

FLENDER Standard Couplings

Catalog MD 10.1 • 2009



FLENDER Couplings

Answers for industry.

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PLANUREX 2

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FLENDER Standard Couplings

Catalog MD 10.1 · 2009



Dear Customer,

We take pleasure in presenting you with the new Catalog MD 10.1 2009 Edition, which replaces the 2008 Edition.

This catalog contains the whole up-to-date product range of our standard couplings, such as:

- ZAPEX ZW, ZAPEX ZI – Torsionally rigid gear couplings
- ARPEX – Torsionally rigid all-steel couplings
- N-EUPEX, N-EUPEX DS – Flexible couplings
- RUPEX – Flexible couplings
- BIPEX – Flexible couplings
- ELPEX-B, ELPEX-S, ELPEX – Highly flexible couplings
- FLUDEX – Fluid couplings

We hope that you will enjoy using Catalog MD 10.1 for all your ordering information. Any ideas and suggestions for improvement will be gratefully received.

Couplings can also be selected in the product configurator of the **x.CAT** PC software, specified using selection menus and assigned their respective order numbers.

You can download **x.CAT** free of charge on the Internet at:

<http://www.flender.com>

The **x.CAT** software is also available as an installation CD-ROM from your Siemens contact partner.

You can also access our catalog and online ordering system (Industry Mall) on the Internet at:

<http://www.siemens.com/automation/mall>



Yours truly,

Dr. Johannes Schmeink
Head of Business Unit Couplings

Siemens AG, Industry Sector, Drive Technologies, Mechanical Drives

FLENDER couplings

Answers for industry.

SIEMENS



FLENDER Couplings Standard Couplings

Catalog MD 10.1 · 2009



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with DIN EN ISO 9001 (Certified Registration No. 01 100 000708). The certificate is recognized by all IQNet countries.

Supersedes:
Catalog MD 10.1 · 2008

Refer to the Industry Mall for current updates of this catalog:
www.siemens.com/automation/mall

The products contained in this catalog can also be found in the e-Catalog CA 01.
Order No.:
E86060-D4001-A510-C8-7600

Please contact your local Siemens branch

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Answers for industry.

Siemens Industry answers the challenges in the manufacturing and the process industry as well as in the building automation business. Our drive and automation solutions based on Totally Integrated Automation (TIA) and Totally Integrated Power (TIP) are employed in all kinds of industry. In the manufacturing and the process industry. In industrial as well as in functional buildings.

Siemens offers automation, drive, and low-voltage switching technology as well as industrial software from standard products up to entire industry solutions. The industry software enables our industry customers to optimize the entire value chain – from product design and development through manufacture and sales up to after-sales service. Our electrical and mechanical components offer integrated technologies for the entire drive train – from couplings to gear units, from motors to control and drive solutions for all engineering industries. Our technology platform TIP offers robust solutions for power distribution.

Check out the opportunities our automation and drive solutions provide. And discover how you can sustainably enhance your competitive edge with us.

The mechanical drive train comprises individual units such as motor, gear unit and driven machine. The coupling connects these component assemblies.

As well as the transmission of rotary motion and torque, other requirements may be made of the coupling.

- Compensation for shaft misalignment where restorative forces are low
- Compensation for shaft displacement with low restorative forces
- Control of characteristic angular vibration frequency and damping
- Interruption or limitation of torque
- Noise insulation, electrical insulation

Couplings are frequently chosen after the machines to be connected have already been selected. Thanks to a large number of different coupling assembly options, specified marginal conditions for clearance and connection geometry can be met from the standard range. The coupling also performs secondary functions, e.g. providing a brake disk or brake drum for operating or blocking brakes, devices to record speed or the attachment of sprockets or pulleys.

Couplings are divided into two main groups, couplings and clutches.

Clutches interrupt or limited the transmissible torque. The engaging and disengaging forces on externally operated clutches are introduced via a mechanically, electrically, hydraulically or pneumatically operating mechanism. Overload, centrifugal or

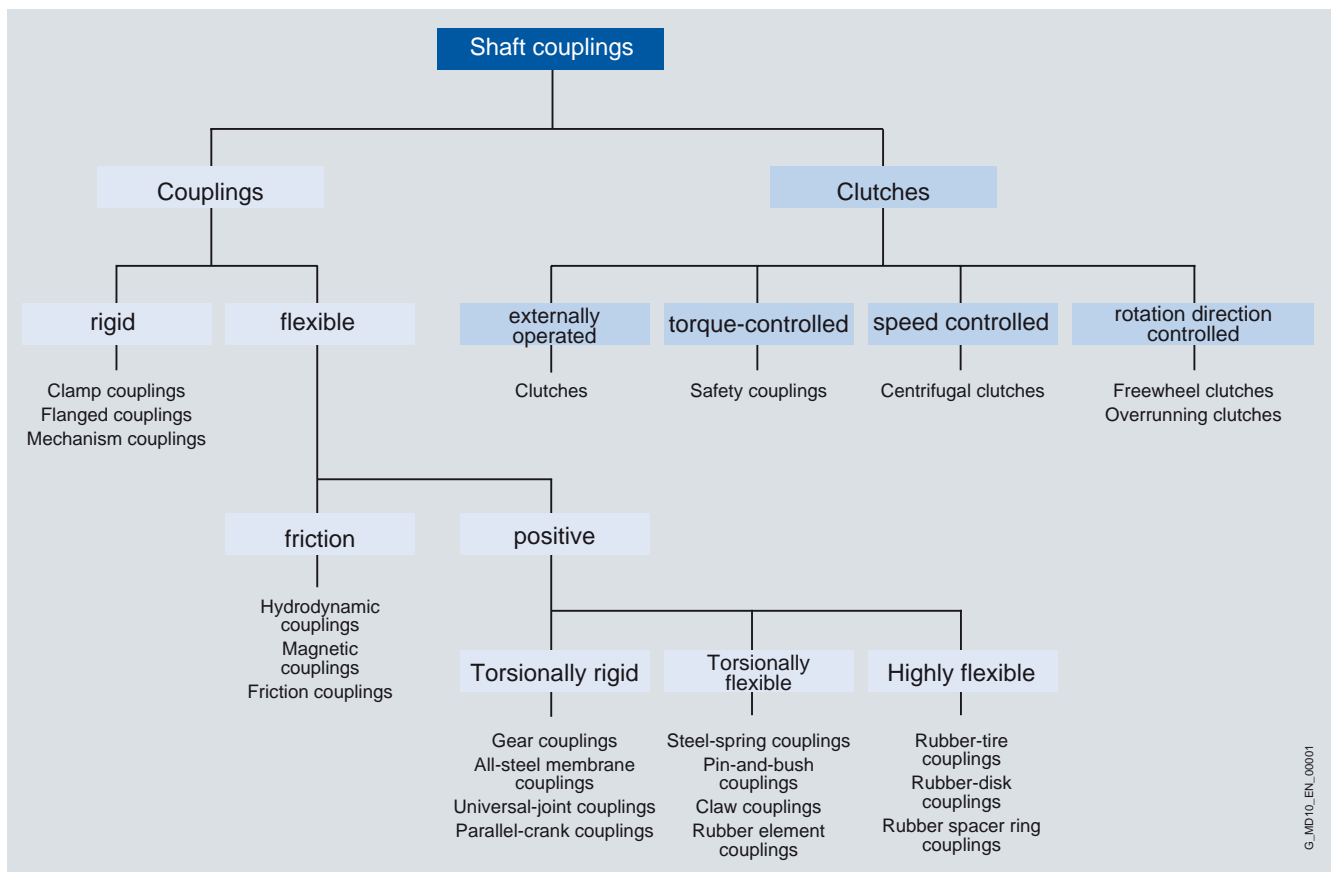
freewheel clutches draw their engaging energy from the transmitted output.

Rigid couplings, designed as clamp, flanged or mechanism couplings, connect machines which must not undergo any shaft misalignment. Hydrodynamic couplings, often also called fluid or Föttinger couplings, are used as starting couplings in drives with high mass moments of inertia of the driven machine. In drive technology very often flexible, positive couplings, which may be designed to be torsionally rigid, torsionally flexible or highly flexible, are used.

Torsionally rigid couplings are designed to be rigid in a peripheral direction and flexible in radial and axial directions. The angle of rotation and torque are conducted through the coupling without a phase shift.

Torsionally flexible couplings have resilient elements usually manufactured from elastomer materials. Using an elastomer material with a suitable ShoreA hardness provides the most advantageous torsional stiffness and damping for the application. Shaft misalignment causes the resilient elements to deform.

Highly flexible couplings have large-volume (elastomer) resilient elements of low stiffness. The angle of rotation and torque are conducted through the coupling with a considerable phase shift.



G_MD10_EN_00001

FLENDER Standard Couplings

Introduction

Notes

1



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FLENDER Standard Couplings

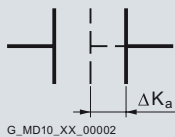
Technical Information

2

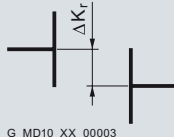
Shaft misalignment

Shaft misalignment is the result of displacement during assembly and operation and, where machines constructed with two radial bearings each are rigidly coupled, will cause high loads being placed on the bearings. Elastic deformation of base frame, foundation and machine housing will lead to shaft misalignment which cannot be prevented, even by precise alignment.

Depending on the direction of the effective shaft misalignment a distinction is made between:



Axial misalignment



Radial misalignment



Angular misalignment

Couplings can be categorized into one of the following groups:

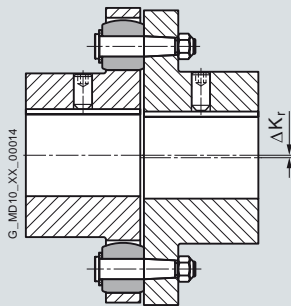
- **Single-joint couplings**

Couplings with flexible elements mainly made of elastomer materials. Shaft misalignment results in deformation of the elastomer elements. The elastomer elements can absorb shaft misalignment as deformations in an axial, radial and angular direction. The degree of permissible misalignment depends on the coupling size, the speed and the type of elastomer element.

Single-joint couplings do not require an adapter and are therefore short versions.

- **Example:**

In the case of a RUPEX RWN 198 coupling with an outer diameter of 198 mm and a speed of 1500 rpm, the permitted radial misalignment is $\Delta K_r = 0.3$ mm.



Furthermore, because individual components of the drive train heat up differently during operation, heat expansion of the machine housings causes shaft misalignment.

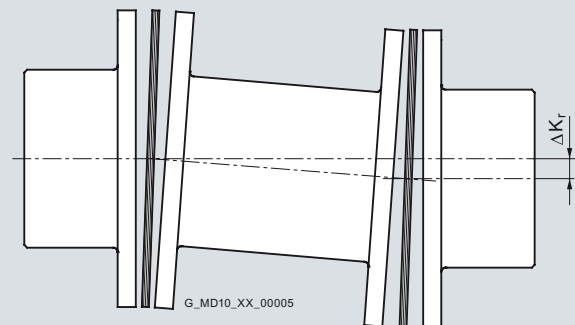
Poorly aligned drives are often the cause of seal, rolling bearing or coupling failure. Alignment should be carried out by specialist personnel in accordance with FLINDER operating instructions.

- **Two-joint couplings**

Two-joint couplings are always designed with an adapter. The two joint levels are able to absorb axial and angular misalignment. Radial misalignment occurs via the gap between the two joint levels and the angular displacement of the joint levels. The permitted angular misalignment per joint level is frequently about 0.5° . The permitted shaft misalignment of the coupling can be adjusted via the length of the adapter. If there are more than two joint levels, it is not possible to define the position of the coupling parts relative to the axis of rotation. (The less frequently used parallel-crank couplings are an exception).

- **Example:**

ARPEX ARS-6 NEN 210-6 coupling with a shaft distance of 160 mm with a permitted radial misalignment of $\Delta K_r = 1.77$ mm (angle per joint level 0.7°).



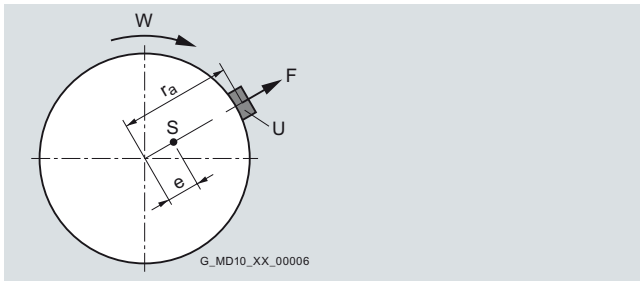
Restorative forces

Shaft misalignment causes restorative forces to act on the coupled shafts which are determined by the displacement stiffness of the coupling. These restorative forces are frequently comparatively weak and can usually be disregarded. Where bearings or shafts are under heavy loads, the restorative forces should be taken into account.

Balancing

Because of primary shaping processes and machining, the coupling components are manufactured with a mass distribution about the axis of rotation of the motor, gear unit or driven machine which is not always ideal.

Balancing means improving the mass distribution of a rotating body so that it rotates on its bearings with a sufficiently limited effect of free centrifugal forces.



The imbalance force increases linearly with the distance between the center of gravity of the body and the axis of rotation, the weight of the body and the rotor speed squared.

F = imbalance force

S = center of gravity of the body

e = distance of center of gravity of body from the pivot axis

In the case of rotating unbalanced coupling parts rotary, imbalance forces develop which impose loads on the bearings of the machine shafts and excite vibration. High vibration values on drives are frequently detected as early as initial start-up if the balance of the machine shafts or the mounted coupling parts is insufficient or the balancing specifications are incompatible. The balance condition of the coupling can be measured on balancing machines. By adding or drilling away material, a balance condition which meets the requirements can be achieved.

Balance quality levels

The so-called quality level G to DIN ISO 1940 indicates a range of permitted residual imbalance from zero up to an upper limit. Applications can be grouped on the basis of similarity analysis. For many applications a coupling balance quality of G 16 is sufficient. On drives susceptible to vibration the balance quality should be G 6.3. Only in special cases is a better balance quality required.

Single- and two-level balancing

For discoid bodies (such as brake disks, coupling hubs) so-called single-level balancing is carried out. The mass compensation for the imbalance is undertaken at a single level only. For historical reasons single-level balancing is also known as static balancing. On long bodies such as adapters mass compensation must be implemented at two levels to reduce the couple imbalance. Two-level balancing is carried out while the rotor body is rotating. Historically, this is known as dynamic balancing.

Balancing standard in accordance with DIN ISO 8821

Besides the required balance quality, it is necessary to set standards which define how the mass of the parallel key is to be taken into consideration when balancing. In the past, motor rotors have frequently been balanced in accordance with the full parallel key standard. The "appropriate" balance condition of the coupling hub was described as "balancing with open keyway" or "balancing after keyseating". Today it is usual for the motor rotor, as well as the gear unit and driven machine shaft, to be balanced in accordance with the half parallel key standard.

Full parallel key standard

The parallel key is inserted in the shaft keyway, then balancing is carried out. The coupling hub must be balanced without parallel key after keyseating. Marking of shaft and hub with "F" (for "full").

Half parallel key standard

The balancing standard normally applied today. Before balancing, a half parallel key is inserted in the shaft and another in the coupling hub. Alternatively, balancing can be carried out before cutting the keyway. The balanced parts must be marked with an "H". This marking can be dispensed with if it is absolutely clear which parallel key standard has been applied.

No parallel key standard

Balancing of shaft and coupling hub after keyseating, but without parallel key. Not used in practice. Marking of shaft and hub with "N" (for "no").

The length of the parallel key is determined by the shaft keyway. Coupling hubs may be designed considerably shorter than the shaft. To prevent imbalance forces caused by projecting parallel key factors when balancing in accordance with the half parallel key standard in the case of applications with high balancing quality requirements, grooved spacer rings can be fitted or stepped parallel keys used.

FLENDER Balancing Standard

The balancing quality level, together with the operating speed, results in the maximum permissible eccentricity of the center of gravity of the coupling or the coupling subassembly. In the FLENDER product code only the maximum eccentricity of the center of gravity of the coupling is to be specified.

The procedure is as follows:

Operating speed and required balancing quality level are known from the application. Using these values, the required eccentricity of the center of gravity can be calculated using the specified formula context or the following graph. The eccentricity of the center of gravity of the coupling must be less than the required balancing quality. The associated product code must be stated in the order; only if standard balancing has been selected is the product code to be dispensed with

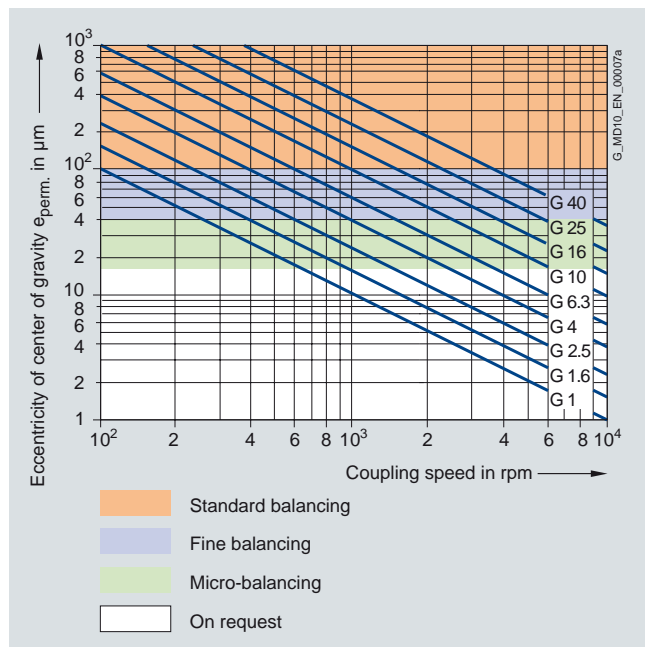
$$e_{\text{perm}} = 9600 \cdot \frac{G}{n}$$

$$e_{\text{coupl}} \leq e_{\text{perm.}}$$

permitted:

| | | |
|---|--------------------|------------------|
| Eccentricity of center of gravity of the coupling | $e_{\text{perm.}}$ | in μm |
| Balancing quality level | e_{coupl} | in μm |
| Coupling speed | G | in mm/s |
| | n | in rpm |

| Eccentricity of center of gravity of coupling e_{coupl} | FLENDER balancing quality | Order code |
|---|---------------------------|-----------------------|
| maximum 100 μm | standard balancing | without specification |
| maximum 40 μm | fine balancing | W02 |
| maximum 16 μm | micro-balancing | W03 |
| better than 16 μm | special balancing | on request |



The following standards on balancing must be observed:

- couplings are balanced in subassemblies.
- hub parts without finished bore are unbalanced.
- the number of balancing levels (one- or two-level balancing) is specified by FLENDER.
- without special specification balancing is done in accordance with the half-parallel-key standard. Balancing in accordance with the full-parallel-key standard must be specified in the order number.
- for FLUDEX couplings special balancing standards specified in Section 13 apply.
- ARPEX couplings in standard balancing quality are unbalanced. Thanks to steel components machined all over and precisely guided adapters the balancing quality of standard balancing is nearly always adhered to.

Shaft-hub connections

The bore and the shaft-hub connection of the coupling are determined by the design of the machine shaft. In the case of IEC standard motors, the shaft diameters and parallel key connections are specified in accordance with DIN EN 50347. For diesel motors, the flywheel connections are frequently specified in accordance with SAE J620d or DIN 6288. Besides the very widely used connection of shaft and hub with parallel keys to DIN 6885 and cylindrically bored hubs, couplings with Taper clamping bushes, clamping sets, shrink-fit connections and splines to DIN 5480 are common.

The form stability of the shaft/hub connection can only be demonstrated when shaft dimensions and details of the connection are available. The coupling torques specified in the tables of power ratings of the coupling series do not apply to the shaft-hub connection unrestrictedly.

In the case of the shaft-hub connection with parallel key, the coupling hub must be axially secured, e.g. with a set screw or end washer. The parallel key must be secured against axial displacement in the machine shaft.

All FLENDER couplings with a finished bore and parallel keyway are designed with a set screw. Exceptions are some couplings of the FLUDEX series, in which end washers are used. During assembly, Taper clamping bushes are frictionally connected to the machine shaft.

Assembly

Assembly, start-up, maintenance and servicing of the coupling are described in the operating instructions.

Contact protection

Couplings are rotating components which can pose a risk to the environment. FLENDER prescribes fitting couplings with a suitable contact guard, also called a coupling guard in the operating instructions. The contact guard, must provide a firm cover to protect against contact with the rotating coupling. The coupling must also be protected against blows from objects striking it. The coupling guard must enable the coupling to be adequately ventilated. The following guidelines give information on designing the contact guard: 2006/42/EC EC Machinery Directive; EN 13463-1 Section 13.3.2.1; EN 13463-1 Section 7.4; EN 13463-1 Section 8.1.

Maintenance

All-steel membrane couplings of the ARPEX series require no maintenance. If the operating and mounting conditions have been adhered to, only regular visual inspection is required.

Elastomer elements, elastomer seals and lubricants are subject to wear through ageing and loads. To avoid damage to the coupling or failure of the drive, the ZAPEX, N-EUPEX, N-EUPEX DS, RUPEX, BIPEX, ELPEX, ELPEX-S, ELPEX-B and FLUDEX series must be maintained in accordance with the operating instructions.

On gear couplings, the lubricant must be changed at regular intervals.

On flexible or highly flexible couplings, the torsional backlash or the torsion angle must be checked at regular intervals under load. If a limit value is exceeded, the elastomer element must be replaced. It is very important to maintain couplings which are operated in a potentially explosive environment, as couplings which are not maintained can become ignition sources.

Corrosion protection

Depending on the environmental conditions, suitable corrosion protection must be specified for the coupling. Unless otherwise specified in the order, steel and cast iron surfaces are shipped with a simple preservative.

Ambient conditions

Because of the environment, the coupling has to meet a large number of additional requirements. Couplings must be as suitable for use in a potentially explosive environment as for use at a high or low ambient temperature. The environment may be defined as chemically aggressive or be subject to laboratory conditions or requirements of food manufacture.

ATEX and EC Machinery Directive

Wherever a potentially explosive environment cannot be ruled out, the machinery used must meet special conditions in order to prevent the outbreak of fire as far as possible. Within the European Union, Directive 94/9/EC applies to these applications. This directive, also called ATEX 95, harmonizes the individual states' legal requirements for explosion prevention and clearly defines the procedure for checking and circulating machines and parts. Whether or not a machine is used in a potentially explosive environment, the manufacturer is required under EC Machinery Directive 98/37/EC to assess and as far as possible prevent hazards which may arise from his product.

The operator has an obligation to ascertain whether an environment is potentially explosive. Details of this are laid down in Directive 1999/92/EC, also known as ATEX 137.

The manufacturer is responsible for ensuring that the product is safe as defined in the EC Machinery Directive and conforms to Directive 94/9/EC if the EX requirement is specified by the operator.

The drive train mostly comprises individual pieces of equipment which are put together to form a subassembly. If the individual pieces of equipment, such as motor, coupling, gear unit or driven machine conform to Directive 94/9/EC, the manufacturer of the overall unit can limit the risk assessment to the additional hazards which arise from the combination of different individual pieces of equipment. The hazards which can arise from the individual pieces of equipment are assessed by the relevant suppliers.

All FLENDER couplings conform to the requirements of the EC Machinery Directive 98/37/EC.

The coupling series suitable for use in potentially explosive environments are marked with EX in the catalog.

Overload conditions

Overload conditions are operating conditions that go beyond the limit loads of the coupling.

Overload conditions may occur under abnormal operating conditions, e.g. drive blockage, short circuit or supply deviations, as well as under normal operating conditions, e.g. during starting or breaking. Particularly in the case of high mass moments of inertia of the driven machine, torques that are a multiple of the motor starting torque may become effective during direct starting or star-delta starting.

Overload conditions may damage not only the coupling but also the entire drive train.

Overload conditions can frequently be prevented with special design measures. SIRIUS soft starters or SINAMICS frequency converters are suitable for considerably reducing starting torques of asynchronous motors. If drive blockages and overloads of the driven machine cannot be ruled out, torque limiting SECUREX couplings can prevent damage to the drive train.

Coupling behavior under overload conditions

Coupling behavior under overload where the torque is considerably above the limits of use of the coupling concerned is determined by the engineering design of the coupling series.

The ZAPEX, ARPEX, N-EUPEX, RUPEX and BIPEX coupling series can withstand overloads until the breakage of metal parts. These coupling series are designated as fail-safe. Coupling types which can withstand overload, i.e. fail-safe types, are used e.g. in crane systems. In case of coupling breakage due to overloads, the splintering metal parts may cause injury to persons and property damages.

The N-EUPEX DS, ELPEX-B, ELPEX-S and ELPEX coupling series throw overload. The elastomer element of these couplings is irreparably damaged without damage to metal parts when subjected to excessive overload. These coupling series are designated as non-fail-safe. The types that fail can be fitted with a fail-safe device. This component enables emergency operation, even after the rubber element of the coupling has been irreparably damaged.

The fluid couplings of the FLUDEX series withstand a load for a short time. Persistent overload causes the FLUDEX coupling to heat up beyond limits, causing the fuse to operate and so emptying the coupling and interrupting the torque transmission.

Torsional and bending vibrations

On drives which are prone to torsional and bending vibrations, measurements or calculations such as natural frequency calculations, torsional vibration simulations or bending vibration calculations are necessary.

The drive train may, depending on complexity, be regarded as a two-mass vibration-generating system or N-mass vibration-generating system. The vibration-generating masses are defined by the rotating bodies and the couplings by the coupling stiffnesses and shaft stiffnesses. The effect of torsional vibration excitations on the behavior of the system is calculated.

Torsional vibration excitations may occur during the starting of an asynchronous motor, during a motor short circuit or in diesel engine drives. Bending vibrations may be critical if the coupling is insufficiently balanced and/or at an operating speed close to the critical speed.

The details needed for calculating torsional vibration are specified in the coupling catalog:

- Dynamic torsional stiffness
- Damping (specification of the damping coefficient ψ or Lehr's damping $D = \psi/4\pi$).
- Mass moment of inertia of the coupling halves.

FLENDER Standard Couplings

Technical Information

2

Standards

Machines

| | |
|--------------|---|
| 2006/42/EC | EC Machinery Directive (formerly: 98/9/EC) |
| 94/9/EC | ATEX 95 Directive – Manufacturer – and ATEX Guideline to Directive 94/9/EC |
| 1999/92/EC | ATEX 137 Directive – Operator – and ATEX Guideline to Directive 199/92/EC |
| DIN EN 13463 | Non-electric equipment for use in potentially explosive areas |
| DIN EN 1127 | Potentially explosive atmospheres, explosion protection |
| DIN EN 50347 | General-purpose three-phase induction motors having standard dimensions and output data |

Couplings

| | |
|--------------------|---|
| DIN 740 | Flexible shaft couplings Part 1 and Part 2 |
| VDI Guideline 2240 | Shaft couplings - Systematic subdivision according to their properties VDI Technical Group Engineering Design 1971 |
| API 610 | Centrifugal Pumps for Petroleum, Chemical and Gas Industry Services |
| API 670 | Machinery Protection System |
| API 671 | Special Purpose Couplings for Petroleum, Chemical and Gas Industry Services |
| ISO 10441 | Petroleum, petrochemical and natural gas industries – Flexible couplings for mechanical power transmission-special-purpose applications |

Balancing

| | |
|--------------|---|
| DIN ISO 1940 | Requirements for the balancing quality of rigid rotors |
| DIN ISO 8821 | Mechanical vibrations; standard governing the type of parallel key during balancing of shafts and composite parts |

Shaft-hub connections

| | |
|--------------|--|
| DIN 6885 | Driver connections without taper action – parallel keys – keyways |
| SAE J620d | Flywheels for industrial engines ... |
| DIN 6288 | Internal-combustion piston engines Connection dimensions and requirements for flywheels and flexible coupling |
| ASME B17.1 | Keys and keyseats |
| DIN EN 50347 | General-purpose three-phase induction motors with standard dimensions and output data |
| BS 46-1:1958 | Keys and keyways and taper pins Specification |

Formula symbols

Key to the formula symbols

| Name | Symbol | Unit | Explanation |
|------------------------------|--------------|------------------|---|
| Torsional stiffness, dynamic | C_{Tdyn} | Nm/rad | For calculating torsional vibration |
| Excitation frequency | f_{err} | Hz | Excitation frequency of motor or driven machine |
| Moment of inertia | J | kgm ² | Moment of inertia of coupling sides 1 and 2 |
| Axial misalignment | ΔK_a | mm | Axial misalignment of the coupling halves |
| Radial misalignment | ΔK_r | mm | Radial misalignment of the coupling halves |
| Angular misalignment | ΔK_w | ° | Angular misalignment of the coupling halves |
| Service factor | FB | | Factor expressing the real coupling load as a ratio of the nominal coupling load |
| Frequency factor | FF | | Factor expressing the frequency dependence of the fatigue torque load |
| Temperature factor | FT | | Factor taking into account the reduction in strength of flexible rubber materials at a higher temperature |
| Weight | m | kg | Weight of the coupling |
| Rated speed | n_N | rpm | Coupling speed |
| Maximum coupling speed | n_{Kmax} | rpm | Maximum permissible coupling speed |
| Rated power | P_N | kW | Rated output on the coupling, usually the output of the driven machine |
| Rated torque | T_N | Nm | Rated torque as nominal load on the coupling |
| Fatigue torque | T_W | Nm | Amplitude of the dynamic coupling load |
| Maximum torque | T_{max} | Nm | More frequently occurring maximum load, e.g. during starting |
| Overload torque | T_{OL} | Nm | Very infrequently occurring maximum load, e.g. during short circuit or blocking conditions |
| Rated coupling torque | T_{KN} | Nm | Torque which can be transmitted as static torque by the coupling over the period of use. |
| Maximum coupling torque | T_{Kmax} | Nm | Torque which can be frequently transmitted (up to 25 times an hour) as maximum torque by the coupling. |
| Coupling overload torque | T_{KOL} | Nm | Torque which can very infrequently be transmitted as maximum torque by the coupling. |
| Fatigue coupling torque | T_{KW} | Nm | Torque amplitude which can be transmitted by the coupling as dynamic torque at a frequency of 10 Hz over the period of use. |
| Resonance factor | V_R | | Factor specifying the torque increase at resonance |
| Temperature | T_a | °C | Ambient temperature of the coupling in operation |
| Damping coefficient | ψ | Psi | Damping parameter |



| | |
|-------------|--|
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| 3/2 | <u>Selection and ordering data</u> |
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FLENDER Standard Couplings

Coupling Preselection and Options

Selection of the coupling series

Selection and ordering data

The coupling series is frequently determined by the driven machine and the design of the drive train. Common selection criteria are listed below and assigned to coupling properties, which are used to select the coupling series. Additionally, the price of the coupling and availability are important criteria for determining the coupling series to be used.

The FLUDEX series operates positively and transmits the torque with the aid of a flowing oil or water filling. FLUDEX couplings are used to reduce starting and/or overload torques. During starting, the motor may, for example, run up within a very short time; because of the FLUDEX coupling, the drive train with the driven machine may accelerate after a delay and without increased torque load.

The FLUDEX coupling cannot compensate for shaft misalignment and is therefore designed in combination with a displacement coupling, a cardan shaft or a belt drive. The displacement coupling may be selected in accordance with the criteria described below.

| Selection criterion | | ZAPEX | ARPEX | N-EUPEX | N-EUPEX DS | RUPEX | BIPEX | ELPEX-B | ELPEX-S | ELPEX |
|----------------------------|---|-----------------|-----------------|-----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|
| Torque range | Rated coupling torque T_{KN} in Nm | 850 ... 7200000 | 92 ... 1450000 | 19 ... 62000 | 19 ... 21200 | 200 ... 1300000 | 13.5 ... 3700 | 24 ... 14500 | 330 ... 63000 | 1600 ... 90000 |
| Speed range | Peripheral speed $v_{max} = DA \cdot n_{max}/19100$ | 60 | 100 | 36 | 36 | 60 | 36 | 35 | 66 | 60 |
| Torque load | uniform | | | | | | | | | |
| | non uniform | | | | | | | | | |
| | rough | | | | | | | | | |
| | very rough | | | | | | | | | |
| Installation and alignment | Rigid installation, well aligned | | | | | | | | | |
| | Rigid installation, roughly aligned | | | | | | | | | |
| | Flexible installation | | | | | | | | | |
| Torsional stiffness | Torsionally rigid | | | | | | | | | |
| | Torsionally flexible | | | | | | | | | |
| | Highly flexible | | | | | | | | | |
| Torque transmission | Free of torsional backlash | | | | | | | | | |
| | Low torsional backlash | | | | | | | | | |
| | Overload withstand capability | | | | | | | | | |
| Assembly | Plug-in assembly | | | | | | | | | |
| | with Taper clamping bushes | | | | | | | | | |
| Maintenance | Wear parts easily dismountable | | | | | | | | | |
| | Maintenance-free | | | | | | | | | |
| | Low-maintenance - interval 1 year | | | | | | | | | |
| Environment | ATEX 94/9/EC Approval | | | | | | | | | |
| | Operating temperature range | -20 ... +80 °C | -40 ... +280 °C | -50 ... +100 °C | -30 ... +80 °C | -50 ... +100 °C | -30 ... +80 °C | -50 ... +70 °C | -40 ... +120 °C | -40 ... +80 °C |
| | Chemically aggressive | | | | | | | | | |
| Coupling material | Cast iron | | | | | | | | | |
| | Steel | | | | | | | | | |
| | Stainless steel | | | | | | | | | |
| Add-on parts / types | Adapter | | | | | | | | | |
| | Brake disk | | | | | | | | | |
| | Brake drum | | | | | | | | | |
| | Axial backlash limiter | | | | | | | | | |
| | Shiftgear | | | | | | | | | |
| | Flange type | | | | | | | | | |
| | Flange to SAE J620d | | | | | | | | | |

| | |
|---|--------------|
| | Standard |
| | On request |
| - | Not possible |

FLENDER Standard Couplings

Coupling Preselection and Options



Selection of the coupling series

Typical coupling solutions for different example applications

The specified application factors are recommendations; regulations, rules and practical experience take priority as assessment criteria.

No application factor need be taken into account with FLUDEX couplings. In the case of highly flexible couplings of the ELPEX, ELPEX-S and ELPEX-B series, deviating application factors are stated in the product descriptions.

| Example applications | Application factor FB | FLUDEX | ZAPEX | ARPEX | N-EUPEX | RUPEX | BIPEX | ELPEX-B | ELPEX-S | ELPEX |
|---|-----------------------|--------|-------|-------|---------|-------|-------|---------|---------|-------|
| Electric motor without gear unit | | | | | | | | | | |
| Centrifugal pumps | 1.0 ... 1.5 | | | | | | | | – | – |
| Piston pumps | 1.5 ... 2.0 | | | – | | – | | | | |
| Vacuum pumps | 1.5 ... 1.75 | | | | | – | | | | |
| Fans | 1.5 ... 2.0 | | | | | – | | | | |
| Blowers | 1.5 ... 2.0 | | | | | – | | | | |
| Frequency converters / generators | 1.25 ... 1.75 | | | | | – | | | – | |
| Reciprocating compressors | 1.75 ... 2.5 | | | | – | | – | | | |
| Screw-type compressors | 1.5 ... 1.75 | | | | | | – | | | |
| Internal-combustion engine without gear unit | | | | | | | | | | |
| Generators | 1.75 ... 2.5 | | – | – | | | – | | | |
| Pumps | 1.5 ... 1.75 | | – | | | | – | | | |
| Fans | 1.75 ... 2.5 | | – | | – | | – | | | |
| Hydraulic pumps, excavators, construction machines | 1.5 ... 1.75 | | | | | | | | | – |
| Compressors / screw-type compressors | 1.5 ... 1.75 | | | | | | – | | | |
| Agricultural machinery | 1.75 ... 2.5 | | | | | | – | | | |
| Other | | | | | | | | | | |
| Turbine gear units | 1.5 ... 1.75 | | | – | – | – | – | – | – | – |
| Hydraulic motor - gear unit | 1.25 ... 1.5 | – | | | | | | | | |
| Electric motor with gear unit | | | | | | | | | | |
| Chemical industry | | | | | | | | | | |
| Extruders | 1.5 ... 2.0 | – | | | | | – | | | – |
| Pumps - centrifugal pumps | 1.0 ... 1.5 | | | | | | | | – | – |
| Pumps - piston pumps | 1.75 ... 2.5 | | | | | | – | | | |
| Pumps - plunger pumps | 1.5 ... 1.75 | | | | | | – | | | |
| Reciprocating compressors | 1.75 ... 2.5 | | | | | | – | | | |
| Calenders | 1.5 ... 1.75 | | | | | | – | | | – |
| Kneaders | 1.75 ... 2.5 | | | | | | – | | | |
| Cooling drums | 1.25 ... 1.5 | | | | | | | – | – | – |
| Mixers | 1.25 ... 1.5 | | | | | | | – | – | – |
| Stirrers | 1.25 ... 1.5 | | | | | | | | – | – |
| Toasters | 1.25 ... 1.5 | – | | | | | – | | – | – |
| Drying drums | 1.25 ... 1.5 | | | | | | – | | – | – |
| Centrifuges | 1.25 ... 1.5 | | | | | | | | – | – |
| Crushers | 1.5 ... 2.5 | | | | | | – | | – | |
| Power generation and conversion | | | | | | | | | | |
| Compressed air, reciprocating compressors | 1.75 ... 2.5 | | | – | | | – | | | |
| Compressed air, screw-type compressors | 1.25 ... 1.5 | – | | | | | | – | | |
| Air - Blowers | 1.5 ... 1.75 | | | | | | | | | |
| Air - Cooling tower fans | 1.5 ... 1.75 | | | | | | – | | | |
| Air - Turbine blowers | 1.5 ... 1.75 | – | | | – | | – | – | – | – |
| Generators, converters | 1.25 ... 1.5 | | | | – | | – | – | – | – |
| Welding generators | 1.25 ... 1.5 | – | | | – | | – | – | – | – |
| Metal production, iron and steel works | | | | | | | | | | |
| Plate tilters | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Ingot pushers | 1.75 ... 2.5 | – | | | – | | – | | – | |
| Slabbing mill | 1.75 ... 2.5 | – | | | – | | – | | – | |
| Coiling machines | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Roller straightening machines | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Roller tables | 1.75 ... 2.5 | – | | | – | | – | | – | |
| Shears | 1.75 ... 2.0 | – | | | – | | – | | – | |
| Rollers | 1.75 ... 2.0 | – | | | – | | – | | – | |

 Preferred solution
 Possible, less common
 – Uncommon

FLENDER Standard Couplings

Coupling Preselection and Options

Selection of the coupling series

| Example applications | Application factor FB | FLUDEX | ZAPEX | ARPEX | N-EUPEX | RUPEX | BIPEX | ELPEX-B | ELPEX-S | ELPEX |
|--|-----------------------|--------|-------|-------|---------|-------|-------|---------|---------|-------|
| Metal working machines | | | | | | | | | | |
| Plate bending machines | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Plate straightening machines | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Hammers | 1.75 ... 2.5 | – | | | – | | – | | – | |
| Planing machines | 1.75 ... 2.5 | – | | | – | | – | | – | |
| Presses, forging presses | 1.75 ... 2.0 | – | | | – | | – | | – | |
| Shears | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Grinding machines | 1.25 ... 1.75 | – | | | – | | – | | – | |
| Punches | 1.5 ... 2.0 | – | | | – | | – | | – | |
| Machine tools: Main drives | 1.5 ... 1.75 | – | | | – | – | – | – | – | – |
| Machine tools: Auxiliary drives | 1.25 ... 1.5 | – | | | – | – | | – | – | – |
| Food industry | | | | | | | | | | |
| Filling machines | 1.25 ... 1.5 | – | | | – | – | – | – | – | – |
| Kneading machines | 1.5 ... 2.0 | | | | – | | – | – | – | – |
| Mashers | 1.5 ... 2.0 | | | | – | | – | – | – | – |
| Sugar cane production | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Production machines | | | | | | | | | | |
| Construction machines, hydraulic pumps | 1.25 ... 1.5 | – | | | – | | | – | – | – |
| Construction machines, traversing gears | 1.5 ... 1.75 | | | | | | | | | |
| Construction machines, suction pumps | 1.5 ... 1.75 | – | | | | | – | | – | – |
| Construction machines, concrete mixers | 1.5 ... 1.75 | | | – | – | | – | | | |
| Printing machines | 1.25 ... 1.5 | – | | | | | – | – | – | – |
| Woodworking - barking drums | 1.5 ... 2.0 | | | | | – | – | | | |
| Woodworking - planing machines | 1.5 ... 2.0 | – | | | | | – | | | |
| Woodworking - reciprocating saws | 1.5 ... 1.75 | – | | | | | – | | | |
| Grinding machines | 1.5 ... 1.75 | – | | | | | – | | – | – |
| Textile machines - winders | 1.5 ... 1.75 | – | | | | | – | | – | – |
| Textile machines - printing machines | 1.5 ... 1.75 | – | | | | | – | | – | – |
| Textile machines - tanning vats | 1.5 ... 1.75 | – | | | | | – | | – | – |
| Textile machines - shredders | 1.5 ... 1.75 | – | | | – | | – | | – | |
| Textile machines - looms | 1.5 ... 1.75 | – | | | – | | – | – | – | – |
| Packaging machines | 1.5 ... 1.75 | – | | | | | | – | – | – |
| Brick molding machines | 1.75 ... 2.0 | – | | | – | | – | | – | |
| Transport and logistics | | | | | | | | | | |
| Passenger transport - elevators | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Passenger transport - escalators | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Conveyor systems - bucket elevators | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Conveyor systems - hauling winches | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Conveyor systems - belt conveyors | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Conveyor systems - endless-chain conveyors | 1.5 ... 2.0 | | | | – | | – | – | – | – |
| Conveyor systems - circular conveyors | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Conveyor systems - screw conveyors | 1.5 ... 2.0 | | | | | | – | – | – | – |
| Conveyor systems - inclined hoists | 1.5 ... 2.0 | | | | – | | – | – | – | – |
| Crane traversing gear | 1.5 ... 2.0 | – | | | | | – | – | – | – |
| Hoisting gear | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Crane lifting gear | 2.0 ... 2.5 | – | | | – | | – | – | – | – |
| Crane traveling gear | 1.5 ... 1.75 | – | | | | | – | – | – | – |
| Crane slewing gear | 1.5 ... 1.75 | – | | | | | – | – | – | – |
| Crane fly jib hoists | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Cable railways | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Drag lifts | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Winches | 1.5 ... 2.0 | – | | | – | | – | – | – | – |
| Cellulose and paper | | | | | | | | | | |
| Paper-making machines, all | 1.5 ... 1.75 | – | | | | | – | – | – | – |
| Pulper drives | 1.5 ... 1.75 | | | | | | – | – | – | – |

| | |
|---|-----------------------|
| | Preferred solution |
| | Possible, less common |
| – | Uncommon |

FLENDER Standard Couplings

Coupling Preselection and Options

Selection of the coupling series

| Example applications | Application factor FB | FLUDEX | ZAPEX | ARPEX | N-EUPEX | RUPEX | BIPEX | ELPEX-B | ELPEX-S | ELPEX |
|------------------------|-----------------------|--------|-------|-------|---------|-------|-------|---------|---------|-------|
| Cement industry | | | | | | | | | | |
| Crushers | 1.75 ... 2.5 | | | | | | | | | |
| Rotary furnaces | 1.5 ... 2.0 | | | | | | | | | |
| Hammer mills | 1.75 ... 2.5 | | | | | | | | | |
| Ball mills | 1.75 ... 2.0 | | | | | | | | | |
| Pug mills | 1.75 ... 2.0 | | | | | | | | | |
| Mixers | 1.5 ... 1.75 | | | | | | | | | |
| Pipe mills | 1.5 ... 1.75 | | | | | | | | | |
| Beater mills | 1.75 ... 2.5 | | | | | | | | | |
| Separators | 1.5 ... 1.75 | | | | | | | | | |
| Roller presses | 1.75 ... 2.5 | | | | | | | | | |

- Preferred solution
- Possible, less common
- Uncommon

FLUDEX couplings are mostly mounted on the high-speed gear shaft.

FLENDER Standard Couplings

Coupling Preselection and Options

Selection of the coupling size

Selection and ordering data

The torque load of the coupling must be determined from the output of the driven machine and the coupling speed.

Rated coupling load $T_N = 9550 \cdot P_N / n_N$
(T_N in Nm; P_N in kW; n_N in rpm)

The rated coupling load obtained in this way must be multiplied by factors and compared with the rated coupling torque. An ideal but expensive method is to measure the torque characteristic on the coupling. For this, FLENDER offers special adapters fitted with torque measuring devices.

The rated coupling torque T_{KN} is the torque which can be transmitted by the coupling over an appropriate period of use if the load is applied to the coupling purely statically at room temperature.

Application factors are to express the deviation of the real coupling load from the "ideal" load condition.

Coupling load in continuous operation

The operating principles of the driving and driven machines are divided into categories and the application factor FB derived from these in accordance with DIN 3990-1.

| Application factor FB | Torque characteristic of the driven machine | | | |
|-----------------------------------|---|-----------------------------------|-------------|------------|
| | uniform | uniform with moderate shock loads | non uniform | very rough |
| uniform | 1.0 | 1.25 | 1.5 | 1.75 |
| uniform with moderate shock loads | 1.25 | 1.5 | 1.75 | 2.0 |
| non uniform | 1.5 | 1.75 | 2.0 | 2.5 |

| Temperature factor FT | | | Temperature T_a on the coupling | | | | | | | | |
|-----------------------|--------------------|--------------------|-----------------------------------|-----------------|----------|----------|----------|----------|-----------|-----------|-----------|
| Coupling | Elastomer material | Low temperature °C | under -30 °C | -30 °C to 50 °C | to 60 °C | to 70 °C | to 80 °C | to 90 °C | to 100 °C | to 110 °C | to 120 °C |
| N-EUPEX | NBR | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | – | – | – | – |
| N-EUPEX | NR | -50 | 1.1 ¹⁾ | 1.0 | – | – | – | – | – | – | – |
| N-EUPEX | HNBR | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | 1.25 | 1.25 | – | – |
| N-EUPEX DS | NBR | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | – | – | – | – |
| RUPEX | NBR | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | – | – | – | – |
| RUPEX | NR | -50 | 1.1 | 1.0 | 1.0 | – | – | – | – | – | – |
| RUPEX | HNBR | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | 1.25 | 1.25 | – | – |
| BIPEX | TPU | -30 | – | 1.0 | 1.0 | 1.0 | 1.0 | – | – | – | – |
| ELPEX | NR | -40 | 1.1 | 1.0 | 1.25 | 1.40 | 1.60 | – | – | – | – |
| ELPEX-B | NR | -50 | 1.1 | 1.0 | – | – | – | – | – | – | – |
| ELPEX-B | CR | -15 | – | 1.0 | 1.0 | 1.0 | – | – | – | – | – |
| ELPEX-S SN, NN, WN | NR | -40 | 1.1 | 1.0 | 1.25 | 1.40 | 1.60 | – | – | – | – |
| ELPEX-S NX | VMQ | -40 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.25 | 1.4 | 1.6 |

NR = natural rubber, natural-synthetic rubber mixture
 NBR = nitril-butadiene-rubber (Perbunan)
 HNBR = hydrated acrylonitrile butadiene rubber
 CR = chloroprene rubber (FRAS fire-resistant and anti-static)
 VMQ = silicone
 TPU = polyurethane

Examples of torque characteristic of driving machines:

- uniform: Electric motors with soft starting, steam turbines
- uniform with moderate shock loads: Electric motors without soft starting, hydraulic motors, gas and water turbines
- non uniform: Internal-combustion engines

Examples of torque characteristic in driven machines:

- uniform: Generators, centrifugal pumps for light fluids
- uniform with moderate shock loads: Centrifugal pumps for viscous fluids, elevators, machine tool drives, centrifuges, extruders, blowers, crane drives
- non uniform: Excavators, kneaders, conveyor systems, presses, mills
- very rough: Crushers, excavators, shredders, iron/smeltering machinery

In the case of ARPEX and ZAPEX coupling types, no temperature factor (FT = 1.0) need be taken into account.

$$\text{Coupling size } T_{KN} \geq T_N \cdot FB \cdot FT$$

¹⁾ The N-EUPEX coupling is not suitable for shock loads when used at low temperatures.

Coupling load under maximum and overload conditions

The maximum torque is the highest load acting on the coupling in normal operation.

Maximum torques at a frequency of up to 25 times an hour are permitted and must be lower than the maximum coupling torque. Examples of maximum torque conditions are: Starting operations, stopping operations or usual operating conditions with maximum load.

$$T_{Kmax} \geq T_{max} \cdot FT$$

Overload torques are maximum loads which occur only in combination with special, infrequent operating conditions.

Examples of overload torque conditions are: Motor short circuit, emergency stop or blocking because of component breakage. Overload torques at a frequency of once a month are permitted and must be lower than the overload torque of the coupling. The overload condition may last only a short while, i.e. fractions of a second.

$$T_{KOL} \geq T_{OL} \cdot FT$$

Coupling load due to dynamic torque load

Applying the frequency factor, the dynamic torque load must be lower than the coupling fatigue torque.

Dynamic torque load

$$T_{KW} \geq T_W \cdot FF \cdot \frac{1.5}{FB - 1.0}$$

Frequency of the dynamic torque load

$$f_{err} \leq 10 \text{ Hz frequency factor } FF = 1.0$$

Frequency of the dynamic torque load

$$f_{err} > 10 \text{ Hz frequency factor } FF = \sqrt{(f_{err}/10 \text{ Hz})}$$

For the ZAPEX and ARPEX series, the frequency factor is always $FF = 1.0$.

Checking the maximum speed

For all load situations $n_{Kmax} \geq n_{max}$

Checking permitted shaft misalignment

For all load situations, the actual shaft misalignment must be less than the permitted shaft misalignment.

Checking bore diameter, mounting geometry and coupling design

The check must be made on the basis of the dimension tables. The maximum bore diameter applies to parallel keyways to DIN 6885. For other keyway geometries, the maximum bore diameter can be reduced. On request, couplings with adapted geometry can be provided.

Coupling behavior under overload conditions

The ZAPEX, ARPEX, N-EUPEX, RUPEX and BIPEX coupling series can withstand overloads until the breakage of metal parts. These coupling series are designated as fail-safe.

The N-EUPEX DS, ELPEX-B, ELPEX-S and ELPEX coupling series throw overload. The elastomer element of these couplings is irreparably damaged without damage to metal parts when subjected to excessive overload. These coupling series are designated as non-fail-safe. These types that fail can be fitted with a so-called fail-safe device. This additional component enables emergency operation, even after the rubber element of the coupling has been irreparably damaged.

Checking shaft-hub connection

The torques specified in the tables of power ratings data of the coupling series do not necessarily apply to the shaft-hub connection. Depending on the shaft-hub connection, proof of form stability is required. FLINDER recommends obtaining proof of form strength by using calculation methods in accordance with the current state of the art.

| Shaft-hub connection | Suggestion for calculation method |
|--|-----------------------------------|
| Keyway connection to DIN 6885-1 | DIN 6892 |
| Shrink fit | DIN 7190 |
| Spline to DIN 5480 | |
| Bolted flange connection | VDI 2230 |
| Flange connection with close-fitting bolts | |

Fitting recommendations for the shaft-hub connection are given in catalog section 15.

The coupling hub is frequently fitted flush with the shaft end face. If the shaft projects, the risk of collision with other coupling parts must be checked. If the shaft is set back, in addition to the load-bearing capacity of the shaft-hub connection, the correct positioning of the hub must be ensured as well. If the bearing hub length is insufficient, restorative forces may cause tilting movements and so wear to and impairment of the axial retention. Also, the position of the set screw to be positioned on sufficient shaft or parallel key material must be noted.

Checking low temperature and chemically aggressive environment

The minimum permitted coupling temperature is specified in the Temperature factor FT table. In the case of chemically aggressive environments, please consult the manufacturer.

FLENDER Standard Couplings

Coupling Preselection and Options

Product code key

Overview

The product code consists of a combination of digits and letters and is divided into three blocks linked by hyphens for better clarity. In blocks 1 and 2 the coupling series, the type and the size are encoded. Block 3 contains information applying only to the coupling specified in blocks 1 and 2. The three blocks of the product code are supplemented by information on the bore of the coupling hub parts and information on "Special types".

The bore details with the code letter L always refer to the bore diameter D1 of the hub part shown on the left on the dimension drawing. The order code beginning with M always refers to the bore diameter D2 of the hub part shown on the right on the dimension drawing.

"Special types" are linked to the 3rd block of the product code by appending the code "-Z". Special order requirements are, for example, fine balancing G6.3 or the ATEX design of the coupling.

With this product code key, the couplings shown in the catalog can be completely specified. No further textual details are required, they should be avoided. Couplings in special variants are specified with the digit 9 in the 4th place in the product code (block 1) and additionally with 00-0AA0 in positions 11 to 16. Series, type and size should, as far as possible, be specified in accordance with the coding for the standard coupling. By appending "-Z Y99", plain text information can be included. The plain text information can then clearly specify the features of the special coupling.

| Structure of the product code | Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---------------|---|---|---|---|---|---|----|----|----|----|----|----|------------|
| FLENDER Standard Couplings | | | | | | | | | | | | | | | | | |
| Positions 1 to 3 digit, letter, letter | Type | 2 | L | C | | | | | | | | | | | | | |
| Position 4 digit | Coupling design | | | 0 ... 9 | | | | | | | | | | | | | |
| Positions 5 to 6 digits | Series | | | | | | | | | | | | | | | | |
| Positions 7 to 8 digits | Size | | | | | | | | | | | | | | | | |
| Positions 9 and 10 letters | Type, subassembly or component part | | | | | | | | | | | | | | | | |
| Position 11 digit | Shaft-hub connection, flange connection | | | | | | | | | | | | | | | | |
| Position 12 digit | Shaft-hub connection, flange connection, V-belt pulley | | | | | | | | | | | | | | | | |
| Positions 13 to 16 digit, letter, letter, digit | Various details | | | | | | | | | | | | | | | | |
| Bore specifications | Additional order codes for bores finished in delivery condition Ø D1 and Ø D2 Specification of a 9 in the 11th position of the product code (product code without "-Z") with order codes L.. for Ø D1 and/or specification of a 9 in the 12th position of the product code (product code without "-Z") with order codes M.. for Ø D2 Selection of order codes for diameter and tolerance in the following tables under "Bore specifications". | | | | | | | | | | | | | | | | |
| Special types | Additional order codes (product code with "-Z") and, if required, plain text Selection of order codes in this catalog section and in catalog section 13 under "Special types". | | | | | | | | | | | | | | | | - Z |

FLENDER Standard Couplings

Coupling Preselection and Options

Features of the standard type

Features of the standard type

| | |
|--|---|
| Couplings | Features of the standard type |
| All coupling series except ARPEX clamping hubs and FLUDEX with keyway to ASME B17.1 | Bore tolerance H7 |
| ARPEX clamping hubs | Bore tolerance H6 |
| FLUDEX couplings with keyway to ASME B17.1 | Hollow shafts: Bore tolerance K7 Other parts Bore tolerance M7 |
| All coupling series with bore diameter - imperial | Parallel keyway to ASME B17.1 |
| Bore diameter metric in the case of ZAPEX and ARPEX coupling series as well as coupling hubs with applied brake disks or brake drums of the N-EUPEX and RUPEX series | Parallel keyway to DIN 6885-1 keyway width P9 |
| Bore diameter metric in the case of the N-EUPEX, RUPEX, BIPEX, ELPEX-S, ELPEX-B, ELPEX, FLUDEX coupling series | Parallel keyway to DIN 6885-1 keyway width JS9 |
| All coupling series except FLUDEX | Axial locking by means of set screw |
| FLUDEX coupling series | Axial lock by means of set screw or end washer |
| All coupling series | Balancing in accordance with half parallel key standard |
| ZAPEX, ARPEX, N-EUPEX, RUPEX, BIPEX, ELPEX-S, ELPEX-B and ELPEX coupling series | Balancing quality G16 |
| FLUDEX coupling series | Balancing quality G6.3 |
| All series | Unpainted |
| All series | Preservation with cleaning emulsion |
| FLUDEX couplings | Fuse 140 °C |

Ordering examples

- ZAPEX ZWN 230 Variant A, prebored, unbalanced
product code:
2LC0300-5AA11-0AA0
- N-EUPEX A 280 prebored, unbalanced
product code:
2LC0101-3AB11-0AA0
- N-EUPEX A 280
finished bores, keyway to DIN 6885-1 and set screw
Ø D1 = 60H7 mm
Ø D2 = 80H7 mm,
balanced G16 in accordance with half parallel key standard
product code:
2LC0101-3AB99-0AA0
L1E +M1J
- N-EUPEX A 280
finished bore, keyway to DIN 6885-1 and set screw
Ø D1 = 60H7 mm
Ø D2 = 80H7 mm,
in ATEX variant
product code:
2LC0101-3AB99-0AA0-Z
L1E +M1J +X99
- N-EUPEX A 280
finished bore
Ø D1 = 78P6 mm, with keyway to DIN 6885-1 keyway width JS9,
Ø D2 = 3 inch M7 with keyway to ASME B17.1
product code:
2LC0101-3AB99-0AA0-Z
L9Y+M7A+L40+L28+M14
plain text info for L9Y: **78 mm**

The product code can be obtained with the help of PC software **x.CAT**. The coupling can be selected in a product configurator and specified using selection menus.

x.CAT is available for free downloading at
www.flender.com

The installation CD is also available through your Siemens AG contact.

FLENDER Standard Couplings

Coupling Preselection and Options

Bore specifications

Options

Additional order codes for bore specifications
(without “-Z” specification)

Order codes have been specified for the bore specifications. Finished bores can be ordered by specifying code digit **9** in the 11th and/or 12th position of the product code and additionally the supplementary order code for Ø D1 and/or Ø D2 from the following table.

H7 is selected for all coupling series where no bore tolerance is specified.

Bore diameters deviating from the table values must be ordered by stating the code number **9** in the 11th and/or 12th position of the product code, adding “-Z” to the product code and the order code **L9Y** with plain text for the left-hand hub and order code **M9Y** with plain text for the right-hand hub.

| Bore diameter - metric in mm | | | | | | | | |
|------------------------------|------------------------------|------|---------------|------------------------------|------|---------------|------------------------------|------|
| Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | |
| | Ø D1 | Ø D2 | | Ø D1 | Ø D2 | | Ø D1 | Ø D2 |
| 6 | L0A | M0A | 45 | L1A | M1A | 170 | L2A | M2A |
| 7 | L0B | M0B | 48 | L1B | M1B | 180 | L2B | M2B |
| 8 | L0C | M0C | 50 | L1C | M1C | 190 | L2C | M2C |
| 9 | L0D | M0D | 55 | L1D | M1D | 200 | L2D | M2D |
| 10 | L0E | M0E | 60 | L1E | M1E | 220 | L2E | M2E |
| 11 | L0F | M0F | 65 | L1F | M1F | 240 | L2F | M2F |
| 12 | L0G | M0G | 70 | L1G | M1G | 250 | L2G | M2G |
| 14 | L0H | M0H | 75 | L1H | M1H | 260 | L2H | M2H |
| 16 | L0J | M0J | 80 | L1J | M1J | 280 | L2J | M2J |
| 18 | L0K | M0K | 85 | L1K | M1K | 300 | L2K | M2K |
| 19 | L0L | M0L | 90 | L1L | M1L | 320 | L2L | M2L |
| 20 | L0M | M0M | 95 | L1M | M1M | 340 | L2M | M2M |
| 22 | L0N | M0N | 100 | L1N | M1N | 360 | L2N | M2N |
| 24 | L0P | M0P | 105 | L1P | M1P | 380 | L2P | M2P |
| 25 | L0Q | M0Q | 110 | L1Q | M1Q | 400 | L2Q | M2Q |
| 28 | L0R | M0R | 115 | L1R | M1R | 420 | L2R | M2R |
| 30 | L0S | M0S | 120 | L1S | M1S | 440 | L2S | M2S |
| 32 | L0T | M0T | 125 | L1T | M1T | 450 | L2T | M2T |
| 35 | L0U | M0U | 130 | L1U | M1U | 460 | L2U | M2U |
| 38 | L0V | M0V | 140 | L1V | M1V | 480 | L2V | M2V |
| 40 | L0W | M0W | 150 | L1W | M1W | 500 | L2W | M2W |
| 42 | L0X | M0X | 160 | L1X | M1X | | | |

| Bore tolerance to DIN ISO 286 | | | | | | | | |
|-------------------------------|--|------|-------------------------|--|------|-------------------------|--|------|
| Tolerance specification | Order code for specifying bore tolerance | | Tolerance specification | Order code for specifying bore tolerance | | Tolerance specification | Order code for specifying bore tolerance | |
| | Ø D1 | Ø D2 | | Ø D1 | Ø D2 | | Ø D1 | Ø D2 |
| H7 | L10 | M10 | N7 | L15 | M15 | J6 | L24 | M24 |
| F7 | L11 | M11 | P7 | L16 | M16 | K6 | L25 | M25 |
| J7 | L12 | M12 | F6 | L21 | M21 | M6 | L26 | M26 |
| K7 | L13 | M13 | H6 | L22 | M22 | N6 | L27 | M27 |
| M7 | L14 | M14 | G6 | L23 | M23 | P6 | L28 | M28 |
| G7 | L17 | M17 | | | | | | |

FLENDER Standard Couplings

Coupling Preselection and Options

Special types

Options

Special types or order codes (code **-Z** must be appended to product code)

| Special types | Order code for coupling half | | Comment |
|--|------------------------------|----------|------------------------|
| | 1 | 2 | |
| Shaft-hub connection | | | |
| Parallel keyway to DIN 6885 ¹⁾ keyway width JS9 for metric bore diameters | L40 | M40 | |
| Parallel keyway to DIN 6885 ¹⁾ keyway width P9 for metric bore diameters | L41 | M41 | |
| Parallel keyway to ASME B17.1 for imperial bore diameters | L43 | M43 | |
| Two parallel keyways spaced 180° apart | L46 | M46 | |
| Two parallel keyways spaced 120° apart | L47 | M47 | |
| Shrink fit for oil-hydraulic removal | L44 | M44 | |
| Clamp connection with shaft without parallel keyway | L45 | M45 | |
| Shaft journal length as stated in order | Y28 | Y29 | and as stated in order |
| Bore diameters deviating from standard values (11th and/or 12th position in product code - code number 9) | L9Y | M9Y | and as stated in order |
| Balancing - balancing principle | | | |
| Balancing in accordance with half parallel key standard to DIN ISO 8821 | Standard | Standard | before keyseating |
| Balancing in accordance with full parallel key standard to DIN ISO 8821 | L52 | M52 | after keyseating |
| Balancing - balance quality | | | |
| For standard balancing, see page 2/3. | Standard | | |
| For fine balancing, see page 2/3. | W02 | | |
| For micro-balancing, see page 2/3. | W03 | | |
| Documentation, test certificates and acceptances | | | |
| Operating instructions | | | |
| With declaration of compliance with the order acc. to DIN 10204-2.1 | D99 | | |
| With test report acc. to DIN EN 10204-2.2 | D98 | | |
| With inspection certificate for leakage test acc. to DIN EN 10204-3.1 | E36 | | |
| With inspection certificate for fitting dimensions acc. to DIN EN 10204-3.1 | E37 | | |
| With inspection certificate for balancing test acc. to DIN EN 10204-3.1 | E38 | | |
| With inspection certificate for surface crack detection acc. to DIN EN 10204-3.1 | E39 | | |
| With inspection certificate for ultrasonic examination acc. to DIN EN 10204-3.1/3.2 | E40 | | |
| With inspection certificate for coating layer - thickness measurement acc. to DIN EN 10204-3.1 | E41 | | |
| With inspection certificate for chemical analysis, mechanical parameters acc. to DIN EN 10204-3.1/3.2 | E42 | | |
| Acceptance by classification society | On request | | |
| Special ambient conditions | | | |
| ATEX variant with CE marking in accordance with Directive 94/9/EC | X99 | | |

Surface coat

Preservation

| Preservative | Properties | Durability | | Depreservatives | Order code |
|--|-----------------------------------|-----------------|-----------------|--------------------------------|-----------------|
| | | Indoor storage | Outdoor storage | | |
| Cleaning emulsion | Simple preservation | up to 6 months | – | Aqueous cleaners | Standard |
| Spray oil | Anti-corrosion agent | up to 12 months | up to 4 months | Aqueous cleaners, solvents | B31 |
| Tectyl 846 or similar | Long-term preservation, wax-based | up to 36 months | up to 12 months | White spirit, special solvents | B28 |
| Cleaning emulsion + VCI film ²⁾ | Active system, reusable | up to 5 years | up to 5 years | Aqueous cleaners | B34 |

¹⁾ The hub keyways are designed to DIN 6885 Sheet 1 "High Form". On some sizes, which are marked in the dimension tables, the keyway is designed to DIN 6885 Sheet 3 "Low Form".

²⁾ VCI films used as export or long-term packing protect against corrosion. The costly removal of e.g. Tectyl 846 is thus unnecessary.

Torsionally Rigid Gear Couplings ZAPEX ZW Series

4



| | |
|------|--|
| | |
| 4/2 | Overview |
| 4/2 | Benefits |
| 4/2 | Application |
| 4/2 | Design |
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| 4/3 | Technical data |
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| 4/11 | Selection and ordering data |
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| 4/12 | Selection and ordering data |
| 4/13 | Type ZWB |
| 4/13 | Selection and ordering data |
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| 4/18 | Selection and ordering data |
| 4/19 | Multipurpose hubs for ZAPEX ZW Series |
| 4/19 | Selection and ordering data |
| 4/20 | Spare and wear parts |
| 4/20 | Selection and ordering data |

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

General information

Overview



**Coupling suitable for potentially explosive environments.
Complies with Directive 94/9/EC for:**

CE  II 2 GD c 120 °C (T4)

CE  I M2

Benefits

ZAPEX gear couplings link machine shafts and compensate for shaft misalignment with weak restorative forces. High transmissible torque combined with compactness and light weight are characteristic of ZAPEX couplings. ZAPEX coupling types are constructed on a modular principle.

This means that application-specific solutions can be delivered quickly. ZAPEX couplings require very little maintenance. Regular grease or oil changes at the prescribed intervals prolongs the service life of the coupling.

Application

ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry. ZAPEX couplings are suitable for reverse operation and horizontal mounting positions and, in the case of type ZWNV, for vertical mounting positions.

Design

A ZAPEX coupling comprises two hub sections with external teeth which are mounted on the machine shafts. Each set of external teeth engages in a flanged socket with mating internal teeth. The flanged sleeves are connected via two flanges with close-fitting bolts.

The teeth are lubricated with oil or grease. On the ZAPEX type ZW, DUO sealing rings are used to seal the tooth space. The DUO sealing rings prevent the lubricant from escaping and dirt from entering the tooth space. The parallel keyways must be sealed during assembly to prevent lubricant from escaping.

The hubs of the standard types can be easily exchanged for multipurpose hubs. Multipurpose hubs are significantly longer and can be shortened to suit customer requirements. The multipurpose hubs are described after the types.

ZAPEX ZW gear coupling types

| Type | Description |
|------|------------------------------------|
| ZWN | Standard type |
| ZZS | with adapter |
| ZZW | with intermediate shaft |
| ZWH | with coupling sleeve |
| ZWBT | with offset brake disk |
| ZWBG | with straight brake disk |
| ZWB | with brake drum |
| ZWTR | for rope drums |
| ZBR | with shear pins |
| ZWS | Clutch |
| ZWNV | Vertical type |
| ZWSE | Simple clutch-coupling combination |

Further application-related coupling types are available. Dimension sheets for and information on these are available on request.

Function

The torque is transmitted through the coupling teeth. The teeth are crowned, so angular displacement per tooth plane is possible. Radial displacement can be compensated for via the space VA between the tooth planes. The internal teeth of the flanged sleeves are significantly wider than the external teeth of the hub parts, permitting a relatively high axial misalignment.

A small angular misalignment on the coupling teeth results in an advantageous distribution of the lubricant film and a very low wear rate. This favorable condition can be deliberately set by aligning the drive with the machine shafts with a slight radial misalignment.

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZW Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Torsional stiffness | Permitted shaft misalignment |
|------|----------------|------------------|-----------------|----------------|-----------------------------|------------------------------|
| | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} Nm | ZW C_{Tdyn} kNm/rad | ΔK_a mm |
| 112 | 1300 | 2600 | 5200 | 520 | 2000 | 1.0 |
| 128 | 2500 | 5000 | 10000 | 1000 | 3600 | 1.0 |
| 146 | 4300 | 8600 | 17200 | 1720 | 6900 | 1.0 |
| 175 | 7000 | 14000 | 28000 | 2800 | 9360 | 1.0 |
| 198 | 11600 | 23200 | 46400 | 4640 | 15600 | 1.0 |
| 230 | 19000 | 38000 | 76000 | 7600 | 26300 | 1.0 |
| 255 | 27000 | 54000 | 108000 | 10800 | 33400 | 1.5 |
| 290 | 39000 | 78000 | 156000 | 15600 | 44000 | 1.5 |
| 315 | 54000 | 108000 | 216000 | 21600 | 64100 | 1.5 |
| 342 | 69000 | 138000 | 276000 | 27600 | 81600 | 1.5 |
| 375 | 98000 | 196000 | 392000 | 39200 | 115600 | 1.5 |
| 415 | 130000 | 260000 | 520000 | 52000 | 106000 | 1.5 |
| 465 | 180000 | 360000 | 720000 | 72000 | 134600 | 2.0 |
| 505 | 250000 | 500000 | 1000000 | 100000 | 168700 | 2.0 |
| 545 | 320000 | 640000 | 1280000 | 128000 | 216900 | 2.0 |
| 585 | 400000 | 800000 | 1600000 | 160000 | 263200 | 2.0 |
| 640 | 510000 | 1020000 | 2040000 | 204000 | 356000 | 2.0 |
| 690 | 660000 | 1320000 | 2640000 | 264000 | 431000 | 2.0 |
| 730 | 790000 | 1580000 | 3160000 | 316000 | 538000 | 2.0 |
| 780 | 1000000 | 2000000 | 4000000 | 400000 | 696000 | 3.0 |
| 852 | 1200000 | 2400000 | 4800000 | 480000 | 926000 | 3.0 |
| 910 | 1600000 | 3200000 | 6400000 | 640000 | 1118000 | 3.0 |
| 1020 | 1900000 | 3800000 | 7600000 | 760000 | 1339000 | 3.0 |
| 1080 | 2200000 | 4400000 | 8800000 | 880000 | 1605000 | 3.0 |
| 1150 | 2700000 | 5400000 | 10800000 | 1080000 | 2120000 | 3.0 |
| 1160 | 3350000 | 6700000 | 13400000 | 1340000 | 2474000 | 3.0 |
| 1240 | 3800000 | 7600000 | 15200000 | 1520000 | 3079000 | 3.0 |
| 1310 | 4600000 | 9200000 | 18400000 | 1840000 | 3693000 | 4.0 |
| 1380 | 5300000 | 10600000 | 21200000 | 2120000 | 4383000 | 4.0 |
| 1440 | 6250000 | 12500000 | 25000000 | 2500000 | 5056000 | 4.0 |
| 1540 | 7200000 | 14400000 | 28800000 | 2880000 | 6115000 | 4.0 |

In the case of type ZWTR, the rated torques which deviate from the above are specified in the dimension table.

The stated torsional stiffness "ZW" applies to coupling types ZWN and ZWNV.

Torsional stiffness of the remaining types on request.

The axial misalignment ΔK_a must be understood as the maximum permitted enlargement of the hub distance S of the coupling.

Angular misalignment ΔK_W

- Types ZWN, ZZS, ZZW, ZWH, ZWB, ZBR, ZWS: $\Delta K_W = 1^\circ$
- Types ZWBT and ZWBG: $\Delta K_W = 0.2^\circ$
- Type ZWSE: $\Delta K_W = 0.4^\circ$

Radial misalignment ΔK_r

- Types ZWN, ZZS, ZZW, ZWH, ZWB, ZBR, ZWS and ZWSE:
 $\Delta K_r \leq VA \cdot \tan 1^\circ$
- Types ZWBT and ZWBG: $\Delta K_r \leq VA \cdot \tan 0.2^\circ$

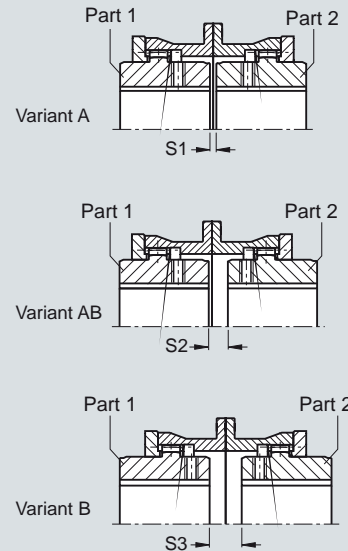
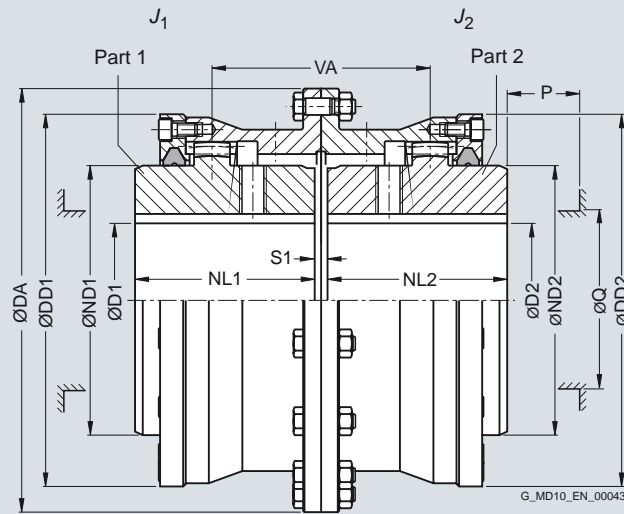
For the tooth distance VA, see the relevant table for the subassembly.

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWN

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A, AB, B.

After the finished bore has been drilled, the variant can no longer be changed.

| Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight | |
|------------------|-----------------|-----------------------|------------------------------|------|-----|-------------|-------------|-------------|----|-----|-----|-----|-----|------------------------------|------------------|---|------|
| Size | Rated torque | Maxi- mum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S1 | S2 | S3 | VA | Q | P | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | | | | kgm ² | | kg |
| 112 | 1300 | 9400 | 0 | 45 | 143 | 65 | 50 | 110 | 6 | - | - | 56 | 45 | 35 | 0.006 | 2LC0300-0A ■■■-0AA0 | 6.2 |
| 128 | 2500 | 8300 | 0 | 55 | 157 | 80 | 60 | 128 | 6 | 13 | 20 | 73 | 60 | 45 | 0.014 | 2LC0300-1A ■■■-0AA0 | 8.4 |
| 146 | 4300 | 7300 | 0 | 65 | 177 | 95 | 75 | 146 | 6 | 13 | 20 | 88 | 75 | 45 | 0.022 | 2LC0300-2A ■■■-0AA0 | 12 |
| 175 | 7000 | 6400 | 0 | 80 | 215 | 112 | 90 | 175 | 8 | 14 | 20 | 104 | 85 | 50 | 0.052 | 2LC0300-3A ■■■-0AA0 | 20.5 |
| 198 | 11600 | 5500 | 0 | 95 | 237 | 135 | 100 | 198 | 8 | 19 | 30 | 119 | 110 | 50 | 0.089 | 2LC0300-4A ■■■-0AA0 | 28.5 |
| 230 | 19000 | 4700 | 0 | 110 | 265 | 160 | 110 | 230 | 8 | 20 | 32 | 130 | 135 | 50 | 0.16 | 2LC0300-5A ■■■-0AA0 | 41 |
| 255 | 27000 | 4100 | 0 | 125 | 294 | 185 | 125 | 255 | 10 | 25 | 40 | 150 | 160 | 50 | 0.27 | 2LC0300-6A ■■■-0AA0 | 56 |
| 290 | 39000 | 3700 | 70 | 145 | 330 | 210 | 140 | 290 | 10 | 30 | 50 | 170 | 180 | 60 | 0.52 | 2LC0300-7A ■■■-0AA0 | 83 |
| 315 | 54000 | 3300 | 80 | 160 | 366 | 230 | 160 | 315 | 10 | 30 | 50 | 190 | 200 | 60 | 0.84 | 2LC0300-8A ■■■-0AA0 | 110 |
| 342 | 69000 | 3000 | 90 | 180 | 392 | 255 | 180 | 340 | 12 | 42 | 72 | 222 | 225 | 60 | 1.3 | 2LC0301-0A ■■■-0AA0 | 140 |
| 375 | 98000 | 2700 | 100 | 200 | 430 | 290 | 200 | 375 | 12 | 42 | 72 | 242 | 260 | 60 | 2.1 | 2LC0301-1A ■■■-0AA0 | 195 |
| 415 | 130000 | 2500 | 120 | 220 | 478 | 320 | 220 | 415 | 12 | 74 | 136 | 294 | 285 | 80 | 3.3 | 2LC0301-2A ■■■-0AA0 | 250 |
| 465 | 180000 | 2200 | 140 | 250 | 528 | 360 | 240 | 465 | 16 | 96 | 176 | 336 | 325 | 80 | 5.5 | 2LC0301-3A ■■■-0AA0 | 330 |
| 505 | 250000 | 2000 | 160 | 275 | 568 | 400 | 260 | 505 | 16 | 106 | 196 | 366 | 365 | 80 | 8.1 | 2LC0301-4A ■■■-0AA0 | 420 |
| 545 | 320000 | 1800 | 180 | 300 | 620 | 440 | 280 | 545 | 16 | 126 | 236 | 406 | 405 | 80 | 12.5 | 2LC0301-5A ■■■-0AA0 | 560 |
| 585 | 400000 | 1700 | 210 | 330 | 660 | 480 | 310 | 585 | 20 | 150 | 280 | 460 | 445 | 80 | 18.5 | 2LC0301-6A ■■■-0AA0 | 700 |
| 640 | 510000 | 1600 | 230 | 330 | 738 | 480 | 330 | 640 | 20 | 149 | 278 | 479 | 445 | 90 | 26 | 2LC0301-7A ■■■-0AA0 | 860 |
| | | | >330 | 360 | | 520 | | | | | | | | | 29 | | 890 |
| 690 | 660000 | 1450 | 250 | 360 | 788 | 520 | 350 | 690 | 20 | 166 | 312 | 516 | 475 | 90 | 37 | 2LC0301-8A ■■■-0AA0 | 1050 |
| | | | >360 | 390 | | 560 | | | | | | | | | 41 | | 1050 |
| 730 | 790000 | 1350 | 275 | 390 | 834 | 560 | 380 | 730 | 20 | 180 | 340 | 560 | 515 | 90 | 52 | 2LC0302-0A ■■■-0AA0 | 1250 |
| | | | >390 | 415 | | 600 | | | | | | | | | 56 | | 1350 |
| 780 | 1000000 | 1250 | 300 | 415 | 900 | 600 | 400 | 780 | 25 | 176 | 327 | 576 | 555 | 110 | 71 | 2LC0302-1A ■■■-0AA0 | 1550 |
| | | | >415 | 450 | | 650 | | | | | | | | | 83 | | 1650 |
| 852 | 1200000 | 1150 | 325 | 450 | 970 | 650 | 420 | 850 | 25 | 185 | 345 | 605 | 595 | 110 | 105 | 2LC0302-2A ■■■-0AA0 | 1950 |
| | | | >450 | 490 | | 710 | | | | | | | | | 115 | | 2050 |

Variant:

- A
- B
- AB

A
B
C

ØD1:

- Without finished bore – Without order codes
- Without finished bore from size 640 for 2nd diameter range D1 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

ØD2:

- Without finished bore – Without order codes
- Without finished bore from size 640 for 2nd diameter range D2 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

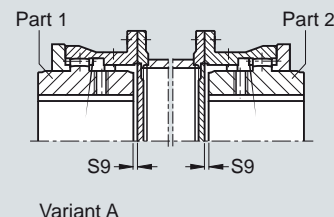
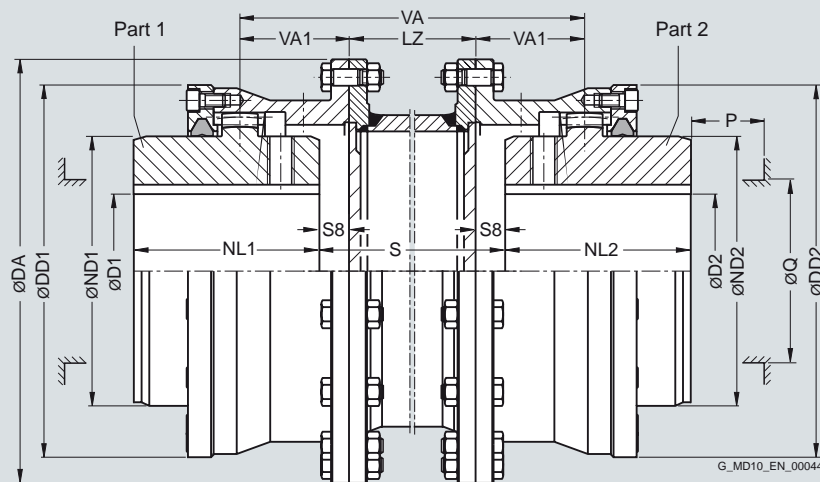
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2
9

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZZS

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A and B.

After the finished bore has been drilled, the variant can no longer be changed.

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S8 | S9 | VA1 | Q | P | LZ min. | Product code Plain text required for dimension S Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|---------|------------------------------------|--|------|-----|-------------|-------------|-------------|-----|----|------|-----|----|----------------|---|-------------------------------------|-----------|
| | | min. | max. | | | | | | | | | | | | m each 100 mm pipe kg | m kg |
| 112 | 1300 | 0 | 45 | 143 | 65 | 50 | 110 | 3 | 3 | 28 | 45 | 35 | 120 | 2LC0300-0A ■■■ -0AZ0 Q0Y | 0.8 | 10 |
| 128 | 2500 | 0 | 55 | 157 | 80 | 60 | 128 | 10 | 3 | 36.5 | 60 | 45 | 120 | 2LC0300-1A ■■■ -0AZ0 Q0Y | 1.3 | 13 |
| 146 | 4300 | 0 | 65 | 177 | 95 | 75 | 146 | 10 | 3 | 44 | 75 | 45 | 120 | 2LC0300-2A ■■■ -0AZ0 Q0Y | 1.8 | 18 |
| 175 | 7000 | 0 | 80 | 215 | 112 | 90 | 175 | 10 | 4 | 52 | 85 | 50 | 130 | 2LC0300-3A ■■■ -0AZ0 Q0Y | 2.3 | 29 |
| 198 | 11600 | 0 | 95 | 237 | 135 | 100 | 198 | 15 | 4 | 59.5 | 110 | 50 | 130 | 2LC0300-4A ■■■ -0AZ0 Q0Y | 3.5 | 39 |
| 230 | 19000 | 0 | 110 | 265 | 160 | 110 | 230 | 16 | 4 | 65 | 135 | 50 | 130 | 2LC0300-5A ■■■ -0AZ0 Q0Y | 4.5 | 53 |
| 255 | 27000 | 0 | 125 | 294 | 185 | 125 | 255 | 20 | 5 | 75 | 160 | 50 | 140 | 2LC0300-6A ■■■ -0AZ0 Q0Y | 6.3 | 76 |
| 290 | 39000 | 70 | 145 | 330 | 210 | 140 | 290 | 25 | 5 | 85 | 180 | 60 | 140 | 2LC0300-7A ■■■ -0AZ0 Q0Y | 7.2 | 105 |
| 315 | 54000 | 80 | 160 | 366 | 230 | 160 | 315 | 25 | 5 | 95 | 200 | 60 | 180 | 2LC0300-8A ■■■ -0AZ0 Q0Y | 9.1 | 145 |
| 342 | 69000 | 90 | 180 | 392 | 255 | 180 | 340 | 36 | 6 | 111 | 225 | 60 | 180 | 2LC0301-0A ■■■ -0AZ0 Q0Y | 12 | 185 |
| 375 | 98000 | 100 | 200 | 430 | 290 | 200 | 375 | 36 | 6 | 121 | 260 | 60 | 180 | 2LC0301-1A ■■■ -0AZ0 Q0Y | 15 | 250 |
| 415 | 130000 | 120 | 220 | 478 | 320 | 220 | 415 | 68 | 6 | 147 | 285 | 80 | 200 | 2LC0301-2A ■■■ -0AZ0 Q0Y | 17 | 320 |
| 465 | 180000 | 140 | 250 | 528 | 360 | 240 | 465 | 88 | 8 | 168 | 325 | 80 | 200 | 2LC0301-3A ■■■ -0AZ0 Q0Y | 19 | 420 |
| 505 | 250000 | 160 | 275 | 568 | 400 | 260 | 505 | 98 | 8 | 183 | 365 | 80 | 200 | 2LC0301-4A ■■■ -0AZ0 Q0Y | 24 | 520 |
| 545 | 320000 | 180 | 300 | 620 | 440 | 280 | 545 | 118 | 8 | 203 | 405 | 80 | 220 | 2LC0301-5A ■■■ -0AZ0 Q0Y | 30 | 710 |
| 585 | 400000 | 210 | 330 | 660 | 480 | 310 | 585 | 140 | 10 | 230 | 445 | 80 | 220 | 2LC0301-6A ■■■ -0AZ0 Q0Y | 33 | 870 |
| Variant | | <div><div>• A</div><div>• B</div></div> | | | | | | | | | | | | D | | |
| ØD1: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | E | 1 | |
| ØD2: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | 1 | |
| | | | | | | | | | | | | | | | 9 | |

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZZS

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S8 | S9 | VA1 | Q | P | LZ min. | Product code Plain text required for dimension S Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|-------------|------------------------------------|------------------------------|------|------|-------------|-------------|-------------|-----|------|-------|------|-----|----------------|---|------------------------|------|
| | | D1, D2 Keyway DIN 6885 | | | | | | | | | | | | | m | m |
| | | min. | max. | | | | | | | | | | | | each 100 mm pipe | kg |
| 640 | 510000 | 230 | 330 | 738 | 480 | 330 | 640 | 139 | 10 | 239.5 | 445 | 90 | 250 | 2LC0301-7A ■■■ -0AZ0 Q0Y | 39 | 1100 |
| | | >330 | 360 | | 520 | | | | | | | | | | | 1120 |
| 690 | 660000 | 250 | 360 | 788 | 520 | 350 | 690 | 156 | 10 | 258 | 475 | 90 | 250 | 2LC0301-8A ■■■ -0AZ0 Q0Y | 45 | 1500 |
| | | >360 | 390 | | 560 | | | | | | | | | | | 1400 |
| 730 | 790000 | 275 | 390 | 834 | 560 | 380 | 730 | 170 | 10 | 280 | 515 | 90 | 250 | 2LC0302-0A ■■■ -0AZ0 Q0Y | | |
| | | >390 | 415 | | 600 | | | | | | | | | | | |
| 780 | 1000000 | 300 | 415 | 900 | 600 | 400 | 780 | 163 | 12.5 | 288 | 555 | 110 | 280 | 2LC0302-1A ■■■ -0AZ0 Q0Y | | |
| | | >415 | 450 | | 650 | | | | | | | | | | | |
| 852 | 1200000 | 325 | 450 | 970 | 650 | 420 | 850 | 172 | 12.5 | 302.5 | 595 | 110 | 280 | 2LC0302-2A ■■■ -0AZ0 Q0Y | | |
| | | >450 | 490 | | 710 | | | | | | | | | | | |
| 910 | 1600000 | 35 | 490 | 1030 | 710 | 450 | 910 | 202 | 12.5 | 332.5 | 655 | 110 | 280 | 2LC0302-3A ■■■ -0AZ0 Q0Y | | |
| | | >490 | 520 | | 750 | | | | | | | | | | | |
| 1020 | 1900000 | 375 | 520 | 1112 | 750 | 480 | 1020 | 200 | 12.5 | 346.5 | 695 | 130 | 380 | 2LC0302-4A ■■■ -0AZ0 Q0Y | | |
| | | >520 | 550 | | 800 | | | | | | | | | | | |
| 1080 | 2200000 | 400 | 550 | 1162 | 800 | 500 | 1080 | 211 | 15 | 363 | 735 | 135 | 380 | 2LC0302-5A ■■■ -0AZ0 Q0Y | | |
| | | >550 | 600 | | 860 | | | | | | | | | | | |
| 1150 | 2700000 | 425 | 600 | 1222 | 860 | 520 | 1150 | 223 | 15 | 379 | 795 | 135 | 380 | 2LC0302-6A ■■■ -0AZ0 Q0Y | | |
| | | >600 | 650 | | 930 | | | | | | | | | | | |
| 1160 | 3350000 | 450 | 600 | 1292 | 860 | 550 | 1160 | 245 | 15 | 405 | 795 | 135 | 380 | 2LC0302-7A ■■■ -0AZ0 Q0Y | | |
| | | >600 | 650 | | 930 | | 1160 | | | | | | | | | |
| | | >650 | 690 | | 990 | | 1210 | | | | | | | | | |
| 1240 | 3800000 | 475 | 650 | 1400 | 930 | 580 | 1240 | 235 | 15 | 415 | 865 | 155 | 400 | 2LC0302-8A ■■■ -0AZ0 Q0Y | | |
| | | >650 | 690 | | 990 | | 1240 | | | | | | | | | |
| | | >690 | 730 | | 1055 | | 1290 | | | | | | | | | |
| 1310 | 4600000 | 500 | 650 | 1470 | 930 | 610 | 1310 | 247 | 17.5 | 437.5 | 850 | 155 | 400 | 2LC0303-0A ■■■ -0AZ0 Q0Y | | |
| | | >650 | 690 | | 990 | | 1310 | | | | | | | | | |
| | | >690 | 730 | | 1055 | | 1310 | | | | | | | | | |
| | | >730 | 780 | | 1120 | | 1370 | | | | | | | | | |
| 1380 | 5300000 | 525 | 690 | 1540 | 990 | 640 | 1380 | 257 | 17.5 | 457.5 | 910 | 155 | 400 | 2LC0303-1A ■■■ -0AZ0 Q0Y | | |
| | | >690 | 730 | | 1055 | | 1380 | | | | | | | | | |
| | | >730 | 780 | | 1120 | | 1380 | | | | | | | | | |
| | | >780 | 810 | | 1170 | | 1430 | | | | | | | | | |
| 1440 | 6250000 | 550 | 730 | 1600 | 1055 | 670 | 1440 | 277 | 17.5 | 482.5 | 975 | 155 | 400 | 2LC0303-2A ■■■ -0AZ0 Q0Y | | |
| | | >730 | 780 | | 1120 | | 1440 | | | | | | | | | |
| | | >780 | 810 | | 1170 | | 1440 | | | | | | | | | |
| | | >810 | 860 | | 1240 | | 1510 | | | | | | | | | |
| 1540 | 7200000 | 575 | 780 | 1710 | 1120 | 700 | 1540 | 257 | 17.5 | 487.5 | 1030 | 175 | 600 | 2LC0303-3A ■■■ -0AZ0 Q0Y | | |
| | | >780 | 810 | | 1170 | | 1540 | | | | | | | | | |
| | | >810 | 860 | | 1240 | | 1540 | | | | | | | | | |
| | | >860 | 910 | | 1310 | | 1610 | | | | | | | | | |

| Variant | • A • B | D E |
|---------|--|--------|
| ØD1: | • Without finished bore – Without order codes | 1 |
| | • Without finished bore from size 640 for 2nd diameter range D1 – Without order codes | 2 |
| | • Without finished bore from size 1160 for 3rd diameter range D1 – Without order codes | 3 |
| | • Without finished bore from size 1310 for 4th diameter range D1 – Without order codes | 4 |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |
| ØD2: | • Without finished bore – Without order codes | 1 |
| | • Without finished bore from size 640 for 2nd diameter range D2 – Without order codes | 2 |
| | • Without finished bore from size 1160 for 3rd diameter range D2 – Without order codes | 3 |
| | • Without finished bore from size 1310 for 4th diameter range D2 – Without order codes | 4 |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |

Up to size 505, without adapter, available from FLENDER stocks.

Weights from size 730 on request.

$VA = 2 \cdot VA1 + LZ$

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings.

Mass moments of inertia on request.

Weights apply to maximum bores and an adapter length of LZ min.

Maximum speed, limited by weight and critical adapter speed, on request.

Ordering example:

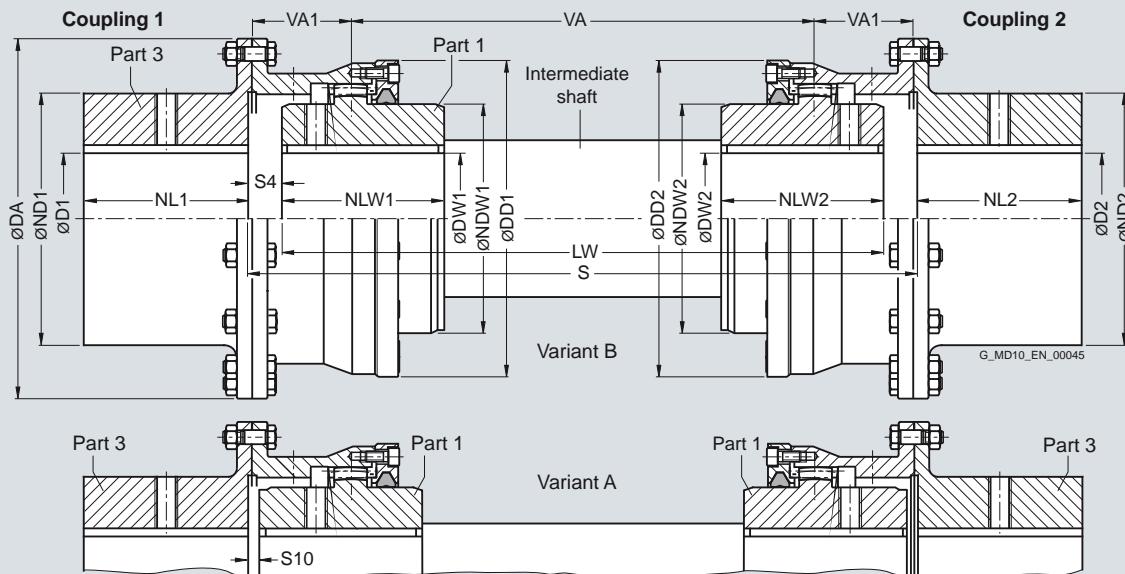
Product code: **2LC0300-2AE99-0AZ0-Z**
LOW+M1A+Q0Y+M13
plain text to Q0Y: **250 mm**

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZZW

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A and B.

After the finished bore has been drilled, the variant can no longer be changed.

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | D1, D2 Keyway DIN 6885 | DA | ND1/ ND2 | NL1/ NL2/ NLW1/ NLW2 | DW1, DW2 Keyway DIN 6885 | NDW1/ NDW2 | DD1/ DD2 | S4 | S10 | VA1 | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight <i>m</i> kg |
|------|--------------------------------|------------------|------|------------------------------|-----|-------------|-------------------------------|--------------------------------|---------------|-------------|-------|------|-------|---|--------------------------|
| | | min. | max. | | | | | min. | max. | | | | | | |
| 112 | 1300 | 20 | 55 | 143 | 80 | 50 | 0 | 45 | 65 | 110 | 12.5 | 12.5 | 37.5 | 2LC0300-0B ■■■-0AA0 | 5.4 |
| 128 | 2500 | 25 | 65 | 157 | 95 | 60 | 0 | 55 | 80 | 128 | 12.5 | 5.5 | 39 | 2LC0300-1B ■■■-0AA0 | 6.9 |
| 146 | 4300 | 30 | 80 | 177 | 112 | 75 | 0 | 65 | 95 | 146 | 12.5 | 5.5 | 46.5 | 2LC0300-2B ■■■-0AA0 | 10.5 |
| 175 | 7000 | 35 | 95 | 215 | 135 | 90 | 0 | 80 | 112 | 175 | 12.5 | 6.5 | 54.5 | 2LC0300-3B ■■■-0AA0 | 17.5 |
| 198 | 11600 | 40 | 110 | 237 | 160 | 100 | 0 | 95 | 135 | 198 | 17.5 | 6.5 | 62 | 2LC0300-4B ■■■-0AA0 | 25 |
| 230 | 19000 | 50 | 125 | 265 | 185 | 110 | 0 | 110 | 160 | 230 | 18.5 | 6.5 | 67.5 | 2LC0300-5B ■■■-0AA0 | 36 |
| 255 | 27000 | 60 | 145 | 294 | 210 | 125 | 0 | 125 | 185 | 255 | 23.5 | 8.5 | 78.5 | 2LC0300-6B ■■■-0AA0 | 50 |
| 290 | 39000 | 70 | 160 | 330 | 230 | 140 | 70 | 145 | 210 | 290 | 28.5 | 8.5 | 88.5 | 2LC0300-7B ■■■-0AA0 | 71 |
| 315 | 54000 | 80 | 180 | 366 | 255 | 160 | 80 | 160 | 230 | 315 | 28.5 | 8.5 | 98.5 | 2LC0300-8B ■■■-0AA0 | 99 |
| 342 | 69000 | 90 | 200 | 392 | 290 | 180 | 90 | 180 | 255 | 340 | 39.5 | 9.5 | 114.5 | 2LC0301-0B ■■■-0AA0 | 130 |
| 375 | 98000 | 100 | 220 | 430 | 320 | 200 | 100 | 200 | 290 | 375 | 39.5 | 9.5 | 124.5 | 2LC0301-1B ■■■-0AA0 | 175 |
| 415 | 130000 | 120 | 250 | 478 | 360 | 220 | 120 | 220 | 320 | 415 | 71.5 | 9.5 | 150.5 | 2LC0301-2B ■■■-0AA0 | 230 |
| 465 | 180000 | 140 | 275 | 528 | 400 | 240 | 140 | 250 | 360 | 465 | 91.5 | 11.5 | 171.5 | 2LC0301-3B ■■■-0AA0 | 310 |
| 505 | 250000 | 160 | 300 | 568 | 440 | 260 | 160 | 275 | 400 | 505 | 102.5 | 12.5 | 187.5 | 2LC0301-4B ■■■-0AA0 | 400 |
| 545 | 320000 | 180 | 330 | 620 | 480 | 280 | 180 | 300 | 440 | 545 | 122.5 | 12.5 | 207.5 | 2LC0301-5B ■■■-0AA0 | 520 |
| 585 | 400000 | 210 | 330 | 660 | 480 | 310 | 210 | 330 | 480 | 585 | 144.5 | 14.5 | 234.5 | 2LC0301-6B ■■■-0AA0 | 610 |
| | | >330 | 360 | | 520 | | | | | | | | | | 640 |
| 640 | 510000 | 230 | 360 | 738 | 520 | 330 | 230 | 330 | 480 | 640 | 143.5 | 14.5 | 244 | 2LC0301-7B ■■■-0AA0 | 780 |
| | | >360 | 390 | | 560 | | >330 | 360 | 520 | | | | | | 830 |
| 690 | 660000 | 250 | 390 | 788 | 560 | 350 | 250 | 360 | 520 | 690 | 160.5 | 14.5 | 262.5 | 2LC0301-8B ■■■-0AA0 | 910 |
| | | >390 | 415 | | 600 | | >360 | 390 | 560 | | | | | | 1000 |
| 730 | 790000 | 275 | 415 | 834 | 600 | 380 | 275 | 390 | 560 | 730 | 176 | 16 | 286 | 2LC0302-0B ■■■-0AA0 | 1150 |
| | | >415 | 450 | | 650 | | >390 | 415 | 600 | | | | | | 1250 |
| 780 | 1000000 | 300 | 450 | 900 | 650 | 400 | 300 | 415 | 600 | 780 | 171 | 20.5 | 296 | 2LC0302-1B ■■■-0AA0 | 1450 |
| | | >450 | 490 | | 710 | | >415 | 450 | 650 | | | | | | 1550 |
| 852 | 1200000 | 325 | 490 | 970 | 710 | 420 | 325 | 450 | 650 | 850 | 180 | 20.5 | 310.5 | 2LC0302-2B ■■■-0AA0 | 1750 |
| | | >490 | 520 | | 750 | | >450 | 490 | 710 | | | | | | 1850 |

Variant:

- A
- B

D
E

ØD1:

- Without finished bore – Without order codes
- Without finished bore from size 585 for 2nd diameter range D1 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

ØD2:

- Without finished bore – Without order codes
- Without finished bore from size 585 for 2nd diameter range D2 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

FLENDER Standard Couplings **Torsionally Rigid Gear Couplings - ZAPEX ZW Series**

Type ZZW

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | DA | ND1/ ND2 | NL1/ NL2/ NLW1/ NLW2 | DW1, DW2 Keyway DIN 6885 | | NDW1/ NDW2 | DD1/ DD2 | S4 | S10 | VA1 | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight <i>m</i> kg |
|-------------|--------------------------------|------------------|------|------|-------------|-------------------------------|--------------------------------|------|---------------|-------------|-----|------|-------|---|--------------------------|
| | | min. | max. | | | | min. | max. | | | | | | | |
| 910 | 1600000 | 350 | 520 | 1030 | 750 | 450 | 350 | 490 | 710 | 910 | 210 | 20.5 | 340.5 | 2LC0302-3B ■■■■-0AA0 | 2150 |
| | | >520 | 550 | | 800 | | >490 | 520 | | | | | | | 2250 |
| 1020 | 1900000 | 375 | 550 | 1112 | 800 | 480 | 375 | 520 | 750 | 1020 | 210 | 22.5 | 356.5 | 2LC0302-4B ■■■■-0AA0 | 2650 |
| | | >550 | 600 | | 860 | | >520 | 550 | | | | | | | 2800 |
| 1080 | 2200000 | 400 | 600 | 1162 | 860 | 500 | 400 | 550 | 800 | 1080 | 221 | 25 | 373 | 2LC0302-5B ■■■■-0AA0 | 3000 |
| | | >600 | 650 | | 930 | | >550 | 600 | | | | | | | 3300 |
| 1150 | 2700000 | 425 | 600 | 1222 | 860 | 520 | 425 | 600 | 860 | 1150 | 233 | 25 | 389 | 2LC0302-6B ■■■■-0AA0 | 3500 |
| | | >600 | 650 | | 930 | | >425 | 600 | | | | | | | 3600 |
| | | >650 | 690 | | 990 | | >600 | 650 | | | | | | | 3800 |
| 1160 | 3350000 | 450 | 650 | 1292 | 930 | 550 | 450 | 600 | 860 | 1160 | 255 | 25 | 415 | 2LC0302-7B ■■■■-0AA0 | 4000 |
| | | >650 | 690 | | 990 | | >600 | 650 | | | | | | | 4200 |
| | | >690 | 730 | | 1055 | | >650 | 690 | | | | | | | 4600 |
| | | | | | | | | | | | | | | | |
| 1240 | 3800000 | 475 | 650 | 1400 | 930 | 580 | 475 | 650 | 930 | 1240 | 245 | 25 | 425 | 2LC0302-8B ■■■■-0AA0 | 4700 |
| | | >650 | 690 | | 990 | | 475 | 650 | | | | | | | 4900 |
| | | >690 | 730 | | 1055 | | >650 | 690 | | | | | | | 5200 |
| | | >730 | 780 | | 1120 | | >690 | 730 | | | | | | | 5600 |
| | | | | | | | | | | | | | | | |
| 1310 | 4600000 | 500 | 690 | 1470 | 990 | 610 | 500 | 650 | 930 | 1310 | 258 | 28.5 | 448.5 | 2LC0303-0B ■■■■-0AA0 | 5500 |
| | | >690 | 730 | | 1055 | | >650 | 690 | | | | | | | 5800 |
| | | >730 | 780 | | 1120 | | >690 | 730 | | | | | | | 6100 |
| | | >780 | 810 | | 1170 | | >730 | 780 | | | | | | | 6600 |
| | | | | | | | | | | | | | | | |
| 1380 | 5300000 | 525 | 730 | 1540 | 1055 | 640 | 525 | 690 | 990 | 1380 | 268 | 28.5 | 468.5 | 2LC0303-1B ■■■■-0AA0 | 6400 |
| | | >730 | 780 | | 1120 | | >690 | 730 | | | | | | | 6700 |
| | | >780 | 810 | | 1170 | | >730 | 780 | | | | | | | 7100 |
| | | >810 | 860 | | 1240 | | >780 | 810 | | | | | | | 7400 |
| | | | | | | | | | | | | | | | |
| 1440 | 6250000 | 550 | 780 | 1600 | 1120 | 670 | 550 | 730 | 1055 | 1440 | 288 | 28.5 | 493.5 | 2LC0303-2B ■■■■-0AA0 | 7400 |
| | | >780 | 810 | | 1170 | | >730 | 780 | | | | | | | 7600 |
| | | >810 | 860 | | 1240 | | >780 | 810 | | | | | | | 8000 |
| | | >860 | 910 | | 1310 | | >810 | 860 | | | | | | | 8600 |
| | | | | | | | | | | | | | | | |
| 1540 | 7200000 | 575 | 810 | 1710 | 1170 | 700 | 575 | 780 | 1120 | 1540 | 268 | 28.5 | 498.5 | 2LC0303-3B ■■■■-0AA0 | 8600 |
| | | 575 | 810 | | 1170 | | >780 | 810 | | | | | | | 8700 |
| | | >810 | 860 | | 1240 | | >810 | 860 | | | | | | | 9200 |
| | | >860 | 960 | | 1390 | | >860 | 910 | | | | | | | 10500 |
| | | | | | | | | | | | | | | | |

| | | |
|----------|---|----------|
| Variant: | <ul style="list-style-type: none"> • A • B | D |
| ØD1: | <ul style="list-style-type: none"> • Without finished bore – Without order codes • Without finished bore from size 585 for 2nd diameter range D1 – Without order codes • Without finished bore from size 1150 for 3rd diameter range D1 – Without order codes • Without finished bore from size 1240 for 4th diameter range D1 – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | E |
| ØD2: | <ul style="list-style-type: none"> • Without finished bore – Without order codes • Without finished bore from size 585 for 2nd diameter range D2 – Without order codes • Without finished bore from size 1150 for 3rd diameter range D2 – Without order codes • Without finished bore from size 1240 for 4th diameter range D2 – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | |

$$VA = S - 2 \cdot VA1$$

Mass moments of inertia on request.

Weights apply to either coupling 1 or 2 with maximum bore diameter, without intermediate shaft.

Maximum speed, limited by weight and critical speed of intermediate shaft, on request.

Ordering example:

Coupling ZZW consisting of coupling 1, intermediate shaft, coupling 2

Coupling 1:

ZAPEX ZZW coupling, size 146, variant B,
Part 3: Bore D1 = 45K7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 1: Bore DW1 = 45H7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

2LC0300-2BE99-0AA0-Z
L1A+M1A+M13

Intermediate shaft:

Intermediate shaft for ZAPEX coupling ZZW, size 146, length LW = 570 mm, for shaft distance S = 595 mm shaft journal Ø45p6 x 75 long; keyway DIN 6885-1.

Product code:

2LC0308-8XX00-0AA0-Z

Y99

plain text to Y99: **DW1 = 45p6 mm, NLW1 = 75 mm, DW2 = 45p6 mm, NLW2 = 75 mm, LW = 570 mm**

Coupling 2:

ZAPEX ZZW coupling, size 146, variant B,
Part 1: Bore DW2 = 45H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 3: Bore D2 = 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

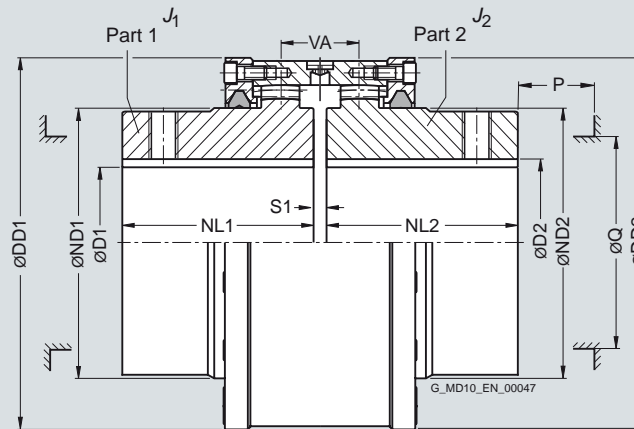
2LC0300-2BE99-0AA0-Z
L1A+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWH

Selection and ordering data



| | | | Dimensions in mm | | | | | | | | | Mass moment of inertia | Product code | Weight |
|------|--|-------------------|------------------------|------|----------|----------|----------|----|-----|-----|----|------------------------|--|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S1 | VA | Q | P | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | kgm ² | | kg |
| 112 | 1300 | 9400 | 0 | 45 | 65 | 50 | 110 | 6 | 28 | 45 | 35 | 0.003 | 2LC0300-0BB ■ ■ -0AA0 | 4.0 |
| 128 | 2500 | 8300 | 0 | 55 | 80 | 60 | 128 | 6 | 30 | 60 | 45 | 0.007 | 2LC0300-1BB ■ ■ -0AA0 | 5.7 |
| 146 | 4300 | 7300 | 0 | 65 | 95 | 75 | 146 | 6 | 33 | 75 | 45 | 0.013 | 2LC0300-2BB ■ ■ -0AA0 | 8.6 |
| 175 | 7000 | 6400 | 0 | 80 | 112 | 90 | 175 | 8 | 46 | 85 | 50 | 0.032 | 2LC0300-3BB ■ ■ -0AA0 | 15.5 |
| 198 | 11600 | 5500 | 0 | 95 | 135 | 100 | 198 | 8 | 48 | 110 | 50 | 0.059 | 2LC0300-4BB ■ ■ -0AA0 | 21.5 |
| 230 | 19000 | 4700 | 0 | 110 | 160 | 110 | 230 | 8 | 50 | 135 | 50 | 0.11 | 2LC0300-5BB ■ ■ -0AA0 | 33 |
| 255 | 27000 | 4100 | 0 | 125 | 185 | 125 | 255 | 10 | 55 | 160 | 50 | 0.21 | 2LC0300-6BB ■ ■ -0AA0 | 45 |
| 290 | 39000 | 3700 | 70 | 145 | 210 | 140 | 290 | 10 | 58 | 180 | 60 | 0.38 | 2LC0300-7BB ■ ■ -0AA0 | 67 |
| 315 | 54000 | 3300 | 80 | 160 | 230 | 160 | 315 | 10 | 62 | 200 | 60 | 0.59 | 2LC0300-8BB ■ ■ -0AA0 | 88 |
| 342 | 69000 | 3000 | 90 | 180 | 255 | 180 | 340 | 12 | 70 | 225 | 60 | 0.85 | 2LC0301-0BB ■ ■ -0AA0 | 110 |
| 375 | 98000 | 2700 | 100 | 200 | 290 | 200 | 375 | 12 | 72 | 260 | 60 | 1.5 | 2LC0301-1BB ■ ■ -0AA0 | 150 |
| 415 | 130000 | 2500 | 120 | 220 | 320 | 220 | 415 | 12 | 76 | 285 | 80 | 2.4 | 2LC0301-2BB ■ ■ -0AA0 | 200 |
| 465 | 180000 | 2200 | 140 | 250 | 360 | 240 | 465 | 16 | 90 | 325 | 80 | 4.2 | 2LC0301-3BB ■ ■ -0AA0 | 280 |
| 505 | 250000 | 2000 | 160 | 275 | 400 | 260 | 505 | 16 | 92 | 365 | 80 | 6.3 | 2LC0301-4BB ■ ■ -0AA0 | 360 |
| 545 | 320000 | 1800 | 180 | 300 | 440 | 280 | 545 | 16 | 96 | 405 | 80 | 9.5 | 2LC0301-5BB ■ ■ -0AA0 | 460 |
| 585 | 400000 | 1700 | 210 | 330 | 480 | 310 | 585 | 20 | 102 | 445 | 80 | 14 | 2LC0301-6BB ■ ■ -0AA0 | 570 |
| ØD1: | • Without finished bore – Without order codes | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | 9 | |
| ØD2: | • Without finished bore – Without order codes | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | 9 | |

Larger size couplings on request.

Up to size 255 available from FLENDER stocks.

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZWH coupling, size 146,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,

Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

2LC0300-2BB99-0AA0-Z

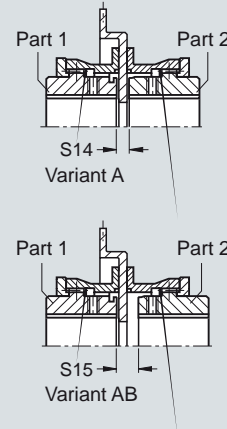
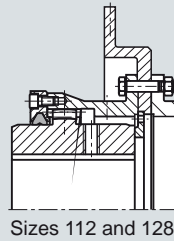
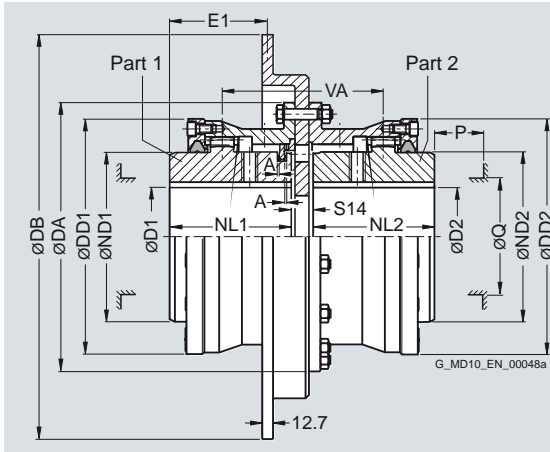
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWBT

Selection and ordering data



Variant limited in displacement and axial movement.
Max. displacement 0.2°.

After the finished bore has been drilled, the variant can no longer be changed.

Coupling parts 1 and 2 can be combined to form coupling variants A and AB.

| Dimensions in mm | | | | | | | | | | | | | | | | | Product code | | Weight | |
|------------------|----------------|-------------------|--|------|-----|----------|----------|----------|------|------|-----|-----|-----|-----|------------|----------------------|--|-----|--------|--|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S14 | S15 | A | VA | Q | P | Brake disk | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | | |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | | | | DB | E1 | | | kg | |
| 112 | 1300 | 3800 | 0 | 45 | 143 | 65 | 50 | 110 | 20 | – | 0.5 | 69 | 45 | 35 | 300 | 32.35 | 2LC0300-0A ■■■ -0AA0 | 13 | | |
| | | 23 | | | | | | | – | – | 72 | – | – | 356 | 22.35 | 2LC0300-0A ■■■ -0BA0 | 16.5 | | | |
| 128 | 2500 | 3200 | 0 | 55 | 157 | 80 | 60 | 128 | 23.5 | 30.5 | 0.5 | 89 | 60 | 45 | 356 | 32.85 | 2LC0300-1A ■■■ -0AA0 | 19 | | |
| | | 20.5 | | | | | | | 27.5 | – | 86 | – | – | 406 | 29.85 | 2LC0300-1A ■■■ -0BA0 | 22 | | | |
| 146 | 4300 | 2800 | 0 | 65 | 177 | 95 | 75 | 146 | 19 | 26 | 0.5 | 101 | 75 | 45 | 406 | 43.35 | 2LC0300-2A ■■■ -0AA0 | 25 | | |
| | | 22 | | | | | | | 29 | – | 104 | – | – | 457 | 46.35 | 2LC0300-2A ■■■ -0BA0 | 30 | | | |
| 175 | 7000 | 2800 | 0 | 80 | 215 | 112 | 90 | 175 | 21 | 27 | 0.5 | 117 | 85 | 50 | 406 | 59.35 | 2LC0300-3A ■■■ -0AA0 | 34 | | |
| | | 24 | | | | | | | 30 | – | 120 | – | – | 457 | 62.35 | 2LC0300-3A ■■■ -0BA0 | 39 | | | |
| | | 2200 | | | | | | | 24 | 30 | – | 120 | – | – | 514 | 62.35 | 2LC0300-3A ■■■ -0CA0 | 44 | | |
| 198 | 11600 | 2500 | 0 | 95 | 237 | 135 | 100 | 198 | 24 | 35 | 0.5 | 135 | 110 | 50 | 457 | 72.35 | 2LC0300-4A ■■■ -0AA0 | 47 | | |
| | | 2200 | | | | | | | 24 | 35 | – | 135 | – | – | 514 | 72.35 | 2LC0300-4A ■■■ -0BA0 | 52 | | |
| 230 | 19000 | 2200 | 0 | 110 | 265 | 160 | 110 | 230 | 24 | 36 | 0.5 | 146 | 135 | 50 | 514 | 82.35 | 2LC0300-5A ■■■ -0AA0 | 65 | | |
| | | 1850 | | | | | | | 24 | 36 | – | 146 | – | – | 610 | 82.35 | 2LC0300-5A ■■■ -0BA0 | 76 | | |
| 255 | 27000 | 2200 | 0 | 125 | 294 | 185 | 125 | 255 | 26 | 41 | 1 | 166 | 160 | 50 | 514 | 98.35 | 2LC0300-6A ■■■ -0AA0 | 80 | | |
| | | 1850 | | | | | | | 26 | 41 | – | 166 | – | – | 610 | 98.35 | 2LC0300-6A ■■■ -0BA0 | 92 | | |
| 290 | 39000 | 1850 | 70 | 145 | 330 | 210 | 140 | 290 | 26 | 46 | 1 | 186 | 180 | 60 | 610 | 113.35 | 2LC0300-7A ■■■ -0AA0 | 120 | | |
| | | 1600 | | | | | | | 29 | 49 | – | 189 | – | – | 711 | 116.35 | 2LC0300-7A ■■■ -0BA0 | 135 | | |
| 315 | 54000 | 1850 | 80 | 160 | 366 | 230 | 160 | 315 | 26 | 46 | 1 | 206 | 200 | 60 | 610 | 133.35 | 2LC0300-8A ■■■ -0AA0 | 145 | | |
| | | 1600 | | | | | | | 29 | 49 | – | 209 | – | – | 711 | 136.35 | 2LC0300-8A ■■■ -0BA0 | 160 | | |
| 342 | 69000 | 1600 | 90 | 180 | 392 | 255 | 180 | 340 | 31 | 61 | 1 | 241 | 225 | 60 | 711 | 157.35 | 2LC0301-0A ■■■ -0AA0 | 195 | | |
| 375 | 98000 | 1600 | 100 | 200 | 430 | 290 | 200 | 375 | 31 | 61 | 1 | 261 | 260 | 60 | 711 | 177.35 | 2LC0301-1A ■■■ -0AA0 | 240 | | |
| 415 | 130000 | 1400 | 120 | 220 | 478 | 320 | 220 | 415 | 37 | 99 | 1 | 319 | 285 | 80 | 812 | 203.35 | 2LC0301-2A ■■■ -0AA0 | 340 | | |
| 465 | 180000 | 1400 | 140 | 250 | 528 | 360 | 240 | 465 | 41 | 121 | 1 | 361 | 325 | 80 | 812 | 225.35 | 2LC0301-3A ■■■ -0AA0 | 420 | | |
| Variant: | | | <div><div>• A</div><div>• AB</div></div> | | | | | | | | | | | | | | | S | T | |
| ØD1: | | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | |
| ØD2: | | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | |

Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings.

Mass moments of inertia on request.

Weights apply to maximum bores.

Ordering example:

ZAPEX ZWBT coupling, size 146, variant A, brake disk diameter DB = 457 mm,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

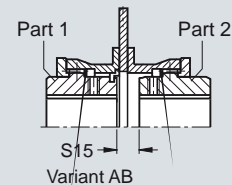
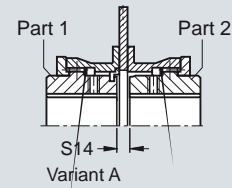
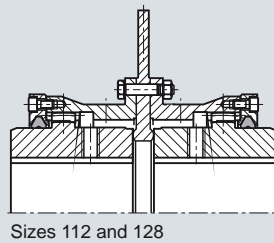
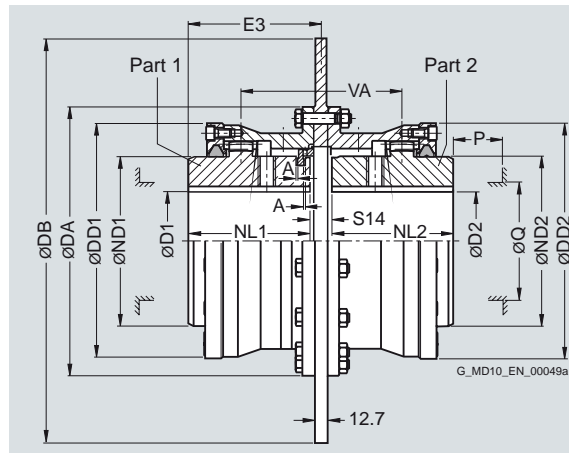
Product code:
2LC0300-2AS99-0BA0-Z
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWBG

Selection and ordering data



Variant limited in displacement and axial movement.
Max. displacement 0.2°.

Coupling parts 1 and 2 can be combined to form coupling variants A and AB.

After the finished bore has been drilled, the variant can no longer be changed.

Modified brake disk dimensions on request

| Dimensions in mm | | | | | | | | | | | | | | | | Product code | | Weight |
|------------------|--------------------------------|------------------------------------|---|-----|-------------|-------------|-------------|-----|-----|-----|-----|-----|----|---------------------|-------|---|-------------|--------|
| Size | Rated torque T_{KN} Nm | Maximum speed n_{Kmax} rpm | D1, D2 Keyway DIN 6885 min. max. | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S14 | S15 | A | VA | Q | P | Brake disk DB E3 | | Order codes for bore diameters and tolerances are specified in catalog section 3 | | m |
| | | | | | | | | | | | | | | | | | | kg |
| 112 | 1300 | 3800 | 0 45 | 143 | 65 | 50 | 110 | 19 | – | 0.5 | 69 | 45 | 35 | 300 | 59.5 | 2LC0300-0A | ■ ■ ■ -0AA0 | 13 |
| | | 3200 | | | | | | 22 | – | | 72 | | | 356 | 61 | 2LC0300-0A | ■ ■ ■ -0BA0 | 16 |
| 128 | 2500 | 3200 | 0 55 | 157 | 80 | 60 | 128 | 22 | 29 | 0.5 | 89 | 60 | 45 | 356 | 71 | 2LC0300-1A | ■ ■ ■ -0AA0 | 18.5 |
| | | 2800 | | | | | | 19 | 26 | | 86 | | | 406 | 69.5 | 2LC0300-1A | ■ ■ ■ -0BA0 | 21 |
| 146 | 4300 | 2800 | 0 65 | 177 | 95 | 75 | 146 | 19 | 26 | 0.5 | 101 | 75 | 45 | 406 | 84.5 | 2LC0300-2A | ■ ■ ■ -0AA0 | 24 |
| | | 2500 | | | | | | 22 | 29 | | 104 | | | 457 | 86 | 2LC0300-2A | ■ ■ ■ -0BA0 | 28 |
| 175 | 7000 | 2800 | 0 80 | 215 | 112 | 90 | 175 | 21 | 27 | 0.5 | 117 | 85 | 50 | 406 | 100.5 | 2LC0300-3A | ■ ■ ■ -0AA0 | 33 |
| | | 2500 | | | | | | 24 | 30 | | 120 | | | 457 | 102 | 2LC0300-3A | ■ ■ ■ -0BA0 | 37 |
| | | 2200 | | | | | | 24 | 30 | | 120 | | | 514 | 102 | 2LC0300-3A | ■ ■ ■ -0CA0 | 41 |
| 198 | 11600 | 2500 | 0 95 | 237 | 135 | 100 | 198 | 24 | 35 | 0.5 | 135 | 110 | 50 | 457 | 112 | 2LC0300-4A | ■ ■ ■ -0AA0 | 44 |
| | | 2200 | | | | | | 24 | 35 | | 135 | | | 514 | 112 | 2LC0300-4A | ■ ■ ■ -0BA0 | 49 |
| 230 | 19000 | 2200 | 0 110 | 265 | 160 | 110 | 230 | 24 | 36 | 0.5 | 146 | 135 | 50 | 514 | 122 | 2LC0300-5A | ■ ■ ■ -0AA0 | 60 |
| | | 1850 | | | | | | 24 | 36 | | 146 | | | 610 | 122 | 2LC0300-5A | ■ ■ ■ -0BA0 | 69 |
| 255 | 27000 | 2200 | 0 125 | 294 | 185 | 125 | 255 | 26 | 41 | 1 | 166 | 160 | 50 | 514 | 138 | 2LC0300-6A | ■ ■ ■ -0AA0 | 75 |
| | | 1850 | | | | | | 26 | 41 | | 166 | | | 610 | 138 | 2LC0300-6A | ■ ■ ■ -0BA0 | 82 |
| 290 | 39000 | 1850 | 70 145 | 330 | 210 | 140 | 290 | 26 | 46 | 1 | 186 | 180 | 60 | 610 | 153 | 2LC0300-7A | ■ ■ ■ -0AA0 | 110 |
| | | 1600 | | | | | | 29 | 49 | | 189 | | | 711 | 154.5 | 2LC0300-7A | ■ ■ ■ -0BA0 | 125 |
| 315 | 54000 | 1850 | 80 160 | 366 | 230 | 160 | 315 | 26 | 46 | 1 | 206 | 200 | 60 | 610 | 173 | 2LC0300-8A | ■ ■ ■ -0AA0 | 140 |
| | | 1600 | | | | | | 29 | 49 | | 209 | | | 711 | 174.5 | 2LC0300-8A | ■ ■ ■ -0BA0 | 150 |
| 342 | 69000 | 1600 | 90 180 | 392 | 255 | 180 | 340 | 31 | 61 | 1 | 241 | 225 | 60 | 711 | 195.5 | 2LC0301-0A | ■ ■ ■ -0AA0 | 175 |
| 375 | 98000 | 1600 | 100 200 | 430 | 290 | 200 | 375 | 31 | 61 | 1 | 261 | 260 | 60 | 711 | 215.5 | 2LC0301-1A | ■ ■ ■ -0AA0 | 225 |
| 415 | 130000 | 1400 | 120 220 | 478 | 320 | 220 | 415 | 37 | 99 | 1 | 319 | 285 | 80 | 812 | 238.5 | 2LC0301-2A | ■ ■ ■ -0AA0 | 300 |
| 465 | 180000 | 1400 | 140 250 | 528 | 360 | 240 | 465 | 41 | 121 | 1 | 361 | 325 | 80 | 812 | 260.5 | 2LC0301-3A | ■ ■ ■ -0AA0 | 380 |
| Variant: | | | | | | | | | | | | | | | | U | | |
| | | | | | | | | | | | | | | | | V | | |
| ØD1: | | | | | | | | | | | | | | | | 1 | | |
| | | | | | | | | | | | | | | | | 9 | | |
| ØD2: | | | | | | | | | | | | | | | | 1 | | |
| | | | | | | | | | | | | | | | | 9 | | |

Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings.

Mass moments of inertia on request.

Weights apply to maximum bores.

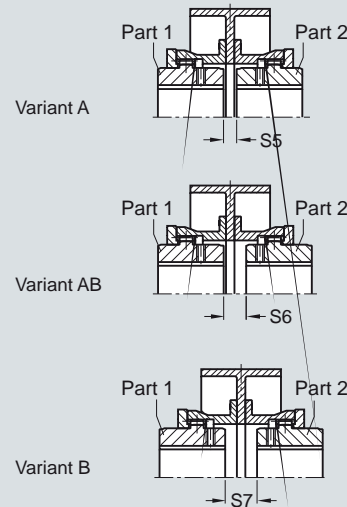
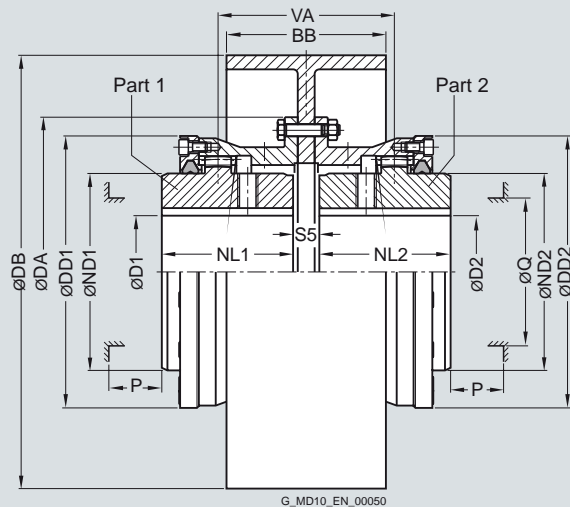
Ordering example:
ZAPEX ZWBG coupling, size 146, variant A, brake disk diameter
DB = 457 mm,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:
2LC0300-2AU99-0BA0-Z
L0W+M1A+M13

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWB

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A, AB, B.

After the finished bore has been drilled, the variant can no longer be changed.

| | | | Dimensions in mm | | | | | | | | | | | | | | Product code | | Weight |
|----------|------------------------------|---|------------------------|------|-----|---------|---------|---------|----|----|----|-----|-----|----|------------|-----|--|----------|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ND2 | NL1/NL2 | DD1/DD2 | S5 | S6 | S7 | VA | Q | P | Brake disk | | Order codes for bore diameters and tolerances are specified in catalog section 3 | <i>m</i> | |
| | <i>T</i> _{KN} Nm | <i>n</i> _{Kmax} rpm | min. | max. | | | | | | | | | | | | | | | kg |
| 128 | 2500 | 2500 | 0 | 55 | 157 | 80 | 60 | 128 | 16 | 23 | 30 | 83 | 60 | 45 | 200 | 75 | 2LC0300-1 ■■■■ -0AA0 | 12.5 | |
| | | 2000 | | | | | | | 16 | 23 | 30 | 83 | | | 250 | 95 | 2LC0300-1 ■■■■ -0BA0 | 16 | |
| 146 | 4300 | 2000 | 0 | 65 | 177 | 95 | 75 | 146 | 16 | 23 | 30 | 98 | 75 | 45 | 250 | 95 | 2LC0300-2 ■■■■ -0AA0 | 19 | |
| | | 1600 | | | | | | | 18 | 25 | 32 | 100 | | | 315 | 118 | 2LC0300-2 ■■■■ -0BA0 | 26 | |
| 175 | 7000 | 1600 | 0 | 80 | 215 | 112 | 90 | 175 | 20 | 26 | 32 | 116 | 85 | 50 | 315 | 118 | 2LC0300-3 ■■■■ -0AA0 | 35 | |
| | | 1250 | | | | | | | 22 | 28 | 34 | 118 | | | 400 | 150 | 2LC0300-3 ■■■■ -0BA0 | 47 | |
| 198 | 11600 | 1600 | 0 | 95 | 237 | 135 | 100 | 198 | 20 | 31 | 42 | 131 | 110 | 50 | 315 | 118 | 2LC0300-4 ■■■■ -0AA0 | 42 | |
| | | 1250 | | | | | | | 22 | 33 | 44 | 133 | | | 400 | 150 | 2LC0300-4 ■■■■ -0BA0 | 54 | |
| 230 | 19000 | 1250 | 0 | 110 | 265 | 160 | 110 | 230 | 22 | 34 | 46 | 144 | 135 | 50 | 400 | 150 | 2LC0300-5 ■■■■ -0AA0 | 66 | |
| | | 1000 | | | | | | | 23 | 35 | 47 | 145 | | | 500 | 190 | 2LC0300-5 ■■■■ -0BA0 | 85 | |
| 255 | 27000 | 1000 | 0 | 125 | 294 | 185 | 125 | 255 | 25 | 40 | 55 | 165 | 160 | 50 | 500 | 190 | 2LC0300-6 ■■■■ -0AA0 | 97 | |
| | | 1000 | | | | | | | 28 | 43 | 58 | 168 | | | 630 | 236 | 2LC0300-6 ■■■■ -0BA0 | 135 | |
| 290 | 39000 | 1000 | 70 | 145 | 330 | 210 | 140 | 290 | 28 | 48 | 68 | 188 | 180 | 60 | 630 | 236 | 2LC0300-7 ■■■■ -0AA0 | 165 | |
| | | 750 | | | | | | | 28 | 48 | 68 | 188 | | | 710 | 265 | 2LC0300-7 ■■■■ -0BA0 | 195 | |
| Variant: | | <div><div>• A</div><div>• B</div><div>• AB</div></div> | | | | | | | | | | | | | | | A W | | |
| ØD1: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | A X | 1 | |
| ØD2: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | B A | 9 | |

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings.

Mass moments of inertia on request.

Weights apply to maximum bores.

Ordering example:

ZAPEX ZWB coupling, size 146, variant A, brake disk diameter DB = 315 mm, BB = 118 mm,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

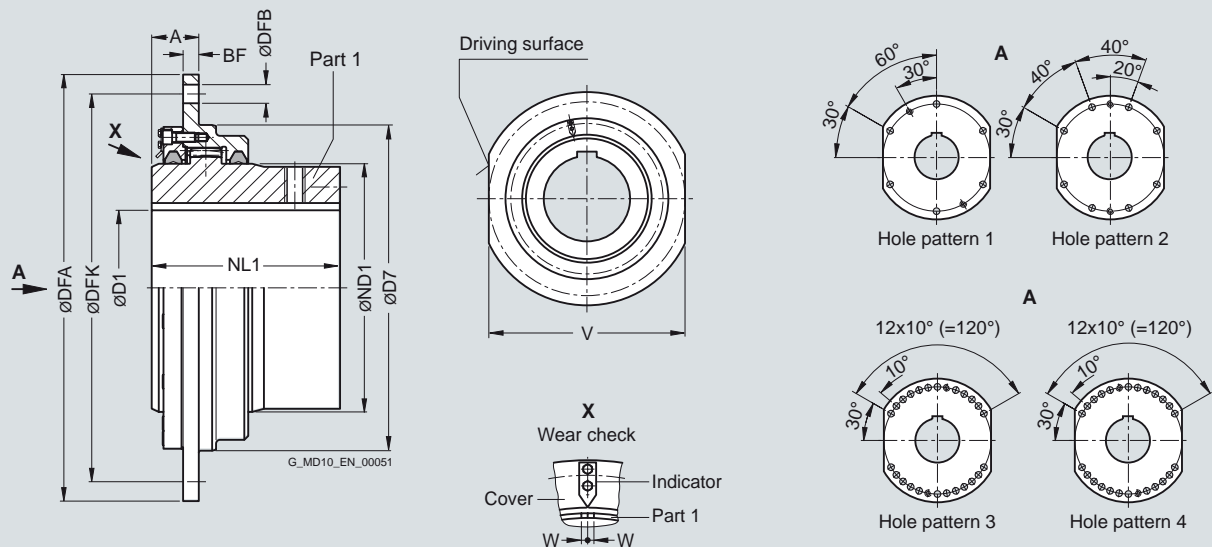
2LC0300-2AW99-0BA0-Z
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWTR

Selection and ordering data



| Size | Rated torque T_{KN} Nm | Perm. radial load N | Dimensions in mm | | | | | | | | | | | | | Hole pattern | Perm. wear W | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m kg |
|-------------------|------------------------------------|----------------------------|--------------------|------|-----|-----|-----|-----|-----|----|----|-----|-----|----|----|----------------------|---------------------|--|-----------------------------|
| | | | D1 Keyway DIN 6885 | | ND1 | NL1 | DFA | D7 | V | A | BF | DFK | DFB | | | | | | |
| | | | min. | max. | | | | | | | | | | h6 | h9 | | | | |
| 198 | 14500 | 32500 | 0 | 95 | 135 | 125 | 340 | 220 | 300 | 45 | 15 | 300 | 15 | 1 | 2 | 2LC0300-4BN ■ 0-0AA0 | 25 | | |
| 230 | 17500 | 36500 | 0 | 110 | 160 | 130 | 360 | 240 | 320 | 45 | 15 | 320 | 15 | 1 | 2 | 2LC0300-5BN ■ 0-0AA0 | 30 | | |
| 255 | 24000 | 45500 | 0 | 125 | 185 | 145 | 380 | 260 | 340 | 45 | 15 | 340 | 19 | 1 | 2 | 2LC0300-6BN ■ 0-0AA0 | 35 | | |
| 290 ¹⁾ | 31500 | 50000 | 0 | 145 | 210 | 170 | 400 | 280 | 360 | 45 | 15 | 360 | 19 | 1 | 3 | 2LC0300-7BN ■ 0-0AA0 | 45 | | |
| 315 | 42000 | 70000 | 0 | 160 | 230 | 175 | 420 | 310 | 380 | 60 | 20 | 380 | 24 | 1 | 3 | 2LC0300-8BN ■ 0-0AA0 | 60 | | |
| 342 ¹⁾ | 55000 | 90000 | 0 | 180 | 255 | 185 | 450 | 340 | 400 | 60 | 20 | 400 | 24 | 1 | 3 | 2LC0301-0BN ■ 0-0AA0 | 70 | | |
| 375 | 78000 | 110000 | 0 | 200 | 290 | 220 | 510 | 400 | 460 | 60 | 20 | 460 | 24 | 1 | 3 | 2LC0301-1BN ■ 0-0AA0 | 100 | | |
| 415 ¹⁾ | 104000 | 150000 | 0 | 220 | 320 | 240 | 550 | 420 | 500 | 60 | 20 | 500 | 24 | 1 | 3 | 2LC0301-2BN ■ 0-0AA0 | 130 | | |
| 465 ¹⁾ | 155000 | 165000 | 0 | 250 | 360 | 260 | 580 | 450 | 530 | 60 | 20 | 530 | 24 | 2 | 4 | 2LC0301-3BN ■ 0-0AA0 | 160 | | |
| 505 ¹⁾ | 235000 | 200000 | 0 | 275 | 400 | 315 | 650 | 530 | 580 | 65 | 25 | 600 | 24 | 2 | 4 | 2LC0301-4BN ■ 0-0AA0 | 240 | | |
| 545 ¹⁾ | 390000 | 325000 | 0 | 300 | 440 | 350 | 680 | 560 | 600 | 65 | 25 | 630 | 24 | 3 | 4 | 2LC0301-5BN ■ 0-0AA0 | 320 | | |
| 585 ¹⁾ | 460000 | 380000 | 0 | 330 | 480 | 380 | 710 | 600 | 640 | 81 | 35 | 660 | 28 | 4 | 4 | 2LC0301-6BN ■ 0-0AA0 | 400 | | |
| 640 ¹⁾ | 600000 | 420000 | 0 | 360 | 520 | 410 | 780 | 670 | 700 | 81 | 35 | 730 | 28 | 4 | 4 | 2LC0301-7BN ■ 0-0AA0 | 510 | | |
| 730 ¹⁾ | 880000 | 500000 | 0 | 415 | 600 | 450 | 850 | 730 | 760 | 81 | 35 | 800 | 28 | 4 | 5 | 2LC0302-0BN ■ 0-0AA0 | 690 | | |

ØD1: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
9

Total wear must not exceed $1 \times W$.

Mass moments of inertia on request.

Weights apply to maximum bores.

Ordering example:

ZAPEX ZWTR coupling, size 198, bore 80H7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

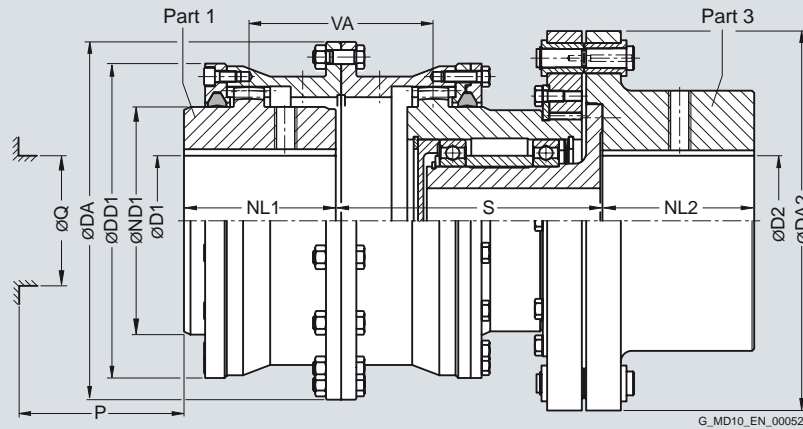
**2LC0300-4BN90-0AA0
L1J**

¹⁾ These sizes have connection dimensions to SEB 666 212.

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZBR

Selection and ordering data



4

| Size | Rated torque T_{KN} Nm | Max. shear torque T_{BR} Nm | Maximum speed n_{Kmax} rpm | Geometry data | | | | DA | ND1 | NL1/ NL2 | DA2 | DD1 | S | VA | Q | P | Product code Plain text required for max. shear torque. Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight <i>m</i> kg |
|------|--------------------------------|-------------------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----|-----|-------------|------|-----|-----|-----|-----|----|--|--------------------------|
| | | | | D1 Keyway DIN 6885 min. | D1 Keyway DIN 6885 max. | D2 Keyway DIN 6885 min. | D2 Keyway DIN 6885 max. | | | | | | | | | | | |
| 112 | 1300 | 1690 | 9400 | 0 | 45 | 0 | 55 | 143 | 65 | 50 | 170 | 110 | 106 | 56 | 45 | 35 | 2LC0300-0BH ■ ■ -0AA0-Z Y99 | 15 |
| 128 | 2500 | 3250 | 8300 | 0 | 55 | 0 | 65 | 157 | 80 | 60 | 190 | 128 | 116 | 73 | 60 | 45 | 2LC0300-1BH ■ ■ -0AA0-Z Y99 | 18 |
| 146 | 4300 | 5590 | 7300 | 0 | 65 | 0 | 75 | 177 | 95 | 75 | 205 | 146 | 131 | 88 | 75 | 45 | 2LC0300-2BH ■ ■ -0AA0-Z Y99 | 29.5 |
| 175 | 7000 | 9100 | 6400 | 0 | 80 | 0 | 90 | 215 | 112 | 90 | 235 | 175 | 165 | 104 | 85 | 50 | 2LC0300-3BH ■ ■ -0AA0-Z Y99 | 46 |
| 198 | 11600 | 15080 | 5500 | 0 | 95 | 0 | 110 | 237 | 135 | 100 | 285 | 198 | 182 | 119 | 110 | 50 | 2LC0300-4BH ■ ■ -0AA0-Z Y99 | 63 |
| 230 | 19000 | 24700 | 4700 | 0 | 110 | 0 | 125 | 265 | 160 | 110 | 300 | 230 | 198 | 130 | 135 | 50 | 2LC0300-5BH ■ ■ -0AA0-Z Y99 | 96 |
| 255 | 27000 | 35100 | 4100 | 0 | 125 | 0 | 150 | 294 | 185 | 125 | 335 | 255 | 215 | 150 | 160 | 50 | 2LC0300-6BH ■ ■ -0AA0-Z Y99 | 120 |
| 290 | 39000 | 50700 | 3700 | 70 | 145 | 70 | 160 | 330 | 210 | 140 | 390 | 290 | 236 | 170 | 180 | 60 | 2LC0300-7BH ■ ■ -0AA0-Z Y99 | 180 |
| 315 | 54000 | 70200 | 3300 | 80 | 160 | 80 | 180 | 366 | 230 | 160 | 415 | 315 | 257 | 190 | 200 | 60 | 2LC0300-8BH ■ ■ -0AA0-Z Y99 | 225 |
| 342 | 69000 | 89700 | 3000 | 90 | 180 | 90 | 200 | 392 | 255 | 180 | 460 | 340 | 280 | 222 | 225 | 60 | 2LC0301-0BH ■ ■ -0AA0-Z Y99 | 300 |
| 375 | 98000 | 127400 | 2700 | 100 | 200 | 100 | 220 | 430 | 290 | 200 | 495 | 375 | 292 | 242 | 260 | 60 | 2LC0301-1BH ■ ■ -0AA0-Z Y99 | 380 |
| 415 | 130000 | 169000 | 2500 | 120 | 220 | 120 | 240 | 478 | 320 | 220 | 540 | 415 | 349 | 294 | 285 | 80 | 2LC0301-2BH ■ ■ -0AA0-Z Y99 | 490 |
| 465 | 180000 | 234000 | 2200 | 140 | 250 | 140 | 280 | 528 | 360 | 240 | 635 | 465 | 380 | 336 | 325 | 80 | 2LC0301-3BH ■ ■ -0AA0-Z Y99 | 720 |
| 505 | 250000 | 325000 | 2000 | 160 | 275 | 160 | 320 | 568 | 400 | 260 | 710 | 505 | 395 | 366 | 365 | 80 | 2LC0301-4BH ■ ■ -0AA0-Z Y99 | 930 |
| 545 | 320000 | 416000 | 1800 | 180 | 300 | 180 | 360 | 620 | 440 | 280 | 800 | 545 | 433 | 406 | 405 | 80 | 2LC0301-5BH ■ ■ -0AA0-Z Y99 | 1350 |
| 585 | 400000 | 520000 | 1700 | 210 | 330 | 210 | 390 | 660 | 480 | 310 | 860 | 585 | 466 | 460 | 445 | 80 | 2LC0301-6BH ■ ■ -0AA0-Z Y99 | 1700 |
| 640 | 510000 | 663000 | 1600 | 230 | 330 | 230 | 420 | 738 | 480 | 330 | 900 | 640 | 502 | 479 | 445 | 90 | 2LC0301-7BH ■ ■ -0AA0-Z Y99 | 1900 |
| | | | | >330 | 360 | | | | 520 | | | | | | | | | 1950 |
| 690 | 660000 | 858000 | 1450 | 250 | 360 | 250 | 450 | 788 | 520 | 350 | 1020 | 690 | 528 | 516 | 475 | 90 | 2LC0301-8BH ■ ■ -0AA0-Z Y99 | 2650 |
| | | | | >360 | 390 | | | | 560 | | | | | | | | | 2700 |
| 730 | 790000 | 1027000 | 1350 | 275 | 390 | 275 | 480 | 834 | 560 | 380 | 1080 | 730 | 555 | 560 | 515 | 90 | 2LC0302-0BH ■ ■ -0AA0-Z Y99 | 3200 |
| | | | | >390 | 415 | | | | 600 | | | | | | | | | 3250 |

- ØD1:
- Without finished bore – Without order codes
 - Without finished bore from size 640 for 2nd diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without -Z)
- ØD2:
- Without finished bore – Without order codes
 - Without finished bore from size 640 for 2nd diameter range D2 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without -Z)

Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings.

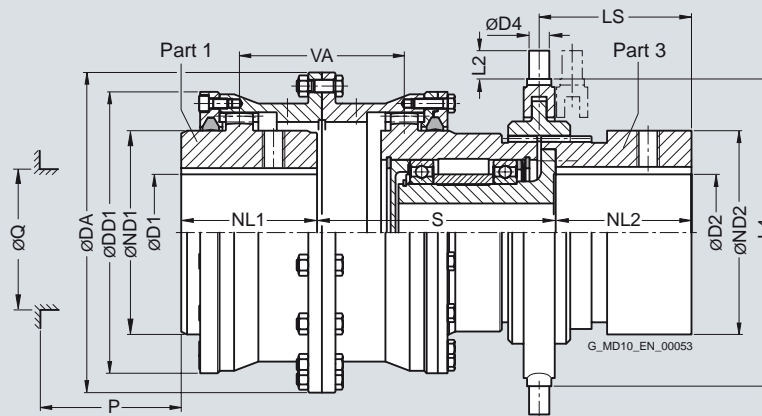
Mass moments of inertia on request.
Weights apply to maximum bores.

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWS

Selection and ordering data



For engaging/disengaging during standstill.

Part 3 should be mounted on the shaft while the shaft is disconnected and not being driven.

| Dimensions in mm | | | | | | | | | | | | | | | | | | | | Shift ring | | | | Switch | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|--|------------------------------|---------------------------------|--------------------------|------|--------------------------|------|-----|-------------|-------------|-----|-----|-----|-----|----|-----|-----|----|----|-------|------------|-----------------------|------|--|--------|--|---|--------|
| Size | Rated torque | Maxi- mum speed | D1 Keyway DIN 6885 | | D2 Keyway DIN 6885 | | DA | ND1/ ND2 | NL1/ NL2 | DD1 | S | VA | Q | P | LS | L4 | D4 | L2 | KSHN | KSZH | <i>m</i> | | | | | | |
| | <i>T</i> _{KN} Nm | <i>n</i> _{Kmax} rpm | min. | max. | min. | max. | | | | | | | | | | | | | | | kg | | | | | | |
| 128 | 2500 | 1500 | 0 | 55 | 0 | 50 | 157 | 80 | 60 | 128 | 116 | 73 | 60 | 45 | 70 | 150 | 15 | 14 | 14/11 | – | 2LC0300-1BK ■ ■ -0AA0 | 15.5 | | | | | |
| 146 | 4300 | 1300 | 0 | 65 | 0 | 60 | 177 | 95 | 75 | 146 | 131 | 88 | 75 | 45 | 86 | 180 | 16 | 16 | 16/12 | – | 2LC0300-2BK ■ ■ -0AA0 | 22.5 | | | | | |
| 175 | 7000 | 1100 | 0 | 80 | 0 | 70 | 215 | 112 | 90 | 175 | 165 | 104 | 85 | 50 | 101 | 180 | 16 | 16 | 16/12 | – | 2LC0300-3BK ■ ■ -0AA0 | 33 | | | | | |
| 198 | 11600 | 960 | 0 | 95 | 0 | 80 | 237 | 135 | 100 | 198 | 182 | 119 | 110 | 50 | 116 | 210 | 20 | 18 | 18/13 | – | 2LC0300-4BK ■ ■ -0AA0 | 50 | | | | | |
| 230 | 19000 | 830 | 0 | 110 | 0 | 100 | 265 | 160 | 110 | 230 | 198 | 130 | 135 | 50 | 126 | 260 | 22 | 20 | 18/15 | 14/14 | 2LC0300-5BK ■ ■ -0AA0 | 74 | | | | | |
| 255 | 27000 | 750 | 0 | 125 | 0 | 115 | 294 | 185 | 125 | 255 | 215 | 150 | 160 | 50 | 142 | 300 | 25 | 22 | 21/17 | 16/17 | 2LC0300-6BK ■ ■ -0AA0 | 115 | | | | | |
| 290 | 39000 | 660 | 70 | 145 | 70 | 130 | 330 | 210 | 140 | 290 | 236 | 170 | 180 | 60 | 157 | 315 | 25 | 35 | – | 16/211 | 2LC0300-7BK ■ ■ -0AA0 | 160 | | | | | |
| 315 | 54000 | 600 | 80 | 160 | 80 | 140 | 366 | 230 | 160 | 315 | 257 | 190 | 200 | 60 | 182 | 360 | 30 | 24 | – | 18/18 | 2LC0300-8BK ■ ■ -0AA0 | 215 | | | | | |
| 342 | 69000 | 560 | 90 | 180 | 90 | 160 | 392 | 255 | 180 | 340 | 280 | 222 | 225 | 60 | 202 | 360 | 30 | 24 | – | 18/18 | 2LC0301-0BK ■ ■ -0AA0 | 270 | | | | | |
| 375 | 98000 | 510 | 100 | 200 | 100 | 180 | 430 | 290 | 200 | 375 | 292 | 242 | 260 | 60 | 222 | 430 | 34 | 26 | – | 24/20 | 2LC0301-1BK ■ ■ -0AA0 | 370 | | | | | |
| 415 | 130000 | 460 | 120 | 220 | 120 | 210 | 478 | 320 | 220 | 415 | 349 | 294 | 285 | 80 | 247 | – | – | – | – | – | 2LC0301-2BK ■ ■ -0AA0 | 460 | | | | | |
| 465 | 180000 | 410 | 140 | 250 | 140 | 230 | 528 | 360 | 240 | 465 | 380 | 336 | 325 | 80 | 267 | – | – | – | – | – | 2LC0301-3BK ■ ■ -0AA0 | 620 | | | | | |
| 505 | 250000 | 380 | 160 | 275 | 160 | 260 | 568 | 400 | 260 | 505 | 395 | 366 | 365 | 80 | 287 | – | – | – | – | – | 2LC0301-4BK ■ ■ -0AA0 | 820 | | | | | |
| 545 | 320000 | 350 | 180 | 300 | 180 | 280 | 620 | 440 | 280 | 545 | 433 | 406 | 405 | 80 | 315 | – | – | – | – | – | 2LC0301-5BK ■ ■ -0AA0 | 1000 | | | | | |
| ØD1: • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | | | 9 | | | | | | |
| ØD2: • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | | | 9 | | | | | | |

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings.

Mass moments of inertia on request.

Weights apply to maximum bores.

KSHN: Manual lever switch type KSHN to M4218

KSZH: Toothed rack type KSZH to M4215

Pneumatically or hydraulically actuated switches also available.

Ordering example:

ZAPEX ZWS coupling, size 146,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,

Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

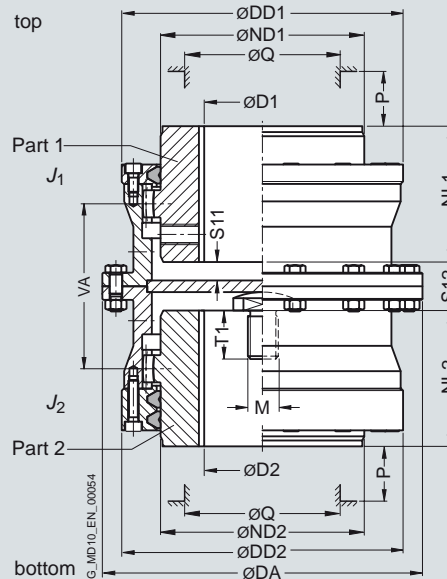
2LC0300-2BK99-0AA0-Z

LOW+M1A+M13

FLENDER Standard Couplings **Torsionally Rigid Gear Couplings - ZAPEX ZW Series**

Type ZWNV

Selection and ordering data



When ordering, state thread size M and thread length T1 of the thrust piece.

| Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia <i>J</i> ₁ / <i>J</i> ₂ kgm ² | Product code Plain text for thread size M and thread length T1 necessary. Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight <i>m</i> kg |
|------------------|--|---------------------------------|------------------------------|------|-----|-------------|-------------|-------------|-----|-----|-----|-----|----|---|---|----------------------------------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | NL1/ NL2 | DD1/ DD2 | S11 | S12 | VA | Q | P | | | |
| | <i>T</i> _{KN} Nm | <i>n</i> _{Kmax} rpm | min. | max. | | | | | | | | | | | | |
| 128 | 2500 | 8300 | 0 | 55 | 157 | 80 | 60 | 128 | 6.5 | 26 | 73 | 60 | 45 | 0.015 | 2LC0300-1AH ■ ■ -0AA0-Z Y99 | 9.3 |
| 146 | 4300 | 7300 | 0 | 65 | 177 | 95 | 75 | 146 | 6 | 28 | 88 | 75 | 45 | 0.024 | 2LC0300-2AH ■ ■ -0AA0-Z Y99 | 10.5 |
| 175 | 7000 | 6400 | 0 | 80 | 215 | 112 | 90 | 175 | 5.5 | 33 | 104 | 85 | 50 | 0.057 | 2LC0300-3AH ■ ■ -0AA0-Z Y99 | 23 |
| 198 | 11600 | 5500 | 0 | 95 | 237 | 135 | 100 | 198 | 10 | 40 | 119 | 110 | 50 | 0.099 | 2LC0300-4AH ■ ■ -0AA0-Z Y99 | 32 |
| 230 | 19000 | 4700 | 0 | 110 | 265 | 160 | 110 | 230 | 11 | 32 | 130 | 135 | 50 | 0.18 | 2LC0300-5AH ■ ■ -0AA0-Z Y99 | 46 |
| 255 | 27000 | 4100 | 0 | 125 | 294 | 185 | 125 | 255 | 14 | 40 | 150 | 160 | 50 | 0.30 | 2LC0300-6AH ■ ■ -0AA0-Z Y99 | 62 |
| 290 | 39000 | 3700 | 70 | 145 | 330 | 210 | 140 | 290 | 19 | 50 | 170 | 180 | 60 | 0.57 | 2LC0300-7AH ■ ■ -0AA0-Z Y99 | 94 |
| 315 | 54000 | 3300 | 80 | 160 | 366 | 230 | 160 | 315 | 18 | 50 | 190 | 200 | 60 | 0.94 | 2LC0300-8AH ■ ■ -0AA0-Z Y99 | 125 |
| 342 | 69000 | 3000 | 90 | 180 | 392 | 255 | 180 | 340 | 29 | 72 | 222 | 225 | 60 | 1.4 | 2LC0301-0AH ■ ■ -0AA0-Z Y99 | 155 |
| 375 | 98000 | 2700 | 100 | 200 | 430 | 290 | 200 | 375 | 29 | 72 | 242 | 260 | 60 | 2.2 | 2LC0301-1AH ■ ■ -0AA0-Z Y99 | 205 |
| 415 | 130000 | 2500 | 120 | 220 | 478 | 320 | 220 | 415 | 60 | 136 | 294 | 285 | 80 | 3.6 | 2LC0301-2AH ■ ■ -0AA0-Z Y99 | 270 |
| 465 | 180000 | 2200 | 140 | 250 | 528 | 360 | 240 | 465 | 80 | 176 | 336 | 325 | 80 | 6.0 | 2LC0301-3AH ■ ■ -0AA0-Z Y99 | 360 |
| 505 | 250000 | 2000 | 160 | 275 | 568 | 400 | 260 | 505 | 89 | 196 | 366 | 365 | 80 | 8.8 | 2LC0301-4AH ■ ■ -0AA0-Z Y99 | 450 |
| ØD1: | • Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | |
| ØD2: | • Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | |

Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:
ZAPEX ZWNV coupling, size 146, thread M 10 x 20 deep,
Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

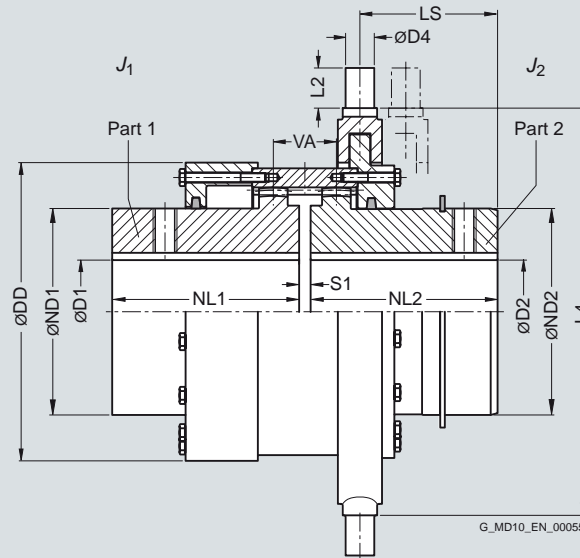
Product code:
2LC0300-2AH99-0AA0-Z
L0W+M1A+M13+Y99
plain text to Y99: **Thread M10 x 20 mm**

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Type ZWSE

Selection and ordering data



For engaging/disengaging during standstill. Protect sliding surfaces from dirt and corrosion; sprayed with adhesive grease.

Part 2 should be mounted on the shaft while the shaft is disconnected and not being driven.

| Dimensions in mm | | | | | | | | | | | | | | Shift ring | Switch | Mass moment of inertia | Product code | Weight |
|--|----------------|-------------------|--------------------|--------------------|------|------|----------|-----|-----|----|------|-----|----|------------|--------|------------------------|--|--------|
| Size | Rated torque | Maximum speed | D1 Keyway DIN 6885 | D2 Keyway DIN 6885 | ND1 | ND2 | NL1/ NL2 | DD | S1 | LS | L4 | D4 | L2 | KSHN | Size | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | min. | max. | | | | | | | | | | kgm ² | | kg |
| 128 | 2500 | 730 | 0 | 55 | 0 | 50 | 76.5 75 | 60 | 130 | 6 | 36.5 | 180 | 16 | 16 | 16/12 | 0.007 | 2LC0300-1BM ■ ■ -0AA0 | 7 |
| 146 | 4300 | 630 | 0 | 65 | 0 | 60 | 91.5 90 | 75 | 150 | 6 | 50 | 210 | 20 | 18 | 18/13 | 0.014 | 2LC0300-2BM ■ ■ -0AA0 | 11.5 |
| 175 | 7000 | 520 | 0 | 75 | 0 | 75 | 108 105 | 90 | 180 | 8 | 56.5 | 250 | 20 | 30 | 18/181 | 0.033 | 2LC0300-3BM ■ ■ -0AA0 | 17 |
| 198 | 11600 | 500 | 0 | 90 | 0 | 90 | 130 130 | 100 | 204 | 8 | 64.5 | 260 | 22 | 20 | 18/14 | 0.06 | 2LC0300-4BM ■ ■ -0AA0 | 28 |
| 230 | 19000 | 430 | 0 | 110 | 0 | 105 | 155 155 | 110 | 236 | 8 | 73 | 300 | 25 | 22 | 21/16 | 0.12 | 2LC0300-5BM ■ ■ -0AA0 | 35 |
| 255 | 27000 | 360 | 0 | 125 | 0 | 120 | 180 180 | 125 | 260 | 10 | 82 | 355 | 25 | 35 | 24/241 | 0.23 | 2LC0300-6BM ■ ■ -0AA0 | 53 |
| ØD1: • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | 1 9 |
| ØD2: • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | 1 9 |

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZWSE coupling, size 146,
 Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
 Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

2LC0300-2BM99-0AA0-Z
LOW+M1A+M13

FLENDER Standard Couplings **Torsionally Rigid Gear Couplings - ZAPEX ZW Series**

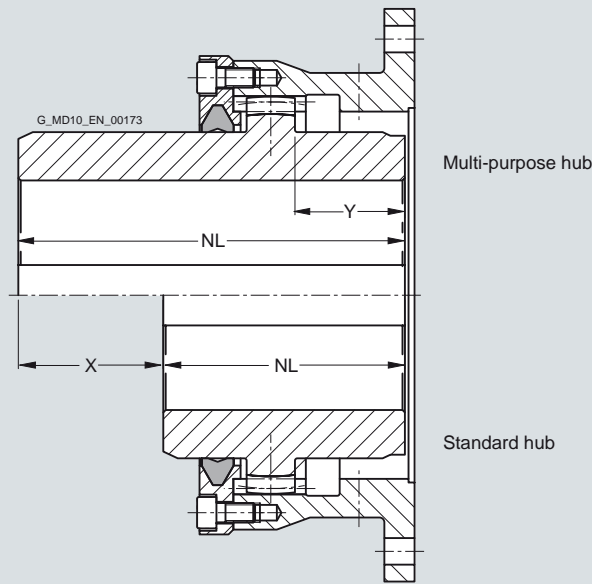
Multipurpose hubs for ZAPEX ZW Series

Selection and ordering data

ZAPEX couplings can be designed with multipurpose hubs in order to implement modified hub geometries. One or both standard hubs can be replaced with multipurpose hubs. Hub lengths and coupling lengths can be altered through the use of multipurpose hubs. The distance VA of the coupling teeth, the permitted bore diameter and the hub diameter remain unchanged.

By stating the hub reductions X and Y the multipurpose hub can be adapted to the mounting situation.

Details D1, NL1, X1 and Y1 relate to the hub shown on the dimension drawings left; details D2, NL2, X2 and Y2 apply to the hub shown on the dimension drawings right.



Geometric data and permitted reduction of the multipurpose hub

| Size | Standard hub | | Multipurpose hub | |
|------|--------------|----------|-------------------------------------|---------|
| | NL mm | NL mm | Maximum hub reduction X mm | Y mm |
| 112 | 50 | 90 | 40 | 20 |
| 128 | 60 | 100 | 40 | 27.5 |
| 146 | 75 | 115 | 40 | 33.5 |
| 175 | 90 | 150 | 60 | 39 |
| 198 | 100 | 160 | 60 | 45.5 |
| 230 | 110 | 180 | 70 | 50 |
| 255 | 125 | 210 | 85 | 57.5 |
| 290 | 140 | 210 | 70 | 66 |
| 315 | 160 | 240 | 80 | 74 |
| 342 | 180 | 270 | 90 | 88 |
| 375 | 200 | 310 | 110 | 97 |
| 415 | 220 | 310 | 90 | 121 |
| 465 | 240 | 350 | 110 | 138 |
| 505 | 260 | 400 | 140 | 152 |

Up to size 505 available from FLENDER stocks.

Product code

The product code of the respective ZAPEX coupling type must be supplemented with **-Z** and order code **Y99**.

The dimensions of the hub reduction X, Y of the multipurpose hub must be stated in plain text.

Ordering example:

ZAPEX ZWN coupling with multipurpose hub size 505,

S1 = 66 mm

Hub left with bore D1 = 200H7 mm, with keyway to DIN 6885-1 P9 and set screw, NL1 = 385 mm, reduced with X1 = 15 mm.

Hub right with bore D2 = 220K7 mm, with keyway to DIN 6885-1 P9 and set screw, NL2 = 350 mm, reduced with Y2 = 50 mm.

Product code:

2LC0301-4AA99-0AA0-Z

Y99 + L1D + L41 + M2E + M13 + M41

plain text to Y99:

Hub lengths NL1 = 385 mm, NL2 = 350 mm, hub reduction X1 = 15 mm, Y1 = 0 mm, X2 = 0 mm, Y2 = 50 mm

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZW Series

Spare and wear parts

Selection and ordering data

DUO sealing rings

The DUO sealing rings are wear parts and must be replaced in accordance with the operating instructions.

| Size | Hub diameter ND1/ND2 mm | Product code |
|------|-------------------------------|--------------------|
| 112 | 65 | 2LC0300-0XG00-0AA0 |
| 128 | 80 | 2LC0300-1XG00-0AA0 |
| 146 | 95 | 2LC0300-2XG00-0AA0 |
| 175 | 112 | 2LC0300-3XG00-0AA0 |
| 198 | 135 | 2LC0300-4XG00-0AA0 |
| 230 | 160 | 2LC0300-5XG00-0AA0 |
| 255 | 185 | 2LC0300-6XG00-0AA0 |
| 290 | 210 | 2LC0300-7XG00-0AA0 |
| 315 | 230 | 2LC0300-8XG00-0AA0 |
| 342 | 255 | 2LC0301-0XG00-0AA0 |
| 375 | 290 | 2LC0301-1XG00-0AA0 |
| 415 | 320 | 2LC0301-2XG00-0AA0 |
| 465 | 360 | 2LC0301-3XG00-0AA0 |
| 505 | 400 | 2LC0301-4XG00-0AA0 |
| 545 | 440 | 2LC0301-5XG00-0AA0 |
| 585 | 480 | 2LC0301-6XG00-0AA0 |
| 640 | 480 | 2LC0301-7XG10-0AA0 |
| | 520 | 2LC0301-7XG20-0AA0 |
| 690 | 520 | 2LC0301-8XG10-0AA0 |
| | 560 | 2LC0301-8XG20-0AA0 |
| 730 | 560 | 2LC0302-0XG10-0AA0 |
| | 600 | 2LC0302-0XG20-0AA0 |
| 780 | 600 | 2LC0302-1XG10-0AA0 |
| | 650 | 2LC0302-1XG20-0AA0 |
| 852 | 650 | 2LC0302-2XG10-0AA0 |
| | 710 | 2LC0302-2XG20-0AA0 |
| 910 | 710 | 2LC0302-3XG10-0AA0 |
| | 750 | 2LC0302-3XG20-0AA0 |
| 1020 | 750 | 2LC0302-4XG10-0AA0 |
| | 800 | 2LC0302-4XG20-0AA0 |
| 1080 | 800 | 2LC0302-5XG10-0AA0 |
| | 860 | 2LC0302-5XG20-0AA0 |
| 1150 | 860 | 2LC0302-6XG10-0AA0 |
| | 930 | 2LC0302-6XG20-0AA0 |
| 1160 | 860 | 2LC0302-7XG10-0AA0 |
| | 930 | 2LC0302-7XG20-0AA0 |
| | 990 | 2LC0302-7XG30-0AA0 |
| 1240 | 930 | 2LC0302-8XG10-0AA0 |
| | 990 | 2LC0302-8XG20-0AA0 |
| | 1055 | 2LC0302-8XG30-0AA0 |
| 1310 | 930 | 2LC0303-0XG10-0AA0 |
| | 990 | 2LC0303-0XG20-0AA0 |
| | 1055 | 2LC0303-0XG30-0AA0 |
| | 1120 | 2LC0303-0XG40-0AA0 |
| 1380 | 990 | 2LC0303-1XG10-0AA0 |
| | 1055 | 2LC0303-1XG20-0AA0 |
| | 1120 | 2LC0303-1XG30-0AA0 |
| | 1170 | 2LC0303-1XG40-0AA0 |
| 1440 | 1055 | 2LC0303-2XG10-0AA0 |
| | 1120 | 2LC0303-2XG20-0AA0 |
| | 1170 | 2LC0303-2XG30-0AA0 |
| | 1240 | 2LC0303-2XG40-0AA0 |
| 1540 | 1120 | 2LC0303-3XG10-0AA0 |
| | 1170 | 2LC0303-3XG20-0AA0 |
| | 1240 | 2LC0303-3XG30-0AA0 |
| | 1310 | 2LC0303-3XG40-0AA0 |

FLENDER high-performance grease (cartridge 300 g)

FFA: **000 000 501 027**

Sealing compound (tube 60 ml)

FFA: **000 000 243 185**

Torsionally Rigid Gear Couplings ZAPEX ZI Series

5



| | |
|------|---|
| | |
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| 5/5 | Type ZIZS |
| 5/5 | Selection and ordering data |
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FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

General information

Overview



**Coupling suitable for potentially explosive environments.
Complies with Directive 94/9/EC for:**

CE  II 2 GD c 120 °C (T4)

CE  I M2

Materials

- Hubs and flanged sleeves: Steel
- O ring: Perbunan
- Lubricant: Grease filling

Benefits

ZAPEX gear couplings link machine shafts and compensate for shaft misalignment with weak restorative forces. High transmissible torque combined with compactness and light weight are characteristic of ZAPEX couplings. ZAPEX coupling types are constructed on a modular principle, so application-related solutions can be delivered quickly.

This coupling requires very little maintenance. Regular grease changes at the prescribed intervals prolong the service life of the coupling.

Application

ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry. ZAPEX couplings are suitable for reverse operation and horizontal mounting positions and, in the case of type ZINV, for vertical mounting positions.

Design

A ZAPEX coupling comprises two hub sections with external teeth which are mounted on the machine shafts. The external teeth engage with a flanged sleeve with corresponding internal teeth. The flanged sleeves are connected via two flanges with close-fitting bolts.

The teeth are lubricated with grease. On the ZAPEX type ZI, O-rings are used to seal the tooth space. The O-rings prevent the lubricant from escaping and dirt from entering the tooth space. The parallel keyways must be sealed during assembly to prevent lubricant from escaping.

The torque is transmitted through the coupling teeth. The teeth are crowned, so angular displacement per tooth plane is possible. Radial misalignment can be compensated for via the space VA between the tooth planes. The internal teeth of the flanged sleeves are significantly wider than the external teeth of the hub parts, permitting a relatively high axial misalignment.

A small angular misalignment on the coupling teeth results in an advantageous distribution of the lubricant film in contact with the teeth and a very low wear rate. This favorable condition can be deliberately set by aligning the drive with the machine shafts with a slight radial misalignment.

ZAPEX ZI gear coupling types

| Type | Description |
|------|---|
| ZIN | Standard type |
| ZIZS | with adapter |
| ZIW | with intermediate shaft |
| ZIBT | with offset brake disk |
| ZIBG | with straight brake disk |
| ZINA | with axial backlash limiter |
| ZIZA | with adapter and axial backlash limiter |
| ZINV | Vertical type |
| ZIN | for axial displacement |
| ZIZI | electrically insulating |

Further application-related coupling types are available. Dimension sheets for and information on these are available on request.

The hubs of the standard types can be easily exchanged for multipurpose hubs. Multipurpose hubs are designed much longer and can be shortened to meet customer requirements.

The multipurpose hubs are described after the types.

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Torsional stiffness | Permitted shaft misalignment |
|------------|----------------|------------------|-----------------|----------------|-----------------------------|------------------------------|
| | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} | ZI C_{Tdyn} kNm/rad | ΔK_a mm |
| 1 | 850 | 1700 | 3400 | 340 | 500 | 1 |
| 1.5 | 1700 | 3400 | 6800 | 680 | 1400 | 1 |
| 2 | 3350 | 6700 | 13400 | 1340 | 2500 | 1 |
| 2.5 | 6000 | 12000 | 24000 | 2400 | 5800 | 1 |
| 3 | 10000 | 20000 | 40000 | 4000 | 9200 | 1 |
| 3.5 | 16000 | 32000 | 64000 | 6400 | 16600 | 1 |
| 4 | 23600 | 47200 | 94400 | 9440 | 27300 | 1 |
| 4.5 | 33500 | 67000 | 134000 | 13400 | 41500 | 1.5 |
| 5 | 47500 | 95000 | 190000 | 19000 | 61000 | 1.5 |
| 5.5 | 67000 | 134000 | 268000 | 26800 | 79000 | 1.5 |
| 6 | 90000 | 180000 | 360000 | 36000 | 99000 | 1.5 |
| 7 | 125000 | 250000 | 500000 | 50000 | 156000 | 1.5 |

The rated torques for type ZIZI deviating from these listed above are provided in the respective dimension table.

The specified torsional stiffness "ZI" applies to coupling types ZIN, ZINA, ZINV and ZIN for axial displacement.

Torsional stiffness of types ZIZS, ZIW, ZIBT, ZIBG, ZIZA and ZIZI on request.

The axial misalignment ΔK_a must be understood as the maximum permitted enlargement of the hub distance S of the coupling.

Angular misalignment ΔK_w

- Types ZIN, ZIZS, ZIW, ZINV; ZIN for axial displacement, ZIZI: $\Delta K_w = 0.5^\circ$
- Types ZIBG; ZIBT; ZINA; ZIZA: $\Delta K_w = 0.2^\circ$

Radial misalignment ΔK_r

- Types ZIN, ZIZS, ZIW, ZINV; ZIN for axial displacement, ZIZI: $\Delta K_r \leq VA \cdot \tan 0.5^\circ$
- Types ZIBG; ZIBT; ZINA; ZIZA: $\Delta K_r \leq VA \cdot \tan 0.2^\circ$

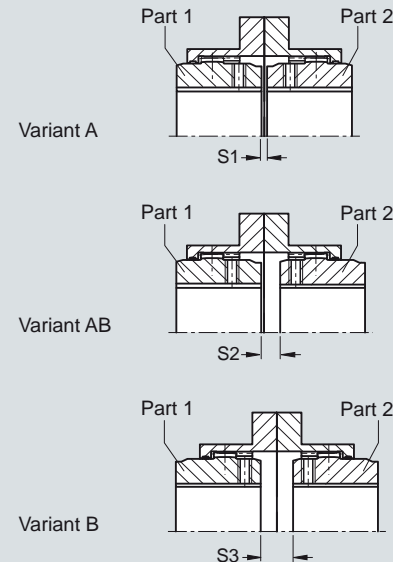
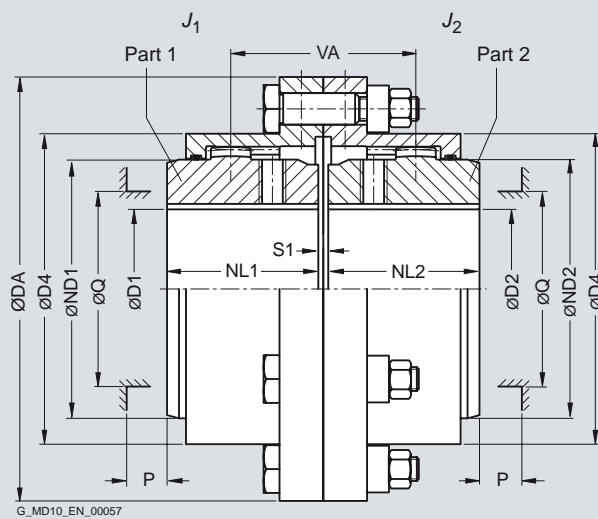
For the tooth distance VA, see the relevant table for the subassembly.

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIN

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A, AB, B.

After the finished bore has been drilled, the variant can no longer be changed.

| Dimensions in mm | | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|------------------|--------------|--|------------------------|------|-------|----------|----------|-------|----|----|----|-----|-----|-----|------------------------|--|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | NL1/ NL2 | D4 | S1 | S2 | S3 | VA | Q | P | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | | | | kgm ² | | kg |
| 1 | 850 | 8500 | 0 | 50 | 117 | 67 | 43 | 83 | 3 | 12 | 21 | 55 | 52 | 31 | 0.003 | 2LC0310-0A ■ ■ ■ -0AA0 | 3.2 |
| 1.5 | 1700 | 7700 | 0 | 64 | 152 | 87 | 50 | 107 | 3 | 9 | 15 | 59 | 68 | 34 | 0.009 | 2LC0310-1A ■ ■ ■ -0AA0 | 6.5 |
| 2 | 3350 | 6900 | 0 | 80 | 178 | 108 | 62 | 129.5 | 3 | 17 | 31 | 79 | 85 | 42 | 0.02 | 2LC0310-2A ■ ■ ■ -0AA0 | 9.8 |
| 2.5 | 6000 | 6200 | 0 | 98 | 213 | 130 | 76 | 156 | 5 | 17 | 29 | 93 | 110 | 47 | 0.05 | 2LC0310-3A ■ ■ ■ -0AA0 | 17.5 |
| 3 | 10000 | 5800 | 0 | 112 | 240 | 153 | 90 | 181 | 5 | 19 | 33 | 109 | 130 | 58 | 0.09 | 2LC0310-4A ■ ■ ■ -0AA0 | 25.5 |
| 3.5 | 16000 | 5100 | 0 | 133 | 280 | 180 | 105 | 211 | 6 | 23 | 40 | 128 | 150 | 67 | 0.21 | 2LC0310-5A ■ ■ ■ -0AA0 | 43 |
| 4 | 23600 | 4500 | 0 | 158 | 318 | 214 | 120 | 249.5 | 6 | 24 | 42 | 144 | 175 | 72 | 0.39 | 2LC0310-6A ■ ■ ■ -0AA0 | 60 |
| 4.5 | 33500 | 4000 | 80 | 172 | 347 | 233 | 135 | 274 | 8 | 29 | 50 | 164 | 190 | 81 | 0.59 | 2LC0310-7A ■ ■ ■ -0AA0 | 82 |
| 5 | 47500 | 3750 | 90 | 192 | 390 | 260 | 150 | 307 | 8 | 32 | 56 | 182 | 220 | 91 | 1.1 | 2LC0310-8A ■ ■ ■ -0AA0 | 115 |
| 5.5 | 67000 | 3550 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 8 | 39 | 70 | 214 | 250 | 104 | 1.8 | 2LC0311-0A ■ ■ ■ -0AA0 | 155 |
| 6 | 90000 | 3400 | 120 | 232 | 457 | 312 | 190 | 364 | 8 | 46 | 84 | 236 | 265 | 126 | 2.3 | 2LC0311-1A ■ ■ ■ -0AA0 | 180 |
| 7 | 125000 | 3200 | 150 | 276 | 527 | 371 | 220 | 423.5 | 10 | 43 | 76 | 263 | 300 | 140 | 4.9 | 2LC0311-2A ■ ■ ■ -0AA0 | 275 |
| Variant: | | • A | | | | | | | | | | | | | | A | |
| | | • B | | | | | | | | | | | | | | B | |
| | | • AB | | | | | | | | | | | | | | C | |
| ØD1: | | • Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | |
| ØD2: | | • Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | |

All sizes available from FLENDER stock.

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZIN coupling, size 1.5, variant A,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

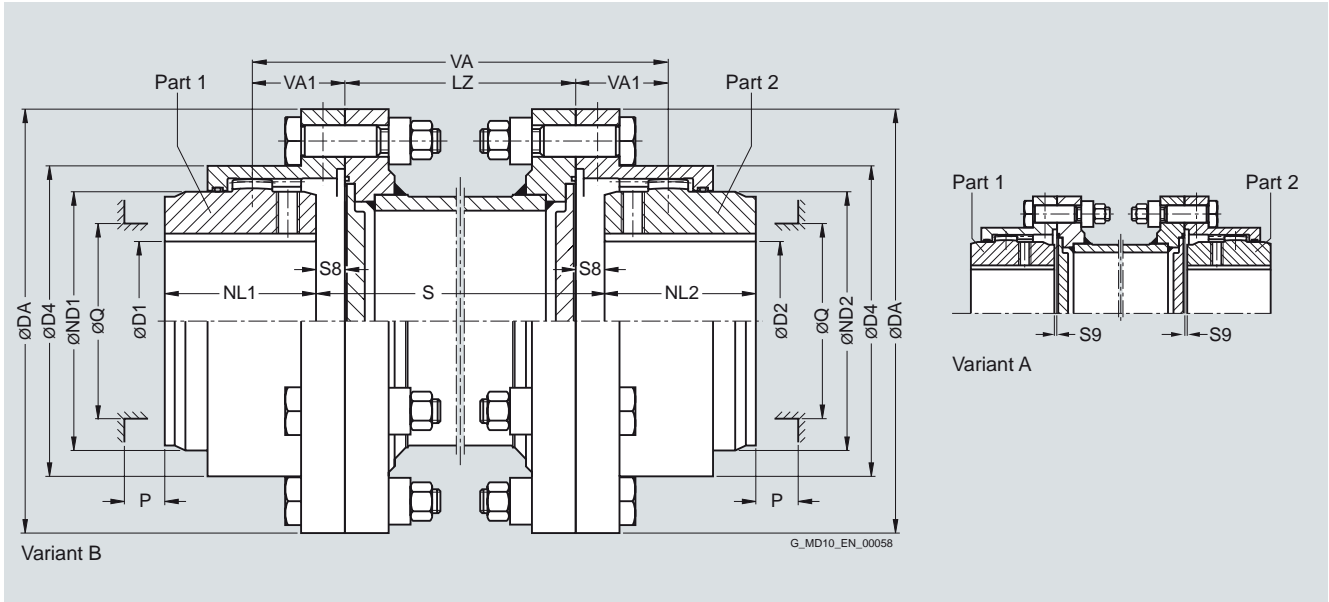
2LC0310-1AA99-0AA0-Z
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIZS

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A and B.

After the finished bore has been drilled, the variant can no longer be changed.

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | DA | ND1/ ND2 | NL1/ NL2 | D4 | S8 | S9 | VA1 | Q | P | LZ min. | Product code Plain text required for dimension S Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|------|--------------------------------|------------------------------|------|-------|-------------|-------------|-------|------|-----|-------|-----|-----|------------|---|------------------------|-----|
| | | D1, D2 Keyway DIN 6885 | DA | | | | | | | | | | | | m | m |
| | | min. | max. | | | | | | | | | | | | each 100 mm pipe | kg |
| 1 | 850 | 0 | 50 | 117 | 67 | 43 | 83 | 10.5 | 1.5 | 27.5 | 52 | 31 | 75 | 2LC0310-0A ■■■■ -0AZ0 Q0Y | 0.9 | 5.5 |
| 1.5 | 1700 | 0 | 64 | 152 | 87 | 50 | 107 | 7.5 | 1.5 | 29.5 | 68 | 34 | 85 | 2LC0310-1A ■■■■ -0AZ0 Q0Y | 0.8 | 12 |
| 2 | 3350 | 0 | 80 | 178 | 108 | 62 | 129.5 | 15.5 | 1.5 | 39.5 | 85 | 42 | 95 | 2LC0310-2A ■■■■ -0AZ0 Q0Y | 1.2 | 16 |
| 2.5 | 6000 | 0 | 98 | 213 | 130 | 76 | 156 | 14.5 | 2.5 | 46.5 | 110 | 47 | 110 | 2LC0310-3A ■■■■ -0AZ0 Q0Y | 2.3 | 28 |
| 3 | 10000 | 0 | 112 | 240 | 153 | 90 | 181 | 16.5 | 2.5 | 54.5 | 130 | 58 | 110 | 2LC0310-4A ■■■■ -0AZ0 Q0Y | 3.5 | 40 |
| 3.5 | 16000 | 0 | 133 | 280 | 180 | 105 | 211 | 20 | 3 | 64 | 150 | 67 | 125 | 2LC0310-5A ■■■■ -0AZ0 Q0Y | 4.5 | 64 |
| 4 | 23600 | 0 | 158 | 318 | 214 | 120 | 249.5 | 21 | 3 | 72 | 175 | 72 | 125 | 2LC0310-6A ■■■■ -0AZ0 Q0Y | 6.3 | 91 |
| 4.5 | 33500 | 80 | 172 | 347 | 233 | 135 | 274 | 25 | 4 | 82 | 190 | 81 | 125 | 2LC0310-7A ■■■■ -0AZ0 Q0Y | 7.2 | 115 |
| 5 | 47500 | 90 | 192 | 390 | 260 | 150 | 307 | 28 | 4 | 91 | 220 | 91 | 145 | 2LC0310-8A ■■■■ -0AZ0 Q0Y | 9.1 | 175 |
| 5.5 | 67000 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 35 | 4 | 107 | 250 | 104 | 145 | 2LC0311-0A ■■■■ -0AZ0 Q0Y | 12 | 220 |
| 6 | 90000 | 120 | 232 | 457 | 312 | 190 | 364 | 42 | 4 | 118 | 265 | 126 | 145 | 2LC0311-1A ■■■■ -0AZ0 Q0Y | 15 | 245 |
| 7 | 125000 | 150 | 276 | 527 | 371 | 220 | 423.5 | 38 | 5 | 131.5 | 300 | 140 | 145 | 2LC0311-2A ■■■■ -0AZ0 Q0Y | 16 | 360 |

Variant:

- A
- B

ØD1:

- Without finished bore – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

ØD2:

- Without finished bore – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without -Z)

D
E

1

9

1

9

All sizes, without adapter, available from FLENDER stock.

$VA = 2 \cdot VA1 + LZ$

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia on request.

Weights apply to the entire coupling with maximum bores and an adapter length of LZ min.

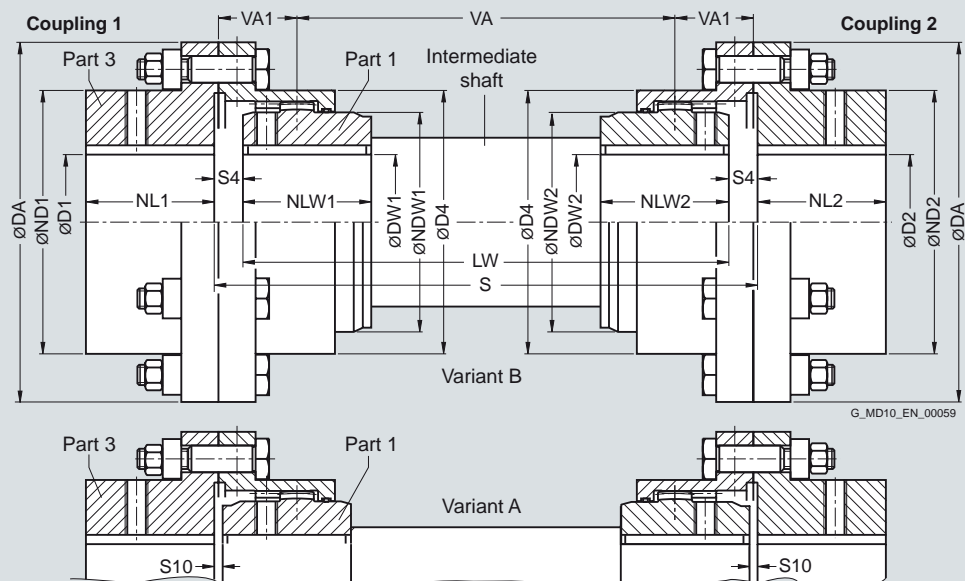
Maximum speed, limited by weight and critical adapter speed, on request.

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIW

Selection and ordering data



Coupling parts 1 and 2 can be combined to form coupling variants A and B.

After the finished bore has been drilled, the variant can no longer be changed.

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | D1, D2 Keyway DIN 6885 | DA | ND1/ ND2 | NL1/ NL2/ NLW1/ NLW2 | DW1, DW2 Keyway DIN 6885 | | NDW1/ D4 NDW2 | S4 | S10 | VA1 | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight <i>m</i> kg |
|----------|--------------------------------|---|------|------------------------------|-------|-------------|-------------------------------|--------------------------------|------|------------------|----|-----|-------|---|--------------------------|
| | | min. | max. | | | | | min. | max. | | | | | | |
| 1 | 850 | 0 | 61 | 117 | 83 | 43 | 0 | 50 | 67 | 83 | 12 | 3 | 29 | 2LC0310-0A ■■■ -0AA0 | 3.1 |
| 1.5 | 1700 | 0 | 79 | 152 | 107 | 50 | 0 | 64 | 87 | 107 | 9 | 3 | 31 | 2LC0310-1A ■■■ -0AA0 | 6.2 |
| 2 | 3350 | 0 | 96 | 178 | 129.5 | 62 | 0 | 80 | 108 | 129.5 | 17 | 3 | 41 | 2LC0310-2A ■■■ -0AA0 | 9.5 |
| 2.5 | 6000 | 0 | 116 | 213 | 156 | 76 | 0 | 98 | 130 | 156 | 17 | 5 | 49 | 2LC0310-3A ■■■ -0AA0 | 17 |
| 3 | 10000 | 0 | 134 | 240 | 181 | 90 | 0 | 112 | 153 | 181 | 19 | 5 | 57 | 2LC0310-4A ■■■ -0AA0 | 24.5 |
| 3.5 | 16000 | 0 | 156 | 280 | 211 | 105 | 0 | 133 | 180 | 211 | 23 | 6 | 67 | 2LC0310-5A ■■■ -0AA0 | 41 |
| 4 | 23600 | 0 | 184 | 318 | 249.5 | 120 | 0 | 158 | 214 | 249.5 | 24 | 6 | 75 | 2LC0310-6A ■■■ -0AA0 | 58 |
| 4.5 | 33500 | 80 | 202 | 347 | 274 | 135 | 80 | 172 | 233 | 274 | 29 | 8 | 86 | 2LC0310-7A ■■■ -0AA0 | 76 |
| 5 | 47500 | 90 | 228 | 390 | 307 | 150 | 90 | 192 | 260 | 307 | 32 | 8 | 95 | 2LC0310-8A ■■■ -0AA0 | 110 |
| 5.5 | 67000 | 100 | 247 | 425.5 | 332.5 | 175 | 100 | 210 | 283 | 332.5 | 39 | 8 | 111 | 2LC0311-0A ■■■ -0AA0 | 150 |
| 6 | 90000 | 120 | 270 | 457 | 364 | 190 | 120 | 232 | 312 | 364 | 46 | 8 | 122 | 2LC0311-1A ■■■ -0AA0 | 170 |
| 7 | 125000 | 150 | 313 | 527 | 423.5 | 220 | 150 | 276 | 371 | 423.5 | 43 | 10 | 136.5 | 2LC0311-2A ■■■ -0AA0 | 270 |
| Variant: | | <ul style="list-style-type: none"> • A • B | | | | | | | | | | | | V | |
| ØD1: | | <ul style="list-style-type: none"> • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | W | 1 |
| ØD2: | | <ul style="list-style-type: none"> • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | 9 |

$$VA = S - 2 \cdot VA1$$

Mass moments of inertia on request.

Weights apply to either coupling 1 or 2 with maximum bores, without intermediate shaft.
Maximum speed, limited by weight and critical speed of intermediate shaft, on request.

Ordering example:

Coupling 1:
ZAPEX ZIW coupling, size 1.5, variant B,
Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 1: Bore 45H7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:
2LC0310-1AW99-0AA0-Z
L1A+L13+M1A

Intermediate shaft:

Intermediate shaft to ZAPEX ZIW coupling, size 1.5, length
LW = 570 mm, shaft journal Ø45p6 x 50 long; keyway
DIN 6885-1.

Product code:
2LC9310-0XH00-0AA0-Z
Y99

plain text to Y99: **DW1 = 45p6 mm, NLW1 = 50 mm,**
DW2 = 45p6 mm, NLW2 = 50 mm, LW = 570 mm

Coupling 2:

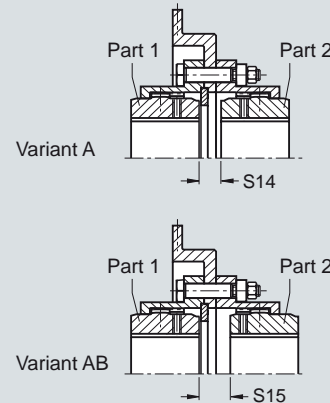
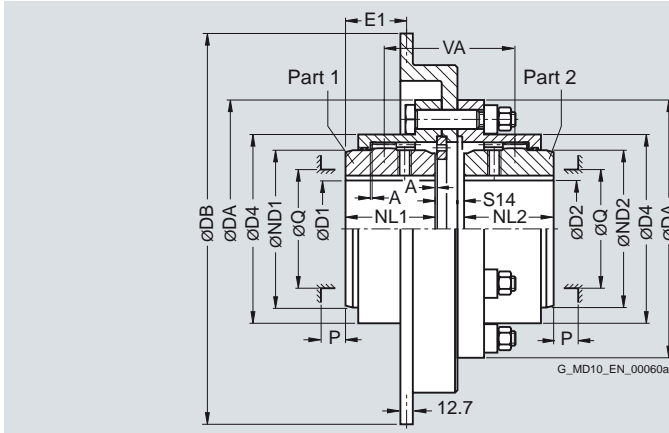
ZAPEX ZIW coupling, size 1.5, variant B,
Part 1: Bore 45H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:
2LC0310-0AW99-0AA0-Z
L1A+M1A+M13

FLENDER Standard Couplings **Torsionally Rigid Gear Couplings - ZAPEX ZI Series**

Type ZIBT

Selection and ordering data



Variant limited in displacement and axial movement.
Max. displacement 0.2°.

After the finished bore has been drilled, the variant can no longer be changed.

Coupling parts 1 and 2 can be combined to form coupling variants A and AB.

| | | | Dimensions in mm | | | | | | | | | | | | | | Brake disk | | Product code | Weight |
|----------|------------------------------|--|------------------------|------|-------|-------------------|-----|-------|------|------|-----|-------|-----|-----|-----|--------|--|----------|--------------|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ NL1/ ND2 NL2 | | D4 | S14 | S15 | A | VA | Q | P | DB | E1 | Order codes for bore diameters and tolerances are specified in catalog section 3 | <i>m</i> | | |
| | <i>T</i> _{KN} Nm | <i>n</i> _{Kmax} rpm | min. | max. | | | | | | | | | | | | | | kg | | |
| 1 | 850 | 3800 | 0 | 50 | 117 | 67 | 43 | 83 | 17 | 26 | 0.5 | 69 | 52 | 31 | 300 | 23.85 | 2LC0310-0A ■■■ -0AA0 | 10 | | |
| 1.5 | 1700 | 3200 | 0 | 64 | 152 | 87 | 50 | 107 | 20.5 | 26.5 | 0.5 | 76.5 | 68 | 34 | 356 | 21.35 | 2LC0310-1A ■■■ -0AA0 | 17 | | |
| 2 | 3350 | 3200 | 0 | 80 | 178 | 108 | 62 | 129.5 | 20.5 | 34.5 | 0.5 | 96.5 | 85 | 42 | 356 | 33.35 | 2LC0310-2A ■■■ -0AA0 | 17.5 | | |
| | | 2800 | | | | | | | 17.5 | 31.5 | | 93.5 | | | 406 | 30.35 | 2LC0310-2A ■■■ -0BA0 | 20 | | |
| 2.5 | 6000 | 2800 | 0 | 98 | 213 | 130 | 76 | 156 | 20 | 32 | 0.5 | 108 | 110 | 47 | 406 | 45.85 | 2LC0310-3A ■■■ -0AA0 | 30 | | |
| | | 2500 | | | | | | | 23 | 35 | | 111 | | | 457 | 48.85 | 2LC0310-3A ■■■ -0BA0 | 35 | | |
| 3 | 10000 | 2800 | 0 | 112 | 240 | 153 | 90 | 181 | 20 | 34 | 0.5 | 124 | 130 | 58 | 406 | 59.85 | 2LC0310-4A ■■■ -0AA0 | 39 | | |
| | | 2500 | | | | | | | 23 | 37 | | 127 | | | 457 | 62.85 | 2LC0310-4A ■■■ -0BA0 | 44 | | |
| | | 2200 | | | | | | | 23 | 37 | | 127 | | | 514 | 62.85 | 2LC0310-4A ■■■ -0CA0 | 49 | | |
| 3.5 | 16000 | 2500 | 0 | 133 | 280 | 180 | 105 | 211 | 24.5 | 41.5 | 0.5 | 146.5 | 150 | 67 | 457 | 78.85 | 2LC0310-5A ■■■ -0AA0 | 60 | | |
| | | 2200 | | | | | | | 24.5 | 41.5 | | 146.5 | | | 514 | 78.85 | 2LC0310-5A ■■■ -0BA0 | 65 | | |
| | | 1850 | | | | | | | 24.5 | 41.5 | | 146.5 | | | 610 | 78.85 | 2LC0310-5A ■■■ -0CA0 | 76 | | |
| 4 | 23600 | 2200 | 0 | 158 | 318 | 214 | 120 | 249.5 | 24 | 42 | 1.0 | 162 | 175 | 72 | 514 | 93.35 | 2LC0310-6A ■■■ -0AA0 | 82 | | |
| | | 1850 | | | | | | | 24 | 42 | | 162 | | | 610 | 93.35 | 2LC0310-6A ■■■ -0BA0 | 92 | | |
| | | 1600 | | | | | | | 27 | 45 | | 165 | | | 711 | 96.35 | 2LC0310-6A ■■■ -0CA0 | 105 | | |
| 4.5 | 33500 | 2200 | 80 | 172 | 347 | 233 | 135 | 274 | 26.5 | 47.5 | 1.0 | 182.5 | 190 | 81 | 514 | 109.85 | 2LC0310-7A ■■■ -0AA0 | 100 | | |
| | | 1850 | | | | | | | 26.5 | 47.5 | | 182.5 | | | 610 | 109.85 | 2LC0310-7A ■■■ -0BA0 | 110 | | |
| | | 1600 | | | | | | | 29.5 | 50.5 | | 185.5 | | | 711 | 112.85 | 2LC0310-7A ■■■ -0CA0 | 125 | | |
| | | 1400 | | | | | | | 35.5 | 56.5 | | 191.5 | | | 812 | 118.85 | 2LC0310-7A ■■■ -0DA0 | 160 | | |
| 5 | 47500 | 1850 | 90 | 192 | 390 | 260 | 150 | 307 | 27 | 51 | 1.0 | 201 | 220 | 91 | 610 | 125.35 | 2LC0310-8A ■■■ -0AA0 | 145 | | |
| | | 1600 | | | | | | | 30 | 54 | | 204 | | | 711 | 128.35 | 2LC0310-8A ■■■ -0BA0 | 160 | | |
| | | 1400 | | | | | | | 36 | 60 | | 210 | | | 812 | 134.35 | 2LC0310-8A ■■■ -0CA0 | 195 | | |
| 5.5 | 67000 | 1600 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 30 | 61 | 1.0 | 236 | 250 | 104 | 711 | 153.35 | 2LC0311-0A ■■■ -0AA0 | 195 | | |
| | | 1400 | | | | | | | 36 | 67 | | 242 | | | 812 | 159.35 | 2LC0311-0A ■■■ -0BA0 | 230 | | |
| 6 | 90000 | 1400 | 120 | 232 | 457 | 312 | 190 | 364 | 36 | 74 | 1.0 | 264 | 265 | 126 | 812 | 174.35 | 2LC0311-1A ■■■ -0AA0 | 260 | | |
| Variant: | | <div><div></div><div>A</div><div></div><div>AB</div></div> | | | | | | | | | | | | | | | N | | | |
| | | | | | | | | | | | | | | | | | P | | | |
| ØD1: | | <div><div></div><div>Without finished bore – Without order codes</div><div></div><div>With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | | |
| ØD2: | | <div><div></div><div>Without finished bore – Without order codes</div><div></div><div>With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | | |

Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.
Mass moments of inertia on request.
Weights apply to the entire coupling with maximum bores.

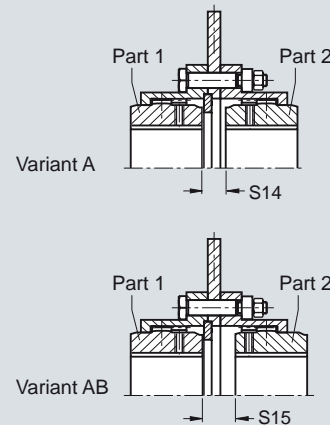
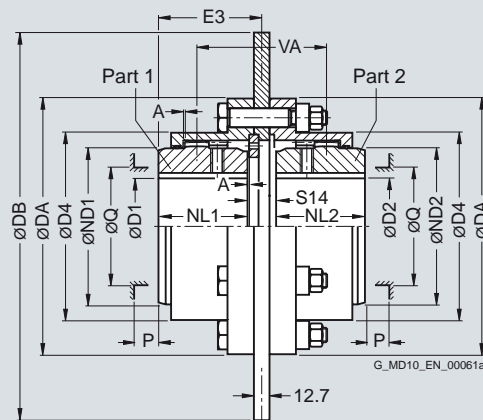
Ordering example:
ZAPEX ZIBT coupling, size 1.5, variant A, brake disk diameter DB = 356 mm, Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw, Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.
Product code: **2LC0310-1A99-0AA0-Z**
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIBG

Selection and ordering data



Variant limited in displacement and axial movement.
Max. displacement 0.2°.

After the finished bore has been drilled, the variant can no longer be changed.

Coupling parts 1 and 2 can be combined to form coupling variants A and AB.

| Dimensions in mm | | | | | | | | | | | | | | | | | Product code | | Weight |
|------------------|--------------|--|------------------------|------|-------|----------|-----|-------|------|------|-----|-------|-----|-----|------------|-------|--|------|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | | D4 | S14 | S15 | A | VA | Q | P | Brake disk | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| | | | min. | max. | | DB | E3 | | | | | | | | kg | | | | |
| 1 | 850 | 3800 | 0 | 50 | 117 | 67 | 43 | 83 | 17 | 26 | 0.5 | 69 | 52 | 31 | 300 | 52 | 2LC0310-0A ■ ■ ■ -0AA0 | 10 | |
| 1.5 | 1700 | 3200 | 0 | 64 | 152 | 87 | 50 | 107 | 20.5 | 26.5 | 0.5 | 76.5 | 68 | 34 | 356 | 61 | 2LC0310-1A ■ ■ ■ -0AA0 | 16 | |
| 2 | 3350 | 3200 | 0 | 80 | 178 | 108 | 62 | 129.5 | 20.5 | 34.5 | 0.5 | 96.5 | 85 | 42 | 356 | 73 | 2LC0310-2A ■ ■ ■ -0AA0 | 16.5 | |
| | | 2800 | | | | | | | 17.5 | 31.5 | | 93.5 | | | 406 | 71.5 | 2LC0310-2A ■ ■ ■ -0BA0 | 19.5 | |
| 2.5 | 6000 | 2800 | 0 | 98 | 213 | 130 | 76 | 156 | 20 | 32 | 0.5 | 108 | 110 | 47 | 406 | 87 | 2LC0310-3A ■ ■ ■ -0AA0 | 29 | |
| | | 2500 | | | | | | | 23 | 35 | | 111 | | | 457 | 88.5 | 2LC0310-3A ■ ■ ■ -0BA0 | 33 | |
| 3 | 10000 | 2800 | 0 | 112 | 240 | 153 | 90 | 181 | 20 | 34 | 0.5 | 124 | 130 | 58 | 406 | 101 | 2LC0310-4A ■ ■ ■ -0AA0 | 38 | |
| | | 2500 | | | | | | | 23 | 37 | | 127 | | | 457 | 102.5 | 2LC0310-4A ■ ■ ■ -0BA0 | 42 | |
| | | 2200 | | | | | | | 23 | 37 | | 127 | | | 514 | 102.5 | 2LC0310-4A ■ ■ ■ -0CA0 | 46 | |
| 3.5 | 16000 | 2500 | 0 | 133 | 280 | 180 | 105 | 211 | 24.5 | 41.5 | 0.5 | 146.5 | 150 | 67 | 457 | 118.5 | 2LC0310-5A ■ ■ ■ -0AA0 | 58 | |
| | | 2200 | | | | | | | 24.5 | 41.5 | | 146.5 | | | 514 | 118.5 | 2LC0310-5A ■ ■ ■ -0BA0 | 63 | |
| | | 1850 | | | | | | | 24.5 | 41.5 | | 146.5 | | | 610 | 118.5 | 2LC0310-5A ■ ■ ■ -0CA0 | 71 | |
| 4 | 23600 | 2200 | 0 | 158 | 318 | 214 | 120 | 249.5 | 24 | 42 | 1.0 | 162 | 175 | 72 | 514 | 133 | 2LC0310-6A ■ ■ ■ -0AA0 | 77 | |
| | | 1850 | | | | | | | 24 | 42 | | 162 | | | 610 | 133 | 2LC0310-6A ■ ■ ■ -0BA0 | 87 | |
| | | 1600 | | | | | | | 27 | 45 | | 165 | | | 711 | 134.5 | 2LC0310-6A ■ ■ ■ -0CA0 | 97 | |
| 4.5 | 33500 | 2200 | 80 | 172 | 347 | 233 | 135 | 274 | 26.5 | 47.5 | 1.0 | 182.5 | 190 | 81 | 514 | 149.5 | 2LC0310-7A ■ ■ ■ -0AA0 | 97 | |
| | | 1850 | | | | | | | 26.5 | 47.5 | | 182.5 | | | 610 | 149.5 | 2LC0310-7A ■ ■ ■ -0BA0 | 105 | |
| | | 1600 | | | | | | | 29.5 | 50.5 | | 185.5 | | | 711 | 151 | 2LC0310-7A ■ ■ ■ -0CA0 | 115 | |
| | | 1400 | | | | | | | 35.5 | 56.5 | | 191.5 | | | 812 | 154 | 2LC0310-7A ■ ■ ■ -0DA0 | 130 | |
| 5 | 47500 | 1850 | 90 | 192 | 390 | 260 | 150 | 307 | 27 | 51 | 1.0 | 201 | 220 | 91 | 610 | 165 | 2LC0310-8A ■ ■ ■ -0AA0 | 140 | |
| | | 1600 | | | | | | | 30 | 54 | | 204 | | | 711 | 166.5 | 2LC0310-8A ■ ■ ■ -0BA0 | 155 | |
| | | 1400 | | | | | | | 36 | 60 | | 210 | | | 812 | 169.5 | 2LC0310-8A ■ ■ ■ -0CA0 | 170 | |
| 5.5 | 67000 | 1600 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 30 | 61 | 1.0 | 236 | 250 | 104 | 711 | 191.5 | 2LC0311-0A ■ ■ ■ -0AA0 | 190 | |
| | | 1400 | | | | | | | 36 | 67 | | 242 | | | 812 | 194.5 | 2LC0311-0A ■ ■ ■ -0BA0 | 205 | |
| 6 | 90000 | 1400 | 120 | 232 | 457 | 312 | 190 | 364 | 36 | 74 | 1.0 | 264 | 265 | 126 | 812 | 209.5 | 2LC0311-1A ■ ■ ■ -0AA0 | 235 | |
| Variant: | | <div><div>• A</div><div>• AB</div></div> | | | | | | | | | | | | | | | Q | | |
| | | | | | | | | | | | | | | | | | R | | |
| ØD1: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | |
| ØD2: | | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | 9 | |

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia on request.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZIBG coupling, size 1.5, variant A,

brake disk diameter DB = 356 mm,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,

Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

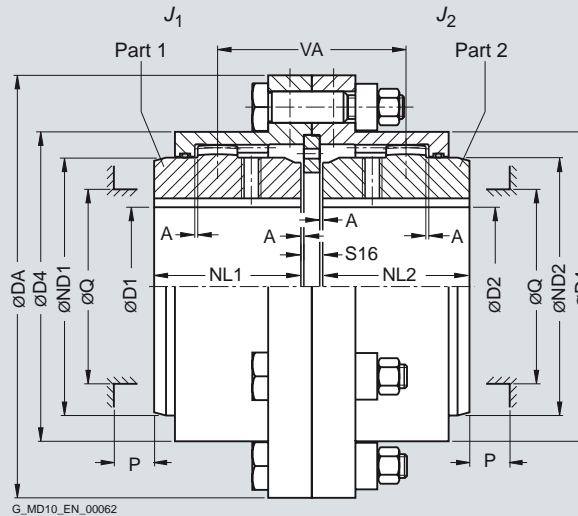
Product code: **2LC0310-1AQ99-0AA0-Z**

LOW+M1A+M13

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZINA

Selection and ordering data



Variant limited in displacement and axial movement. Max. displacement 0.2°.

| Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|---|----------------|-------------------|------------------------|------|-------|---------|---------|-------|-----|-----|-----|-----|-----|------------------------|--|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ND2 | NL1/NL2 | D4 | S16 | A | VA | Q | P | J1/J2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | | | kgm ² | | kg |
| 1 | 850 | 8500 | 0 | 50 | 117 | 67 | 43 | 83 | 5 | 0.5 | 57 | 52 | 31 | 0.003 | 2LC0310-0AF ■ ■ ■ -0AA0 | 3.3 |
| 1.5 | 1700 | 7700 | 0 | 64 | 152 | 87 | 50 | 107 | 6 | 0.5 | 62 | 68 | 34 | 0.010 | 2LC0310-1AF ■ ■ ■ -0AA0 | 6.7 |
| 2 | 3350 | 6900 | 0 | 80 | 178 | 108 | 62 | 129.5 | 6 | 0.5 | 82 | 85 | 42 | 0.021 | 2LC0310-2AF ■ ■ ■ -0AA0 | 10.5 |
| 2.5 | 6000 | 6200 | 0 | 98 | 213 | 130 | 76 | 156 | 9 | 0.5 | 97 | 110 | 47 | 0.050 | 2LC0310-3AF ■ ■ ■ -0AA0 | 18 |
| 3 | 10000 | 5800 | 0 | 112 | 240 | 153 | 90 | 181 | 9 | 0.5 | 113 | 130 | 58 | 0.095 | 2LC0310-4AF ■ ■ ■ -0AA0 | 26.5 |
| 3.5 | 16000 | 5100 | 0 | 133 | 280 | 180 | 105 | 211 | 11 | 0.5 | 133 | 150 | 67 | 0.22 | 2LC0310-5AF ■ ■ ■ -0AA0 | 44 |
| 4 | 23600 | 4500 | 0 | 158 | 318 | 214 | 120 | 249.5 | 10 | 1 | 148 | 175 | 72 | 0.40 | 2LC0310-6AF ■ ■ ■ -0AA0 | 62 |
| 4.5 | 33500 | 4000 | 80 | 172 | 347 | 233 | 135 | 274 | 13 | 1 | 169 | 190 | 81 | 0.64 | 2LC0310-7AF ■ ■ ■ -0AA0 | 82 |
| 5 | 47500 | 3750 | 90 | 192 | 390 | 260 | 150 | 307 | 14 | 1 | 188 | 220 | 91 | 1.1 | 2LC0310-8AF ■ ■ ■ -0AA0 | 115 |
| 5.5 | 67000 | 3550 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 14 | 1 | 220 | 250 | 104 | 1.8 | 2LC0311-0AF ■ ■ ■ -0AA0 | 155 |
| 6 | 90000 | 3400 | 120 | 232 | 457 | 312 | 190 | 364 | 14 | 1 | 242 | 265 | 126 | 2.4 | 2LC0311-1AF ■ ■ ■ -0AA0 | 185 |
| 7 | 125000 | 3200 | 150 | 276 | 527 | 371 | 220 | 423.5 | 18 | 1 | 271 | 300 | 140 | 4.9 | 2LC0311-2AF ■ ■ ■ -0AA0 | 285 |
| ØD1: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 9 |
| ØD2: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 9 |

All sizes available from FLENDER stock.

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZINA coupling, size 1.5,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

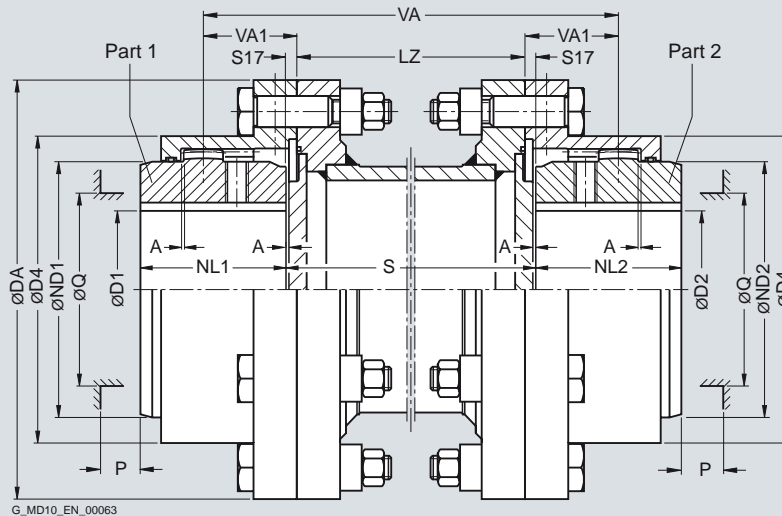
2LC0310-1AF99-0AA0-Z
LOW+M1A+M13

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIZA

Selection and ordering data



Variant limited in displacement and axial movement. Max. displacement 0.2°.

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | | | ND1/ ND2 | NL1/ NL2 | D4 | S17 | A | VA1 | Q | P | LZ min. | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|------|--|------------------------|------|---------------------|--------|-------------|-------------|-----|-----|-------|-----|-----|-----|---------------------------|--|--------|--|
| | | D1, D2 Keyway DIN 6885 | DA | each 100 mm pipe kg | m kg | | | | | | | | | | | | |
| | | min. | max. | | | | | | | | | | | | | | |
| 1 | 850 | 0 | 50 | 117 | 67 | 43 | 83 | 2.5 | 0.5 | 28.5 | 52 | 31 | 75 | 2LC0310-0AG ■ ■ -0AZ0 Q0Y | 0.9 | 5.5 | |
| 1.5 | 1700 | 0 | 64 | 152 | 87 | 50 | 107 | 3 | 0.5 | 31 | 68 | 34 | 85 | 2LC0310-1AG ■ ■ -0AZ0 Q0Y | 0.8 | 12 | |
| 2 | 3350 | 0 | 80 | 178 | 108 | 62 | 129.5 | 3 | 0.5 | 41 | 85 | 42 | 95 | 2LC0310-2AG ■ ■ -0AZ0 Q0Y | 1.2 | 16 | |
| 2.5 | 6000 | 0 | 98 | 213 | 130 | 76 | 156 | 4.5 | 0.5 | 48.5 | 110 | 47 | 110 | 2LC0310-3AG ■ ■ -0AZ0 Q0Y | 2.3 | 28 | |
| 3 | 10000 | 0 | 112 | 240 | 153 | 90 | 181 | 4.5 | 0.5 | 56.5 | 130 | 58 | 110 | 2LC0310-4AG ■ ■ -0AZ0 Q0Y | 3.5 | 40 | |
| 3.5 | 16000 | 0 | 133 | 280 | 180 | 105 | 211 | 5.5 | 0.5 | 66.5 | 150 | 67 | 125 | 2LC0310-5AG ■ ■ -0AZ0 Q0Y | 4.5 | 64 | |
| 4 | 23600 | 0 | 158 | 318 | 214 | 120 | 249.5 | 5 | 1 | 74 | 175 | 72 | 125 | 2LC0310-6AG ■ ■ -0AZ0 Q0Y | 6.3 | 91 | |
| 4.5 | 33500 | 80 | 172 | 347 | 233 | 135 | 274 | 6.5 | 1 | 84.5 | 190 | 81 | 125 | 2LC0310-7AG ■ ■ -0AZ0 Q0Y | 7.2 | 115 | |
| 5 | 47500 | 90 | 192 | 390 | 260 | 150 | 307 | 7 | 1 | 94 | 220 | 91 | 145 | 2LC0310-8AG ■ ■ -0AZ0 Q0Y | 9.1 | 175 | |
| 5.5 | 67000 | 100 | 210 | 425.5 | 283 | 175 | 332.5 | 7 | 1 | 110 | 250 | 104 | 145 | 2LC0311-0AG ■ ■ -0AZ0 Q0Y | 12 | 220 | |
| 6 | 90000 | 120 | 232 | 457 | 312 | 190 | 364 | 7 | 1 | 121 | 265 | 126 | 145 | 2LC0311-1AG ■ ■ -0AZ0 Q0Y | 15 | 245 | |
| 7 | 125000 | 150 | 276 | 527 | 371 | 220 | 423.5 | 9 | 1 | 135.5 | 300 | 140 | 145 | 2LC0311-2AG ■ ■ -0AZ0 Q0Y | 16 | 360 | |

ØD1: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

All sizes, without adapter, available from FLENDER stock.

$$VA = 2 \cdot VA1 + LZ$$

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia on request.

Weights apply to the entire coupling with maximum bores and an adapter length of LZ min.

Maximum speed, limited by weight and critical adapter speed, on request.

Ordering example:

ZAPEX ZIZA coupling, size 1.5,

adapter LZ = 244 mm,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,

Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code: **2LC0310-1AG99-0AZ0-Z**

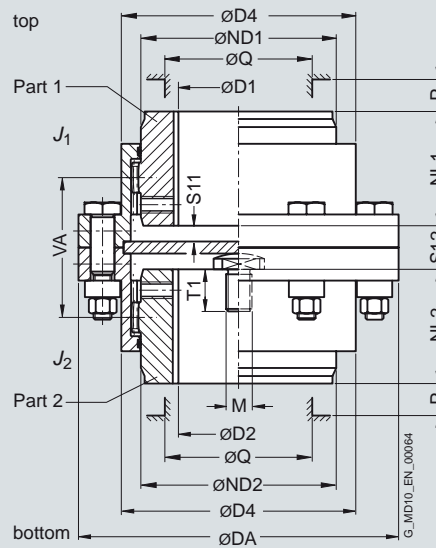
LOW+M1A+Q0Y+M13

plain text to Q0Y: **LZ = 244 mm**

FLENDER Standard Couplings **Torsionally Rigid Gear Couplings - ZAPEX ZI Series**

Type ZINV

Selection and ordering data



When ordering, state thread size M and thread length T1 of the thrust piece.

| Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|------------------|----------------|-------------------|------------------------|------|------|----------|-----|-------|------|-----|-----|-----|-----|------------------------|--|--------|
| Size | Rated torque | Maximum speed | D1, D2 Keyway DIN 6885 | | DA | ND1/ ND2 | | D4 | S11 | S12 | VA | Q | P | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | T_{KN} Nm | n_{Kmax} rpm | min. | max. | | | | | | | | | | kgm ² | | kg |
| 1 | 850 | 8500 | 0 | 50 | 117 | 67 | 43 | 83 | 8 | 21 | 55 | 52 | 31 | 0.003 | 2LC0310-0AH ■ ■ -0AA0-Z Y99 | 3.5 |
| 1.5 | 1700 | 7700 | 0 | 64 | 152 | 87 | 50 | 107 | 4.5 | 15 | 59 | 68 | 34 | 0.009 | 2LC0310-1AH ■ ■ -0AA0-Z Y99 | 6.6 |
| 2 | 3350 | 6900 | 0 | 80 | 178 | 108 | 62 | 129.5 | 12.5 | 31 | 79 | 85 | 42 | 0.023 | 2LC0310-2AH ■ ■ -0AA0-Z Y99 | 10.5 |
| 2.5 | 6000 | 6200 | 0 | 98 | 213 | 130 | 76 | 156 | 10.5 | 29 | 93 | 110 | 47 | 0.055 | 2LC0310-3AH ■ ■ -0AA0-Z Y99 | 17 |
| 3 | 10000 | 5800 | 0 | 112 | 240 | 153 | 90 | 181 | 12.5 | 33 | 109 | 130 | 58 | 0.10 | 2LC0310-4AH ■ ■ -0AA0-Z Y99 | 25.5 |
| 3.5 | 16000 | 5100 | 0 | 133 | 280 | 180 | 105 | 211 | 15 | 40 | 128 | 150 | 67 | 0.22 | 2LC0310-5AH ■ ■ -0AA0-Z Y99 | 40 |
| 4 | 23600 | 4500 | 0 | 158 | 318 | 214 | 120 | 249.5 | 17 | 42 | 144 | 175 | 72 | 0.37 | 2LC0310-6AH ■ ■ -0AA0-Z Y99 | 54 |
| 4.5 | 33500 | 4000 | 80 | 172 | 347 | 233 | 135 | 274 | 19.5 | 50 | 164 | 190 | 81 | 0.64 | 2LC0310-7AH ■ ■ -0AA0-Z Y99 | 87 |
| 5 | 47500 | 3750 | 90 | 192 | 390 | 260 | 150 | 307 | 22 | 56 | 182 | 220 | 91 | 1.2 | 2LC0310-8AH ■ ■ -0AA0-Z Y99 | 130 |
| 5.5 | 67000 | 3550 | 100 | 210 | 25.5 | 283 | 175 | 332.5 | 29 | 70 | 214 | 250 | 104 | 1.8 | 2LC0311-0AH ■ ■ -0AA0-Z Y99 | 160 |
| 6 | 90000 | 3400 | 120 | 232 | 457 | 312 | 190 | 364 | 36 | 84 | 236 | 265 | 126 | 2.6 | 2LC0311-1AH ■ ■ -0AA0-Z Y99 | 190 |
| 7 | 125000 | 3200 | 150 | 276 | 527 | 371 | 220 | 423.5 | 30 | 76 | 263 | 300 | 140 | 5.4 | 2LC0311-2AH ■ ■ -0AA0-Z Y99 | 270 |

| | | |
|------|---|--------|
| ØD1: | <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | 1 9 |
| ØD2: | <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | 1 9 |

- Q Diameter required for renewing the sealing rings.
- P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:
 ZAPEX ZINV coupling, size 1.5,
 Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
 Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw,
 thread M10 x 20 deep.

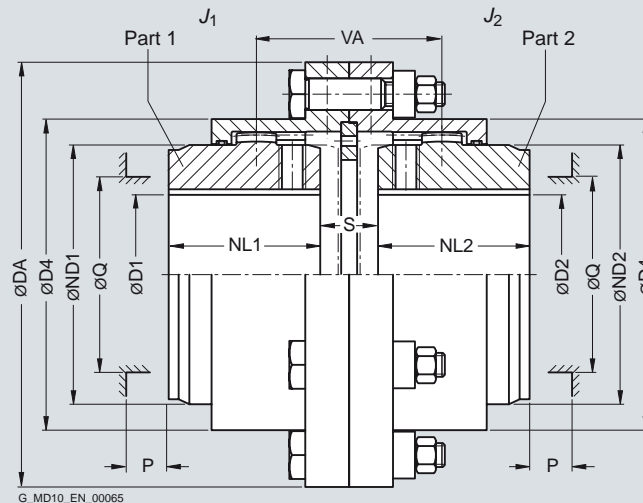
Product code:
2LC0310-1AH99-0AA0-Z
LOW +M1A +M13+Y99
 plain text to Y99: **Thread M10 x 20**

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIN for axial displacement

Selection and ordering data



| Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|---|--------------------------------|------------------------------------|---|-------|-------------|-------------|-------|------|------|-----|-----|-----|-----------|------------------------|--|--------|
| Size | Rated torque T_{KN} Nm | Maximum speed n_{Kmax} rpm | D1, D2 Keyway DIN 6885 min. max. | DA | ND1/ ND2 | NL1/ NL2 | D4 | S | S | VA | Q | P | J_1/J_2 | kgm2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | | | | | | | | min. | max. | | | | | | | kg |
| 1 | 850 | 8500 | 0 50 | 117 | 67 | 43 | 83 | 6 | 21 | 55 | 52 | 31 | 0.003 | | 2LC0310-0AY ■ ■ ■ -0AA0 | 3.3 |
| 1.5 | 1700 | 7700 | 0 64 | 152 | 87 | 50 | 107 | 7 | 15 | 59 | 68 | 34 | 0.010 | | 2LC0310-1AY ■ ■ ■ -0AA0 | 6.7 |
| 2 | 3350 | 6900 | 0 80 | 178 | 108 | 62 | 129.5 | 16 | 31 | 79 | 85 | 42 | 0.021 | | 2LC0310-2AY ■ ■ ■ -0AA0 | 10.5 |
| 2.5 | 6000 | 6200 | 0 98 | 213 | 130 | 76 | 156 | 11 | 29 | 93 | 110 | 47 | 0.050 | | 2LC0310-3AY ■ ■ ■ -0AA0 | 18 |
| 3 | 10000 | 5800 | 0 112 | 240 | 153 | 90 | 181 | 11 | 33 | 109 | 130 | 58 | 0.095 | | 2LC0310-4AY ■ ■ ■ -0AA0 | 26.5 |
| 3.5 | 16000 | 5100 | 0 133 | 280 | 180 | 105 | 211 | 14 | 40 | 128 | 150 | 67 | 0.22 | | 2LC0310-5AY ■ ■ ■ -0AA0 | 44 |
| 4 | 23600 | 4500 | 0 158 | 318 | 214 | 120 | 249.5 | 12 | 42 | 144 | 175 | 72 | 0.40 | | 2LC0310-6AY ■ ■ ■ -0AA0 | 62 |
| 4.5 | 33500 | 4000 | 80 172 | 347 | 233 | 135 | 274 | 16 | 50 | 164 | 190 | 81 | 0.64 | | 2LC0310-7AY ■ ■ ■ -0AA0 | 82 |
| 5 | 47500 | 3750 | 90 192 | 390 | 260 | 150 | 307 | 17 | 56 | 182 | 220 | 91 | 1.1 | | 2LC0310-8AY ■ ■ ■ -0AA0 | 115 |
| 5.5 | 67000 | 3550 | 100 210 | 425.5 | 283 | 175 | 332.5 | 17 | 70 | 214 | 250 | 104 | 1.8 | | 2LC0311-0AY ■ ■ ■ -0AA0 | 155 |
| 6 | 90000 | 3400 | 120 232 | 457 | 312 | 190 | 364 | 17 | 84 | 236 | 265 | 126 | 2.4 | | 2LC0311-1AY ■ ■ ■ -0AA0 | 185 |
| 7 | 125000 | 3200 | 150 276 | 527 | 371 | 220 | 423.5 | 23 | 76 | 263 | 300 | 140 | 4.9 | | 2LC0311-2AY ■ ■ ■ -0AA0 | 285 |
| ØD1: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 9 |
| ØD2: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 9 |

All sizes available from FLENDER stock.

VA Valid at S max.

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia apply to a coupling half with maximum bore diameter.

Weights apply to the entire coupling with maximum bores.

Ordering example:

ZAPEX ZIN coupling for axial displacement, size 1.5,

S min. = 7 mm, S max. = 12 mm,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

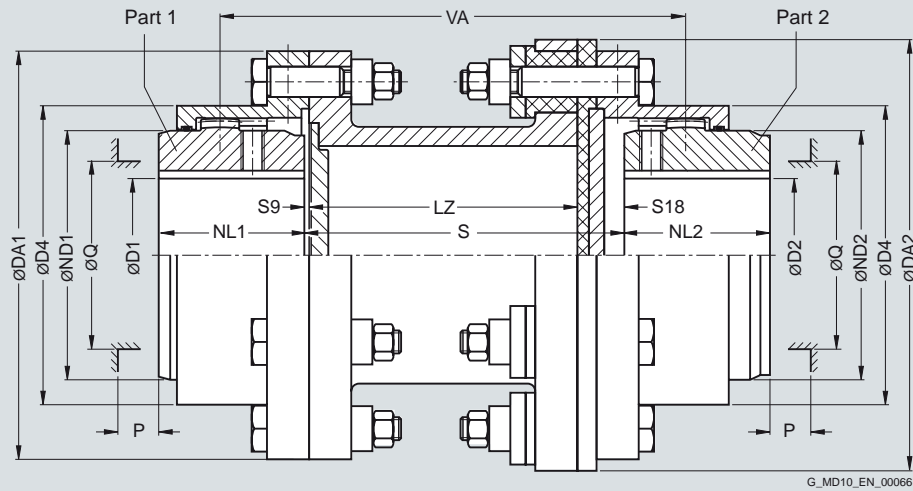
Product code:

2LC0310-0AY99-0AA0-Z
LOW +M1A +M13

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZIZI

Selection and ordering data



G_MD10_EN_00066

| Size | Rated torque T_{KN} Nm | Dimensions in mm | | | | | | | | | | | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | | |
|---|--|------------------------|------|-------|---------|---------|-----|-------|------|-----|-----|-----|----------|--|------------------|------|----|
| | | D1, D2 Keyway DIN 6885 | DA1 | DA2 | ND1/ND2 | NL1/NL2 | D4 | S18 | S9 | VA1 | Q | P | <i>m</i> | | <i>m</i> | | |
| | | min. | max. | | | | | | | | | | | | each 100 mm pipe | | |
| | | | | | | | | | | | | | | | | kg | kg |
| 1 | 400 | 0 | 50 | 117 | 117 | 67 | 43 | 83 | 18.5 | 1.5 | 63 | 52 | 31 | 2LC0310-0BE ■ ■ -0AZ0 Q0Y | 0.8 | 10 | |
| 1.5 | 1300 | 0 | 64 | 152 | 152 | 87 | 50 | 107 | 15.5 | 1.5 | 67 | 68 | 34 | 2LC0310-1BE ■ ■ -0AZ0 Q0Y | 1.3 | 17 | |
| 2 | 2000 | 0 | 80 | 178 | 185 | 108 | 62 | 129.5 | 23.5 | 1.5 | 87 | 85 | 42 | 2LC0310-2BE ■ ■ -0AZ0 Q0Y | 2 | 26.5 | |
| 2.5 | 3800 | 0 | 98 | 213 | 225 | 130 | 76 | 156 | 24.5 | 2.5 | 103 | 110 | 47 | 2LC0310-3BE ■ ■ -0AZ0 Q0Y | 2.6 | 43 | |
| 3 | 5800 | 0 | 112 | 240 | 250 | 153 | 90 | 181 | 26.5 | 2.5 | 119 | 130 | 58 | 2LC0310-4BE ■ ■ -0AZ0 Q0Y | 3.8 | 58 | |
| 3.5 | 9000 | 0 | 133 | 280 | 295 | 180 | 105 | 211 | 30 | 3 | 138 | 150 | 67 | 2LC0310-5BE ■ ■ -0AZ0 Q0Y | 5.4 | 88 | |
| 4 | 10000 | 0 | 158 | 318 | 330 | 214 | 120 | 249.5 | 33 | 3 | 156 | 175 | 72 | 2LC0310-6BE ■ ■ -0AZ0 Q0Y | 7.4 | 110 | |
| 4.5 | 14000 | 80 | 172 | 347 | 355 | 233 | 135 | 274 | 37 | 4 | 176 | 190 | 81 | 2LC0310-7BE ■ ■ -0AZ0 Q0Y | 8.8 | 150 | |
| 5 | 22000 | 90 | 192 | 390 | 405 | 260 | 150 | 307 | 40 | 4 | 194 | 220 | 91 | 2LC0310-8BE ■ ■ -0AZ0 Q0Y | 10.9 | 225 | |
| 5.5 | 42000 | 100 | 210 | 425.5 | 430 | 283 | 175 | 332.5 | 50 | 4 | 229 | 250 | 104 | 2LC0311-0BE ■ ■ -0AZ0 Q0Y | 12.4 | 275 | |
| 6 | 46000 | 120 | 232 | 457 | 460 | 312 | 190 | 364 | 57 | 4 | 251 | 265 | 126 | 2LC0311-1BE ■ ■ -0AZ0 Q0Y | 15 | 305 | |
| 7 | 60000 | 150 | 276 | 527 | 530 | 371 | 220 | 423.5 | 53 | 5 | 278 | 300 | 140 | 2LC0311-2BE ■ ■ -0AZ0 Q0Y | 18 | 420 | |
| ØD1: <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | | |
| | | | | | | | | | | | | | | | 9 | | |
| ØD2: <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | 1 | | |
| | | | | | | | | | | | | | | | 9 | | |

VA = VA1 + LZ

Q Diameter required for renewing the sealing rings.

P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Mass moments of inertia on request.

Weights apply to the entire coupling with maximum bores and an adapter length of LZ = 500 mm.

Maximum speed, limited by weight and critical adapter speed, on request.

Ordering example:

ZAPEX ZIZI coupling, size 1.5,
adapter LZ = 244 mm,
Part 1: Bore 40H7 mm, keyway to DIN 6885-1 P9 and set screw,
Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Product code:

2LC0310-1BE99-0AZ0-Z

L0W+M1A+Q0Y+M13

plain text to Q0Y: **LZ = 244 mm**

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

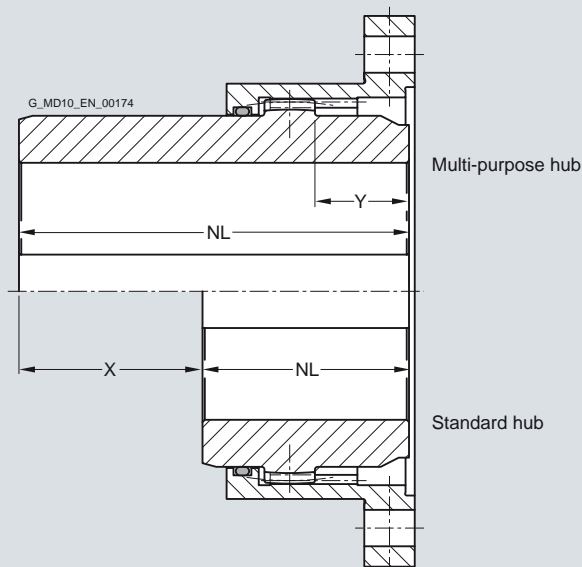
Multipurpose hubs for ZAPEX ZI Series

Selection and ordering data

ZAPEX couplings can be designed with multipurpose hubs in order to implement modified hub geometries. One or both standard hubs can be replaced with multipurpose hubs. Hub lengths and coupling lengths can be altered through the use of multipurpose hubs. The distance VA of the coupling teeth, the permitted bore diameter and the hub diameter remain unchanged.

By stating the hub reductions X and Y the multipurpose hub can be adapted to the mounting situation.

Details D1, NL1, X1 and Y1 relate to the hub shown on the dimension drawings left; details D2, NL2, X2 and Y2 apply to the hub shown on the dimension drawings right.



Geometric data and permitted reduction of the multipurpose hub

| Size | Standard hub | Multipurpose hub | | |
|------|--------------|------------------|-------------------------------------|---------|
| | NL mm | NL mm | Maximum hub reduction X mm | Y mm |
| 1 | 43 | 105 | 62 | 20.5 |
| 1.5 | 50 | 115 | 65 | 22 |
| 2 | 62 | 130 | 68 | 30.5 |
| 2.5 | 76 | 150 | 74 | 34 |
| 3 | 90 | 170 | 80 | 41 |
| 3.5 | 105 | 185 | 80 | 48 |
| 4 | 120 | 215 | 95 | 56 |
| 4.5 | 135 | 245 | 110 | 60.5 |
| 5 | 150 | 295 | 145 | 68 |
| 5.5 | 175 | 300 | 125 | 81 |
| 6 | 190 | 305 | 115 | 88 |
| 7 | 220 | 310 | 90 | 95 |

Up to size 7 available from FLENDER stocks.

Product code

The product code of the respective ZAPEX coupling type must be supplemented with **-Z** and order code **Y99**.

The dimensions of the hub reduction X, Y of the multipurpose hub must be stated in plain text.

Ordering example:

ZAPEX ZIN coupling with multipurpose hub, size 5.5, variant A.

Hub left: Bore D1 = 190H7 mm, keyway to DIN 6885-1 P9 and set screw, NL1 = 300 mm, unreduced

Hub right: Bore D2 = 200K7 mm, keyway to DIN 6885-1 P9 and set screw, NL2 = 250 mm, reduced with Y2 = 50 mm.

Product code:

2LC0311-0AA99-0AA0-Z

Y99 + L2C + M2D + M13

Plain text to Y99:

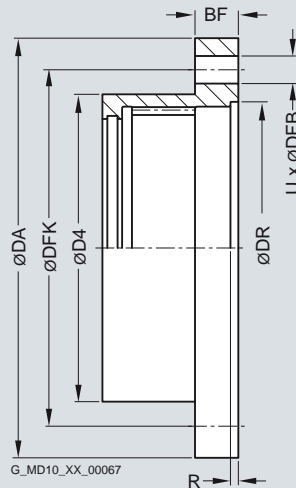
hub lengths NL1 = 300 mm, NL2 = 250 mm,

hub reduction X1 = 0 mm, Y1 = 0 mm, X2 = 0 mm, Y2 = 50 mm

FLENDER Standard Couplings Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Type ZI - flange connection dimensions

Selection and ordering data



| Size | Dimensions in mm | | | | | | | |
|------------|------------------|------|-------|---------|--------|-------------|-----|-----|
| | DA | BF | D4 | DFK | DFB | U Number | DR | R |
| 1 | 117 | 14 | 83 | 95.25 | 6.35 | 6 | 82 | 2.5 |
| 1.5 | 152 | 19 | 107 | 122.238 | 9.525 | 8 | 105 | 3 |
| 2 | 178 | 19 | 129.5 | 149.225 | 12.7 | 6 | 130 | 3 |
| 2.5 | 213 | 22 | 156 | 180.975 | 15.875 | 6 | 153 | 4 |
| 3 | 240 | 22 | 181 | 206.375 | 15.875 | 8 | 178 | 4 |
| 3.5 | 280 | 28.5 | 211 | 241.3 | 19.05 | 8 | 205 | 5 |
| 4 | 318 | 28.5 | 249.5 | 279.4 | 19.05 | 8 | 243 | 4 |
| 4.5 | 347 | 28.5 | 274 | 304.8 | 19.05 | 10 | 265 | 5.5 |
| 5 | 390 | 38 | 307 | 342.9 | 22.225 | 8 | 302 | 6 |
| 5.5 | 425.5 | 38 | 332.5 | 368.3 | 22.225 | 14 | 320 | 6 |
| 6 | 457 | 26 | 364 | 400.05 | 22.225 | 14 | 353 | 6 |
| 7 | 527 | 28.5 | 423.5 | 463.55 | 25.4 | 16 | 412 | 8 |

Replacement table

The flange outside diameter (DA) and the screw hole diameter (DFK) as well as the number (U) and the dimensions of the fitting holes (DFB) permit replaceability per half-coupling

with the corresponding screw connection by the American manufacturers listed below:

| ZAPEX ZI | AJAX | ESCOGEAR | FALK | FAST-KOPPERS | ZURN AMERIGEAR |
|------------|-------------|------------|-------------------|--------------|----------------|
| Size | 6901 Series | FST Series | G-10, G-20 Series | FS-H Series | F Series |
| 1 | 1 | 40 | 10 | 1 | 101 |
| 1.5 | 1.5 | 55 | 15 | 1 ½ | 101 ½ |
| 2 | 2 | 70 | 20 | 2 | 102 |
| 2.5 | 2.5 | 85 | 25 | 2 ½ | 102 ½ |
| 3 | 3 | 100 | 30 | 3 | 103 |
| 3.5 | 3.5 | 120 | 35 | 3 ½ | 103 ½ |
| 4 | 4 | 140 | 40 | 4 | 104 |
| 4.5 | 4.5 | 160 | 45 | 4 ½ | 104 ½ |
| 5 | 5 | 180 | 50 | 5 | 105 |
| 5.5 | 5.5 | 200 | 55 | 5 ½ | 105 ½ |
| 6 | 6 | 220 | 60 | 6 | 106 |
| 7 | 7 | 250 | 70 | 7 | 107 |

FLENDER Standard Couplings

Torsionally Rigid Gear Couplings - ZAPEX ZI Series

Spare and wear parts

Selection and ordering data

Sealing rings

The sealing rings are wear parts and must be replaced in accordance with the operating instructions.

Sealing compound (tube 60 ml)
FFA: **000 000 243 185**

| Size | Hub diameter ND1/ND2 mm | Product code |
|------|-------------------------------|--------------------|
| 1 | 67 | 2LC0310-0XE00-0AA0 |
| 1.5 | 87 | 2LC0310-1XE00-0AA0 |
| 2 | 108 | 2LC0310-2XE00-0AA0 |
| 2.5 | 130 | 2LC0310-3XE00-0AA0 |
| 3 | 153 | 2LC0310-4XE00-0AA0 |
| 3.5 | 180 | 2LC0310-5XE00-0AA0 |
| 4 | 214 | 2LC0310-6XE00-0AA0 |
| 4.5 | 233 | 2LC0310-7XE00-0AA0 |
| 5 | 260 | 2LC0310-8XE00-0AA0 |
| 5.5 | 283 | 2LC0311-0XE00-0AA0 |
| 6 | 312 | 2LC0311-1XE00-0AA0 |
| 7 | 371 | 2LC0311-2XE00-0AA0 |

Torsionally Rigid All-Steel Couplings ARPEX Series

6



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6/4 ARPEX ARS-6 Series

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6/10 • Type NUN

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6/12 • Type NON

6/12 [Selection and ordering data](#)

6/14 • Type NHN

6/14 [Selection and ordering data](#)

6/16 • Type NZN

6/16 [Selection and ordering data](#)

6/18 • Type NWN

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6/20 Further hubs and flanges

6/20 • J hub

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6/22 • F flange, D flange, C flange

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6/26 Spare and wear parts

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6/40 • Type NAN

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6/42 • Type MCECM

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FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX Series

General information

Overview



ARPEX couplings have proved themselves for over 30 years in all areas of technology where reliable, maintenance-free torque transmission is required. ARPEX couplings link machine shafts and compensate for shaft misalignments, while generating only low restorative forces. Thanks to the use of spring steel plates and backlash-free screw connections, ARPEX couplings are torsionally rigid and backlash-free. All ARPEX coupling components are manufactured from high-quality steel. Robust, compact construction guaranteeing a high level of operational reliability and a long service life is therefore possible. High-precision production ensures that at speed in the assembled condition only low forces act on the machine parts connected to them. ARPEX couplings can be used for both directions of rotation and are thus also suitable for reverse operation.

ARPEX couplings are not subject to wear and, if correctly designed, assembled and installed, can be expected to have an unlimited service life. With most types the intermediate spacer can be fitted radially without having to move the driving and driven machines.

Thanks to a large number of standard components ARPEX couplings can be combined to make many different types. In this way, standard types can be used with many drives.

ARPEX couplings can withstand temperatures between -40°C and $+280^{\circ}\text{C}$ in operation. On request, they can also be specially equipped for use in other temperature ranges.



ARPEX coupling optionally suitable for potentially explosive environments.

Complies with Directive 94/9/EC for:

CE Ex II 2G T2/T3/T4/T5/T6
 $-40^{\circ}\text{C} \leq T_a \leq +230^{\circ}\text{C}/+150^{\circ}\text{C}/+85^{\circ}\text{C}/+50^{\circ}\text{C}/35^{\circ}\text{C}$

CE Ex II 2D T 120^{\circ}\text{C} $-40^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$

CE Ex I M2



To meet the high quality demands made of ARPEX couplings, the development and manufacture of ARPEX couplings is integrated into a certified quality management system in accordance with the requirements of DIN EN ISO 9001.

Type approval for use of ARPEX couplings in shipbuilding has been issued by the following classification societies: American Bureau of Shipping (ABS), Det Norske Veritas (DNV), Germanischer Lloyd (GL) and Lloyd's Register of Shipping. Product certification to GOST-R for the Russian market has already been obtained.

Design

ARPEX couplings are manufactured completely from steel. Torque is transmitted by means of torsionally rigid, flexible plates. The plates are held together by a sleeve and ring to form a compact plate pack. This ensures easy, operationally safe installation. Two plate packs fastened alternately to the flanges permit compensation of shaft misalignments in an angular, radial and axial direction. On coupling types with a single plate pack only angular and axial misalignments are possible.

Materials

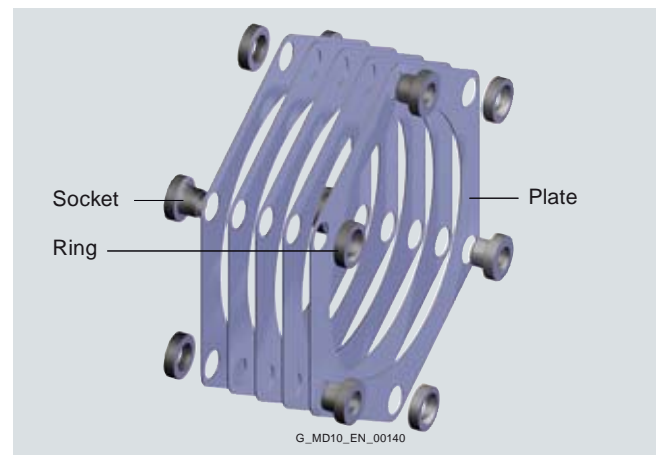
All coupling parts like hubs, spacers and flanges are manufactured from high-grade steel; the plates are made from stainless, hard-rolled CrNi spring steel. Bolts and nuts are of quality 10.9 or 10.

Application

ARPEX couplings are available as a catalog standard from 92 Nm to 1450000 Nm and are divided into various series. Because of this series diversity, ARPEX couplings meet most torque and speed requirements as a universal coupling solution in general mechanical engineering. The individual series and their corresponding possible applications are described in full in the following sections.

Plate pack

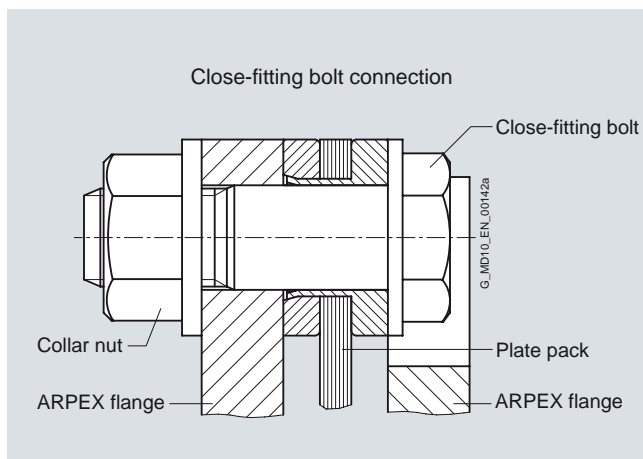
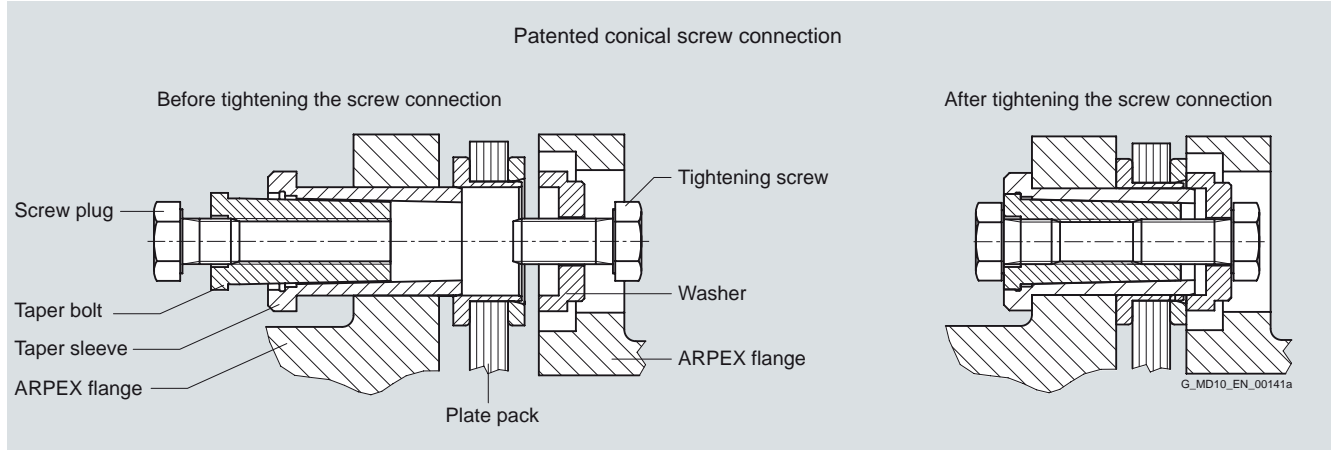
The flexible elements in an ARPEX coupling take the form of plate packs. The individual, thin plates are held together by a socket and ring to form a compact plate pack. The picture below shows the structure of a ring plate pack.



FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX Series

General information

Plate pack screw connection



Features of plate pack screw connection

Up to bolt size M22, the plate pack screw connection on ARPEX couplings is in the form of a close-fitting bolt connection. After that the patented conical screw connection is used. The decisive advantage of this screw connection is considerably simplified fitting. The use of an hydraulic fitting tool is no longer necessary. All sizes can be fitted with a torque wrench.

A further feature of the conical screw connection is the genuine positive connection resulting in high centering accuracy and, thus, a high balancing quality. Material: High-grade quenched and tempered steel.

The conical screw connection is used for the following coupling sizes:

- ARS-6 series: size 305-6 to 602-6
- ARC-8/-10 series: all sizes
- ARP-6 series: type NAN, size 325-6;
type MCECM, size 310 and 345-6
- ARW-4/-6 series: size 324-4 to 880-6

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

General information

Overview



Coupling can be designed for potentially explosive environments.

6

Benefits

ARPEX couplings of the ARS-6 series are outstanding for their versatility. Most standard components are available from stock, resulting in short delivery times. Their use in potentially explosive environments in accordance with Directive 94/9/EC is possible.

Application

ARPEX couplings of the ARS-6 series are a versatile coupling solution which thanks to standard modular components can be used for most drive requirements at a low to medium speed. Torques of between 170 and 106000 Nm can be transmitted at a permitted angular misalignment of 0.7°. The open flange form is regarded as very easy to fit and has easily accessible screw connection points. On most types, the intermediate spacer can be radially fitted without moving the connected units.

Main areas of application for the ARS-6 series:

- Paper-making machines
- Printing machines
- Compressors
- Pumps
- Fans and blowers
- Film and foil machines
- Generators
- Presses
- Metalworking machines
- Conveyors
- Crane systems
- Textile machines
- Plastics processing machines
- Centrifuges

FLENDER Standard Couplings

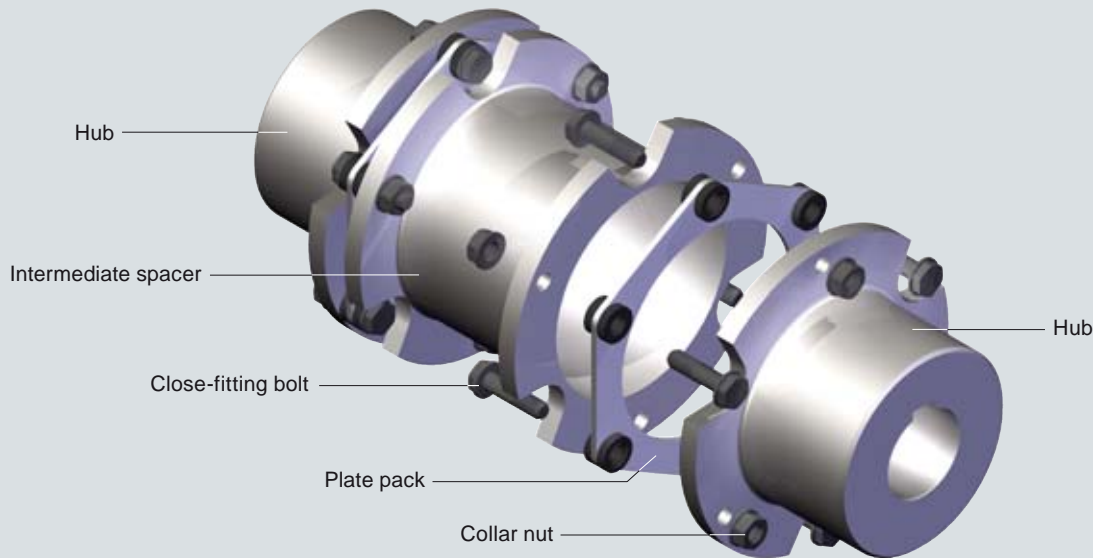
Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

General information

Design

The classic design of an ARPEX couplings of the ARS-6 series is shown in the following illustration. The plate packs are bolted alternately between the flanges of the coupling hubs and the intermediate spacer. Up to size 280-6 close-fitting bolts and from size

305-6 conical screw connections are used for fastening. A large number of intermediate spacer and shafts, hubs and flanges can be combined and thus cover a large number of possible drive requirements.



G_MD10_EN_00143a

Design of an ARPEX coupling, ARS-6 series, type NEN

Variants of the ARPEX coupling, ARS-6 series

| Types | |
|----------------------|--|
| NEN, BEN, BEB | Variant with standard intermediate spacer, many sizes available from stock |
| NON, BON | Variant with shortest intermediate spacer |
| NUN, BUN, BUB | Variant with split intermediate spacer |
| NHN | Variant with intermediate spacer for customer-specific shaft distance |
| NZN | Variant with reinforced intermediate spacer |
| NWN | Variant with intermediate shaft |

All coupling types can be very easily combined with further standard components in the ARPEX modular system. Jumbo hubs are used to permit larger maximum bores.

Clamping hubs transmit torque by friction without the use of parallel keys.

F, D and C flanges offer many different possibilities for flange connection.

The coupling parts of the ARPEX ARS-6 series are machined on all sides. Exceptions are H and Z spacers and intermediate shafts. The spacers are delivered with unmachined, primed spacer tube.

Higher torques and maximum speeds with similar coupling outer diameters DA can be achieved with the ARPEX ARC-8/-10 series.

Further application-specific coupling types are available in selection module **x.CAT** at www.flender.com. Dimension sheets and further information are available on request.

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Over-load torque | Fatigue torque | Maximum speed | Maximum permitted shaft misalignment | | | | | Torsional stiffness | | | | | |
|-------|--------------|----------------|------------------|----------------|---------------|--------------------------------------|-----------------|-------------------|---------------------------|------------|---------------------|----------------|------------|---------|---------|---------|
| DA | T_{KN} | T_{Kmax} | T_{KOL} | T_{KW} | n_{Kmax} | $\pm\Delta K_a$ | $\pm\Delta K_w$ | $\pm\Delta K_r$ | | C_{Tdyn} | | | | | | |
| | | | | | | | | NHN NZN NWN | NEN/BEN NUN/BUN NWN | NON BON | NEN BEN/BEB | NUN BUN/BUB | NON BON | NHN | NZN | NWN |
| | Nm | Nm | Nm | Nm | rpm | mm | | mm | mm | mm | MNm/rad | MNm/rad | MNm/rad | MNm/rad | MNm/rad | MNm/rad |
| 78-6 | 170 | 320 | 510 | 85 | 13400 | 1.10 | 0.7° | 12.1 | 0.57 | 0.53 | 0.05 | 0.04 | 0.05 | 0.012 | 0.032 | 0.05 |
| 105-6 | 270 | 510 | 810 | 135 | 10000 | 1.80 | | 12.1 | 0.88 | 0.53 | 0.09 | 0.09 | 0.09 | 0.024 | 0.070 | 0.09 |
| 125-6 | 490 | 930 | 1470 | 245 | 8400 | 2.02 | | 12.1 | 1.04 | 0.68 | 0.17 | 0.17 | 0.18 | 0.043 | 0.141 | 0.19 |
| 140-6 | 700 | 1330 | 2100 | 350 | 7500 | 2.40 | | 12.1 | 1.28 | 0.72 | 0.22 | 0.22 | 0.24 | 0.066 | 0.203 | 0.25 |
| 165-6 | 1250 | 2370 | 3750 | 625 | 6350 | 2.74 | | 12.0 | 1.49 | 0.84 | 0.33 | 0.34 | 0.36 | 0.114 | 0.317 | 0.39 |
| 175-6 | 2000 | 3800 | 6000 | 1000 | 6000 | 2.86 | | 12.0 | 1.55 | 0.98 | 0.48 | 0.50 | 0.52 | 0.196 | 0.443 | 0.57 |
| 195-6 | 3000 | 5700 | 9000 | 1500 | 5350 | 3.06 | | 12.0 | 1.55 | 0.98 | 0.67 | 0.69 | 0.73 | 0.302 | 0.614 | 0.79 |
| 210-6 | 4400 | 8300 | 13200 | 2200 | 5000 | 3.14 | | 12.0 | 1.77 | 1.10 | 0.77 | 0.78 | 0.82 | 0.352 | 0.669 | 0.88 |
| 240-6 | 5700 | 10800 | 17100 | 2850 | 4350 | 3.70 | | 12.0 | 1.93 | 1.20 | 1.24 | 1.26 | 1.32 | 0.568 | 1.04 | 1.40 |
| 255-6 | 7600 | 14400 | 22800 | 3800 | 4100 | 3.84 | | 11.9 | 2.09 | 1.50 | 1.39 | 1.42 | 1.46 | 0.697 | 1.22 | 1.57 |
| 280-6 | 10000 | 19000 | 30000 | 4600 | 3750 | 4.18 | | 11.9 | 2.53 | 1.53 | 1.55 | 1.57 | 1.65 | 0.881 | 1.42 | 1.73 |
| 305-6 | 12000 | 21000 | 36000 | 5000 | 3400 | 4.46 | | 11.9 | 2.72 | 1.80 | 2.83 | 2.87 | 3.05 | 1.51 | 2.71 | 3.32 |
| 335-6 | 18000 | 32000 | 54000 | 7500 | 3100 | 4.84 | | 11.9 | 2.88 | 1.89 | 3.85 | 3.92 | 4.14 | 2.11 | 3.62 | 4.49 |
| 372-6 | 24000 | 43000 | 72000 | 10000 | 2800 | 4.98 | | 11.8 | 3.03 | 2.16 | 5.72 | 5.84 | 6.12 | 3.14 | – | 6.75 |
| 407-6 | 34000 | 61000 | 102000 | 14000 | 2550 | 5.50 | | 11.8 | 3.31 | 2.26 | 7.25 | 7.42 | 7.79 | 5.06 | – | 8.51 |
| 442-6 | 43000 | 77000 | 129000 | 18000 | 2350 | 6.02 | | 11.8 | 3.59 | 2.48 | 10.0 | 10.2 | 10.8 | 7.42 | – | 11.9 |
| 487-6 | 55000 | 99000 | 165000 | 23000 | 2150 | 6.80 | | 11.7 | 4.09 | 2.64 | 11.7 | 11.9 | 12.7 | 9.25 | – | 13.6 |
| 522-6 | 69000 | 124000 | 207000 | 29000 | 2000 | 7.34 | | 11.7 | 4.35 | 2.86 | 14.0 | 14.3 | 15.1 | 11.4 | – | 16.2 |
| 572-6 | 92000 | 166000 | 276000 | 38000 | 1800 | 7.86 | | 11.6 | 4.87 | 3.02 | 17.9 | 18.3 | 19.4 | 15.2 | – | 20.7 |
| 602-6 | 106000 | 191000 | 318000 | 44000 | 1700 | 8.24 | | 11.6 | 5.13 | 3.24 | 21.1 | 21.7 | 22.9 | 18.2 | – | 24.5 |

The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur at the same time (see following table).

The permitted shaft misalignment ΔK_r for types NHN, NZN and NWN applies to a coupling with shaft distance $S = 1000$ mm. For other shaft distances, the permitted radial misalignment can be determined with the following formula:

$$\Delta K_r = (S - S_1) \cdot \tan(\Delta K_w).$$

The shaft distance S is shown in the table for the type.

T_{Kmax} permitted only five times per hour.

The values for torsional stiffness apply to the complete coupling. In the case of types NHN and NZN to a coupling with shaft distance $S = 1000$ mm. In the case of type NWN, the torsional stiffness applies to a coupling without intermediate or torsion shaft. The torsional stiffness of the plate packs applies to the rated coupling torque T_{KN} . To determine the torsional stiffness for a specific operating point, e.g. for calculating torsional vibration, the manufacturer must be consulted.

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

General information

Permitted shaft misalignments

| Size | Permitted angular misalignment $\pm\Delta K_w$ | | | | | | | |
|--------------|--|------|------|------|------|------|------|------|
| | 0.0° | 0.1° | 0.2° | 0.3° | 0.4° | 0.5° | 0.6° | 0.7° |
| DA | Permitted axial misalignment $\pm\Delta K_a$ in mm | | | | | | | |
| 78-6 | 1.10 | 0.94 | 0.79 | 0.63 | 0.47 | 0.31 | 0.16 | 0.00 |
| 105-6 | 1.80 | 1.54 | 1.29 | 1.03 | 0.77 | 0.51 | 0.26 | 0.00 |
| 125-6 | 2.02 | 1.73 | 1.44 | 1.15 | 0.87 | 0.58 | 0.29 | 0.00 |
| 140-6 | 2.40 | 2.06 | 1.71 | 1.37 | 1.03 | 0.69 | 0.34 | 0.00 |
| 165-6 | 2.74 | 2.35 | 1.96 | 1.57 | 1.17 | 0.78 | 0.39 | 0.00 |
| 175-6 | 2.86 | 2.45 | 2.04 | 1.63 | 1.23 | 0.82 | 0.41 | 0.00 |
| 195-6 | 3.06 | 2.62 | 2.19 | 1.75 | 1.31 | 0.87 | 0.44 | 0.00 |
| 210-6 | 3.14 | 2.69 | 2.24 | 1.79 | 1.35 | 0.90 | 0.45 | 0.00 |
| 240-6 | 3.70 | 3.17 | 2.64 | 2.11 | 1.59 | 1.06 | 0.53 | 0.00 |
| 255-6 | 3.84 | 3.29 | 2.74 | 2.19 | 1.65 | 1.10 | 0.55 | 0.00 |
| 280-6 | 4.18 | 3.58 | 2.99 | 2.39 | 1.79 | 1.19 | 0.60 | 0.00 |
| 305-6 | 4.46 | 3.82 | 3.19 | 2.55 | 1.91 | 1.27 | 0.64 | 0.00 |
| 335-6 | 4.84 | 4.15 | 3.46 | 2.77 | 2.07 | 1.38 | 0.69 | 0.00 |
| 372-6 | 4.98 | 4.27 | 3.56 | 2.85 | 2.13 | 1.42 | 0.71 | 0.00 |
| 407-6 | 5.50 | 4.71 | 3.93 | 3.14 | 2.36 | 1.57 | 0.79 | 0.00 |
| 442-6 | 6.02 | 5.16 | 4.30 | 3.44 | 2.58 | 1.72 | 0.86 | 0.00 |
| 487-6 | 6.80 | 5.83 | 4.86 | 3.89 | 2.91 | 1.94 | 0.97 | 0.00 |
| 522-6 | 7.34 | 6.29 | 5.24 | 4.19 | 3.15 | 2.10 | 1.05 | 0.00 |
| 572-6 | 7.86 | 6.74 | 5.61 | 4.49 | 3.37 | 2.25 | 1.12 | 0.00 |
| 602-6 | 8.24 | 7.06 | 5.89 | 4.71 | 3.53 | 2.35 | 1.18 | 0.00 |

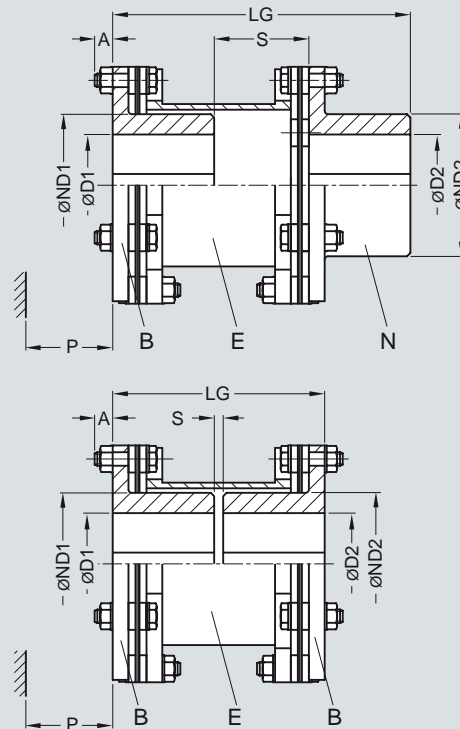
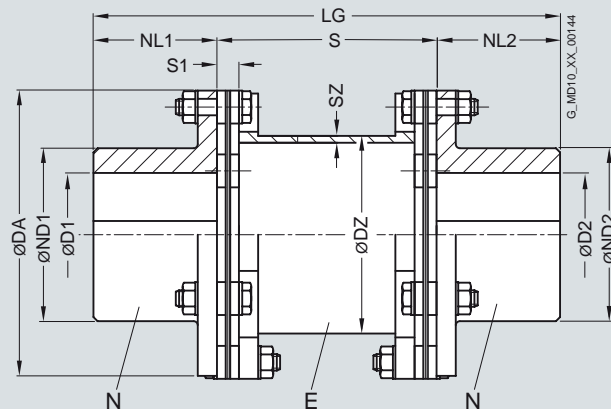
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NEN

Selection and ordering data

Torsionally rigid coupling type NEN with radially freely dismountable intermediate spacer. Types BEN and BEB cannot be dismounted radially without moving the units. On type BEB, the smallest possible shaft distance can be achieved.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|------|---------------------------------|-----|-----|-----|-----|---------|-----|----|-----|----|----------------|------------------|--------------------|--|--------------|--------|
| DA | T _{KN} | n _{kmax} | | D1, D2 | ND1 | ND2 | DZ | SZ | NL1/ S1 | NL2 | S | A | P | LG | J | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | Nm | rpm | | Keyway DIN 6885 max. max. | | | | | | | | | | | kgm ² | | | kg | |
| 78-6 | 170 | 13400 | NEN | 28 | 28 | 39 | 39 | 45 | 2.5 | 30 | 8 | 55 | — | — | 115 | 0.001 | 2LC0470-0NS99-0AA0 | 1.2 | |
| | | | BEN | | | | | | | | | 32 | 8 | 29 | 92 | 2LC0470-0AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 9 | | | 69 | 2LC0470-0AC99-0AA0 | | | |
| 105-6 | 270 | 10000 | NEN | 45 | 45 | 63 | 63 | 72 | 2.5 | 45 | 8 | 80 | — | — | 170 | 0.003 | 2LC0470-1NS99-0AA0 | 2.5 | |
| | | | BEN | | | | | | | | | 42 | 8 | 29 | 132 | 2LC0470-1AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 4 | | | 94 | 2LC0470-1AC99-0AA0 | | | |
| 125-6 | 490 | 8400 | NEN | 55 | 55 | 76 | 76 | 84 | 2.5 | 55 | 11 | 96 | — | — | 206 | 0.009 | 2LC0470-2NS99-0AA0 | 4.5 | |
| | | | BEN | | | | | | | | | 50 | 10 | 37 | 160 | 2LC0470-2AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 4 | | | 114 | 2LC0470-2AC99-0AA0 | | | |
| 140-6 | 700 | 7500 | NEN | 65 | 65 | 91 | 91 | 99 | 2.5 | 65 | 11 | 116 | — | — | 246 | 0.015 | 2LC0470-3NS99-0AA0 | 6.4 | |
| | | | BEN | | | | | | | | | 60 | 10 | 37 | 190 | 2LC0470-3AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 4 | | | 134 | 2LC0470-3AC99-0AA0 | | | |
| 165-6 | 1250 | 6350 | NEN | 75 | 75 | 105 | 105 | 114 | 2.5 | 75 | 14 | 136 | — | — | 286 | 0.032 | 2LC0470-4NS99-0AA0 | 9.7 | |
| | | | BEN | | | | | | | | | 70 | 12 | 45 | 220 | 2LC0470-4AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 4 | | | 154 | 2LC0470-4AC99-0AA0 | | | |
| 175-6 | 2000 | 6000 | NEN | 80 | 80 | 110 | 110 | 120 | 3.0 | 80 | 15 | 142 | — | — | 302 | 0.048 | 2LC0470-5NS99-0AA0 | 12.5 | |
| | | | BEN | | | | | | | | | 74 | 15 | 52 | 234 | 2LC0470-5AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 6 | | | 166 | 2LC0470-5AC99-0AA0 | | | |
| 195-6 | 3000 | 5350 | NEN | 90 | 90 | 120 | 120 | 131 | 3.0 | 80 | 15 | 142 | — | — | 302 | 0.073 | 2LC0470-6NS99-0AA0 | 14.9 | |
| | | | BEN | | | | | | | | | 74 | 14 | 52 | 234 | 2LC0470-6AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 6 | | | 166 | 2LC0470-6AC99-0AA0 | | | |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NEN

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|------|------------------------------|------|-----|-----|-----|------|----------|----|-----|----|----------------|------|------------------|--|------------------------|--------------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1, D2 Keyway DIN 6885 | | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | S | A | P | LG | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | | |
| mm | Nm | rpm | | max. | max. | | | | | | | | | | | kgm ² | | | | |
| 210-6 | 4400 | 5000 | NEN | 95 | 95 | 126 | 126 | 139 | 4.0 | 90 | 15 | 160 | – | – | 340 | 0.109 | | | 2LC0470-7NS99-0AA0 | 19.5 |
| | | | BEN | | | | | | | | | 83 | 20 | 61 | 263 | | 2LC0470-7AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 6 | | | 186 | | 2LC0470-7AC99-0AA0 | | | |
| 240-6 | 5700 | 4350 | NEN | 110 | 110 | 145 | 145 | 162 | 5.0 | 100 | 18 | 176 | – | – | 376 | 0.210 | 2LC0470-8NS99-0AA0 | 28.4 | | |
| | | | BEN | | | | | | | | | 91 | 18 | 66 | 291 | | 2LC0470-8AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 6 | | | 206 | | 2LC0470-8AC99-0AA0 | | | |
| 255-6 | 7600 | 4100 | NEN | 115 | 115 | 154 | 154 | 170 | 5.0 | 110 | 23 | 194 | – | – | 414 | 0.315 | 2LC0471-0NS99-0AA0 | 37.5 | | |
| | | | BEN | | | | | | | | | 102 | 24 | 81 | 322 | | 2LC0471-0AK99-0AA0 | | | |
| | | | BEB | | | | | | | | | 10 | | | 230 | | 2LC0471-0AC99-0AA0 | | | |
| 280-6 | 10000 | 3750 | NEN | 135 | 135 | 184 | 184 | 186 | 6.0 | 130 | 25 | 232 | – | – | 492 | 0.542 | 2LC0471-1NS99-0AA0 | 54.5 | | |
| | | | BEN | 120 | 135 | 161 | 184 | | | | | 121 | 22 | 83 | 381 | 0.514 | 2LC0471-1AK99-0AA0 | 52.1 | | |
| | | | BEB | 120 | 120 | 161 | 161 | | | | | 10 | | | 270 | 0.486 | 2LC0471-1AC99-0AA0 | 49.7 | | |
| 305-6 | 12000 | 3400 | NEN | 145 | 145 | 198 | 198 | 200 | 6.5 | 140 | 27 | 250 | – | – | 530 | 0.762 | 2LC0471-2NS99-0AA0 | 66.4 | | |
| | | | BEN | 130 | 145 | 175 | 198 | | | | | 130 | 13 | 46 | 410 | 0.724 | 2LC0471-2AK99-0AA0 | 63.6 | | |
| | | | BEB | 130 | 130 | 175 | 175 | | | | | 10 | | | 290 | 0.685 | 2LC0471-2AC99-0AA0 | 60.9 | | |
| 335-6 | 18000 | 3100 | NEN | 160 | 160 | 214 | 214 | 218 | 7.5 | 150 | 30 | 266 | – | – | 566 | 1.18 | 2LC0471-3NS99-0AA0 | 84.2 | | |
| | | | BEN | 140 | 160 | 190 | 214 | | | | | 138 | 15 | 55 | 438 | 1.13 | 2LC0471-3AK99-0AA0 | 82.1 | | |
| | | | BEB | 140 | 140 | 190 | 190 | | | | | 10 | | | 310 | 1.08 | 2LC0471-3AC99-0AA0 | 80.0 | | |
| 372-6 | 24000 | 2800 | NEN | 165 | 165 | 225 | 225 | 228 | 9.5 | 160 | 32 | 280 | – | – | 600 | 1.93 | 2LC0471-4NS99-0AA0 | 116 | | |
| | | | BEN | 145 | 165 | 200 | 225 | | | | | 145 | 16 | 65 | 465 | 1.87 | 2LC0471-4AK99-0AA0 | 113 | | |
| | | | BEB | 145 | 145 | 200 | 200 | | | | | 10 | | | 330 | 1.80 | 2LC0471-4AC99-0AA0 | 110 | | |
| 407-6 | 34000 | 2550 | NEN | 185 | 185 | 250 | 250 | 245 | 11.0 | 175 | 35 | 306 | – | – | 656 | 3.06 | 2LC0471-5NS99-0AA0 | 152 | | |
| | | | BEN | 145 | 185 | 205 | 250 | | | | | 158 | 19 | 71 | 508 | 2.91 | 2LC0471-5AK99-0AA0 | 148 | | |
| | | | BEB | 145 | 145 | 205 | 205 | | | | | 10 | | | 360 | 2.76 | 2LC0471-5AC99-0AA0 | 144 | | |
| 442-6 | 43000 | 2350 | NEN | 200 | 200 | 270 | 270 | 273 | 11.0 | 190 | 38 | 332 | – | – | 712 | 4.58 | 2LC0471-6NS99-0AA0 | 192 | | |
| | | | BEN | 170 | 200 | 230 | 270 | | | | | 172 | 20 | 79 | 552 | 4.38 | 2LC0471-6AK99-0AA0 | 185 | | |
| | | | BEB | 170 | 170 | 230 | 230 | | | | | 12 | | | 392 | 4.18 | 2LC0471-6AC99-0AA0 | 178 | | |
| 487-6 | 55000 | 2150 | NEN | 225 | 225 | 305 | 305 | 298 | 13.0 | 215 | 41 | 376 | – | – | 806 | 7.73 | 2LC0471-7NS99-0AA0 | 268 | | |
| | | | BEN | 180 | 225 | 250 | 305 | | | | | 194 | 23 | 87 | 624 | 7.32 | 2LC0471-7AK99-0AA0 | 258 | | |
| | | | BEB | 180 | 180 | 250 | 250 | | | | | 12 | | | 442 | 6.91 | 2LC0471-7AC99-0AA0 | 248 | | |
| 522-6 | 69000 | 2000 | NEN | 240 | 240 | 325 | 325 | 324 | 13.0 | 230 | 44 | 400 | – | – | 860 | 10.7 | 2LC0471-8NS99-0AA0 | 323 | | |
| | | | BEN | 200 | 240 | 275 | 325 | | | | | 206 | 23 | 90 | 666 | 10.2 | 2LC0471-8AK99-0AA0 | 312 | | |
| | | | BEB | 200 | 200 | 275 | 275 | | | | | 12 | | | 472 | 9.72 | 2LC0471-8AC99-0AA0 | 301 | | |
| 572-6 | 92000 | 1800 | NEN | 265 | 265 | 360 | 360 | 356 | 15.0 | 255 | 47 | 446 | – | – | 956 | 17.1 | 2LC0472-0NS99-0AA0 | 431 | | |
| | | | BEN | 220 | 265 | 300 | 360 | | | | | 229 | 24 | 97 | 739 | 16.2 | 2LC0472-0AK99-0AA0 | 413 | | |
| | | | BEB | 220 | 220 | 300 | 300 | | | | | 12 | | | 522 | 15.2 | 2LC0472-0AC99-0AA0 | 394 | | |
| 602-6 | 106000 | 1700 | NEN | 280 | 280 | 380 | 380 | 368 | 16.0 | 270 | 50 | 470 | – | – | 1010 | 22.6 | 2LC0472-1NS99-0AA0 | 514 | | |
| | | | BEN | 225 | 280 | 310 | 380 | | | | | 241 | 26 | 103 | 781 | 21.3 | 2LC0472-1AK99-0AA0 | 492 | | |
| | | | BEB | 225 | 225 | 310 | 310 | | | | | 12 | | | 552 | 20.0 | 2LC0472-1AC99-0AA0 | 470 | | |

Torsionally rigid ARPEX couplings up to size 240-6 available from stock.

For simplified fitting on B hubs, plate packs from size 280-6 available with closing element.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:

ARPEX ARS-6 NEN coupling, size 105-6, bore ØD1 40H7 mm, with keyway to DIN 6885 and set screw, bore ØD2 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0470-1NS99-0AA0-Z
LOW+M1A+M13

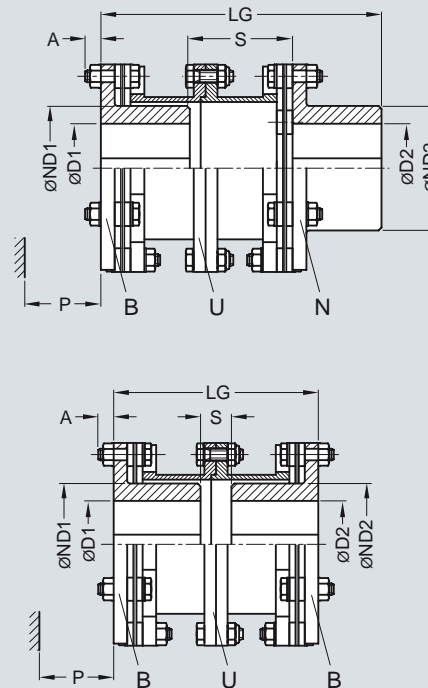
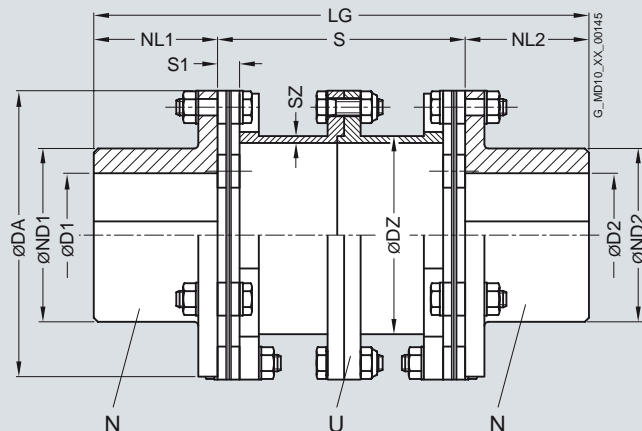
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NUN

Selection and ordering data

Torsionally rigid coupling type NUN with radially freely dismountable intermediate spacer. Types BUN and BUB cannot be radially dismounted without moving the units. On type BUB, the smallest possible shaft distance can be achieved.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|------|---------------------------------|-----|-----|-----|-----|----------|----|----|-----|----|----------------|--------------------|-------|--|--------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1, D2 | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | S | A | P | LG | J | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | Nm | rpm | | Keyway DIN 6885 max. max. | | | | | | | | | | | kgm ² | | | kg | |
| 78-6 | 170 | 13400 | NUN | 28 | 28 | 39 | 39 | 45 | 2.5 | 30 | 8 | 84 | – | – | 144 | 0.001 | 2LC0470-0NW99-0AA0 | 1.5 | |
| | | | BUN | | | | | | | | 61 | 8 | 29 | 121 | 2LC0470-0BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 38 | | | 98 | 2LC0470-0AT99-0AA0 | | | | |
| 105-6 | 270 | 10000 | NUN | 45 | 45 | 63 | 63 | 72 | 2.5 | 45 | 8 | 90 | – | – | 180 | 0.004 | 2LC0470-1NW99-0AA0 | 2.9 | |
| | | | BUN | | | | | | | | 52 | 8 | 29 | 142 | 2LC0470-1BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 14 | | | 104 | 2LC0470-1AT99-0AA0 | | | | |
| 125-6 | 490 | 8400 | NUN | 55 | 55 | 76 | 76 | 84 | 2.5 | 55 | 11 | 116 | – | – | 226 | 0.011 | 2LC0470-2NW99-0AA0 | 5.3 | |
| | | | BUN | | | | | | | | 70 | 10 | 37 | 180 | 2LC0470-2BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 24 | | | 134 | 2LC0470-2AT99-0AA0 | | | | |
| 140-6 | 700 | 7500 | NUN | 65 | 65 | 91 | 91 | 99 | 2.5 | 65 | 11 | 116 | – | – | 246 | 0.019 | 2LC0470-3NW99-0AA0 | 7.2 | |
| | | | BUN | | | | | | | | 60 | 10 | 37 | 190 | 2LC0470-3BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 4 | | | 134 | 2LC0470-3AT99-0AA0 | | | | |
| 165-6 | 1250 | 6350 | NUN | 75 | 75 | 105 | 105 | 114 | 2.5 | 75 | 14 | 136 | – | – | 286 | 0.038 | 2LC0470-4NW99-0AA0 | 10.9 | |
| | | | BUN | | | | | | | | 70 | 12 | 45 | 220 | 2LC0470-4BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 4 | | | 154 | 2LC0470-4AT99-0AA0 | | | | |
| 175-6 | 2000 | 6000 | NUN | 80 | 80 | 110 | 110 | 120 | 3.0 | 80 | 15 | 142 | – | – | 302 | 0.057 | 2LC0470-5NW99-0AA0 | 14.1 | |
| | | | BUN | | | | | | | | 74 | 15 | 52 | 234 | 2LC0470-5BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 6 | | | 166 | 2LC0470-5AT99-0AA0 | | | | |
| 195-6 | 3000 | 5350 | NUN | 90 | 90 | 120 | 120 | 131 | 3.0 | 80 | 15 | 142 | – | – | 302 | 0.085 | 2LC0470-6NW99-0AA0 | 16.8 | |
| | | | BUN | | | | | | | | 74 | 14 | 52 | 234 | 2LC0470-6BD99-0AA0 | | | | |
| | | | BUB | | | | | | | | 6 | | | 166 | 2LC0470-6AT99-0AA0 | | | | |

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series**

Type NUN

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | Mass moment of inertia | | Product code | Weight |
|--------------|--------------|---------------|------------|------------------|-----|-----|-----|-----|----------|-----|----|-----|----|----------------|------------------------|-------|--|--------|
| DA | T_{KN} | n_{Kmax} | | D1, D2 | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | S | A | P | LG | J | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | Nm | rpm | | max. max. | | | | | | | | | | | kgm ² | | | kg |
| 210-6 | 4400 | 5000 | NUN | 95 | 95 | 126 | 126 | 139 | 4.0 | 90 | 15 | 160 | – | – | 340 | 0.128 | 2LC0470-7NW99-0AA0 | 21.9 |
| | | | BUN | | | | | | | | | 83 | 20 | 61 | 263 | | 2LC0470-7BD99-0AA0 | |
| | | | BUB | | | | | | | | | 6 | | | 186 | | 2LC0470-7AT99-0AA0 | |
| 240-6 | 5700 | 4350 | NUN | 110 | 110 | 145 | 145 | 162 | 5.0 | 100 | 18 | 176 | – | – | 376 | 0.242 | 2LC0470-8NW99-0AA0 | 31.5 |
| | | | BUN | | | | | | | | | 91 | 18 | 66 | 291 | | 2LC0470-8BD99-0AA0 | |
| | | | BUB | | | | | | | | | 6 | | | 206 | | 2LC0470-8AT99-0AA0 | |
| 255-6 | 7600 | 4100 | NUN | 115 | 115 | 154 | 154 | 170 | 5.0 | 110 | 23 | 194 | – | – | 414 | 0.363 | 2LC0471-0NW99-0AA0 | 41.6 |
| | | | BUN | | | | | | | | | 102 | 24 | 81 | 322 | | 2LC0471-0BD99-0AA0 | |
| | | | BUB | | | | | | | | | 10 | | | 230 | | 2LC0471-0AT99-0AA0 | |
| 280-6 | 10000 | 3750 | NUN | 135 | 135 | 184 | 184 | 186 | 6.0 | 130 | 25 | 232 | – | – | 492 | 0.611 | 2LC0471-1NW99-0AA0 | 59.4 |
| | | | BUN | 120 | 135 | 161 | 184 | | | | | 121 | 22 | 83 | 381 | 0.583 | 2LC0471-1BD99-0AA0 | 57.0 |
| | | | BUB | 120 | 120 | 161 | 161 | | | | | 10 | | | 270 | 0.555 | 2LC0471-1AT99-0AA0 | 54.6 |
| 305-6 | 12000 | 3400 | NUN | 145 | 145 | 198 | 198 | 200 | 6.5 | 140 | 27 | 250 | – | – | 530 | 0.861 | 2LC0471-2NW99-0AA0 | 72.4 |
| | | | BUN | 130 | 145 | 175 | 198 | | | | | 130 | 13 | 46 | 410 | 0.823 | 2LC0471-2BD99-0AA0 | 69.6 |
| | | | BUB | 130 | 130 | 175 | 175 | | | | | 10 | | | 290 | 0.784 | 2LC0471-2AT99-0AA0 | 66.8 |
| 335-6 | 18000 | 3100 | NUN | 160 | 160 | 214 | 214 | 218 | 7.5 | 150 | 30 | 266 | – | – | 566 | 1.35 | 2LC0471-3NW99-0AA0 | 93.1 |
| | | | BUN | 140 | 160 | 190 | 214 | | | | | 138 | 15 | 55 | 438 | 1.31 | 2LC0471-3BD99-0AA0 | 91.0 |
| | | | BUB | 140 | 140 | 190 | 190 | | | | | 10 | | | 310 | 1.26 | 2LC0471-3AT99-0AA0 | 88.9 |
| 372-6 | 24000 | 2800 | NUN | 165 | 165 | 225 | 225 | 228 | 9.5 | 160 | 32 | 280 | – | – | 600 | 2.21 | 2LC0471-4NW99-0AA0 | 127 |
| | | | BUN | 145 | 165 | 200 | 225 | | | | | 145 | 16 | 65 | 465 | 2.15 | 2LC0471-4BD99-0AA0 | 125 |
| | | | BUB | 145 | 145 | 200 | 200 | | | | | 10 | | | 330 | 2.09 | 2LC0471-4AT99-0AA0 | 122 |
| 407-6 | 34000 | 2550 | NUN | 185 | 185 | 250 | 250 | 245 | 11.0 | 175 | 35 | 306 | – | – | 656 | 3.55 | 2LC0471-5NW99-0AA0 | 170 |
| | | | BUN | 145 | 185 | 205 | 250 | | | | | 158 | 19 | 71 | 508 | 3.40 | 2LC0471-5BD99-0AA0 | 166 |
| | | | BUB | 145 | 145 | 205 | 205 | | | | | 10 | | | 360 | 3.25 | 2LC0471-5AT99-0AA0 | 161 |
| 442-6 | 43000 | 2350 | NUN | 200 | 200 | 270 | 270 | 273 | 11.0 | 190 | 38 | 332 | – | – | 712 | 5.29 | 2LC0471-6NW99-0AA0 | 213 |
| | | | BUN | 170 | 200 | 230 | 270 | | | | | 172 | 20 | 79 | 552 | 5.09 | 2LC0471-6BD99-0AA0 | 206 |
| | | | BUB | 170 | 170 | 230 | 230 | | | | | 12 | | | 392 | 4.89 | 2LC0471-6AT99-0AA0 | 200 |
| 487-6 | 55000 | 2150 | NUN | 225 | 225 | 305 | 305 | 298 | 13.0 | 215 | 41 | 376 | – | – | 806 | 8.79 | 2LC0471-7NW99-0AA0 | 294 |
| | | | BUN | 180 | 225 | 250 | 305 | | | | | 194 | 23 | 87 | 624 | 8.38 | 2LC0471-7BD99-0AA0 | 284 |
| | | | BUB | 180 | 180 | 250 | 250 | | | | | 12 | | | 442 | 7.96 | 2LC0471-7AT99-0AA0 | 274 |
| 522-6 | 69000 | 2000 | NUN | 240 | 240 | 325 | 325 | 324 | 13.0 | 230 | 44 | 400 | – | – | 860 | 12.5 | 2LC0471-8NW99-0AA0 | 361 |
| | | | BUN | 200 | 240 | 275 | 325 | | | | | 206 | 23 | 90 | 666 | 12.0 | 2LC0471-8BD99-0AA0 | 350 |
| | | | BUB | 200 | 200 | 275 | 275 | | | | | 12 | | | 472 | 11.5 | 2LC0471-8AT99-0AA0 | 339 |
| 572-6 | 92000 | 1800 | NUN | 265 | 265 | 360 | 360 | 356 | 15.0 | 255 | 47 | 446 | – | – | 956 | 19.7 | 2LC0472-0NW99-0AA0 | 477 |
| | | | BUN | 220 | 265 | 300 | 360 | | | | | 229 | 24 | 97 | 739 | 18.7 | 2LC0472-0BD99-0AA0 | 458 |
| | | | BUB | 220 | 220 | 300 | 300 | | | | | 12 | | | 522 | 17.8 | 2LC0472-0AT99-0AA0 | 439 |
| 602-6 | 106000 | 1700 | NUN | 280 | 280 | 380 | 380 | 368 | 16.0 | 270 | 50 | 470 | – | – | 1010 | 26.9 | 2LC0472-1NW99-0AA0 | 584 |
| | | | BUN | 225 | 280 | 310 | 380 | | | | | 241 | 26 | 103 | 781 | 25.6 | 2LC0472-1BD99-0AA0 | 562 |
| | | | BUB | 225 | 225 | 310 | 310 | | | | | 12 | | | 552 | 24.3 | 2LC0472-1AT99-0AA0 | 540 |

Up to size 240-6 available from stock.

Because of the split variant, the coupling is optionally available with prefitted plate packs.

For simplified fitting on B hubs, plate packs from size 280-6 available with closing element.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:

ARPEX ARS-6 NUN coupling, size 140-6,
 Bore ØD1 60H7 mm, with keyway to DIN 6885 and set screw,
 Bore ØD2 65K7 mm, with keyway to DIN 6885 and set screw.

Product code:

**2LC0470-3NW99-0AA0-Z
 L1E+M1F+M13**

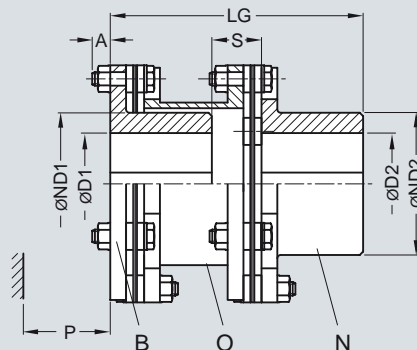
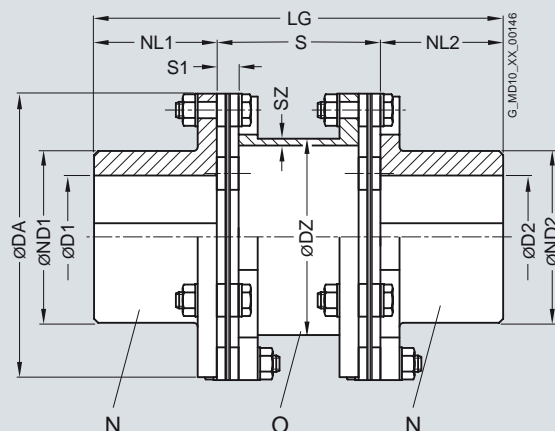
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NON

Selection and ordering data

Torsionally rigid coupling with shortest possible shaft distance enabling problem-free fitting with commercially available tools.
Type NON with radially freely dismountable intermediate spacer. Type BON cannot be radially dismounted without moving the units.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|------|----------------------------|------|-----|-----|-----|----------------|-----|----|-----|----|----------------|------------------|--|--------------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1, D2 | ND1 | ND2 | DZ | SZ | NL1/ S1 NL2 | | S | A | P | LG | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | Nm | rpm | | Keyway DIN 6885 max. | max. | | | | | | | | | | kgm ² | | kg | |
| 78-6 | 170 | 13400 | NON | 28 | 28 | 39 | 39 | 45 | 2.5 | 30 | 8 | 51 | – | – | 111 | 0.001 | 2LC0470-0NV99-0AA0 | 1.1 |
| | | | BON | | | | | | | | | | 28 | 8 | 29 | 88 | 2LC0470-0AS99-0AA0 | |
| 105-6 | 270 | 10000 | NON | 45 | 45 | 63 | 63 | 72 | 2.5 | 45 | 8 | 51 | – | – | 141 | 0.003 | 2LC0470-1NV99-0AA0 | 2.4 |
| | | | BON | | | | | | | | | | 13 | 8 | 29 | 103 | 2LC0470-1AS99-0AA0 | |
| 125-6 | 490 | 8400 | NON | 55 | 55 | 76 | 76 | 84 | 2.5 | 55 | 11 | 67 | – | – | 177 | 0.008 | 2LC0470-2NV99-0AA0 | 4.3 |
| | | | BON | | | | | | | | | | 21 | 10 | 37 | 131 | 2LC0470-2AS99-0AA0 | |
| 140-6 | 700 | 7500 | NON | 65 | 65 | 91 | 91 | 99 | 2.5 | 65 | 11 | 70 | – | – | 200 | 0.015 | 2LC0470-3NV99-0AA0 | 6.1 |
| | | | BON | | | | | | | | | | 14 | 10 | 37 | 144 | 2LC0470-3AS99-0AA0 | |
| 165-6 | 1250 | 6350 | NON | 75 | 75 | 105 | 105 | 114 | 2.5 | 75 | 14 | 83 | – | – | 233 | 0.031 | 2LC0470-4NV99-0AA0 | 9.4 |
| | | | BON | | | | | | | | | | 17 | 12 | 45 | 167 | 2LC0470-4AS99-0AA0 | |
| 175-6 | 2000 | 6000 | NON | 80 | 80 | 110 | 110 | 120 | 3.0 | 80 | 15 | 95 | – | – | 255 | 0.047 | 2LC0470-5NV99-0AA0 | 12.1 |
| | | | BON | | | | | | | | | | 27 | 15 | 52 | 187 | 2LC0470-5AS99-0AA0 | |
| 195-6 | 3000 | 5350 | NON | 90 | 90 | 120 | 120 | 131 | 3.0 | 80 | 15 | 95 | – | – | 255 | 0.071 | 2LC0470-6NV99-0AA0 | 14.5 |
| | | | BON | | | | | | | | | | 27 | 14 | 52 | 187 | 2LC0470-6AS99-0AA0 | |
| 210-6 | 4400 | 5000 | NON | 95 | 95 | 126 | 126 | 139 | 4.0 | 90 | 15 | 105 | – | – | 285 | 0.105 | 2LC0470-7NV99-0AA0 | 18.7 |
| | | | BON | | | | | | | | | | 28 | 20 | 61 | 208 | 2LC0470-7AS99-0AA0 | |
| 240-6 | 5700 | 4350 | NON | 110 | 110 | 145 | 145 | 162 | 5.0 | 100 | 18 | 116 | – | – | 316 | 0.203 | 2LC0470-8NV99-0AA0 | 27.3 |
| | | | BON | | | | | | | | | | 31 | 18 | 66 | 231 | 2LC0470-8AS99-0AA0 | |
| 255-6 | 7600 | 4100 | NON | 115 | 115 | 154 | 154 | 170 | 5.0 | 110 | 23 | 146 | – | – | 366 | 0.309 | 2LC0471-0NV99-0AA0 | 36.5 |
| | | | BON | | | | | | | | | | 54 | 24 | 81 | 274 | 2LC0471-0AS99-0AA0 | |
| 280-6 | 10000 | 3750 | NON | 135 | 135 | 184 | 184 | 186 | 6.0 | 130 | 25 | 150 | – | – | 410 | 0.524 | 2LC0471-1NV99-0AA0 | 52.3 |
| | | | BON | 120 | 135 | 161 | 184 | | | | | 39 | 22 | 83 | 299 | 0.496 | 2LC0471-1AS99-0AA0 | 49.9 |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NON

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Shaft distance | | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|------|------------------------------|------|-----|-----|-----|------|----------|----|-----|----|----------------|-----|------------------|--|------------------------|--------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1, D2 Keyway DIN 6885 | | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | S | A | P | LG | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | | |
| mm | Nm | rpm | | max. | max. | | | | | | | | | | | kgm ² | | kg | | |
| 305-6 | 12000 | 3400 | NON | 145 | 145 | 198 | 198 | 200 | 6.5 | 140 | 27 | 174 | – | – | 454 | 0.740 | 2LC0471-2NV99-0AA0 | 64.1 | | |
| | | | BON | 130 | 145 | 175 | 198 | | | | | 54 | 13 | 46 | 334 | 0.702 | 2LC0471-2AS99-0AA0 | 61.3 | | |
| 335-6 | 18000 | 3100 | NON | 160 | 160 | 214 | 214 | 218 | 7.5 | 150 | 30 | 185 | – | – | 485 | 1.14 | 2LC0471-3NV99-0AA0 | 81.0 | | |
| | | | BON | 140 | 160 | 190 | 214 | | | | | 57 | 15 | 55 | 357 | 1.09 | 2LC0471-3AS99-0AA0 | 78.9 | | |
| 372-6 | 24000 | 2800 | NON | 165 | 165 | 225 | 225 | 228 | 9.5 | 160 | 32 | 209 | – | – | 529 | 1.89 | 2LC0471-4NV99-0AA0 | 112 | | |
| | | | BON | 145 | 165 | 200 | 225 | | | | | 74 | 16 | 65 | 394 | 1.82 | 2LC0471-4AS99-0AA0 | 109 | | |
| 407-6 | 34000 | 2550 | NON | 185 | 185 | 250 | 250 | 245 | 11.0 | 175 | 35 | 220 | – | – | 570 | 2.98 | 2LC0471-5NV99-0AA0 | 147 | | |
| | | | BON | 145 | 185 | 205 | 250 | | | | | 72 | 19 | 71 | 422 | 2.84 | 2LC0471-5AS99-0AA0 | 143 | | |
| 442-6 | 43000 | 2350 | NON | 200 | 200 | 270 | 270 | 273 | 11.0 | 190 | 38 | 241 | – | – | 621 | 4.46 | 2LC0471-6NV99-0AA0 | 185 | | |
| | | | BON | 170 | 200 | 230 | 270 | | | | | 81 | 20 | 79 | 461 | 4.27 | 2LC0471-6AS99-0AA0 | 179 | | |
| 487-6 | 55000 | 2150 | NON | 225 | 225 | 305 | 305 | 298 | 13.0 | 215 | 41 | 257 | – | – | 687 | 7.51 | 2LC0471-7NV99-0AA0 | 257 | | |
| | | | BON | 180 | 225 | 250 | 305 | | | | | 75 | 23 | 87 | 505 | 7.10 | 2LC0471-7AS99-0AA0 | 247 | | |
| 522-6 | 69000 | 2000 | NON | 240 | 240 | 325 | 325 | 324 | 13.0 | 230 | 44 | 278 | – | – | 738 | 10.4 | 2LC0471-8NV99-0AA0 | 311 | | |
| | | | BON | 200 | 240 | 275 | 325 | | | | | 84 | 23 | 90 | 544 | 9.93 | 2LC0471-8AS99-0AA0 | 300 | | |
| 572-6 | 92000 | 1800 | NON | 265 | 265 | 360 | 360 | 356 | 15.0 | 255 | 47 | 294 | – | – | 804 | 16.5 | 2LC0472-0NV99-0AA0 | 413 | | |
| | | | BON | 220 | 265 | 300 | 360 | | | | | 77 | 24 | 97 | 587 | 15.6 | 2LC0472-0AS99-0AA0 | 394 | | |
| 602-6 | 106000 | 1700 | NON | 280 | 280 | 380 | 380 | 368 | 16.0 | 270 | 50 | 315 | – | – | 855 | 21.9 | 2LC0472-1NV99-0AA0 | 492 | | |
| | | | BON | 225 | 280 | 310 | 380 | | | | | 86 | 26 | 103 | 626 | 20.6 | 2LC0472-1AS99-0AA0 | 470 | | |

Up to size 240-6 available from stock.

For simplified fitting on B hubs, plate packs from size 280-6 available with closing element.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:

ARPEX ARS-6 NON coupling, size 105-6,
Bore ØD1 40H7 mm, with keyway to DIN 6885 and set screw,
Bore ØD2 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0470-1NV99-0AA0-Z
L0W+M1A+M13

6

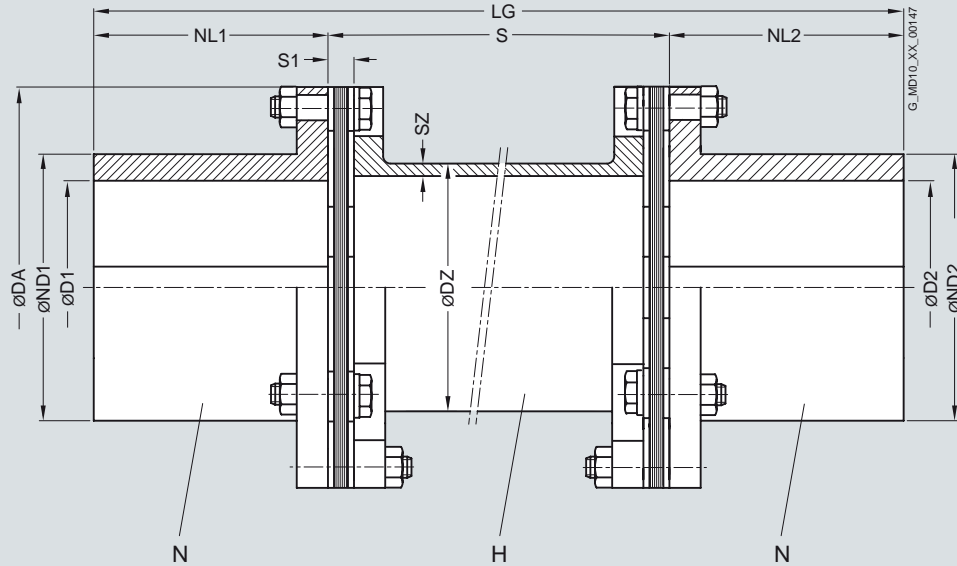
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NHN

Selection and ordering data

Torsionally rigid coupling type NHN with variable shaft distance S. Type NHN with radially freely dismountable intermediate spacer.



| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | Mass moment of inertia | Product code | Weight |
|--------------|--------------|---------------|-----------------------------|---------|-------|------|---------|----|-----------------------------|------------------------|--|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 | ND1/ND2 | DZ | SZ | NL1/NL2 | S1 | Shaft distance S min. | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | Nm | rpm | max. | | | | | | | kgm ² | | kg |
| 78-6 | 170 | 13400 | 28 | 39 | 44.5 | 3.2 | 30 | 8 | 85 | 0.002 | 2LC0470-0NT99-0AZ0 | 4.3 |
| 105-6 | 270 | 10000 | 45 | 63 | 57.0 | 3.2 | 45 | 8 | 80 | 0.006 | 2LC0470-1NT99-0AZ0 | 6.6 |
| 125-6 | 490 | 8400 | 55 | 76 | 63.5 | 4.0 | 55 | 11 | 95 | 0.014 | 2LC0470-2NT99-0AZ0 | 10.2 |
| 140-6 | 700 | 7500 | 65 | 91 | 76.1 | 3.6 | 65 | 11 | 95 | 0.023 | 2LC0470-3NT99-0AZ0 | 12.6 |
| 165-6 | 1250 | 6350 | 75 | 105 | 88.9 | 4.0 | 75 | 14 | 100 | 0.046 | 2LC0470-4NT99-0AZ0 | 17.7 |
| 175-6 | 2000 | 6000 | 80 | 110 | 101.6 | 5.0 | 80 | 15 | 100 | 0.074 | 2LC0470-5NT99-0AZ0 | 23.7 |
| 195-6 | 3000 | 5350 | 90 | 120 | 108.0 | 7.1 | 80 | 15 | 100 | 0.115 | 2LC0470-6NT99-0AZ0 | 31.8 |
| 210-6 | 4400 | 5000 | 95 | 126 | 114.3 | 7.1 | 90 | 15 | 130 | 0.157 | 2LC0470-7NT99-0AZ0 | 36.9 |
| 240-6 | 5700 | 4350 | 110 | 145 | 133.0 | 7.1 | 100 | 18 | 140 | 0.287 | 2LC0470-8NT99-0AZ0 | 48.6 |
| 255-6 | 7600 | 4100 | 115 | 154 | 139.7 | 8.0 | 110 | 23 | 180 | 0.415 | 2LC0471-0NT99-0AZ0 | 61.4 |
| 280-6 | 10000 | 3750 | 135 | 184 | 152.4 | 8.8 | 130 | 25 | 180 | 0.675 | 2LC0471-1NT99-0AZ0 | 81.9 |
| 305-6 | 12000 | 3400 | 145 | 198 | 168.3 | 10.0 | 140 | 27 | 200 | 0.962 | 2LC0471-2NT99-0AZ0 | 100 |
| 335-6 | 18000 | 3100 | 160 | 214 | 177.8 | 12.5 | 150 | 30 | 230 | 1.46 | 2LC0471-3NT99-0AZ0 | 128 |
| 372-6 | 24000 | 2800 | 165 | 225 | 193.7 | 14.2 | 160 | 32 | 250 | 2.32 | 2LC0471-4NT99-0AZ0 | 168 |
| 407-6 | 34000 | 2550 | 185 | 250 | 244.5 | 14.2 | 175 | 35 | 250 | 3.85 | 2LC0471-5NT99-0AZ0 | 212 |
| 442-6 | 43000 | 2350 | 200 | 270 | 273.0 | 16.0 | 190 | 38 | 260 | 5.82 | 2LC0471-6NT99-0AZ0 | 267 |
| 487-6 | 55000 | 2150 | 225 | 305 | 298.5 | 17.5 | 215 | 41 | 270 | 9.39 | 2LC0471-7NT99-0AZ0 | 352 |
| 522-6 | 69000 | 2000 | 240 | 325 | 323.9 | 17.5 | 230 | 44 | 290 | 12.8 | 2LC0471-8NT99-0AZ0 | 413 |
| 572-6 | 92000 | 1800 | 265 | 360 | 355.6 | 20.0 | 255 | 47 | 310 | 20.1 | 2LC0472-0NT99-0AZ0 | 538 |
| 602-6 | 106000 | 1700 | 280 | 380 | 368.0 | 22.2 | 270 | 50 | 330 | 26.1 | 2LC0472-1NT99-0AZ0 | 633 |

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table).

When ordering individual parts of the intermediate spacer, the length must be specified.

For greater shaft distances, see type NZN.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2 and S = 1000 mm.

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series**

Type NHN

Permitted shaft distance S of type NHN relative to speed

| Size | Speed n_N rpm | | | | | | | | | | | | |
|--------------|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| DA | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1500 | 2000 | 2500 | 3000 | 4000 |
| mm | Permitted shaft distance S mm | | | | | | | | | | | | |
| 78-6 | 2809 | 2565 | 2376 | 2223 | 2096 | 1989 | 1816 | 1682 | 1625 | 1409 | 1261 | 1152 | 998 |
| 105-6 | 3203 | 2925 | 2709 | 2534 | 2390 | 2268 | 2071 | 1918 | 1853 | 1606 | 1437 | 1313 | 1138 |
| 125-6 | 3372 | 3079 | 2852 | 2668 | 2516 | 2388 | 2181 | 2020 | 1952 | 1692 | 1514 | 1383 | 1199 |
| 140-6 | 3719 | 3396 | 3145 | 2943 | 2775 | 2633 | 2405 | 2227 | 2152 | 1865 | 1669 | 1525 | 1322 |
| 165-6 | 4027 | 3677 | 3405 | 3186 | 3005 | 2852 | 2604 | 2412 | 2331 | 2020 | 1809 | 1652 | 1433 |
| 175-6 | 4296 | 3923 | 3633 | 3399 | 3206 | 3042 | 2778 | 2573 | 2487 | 2155 | 1929 | 1763 | 1529 |
| 195-6 | 4393 | 4011 | 3715 | 3476 | 3278 | 3110 | 2841 | 2631 | 2542 | 2204 | 1973 | 1802 | 1563 |
| 210-6 | 4527 | 4134 | 3828 | 3582 | 3378 | 3205 | 2927 | 2711 | 2620 | 2271 | 2033 | 1857 | 1610 |
| 240-6 | 4906 | 4480 | 4149 | 3882 | 3661 | 3474 | 3173 | 2939 | 2840 | 2462 | 2204 | 2013 | 1746 |
| 255-6 | 5023 | 4587 | 4249 | 3976 | 3750 | 3558 | 3250 | 3011 | 2910 | 2523 | 2259 | 2064 | 1791 |
| 280-6 | 5246 | 4791 | 4437 | 4152 | 3916 | 3717 | 3395 | 3145 | 3039 | 2635 | 2360 | 2156 | |
| 305-6 | 5509 | 5031 | 4660 | 4361 | 4113 | 3903 | 3566 | 3303 | 3192 | 2768 | 2479 | 2265 | |
| 335-6 | 5634 | 5146 | 4766 | 4461 | 4207 | 3993 | 3647 | 3379 | 3266 | 2832 | 2536 | 2318 | |
| 372-6 | 5873 | 5364 | 4968 | 4650 | 4385 | 4162 | 3802 | 3523 | 3404 | 2952 | 2644 | | |
| 407-6 | 6647 | 6071 | 5623 | 5262 | 4963 | 4710 | 4303 | 3986 | 3852 | 3341 | 2992 | | |
| 442-6 | 7023 | 6414 | 5941 | 5560 | 5244 | 4977 | 4547 | 4212 | 4071 | 3530 | | | |
| 487-6 | 7345 | 6708 | 6214 | 5815 | 5485 | 5205 | 4755 | 4406 | 4258 | 3693 | | | |
| 522-6 | 7669 | 7005 | 6489 | 6072 | 5728 | 5436 | 4966 | 4601 | 4446 | 3857 | | | |
| 572-6 | 8000 | 7333 | 6792 | 6356 | 5996 | 5690 | 5199 | 4817 | 4655 | | | | |
| 602-6 | 8000 | 7447 | 6898 | 6456 | 6089 | 5779 | 5280 | 4892 | 4728 | | | | |

Outside the permitted speed range

Ordering example:

ARPEX ARS-6 NHN coupling, size 105-6, with shaft distance
S = 1000 mm,
Bore ØD1 40H7 mm, with keyway to DIN 6885 and set screw,
Bore ØD2 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0470-1NT99-0AZ0-Z

L0W+M1A+Q0Y+M13

plain text to Q0Y: **S = 1000 mm**

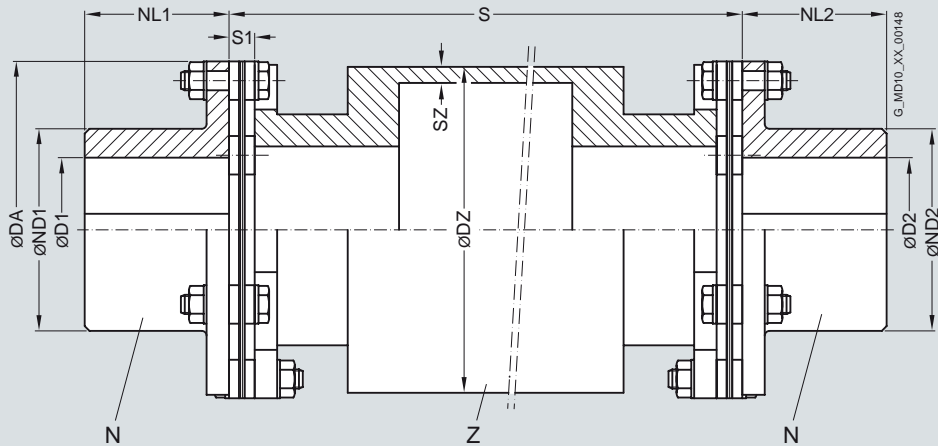
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NZN

Selection and ordering data

Torsionally rigid coupling type NZN with variable shaft distance S and reinforced intermediate spacer.
Type NZN with radially freely dismountable intermediate spacer.



| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|-------|--------------|---------------|-----------------------------|---------|-------|------|---------|----|-----------|------------------|--|--------------|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 | ND1/ND2 | DZ | SZ | NL1/NL2 | S1 | S_{min} | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | Nm | rpm | max. | | | | | | | kgm ² | | kg | |
| 78-6 | 170 | 13400 | 28 | 39 | 76.1 | 3.6 | 30 | 8 | 140 | 0.009 | 2LC0470-0PC99-0AZ0 | 7.8 | |
| 105-6 | 270 | 10000 | 45 | 63 | 101.6 | 5.0 | 45 | 8 | 140 | 0.031 | 2LC0470-1PC99-0AZ0 | 15.3 | |
| 125-6 | 490 | 8400 | 55 | 76 | 114.3 | 7.1 | 55 | 11 | 185 | 0.061 | 2LC0470-2PC99-0AZ0 | 23.9 | |
| 140-6 | 700 | 7500 | 65 | 91 | 139.7 | 8.0 | 65 | 11 | 185 | 0.125 | 2LC0470-3PC99-0AZ0 | 33.1 | |
| 165-6 | 1250 | 6350 | 75 | 105 | 168.3 | 7.1 | 75 | 14 | 240 | 0.219 | 2LC0470-4PC99-0AZ0 | 41.5 | |
| 175-6 | 2000 | 6000 | 80 | 110 | 177.8 | 7.1 | 80 | 15 | 255 | 0.266 | 2LC0470-5PC99-0AZ0 | 45.6 | |
| 195-6 | 3000 | 5350 | 90 | 120 | 193.7 | 7.1 | 80 | 15 | 255 | 0.361 | 2LC0470-6PC99-0AZ0 | 51.7 | |
| 210-6 | 4400 | 5000 | 95 | 126 | 193.7 | 7.1 | 90 | 15 | 280 | 0.392 | 2LC0470-7PC99-0AZ0 | 55.0 | |
| 240-6 | 5700 | 4350 | 110 | 145 | 219.1 | 7.1 | 100 | 18 | 300 | 0.622 | 2LC0470-8PC99-0AZ0 | 68.3 | |
| 255-6 | 7600 | 4100 | 115 | 154 | 244.5 | 7.1 | 110 | 23 | 360 | 0.902 | 2LC0471-0PC99-0AZ0 | 85.9 | |
| 280-6 | 10000 | 3750 | 135 | 184 | 273.0 | 7.1 | 130 | 25 | 380 | 1.39 | 2LC0471-1PC99-0AZ0 | 112 | |
| 305-6 | 12000 | 3400 | 145 | 198 | 298.5 | 11.0 | 140 | 27 | 445 | 2.28 | 2LC0471-2PC99-0AZ0 | 155 | |
| 335-6 | 18000 | 3100 | 160 | 214 | 323.9 | 11.0 | 150 | 30 | 460 | 3.13 | 2LC0471-3PC99-0AZ0 | 180 | |

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table).

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2 and $S = 1000$ mm.

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series**

Type NZN

Permitted shaft distance S of type NZN relative to speed

| Size | Speed n_N rpm | | | | | | | | | | | | |
|--------------|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| DA | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1500 | 2000 | 2500 | 3000 | 4000 |
| mm | Permitted shaft distance S mm | | | | | | | | | | | | |
| 78-6 | 3716 | 3393 | 3142 | 2940 | 2772 | 2630 | 2402 | 2224 | 2149 | 1862 | 1666 | 1522 | 1319 |
| 105-6 | 4289 | 3916 | 3626 | 3392 | 3199 | 3035 | 2771 | 2566 | 2480 | 2148 | 1922 | 1756 | 1522 |
| 125-6 | 4523 | 4130 | 3824 | 3578 | 3374 | 3201 | 2923 | 2707 | 2616 | 2267 | 2029 | 1853 | 1606 |
| 140-6 | 5011 | 4575 | 4237 | 3964 | 3738 | 3546 | 3238 | 2999 | 2898 | 2511 | 2247 | 2052 | 1779 |
| 165-6 | 5543 | 5061 | 4687 | 4385 | 4135 | 3924 | 3583 | 3318 | 3206 | 2779 | 2487 | 2271 | 1969 |
| 175-6 | 5704 | 5209 | 4823 | 4513 | 4256 | 4038 | 3687 | 3415 | 3300 | 2860 | 2559 | 2338 | 2026 |
| 195-6 | 5963 | 5445 | 5042 | 4717 | 4448 | 4221 | 3854 | 3570 | 3449 | 2989 | 2675 | 2443 | 2118 |
| 210-6 | 5963 | 5445 | 5042 | 4717 | 4448 | 4221 | 3854 | 3570 | 3449 | 2989 | 2675 | 2443 | 2118 |
| 240-6 | 6357 | 5805 | 5376 | 5030 | 4743 | 4501 | 4110 | 3807 | 3678 | 3188 | 2853 | 2606 | 2259 |
| 255-6 | 6731 | 6147 | 5692 | 5326 | 5023 | 4766 | 4353 | 4032 | 3896 | 3377 | 3023 | 2762 | 2395 |
| 280-6 | 7124 | 6505 | 6025 | 5637 | 5316 | 5045 | 4607 | 4267 | 4124 | 3574 | 3200 | 2923 | – |
| 305-6 | 7410 | 6767 | 6267 | 5864 | 5530 | 5248 | 4793 | 4439 | 4290 | 3719 | 3329 | 3041 | – |
| 335-6 | 7732 | 7061 | 6539 | 6119 | 5771 | 5476 | 5002 | 4633 | 4477 | 3881 | 3474 | 3174 | – |

Ordering example:

ARPEX ARS-6 NZN coupling, size 105-6, with shaft distance
S = 1000 mm,
Bore ØD1 40H7 mm, with keyway to DIN 6885 and set screw,
Bore ØD2 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0470-1PC99-0AZ0-Z

L0W+M1A+Q0Y+M13

plain text to Q0Y: **S = 1000 mm**

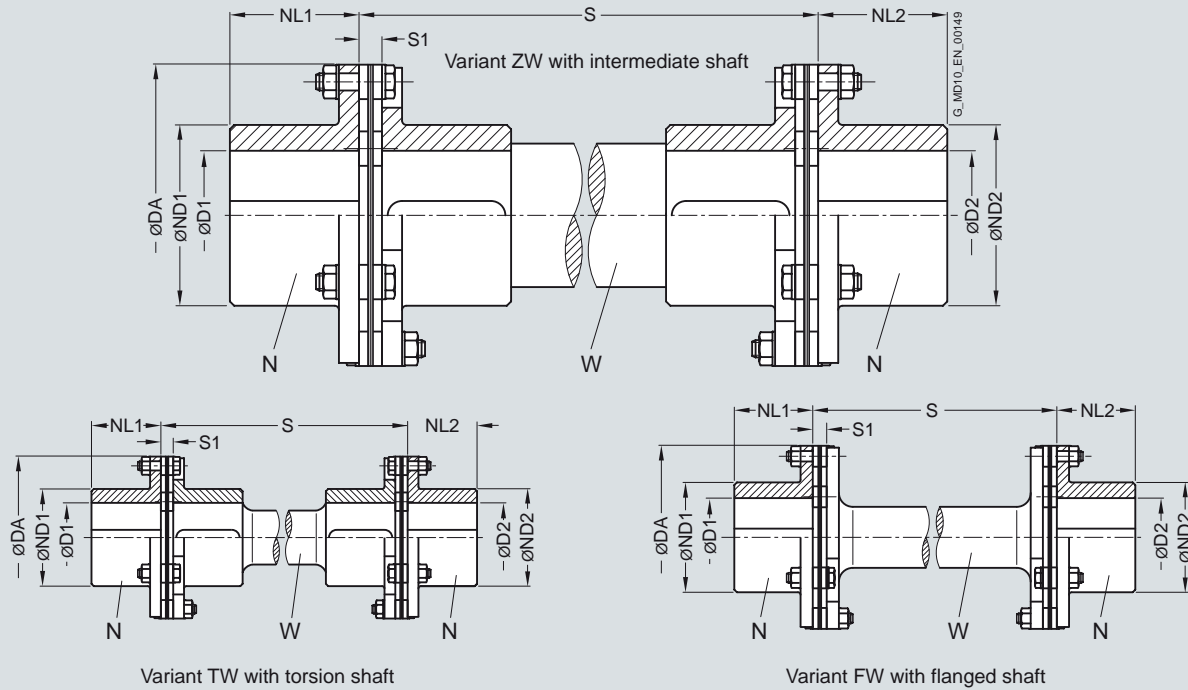
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NWN

Selection and ordering data

Torsionally rigid coupling type NWN with radially freely dismountable intermediate, torsion or flange shaft and variable shaft distance S.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|-------|--------------|---------------|------|-------------------------------------|-----|---------|----|-----|----------------|------------------------|--|--------|
| DA | T_{KN} | n_{Kmax} | | D1/D2 Keyway DIN 6885 max. | ND1 | NL1/NL2 | S1 | | S_{min} | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | Nm | rpm | | | | | | | | kgm ² | | kg |
| 78-6 | 170 | 13400 | ZW | 28 | 39 | 30 | 8 | 70 | 0.001 | | 2LC0470-0NX99-0AZ0 | 1.4 |
| | | | TW | | | | | | | | 2LC0470-0PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-0PA99-0AZ0 | |
| 105-6 | 270 | 10000 | ZW | 45 | 63 | 45 | 8 | 100 | 0.004 | | 2LC0470-1NX99-0AZ0 | 3.4 |
| | | | TW | | | | | | | | 2LC0470-1PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-1PA99-0AZ0 | |
| 125-6 | 490 | 8400 | ZW | 55 | 76 | 55 | 11 | 120 | 0.010 | | 2LC0470-2NX99-0AZ0 | 6.1 |
| | | | TW | | | | | | | | 2LC0470-2PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-2PA99-0AZ0 | |
| 140-6 | 700 | 7500 | ZW | 65 | 91 | 65 | 11 | 140 | 0.020 | | 2LC0470-3NX99-0AZ0 | 9.2 |
| | | | TW | | | | | | | | 2LC0470-3PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-3PA99-0AZ0 | |
| 165-6 | 1250 | 6350 | ZW | 75 | 105 | 75 | 14 | 160 | 0.041 | | 2LC0470-4NX99-0AZ0 | 14.2 |
| | | | TW | | | | | | | | 2LC0470-4PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-4PA99-0AZ0 | |
| 175-6 | 2000 | 6000 | ZW | 80 | 110 | 80 | 15 | 170 | 0.059 | | 2LC0470-5NX99-0AZ0 | 17.5 |
| | | | TW | | | | | | | | 2LC0470-5PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-5PA99-0AZ0 | |
| 195-6 | 3000 | 5350 | ZW | 90 | 120 | 80 | 15 | 170 | 0.088 | | 2LC0470-6NX99-0AZ0 | 20.5 |
| | | | TW | | | | | | | | 2LC0470-6PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-6PA99-0AZ0 | |
| 210-6 | 4400 | 5000 | ZW | 95 | 126 | 90 | 15 | 190 | 0.127 | | 2LC0470-7NX99-0AZ0 | 25.9 |
| | | | TW | | | | | | | | 2LC0470-7PB99-0AZ0 | |
| | | | FW | | | | | | | | 2LC0470-7PA99-0AZ0 | |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Type NWN

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|--------------|--------------|---------------|-----------|-------------------------------------|-----|---------|----|----------------|------------------------|--|--------|
| DA | T_{KN} | n_{Kmax} | | D1/D2 Keyway DIN 6885 max. | ND1 | NL1/NL2 | S1 | S_{min} | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | Nm | rpm | | | | | | | kgm ² | | kg |
| 240-6 | 5700 | 4350 | ZW | 110 | 145 | 100 | 18 | 210 | 0.245 | 2LC0470-8NX99-0AZ0 | 37.7 |
| | | | TW | | | | | 210 | | 2LC0470-8PB99-0AZ0 | |
| | | | FW | | | | | 116 | | 2LC0470-8PA99-0AZ0 | |
| 255-6 | 7600 | 4100 | ZW | 115 | 154 | 110 | 23 | 230 | 0.368 | 2LC0471-0NX99-0AZ0 | 49.9 |
| | | | TW | | | | | 230 | | 2LC0471-0PB99-0AZ0 | |
| | | | FW | | | | | 146 | | 2LC0471-0PA99-0AZ0 | |
| 280-6 | 10000 | 3750 | ZW | 135 | 184 | 130 | 25 | 270 | 0.667 | 2LC0471-1NX99-0AZ0 | 74.8 |
| | | | TW | | | | | 270 | | 2LC0471-1PB99-0AZ0 | |
| | | | FW | | | | | 150 | | 2LC0471-1PA99-0AZ0 | |
| 305-6 | 12000 | 3400 | ZW | 145 | 198 | 140 | 27 | 290 | 0.944 | 2LC0471-2NX99-0AZ0 | 91.9 |
| | | | TW | | | | | 290 | | 2LC0471-2PB99-0AZ0 | |
| | | | FW | | | | | 174 | | 2LC0471-2PA99-0AZ0 | |
| 335-6 | 18000 | 3100 | ZW | 160 | 214 | 150 | 30 | 310 | 1.43 | 2LC0471-3NX99-0AZ0 | 114 |
| | | | TW | | | | | 310 | | 2LC0471-3PB99-0AZ0 | |
| | | | FW | | | | | 185 | | 2LC0471-3PA99-0AZ0 | |
| 372-6 | 24000 | 2800 | ZW | 165 | 225 | 160 | 32 | 330 | 2.25 | 2LC0471-4NX99-0AZ0 | 151 |
| | | | TW | | | | | 330 | | 2LC0471-4PB99-0AZ0 | |
| | | | FW | | | | | 209 | | 2LC0471-4PA99-0AZ0 | |
| 407-6 | 34000 | 2550 | ZW | 185 | 250 | 175 | 35 | 360 | 3.58 | 2LC0471-5NX99-0AZ0 | 198 |
| | | | TW | | | | | 360 | | 2LC0471-5PB99-0AZ0 | |
| | | | FW | | | | | 220 | | 2LC0471-5PA99-0AZ0 | |
| 442-6 | 43000 | 2350 | ZW | 200 | 270 | 190 | 38 | 390 | 5.36 | 2LC0471-6NX99-0AZ0 | 251 |
| | | | TW | | | | | 390 | | 2LC0471-6PB99-0AZ0 | |
| | | | FW | | | | | 241 | | 2LC0471-6PA99-0AZ0 | |
| 487-6 | 55000 | 2150 | ZW | 225 | 305 | 215 | 41 | 440 | 9.16 | 2LC0471-7NX99-0AZ0 | 352 |
| | | | TW | | | | | 440 | | 2LC0471-7PB99-0AZ0 | |
| | | | FW | | | | | 257 | | 2LC0471-7PA99-0AZ0 | |
| 522-6 | 69000 | 2000 | ZW | 240 | 325 | 230 | 44 | 470 | 12.8 | 2LC0471-8NX99-0AZ0 | 428 |
| | | | TW | | | | | 470 | | 2LC0471-8PB99-0AZ0 | |
| | | | FW | | | | | 278 | | 2LC0471-8PA99-0AZ0 | |
| 572-6 | 92000 | 1800 | ZW | 265 | 360 | 255 | 47 | 520 | 20.4 | 2LC0472-0NX99-0AZ0 | 573 |
| | | | TW | | | | | 520 | | 2LC0472-0PB99-0AZ0 | |
| | | | FW | | | | | 294 | | 2LC0472-0PA99-0AZ0 | |
| 602-6 | 106000 | 1700 | ZW | 280 | 380 | 270 | 50 | 550 | 26.9 | 2LC0472-1NX99-0AZ0 | 678 |
| | | | TW | | | | | 550 | | 2LC0472-1PB99-0AZ0 | |
| | | | FW | | | | | 315 | | 2LC0472-1PA99-0AZ0 | |

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling.

Weights and mass moments of inertia apply to four hubs with maximum bore D1/D2 and two plate packs.

Ordering example:

ARPEX ARS-6 NWN coupling, size 105-6, with intermediate shaft and shaft distance $S = 1000$ mm,
Bore $\varnothing D1$ 40H7 mm, with keyway to DIN 6885 and set screw,
Bore $\varnothing D2$ 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0470-1NX99-0AZ0-Z

L0W+M1A+Q0Y+M13

plain text to Q0Y: **S = 1000 mm**

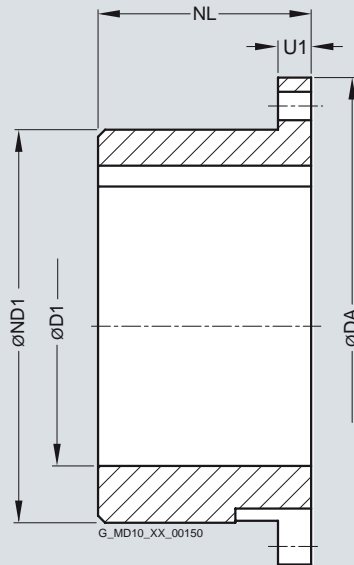
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
J hub

Selection and ordering data

J hubs or jumbo hubs are used where the shaft diameter is greater than the maximum bore diameter of the N hub. Because of the larger hub core diameter " $\varnothing ND1$ ", the J hub cannot be used as a B hub, i.e. the hub core diameter is greater than the inside diameter of the spacer tube and cannot project into the spacer. The J hub can be combined with any spacer.



FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
J hub

| Size | Dimensions in mm | | | | Mass moment of inertia | Product code | Weight |
|--------------|------------------|-----|-----|----|------------------------|--|----------|
| DA | D1 | ND1 | NL | U1 | <i>J</i> | Order codes for bore diameters and tolerances are specified in catalog section 3 | <i>m</i> |
| mm | | | | | kgm ² | | kg |
| 78-6 | 40 | 53 | 30 | 7 | 0.0002 | 2LC0470-0JU90-0AA0 | 0.3 |
| 105-6 | 60 | 80 | 45 | 7 | 0.0013 | 2LC0470-1JU90-0AA0 | 0.9 |
| 125-6 | 70 | 92 | 55 | 9 | 0.0029 | 2LC0470-2JU90-0AA0 | 1.5 |
| 140-6 | 80 | 107 | 65 | 9 | 0.0058 | 2LC0470-3JU90-0AA0 | 2.4 |
| 165-6 | 92 | 124 | 75 | 9 | 0.0121 | 2LC0470-4JU90-0AA0 | 3.7 |
| 175-6 | 96 | 130 | 80 | 12 | 0.0168 | 2LC0470-5JU90-0AA0 | 4.5 |
| 195-6 | 106 | 142 | 80 | 12 | 0.0244 | 2LC0470-6JU90-0AA0 | 5.4 |
| 210-6 | 110 | 149 | 90 | 13 | 0.0347 | 2LC0470-7JU90-0AA0 | 6.9 |
| 240-6 | 130 | 173 | 100 | 15 | 0.0675 | 2LC0470-8JU90-0AA0 | 9.9 |
| 255-6 | 135 | 182 | 110 | 18 | 0.0961 | 2LC0471-0JU90-0AA0 | 12.6 |

Weights and mass moments of inertia apply to a J hub with a maximum bore D1.

Ordering example:

ARPEX ARS-6 J hub, size 105-6,
hub with bore 60H7 mm and parallel keyway to DIN 6885/1 and
set screw.

Product code:

2LC0470-1JU90-0AA0
L1E

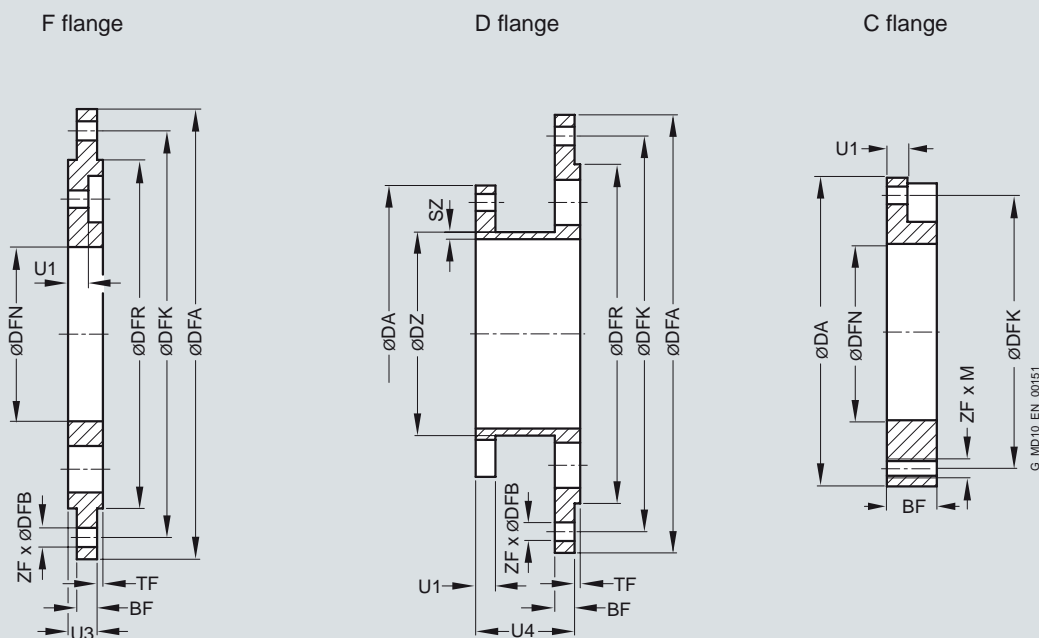
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
F flange, D flange, C flange

Selection and ordering data

F, D and C flanges are used where torque is to be transmitted by flange connections.
F, D and C flanges can be combined with any spacer.



| Size | Type | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|-------|------|-------------------|-----|-----|-----|-----|-----|------|----|----|----|----|----|----|----|-------------------------|--------------------|-----------|
| DA mm | | DFR | DFA | DFN | DZ | SZ | DFK | DFB | M | ZF | BF | U1 | U3 | U4 | TF | J kgm ² | | m kg |
| 78-6 | F | 90 _{j6} | 125 | 40 | — | — | 110 | 6.6 | — | 6 | 7 | 7 | 10 | — | 2 | 0.0014 | 2LC0470-0GP00-0AA0 | 0.7 |
| | D | | | — | 45 | 2.5 | | | | | | | — | 35 | | 0.0014 | 2LC0470-0EC00-0AA0 | 0.8 |
| | C | — | — | 40 | — | — | 66 | — | 6 | 6 | 12 | | | — | — | 0.0002 | 2LC0470-0BE00-0AA0 | 0.2 |
| 105-6 | F | 120 _{j6} | 155 | 60 | — | — | 140 | 6.6 | — | 6 | 7 | 7 | 10 | — | 2 | 0.0036 | 2LC0470-1GP00-0AA0 | 1.1 |
| | D | | | — | 72 | 2.5 | | | | | | | — | 35 | | 0.0036 | 2LC0470-1EC00-0AA0 | 1.2 |
| | C | — | — | 60 | — | — | 93 | — | 6 | 6 | 12 | | | — | — | 0.0007 | 2LC0470-1BE00-0AA0 | 0.4 |
| 125-6 | F | 140 _{j6} | 178 | 75 | — | — | 160 | 9.0 | — | 6 | 9 | 9 | 13 | — | 2 | 0.0077 | 2LC0470-2GP00-0AA0 | 1.8 |
| | D | | | — | 84 | 2.5 | | | | | | | — | 45 | | 0.0079 | 2LC0470-2EC00-0AA0 | 1.9 |
| | C | — | — | 75 | — | — | 109 | — | 8 | 6 | 15 | | | — | — | 0.0016 | 2LC0470-2BE00-0AA0 | 0.7 |
| 140-6 | F | 155 _{j6} | 194 | 90 | — | — | 175 | 9.0 | — | 6 | 9 | 9 | 13 | — | 2 | 0.0109 | 2LC0470-3GP00-0AA0 | 2.0 |
| | D | | | — | 99 | 2.5 | | | | | | | — | 45 | | 0.0113 | 2LC0470-3EC00-0AA0 | 2.2 |
| | C | — | — | 90 | — | — | 124 | — | 8 | 6 | 15 | | | — | — | 0.0026 | 2LC0470-3BE00-0AA0 | 0.8 |
| 165-6 | F | 180 _{j6} | 232 | 95 | — | — | 210 | 11.0 | — | 6 | 9 | 9 | 15 | — | 2 | 0.0233 | 2LC0470-4GP00-0AA0 | 3.3 |
| | D | | | — | 114 | 2.5 | | | | | | | — | 55 | | 0.0226 | 2LC0470-4EC00-0AA0 | 3.2 |
| | C | — | — | 95 | — | — | 145 | — | 10 | 6 | 17 | | | — | — | 0.0060 | 2LC0470-4BE00-0AA0 | 1.4 |
| 175-6 | F | 190 _{j6} | 245 | 105 | — | — | 220 | 14.0 | — | 6 | 12 | 12 | 19 | — | 2 | 0.0365 | 2LC0470-5GP00-0AA0 | 4.5 |
| | D | | | — | 120 | 3.0 | | | | | | | — | 65 | | 0.0368 | 2LC0470-5EC00-0AA0 | 4.7 |
| | C | — | — | 105 | — | — | 153 | — | 12 | 6 | 21 | | | — | — | 0.0091 | 2LC0470-5BE00-0AA0 | 1.8 |
| 195-6 | F | 215 _{j6} | 270 | 115 | — | — | 245 | 14.0 | — | 8 | 12 | 12 | 20 | — | 2 | 0.0559 | 2LC0470-6GP00-0AA0 | 5.6 |
| | D | | | — | 131 | 3.0 | | | | | | | — | 65 | | 0.0542 | 2LC0470-6EC00-0AA0 | 5.6 |
| | C | — | — | 115 | — | — | 169 | — | 14 | 6 | 22 | | | — | — | 0.0146 | 2LC0470-6BE00-0AA0 | 2.4 |
| 210-6 | F | 230 _{j6} | 300 | 120 | — | — | 270 | 18.0 | — | 6 | 13 | 13 | 22 | — | 2 | 0.0907 | 2LC0470-7GP00-0AA0 | 7.6 |
| | D | | | — | 139 | 4.0 | | | | | | | — | 75 | | 0.0889 | 2LC0470-7EC00-0AA0 | 7.7 |
| | C | — | — | 120 | — | — | 180 | — | 16 | 6 | 24 | | | — | — | 0.0210 | 2LC0470-7BE00-0AA0 | 3.1 |
| 240-6 | F | 260 _{j6} | 330 | 140 | — | — | 300 | 18.0 | — | 8 | 15 | 15 | 26 | — | 2 | 0.1549 | 2LC0470-8GP00-0AA0 | 10.6 |
| | D | | | — | 162 | 5.0 | | | | | | | — | 80 | | 0.1514 | 2LC0470-8EC00-0AA0 | 10.7 |
| | C | — | — | 140 | — | — | 207 | — | 18 | 6 | 28 | | | — | — | 0.0416 | 2LC0470-8BE00-0AA0 | 4.6 |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
F flange, D flange, C flange

| Size | Type | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|--------------|----------|-------------------|-----|-----|-----|------|-----|------|----|----|----|----|----|-----|----|-------------------------|---------------------------|-----------|
| DA mm | | DFR | DFA | DFN | DZ | SZ | DFK | DFB | M | ZF | BF | U1 | U3 | U4 | TF | J kgm ² | | m kg |
| 255-6 | F | 275 _{m6} | 345 | 150 | – | – | 315 | 18.0 | – | 8 | 18 | 18 | 30 | – | 2 | 0.2167 | 2LC0471-0GP00-0AA0 | 13.2 |
| | D | – | – | – | 170 | 5.0 | – | – | – | – | – | – | – | 100 | – | 0.2168 | 2LC0471-0EC00-0AA0 | 13.9 |
| | C | – | – | 150 | – | – | 219 | – | 20 | 6 | 32 | – | – | – | – | 0.0586 | 2LC0471-0BE00-0AA0 | 5.7 |
| 280-6 | F | 305 _{m6} | 375 | 160 | – | – | 345 | 18.0 | – | 10 | 19 | 19 | 31 | – | 3 | 0.3278 | 2LC0471-1GP00-0AA0 | 17.1 |
| | D | – | – | – | 186 | 6.0 | – | – | – | – | – | – | – | 100 | – | 0.3266 | 2LC0471-1EC00-0AA0 | 17.9 |
| | C | – | – | 160 | – | – | 240 | – | 22 | 6 | 34 | – | – | – | – | 0.0927 | 2LC0471-1BE00-0AA0 | 7.6 |
| 305-6 | F | 330 _{m6} | 400 | 180 | – | – | 370 | 18.0 | – | 12 | 20 | 20 | 37 | – | 3 | 0.4709 | 2LC0471-2GP00-0AA0 | 21.3 |
| | D | – | – | – | 200 | 6.5 | – | – | – | – | – | – | – | 120 | – | 0.4519 | 2LC0471-2EC00-0AA0 | 21.9 |
| | C | – | – | 180 | – | – | 260 | – | 24 | 6 | 40 | – | – | – | – | 0.1442 | 2LC0471-2BE00-0AA0 | 9.8 |
| 335-6 | F | 365 _{m6} | 447 | 190 | – | – | 410 | 22.0 | – | 10 | 22 | 22 | 41 | – | 3 | 0.8051 | 2LC0471-3GP00-0AA0 | 29.9 |
| | D | – | – | – | 218 | 7.5 | – | – | – | – | – | – | – | 125 | – | 0.7586 | 2LC0471-3EC00-0AA0 | 29.7 |
| | C | – | – | 190 | – | – | 285 | – | 27 | 6 | 44 | – | – | – | – | 0.2334 | 2LC0471-3BE00-0AA0 | 13.5 |
| 372-6 | F | 410 _{m6} | 505 | 200 | – | – | 460 | 22.0 | – | 12 | 25 | 25 | 46 | – | 3 | 1.4635 | 2LC0471-4GP00-0AA0 | 42.9 |
| | D | – | – | – | 228 | 9.5 | – | – | – | – | – | – | – | 145 | – | 1.3843 | 2LC0471-4EC00-0AA0 | 44.0 |
| | C | – | – | 200 | – | – | 310 | – | 30 | 6 | 49 | – | – | – | – | 0.3947 | 2LC0471-4BE00-0AA0 | 19.0 |
| 407-6 | F | 445 _{m6} | 535 | 210 | – | – | 490 | 22.0 | – | 16 | 27 | 27 | 48 | – | 3 | 1.9809 | 2LC0471-5GP00-0AA0 | 51.9 |
| | D | – | – | – | 245 | 11.0 | – | – | – | – | – | – | – | 150 | – | 1.9083 | 2LC0471-5EC00-0AA0 | 54.4 |
| | C | – | – | 210 | – | – | 340 | – | 33 | 6 | 51 | – | – | – | – | 0.6095 | 2LC0471-5BE00-0AA0 | 25.2 |
| 442-6 | F | 490 _{m6} | 585 | 230 | – | – | 540 | 22.0 | – | 18 | 30 | 30 | 55 | – | 3 | 3.2065 | 2LC0471-6GP00-0AA0 | 70.0 |
| | D | – | – | – | 273 | 11.0 | – | – | – | – | – | – | – | 165 | – | 2.9664 | 2LC0471-6EC00-0AA0 | 69.0 |
| | C | – | – | 230 | – | – | 370 | – | 36 | 6 | 58 | – | – | – | – | 0.9466 | 2LC0471-6BE00-0AA0 | 33.0 |
| 487-6 | F | 535 _{m6} | 645 | 260 | – | – | 590 | 26.0 | – | 16 | 33 | 33 | 60 | – | 3 | 5.1248 | 2LC0471-7GP00-0AA0 | 91.6 |
| | D | – | – | – | 298 | 13.0 | – | – | – | – | – | – | – | 175 | – | 4.8658 | 2LC0471-7EC00-0AA0 | 94.3 |
| | C | – | – | 260 | – | – | 410 | – | 39 | 6 | 63 | – | – | – | – | 1.5350 | 2LC0471-7BE00-0AA0 | 43.4 |
| 522-6 | F | 580 _{m6} | 695 | 280 | – | – | 640 | 26.0 | – | 18 | 36 | 36 | 63 | – | 4 | 7.4857 | 2LC0471-8GP00-0AA0 | 114 |
| | D | – | – | – | 324 | 13.0 | – | – | – | – | – | – | – | 190 | – | 7.0887 | 2LC0471-8EC00-0AA0 | 117 |
| | C | – | – | 280 | – | – | 440 | – | 42 | 6 | 67 | – | – | – | – | 2.0955 | 2LC0471-8BE00-0AA0 | 51.4 |
| 572-6 | F | 625 _{m6} | 770 | 310 | – | – | 700 | 33.0 | – | 16 | 38 | 38 | 67 | – | 4 | 11.6519 | 2LC0472-0GP00-0AA0 | 147 |
| | D | – | – | – | 356 | 15.0 | – | – | – | – | – | – | – | 200 | – | 11.2872 | 2LC0472-0EC00-0AA0 | 153 |
| | C | – | – | 310 | – | – | 480 | – | 45 | 6 | 71 | – | – | – | – | 3.2918 | 2LC0472-0BE00-0AA0 | 66.6 |
| 602-6 | F | 655 _{m6} | 800 | 320 | – | – | 730 | 33.0 | – | 16 | 41 | 41 | 72 | – | 4 | 14.7118 | 2LC0472-1GP00-0AA0 | 172 |
| | D | – | – | – | 368 | 16.0 | – | – | – | – | – | – | – | 215 | – | 14.3454 | 2LC0472-1EC00-0AA0 | 181 |
| | C | – | – | 320 | – | – | 505 | – | 48 | 6 | 76 | – | – | – | – | 4.3874 | 2LC0472-1BE00-0AA0 | 81.1 |

F, D and C flanges are readily available in many sizes.

Ordering example:

ARPEX ARS-6 F flange, size 105-6.

Product code:

2LC0470-1GP00-0AA0

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
Clamping hub

Selection and ordering data

Standard clamping hub types 124 and 125 can be combined with any spacer. It should be noted that the clamping hub can be used only as an N hub (hub core outside). Clamping hub as "B hub" (hub core in spacer tube) on request. Transmissible torque and maximum bore diameter are smaller on a B hub variant than stated below.

Function

ARPEX clamping hubs transmit torque with the aid of a flexible press fit. By pulling the clamping ring on by means of the tightening screws the necessary surface pressure is applied in the "shaft/hub" contact area. After the tightening operation the clamping ring lies up against the clamping hub. The gap dimension between the clamping hub and the clamping ring is then zero. This has the effect that even with repeated fitting and dismounting the balancing condition is maintained (no wobble effect). Clamping hubs can be clamped as often as required. It must be ensured that the taper surfaces are adequately lubricated.

Transmissible torque

The clamping connections are designed to enable the specified maximum torques to be transmitted. These maximum torques may not be exceeded. The mathematical coefficient of friction between the shaft and the clamping hub is $\mu = 0.16$.

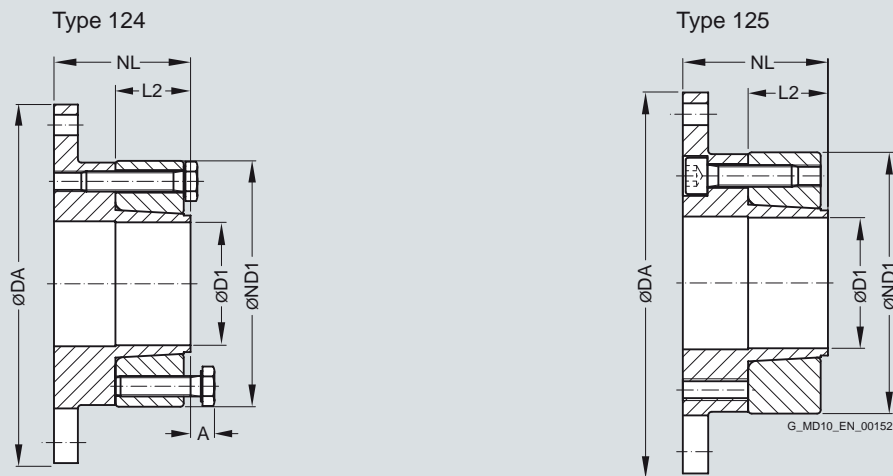
Fitting clearance and surface roughness

The transmissible torques take into account the maximum fitting clearance and maximum surface roughness. For other shaft tolerances reduced torques or other bore tolerances must be used. The surface roughness of the shaft should be $\leq R_a = 1.6 \mu\text{m}$.

The shaft tolerance must be specified in the order.

To specify, -Z must be added to the product code and the order code Y26 with plain text specification of the shaft tolerance for D1 must be added as well. The fit pairing G6/h6 should be used wherever possible.

6



| Size | Clamping hub | Dimensions in mm | | | | | | Mass moment of inertia | Product code | Weight |
|-------|--------------|------------------|------|-----|----|----|----|------------------------|--|--------|
| DA | Type | D1 | D1 | ND1 | NL | L2 | A | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | | min. | max. | | | | | kgm ² | | kg |
| 78-6 | 124 | 15 | 25 | 48 | 35 | 19 | 6 | 0.0002 | 2LC0470-0LM90-0AA0 | 0.5 |
| | 125 | | | | | | | | 2LC0470-0LN90-0AA0 | |
| 105-6 | 124 | 25 | 45 | 74 | 40 | 22 | 8 | 0.0012 | 2LC0470-1LM90-0AA0 | 1.0 |
| | 125 | | | | | | | | 2LC0470-1LN90-0AA0 | |
| 125-6 | 124 | 30 | 50 | 86 | 45 | 28 | 8 | 0.0026 | 2LC0470-2LM90-0AA0 | 1.6 |
| | 125 | | | | | | | | 2LC0470-2LN90-0AA0 | |
| 140-6 | 124 | 30 | 60 | 103 | 50 | 33 | 9 | 0.0051 | 2LC0470-3LM90-0AA0 | 2.4 |
| | 125 | | | | | | | | 2LC0470-3LN90-0AA0 | |
| 165-6 | 124 | 38 | 70 | 118 | 55 | 33 | 9 | 0.0096 | 2LC0470-4LM90-0AA0 | 3.4 |
| | 125 | | | | | | | | 2LC0470-4LN90-0AA0 | |
| 175-6 | 124 | 42 | 75 | 122 | 65 | 43 | 10 | 0.0141 | 2LC0470-5LM90-0AA0 | 4.3 |
| | 125 | | | | | | | | 2LC0470-5LN90-0AA0 | |
| 195-6 | 124 | 48 | 75 | 135 | 70 | 44 | 9 | 0.0231 | 2LC0470-6LM90-0AA0 | 6.2 |
| | 125 | | | | | | | | 2LC0470-6LN90-0AA0 | |
| 210-6 | 124 | 55 | 85 | 141 | 75 | 49 | 9 | 0.0309 | 2LC0470-7LM90-0AA0 | 7.2 |
| | 125 | | | | | | | | 2LC0470-7LN90-0AA0 | |
| 240-6 | 124 | 65 | 95 | 164 | 90 | 59 | 10 | 0.0648 | 2LC0470-8LM90-0AA0 | 11.4 |
| | 125 | | | | | | | | 2LC0470-8LN90-0AA0 | |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Further hubs and flanges
Clamping hub

| Size | Clamping hub | Dimensions in mm | | | | | | Mass moment of inertia | Product code | Weight |
|--------------|--------------|------------------|------|-----|-----|-----|----|------------------------|--|----------|
| DA | Type | D1 | D1 | ND1 | NL | L2 | A | <i>J</i> | Order codes for bore diameters and tolerances are specified in catalog section 3 | <i>m</i> |
| mm | | min. | max. | | | | | kgm ² | | kg |
| 255-6 | 124 | 70 | 95 | 171 | 95 | 64 | 10 | 0.0886 | 2LC0471-0LM90-0AA0 | 14.1 |
| | 125 | | | | | | | | 2LC0471-0LN90-0AA0 | |
| 280-6 | 124 | 75 | 110 | 189 | 115 | 79 | – | 0.1489 | 2LC0471-1LM90-0AA0 | 19.6 |
| | 125 | | | | | | | | 2LC0471-1LN90-0AA0 | |
| 305-6 | 124 | 80 | 120 | 203 | 125 | 90 | – | 0.2163 | 2LC0471-2LM90-0AA0 | 24.3 |
| | 125 | | | | | | | | 2LC0471-2LN90-0AA0 | |
| 335-6 | 124 | 85 | 130 | 221 | 140 | 100 | – | 0.3441 | 2LC0471-3LM90-0AA0 | 32.6 |
| | 125 | | | | | | | | 2LC0471-3LN90-0AA0 | |
| 372-6 | 124 | 95 | 140 | 230 | 150 | 110 | – | 0.4955 | 2LC0471-4LM90-0AA0 | 38.8 |
| | 125 | | | | | | | | 2LC0471-4LN90-0AA0 | |

Additional coupling sizes are available on request.

Smaller bore diameters D1_{min} are available on request.

Forcing-off threads of clamping hubs of type 124 from size 280 fitted from flange side (like type 125).

Weights and mass moments of inertia apply to a clamping hub with a maximum bore D1.

Dimensions and torques

| Finished bore/shaft in standard fit | Size | 78-6 | 105-6 | 125-6 | 140-6 | 165-6 | 175-6 | 195-6 | 210-6 | 240-6 | 255-6 | 280-6 | 305-6 | 335-6 | 372-6 |
|-------------------------------------|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Rated coupling torque <i>T</i> _{KN} | | | | | | | | | | | | | | |
| | Nm | 170 | 270 | 490 | 700 | 1250 | 2000 | 3000 | 4400 | 5700 | 7600 | 10000 | 12000 | 18000 | 24000 |
| D1 ^{G6} / _{h6} | Maximum transmissible torque of the clamping hub | | | | | | | | | | | | | | |
| | Nm | | | | | | | | | | | | | | |
| 16 | 200 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 19 | 220 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 20 | 250 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 22 | 245 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 24 | 195 | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 25 | 225 | 270 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 28 | – | 400 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 30 | – | 380 | 670 | 900 | – | – | – | – | – | – | – | – | – | – | – |
| 32 | – | 430 | 710 | 940 | – | – | – | – | – | – | – | – | – | – | – |
| 35 | – | 390 | 740 | 1060 | – | – | – | – | – | – | – | – | – | – | – |
| 38 | – | 520 | 950 | 1340 | 1720 | – | – | – | – | – | – | – | – | – | – |
| 40 | – | 400 | 810 | 1140 | 1970 | – | – | – | – | – | – | – | – | – | – |
| 42 | – | 480 | 950 | 1320 | 1790 | 2590 | – | – | – | – | – | – | – | – | – |
| 45 | – | 505 | 850 | 1190 | 2150 | 3120 | – | – | – | – | – | – | – | – | – |
| 48 | – | – | 850 | 1400 | 2430 | 3200 | 3280 | – | – | – | – | – | – | – | – |
| 50 | – | – | 970 | 1090 | 2500 | 3550 | 3650 | – | – | – | – | – | – | – | – |
| 55 | – | – | – | 1390 | 2300 | 3870 | 3750 | 4120 | – | – | – | – | – | – | – |
| 60 | – | – | – | 1180 | 2020 | 3490 | 4490 | 5220 | – | – | – | – | – | – | – |
| 65 | – | – | – | – | 2500 | 4000 | 4840 | 6630 | 7600 | – | – | – | – | – | – |
| 70 | – | – | – | – | 2360 | 3610 | 5110 | 7430 | 9200 | 9800 | – | – | – | – | – |
| 75 | – | – | – | – | – | 3070 | 5040 | 7430 | 9600 | 11700 | 14600 | – | – | – | – |
| 80 | – | – | – | – | – | – | – | 7330 | 8800 | 12600 | 17200 | 19300 | – | – | – |
| 85 | – | – | – | – | – | – | – | 6260 | 10000 | 12400 | 18300 | 21400 | 25100 | – | – |
| 90 | – | – | – | – | – | – | – | – | 9700 | 14200 | 20000 | 23600 | 29000 | – | – |
| 95 | – | – | – | – | – | – | – | – | 10000 | 14700 | 19700 | 24000 | 30400 | 36300 | – |
| 100 | – | – | – | – | – | – | – | – | – | – | 19700 | 24000 | 34400 | 41100 | – |
| 110 | – | – | – | – | – | – | – | – | – | – | 19100 | 24000 | 33600 | 44200 | – |
| 120 | – | – | – | – | – | – | – | – | – | – | – | 24000 | 33400 | 48000 | – |
| 130 | – | – | – | – | – | – | – | – | – | – | – | – | 33500 | 46700 | – |
| 140 | – | – | – | – | – | – | – | – | – | – | – | – | – | 44900 | – |

The maximum transmissible torque of the clamping hub must not be exceeded!

Further coupling sizes and higher torques are available on request.

Ordering example:

ARPEX ARS-6 clamping hub, size 105-6, type 124, for shaft diameter 40h6 mm.

Product code:

2LC0470-1LM90-0AA0-Z

L0W+Y26

clear text to Y26: **h6**

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARS-6 Series

Spare and wear parts
Plate pack ARS-6

Selection and ordering data

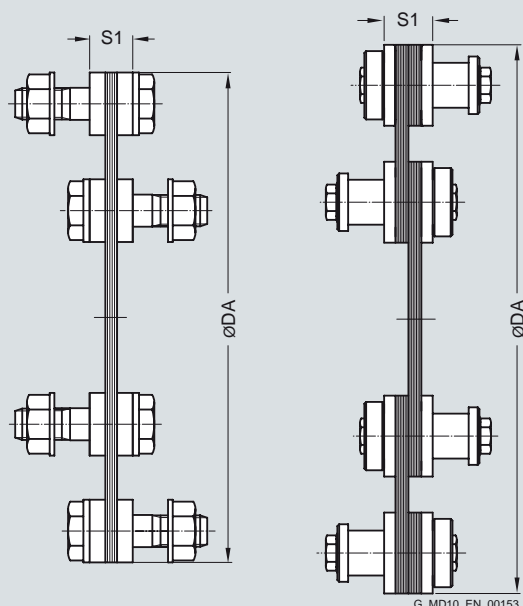


Figure 1

Figure 2

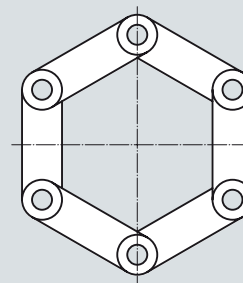
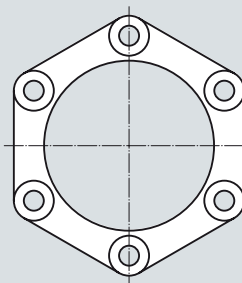


Plate packs up to size 255-6 comprise ring plates (Fig. 1) and from size 280-6 side-bar plates (Fig. 2).

| Dimensions in mm | | Mass moment of inertia | Product code | Weight |
|------------------|----|------------------------|--------------------|--------|
| Size | S1 | J | | m |
| DA | | kgm ² | | kg |
| 78-6 | 8 | 0.0001 | 2LC0470-0NQ00-0AA0 | 0.1 |
| 105-6 | 8 | 0.0003 | 2LC0470-1NQ00-0AA0 | 0.1 |
| 125-6 | 11 | 0.0009 | 2LC0470-2NQ00-0AA0 | 0.3 |
| 140-6 | 11 | 0.0012 | 2LC0470-3NQ00-0AA0 | 0.3 |
| 165-6 | 14 | 0.0033 | 2LC0470-4NQ00-0AA0 | 0.7 |
| 175-6 | 15 | 0.0050 | 2LC0470-5NQ00-0AA0 | 0.9 |
| 195-6 | 15 | 0.0084 | 2LC0470-6NQ00-0AA0 | 1.2 |
| 210-6 | 15 | 0.0137 | 2LC0470-7NQ00-0AA0 | 1.8 |
| 240-6 | 18 | 0.0253 | 2LC0470-8NQ00-0AA0 | 2.5 |
| 255-6 | 23 | 0.0410 | 2LC0471-0NQ00-0AA0 | 3.5 |
| 280-6 | 25 | 0.0613 | 2LC0471-1NQ00-0AA0 | 4.4 |
| 305-6 | 27 | 0.0734 | 2LC0471-2NQ00-0AA0 | 4.6 |
| 335-6 | 30 | 0.1180 | 2LC0471-3NQ00-0AA0 | 6.1 |
| 372-6 | 32 | 0.2127 | 2LC0471-4NQ00-0AA0 | 9.3 |
| 407-6 | 35 | 0.3387 | 2LC0471-5NQ00-0AA0 | 12.3 |
| 442-6 | 38 | 0.4950 | 2LC0471-6NQ00-0AA0 | 15.2 |
| 487-6 | 41 | 0.7965 | 2LC0471-7NQ00-0AA0 | 20.0 |
| 522-6 | 44 | 1.0849 | 2LC0471-8NQ00-0AA0 | 23.6 |
| 572-6 | 47 | 1.6931 | 2LC0472-0NQ00-0AA0 | 31.0 |
| 602-6 | 50 | 2.2420 | 2LC0472-1NQ00-0AA0 | 37.1 |

The plate pack of the ARS-6 series is readily available as a spare part.

The plate pack is delivered with screw connection.
Up to size 280-6 close-fitting bolts with collar nuts are used.
From size 305-6 patented conical screw connections are used.

Ordering example:
ARPEX ARS-6 plate pack, size 105-6,
complete with screw connections.

Product code:
2LC0470-1NQ00-0AA0

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

General information

Overview



Coupling can be designed for potentially explosive environments in accordance with 94/9/EC.

Benefits

ARPEX couplings of the ARC-8/-10 series are outstanding for their robust construction. They have been optimized for high torques combined with high speeds. The patented conical screw connection ensures reliable torque transmission by a true

positive fit and is designed to be extremely easy to fit. Couplings can be designed for potentially explosive environments in accordance with 94/9/EC.

Application

ARPEX couplings of the ARC-8 and ARC-10 series are output- and speed-optimized coupling solutions. Power transmission is by means of patented conical screw connections and plate packs of the octagonal and decagonal types. Torques of between 8.5 and 1450 kNm can be transmitted at a permitted angular misalignment of 0.2° to 0.4°. The closed flange shape and a compact construction permit high peripheral speeds and high speeds. On most types, the intermediate spacer can be radially fitted without moving the connected units.

Main areas of application for the ARC-8/-10 series:

- Paper-making machines
- Printing machines
- Compressors
- Fans and blowers
- Generators
- Presses
- Conveyors
- Crane systems
- Pumps
- Mills
- Rotary furnaces
- Stirrers

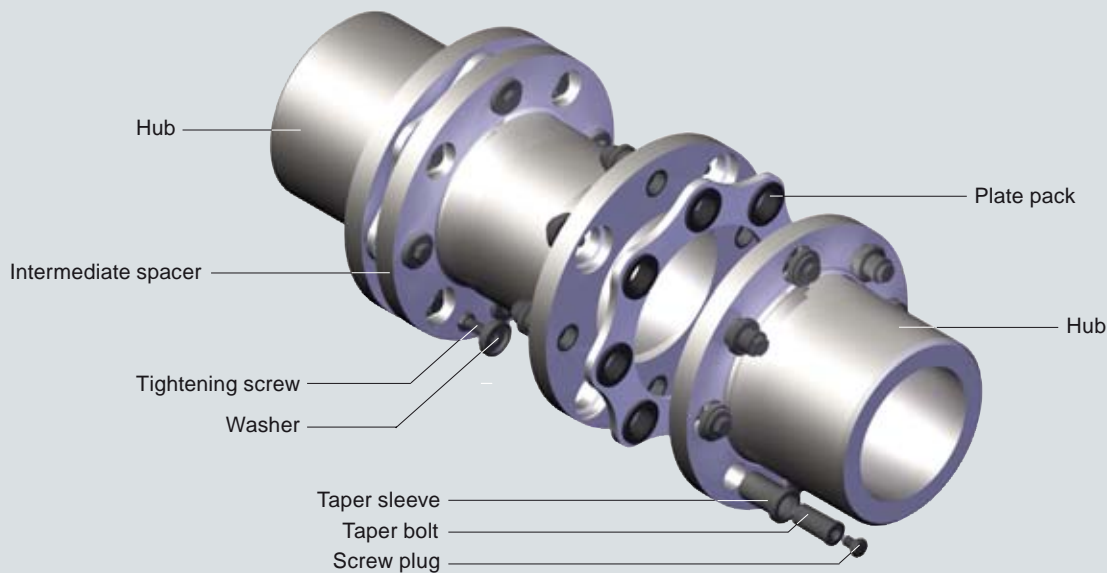
FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series**

General information

Design

The classic design of an ARPEX coupling of the ARC-8/-10 series type NEN is shown in the following illustration. The plate packs are bolted alternately between the flanges of the coupling hubs and the intermediate spacer.

Conical screw connections are used for fastening. The intermediate spacer lengths are variably designed according to customer specifications.



G_MD10_EN_00154a

Design of an ARPEX coupling, ARC-8/-10 series, type NEN

Variants of the ARPEX coupling, ARC-8/-10 series

| Types | |
|--------------|---|
| NEN | Variant with intermediate spacer machined on all sides, length variable |
| NHN | Variant with unmachined intermediate spacer, length variable |
| BUB | Compact variant with split intermediate spacer for short shaft distances |
| MFEFM | Variant with preassembled intermediate unit and machined intermediate spacer, length variable |
| MFHFM | Variant with preassembled intermediate unit and unmachined intermediate spacer, length variable |

The coupling parts of the ARPEX ARC-8/-10 series with the exception of the H spacers have been machined on all sides. These are delivered with unmachined and primed spacer tube.

Further application-specific coupling types are available in selection module **x.CAT** at www.flender.com. Dimension sheets and further information are available on request.

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Maximum speed | Maximum permitted shaft misalignment | | | Torsional stiffness | | | | | | | |
|---------|--------------|----------------|-----------------|----------------|---------------|--------------------------------------|-----------------|-----------------|---------------------|------|--------------------|-------------------------|---------------------------|---------|---------------------------|-----------------------------|
| | T_{KN} | T_{Kmax} | T_{KOL} | T_{KW} | n_{Kmax} | $\pm\Delta K_a$ | $\pm\Delta K_w$ | $\pm\Delta K_r$ | C_T | | | | | | | |
| | | | | | | | | | NEN NHN | BUB | MFEFM MFHFM | NEN for S_{min} | NHN $S=1000\text{ mm}$ | BUB | MFEFM for S_{min} | MFHFM $S=1000\text{ mm}$ |
| | | | | | | | | | | | | | | | | |
| | kNm | kNm | kNm | kNm | rpm | mm | | | mm | mm | mm | MNm/rad | MNm/rad | MNm/rad | MNm/rad | MNm/rad |
| 225-8 | 8.5 | 17 | 25.5 | 4.25 | 8500 | 1.94 | 0.4° | | 6.87 | 0.96 | 6.53 | 3.1 | 0.9368 | 3.0 | 3.1 | 0.9748 |
| 255-8 | 12.7 | 25 | 38.1 | 6.35 | 7500 | 2.32 | | | 6.86 | 1.10 | 6.51 | 3.8 | 1.2778 | 3.7 | 3.8 | 1.3295 |
| 270-8 | 16.5 | 33 | 49.5 | 8.25 | 7000 | 2.40 | | | 6.88 | 1.10 | 6.52 | 5.4 | 1.7339 | 5.1 | 5.4 | 1.8072 |
| 295-8 | 23 | 46 | 69 | 11.5 | 6500 | 2.62 | | | 6.86 | 1.17 | 6.44 | 7.1 | 2.6134 | 6.7 | 7.1 | 2.7358 |
| 325-8 | 33 | 66 | 99 | 16.5 | 6000 | 2.60 | | | 6.84 | 1.38 | 6.34 | 9.6 | 3.9537 | 9.4 | 9.6 | 4.1715 |
| 355-8 | 45 | 90 | 135 | 22.5 | 5500 | 2.88 | | | 6.83 | 1.42 | 6.28 | 12.8 | 5.6093 | 12.5 | 12.8 | 5.9339 |
| 385-8 | 56 | 112 | 168 | 28 | 5000 | 3.12 | | | 6.81 | 1.63 | 6.22 | 17.8 | 7.8517 | 17.0 | 17.8 | 8.3555 |
| 420-8 | 70 | 140 | 210 | 35 | 4500 | 3.46 | | | 6.79 | 1.78 | 6.14 | 22.9 | 10.8175 | 21.9 | 22.9 | 11.5763 |
| 455-8 | 88 | 176 | 264 | 44 | 4200 | 4.02 | | | 6.78 | 1.89 | 6.11 | 30.0 | 14.2794 | 28.2 | 30.0 | 15.2998 |
| 505-8 | 120 | 240 | 360 | 60 | 3800 | 4.28 | | | 6.77 | 2.41 | 6.04 | 40.2 | 20.9046 | 36.4 | 40.2 | 22.4421 |
| 545-8 | 165 | 330 | 495 | 82.5 | 3500 | 4.48 | | | 6.75 | 2.67 | 5.98 | 50.4 | 28.7428 | 45.0 | 50.4 | 30.7848 |
| 595-8 | 210 | 420 | 630 | 105 | 3200 | 4.86 | | | 6.73 | 2.88 | 5.89 | 67.8 | 39.5343 | 59.5 | 67.8 | 42.5997 |
| 630-8 | 260 | 520 | 780 | 130 | 3000 | 4.98 | 0.3° | | 4.93 | 2.10 | 4.14 | 61.8 | 42.6162 | 61.2 | 61.8 | 46.3697 |
| 700-8 | 340 | 680 | 1020 | 170 | 2700 | 5.78 | | | 4.91 | 2.38 | 4.06 | 84.9 | 60.2135 | 83.1 | 84.9 | 65.8083 |
| | | | | | | | | | $S=1500\text{ mm}$ | | $S=1500\text{ mm}$ | | $S=1500\text{ mm}$ | | | $S=1500\text{ mm}$ |
| 630-10 | 340 | 680 | 1020 | 170 | 3000 | 3.04 | | 0.2° | 5.03 | 1.40 | 4.50 | 94.6 | 46.9832 | 94.4 | 94.6 | 50.5520 |
| 700-10 | 430 | 860 | 1290 | 215 | 2700 | 3.60 | | | 5.02 | 1.58 | 4.45 | 135 | 72.3106 | 132 | 135 | 77.9729 |
| 760-10 | 550 | 1100 | 1650 | 275 | 2500 | 3.70 | | | 4.98 | 1.60 | 4.30 | 173 | 91.7589 | 180 | 173 | 101.228 |
| 860-10 | 770 | 1540 | 2310 | 385 | 2200 | 4.82 | | | 4.95 | 1.86 | 4.21 | 244 | 145.230 | 245 | 244 | 160.422 |
| 950-10 | 1050 | 2100 | 3150 | 525 | 2000 | 5.40 | | | 4.91 | 1.92 | 4.09 | 325 | 204.443 | 338 | 325 | 227.957 |
| 1035-10 | 1450 | 2900 | 4350 | 725 | 1850 | 5.78 | | | 4.88 | 1.95 | 3.97 | 426 | 292.140 | 455 | 426 | 326.930 |

The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur at the same time (see following table).

The specified, permitted shaft misalignment ΔK_r for types NEN/NHN and MFEFM/MFHFM applies to a shaft distance of $S = 1000$ mm (ARC-8) or $S = 1500$ mm (ARC-10).

The permitted shaft misalignment ΔK_r for types NEN and NHN is calculated as follows: $\Delta K_r = (S - S_1) \cdot \tan(\Delta K_w)$.

The permitted shaft misalignment ΔK_r for types MFEFM and MFHFM is calculated as follows:

$\Delta K_r = (S - S_1 - 2 \cdot BF) \cdot \tan(\Delta K_w)$.

The values for torsional stiffness apply to the complete coupling. In the case of types NHN and MFHFM to a coupling with shaft distance $S = 1000$ mm (ARC-8) or $S = 1500$ mm (ARC-10). The torsional stiffness of the plate packs applies to the rated coupling torque T_{KN} . To determine the torsional stiffness for a specific operating point, e.g. for calculating torsional vibration, the manufacturer must be consulted.

T_{Kmax} permitted only five times per hour.

Permitted shaft misalignments

| Size | Permitted angular misalignment $\pm\Delta K_w$ | | | | |
|--|--|------|------|------|------|
| | 0.0° | 0.1° | 0.2° | 0.3° | 0.4° |
| Permitted axial misalignment $\pm\Delta K_a$ in mm | | | | | |
| 225-8 | 1.94 | 1.46 | 0.97 | 0.48 | 0.00 |
| 255-8 | 2.32 | 1.74 | 1.16 | 0.58 | 0.00 |
| 270-8 | 2.40 | 1.80 | 1.20 | 0.60 | 0.00 |
| 295-8 | 2.62 | 1.96 | 1.31 | 0.66 | 0.00 |
| 325-8 | 2.60 | 1.95 | 1.30 | 0.65 | 0.00 |
| 355-8 | 2.88 | 2.16 | 1.44 | 0.72 | 0.00 |
| 385-8 | 3.12 | 2.34 | 1.56 | 0.78 | 0.00 |
| 420-8 | 3.46 | 2.59 | 1.73 | 0.86 | 0.00 |
| 455-8 | 4.02 | 3.01 | 2.01 | 1.00 | 0.00 |
| 505-8 | 4.28 | 3.21 | 2.14 | 1.07 | 0.00 |
| 545-8 | 4.48 | 3.36 | 2.24 | 1.12 | 0.00 |
| 595-8 | 4.86 | 3.65 | 2.43 | 1.22 | 0.00 |
| 630-8 | 4.98 | 3.32 | 1.66 | 0.00 | |
| 700-8 | 5.78 | 3.85 | 1.93 | 0.00 | |
| 630-10 | 3.04 | 1.52 | 0.00 | | |
| 700-10 | 3.60 | 1.80 | 0.00 | | |
| 760-10 | 3.70 | 1.85 | 0.00 | | |
| 860-10 | 4.82 | 2.41 | 0.00 | | |
| 950-10 | 5.40 | 2.70 | 0.00 | | |
| 1035-10 | 5.78 | 2.89 | 0.00 | | |

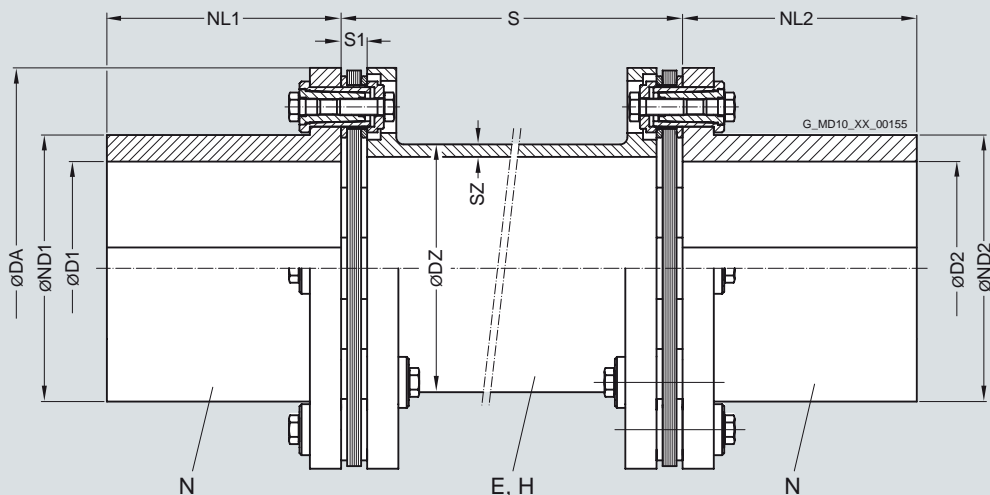
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Types NEN/NHN

Selection and ordering data

Torsionally rigid coupling types NEN and NHN with radially freely dismountable intermediate spacer and variable spacer length. Power transmission via patented conical screw connection.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|--------------|--------------|---------------|------------|-------------------------------------|-------------|-------|------|-------------|----|----------------|------------------------|---|--------|
| DA | T_{KN} | n_{Kmax} | | D1/D2 Keyway DIN 6885 max. | ND1/ ND2 | DZ | SZ | NL1/ NL2 | S1 | S_{min} | J | Order codes for bore diameters and toler- ances are specified in catalog section 3 | m |
| mm | kNm | rpm | | | | | | | | | kgm ² | | kg |
| 225-8 | 8.5 | 8500 | NEN | 120 | 147 | 135.0 | 6.0 | 140 | 16 | 123 | 0.19 | 2LC0400-0BE99-0AZ0 | 29 |
| | | | NHN | | | 139.7 | 8.0 | | | 272 | 0.21 | 2LC0400-0BF99-0AZ0 | 33 |
| 255-8 | 12.7 | 7500 | NEN | 140 | 172 | 147.0 | 7.0 | 160 | 17 | 128 | 0.35 | 2LC0400-1BE99-0AZ0 | 42 |
| | | | NHN | | | 152.4 | 8.8 | | | 284 | 0.38 | 2LC0400-1BF99-0AZ0 | 47 |
| 270-8 | 16.5 | 7000 | NEN | 150 | 182 | 172.0 | 7.0 | 170 | 14 | 124 | 0.45 | 2LC0400-2BE99-0AZ0 | 46 |
| | | | NHN | | | 177.8 | 7.1 | | | 328 | 0.49 | 2LC0400-2BF99-0AZ0 | 52 |
| 295-8 | 23 | 6500 | NEN | 160 | 199 | 188.0 | 8.0 | 185 | 17 | 155 | 0.75 | 2LC0400-3BE99-0AZ0 | 66 |
| | | | NHN | | | 193.7 | 8.8 | | | 344 | 0.82 | 2LC0400-3BF99-0AZ0 | 74 |
| 325-8 | 33 | 6000 | NEN | 170 | 214 | 197.0 | 10.5 | 195 | 20 | 174 | 1.27 | 2LC0400-4BE99-0AZ0 | 93 |
| | | | NHN | | | 203.0 | 12.5 | | | 420 | 1.42 | 2LC0400-4BF99-0AZ0 | 108 |
| 355-8 | 45 | 5500 | NEN | 185 | 235 | 222.0 | 11.0 | 215 | 22 | 189 | 2.01 | 2LC0400-5BE99-0AZ0 | 123 |
| | | | NHN | | | 229.0 | 12.5 | | | 434 | 2.21 | 2LC0400-5BF99-0AZ0 | 140 |
| 385-8 | 56 | 5000 | NEN | 205 | 256 | 238.0 | 12.0 | 240 | 25 | 201 | 3.02 | 2LC0400-6BE99-0AZ0 | 156 |
| | | | NHN | | | 244.5 | 14.2 | | | 500 | 3.35 | 2LC0400-6BF99-0AZ0 | 181 |
| 420-8 | 70 | 4500 | NEN | 230 | 282 | 266.0 | 12.0 | 275 | 27 | 231 | 4.74 | 2LC0400-7BE99-0AZ0 | 202 |
| | | | NHN | | | 273.0 | 14.2 | | | 524 | 5.23 | 2LC0400-7BF99-0AZ0 | 230 |
| 455-8 | 88 | 4200 | NEN | 255 | 308 | 291.0 | 13.0 | 300 | 29 | 238 | 6.81 | 2LC0400-8BE99-0AZ0 | 244 |
| | | | NHN | | | 298.5 | 14.2 | | | 528 | 7.43 | 2LC0400-8BF99-0AZ0 | 274 |
| 505-8 | 120 | 3800 | NEN | 285 | 344 | 315.0 | 15.0 | 340 | 31 | 250 | 11.5 | 2LC0401-0BE99-0AZ0 | 335 |
| | | | NHN | | | 323.9 | 17.5 | | | 652 | 12.8 | 2LC0401-0BF99-0AZ0 | 390 |
| 545-8 | 165 | 3500 | NEN | 300 | 371 | 346.0 | 17.0 | 350 | 33 | 268 | 16.8 | 2LC0401-1BE99-0AZ0 | 427 |
| | | | NHN | | | 355.6 | 20.0 | | | 666 | 18.7 | 2LC0401-1BF99-0AZ0 | 497 |
| 595-8 | 210 | 3200 | NEN | 330 | 405 | 384.0 | 18.0 | 390 | 36 | 284 | 25.9 | 2LC0401-2BE99-0AZ0 | 552 |
| | | | NHN | | | 394.0 | 20.0 | | | 682 | 28.6 | 2LC0401-2BF99-0AZ0 | 626 |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Types NEN/NHN

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|---------|--------------|---------------|------|-------------------------------------|-------------|-------|------|-------------|-----|-----------|------------------|--|--------------|--------|
| DA | T_{KN} | n_{Kmax} | | D1/D2 Keyway DIN 6885 max. | ND1/ ND2 | DZ | SZ | NL1/ NL2 | S1 | S_{min} | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | kNm | rpm | | | | | | | | | kgm ² | | kg | |
| 630-8 | 260 | 3000 | NEN | 340 | 425 | 409.0 | 19.0 | 400 | 58 | 397 | 40.6 | 2LC0401-3BE99-0AZ0 | 763 | |
| | | | NHN | | | 419.0 | 20.0 | | | 746 | 43.4 | 2LC0401-3BF99-0AZ0 | 830 | |
| 700-8 | 340 | 2700 | NEN | 395 | 479 | 459.0 | 19.0 | 470 | 62 | 424 | 66.5 | 2LC0401-4BE99-0AZ0 | 992 | |
| | | | NHN | | | 470.0 | 20.0 | | | 824 | 71.0 | 2LC0401-4BF99-0AZ0 | 1078 | |
| 630-10 | 340 | 3000 | NEN | 310 | 425 | 396.0 | 29.0 | 400 | 58 | 397 | 45.0 | 2LC0410-0BE99-0AZ0 | 895 | |
| | | | NHN | | | 406.4 | 30.0 | | | 746 | 48.5 | 2LC0410-0BF99-0AZ0 | 991 | |
| 700-10 | 430 | 2700 | NEN | 350 | 479 | 459.0 | 26.0 | 470 | 62 | 424 | 75.7 | 2LC0410-1BE99-0AZ0 | 1215 | |
| | | | NHN | | | 470.0 | 30.0 | | | 824 | 82.4 | 2LC0410-1BF99-0AZ0 | 1352 | |
| 760-10 | 550 | 2500 | NEN | 375 | 507 | 483.0 | 30.0 | 480 | 74 | 507 | 116 | 2LC0410-2BE99-0AZ0 | 1557 | |
| | | | NHN | | | 495.0 | 30.0 | | | 908 | 123 | 2LC0410-2BF99-0AZ0 | 1688 | |
| 860-10 | 770 | 2200 | NEN | 425 | 574 | 546.0 | 33.0 | 510 | 82 | 557 | 208 | 2LC0410-3BE99-0AZ0 | 2159 | |
| | | | NHN | | | 559.0 | 36.0 | | | 1024 | 223 | 2LC0410-3BF99-0AZ0 | 2380 | |
| 950-10 | 1050 | 2000 | NEN | 470 | 639 | 596.0 | 38.0 | 550 | 92 | 621 | 347 | 2LC0410-4BE99-0AZ0 | 2948 | |
| | | | NHN | | | 610.0 | 40.0 | | | 1134 | 371 | 2LC0410-4BF99-0AZ0 | 3234 | |
| 1035-10 | 1450 | 1850 | NEN | 490 | 693 | 645.0 | 46.0 | 580 | 102 | 685 | 545 | 2LC0410-5BE99-0AZ0 | 3974 | |
| | | | NHN | | | 660.4 | 50.0 | | | 1239 | 586 | 2LC0410-5BF99-0AZ0 | 4401 | |

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table).

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2 and $S = S_{min}$.

Permitted shaft distance S of type NHN relative to speed

| Size | Speed n_N rpm | | Permitted shaft distance S mm | | | | | | | | | | |
|----------------|--------------------|------|----------------------------------|------|------|------|------|------|------|------|------|------|------|
| | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1500 | 2000 | 2500 | 3000 | 4000 |
| 225-8 | 4962 | 4531 | 4196 | 3926 | 3703 | 3514 | 3209 | 2972 | 2872 | 2489 | 2228 | 2035 | 1765 |
| 255-8 | 5170 | 4721 | 4372 | 4091 | 3858 | 3661 | 3343 | 3097 | 2992 | 2594 | 2322 | 2121 | 1839 |
| 270-8 | 5608 | 5120 | 4741 | 4436 | 4183 | 3969 | 3625 | 3357 | 3243 | 2811 | 2516 | 2298 | 1992 |
| 295-8 | 5860 | 5351 | 4955 | 4636 | 4372 | 4148 | 3788 | 3509 | 3390 | 2938 | 2630 | 2402 | 2083 |
| 325-8 | 5969 | 5451 | 5048 | 4723 | 4454 | 4227 | 3860 | 3575 | 3455 | 2994 | 2680 | 2449 | 2123 |
| 355-8 | 6349 | 5798 | 5369 | 5024 | 4738 | 4496 | 4106 | 3803 | 3675 | 3185 | 2851 | 2605 | 2259 |
| 385-8 | 6573 | 6003 | 5559 | 5202 | 4906 | 4655 | 4252 | 3938 | 3806 | 3299 | 2953 | 2698 | 2340 |
| 420-8 | 6968 | 6363 | 5893 | 5514 | 5200 | 4935 | 4507 | 4175 | 4034 | 3497 | 3131 | 2861 | 2481 |
| 455-8 | 7290 | 6658 | 6166 | 5770 | 5441 | 5164 | 4716 | 4368 | 4221 | 3660 | 3276 | 2993 | 2596 |
| 505-8 | 7575 | 6918 | 6407 | 5995 | 5654 | 5365 | 4900 | 4539 | 4386 | 3803 | 3405 | 3111 | |
| 545-8 | 7933 | 7245 | 6710 | 6279 | 5922 | 5619 | 5133 | 4754 | 4594 | 3983 | 3566 | 3258 | |
| 595-8 | 8368 | 7642 | 7078 | 6623 | 6246 | 5928 | 5414 | 5015 | 4847 | 4202 | 3762 | 3438 | |
| 630-8 | 8659 | 7910 | 7327 | 6858 | 6469 | 6140 | 5610 | 5198 | 5024 | 4358 | 3904 | 3569 | |
| 700-8 | 9197 | 8401 | 7782 | 7283 | 6870 | 6521 | 5958 | 5521 | 5336 | 4629 | 4147 | | |
| 630-10 | 8410 | 7682 | 7116 | 6660 | 6283 | 5963 | 5449 | 5049 | 4880 | 4234 | 3793 | 3468 | |
| 700-10 | 9128 | 8338 | 7724 | 7229 | 6819 | 6472 | 5914 | 5480 | 5296 | 4595 | 4116 | | |
| 760-10 | 9348 | 8540 | 7912 | 7406 | 6987 | 6632 | 6061 | 5616 | 5429 | 4711 | 4222 | | |
| 860-10 | 9951 | 9091 | 8423 | 7884 | 7438 | 7060 | 6452 | 5980 | 5780 | 5016 | | | |
| 950-10 | 10386 | 9489 | 8792 | 8230 | 7765 | 7371 | 6737 | 6244 | 6035 | 5239 | | | |
| 1035-10 | 10771 | 9841 | 9119 | 8536 | 8054 | 7646 | 6989 | 6478 | 6262 | | | | |

Ordering example:

ARPEX ARC-8 NHN coupling, size 270-8, with shaft distance $S = 1000$ mm,
Bore $\varnothing D1$ 120H7 mm, with keyway to DIN 6885 and set screw,
Bore $\varnothing D2$ 130K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0400-2BF99-0AZ0-Z

L1S+M1U+Q0Y+M13

clear text to Q0Y **S = 1000 mm**

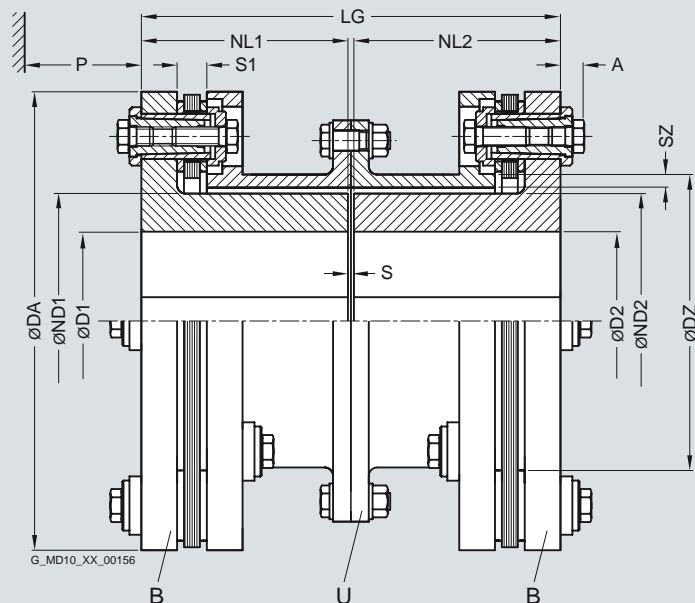
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Type BUB

Selection and ordering data

Torsionally rigid coupling type BUB with split intermediate spacer. Type BUB permits shortest shaft distances.



| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|---------|--------------|---------------|-----------------------------|-------------|-----|------|-------------|-----|----|-----|-----|------------------|---|--------------|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 | ND1/ ND2 | DZ | SZ | NL1/ NL2 | S1 | S | P | LG | J | Order codes for bore diameters and toler- ances are specified in catalog section 3 | m | |
| mm | kNm | rpm | max. | | | | | | | | | kgm ² | | kg | |
| 225-8 | 8.5 | 8500 | 105 | 136 | 150 | 4.5 | 90 | 16 | 5 | 47 | 185 | 0.19 | 2LC0400-0AF99-0AA0 | 27 | |
| 255-8 | 12.7 | 7500 | 125 | 160 | 175 | 5.0 | 100 | 17 | 8 | 49 | 208 | 0.34 | 2LC0400-1AF99-0AA0 | 38 | |
| 270-8 | 16.5 | 7000 | 130 | 169 | 185 | 5.5 | 100 | 14 | 8 | 46 | 208 | 0.43 | 2LC0400-2AF99-0AA0 | 43 | |
| 295-8 | 23 | 6500 | 135 | 185 | 202 | 6.0 | 110 | 17 | 7 | 55 | 227 | 0.70 | 2LC0400-3AF99-0AA0 | 61 | |
| 325-8 | 33 | 6000 | 140 | 195 | 217 | 8.5 | 130 | 20 | 10 | 65 | 270 | 1.23 | 2LC0400-4AF99-0AA0 | 90 | |
| 355-8 | 45 | 5500 | 150 | 215 | 238 | 9.0 | 135 | 22 | 12 | 71 | 282 | 1.89 | 2LC0400-5AF99-0AA0 | 116 | |
| 385-8 | 56 | 5000 | 180 | 235 | 259 | 9.5 | 155 | 25 | 8 | 79 | 318 | 2.87 | 2LC0400-6AF99-0AA0 | 143 | |
| 420-8 | 70 | 4500 | 200 | 260 | 285 | 10.0 | 170 | 27 | 10 | 87 | 350 | 4.51 | 2LC0400-7AF99-0AA0 | 187 | |
| 455-8 | 88 | 4200 | 220 | 285 | 311 | 10.5 | 180 | 29 | 10 | 90 | 370 | 6.42 | 2LC0400-8AF99-0AA0 | 226 | |
| 505-8 | 120 | 3800 | 245 | 316 | 347 | 12.0 | 220 | 31 | 12 | 97 | 452 | 11.1 | 2LC0401-0AF99-0AA0 | 322 | |
| 545-8 | 165 | 3500 | 260 | 334 | 374 | 14.5 | 240 | 33 | 16 | 103 | 496 | 15.9 | 2LC0401-1AF99-0AA0 | 400 | |
| 595-8 | 210 | 3200 | 285 | 364 | 408 | 15.0 | 260 | 36 | 16 | 112 | 536 | 24.0 | 2LC0401-2AF99-0AA0 | 507 | |
| 630-8 | 260 | 3000 | 300 | 381 | 428 | 17.0 | 280 | 58 | 16 | 150 | 576 | 37.4 | 2LC0401-3AF99-0AA0 | 688 | |
| 700-8 | 340 | 2700 | 332 | 431 | 482 | 17.5 | 310 | 62 | 20 | 160 | 640 | 62.3 | 2LC0401-4AF99-0AA0 | 936 | |
| 630-10 | 340 | 3000 | 260 | 377 | 428 | 23.0 | 280 | 58 | 16 | 150 | 576 | 41.0 | 2LC0410-0AF99-0AA0 | 794 | |
| 700-10 | 430 | 2700 | 310 | 430 | 482 | 24.0 | 310 | 62 | 20 | 160 | 640 | 66.4 | 2LC0410-1AF99-0AA0 | 1023 | |
| 760-10 | 550 | 2500 | 320 | 452 | 512 | 26.0 | 330 | 74 | 20 | 191 | 680 | 104 | 2LC0410-2AF99-0AA0 | 1354 | |
| 860-10 | 770 | 2200 | 350 | 515 | 579 | 28.0 | 380 | 82 | 20 | 209 | 780 | 191 | 2LC0410-3AF99-0AA0 | 1993 | |
| 950-10 | 1050 | 2000 | 400 | 574 | 644 | 31.0 | 400 | 92 | 25 | 233 | 825 | 311 | 2LC0410-4AF99-0AA0 | 2592 | |
| 1035-10 | 1450 | 1850 | 430 | 615 | 698 | 38.0 | 420 | 102 | 25 | 257 | 865 | 477 | 2LC0410-5AF99-0AA0 | 3332 | |

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Type BUB

Split intermediate spacer permits preassembly of the coupling halves at the factory and easy final assembly by the customer (optional).

Power transmission via patented conical screw connection.

The hubs are standard-manufactured from high-grade steel. In the case of smaller bore diameters higher-grade material is used, depending on the application (additional price).

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:

ARPEX ARC-8 BUB coupling, size 270-8,

Bore ØD1 120H7 mm, with keyway to DIN 6885 and set screw,

Bore ØD2 130K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0400-2AF99-0AA0-Z

L1S+M1U+M13

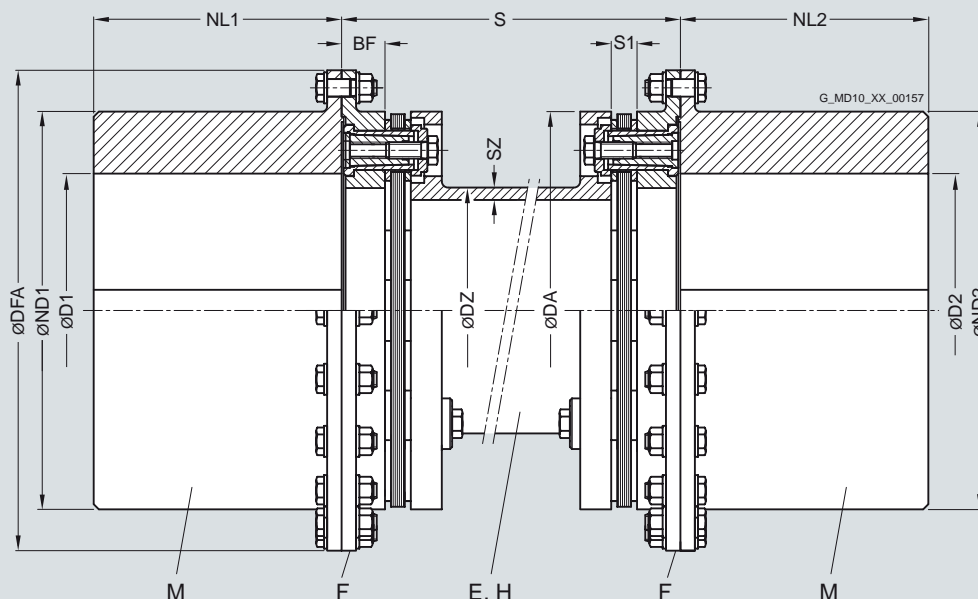
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Types MFEFM/MFHFM

Selection and ordering data

Torsionally rigid coupling types MFEFM and MFHFM with radially freely dismountable FEF or FHF transmission unit and variable spacer length. Power transmission via patented conical screw connection.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|-------|-------------------------------------|-------------|-----|-------|------|-------------|----|------------------------------------|------|--------------------|--|--------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1/D2 Keyway DIN 6885 max. | ND1/ ND2 | DFA | DZ | SZ | NL1/ NL2 | S1 | Shaft distance S _{min} | BF | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | kNm | rpm | | | | | | | | | | | kgm ² | | kg | |
| 225-8 | 8.5 | 8500 | MFEFM | 160 | 225 | 283 | 135.0 | 6.0 | 170 | 16 | 171 | 24 | 0.81 | 2LC0400-0AV99-0AZ0 | 81 | |
| | | | MFHFM | | | | 139.7 | 8.0 | | | 320 | 0.83 | 2LC0400-0AX99-0AZ0 | 85 | | |
| 255-8 | 12.7 | 7500 | MFEFM | 180 | 255 | 313 | 147.0 | 7.0 | 180 | 17 | 178 | 25 | 1.37 | 2LC0400-1AV99-0AZ0 | 109 | |
| | | | MFHFM | | | | 152.4 | 8.8 | | | 334 | 1.39 | 2LC0400-1AX99-0AZ0 | 114 | | |
| 270-8 | 16.5 | 7000 | MFEFM | 195 | 270 | 328 | 172.0 | 7.0 | 185 | 14 | 176 | 26 | 1.70 | 2LC0400-2AV99-0AZ0 | 119 | |
| | | | MFHFM | | | | 177.8 | 7.1 | | | 380 | 1.74 | 2LC0400-2AX99-0AZ0 | 125 | | |
| 295-8 | 23 | 6500 | MFEFM | 210 | 295 | 353 | 188.0 | 8.0 | 190 | 17 | 215 | 30 | 2.55 | 2LC0400-3AV99-0AZ0 | 153 | |
| | | | MFHFM | | | | 193.7 | 8.8 | | | 404 | 2.62 | 2LC0400-3AX99-0AZ0 | 161 | | |
| 325-8 | 33 | 6000 | MFEFM | 230 | 325 | 389 | 197.0 | 10.5 | 210 | 20 | 246 | 36 | 4.30 | 2LC0400-4AV99-0AZ0 | 215 | |
| | | | MFHFM | | | | 203.0 | 12.5 | | | 492 | 4.45 | 2LC0400-4AX99-0AZ0 | 231 | | |
| 355-8 | 45 | 5500 | MFEFM | 255 | 355 | 419 | 222.0 | 11.0 | 230 | 22 | 267 | 39 | 6.45 | 2LC0400-5AV99-0AZ0 | 270 | |
| | | | MFHFM | | | | 229.0 | 12.5 | | | 512 | 6.65 | 2LC0400-5AX99-0AZ0 | 288 | | |
| 385-8 | 56 | 5000 | MFEFM | 275 | 385 | 465 | 238.0 | 12.0 | 250 | 25 | 285 | 42 | 10.0 | 2LC0400-6AV99-0AZ0 | 354 | |
| | | | MFHFM | | | | 244.5 | 14.2 | | | 584 | 10.4 | 2LC0400-6AX99-0AZ0 | 379 | | |
| 420-8 | 70 | 4500 | MFEFM | 300 | 420 | 507 | 266.0 | 12.0 | 270 | 27 | 325 | 47 | 15.3 | 2LC0400-7AV99-0AZ0 | 454 | |
| | | | MFHFM | | | | 273.0 | 14.2 | | | 618 | 15.8 | 2LC0400-7AX99-0AZ0 | 483 | | |
| 455-8 | 88 | 4200 | MFEFM | 325 | 455 | 542 | 291.0 | 13.0 | 295 | 29 | 334 | 48 | 22.2 | 2LC0400-8AV99-0AZ0 | 563 | |
| | | | MFHFM | | | | 298.5 | 14.2 | | | 624 | 22.8 | 2LC0400-8AX99-0AZ0 | 593 | | |
| 505-8 | 120 | 3800 | MFEFM | 361 | 505 | 601 | 315.0 | 15.0 | 325 | 31 | 354 | 52 | 37.9 | 2LC0401-0AV99-0AZ0 | 773 | |
| | | | MFHFM | | | | 323.9 | 17.5 | | | 756 | 39.2 | 2LC0401-0AX99-0AZ0 | 829 | | |
| 545-8 | 165 | 3500 | MFEFM | 389 | 545 | 641 | 346.0 | 17.0 | 350 | 33 | 378 | 55 | 54.3 | 2LC0401-1AV99-0AZ0 | 959 | |
| | | | MFHFM | | | | 355.6 | 20.0 | | | 776 | 56.2 | 2LC0401-1AX99-0AZ0 | 1029 | | |
| 595-8 | 210 | 3200 | MFEFM | 425 | 595 | 691 | 384.0 | 18.0 | 385 | 36 | 404 | 60 | 82.8 | 2LC0401-2AV99-0AZ0 | 1236 | |
| | | | MFHFM | | | | 394.0 | 20.0 | | | 802 | 85.5 | 2LC0401-2AX99-0AZ0 | 1310 | | |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Types MFEFM/MFHFM

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|---------|-----------------|-------------------|-------|-----------------------------|-------------|------|-------|------|-------------|-----|------------------------------------|-----|------------------|--|--------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1/D2 Keyway DIN 6885 | ND1/ ND2 | DFA | DZ | SZ | NL1/ NL2 | S1 | Shaft distance S _{min} | BF | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| mm | kNm | rpm | | max. | | | | | | | | | kgm ² | | kg | |
| 630-8 | 260 | 3000 | MFEFM | 450 | 630 | 736 | 409.0 | 19.0 | 405 | 58 | 549 | 76 | 116 | 2LC0401-3AV99-0AZ0 | 1567 | |
| | | | MFHFM | | | | 419.0 | 20.0 | | | 898 | | 119 | 2LC0401-3AX99-0AZ0 | 1634 | |
| 700-8 | 340 | 2700 | MFEFM | 500 | 700 | 816 | 459.0 | 19.0 | 450 | 62 | 586 | 81 | 194 | 2LC0401-4AV99-0AZ0 | 2106 | |
| | | | MFHFM | | | | 470.0 | 20.0 | | | 986 | | 198 | 2LC0401-4AX99-0AZ0 | 2192 | |
| 630-10 | 340 | 3000 | MFEFM | 450 | 630 | 746 | 396.0 | 29.0 | 405 | 58 | 549 | 76 | 121 | 2LC0410-0AV99-0AZ0 | 1631 | |
| | | | MFHFM | | | | 406.4 | 30.0 | | | 898 | | 125 | 2LC0410-0AX99-0AZ0 | 1727 | |
| 700-10 | 430 | 2700 | MFEFM | 500 | 700 | 816 | 459.0 | 26.0 | 450 | 62 | 586 | 81 | 197 | 2LC0410-1AV99-0AZ0 | 2136 | |
| | | | MFHFM | | | | 470.0 | 30.0 | | | 986 | | 203 | 2LC0410-1AX99-0AZ0 | 2273 | |
| 760-10 | 550 | 2500 | MFEFM | 545 | 760 | 878 | 483.0 | 30.0 | 490 | 74 | 701 | 97 | 301 | 2LC0410-2AV99-0AZ0 | 2810 | |
| | | | MFHFM | | | | 495.0 | 30.0 | | | 1102 | | 308 | 2LC0410-2AX99-0AZ0 | 2940 | |
| 860-10 | 770 | 2200 | MFEFM | 615 | 860 | 991 | 546.0 | 33.0 | 555 | 82 | 769 | 106 | 547 | 2LC0410-3AV99-0AZ0 | 3993 | |
| | | | MFHFM | | | | 559.0 | 36.0 | | | 1236 | | 563 | 2LC0410-3AX99-0AZ0 | 4213 | |
| 950-10 | 1050 | 2000 | MFEFM | 680 | 950 | 1083 | 596.0 | 38.0 | 615 | 92 | 857 | 118 | 892 | 2LC0410-4AV99-0AZ0 | 5368 | |
| | | | MFHFM | | | | 610.0 | 40.0 | | | 1370 | | 916 | 2LC0410-4AX99-0AZ0 | 5654 | |
| 1035-10 | 1450 | 1850 | MFEFM | 740 | 1035 | 1168 | 645.0 | 46.0 | 670 | 102 | 947 | 131 | 1371 | 2LC0410-5AV99-0AZ0 | 7005 | |
| | | | MFHFM | | | | 660.4 | 50.0 | | | 1501 | | 1412 | 2LC0410-5AX99-0AZ0 | 7432 | |

FEF or HFH transmission unit preassembled at the factory enables easy final assembly by the customer.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2 and $S = S_{min}$.

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table).

Permitted shaft distance S of type MFHFM relative to speed

| Size | Speed n_N rpm | | | | | | | | | | | | |
|----------------|----------------------------------|-------|------|------|------|------|------|------|------|------|-----------------------------------|------|------|
| | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1500 | 2000 | 2500 | 3000 | 4000 |
| | Permitted shaft distance S mm | | | | | | | | | | | | |
| 225-8 | 5010 | 4579 | 4244 | 3974 | 3751 | 3562 | 3257 | 3020 | 2920 | 2537 | 2276 | 2083 | 1813 |
| 255-8 | 5220 | 4771 | 4422 | 4141 | 3908 | 3711 | 3393 | 3147 | 3042 | 2644 | 2372 | 2171 | 1889 |
| 270-8 | 5660 | 5172 | 4793 | 4488 | 4235 | 4021 | 3677 | 3409 | 3295 | 2863 | 2568 | 2350 | 2044 |
| 295-8 | 5920 | 5411 | 5015 | 4696 | 4432 | 4208 | 3848 | 3569 | 3450 | 2998 | 2690 | 2462 | 2143 |
| 325-8 | 6041 | 5523 | 5120 | 4795 | 4526 | 4299 | 3932 | 3647 | 3527 | 3066 | 2752 | 2521 | 2195 |
| 355-8 | 6427 | 5876 | 5447 | 5102 | 4816 | 4574 | 4184 | 3881 | 3753 | 3263 | 2929 | 2683 | 2337 |
| 385-8 | 6657 | 6087 | 5643 | 5286 | 4990 | 4739 | 4336 | 4022 | 3890 | 3383 | 3037 | 2782 | 2424 |
| 420-8 | 7062 | 6457 | 5987 | 5608 | 5294 | 5029 | 4601 | 4269 | 4128 | 3591 | 3225 | 2955 | 2575 |
| 455-8 | 7386 | 6754 | 6262 | 5866 | 5537 | 5260 | 4812 | 4464 | 4317 | 3756 | 3372 | 3089 | 2692 |
| 505-8 | 7679 | 7022 | 6511 | 6099 | 5758 | 5469 | 5004 | 4643 | 4490 | 3907 | 3509 | 3215 | |
| 545-8 | 8043 | 7355 | 6820 | 6389 | 6032 | 5729 | 5243 | 4864 | 4704 | 4093 | 3676 | 3368 | |
| 595-8 | 8488 | 7762 | 7198 | 6743 | 6366 | 6048 | 5534 | 5135 | 4967 | 4322 | 3882 | 3558 | |
| 630-8 | 8811 | 8062 | 7479 | 7010 | 6621 | 6292 | 5762 | 5350 | 5176 | 4510 | 4056 | 3721 | |
| 700-8 | 9359 | 8563 | 7944 | 7445 | 7032 | 6683 | 6120 | 5683 | 5498 | 4791 | 4309 | | |
| 630-10 | 8562 | 7834 | 7268 | 6812 | 6435 | 6115 | 5601 | 5201 | 5032 | 4386 | 3945 | 3620 | |
| 700-10 | 9290 | 8500 | 7886 | 7391 | 6981 | 6634 | 6076 | 5642 | 5458 | 4757 | 4278 | | |
| 760-10 | 9542 | 8734 | 8106 | 7600 | 7181 | 6826 | 6255 | 5810 | 5623 | 4905 | 4416 | | |
| 860-10 | 10163 | 9303 | 8635 | 8096 | 7650 | 7272 | 6664 | 6192 | 5992 | 5228 | Outside the permitted speed range | | |
| 950-10 | 10622 | 9725 | 9028 | 8466 | 8001 | 7607 | 6973 | 6480 | 6271 | 5475 | | | |
| 1035-10 | 11033 | 10103 | 9381 | 8798 | 8316 | 7908 | 7251 | 6740 | 6524 | | | | |

Ordering example:

ARPEX ARC-8 MFHFM coupling, size 270-8, with shaft distance $S = 1000$ mm,
Bore $\varnothing D1$ 150H7 mm, with keyway to DIN 6885 and set screw,
Bore $\varnothing D2$ 160K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0400-2AX99-0AZ0-Z

L1W+M1X+Q0Y+M13

clear text to Q0Y: **S = 1000 mm**

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARC-8/-10 Series

Spare and wear parts
Plate pack ARC-8/-10

Selection and ordering data

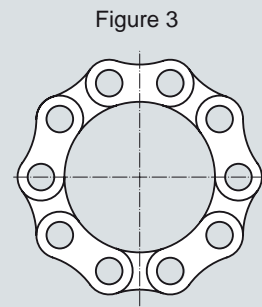
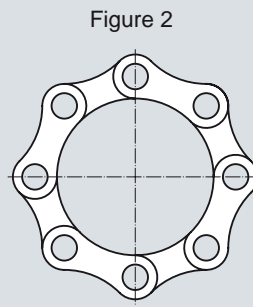
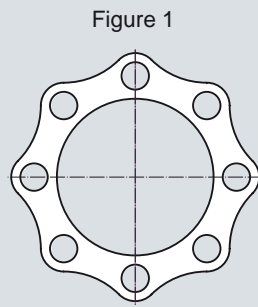
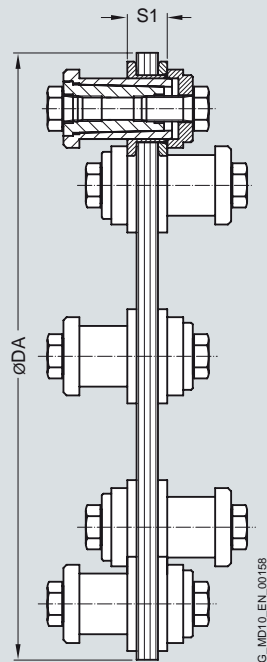


Plate packs of the ARC-8 series up to size 595-8 comprise ring plates (Fig. 1) and from size 630-8 side-bar plates (Fig. 2).

Plate packs of the ARC-10 series in all sizes comprise side-bar plates (Fig. 3).

| Dimensions in mm Size | S1 | Plate pack Series | Mass moment of inertia J kgm ² | Product code | Weight m kg |
|--------------------------|-----|----------------------|---|--------------------|---------------------|
| 225-8 | 16 | ARC-8 | 0.02 | 2LC0400-0AT00-0AA0 | 2.4 |
| 255-8 | 17 | ARC-8 | 0.03 | 2LC0400-1AT00-0AA0 | 3.1 |
| 270-8 | 14 | ARC-8 | 0.04 | 2LC0400-2AT00-0AA0 | 3.4 |
| 295-8 | 17 | ARC-8 | 0.07 | 2LC0400-3AT00-0AA0 | 4.8 |
| 325-8 | 20 | ARC-8 | 0.12 | 2LC0400-4AT00-0AA0 | 7.2 |
| 355-8 | 22 | ARC-8 | 0.20 | 2LC0400-5AT00-0AA0 | 9.8 |
| 385-8 | 25 | ARC-8 | 0.30 | 2LC0400-6AT00-0AA0 | 12.7 |
| 420-8 | 27 | ARC-8 | 0.46 | 2LC0400-7AT00-0AA0 | 16.2 |
| 455-8 | 29 | ARC-8 | 0.64 | 2LC0400-8AT00-0AA0 | 19.2 |
| 505-8 | 31 | ARC-8 | 1.01 | 2LC0401-0AT00-0AA0 | 24.5 |
| 545-8 | 33 | ARC-8 | 1.47 | 2LC0401-1AT00-0AA0 | 30.8 |
| 595-8 | 36 | ARC-8 | 2.26 | 2LC0401-2AT00-0AA0 | 39.8 |
| 630-8 | 58 | ARC-8 | 4.03 | 2LC0401-3AT00-0AA0 | 67.2 |
| 700-8 | 62 | ARC-8 | 6.33 | 2LC0401-4AT00-0AA0 | 84.5 |
| 630-10 | 58 | ARC-10 | 5.00 | 2LC0410-0AT00-0AA0 | 78.0 |
| 700-10 | 62 | ARC-10 | 7.85 | 2LC0410-1AT00-0AA0 | 98.0 |
| 760-10 | 74 | ARC-10 | 13.73 | 2LC0410-2AT00-0AA0 | 147 |
| 860-10 | 82 | ARC-10 | 24.49 | 2LC0410-3AT00-0AA0 | 203 |
| 950-10 | 92 | ARC-10 | 41.26 | 2LC0410-4AT00-0AA0 | 277 |
| 1035-10 | 102 | ARC-10 | 65.64 | 2LC0410-5AT00-0AA0 | 374 |

The plate pack of the ARC-8/-10 series is readily available as a spare part.

The plate pack is delivered with conical screw connection.

Ordering example:

ARPEX ARC-8 plate pack, size 225-8,
complete with screw connection

Product code:

2LC0400-0AT00-0AA0

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

General information

Overview



Coupling can be used for potentially explosive environments in accordance with 94/9/EC.

Benefits

ARPEX couplings of the ARP-6 series are outstanding for their application-optimized construction. The two types NAN and MCECM have been specially designed for drives with uniform to medium loads and at the same time meet the requirements of API 610. The type MCECM with preassembled CEC intermedi-

ate unit can also be optionally designed to API 671. A special catcher device serves to secure the intermediate spacer in the event of plate breakage. Their use in potentially explosive environments in accordance with Directive 94/9/EC is possible.

Application

ARPEX series ARP-6 couplings have been specially developed for pump drives and specifically for centrifugal pump drives. Special care was taken to meet the requirements of API 610 and API 671 (API = American Petroleum Institute). Power is transmitted via close-fitting bolts and nuts from size 310-6 with conical screw connection and plate packs in hexagonal design. Torques of between 100 and 17000 Nm can be transmitted at a permitted angular misalignment of 0.7°. The closed flange shape and a compact construction permit high peripheral speeds and high speeds. The intermediate spacer can be fitted radially without moving the connected units.

Main areas of application for the ARP-6 series:

- Centrifugal pumps
- Boiler feed pumps
- Propeller pumps
- Wing pumps
- Pipeline pumps
- Turbo compressors
- Screw compressors
- Turbo blowers
- Axial, radial blowers
- Rotary-piston blowers
- Fans

FLENDER Standard Couplings

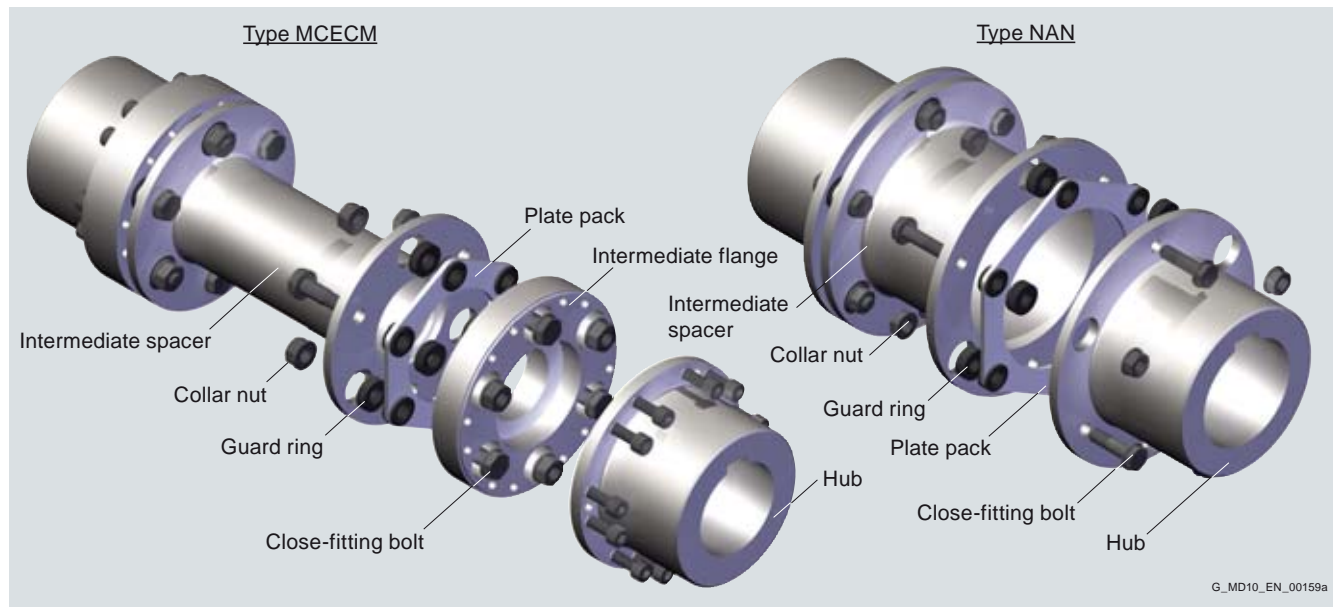
Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

General information

Design

NAN: The design of an ARPEX NAN coupling of the ARP-6 series is shown in the following illustration. The plate packs are bolted alternately between the flanges of the coupling hubs and the intermediate spacer. Up to size 298-6 close-fitting bolts and from size 325-6 conical screw connections are used for fastening. The intermediate spacer is available from stock in various fixed lengths. Hubs are designed with threaded pull-off holes.

MCECM: The design of an ARPEX MCECM coupling of the ARP-6 series is shown in the following illustration. Bolted between two hubs is the CEC transmission unit, the preassembled plate packs of which are bolted alternately between flanges and intermediate spacer. Up to size 275-6 close-fitting bolts and from size 310-6 conical screw connections are used for fastening. The intermediate spacer is available from stock in various fixed lengths. Jumbo hubs for large bore diameters can be optionally used.



Design of the ARPEX coupling, ARP-6 series

Variants of the ARPEX coupling, ARP-6 series

| Types | |
|--------------|--|
| NAN | Variant with intermediate spacer, various fixed lengths available from stock |
| MCECM | Variant with preassembled intermediate unit and spacer machined on all sides, various fixed lengths available from stock |

Further application-specific coupling types are available in selection module **x.CAT** at www.flender.com. Dimension sheets and further information are available on request.

Technical data

Power ratings, type NAN

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Maximum speed | Maximum permitted shaft misalignment | | | | | Torsional stiffness | | | | |
|--------------|--------------|----------------|-----------------|----------------|---------------|--------------------------------------|------------------|------------------|--------------|--------------|---------------------|--------------|--------------|--------------|--------------|
| | T_{KN} | T_{Kmax} | T_{KOL} | T_{KW} | n_{Kmax} | $\pm \Delta K_a$ | $\pm \Delta K_w$ | $\pm \Delta K_r$ | C_T | | | | | $S = 100$ mm | $S = 140$ mm |
| | Nm | Nm | Nm | Nm | rpm | mm | mm | mm | $S = 100$ mm | $S = 140$ mm | $S = 180$ mm | $S = 200$ mm | $S = 250$ mm | MNm/rad | MNm/rad |
| 88-6 | 190 | 270 | 450 | 70 | 21700 | 1.10 | 0.7° | 1.15 | 1.64 | — | — | — | — | 0.04 | 0.04 |
| 115-6 | 270 | 410 | 680 | 110 | 16600 | 1.81 | | 1.15 | 1.64 | 2.13 | — | — | — | 0.09 | 0.09 |
| 135-6 | 580 | 870 | 1450 | 230 | 12700 | 2.02 | | 1.14 | 1.62 | 2.11 | — | — | — | 0.21 | 0.19 |
| 150-6 | 660 | 100 | 1650 | 270 | 11400 | 2.41 | | 1.14 | 1.62 | 2.11 | 2.36 | 2.97 | 0.27 | 0.25 | 0.24 |
| 176-6 | 1220 | 1900 | 3100 | 490 | 9750 | 2.75 | | 1.11 | 1.6 | 2.09 | 2.33 | 2.94 | 0.44 | 0.40 | 0.38 |
| 185-6 | 1875 | 2900 | 4700 | 750 | 9300 | 2.85 | | 1.09 | 1.58 | 2.06 | 2.31 | 2.92 | 0.56 | 0.52 | 0.49 |
| 212-6 | 2850 | 4230 | 7200 | 1200 | 8100 | 3.06 | | 1.10 | 1.59 | 2.08 | 2.32 | 2.93 | 0.81 | 0.75 | 0.70 |
| 225-6 | 4200 | 6300 | 10500 | 1700 | 7650 | 3.14 | | — | 1.59 | 2.08 | 2.32 | 2.93 | — | 0.85 | 0.81 |
| 256-6 | 5750 | 8700 | 15000 | 2300 | 6700 | 3.69 | | — | 1.56 | 2.05 | 2.3 | 2.91 | — | 1.37 | 1.31 |
| 272-6 | 8050 | 12000 | 20000 | 3200 | 6300 | 3.85 | | — | 1.51 | 2 | 2.25 | 2.86 | — | 1.44 | 1.39 |
| 298-6 | 10000 | 15000 | 25000 | 4000 | 5150 | 4.19 | | — | 1.47 | 1.95 | 2.2 | 2.81 | — | 1.47 | 1.43 |
| 325-6 | 12000 | 18000 | 30000 | 4800 | 4700 | 4.45 | | — | — | 1.93 | 2.17 | 2.79 | — | — | 2.48 |

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series**

General information

Power ratings, type MCECM

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Maximum speed | Maximum permitted shaft misalignment | | | | | | Torsional stiffness | | | | | |
|-------|--------------|----------------|-----------------|----------------|---------------|--------------------------------------|-----------------|-----------------|------------|------------|------------|---------------------|------------|------------|------------|------------|------------|
| | | | | | | $\pm\Delta K_a$ | $\pm\Delta K_w$ | $\pm\Delta K_r$ | | | C_T | | | | | | |
| | T_{KN} | T_{Kmax} | T_{KOL} | T_{KW} | n_{Kmax} | | | S = 100 mm | S = 140 mm | S = 180 mm | S = 200 mm | S = 250 mm | S = 100 mm | S = 140 mm | S = 180 mm | S = 200 mm | S = 250 mm |
| | Nm | Nm | Nm | Nm | rpm | mm | mm | mm | mm | mm | mm | MNm/rad | MNm/rad | MNm/rad | MNm/rad | MNm/rad | |
| 64-4 | 100 | 150 | 250 | 40 | 22500 | 0.80 | 0.7° | 0.78 | 1.27 | – | – | – | 0.009 | 0.008 | – | – | – |
| 96-6 | 210 | 310 | 530 | 85 | 19900 | 1.15 | | 0.78 | 1.27 | – | – | – | 0.06 | 0.05 | – | – | – |
| 120-6 | 490 | 740 | 1250 | 200 | 15900 | 1.47 | | 0.65 | 1.14 | 1.62 | – | – | 0.17 | 0.15 | 0.13 | – | – |
| 142-6 | 925 | 1400 | 2300 | 370 | 13400 | 1.73 | | – | 1.04 | 1.53 | – | – | – | 0.28 | 0.25 | – | – |
| 162-6 | 1600 | 2400 | 4000 | 640 | 11800 | 2.07 | | – | 0.92 | 1.40 | 1.65 | 2.26 | – | 0.43 | 0.39 | 0.38 | 0.34 |
| 190-6 | 2500 | 3800 | 6300 | 1000 | 10000 | 2.36 | | – | 0.93 | 1.42 | 1.66 | 2.27 | – | 0.71 | 0.65 | 0.63 | 0.57 |
| 214-6 | 3900 | 5900 | 9800 | 1600 | 8900 | 2.67 | | – | 0.78 | 1.27 | 1.51 | 2.13 | – | 1.01 | 0.94 | 0.92 | 0.85 |
| 230-6 | 5200 | 7800 | 13000 | 2100 | 8300 | 2.88 | | – | – | 1.25 | 1.49 | 2.10 | – | – | 1.36 | 1.32 | 1.22 |
| 245-6 | 7000 | 10500 | 18000 | 2800 | 7800 | 2.99 | | – | – | 1.00 | 1.25 | 1.86 | – | – | 1.49 | 1.45 | 1.37 |
| 275-6 | 9800 | 15000 | 25000 | 4000 | 6250 | 3.38 | | – | – | – | 1.22 | 1.83 | – | – | – | 1.65 | 1.58 |
| 310-6 | 12900 | 20000 | 33000 | 5200 | 5550 | 3.85 | | – | – | – | – | 1.64 | – | – | – | – | 2.96 |
| 345-6 | 17000 | 26000 | 43000 | 6800 | 5000 | 4.24 | | – | – | – | – | 1.61 | – | – | – | – | 4.12 |

The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur at the same time (see following table). The permitted shaft misalignment ΔK_r applies to the shaft distance S specified in each case.

T_{Kmax} permitted only five times per hour.

The values for torsional stiffness apply to the complete coupling. The torsional stiffness of the plate packs applies to the rated coupling torque T_{KN} . To determine the torsional stiffness for a specific operating point, e.g. for calculating torsional vibration, the manufacturer must be consulted.

Permitted shaft misalignments, type NAN

| Size | Permitted angular misalignment $\pm\Delta K_w$ | | | | | | | |
|-------|--|------|------|------|------|------|------|------|
| | 0.0° | 0.1° | 0.2° | 0.3° | 0.4° | 0.5° | 0.6° | 0.7° |
| | Permitted axial misalignment $\pm\Delta K_a$ in mm | | | | | | | |
| 88-6 | 1.10 | 0.94 | 0.79 | 0.63 | 0.47 | 0.31 | 0.16 | 0.00 |
| 115-6 | 1.81 | 1.55 | 1.29 | 1.03 | 0.77 | 0.52 | 0.26 | 0.00 |
| 135-6 | 2.02 | 1.73 | 1.44 | 1.15 | 0.86 | 0.58 | 0.29 | 0.00 |
| 150-6 | 2.41 | 2.06 | 1.72 | 1.38 | 1.03 | 0.69 | 0.34 | 0.00 |
| 176-6 | 2.75 | 2.36 | 1.96 | 1.57 | 1.18 | 0.79 | 0.39 | 0.00 |
| 185-6 | 2.85 | 2.45 | 2.04 | 1.63 | 1.22 | 0.82 | 0.41 | 0.00 |
| 212-6 | 3.06 | 2.63 | 2.19 | 1.75 | 1.31 | 0.88 | 0.44 | 0.00 |
| 225-6 | 3.14 | 2.69 | 2.24 | 1.80 | 1.35 | 0.90 | 0.45 | 0.00 |
| 256-6 | 3.69 | 3.16 | 2.64 | 2.11 | 1.58 | 1.05 | 0.53 | 0.00 |
| 272-6 | 3.85 | 3.30 | 2.75 | 2.20 | 1.65 | 1.10 | 0.55 | 0.00 |
| 298-6 | 4.19 | 3.59 | 2.99 | 2.39 | 1.80 | 1.20 | 0.60 | 0.00 |
| 325-6 | 4.45 | 3.82 | 3.18 | 2.54 | 1.91 | 1.27 | 0.64 | 0.00 |

Permitted shaft misalignments, type MCECM

| Size | Permitted angular misalignment $\pm\Delta K_w$ | | | | | | | |
|-------|--|------|------|------|------|------|------|------|
| | 0.0° | 0.1° | 0.2° | 0.3° | 0.4° | 0.5° | 0.6° | 0.7° |
| | Permitted axial misalignment $\pm\Delta K_a$ in mm | | | | | | | |
| 64-4 | 0.80 | 0.68 | 0.57 | 0.46 | 0.34 | 0.23 | 0.11 | 0.00 |
| 96-6 | 1.15 | 0.99 | 0.82 | 0.66 | 0.49 | 0.33 | 0.16 | 0.00 |
| 120-6 | 1.47 | 1.26 | 1.05 | 0.84 | 0.63 | 0.42 | 0.21 | 0.00 |
| 142-6 | 1.73 | 1.48 | 1.23 | 0.99 | 0.74 | 0.49 | 0.25 | 0.00 |
| 162-6 | 2.07 | 1.77 | 1.48 | 1.18 | 0.89 | 0.59 | 0.30 | 0.00 |
| 190-6 | 2.36 | 2.02 | 1.68 | 1.35 | 1.01 | 0.67 | 0.34 | 0.00 |
| 214-6 | 2.67 | 2.29 | 1.91 | 1.53 | 1.14 | 0.76 | 0.38 | 0.00 |
| 230-6 | 2.88 | 2.47 | 2.06 | 1.65 | 1.23 | 0.82 | 0.41 | 0.00 |
| 245-6 | 2.99 | 2.56 | 2.13 | 1.71 | 1.28 | 0.85 | 0.43 | 0.00 |
| 275-6 | 3.38 | 2.90 | 2.41 | 1.93 | 1.45 | 0.97 | 0.48 | 0.00 |
| 310-6 | 3.85 | 3.30 | 2.75 | 2.20 | 1.65 | 1.10 | 0.55 | 0.00 |
| 345-6 | 4.24 | 3.64 | 3.03 | 2.42 | 1.82 | 1.21 | 0.61 | 0.00 |

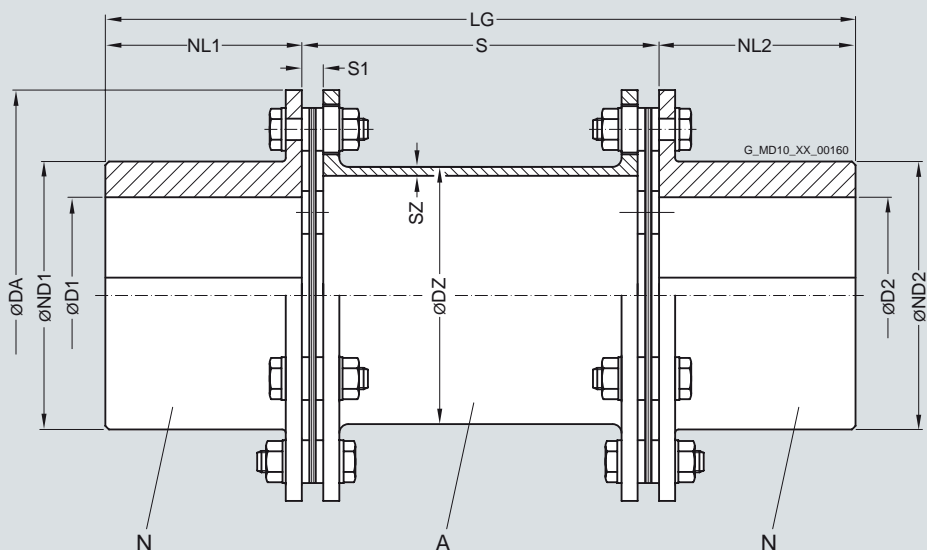
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

Type NAN

Selection and ordering data

Torsionally rigid type NAN coupling with radially freely dismountable intermediate spacer and catcher device for securing the intermediate spacer in the event of plate breakage. Standard coupling type in accordance with **API 610**.



| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | Shaft distance | Mass moment of inertia | Product code | Weight |
|--------------|--------------|---------------|-------------------------------------|---------|-----|-----|-------------|----|-----|----------------|------------------------|---|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 max. | ND1/ND2 | DZ | SZ | NL1/ NL2 | S1 | S | LG | J | Order codes for bore diameters and toler- ances are specified in catalog section 3 | m |
| mm | Nm | rpm | | | | | | | | | kgm ² | | kg |
| 88-6 | 190 | 21 700 | 35 | 48 | 45 | 2.5 | 40 | 6 | 100 | 180 | 0.001 | 2LC0450-0AD99-0AA0 | 1.6 |
| | | | | | | | | | 140 | 220 | 0.001 | 2LC0450-0AD99-0AB0 | 1.7 |
| 115-6 | 270 | 16 600 | 55 | 75 | 72 | 2.5 | 55 | 6 | 100 | 210 | 0.005 | 2LC0450-1AD99-0AA0 | 3.2 |
| | | | | | | | | | 140 | 250 | 0.005 | 2LC0450-1AD99-0AB0 | 3.4 |
| | | | | | | | | | 180 | 290 | 0.005 | 2LC0450-1AD99-0AC0 | 3.6 |
| 135-6 | 580 | 12 700 | 65 | 86 | 84 | 2.5 | 65 | 7 | 100 | 230 | 0.011 | 2LC0450-2AD99-0AA0 | 5.2 |
| | | | | | | | | | 140 | 270 | 0.012 | 2LC0450-2AD99-0AB0 | 5.4 |
| | | | | | | | | | 180 | 310 | 0.012 | 2LC0450-2AD99-0AC0 | 5.6 |
| 150-6 | 660 | 11 400 | 75 | 101 | 99 | 2.5 | 75 | 7 | 100 | 250 | 0.019 | 2LC0450-3AD99-0AA0 | 7.2 |
| | | | | | | | | | 140 | 290 | 0.020 | 2LC0450-3AD99-0AB0 | 7.5 |
| | | | | | | | | | 180 | 330 | 0.021 | 2LC0450-3AD99-0AC0 | 7.7 |
| | | | | | | | | | 200 | 350 | 0.021 | 2LC0450-3AD99-0AD0 | 7.8 |
| | | | | | | | | | 250 | 400 | 0.022 | 2LC0450-3AD99-0AE0 | 8.1 |
| 176-6 | 1 220 | 9 750 | 85 | 117 | 114 | 2.5 | 85 | 9 | 100 | 270 | 0.041 | 2LC0450-4AD99-0AA0 | 11.4 |
| | | | | | | | | | 140 | 310 | 0.042 | 2LC0450-4AD99-0AB0 | 11.7 |
| | | | | | | | | | 180 | 350 | 0.043 | 2LC0450-4AD99-0AC0 | 12.0 |
| | | | | | | | | | 200 | 370 | 0.044 | 2LC0450-4AD99-0AD0 | 12.1 |
| | | | | | | | | | 250 | 420 | 0.045 | 2LC0450-4AD99-0AE0 | 12.4 |
| 185-6 | 1 875 | 9 300 | 90 | 122 | 120 | 3.0 | 90 | 11 | 100 | 280 | 0.056 | 2LC0450-5AD99-0AA0 | 13.5 |
| | | | | | | | | | 140 | 320 | 0.057 | 2LC0450-5AD99-0AB0 | 13.9 |
| | | | | | | | | | 180 | 360 | 0.058 | 2LC0450-5AD99-0AC0 | 14.2 |
| | | | | | | | | | 200 | 380 | 0.058 | 2LC0450-5AD99-0AD0 | 14.4 |
| | | | | | | | | | 250 | 430 | 0.060 | 2LC0450-5AD99-0AE0 | 14.8 |

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series**

Type NAN

| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | Shaft distance | | Mass moment of inertia | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|-------|--------------|---------------|-----------------------------|---------|-----|-----|-------------|----|-----|----------------|------------------|------------------------|--|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 | ND1/ND2 | DZ | SZ | NL1/ NL2 | S1 | S | LG | J | | | m |
| mm | Nm | rpm | max. | | | | | | | | kgm ² | | | kg |
| 212-6 | 2 850 | 8 100 | 100 | 134 | 131 | 3.0 | 100 | 10 | 100 | 300 | 0.095 | 2LC0450-6AD99-0AA0 | 18.3 | |
| | | | | | | | | | 140 | 340 | 0.097 | 2LC0450-6AD99-0AB0 | 18.6 | |
| | | | | | | | | | 180 | 380 | 0.098 | 2LC0450-6AD99-0AC0 | 19.0 | |
| | | | | | | | | | 200 | 400 | 0.099 | 2LC0450-6AD99-0AD0 | 19.2 | |
| | | | | | | | | | 250 | 450 | 0.101 | 2LC0450-6AD99-0AE0 | 19.7 | |
| 225-6 | 4 200 | 7 650 | 105 | 141 | 139 | 4.0 | 105 | 10 | 140 | 350 | 0.134 | 2LC0450-7AD99-0AB0 | 22.8 | |
| | | | | | | | | | 180 | 390 | 0.136 | 2LC0450-7AD99-0AC0 | 23.3 | |
| | | | | | | | | | 200 | 410 | 0.137 | 2LC0450-7AD99-0AD0 | 23.6 | |
| | | | | | | | | | 250 | 460 | 0.140 | 2LC0450-7AD99-0AE0 | 24.2 | |
| | | | | | | | | | 140 | 380 | 0.262 | 2LC0450-8AD99-0AB0 | 34.3 | |
| 256-6 | 5 750 | 6 700 | 120 | 163 | 162 | 5.0 | 120 | 12 | 180 | 420 | 0.267 | 2LC0450-8AD99-0AC0 | 35.1 | |
| | | | | | | | | | 200 | 440 | 0.270 | 2LC0450-8AD99-0AD0 | 35.5 | |
| | | | | | | | | | 250 | 490 | 0.276 | 2LC0450-8AD99-0AE0 | 36.5 | |
| | | | | | | | | | 140 | 400 | 0.373 | 2LC0451-0AD99-0AB0 | 42.9 | |
| | | | | | | | | | 180 | 440 | 0.378 | 2LC0451-0AD99-0AC0 | 43.7 | |
| 272-6 | 8 050 | 6 300 | 125 | 171 | 170 | 5.0 | 130 | 16 | 200 | 460 | 0.381 | 2LC0451-0AD99-0AD0 | 44.1 | |
| | | | | | | | | | 250 | 510 | 0.388 | 2LC0451-0AD99-0AE0 | 45.1 | |
| | | | | | | | | | 140 | 420 | 0.559 | 2LC0451-1AD99-0AB0 | 53.6 | |
| | | | | | | | | | 180 | 460 | 0.567 | 2LC0451-1AD99-0AC0 | 54.7 | |
| | | | | | | | | | 200 | 480 | 0.572 | 2LC0451-1AD99-0AD0 | 55.2 | |
| 298-6 | 10 000 | 5 150 | 140 | 189 | 186 | 6.0 | 140 | 20 | 250 | 530 | 0.582 | 2LC0451-1AD99-0AE0 | 56.5 | |
| | | | | | | | | | 180 | 480 | 0.851 | 2LC0451-2AD99-0AC0 | 69.4 | |
| | | | | | | | | | 200 | 500 | 0.857 | 2LC0451-2AD99-0AD0 | 70.0 | |
| | | | | | | | | | 250 | 550 | 0.872 | 2LC0451-2AD99-0AE0 | 71.6 | |
| | | | | | | | | | | | | | | |

Hubs are designed with threaded pull-off holes.
 Type NAN with spacer machined on all sides, available in various standard lengths.
 A spacers are also available in the following inch dimensions:
 $S = 3.5"/5"/7"/8"/10"$.
 Other spacer lengths are available on request.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:
 ARPEX ARP-6 NAN coupling, size 135-6, with shaft distance $S = 140$ mm,
 Bore $\varnothing D1$ 50H7 mm, with keyway to DIN 6885 and set screw,
 Bore $\varnothing D2$ 60K7 mm, with keyway to DIN 6885 and set screw.

Product code:
2LC0450-2AD99-0AB0-Z
L1C+M1E+M13

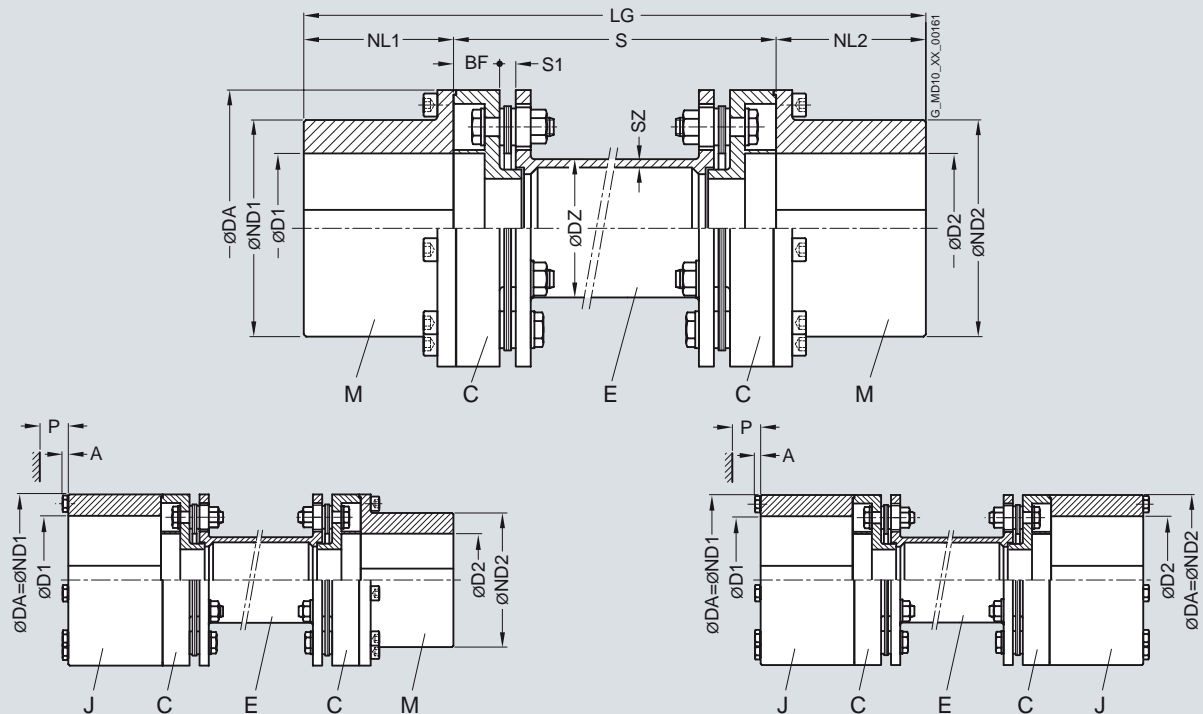
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

Type MCECM

Selection and ordering data

Torsionally rigid type MCECM coupling with radially freely dismountable intermediate unit and catcher device for securing the intermediate spacer in the event of plate breakage. Standard coupling type in accordance with **API 610**. Coupling type in accordance with **API 671** possible.



| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | | | | Shaft distance | Mass moment of inertia | Product code | Weight | |
|-------|--------------|---------------|-------|---------------------------------|-------|-----|----|-----|----------|----|-----|------|-----|-------|--------------------|--------------------|--|------------------------|--------------------|--------------------|-----|
| DA | T_{KN} | n_{Kmax} | | D1/D2 | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | BF | A | P | S | LG | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | | | |
| mm | Nm | rpm | | Keyway DIN 6885 max. max. | | | | | | | | | | | | kgm ² | | kg | | | |
| 64-4 | 100 | 22500 | JCECJ | 46 | 46 | 64 | 64 | 28 | 3.0 | 25 | 6 | 14.5 | 5 | 42 | 100 | 150 | 0.001 | 2LC0460-0AG99-0AA0 | 1.6 | | |
| | | | | | | | | | | | | | | | 140 | 190 | 0.001 | 2LC0460-0AG99-0AB0 | 1.7 | | |
| 96-6 | 210 | 19900 | MCECM | 50 | 50 | 70 | 70 | 45 | 2.5 | 50 | 6 | 15 | – | – | 100 | 200 | 0.004 | 2LC0460-1AP99-0AA0 | 3.8 | | |
| | | | | | | | | | | | | | | 140 | 240 | 0.005 | 2LC0460-1AP99-0AB0 | 3.9 | | | |
| | | | JCECM | 65 | 50 | 96 | 70 | | | | | 6 | 68 | 100 | 200 | 0.006 | 2LC0460-1AH99-0AA0 | 4.4 | | | |
| | | | | | | | | | | | | | | 140 | 240 | 0.006 | 2LC0460-1AH99-0AB0 | 4.5 | | | |
| | | | JCECJ | 65 | 65 | 96 | 96 | | | | | | | 100 | 200 | 0.008 | 2LC0460-1AG99-0AA0 | 5.0 | | | |
| | | | | | | | | | | | | | | 140 | 240 | 0.008 | 2LC0460-1AG99-0AB0 | 5.1 | | | |
| | | | 120-6 | 490 | MCECM | 65 | 65 | 94 | 94 | 60 | 3.6 | 65 | 7 | 20 | – | – | 100 | 230 | 0.016 | 2LC0460-2AP99-0AA0 | 8.1 |
| | | | | | | | | | | | | | | | | 140 | 270 | 0.016 | 2LC0460-2AP99-0AB0 | 8.3 | |
| | | | | | | | | | | | | 180 | 310 | 0.016 | 2LC0460-2AP99-0AC0 | 8.5 | | | | | |
| JCECM | 80 | 65 | | | 120 | 94 | | | | | 6 | 88 | 100 | 230 | 0.020 | 2LC0460-2AH99-0AA0 | 9.1 | | | | |
| | | | | | | | | | | | | | 140 | 270 | 0.020 | 2LC0460-2AH99-0AB0 | 9.3 | | | | |
| JCECJ | 80 | 80 | | | 120 | 120 | | | | | | | 180 | 310 | 0.020 | 2LC0460-2AH99-0AC0 | 9.5 | | | | |
| | | | | | | | | | | | | | 100 | 230 | 0.025 | 2LC0460-2AG99-0AA0 | 10.2 | | | | |
| | | | | | | | | | | | | | 140 | 270 | 0.025 | 2LC0460-2AG99-0AB0 | 10.4 | | | | |
| 142-6 | 925 | MCECM | 75 | 75 | 109 | 109 | 72 | 4.8 | 75 | 9 | 23 | – | – | 140 | 290 | 0.035 | 2LC0460-3AP99-0AB0 | 13.2 | | | |
| | | | | | | | | | | | | | 180 | 330 | 0.035 | 2LC0460-3AP99-0AC0 | 13.6 | | | | |
| | | JCECM | 95 | 75 | 142 | 109 | | | | | 8 | 100 | 140 | 290 | 0.045 | 2LC0460-3AH99-0AB0 | 15.0 | | | | |
| | | | | | | | | | | | | | 180 | 330 | 0.046 | 2LC0460-3AH99-0AC0 | 15.3 | | | | |
| | | JCECJ | 95 | 92 | 142 | 142 | | | | | | | 140 | 290 | 0.055 | 2LC0460-3AG99-0AB0 | 16.8 | | | | |
| | | | | | | | | | | | | | 180 | 330 | 0.056 | 2LC0460-3AG99-0AC0 | 17.1 | | | | |

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

Type MCECM

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|-------|-----------------|-------------------|-------|-----------------------------|-----|-----|-----|------|----------|-----|----|----|----|-----|-----|------------------|--|------------------------|--------------|--------|
| DA | T _{KN} | n _{Kmax} | | D1/D2 Keyway DIN 6885 | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | BF | A | P | S | LG | J | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | | |
| mm | Nm | rpm | | max. max. | | | | | | | | | | | | kgm ² | | kg | | |
| 162-6 | 1600 | 11800 | MCECM | 85 | 85 | 122 | 122 | 84.5 | 5.5 | 85 | 11 | 27 | - | - | 140 | 310 | 0.066 | 2LC0460-4AP99-0AB0 | 19.2 | |
| | | | | | | | | | | | | | | 180 | 350 | 0.067 | 2LC0460-4AP99-0AC0 | 19.7 | | |
| | | | | | | | | | | | | | | 200 | 370 | 0.067 | 2LC0460-4AP99-0AD0 | 19.9 | | |
| | | | | | | | | | | | | | | 250 | 420 | 0.068 | 2LC0460-4AP99-0AE0 | 20.4 | | |
| | | | JCECM | 108 | 85 | 162 | 122 | | | | | | 10 | 113 | 140 | 310 | 0.087 | 2LC0460-4AH99-0AB0 | 22.0 | |
| | | | | | | | | | | | | | | | 180 | 350 | 0.088 | 2LC0460-4AH99-0AC0 | 22.4 | |
| | | | | | | | | | | | | | | | 200 | 370 | 0.088 | 2LC0460-4AH99-0AD0 | 22.6 | |
| | | | | | | | | | | | | | | | 250 | 420 | 0.089 | 2LC0460-4AH99-0AE0 | 23.2 | |
| | | | JCECJ | 108 | 108 | 162 | 162 | | | | | | | | 140 | 310 | 0.108 | 2LC0460-4AG99-0AB0 | 24.8 | |
| | | | | | | | | | | | | | | | 180 | 350 | 0.109 | 2LC0460-4AG99-0AC0 | 25.3 | |
| | | | | | | | | | | | | | | | 200 | 370 | 0.109 | 2LC0460-4AG99-0AD0 | 25.5 | |
| | | | | | | | | | | | | | | | 250 | 420 | 0.110 | 2LC0460-4AG99-0AE0 | 26.0 | |
| 190-6 | 2500 | 10000 | MCECM | 105 | 105 | 145 | 145 | 97.6 | 7.0 | 105 | 10 | 27 | - | - | 140 | 350 | 0.136 | 2LC0460-5AP99-0AB0 | 28.4 | |
| | | | | | | | | | | | | | | 180 | 390 | 0.138 | 2LC0460-5AP99-0AC0 | 29.0 | | |
| | | | | | | | | | | | | | | 200 | 410 | 0.138 | 2LC0460-5AP99-0AD0 | 29.4 | | |
| | | | | | | | | | | | | | | 250 | 460 | 0.140 | 2LC0460-5AP99-0AE0 | 30.1 | | |
| | | | JCECM | 125 | 105 | 190 | 145 | | | | | | 12 | 135 | 140 | 350 | 0.186 | 2LC0460-5AH99-0AB0 | 33.8 | |
| | | | | | | | | | | | | | | | 180 | 390 | 0.187 | 2LC0460-5AH99-0AC0 | 34.4 | |
| | | | | | | | | | | | | | | | 200 | 410 | 0.188 | 2LC0460-5AH99-0AD0 | 34.7 | |
| | | | | | | | | | | | | | | | 250 | 460 | 0.190 | 2LC0460-5AH99-0AE0 | 35.5 | |
| | | | JCECJ | 125 | 125 | 190 | 190 | | | | | | | | 140 | 350 | 0.236 | 2LC0460-5AG99-0AB0 | 39.2 | |
| | | | | | | | | | | | | | | | 180 | 390 | 0.238 | 2LC0460-5AG99-0AC0 | 39.8 | |
| | | | | | | | | | | | | | | | 200 | 410 | 0.238 | 2LC0460-5AG99-0AD0 | 40.1 | |
| | | | | | | | | | | | | | | | 250 | 460 | 0.240 | 2LC0460-5AG99-0AE0 | 40.9 | |
| 214-6 | 3900 | 8900 | MCECM | 115 | 115 | 164 | 164 | 110 | 9.1 | 115 | 10 | 33 | - | - | 140 | 370 | 0.251 | 2LC0460-6AP99-0AB0 | 41.7 | |
| | | | | | | | | | | | | | | 180 | 410 | 0.253 | 2LC0460-6AP99-0AC0 | 42.6 | | |
| | | | | | | | | | | | | | | 200 | 430 | 0.254 | 2LC0460-6AP99-0AD0 | 43.1 | | |
| | | | | | | | | | | | | | | 250 | 480 | 0.257 | 2LC0460-6AP99-0AE0 | 44.2 | | |
| | | | JCECM | 140 | 115 | 214 | 164 | | | | | | 12 | 145 | 140 | 370 | 0.339 | 2LC0460-6AH99-0AB0 | 48.9 | |
| | | | | | | | | | | | | | | | 180 | 410 | 0.342 | 2LC0460-6AH99-0AC0 | 49.8 | |
| | | | | | | | | | | | | | | | 200 | 430 | 0.343 | 2LC0460-6AH99-0AD0 | 50.3 | |
| | | | | | | | | | | | | | | | 250 | 480 | 0.346 | 2LC0460-6AH99-0AE0 | 51.4 | |
| | | | JCECJ | 140 | 140 | 214 | 214 | | | | | | | | 140 | 370 | 0.428 | 2LC0460-6AG99-0AB0 | 56.2 | |
| | | | | | | | | | | | | | | | 180 | 410 | 0.430 | 2LC0460-6AG99-0AC0 | 57.1 | |
| | | | | | | | | | | | | | | | 200 | 430 | 0.431 | 2LC0460-6AG99-0AD0 | 57.6 | |
| | | | | | | | | | | | | | | | 250 | 480 | 0.434 | 2LC0460-6AG99-0AE0 | 58.7 | |
| 230-6 | 5200 | 8300 | MCECM | 125 | 125 | 174 | 174 | 123 | 8.8 | 125 | 12 | 33 | - | - | 180 | 430 | 0.359 | 2LC0460-7AP99-0AC0 | 51.5 | |
| | | | | | | | | | | | | | | 200 | 450 | 0.361 | 2LC0460-7AP99-0AD0 | 52.0 | | |
| | | | | | | | | | | | | | | 250 | 500 | 0.365 | 2LC0460-7AP99-0AE0 | 53.2 | | |
| | | | | | | | | | | | | | | 180 | 430 | 0.484 | 2LC0460-7AH99-0AC0 | 60.0 | | |
| | | | JCECM | 155 | 125 | 230 | 174 | | | | | | 14 | 158 | 200 | 450 | 0.485 | 2LC0460-7AH99-0AD0 | 60.5 | |
| | | | | | | | | | | | | | | | 250 | 500 | 0.489 | 2LC0460-7AH99-0AE0 | 61.7 | |
| | | | | | | | | | | | | | | | 180 | 430 | 0.610 | 2LC0460-7AG99-0AC0 | 68.7 | |
| | | | | | | | | | | | | | | | 200 | 450 | 0.611 | 2LC0460-7AG99-0AD0 | 69.2 | |
| | | | JCECJ | 155 | 155 | 230 | 230 | | | | | | | | 250 | 500 | 0.615 | 2LC0460-7AG99-0AE0 | 70.5 | |
| | | | | | | | | | | | | | | | 180 | 440 | 0.532 | 2LC0460-8AP99-0AC0 | 67.0 | |
| | | | | | | | | | | | | | | | 200 | 460 | 0.534 | 2LC0460-8AP99-0AD0 | 67.7 | |
| | | | | | | | | | | | | | | | 250 | 510 | 0.540 | 2LC0460-8AP99-0AE0 | 69.5 | |
| 245-6 | 7000 | 7800 | MCECM | 130 | 130 | 185 | 185 | 128 | 12.2 | 130 | 16 | 41 | - | - | 160 | 440 | 0.693 | 2LC0460-8AH99-0AC0 | 76.2 | |
| | | | | | | | | | | | | | | 200 | 460 | 0.695 | 2LC0460-8AH99-0AD0 | 76.9 | | |
| | | | | | | | | | | | | | | 250 | 510 | 0.701 | 2LC0460-8AH99-0AE0 | 78.6 | | |
| | | | JCECM | 165 | 130 | 245 | 185 | | | | | | 16 | 170 | 180 | 440 | 0.855 | 2LC0460-8AG99-0AC0 | 85.5 | |
| | | | | | | | | | | | | | | | 200 | 460 | 0.857 | 2LC0460-8AG99-0AD0 | 86.2 | |
| | | | | | | | | | | | | | | | 250 | 510 | 0.863 | 2LC0460-8AG99-0AE0 | 88.0 | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

Type MCECM

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | | | | Shaft distance | Mass moment of inertia | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|-------|-----------------|-------------------|-------|-----------------------------|------|-----|-----|-----|-------------|-----|----|----|----|-----|-----|------------------|--------------------|------------------------|--|--------|
| DA | T _{KN} | n _{Kmax} | | D1/D2 Keyway DIN 6885 | ND1 | ND2 | DZ | SZ | NL1/ NL2 | S1 | BF | A | P | S | LG | J | | m | | |
| mm | Nm | rpm | | max. | max. | | | | | | | | | | | kgm ² | | kg | | |
| 275-6 | 9800 | 6250 | MCECM | 150 | 150 | 213 | 213 | 148 | 12.6 | 150 | 20 | 40 | – | – | 200 | 500 | 0.917 | 2LC0461-0AP99-0AD0 | 91.1 | |
| | | | | | | | | | | | | | | 250 | 550 | 0.927 | 2LC0461-0AP99-0AE0 | 93.3 | | |
| | | | JCECM | 185 | 150 | 275 | 213 | | | | | | 16 | 200 | 200 | 500 | 1.207 | 2LC0461-0AH99-0AD0 | 104.4 | |
| | | | | | | | | | | | | | | | 250 | 550 | 1.217 | 2LC0461-0AH99-0AE0 | 106.5 | |
| | | | JCECJ | 185 | 185 | 275 | 275 | | | | | | | | 200 | 500 | 1.499 | 2LC0461-0AG99-0AD0 | 118.0 | |
| | | | | | | | | | | | | | | | | 250 | 550 | 1.509 | 2LC0461-0AG99-0AE0 | 120.1 |
| 310-6 | 12900 | 5550 | MCECM | 170 | 170 | 240 | 240 | 160 | 13.5 | 170 | 22 | 47 | – | – | 250 | 590 | 1.670 | 2LC0461-1AP99-0AE0 | 131.7 | |
| | | | JCECM | 205 | 170 | 310 | 240 | | | | | | 16 | 220 | | | 2.228 | 2LC0461-1AH99-0AE0 | 153.2 | |
| | | | JCECJ | 205 | 205 | 310 | 310 | | | | | | | | | | 2.788 | 2LC0461-1AG99-0AE0 | 175.0 | |
| 345-6 | 17000 | 5000 | MCECM | 190 | 190 | 267 | 267 | 172 | 18.5 | 190 | 24 | 47 | – | – | 250 | 630 | 2.742 | 2LC0461-2AP99-0AE0 | 176.1 | |
| | | | JCECM | 230 | 190 | 345 | 267 | | | | | | 20 | 245 | | | 3.684 | 2LC0461-2AH99-0AE0 | 205.1 | |
| | | | JCECJ | 230 | 230 | 345 | 345 | | | | | | | | | | 4.629 | 2LC0461-2AG99-0AE0 | 234.3 | |

Hubs are designed with threaded pull-off holes.
E spacers are also available in the following inch dimensions on request: S = 3.5"/5"/7"/8"/10".
Other spacer lengths are available on request.
Plate packs in the CEC intermediate unit assembled at the factory.
Jumbo hub for large shaft diameters.

Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

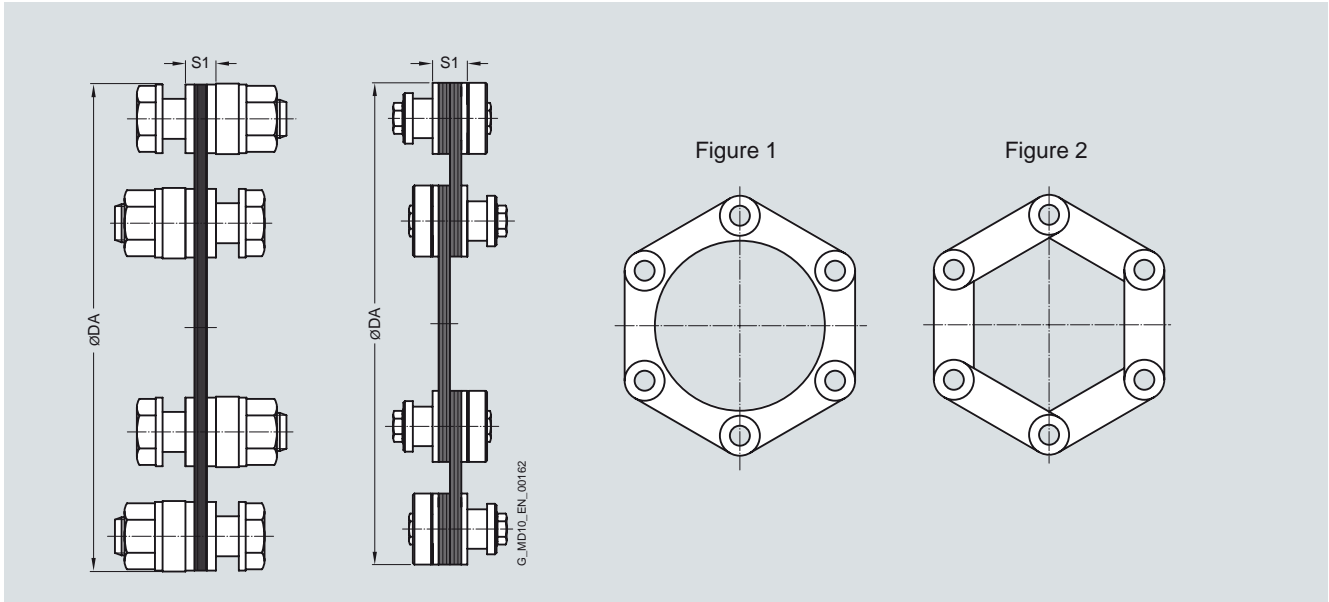
Ordering example:
ARPEX ARP-6 MCECM coupling, size 120-6, with shaft distance S = 140 mm,
Bore ØD1 50H7 mm, with keyway to DIN 6885 and set screw,
Bore ØD2 60K7 mm, with keyway to DIN 6885 and set screw.

Product code:
2LC0460-2AP99-0AB0-Z
L1C+M1E+M13

FLENDER Standard Couplings Torsionally Rigid All-Steel Couplings - ARPEX ARP-6 Series

Spare and wear parts
Plate pack ARP-6

Selection and ordering data



Mainly ring plates (Fig. 1) are used for the plate packs. Sizes 298-6 and 325-6 comprise side-bar plates (Fig. 2).

The plate pack of the ARP-6 series is delivered with screw connection and is readily available as a spare part.

- With outside diameters up to $DA = 300$ mm, close-fitting bolts with collar nuts are used
- From outside diameter $DA = 300$ mm, patented conical screw connections are used

Plate pack

| Dimensions in mm | | Mass moment of inertia | Product code | Weight |
|-------------------------|----|-------------------------|--------------------|-----------|
| Size | | | | |
| DA | S1 | J kgm ² | | m kg |
| Plate pack NAN | | | | |
| 88-6 | 6 | 0.0001 | 2LC0450-0AF00-0AA0 | 0.1 |
| 115-6 | 6 | 0.0003 | 2LC0450-1AF00-0AA0 | 0.1 |
| 135-6 | 7 | 0.0010 | 2LC0450-2AF00-0AA0 | 0.3 |
| 150-6 | 7 | 0.0013 | 2LC0450-3AF00-0AA0 | 0.4 |
| 176-6 | 9 | 0.0035 | 2LC0450-4AF00-0AA0 | 0.7 |
| 185-6 | 11 | 0.0053 | 2LC0450-5AF00-0AA0 | 0.9 |
| 212-6 | 10 | 0.0088 | 2LC0450-6AF00-0AA0 | 1.3 |
| 225-6 | 10 | 0.0145 | 2LC0450-7AF00-0AA0 | 1.8 |
| 256-6 | 12 | 0.0269 | 2LC0450-8AF00-0AA0 | 2.6 |
| 272-6 | 16 | 0.0425 | 2LC0451-0AF00-0AA0 | 3.7 |
| 298-6 | 20 | 0.0653 | 2LC0451-1AF00-0AA0 | 4.7 |
| 325-6 | 22 | 0.1081 | 2LC0451-2AF00-0AA0 | 6.6 |
| Plate pack MCECM | | | | |
| 64-4 | 6 | 0.0001 | 2LC0460-0AS00-0AA0 | 0.1 |
| 96-6 | 6 | 0.0002 | 2LC0460-1AS00-0AA0 | 0.1 |
| 120-6 | 7 | 0.0006 | 2LC0460-2AS00-0AA0 | 0.3 |
| 142-6 | 9 | 0.0018 | 2LC0460-3AS00-0AA0 | 0.6 |
| 162-6 | 11 | 0.0033 | 2LC0460-4AS00-0AA0 | 0.9 |
| 190-6 | 10 | 0.0060 | 2LC0460-5AS00-0AA0 | 1.2 |
| 214-6 | 10 | 0.0116 | 2LC0460-6AS00-0AA0 | 1.8 |
| 230-6 | 12 | 0.0189 | 2LC0460-7AS00-0AA0 | 2.5 |
| 245-6 | 16 | 0.0299 | 2LC0460-8AS00-0AA0 | 3.5 |
| 275-6 | 20 | 0.0487 | 2LC0461-0AS00-0AA0 | 4.6 |
| 310-6 | 22 | 0.0891 | 2LC0461-1AS00-0AA0 | 6.5 |
| 345-6 | 24 | 0.1461 | 2LC0461-2AS00-0AA0 | 8.7 |

Ordering example for plate pack NAN:

ARPEX ARP-6 plate pack, size 115-6, complete with screw connection.

Product code:

2LC0450-1AF00-0AA0

Ordering example for plate pack MCECM:

ARPEX ARP-6 plate pack, size 120-6, complete with screw connection.

Product code:

LC0460-2AS00-0AA0

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARW-4/-6 Series

General information

Overview



Coupling can be designed for potentially explosive environments in accordance with 94/9/EC.

Benefits

ARPEX couplings of the ARW-4/-6 series are outstanding for their large angular misalignment capacity of 3°. They were specially designed for drives where high misalignments which have

to be compensated for by the coupling are to be expected. The intermediate spacer lengths are variable and are manufactured to customer specifications.

Application

ARPEX couplings of the ARW-4/-6 series are used where large misalignment capacities are required. In the paper-making machine industry, the ARW coupling has already proved itself as a maintenance-free alternative to the cardan shaft. Torques of between 92 and 80000 Nm can be transmitted at a permitted angular misalignment of 3.0°. The intermediate spacer can be fitted radially without moving the connected units.

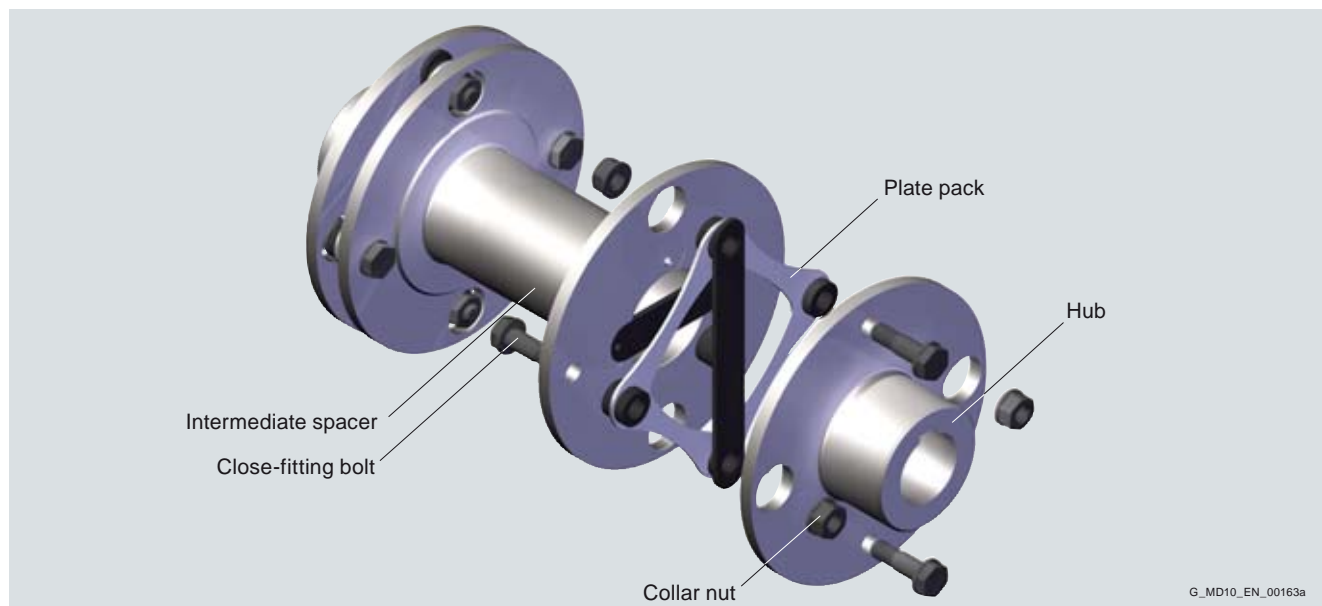
Main areas of application for the ARW-4/-6 series:

- Paper-making machines
- Wind power systems
- Traction drives

Design

The design of an ARPEX NHN coupling of the ARW-4/-6 series is shown in the following illustration. The plate packs are bolted alternately between the flanges of the coupling hubs and the intermediate spacer. Up to size 292-4 close-fitting bolts and from size 324-4 conical screw connections are used for fastening. Up to

size 647-4 plate packs in rectangular design, from size 695-6 in hexagonal design are used. The intermediate spacers are variable in length and are manufactured specifically to customer specifications.



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Variants of the ARPEX coupling, ARW-4/-6 series

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARW-4/-6 Series

General information

Variants of the ARPEX coupling, ARW-4/-6 series

Types

| | |
|------------|--|
| NHN | Variant with unmachined intermediate spacer, with variable spacer length |
|------------|--|

Further application-specific coupling types are available in selection module **x.CAT** at www.flender.com. Dimension sheets and further information are available on request.

The coupling parts of the ARPEX ARW-4/-6 series with the exception of H spacers are machined on all sides. These are delivered with unmachined, primed spacer tube.

Technical data

Power ratings, type NHN

| Size | Rated torque T_{KN} | Maximum torque T_{Kmax} | Overload torque T_{KOL} | Fatigue torque T_{KW} | Maximum speed n_{Kmax} | Maximum permitted shaft misalignment | | | Torsional stiffness C_{Tdyn} for S = 1000 mm MNm/rad |
|--------------|--------------------------|------------------------------|------------------------------|----------------------------|-----------------------------|--------------------------------------|-------------------------------|------------------|--|
| | Nm | Nm | Nm | Nm | rpm | + ΔK_a Tension | - ΔK_a Compression | $\pm \Delta K_w$ | $\pm \Delta K_r$ for S = 1000 mm mm |
| 101-4 | 92 | 140 | 230 | 37 | 10400 | 2.4 | 2.0 | 3.0° | 51.8 |
| 133-4 | 225 | 340 | 560 | 90 | 7850 | 3.3 | 2.2 | | 51.7 |
| 167-4 | 450 | 680 | 1130 | 180 | 6250 | 4.2 | 2.2 | | 51.6 |
| 196-4 | 800 | 1200 | 2000 | 320 | 5350 | 5.1 | 2.2 | | 51.6 |
| 230-4 | 1250 | 1880 | 3200 | 500 | 4550 | 5.7 | 2.2 | | 51.6 |
| 260-4 | 2000 | 3000 | 5000 | 800 | 4000 | 6.6 | 2.2 | | 51.5 |
| 292-4 | 2700 | 4100 | 6800 | 1080 | 3550 | 7.5 | 2.8 | | 51.4 |
| 324-4 | 3850 | 5800 | 9700 | 1540 | 3200 | 8.4 | 2.8 | | 51.4 |
| 355-4 | 5250 | 7900 | 13200 | 2100 | 2950 | 9.0 | 2.8 | | 51.4 |
| 389-4 | 6650 | 10000 | 16700 | 2660 | 2700 | 10.0 | 2.8 | | 51.4 |
| 439-4 | 9850 | 15000 | 25000 | 3940 | 2350 | 11.1 | 3.0 | | 51.3 |
| 499-4 | 13300 | 20000 | 34000 | 5320 | 2100 | 12.4 | 4.8 | | 50.8 |
| 547-4 | 19000 | 29000 | 48000 | 7600 | 1900 | 13.4 | 4.8 | | 50.7 |
| 600-4 | 25150 | 38000 | 63000 | 10060 | 1750 | 14.6 | 4.8 | | 50.6 |
| 647-4 | 32500 | 49000 | 82000 | 13000 | 1600 | 16.0 | 4.8 | | 50.6 |
| 695-6 | 41000 | 62000 | 103000 | 16400 | 1500 | 17.0 | 4.8 | | 50.7 |
| 756-6 | 52000 | 78000 | 130000 | 20800 | 1350 | 18.0 | 4.8 | | 50.6 |
| 817-6 | 65000 | 98000 | 163000 | 26000 | 1250 | 20.0 | 4.8 | | 50.5 |
| 880-6 | 80000 | 120000 | 200000 | 32000 | 1150 | 22.0 | 4.8 | | 50.5 |

The radial misalignment ΔK_r applies to a type NHN coupling with a shaft distance S = 1000 mm. The radial misalignment ΔK_r for other shaft distances S is calculated as follows:

$$\Delta K_r = (S - S_1) \cdot \tan(\Delta K_w)$$

The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur at the same time (see following table).

Permitted shaft misalignments

| Size | Permitted angular misalignment ΔK_w (tension +) | | | Permitted angular misalignment ΔK_w (compression -) | | |
|--------------|---|------|------|---|------|------|
| | 3.0° | 1.5° | 0.0° | 3.0° | 1.5° | 0.0° |
| | Permitted axial misalignment ΔK_a in mm | | | Permitted axial misalignment ΔK_a in mm | | |
| 101-4 | 0.8 | 1.6 | 2.4 | 0.8 | 1.6 | 2 |
| 133-4 | 1.1 | 2.2 | 3.3 | 1.1 | 2.2 | 2.2 |
| 167-4 | 1.4 | 2.8 | 4.2 | 1.4 | 2.2 | 2.2 |
| 196-4 | 1.7 | 3.4 | 5.1 | 1.7 | 2.2 | 2.2 |
| 230-4 | 1.9 | 3.8 | 5.7 | 1.9 | 2.2 | 2.2 |
| 260-4 | 2.2 | 4.4 | 6.6 | 2.2 | 2.2 | 2.2 |
| 292-4 | 2.5 | 5.0 | 7.5 | 2.5 | 2.8 | 2.8 |
| 324-4 | 2.8 | 5.6 | 8.4 | 2.8 | 2.8 | 2.8 |
| 355-4 | 3.0 | 6.0 | 9.0 | 2.8 | 2.8 | 2.8 |
| 389-4 | 3.3 | 6.7 | 10.0 | 2.8 | 2.8 | 2.8 |
| 439-4 | 3.7 | 7.4 | 11.1 | 3.0 | 3.0 | 3.0 |
| 499-4 | 4.1 | 8.3 | 12.4 | 4.1 | 4.8 | 4.8 |
| 547-4 | 4.5 | 8.9 | 13.4 | 4.4 | 4.8 | 4.8 |
| 600-4 | 4.9 | 9.7 | 14.6 | 4.8 | 4.8 | 4.8 |
| 647-4 | 5.3 | 10.7 | 16.0 | 4.8 | 4.8 | 4.8 |
| 695-6 | 5.6 | 11.4 | 17.0 | 4.8 | 4.8 | 4.8 |
| 756-6 | 6 | 12.1 | 18.0 | 4.8 | 4.8 | 4.8 |
| 817-6 | 6.7 | 13.4 | 20.0 | 4.8 | 4.8 | 4.8 |
| 880-6 | 7.3 | 14.8 | 22.0 | 4.8 | 4.8 | 4.8 |

Because of design specifications, the maximum possible axial shaft misalignment with plate packs pulled apart (**tension +**) is greater than with plate packs pressed together (**compression -**).

The torsional stiffness values apply to the entire coupling with shaft distance S = 1000 mm. The torsional stiffness of the plate packs applies to the rated coupling torque T_{KN} . To determine the torsional stiffness for a specific operating point, e.g. for calculating torsional vibration, the manufacturer must be consulted.

T_{Kmax} permitted only five times per hour.

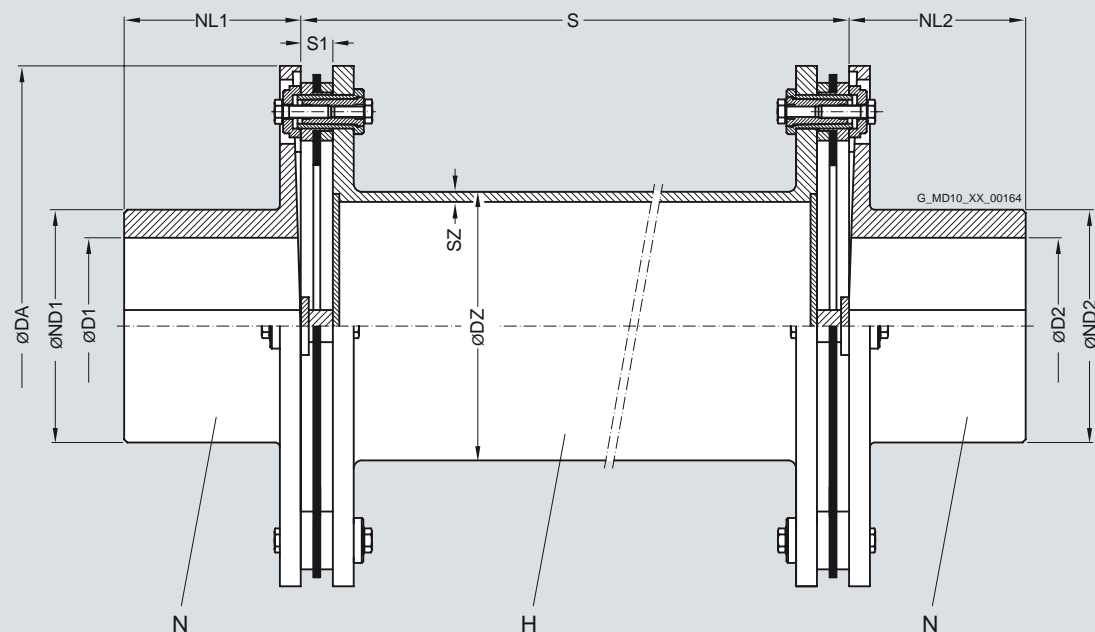
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARW-4/-6 Series

Type NHN

Selection and ordering data

Torsionally rigid type NHN coupling with high angular misalignment capacity up to 3° and radially freely dismountable intermediate spacer and variable shaft distance S.



| Size | Rated torque | Maximum speed | Dimensions in mm | | | | | | | Minimum shaft distance | Mass moment of inertia | Product code | Weight |
|-------|--------------|---------------|-----------------------------|-------------|-----|------|-------------|----|-----------|------------------------|---|--------------|--------|
| DA | T_{KN} | n_{Kmax} | D1/D2 Keyway DIN 6885 | ND1/ ND2 | DZ | SZ | NL1/ NL2 | S1 | S_{min} | J | Order codes for bore diameters and toler- ances are specified in catalog section 3 | m | |
| mm | Nm | rpm | max. | | | | | | | kgm ² | | kg | |
| 101-4 | 92 | 10400 | 32 | 45 | 45 | 2.9 | 32 | 11 | 65 | 0.002 | 2LC0530-0AD99-0AZ0 | 1.5 | |
| 133-4 | 225 | 7850 | 45 | 60 | 48 | 2.9 | 45 | 13 | 85 | 0.008 | 2LC0530-1AD99-0AZ0 | 3.9 | |
| 167-4 | 450 | 6250 | 50 | 70 | 64 | 4.0 | 50 | 15 | 100 | 0.022 | 2LC0530-2AD99-0AZ0 | 7.1 | |
| 196-4 | 800 | 5350 | 60 | 80 | 89 | 4.0 | 60 | 16 | 115 | 0.056 | 2LC0530-3AD99-0AZ0 | 12.1 | |
| 230-4 | 1250 | 4550 | 75 | 100 | 102 | 5.0 | 75 | 16 | 115 | 0.109 | 2LC0530-4AD99-0AZ0 | 17.9 | |
| 260-4 | 2000 | 4000 | 90 | 120 | 133 | 5.0 | 90 | 17 | 130 | 0.189 | 2LC0530-5AD99-0AZ0 | 24.6 | |
| 292-4 | 2700 | 3550 | 100 | 130 | 152 | 5.0 | 100 | 19 | 130 | 0.359 | 2LC0530-6AD99-0AZ0 | 35.1 | |
| 324-4 | 3850 | 3200 | 110 | 145 | 168 | 6.3 | 110 | 20 | 160 | 0.520 | 2LC0530-7AD99-0AZ0 | 43.7 | |
| 355-4 | 5250 | 2950 | 120 | 160 | 178 | 7.1 | 120 | 20 | 165 | 0.856 | 2LC0530-8AD99-0AZ0 | 59.8 | |
| 389-4 | 6650 | 2700 | 130 | 175 | 194 | 7.1 | 130 | 20 | 170 | 1.09 | 2LC0531-0AD99-0AZ0 | 68.9 | |
| 439-4 | 9850 | 2350 | 150 | 200 | 219 | 7.1 | 150 | 22 | 210 | 2.23 | 2LC0531-1AD99-0AZ0 | 106 | |
| 499-4 | 13300 | 2100 | 165 | 220 | 245 | 7.1 | 165 | 30 | 230 | 3.81 | 2LC0531-2AD99-0AZ0 | 142 | |
| 547-4 | 19000 | 1900 | 190 | 250 | 299 | 8.8 | 190 | 32 | 240 | 6.24 | 2LC0531-3AD99-0AZ0 | 191 | |
| 600-4 | 25150 | 1750 | 205 | 275 | 324 | 8.8 | 205 | 34 | 250 | 10.2 | 2LC0531-4AD99-0AZ0 | 257 | |
| 647-4 | 32500 | 1600 | 225 | 300 | 343 | 10.0 | 225 | 35 | 290 | 16.5 | 2LC0531-5AD99-0AZ0 | 348 | |
| 695-6 | 41000 | 1500 | 240 | 325 | 368 | 10.0 | 240 | 33 | 290 | 23.7 | 2LC0540-0AD99-0AZ0 | 441 | |
| 756-6 | 52000 | 1350 | 255 | 340 | 394 | 12.5 | 255 | 34 | 300 | 33.2 | 2LC0540-1AD99-0AZ0 | 525 | |
| 817-6 | 65000 | 1250 | 270 | 360 | 406 | 12.5 | 270 | 36 | 310 | 49.1 | 2LC0540-2AD99-0AZ0 | 659 | |
| 880-6 | 80000 | 1150 | 300 | 400 | 419 | 12.5 | 300 | 37 | 330 | 72.8 | 2LC0540-3AD99-0AZ0 | 849 | |

The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table).

Mass moments of inertia and weights apply to the entire NHN coupling with maximum bores D1/D2 and a shaft distance $S = S_{min}$.

FLENDER Standard Couplings **Torsionally Rigid All-Steel Couplings - ARPEX ARW-4/-6 Series**

Type NHN

Permitted shaft distance S of type NHN relative to speed

| Size | Speed n_N rpm | | | | | | | | | | | | |
|--------------|----------------------------------|------|------|------|------|------|------|------|------|-----------------------------------|------|------|------|
| | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1500 | 2000 | 2500 | 3000 | 4000 |
| | Permitted shaft distance S mm | | | | | | | | | | | | |
| 101-4 | 2822 | 2577 | 2387 | 2233 | 2106 | 1999 | 1825 | 1691 | 1634 | 1416 | 1268 | 1159 | 1005 |
| 133-4 | 2949 | 2693 | 2494 | 2334 | 2201 | 2089 | 1908 | 1767 | 1708 | 1481 | 1326 | 1212 | 1051 |
| 167-4 | 3376 | 3083 | 2856 | 2672 | 2520 | 2392 | 2185 | 2024 | 1956 | 1696 | 1518 | 1387 | 1203 |
| 196-4 | 4029 | 3679 | 3407 | 3188 | 3007 | 2854 | 2606 | 2414 | 2333 | 2022 | 1811 | 1654 | 1435 |
| 230-4 | 4297 | 3924 | 3634 | 3400 | 3207 | 3043 | 2779 | 2574 | 2488 | 2156 | 1930 | 1764 | 1530 |
| 260-4 | 4943 | 4514 | 4181 | 3912 | 3689 | 3500 | 3197 | 2961 | 2861 | 2480 | 2220 | 2028 | 1759 |
| 292-4 | 5305 | 4844 | 4487 | 4198 | 3959 | 3757 | 3431 | 3178 | 3071 | 2662 | 2383 | 2177 | |
| 324-4 | 5562 | 5079 | 4704 | 4401 | 4151 | 3939 | 3597 | 3332 | 3220 | 2791 | 2499 | 2283 | |
| 355-4 | 5709 | 5214 | 4828 | 4518 | 4261 | 4043 | 3692 | 3420 | 3305 | 2865 | 2564 | | |
| 389-4 | 5968 | 5450 | 5047 | 4722 | 4453 | 4226 | 3859 | 3575 | 3454 | 2994 | 2680 | | |
| 439-4 | 6361 | 5809 | 5380 | 5034 | 4747 | 4505 | 4114 | 3811 | 3682 | 3192 | | | |
| 499-4 | 6738 | 6154 | 5699 | 5333 | 5030 | 4773 | 4360 | 4039 | 3903 | 3384 | | | |
| 547-4 | 7442 | 6797 | 6295 | 5890 | 5555 | 5272 | 4815 | 4460 | 4310 | | | | |
| 600-4 | 7762 | 7089 | 6565 | 6144 | 5794 | 5499 | 5022 | 4652 | 4496 | | | | |
| 647-4 | 7980 | 7287 | 6750 | 6316 | 5957 | 5653 | 5163 | 4783 | 4622 | Outside the permitted speed range | | | |
| 695-6 | 8000 | 7553 | 6995 | 6545 | 6173 | 5858 | 5350 | 4956 | 4789 | | | | |
| 756-6 | 8000 | 7797 | 7221 | 6757 | 6372 | 6047 | 5523 | | | | | | |
| 817-6 | 8000 | 7920 | 7335 | 6864 | 6473 | 6143 | 5611 | | | | | | |
| 880-6 | 8000 | 8000 | 7456 | 6977 | 6580 | 6244 | | | | | | | |

Ordering example:

ARPEX ARW-4 NHN coupling, size 133-4, with shaft distance

S = 1000 mm,

Bore ØD1 40H7 mm, with keyway to DIN 6885 and set screw,

Bore ØD2 45K7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0530-1AD99-0AZ0-Z

L0W+M1A+Q0Y+M13

plain text to Q0Y: **S = 1000 mm**

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARW-4/-6 Series

Spare and wear parts
Plate pack ARW-4/-6

Selection and ordering data

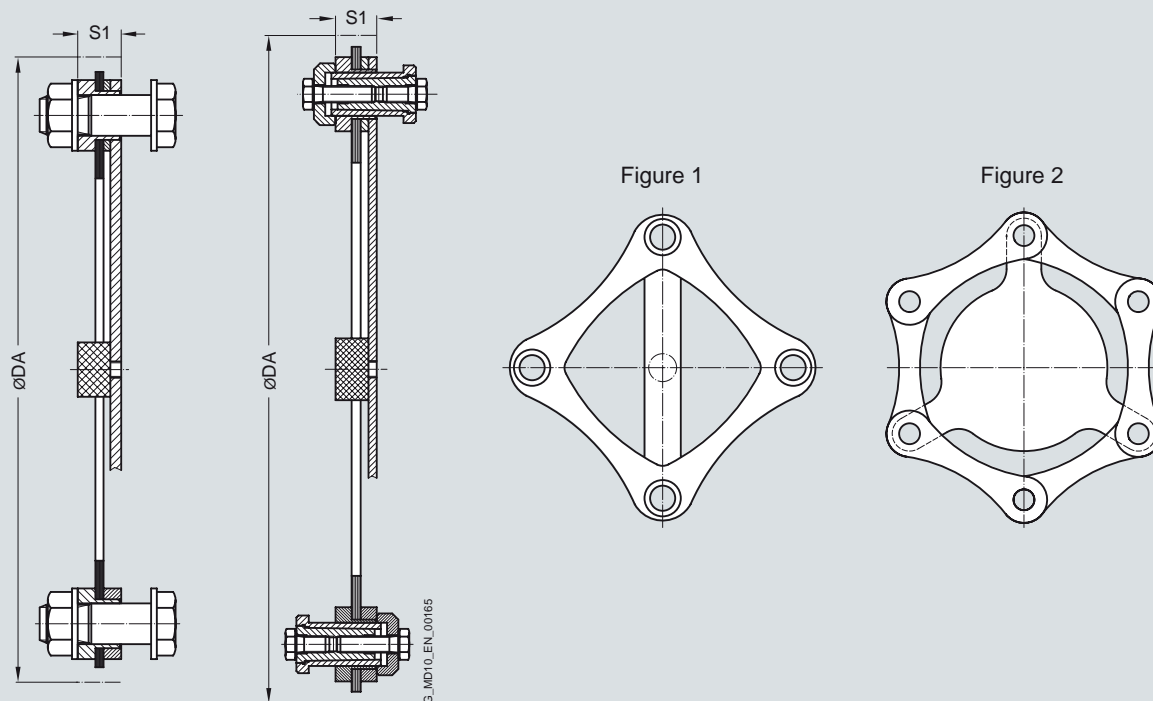


Plate packs of the ARW-4 series comprise ring plates (Fig. 1), those of the ARW-6 series side-bar plates (Fig. 2).

| Dimensions in mm | | Mass moment of inertia | | Product code | Weight |
|------------------|----|------------------------|--|--------------------|--------|
| Size | S1 | J | | | m |
| DA | | kgm ² | | | kg |
| 101-4 | 11 | 0.0001 | | 2LC0530-0AB00-0AA0 | 0.1 |
| 133-4 | 13 | 0.0005 | | 2LC0530-1AB00-0AA0 | 0.2 |
| 167-4 | 15 | 0.0017 | | 2LC0530-2AB00-0AA0 | 0.5 |
| 196-4 | 16 | 0.0037 | | 2LC0530-3AB00-0AA0 | 0.7 |
| 230-4 | 16 | 0.0068 | | 2LC0530-4AB00-0AA0 | 1.0 |
| 260-4 | 17 | 0.0136 | | 2LC0530-5AB00-0AA0 | 1.5 |
| 292-4 | 19 | 0.0227 | | 2LC0530-6AB00-0AA0 | 1.9 |
| 324-4 | 20 | 0.0288 | | 2LC0530-7AB00-0AA0 | 2.1 |
| 355-4 | 20 | 0.0452 | | 2LC0530-8AB00-0AA0 | 2.7 |
| 389-4 | 20 | 0.0645 | | 2LC0531-0AB00-0AA0 | 3.2 |
| 439-4 | 22 | 0.1147 | | 2LC0531-1AB00-0AA0 | 4.5 |
| 499-4 | 30 | 0.2235 | | 2LC0531-2AB00-0AA0 | 6.9 |
| 547-4 | 32 | 0.3658 | | 2LC0531-3AB00-0AA0 | 9.5 |
| 600-4 | 34 | 0.5355 | | 2LC0531-4AB00-0AA0 | 11.4 |
| 647-4 | 35 | 0.7939 | | 2LC0531-5AB00-0AA0 | 14.6 |
| 695-6 | 33 | 1.4624 | | 2LC0540-0AB00-0AA0 | 24.6 |
| 756-6 | 34 | 1.2250 | | 2LC0540-1AB00-0AA0 | 20.2 |
| 817-6 | 36 | 1.7497 | | 2LC0540-2AB00-0AA0 | 23.9 |
| 880-6 | 37 | 2.5460 | | 2LC0540-3AB00-0AA0 | 28.9 |

The plate pack of the ARW-4/-6 series is readily available as a spare part.

The plate pack is delivered with screw connection.

Up to size 292-4 close-fitting bolts with collar nuts, from size 324-4 patented conical screw connections are used.

Ordering example:

ARPEX ARW-4 plate pack, size 133-4, complete with screw connection.

Product code:

2LC0530-1AB00-0AA0

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARF-6 Series

General information

Overview



Coupling can be designed for potentially explosive environments in accordance with 94/9/EC.

Benefits

ARPEX couplings of the ARF-6 series are extremely short and so suitable for drives with short shaft distances. They also serve as self-aligning couplings for axial, angular and radial misalignment. The hubs are available both as pure clamping hubs for smooth shafts and with parallel keyway for shafts with parallel

key. The variant with slit clamping hubs enables the delivery of fully preassembled couplings. This means that the entire coupling can be dismantled and fitted without moving the connected units.

Application

ARPEX couplings of the ARF-6 series are designed for minimum fitting spaces without having to sacrifice the advantages of the two-joint coupling. It is thus possible to compensate for both axial and angular as well as radial misalignment. By using half-shell clamping hubs, the coupling can be radially freely dismantled. Power is transmitted via hexagon socket head cap screws and close-fitting bolts with nuts and ring plate packs in

hexagonal design. Torques of between 120 and 6100 Nm can be transmitted at a permitted angular misalignment of 0.7°.

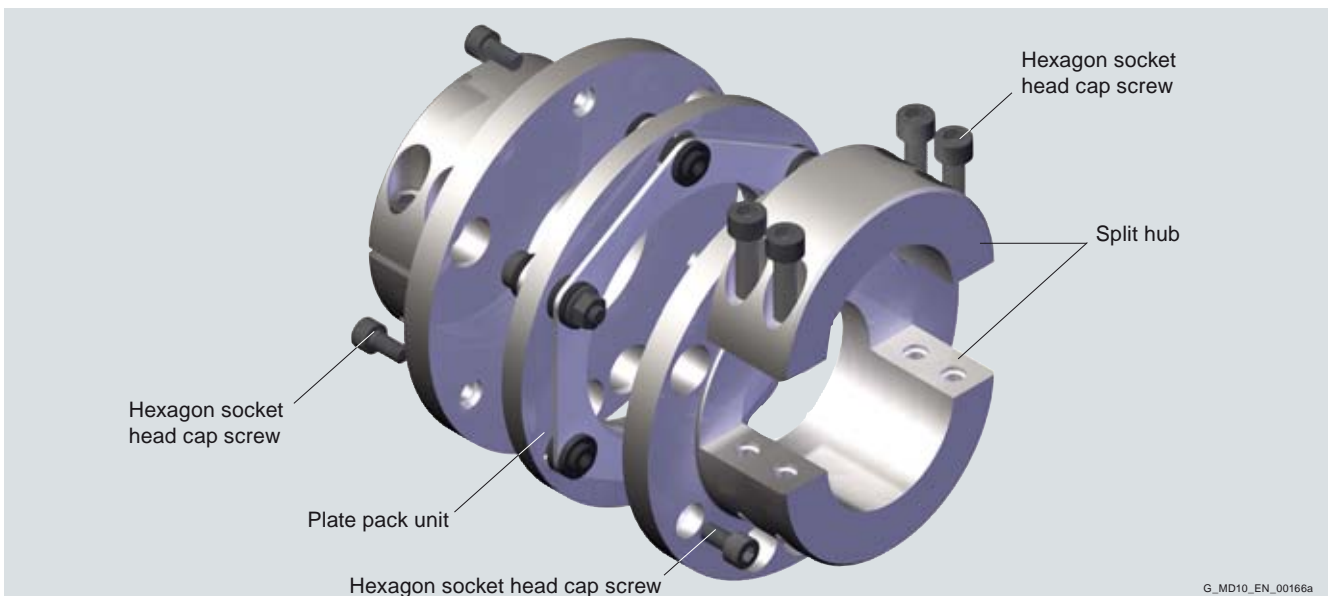
Main areas of application for the ARF-6 series:

- Film stretching machines
- Machines in the cellulose industry
- Machines in confined fitting situations

Design

The two plate packs form a unit with the adapter disk and are screwed together with close-fitting bolts and nuts at three points. The alternate connection of this intermediate unit with the flanges of the split coupling hubs is achieved by means of short

hexagon socket head cap screws at further three points. The hubs are designed as axially slit clamping hubs with a half-shell. For larger bores these can be manufactured as jumbo hubs. Optionally, the hubs are also available without parallel keyway.



Design of the ARPEX coupling, ARF series

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARF-6 Series

General information

Design of the ARF coupling

Types

| | |
|-----------|--|
| GG | Variant with 2 standard clamping hubs |
| GJ | Variant with 1 jumbo clamping hub for large bore diameters |

Further application-specific coupling types are available in selection module **x.CAT** at www.flender.com. Dimension sheets and further information are available on request.

Technical data

Power ratings, types GG and GJ

| Size | Rated torque T_{KN} Nm | Maximum torque T_{Kmax} Nm | Overload torque T_{KOL} Nm | Fatigue torque T_{KW} Nm | Maximum speed n_{Kmax} rpm | Maximum permitted shaft misalignment | | | Torsional stiffness C_{Tdyn} MNm/rad |
|--------------|--------------------------------|------------------------------------|------------------------------------|----------------------------------|------------------------------------|--------------------------------------|-----------------|-----------------------|--|
| | | | | | | $\pm\Delta K_a$ mm | $\pm\Delta K_w$ | $\pm\Delta K_r$ mm | |
| 84-6 | 120 | 220 | 330 | 55 | 12500 | 1.10 | 0.7° | 0.16 | 0.07 |
| 111-6 | 190 | 350 | 520 | 90 | 9450 | 1.80 | | 0.16 | 0.13 |
| 132-6 | 350 | 650 | 950 | 160 | 7950 | 2.02 | | 0.20 | 0.20 |
| 147-6 | 500 | 900 | 1350 | 230 | 7100 | 2.40 | | 0.20 | 0.28 |
| 171-6 | 900 | 1700 | 2450 | 400 | 6100 | 2.74 | | 0.24 | 0.57 |
| 182-6 | 1450 | 2600 | 4000 | 650 | 5750 | 2.86 | | 0.29 | 0.66 |
| 202-6 | 2150 | 3900 | 5800 | 980 | 5200 | 3.06 | | 0.29 | 0.77 |
| 218-6 | 3200 | 5800 | 8700 | 1450 | 4800 | 3.14 | | 0.37 | 1.25 |
| 252-6 | 4500 | 8100 | 12000 | 2000 | 4150 | 3.70 | | 0.45 | 1.55 |
| 267-6 | 6100 | 11000 | 16500 | 2800 | 3900 | 3.84 | | 0.46 | 1.80 |

The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur at the same time (see following table).

T_{Kmax} permitted only five times per hour.

The values for torsional stiffness apply to the complete coupling. The torsional stiffness of the plate packs applies to the rated coupling torque T_{KN} . To determine the torsional stiffness for a specific operating point, e.g. for calculating torsional vibration, the manufacturer must be consulted.

Permitted shaft misalignments

| Size | Permitted angular misalignment $\pm\Delta K_w$ | | | | | | | |
|--------------|--|------|------|------|------|------|------|------|
| | 0.0° | 0.1° | 0.2° | 0.3° | 0.4° | 0.5° | 0.6° | 0.7° |
| | Permitted axial misalignment $\pm\Delta K_a$ in mm | | | | | | | |
| 84-6 | 1.10 | 0.94 | 0.79 | 0.63 | 0.47 | 0.31 | 0.16 | 0.00 |
| 111-6 | 1.80 | 1.54 | 1.29 | 1.03 | 0.77 | 0.51 | 0.26 | 0.00 |
| 132-6 | 2.02 | 1.73 | 1.44 | 1.15 | 0.87 | 0.58 | 0.29 | 0.00 |
| 147-6 | 2.40 | 2.06 | 1.71 | 1.37 | 1.03 | 0.69 | 0.34 | 0.00 |
| 171-6 | 2.74 | 2.35 | 1.96 | 1.57 | 1.17 | 0.78 | 0.39 | 0.00 |
| 182-6 | 2.86 | 2.45 | 2.04 | 1.63 | 1.23 | 0.82 | 0.41 | 0.00 |
| 202-6 | 3.06 | 2.62 | 2.19 | 1.75 | 1.31 | 0.87 | 0.44 | 0.00 |
| 218-6 | 3.14 | 2.69 | 2.24 | 1.79 | 1.35 | 0.90 | 0.45 | 0.00 |
| 252-6 | 3.70 | 3.17 | 2.64 | 2.11 | 1.59 | 1.06 | 0.53 | 0.00 |
| 267-6 | 3.84 | 3.29 | 2.74 | 2.19 | 1.65 | 1.10 | 0.55 | 0.00 |

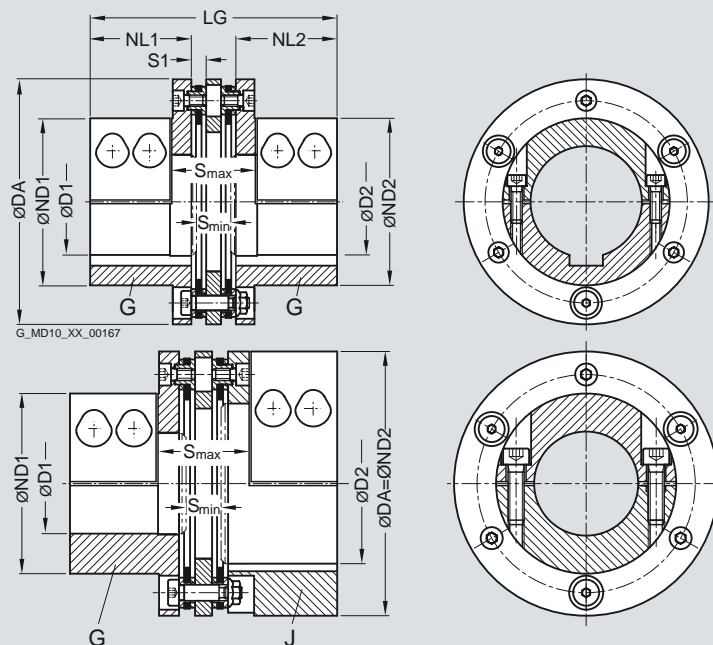
FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARF-6 Series

Types GG and GJ

Selection and ordering data

Radially freely dismountable, torsionally rigid coupling, available as types GG and GJ.
Complete dismounting without moving the units with extremely short shaft distances.



The shaft tolerance must be specified in the order. To specify, -Z must be added to the product code and the order codes Y26 and Y27 with plain text specification of the shaft tolerance for D1 and D2 must be added as well.

| Size | Rated torque | Maximum speed | Type | Dimensions in mm | | | | | | | | | | Mass moment of inertia | Product code | Weight |
|-------|--------------|---------------|------|----------------------|-------------------|---------------|-----|-------------|------|------|------|-----|------------------|------------------------|--|--------|
| DA | T_{KN} | n_{Kmax} | | D1 | D2 | ND1 | ND2 | NL1/ NL2 | S1 | S | LG | J | | | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| mm | Nm | rpm | | Keyway DIN 6885 max. | Parallel key max. | Clamping seat | | | min. | max. | | | kgm ² | | | kg |
| 84-6 | 120 | 12500 | GG | 25 | 25 | 25 | 50 | 50 | 40 | 6 | 16 | 39 | 99 | 0.0013 | 2LC0420-0AB99-0AA0 | 1.7 |
| | | | GJ | | 40 | 48 | | 84 | | | | | | 0.0021 | 2LC0420-0AC99-0AA0 | 2.1 |
| 111-6 | 190 | 9450 | GG | 48 | 48 | 48 | 76 | 76 | 40 | 6 | 16 | 39 | 99 | 0.0043 | 2LC0420-1AB99-0AA0 | 2.9 |
| | | | GJ | | 65 | 65 | | 111 | | | | | | 0.0067 | 2LC0420-1AC99-0AA0 | 3.6 |
| 132-6 | 350 | 7950 | GG | 52 | 52 | 52 | 90 | 90 | 55 | 8 | 18.5 | 45 | 134 | 0.0110 | 2LC0420-2AB99-0AA0 | 5.7 |
| | | | GJ | | 75 | 80 | | 132 | | | | | | 0.0177 | 2LC0420-2AC99-0AA0 | 7.0 |
| 147-6 | 500 | 7100 | GG | 60 | 60 | 60 | 105 | 105 | 65 | 8 | 18.5 | 45 | 154 | 0.0199 | 2LC0420-3AB99-0AA0 | 8.3 |
| | | | GJ | | 85 | 85 | | 147 | | | | | | 0.0324 | 2LC0420-3AC99-0AA0 | 10.4 |
| 171-6 | 900 | 6100 | GG | 70 | 70 | 70 | 122 | 122 | 75 | 9 | 22.5 | 56 | 179 | 0.0439 | 2LC0420-4AB99-0AA0 | 13.3 |
| | | | GJ | | 100 | 100 | | 171 | | | | | | 0.0695 | 2LC0420-4AC99-0AA0 | 16.4 |
| 182-6 | 1450 | 5750 | GG | 70 | 70 | 70 | 126 | 126 | 85 | 11 | 29 | 71 | 205 | 0.0649 | 2LC0420-5AB99-0AA0 | 17.5 |
| | | | GJ | | 100 | 110 | | 182 | | | | | | 0.1005 | 2LC0420-5AC99-0AA0 | 20.9 |
| 202-6 | 2150 | 5200 | GG | 75 | 75 | 75 | 138 | 138 | 85 | 11 | 29 | 71 | 205 | 0.0986 | 2LC0420-6AB99-0AA0 | 21.9 |
| | | | GJ | | 115 | 125 | | 202 | | | | | | 0.1519 | 2LC0420-6AC99-0AA0 | 25.6 |
| 218-6 | 3200 | 4800 | GG | 90 | 90 | 90 | 149 | 149 | 95 | 14 | 35 | 86 | 234 | 0.1499 | 2LC0420-7AB99-0AA0 | 27.2 |
| | | | GJ | | 130 | 130 | | 218 | | | | | | 0.2345 | 2LC0420-7AC99-0AA0 | 33.6 |
| 252-6 | 4500 | 4150 | GG | 100 | 100 | 100 | 166 | 166 | 105 | 17 | 40.5 | 101 | 264 | 0.2924 | 2LC0420-8AB99-0AA0 | 39.9 |
| | | | GJ | | 140 | 150 | | 252 | | | | | | 0.4651 | 2LC0420-8AC99-0AA0 | 49.8 |
| 267-6 | 6100 | 3900 | GG | 110 | 110 | 100 | 177 | 177 | 110 | 17 | 40.5 | 102 | 275 | 0.3827 | 2LC0421-0AB99-0AA0 | 45.9 |
| | | | GJ | | 150 | 160 | | 267 | | | | | | 0.6129 | 2LC0421-0AC99-0AA0 | 58.1 |

Jumbo hubs for larger shaft diameters.
G and J hubs in split clamping hub variant.
The hub variant with keyway rates as standard. Optionally, the shaft/hub connection can be implemented without keyway as a pure clamping seat.
For specification of plate pack, see under spare parts.
Weights and mass moments of inertia apply to the entire coupling with maximum bores D1/D2.

Ordering example:
ARPEX ARF-6 GG coupling, size 132-6,
for shaft diameter ØD1 45h6 mm, without keyway,
for shaft diameter ØD2 50k6 mm, with keyway to DIN 6885-1,
keyway width P9.

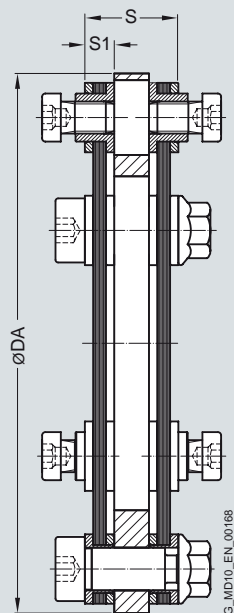
Product code: **2LC0420-2AB99-0AA0-Z**
L1A+M1C+L45+Y26+Y27
plain text to Y26: **h6**
plain text to Y27: **k6**

FLENDER Standard Couplings

Torsionally Rigid All-Steel Couplings - ARPEX ARF-6 Series

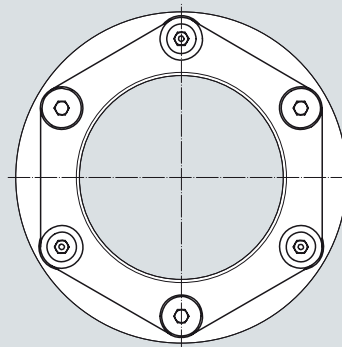
Spare and wear parts
Plate pack ARF-6

Selection and ordering data



G_MD10_EN_00168

Figure 1



Ring plates (Fig. 1) are used for the plate packs.

| Dimensions in mm | | | | Mass moment of inertia | Product code | Weight |
|------------------|------|----|----|------------------------|--------------------|--------|
| Size | Type | S | S1 | J | | m |
| DA | | | | kgm ² | | kg |
| 84-6 | GG | 19 | 6 | 0.0003 | 2LC0420-0AE00-0AA0 | 0.30 |
| | GJ | | | | 2LC0420-0AH00-0AA0 | |
| 111-6 | GG | 19 | 6 | 0.0009 | 2LC0420-1AE00-0AA0 | 0.46 |
| | GJ | | | | 2LC0420-1AH00-0AA0 | |
| 132-6 | GG | 24 | 8 | 0.0026 | 2LC0420-2AE00-0AA0 | 0.90 |
| | GJ | | | | 2LC0420-2AH00-0AA0 | |
| 147-6 | GG | 24 | 8 | 0.0038 | 2LC0420-3AE00-0AA0 | 1.07 |
| | GJ | | | | 2LC0420-3AH00-0AA0 | |
| 171-6 | GG | 29 | 9 | 0.0097 | 2LC0420-4AE00-0AA0 | 1.96 |
| | GJ | | | | 2LC0420-4AH00-0AA0 | |
| 182-6 | GG | 35 | 11 | 0.0143 | 2LC0420-5AE00-0AA0 | 2.58 |
| | GJ | | | | 2LC0420-5AH00-0AA0 | |
| 202-6 | GG | 35 | 11 | 0.0240 | 2LC0420-6AE00-0AA0 | 3.53 |
| | GJ | | | | 2LC0420-6AH00-0AA0 | |
| 218-6 | GG | 44 | 14 | 0.0383 | 2LC0420-7AE00-0AA0 | 4.89 |
| | GJ | | | | 2LC0420-7AH00-0AA0 | |
| 252-6 | GG | 54 | 17 | 0.0812 | 2LC0420-8AE00-0AA0 | 7.90 |
| | GJ | | | | 2LC0420-8AH00-0AA0 | |
| 267-6 | GG | 55 | 17 | 0.1152 | 2LC0421-0AE00-0AA0 | 9.60 |
| | GJ | | | | 2LC0421-0AH00-0AA0 | |

The plate pack unit for the ARF-6 series is readily available as a spare part in most sizes.

The plate pack unit comprises two preassembled plate packs with adapter disk, including screw connection.
The standard screw connection comprises hexagon socket head cap screws and close-fitting bolts with nuts.

Flexible Couplings N-EUPEX Series

7



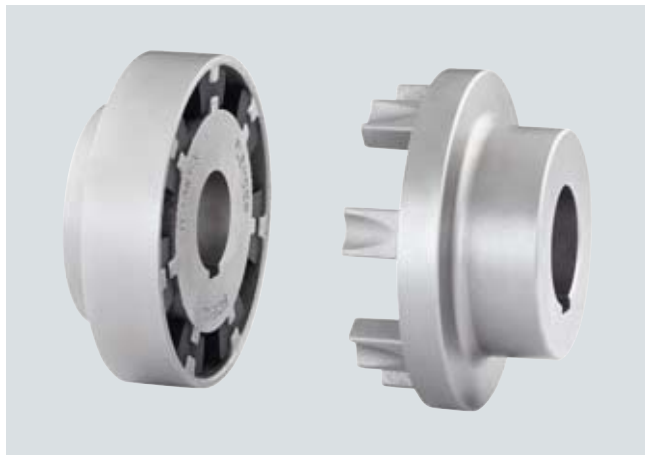
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| | |
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| 7/24 | Type HDS |
| 7/24 | Selection and ordering data |
| 7/26 | Spare and wear parts |
| 7/26 | Selection and ordering data |

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

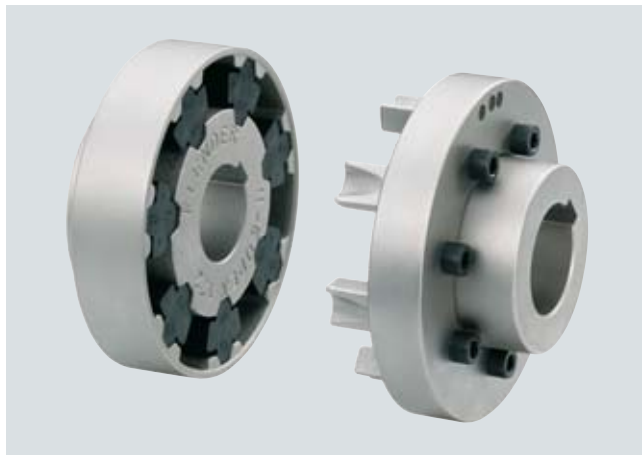
Overview



N-EUPEX as overload-holding, fail-safe series

N-EUPEX and N-EUPEX DS claw couplings connect machines. They compensate for shaft misalignment, generating only low restorative forces.

The torque is conducted through elastomer flexibles, so the coupling has typically flexible rubber properties.



N-EUPEX DS as overload-shedding, non-fail-safe series

N-EUPEX couplings are overload-holding. By contrast, the N-EUPEX DS series is designed so that overload or advanced wear causes irreparable damage to the elastomer flexibles. The metal parts of N-EUPEX DS couplings can then rotate freely against one another without contact.

Elastomer flexible of the N-EUPEX series

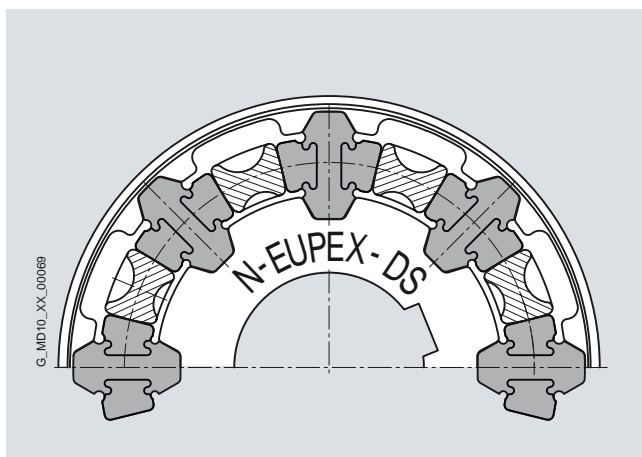
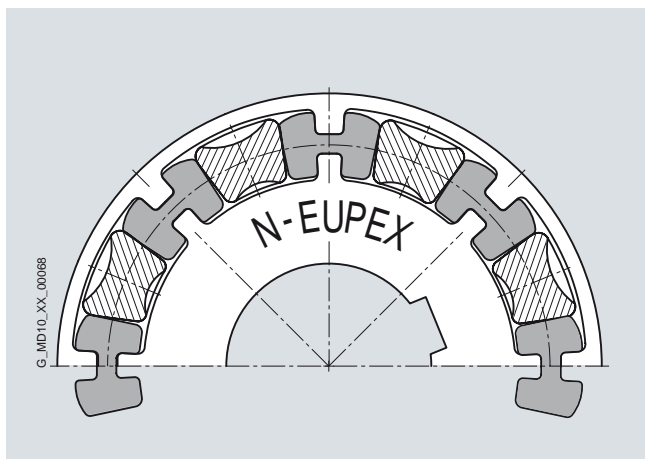


The flexibles of the N-EUPEX coupling are subjected to compression. If the flexibles are irreparably damaged, the hub parts come into contact with metal. This "emergency operation capability" is required, e.g., in the case of fire pump drives.

Elastomer flexible of the N-EUPEX DS series



The flexibles of the N-EUPEX DS series are subjected to compression and bending forces. If the flexibles are irreparably damaged, the metal parts turn against one another without contact, and the power transmission is separated. Fitting new flexibles will make the coupling once more usable. The capacity of the N-EUPEX DS series to shed overloads is especially in demand for highly sensitive machines.



FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

Benefits

N-EUPEX couplings are designed on the modular principle and have a very simple construction. N-EUPEX types are made up of subassemblies to suit requirements. The couplings are assembled by simply fitting the coupling halves together. Wear is restricted to the elastomer flexibles, which must be replaced at the end of their service life.

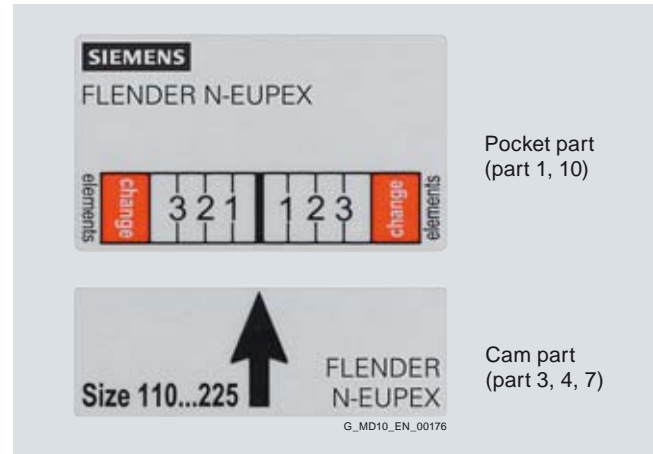
Depending on type, the elastomer flexibles can be changed without moving the coupled machines.

The coupling parts are readily available from stock and are mostly finish-machined, i.e. with finished bore, keyway, set screw and balancing.

Optionally:

The wear indicator for N-EUPEX couplings enables the condition of the flexible to be easily assessed. The wear condition can also be ascertained with the aid of a stroboscope while the coupling is rotating. The production process can thus continue undisturbed.

If the stroboscope is to be used in a potentially explosive environment, you can enquire about the equipment for this at FLENDER.



The wear indicator must be attached to the outside diameter of the coupling after the coupling has been fitted.

Application

The N-EUPEX coupling is available as a catalog standard in 23 sizes with a rated torque of between 19 Nm and 62000 Nm. The coupling is suitable for use at ambient temperatures of between -30 °C and +80 °C. By using alternative elastomer buffers, the permissible ambient temperature range can be extended to between -50 °C and +100 °C.

Frequently, the coupling is used to connect the motor to the gear unit input shaft. The coupling is suitable especially for drives with uniform to average dynamic loads. Examples of applications are pump drives, ventilator drives or crane running gear. Furthermore, N-EUPEX couplings can be used as add-on couplings, particularly on FLUDEX fluid couplings or ARPEX AKR safety couplings. In the case of drives with a diesel engine, N-EUPEX couplings are suitable for driven machines with a low mass moment of inertia.

In the case of diesel engine drives, the actual dynamic coupling load should be checked by measurement or torsional vibration calculations.



Coupling suitable for potentially explosive environments. Complies with Directive 94/9/EC for:

CE Ex II 2 G T4 / T5 / T6 D120 °C
-30 °C, $T_a \leq +80$ °C / +50 °C / +40 °C

CE Ex I M2

Function

The motor torque is transmitted to the hub at the drive end via the shaft-hub connection, which is mostly designed as a keyway connection. The torque is transmitted to the hub on the output side with the aid of elastomer flexibles. The hub on the output side further transmits the torque to the driven machine or a gear unit placed in between. Because of the primarily compression-loaded elastomer flexibles, the coupling has a progressive torsional stiffness.

In the case of the N-EUPEX DS coupling series, the elastomer flexible is subjected to bending and compression loads. In the event of overload or advanced wear, the coupling disconnects positively and the flexibles are irreparably damaged. The metal parts then rotate without touching one another. After new elastomer flexibles are fitted, the N-EUPEX DS coupling is once more operable.

N-EUPEX DS couplings are maintenance-free, even in potentially explosive environments, so long as the possible torque interruption does not lead to an unacceptable disruption of the production process.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

Design

N-EUPEX and N-EUPEX DS couplings consist of two hub parts mounted on the machine shafts. The coupling parts are connected positively by means of elastomer flexibles. On the two-part variant, the elastomer flexibles can be changed only if one

of the coupled machines is moved. On the three-part variants, the bolted cam ring can be released and moved to enable the flexible to be changed without moving the coupled machines.

Materials

Cam parts, pocket parts, adapters and hubs

Grey cast iron EN-GJL-250

Flexible materials

• N-EUPEX series

| Material/description | Hardness | Identification | Ambient temperature |
|--------------------------|-------------------|--|--------------------------|
| NBR standard type | 80 Shore A | Flexible black with blue stripe | -30 °C ... +80 °C |
| NBR soft | 65 Shore A | Flexible black with green stripe | -30 °C ... +80 °C |
| NBR hard | 90 Shore A | Flexible black with magenta stripe | -30 °C ... +80 °C |
| NBR normal low-backlash | 80 Shore A | Flexible black with yellow stripe | -30 °C ... +80 °C |
| NBR soft low-backlash | 65 Shore A | Flexible black with white stripe | -30 °C ... +80 °C |
| NR for low temperature | 80 Shore A | Flexible black with orange stripe | -50 °C ... +50 °C |
| HNBR high temperature | 80 Shore A | Flexible black with red stripe | -10 °C ... +100 °C |

• N-EUPEX DS series

| Material/description | Hardness | Identification | Ambient temperature |
|--|----------------------|-----------------------|--------------------------|
| NBR compound flexibles for sizes 66 ... 272 | 80/90 Shore A | Flexible black | -30 °C ... +80 °C |
| NBR hard for sizes 305 ... 556 | 90 Shore A | Flexible black | -30 °C ... +80 °C |
| PU electrically insulating | 95 Shore A | Flexible blue | -30 °C ... +50 °C |

PU elastomer flexibles in special design on request.

The technical data and product codes do not include the flexible variants NBR low-backlash, HNBR high temperature and NR low temperature and the DS flexibles polyurethane electrically insulating.

Technical data, prices and product codes on request.

Brake disks

EN-GJS-400 spheroidal graphite cast iron or S355J2G3 steel

Brake drums

Grey cast iron EN-GJL-250

Low-temperature application

Shock loads in the drive caused by e.g. starting of drives with large masses to be accelerated (e.g. in fan drives) result in high component loads, particularly at low temperatures. For such applications a particularly robust coupling series must be selected. Of the flexible couplings, the RUPEX pin-and-bush coupling is especially suited for this.

Types of N-EUPEX claw coupling

| Type | Description |
|------|--|
| A | Fail-safe, 3-part |
| B | Fail-safe, 2-part |
| D | Fail-safe, 3-part, flange variant |
| E | Fail-safe, 2-part, flange variant |
| H | Fail-safe, with adapter |
| O | Fail-safe, 2-part, with brake drum |
| P | Fail-safe, 3-part, with brake drum |
| EBD | Fail-safe, 2-part, with brake disk |
| DBD | Fail-safe, 3-part, with brake disk |
| DBDR | Fail-safe, 3-part, with brake disk, brake disk radially dismountable |
| ADS | Non-fail-safe, 3-part |
| BDS | Non-fail-safe, 2-part |
| HDS | Non-fail-safe, with adapter |

Further application-related coupling types are available. Dimension sheets for and information on these are available on request.

Types of N-EUPEX claw coupling on request

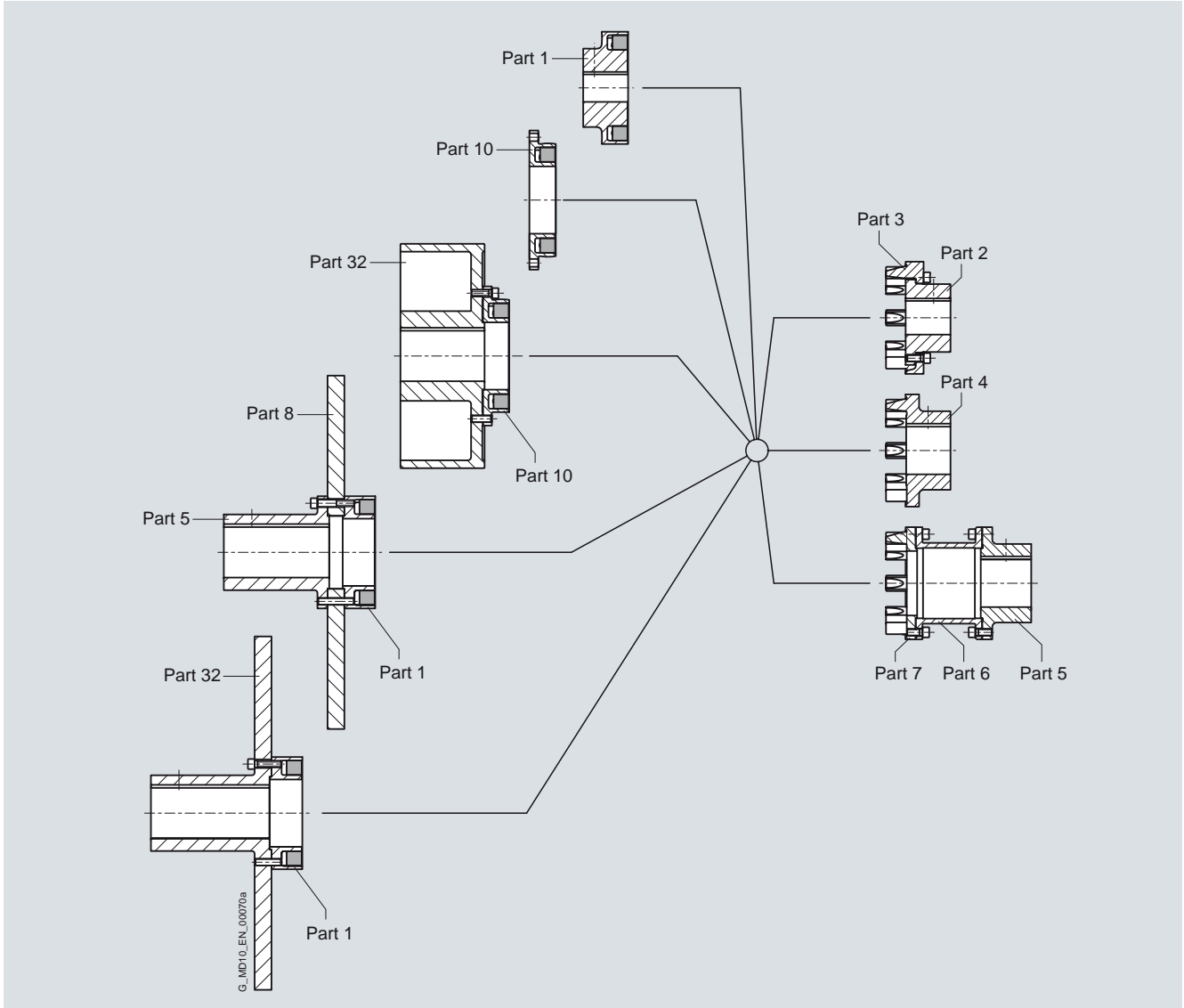
| Type | Description |
|------|--|
| AT | Fail-safe, 3-part, with Taper clamping bush |
| BT | Fail-safe, 2-part, with Taper clamping bush |
| G | Fail-safe, 2-part, with intermediate shaft |
| F | Fail-safe, 3-part, with intermediate shaft |
| K | Fail-safe, 3-part, with brake drum to customer's requirement |
| L | Fail-safe, 2-part, with brake drum to customer's requirement |
| M | Fail-safe, 2-part, with flange dimensions to SAE J620d |

FLENDER Standard Couplings

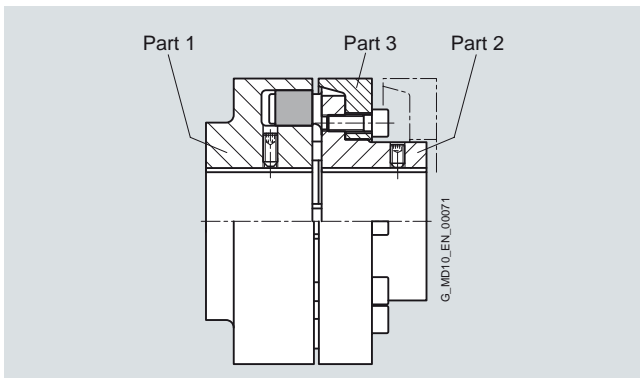
Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

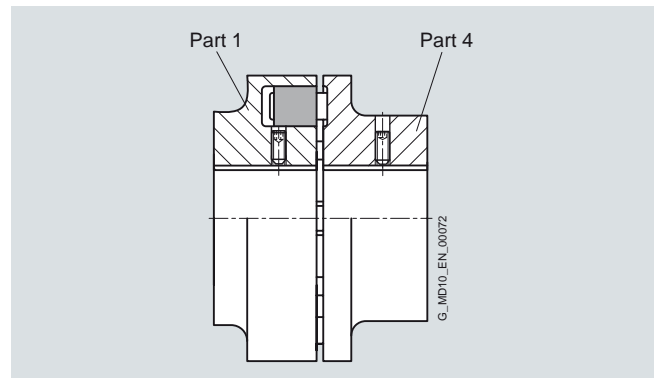
Modular principle of N-EUPEX types



7



Types A and ADS

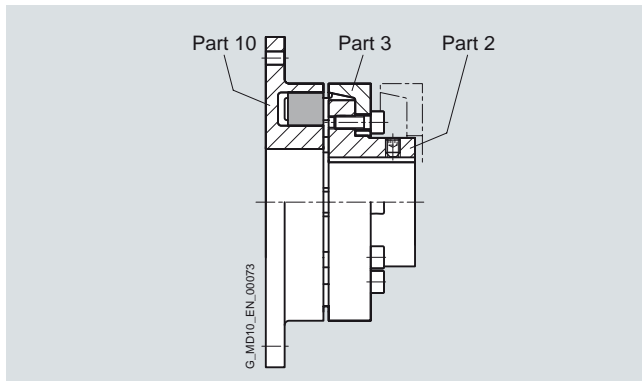


Types B and BDS

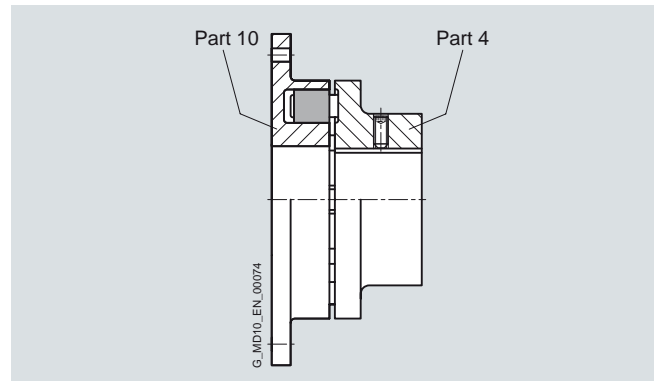
FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

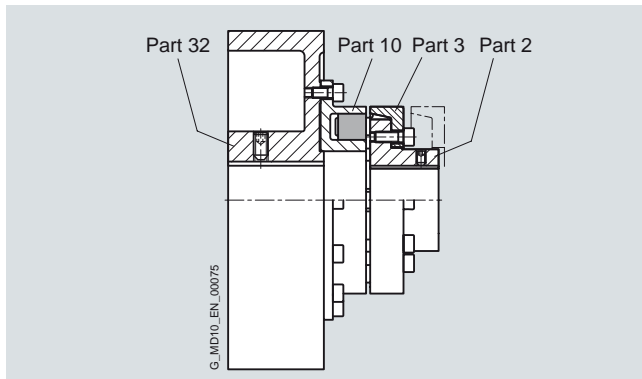
General information



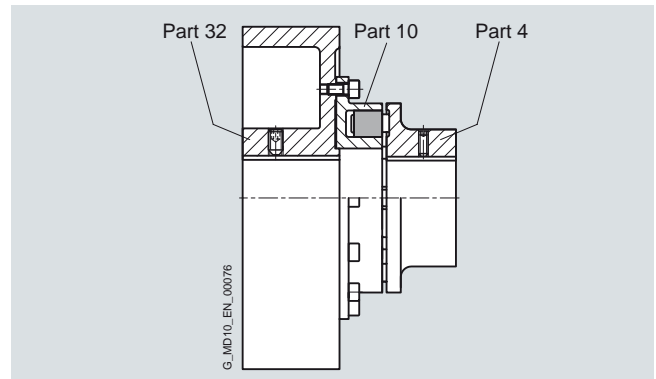
Type D



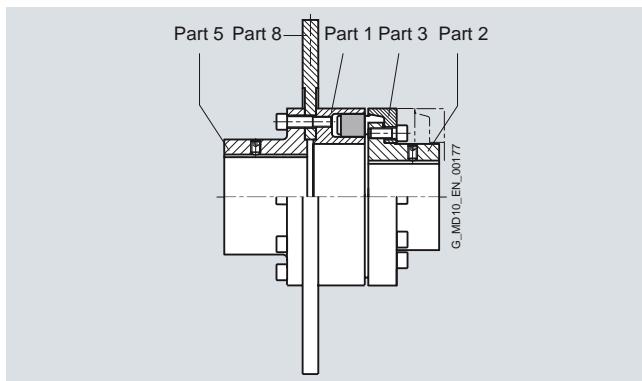
Type E



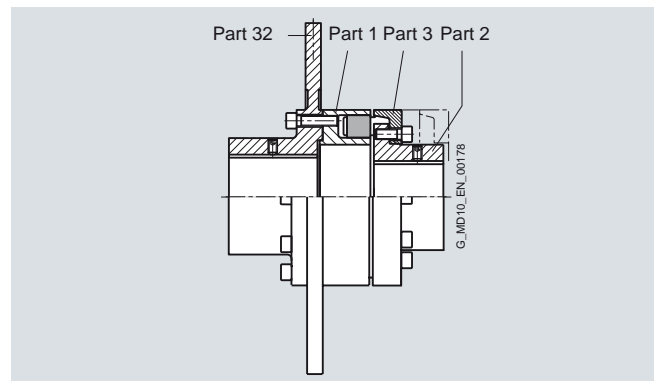
Type P



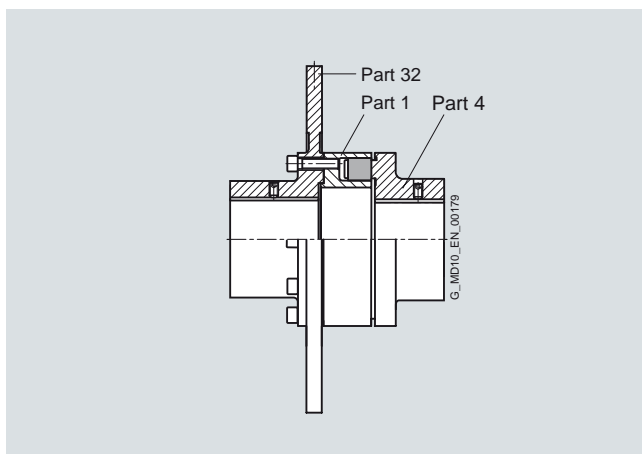
Type O



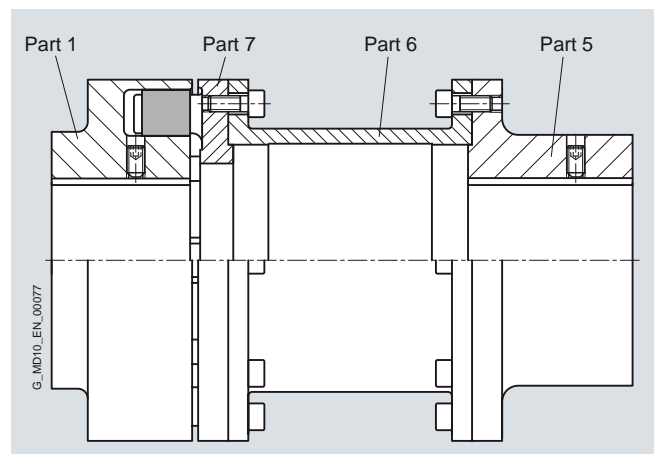
Type DBDR



Type DBD



Type EBD



Types H and HDS

Further application-related coupling types are available. Dimension sheets for and information on these are available on request.

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

Technical data

Power ratings of the N-EUPEX series

| Size | Rated torque for flexible type | | | Torsional stiffness at 50 % capacity utilization for flexible type | | | Assembly Gap dimension ²⁾ | Permitted shaft misalignment at $n = 1500 \text{ rpm}$ ¹⁾ | | |
|------|--------------------------------|----------------|----------------|--|-----------------------------|-----------------------------|--------------------------------------|--|--------------------|-------------------|
| | 65 ShoreA | 80 ShoreA | 90 ShoreA | 65 ShoreA | 80 ShoreA | 90 ShoreA | | Axial | Radial | Angle |
| | T_{KN} Nm | T_{KN} Nm | T_{KN} Nm | $C_{Tdyn} 50 \%$ kNm/rad | $C_{Tdyn} 50 \%$ kNm/rad | $C_{Tdyn} 50 \%$ kNm/rad | | ΔK_a mm | ΔK_r mm | ΔK_w ° |
| 58 | 11 | 19 | 19 | 0.21 | 0.50 | 0.93 | 1.0 | 0.2 | 0.2 | 0.15 |
| 68 | 21 | 34 | 34 | 0.39 | 0.90 | 1.80 | 1.0 | 0.2 | 0.2 | 0.15 |
| 80 | 37 | 60 | 60 | 1.05 | 2.40 | 4.50 | 1.0 | 0.2 | 0.2 | 0.12 |
| 95 | 63 | 100 | 100 | 1.64 | 4.00 | 7.40 | 1.0 | 0.2 | 0.2 | 0.12 |
| 110 | 100 | 160 | 160 | 2.49 | 6.00 | 11.4 | 1.0 | 0.2 | 0.2 | 0.10 |
| 125 | 150 | 240 | 240 | 3.70 | 9.00 | 17 | 1.0 | 0.25 | 0.25 | 0.10 |
| 140 | 230 | 360 | 360 | 5.60 | 13.2 | 25 | 1.0 | 0.25 | 0.25 | 0.10 |
| 160 | 350 | 560 | 560 | 11.2 | 26.7 | 51 | 2.0 | 0.3 | 0.3 | 0.10 |
| 180 | 550 | 880 | 880 | 19.2 | 46 | 88 | 2.0 | 0.3 | 0.3 | 0.10 |
| 200 | 850 | 1340 | 1340 | 31.6 | 75 | 139 | 2.0 | 0.3 | 0.3 | 0.09 |
| 225 | 1260 | 2000 | 2000 | 48 | 115 | 212 | 2.0 | 0.35 | 0.35 | 0.09 |
| 250 | 1760 | 2800 | 2800 | 68 | 162 | 302 | 2.5 | 0.35 | 0.35 | 0.08 |
| 280 | 2460 | 3900 | 3900 | 95 | 226 | 420 | 2.5 | 0.4 | 0.4 | 0.08 |
| 315 | 3500 | 5500 | 5500 | 171 | 370 | 730 | 2.5 | 0.4 | 0.4 | 0.08 |
| 350 | 4850 | 7700 | 7700 | 235 | 520 | 950 | 2.5 | 0.5 | 0.5 | 0.08 |
| 400 | 6500 | 10300 | 10300 | 316 | 750 | 1420 | 2.5 | 0.5 | 0.5 | 0.08 |
| 440 | 8500 | 13500 | 13500 | 390 | 930 | 1920 | 2.5 | 0.6 | 0.6 | 0.08 |
| 480 | 10500 | 16600 | 16600 | 510 | 1200 | 2300 | 2.5 | 0.6 | 0.6 | 0.07 |
| 520 | 13300 | 21200 | 21200 | 600 | 1410 | 2710 | 2.5 | 0.65 | 0.65 | 0.07 |
| 560 | 18300 | 29000 | 29000 | 1000 | 2340 | 4400 | 3.0 | 0.65 | 0.65 | 0.07 |
| 610 | 24000 | 38000 | 38000 | 1300 | 3030 | 5700 | 3.0 | 0.75 | 0.75 | 0.07 |
| 660 | 30900 | 49000 | 49000 | 1640 | 3800 | 7100 | 3.0 | 0.8 | 0.8 | 0.07 |
| 710 | 39000 | 62000 | 62000 | 2140 | 4900 | 9100 | 3.0 | 0.9 | 0.9 | 0.07 |

For maximum coupling torque:

$$T_{Kmax} = 3.0 \cdot T_{KN}$$

For coupling overload torque:

$$T_{KOL} = 3.5 \cdot T_{KN}$$

For coupling fatigue torque: $T_{KW} = 0.15 \cdot T_{KN}$, where $T_N > T_W$ must be adhered to.

Torsional stiffness and damping

The values stated in the above table apply to a capacity utilization of 50 %, an excitation amplitude of 10 % T_{KN} with the frequency 10 Hz and an ambient temperature of 20 °C. Dynamic torsional stiffness is dependent on load and increases in proportion to capacity utilization. The following table shows the correction factors for different nominal loads.

$$C_{Tdyn} = C_{Tdyn 50 \%} \cdot FKC$$

| | Capacity utilization T_N / T_{KN} | | | | | | |
|--|-------------------------------------|------|------|------|------|------|-------|
| | 20 % | 40 % | 50 % | 60 % | 70 % | 80 % | 100 % |
| Correction factor FKC 65/80/90 ShoreA | 0.54 | 0.84 | 1.00 | 1.18 | 1.36 | 1.55 | 1.97 |

The damping coefficient is $\Psi = 1.4$

Furthermore, torsional stiffness and damping depend on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size must be observed!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.7 | 1.2 | 1.0 | 0.70 |

The axial misalignment may occur dynamically at frequencies up to 10 Hz. For fitting, a maximum gap dimension of $S_{max} = S + \Delta S$ and a minimum gap dimension of $S_{min} = S - \Delta S$ are permitted. Shaft misalignments ΔK_a , ΔK_r and ΔK_w may occur simultaneously.

¹⁾ The maximum speed of the respective type must be noted. For further information on permissible shaft misalignment, please see the operating instructions.

²⁾ Does not apply to type H.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

Power ratings of the N-EUPEX DS series

| Size | Rated torque | Torsional stiffness at 50 % capacity utilization | Assembly | Permitted shaft misalignment at speed $n = 1500$ rpm | | |
|------|----------------|--|---|--|------------------------------|----------------------------|
| | T_{KN} Nm | C_{Tdyn} kNm/rad | Gap dimension ¹⁾ ΔS mm | Axial ΔK_a mm | Radial ΔK_r mm | Angle ΔK_w ° |
| 66 | 19 | 0.73 | 1.0 | 0.2 | 0.2 | 0.15 |
| 76 | 34 | 1.36 | 1.0 | 0.2 | 0.2 | 0.15 |
| 88 | 60 | 2.62 | 1.0 | 0.2 | 0.2 | 0.12 |
| 103 | 100 | 4.00 | 1.0 | 0.2 | 0.2 | 0.12 |
| 118 | 160 | 6.30 | 1.0 | 0.2 | 0.2 | 0.10 |
| 135 | 240 | 10.5 | 1.0 | 0.25 | 0.25 | 0.10 |
| 152 | 360 | 13.6 | 1.0 | 0.25 | 0.25 | 0.10 |
| 172 | 560 | 27.2 | 2.0 | 0.3 | 0.3 | 0.10 |
| 194 | 880 | 47.0 | 2.0 | 0.3 | 0.3 | 0.10 |
| 218 | 1340 | 70.0 | 2.0 | 0.3 | 0.3 | 0.09 |
| 245 | 2000 | 106 | 2.0 | 0.35 | 0.35 | 0.09 |
| 272 | 2800 | 149 | 2.5 | 0.35 | 0.35 | 0.08 |
| 305 | 3900 | 214 | 2.5 | 0.4 | 0.4 | 0.08 |
| 340 | 5500 | 350 | 2.5 | 0.4 | 0.4 | 0.08 |
| 380 | 7700 | 480 | 2.5 | 0.5 | 0.5 | 0.08 |
| 430 | 10300 | 730 | 2.5 | 0.5 | 0.5 | 0.08 |
| 472 | 13500 | 990 | 2.5 | 0.6 | 0.6 | 0.08 |
| 514 | 16600 | 1270 | 2.5 | 0.6 | 0.6 | 0.07 |
| 556 | 21200 | 1540 | 2.5 | 0.65 | 0.65 | 0.07 |

Flexibles of sizes 66 to 272 are of the compound type with a hard core and soft thrust pieces.
Sizes 305 to 556 are completely made of 90 ShoreA NBR material.

For maximum coupling torque:

$$T_{Kmax} = 2.0 \cdot T_{KN}$$

For coupling overload torque:

$$T_{KOL} = 3.0 \cdot T_{KN}$$

For coupling fatigue torque:

$$T_{KW} = 0.15 \cdot T_{KN}$$

Torsional stiffness and damping

The values stated in the above table apply to a capacity utilization of 50 %, an excitation amplitude of 10 % T_{KN} with the frequency 10 Hz and an ambient temperature of 20 °C. Dynamic torsional stiffness is dependent on load and increases in proportion to capacity utilization. The following table shows the correction factors for different rated loads.

$$C_{Tdyn} = C_{Tdyn 50 \%} \cdot FKC$$

| Correction factor FKC | Capacity utilization T_N / T_{KN} | | | | | | |
|-----------------------|-------------------------------------|------|------|------|------|------|-------|
| | 20 % | 40 % | 50 % | 60 % | 70 % | 80 % | 100 % |
| | 0.7 | 0.9 | 1 | 1.1 | 1.2 | 1.3 | 1.5 |

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size must be noted!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.6 | 1.20 | 1.0 | 0.70 |

The axial misalignment may occur dynamically at frequencies up to 10 Hz. For fitting, a maximum gap dimension of $S_{max} = S + \Delta S$ and a minimum gap dimension of $S_{min} = S - \Delta S$ are permitted.

Shaft misalignments ΔK_a , ΔK_r and ΔK_w may occur simultaneously.

The damping coefficient is $\Psi = 1.4$

Torsional stiffness and damping is further dependent on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

¹⁾ Does not apply to type HDS.

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

General information

Assignment of N-EUPEX sizes to IEC standard motors

The assignment applies to an application factor of 1.25.

Outputs P_M of IEC motors and assigned N-EUPEX couplings

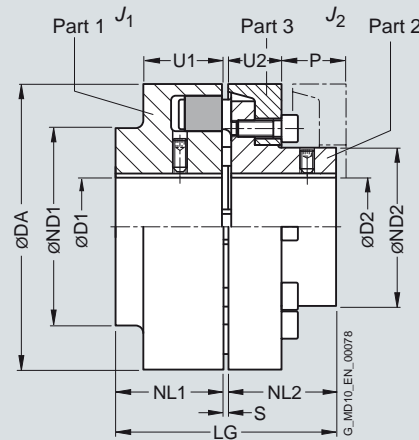
| Three-phase motor Size | Output at ≈ 3000 rpm | N-EUPEX coupling Size | Output at ≈ 1500 rpm | N-EUPEX coupling Size | Output at ≈ 1000 rpm | N-EUPEX coupling Size | Output at ≈ 750 rpm | N-EUPEX coupling Size | DE shaft end D x E to IEC | |
|------------------------|------------------------------|-----------------------|------------------------------|-----------------------|------------------------------|-----------------------|-----------------------------|-----------------------|---------------------------|------|
| | P_M kW | | P_M kW | | P_M kW | | P_M kW | | D mm | E mm |
| 56 | 0.09 | 58 | 0.06 | 58 | | | | | 9 | 20 |
| | 0.12 | 58 | 0.09 | 58 | | | | | | |
| 63 | 0.18 | 58 | 0.12 | 58 | | | | | 11 | 23 |
| | 0.25 | 58 | 0.18 | 58 | | | | | | |
| 71 | 0.37 | 58 | 0.25 | 58 | | | | | 14 | 30 |
| | 0.55 | 58 | 0.37 | 58 | | | | | | |
| 80 | 0.75 | 58 | 0.55 | 58 | 0.37 | 58 | | | 19 | 40 |
| | 1.1 | 58 | 0.75 | 58 | 0.55 | 58 | | | | |
| 90 S | 1.5 | 68 | 1.1 | 68 | 0.75 | 68 | | | 24 | 50 |
| 90 L | 2.2 | 68 | 1.5 | 68 | 1.1 | 68 | | | 24 | 50 |
| 100 L | 3 | 80 | 2.2 | 80 | 1.5 | 80 | 0.75 | 80 | 28 | 60 |
| | | | 3 | 80 | | | 1.1 | 80 | | |
| 112 M | 4 | 80 | 4 | 80 | 2.2 | 80 | 1.5 | 80 | 28 | 60 |
| 132 S | 5.5 | 95 | 5.5 | 95 | 3 | 95 | 2.2 | 95 | 38 | 80 |
| | 7.5 | 95 | | | | | | | | |
| 132 M | | | 7.5 | 95 | 4 | 95 | 3 | 95 | 38 | 80 |
| | | | | | 5.5 | 95 | | | | |
| 160 M | 11 | 95 | 11 | 95 | 7.5 | 95 | 4 | 95 | 42 | 110 |
| | 15 | 95 | | | | | 5.5 | 95 | | |
| 160 L | 18.5 | 95 | 15 | 110 | 11 | 110 | 7.5 | 110 | 42 | 110 |
| 180 M | 22 | 110 | 18.5 | 110 | | | | | 48 | 110 |
| 180 L | | | 22 | 125 | 15 | 125 | 11 | 125 | 48 | 110 |
| 200 L | 30 | 125 | 30 | 125 | 18.5 | 125 | 15 | 125 | 55 | 110 |
| | 37 | 125 | | | 22 | 140 | | | | |
| 225 S | | | 37 | 140 | | | 18.5 | 140 | 55 | 110 |
| | | | | | | | | | 60 | 140 |
| 225 M | 45 | 125 | 45 | 140 | 30 | 140 | 22 | 140 | 55 | 110 |
| | | | | | | | | | 60 | 140 |
| 250 M | 55 | 140 | 55 | 160 | 37 | 160 | 30 | 160 | 60 | 140 |
| | | | | | | | | | 65 | 140 |
| 280 S | 75 | 160 | 75 | 180 | 45 | 180 | 37 | 180 | 65 | 140 |
| | | | | | | | | | 75 | 140 |
| 280 M | 90 | 160 | 90 | 180 | 55 | 180 | 45 | 180 | 65 | 140 |
| | | | | | | | | | 75 | 140 |
| 315 S | 110 | 160 | 110 | 200 | 75 | 200 | 55 | 200 | 65 | 140 |
| | | | | | | | | | 80 | 170 |
| 315 M | 132 | 160 | 132 | 200 | 90 | 200 | 75 | 200 | 65 | 140 |
| | | | | | | | | | 80 | 170 |

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type A for easy elastomer flexible replacement

Selection and ordering data



| Size | Rated torque flexible type 80 ShoreA T_{KN} | Speed n_{Kmax} | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | Mass moment of inertia J_1/J_2 | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m | |
|------|--|---------------------|--|------|------|------|-----|-----|---------------|-----|-----|-----|-----|------------------|-------------------------------------|--|-----------------------|-----|
| | | | D1 | D2 | | DA | ND1 | ND2 | NL1/ S NL2 | U1 | U2 | P | LG | | | | | |
| | | | min. | max. | min. | max. | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | kgm ² | | kg | | |
| 110 | 160 | 5300 | 48 | 38 | 110 | 86 | 62 | 40 | 3 | 34 | 20 | 33 | 83 | 0.003 | 2LC0100-4AB ■ ■ -0AA0 | 3 | | |
| 125 | 240 | 5100 | 55 | 45 | 125 | 100 | 75 | 50 | 3 | 36 | 23 | 38 | 103 | 0.005 | 2LC0100-5AB ■ ■ -0AA0 | 4.8 | | |
| 140 | 360 | 4900 | 60 | 50 | 140 | 100 | 82 | 55 | 3 | 34 | 28 | 43 | 113 | 0.008 | 2LC0100-6AB ■ ■ -0AA0 | 6 | | |
| 160 | 560 | 4250 | 65 | 58 | 160 | 108 | 95 | 60 | 4 | 39 | 28 | 47 | 124 | 0.014 | 2LC0100-7AB ■ ■ -0AA0 | 8.4 | | |
| 180 | 880 | 3800 | 75 | 65 | 180 | 125 | 108 | 70 | 4 | 42 | 30 | 50 | 144 | 0.025 | 2LC0100-8AB ■ ■ -0AA0 | 12 | | |
| 200 | 1340 | 3400 | 85 | 75 | 200 | 140 | 122 | 80 | 4 | 47 | 32 | 53 | 164 | 0.04 | 2LC0101-0AB ■ ■ -0AA0 | 17 | | |
| 225 | 2000 | 3000 | 90 | 85 | 225 | 150 | 138 | 90 | 4 | 52 | 38 | 61 | 184 | 0.08 | 2LC0101-1AB ■ ■ -0AA0 | 23 | | |
| 250 | 2800 | 2750 | 46 | 100 | 95 | 250 | 165 | 155 | 100 | 5.5 | 60 | 42 | 69 | 205.5 | 0.13 | 2LC0101-2AB ■ ■ -0AA0 | 31 | |
| 280 | 3900 | 2450 | 49 | 110 | 54 | 105 | 280 | 180 | 172 | 110 | 5.5 | 65 | 42 | 73 | 225.5 | 0.20 | 2LC0101-3AB ■ ■ -0AA0 | 41 |
| 315 | 5500 | 2150 | 49 | 100 | 46 | 100 | 315 | 165 | 165 | 125 | 5.5 | 70 | 47 | 78 | 255.5 | 0.32 | 2LC0101-4AB ■ ■ -0AA0 | 57 |
| | | | 90 | 120 | 90 | 120 | | | 200 | 200 | | | | | 0.35 | 61 | | |
| 350 | 7700 | 2000 | 61 | 110 | 61 | 110 | 350 | 180 | 180 | 140 | 5.5 | 74 | 51 | 83 | 285.5 | 0.54 | 2LC0101-5AB ■ ■ -0AA0 | 78 |
| | | | 90 | 140 | 90 | 140 | | | 230 | 230 | | | | | 0.61 | 82 | | |
| 400 | 10300 | 1700 | 66 | 120 | 66 | 120 | 400 | 200 | 200 | 160 | 5.5 | 78 | 56 | 88 | 325.5 | 1.0 | 2LC0101-6AB ■ ■ -0AA0 | 112 |
| | | | 100 | 150 | 100 | 150 | | | 250 | 250 | | | | | 1.1 | 117 | | |
| 440 | 13500 | 1550 | 80 | 130 | 80 | 130 | 440 | 215 | 215 | 180 | 7.5 | 86 | 64 | 99 | 367.5 | 1.5 | 2LC0101-7AB ■ ■ -0AA0 | 147 |
| | | | 120 | 160 | 120 | 160 | | | 265 | 265 | | | | | 1.7 | 155 | | |
| 480 | 16600 | 1400 | 90 | 145 | 90 | 145 | 480 | 240 | 240 | 190 | 7.5 | 90 | 65 | 104 | 387.5 | 2.3 | 2LC0101-8AB ■ ■ -0AA0 | 184 |
| | | | 136 | 180 | 136 | 180 | | | 300 | 300 | | | | | 2.6 | 200 | | |
| 520 | 21200 | 1300 | 100 | 150 | 100 | 150 | 520 | 250 | 250 | 210 | 7.5 | 102 | 68 | 115 | 427.5 | 3.3 | 2LC0102-0AB ■ ■ -0AA0 | 234 |
| | | | 140 | 190 | 140 | 190 | | | 315 | 315 | | | | | 3.7 | 254 | | |
| 560 | 29000 | 1200 | 120 | 200 | 120 | 200 | 560 | 320 | 320 | 220 | 9 | 115 | 80 | 125 | 449 | 6.0 | 2LC0102-1AB ■ ■ -0AA0 | 329 |
| 610 | 38000 | 1100 | 130 | 220 | 130 | 220 | 610 | 352 | 352 | 240 | 9 | 121 | 88 | 135 | 489 | 9.0 | 2LC0102-2AB ■ ■ -0AA0 | 416 |
| 660 | 49000 | 1000 | 140 | 240 | 140 | 240 | 660 | 384 | 384 | 260 | 9 | 132 | 96 | 145 | 529 | 13.5 | 2LC0102-3AB ■ ■ -0AA0 | 546 |
| 710 | 62000 | 1000 | 140 | 260 | 140 | 260 | 710 | 416 | 416 | 290 | 9 | 138 | 102 | 155 | 589 | 19 | 2LC0102-4AB ■ ■ -0AA0 | 680 |

- ØD1:
- Without finished bore – Without order codes
 - Without finished bore sizes 315 to 520 for 2nd diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)
- ØD2:
- Without finished bore – Without order codes
 - Without finished bore sizes 315 to 520 for 2nd diameter range D2 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1
2
9

1
2
9

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to maximum bore diameters.

The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

Ordering example:

N-EUPEX A coupling, size 200.

Part 1: Bore D1 65H7 mm, keyway to DIN 6885-1 and set screw,
Part 2: Bore D2 50H7 mm, keyway to DIN 6885-1 and set screw.

Product code:

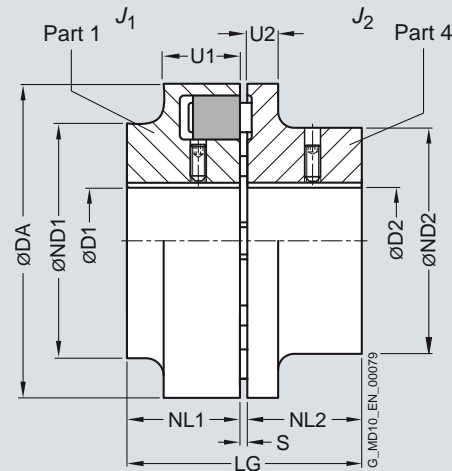
2LC0101-0AB99-0AA0
L1F+M1C

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type B

Selection and ordering data



| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | Mass moment of inertia | Product code | Weight | |
|------|--|------------|------------------------------|---------|---------|---------|-----|-----|-----|------------|-----|----|-----|------------------------|--|-----------------------|----|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m | |
| | | | D1 min. | D2 max. | D1 min. | D2 max. | DA | ND1 | ND2 | NL1/ S NL2 | U1 | U2 | LG | | | | |
| | Nm | rpm | | | | | | | | | | | | kgm ² | | kg | |
| 58 | 19 | 7500 | | 19 | 24 | 58 | 58 | 40 | 20 | 3 | 20 | 8 | 43 | 0.0001 | 2LC0100-0AA ■ ■ -0AA0 | 0.4 | |
| 68 | 34 | 7000 | | 24 | 28 | 68 | 68 | 50 | 20 | 3 | 20 | 8 | 43 | 0.0002 | 2LC0100-1AA ■ ■ -0AA0 | 0.54 | |
| 80 | 60 | 6000 | | 30 | 38 | 80 | 80 | 68 | 30 | 3 | 30 | 10 | 63 | 0.0006 | 2LC0100-2AA ■ ■ -0AA0 | 1.3 | |
| 95 | 100 | 5500 | | 42 | 42 | 95 | 76 | 76 | 35 | 3 | 30 | 12 | 73 | 0.0013 | 2LC0100-3AA ■ ■ -0AA0 | 2.2 | |
| 110 | 160 | 5300 | | 48 | 48 | 110 | 86 | 86 | 40 | 3 | 34 | 14 | 83 | 0.003 | 2LC0100-4AA ■ ■ -0AA0 | 3.3 | |
| 125 | 240 | 5100 | | 55 | 55 | 125 | 100 | 100 | 50 | 3 | 36 | 18 | 103 | 0.006 | 2LC0100-5AA ■ ■ -0AA0 | 5.2 | |
| 140 | 360 | 4900 | | 60 | 60 | 140 | 100 | 100 | 55 | 3 | 34 | 20 | 113 | 0.007 | 2LC0100-6AA ■ ■ -0AA0 | 5.6 | |
| 160 | 560 | 4250 | | 65 | 65 | 160 | 108 | 108 | 60 | 4 | 39 | 20 | 124 | 0.01 | 2LC0100-7AA ■ ■ -0AA0 | 7.8 | |
| 180 | 880 | 3800 | | 75 | 75 | 180 | 125 | 125 | 70 | 4 | 42 | 20 | 144 | 0.02 | 2LC0100-8AA ■ ■ -0AA0 | 11.5 | |
| 200 | 1340 | 3400 | | 85 | 85 | 200 | 140 | 140 | 80 | 4 | 47 | 24 | 164 | 0.04 | 2LC0101-0AA ■ ■ -0AA0 | 16 | |
| 225 | 2000 | 3000 | | 90 | 90 | 225 | 150 | 150 | 90 | 4 | 52 | 18 | 184 | 0.07 | 2LC0101-1AA ■ ■ -0AA0 | 20 | |
| 250 | 2800 | 2750 | 46 | 100 | 46 | 100 | 250 | 165 | 165 | 100 | 5.5 | 60 | 18 | 205.5 | 0.12 | 2LC0101-2AA ■ ■ -0AA0 | 29 |
| 280 | 3900 | 2450 | 49 | 110 | 54 | 110 | 280 | 180 | 180 | 110 | 5.5 | 65 | 20 | 225.5 | 0.18 | 2LC0101-3AA ■ ■ -0AA0 | 38 |
| ØD1: | • Without finished bore – Without order codes | | | | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | 9 | |
| ØD2: | • Without finished bore – Without order codes | | | | | | | | | | | | | | | 1 | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | 9 | |

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX B coupling, size 95,
Part 1: Bore D1 42H7 mm, keyway to DIN 6885-1 and set screw,
Part 2: Bore D2 32H7 mm, keyway to DIN 6885-1 and set screw.

Product code:
2LC0100-3AA99-0AA0
L0X+M0T

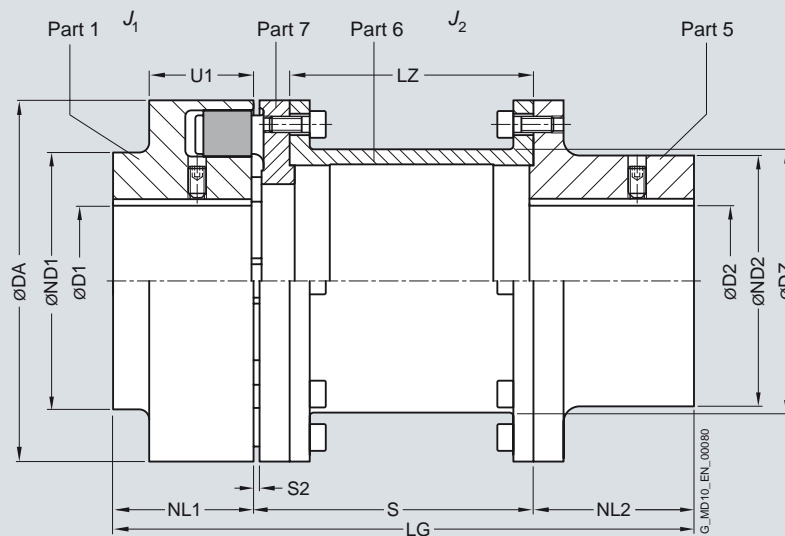
The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type H

Selection and ordering data



For dimension U1, see type A

| Size | Rated torque flexible type 80 ShoreA T_{KN} | Speed n_{Kmax} | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | | Mass moment of inertia | | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m |
|------|--|---------------------|--|------|------|------|-----|----|-----|-----|-----|-------|-----|-------|-----------------------|-------|------------------------|------------------|-------|--|---------------|
| | | | D1 | | D2 | | DA | | ND1 | ND2 | NL1 | NL2 | S2 | S | LZ | DZ | LG | J_1 | J_2 | | |
| | | | min. | max. | min. | max. | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | | | kgm ² | kgm ² | | kg | |
| 80 | 60 | 6000 | 30 | 32 | 80 | 80 | 55 | 30 | 45 | 5 | 100 | 87 | 51 | 175 | 0.0006 | 0.001 | 2LC0100-2AG ■ ■ -0AA0 | 2.6 | | | |
| | | | | | | | | | | | 140 | 127 | 215 | 0.001 | 2LC0100-2AG ■ ■ -0AB0 | 2.7 | | | | | |
| 95 | 100 | 5500 | 42 | 42 | 95 | 76 | 70 | 35 | 45 | 5 | 100 | 87 | 63 | 180 | 0.001 | 0.003 | 2LC0100-3AG ■ ■ -0AA0 | 3.5 | | | |
| | | | | | | | | | | | 140 | 127 | 220 | 0.003 | 2LC0100-3AG ■ ■ -0AB0 | 3.8 | | | | | |
| 110 | 160 | 5300 | 48 | 48 | 110 | 86 | 80 | 40 | 50 | 5 | 100 | 85 | 73 | 190 | 0.003 | 0.005 | 2LC0100-4AG ■ ■ -0AA0 | 5.2 | | | |
| | | | | | | | | | 50 | | 140 | 125 | 230 | 0.006 | 2LC0100-4AG ■ ■ -0AB0 | 5.4 | | | | | |
| | | | | | | | | | 60 | | 180 | 165 | 280 | 0.006 | 2LC0100-4AG ■ ■ -0AC0 | 6.0 | | | | | |
| 125 | 240 | 5100 | 55 | 55 | 125 | 100 | 90 | 50 | 50 | 5 | 100 | 85 | 85 | 200 | 0.005 | 0.01 | 2LC0100-5AG ■ ■ -0AA0 | 7.2 | | | |
| | | | | | | | | | 50 | | 140 | 125 | 240 | 0.01 | 2LC0100-5AG ■ ■ -0AB0 | 7.7 | | | | | |
| | | | | | | | | | 60 | | 180 | 165 | 290 | 0.011 | 2LC0100-5AG ■ ■ -0AC0 | 8.2 | | | | | |
| | | | | | | | | | 70 | | 200 | 185 | 320 | 0.012 | 2LC0100-5AG ■ ■ -0AD0 | 8.5 | | | | | |
| | | | | | | | | | 80 | | 250 | 235 | 380 | 0.012 | 2LC0100-5AG ■ ■ -0AE0 | 9 | | | | | |
| 140 | 360 | 4900 | 60 | 60 | 140 | 100 | 100 | 55 | 65 | 5 | 100 | 82 | 91 | 220 | 0.007 | 0.018 | 2LC0100-6AG ■ ■ -0AA0 | 10.0 | | | |
| | | | | | | | | | 65 | | 140 | 122 | 260 | 0.019 | 2LC0100-6AG ■ ■ -0AB0 | 10.5 | | | | | |
| | | | | | | | | | 65 | | 180 | 162 | 300 | 0.02 | 2LC0100-6AG ■ ■ -0AC0 | 11.0 | | | | | |
| | | | | | | | | | 65 | | 200 | 182 | 320 | 0.021 | 2LC0100-6AG ■ ■ -0AD0 | 11.3 | | | | | |
| | | | | | | | | | 80 | | 250 | 232 | 385 | 0.022 | 2LC0100-6AG ■ ■ -0AE0 | 12.0 | | | | | |
| 160 | 560 | 4250 | 65 | 65 | 160 | 108 | 108 | 60 | 70 | 6 | 100 | 81.5 | 111 | 230 | 0.013 | 0.03 | 2LC0100-7AG ■ ■ -0AA0 | 13 | | | |
| | | | | | | | | | 70 | | 140 | 121.5 | 270 | 0.032 | 2LC0100-7AG ■ ■ -0AB0 | 13.7 | | | | | |
| | | | | | | | | | 70 | | 180 | 161.5 | 310 | 0.034 | 2LC0100-7AG ■ ■ -0AC0 | 14.5 | | | | | |
| | | | | | | | | | 70 | | 200 | 181.5 | 330 | 0.035 | 2LC0100-7AG ■ ■ -0AD0 | 14.9 | | | | | |
| | | | | | | | | | 80 | | 250 | 231.5 | 390 | 0.037 | 2LC0100-7AG ■ ■ -0AE0 | 15.9 | | | | | |
| 180 | 880 | 3800 | 75 | 75 | 180 | 125 | 125 | 70 | 80 | 6 | 140 | 121.5 | 131 | 290 | 0.023 | 0.054 | 2LC0100-8AG ■ ■ -0AB0 | 18.5 | | | |
| | | | | | | | | | | | 180 | 161.5 | 330 | 0.058 | 2LC0100-8AG ■ ■ -0AC0 | 19.4 | | | | | |
| | | | | | | | | | | | 200 | 181.5 | 350 | 0.060 | 2LC0100-8AG ■ ■ -0AD0 | 21 | | | | | |
| | | | | | | | | | | | 250 | 231.5 | 400 | 0.065 | 2LC0100-8AG ■ ■ -0AE0 | 22 | | | | | |

$\varnothing D1$: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1

9

$\varnothing D2$: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

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9

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type H

| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|--------------------------------------|--|------------------|------|------|------|-----|-----|-----|-----|-----|-------|-----|-------|------------------|------------------|-----------------------|-----------------------|------------------------|-----|--|--------|
| | T_{KN} | n_{Kmax} | D1 | D2 | DA | ND1 | ND2 | NL1 | NL2 | S2 | S | LZ | DZ | LG | J_1 | J_2 | m | | | | | |
| | | | min. | max. | min. | max. | | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | kgm ² | kgm ² | kg | | | | | |
| 200 | 1340 | 3400 | 85 | 85 | 200 | 140 | 140 | 80 | 90 | 6 | 140 | 118.5 | 144 | 310 | 0.04 | 0.095 | 2LC0101-0AG ■ ■ -0AB0 | 25.6 | | | | |
| | | | | | | | | | | | 180 | 158.5 | | 350 | | 0.1 | 2LC0101-0AG ■ ■ -0AC0 | 26.5 | | | | |
| | | | | | | | | | | | 200 | 178.5 | | 370 | | 0.105 | 2LC0101-0AG ■ ■ -0AD0 | 27.2 | | | | |
| | | | | | | | | | | | 250 | 228.5 | | 420 | | 0.11 | 2LC0101-0AG ■ ■ -0AE0 | 28.5 | | | | |
| 225 | 2000 | 3000 | 90 | 90 | 225 | 150 | 150 | 90 | 100 | 6 | 140 | 118.5 | 169 | 330 | 0.07 | 0.158 | 2LC0101-1AG ■ ■ -0AB0 | 34 | | | | |
| | | | | | | | | | | | 180 | 158.5 | | 370 | | 0.16 | 2LC0101-1AG ■ ■ -0AC0 | 35 | | | | |
| | | | | | | | | | | | 200 | 178.5 | | 390 | | 0.17 | 2LC0101-1AG ■ ■ -0AD0 | 36 | | | | |
| | | | | | | | | | | | 250 | 228.5 | | 440 | | 0.18 | 2LC0101-1AG ■ ■ -0AE0 | 38 | | | | |
| 250 | 2800 | 2750 | 46 | 100 | 46 | 100 | 250 | 165 | 165 | 100 | 110 | 8 | 180 | 152.5 | 185 | 390 | 0.12 | 0.27 | 2LC0101-2AG ■ ■ -0AC0 | 48 | | |
| | | | | | | | | | | | | | 200 | 172.5 | | 410 | | 0.28 | 2LC0101-2AG ■ ■ -0AD0 | 50 | | |
| | | | | | | | | | | | | | 250 | 222.5 | | 460 | | 0.3 | 2LC0101-2AG ■ ■ -0AE0 | 52 | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 280 | 3900 | 2450 | 49 | 110 | 51 | 110 | 280 | 180 | 180 | 110 | 120 | 8 | 250 | 222.5 | 215 | 480 | 0.20 | 0.52 | 2LC0101-3AG ■ ■ -0AE0 | 70 | | |
| 315 | 5500 | 2150 | 49 | 100 | 51 | 120 | 315 | 165 | 200 | 125 | 140 | 8 | 250 | 222.5 | 250 | 515 | 0.32 | 0.87 | 2LC0101-4AG ■ ■ -0AE0 | 98 | | |
| | | | 90 | 120 | | | 200 | | | | | | | | | 0.35 | | 2LC0101-4AG ■ ■ -0AE0 | 100 | | | |
| 350 | 7700 | 2000 | 61 | 110 | 51 | 140 | 350 | 180 | 230 | 140 | 150 | 8 | 250 | 220.5 | 272 | 540 | 0.54 | 1.4 | 2LC0101-5AG ■ ■ -0AE0 | 120 | | |
| | | | 90 | 140 | | | 230 | | | | | | | | | 0.61 | | 2LC0101-5AG ■ ■ -0AE0 | 125 | | | |
| 400 | 10300 | 1700 | 66 | 120 | 51 | 150 | 400 | 200 | 250 | 160 | 180 | 8 | 250 | 185.5 | 310 | 590 | 1.0 | 2.9 | 2LC0101-6AG ■ ■ -0AE0 | 195 | | |
| | | | 100 | 150 | | | 250 | | | | | | | | | 1.1 | | 2LC0101-6AG ■ ■ -0AE0 | 200 | | | |
| 440 | 13500 | 1550 | 80 | 130 | 51 | 160 | 440 | 215 | 265 | 180 | 180 | 10 | 250 | 182 | 354 | 610 | 1.5 | 4.1 | 2LC0101-7AG ■ ■ -0AE0 | 225 | | |
| | | | 120 | 160 | | | 265 | | | | | | | | | 1.7 | | 2LC0101-7AG ■ ■ -0AE0 | 230 | | | |
| ØD1: | | <div><div>• Without finished bore – Without order codes</div><div>• Without finished bore sizes 315 to 440 for 2nd diameter range D1 – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | | 1 | | | | |
| | | | | | | | | | | | | | | | | | | 2 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| ØD2: | | <div><div>• Without finished bore – Without order codes</div><div>• Without finished bore sizes 315 to 440 for 2nd diameter range D2 – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | | | 1 | | | | |
| | | | | | | | | | | | | | | | | | | 2 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |

During assembly, the gap dimension S2 must not exceed the permissible tolerance of +1 mm.

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX H coupling, size 160, S = 200 mm,

Part 1: Bore D1 60H7 mm, keyway to DIN 6885-1 and set screw,

Part 2: Bore D2 55H7 mm, keyway to DIN 6885-1 and set screw.

Product code:

2LC0100-7AG99-0AD0

L1E+M1D

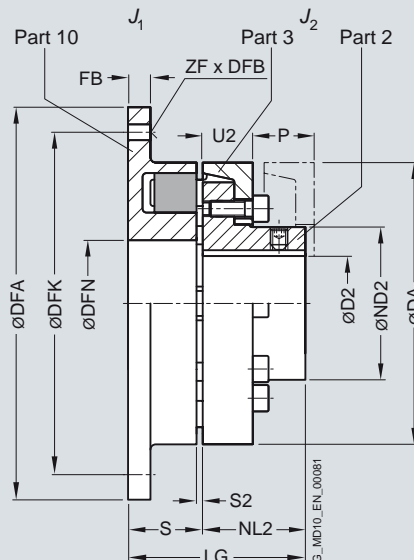
The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type D for easy elastomer flexible replacement

Selection and ordering data



For dimensions U2 and P, see type A

| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | Flange connection dimensions | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|--------------------------------------|-------|------------------------------|------|-----|-----|-----|------|-------|-------|-----|-----|------------------------------|----|-----------|----------------|----------------|------------------------|----------------------|--|--------|
| | | | Bore with keyway to DIN 6885 | | | | | | | | | | | | | | | | | | |
| | | | D2 | DA | ND2 | NL2 | S2 | S | LG | DFA | DFN | DFK | FB | ZF | DFB | J ₁ | J ₂ | m | | | |
| | | | min. | max. | | | | | | | | | h8 | H7 | | | | | | | |
| 110 | 160 | 5300 | 38 | 110 | 62 | 40 | 3 | 30 | 70 | 144 | 62 | 128 | 10 | 6 | 9 M8 | 0.003 | 0.003 | | 2LC0100-4AD1 ■ -0AA0 | 2.7 | |
| | | | | | | | | | | | | | | | | | | 2LC0100-4AD2 ■ -0AA0 | | | |
| 125 | 240 | 5100 | 45 | 125 | 75 | 50 | 3 | 34 | 84 | 158 | 75 | 142 | 10 | 6 | 9 M8 | 0.005 | 0.005 | 2LC0100-5AD1 ■ -0AA0 | 3.9 | | |
| | | | | | | | | | | | | | | | | | | 2LC0100-5AD2 ■ -0AA0 | | | |
| 140 | 360 | 4900 | 50 | 140 | 82 | 55 | 3 | 37 | 92 | 180 | 82 | 160 | 13 | 6 | 11 M10 | 0.011 | 0.008 | 2LC0100-6AD1 ■ -0AA0 | 5.6 | | |
| | | | | | | | | | | | | | | | | | | 2LC0100-6AD2 ■ -0AA0 | | | |
| 160 | 560 | 4250 | 58 | 160 | 95 | 60 | 4 | 43 | 103 | 200 | 95 | 180 | 13 | 7 | 11 M10 | 0.017 | 0.014 | 2LC0100-7AD1 ■ -0AA0 | 7.5 | | |
| | | | | | | | | | | | | | | | | | | 2LC0100-7AD2 ■ -0AA0 | | | |
| 180 | 880 | 3800 | 65 | 180 | 108 | 70 | 4 | 46 | 116 | 220 | 110 | 200 | 13 | 8 | 11 M10 | 0.026 | 0.025 | 2LC0100-8AD1 ■ -0AA0 | 10.3 | | |
| | | | | | | | | | | | | | | | | | | 2LC0100-8AD2 ■ -0AA0 | | | |
| 200 | 1340 | 3400 | 75 | 200 | 122 | 80 | 4 | 51 | 131 | 248 | 120 | 224 | 16 | 8 | 14 M12 | 0.051 | 0.04 | 2LC0101-0AD1 ■ -0AA0 | 14.7 | | |
| | | | | | | | | | | | | | | | | | | 2LC0101-0AD2 ■ -0AA0 | | | |
| 225 | 2000 | 3000 | 85 | 225 | 138 | 90 | 4 | 56 | 146 | 274 | 135 | 250 | 16 | 8 | 14 M12 | 0.085 | 0.08 | 2LC0101-1AD1 ■ -0AA0 | 19.5 | | |
| | | | | | | | | | | | | | | | | | | 2LC0101-1AD2 ■ -0AA0 | | | |
| 250 | 2800 | 2750 | 95 | 250 | 155 | 100 | 5.5 | 65.5 | 165.5 | 314 | 150 | 282 | 20 | 8 | 18 M16 | 0.16 | 0.13 | 2LC0101-2AD1 ■ -0AA0 | 28.0 | | |
| | | | | | | | | | | | | | | | | | | 2LC0101-2AD2 ■ -0AA0 | | | |
| 280 | 3900 | 2450 | 54 | 105 | 280 | 172 | 110 | 5.5 | 70.5 | 180.5 | 344 | 170 | 312 | 20 | 8 | 18 M16 | 0.24 | 0.2 | 2LC0101-3AD1 ■ -0AA0 | 35.0 | |
| | | | | | | | | | | | | | | | | | | 2LC0101-3AD2 ■ -0AA0 | | | |
| 315 | 5500 | 2150 | 46 | 100 | 315 | 165 | 125 | 5.5 | 75.5 | 200.5 | 380 | 200 | 348 | 22 | 9 | 18 | 0.4 | 0.32 | 2LC0101-4AD1 ■ -0AA0 | 47 | |
| | | | 90 | 120 | | 200 | | | | | | | | | | | 0.35 | | | 50 | |
| | 5500 | 2150 | 46 | 100 | 315 | 165 | 125 | 5.5 | 75.5 | 200.5 | 380 | 200 | 348 | 22 | 9 | M16 | 0.4 | 0.32 | 2LC0101-4AD2 ■ -0AA0 | 47 | |
| | | | 90 | 120 | | 200 | | | | | | | | | | | 0.35 | | | 50 | |
| 350 | 7700 | 2000 | 61 | 110 | 350 | 180 | 140 | 5.5 | 79.5 | 219.5 | 430 | 225 | 390 | 25 | 9 | 22 | 0.7 | 0.54 | 2LC0101-5AD1 ■ -0AA0 | 64 | |
| | | | 90 | 140 | | 230 | | | | | | | | | | | 0.61 | | | 67 | |
| | 7700 | 2000 | 61 | 110 | 350 | 180 | 140 | 5.5 | 79.5 | 219.5 | 430 | 225 | 390 | 25 | 9 | M20 | 0.7 | 0.54 | 2LC0101-5AD2 ■ -0AA0 | 64 | |
| | | | 90 | 140 | | 230 | | | | | | | | | | | 0.61 | | | 67 | |
| 400 | 10300 | 1700 | 66 | 120 | 400 | 200 | 160 | 5.5 | 83.5 | 243.5 | 480 | 265 | 440 | 25 | 10 | 22 | 1.1 | 1.0 | 2LC0101-6AD1 ■ -0AA0 | 86 | |
| | | | 100 | 150 | | 250 | | | | | | | | | | | 1.1 | | | 90 | |
| | 10300 | 1700 | 66 | 120 | 400 | 200 | 160 | 5.5 | 83.5 | 243.5 | 480 | 265 | 440 | 25 | 10 | M20 | 1.1 | 1.0 | 2LC0101-6AD2 ■ -0AA0 | 86 | |
| | | | 100 | 150 | | 250 | | | | | | | | | | | 1.1 | | | 90 | |

- ØD2:
- Without finished bore – Without order codes
 - Without finished bore – Only for sizes 315 to 520 in each case with a larger diameter D2 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type D for easy elastomer flexible replacement

| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | | | |
|------|--------------------------------------|------------|------------------------------|---------|-----|-----|-----|-----|-------|-------|--------|--------|-----|----|----|------------------------|-------|--|----------------------|--|--|---|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | | | | | | m | | | |
| | Nm | rpm | D2 min. | D2 max. | DA | NL2 | S2 | S | | LG | DFA h8 | DFN H7 | DFK | FB | ZF | DFB | J_1 | | J_2 | kg | | |
| 440 | 13500 | 1550 | 80 | 130 | 440 | 215 | 180 | 7.5 | 93.5 | 273.5 | 520 | 295 | 480 | 25 | 10 | 22 | 1.7 | 1.5 | 2LC0101-7AD1 ■ -0AA0 | 114 | | |
| | | | 120 | 160 | | 265 | | | | | | | | | | | | 1.7 | | 119 | | |
| | 13500 | 1550 | 80 | 130 | 440 | 215 | 180 | 7.5 | 93.5 | 273.5 | 520 | 295 | 480 | 25 | 10 | M20 | 1.7 | 1.5 | 2LC0101-7AD2 ■ -0AA0 | 114 | | |
| | | | 120 | 160 | | 265 | | | | | | | | | | | | 1.7 | | 119 | | |
| 480 | 16600 | 1400 | 90 | 145 | 480 | 240 | 190 | 7.5 | 97.5 | 287.5 | 575 | 325 | 528 | 30 | 10 | 26 | 2.7 | 2.3 | 2LC0101-8AD1 ■ -0AA0 | 146 | | |
| | | | 136 | 180 | | 300 | | | | | | | | | | | | 2.6 | | 155 | | |
| | 16600 | 1400 | 90 | 145 | 480 | 240 | 190 | 7.5 | 97.5 | 287.5 | 575 | 325 | 528 | 30 | 10 | M24 | 2.7 | 2.3 | 2LC0101-8AD2 ■ -0AA0 | 146 | | |
| | | | 136 | 180 | | 300 | | | | | | | | | | | | 2.6 | | 155 | | |
| 520 | 21200 | 1300 | 100 | 150 | 520 | 250 | 210 | 7.5 | 109.5 | 319.5 | 615 | 355 | 568 | 30 | 10 | 26 | 3.8 | 3.3 | 2LC0102-0AD1 ■ -0AA0 | 177 | | |
| | | | 140 | 190 | | 315 | | | | | | | | | | | | 3.7 | | 190 | | |
| | 21200 | 1300 | 100 | 150 | 520 | 250 | 210 | 7.5 | 109.5 | 319.5 | 615 | 355 | 568 | 30 | 10 | M24 | 3.8 | 3.3 | 2LC0102-0AD2 ■ -0AA0 | 177 | | |
| | | | 140 | 190 | | 315 | | | | | | | | | | | | 3.7 | | 190 | | |
| ØD2: | | | | | | | | | | | | | | | | | | | | • Without finished bore – Without order codes | | 1 |
| | | | | | | | | | | | | | | | | | | | | • Without finished bore – Only for sizes 315 to 520 in each case with a larger diameter D2 – Without order codes | | 2 |
| | | | | | | | | | | | | | | | | | | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | 9 |

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX D coupling, size 125,

Part 10: with through bores,

Part 2: Bore D2 38H7 mm, with keyway to DIN 6885-1 and set screw.

Product code:

2LC0100-5AD19-0AA0

MOV

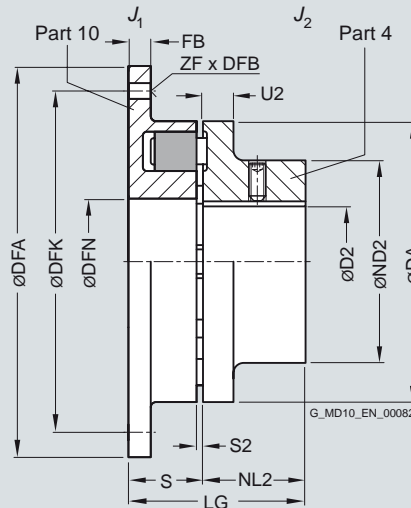
The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type E

Selection and ordering data



For dimension U2, see type B

| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | Flange connection dimensions | | | | | | | | Mass moment of inertia | | Product code | Weight |
|------|---|------------|------------------------------|-----|-----|-----|-----|-----|------|-------|------------------------------|--------|-----|----|-----|--------|------------------|----------------------|--|--------|--------------|--------|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | DA | ND2 | NL2 | S2 | S | LG | DFA h8 | DFN H7 | DFK | FB | ZF | DFB | J_2 | J_1 | Order codes for bore diameters and tolerances are specified in catalog section 3 | | | |
| | | | D2 from | to | | | | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | | | kgm ² | kgm ² | | kg | | |
| 68 | 34 | 7000 | 28 | 68 | 50 | 20 | 3 | 23 | 43 | 90 | 34 | 80 | 7 | 6 | 5.5 | 0.0004 | 0.0002 | 2LC0100-1AC1 ■ -0AA0 | 0.63 | | | |
| | | | | | | | | | | | | | | | M5 | | | 2LC0100-1AC2 ■ -0AA0 | | | | |
| 80 | 60 | 6000 | 38 | 80 | 68 | 30 | 3 | 24 | 54 | 106 | 42 | 94 | 8 | 6 | 6.6 | 0.0008 | 0.0006 | 2LC0100-2AC1 ■ -0AA0 | 1.35 | | | |
| | | | | | | | | | | | | | | | M6 | | | 2LC0100-2AC2 ■ -0AA0 | | | | |
| 95 | 100 | 5500 | 42 | 95 | 76 | 35 | 3 | 27 | 62 | 120 | 52 | 108 | 8 | 6 | 6.6 | 0.0014 | 0.0013 | 2LC0100-3AC1 ■ -0AA0 | 2.0 | | | |
| | | | | | | | | | | | | | | | M6 | | | 2LC0100-3AC2 ■ -0AA0 | | | | |
| 110 | 160 | 5300 | 48 | 110 | 86 | 40 | 3 | 30 | 70 | 144 | 62 | 128 | 10 | 6 | 9 | 0.0034 | 0.0030 | 2LC0100-4AC1 ■ -0AA0 | 3.0 | | | |
| | | | | | | | | | | | | | | | M8 | | | 2LC0100-4AC2 ■ -0AA0 | | | | |
| 125 | 240 | 5100 | 55 | 125 | 100 | 50 | 3 | 34 | 84 | 158 | 75 | 142 | 10 | 6 | 9 | 0.0052 | 0.0060 | 2LC0100-5AC1 ■ -0AA0 | 4.5 | | | |
| | | | | | | | | | | | | | | | M8 | | | 2LC0100-5AC2 ■ -0AA0 | | | | |
| 140 | 360 | 4900 | 60 | 140 | 100 | 55 | 3 | 37 | 92 | 180 | 82 | 160 | 13 | 6 | 11 | 0.011 | 0.007 | 2LC0100-6AC1 ■ -0AA0 | 5.6 | | | |
| | | | | | | | | | | | | | | | M10 | | | 2LC0100-6AC2 ■ -0AA0 | | | | |
| 160 | 560 | 4250 | 65 | 160 | 108 | 60 | 4 | 43 | 103 | 200 | 95 | 180 | 13 | 7 | 11 | 0.017 | 0.01 | 2LC0100-7AC1 ■ -0AA0 | 7.2 | | | |
| | | | | | | | | | | | | | | | M10 | | | 2LC0100-7AC2 ■ -0AA0 | | | | |
| 180 | 880 | 3800 | 75 | 180 | 125 | 70 | 4 | 46 | 116 | 220 | 110 | 200 | 13 | 8 | 11 | 0.026 | 0.02 | 2LC0100-8AC1 ■ -0AA0 | 10.3 | | | |
| | | | | | | | | | | | | | | | M10 | | | 2LC0100-8AC2 ■ -0AA0 | | | | |
| 200 | 1340 | 3400 | 85 | 200 | 140 | 80 | 4 | 51 | 131 | 248 | 120 | 224 | 16 | 8 | 14 | 0.051 | 0.04 | 2LC0101-0AC1 ■ -0AA0 | 14 | | | |
| | | | | | | | | | | | | | | | M12 | | | 2LC0101-0AC2 ■ -0AA0 | | | | |
| 225 | 2000 | 3000 | 90 | 225 | 150 | 90 | 4 | 56 | 146 | 274 | 135 | 250 | 16 | 8 | 14 | 0.085 | 0.7 | 2LC0101-1AC1 ■ -0AA0 | 17 | | | |
| | | | | | | | | | | | | | | | M12 | | | 2LC0101-1AC2 ■ -0AA0 | | | | |
| 250 | 2800 | 2750 | 46 | 100 | 250 | 165 | 100 | 5.5 | 65.5 | 165.5 | 314 | 150 | 282 | 20 | 8 | 18 | 0.16 | 0.12 | 2LC0101-2AC1 ■ -0AA0 | 26 | | |
| | | | | | | | | | | | | | | | M16 | | | 2LC0101-2AC2 ■ -0AA0 | | | | |
| 280 | 3900 | 2450 | 54 | 110 | 280 | 180 | 110 | 5.5 | 70.5 | 180.5 | 344 | 170 | 312 | 20 | 8 | 18 | 0.24 | 0.13 | 2LC0101-3AC1 ■ -0AA0 | 32 | | |
| | | | | | | | | | | | | | | | M16 | | | 2LC0101-3AC2 ■ -0AA0 | | | | |
| ØD2: | <div>• Without finished bore – Without order codes</div> <div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div> | | | | | | | | | | | | | | | | | | | 1 9 | | |

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
9

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX E coupling, size 125,
Part 10 with through bores,
Part 4: Bore D2 38H7 mm, keyway to DIN 6885-1 and set screw.

Product code:

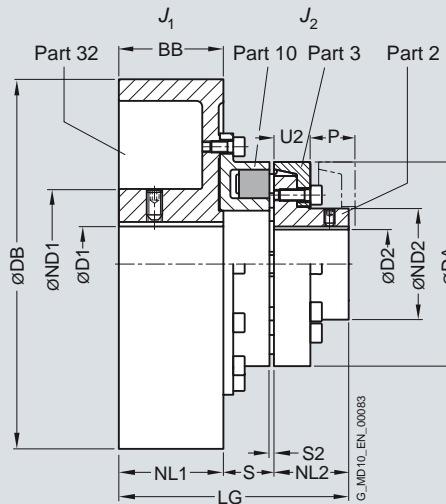
2LC0100-5AC19-0AA0
M0V

The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type P with brake drum
for easy elastomer replacement

Selection and ordering data



For dimensions U2 and P, see type A

| Size | Rated torque flexible type 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|------|--------------------------------------|--|------------------|------|------|------|-----|--------|-----|-----|------|------|------|-------|------------------|------------------------|-----------------------|--|-----------------------|-----|
| | T_{KN} | n_{kmax} | D1 | D2 | DA | ND1 | ND2 | NL1/BB | NL2 | S2 | S | DB | U2 | LG | J_1 | J_2 | m | | | |
| | Nm | rpm | min. | max. | min. | max. | | | | | | | | | kgm ² | kgm ² | kg | | | |
| 125 | 240 | 3400 | 55 | 45 | 125 | 84 | 75 | 75 | 50 | 3 | 31 | 200 | 23 | 156 | 0.043 | 0.004 | 2LC0100-5AF ■ ■ -0BA0 | 10.9 | | |
| 140 | 360 | 2750 | 60 | 50 | 140 | 128 | 82 | 95 | 55 | 3 | 34 | 250 | 28 | 184 | 0.13 | 0.008 | 2LC0100-6AF ■ ■ -0CA0 | 21 | | |
| 160 | 560 | 2750 | 70 | 58 | 160 | 128 | 95 | 95 | 60 | 4 | 40 | 250 | 28 | 195 | 0.14 | 0.014 | 2LC0100-7AF ■ ■ -0CA0 | 22 | | |
| 180 | 880 | 2750 | 70 | 65 | 180 | 128 | 108 | 95 | 70 | 4 | 41 | 250 | 30 | 206 | 0.16 | 0.025 | 2LC0100-8AF ■ ■ -0CA0 | 28 | | |
| | | 2150 | 80 | | | 128 | | 118 | | | 43 | 315 | | 231 | 0.35 | | 2LC0100-8AF ■ ■ -0DA0 | 35 | | |
| 200 | 1340 | 2150 | 80 | 75 | 200 | 128 | 122 | 118 | 80 | 4 | 48 | 315 | 32 | 246 | 0.37 | 0.04 | 2LC0101-0AF ■ ■ -0DA0 | 40 | | |
| | | 1700 | 90 | | | 160 | | 150 | | | 48 | 400 | | 278 | 1.1 | | 2LC0101-0AF ■ ■ -0FA0 | 60 | | |
| | | 1400 | 110 | | | 175 | | 190 | | | 48 | 500 | | 318 | 2.8 | | 2LC0101-0AF ■ ■ -0HA0 | 98 | | |
| 225 | 2000 | 2150 | 80 | 85 | 225 | 128 | 138 | 118 | 90 | 4 | 51 | 315 | 38 | 259 | 0.39 | 0.08 | 2LC0101-1AF ■ ■ -0DA0 | 47 | | |
| | | 1700 | 90 | | | 160 | | 150 | | | 53 | 400 | | 293 | 1.1 | | 2LC0101-1AF ■ ■ -0FA0 | 65 | | |
| | | 1400 | 38 | 110 | | 175 | | 190 | | | 53 | 500 | | 333 | 3.1 | | 2LC0101-1AF ■ ■ -0HA0 | 104 | | |
| 250 | 2800 | 1700 | 100 | 95 | 250 | 160 | 155 | 150 | 100 | 5.5 | 63.5 | 400 | 42 | 313.5 | 1.16 | 0.13 | 2LC0101-2AF ■ ■ -0FA0 | 76 | | |
| | | 1400 | 38 | 110 | | 175 | | 190 | | | 63.5 | 500 | | 353.5 | 2.9 | | 2LC0101-2AF ■ ■ -0HA0 | 113 | | |
| 280 | 3900 | 1700 | 100 | 54 | 105 | 280 | 160 | 172 | 150 | 110 | 5.5 | 65.5 | 400 | 42 | 325.5 | 1.24 | 0.2 | 2LC0101-3AF ■ ■ -0FA0 | 85 | |
| | | 1400 | 48 | 110 | | 175 | | 190 | | | 68.5 | 500 | | 368.5 | 3.1 | | 2LC0101-3AF ■ ■ -0HA0 | 118 | | |
| | | 1100 | 48 | 110 | | 175 | | 236 | | | 68.5 | 630 | | 414.5 | 8.0 | | 2LC0101-3AF ■ ■ -0KA0 | 171 | | |
| 315 | 5500 | 1700 | 100 | 46 | 100 | 315 | 160 | 165 | 150 | 125 | 5.5 | 73.5 | 400 | 47 | 348.5 | 1.4 | 0.32 | 2LC0101-4AF ■ ■ -0FA0 | 96 | |
| | | 1400 | 48 | 110 | | 175 | | 190 | | | 73.5 | 500 | | 388.5 | 3.3 | | 2LC0101-4AF ■ ■ -0HA0 | 134 | | |
| | | 1100 | 48 | 110 | | 175 | | 236 | | | 73.5 | 630 | | 434.5 | 8.2 | | 2LC0101-4AF ■ ■ -0KA0 | 183 | | |
| | | 1000 | 55 | 120 | | 192 | | 265 | | | 73.5 | 710 | | 463.5 | 14.2 | | 2LC0101-4AF ■ ■ -0LA0 | 236 | | |
| 315 | 5500 | 1700 | 100 | 90 | 120 | 315 | 160 | 200 | 150 | 125 | 5.5 | 73.5 | 400 | 47 | 348.5 | 1.4 | 0.35 | 2LC0101-4AF ■ ■ -0FA0 | 97 | |
| | | 1400 | 48 | 110 | | 175 | | 190 | | | 73.5 | 500 | | 388.5 | 3.3 | | 2LC0101-4AF ■ ■ -0HA0 | 136 | | |
| | | 1100 | 48 | 110 | | 175 | | 236 | | | 73.5 | 630 | | 434.5 | 8.2 | | 2LC0101-4AF ■ ■ -0KA0 | 185 | | |
| | | 1000 | 55 | 120 | | 192 | | 265 | | | 73.5 | 710 | | 463.5 | 14.2 | | 2LC0101-4AF ■ ■ -0LA0 | 238 | | |
| 350 | 7700 | 1100 | 48 | 110 | 61 | 110 | 350 | 175 | 180 | 236 | 140 | 5.5 | 76.5 | 630 | 51 | 452.5 | 8.5 | 0.54 | 2LC0101-5AF ■ ■ -0KA0 | 200 |
| | | 1000 | 55 | 120 | | 192 | | 265 | | | 76.5 | 710 | | 481.5 | 14.6 | | 2LC0101-5AF ■ ■ -0LA0 | 253 | | |
| 350 | 7700 | 1100 | 48 | 110 | 90 | 140 | 350 | 175 | 230 | 236 | 140 | 5.5 | 76.5 | 630 | 51 | 452.5 | 8.5 | 0.61 | 2LC0101-5AF ■ ■ -0KA0 | 203 |
| | | 1000 | 55 | 120 | | 192 | | 265 | | | 76.5 | 710 | | 481.5 | 14.6 | | 2LC0101-5AF ■ ■ -0LA0 | 257 | | |
| ØD1: | | ● Without finished bore – Without order codes | | | | | | | | | | | | | | | | 1 | | |
| | | ● With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 9 | | |
| ØD2: | | ● Without finished bore – Without order codes | | | | | | | | | | | | | | | | 1 | | |
| | | ● With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 9 | | |

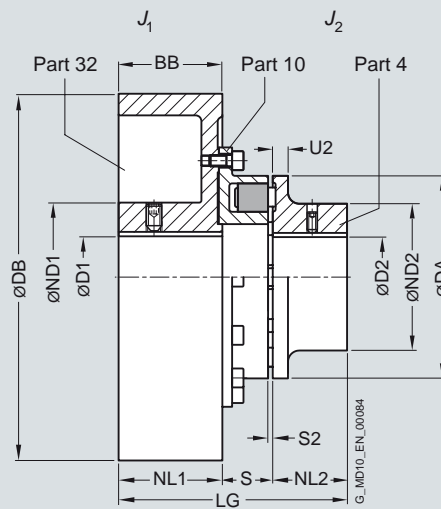
Weights and mass moments of inertia apply to maximum bore diameters.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type O with brake drum

Selection and ordering data



| Size | Rated torque flexible type 80 ShoreA T_{KN} | Speed n_{Kmax} | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m |
|------|--|---------------------|--|------|-----|-----|-----|-----------|-----|-----|-----|------|-----|-----|------------------|------------------|------------------------|-----------------------|--|---------------|
| | | | D1 | D2 | DA | ND1 | ND2 | NL1 BB | NL2 | S2 | S | DB | U2 | LG | J_1 | J_2 | | | | |
| | | | min. | max. | | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | kgm ² | kgm ² | | kg | | |
| 125 | 240 | 3400 | 55 | 55 | 125 | 84 | 100 | 75 | 50 | 3 | 31 | 200 | 18 | 156 | 0.043 | 0.006 | 2LC0100-5AE ■ ■ -0BA0 | 11.3 | | |
| 140 | 360 | 2750 | 60 | 60 | 140 | 128 | 100 | 95 | 55 | 3 | 34 | 250 | 20 | 184 | 0.13 | 0.007 | 2LC0100-6AE ■ ■ -0CA0 | 22.3 | | |
| 160 | 560 | 2750 | 70 | 65 | 160 | 128 | 108 | 95 | 60 | 4 | 40 | 250 | 20 | 195 | 0.14 | 0.01 | 2LC0100-7AE ■ ■ -0CA0 | 24 | | |
| 180 | 880 | 2750 | 70 | 75 | 180 | 128 | 125 | 95 | 70 | 4 | 41 | 250 | 20 | 206 | 0.16 | 0.02 | 2LC0100-8AE ■ ■ -0CA0 | 28 | | |
| | | 2150 | 80 | | | | | 118 | | | 43 | 315 | | 231 | 0.35 | | 2LC0100-8AE ■ ■ -0DA0 | 35 | | |
| 200 | 1340 | 2150 | 80 | 85 | 200 | 128 | 140 | 118 | 80 | 4 | 48 | 315 | 24 | 246 | 0.37 | 0.04 | 2LC0101-0AE ■ ■ -0DA0 | 40 | | |
| | | 1700 | 90 | | | | | 160 | | | 48 | 400 | | 278 | 1.10 | | 2LC0101-0AE ■ ■ -0FA0 | 60 | | |
| | | 1400 | 110 | | | | | 175 | | | 48 | 500 | | 318 | 2.80 | | 2LC0101-0AE ■ ■ -0HA0 | 98 | | |
| 225 | 2000 | 2150 | 80 | 90 | 225 | 128 | 150 | 118 | 90 | 4 | 51 | 315 | 18 | 259 | 0.39 | 0.07 | 2LC0101-1AE ■ ■ -0DA0 | 45 | | |
| | | 1700 | 90 | | | | | 160 | | | 53 | 400 | | 293 | 1.10 | | 2LC0101-1AE ■ ■ -0FA0 | 63 | | |
| | | 1400 | 38 | 110 | | | | 175 | | | 53 | 500 | | 333 | 3.10 | | 2LC0101-1AE ■ ■ -0HA0 | 102 | | |
| 250 | 2800 | 1700 | 100 | 46 | 100 | 250 | 160 | 165 | 150 | 100 | 5.5 | 63.5 | 400 | 18 | 313.5 | 1.16 | 0.12 | 2LC0101-2AE ■ ■ -0FA0 | 73 | |
| | | 1400 | 38 | 110 | | | | 175 | | | | 63.5 | 500 | | 353.5 | 2.90 | | 2LC0101-2AE ■ ■ -0HA0 | 108 | |
| 280 | 3900 | 1700 | 110 | 54 | 110 | 280 | 160 | 180 | 150 | 110 | 5.5 | 65.5 | 400 | 20 | 325.5 | 1.24 | 0.18 | 2LC0101-3AE ■ ■ -0FA0 | 82 | |
| | | 1400 | 48 | | | | | 175 | | | | 68.5 | 500 | | 368.5 | 3.10 | | 2LC0101-3AE ■ ■ -0HA0 | 115 | |
| | | 1100 | 48 | | | | | 175 | | | | 68.5 | 630 | | 414.5 | 8.0 | | 2LC0101-3AE ■ ■ -0KA0 | 168 | |

ØD1: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX O coupling, size 200,
brake drum 315 x 118 mm,
Part 32: Bore D1 55H7 mm, keyway to DIN 6885 P9 and set
screw,
Part 4: Bore D2 60H7 mm, keyway to DIN 6885 and set screw.

Coupling micro-balanced G6.3 at 1500 rpm in accordance with
half parallel key standard.

Product code:

2LC0101-0AE99-0DA0-Z
L1D+M1E+W02

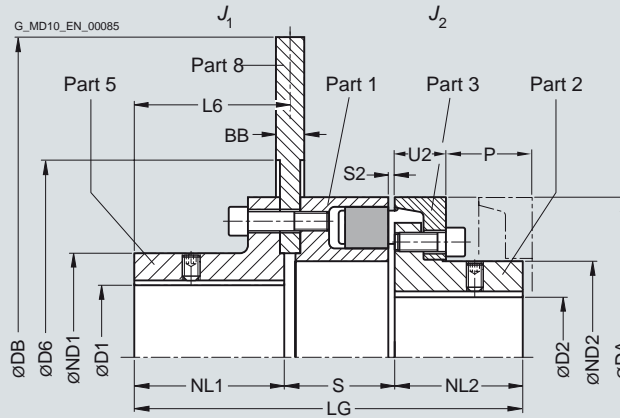
The product code applies to standard flexibles of 80 ShoreA;
the product code for alternative flexible types is available on
request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type DBDR with brake disk
for easy elastomer flexible replacement

Selection and ordering data



For dimensions U2 and P, see type A

| Size | Rated torque flexible type 80 ShoreA | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | | Product code | Weight |
|------|--------------------------------------|------------------|---------|---------|-----|-----|-----|-----|-------|----|---------|---------|------|-----|--------|-----------------------------|------------------------|---|-------------|
| | T_{KN} Nm | D1 max. | D2 min. | DA max. | ND1 | ND2 | NL1 | NL2 | S | S2 | DB min. | D6 min. | BB | L6 | LG | J_1 min. kgm ² | J_2 kgm ² | Plain text specification DB; BB; D6; NL1 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 | m min. kg |
| 140 | 360 | 55 | 50 | 140 | 85 | 82 | 72 | 55 | 54.35 | 3 | 315 | 175 | 12.7 | 74 | 181.35 | 0.11 | 0.008 | 2LC0100-6AV ■ ■ -0ZA0 P0Y | 15.5 |
| | | | | | | | 72 | | 57.5 | | | | 15 | 76 | 184.5 | 0.13 | | | 17 |
| | | | | | | | 188 | | 73 | | | | 30 | 200 | 316 | 0.24 | | | 28.5 |
| 160 | 560 | 70 | 58 | 160 | 105 | 95 | 90 | 60 | 58.35 | 4 | 315 | 175 | 12.7 | 91 | 208.35 | 0.12 | 0.014 | 2LC0100-7AV ■ ■ -0ZA0 P0Y | 19 |
| | | | | | | | 90 | | 62.5 | | | | 15 | 94 | 212.5 | 0.14 | | | 20.5 |
| | | | | | | | 188 | | 78 | | | | 30 | 200 | 326 | 0.26 | | | 32 |
| 180 | 880 | 80 | 65 | 180 | 125 | 108 | 90 | 70 | 60.35 | 4 | 355 | 200 | 12.7 | 91 | 220.35 | 0.35 | 0.025 | 2LC0100-8AV ■ ■ -0ZA0 P0Y | 25.5 |
| | | | | | | | 90 | | 64.5 | | | | 15 | 94 | 224.5 | 0.37 | | | 27 |
| | | | | | | | 188 | | 80 | | | | 30 | 200 | 338 | 0.57 | | | 43 |
| 200 | 1340 | 90 | 75 | 200 | 135 | 122 | 95 | 80 | 67.35 | 4 | 400 | 220 | 12.7 | 97 | 242.35 | 0.32 | 0.04 | 2LC0101-0AV ■ ■ -0ZA0 P0Y | 33 |
| | | | | | | | 95 | | 70.5 | | | | 15 | 99 | 245.5 | 0.36 | | | 36 |
| | | | | | | | 188 | | 86 | | | | 30 | 200 | 354 | 0.67 | | | 55 |
| 225 | 2000 | 105 | 85 | 225 | 160 | 138 | 100 | 90 | 72.35 | 4 | 450 | 250 | 12.7 | 103 | 262.35 | 0.52 | 0.08 | 2LC0101-1AV ■ ■ -0ZA0 P0Y | 44 |
| | | | | | | | 100 | | 74.5 | | | | 15 | 104 | 264.5 | 0.59 | | | 47 |
| | | | | | | | 188 | | 90 | | | | 30 | 200 | 368 | 1.1 | | | 72 |
| 250 | 2800 | 110 | 95 | 250 | 170 | 155 | 105 | 100 | 83.35 | 6 | 500 | 280 | 12.7 | 107 | 288.35 | 1.6 | 0.13 | 2LC0101-2AV ■ ■ -0ZA0 P0Y | 58 |
| | | | | | | | 105 | | 86.5 | | | | 15 | 109 | 291.5 | 1.7 | | | 61 |
| | | | | | | | 188 | | 102 | | | | 30 | 200 | 390 | 2.5 | | | 90 |
| 280 | 3900 | 130 | 54 | 105 | 280 | 200 | 120 | 110 | 87.35 | 6 | 560 | 310 | 12.7 | 122 | 317.35 | 1.3 | 0.20 | 2LC0101-3AV ■ ■ -0ZA0 P0Y | 76 |
| | | | | | | | 120 | | 90.5 | | | | 15 | 124 | 320.5 | 1.5 | | | 80 |
| | | | | | | | 188 | | 106 | | | | 30 | 200 | 404 | 2.7 | | | 115 |
| 315 | 5500 | 130 | 46 | 100 | 315 | 200 | 130 | 125 | 87.35 | 6 | 630 | 350 | 12.7 | 130 | 342.35 | 2.1 | 0.32 | 2LC0101-4AV ■ ■ -0ZA0 P0Y | 98 |
| | | | | | | | 130 | | 92.5 | | | | 15 | 134 | 347.5 | 2.3 | | | 100 |
| | | | | | | | 188 | | 108 | | | | 30 | 200 | 421 | 4.2 | | | 140 |
| 315 | 5500 | 130 | 90 | 120 | 315 | 200 | 130 | 125 | 87.35 | 6 | 630 | 350 | 12.7 | 130 | 342.35 | 2.1 | 0.35 | 2LC0101-4AV ■ ■ -0ZA0 P0Y | 100 |
| | | | | | | | 130 | | 92.5 | | | | 15 | 134 | 347.5 | 2.3 | | | 105 |
| | | | | | | | 188 | | 108 | | | | 30 | 200 | 421 | 4.2 | | | 145 |
| 350 | 7700 | 140 | 61 | 110 | 350 | 230 | 135 | 140 | 97.35 | 6 | 710 | 390 | 12.7 | 136 | 372.35 | 3.3 | 0.54 | 2LC0101-5AV ■ ■ -0ZA0 P0Y | 130 |
| | | | | | | | 135 | | 101.5 | | | | 15 | 139 | 376.5 | 3.8 | | | 135 |
| | | | | | | | 188 | | 117 | | | | 30 | 200 | 445 | 6.7 | | | 190 |
| 350 | 7700 | 140 | 90 | 140 | 350 | 230 | 135 | 140 | 97.35 | 6 | 710 | 390 | 12.7 | 136 | 372.35 | 3.3 | 0.61 | 2LC0101-5AV ■ ■ -0ZA0 P0Y | 135 |
| | | | | | | | 135 | | 101.5 | | | | 15 | 139 | 376.5 | 3.8 | | | 140 |
| | | | | | | | 188 | | 117 | | | | 30 | 200 | 445 | 6.7 | | | 190 |

ØD1: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

Weights and mass moments of inertia apply to maximum bore diameters.

Maximum speed in rpm
 $n_{max} = 1146/DB$ DB in m

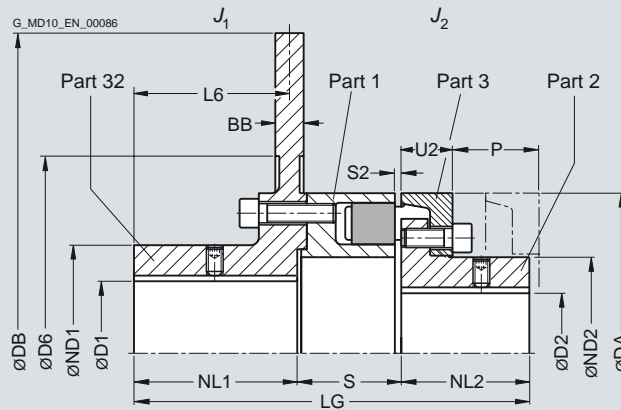
Other brake disk diameters DB and brake disk widths BB on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type DBD with brake disk
for easy elastomer flexible replacement

Selection and ordering data



For dimensions U2 and P, see type A

| Size | Rated torque flexible type 80 ShoreA T_{KN} Nm | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia J_1 J_2 min. kgm ² kgm ² | | Product code Plain text specification DB; BB; D6; NL1 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m min. kg |
|------|--|------------------|------|------|-----|-----|-------|-----|------|------|------|-----|------|-----|-----|--|-------|--|--------------------------|
| | | D1 | D2 | DA | ND1 | ND2 | NL1 | NL2 | S | S2 | DB | D6 | BB | L6 | LG | | | | |
| | | max. | min. | max. | | | | | | min. | min. | | | | | | | | |
| 140 | 360 | 55 | 50 | 140 | 85 | 82 | 81.5 | 55 | 49.5 | 3 | 315 | 175 | 12.7 | 74 | 186 | 0.10 | 0.008 | 2LC0100-6AU ■ ■ -0ZA0 P0Y | 15 |
| | | | | | | | 81.5 | | | | | | 15 | 73 | 186 | 0.12 | | | 16 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 316 | 0.22 | | | 26 |
| | | | | | | | | | | | | | | | | | | | |
| 160 | 560 | 70 | 58 | 160 | 105 | 95 | 98.5 | 60 | 54.5 | 4 | 315 | 175 | 12.7 | 91 | 213 | 0.11 | 0.014 | 2LC0100-7AU ■ ■ -0ZA0 P0Y | 18 |
| | | | | | | | 98.5 | | | | | | 15 | 90 | 213 | 0.13 | | | 19 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 326 | 0.23 | | | 30 |
| | | | | | | | | | | | | | | | | | | | |
| 180 | 880 | 80 | 65 | 180 | 125 | 108 | 98.5 | 70 | 56.5 | 4 | 355 | 200 | 12.7 | 91 | 225 | 0.33 | 0.025 | 2LC0100-8AU ■ ■ -0ZA0 P0Y | 24 |
| | | | | | | | 98.5 | | | | | | 15 | 90 | 225 | 0.36 | | | 25.5 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 338 | 0.53 | | | 40 |
| | | | | | | | | | | | | | | | | | | | |
| 200 | 1340 | 90 | 75 | 200 | 135 | 122 | 104.5 | 80 | 62.5 | 4 | 400 | 220 | 12.7 | 97 | 247 | 0.30 | 0.04 | 2LC0101-0AU ■ ■ -0ZA0 P0Y | 32.5 |
| | | | | | | | 104.5 | | | | | | 15 | 96 | 247 | 0.34 | | | 34 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 354 | 0.61 | | | 51 |
| | | | | | | | | | | | | | | | | | | | |
| 225 | 2000 | 105 | 85 | 225 | 160 | 138 | 111.5 | 90 | 66.5 | 4 | 450 | 250 | 12.7 | 103 | 268 | 0.48 | 0.08 | 2LC0101-1AU ■ ■ -0ZA0 P0Y | 43 |
| | | | | | | | 111.5 | | | | | | 15 | 102 | 268 | 0.55 | | | 45 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 368 | 1.0 | | | 66 |
| | | | | | | | | | | | | | | | | | | | |
| 250 | 2800 | 110 | 95 | 250 | 170 | 155 | 116.5 | 100 | 78.5 | 6 | 500 | 280 | 12.7 | 107 | 295 | 1.5 | 0.13 | 2LC0101-2AU ■ ■ -0ZA0 P0Y | 56 |
| | | | | | | | 116.5 | | | | | | 15 | 106 | 295 | 1.6 | | | 58 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 390 | 2.3 | | | 83 |
| | | | | | | | | | | | | | | | | | | | |
| 280 | 3900 | 130 | 54 | 105 | 280 | 200 | 131.5 | 110 | 82.5 | 6 | 560 | 310 | 12.7 | 122 | 324 | 1.2 | 0.20 | 2LC0101-3AU ■ ■ -0ZA0 P0Y | 73 |
| | | | | | | | 131.5 | | | | | | 15 | 121 | 324 | 1.3 | | | 76 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 404 | 2.4 | | | 107 |
| | | | | | | | | | | | | | | | | | | | |
| 315 | 5500 | 130 | 46 | 100 | 315 | 200 | 141.5 | 125 | 87.5 | 6 | 630 | 350 | 12.7 | 130 | 351 | 1.9 | 0.32 | 2LC0101-4AU ■ ■ -0ZA0 P0Y | 93 |
| | | | | | | | 141.5 | | | | | | 15 | 129 | 351 | 2.1 | | | 97 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 421 | 3.8 | | | 130 |
| | | | | | | | | | | | | | | | | | | | |
| 315 | 5500 | 130 | 90 | 120 | 315 | 200 | 141.5 | 125 | 87.5 | 6 | 630 | 350 | 12.7 | 130 | 351 | 1.9 | 0.35 | 2LC0101-4AU ■ ■ -0ZA0 P0Y | 96 |
| | | | | | | | 141.5 | | | | | | 15 | 129 | 351 | 2.1 | | | 100 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 421 | 3.8 | | | 135 |
| | | | | | | | | | | | | | | | | | | | |
| 350 | 7700 | 140 | 61 | 110 | 350 | 230 | 146.5 | 140 | 93.5 | 6 | 710 | 390 | 12.7 | 136 | 380 | 3.8 | 0.54 | 2LC0101-5AU ■ ■ -0ZA0 P0Y | 145 |
| | | | | | | | 146.5 | | | | | | 15 | 134 | 380 | 4.2 | | | 150 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 445 | 6.0 | | | 170 |
| | | | | | | | | | | | | | | | | | | | |
| 350 | 7700 | 140 | 90 | 140 | 350 | 230 | 146.5 | 140 | 93.5 | 6 | 710 | 390 | 12.7 | 136 | 380 | 3.8 | 0.61 | 2LC0101-5AU ■ ■ -0ZA0 P0Y | 150 |
| | | | | | | | 146.5 | | | | | | 15 | 134 | 380 | 4.2 | | | 155 |
| | | | | | | | 211.5 | | | | | | 30 | 200 | 445 | 6.0 | | | 175 |
| | | | | | | | | | | | | | | | | | | | |

ØD1: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

ØD2: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

Weights and mass moments of inertia apply to maximum bore diameters.

Maximum speed in rpm
 $n_{max} = 1146/DB$ DB in m

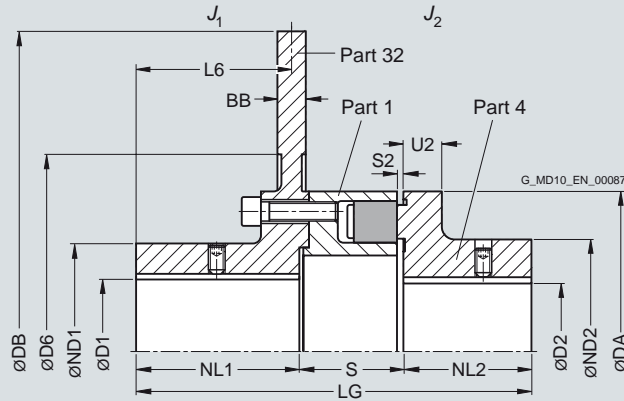
Other brake disk diameters DB and brake disk widths BB on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type EBD with brake disk

Selection and ordering data



For dimension U2, see type B

| Size | Rated torque flexible type 80 ShoreA T_{KN} Nm | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | | Mass moment of inertia | | Product code Plain text specification DB; BB; D6; NL1 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m min. kg |
|---|--|--|------------|------------|-----|-----|----------------|-----|------|----|------------|------------|------------------|-------------------|-------------------|-----------------------------------|---------------------------|--|-----------------------------|
| | | D1 max. | D2 min. | DA max. | ND1 | ND2 | NL1 | NL2 | S | S2 | DB min. | D6 min. | BB | L6 | LG | J_1 min. kgm ² | J_2 kgm ² | | |
| 140 | 360 | 55 | 60 | 140 | 85 | 100 | 81.5 211.5 | 55 | 49.5 | 3 | 315 | 175 | 12.7 15 30 | 74 73 200 | 186 186 316 | 0.10 0.12 0.22 | 0.007 | 2LC0100-6AW ■ ■ -0ZA0 P0Y | 15 16 26 |
| 160 | 560 | 70 | 65 | 160 | 105 | 108 | 98.5 211.5 | 60 | 54.5 | 4 | 315 | 175 | 12.7 15 30 | 91 90 200 | 213 213 326 | 0.11 0.13 0.23 | 0.01 | 2LC0100-7AW ■ ■ -0ZA0 P0Y | 18 19 30 |
| 180 | 880 | 80 | 75 | 180 | 125 | 125 | 98.5 211.5 | 70 | 56.5 | 4 | 355 | 200 | 12.7 15 30 | 91 90 200 | 225 225 338 | 0.33 0.36 0.53 | 0.02 | 2LC0100-8AW ■ ■ -0ZA0 P0Y | 24 25.5 40 |
| 200 | 1340 | 90 | 85 | 200 | 135 | 140 | 104.5 211.5 | 80 | 62.5 | 4 | 400 | 220 | 12.7 15 30 | 97 96 200 | 247 247 354 | 0.30 0.34 0.61 | 0.04 | 2LC0101-0AW ■ ■ -0ZA0 P0Y | 32.5 34 51 |
| 225 | 2000 | 105 | 90 | 225 | 160 | 150 | 111.5 211.5 | 90 | 66.5 | 4 | 450 | 250 | 12.7 15 30 | 103 102 200 | 268 268 368 | 0.48 0.55 1.0 | 0.07 | 2LC0101-1AW ■ ■ -0ZA0 P0Y | 43 45 66 |
| 250 | 2800 | 110 | 46 | 100 | 250 | 170 | 116.5 211.5 | 100 | 78.5 | 6 | 500 | 280 | 12.7 15 30 | 107 106 200 | 295 295 390 | 1.5 1.6 2.3 | 0.12 | 2LC0101-2AW ■ ■ -0ZA0 P0Y | 56 58 83 |
| 280 | 3900 | 130 | 54 | 110 | 280 | 200 | 131.5 211.5 | 110 | 82.5 | 6 | 560 | 310 | 12.7 15 30 | 122 121 200 | 324 324 404 | 1.2 1.3 2.4 | 0.18 | 2LC0101-3AW ■ ■ -0ZA0 P0Y | 73 76 107 |
| ØD1: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | 1 9 |
| ØD2: <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | 1 9 |

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX EBD coupling, size 200,
brake disk DIN 15432-AM-400 mm x 30 mm,
Bore D1 55H7 mm, with keyway to DIN 6885 P9 and set screw,
Bore D2 60H7 mm, with keyway to DIN 6885 and set screw.
Coupling micro-balanced G6.3 at 1500 rpm in accordance with the half parallel key standard.

Product code:

2LC0101-0AW99-0ZA0-Z
L1D+M1E+P0Y+W02

plain text to P0Y:

DB = 400 mm; BB = 30 mm; D6 = 220 mm; NL1 = 211.5 mm

The product code applies to standard flexibles of 80 ShoreA; the product code for alternative flexible types is available on request.

Other brake disk diameters DB and brake disk widths BB on request.

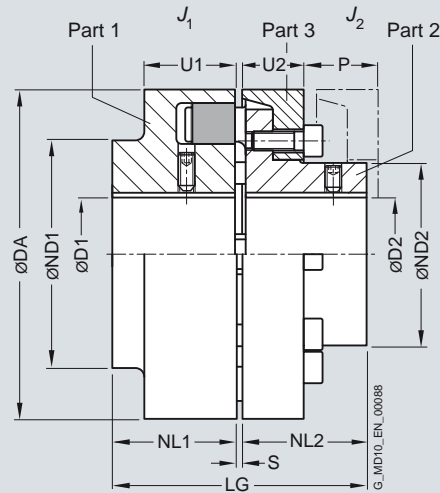
Maximum speed in rpm
 $n_{max} = 1146/\sqrt{DB}$ DB in m

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type ADS
for easy elastomer flexible replacement

Selection and ordering data



| Size | Rated torque | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | Product code | Weight | |
|------|--------------|------------|------------------------------|---------|-----|-----|-----|----------|-----|-----|-----|-----|-----|------------------|-----------------------|------------------------|--|--------|-----|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | | | J_1/J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | | m |
| | | | D1 min. | D2 min. | DA | ND1 | ND2 | NL1/ NL2 | S | U1 | U2 | P | LG | | | | | | |
| | Nm | rpm | | | | | | | | | | | | kgm ² | | kg | | | |
| 118 | 160 | 5300 | 48 | 38 | 118 | 86 | 62 | 40 | 3 | 34 | 20 | 33 | 83 | 0.003 | 2LC0110-4AB ■ ■ -0AA0 | 3.5 | | | |
| 135 | 240 | 5100 | 55 | 45 | 135 | 100 | 75 | 50 | 3 | 36 | 23 | 38 | 103 | 0.006 | 2LC0110-5AB ■ ■ -0AA0 | 5.5 | | | |
| 152 | 360 | 4900 | 60 | 50 | 152 | 108 | 82 | 55 | 3 | 36 | 28 | 43 | 113 | 0.011 | 2LC0110-6AB ■ ■ -0AA0 | 7.7 | | | |
| 172 | 560 | 4250 | 65 | 58 | 172 | 118 | 95 | 60 | 4 | 41 | 28 | 47 | 124 | 0.019 | 2LC0110-7AB ■ ■ -0AA0 | 10.5 | | | |
| 194 | 880 | 3800 | 75 | 65 | 194 | 135 | 108 | 70 | 4 | 44 | 30 | 50 | 144 | 0.036 | 2LC0110-8AB ■ ■ -0AA0 | 15 | | | |
| 218 | 1340 | 3400 | 85 | 75 | 218 | 150 | 122 | 80 | 4 | 47 | 32 | 53 | 164 | 0.062 | 2LC0111-0AB ■ ■ -0AA0 | 21 | | | |
| 245 | 2000 | 3000 | 90 | 85 | 245 | 150 | 138 | 90 | 4 | 52 | 38 | 61 | 184 | 0.10 | 2LC0111-1AB ■ ■ -0AA0 | 28 | | | |
| 272 | 2800 | 2750 | 46 | 100 | 95 | 272 | 165 | 155 | 100 | 5.5 | 60 | 42 | 69 | 205.5 | 0.18 | 2LC0111-2AB ■ ■ -0AA0 | 40 | | |
| 305 | 3900 | 2450 | 49 | 110 | 54 | 105 | 305 | 180 | 172 | 110 | 5.5 | 65 | 42 | 73 | 225.5 | 0.28 | 2LC0111-3AB ■ ■ -0AA0 | 50 | |
| 340 | 5500 | 2150 | 49 | 120 | 46 | 100 | 340 | 200 | 165 | 125 | 5.5 | 70 | 47 | 78 | 255.5 | 0.45 | 2LC0111-4AB ■ ■ -0AA0 | 72 | |
| | | | 90 | 120 | | | 200 | | | | | | | | 0.50 | | 73 | | |
| 380 | 7700 | 2000 | 61 | 140 | 61 | 110 | 380 | 230 | 180 | 140 | 5.5 | 74 | 51 | 83 | 285.5 | 0.75 | 2LC0111-5AB ■ ■ -0AA0 | 100 | |
| | | | | | 90 | 140 | | 230 | | | | | | | 0.80 | | 104 | | |
| 430 | 10300 | 1700 | 66 | 150 | 66 | 120 | 430 | 250 | 200 | 160 | 5.5 | 78 | 56 | 88 | 325.5 | 1.2 | 2LC0111-6AB ■ ■ -0AA0 | 135 | |
| | | | | | 100 | 150 | | 250 | | | | | | | 1.4 | | 140 | | |
| 472 | 13500 | 1550 | 80 | 160 | 80 | 130 | 472 | 265 | 215 | 180 | 7.5 | 86 | 64 | 99 | 367.5 | 2.0 | 2LC0111-7AB ■ ■ -0AA0 | 174 | |
| | | | | | 120 | 160 | | 265 | | | | | | | 2.1 | | 180 | | |
| 514 | 16600 | 1400 | 90 | 180 | 90 | 145 | 514 | 300 | 240 | 190 | 7.5 | 90 | 65 | 104 | 387.5 | 2.9 | 2LC0111-8AB ■ ■ -0AA0 | 220 | |
| | | | | | 136 | 180 | | 300 | | | | | | | 3.2 | | 237 | | |
| 556 | 21200 | 1300 | 100 | 190 | 100 | 150 | 556 | 315 | 250 | 210 | 7.5 | 102 | 68 | 115 | 427.5 | 4.3 | 2LC0112-0AB ■ ■ -0AA0 | 281 | |
| | | | | | 140 | 190 | | 315 | | | | | | | 4.7 | | 290 | | |

ØD1: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

ØD2: • Without finished bore – Without order codes

• Without finished bore from size 340 for 2nd diameter range D2 – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

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The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX ADS coupling, size 135,

Part 1: Bore D1 42H7 mm, keyway to DIN 6885 and set screw,
Part 2: Bore D2 32H7 mm, keyway to DIN 6885 and set screw.

Product code:

2LC0110-5AB99-0AA0

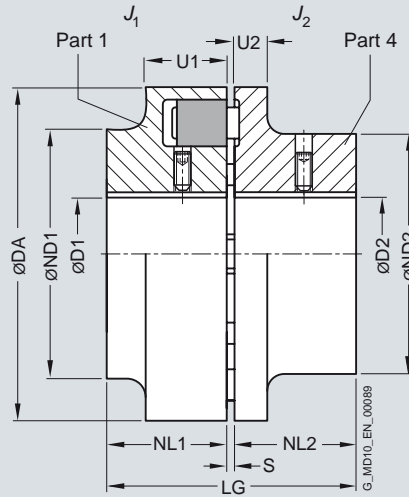
L0X+M0T

The product code applies to NBR standard flexibles; the product code for alternative flexible type is available on request.

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type BDS

Selection and ordering data



| Size | Rated torque | Speed | Dimensions in mm | | | | | | | | | | | Mass moment of inertia | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|------|--------------|-------------------|--|------|----|-----|-----|-----|----------|-----|-----|----|-----|------------------------|--|-------------------------|-----|
| | T_{KN} | n_{Kmax} rpm | D1 | | D2 | DA | ND1 | ND2 | NL1/ NL2 | S | U1 | U2 | LG | | | J_1/J_2 | m |
| | | | min. | max. | | | | | | | | | | | | | |
| | | | min. | max. | | | | | | | | | | | | | |
| | Nm | | | | | | | | | | | | | | | kg | |
| 66 | 19 | 7500 | | 19 | 24 | 66 | 66 | 40 | 20 | 3 | 20 | 8 | 43 | 0.0001 | 2LC0110-0AA ■ ■ ■ -0AA0 | 0.50 | |
| 76 | 34 | 7000 | | 24 | 28 | 76 | 76 | 50 | 20 | 3 | 20 | 8 | 43 | 0.0002 | 2LC0110-1AA ■ ■ ■ -0AA0 | 0.65 | |
| 88 | 60 | 6000 | | 30 | 38 | 88 | 88 | 68 | 30 | 3 | 30 | 10 | 63 | 0.0006 | 2LC0110-2AA ■ ■ ■ -0AA0 | 1.8 | |
| 103 | 100 | 5500 | | 42 | 42 | 103 | 76 | 76 | 35 | 3 | 30 | 12 | 73 | 0.0015 | 2LC0110-3AA ■ ■ ■ -0AA0 | 3 | |
| 118 | 160 | 5300 | | 48 | 48 | 118 | 86 | 86 | 40 | 3 | 34 | 14 | 83 | 0.003 | 2LC0110-4AA ■ ■ ■ -0AA0 | 3.7 | |
| 135 | 240 | 5100 | | 55 | 55 | 135 | 100 | 100 | 50 | 3 | 36 | 18 | 103 | 0.007 | 2LC0110-5AA ■ ■ ■ -0AA0 | 6.1 | |
| 152 | 360 | 4900 | | 60 | 60 | 152 | 108 | 100 | 55 | 3 | 36 | 20 | 113 | 0.011 | 2LC0110-6AA ■ ■ ■ -0AA0 | 7.0 | |
| 172 | 560 | 4250 | | 65 | 65 | 172 | 118 | 108 | 60 | 4 | 41 | 20 | 124 | 0.019 | 2LC0110-7AA ■ ■ ■ -0AA0 | 11 | |
| 194 | 880 | 3800 | | 75 | 75 | 194 | 135 | 125 | 70 | 4 | 44 | 20 | 144 | 0.035 | 2LC0110-8AA ■ ■ ■ -0AA0 | 17 | |
| 218 | 1340 | 3400 | | 85 | 85 | 218 | 150 | 140 | 80 | 4 | 47 | 24 | 164 | 0.06 | 2LC0111-0AA ■ ■ ■ -0AA0 | 23 | |
| 245 | 2000 | 3000 | | 90 | 90 | 245 | 150 | 150 | 90 | 4 | 52 | 18 | 184 | 0.085 | 2LC0111-1AA ■ ■ ■ -0AA0 | 27 | |
| 272 | 2800 | 2750 | 46 | 100 | 46 | 100 | 272 | 165 | 165 | 100 | 5.5 | 60 | 18 | 205.5 | 0.15 | 2LC0111-2AA ■ ■ ■ -0AA0 | 36 |
| 305 | 3900 | 2450 | 49 | 110 | 49 | 110 | 305 | 180 | 180 | 110 | 5.5 | 65 | 20 | 225.5 | 0.25 | 2LC0111-3AA ■ ■ ■ -0AA0 | 47 |
| ØD1: | | | • Without finished bore – Without order codes | | | | | | | | | | | | | 1 | |
| | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | 9 | |
| ØD2: | | | • Without finished bore – Without order codes | | | | | | | | | | | | | 1 | |
| | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | 9 | |

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX BDS coupling, size 103,
Part 1: Bore D1 42H7 mm, keyway to DIN 6885 and set screw,
Part 4: Bore D2 32H7 mm, keyway to DIN 6885 and set screw.

Product code:

2LC0110-3AA99-0AA0

L0X+M0T

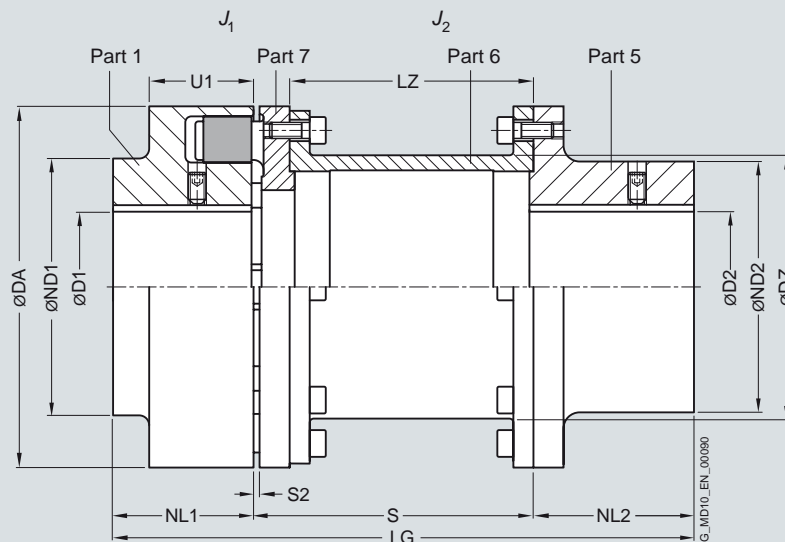
The product code applies to NBR standard flexibles; the product code for alternative flexible type is available on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type HDS

Selection and ordering data



For dimension U1, see type A

| Size | Rated torque | Speed | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | |
|------|--------------|------------|------------------------------|---------|-----|-----|-----|-----|-----|----|-----|-------|-----|-----|--------|------------------|------------------------|-----------|--|-----------|------|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | DA | ND1 | ND2 | NL1 | NL2 | S2 | S | LZ | DZ | LG | J_1 | J_2 | m | | | | |
| | | | D1 min. | D2 max. | | | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | | kgm ² | kgm ² | | kg | | |
| 88 | 60 | 6000 | 30 | 32 | 88 | 88 | 55 | 30 | 45 | 5 | 100 | 87 | 51 | 175 | 0.0007 | 0.0014 | 2LC0110-2AC | ■ ■ -0AA0 | 2.8 | | |
| | | | | | | | | | | | 140 | 127 | | 215 | | 0.0015 | | | 2LC0110-2AC | ■ ■ -0AB0 | 2.9 |
| 103 | 100 | 5500 | 42 | 42 | 103 | 76 | 70 | 35 | 45 | 5 | 100 | 87 | 63 | 180 | 0.001 | 0.003 | 2LC0110-3AC | ■ ■ -0AA0 | 4.0 | | |
| | | | | | | | | | | | 140 | 127 | | 220 | | 0.0033 | | | 2LC0110-3AC | ■ ■ -0AB0 | 4.3 |
| 118 | 160 | 5300 | 48 | 48 | 118 | 86 | 80 | 40 | 50 | 5 | 100 | 85 | 73 | 190 | 0.003 | 0.006 | 2LC0110-4AC | ■ ■ -0AA0 | 5.3 | | |
| | | | | | | | | | | | 140 | 125 | | 230 | | 0.0064 | | | 2LC0110-4AC | ■ ■ -0AB0 | 5.7 |
| | | | | | | | | | | | 180 | 165 | | 280 | | 0.0068 | | | 2LC0110-4AC | ■ ■ -0AC0 | 6.1 |
| 135 | 240 | 5100 | 55 | 55 | 135 | 100 | 90 | 50 | 50 | 5 | 100 | 85 | 85 | 200 | 0.006 | 0.01 | 2LC0110-5AC | ■ ■ -0AA0 | 7.6 | | |
| | | | | | | | | | | | 140 | 125 | | 240 | | 0.01 | | | 2LC0110-5AC | ■ ■ -0AB0 | 8.1 |
| | | | | | | | | | | | 180 | 165 | | 290 | | 0.012 | | | 2LC0110-5AC | ■ ■ -0AC0 | 8.6 |
| | | | | | | | | | | | 200 | 185 | | 320 | | 0.012 | | | 2LC0110-5AC | ■ ■ -0AD0 | 8.9 |
| | | | | | | | | | | | 250 | 235 | | 380 | | 0.013 | | | 2LC0110-5AC | ■ ■ -0AE0 | 9.4 |
| 152 | 360 | 4900 | 60 | 60 | 152 | 108 | 100 | 55 | 65 | 5 | 100 | 82 | 91 | 220 | 0.011 | 0.02 | 2LC0110-6AC | ■ ■ -0AA0 | 11.2 | | |
| | | | | | | | | | | | 140 | 122 | | 260 | | 0.02 | | | 2LC0110-6AC | ■ ■ -0AB0 | 11.7 |
| | | | | | | | | | | | 180 | 162 | | 300 | | 0.022 | | | 2LC0110-6AC | ■ ■ -0AC0 | 12.2 |
| | | | | | | | | | | | 200 | 182 | | 320 | | 0.023 | | | 2LC0110-6AC | ■ ■ -0AD0 | 12.5 |
| | | | | | | | | | | | 250 | 232 | | 385 | | 0.024 | | | 2LC0110-6AC | ■ ■ -0AE0 | 13.1 |
| 172 | 560 | 4250 | 65 | 65 | 172 | 118 | 108 | 60 | 70 | 6 | 100 | 81.5 | 111 | 230 | 0.019 | 0.03 | 2LC0110-7AC | ■ ■ -0AA0 | 14.3 | | |
| | | | | | | | | | | | 140 | 121.5 | | 270 | | 0.034 | | | 2LC0110-7AC | ■ ■ -0AB0 | 15.0 |
| | | | | | | | | | | | 180 | 161.5 | | 310 | | 0.036 | | | 2LC0110-7AC | ■ ■ -0AC0 | 15.9 |
| | | | | | | | | | | | 200 | 181.5 | | 330 | | 0.037 | | | 2LC0110-7AC | ■ ■ -0AD0 | 16.2 |
| | | | | | | | | | | | 250 | 231.5 | | 390 | | 0.039 | | | 2LC0110-7AC | ■ ■ -0AE0 | 17.2 |
| 194 | 880 | 3800 | 75 | 75 | 194 | 135 | 125 | 70 | 80 | 6 | 140 | 121.5 | 131 | 290 | 0.037 | 0.058 | 2LC0110-8AC | ■ ■ -0AB0 | 21 | | |
| | | | | | | | | | | | 180 | 161.5 | | 330 | | 0.062 | | | 2LC0110-8AC | ■ ■ -0AC0 | 22 |
| | | | | | | | | | | | 200 | 181.5 | | 350 | | 0.064 | | | 2LC0110-8AC | ■ ■ -0AD0 | 23 |
| | | | | | | | | | | | 250 | 231.5 | | 400 | | 0.069 | | | 2LC0110-8AC | ■ ■ -0AE0 | 24 |
| 218 | 1340 | 3400 | 85 | 85 | 218 | 150 | 140 | 80 | 90 | 6 | 140 | 118.5 | 144 | 310 | 0.062 | 0.10 | 2LC0111-0AC | ■ ■ -0AB0 | 30 | | |
| | | | | | | | | | | | 180 | 158.5 | | 350 | | 0.11 | | | 2LC0111-0AC | ■ ■ -0AC0 | 31 |
| | | | | | | | | | | | 200 | 178.5 | | 370 | | 0.11 | | | 2LC0111-0AC | ■ ■ -0AD0 | 32 |
| | | | | | | | | | | | 250 | 228.5 | | 420 | | 0.12 | | | 2LC0111-0AC | ■ ■ -0AE0 | 33 |

- $\varnothing D1$:
 • Without finished bore – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without -Z)
- $\varnothing D2$:
 • Without finished bore – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without -Z)

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9
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9

FLENDER Standard Couplings Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Type HDS

| Size | Rated torque | Speed | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|--------------|--|------------------|------|------|------|-----|-----|-----|-----|-----|-------|-----|-------|------------------|------------------|-------------------------|------|--|--------|
| | T_{KN} | n_{Kmax} | D1 | D2 | DA | ND1 | ND2 | NL1 | NL2 | S2 | S | LZ | DZ | LG | J_1 | J_2 | m | | | |
| | Nm | rpm | min. | max. | min. | max. | | | | | | | | | kgm ² | kgm ² | kg | | | |
| 245 | 2000 | 3000 | 90 | 90 | 245 | 150 | 150 | 90 | 100 | 6 | 140 | 118.5 | 169 | 330 | 0.09 | 0.16 | 2LC0111-1AC ■ ■ ■ -0AB0 | 35 | | |
| | | | | | | | | | | | 180 | 158.5 | | 370 | | 0.17 | 2LC0111-1AC ■ ■ ■ -0AC0 | 36 | | |
| | | | | | | | | | | | 200 | 178.5 | | 390 | | 0.18 | 2LC0111-1AC ■ ■ ■ -0AD0 | 37 | | |
| | | | | | | | | | | | 250 | 228.5 | | 430 | | 0.19 | 2LC0111-1AC ■ ■ ■ -0AE0 | 39 | | |
| 272 | 2800 | 2750 | 46 | 100 | 46 | 100 | 272 | 165 | 165 | 100 | 110 | 8 | 180 | 152.5 | 185 | 390 | 0.16 | 0.3 | 2LC0111-2AC ■ ■ ■ -0AC0 | 51 |
| | | | | | | | | | | | | | 200 | 172.5 | | 410 | | 0.31 | 2LC0111-2AC ■ ■ ■ -0AD0 | 52 |
| | | | | | | | | | | | | | 250 | 222.5 | | 460 | | 0.33 | 2LC0111-2AC ■ ■ ■ -0AE0 | 55 |
| 305 | 3900 | 2450 | 49 | 110 | 51 | 110 | 305 | 180 | 180 | 110 | 120 | 8 | 250 | 222.5 | 215 | 480 | 0.28 | 0.52 | 2LC0111-3AC ■ ■ ■ -0AE0 | 74 |
| 340 | 5500 | 2150 | 49 | 120 | 51 | 120 | 340 | 200 | 200 | 125 | 140 | 8 | 250 | 222.5 | 250 | 515 | 0.50 | 0.87 | 2LC0111-4AC ■ ■ ■ -0AE0 | 105 |
| 380 | 7700 | 1980 | 61 | 140 | 51 | 140 | 380 | 230 | 230 | 140 | 150 | 8 | 250 | 220.5 | 272 | 540 | 0.80 | 1.4 | 2LC0111-5AC ■ ■ ■ -0AE0 | 130 |
| 430 | 10300 | 1700 | 66 | 150 | 51 | 150 | 430 | 250 | 250 | 160 | 180 | 8 | 250 | 185.5 | 310 | 590 | 1.4 | 2.5 | 2LC0111-6AC ■ ■ ■ -0AE0 | 205 |
| 472 | 13500 | 1550 | 80 | 160 | 51 | 160 | 472 | 265 | 265 | 180 | 180 | 10 | 250 | 182 | 354 | 610 | 2.1 | 4.1 | 2LC0111-7AC ■ ■ ■ -0AE0 | 235 |
| ØD1: | | • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 9 | |
| ØD2: | | • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 9 | |

During assembly, the gap dimension S2 must not exceed the permissible tolerance of +1 mm.

For sizes 305 to 472 the outer diameter of part 5 and part 7 is smaller than ØDA.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

N-EUPEX HDS coupling, size 103, S3 = 100

Part 1: Bore D1 42H7 mm, keyway to DIN 6885-1 and set screw,

Part 5: Bore D2 32H7 mm, keyway to DIN 6885-1 and set screw.

Coupling micro-balanced G6.3 at 1500 rpm in accordance with the half parallel key standard.

Product code:

2LC0110-3AC99-0AA0-Z

L0X+M0T+W02

The product code applies to NBR standard flexibles; the product code for alternative flexible type is available on request.

FLENDER Standard Couplings

Flexible Couplings - N-EUPEX and N-EUPEX DS Series

Spare and wear parts

Selection and ordering data

Elastomer flexibles

The elastomer flexibles are wear parts. The service life depends on the operating conditions.

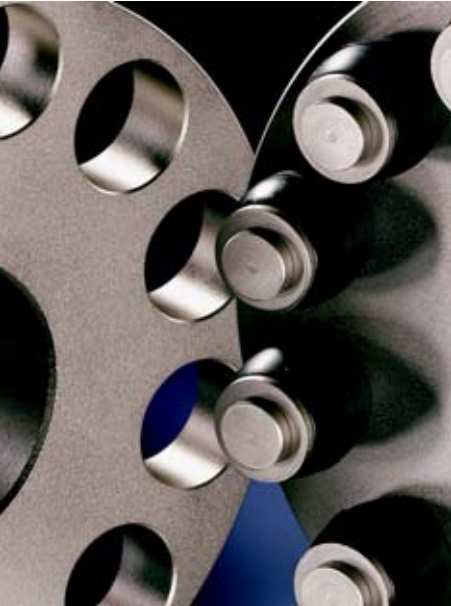
Elastomer flexibles of the N-EUPEX series

| Size | Product code flexible set for one coupling NBR elastomer flexibles 80 ShoreA standard type | Number of flexibles per set | Weight per set kg |
|------|---|-----------------------------------|-----------------------------|
| 58 | 2LC0100-0WA00-0AA0 | 4 | 0.012 |
| 68 | 2LC0100-1WA00-0AA0 | 5 | 0.015 |
| 80 | 2LC0100-2WA00-0AA0 | 6 | 0.02 |
| 95 | 2LC0100-3WA00-0AA0 | 6 | 0.03 |
| 110 | 2LC0100-4WA00-0AA0 | 6 | 0.045 |
| 125 | 2LC0100-5WA00-0AA0 | 6 | 0.06 |
| 140 | 2LC0100-6WA00-0AA0 | 6 | 0.09 |
| 160 | 2LC0100-7WA00-0AA0 | 7 | 0.12 |
| 180 | 2LC0100-8WA00-0AA0 | 8 | 0.17 |
| 200 | 2LC0101-0WA00-0AA0 | 8 | 0.23 |
| 225 | 2LC0101-1WA00-0AA0 | 8 | 0.3 |
| 250 | 2LC0101-2WA00-0AA0 | 8 | 0.38 |
| 280 | 2LC0101-3WA00-0AA0 | 8 | 0.55 |
| 315 | 2LC0101-4WA00-0AA0 | 9 | 0.7 |
| 350 | 2LC0101-5WA00-0AA0 | 9 | 0.85 |
| 400 | 2LC0101-6WA00-0AA0 | 10 | 1.2 |
| 440 | 2LC0101-7WA00-0AA0 | 10 | 1.5 |
| 480 | 2LC0101-8WA00-0AA0 | 10 | 2.1 |
| 520 | 2LC0102-0WA00-0AA0 | 10 | 2.6 |
| 560 | 2LC0102-1WA00-0AA0 | 10 | 3.6 |
| 610 | 2LC0102-2WA00-0AA0 | 10 | 4.9 |
| 660 | 2LC0102-3WA00-0AA0 | 10 | 6.3 |
| 710 | 2LC0102-4WA00-0AA0 | 10 | 7.6 |

Elastomer flexibles of the N-EUPEX DS series

| Size | Product code flexible set for one coupling NBR elastomer flexibles standard type | Number of flexibles per set | Weight per set kg |
|------|---|-----------------------------------|-----------------------------|
| 66 | 2LC0110-0WA00-0AA0 | 4 | 0.012 |
| 76 | 2LC0110-1WA00-0AA0 | 5 | 0.015 |
| 88 | 2LC0110-2WA00-0AA0 | 6 | 0.021 |
| 103 | 2LC0110-3WA00-0AA0 | 6 | 0.033 |
| 118 | 2LC0110-4WA00-0AA0 | 6 | 0.048 |
| 135 | 2LC0110-5WA00-0AA0 | 6 | 0.072 |
| 152 | 2LC0110-6WA00-0AA0 | 6 | 0.1 |
| 172 | 2LC0110-7WA00-0AA0 | 7 | 0.16 |
| 194 | 2LC0110-8WA00-0AA0 | 8 | 0.21 |
| 218 | 2LC0111-0WA00-0AA0 | 8 | 0.28 |
| 245 | 2LC0111-1WA00-0AA0 | 8 | 0.45 |
| 272 | 2LC0111-2WA00-0AA0 | 8 | 0.64 |
| 305 | 2LC0111-3WA00-0AA0 | 8 | 0.72 |
| 340 | 2LC0111-4WA00-0AA0 | 9 | 0.92 |
| 380 | 2LC0111-5WA00-0AA0 | 9 | 1.2 |
| 430 | 2LC0111-6WA00-0AA0 | 10 | 1.6 |
| 472 | 2LC0111-7WA00-0AA0 | 10 | 2.0 |
| 514 | 2LC0111-8WA00-0AA0 | 10 | 2.5 |
| 556 | 2LC0112-0WA00-0AA0 | 10 | 3.2 |

Flexibles of sizes 66 to 272 are of the compound type with a hard core and soft thrust pieces. Sizes 305 to 556 are completely made of 90 ShoreA NBR material.



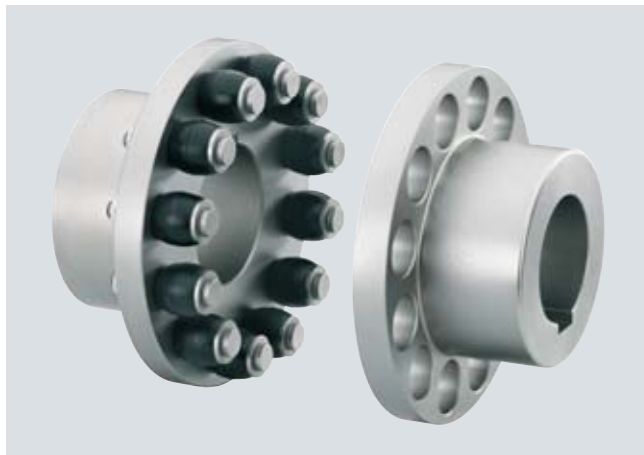
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|------|---|
| | |
| 8/2 | Overview |
| 8/2 | Benefits |
| 8/2 | Application |
| 8/2 | Design |
| 8/4 | Function |
| 8/4 | Technical data |
| 8/6 | Type RWN hub material grey cast iron Selection and ordering data |
| 8/8 | Type RWS hub material steel Selection and ordering data |
| 8/10 | Type RFN with hub in grey cast iron Selection and ordering data |
| 8/11 | Type RFS in steel Selection and ordering data |
| 8/12 | Type RWB with brake disk to DIN 15432 Selection and ordering data |
| 8/14 | Type RBS with brake disk to DIN 15432 Sizes 144 to 360 Selection and ordering data |
| 8/16 | Type RBS with brake disk to DIN 15432 Sizes 400 to 1000 Selection and ordering data |
| 8/18 | Type RWB with brake drum to DIN 15431 Selection and ordering data |
| 8/19 | Type RBS with brake drum to DIN 15431 Selection and ordering data |
| 8/20 | Spare and wear parts Selection and ordering data |

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

General information

Overview



Coupling suitable for potentially explosive environments. Complies with Directive 94/9/EC for:

CE Ex II 2 G T4 / T5 / T6 D120 °C
 $-30\text{ °C} \leq T_a \leq +80\text{ °C} / +50\text{ °C} / +40\text{ °C}$

CE Ex I M2

RUPEX pin and bush couplings link machine shafts and compensate for shaft misalignment with weak restorative forces. The torque is conducted through elastomer buffers, so the coupling has typically flexible rubber properties. Thanks to their robust design, RUPEX couplings are also suitable for rough operating conditions.

Benefits

RUPEX couplings can also hold loads when overloaded and are therefore especially suitable for drives for special safety and reliability requirements.

Torque shock loads and changing loads are no problem for robust, compact flexible RUPEX couplings.

The steel variant is also especially suitable for high-speed drives.

RUPEX couplings are fitted by putting together the coupling halves. Fitting with low torsional backlash is simplified by the barrel-shaped geometry of the buffers.

RUPEX couplings require little maintenance. Only the elastomer buffers, as wear parts, need be replaced and the coupled machines need not be moved to do so.

RUPEX couplings are suitable for reversing operation and horizontal and vertical fitting or fitting at any required angle.

Application

RUPEX couplings are available as a catalog standard in 26 sizes with a rated torque of between 200 Nm and 1300000 Nm.

The coupling is suitable for use at ambient temperatures of between -30 °C and $+80\text{ °C}$. By using alternative elastomer buffers, the permissible ambient temperature range can be extended to between -50 °C and $+100\text{ °C}$.

Frequently, the coupling is used to connect the gear shaft to the driven machine. In the case of drives without gear units, the coupling is particularly suitable for operation in rough conditions or heavy-duty drives with electric motor drive. Ventilator drives with high ventilator mass and drives in the cement industry are typical applications.

Examples of particularly safety-relevant areas of application are cable railway drives, lifting gear for crane drives or escalator drives.

Design

A RUPEX coupling comprises two hub sections which are mounted on the machine shafts. The hub parts are connected positively by steel pins and elastomer buffers. The coupling can be fitted with add-on parts such as brake disks or brake drums. Up to size 360, the pins and buffers are fitted on one side. From size 400 up, the pins and buffers are fitted in the hubs on alternate sides.

Materials

Hubs

- Types RWN and RWB made of grey cast iron EN-GJL-250
- Types RWS and RBS made of steel with yield point higher than 400 N/mm^2

Flange

- Types RFN, RFS made of steel

Pin

Material steel 42CrMo4, surface fine-machined

Buffer material

| Material/description | Hardness | Identification | Ambient temperature |
|-----------------------------|------------------|-------------------------------|---|
| NBR standard type | 80 ShoreA | Buffer black | $-30\text{ °C} \dots +80\text{ °C}$ |
| NBR electrically insulating | 80 ShoreA | Buffer green | $-30\text{ °C} \dots +80\text{ °C}$ |
| NBR soft | 60 ShoreA | Buffer black with green dot | $-30\text{ °C} \dots +80\text{ °C}$ |
| NBR hard | 90 ShoreA | Buffer black with magenta dot | $-30\text{ °C} \dots +80\text{ °C}$ |
| NR for low temperature | 80 ShoreA | Buffer black with white dot | $-50\text{ °C} \dots +50\text{ °C}$ |
| HNBR high temperature | 80 ShoreA | Buffer black with red dot | $-10\text{ °C} \dots +100\text{ °C}$ |

Brake disks

- Type RWB made of EN-GJS-400 spheroidal graphite cast iron
- Type RBS made of steel

Brake drums

- Type RWB made of EN-GJL-250 grey cast iron
- Type RBS made of steel

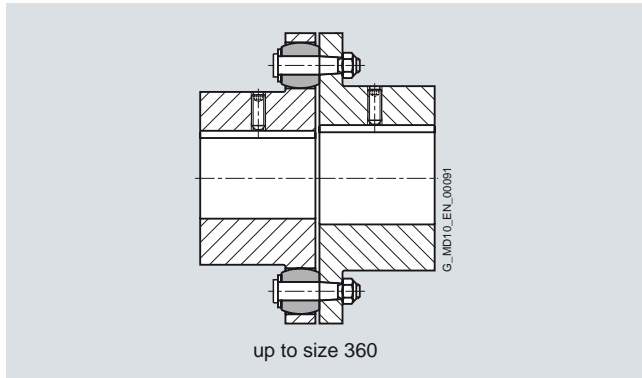
FLENDER Standard Couplings **Flexible Couplings - RUPEX Series**

General information

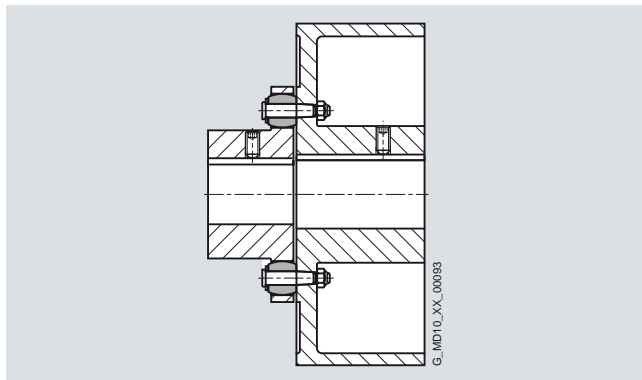
RUPEX pin and bush coupling types

| Type | Description |
|------|---|
| RWN | Coupling made of grey cast iron |
| RWS | Coupling made of steel |
| RWB | Coupling made of grey cast iron with brake drum or brake disk |
| RBS | Coupling made of steel with brake drum or brake disk |
| RFN | Coupling made of grey cast iron in flange-shaft variant |
| RFS | Coupling made of steel in flange-shaft variant |

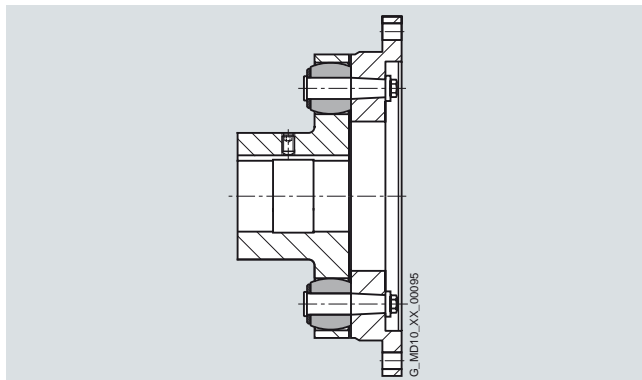
Further application-related coupling types are available. Dimension sheets for and information on these are available on request.



Types RWN/RWS – One-sided arrangement of pins and buffers



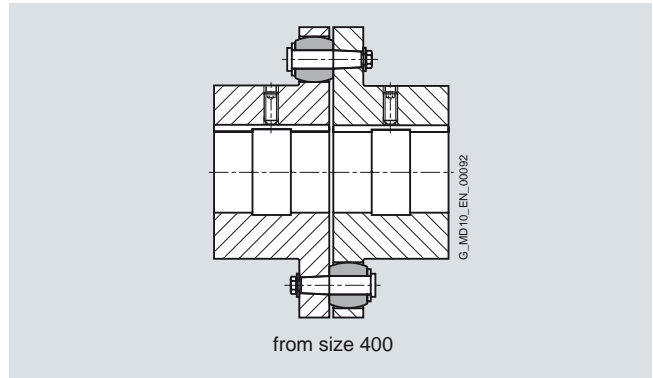
Types RWB/RBS with brake drum



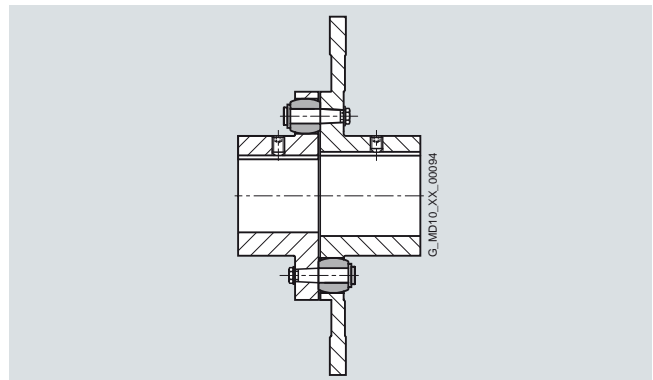
Types RFN, RFS

RUPEX pin and bush coupling types on request

| Type | Description |
|------------|---|
| All | Coupling with axial backlash limitation |
| All | Coupling with pretensioned buffers |
| All | Coupling with lengthened pins and spacer sleeves |
| RKS | Coupling for engaging/disengaging during standstill |
| RWNH, RWSH | Coupling with extension piece |
| RBM | Coupling with lengthened pins for sliding rotor motors |
| RAK | Coupling combination RUPEX with ARPEX all-steel membrane coupling |



Types RWN/RWS – Alternate-sided arrangement of pins and buffers



Types RWB/RBS with brake disk

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

General information

Function

The motor torque is transmitted to the hub on the drive side via the shaft-hub connection, which is mostly designed as a keyway connection. With the aid of elastomer buffers mounted on steel pins, the torque is conducted to the hub on the output side.

The hub on the output side further transmits the torque to the driven machine or a gear unit located in between. Because of the primarily compression-loaded buffers, the coupling has a progressive torsional stiffness.

Technical data

Power ratings

| Size | Rated torque for buffer type | | | Torsional stiffness at 50 % capacity utilization for buffer type | | | Assembly Gap dimension ΔS mm | Permitted shaft misalignment at speed $n = 1500 \text{ rpm}^{1)}$ | | |
|------|------------------------------|-------------|-------------|--|--------------------------|--------------------------|--------------------------------------|---|-----------------|---------------------|
| | 65 ShoreA | 80 ShoreA | 90 ShoreA | 65 ShoreA | 80 ShoreA | 90 ShoreA | | Axial | Radial | Angle |
| | T_{KN} Nm | T_{KN} Nm | T_{KN} Nm | $C_{Tdyn} 50 \%$ kNm/rad | $C_{Tdyn} 50 \%$ kNm/rad | $C_{Tdyn} 50 \%$ kNm/rad | | ΔK_a mm | ΔK_r mm | ΔK_w Degree |
| 105 | 120 | 200 | 200 | 5 | 13 | 21 | 1.0 | 0.2 | 0.2 | 0.11 |
| 125 | 210 | 350 | 350 | 9 | 25 | 37 | 1.0 | 0.2 | 0.2 | 0.10 |
| 144 | 300 | 500 | 500 | 15 | 43 | 64 | 1.0 | 0.23 | 0.23 | 0.09 |
| 162 | 450 | 750 | 750 | 20 | 55 | 83 | 1.5 | 0.25 | 0.25 | 0.09 |
| 178 | 570 | 950 | 950 | 31 | 85 | 130 | 1.5 | 0.27 | 0.27 | 0.09 |
| 198 | 780 | 1300 | 1300 | 43 | 123 | 187 | 1.5 | 0.29 | 0.29 | 0.08 |
| 228 | 1300 | 2200 | 2200 | 65 | 184 | 270 | 1.5 | 0.3 | 0.3 | 0.08 |
| 252 | 1650 | 2750 | 2750 | 92 | 256 | 380 | 1.5 | 0.34 | 0.34 | 0.08 |
| 285 | 2600 | 4300 | 4300 | 141 | 390 | 560 | 1.5 | 0.36 | 0.36 | 0.07 |
| 320 | 3300 | 5500 | 5500 | 195 | 540 | 790 | 1.5 | 0.4 | 0.4 | 0.07 |
| 360 | 4700 | 7800 | 7800 | 276 | 610 | 940 | 1.5 | 0.43 | 0.43 | 0.07 |
| 400 | 7500 | 12500 | 12500 | 410 | 1130 | 1710 | 1.5 | 0.48 | 0.48 | 0.07 |
| 450 | 11000 | 18500 | 18500 | 570 | 1600 | 2380 | 1.5 | 0.52 | 0.52 | 0.07 |
| 500 | 15000 | 25000 | 25000 | 860 | 2350 | 3600 | 1.5 | 0.57 | 0.57 | 0.07 |
| 560 | 23500 | 39000 | 39000 | 1130 | 3070 | 4700 | 2.0 | 0.62 | 0.62 | 0.06 |
| 630 | 31000 | 52000 | 52000 | 1640 | 4600 | 7400 | 2.0 | 0.68 | 0.68 | 0.06 |
| 710 | 50000 | 84000 | 84000 | 2560 | 7200 | 10900 | 2.0 | 0.75 | 0.75 | 0.06 |
| 800 | 66000 | 110000 | 110000 | 3900 | 10700 | 16700 | 2.0 | 0.84 | 0.84 | 0.06 |
| 900 | 90000 | 150000 | 150000 | 5200 | 14300 | 22500 | 2.5 | 0.93 | 0.93 | 0.06 |
| 1000 | 115000 | 195000 | 195000 | 7700 | 21300 | 33000 | 2.5 | 1.03 | 1.03 | 0.06 |
| 1120 | 160000 | 270000 | 270000 | 9800 | 27300 | 44000 | 2.5 | 1.14 | 1.14 | 0.06 |
| 1250 | 205000 | 345000 | 345000 | 14000 | 39000 | 62000 | 2.5 | 1.26 | 1.26 | 0.06 |
| 1400 | 320000 | 530000 | 530000 | 22800 | 62000 | 97000 | 3.0 | 1.39 | 1.39 | 0.06 |
| 1600 | 450000 | 750000 | 750000 | 37000 | 103000 | 160000 | 3.0 | 1.55 | 1.55 | 0.06 |
| 1800 | 585000 | 975000 | 975000 | 48000 | 133000 | 208000 | 4.0 | 1.76 | 1.76 | 0.06 |
| 2000 | 780000 | 1300000 | 1300000 | 73000 | 201000 | 314000 | 4.0 | 2.17 | 2.17 | 0.06 |

All product codes listed below apply to standard buffers of NBR material in the 80 ShoreA variant.

¹⁾ The maximum speed of the respective type must be noted. For further information on permissible shaft misalignment, please see the operating instructions.

For maximum coupling torque:

$$T_{K\max} = 3.0 \cdot T_{KN}$$

For overload torque:

$$T_{KOL} = 4 \cdot T_{KN}$$

For coupling fatigue torque:

$$T_{KW} = 0.20 \cdot T_{KN}$$

The axial misalignment may occur dynamically at frequencies up to 10Hz.

For fitting, a maximum gap dimension of $S_{\max} = S + \Delta S$ and a minimum gap dimension of $S_{\min} = S - \Delta S$ are permitted.

Torsional stiffness and damping

The values stated in the above table apply to a capacity utilization of 50 %, an excitation amplitude of 10 % T_{KN} with the frequency 10 Hz and an ambient temperature of 20 °C. Dynamic torsional stiffness is dependent on load and increases in proportion to capacity utilization. The following table shows the correction factors for different nominal loads.

$$C_{Tdyn} = C_{Tdyn\ 50\%} \cdot FKC$$

| | Capacity utilization T_N/T_{KN} | | | | | | | |
|-----------------------|-----------------------------------|------|------|------|------|------|------|-------|
| | 20 % | 40 % | 50 % | 60 % | 70 % | 80 % | 90 % | 100 % |
| Correction factor FKC | 0.51 | 0.83 | 1.00 | 1.18 | 1.38 | 1.58 | 1.80 | 2.03 |

65/80/90 Shore

The damping coefficient is $\Psi = 1.4$

Furthermore, torsional stiffness and damping depend on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size and type must be observed!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.60 | 1.20 | 1.0 | 0.70 |

The axial misalignment may occur dynamically at frequencies up to 10 Hz. For fitting, a maximum gap dimension of $S_{\max} = S + \Delta S$ and a minimum gap dimension of $S_{\min} = S - \Delta S$ are permitted.

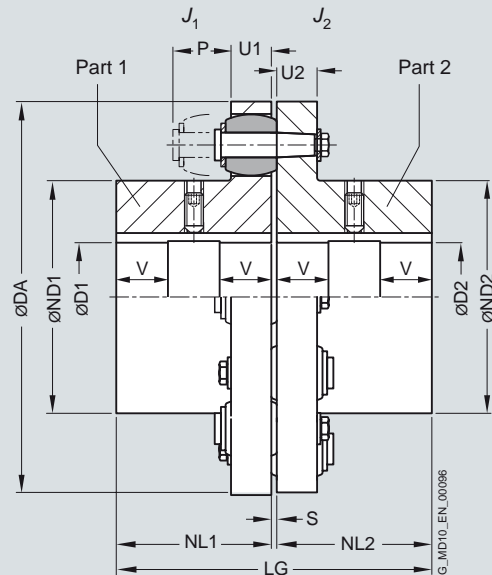
Shaft misalignments ΔK_a , ΔK_r and ΔK_w may occur simultaneously.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RWN - hub material grey cast iron

Selection and ordering data



| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|-------------------|-------------------------------------|------------|------------------|------|------|------|-----|-----|-----|--------|-----|----|----|-----|------------------|------------------------------|-----------------------|---|--------|
| | T_{KN} | n_{Kmax} | D1 | | D2 | | DA | ND1 | ND2 | NL1/ S | U1 | U2 | P | LG | J_1 | J_2 | m | | |
| | Nm | rpm | min. | max. | min. | max. | | | | NL2 | | | | | kgm ² | kgm ² | kg | | |
| 105 ¹⁾ | 200 | 7000 | – | 32 | – | 38 | 105 | 53 | 59 | 45 | 3 | 13 | 12 | 30 | 93 | 0.001 | 0.001 | 2LC0130-1AA ■ ■ -0AA0 | 1.9 |
| 125 ¹⁾ | 350 | 6000 | – | 40 | – | 48 | 125 | 65 | 68 | 50 | 3 | 16 | 15 | 35 | 103 | 0.003 | 0.003 | 2LC0130-2AA ■ ■ -0AA0 | 3.2 |
| 144 | 500 | 5250 | – | 45 | – | 55 | 144 | 76 | 84 | 55 | 3 | 16 | 15 | 35 | 113 | 0.004 | 0.006 | 2LC0130-3AA ■ ■ -0AA0 | 4.5 |
| 162 | 750 | 4650 | – | 50 | – | 60 | 162 | 85 | 92 | 60 | 3.5 | 20 | 18 | 40 | 123.5 | 0.007 | 0.013 | 2LC0130-4AA ■ ■ -0AA0 | 6.7 |
| 178 | 950 | 4200 | – | 60 | – | 70 | 178 | 102 | 108 | 70 | 3.5 | 20 | 18 | 40 | 143.5 | 0.014 | 0.022 | 2LC0130-5AA ■ ■ -0AA0 | 9.7 |
| 198 | 1300 | 3750 | – | 70 | – | 80 | 198 | 120 | 128 | 80 | 3.5 | 20 | 18 | 40 | 163.5 | 0.022 | 0.030 | 2LC0130-6AA ■ ■ -0AA0 | 12.9 |
| 228 | 2200 | 3300 | – | 80 | – | 90 | 228 | 129 | 140 | 90 | 3.5 | 26 | 24 | 50 | 183.5 | 0.038 | 0.071 | 2LC0130-7AA ■ ■ -0AA0 | 19 |
| 252 | 2750 | 3000 | – | 90 | – | 100 | 252 | 150 | 160 | 100 | 3.5 | 26 | 24 | 50 | 203.5 | 0.07 | 0.12 | 2LC0130-8AA ■ ■ -0AA0 | 26.3 |
| 285 | 4300 | 2650 | 48 | 100 | 48 | 110 | 285 | 164 | 175 | 110 | 4.5 | 32 | 30 | 60 | 224.5 | 0.13 | 0.22 | 2LC0131-0AA ■ ■ -0AA0 | 39 |
| 320 | 5500 | 2350 | 55 | 110 | 55 | 120 | 320 | 180 | 192 | 125 | 4.5 | 32 | 30 | 60 | 254.5 | 0.23 | 0.30 | 2LC0131-1AA ■ ■ -0AA0 | 53 |
| 360 | 7800 | 2100 | 65 | 120 | 65 | 130 | 360 | 200 | 210 | 140 | 4.5 | 42 | 42 | 75 | 284.5 | 0.41 | 0.70 | 2LC0131-2AA ■ ■ -0AA0 | 78 |
| 400 | 12500 | 2050 | 75 | 140 | 75 | 140 | 400 | 230 | 230 | 160 | 4.5 | 42 | 42 | 75 | 324.5 | 0.87 | 0.87 | 2LC0131-3AA ■ ■ -0AA0 | 105 |
| 450 | 18500 | 1800 | 85 | 160 | 85 | 160 | 450 | 260 | 260 | 180 | 5.5 | 52 | 52 | 90 | 365.5 | 1.7 | 1.7 | 2LC0131-4AA ■ ■ -0AA0 | 156 |
| 500 | 25000 | 1600 | 95 | 180 | 95 | 180 | 500 | 290 | 290 | 200 | 5.5 | 52 | 52 | 90 | 405.5 | 2.8 | 2.8 | 2LC0131-5AA ■ ■ -0AA0 | 200 |
| 560 | 39000 | 1450 | 100 | 140 | 100 | 140 | 560 | 250 | 250 | 220 | 6 | 68 | 68 | 120 | 446 | 4.6 | 4.6 | 2LC0131-6AA ■ ■ -0AA0 | 280 |
| | | | 140 | 180 | 140 | 180 | | 300 | 300 | | | | | | 5 | 5 | 2LC0131-6AA ■ ■ -0AA0 | 290 | |
| | | | 180 | 200 | 180 | 200 | | 320 | 320 | | | | | | 5.1 | 5.1 | 2LC0131-6AA ■ ■ -0AA0 | 295 | |
| 630 | 52000 | 1280 | 100 | 140 | 100 | 140 | 630 | 250 | 250 | 240 | 6 | 68 | 68 | 120 | 486 | 7.2 | 7.2 | 2LC0131-7AA ■ ■ -0AA0 | 345 |
| | | | 140 | 180 | 140 | 180 | | 300 | 300 | | | | | | 7.7 | 7.7 | 2LC0131-7AA ■ ■ -0AA0 | 370 | |
| | | | 180 | 220 | 180 | 220 | | 355 | 355 | | | | | | 8.4 | 8.4 | 2LC0131-7AA ■ ■ -0AA0 | 400 | |
| 710 | 84000 | 1150 | 110 | 160 | 110 | 160 | 710 | 290 | 290 | 260 | 7 | 80 | 80 | 140 | 527 | 13 | 13 | 2LC0131-8AA ■ ■ -0AA0 | 510 |
| | | | 160 | 200 | 160 | 200 | | 330 | 330 | | | | | | 14 | 14 | 2LC0131-8AA ■ ■ -0AA0 | 515 | |
| | | | 200 | 240 | 200 | 240 | | 385 | 385 | | | | | | 15 | 15 | 2LC0131-8AA ■ ■ -0AA0 | 540 | |

ØD1:

- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
- Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
- Without finished bore from size 710 for 3rd diameter range D1 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2:

- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
- Without finished bore from size 560 for 2nd diameter range D2 – Without order codes
- Without finished bore from size 710 for 3rd diameter range D2 – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

¹⁾ Hub material EN-GJS 400 spheroidal graphite cast iron.

FLENDER Standard Couplings Flexible Couplings - RUPEX Series

Type RWN - hub material grey cast iron

| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|-------------|-------------------------------------|------------|---------------------------------|------------|------------|-------------|-------------|-------------|-----|-----|-----|-----|-----|-----|-------|------------------------------|------------------|---|--------|
| | T_{KN} | n_{kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | | | J_1 | J_2 | | m |
| | Nm | rpm | D1 min. | D2 max. | DA min. | ND1 max. | ND2 min. | NL1/ NL2 | S | U1 | U2 | P | LG | | | kgm ² | kgm ² | | kg |
| | | | | | | | | | | | | | | | | | | | |
| 800 | 110000 | 1000 | 125 | 180 | 125 | 180 | 800 | 320 | 320 | 290 | 7 | 80 | 80 | 140 | 587 | 22 | 22 | 2LC0132-0AA ■ ■ ■ -0AA0 | 670 |
| | | | 180 | 220 | 180 | 220 | | 360 | 360 | | | | | | | 23 | 23 | 2LC0132-0AA ■ ■ ■ -0AA0 | 690 |
| | | | 220 | 260 | 220 | 260 | | 420 | 420 | | | | | | | 24.5 | 24.5 | 2LC0132-0AA ■ ■ ■ -0AA0 | 730 |
| 900 | 150000 | 900 | 140 | 220 | 140 | 220 | 900 | 360 | 360 | 320 | 7.5 | 90 | 90 | 160 | 647.5 | 39 | 39 | 2LC0132-1AA ■ ■ ■ -0AA0 | 940 |
| | | | 220 | 260 | 220 | 260 | | 425 | 425 | | | | | | | 41 | 41 | 2LC0132-1AA ■ ■ ■ -0AA0 | 960 |
| | | | 260 | 290 | 260 | 290 | | 465 | 465 | | | | | | | 43 | 43 | 2LC0132-1AA ■ ■ ■ -0AA0 | 1030 |
| 1000 | 195000 | 810 | 150 | 240 | 150 | 240 | 1000 | 395 | 395 | 350 | 7.5 | 90 | 90 | 160 | 707.5 | 60 | 60 | 2LC0132-2AA ■ ■ ■ -0AA0 | 1200 |
| | | | 240 | 280 | 240 | 280 | | 460 | 460 | | | | | | | 63 | 63 | 2LC0132-2AA ■ ■ ■ -0AA0 | 1250 |
| | | | 280 | 320 | 280 | 320 | | 515 | 515 | | | | | | | 68 | 68 | 2LC0132-2AA ■ ■ ■ -0AA0 | 1310 |
| 1120 | 270000 | 700 | 160 | 200 | 160 | 200 | 1120 | 360 | 360 | 380 | 8.5 | 100 | 100 | 180 | 768.5 | 98 | 98 | 2LC0132-3AA ■ ■ ■ -0AA0 | 1470 |
| | | | 200 | 250 | 200 | 250 | | 410 | 410 | | | | | | | 100 | 100 | 2LC0132-3AA ■ ■ ■ -0AA0 | 1510 |
| | | | 250 | 300 | 250 | 300 | | 495 | 495 | | | | | | | 105 | 105 | 2LC0132-3AA ■ ■ ■ -0AA0 | 1600 |
| | | | 300 | 350 | 300 | 350 | | 560 | 560 | | | | | | | 110 | 110 | 2LC0132-3AA ■ ■ ■ -0AA0 | 1690 |
| 1250 | 345000 | 650 | 180 | 230 | 180 | 230 | 1250 | 410 | 410 | 420 | 8.5 | 100 | 100 | 180 | 848.5 | 150 | 150 | 2LC0132-4AA ■ ■ ■ -0AA0 | 1850 |
| | | | 230 | 280 | 230 | 280 | | 460 | 460 | | | | | | | 155 | 155 | 2LC0132-4AA ■ ■ ■ -0AA0 | 1900 |
| | | | 280 | 330 | 280 | 330 | | 540 | 540 | | | | | | | 165 | 165 | 2LC0132-4AA ■ ■ ■ -0AA0 | 2025 |
| | | | 330 | 380 | 330 | 380 | | 610 | 610 | | | | | | | 175 | 175 | 2LC0132-4AA ■ ■ ■ -0AA0 | 2210 |
| 1400 | 530000 | 570 | 200 | 260 | 200 | 260 | 1400 | 465 | 465 | 480 | 9 | 120 | 120 | 210 | 969 | 290 | 290 | 2LC0132-5AA ■ ■ ■ -0AA0 | 2820 |
| | | | 260 | 320 | 260 | 320 | | 525 | 525 | | | | | | | 300 | 300 | 2LC0132-5AA ■ ■ ■ -0AA0 | 2900 |
| | | | 320 | 380 | 320 | 380 | | 620 | 620 | | | | | | | 310 | 310 | 2LC0132-5AA ■ ■ ■ -0AA0 | 3180 |
| | | | 380 | 440 | 380 | 440 | | 700 | 700 | | | | | | | 330 | 330 | 2LC0132-5AA ■ ■ ■ -0AA0 | 3260 |
| 1600 | 750000 | 500 | 260 | 320 | 260 | 320 | 1600 | 565 | 565 | 540 | 9 | 120 | 120 | 210 | 1089 | 490 | 490 | 2LC0132-6AA ■ ■ ■ -0AA0 | 3780 |
| | | | 320 | 380 | 320 | 380 | | 625 | 625 | | | | | | | 500 | 500 | 2LC0132-6AA ■ ■ ■ -0AA0 | 3870 |
| | | | 380 | 440 | 380 | 440 | | 720 | 720 | | | | | | | 530 | 530 | 2LC0132-6AA ■ ■ ■ -0AA0 | 4150 |
| | | | 440 | 480 | 440 | 480 | | 770 | 770 | | | | | | | 550 | 550 | 2LC0132-6AA ■ ■ ■ -0AA0 | 4290 |
| 1800 | 975000 | 450 | 320 | 380 | 320 | 380 | 1800 | 660 | 660 | 600 | 12 | 140 | 140 | 240 | 1212 | 850 | 850 | 2LC0132-7AA ■ ■ ■ -0AA0 | 5550 |
| | | | 380 | 440 | 380 | 440 | | 720 | 720 | | | | | | | 930 | 930 | 2LC0132-7AA ■ ■ ■ -0AA0 | 5630 |
| | | | 440 | 500 | 440 | 500 | | 820 | 820 | | | | | | | 980 | 980 | 2LC0132-7AA ■ ■ ■ -0AA0 | 6000 |
| | | | 500 | 540 | 500 | 540 | | 870 | 870 | | | | | | | 1050 | 1050 | 2LC0132-7AA ■ ■ ■ -0AA0 | 6250 |
| 2000 | 1300000 | 400 | 380 | 440 | 380 | 440 | 2000 | 760 | 760 | 660 | 12 | 140 | 140 | 240 | 1332 | 1350 | 1350 | 2LC0132-8AA ■ ■ ■ -0AA0 | 6800 |
| | | | 440 | 500 | 440 | 500 | | 820 | 820 | | | | | | | 1400 | 1400 | 2LC0132-8AA ■ ■ ■ -0AA0 | 7000 |
| | | | 500 | 560 | 500 | 560 | | 920 | 920 | | | | | | | 1500 | 1500 | 2LC0132-8AA ■ ■ ■ -0AA0 | 7350 |
| | | | 560 | 600 | 560 | 600 | | 960 | 960 | | | | | | | 1550 | 1550 | 2LC0132-8AA ■ ■ ■ -0AA0 | 7620 |

- ØD1:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 - Without finished bore from size 1120 for 4th diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

- ØD2:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D2 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D2 – Without order codes
 - Without finished bore from size 1120 for 4th diameter range D2 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

From size 560 bores D1 and D2 are each provided with a recess of D = +1 mm halfway along the hub. $V \approx 1/3$ NL

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

RUPEX RWN coupling, size 710,
Part 1: hub left with bore 180H7 mm, with keyway to DIN 6885 and set screw,
Part 2: hub right with bore 200H7 mm, with keyway to DIN 6885 and set screw.

Product code:

2LC0131-8AA99-0AA0
L2B+M2D

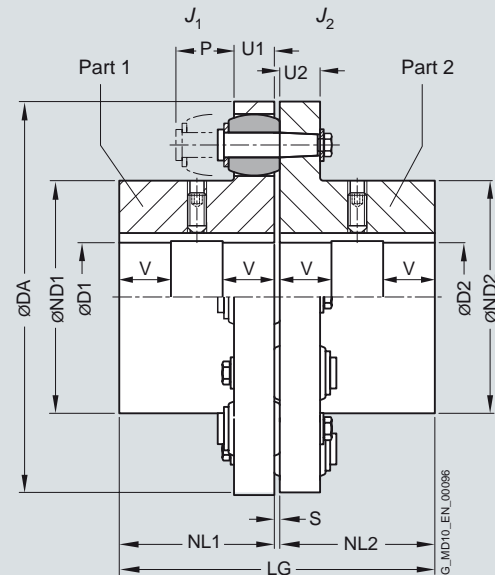
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RWS - hub material steel

Selection and ordering data



| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|-------------------------------------|------------|---------------------------------|------|-----|--------|-----|-----|-----|-----|-----|----|----|-----|------------------|------------------------|-----------------------|---|--------|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | | | J_1 | J_2 | | m |
| | D1 | D2 | DA | ND1 | ND2 | NL1/ S | U1 | U2 | P | LG | | | | | | | | | |
| | min. | max. | min. | max. | | NL2 | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | kgm ² | kgm ² | | kg | |
| 105 | 200 | 10000 | – | 32 | – | 38 | 105 | 53 | 59 | 45 | 3 | 13 | 12 | 30 | 93 | 0.001 | 0.001 | 2LC0130-1AB ■ ■ -0AA0 | 1.9 |
| 125 | 350 | 9000 | – | 40 | – | 48 | 125 | 65 | 68 | 50 | 3 | 16 | 15 | 35 | 103 | 0.003 | 0.003 | 2LC0130-2AB ■ ■ -0AA0 | 3.2 |
| 144 | 500 | 7800 | – | 50 | – | 60 | 144 | 76 | 84 | 55 | 3 | 16 | 15 | 35 | 113 | 0.004 | 0.006 | 2LC0130-3AB ■ ■ -0AA0 | 4.5 |
| 162 | 750 | 6900 | – | 55 | – | 65 | 162 | 85 | 92 | 60 | 3.5 | 20 | 18 | 40 | 123.5 | 0.007 | 0.013 | 2LC0130-4AB ■ ■ -0AA0 | 6.7 |
| 178 | 950 | 6300 | – | 70 | – | 75 | 178 | 102 | 108 | 70 | 3.5 | 20 | 18 | 40 | 143.5 | 0.014 | 0.022 | 2LC0130-5AB ■ ■ -0AA0 | 9.7 |
| 198 | 1300 | 5600 | – | 80 | – | 85 | 198 | 120 | 128 | 80 | 3.5 | 20 | 18 | 40 | 163.5 | 0.022 | 0.030 | 2LC0130-6AB ■ ■ -0AA0 | 12.9 |
| 228 | 2200 | 4900 | – | 85 | – | 95 | 228 | 129 | 140 | 90 | 3.5 | 26 | 24 | 50 | 183.5 | 0.038 | 0.071 | 2LC0130-7AB ■ ■ -0AA0 | 19 |
| 252 | 2750 | 4400 | – | 100 | – | 110 | 252 | 150 | 160 | 100 | 3.5 | 26 | 24 | 50 | 203.5 | 0.07 | 0.12 | 2LC0130-8AB ■ ■ -0AA0 | 26.3 |
| 285 | 4300 | 3900 | 48 | 110 | 48 | 120 | 285 | 164 | 175 | 110 | 4.5 | 32 | 30 | 60 | 224.5 | 0.13 | 0.21 | 2LC0131-0AB ■ ■ -0AA0 | 39 |
| 320 | 5500 | 3500 | 55 | 125 | 55 | 130 | 320 | 180 | 192 | 125 | 4.5 | 32 | 30 | 60 | 254.5 | 0.23 | 0.32 | 2LC0131-1AB ■ ■ -0AA0 | 53 |
| 360 | 7800 | 3100 | 65 | 135 | 65 | 140 | 360 | 200 | 210 | 140 | 4.5 | 42 | 42 | 75 | 284.5 | 0.41 | 0.69 | 2LC0131-2AB ■ ■ -0AA0 | 78 |
| 400 | 12500 | 2800 | 75 | 150 | 75 | 150 | 400 | 230 | 230 | 160 | 4.5 | 42 | 42 | 75 | 324.5 | 0.92 | 0.92 | 2LC0131-3AB ■ ■ -0AA0 | 110 |
| 450 | 18500 | 2500 | 85 | 170 | 85 | 170 | 450 | 260 | 260 | 180 | 5.5 | 52 | 52 | 90 | 365.5 | 1.7 | 1.7 | 2LC0131-4AB ■ ■ -0AA0 | 163 |
| 500 | 25000 | 2200 | 95 | 190 | 95 | 190 | 500 | 290 | 290 | 200 | 5.5 | 52 | 52 | 90 | 405.5 | 2.8 | 2.8 | 2LC0131-5AB ■ ■ -0AA0 | 217 |
| 560 | 39000 | 2000 | 100 | 165 | 100 | 165 | 560 | 250 | 250 | 220 | 6 | 68 | 68 | 120 | 446 | 4.8 | 4.8 | 2LC0131-6AB ■ ■ -0AA0 | 274 |
| | | | 165 | 200 | 165 | 200 | | 300 | 300 | | | | | | 5.2 | 5.2 | 2LC0131-6AB ■ ■ -0AA0 | 292 | |
| | | | 200 | 210 | 200 | 210 | | 320 | 320 | | | | | | 5.4 | 5.4 | 2LC0131-6AB ■ ■ -0AA0 | 305 | |
| 630 | 52000 | 1800 | 100 | 165 | 100 | 165 | 630 | 250 | 250 | 240 | 6 | 68 | 68 | 120 | 486 | 7.6 | 7.6 | 2LC0131-7AB ■ ■ -0AA0 | 352 |
| | | | 165 | 200 | 165 | 200 | | 300 | 300 | | | | | | 7.9 | 7.9 | 2LC0131-7AB ■ ■ -0AA0 | 370 | |
| | | | 200 | 235 | 200 | 235 | | 355 | 355 | | | | | | 8.7 | 8.7 | 2LC0131-7AB ■ ■ -0AA0 | 400 | |
| 710 | 84000 | 1600 | 110 | 190 | 110 | 190 | 710 | 290 | 290 | 260 | 7 | 80 | 80 | 140 | 527 | 14.4 | 14.4 | 2LC0131-8AB ■ ■ -0AA0 | 507 |
| | | | 190 | 220 | 190 | 220 | | 330 | 330 | | | | | | 14.6 | 14.6 | 2LC0131-8AB ■ ■ -0AA0 | 530 | |
| | | | 220 | 250 | 220 | 250 | | 385 | 385 | | | | | | 15.9 | 15.9 | 2LC0131-8AB ■ ■ -0AA0 | 560 | |

ØD1: • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 • Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 • Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2: • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 • Without finished bore from size 560 for 2nd diameter range D2 – Without order codes
 • Without finished bore from size 560 for 3rd diameter range D2 – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1
2
3
9
1
2
3
9

FLENDER Standard Couplings Flexible Couplings - RUPEX Series

Type RWS - hub material steel

| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|-------------|-------------------------------------|------------|--|------|------|------|------|-----|-----|-----|-----|-----|------------------|------------------|------------------------------|------|---|--------|
| | T_{KN} | n_{kmax} | D1 | D2 | DA | ND1 | ND2 | NL1 | S | U1 | P | LG | J_1 | J_2 | | | | m |
| | Nm | rpm | min. | max. | min. | max. | | NL2 | | U2 | | | kgm ² | kgm ² | | | | kg |
| 800 | 110000 | 1400 | 125 | 210 | 125 | 210 | 800 | 320 | 320 | 290 | 7 | 80 | 140 | 587 | 23.1 | 23.1 | 2LC0132-0AB ■ ■ -0AA0 | 683 |
| | | | 210 | 240 | 210 | 240 | | 360 | 360 | | | | | | 23.3 | 23.3 | 2LC0132-0AB ■ ■ -0AA0 | 715 |
| | | | 240 | 280 | 240 | 280 | | 420 | 420 | | | | | | 25.7 | 25.7 | 2LC0132-0AB ■ ■ -0AA0 | 762 |
| 900 | 150000 | 1250 | 140 | 210 | 140 | 210 | 900 | 320 | 320 | 320 | 7.5 | 90 | 160 | 647.5 | 40 | 40 | 2LC0132-1AB ■ ■ -0AA0 | 907 |
| | | | 210 | 240 | 210 | 240 | | 360 | 360 | | | | | | 41 | 41 | 2LC0132-1AB ■ ■ -0AA0 | 933 |
| | | | 240 | 280 | 240 | 280 | | 425 | 425 | | | | | | 44 | 44 | 2LC0132-1AB ■ ■ -0AA0 | 1000 |
| | | | 280 | 310 | 280 | 310 | | 465 | 465 | | | | | | 45 | 45 | 2LC0132-1AB ■ ■ -0AA0 | 1025 |
| 1000 | 195000 | 1100 | 150 | 230 | 150 | 230 | 1000 | 355 | 355 | 350 | 7.5 | 90 | 160 | 707.5 | 63 | 63 | 2LC0132-2AB ■ ■ -0AA0 | 1170 |
| | | | 230 | 260 | 230 | 260 | | 395 | 395 | | | | | | 64 | 64 | 2LC0132-2AB ■ ■ -0AA0 | 1208 |
| | | | 260 | 300 | 260 | 300 | | 460 | 460 | | | | | | 68 | 68 | 2LC0132-2AB ■ ■ -0AA0 | 1290 |
| | | | 300 | 340 | 300 | 340 | | 515 | 515 | | | | | | 70 | 70 | 2LC0132-2AB ■ ■ -0AA0 | 1343 |
| 1120 | 270000 | 1000 | 160 | 240 | 160 | 240 | 1120 | 360 | 360 | 380 | 8.5 | 100 | 180 | 768.5 | 105 | 105 | 2LC0132-3AB ■ ■ -0AA0 | 1560 |
| | | | 240 | 270 | 240 | 270 | | 410 | 410 | | | | | | 106 | 106 | 2LC0132-3AB ■ ■ -0AA0 | 1660 |
| | | | 270 | 330 | 270 | 330 | | 495 | 495 | | | | | | 109 | 109 | 2LC0132-3AB ■ ■ -0AA0 | 1730 |
| | | | 330 | 370 | 330 | 370 | | 560 | 560 | | | | | | 119 | 119 | 2LC0132-3AB ■ ■ -0AA0 | 1870 |
| 1250 | 345000 | 900 | 180 | 270 | 180 | 270 | 1250 | 410 | 410 | 420 | 8.5 | 100 | 180 | 848.5 | 168 | 168 | 2LC0132-4AB ■ ■ -0AA0 | 2000 |
| | | | 270 | 300 | 270 | 300 | | 460 | 460 | | | | | | 172 | 172 | 2LC0132-4AB ■ ■ -0AA0 | 2150 |
| | | | 300 | 360 | 300 | 360 | | 540 | 540 | | | | | | 179 | 179 | 2LC0132-4AB ■ ■ -0AA0 | 2200 |
| | | | 360 | 400 | 360 | 400 | | 610 | 610 | | | | | | 189 | 189 | 2LC0132-4AB ■ ■ -0AA0 | 2420 |
| 1400 | 530000 | 800 | 200 | 310 | 200 | 310 | 1400 | 465 | 465 | 480 | 9 | 120 | 210 | 969 | 316 | 316 | 2LC0132-5AB ■ ■ -0AA0 | 3020 |
| | | | 310 | 350 | 310 | 350 | | 525 | 525 | | | | | | 322 | 322 | 2LC0132-5AB ■ ■ -0AA0 | 3120 |
| | | | 350 | 410 | 350 | 410 | | 620 | 620 | | | | | | 337 | 337 | 2LC0132-5AB ■ ■ -0AA0 | 3350 |
| | | | 410 | 460 | 410 | 460 | | 700 | 700 | | | | | | 357 | 357 | 2LC0132-5AB ■ ■ -0AA0 | 3570 |
| 1600 | 750000 | 700 | 260 | 370 | 260 | 370 | 1600 | 565 | 565 | 540 | 9 | 120 | 210 | 1089 | 540 | 540 | 2LC0132-6AB ■ ■ -0AA0 | 3890 |
| | | | 370 | 410 | 370 | 410 | | 625 | 625 | | | | | | 554 | 554 | 2LC0132-6AB ■ ■ -0AA0 | 4270 |
| | | | 410 | 480 | 410 | 480 | | 720 | 720 | | | | | | 587 | 587 | 2LC0132-6AB ■ ■ -0AA0 | 4300 |
| | | | 480 | 510 | 480 | 510 | | 770 | 770 | | | | | | 611 | 611 | 2LC0132-6AB ■ ■ -0AA0 | 4630 |
| 1800 | 975000 | 600 | 320 | 440 | 320 | 440 | 1800 | 660 | 660 | 600 | 12 | 140 | 240 | 1212 | 1043 | 1043 | 2LC0132-7AB ■ ■ -0AA0 | 6230 |
| | | | 440 | 480 | 440 | 480 | | 720 | 720 | | | | | | 1072 | 1072 | 2LC0132-7AB ■ ■ -0AA0 | 6460 |
| | | | 480 | 540 | 480 | 540 | | 820 | 820 | | | | | | 1122 | 1122 | 2LC0132-7AB ■ ■ -0AA0 | 6770 |
| | | | 540 | 580 | 540 | 580 | | 870 | 870 | | | | | | 1143 | 1143 | 2LC0132-7AB ■ ■ -0AA0 | 7030 |
| 2000 | 1300000 | 550 | 380 | 500 | 380 | 500 | 2000 | 760 | 760 | 660 | 12 | 140 | 240 | 1332 | 1628 | 1628 | 2LC0132-8AB ■ ■ -0AA0 | 8140 |
| | | | 500 | 540 | 500 | 540 | | 820 | 820 | | | | | | 1664 | 1664 | 2LC0132-8AB ■ ■ -0AA0 | 8430 |
| | | | 540 | 610 | 540 | 610 | | 920 | 920 | | | | | | 1735 | 1735 | 2LC0132-8AB ■ ■ -0AA0 | 8860 |
| | | | 610 | 640 | 610 | 640 | | 960 | 960 | | | | | | 1793 | 1793 | 2LC0132-8AB ■ ■ -0AA0 | 9050 |

ØD1: • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 • Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 • Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 • Without finished bore from size 900 for 4th diameter range D1 – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2: • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 • Without finished bore from size 560 for 2nd diameter range D2 – Without order codes
 • Without finished bore from size 560 for 3rd diameter range D2 – Without order codes
 • Without finished bore from size 900 for 4th diameter range D2 – Without order codes
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

From size 560 bores D1 and D2 are each provided with a recess of D = +1 mm halfway along the hub. $V \approx 1/3$ NL

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

RUPEX RWS coupling, size 710,
 Part 1: Hub left with bore 180H7 mm, with keyway to DIN 6885 and set screw,
 Part 2: Hub right with bore 200H7 mm, with keyway to DIN 6885 and set screw.

Coupling balanced G6.3 in accordance with the half parallel key standard.

Product code:
2LC0131-8AB99-0AA0-Z
L2B+M2D+W02

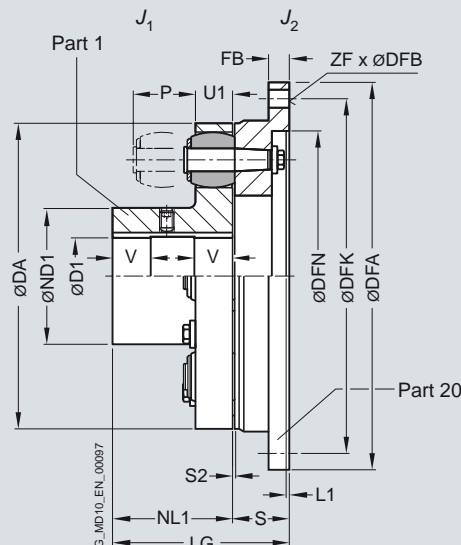
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RFN with hub in grey cast iron

Selection and ordering data



For dimensions U1, P and S2, see type RWN.

| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | Flange connection | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|-------------------------------------|------------|------------------|------|-----|-----|-----|------|-------|------|-----|-----|-------------------|-----|-----|------------------|------------------|------------------------------|----------------------|---|--------|
| | T_{KN} | n_{Kmax} | D1 | DA | ND1 | NL1 | S | LG | DFA | FB | DFN | L1 | DFK | ZF | DFB | J_1 | J_2 | m | | | |
| | | | min. | max. | | | | | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | | kgm ² | kgm ² | kg | | | |
| 105 | 200 | 7000 | – | 32 | 105 | 53 | 45 | 26 | 71 | 158 | 10 | | 142 | 6 | 9 | 0.001 | 0.005 | 2LC0130-1AJ ■ 1-0AA0 | 2.3 | | |
| 125 | 350 | 6000 | – | 40 | 125 | 65 | 50 | 31 | 81 | 180 | 13 | | 160 | 6 | 11 | 0.003 | 0.012 | 2LC0130-2AJ ■ 1-0AA0 | 4.4 | | |
| 144 | 500 | 5250 | – | 45 | 144 | 76 | 55 | 31 | 86 | 200 | 13 | | 180 | 7 | 11 | 0.004 | 0.018 | 2LC0130-3AJ ■ 1-0AA0 | 5.0 | | |
| 162 | 750 | 4650 | – | 50 | 162 | 85 | 60 | 37.5 | 97.5 | 220 | 13 | | 200 | 8 | 11 | 0.007 | 0.032 | 2LC0130-4AJ ■ 1-0AA0 | 7.3 | | |
| 178 | 950 | 4200 | – | 60 | 178 | 102 | 70 | 37.5 | 107.5 | 248 | 16 | | 224 | 8 | 14 | 0.014 | 0.055 | 2LC0130-5AJ ■ 1-0AA0 | 10 | | |
| 198 | 1300 | 3750 | – | 70 | 198 | 120 | 80 | 37.5 | 117.5 | 274 | 16 | | 250 | 8 | 14 | 0.022 | 0.080 | 2LC0130-6AJ ■ 1-0AA0 | 13 | | |
| 228 | 2200 | 3300 | – | 80 | 228 | 129 | 90 | 45.5 | 135.5 | 314 | 20 | | 282 | 8 | 18 | 0.038 | 0.18 | 2LC0130-7AJ ■ 1-0AA0 | 20 | | |
| 252 | 2750 | 3000 | – | 90 | 252 | 150 | 100 | 45.5 | 145.5 | 344 | 20 | | 312 | 8 | 18 | 0.07 | 0.26 | 2LC0130-8AJ ■ 1-0AA0 | 25.5 | | |
| 285 | 4300 | 2650 | 48 | 100 | 285 | 164 | 110 | 55.5 | 165.5 | 380 | 22 | | 348 | 9 | 18 | 0.13 | 0.46 | 2LC0131-0AJ ■ 1-0AA0 | 38 | | |
| 320 | 5500 | 2350 | 55 | 110 | 320 | 180 | 125 | 55.5 | 175.5 | 430 | 25 | | 390 | 9 | 22 | 0.23 | 0.76 | 2LC0131-1AJ ■ 1-0AA0 | 50 | | |
| 360 | 7800 | 2100 | 65 | 120 | 360 | 200 | 140 | 70.5 | 210.5 | 480 | 25 | | 440 | 10 | 22 | 0.41 | 1.4 | 2LC0131-2AJ ■ 1-0AA0 | 76 | | |
| 400 | 12500 | 2050 | 75 | 140 | 400 | 230 | 160 | 74.5 | 234.5 | 520 | 50 | 380 | 4 | 480 | 10 | 22 | 0.87 | 1.8 | 2LC0131-3AJ ■ 1-0AA0 | 125 | |
| 450 | 18500 | 1800 | 85 | 160 | 450 | 260 | 180 | 85.5 | 265.5 | 575 | 45 | 428 | 6 | 528 | 12 | 26 | 1.7 | 3.2 | 2LC0131-4AJ ■ 1-0AA0 | 170 | |
| 500 | 25000 | 1600 | 95 | 180 | 500 | 290 | 200 | 85.5 | 285.5 | 620 | 45 | 475 | 6 | 570 | 12 | 26 | 2.8 | 4.3 | 2LC0131-5AJ ■ 1-0AA0 | 205 | |
| 560 | 39000 | 1500 | 100 | 140 | 560 | 250 | 220 | 106 | 326 | 700 | 65 | 532 | 8 | 650 | 16 | 26 | 4.6 | 8.2 | 2LC0131-6AJ ■ 1-0AA0 | 330 | |
| | | | 140 | 180 | | 300 | | | | | | | | | | 5 | | 2LC0131-6AJ ■ 1-0AA0 | 330 | | |
| | | | 180 | 200 | | 320 | | | | | | | | | | 5.1 | | 2LC0131-6AJ ■ 1-0AA0 | 340 | | |
| 630 | 52000 | 1280 | 100 | 140 | 630 | 250 | 240 | 106 | 346 | 785 | 60 | 602 | 8 | 725 | 16 | 33 | 7.2 | 13.8 | 2LC0131-7AJ ■ 1-0AA0 | 390 | |
| | | | 140 | 180 | | 300 | | | | | | | | | | 7.7 | | 2LC0131-7AJ ■ 1-0AA0 | 400 | | |
| | | | 180 | 220 | | 355 | | | | | | | | | | 8.4 | | 2LC0131-7AJ ■ 1-0AA0 | 420 | | |
| 710 | 84000 | 1200 | 110 | 160 | 710 | 290 | 260 | 127 | 387 | 875 | 80 | 675 | 10 | 815 | 18 | 33 | 13 | 26 | 2LC0131-8AJ ■ 1-0AA0 | 550 | |
| | | | 160 | 200 | | 330 | | | | | | | | | | 14 | | 2LC0131-8AJ ■ 1-0AA0 | 550 | | |
| | | | 200 | 240 | | 385 | | | | | | | | | | 15 | | 2LC0131-8AJ ■ 1-0AA0 | 570 | | |
| 800 | 110000 | 1000 | 125 | 180 | 800 | 320 | 290 | 127 | 417 | 1000 | 70 | 765 | 10 | 930 | 16 | 39 | 22 | 45 | 2LC0131-9AJ ■ 1-0AA0 | 680 | |
| | | | 180 | 220 | | 360 | | | | | | | | | | 23 | | 2LC0131-9AJ ■ 1-0AA0 | 690 | | |
| | | | 220 | 260 | | 420 | | | | | | | | | | 24.5 | | 2LC0131-9AJ ■ 1-0AA0 | 710 | | |

- ØD1:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without -Z)

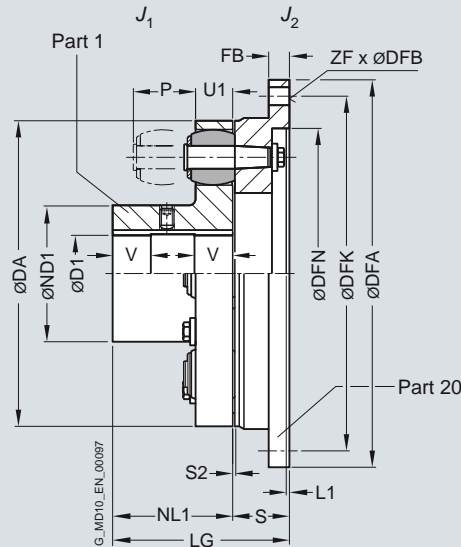
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From size 560 bore D1 is provided with a recess of $D = +1$ mm halfway along the hub. $V \approx 1/3$ NL

Weight and mass moments of inertia apply to maximum bore diameters.

The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

Selection and ordering data



For dimensions U1, P and S2, see type RWS.

| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm | | | | | | | | | | Flange connection | | | | | | Mass moment of inertia | | Product code | Weight |
|------|-------------------------------------|------------|---------------------------------|------------|-----|-----|-----|------|-------|------|-----|-----|-------------------|-----|-----|------------------|------------------|----------------------|------------------------------|-------|---|--------|
| | T_{KN} | n_{Kmax} | Bore with keyway to DIN 6885 | | | | | | | | | | | | | | | | J_1 | J_2 | Order codes for bore diameters and tolerances are specified in catalog section 3 | m |
| | Nm | rpm | D1 min. | DA max. | ND1 | NL1 | S | LG | DFA | FB | DFN | L1 | DFK | ZF | DFB | kgm ² | kgm ² | | kg | | | |
| 105 | 200 | 10000 | – | 32 | 105 | 53 | 45 | 26 | 71 | 158 | 10 | | 142 | 6 | 9 | 0.001 | 0.005 | 2LC0130-1AK ■ 1-0AA0 | 2.3 | | | |
| 125 | 350 | 9000 | – | 40 | 125 | 65 | 50 | 31 | 81 | 180 | 13 | | 160 | 6 | 11 | 0.003 | 0.012 | 2LC0130-2AK ■ 1-0AA0 | 4.2 | | | |
| 144 | 500 | 7800 | – | 50 | 144 | 76 | 55 | 31 | 86 | 200 | 13 | | 180 | 7 | 11 | 0.004 | 0.018 | 2LC0130-3AK ■ 1-0AA0 | 5.0 | | | |
| 162 | 750 | 6900 | – | 55 | 162 | 85 | 60 | 37.5 | 97.5 | 220 | 13 | | 200 | 8 | 11 | 0.007 | 0.032 | 2LC0130-4AK ■ 1-0AA0 | 7.3 | | | |
| 178 | 950 | 6300 | – | 70 | 178 | 102 | 70 | 37.5 | 107.5 | 248 | 16 | | 224 | 8 | 14 | 0.014 | 0.055 | 2LC0130-5AK ■ 1-0AA0 | 10.0 | | | |
| 198 | 1300 | 5600 | – | 80 | 198 | 120 | 80 | 37.5 | 117.5 | 274 | 16 | | 250 | 8 | 14 | 0.022 | 0.080 | 2LC0130-6AK ■ 1-0AA0 | 13 | | | |
| 228 | 2200 | 4900 | – | 85 | 228 | 129 | 90 | 45.5 | 135.5 | 314 | 20 | | 282 | 8 | 18 | 0.038 | 0.18 | 2LC0130-7AK ■ 1-0AA0 | 20 | | | |
| 252 | 2750 | 4400 | – | 100 | 252 | 150 | 100 | 45.5 | 145.5 | 344 | 20 | | 312 | 8 | 18 | 0.07 | 0.26 | 2LC0130-8AK ■ 1-0AA0 | 25 | | | |
| 285 | 4300 | 3900 | 48 | 110 | 285 | 164 | 110 | 55.5 | 165.5 | 380 | 22 | | 348 | 9 | 18 | 0.13 | 0.46 | 2LC0131-0AK ■ 1-0AA0 | 38 | | | |
| 320 | 5500 | 3500 | 55 | 125 | 320 | 180 | 125 | 55.5 | 175.5 | 430 | 25 | | 390 | 9 | 22 | 0.23 | 0.76 | 2LC0131-1AK ■ 1-0AA0 | 50 | | | |
| 360 | 7800 | 3100 | 65 | 135 | 360 | 200 | 140 | 70.5 | 210.5 | 480 | 25 | | 440 | 10 | 22 | 0.41 | 1.4 | 2LC0131-2AK ■ 1-0AA0 | 76 | | | |
| 400 | 12500 | 2800 | 75 | 150 | 400 | 230 | 160 | 74.5 | 234.5 | 520 | 50 | 380 | 4 | 480 | 10 | 22 | 0.92 | 1.8 | 2LC0131-3AK ■ 1-0AA0 | 125 | | |
| 450 | 18500 | 2500 | 85 | 170 | 450 | 260 | 180 | 85.5 | 265.5 | 575 | 45 | 428 | 6 | 528 | 12 | 26 | 1.7 | 3.2 | 2LC0131-4AK ■ 1-0AA0 | 175 | | |
| 500 | 25000 | 2200 | 95 | 190 | 500 | 290 | 200 | 85.5 | 285.5 | 620 | 45 | 475 | 6 | 570 | 12 | 26 | 2.8 | 4.3 | 2LC0131-5AK ■ 1-0AA0 | 210 | | |
| 560 | 39000 | 2000 | 100 | 165 | 560 | 250 | 220 | 106 | 326 | 700 | 65 | 532 | 8 | 650 | 16 | 26 | 4.8 | 8.2 | 2LC0131-6AK ■ 1-0AA0 | 330 | | |
| | | | 165 | 200 | | 300 | | | | | | | | | | | 5.2 | | 2LC0131-6AK ■ 1-0AA0 | 340 | | |
| | | | 200 | 210 | | 320 | | | | | | | | | | | 5.4 | | 2LC0131-6AK ■ 1-0AA0 | 340 | | |
| 630 | 52000 | 1800 | 100 | 165 | 630 | 250 | 240 | 106 | 346 | 785 | 60 | 602 | 8 | 725 | 16 | 33 | 7.6 | 13.8 | 2LC0131-7AK ■ 1-0AA0 | 390 | | |
| | | | 165 | 200 | | 300 | | | | | | | | | | | 7.9 | | 2LC0131-7AK ■ 1-0AA0 | 400 | | |
| | | | 200 | 235 | | 355 | | | | | | | | | | | 8.7 | | 2LC0131-7AK ■ 1-0AA0 | 420 | | |
| 710 | 84000 | 1600 | 110 | 190 | 710 | 290 | 260 | 127 | 387 | 875 | 80 | 675 | 10 | 815 | 18 | 33 | 14.4 | 26 | 2LC0131-8AK ■ 1-0AA0 | 550 | | |
| | | | 190 | 220 | | 330 | | | | | | | | | | | 14.6 | | 2LC0131-8AK ■ 1-0AA0 | 560 | | |
| | | | 220 | 250 | | 385 | | | | | | | | | | | 15.9 | | 2LC0131-8AK ■ 1-0AA0 | 580 | | |
| 800 | 110000 | 1400 | 125 | 210 | 800 | 320 | 290 | 127 | 417 | 1000 | 70 | 765 | 10 | 930 | 16 | 39 | 23.1 | 45 | 2LC0131-9AK ■ 1-0AA0 | 690 | | |
| | | | 210 | 240 | | 360 | | | | | | | | | | | 23.3 | | 2LC0131-9AK ■ 1-0AA0 | 710 | | |
| | | | 240 | 280 | | 420 | | | | | | | | | | | 25.7 | | 2LC0131-9AK ■ 1-0AA0 | 730 | | |

- ØD1:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without -Z)

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From size 560 bore D1 is provided with a recess of $D = +1$ mm halfway along the hub. $V \approx 1/3$ NL

Weight and mass moments of inertia apply to maximum bore diameters.

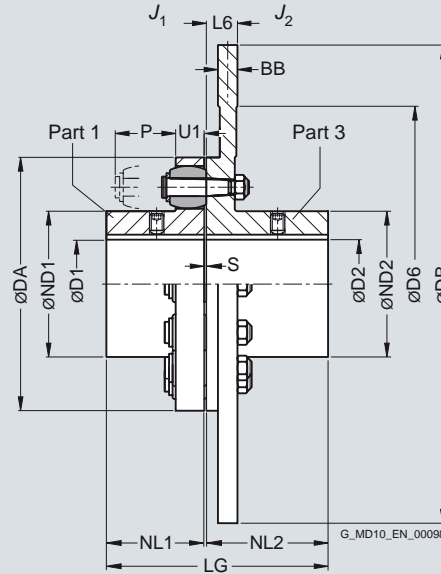
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RWB with brake disk to DIN 15432

Selection and ordering data



| Size | Rated torque buffer 80 ShoreA T_{KN} Nm | Dimensions in mm | | | | | | | | | | | | | | | | | Brake disk | | | | | | Product code Plain text specification DB ; BB ; D6 ; NL2 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 |
|------|--|---------------------------------|------------|------------|------------|-----|-----|-----|-----|-------------|-----|----|----|------------|------------|------------|------------|----|------------|------------------------------|---|--|--|--|---|
| | | Bore with keyway to DIN 6885 | | | | | | | | | | | | | | | | | | | | | | | |
| | | D1 min. | D2 max. | D1 min. | D2 max. | DA | ND1 | ND2 | NL1 | NL2 max. | S | U1 | P | LG max. | DB max. | DB min. | D6 min. | BB | L6 | | | | | | |
| 144 | 500 | – | 45 | – | 45 | 144 | 76 | 84 | 55 | 219 | 3 | 16 | 35 | 277 | 500 | 315 | 175 | 30 | 34 | 2LC0130-3AE ■ ■ -0ZA0 P0Y | | | | | |
| 162 | 750 | – | 50 | – | 50 | 162 | 85 | 92 | 60 | 219 | 3.5 | 20 | 40 | 282.5 | 560 | 315 | 175 | 30 | 34 | 2LC0130-4AE ■ ■ -0ZA0 P0Y | | | | | |
| 178 | 950 | – | 60 | – | 60 | 178 | 102 | 108 | 70 | 219 | 3.5 | 20 | 40 | 292.5 | 560 | 355 | 200 | 30 | 34 | 2LC0130-5AE ■ ■ -0ZA0 P0Y | | | | | |
| 198 | 1300 | – | 70 | – | 70 | 198 | 120 | 128 | 80 | 219 | 3.5 | 20 | 40 | 302.5 | 560 | 355 | 200 | 30 | 34 | 2LC0130-6AE ■ ■ -0ZA0 P0Y | | | | | |
| 228 | 2200 | – | 80 | – | 80 | 228 | 129 | 140 | 90 | 219 | 3.5 | 26 | 50 | 312.5 | 800 | 450 | 250 | 30 | 34 | 2LC0130-7AE ■ ■ -0ZA0 P0Y | | | | | |
| 252 | 2750 | – | 90 | 38 | 100 | 252 | 150 | 160 | 100 | 219 | 3.5 | 26 | 50 | 322.5 | 800 | 500 | 280 | 30 | 34 | 2LC0130-8AE ■ ■ -0ZA0 P0Y | | | | | |
| 285 | 4300 | 48 | 100 | 48 | 110 | 285 | 164 | 175 | 110 | 219 | 4.5 | 32 | 60 | 333.5 | 800 | 560 | 310 | 30 | 34 | 2LC0131-0AE ■ ■ -0ZA0 P0Y | | | | | |
| 320 | 5500 | 55 | 110 | 55 | 120 | 320 | 180 | 192 | 125 | 219 | 4.5 | 32 | 60 | 348.5 | 1000 | 630 | 350 | 30 | 34 | 2LC0131-1AE ■ ■ -0ZA0 P0Y | | | | | |
| ØD1: | • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | 9 | | | | | |
| ØD2: | • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | | 9 | | | | |

Brake disk diameter DB in accordance with customer specification.

Additional sizes are available on request. Further dimensions for part 3 on request.

Maximum speed in rpm:

$$n_{Kmax} = 1146/DB \quad DB \text{ in m}$$

Observe maximum speed of type RWN!

Mass moments of inertia and weights can be sufficiently precisely determined as follows:

- Mass moments of inertia in kgm^2 :
 $J_1 = J_1$ from type RWN
 $J_2 = J_2$ from type RWN + $710 \cdot BB \cdot DB^4$ BB, DB in m
- Weight in kg:
 $m = m$ from type RWN + $5700 \cdot BB \cdot DB^2$ BB, DB in m

Ordering example:

RUPEX RWB coupling, size 252.

Part 1: Bore D1 = 48H7 mm, keyway to DIN 6885-1 and set screw,

Part 3: Brake disk DB = 630; BB = 30 mm; D6 = 350 mm, bore 42H7 mm, keyway to DIN 6885-1 P9 and set screw.

Hub reduced to NL2 = 200 mm

Coupling micro-balanced G6.3 at 1500 rpm in accordance with the half parallel key standard.

Mass moment of inertia:

$$J_1 = 0.07 \text{ kgm}^2,$$

$$J_2 = 0.12 \text{ kgm}^2 + 3.3 \text{ kgm}^2 = 3.42 \text{ kgm}^2$$

Weight:

$$m = 26.3 \text{ kg} + 68 \text{ kg} = 94.3 \text{ kg}$$

Product code:

2LC0130-8AE99-0ZA0-Z

L1B+M0X+P0Y+W02

plain text to P0Y:

DB = 630 mm; BB = 30 mm;

D6 = 350 mm; NL2 = 200 mm

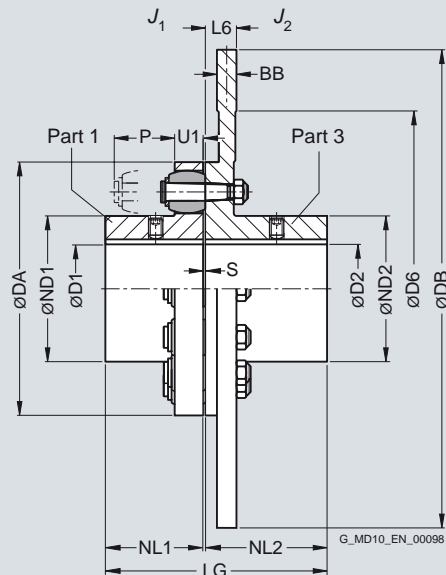
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RBS with brake disk to DIN 15432
Sizes 144 to 360

Selection and ordering data



| Size | Rated torque buffer 80 ShoreA T_{KN} Nm | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | | | | Brake disk | | | | Product code Plain text specification DB ; BB ; D6 ; NL2 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 |
|--|---|---|------|------|------|-----|-----|-----|-----|------|-----|----|----|-------|------|------|----|------------|------------------------------|---|--|---|
| | | D1 | | D2 | | DA | ND1 | ND2 | NL1 | NL2 | S | U1 | P | LG | DB | D6 | BB | L6 | | | | |
| | | min. | max. | min. | max. | | | | | max. | | | | max. | min. | min. | | | | | | |
| 144 | 500 | – | 50 | – | 45 | 144 | 76 | 84 | 55 | 219 | 3 | 16 | 35 | 277 | 315 | 175 | 30 | 34 | 2LC0130-3AH ■ ■ -0ZA0 P0Y | | | |
| 162 | 750 | – | 55 | – | 50 | 162 | 85 | 92 | 60 | 219 | 3.5 | 20 | 40 | 282.5 | 315 | 175 | 30 | 34 | 2LC0130-4AH ■ ■ -0ZA0 P0Y | | | |
| 178 | 950 | – | 70 | – | 60 | 178 | 102 | 108 | 70 | 219 | 3.5 | 20 | 40 | 292.5 | 355 | 200 | 30 | 34 | 2LC0130-5AH ■ ■ -0ZA0 P0Y | | | |
| 198 | 1300 | – | 80 | – | 70 | 198 | 120 | 128 | 80 | 219 | 3.5 | 20 | 40 | 302.5 | 355 | 200 | 30 | 34 | 2LC0130-6AH ■ ■ -0ZA0 P0Y | | | |
| 228 | 2200 | – | 85 | – | 80 | 228 | 129 | 140 | 90 | 219 | 3.5 | 26 | 50 | 312.5 | 450 | 250 | 30 | 34 | 2LC0130-7AH ■ ■ -0ZA0 P0Y | | | |
| 252 | 2750 | – | 100 | 38 | 100 | 252 | 150 | 160 | 100 | 219 | 3.5 | 26 | 50 | 322.5 | 500 | 280 | 30 | 34 | 2LC0130-8AH ■ ■ -0ZA0 P0Y | | | |
| 285 | 4300 | 48 | 110 | 48 | 120 | 285 | 164 | 175 | 110 | 219 | 4.5 | 32 | 60 | 333.5 | 560 | 310 | 30 | 34 | 2LC0131-0AH ■ ■ -0ZA0 P0Y | | | |
| 320 | 5500 | 55 | 125 | 55 | 130 | 320 | 180 | 192 | 125 | 219 | 4.5 | 32 | 60 | 348.5 | 630 | 350 | 30 | 34 | 2LC0131-1AH ■ ■ -0ZA0 P0Y | | | |
| 360 | 7800 | 65 | 135 | 65 | 140 | 360 | 200 | 210 | 140 | 221 | 4.5 | 42 | 75 | 365.5 | 710 | 390 | 30 | 34 | 2LC0131-2AE ■ ■ -0ZA0 P0Y | | | |
| ØD1: | | | | | | | | | | | | | | | | | | | | 1 | | |
| • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | | 9 | | |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | | | | |
| ØD2: | | | | | | | | | | | | | | | | | | | | 1 | | |
| • Without finished bore – Without order codes | | | | | | | | | | | | | | | | | | | | 9 | | |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | | | | |

Brake disk diameter DB in accordance with customer specification.

Additional sizes are available on request. Further dimensions for part 3 on request.

Maximum speed in rpm:

$$n_{Kmax} = 1528/DB \quad DB \text{ in m}$$

Observe maximum speed of type RWS!

Mass moments of inertia and weights can be sufficiently precisely determined as follows:

- Mass moments of inertia in kgm^2 :
 $J_1 = J_1$ from type RWS
 $J_2 = J_2$ from type RWS + $770 \cdot BB \cdot DB^4$ BB and DB in m
- Weight in kg: $m = m$ from type RWS + $6160 \cdot BB \cdot DB^2$
BB and DB in m

Ordering example:

RUPEX RBS coupling, size 252,

Part 1: Bore D1 = 48H7 mm, keyway to DIN 6885-1 and set screw,

Part 3: Brake disk DB = 630 x BB = 30 mm, D6 = 350 mm, bore 42H7 mm, keyway to DIN 6885-1 P9 and set screw.

Hub reduced to NL2 = 200 mm

Coupling micro-balanced G6.3 at 1500 rpm in accordance with the half parallel key standard.

Mass moment of inertia:

$$J_1 = 0.07 \text{ kgm}^2, J_2 = 0.12 \text{ kgm}^2 + 3.6 \text{ kgm}^2 = 3.72 \text{ kgm}^2$$

$$\text{Weight: } m = 25.8 \text{ kg} + 73 \text{ kg} = 98.8 \text{ kg}$$

Product code:

2LC0130-8AH99-OZA0-Z

L1B+M0X+P0Y+W02

plain text to P0Y:

DB = 630 mm; BB = 30 mm;

D6 = 350 mm; NL2 = 200 mm

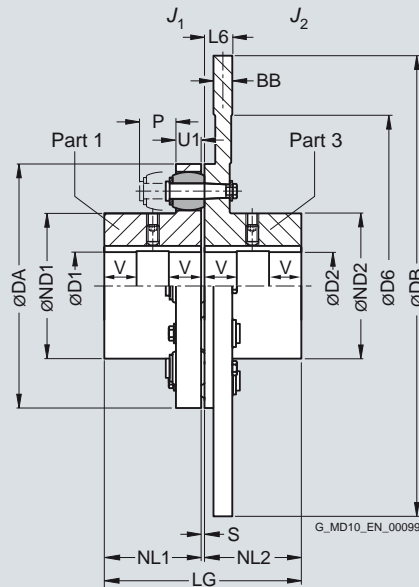
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RBS with brake disk to DIN 15432
Sizes 400 to 1000

Selection and ordering data



| Size | Rated torque buffer 80 ShoreA T_{KN} Nm | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | Brake disk | | | | Product code Plain text specification DB ; BB ; D6 ; NL2 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 |
|------|---|---|------------|------------|------------|-----|-----|-----|-----|-----|-----|----|-----|------------|------------|----|----|---|
| | | D1 min. | D1 max. | D2 min. | D2 max. | DA | ND1 | ND2 | NL1 | NL2 | S | U1 | P | LG | D6 min. | BB | L6 | |
| 400 | 12500 | 75 | 150 | 75 | 150 | 400 | 230 | 230 | 160 | 225 | 4.5 | 42 | 75 | 389.5 | 440 | 30 | 40 | 2LC0131-3AH ■ ■ -0ZA0 P0Y |
| 450 | 18500 | 85 | 170 | 85 | 170 | 450 | 260 | 260 | 180 | 225 | 5.5 | 52 | 90 | 410.5 | 500 | 30 | 40 | 2LC0131-4AH ■ ■ -0ZA0 P0Y |
| 500 | 25000 | 95 | 190 | 95 | 190 | 500 | 290 | 290 | 200 | 225 | 5.5 | 52 | 90 | 430.5 | 500 | 30 | 40 | 2LC0131-5AH ■ ■ -0ZA0 P0Y |
| 560 | 39000 | 100 | 165 | 100 | 210 | 560 | 250 | 320 | 220 | 225 | 6 | 68 | 120 | 451 | 560 | 30 | 40 | 2LC0131-6AH ■ ■ -0ZA0 P0Y |
| | | 165 | 200 | | | | 300 | | | | | | | | | | | 2LC0131-6AH ■ ■ -0ZA0 P0Y |
| | | 200 | 210 | | | | 320 | | | | | | | | | | | 2LC0131-6AH ■ ■ -0ZA0 P0Y |
| 630 | 52000 | 100 | 165 | 100 | 235 | 630 | 250 | 355 | 240 | 240 | 6 | 68 | 120 | 486 | 630 | 30 | 55 | 2LC0131-7AH ■ ■ -0ZA0 P0Y |
| | | 165 | 200 | | | | 300 | | | | | | | | | | | 2LC0131-7AH ■ ■ -0ZA0 P0Y |
| | | 200 | 235 | | | | 355 | | | | | | | | | | | 2LC0131-7AH ■ ■ -0ZA0 P0Y |
| 710 | 84000 | 110 | 190 | 110 | 250 | 710 | 290 | 385 | 260 | 260 | 7 | 80 | 140 | 527 | 710 | 30 | 75 | 2LC0131-8AH ■ ■ -0ZA0 P0Y |
| | | 190 | 220 | | | | 330 | | | | | | | | | | | 2LC0131-8AH ■ ■ -0ZA0 P0Y |
| | | 220 | 250 | | | | 385 | | | | | | | | | | | 2LC0131-8AH ■ ■ -0ZA0 P0Y |
| 800 | 110000 | 125 | 210 | 125 | 280 | 800 | 320 | 420 | 290 | 290 | 7 | 80 | 140 | 587 | 800 | 30 | 75 | 2LC0132-0AH ■ ■ -0ZA0 P0Y |
| | | 210 | 240 | | | | 360 | | | | | | | | | | | 2LC0132-0AH ■ ■ -0ZA0 P0Y |
| | | 240 | 280 | | | | 420 | | | | | | | | | | | 2LC0132-0AH ■ ■ -0ZA0 P0Y |

- ØD1:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D1 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D1 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

- ØD2:
- Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes
 - Without finished bore from size 560 for 2nd diameter range D2 – Without order codes
 - Without finished bore from size 560 for 3rd diameter range D2 – Without order codes
 - With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

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FLENDER Standard Couplings **Flexible Couplings - RUPEX Series**

Type RBS with brake disk to DIN 15432
 Sizes 400 to 1000

| Size | Rated torque buffer 80 ShoreA T_{KN} Nm | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | | Brake disk | | | Product code Plain text specification DB ; BB ; D6 ; NL2 required for order code P0Y Order codes for bore diameters and tolerances are specified in catalog section 3 |
|------|---|--|------|------|------|------|-----|-----|-----|-----|-----|----|-----|-------|------------|------------|----|------------------------------|---|
| | | D1 | | D2 | | DA | ND1 | ND2 | NL1 | NL2 | S | U1 | P | LG | D6 min. | BB | L6 | | |
| | | min. | max. | min. | max. | | | | | | | | | | | | | | |
| 900 | 150000 | 140 | 210 | 140 | 310 | 900 | 320 | 465 | 320 | – | 7.5 | 90 | 160 | 647.5 | 900 | 30 | 75 | 2LC0132-1AH ■ ■ -0ZA0 P0Y | |
| | | 210 | 240 | | | | 360 | | | | | | | | | | | 2LC0132-1AH ■ ■ -0ZA0 P0Y | |
| | | 240 | 280 | | | | 425 | | | | | | | | | | | 2LC0132-1AH ■ ■ -0ZA0 P0Y | |
| | | 280 | 310 | | | | 465 | | | | | | | | | | | 2LC0132-1AH ■ ■ -0ZA0 P0Y | |
| 1000 | 195000 | 150 | 230 | 150 | 340 | 1000 | 355 | 515 | 350 | – | 7.5 | 90 | 160 | 707.5 | 1000 | 30 | 75 | 2LC0132-2AH ■ ■ -0ZA0 P0Y | |
| | | 230 | 260 | | | | 395 | | | | | | | | | | | 2LC0132-2AH ■ ■ -0ZA0 P0Y | |
| | | 260 | 300 | | | | 460 | | | | | | | | | | | 2LC0132-2AH ■ ■ -0ZA0 P0Y | |
| | | 300 | 340 | | | | 515 | | | | | | | | | | | 2LC0132-2AH ■ ■ -0ZA0 P0Y | |
| ØD1: | | • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes • Without finished bore from size 560 for 2nd diameter range D1 – Without order codes • Without finished bore from size 560 for 3rd diameter range D1 – Without order codes • Without finished bore from size 900 for 4th diameter range D1 – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 2 3 4 9 | |
| ØD2: | | • Without finished bore up to size 500, from size 560 for 1st diameter range D1 – Without order codes • Without finished bore from size 560 for 2nd diameter range D2 – Without order codes • Without finished bore from size 560 for 3rd diameter range D2 – Without order codes • Without finished bore from size 900 for 4th diameter range D2 – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 1 2 3 4 9 | |

From size 560 bore D1 is provided with a recess of $D = +1$ mm
 halfway along the hub.
 $V \approx 1/3$ NL

Brake disk diameter DB in accordance with customer specification.

Additional sizes are available on request. Further dimensions for
 part 3 on request.

Maximum speed in rpm:

$$n_{Kmax} = 1528/DB \quad DB \text{ in m}$$

Observe maximum speed of type RWS!

Mass moments of inertia and weights can be sufficiently pre-
 cisely determined as follows:

- Mass moments of inertia in kgm^2 :
 $J_1 = J_1$ from type RWS
 $J_2 = J_2$ from type RWS + $770 \cdot BB \cdot DB^4$ BB and DB in m
- Weight in kg:
 $m = m$ from type RWS + $6160 \cdot BB \cdot DB^2$ BB and DB in m

Ordering example:

RUPEX RBS coupling, size 450,
 Part 1: Bore D1 = 130H7 mm, keyway to DIN 6885-1 and set
 screw,
 Part 3: Brake disk DB = 900; BB = 30 mm; D6 = 500 mm; bore
 120H7 mm, keyway to DIN 6885-1 P9 and set screw.

Coupling micro-balanced G6.3 at 1500 rpm in accordance with
 the half parallel key standard.

Mass moment of inertia:

$$J_1 = 1.74 \text{ kgm}^2$$

$$J_2 = 1.74 \text{ kgm}^2 + 15 \text{ kgm}^2 = 16.74 \text{ kgm}^2$$

Weight:

$$m = 25.8 \text{ kg} + 149 \text{ kg} = 174.8 \text{ kg}$$

Product code:

2LC0131-4AH99-0ZA0-Z
L1U+M1S+P0Y+W02

plain text to P0Y:

DB = 900 mm; BB = 30 mm;
D6 = 500 mm; NL2 = 322 mm

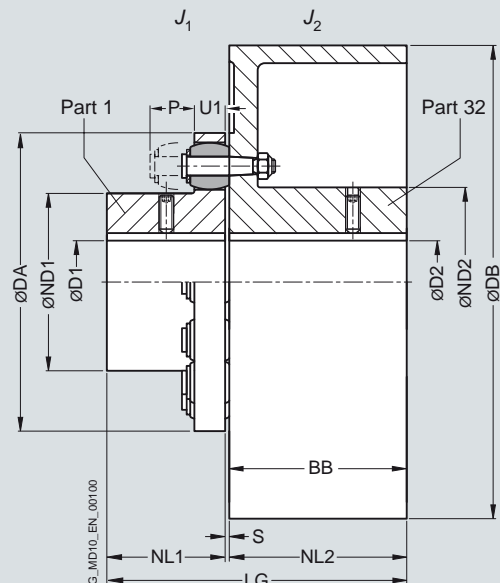
The product code applies to standard buffers of 80 ShoreA; the
 product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RWB with brake drum to DIN 15431

Selection and ordering data



For dimensions U1 and P, see type RWN.

| Size | Rated torque buffer 80 ShoreA | Speed | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | Mass moment of inertia | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|---|------------|---|-----|------|-----|-----|-----|-----|-----|------------|-----|-------|-------|------------------|------------------------------|-----------------------|---|--------|
| | T_{KN} | n_{Kmax} | D1 | | D2 | | DA | ND1 | ND2 | NL1 | NL2/ BB | S | DB | LG | J_1 | J_2 | m | | |
| | | | from | to | from | to | | | | | | | | | | | | | |
| | Nm | rpm | | | | | | | | | | | | | kgm ² | kgm ² | kg | | |
| 144 | 500 | 3400 | – | 45 | – | 55 | 144 | 76 | 84 | 55 | 75 | 3 | 200 | 133 | 0.004 | 0.04 | 2LC0130-3AC ■ ■ -0BA0 | 9.5 | |
| 162 | 750 | 2750 | – | 50 | – | 60 | 162 | 85 | 92 | 60 | 95 | 3.5 | 250 | 158.5 | 0.007 | 0.11 | 2LC0130-4AC ■ ■ -0CA0 | 17 | |
| 178 | 950 | 2750 | – | 60 | – | 70 | 178 | 102 | 108 | 70 | 95 | 3.5 | 250 | 168.5 | 0.014 | 0.12 | 2LC0130-5AC ■ ■ -0CA0 | 20 | |
| | | 2150 | | | | | | | | 118 | | 315 | 191.5 | | 0.31 | 2LC0130-5AC ■ ■ -0DA0 | 28 | | |
| 198 | 1300 | 2750 | – | 70 | – | 80 | 198 | 120 | 128 | 80 | 95 | 3.5 | 250 | 178.5 | 0.022 | 0.13 | 2LC0130-6AC ■ ■ -0CA0 | 24 | |
| | | 2150 | | | | | | | | 118 | | 315 | 201.5 | | 0.32 | 2LC0130-6AC ■ ■ -0DA0 | 32 | | |
| 228 | 2200 | 1700 | – | 80 | – | 90 | 228 | 129 | 140 | 90 | 150 | 3.5 | 400 | 243.5 | 0.038 | 1.0 | 2LC0130-7AC ■ ■ -0EA0 | 54 | |
| 252 | 2750 | 1700 | – | 90 | 38 | 100 | 252 | 150 | 160 | 100 | 150 | 3.5 | 400 | 253.5 | 0.07 | 1.0 | 2LC0130-8AC ■ ■ -0EA0 | 63 | |
| | | 1400 | | | | | | | | 190 | | 500 | 293.5 | | 2.8 | 2LC0130-8AC ■ ■ -0FA0 | 93 | | |
| 285 | 4300 | 1400 | 48 | 100 | 48 | 110 | 285 | 164 | 175 | 110 | 190 | 4.5 | 500 | 304.5 | 0.13 | 2.8 | 2LC0131-0AC ■ ■ -0FA0 | 104 | |
| | | 1100 | | | | | | | | 236 | | 630 | 350.5 | | 7.8 | 2LC0131-0AC ■ ■ -0GA0 | 157 | | |
| 320 | 5500 | 1100 | 55 | 110 | 55 | 120 | 320 | 180 | 192 | 125 | 236 | 4.5 | 630 | 365.5 | 0.23 | 7.9 | 2LC0131-1AC ■ ■ -0GA0 | 172 | |
| | | 950 | | | | | | | | 265 | | 710 | 394.5 | | 13.9 | 2LC0131-1AC ■ ■ -0HA0 | 217 | | |
| 360 | 7800 | 1100 | 65 | 120 | 65 | 130 | 360 | 200 | 210 | 140 | 236 | 4.5 | 630 | 380.5 | 0.41 | 8.1 | 2LC0131-2AC ■ ■ -0GA0 | 191 | |
| | | 950 | | | | | | | | 265 | | 710 | 409.5 | | 14.0 | 2LC0131-2AC ■ ■ -0HA0 | 236 | | |
| ØD1: | • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 1 9 | |
| ØD2: | • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 1 9 | |

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:
 RUPEX RWB coupling, size 252,
 Part 1: Bore 48H7 mm, keyway to DIN 6885-1 and set screw,
 Part 3: 500 x 190, bore 42H7 mm, keyway to DIN 6885-1 P9 and set screw.

Coupling micro-balanced G6.3 at 1500 rpm in accordance with the half parallel key standard.

Product code:
2LC0130-8AC99-0FA0-Z
L1B+M0X+W02

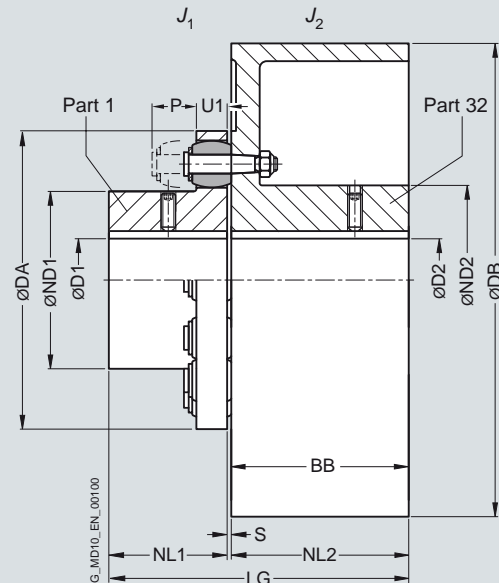
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

Flexible Couplings - RUPEX Series

Type RBS with brake drum to DIN 15431

Selection and ordering data



For dimensions U1 and P, see type RWS

| Size | Rated torque buffer 80 ShoreA T_{KN} Nm | Speed n_{Kmax} rpm | Dimensions in mm Bore with keyway to DIN 6885 | | | | | | | | | | | | | Mass moment of inertia J_1 J_2 kgm ² kgm ² | | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m kg |
|--|---|----------------------------|---|------------|----|-----|-----|-----|-----------|-----|-----|-----|-----|-------|-------|--|--------------------|---|---------------------|
| | | | D1 min. | D2 max. | DA | ND1 | ND2 | NL1 | NL2 BB | S | DB | LG | | | | | | | |
| 144 | 500 | 5000 | — | 50 | — | 60 | 144 | 76 | 84 | 55 | 75 | 3 | 200 | 133 | 0.004 | 0.04 | 2LC0130-3AD | -0BA0 | 10 |
| 162 | 750 | 5000 | — | 55 | — | 65 | 162 | 85 | 92 | 60 | 95 | 3.5 | 250 | 158.5 | 0.007 | 0.13 | 2LC0130-4AD | -0CA0 | 18 |
| 178 | 950 | 4900 | — | 70 | — | 75 | 178 | 102 | 108 | 70 | 95 | 3.5 | 250 | 168.5 | 0.014 | 0.13 | 2LC0130-5AD | -0CA0 | 22 |
| | | 4350 | | | | | | | | | 118 | | 315 | 191.5 | | 0.34 | 2LC0130-5AD | -0DA0 | 30 |
| 198 | 1300 | 4600 | — | 80 | — | 85 | 198 | 120 | 128 | 80 | 95 | 3.5 | 250 | 178.5 | 0.022 | 0.14 | 2LC0130-6AD | -0CA0 | 26 |
| | | 4350 | | | | | | | | | 118 | | 315 | 201.5 | | 0.35 | 2LC0130-6AD | -0DA0 | 35 |
| 228 | 2200 | 3400 | — | 85 | — | 95 | 228 | 129 | 140 | 90 | 150 | 3.5 | 400 | 243.5 | 0.038 | 1.1 | 2LC0130-7AD | -0EA0 | 60 |
| 252 | 2750 | 3400 | — | 100 | 38 | 110 | 252 | 150 | 160 | 100 | 150 | 3.5 | 400 | 253.5 | 0.067 | 1.1 | 2LC0130-8AD | -0EA0 | 68 |
| | | 2750 | | | | 100 | | | | | 190 | | 500 | 293.5 | | 3.1 | 2LC0130-8AD | -0FA0 | 103 |
| 285 | 4300 | 2750 | 48 | 110 | 48 | 110 | 285 | 164 | 175 | 110 | 190 | 4.5 | 500 | 304.5 | 0.13 | 3.1 | 2LC0131-0AD | -0FA0 | 115 |
| | | 2150 | | | | | | | | | 236 | | 630 | 350.5 | | 8.5 | 2LC0131-0AD | -0GA0 | 171 |
| 320 | 5500 | 2150 | 55 | 125 | 55 | 125 | 320 | 180 | 192 | 125 | 236 | 4.5 | 630 | 365.5 | 0.23 | 8.6 | 2LC0131-1AD | -0GA0 | 185 |
| | | 1900 | | | | | | | | | 265 | | 710 | 394.5 | | 14.8 | 2LC0131-1AD | -0HA0 | 230 |
| 360 | 7800 | 2150 | 65 | 135 | 65 | 135 | 360 | 200 | 210 | 140 | 236 | 4.5 | 630 | 380.5 | 0.41 | 8.9 | 2LC0131-2AD | -0GA0 | 210 |
| | | 1900 | | | | | | | | | 265 | | 710 | 409.5 | | 15.1 | 2LC0131-2AD | -0HA0 | 255 |
| ØD1: • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | 1 |
| ØD2: • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | 9 |

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

RUPEX RBS coupling, size 252,
Part 1: Bore 48H7 mm, keyway to DIN 6885-1 and set screw,
Part 3: 500 x 190, bore 42H7 mm, keyway to DIN 6885-1 P9 and set screw.

Coupling micro-balanced.

Product code:

2LC0130-8AD99-0FA0-Z
L1B+M0X+W02

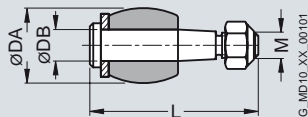
The product code applies to standard buffers of 80 ShoreA; the product code for alternative buffer types is available on request.

FLENDER Standard Couplings

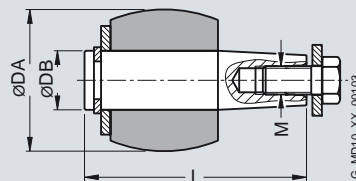
Flexible Couplings - RUPEX Series

Spare and wear parts

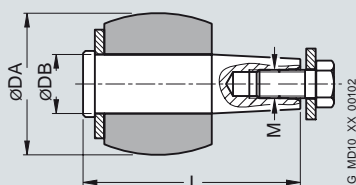
Selection and ordering data



Sizes 105 ... 400



Sizes 710 ... 2000



Sizes 450 ... 630

Buffers and pins

The buffers of RUPEX couplings are wear parts. The service life depends on the operating conditions.

| Size | Identification | Number per set | | | | | Product code for a set of buffers | Weight | | Weight |
|------|----------------|----------------|-----|----|-------|-----|-----------------------------------|--------|-------------------------------|----------|
| | | | DA | DB | L | M | Buffer Perbunan 80 ShoreA | | Pin complete, incl. fasteners | <i>m</i> |
| | | | mm | mm | mm | | | kg | | kg |
| 105 | 105 | 8 | 20 | 8 | 45 | M6 | 2LC0130-1WA00-0AA0 | 0.043 | 2LC0130-1WB00-0AA0 | 0.14 |
| 125 | 125 | 8 | 24 | 10 | 53.5 | M8 | 2LC0130-2WA00-0AA0 | 0.098 | 2LC0130-2WB00-0AA0 | 0.28 |
| 144 | 125 | 10 | 24 | 10 | 53.5 | M8 | 2LC0130-3WA00-0AA0 | 0.12 | 2LC0130-3WB00-0AA0 | 0.35 |
| *) | 125 | | | | 59.5 | | | | 2LC0130-3WB00-0AA0-Z Y99 | 0.4 |
| 162 | 162 | 9 | 30 | 12 | 64.5 | M10 | 2LC0130-4WA00-0AA0 | 0.17 | 2LC0130-4WB00-0AA0 | 0.57 |
| *) | 162 | | | | 67.5 | | | | 2LC0130-4WB00-0AA0-Z Y99 | 0.60 |
| 178 | 162 | 10 | 30 | 12 | 64.5 | M10 | 2LC0130-5WA00-0AA0 | 0.19 | 2LC0130-5WB00-0AA0 | 0.65 |
| *) | 162 | | | | 67.5 | | | | 2LC0130-5WB00-0AA0-Z Y99 | 0.67 |
| 198 | 162 | 12 | 30 | 12 | 64.5 | M10 | 2LC0130-6WA00-0AA0 | 0.23 | 2LC0130-6WB00-0AA0 | 0.76 |
| *) | 162 | | | | 67.5 | | | | 2LC0130-6WB00-0AA0-Z Y99 | 0.80 |
| 228 | 228 | 11 | 40 | 16 | 79 | M12 | 2LC0130-7WA00-0AA0 | 0.42 | 2LC0130-7WB00-0AA0 | 1.40 |
| 252 | 228 | 12 | 40 | 16 | 79 | M12 | 2LC0130-8WA00-0AA0 | 0.45 | 2LC0130-8WB00-0AA0 | 1.50 |
| 285 | 285 | 11 | 48 | 20 | 98 | M16 | 2LC0131-0WA00-0AA0 | 0.81 | 2LC0131-0WB00-0AA0 | 2.50 |
| 320 | 285 | 12 | 48 | 20 | 98 | M16 | 2LC0131-1WA00-0AA0 | 0.88 | 2LC0131-1WB00-0AA0 | 2.80 |
| 360 | 360 | 10 | 64 | 25 | 123 | M18 | 2LC0131-2WA00-0AA0 | 1.6 | 2LC0131-2WB00-0AA0 | 4.4 |
| 400 | 360 | 14 | 64 | 25 | 123 | M18 | 2LC0131-3WA00-0AA0 | 2.2 | 2LC0131-3WB00-0AA0 | 6.1 |
| 450 | 450 | 12 | 78 | 32 | 123 | M16 | 2LC0131-4WA00-0AA0 | 3.5 | 2LC0131-4WB00-0AA0 | 11 |
| 500 | 450 | 14 | 78 | 32 | 123 | M16 | 2LC0131-5WA00-0AA0 | 4.0 | 2LC0131-5WB00-0AA0 | 13 |
| 560 | 560 | 12 | 101 | 42 | 158 | M20 | 2LC0131-6WA00-0AA0 | 7.1 | 2LC0131-6WB00-0AA0 | 25 |
| 630 | 560 | 14 | 101 | 42 | 158 | M20 | 2LC0131-7WA00-0AA0 | 8.3 | 2LC0131-7WB00-0AA0 | 29 |
| 710 | 710 | 14 | 120 | 50 | 185.5 | M24 | 2LC0131-8WA00-0AA0 | 14 | 2LC0131-8WB00-0AA0 | 49 |
| 800 | 710 | 16 | 120 | 50 | 185.5 | M24 | 2LC0132-0WA00-0AA0 | 16 | 2LC0132-0WB00-0AA0 | 56 |
| 900 | 900 | 16 | 136 | 55 | 207.5 | M24 | 2LC0132-1WA00-0AA0 | 24 | 2LC0132-1WB00-0AA0 | 71 |
| 1000 | 900 | 18 | 136 | 55 | 207.5 | M24 | 2LC0132-2WA00-0AA0 | 27 | 2LC0132-2WB00-0AA0 | 80 |
| 1120 | 1120 | 18 | 155 | 60 | 232.5 | M30 | 2LC0132-3WA00-0AA0 | 41 | 2LC0132-3WB00-0AA0 | 110 |
| 1250 | 1120 | 20 | 155 | 60 | 232.5 | M30 | 2LC0132-4WA00-0AA0 | 45 | 2LC0132-4WB00-0AA0 | 125 |
| 1400 | 1400 | 20 | 175 | 70 | 274 | M30 | 2LC0132-5WA00-0AA0 | 65 | 2LC0132-5WB00-0AA0 | 185 |
| 1600 | 1400 | 24 | 175 | 70 | 274 | M30 | 2LC0132-6WA00-0AA0 | 78 | 2LC0132-6WB00-0AA0 | 225 |
| 1800 | 1800 | 22 | 200 | 80 | 327 | M36 | 2LC0132-7WA00-0AA0 | 115 | 2LC0132-7WB00-0AA0 | 320 |
| 2000 | 1800 | 26 | 200 | 80 | 327 | M36 | 2LC0132-8WA00-0AA0 | 135 | 2LC0132-8WB00-0AA0 | 380 |

* Only for type RWB with brake disk and type RBS with brake disk.
Plain text to Y99: "Type RWB/RBS with brake disk"



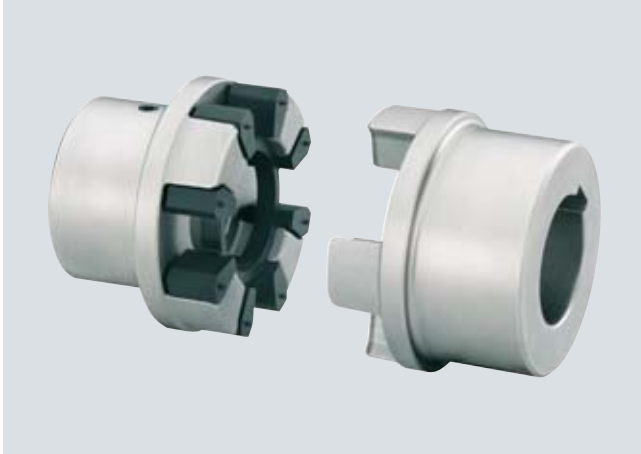
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FLENDER Standard Couplings

Flexible Couplings - BIPEX Series

General information

Overview



BIPEX couplings are torsionally flexible with low torsional backlash. They are outstanding for their particularly compact construction. BIPEX couplings link machine shafts.

BIPEX couplings are specially suited for electric motor drives which are well aligned and have uniform torque loads.

Benefits

BIPEX couplings are suitable for mounting horizontally, vertically or at any desired angle. The coupling parts can be arranged as required on the shaft extensions to be connected.

The cam ring is mounted with low backlash and achieves progressive torsional stiffness, i.e. torsional stiffness increases in proportion to capacity utilization.

The BIPEX coupling is fail-safe, i.e. if the cam ring is worn, the cast cams of the coupling hub provide for emergency operation.

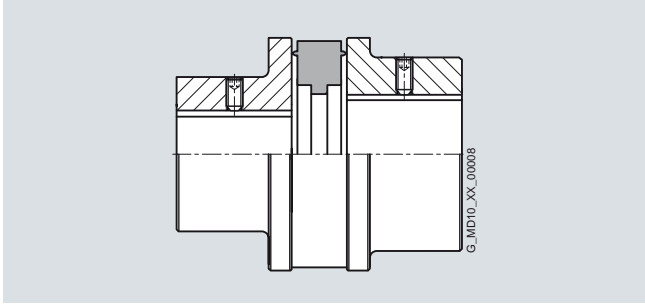
Application

The BIPEX coupling is available as a catalog standard in 13 sizes with rated torque of between 13.5 Nm and 3700 Nm. The coupling is suitable for ambient temperatures of between $-30\text{ }^{\circ}\text{C}$ and $+80\text{ }^{\circ}\text{C}$.

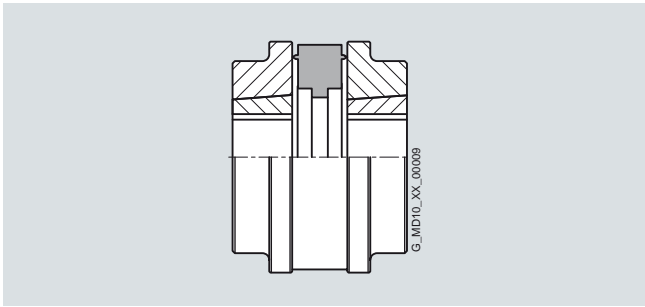
BIPEX couplings are particularly suited for electric motor drives which have a uniform torque load and are well aligned. BIPEX couplings are frequently fitted and used in motor bell housings.

Design

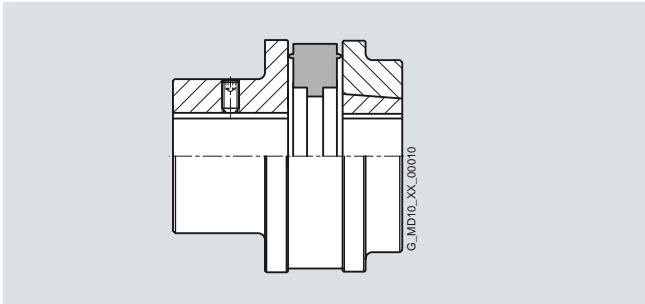
BIPEX couplings of types BWN, BWT and BNT each comprise two hub parts connected by a cam ring of elastomer material.



Type BWN



Type BWT



Type BNT

The couplings are inserted during fitting. The hubs are connected to the respective shafts via Taper clamping bushes or finished bores with parallel keyway connection. BIPEX couplings are positive-locking and torsionally flexible thanks to the polyurethane cam ring. Shaft misalignment will result in deformation of the cam ring.

Coupling materials:

Hubs: EN-GJL-250

Cam ring: PU 92 ShoreA -30 °C to +80 °C

Types of BIPEX coupling

| Type | Description |
|------|--|
| BWN | Coupling as a shaft-to-shaft connection with drilled and grooved hubs |
| BWT | Coupling as a shaft-shaft connection with Taper clamping bushes |
| BNT | Coupling as a shaft-shaft connection with drilled and grooved hubs and a Taper clamping bush |

The coupling comprises the following:

- Cam ring
- 2 hub parts with identical cams. The hub parts are designed with a bore and keyway to DIN 6885 or with a taper bore for mounting a Taper clamping bush.

Fitting the clamping bush connects the hub firmly to the machine shaft.

In the case of part 4 the Taper clamping bush is inserted from the machine housing side. If there is insufficient space, the Taper clamping bush cannot be fitted from this side. Besides space for fitting the Taper clamping bush, space for the fitting tool (offset screwdriver) must be taken into consideration. In the case of part 3 the Taper clamping bush is inserted from the shaft end face side. The hub must be fitted before the machines to be connected are pushed together.

FLENDER Standard Couplings

Flexible Couplings - BIPEX Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Maximum speed | Torsional stiffness at 50 % capacity utilization | Assembly Gap dimension | Permissible shaft misalignment at speed $n=1500$ rpm ¹⁾ | | |
|------------|----------------|------------------|-----------------|----------------|------------------|--|------------------------|--|--------------------|------------------------|
| | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} | n_{max} rpm | C_{Tdyn} 50 % Nm/rad | ΔS mm | ΔK_a mm | ΔK_r mm | ΔK_w Degree |
| 43 | 13.5 | 40.5 | 54 | 2.7 | 5000 | 1160 | 0.5 | 0.25 | 0.08 | 0.1 |
| 53 | 24 | 72 | 96 | 4.8 | 5000 | 2100 | 0.5 | 0.25 | 0.09 | 0.1 |
| 62 | 42 | 126 | 168 | 8.4 | 5000 | 3500 | 0.5 | 0.25 | 0.11 | 0.1 |
| 72 | 75 | 225 | 300 | 15 | 5000 | 6100 | 0.5 | 0.25 | 0.12 | 0.1 |
| 84 | 130 | 390 | 520 | 26 | 5000 | 9600 | 0.5 | 0.25 | 0.14 | 0.1 |
| 97 | 220 | 660 | 880 | 44 | 5000 | 15800 | 1.0 | 0.5 | 0.16 | 0.1 |
| 112 | 360 | 1080 | 1440 | 72 | 5000 | 23100 | 1.0 | 0.5 | 0.19 | 0.1 |
| 127 | 550 | 1650 | 2200 | 110 | 5000 | 37000 | 1.0 | 0.5 | 0.21 | 0.1 |
| 142 | 800 | 2400 | 3200 | 160 | 4900 | 57000 | 1.0 | 0.5 | 0.24 | 0.1 |
| 162 | 1250 | 3750 | 5000 | 250 | 4200 | 85000 | 1.0 | 0.5 | 0.27 | 0.1 |
| 182 | 1750 | 5250 | 7000 | 350 | 3800 | 127000 | 1.0 | 0.5 | 0.30 | 0.1 |
| 202 | 2650 | 7950 | 10600 | 530 | 3400 | 171000 | 1.0 | 0.5 | 0.34 | 0.1 |
| 227 | 3700 | 11100 | 14800 | 740 | 3000 | 285000 | 2.0 | 1.0 | 0.38 | 0.1 |

Torsional stiffness and damping

The values stated in the above table apply to a capacity utilization of 50 %, an excitation amplitude of 10 % T_{KN} with the frequency 10 Hz and an ambient temperature of 20 °C. Dynamic torsional stiffness is dependent on load and increases in proportion to capacity utilization. The following table shows the correction factors for different nominal loads.

$$C_{Tdyn} = C_{Tdyn\ 50\ \%} \cdot FKC$$

| | Capacity utilization T_N / T_{KN} | | | | | | |
|-----------------------|-------------------------------------|------|------|------|------|------|-------|
| | 20 % | 40 % | 50 % | 60 % | 70 % | 80 % | 100 % |
| Correction factor FKC | 0.7 | 0.9 | 1.0 | 1.1 | 1.25 | 1.4 | 1.7 |

The damping coefficient is $\Psi = 1.4$

Furthermore, torsional stiffness and damping depend on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size and type must be observed!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

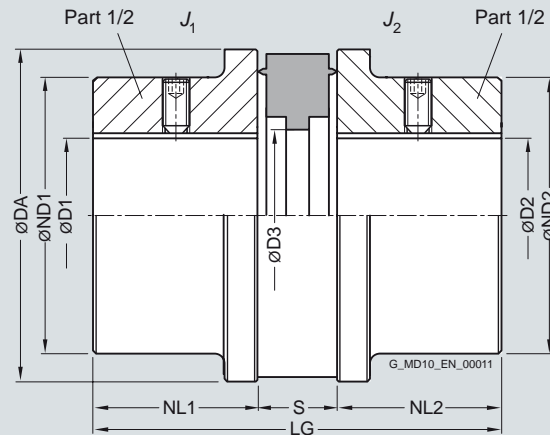
| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.20 | 1.10 | 1.0 | 0.70 |

The axial misalignment may occur dynamically at frequencies up to 10 Hz. For fitting, a maximum gap dimension of $S_{max} = S + \Delta S$ and a minimum gap dimension of $S_{min} = S - \Delta S$ are permitted.

Shaft misalignments ΔK_a , ΔK_r and ΔK_w may occur simultaneously.

¹⁾ The maximum speed of the respective type must be noted. For further information on permissible shaft misalignment, please see the operating instructions.

Selection and ordering data



| Size | Rated torque T_{KN} Nm | Dimensions in mm | | | | | | | Mass moment of inertia J_1/J_2 gm ² | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m kg |
|------------|--------------------------------|--|-----|---------|---------|-----|----|-----|--|--|---------------------|
| | | Bore with keyway to DIN 6885 D1/D2 max. | DA | ND1/ND2 | NL1/NL2 | D3 | S | LG | | | |
| 43 | 13.5 | 25 | 43 | 43 | 22 | 21 | 12 | 56 | 0.04 | 2LC0120-0AA ■ ■ -0AA0 | 0.36 |
| 53 | 24 | 30 | 53 | 50 | 25 | 25 | 14 | 64 | 0.12 | 2LC0120-1AA ■ ■ -0AA0 | 0.62 |
| 62 | 42 | 35 | 62 | 58 | 30 | 29 | 16 | 76 | 0.26 | 2LC0120-2AA ■ ■ -0AA0 | 0.96 |
| 72 | 75 | 32 | 72 | 54 | 35 | 36 | 18 | 88 | 0.55 | 2LC0120-3AA ■ ■ -0AA0 | 1.4 |
| | | 42 | | 68 | | | | | 0.65 | | 1.6 |
| 84 | 130 | 38 | 84 | 64 | 40 | 40 | 21 | 101 | 0.8 | 2LC0120-4AA ■ ■ -0AA0 | 2.1 |
| | | 48 | | 76 | | | | | 1.1 | | 2.3 |
| 97 | 220 | 42 | 97 | 72 | 50 | 48 | 24 | 124 | 1.6 | 2LC0120-5AA ■ ■ -0AA0 | 3.3 |
| | | 50 | | 90 | | | | | 2.2 | | 3.6 |
| 112 | 360 | 48 | 112 | 82 | 60 | 54 | 27 | 147 | 3.2 | 2LC0120-6AA ■ ■ -0AA0 | 5.0 |
| | | 60 | | 100 | | | | | 4.8 | | 5.8 |
| 127 | 550 | 55 | 127 | 94 | 65 | 61 | 27 | 157 | 6.0 | 2LC0120-7AA ■ ■ -0AA0 | 7.3 |
| | | 65 | | 110 | | | | | 8.0 | | 7.8 |
| 142 | 800 | 60 | 142 | 100 | 75 | 70 | 31 | 181 | 10.0 | 2LC0120-8AA ■ ■ -0AA0 | 9.8 |
| | | 75 | | 126 | | | | | 16.0 | | 11.5 |
| 162 | 1250 | 65 | 162 | 110 | 80 | 81 | 36 | 196 | 18.0 | 2LC0121-0AA ■ ■ -0AA0 | 13.5 |
| | | 80 | | 134 | | | | | 26.0 | | 15.5 |
| 182 | 1750 | 75 | 182 | 126 | 90 | 90 | 42 | 222 | 35.0 | 2LC0121-1AA ■ ■ -0AA0 | 19.5 |
| | | 90 | | 152 | | | | | 46.0 | | 22.0 |
| 202 | 2650 | 80 | 202 | 134 | 100 | 100 | 48 | 248 | 55.0 | 2LC0121-2AA ■ ■ -0AA0 | 25.0 |
| | | 100 | | 168 | | | | | 80.0 | | 30.0 |
| 227 | 3700 | 90 | 227 | 150 | 110 | 111 | 54 | 274 | 85.0 | 2LC0121-3AA ■ ■ -0AA0 | 40.0 |
| | | 110 | | 180 | | | | | 110.0 | | 45.0 |

| | | |
|------|--|---|
| ØD1: | • Without finished bore – Without order codes for diameter and tolerance | 1 |
| | • Without finished bore from size 72 for 2nd diameter range D1 – Without order codes | 2 |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |
| ØD2: | • Without finished bore – Without order codes for diameter and tolerance | 1 |
| | • Without finished bore from size 72 for 2nd diameter range D2 – Without order codes | 2 |
| | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |

Mass moment of inertia J in gm², 1 gm² = 0.001 kgm², with reference to one coupling half.

Weight and mass moments of inertia apply to maximum bore diameters.

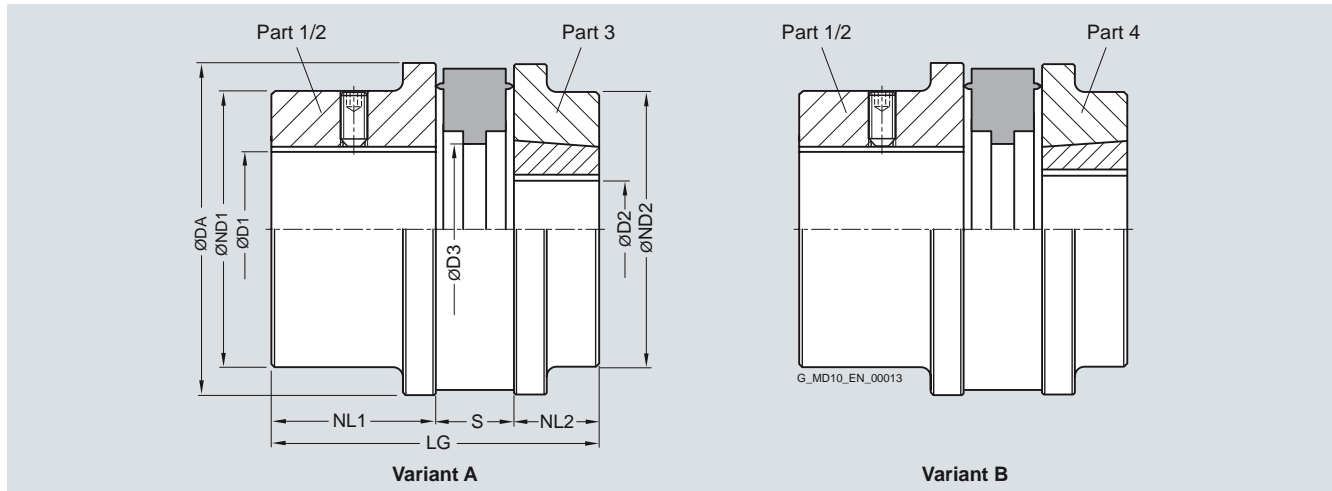
Ordering example:

BIPEX BWN coupling, size 43,
Part 1/2: Bore D1 20H7 mm, with keyway to DIN 6885-1 and set screw,
Part 1/2: Bore D2 22H7 mm, with keyway to DIN 6885-1 and set screw.

Product code:

2LC0120-0AA99-0AA0
L0M+M0N

Selection and ordering data



Dimension D3, see type BWN.

| Size | Rated torque T_{KN} Nm | Variant | Dimensions in mm | | | | | | | | | | | | Mass moment of inertia ¹⁾ J gm ² | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m kg |
|------|------------------------------------|--|--|-------------------------------|--|------------------|-----|-----|-----|-----|----|----|-----|------|--|--|-------------------------|
| | | | Bore with keyway to DIN 6885-1 max. | Taper clamping bushes Size | Bore with keyway to DIN 6885-1 D1/D2 min. max. | DA | ND1 | ND2 | NL1 | NL2 | S | LG | | | | | |
| 62 | 42 | A | 35 | 1008 | 10 | 25 ¹⁾ | 62 | 58 | 58 | 30 | 23 | 16 | 69 | 0.22 | 2LC0120-2AE ■■ -0AA0 | 0.9 | |
| | | B | | | | | | | | | | | | | 2LC0120-2AF ■■ -0AA0 | | |
| 72 | 75 | A | 32 | 1108 | 10 | 28 ¹⁾ | 72 | 54 | 68 | 35 | 23 | 18 | 76 | 0.41 | 2LC0120-3AE ■■ -0AA0 | 1.4 | |
| | | B | 42 | | | | | 68 | | | | | | | 2LC0120-3AF ■■ -0AA0 | | |
| 84 | 130 | A | 38 | 1210 | 11 | 32 | 84 | 64 | 76 | 40 | 26 | 21 | 87 | 0.85 | 2LC0120-4AE ■■ -0AA0 | 1.9 | |
| | | B | 48 | | | | | 76 | | | | | | | 2LC0120-4AF ■■ -0AA0 | | |
| 112 | 360 | A | 48 | 1610 | 14 | 42 ¹⁾ | 112 | 82 | 100 | 60 | 26 | 27 | 113 | 2.70 | 2LC0120-6AE ■■ -0AA0 | 4.5 | |
| | | B | 60 | | | | | 100 | | | | | | | 2LC0120-6AF ■■ -0AA0 | | |
| 142 | 800 | A | 60 | 2012 | 14 | 50 | 142 | 100 | 126 | 75 | 33 | 31 | 139 | 9.25 | 2LC0120-8AE ■■ -0AA0 | 8.9 | |
| | | B | 75 | | | | | 126 | | | | | | | 2LC0120-8AF ■■ -0AA0 | | |
| 182 | 1750 | A | 75 | 2517 | 16 | 60 | 182 | 126 | 126 | 90 | 45 | 42 | 177 | 27.0 | 2LC0121-1AE ■■ -0AA0 | 16.7 | |
| | | B | 90 | | | | | 152 | | | | | | | 2LC0121-1AF ■■ -0AA0 | | |
| 202 | 2650 | A | 80 | 3020 | 25 | 75 | 202 | 134 | 168 | 100 | 52 | 48 | 200 | 52.5 | 2LC0121-2AE ■■ -0AA0 | 23 | |
| | | B | 100 | | | | | 168 | | | | | | | 2LC0121-2AF ■■ -0AA0 | | |
| 227 | 3700 | A | 90 | 3535 | 35 | 90 | 227 | 150 | 180 | 110 | 90 | 54 | 254 | 30.0 | 2LC0121-3AE ■■ -0AA0 | 37.5 | |
| | | B | 110 | | | | | 180 | | | | | | | 2LC0121-3AF ■■ -0AA0 | | |
| ØD1: | | • Without finished bore – Without order codes for diameter and tolerance | | | | | | | | | | | | | 2 | | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | 9 | | |
| ØD2: | | • Without Taper clamping bush – Without order codes for diameter and tolerance | | | | | | | | | | | | | 1 | | |
| | | • With Taper clamping bush – With order codes for diameter (product code without -Z) | | | | | | | | | | | | | 9 | | |

Mass moment of inertia J in gm², 1 gm² = 0.001 kgm², with reference to one coupling half.

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

BIPEX BNT coupling, size 62, variant B

Part 1/2: Bore D1 20H7 mm, with keyway to DIN 6885-1 and set screw,

Part 4: Bore D2 22H7 mm, with keyway to DIN 6885-1 and set screw.

Product code:

2LC0120-2AF99-0AA0
L0M+M0N

¹⁾ Bores, some with shallow keyway, see catalog section 14.

FLENDER Standard Couplings

Flexible Couplings - BIPEX Series

Spare and wear parts

Selection and ordering data

BIPEX cam ring

| Size | Product code | Weight kg |
|------|--------------------|--------------|
| 43 | 2LC0120-0WA00-0AA0 | 0.004 |
| 53 | 2LC0120-1WA00-0AA0 | 0.005 |
| 62 | 2LC0120-2WA00-0AA0 | 0.008 |
| 72 | 2LC0120-3WA00-0AA0 | 0.013 |
| 84 | 2LC0120-4WA00-0AA0 | 0.021 |
| 97 | 2LC0120-5WA00-0AA0 | 0.034 |
| 112 | 2LC0120-6WA00-0AA0 | 0.062 |
| 127 | 2LC0120-7WA00-0AA0 | 0.082 |
| 142 | 2LC0120-8WA00-0AA0 | 0.14 |
| 162 | 2LC0121-0WA00-0AA0 | 0.18 |
| 182 | 2LC0121-1WA00-0AA0 | 0.3 |
| 202 | 2LC0121-2WA00-0AA0 | 0.4 |
| 227 | 2LC0121-3WA00-0AA0 | 0.54 |

The elastomer cam rings are wear parts. The service life depends on the operating conditions.

Highly Flexible Couplings ELPEX-B Series



| | |
|-------|---|
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| 10/6 | Selection and ordering data |
| 10/8 | Type EBWZ |
| 10/8 | Selection and ordering data |
| 10/10 | Spare and wear parts |
| 10/10 | Selection and ordering data |

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-B Series

General information

Overview



ELPEX-B couplings are highly flexible and free of torsional backlash. Because of their low torsional stiffness and damping capacity, ELPEX-B couplings are especially suitable for coupling machines with a highly non uniform torque pattern. ELPEX-B couplings are also suitable for connecting machines with high shaft misalignment.

Standard ELPEX-B coupling types are designed as shaft-shaft connections. Application-related types can be manufactured on request.

Benefits

The ELPEX-B coupling is suitable for horizontal and vertical mounting positions or mounting positions at any required angle.

The elastic tire is slit at the circumference and can be changed without having to move the coupled machines.

The elastic tire is fitted without backlash and gives the coupling linear torsional stiffness, thus the torsional rigidity remains constant as the load on the coupling increases.

The ELPEX-B coupling is especially suitable for reversing operation or operation with changing directions of load.

The coupling parts can be arranged as required on the shaft ends to be connected.

If the elastic tire is irreparably damaged or worn, the metal parts can rotate freely against one another because they are not in contact with one another.

Application

The ELPEX-B coupling is available as a catalog standard in 15 sizes with a rated torque of between 24 Nm and 14500 Nm. The coupling can be fitted with elastic tires made of natural rubber for ambient temperatures of -50°C to $+50^{\circ}\text{C}$ and with elastic

tires made of chloroprene rubber for -15°C to $+70^{\circ}\text{C}$. The chloroprene rubber tire is marked FRAS, "Fire-resistant and Anti-static".

Design

The ELPEX-B coupling's transmission characteristic is determined essentially by the elastic tire. The elastic tire is manufactured from a natural rubber or a chloroprene rubber mixture with a multiply fabric insert. The elastic tire is fastened to the hubs with bolts and two clamping rings.

In type EBWT, the shaft-hub connection is achieved with Taper clamping bushes, in type EBWN with finish-drilled hubs and parallel keys. The type EBWZ connects the machine shafts additionally via a detachable adapter.

Materials

Metal part materials

EN-GJL-250 grey cast iron or steel of quality $R_e > 300 \text{ N/mm}^2$.

Elastic tire material

| Material | Hardness | Identification | Ambient temperature |
|--------------------|-----------|----------------|--|
| Natural rubber | 70 ShoreA | 048 | -50°C to $+50^{\circ}\text{C}$ |
| Chloroprene rubber | 70 ShoreA | 068 FRAS | -15°C to $+70^{\circ}\text{C}$ |

FLENDER Standard Couplings **Highly Flexible Couplings - ELPEX-B Series**

General information

ELPEX-B coupling types

| Type | Description |
|------|--|
| EBWN | Coupling as a shaft-shaft connection with drilled and grooved hubs |
| EBWT | Coupling as a shaft-shaft connection with Taper clamping bushes |
| EBWZ | Coupling as shaft-shaft connection with detachable adapter |

Further application-specific coupling types are available; dimension sheets for and information on these are available on request.

The coupling types set up for shaft-hub connections with Taper clamping bushes are designated as follows:

- Variant A: Coupling with part 3 – part 3
- Variant B: Coupling with part 4 – part 4
- Variant AB: Coupling with part 3 – part 4

In the case of part 3, the Taper clamping bush is screwed in from the shaft end face side. The coupling half must be fitted before the machines to be connected are pushed together.

In the case of part 4, the Taper clamping bush is screwed in from the machine-housing side. If there is insufficient room, the Taper clamping bushes cannot be fitted from this side. Besides fitting space for the Taper clamping bush bolts, space for the fitting tool (offset screwdriver) must be taken into account.

In the case of coupling type EBWT, part 3 and part 4 can be combined as required. Furthermore, the variant with a Taper clamping bush can be combined with the finish-drilled hub.



Unfitted coupling

The elastic tire can simply be slipped over the hub parts. The elastic tire is held firmly in place by fitting the clamping ring. The connection transmits the torque by frictional engagement.



Fitted coupling, shown without connecting shafts.



Fitted elastic tire

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-B Series

General information

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Maximum speed | Dynamic torsional stiffness for 100 % load | Permitted shaft misalignment at speed $n = 1500 \text{ rpm}$ ¹⁾ | | |
|------|----------------|------------------|-----------------|----------------|-------------------|--|--|------------------------------|----------------------------------|
| | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} Nm | n_{Kmax} rpm | C_{Tdyn} Nm/rad | Axial ΔK_a mm | Radial ΔK_r mm | Angle ΔK_w Degrees |
| 105 | 24 | 48 | 72 | 7 | 4500 | 285 | 1.3 | 1.1 | 4 |
| 135 | 66 | 132 | 200 | 20 | 4500 | 745 | 1.7 | 1.3 | 4 |
| 165 | 125 | 250 | 375 | 38 | 4000 | 1500 | 2.0 | 1.6 | 4 |
| 190 | 250 | 500 | 750 | 75 | 3600 | 2350 | 2.3 | 1.9 | 4 |
| 210 | 380 | 760 | 1140 | 114 | 3100 | 3600 | 2.6 | 2.1 | 4 |
| 235 | 500 | 1000 | 1500 | 150 | 3000 | 5200 | 3.0 | 2.4 | 4 |
| 255 | 680 | 1360 | 2040 | 204 | 2600 | 7200 | 3.3 | 2.6 | 4 |
| 280 | 880 | 1760 | 2640 | 264 | 2300 | 10000 | 3.7 | 2.9 | 4 |
| 315 | 1350 | 2700 | 4050 | 405 | 2050 | 17000 | 4.0 | 3.2 | 4 |
| 360 | 2350 | 4700 | 7050 | 705 | 1800 | 28000 | 4.6 | 3.7 | 4 |
| 400 | 3800 | 7600 | 11400 | 1140 | 1600 | 44500 | 5.3 | 4.2 | 4 |
| 470 | 6300 | 12600 | 18900 | 1890 | 1500 | 78500 | 6.0 | 4.8 | 4 |
| 510 | 9300 | 18600 | 27900 | 2790 | 1300 | 110000 | 6.6 | 5.3 | 4 |
| 560 | 11500 | 23000 | 34500 | 3450 | 1100 | 160000 | 7.3 | 5.8 | 4 |
| 630 | 14500 | 29000 | 43500 | 4350 | 1000 | 200000 | 8.2 | 6.6 | 4 |

Torsional stiffness and damping

The damping coefficient is $\Psi = 0.9$

The technical data for the elastic tires made of natural rubber and chloroprene rubber are virtually identical.

Torsional stiffness depends on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The correction factors for different speeds are specified in the following table.

The maximum speed for the respective coupling size must be observed!

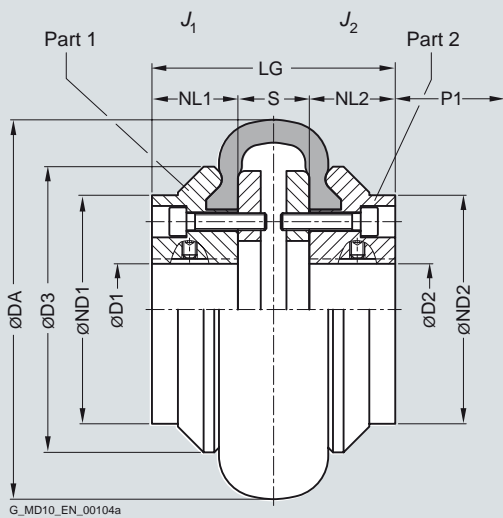
$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.6 | 1.25 | 1.0 | 0.70 |

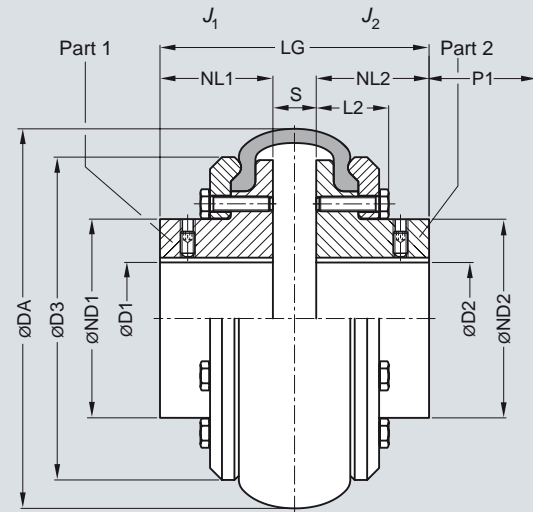
The restorative force (including in the axial direction) depends on speed, system torque and shaft misalignment. Restorative forces on request.

¹⁾ The maximum speed of the respective type must be noted. For further information on permissible shaft misalignment, please see the operating instructions.

Selection and ordering data



Sizes 105 ... 165



Sizes 190 ... 630

| Size | Rated torque | Dimensions in mm | | | | | | | | | Mass moment of inertia | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight |
|------|--------------|--|------|-----|------------|------------|-----|----|----|-----|------------------------|--|--------|
| | | Bore with keyway to DIN 6885-1 | | DA | ND1 ND2 | NL1 NL2 | D3 | L2 | S | LG | | | |
| | T_{KN} | D1, D2 | | | | | | | | | J_1/J_2 | m | |
| | Nm | min. | max. | | | | | | | | kgm ² | | kg |
| 105 | 24 | – | 30 | 104 | 70 | 30 | 82 | – | 22 | 82 | 0.0011 | 2LC0210-0AA ■ ■ -0AA0 | 2.2 |
| 135 | 66 | – | 38 | 134 | 80 | 40 | 100 | – | 25 | 105 | 0.0025 | 2LC0210-1AA ■ ■ -0AA0 | 3.6 |
| 165 | 125 | – | 45 | 165 | 70 | 50 | 125 | – | 33 | 133 | 0.0056 | 2LC0210-2AA ■ ■ -0AA0 | 5.4 |
| 190 | 250 | – | 50 | 187 | 80 | 55 | 145 | 39 | 23 | 133 | 0.0095 | 2LC0210-3AA ■ ■ -0AA0 | 6.9 |
| 210 | 380 | – | 60 | 211 | 98 | 65 | 168 | 42 | 25 | 155 | 0.020 | 2LC0210-4AA ■ ■ -0AA0 | 11 |
| 235 | 500 | – | 70 | 235 | 111 | 70 | 188 | 47 | 27 | 167 | 0.023 | 2LC0210-5AA ■ ■ -0AA0 | 14.8 |
| 255 | 680 | – | 80 | 254 | 130 | 75 | 216 | 49 | 27 | 177 | 0.060 | 2LC0210-6AA ■ ■ -0AA0 | 20 |
| 280 | 880 | – | 90 | 280 | 145 | 80 | 233 | 50 | 25 | 185 | 0.083 | 2LC0210-7AA ■ ■ -0AA0 | 24.5 |
| 315 | 1350 | – | 95 | 314 | 155 | 90 | 264 | 53 | 29 | 209 | 0.129 | 2LC0210-8AA ■ ■ -0AA0 | 35 |
| 360 | 2350 | – | 125 | 359 | 200 | 100 | 311 | 57 | 32 | 232 | 0.32 | 2LC0211-0AA ■ ■ -0AA0 | 54 |
| 400 | 3800 | – | 135 | 402 | 216 | 125 | 345 | 63 | 30 | 280 | 0.55 | 2LC0211-1AA ■ ■ -0AA0 | 78 |
| 470 | 6300 | – | 160 | 470 | 260 | 140 | 398 | 71 | 46 | 326 | 1.12 | 2LC0211-2AA ■ ■ -0AA0 | 120 |
| 510 | 9300 | – | 140 | 508 | 250 | 150 | 429 | 79 | 48 | 348 | 1.6 | 2LC0211-3AA ■ ■ -0AA0 | 146 |
| | | 140 | 180 | 290 | | | | | | | 1.7 | 2LC0211-3AA ■ ■ -0AA0 | 154 |
| 560 | 11500 | – | 140 | 562 | 250 | 165 | 474 | 91 | 55 | 385 | 2.5 | 2LC0211-4AA ■ ■ -0AA0 | 200 |
| | | 140 | 180 | 300 | | | | | | | 2.7 | 2LC0211-4AA ■ ■ -0AA0 | 206 |
| 630 | 14500 | 80 | 140 | 629 | 250 | 195 | 532 | 96 | 59 | 449 | 4.1 | 2LC0211-5AA ■ ■ -0AA0 | 258 |
| | | 140 | 180 | 300 | | | | | | | 4.4 | 2LC0211-5AA ■ ■ -0AA0 | 265 |
| ØD1: | | • Without finished bore – Without order codes | | | | | | | | | | | 1 |
| | | • Without finished bore from size 510 for 2nd diameter range D1 – Without order codes | | | | | | | | | | | 2 |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | 9 |
| ØD2: | | • Without finished bore – Without order codes | | | | | | | | | | | 1 |
| | | • Without finished bore from size 510 for 2nd diameter range D2 – Without order codes | | | | | | | | | | | 2 |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | 9 |

Weight and mass moments of inertia apply to maximum bore diameters.

The product code applies to elastic tires made of natural rubber.

Product code with **-Z** and order code **K01** for variant of the elastic tire made of chloroprene rubber.

P1 = fitting space for offset screwdriver and ejector bolt for dismantling the Taper clamping bush. For dismantling the elastic tire on sizes 105 to 165, a fitting space of P1 = 35 mm must be provided for the offset screwdriver. Sizes 190 to 630 require P1 = 35 mm of fitting space to undo the clamping ring bolts.

Ordering example:

ELPEX-B EBWN coupling, size 210,

Part 1: Bore 40H7 mm, keyway to DIN 6885-1 and set screw,
Part 2: Bore 45H7 mm, keyway to DIN 6885-1 and set screw.

Product code:

2LC0210-4AA99-0AA0

LOW+M1A

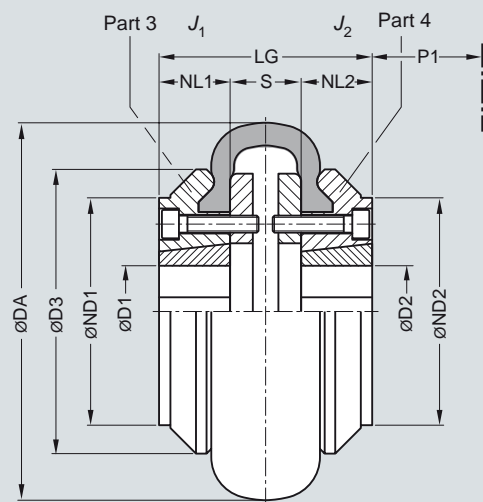
FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-B Series

Type EBWT

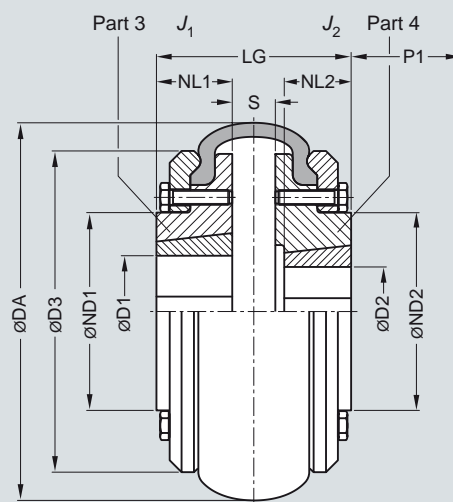
Selection and ordering data

Sizes 105 ... 165



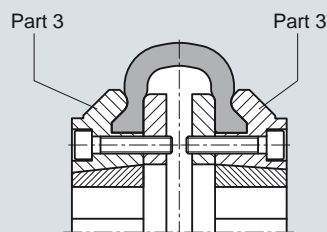
Variant AB

Sizes 190 ... 560

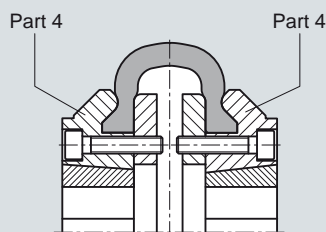


Variant AB

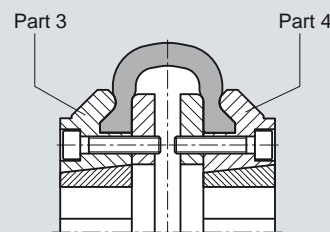
Sizes 105 ... 165



Variant A

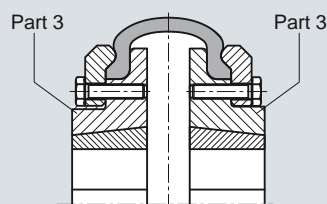


Variant B

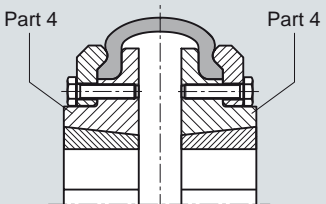


Variant AB

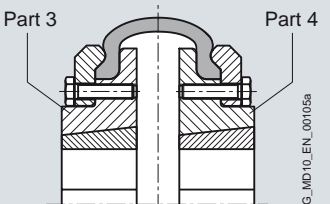
Sizes 190 ... 560



Variant A



Variant B



Variant AB

G_MD10_EN_00105a

Part 3: Screw connection for Taper clamping bush from the shaft end face side
Part 4: Screw connection for Taper clamping bush from the machine-housing side

FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-B Series

Type EBWT

| Size | Rated torque | Part no. | Taper clamp- ing bush | Dimensions in mm | | | | | | | | Mass moment of inertia | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight | | |
|------|--------------|---------------|--------------------------|------------------|--------|------|------------|-------------|-------------|----|-----|------------------------|--|--------|----|-----------|
| | T_{KN} | | | Size | D1, D2 | | DA | ND1/ ND2 | NL1/ NL2 | D3 | S | | | | LG | J_1/J_2 |
| | Nm | | | | min. | max. | | | | | | | | | | |
| 105 | 24 | <u>3</u> 4 | 1008 | 10 | 25 | 104 | – | 22 | 82 | 22 | 66 | 0.0009 | 2LC0210-0A ■■■ -0AA0 | 1.8 | | |
| 135 | 66 | <u>3</u> 4 | 1210 | 11 | 32 | 134 | 80 | 25 | 100 | 25 | 75 | 0.0019 | 2LC0210-1A ■■■ -0AA0 | 2.4 | | |
| 165 | 125 | <u>3</u> 4 | 1610 | 14 | 42 | 165 | 103 | 25 | 125 | 33 | 83 | 0.0049 | 2LC0210-2A ■■■ -0AA0 | 4 | | |
| 190 | 250 | <u>3</u> 4 | 2012 | 14 | 50 | 187 | 80 | <u>32</u> | 145 | 23 | 87 | 0.0085 | 2LC0210-3A ■■■ -0AA0 | 5.4 | | |
| 210 | 380 | <u>3</u> 4 | 2517 | 16 | 60 | 211 | 98 | <u>45</u> | 168 | 25 | 115 | 0.017 | 2LC0210-4A ■■■ -0AA0 | 8 | | |
| 235 | 500 | <u>3</u> 4 | 2517 | 16 | 60 | 235 | 108 | 45 | 188 | 27 | 119 | 0.019 | 2LC0210-5A ■■■ -0AA0 | 12 | | |
| 255 | 680 | <u>3</u> 4 | 3020 | 25 | 75 | 254 | <u>120</u> | <u>51</u> | 216 | 27 | 129 | 0.050 | 2LC0210-6A ■■■ -0AA0 | 14 | | |
| 280 | 880 | <u>3</u> 4 | 3020 | 25 | 75 | 280 | 146 | 51 | 233 | 25 | 129 | 0.075 | 2LC0210-7A ■■■ -0AA0 | 22 | | |
| 315 | 1350 | <u>3</u> 4 | 3525 | 35 | 90 | 314 | 140 | <u>65</u> | 264 | 29 | 161 | 0.11 | 2LC0210-8A ■■■ -0AA0 | 23 | | |
| 360 | 2350 | <u>3</u> 4 | 3525 | 35 | 90 | 359 | 178 | 65 | 311 | 32 | 162 | 0.26 | 2LC0211-0A ■■■ -0AA0 | 38 | | |
| 400 | 3800 | <u>3</u> 4 | 4030 | 40 | 100 | 402 | 197 | 77 | 345 | 30 | 184 | 0.44 | 2LC0211-1A ■■■ -0AA0 | 54 | | |
| 470 | 6300 | <u>3</u> 4 | 4535 | 55 | 110 | 470 | 205 | 89 | 398 | 46 | 224 | 0.8 | 2LC0211-2A ■■■ -0AA0 | 72 | | |
| 510 | 9300 | <u>3</u> 4 | 4535 | 55 | 110 | 508 | 200 | 89 | 429 | 48 | 226 | 1.5 | 2LC0211-3A ■■■ -0AA0 | 120 | | |
| 560 | 11500 | <u>3</u> 4 | 5040 | 70 | 125 | 562 | 222 | 102 | 474 | 55 | 259 | 2.0 | 2LC0211-4A ■■■ -0AA0 | 120 | | |

Variant:

- A
- B
- AB

B
C
D

ØD1:

- Without finished bore – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1
9

ØD2:

- Without finished bore – Without order codes
- With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1
9

Weights and mass moments of inertia apply to couplings with Taper clamping bushes with maximum bore diameter.

The product code applies to elastic tires made of natural rubber.

Product code with **-Z** and order code **K01** for variant of the elastic tire made of chloroprene rubber.

P1 = fitting space for offset screwdriver and ejector bolt for dismounting the Taper clamping bush. For dismounting the elastic tire on sizes 105 to 165, a fitting space of P1 = 35 mm must be provided for the offset screwdriver. Sizes 190 to 630 require P1 = 35 mm of fitting space to undo the clamping ring bolts.

Taper clamping bush size 1008 and bores diameters 24 mm and 25 mm with shallow keyway.

Taper clamping bush size 1610 and bores diameter 42 mm with shallow keyway. See catalog section 14.

Ordering example:

ELPEX-B EBWT coupling, size 210,
variant AB, including Taper bushes,
Part 3: with Taper clamping bush, bore 60 mm;
Part 4: with Taper clamping bush, bore 40 mm.

Product code:

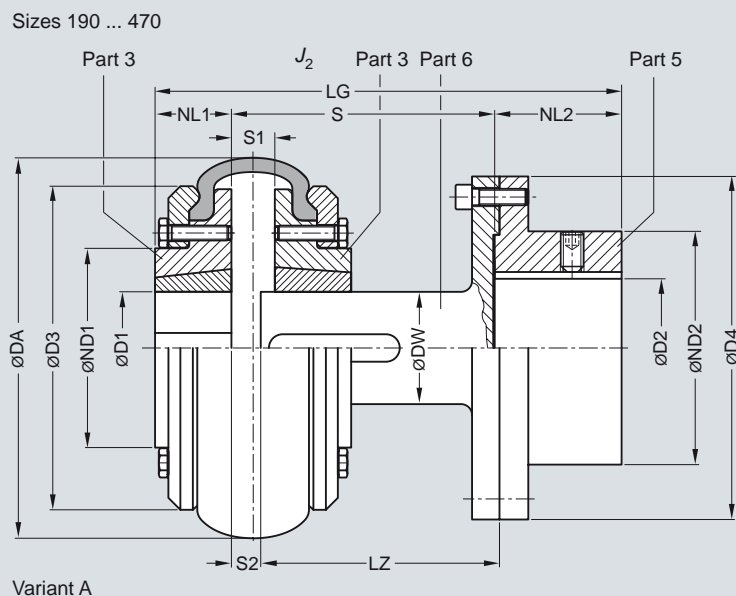
2LC0210-4AD99-0AA0
L1E+M0W

FLENDER Standard Couplings

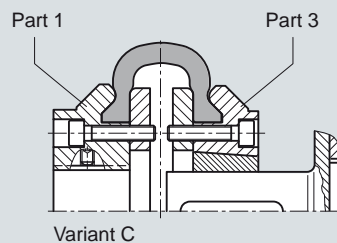
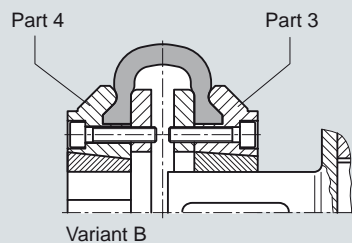
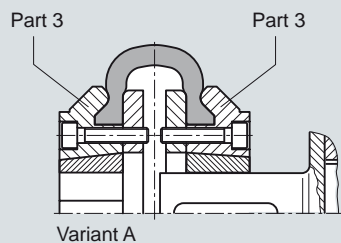
Highly Flexible Couplings - ELPEX-B Series

Type EBWZ

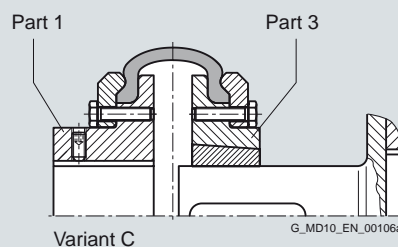
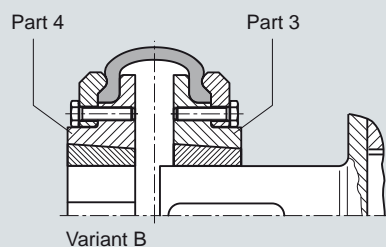
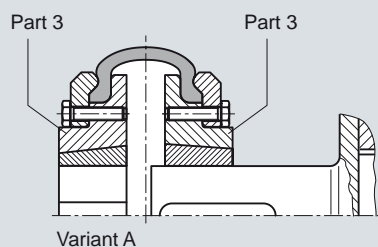
Selection and ordering data



Sizes 105 ... 165



Sizes 190 ... 470



G_MD10_EN_00106a

Part 3: Screw connection for Taper clamping bush from the shaft end face side
 Part 4: Screw connection for Taper clamping bush from the machine-housing side

FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-B Series

Type EBWZ

| Size | Rated torque T_{KN} Nm | Dimensions in mm Bore with keyway to DIN 6885-1 | | | | | | | | | | | | | Mass moment of inertia J_2 kgm ² | Product code Order codes for bore diameters and tolerances are specified in catalog section 3 | Weight m kg |
|----------|--|--|---------|-----|-----|-----|-----|-----|-------|--------|--------|----|---------|--------|---|--|-------------------------|
| | | D2 min. | D2 max. | DA | ND2 | D4 | DW | NL2 | LZ | S min. | S max. | S1 | S2 min. | | | | |
| 105 | 24 | – | 42 | 104 | 70 | 95 | 25 | 45 | 96 | 100 | 116 | 22 | 6 | 0.0027 | 2LC0210-0A ■■■■-0A ■ 0 | 3.3 | |
| 135 | 66 | – | 55 | 134 | 90 | 125 | 32 | 50 | 93 | 100 | 116 | 25 | 9 | 0.0085 | 2LC0210-1A ■■■■-0A ■ 0 | 5.4 | |
| | | | | | | | | | 133 | 140 | 156 | | | | | | |
| 165 | 125 | – | 55 | 165 | 90 | 125 | 32 | 50 | 93 | 100 | 124 | 33 | 9 | 0.012 | 2LC0210-2A ■■■■-0A ■ 0 | 6.2 | |
| | | | | | | | | | 133 | 140 | 164 | | | | | | |
| 190 | 250 | – | 75 | 187 | 125 | 180 | 48 | 80 | 93.5 | 100 | 114 | 23 | 9 | 0.046 | 2LC0210-3A ■■■■-0A ■ 0 | 16.0 | |
| | | | | | | | | | 133.5 | 140 | 154 | | | | | | |
| | | | | | | | | | 173.5 | 180 | 194 | | | | | | |
| 210 | 380 | – | 75 | 211 | 125 | 180 | 48 | 80 | 133.5 | 140 | 156 | 25 | 9 | 0.053 | 2LC0210-4A ■■■■-0A ■ 0 | 17 | |
| | | | | | | | | | 173.5 | 180 | 196 | | | | | | |
| 235 | 500 | – | 75 | 235 | 125 | 180 | 48 | 80 | 133.5 | 140 | 158 | 27 | 9 | 0.056 | 2LC0210-5A ■■■■-0A ■ 0 | 25 | |
| | | | | | | | | | 173.5 | 180 | 198 | | | | | | |
| 255 | 680 | – | 90 | 254 | 150 | 225 | 60 | 100 | 133.5 | 140 | 158 | 27 | 9 | 0.15 | 2LC0210-6A ■■■■-0A ■ 0 | 29 | |
| | | | | | | | | | 173.5 | 180 | 198 | | | | | | |
| 280 | 880 | – | 90 | 280 | 150 | 225 | 60 | 100 | 133.5 | 140 | 156 | 25 | 9 | 0.17 | 2LC0210-7A ■■■■-0A ■ 0 | 33 | |
| | | | | | | | | | 173.5 | 180 | 196 | | | | | | |
| 315 | 1350 | 46 | 100 | 314 | 165 | 250 | 80 | 110 | 134.5 | 140 | 160 | 29 | 9 | 0.28 | 2LC0210-8A ■■■■-0A ■ 0 | 40 | |
| | | | | | | | | | 174.5 | 180 | 200 | | | | | | |
| 360 | 2350 | 46 | 100 | 359 | 165 | 250 | 80 | 110 | 134.5 | 140 | 163 | 32 | 9 | 0.43 | 2LC0211-0A ■■■■-0A ■ 0 | 48 | |
| | | | | | | | | | 174.5 | 180 | 203 | | | | | | |
| 400 | 3800 | 51 | 110 | 402 | 180 | 280 | 90 | 120 | 223.5 | 200 | 220 | 30 | 10 | 0.88 | 2LC0211-1A ■■■■-0A E 0 | 73 | |
| 470 | 6300 | 51 | 120 | 470 | 200 | 315 | 100 | 140 | 207.5 | 250 | 286 | 46 | 10 | 0.97 | 2LC0211-2A ■■■■-0A E 0 | 104 | |
| Variant: | <div><div>• A</div><div>• B</div><div>• C</div></div> | | | | | | | | | | | | | | G H J | | |
| ØD1: | <div><div>• Without finished bore (for variant C only) – Without order codes</div><div>• With finished bore/Taper clamping bush – With order codes for diameter and tolerance in the case of finished bore (product code without -Z)</div></div> | | | | | | | | | | | | | | 1 9 | | |
| ØD2: | <div><div>• Without finished bore – Without order codes</div><div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div></div> | | | | | | | | | | | | | | 1 9 | | |
| S min. | 100 mm 140 mm 180 mm | | | | | | | | | | | | | | | A B C | |

Dimensions D1, ND1, NL1, J1 and fitting space for dismounting elastic tire and Taper clamping bush, see types EBWN or EBWT.

The product code applies to elastic tires made of natural rubber.

Product code with **-Z** and order code **K01** for variant of the elastic tire made of chloroprene rubber.

Mass moment of inertia J_2 and weight m as total of part 3, part 5 and part 6 with maximum bore diameter.

Ordering example:

ELPEX-B EBWZ coupling, size 360,
variant C, for fitting length $S_{min} = 190$ mm,
Part 1: Bore 65H7 mm, keyway to DIN 6885-1 and set screw,
Part 5: Bore 70H7 mm, keyway to DIN 6885-1 and set screw

Product code:

2LC0211-0AJ99-0AC0
L1F+M1G

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-B Series

Spare and wear parts

Selection and ordering data

The elastic tires are wear parts. The service life depends on the operating conditions.

| Size | Product code | Weight | | Weight | |
|------|--------------------------------------|--------|--|---|------|
| | Natural rubber Identification 048 | kg | | Chloroprene rubber Identification 068 FRAS | kg |
| 105 | 2LC0210-0WA00-0AA0 | 0.1 | | 2LC0210-0WA00-0AA0-Z K01 | 0.1 |
| 135 | 2LC0210-1WA00-0AA0 | 0.2 | | 2LC0210-1WA00-0AA0-Z K01 | 0.2 |
| 165 | 2LC0210-2WA00-0AA0 | 0.4 | | 2LC0210-2WA00-0AA0-Z K01 | 0.4 |
| 190 | 2LC0210-3WA00-0AA0 | 0.5 | | 2LC0210-3WA00-0AA0-Z K01 | 0.5 |
| 210 | 2LC0210-4WA00-0AA0 | 0.8 | | 2LC0210-4WA00-0AA0-Z K01 | 0.8 |
| 235 | 2LC0210-5WA00-0AA0 | 1.0 | | 2LC0210-5WA00-0AA0-Z K01 | 1.0 |
| 255 | 2LC0210-6WA00-0AA0 | 1.2 | | 2LC0210-6WA00-0AA0-Z K01 | 1.2 |
| 280 | 2LC0210-7WA00-0AA0 | 1.4 | | 2LC0210-7WA00-0AA0-Z K01 | 1.4 |
| 315 | 2LC0210-8WA00-0AA0 | 2.6 | | 2LC0210-8WA00-0AA0-Z K01 | 2.6 |
| 360 | 2LC0211-0WA00-0AA0 | 2.9 | | 2LC0211-0WA00-0AA0-Z K01 | 2.9 |
| 400 | 2LC0211-1WA00-0AA0 | 3.1 | | 2LC0211-1WA00-0AA0-Z K01 | 3.1 |
| 470 | 2LC0211-2WA00-0AA0 | 5.3 | | 2LC0211-2WA00-0AA0-Z K01 | 5.3 |
| 510 | 2LC0211-3WA00-0AA0 | 7.8 | | 2LC0211-3WA00-0AA0-Z K01 | 7.8 |
| 560 | 2LC0211-4WA00-0AA0 | 10.8 | | 2LC0211-4WA00-0AA0-Z K01 | 10.8 |
| 630 | 2LC0211-5WA00-0AA0 | 12.4 | | 2LC0211-5WA00-0AA0-Z K01 | 12.4 |

Highly Flexible Couplings ELPEX-S Series



| | |
|-----------------------|--|
| 11/2 | Overview |
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| 11/2 | Application |
| 11/2 | Design |
| 11/4 | Function |
| 11/4 | Configuration |
| 11/6 | Technical data |
| 11/9 11/9 | Type ESN Selection and ordering data |
| 11/10 11/10 | Type ESD Selection and ordering data |
| 11/11 11/11 | Type ESNR Selection and ordering data |
| 11/12 11/12 | Type ESDR Selection and ordering data |
| 11/13 11/13 | Types ESNW and ESDW Selection and ordering data |
| 11/14 11/14 | Type EST Selection and ordering data |
| 11/15 11/15 | Spare and wear parts Selection and ordering data |

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

General information

Overview



**Coupling suitable for potentially explosive environments.
Complies with Directive 94/9/EC for:**

CE  II 2 G T3 D160 °C X

CE  II 2 G T3 D120 °C X

(Type EST is not available in Ex version.)

ELPEX-S couplings are highly torsionally flexible and because of their low torsional stiffness and damping capacity are especially suitable for coupling machines with a highly non uniform torque pattern.

Standard ELPEX-S coupling types are designed as flange-shaft-connections or shaft-shaft connections. Application-related types can be implemented on request.

Benefits

The ELPEX-S coupling is suitable for horizontal and vertical mounting positions or mounting at any required angle. The coupling parts can be arranged as required on the shafts to be connected.

ELPEX-S couplings are especially suitable for reversing operation or operation with changing directions of load.

The rubber disk elements are fitted virtually without backlash and give the coupling linear torsional stiffness, i.e. the torsion stiffness remains constant even when the load on the coupling increases.

There are 4 different rubber element versions with different grades of torsional stiffness available for each size from stock.

On certain types the flexible rings can be changed without having to move the coupled machines.

If substantial overload occurs, the rubber disk element of the coupling is irreparably damaged, the coupling throws the load and thus limits the overload for particular operating conditions. The coupling can be inserted and fitted blind e.g. in a bell housing.

There are outer flanges with different connection dimensions available for each coupling size.

Application

The ELPEX-S coupling is available as a catalog standard in 12 sizes with rated torques of between 330 Nm and 63000 Nm.

The coupling is suitable for ambient temperatures of between -40 °C and +120 °C.

The ELPEX-S coupling is frequently used for diesel motor drives or reciprocating compressor drives. Because the different rubber versions enable the torsional stiffness to be adjusted to meet requirements, the coupling is also suitable for drives which require a specific and preferably precalculated torsional vibration behavior setting.

Design

The rubber disk element is vulcanized onto a flange on the inside diameter. The flange can mount e.g. a Taper clamping bush or a hub. On its outer diameter the rubber disk element has driving teeth, which are inserted into the outer flange. The torque is transmitted positively between the rubber disk element and the outer flange.

In the type for shaft-shaft connection the outer flange is screwed to a flange hub mounted on a machine shaft.

Materials

| | Type EST | Types ESN. and ESD. |
|----------------------|--|--|
| Rubber disk element | Grey cast iron EN-GJL-250/elastomer | Spheroidal graphite cast iron EN-GJL-400/elastomer |
| Hubs, part 1, part 2 | Steel | Steel |
| Outer flange | Cast aluminum AlZnSi108.. Sizes 680 and 770 of spheroidal graphite cast iron EN-GJS-500 | Cast aluminum AlZnSi108.. Sizes 680 and 770 of spheroidal graphite cast iron EN-GJS-500 |

Steel of quality $R_m > 450 \text{ N/mm}^2$

Elastomer materials of the rubber disk element

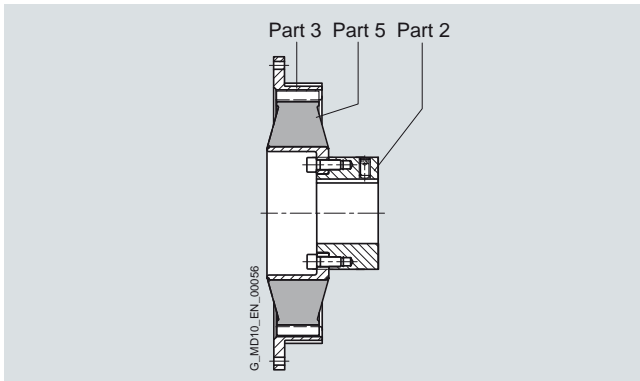
| Material / description | Shore hardness A | Identification | Ambient temperature |
|----------------------------------|------------------|----------------|---------------------|
| Natural-synthetic rubber mixture | 50 ° ... 55 ° | WN | -40 °C ... +80 °C |
| Natural-synthetic rubber mixture | 60 ° ... 65 ° | NN | -40 °C ... +80 °C |
| Natural-synthetic rubber mixture | 70 ° ... 75 ° | SN | -40 °C ... +80 °C |
| Silicone rubber | 55 ° ... 65 ° | NX | -40 °C ... +120 °C |

ELPEX-S coupling types

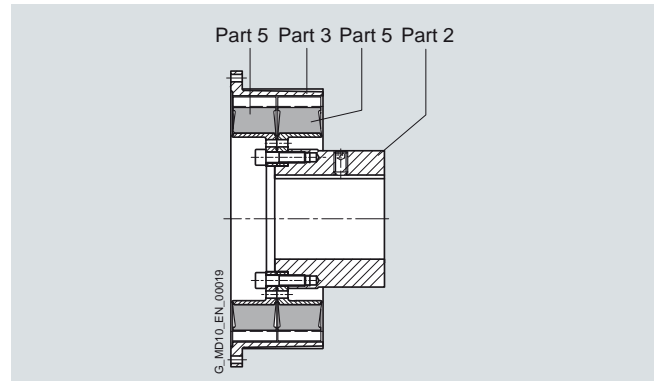
| Type | Description |
|------|--|
| ESN | Coupling with hub, long or short version |
| ESD | Coupling with hub, with two rubber disk elements |
| ESNR | Coupling with hub, rubber disk element radially dismountable |
| ESDR | Coupling with hub with two rubber disk elements; rubber disk elements radially dismountable |
| ESNW | Coupling designed as a shaft-shaft connection with a rubber disk element; rubber disk element radially dismountable |
| ESDW | Coupling designed as a shaft-shaft connection with two rubber disk elements; rubber disk element radially dismountable |
| EST | Coupling suitable for mounting a Taper clamping bush |

FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-S Series

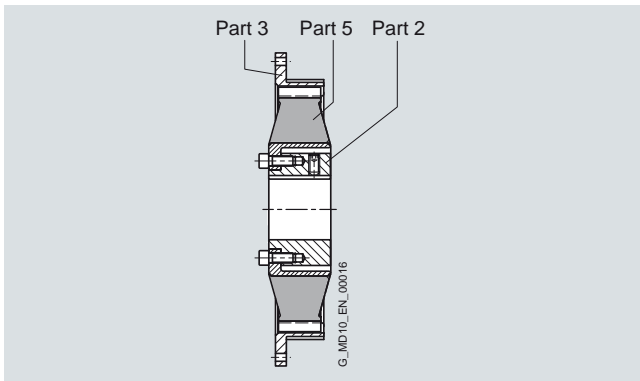
General information



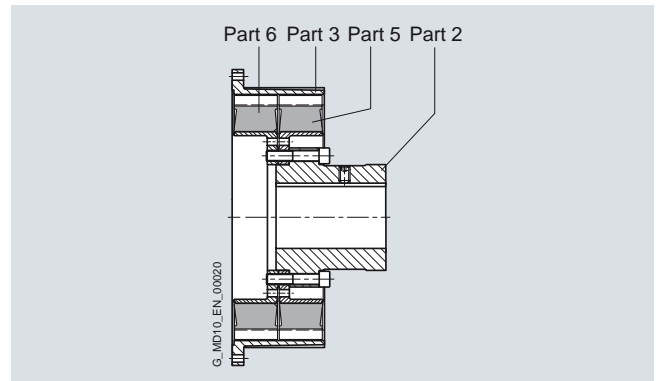
Type **ESN** – long version



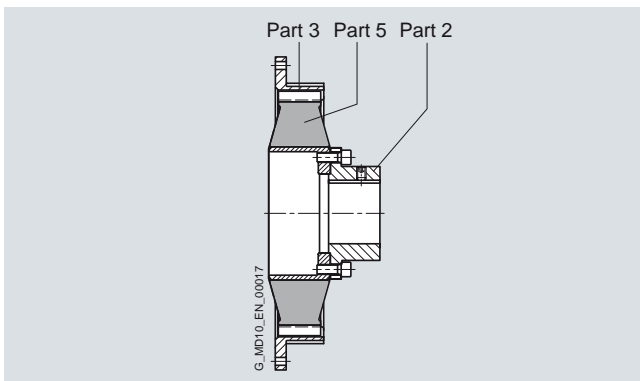
Type **ESD**



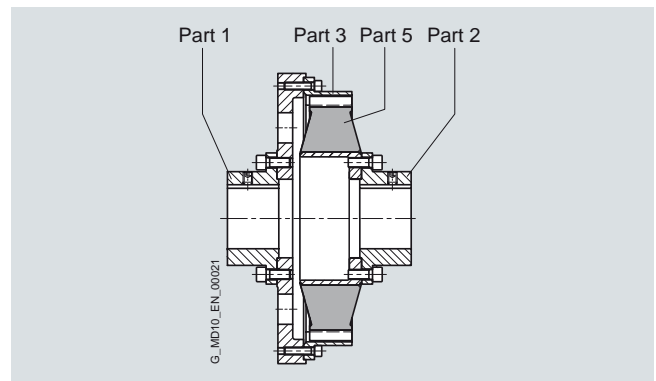
Type **ESN** – short version



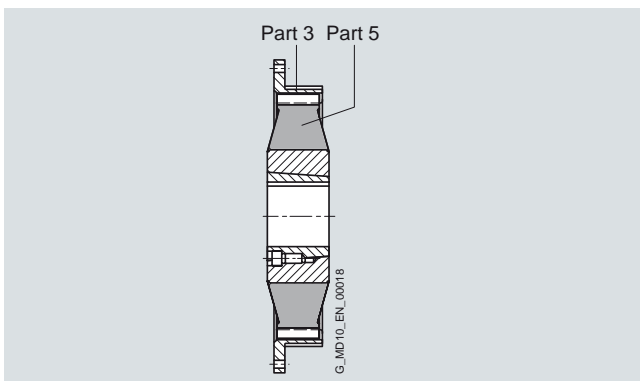
Type **ESDR**



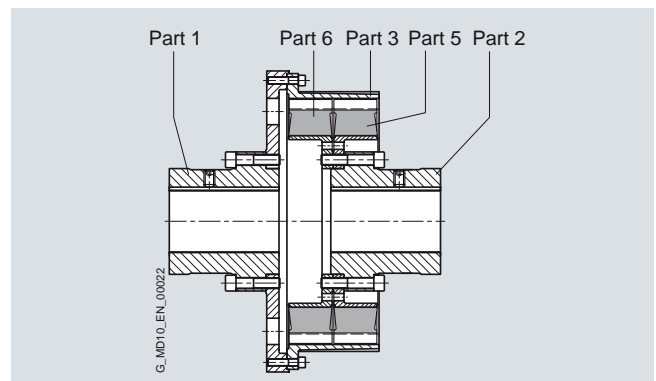
Type **ESNR**



Type **ESNW**



Type **EST**



Type **ESDW**

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

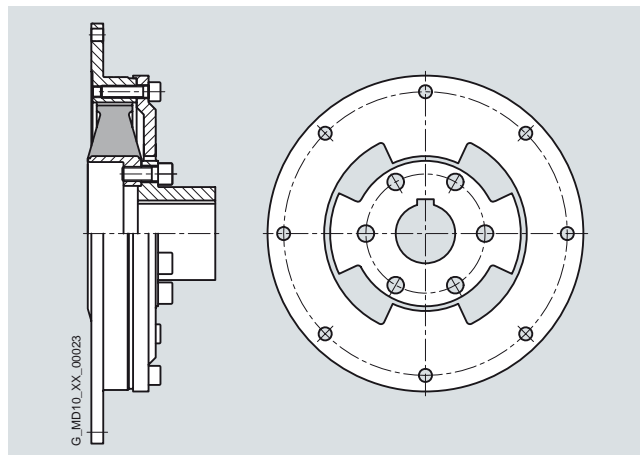
General information

Further application-related coupling types are available. Dimension sheets for and information on these are available on request.

The following versions have already been implemented a number of times:

- ELPEX-S coupling with brake drum, brake disk or flywheel mass
- ELPEX-S coupling with axial backlash limiter
- ELPEX-S coupling with adapter
- ELPEX-S coupling with bearing for mounting a cardan shaft
- ELPEX-S coupling for engaging/disengaging during standstill
- ELPEX-S coupling as part of a coupling combination
- ELPEX-S coupling with fail-safe device

Fail-safe device of ELPEX-S coupling



The ELPEX-S coupling can also be designed with a fail-safe device. If the rubber disk element fails, the coupling can continue operating in emergency mode for a short time. This option is frequently required e.g. in the case of marine drives.

If the rubber disk element fails, cams transmit the torque from the inner and outer parts of the fail-safe device.

In normal operation the torsion angle of the rubber disk element is smaller than the gap between the cams, so there is no metal-metal contact.

Function

The ELPEX-S coupling's transmission characteristic is determined essentially by the rubber disk element. The torque is transmitted positively between the rubber disk element and the outer flange. The outer flange can be bolted to e.g. a diesel motor or compressor flywheel.

Configuration

Coupling selection

The ELPEX-S coupling is especially suitable for rough operating environments. An application factor lower than that in catalog section 3 is therefore sufficient for all applications. In the case of machines which excite torsional vibration, FLENDER urgently recommends carrying out a torsional vibration calculation or measuring the coupling load occurring in the drive.

Coupling load in continuous operation

| Application factor FB | Torque characteristic of the driven machine | | |
|---|---|-------------|------------|
| | uniform with moderate shock loads | non uniform | very rough |
| Electric motors, hydraulic motors, gas and water turbines | 1.0 | 1.3 | 1.4 |
| Internal combustion engines | 1.3 | 1.4 | 1.6 |

Examples of torque characteristic in driven machines:

- uniform with moderate shock loads: generators, fans, blowers
- non uniform: reciprocating compressors, mixers, conveyor systems
- very rough: crushers, excavators, presses, mills

| Temperature factor FT | | | Temperature T_a on the coupling | | | | | | | | | |
|-----------------------|----------------|--------------------|-----------------------------------|---------------|----------|----------|----------|----------|-----------|-----------|-----------|--|
| Coupling | Rubber version | Elastomer material | -40 to -30 °C | -30 to +50 °C | to 60 °C | to 70 °C | to 80 °C | to 90 °C | to 100 °C | to 110 °C | to 120 °C | |
| ELPEX-S | SN, NN, WN | NR | 1.1 | 1.0 | 1.25 | 1.40 | 1.60 | | | | | |
| ELPEX-S | NX | VMQ | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.25 | 1.4 | 1.6 | |

NR = natural-synthetic rubber mixture

VMQ = silicone rubber

Select coupling size with: $T_{KN} \geq T_N \cdot FB \cdot FT$

Coupling load under maximum and overload conditions

The maximum torque is the highest load acting on the coupling in normal operation.

Maximum torques at a frequency of up to 25 times an hour are permitted and must be lower than the maximum coupling torque. Examples of maximum torque conditions are: Starting operations, stopping operations or usual operating conditions with maximum load.

$$T_{Kmax} \geq T_{max} \cdot FT$$

Overload torques are maximum loads which occur only in combination with special, infrequent operating conditions.

Examples of overload torque conditions are: Motor short circuit, emergency stop or blocking because of component breakage. Overload torques at a frequency of once a month are permitted and must be lower than the maximum overload torque of the coupling. The overload condition may last only a short while, i.e. fractions of a second.

$$T_{KOL} \geq T_{OL} \cdot FT$$

Coupling load due to dynamic torque load

Applying the frequency factor FF, the dynamic torque load must be lower than the coupling fatigue torque.

Dynamic torque load

$$T_{KW} \geq T_W \cdot FT \cdot FF \cdot \frac{0.6}{FB - 1.0}$$

Frequency of the dynamic torque load


$f_{err} \leq 10$ Hz frequency factor $FF = 1.0$

Frequency of the dynamic torque load


$f_{err} > 10$ Hz frequency factor $FF = \sqrt{(f_{err}/10 \text{ Hz})}$

 Operation in potentially explosive environments is subject to the following restriction:

Operation with low fatigue load

 The fatigue torque T_{KW} must be reduced by 70 %. In these particular operating conditions the coupling satisfies the requirements of temperature class T4 D120 °C.

Operation with medium fatigue load

 The fatigue torque T_{KW} must be reduced by 50 %. In these particular operating conditions the coupling satisfies the requirements of temperature class T3 D160 °C.

Checking the maximum speed

The following must apply to all load situations: $n_{Kmax} \geq n_{max}$

The maximum speed of a size depends only on the size of the outer flange (part 3).

Checking permitted shaft misalignment and restorative forces

For all load situations, the actual shaft misalignment must be less than the permitted shaft misalignment.

Checking bore diameter, mounting geometry and coupling design

The check must be made on the basis of the dimension tables. On request, couplings with adapted geometry can be provided.

Checking shaft-hub connection

Please refer to catalog section 3 for instructions.

Checking temperature and chemically aggressive environment

The permitted coupling temperature is specified in the Temperature Factor FT table. In the case of chemically aggressive environments, please consult the manufacturer.

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

General information

Technical data

Power ratings

| Rubber dusk elements made of a natural and synthetic rubber mixture | | | | | | | | | |
|---|------|----------------|----------------|------------------|-----------------|----------------|-----------------------------|------------------------|------------------|
| Type | Size | Rubber element | Rated torque | Maximum torque | Overload torque | Fatigue torque | Dynamic torsional stiffness | Motor flange | Maximum speed |
| | | | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} Nm | C_{Tdyn} Nm/rad | SAE J620d Size | n_{max} rpm |
| ESN . EST | 220 | WN | 330 | 660 | 750 | 165 | 1100 | 6.5 | 4200 |
| | | NN | 360 | 720 | 900 | 180 | 1700 | 7.5 | 4200 |
| | | SN | 400 | 800 | 1000 | 200 | 2500 | 8 | 4200 |
| ESN . EST | 265 | WN | 500 | 1000 | 1250 | 250 | 2100 | 10 | 3600 |
| | | NN | 600 | 1200 | 1800 | 300 | 3100 | 11.5 | 4200 |
| | | SN | 700 | 1400 | 2100 | 350 | 4500 | 14 | 3500 |
| ESN . EST | 290 | WN | 800 | 1600 | 2000 | 400 | 3600 | 14 | 3600 |
| | | NN | 900 | 1800 | 2700 | 450 | 5000 | 16 | 3500 |
| | | SN | 1000 | 2000 | 3000 | 500 | 7500 | 18 | 3500 |
| ESN . EST | 320 | WN | 1200 | 2400 | 3000 | 600 | 8000 | 18 | 3500 |
| | | NN | 1350 | 2700 | 3600 | 650 | 10000 | 21 | 3000 |
| | | SN | 1550 | 3100 | 4200 | 750 | 13500 | 24 | 3000 |
| ESN . EST | 360 | WN | 1800 | 3600 | 4500 | 900 | 8500 | 21 | 3200 |
| | | NN | 2000 | 4000 | 5400 | 1000 | 13000 | 24 | 3000 |
| | | SN | 2500 | 5000 | 7500 | 1250 | 22000 | 28 | 3000 |
| ESN . EST | 420 | WN | 3100 | 6200 | 7700 | 1500 | 16000 | 28 | 3000 |
| | | NN | 3450 | 6900 | 10000 | 1700 | 30000 | 32 | 2600 |
| | | SN | 4200 | 8400 | 12600 | 2100 | 45000 | 36 | 2300 |
| ESN . EST | 465 | WN | 4600 | 9200 | 10000 | 2300 | 35000 | 32 | 3000 |
| | | NN | 5200 | 10400 | 15600 | 2600 | 56000 | 36 | 2600 |
| | | SN | 6300 | 12600 | 18900 | 3100 | 100000 | 40 | 2300 |
| ESN . | 520 | WN | 6200 | 12400 | 14000 | 3100 | 38000 | 36 | 2300 |
| | | NN | 7000 | 14000 | 21000 | 3500 | 75000 | 40 | 2000 |
| | | SN | 7800 | 15600 | 23400 | 3900 | 110000 | 44 | 2000 |
| ESD . | 520 | WN | 12400 | 24800 | 28000 | 6200 | 76000 | 40 | 2300 |
| | | NN | 14000 | 28000 | 42000 | 7000 | 150000 | 44 | 2000 |
| | | SN | 15600 | 31200 | 46800 | 7800 | 220000 | 48 | 2000 |
| ESN . | 560 | WN | 8000 | 16000 | 18000 | 4200 | 55000 | 36 | 2300 |
| | | NN | 9000 | 18000 | 27000 | 4800 | 100000 | 40 | 2000 |
| | | SN | 10000 | 20000 | 30000 | 5500 | 190000 | 44 | 2000 |
| ESD . | 560 | WN | 16000 | 32000 | 36000 | 8400 | 110000 | 40 | 2300 |
| | | NN | 18000 | 36000 | 54000 | 9600 | 200000 | 44 | 2000 |
| | | SN | 20000 | 40000 | 60000 | 11000 | 380000 | 48 | 2000 |
| ESN . | 580 | WN | 11000 | 22000 | 28000 | 5500 | 75000 | 36 | 2300 |
| | | NN | 12500 | 25000 | 37000 | 6250 | 120000 | 40 | 2000 |
| | | SN | 14000 | 28000 | 42000 | 7000 | 210000 | 44 | 2000 |
| ESD . | 580 | WN | 22000 | 44000 | 56000 | 11000 | 150000 | 44 | 2000 |
| | | NN | 25000 | 50000 | 74000 | 12500 | 240000 | 48 | 1800 |
| | | SN | 28000 | 56000 | 84000 | 14000 | 420000 | 52 | 1800 |
| ESN . | 680 | WN | 16000 | 32000 | 40000 | 8000 | 150000 | 40 | 2000 |
| | | NN | 18000 | 36000 | 54000 | 9000 | 250000 | 44 | 1800 |
| | | SN | 20000 | 40000 | 60000 | 10000 | 450000 | 48 | 1800 |
| ESD . | 680 | WN | 32000 | 64000 | 80000 | 16000 | 300000 | 44 | 2000 |
| | | NN | 36000 | 72000 | 108000 | 18000 | 500000 | 48 | 1800 |
| | | SN | 40000 | 80000 | 120000 | 20000 | 900000 | 52 | 1800 |
| ESN . | 770 | WN | 25000 | 50000 | 75000 | 12500 | 250000 | similar to DIN 6288 | 1500 |
| | | NN | 28000 | 56000 | 84000 | 14000 | 400000 | | |
| | | SN | 31500 | 63000 | 94000 | 15000 | 700000 | | |
| ESD . | 770 | WN | 50000 | 100000 | 150000 | 25000 | 500000 | similar to DIN 6288 | 1300 |
| | | NN | 56000 | 112000 | 168000 | 28000 | 800000 | | |
| | | SN | 63000 | 126000 | 189000 | 30000 | 1400000 | | |

Torsional stiffness depends on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-S Series

General information

Rubber disk elements made of silicone rubber

| Type | Size | Rubber version | Rated torque T_{KN} Nm | Maximum torque T_{Kmax} Nm | Overload torque T_{KOL} Nm | Fatigue torque T_{KW} (10 Hz) Nm | Dynamic torsional stiffness for 100 % load C_{Tdyn} kNm/rad |
|-------|------|----------------|--------------------------------|------------------------------------|------------------------------------|--|---|
| ESN . | 220 | NX | 200 | 300 | 400 | 87 | 1.70 |
| ESN . | 265 | NX | 300 | 450 | 600 | 133 | 3.10 |
| ESN . | 290 | NX | 500 | 750 | 1000 | 213 | 5.40 |
| ESN . | 320 | NX | 770 | 1150 | 1530 | 320 | 12.0 |
| ESN . | 360 | NX | 1200 | 1800 | 2400 | 480 | 12.7 |
| ESN . | 420 | NX | 2000 | 3000 | 4000 | 800 | 30.0 |
| ESN . | 465 | NX | 3000 | 4500 | 6000 | 1200 | 53.0 |
| ESN . | 520 | NX | 4100 | 6100 | 8200 | 1600 | 75.0 |
| ESD . | 520 | NX | 8200 | 12300 | 16400 | 3200 | 150 |
| ESN . | 560 | NX | 5000 | 7500 | 10000 | 2200 | 83 |
| ESD . | 560 | NX | 10000 | 15000 | 20000 | 4400 | 166 |
| ESN . | 580 | NX | 6500 | 9750 | 13000 | 2667 | 113 |
| ESD . | 580 | NX | 13000 | 19500 | 26000 | 5867 | 226 |
| ESN . | 680 | NX | 10000 | 15000 | 20000 | 4000 | 225 |
| ESD . | 680 | NX | 20000 | 30000 | 40000 | 8000 | 450 |
| ESN . | 770 | NX | 15000 | 22500 | 30000 | 6000 | 480 |
| ESD . | 770 | NX | 30000 | 45000 | 60000 | 12000 | 960 |

Torsional stiffness

The dynamic torsional stiffness of the silicone rubber elements is load-dependent and increases in proportion to the load. The values specified in the selection table represent 100 % loading. The following table shows the correction factors for different rated loads.

$$C_{Tdyn} = C_{Tdyn 100 \%} \cdot FKC$$

| | Load T_N / T_{KN} | | | | | | |
|-----------------------|---------------------|------|------|------|------|-------|-------|
| | 20 % | 50 % | 60 % | 70 % | 80 % | 100 % | 150 % |
| Correction factor FKC | 0.42 | 0.57 | 0.64 | 0.72 | 0.8 | 1 | 1.6 |

Torsional stiffness also depends on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Damping coefficient of the rubber versions

| Rubber version | Hardness Shore A | Damping coefficient ψ |
|----------------|---------------------|-------------------------------|
| WN | 50° ... 55° | 0.80 |
| NN | 60° ... 65° | 1.15 |
| SN | 70° ... 75° | 1.25 |
| NX | 55° ... 65° | 1.15 |

| Size | Assembly ΔS mm | Permitted shaft misalignment at n = 1500 rpm | | |
|------|------------------------------|--|------------------------------|----------------------------------|
| | | Axial ΔK_a mm | Radial ΔK_r mm | Angle ΔK_w degrees |
| 220 | 1.3 | 0.2 | 1.2 | 0.5 |
| 265 | 1.3 | 0.2 | 1.2 | 0.5 |
| 290 | 1.5 | 0.2 | 1.2 | 0.5 |
| 320 | 1.5 | 0.2 | 1.2 | 0.5 |
| 360 | 1.5 | 0.2 | 1.2 | 0.5 |
| 420 | 1.5 | 0.3 | 1.3 | 0.4 |
| 465 | 1.7 | 0.3 | 1.3 | 0.4 |
| 520 | 1.7 | 0.3 | 1.4 | 0.4 |
| 560 | 1.7 | 0.3 | 1.4 | 0.4 |
| 580 | 1.8 | 0.4 | 1.5 | 0.3 |
| 680 | 1.8 | 0.4 | 1.5 | 0.3 |
| 770 | 2.0 | 0.5 | 1.5 | 0.3 |

For fitting, a maximum gap dimension of $S_{max} = S + \Delta S$ and a minimum gap dimension of $S_{min} = S - \Delta S$ are permitted.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size and type must be noted!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.20 | 1.10 | 1.0 | 0.70 |

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

General information

Variants of the outer flange

The outer flange of sizes 220 to 680 is designed to fit the connection dimensions of the SAE J620d standard.

The centering depth on the connection flange of the machine should be between 4 mm and 6.4 mm as a maximum.

| Type | Size | Flange connection size | Figure |
|------------------|------------|------------------------|--------|
| ESN | 220 | 6.5 | 1 |
| ESN | 220 | 7.5 | 2 |
| ESN, ESNR | 265 | 8 | |
| ESN, ESNR | 360 | 11.5 | |
| ESN, ESNR | 465 | 14 | |
| ESN, ESNR | 560 | 18 | |
| ESN, ESNR | 580 | 18 | |
| ESN, ESNR | 680 | 21 | |
| ESN | 220 | 8, 10 | 3 |
| ESN, ESNR | 265 | 10, 11.5 | |
| ESN, ESNR | 290 | All | |
| ESN, ESNR | 320 | All | |
| ESN, ESNR | 360 | 14 | |
| ESN, ESNR | 420 | All | |
| ESN, ESNR | 465 | 16, 18 | |
| ESN, ESNR | 520 | All | |
| ESN, ESNR | 560 | 21 | |
| ESN, ESNR | 580 | 21 | |
| ESN, ESNR | 680 | 24 | |
| ESD, ESDR | 520 | All | 4 |
| ESD, ESDR | 560 | All | |
| ESD, ESDR | 580 | All | |
| ESD, ESDR | 680 | 21 | 5 |
| ESD, ESDR | 680 | 24 | 6 |
| ESD, ESDR | 770 | All | |

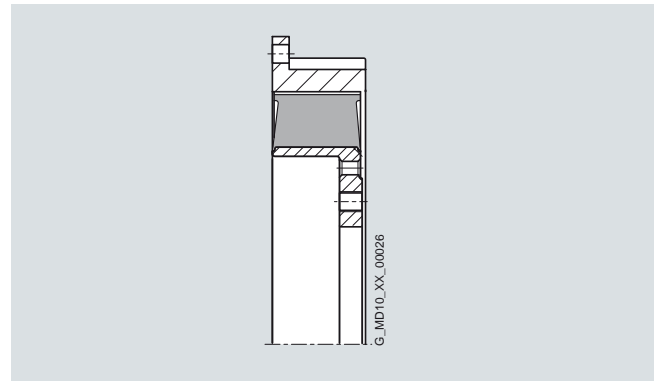


Figure 3

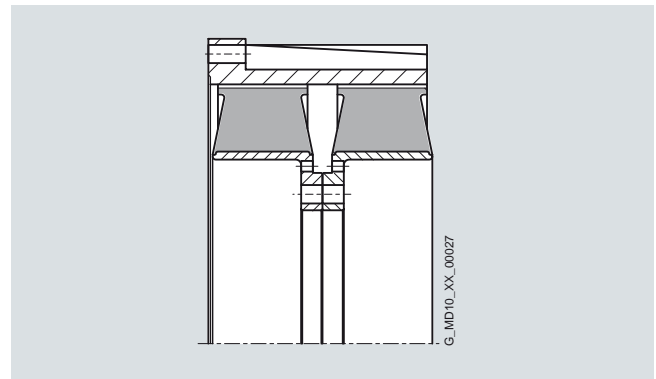


Figure 4

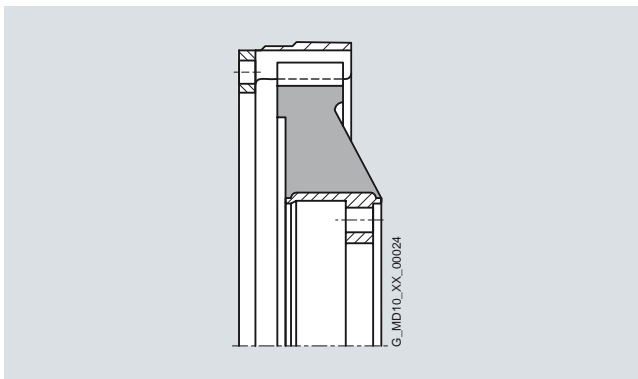


Figure 1

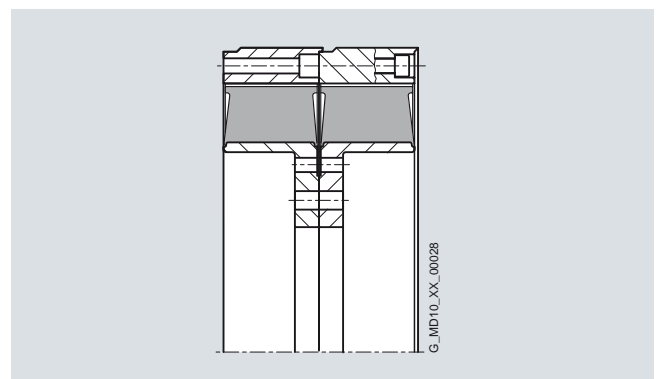


Figure 5

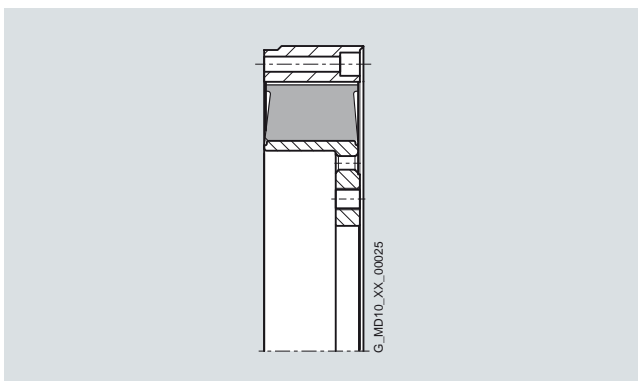


Figure 2

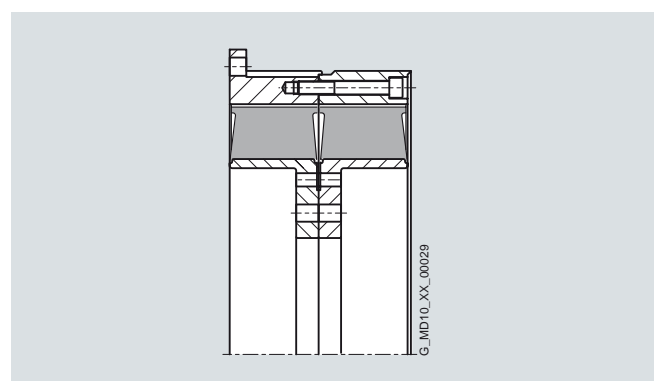
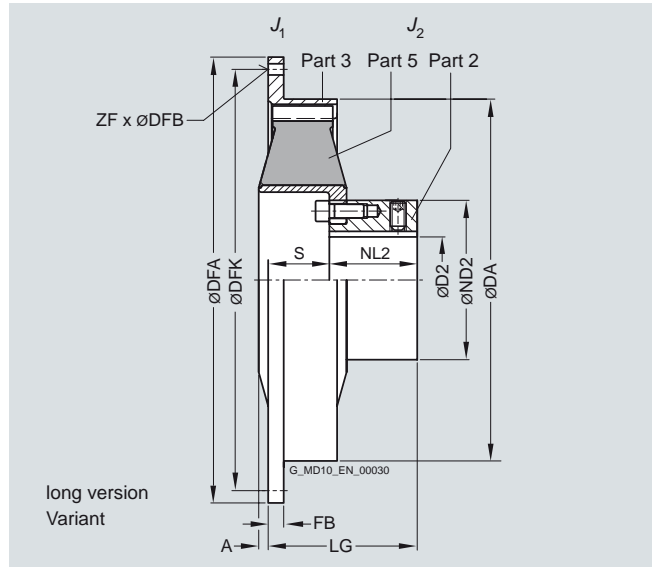


Figure 6

Type ESN



| Dimensions in mm | | | | | | | | | | | | | | | Flange connection dimensions | | | | Mass moment of inertia | | Product code with order codes M.. for bore diameter $\varnothing D2$ and tolerances (product code without -Z) – selection in catalog part 3 | | Weight |
|------------------|----------------------------------|-----|-----|-----|----|-----|---------------|-----|-----|--------------|-------|-------|-----|-----------|------------------------------|--|--|--|--|--|--|-----|------------------|
| Size | D2 Keyway DIN 6885 max. | DA | ND2 | NL2 | A | LG | short version | | | long version | | | SAE | DFA g7 | DFK | FB | ZF | DFB | J_1 | J_2 | m | | |
| | | | | | | | | | | | | | | | | | | | | | | | kgm ² |
| 220 | 60 | 222 | 98 | 54 | – | – | 0 | 49 | 103 | 6.5 | 215.9 | 200.0 | 8 | 6 | 8.5 | 0.008 | 0.01 | 2LC0220-0A B 0 ■ ■ ■ AA0 | 5.8 | | | | |
| | | | | | | | | 40 | 94 | 7.5 | 241.3 | 222.3 | 33 | 8 | 8.5 | 0.011 | 2LC0220-0A B 0 ■ ■ ■ BA0 | | 6.1 | | | | |
| | | | | | | | | 40 | 94 | 8 | 263.5 | 244.5 | 8 | 6 | 10.5 | 0.011 | | | 2LC0220-0A B 0 ■ ■ ■ CA0 | 6.4 | | | |
| | | | | | | | | 40 | 94 | 10 | 314.3 | 295.3 | 8 | 8 | 10.5 | 0.017 | | | | 2LC0220-0A B 0 ■ ■ ■ DA0 | 6.9 | | |
| 265 | 65 | 263 | 118 | 65 | 15 | 74 | 3 | 39 | 104 | 8 | 263.5 | 244.5 | 38 | 6 | 10.5 | 0.011 | 0.022 | 2LC0220-1A ■ ■ ■ ■ ■ ■ ■ CA0 | 6.6 | | | | |
| | | | | | | | | | | 10 | 314.3 | 295.3 | 10 | 8 | 0.017 | 2LC0220-1A ■ ■ ■ ■ ■ ■ ■ DA0 | 6.9 | | | | | | |
| | | | | | | | | | | 11.5 | 352.4 | 333.4 | 10 | 8 | 0.024 | | 2LC0220-1A ■ ■ ■ ■ ■ ■ ■ EA0 | | 7.2 | | | | |
| | | | | | | | | | | 10 | 314.3 | 295.3 | 16 | 8 | 10.5 | | | | 0.026 | 0.026 | 2LC0220-2A ■ ■ ■ ■ ■ ■ ■ DA0 | 9.2 | |
| 290 | 65 | 290 | 118 | 70 | 18 | 58 | 6 | 36 | 106 | 10 | 314.3 | 295.3 | 16 | 8 | 10.5 | 0.026 | 0.026 | 2LC0220-2A ■ ■ ■ ■ ■ ■ ■ EA0 | 10.5 | | | | |
| | | | | | | | | | | 11.5 | 352.4 | 333.4 | 16 | 8 | 0.036 | 2LC0220-3A ■ ■ ■ ■ ■ ■ ■ EA0 | 19 | | | | | | |
| 320 | 80 | 318 | 140 | 87 | 20 | 91 | 8 | 65 | 152 | 11.5 | 352.4 | 333.4 | 16 | 8 | 10.5 | | 0.062 | 0.061 | 2LC0220-3A ■ ■ ■ ■ ■ ■ ■ FA0 | 20.5 | | | |
| | | | | | | | | | | 14 | 466.7 | 438.2 | 16 | 8 | 13 | 0.18 | 2LC0220-4A ■ ■ ■ ■ ■ ■ ■ EA0 | 24.5 | | | | | |
| 360 | 90 | 358 | 160 | 105 | 29 | 92 | 13 | 56 | 161 | 11.5 | 352.4 | 333.4 | 65 | 8 | 10.5 | 0.065 | | 0.13 | 2LC0220-4A ■ ■ ■ ■ ■ ■ ■ FA0 | 27.5 | | | |
| | | | | | | | | | | 14 | 466.7 | 438.2 | 15 | 8 | 13 | 0.18 | 2LC0220-5A ■ ■ ■ ■ ■ ■ ■ FA0 | 36 | | | | | |
| 420 | 100 | 420 | 185 | 102 | 26 | 92 | 10 | 72 | 174 | 14 | 466.7 | 438.2 | 18 | 8 | 13 | 0.22 | | 0.32 | 2LC0220-5A ■ ■ ■ ■ ■ ■ ■ GA0 | 38 | | | |
| | | | | | | | | | | 16 | 517.5 | 489.0 | 18 | 8 | 13 | 0.32 | 2LC0220-5A ■ ■ ■ ■ ■ ■ ■ HA0 | 40 | | | | | |
| | | | | | | | | | | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.47 | | 2LC0220-6A ■ ■ ■ ■ ■ ■ ■ FA0 | | 56 | | | |
| | | | | | | | | | | 16 | 517.5 | 489.0 | 27 | 8 | 13 | 0.41 | | | | 2LC0220-6A ■ ■ ■ ■ ■ ■ ■ GA0 | 57 | | |
| 465 | 120 | 465 | 222 | 125 | 0 | 92 | 33 | 39 | 164 | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.52 | 2LC0220-6A ■ ■ ■ ■ ■ ■ ■ HA0 | 61 | | | | | |
| | | | | | | | | | | 16 | 517.5 | 489.0 | 27 | 8 | 13 | 0.41 | | 2LC0220-7A ■ ■ ■ ■ ■ ■ ■ HA0 | 55 | | | | |
| | | | | | | | | | | 18 | 571.5 | 542.9 | 18 | 12 | 17 | 0.48 | | | 0.93 | 2LC0220-7A ■ ■ ■ ■ ■ ■ ■ JA0 | 60 | | |
| 520 | 165 | 514 | 250 | 142 | 16 | 159 | 0 | 83 | 225 | 21 | 673.1 | 641.4 | 18 | 12 | 17 | 0.95 | 2LC0220-8A ■ ■ ■ ■ ■ ■ ■ HA0 | 69 | | | | | |
| | | | | | | | | | | 21 | 673.1 | 641.4 | 35 | 12 | 17 | 1.8 | | 2LC0220-8A ■ ■ ■ ■ ■ ■ ■ JA0 | 78 | | | | |
| 580 | 200 | 580 | 316 | 200 | 23 | 215 | 3 | 100 | 300 | 18 | 571.5 | 542.9 | 104 | 12 | 17 | 0.77 | 1.8 | | 2LC0221-0A ■ ■ ■ ■ ■ ■ ■ HA0 | 100 | | | |
| | | | | | | | | | | 21 | 673.1 | 641.4 | 26 | 12 | 12 | 1.2 | 2LC0221-0A ■ ■ ■ ■ ■ ■ ■ JA0 | 105 | | | | | |
| 680 | 22 | | | | | | | | | | | | | | | | | | | | | | |

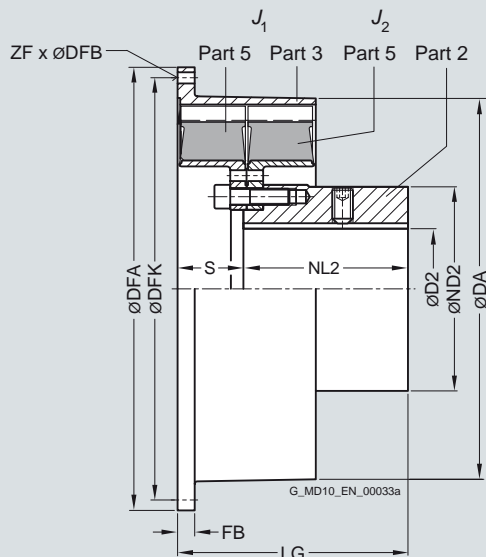
Product code:
short version: **2LC0220-7AA09-1JA0 M1W**
long version: **2LC0220-7AB09-1JA0 M1W**

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

Type ESD

Selection and ordering data



The rubber disk element cannot be dismantled until the machines have been moved.

| Dimensions in mm | | | | | | | Flange connection dimensions | | | | | | Mass moment of inertia | | Product code with order codes M.. for bore diameter ØD2 and tolerances (product code without -Z) – selection in catalog part 3 | Weight <i>m</i> |
|--|----------------------------------|-----|-----|-----|-----|-----|------------------------------|-------|-------|----|----|-----|------------------------|-----------------------|---|--------------------|
| Size | D2 Keyway DIN 6885 max. | DA | ND2 | NL2 | S | LG | SAE | DFA | DFK | FB | ZF | DFB | <i>J</i> ₁ | <i>J</i> ₂ | | |
| | | | | | | | Size | | | | | | kgm ² | kgm ² | | kg |
| 520 | 165 | 525 | 250 | 174 | 81 | 255 | 18 | 571.5 | 542.9 | 25 | 12 | 17 | 1 | 1.6 | 2LC0220-7AD0 ■ - ■ HA0 | 85 |
| | | | | | | | 21 | 673.1 | 641.4 | 18 | 12 | 17 | 1.5 | | 2LC0220-7AD0 ■ - ■ JA0 | 90 |
| 560 | 170 | 560 | 316 | 210 | 60 | 270 | 18 | 571.5 | 542.9 | 35 | 12 | 17 | 1.7 | 2.8 | 2LC0220-8AD0 ■ - ■ HA0 | 140 |
| | | | | | | | 21 | 673.1 | 641.4 | 35 | 12 | 17 | 2.6 | | 2LC0220-8AD0 ■ - ■ JA0 | 150 |
| 580 | 200 | 585 | 310 | 250 | 100 | 350 | 21 | 673.1 | 641.4 | 26 | 12 | 17 | 2 | 3.8 | 2LC0221-0AD0 ■ - ■ JA0 | 170 |
| | | | | | | | 24 | 733.4 | 692.2 | 26 | 12 | 21 | 2.6 | | 2LC0221-0AD0 ■ - ■ KA0 | 175 |
| 680 | 220 | 682 | 380 | 250 | 17 | 267 | 21 | 673.1 | 641.4 | 85 | 12 | 17 | 8.2 | 7 | 2LC0221-1AD0 ■ - ■ JA0 | 265 |
| | | | | | | | 24 | 733.4 | 692.2 | 20 | 12 | 21 | 9.4 | | 2LC0221-1AD0 ■ - ■ KA0 | 275 |
| ØD2 | | | | | | | | | | | | | | | | 1 |
| <ul style="list-style-type: none"> Without finished bore – Without order codes With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 9 |
| Rubber element | | | | | | | | | | | | | | | | 1 |
| <ul style="list-style-type: none"> WN NN SN NX | | | | | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | | | | | 4 |

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

ELPEX-S ESD coupling, size 680, WN rubber element, hub with bore ØD2 = 180H7 mm, with keyway to DIN 6885 and set screw, outer flange to SAE J620d size 24.

Product code:

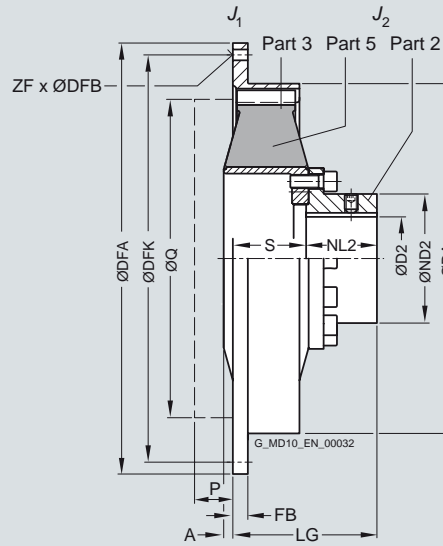
2LC0221-1AD09-1KA0

M2B

FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-S Series

Type ESNR

Selection and ordering data



| Dimensions in mm | | | | | | | | | | | | | | | | Mass moment of inertia | | Product code with order codes M.. for bore diameter ØD2 and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------------------|----------------------------------|-----|--|-----|-----|---|----|-----|-----|------------------------------|-------|-------|-----|----|------|------------------------|----------------|---|--------|----|
| Size | D2 Keyway DIN 6885 max. | DA | ND2 | NL2 | S | A | P | Q | LG | Flange connection dimensions | | | | | | J ₁ | J ₂ | | m | |
| | | | | | | | | | | SAE | DFA | DFK | FB | ZF | DFB | | | | | |
| | | | | | | | | | | | | | | | | | | | | g7 |
| 265 | 50 | 263 | 78 | 65 | 42 | | 10 | 225 | 107 | 8 | 263.5 | 244.5 | 38 | 6 | 10.5 | 0.011 | 0.022 | 2LC0220-1AC0 ■ - ■ CA0 | 5.0 | |
| | | | | | | | | | | 10 | 314.3 | 295.3 | 10 | 8 | | 0.017 | | 2LC0220-1AC0 ■ - ■ DA0 | 5.3 | |
| | | | | | | | | | | 11.5 | 352.4 | 333.4 | 10 | 8 | | 0.024 | | 2LC0220-1AC0 ■ - ■ EA0 | 5.6 | |
| 290 | 50 | 290 | 78 | 65 | 59 | 2 | 15 | 276 | 124 | 10 | 314.3 | 295.3 | 16 | 8 | 10.5 | 0.026 | 0.026 | 2LC0220-2AC0 ■ - ■ DA0 | 8.1 | |
| | | | | | | | | | | 11.5 | 352.4 | 333.4 | 16 | 8 | | 0.036 | | 2LC0220-2AC0 ■ - ■ EA0 | 8.4 | |
| 320 | 65 | 318 | 98 | 87 | 69 | 4 | 20 | 310 | 156 | 11.5 | 352.4 | 333.4 | 16 | 8 | 10.5 | 0.062 | 0.061 | 2LC0220-3AC0 ■ - ■ EA0 | 13.5 | |
| | | | | | | | | | | 14 | 466.7 | 438.2 | 16 | 8 | 13 | 0.18 | | 2LC0220-3AC0 ■ - ■ FA0 | 16 | |
| 360 | 85 | 358 | 123 | 88 | 77 | 9 | 28 | 314 | 165 | 11.5 | 352.4 | 333.4 | 65 | 8 | 10.5 | 0.065 | 0.13 | 2LC0220-4AC0 ■ - ■ EA0 | 20 | |
| | | | | | | | | | | 14 | 466.7 | 438.2 | 15 | 8 | 13 | 0.18 | | 2LC0220-4AC0 ■ - ■ FA0 | 23 | |
| 420 | 100 | 420 | 155 | 85 | 93 | 6 | 28 | 409 | 178 | 14 | 466.7 | 438.2 | 18 | 8 | 13 | 0.22 | 0.32 | 2LC0220-5AC0 ■ - ■ FA0 | 31 | |
| | | | | | | | | | | 16 | 517.5 | 489.0 | 18 | 8 | 13 | 0.32 | | 2LC0220-5AC0 ■ - ■ GA0 | 32 | |
| | | | | | | | | | | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.47 | | 2LC0220-5AC0 ■ - ■ HA0 | 35 | |
| 465 | 130 | 465 | 190 | 119 | 88 | | 15 | 409 | 207 | 14 | 466.7 | 438.2 | 85 | 8 | 13 | 0.31 | 0.58 | 2LC0220-6AC0 ■ - ■ FA0 | 41 | |
| | | | | | | | | | | 16 | 517.5 | 489.0 | 27 | 8 | 13 | 0.41 | | 2LC0220-6AC0 ■ - ■ GA0 | 42 | |
| | | | | | | | | | | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.52 | | 2LC0220-6AC0 ■ - ■ HA0 | 45 | |
| 520 | 150 | 514 | 227 | 162 | 85 | | 10 | 498 | 247 | 18 | 571.5 | 542.9 | 18 | 12 | 17 | 0.48 | 0.93 | 2LC0220-7AC0 ■ - ■ HA0 | 59 | |
| | | | | | | | | | | 21 | 673.1 | 641.4 | 18 | 12 | | 0.95 | | 2LC0220-7AC0 ■ - ■ JA0 | 64 | |
| 560 | 150 | 560 | 240 | 180 | 99 | | 10 | 498 | 279 | 18 | 571.5 | 542.9 | 35 | 12 | 17 | 0.85 | 1.2 | 2LC0220-8AC0 ■ - ■ HA0 | 75 | |
| | | | | | | | | | | 21 | 673.1 | 641.4 | 35 | 12 | | 1.8 | | 2LC0220-8AC0 ■ - ■ JA0 | 85 | |
| 580 | 160 | 580 | 240 | 200 | 102 | | 10 | 498 | 302 | 18 | 571.5 | 542.9 | 104 | 12 | 17 | 0.77 | 1.8 | 2LC0221-0AC0 ■ - ■ HA0 | 80 | |
| | | | | | | | | | | 21 | 673.1 | 641.4 | 26 | 12 | | 1.2 | | 2LC0221-0AC0 ■ - ■ JA0 | 84 | |
| 680 | 200 | 682 | 300 | 210 | 102 | | 10 | 584 | 312 | 21 | 673.1 | 641.4 | 85 | 12 | 17 | 4.1 | 5.3 | 2LC0221-1AC0 ■ - ■ JA0 | 155 | |
| | | | | | | | | | | 24 | 733.4 | 692.2 | 20 | 12 | 21 | 5.3 | | 2LC0221-1AC0 ■ - ■ KA0 | 165 | |
| 770 | 260 | 780 | 390 | 255 | 134 | | 10 | 750 | 389 | – | 860.0 | 820.0 | 26 | 32 | 21 | 10.7 | 12 | 2LC0221-2AC0 ■ - ■ LA0 | 330 | |
| | | | | | | | | | | – | 920.0 | 880.0 | 27 | 32 | 21 | 15.4 | | 2LC0221-2AC0 ■ - ■ MA0 | 350 | |
| | | | | | | | | | | – | 995.0 | 950.0 | 27 | 32 | 21 | 20.5 | | 2LC0221-2AC0 ■ - ■ NA0 | 375 | |
| ØD2 | | | • Without finished bore – Without order codes | | | | | | | | | | | | | | | | 1 | |
| | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 9 | |
| Rubber element | | | • WN • NN • SN • NX | | | | | | | | | | | | | | | | 1 | |
| | | | | | | | | | | | | | | | | | | | 2 | |
| | | | | | | | | | | | | | | | | | | | 3 | |
| | | | | | | | | | | | | | | | | | | | 4 | |

Weight and mass moments of inertia apply to maximum bore diameters.

P, Q = required space for radial dismounting of the rubber disk element

Ordering example:

ELPEX-S ESNR coupling, size 320, WN rubber element, hub with bore ØD2 = 50H7 mm, with keyway to DIN 6885 and set screw, outer flange to SAE J620d size 14.

Product code:

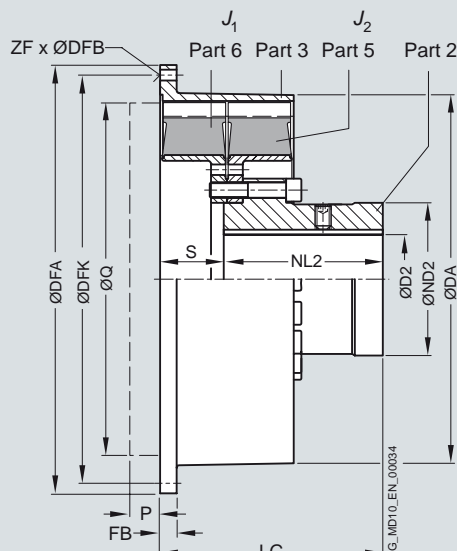
2LC0220-3AC09-1FA0
M1C

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

Type ESDR

Selection and ordering data



| Dimensions in mm | | | | | | | | | | | | | | | Mass moment of inertia | | Product code with order codes M... for bore diameter ØD2 and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------------------|----------------------------------|-----|--|-----|-----|----|-----|------|-------|-----------|-------|----|----|-----|------------------------|-----------------------|--|----------|
| Size | D2 Keyway DIN 6885 max. | DA | ND2 | NL2 | S | P | Q | LG | SAE | DFA g7 | DFK | FB | ZF | DFB | <i>J</i> ₁ | <i>J</i> ₂ | | <i>m</i> |
| | | | | | | | | Size | | | | | | | kgm ² | kgm ² | | kg |
| 520 | 150 | 525 | 227 | 226 | 83 | 10 | 498 | 309 | 18 | 571.5 | 542.9 | 18 | 12 | 17 | 1 | 1.8 | 2LC0220-7AE0 ■ - ■ HA0 | 105 |
| | | | | | | | | 21 | 673.5 | 641.4 | 18 | 12 | 17 | | 1.5 | | 2LC0220-7AE0 ■ - ■ JA0 | 110 |
| 560 | 160 | 560 | 248 | 240 | 100 | 10 | 498 | 340 | 18 | 571.5 | 542.9 | 35 | 12 | 17 | 1.7 | 2.5 | 2LC0220-8AE0 ■ - ■ HA0 | 135 |
| | | | | | | | | 21 | 673.1 | 641.4 | 35 | 12 | 17 | | 2.6 | | 2LC0220-8AE0 ■ - ■ JA0 | 140 |
| 580 | 160 | 585 | 240 | 250 | 100 | 10 | 560 | 350 | 21 | 673.1 | 641.4 | 26 | 12 | 17 | 2 | 3.2 | 2LC0221-0AE0 ■ - ■ JA0 | 145 |
| | | | | | | | | 24 | 733.4 | 692.2 | 26 | 12 | 21 | | 2.6 | | 2LC0221-0AE0 ■ - ■ KA0 | 150 |
| 680 | 200 | 682 | 300 | 250 | 102 | 10 | 584 | 352 | 21 | 673.1 | 641.4 | 85 | 12 | 17 | 8.2 | 6.5 | 2LC0221-1AE0 ■ - ■ JA0 | 260 |
| | | | | | | | | 24 | 733.4 | 692.2 | 20 | 12 | 21 | | 9.4 | | 2LC0221-1AE0 ■ - ■ KA0 | 270 |
| 770 | 260 | 780 | 390 | 300 | 200 | 10 | 750 | 500 | | 860.0 | 820.0 | 19 | 32 | 21 | 22.3 | 20 | 2LC0221-2AE0 ■ - ■ LA0 | 540 |
| | | | | | | | | 500 | | 920.0 | 880.0 | 27 | 32 | | 26 | | 2LC0221-2AE0 ■ - ■ MA0 | 555 |
| | | | | | | | | 500 | | 995.0 | 950.0 | 27 | 32 | | 31 | | 2LC0221-2AE0 ■ - ■ NA0 | 600 |
| ØD2 | | | • Without finished bore – Without order codes | | | | | | | | | | | | | | | 1 |
| | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | 9 |
| Rubber element | | | • WN | | | | | | | | | | | | | | | 1 |
| | | | • NN | | | | | | | | | | | | | | | 2 |
| | | | • SN | | | | | | | | | | | | | | | 3 |
| | | | • NX | | | | | | | | | | | | | | | 4 |

Weight and mass moments of inertia apply to maximum bore diameters.

P, Q = required space for radial dismounting of the rubber disk element

Ordering example:

ELPEX-S ESDR coupling, size 560, WN rubber element, hub with bore ØD2 = 120H7 mm, with keyway to DIN 6885 and set screw, outer flange to SAE J620d size 21.

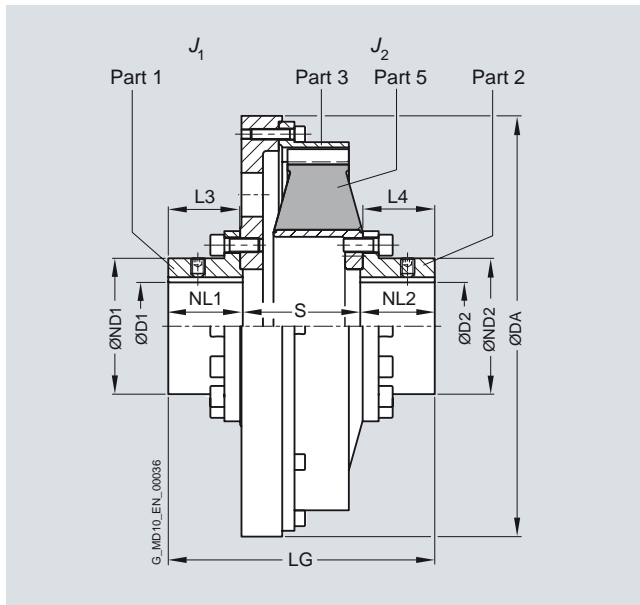
Product code:

2LC0220-8AE09-1JA0
M1S

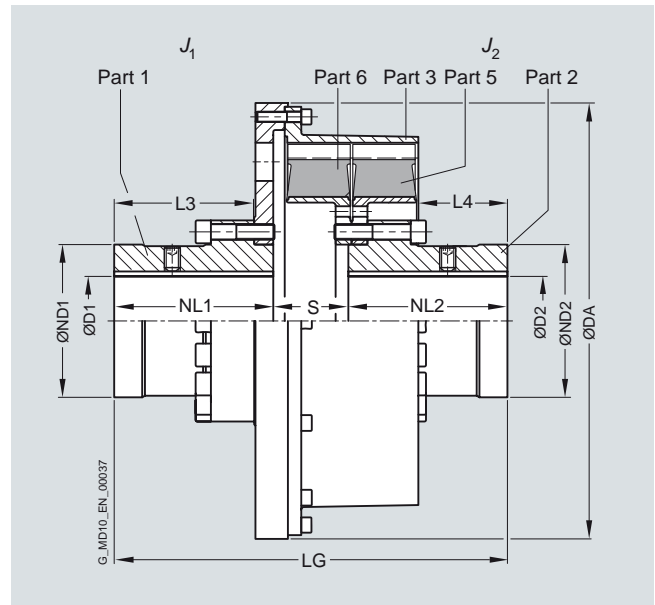
FLENDER Standard Couplings Highly Flexible Couplings - ELPEX-S Series

Types ESNW and ESDW

Selection and ordering data



Type ESNW



Type ESDW

| Dimensions in mm | | | | | | | | | Mass moment of inertia | | Product code with order codes M.. for bore diameter ØD2 and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------------------|-------------------------------------|--|---------|---------|-----|-----|-----|-----|------------------------|------------------|---|----------|
| Size | D1/D2 Keyway DIN 6885 max. | DA | ND1/ND2 | NL1/NL2 | L3 | L4 | S | LG | J_1 | J_2 | | <i>m</i> |
| | | | | | | | | | kgm ² | kgm ² | | kg |
| Type ESNW | | | | | | | | | | | | |
| 265 | 50 | 275 | 78 | 65 | 62 | 66 | 68 | 198 | 0.11 | 0.017 | 2LC0220-1AG ■ ■ - ■ AA0 | 15 |
| 290 | 50 | 325 | 78 | 65 | 62 | 68 | 89 | 219 | 0.21 | 0.028 | 2LC0220-2AG ■ ■ - ■ AA0 | 22 |
| 320 | 65 | 365 | 98 | 87 | 84 | 92 | 100 | 274 | 0.37 | 0.042 | 2LC0220-3AG ■ ■ - ■ AA0 | 32 |
| 360 | 85 | 365 | 123 | 88 | 85 | 96 | 123 | 299 | 0.45 | 0.11 | 2LC0220-4AG ■ ■ - ■ AA0 | 43 |
| 420 | 100 | 480 | 155 | 85 | 82 | 94 | 134 | 304 | 1.5 | 0.3 | 2LC0220-5AG ■ ■ - ■ AA0 | 75 |
| 465 | 130 | 480 | 190 | 119 | 116 | 119 | 125 | 363 | 1.6 | 0.54 | 2LC0220-6AG ■ ■ - ■ AA0 | 89 |
| 520 | 150 | 585 | 227 | 162 | 159 | 161 | 123 | 447 | 4 | 0.94 | 2LC0220-7AG ■ ■ - ■ AA0 | 155 |
| 560 | 150 | 585 | 240 | 180 | 174 | 174 | 132 | 492 | 4.1 | 1.2 | 2LC0220-8AG ■ ■ - ■ AA0 | 160 |
| 580 | 150 | 585 | 240 | 200 | 195 | 198 | 145 | 545 | 5.5 | 1.6 | 2LC0221-0AG ■ ■ - ■ AA0 | 185 |
| 680 | 160 | 685 | 300 | 210 | 205 | 201 | 150 | 570 | 12 | 3.6 | 2LC0221-1AG ■ ■ - ■ AA0 | 315 |
| 770 | 260 | 870 | 390 | 255 | 250 | 253 | 180 | 690 | 27.2 | 12 | 2LC0221-2AG ■ ■ - ■ AA0 | 500 |
| Type ESDW | | | | | | | | | | | | |
| 520 | 150 | 585 | 227 | 226 | 201 | 135 | 100 | 552 | 4.7 | 1.8 | 2LC0220-7AH ■ ■ - ■ AA0 | 215 |
| 560 | 160 | 585 | 248 | 240 | 215 | 133 | 117 | 597 | 5.4 | 2.5 | 2LC0220-8AH ■ ■ - ■ AA0 | 250 |
| 580 | 160 | 685 | 240 | 250 | 220 | 140 | 120 | 620 | 10.1 | 3.2 | 2LC0221-0AH ■ ■ - ■ AA0 | 300 |
| 680 | 200 | 685 | 300 | 250 | 218 | 134 | 125 | 625 | 14.5 | 6.5 | 2LC0221-1AH ■ ■ - ■ AA0 | 440 |
| 770 | 260 | 870 | 390 | 300 | 265 | 238 | 220 | 820 | 40 | 20 | 2LC0221-2AH ■ ■ - ■ AA0 | 720 |
| ØD1 | | • Without finished bore – Without order codes | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | 9 | |
| ØD2 | | • Without finished bore – Without order codes | | | | | | | | | 1 | |
| | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | 9 | |
| Rubber element | | • WN | | | | | | | | | 1 | |
| | | • NN | | | | | | | | | 2 | |
| | | • SN | | | | | | | | | 3 | |
| | | • NX | | | | | | | | | 4 | |

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

ELPEX-S ESNW coupling, size 520, WN rubber element, hub with bore $\varnothing D1 = 140H7$ mm, with keyway to DIN 6885 and set screw, bore $\varnothing D2 = 120H7$ mm, with keyway to DIN 6885 and set screw.

Product code:

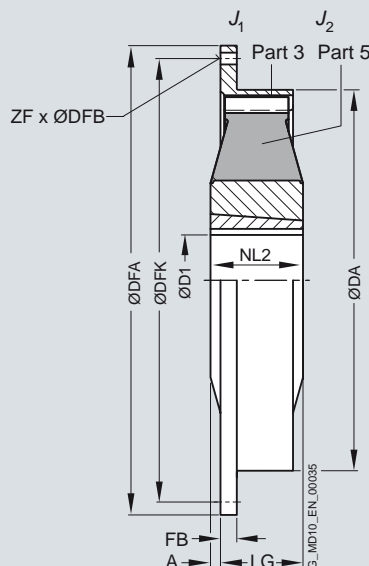
2LC0220-7AG99-1AA0
L1V+M1S

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

Type EST

Selection and ordering data



The rubber disk element cannot be dismantled until the machines have been moved.

| Dimensions in mm | | | | | | | | | | | | | Mass moment of inertia | | Product code with order codes M.. for bore diameter ØD2 and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------------------|------------|---|------|-----|-----|----|------|------------------------------|-------|-------|-----|----|------------------------|----------------|---|--------------------------------------|-----|
| Size | Taper bush | D1 Keyway DIN 6885 | | DA | NL2 | A | LG | Flange connection dimensions | | | | | J ₁ | J ₂ | | m | |
| | Size | min. | max. | | | | | Size | SAE | DFA | DFK | FB | | | | | ZF |
| 220 | 2012 | 14 | 50 | 222 | 32 | 0 | 52 | 6.5 | 215.9 | 200.0 | 8 | 6 | 8.5 | 0.008 | 0.008 | 2LC0220-0AF0 ■ - ■ AA0 | 3.6 |
| | | | | | | | 43 | 7.5 | 241.3 | 222.3 | 33 | 8 | 8.5 | 0.008 | | 2LC0220-0AF0 ■ - ■ BA0 | 3.5 |
| | | | | | | | 43 | 8 | 263.5 | 244.5 | 8 | 6 | 10.5 | 0.011 | | 2LC0220-0AF0 ■ - ■ CA0 | 3.7 |
| | | | | | | | 43 | 10 | 314.3 | 295.3 | 8 | 8 | 10.5 | 0.020 | | 2LC0220-0AF0 ■ - ■ DA0 | 4.2 |
| 265 | 2517 | 16 | 60 | 263 | 45 | 3 | 42 | 8 | 263.5 | 244.5 | 38 | 6 | 10.5 | 0.011 | 0.019 | 2LC0220-1AF0 ■ - ■ CA0 | 5.9 |
| | | | | | | | 10 | 314.3 | 295.3 | 10 | 8 | | 0.017 | | 2LC0220-1AF0 ■ - ■ DA0 | 6.2 | |
| | | | | | | | 11.5 | 352.4 | 333.4 | 10 | 8 | | 0.024 | | 2LC0220-1AF0 ■ - ■ EA0 | 6.5 | |
| 290 | 2517 | 16 | 60 | 290 | 64 | 6 | 58 | 10 | 314.3 | 295.3 | 16 | 8 | 10.5 | 0.026 | 0.026 | 2LC0220-2AF0 ■ - ■ DA0 | 8.5 |
| | | | | | | | 11.5 | 352.4 | 333.4 | 16 | 8 | | 0.036 | | 2LC0220-2AF0 ■ - ■ EA0 | 8.8 | |
| 320 | 3030 | 35 | 75 | 318 | 76 | 8 | 68 | 11.5 | 352.4 | 333.4 | 16 | 8 | 10.5 | 0.062 | 0.06 | 2LC0220-3AF0 ■ - ■ EA0 | 14 |
| 360 | 3535 | 35 | 90 | 358 | 89 | 13 | 76 | 11.5 | 352.4 | 333.4 | 65 | 8 | 10.5 | 0.065 | 0.13 | 2LC0220-4AF0 ■ - ■ EA0 | 21 |
| | | | | | | | 14 | 466.7 | 438.2 | 15 | 8 | 13 | 0.18 | | 2LC0220-4AF0 ■ - ■ FA0 | 24 | |
| 420 | 4040 | 40 | 100 | 420 | 102 | 10 | 92 | 14 | 466.7 | 438.2 | 18 | 8 | 13 | 0.22 | 0.33 | 2LC0220-5AF0 ■ - ■ FA0 | 37 |
| | | | | | | | 16 | 517.5 | 489.0 | 18 | 8 | 13 | 0.32 | | 2LC0220-5AF0 ■ - ■ GA0 | 38 | |
| | | | | | | | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.47 | | 2LC0220-5AF0 ■ - ■ HA0 | 41 | |
| 465 | 4545 | 55 | 110 | 465 | 115 | 28 | 87 | 14 | 466.7 | 438.2 | 85 | 8 | 13 | 0.31 | 0.76 | 2LC0220-6AF0 ■ - ■ FA0 | 63 |
| | | | | | | | 16 | 517.5 | 489.0 | 27 | 8 | 13 | 0.41 | | 2LC0220-6AF0 ■ - ■ GA0 | 64 | |
| | | | | | | | 18 | 571.5 | 542.9 | 18 | 6 | 17 | 0.52 | | 2LC0220-6AF0 ■ - ■ HA0 | 68 | |
| ØD1 | | • Without Taper clamping bush | | | | | | | | | | | | | | 1 | |
| | | • With Taper clamping bush – With order code for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | |
| Rubber element | | • WN | | | | | | | | | | | | | | 1 | |
| | | • NN | | | | | | | | | | | | | | 2 | |
| | | • SN | | | | | | | | | | | | | | 3 | |
| | | • NX | | | | | | | | | | | | | | 4 | |

Weight and mass moments of inertia apply to maximum bore diameters.

Ordering example:

ELPEX-S EST coupling, size 265, WN rubber element, with Taper clamping bush size 2517, with bore ØD2 = 30 mm, outer flange to SAE J620d size 10.

Product code:

2LC0220-1AF99-1DA0
M0S

Selection and ordering data

Rubber disk elements

The rubber disk elements of the ELPEX-S coupling are wear parts. The service life depends on the operating conditions.

| Product code set of rubber disk elements for a coupling | | | | | | |
|---|--------|------------------------|----------------------|----------------------|----------------------|----------------------|
| Size | Type | EST | ESN | ESNR, ESNW | ESD | ESDR, ESDW |
| 220 | | 2LC0220-0XL ■ 0- ■ AA0 | 2LC0220-0XJ00- ■ AA0 | | | |
| 265 | | 2LC0220-1XL ■ 0- ■ AA0 | 2LC0220-1XJ00- ■ AA0 | 2LC0220-1XM00- ■ AA0 | | |
| 290 | | 2LC0220-2XL ■ 0- ■ AA0 | 2LC0220-2XJ00- ■ AA0 | 2LC0220-2XM00- ■ AA0 | | |
| 320 | | 2LC0220-3XL ■ 0- ■ AA0 | 2LC0220-3XJ00- ■ AA0 | 2LC0220-3XM00- ■ AA0 | | |
| 360 | | 2LC0220-4XL ■ 0- ■ AA0 | 2LC0220-4XJ00- ■ AA0 | 2LC0220-4XM00- ■ AA0 | | |
| 420 | | 2LC0220-5XL ■ 0- ■ AA0 | 2LC0220-5XJ00- ■ AA0 | 2LC0220-5XM00- ■ AA0 | | |
| 465 | | 2LC0220-6XL ■ 0- ■ AA0 | 2LC0220-6XJ00- ■ AA0 | 2LC0220-6XM00- ■ AA0 | | |
| 520 | | | 2LC0220-7XJ00- ■ AA0 | 2LC0220-7XM00- ■ AA0 | 2LC0220-7XK00- ■ AA0 | 2LC0220-7XN00- ■ AA0 |
| 560 | | | 2LC0220-8XJ00- ■ AA0 | 2LC0220-8XM00- ■ AA0 | 2LC0220-8XK00- ■ AA0 | 2LC0220-8XN00- ■ AA0 |
| 580 | | | 2LC0221-0XJ00- ■ AA0 | 2LC0221-0XM00- ■ AA0 | 2LC0221-0XK00- ■ AA0 | 2LC0221-0XN00- ■ AA0 |
| 680 | | | 2LC0221-1XJ00- ■ AA0 | 2LC0221-1XM00- ■ AA0 | 2LC0221-1XK00- ■ AA0 | 2LC0221-1XN00- ■ AA0 |
| 770 | | | | 2LC0221-2XM00- ■ AA0 | | 2LC0221-2XN00- ■ AA0 |
| Without Taper clamping bush | 1 | | | | | |
| With Taper clamping bush | 9 | | | | | |
| Rubber element | • WN 1 | | 1 | 1 | 1 | 1 |
| | • NN 2 | | 2 | 2 | 2 | 2 |
| | • SN 3 | | 3 | 3 | 3 | 3 |
| | • NX 4 | | 4 | 4 | 4 | 4 |

Ordering examples:

WN rubber element for ELPEX-S EST 265 coupling, including taper bush 2517 with bore $\varnothing D1 = 24$ mm, keyway to DIN 6885.

Product code:

2LC0220-1XL90-1AA0
L0P

WN rubber element for ELPEX-S EST 265 coupling without Taper clamping bush.

Product code:

2LC0220-1XL10-1AA0

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX-S Series

Notes

Highly Flexible Couplings ELPEX Series



| | |
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FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX Series

General information

Overview



ELPEX couplings are highly torsionally flexible and free of torsional backlash. Because of their low torsional stiffness and damping capacity, ELPEX couplings are especially suitable for coupling machines with a very non uniform torque pattern. ELPEX couplings are also suitable for connecting machines with high shaft misalignment.

Standard ELPEX coupling types are designed as shaft-shaft connections or flange-shaft connections. Application-related types can be implemented on request.

Benefits

The ELPEX coupling is suitable for horizontal and vertical mounting positions or mounting at any required angle. The coupling parts can be arranged as required on the shafts to be connected.

The split flexible rings can be changed without having to move the coupled machines.

The flexible rings are mounted without backlash and give the coupling progressive torsional stiffness, i.e. torsional stiffness increases in proportion to coupling load.

The ELPEX coupling is especially suitable for reversing operation or operation with changing directions of load.

The coupling is delivered preassembled. The flexible rings are completely assembled. On the type ENG, the coupling halves have to be bolted together after the hub has been mounted. On the type EFG, after mounting the coupling hub, only the outer flange has to be connected to the machine.

Outer flanges with different connection dimensions are available for the type EFG.

If the flexible rings are irreparably damaged or worn, the metal parts can rotate freely against one another, they are not in contact with one another.

Application

The ELPEX coupling is available in 9 sizes with a nominal torque of between 1600 Nm and 90000 Nm. The coupling is suitable for ambient temperatures of between -40 °C and +80 °C.

The ELPEX coupling is frequently used for high-quality drives which have to guarantee very long service life in harsh operating conditions. Examples of applications are mill drives in the cement industry, marine main and secondary drives or drives on large excavators powered by an electric motor or diesel engine.

Design

Design and function

The ELPEX coupling's transmission characteristic is determined essentially by the flexible rings. The flexible rings are manufactured from a natural rubber mixture with a multiply fabric lining. The flexible rings are split so that they can be changed without having to move the coupled machines.

The flexible rings are fastened to the hub with a clamping ring and to the outer flange with a clamping ring, using pins and bolts.

On the type EFG, the outer flange is designed with connection dimensions for connection to e.g. a diesel engine flywheel. On ENG types, the outer flange is fitted to a second hub part, which then enables the shaft-shaft connection.

Materials:

| | Type | |
|---------------------------------|---------------------------|-------|
| | Cast iron | Steel |
| Hub part 1 | Grey cast iron EN-GJL-250 | Steel |
| Hub part 2 | Steel | Steel |
| Retaining ring, outer ENG, ENGS | Grey cast iron EN-GJL-250 | Steel |
| Outer flange EFG, EFGS | Grey cast iron EN-GJL-250 | Steel |

Steel in quality $R_m > 450 \text{ N/mm}^2$

Flexible ring materials:

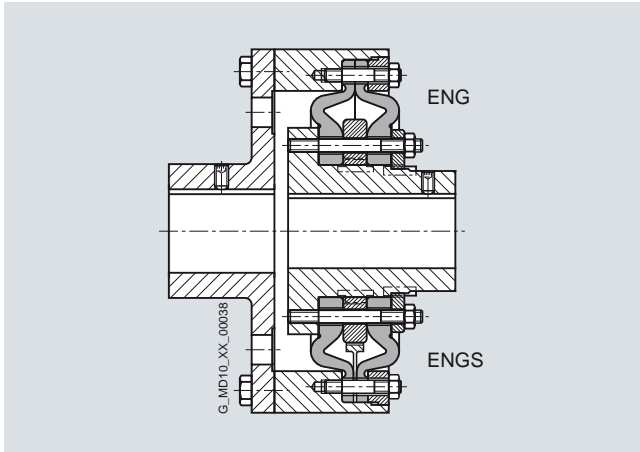
| Material/description | Hardness | Identification | Ambient temperature |
|----------------------|-----------|----------------|---------------------|
| Natural rubber | 70 ShoreA | Size - 2 | -40 °C to +80 °C |

FLENDER Standard Couplings **Highly Flexible Couplings - ELPEX Series**

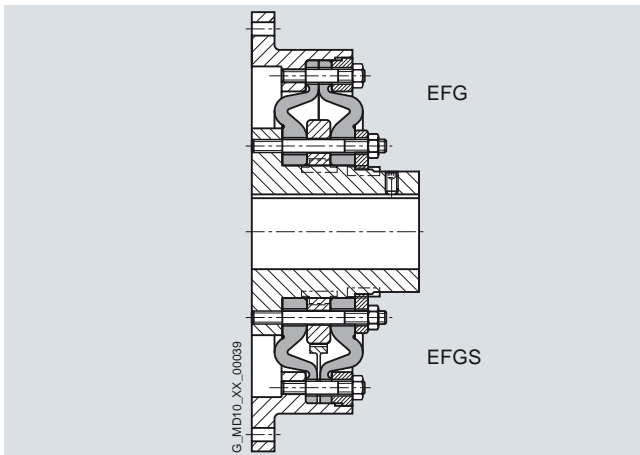
General information

ELPEX coupling types

| Type | Description |
|------|-------------------------------------|
| ENG | Coupling as shaft-shaft connection |
| EFG | Coupling as flange-shaft connection |
| ENGs | as ENG with fail-safe device |
| EFGs | as EFG with fail-safe device |



Types ENG/ENGs



Types EFG/EFGs

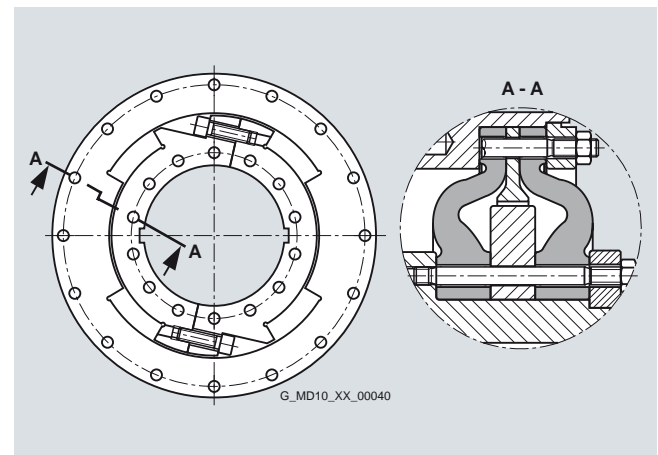
Further application-specific coupling types are available. Dimension sheets for and information on these are available on request. The following versions have already been implemented a number of times:

- ELPEX coupling with brake drum, brake disk or flywheel mass
- ELPEX coupling with axial backlash limiter
- ELPEX coupling with adapter
- ELPEX coupling in combination with a safety slip clutch
- ELPEX coupling for engaging/disengaging during standstill
- ELPEX coupling as part of a coupling combination

Fail-safe device of ELPEX coupling

Types ENGs and EFGs are provided with a fail-safe device. In normal operation the torsion angle of the flexible rings is smaller than the gap between the cams. In normal operation there is no metal-metal contact.

If the flexible rings fail, cams transmit the torque from the inner part and outer part. These enable the coupling to be used in emergency mode for a short time. This option is frequently required e.g. in the case of marine drives.



Fail-safe device

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX Series

General information

Configuration

The ELPEX coupling is especially suitable for rough operation. An application factor different from that in catalog section 3 is therefore sufficient for all applications. In the case of machines which excite torsional vibration, FLENDER urgently recommends carrying out a torsional vibration calculation or measuring the coupling load occurring in the drive.

Coupling selection

Coupling load in continuous operation

The operating principles of the driving and driven machines are divided into categories and the application factor FB derived from these in accordance with DIN 3990-1.

| Application factor FB | Torque characteristic of the driven machine | | |
|---|--|-----------------------------------|------------------------|
| | Torque characteristic of the driving machine | uniform with moderate shock loads | non uniform very rough |
| Electric motors, hydraulic motors, gas and water turbines | 1.0 | 1.3 | 1.4 |
| Internal combustion engines | 1.3 | 1.4 | 1.6 |

Examples of torque characteristic in driven machines:

- uniform with moderate shock loads: generators, fans, blowers
- non uniform: reciprocating compressors, mixers, conveyor systems
- very rough: crushers, excavators, presses, mills

| Temperature factor FT | | Temperature T_a on the coupling | | | | |
|-----------------------|--------------------|-----------------------------------|------------------|----------|----------|----------|
| Coupling | Elastomer material | -40 °C to -30 °C | -30 °C to +50 °C | to 60 °C | to 70 °C | to 80 °C |
| ELPEX | NR | 1.1 | 1.0 | 1.25 | 1.40 | 1.60 |

NR: Natural rubber mixture

Coupling load due to dynamic torque load

Applying the frequency factor FF, the dynamic torque load must be lower than the coupling fatigue torque.

Dynamic torque load

$$T_{KW} \geq T_W \cdot FT \cdot FF \cdot \frac{0.6}{FB - 1.0}$$

Frequency of the dynamic torque load

$f_{err} \leq 10$ Hz frequency factor FF = 1.0

Frequency of the dynamic torque load

$f_{err} > 10$ Hz frequency factor FF = $\sqrt[3]{(f_{err} / 10 \text{ Hz})}$

Checking the maximum speed:

The following must apply to all load situations: $n_{Kmax} \geq n_{max}$

Checking permitted shaft misalignment and restorative forces

For all load situations the actual shaft misalignment must be less than the permitted shaft misalignment.

Checking bore diameter, mounting geometry and coupling design

The check must be made on the basis of the dimension tables. On request, couplings with adapted geometry can be provided.

Checking shaft-hub connection

Please refer to catalog section 3 for instructions.

Checking temperature and chemically aggressive environment

The permitted coupling temperature is specified in the Temperature Factor FT table. In the case of chemically aggressive environments, please consult the manufacturer.

Select size with: $T_{KN} \geq T_N \cdot FB \cdot FT$

Coupling load at maximum and overload conditions

The maximum torque is the highest load acting on the coupling in normal operation.

Maximum torques at a frequency of up to 25 times an hour are permitted and must be lower than the maximum coupling torque. Examples of maximum torque conditions are: Starting operations, stopping operations or usual operating conditions with maximum load.

$$T_{Kmax} \geq T_{max} \cdot FT$$

Overload torques are maximum loads which occur only in combination with special, infrequent operating conditions.

Examples of overload torque conditions are: Motor short circuit, emergency stop or blocking because of component breakage. Overload torques at a frequency of once a month are permitted and must be lower than the maximum overload torque of the coupling. The overload condition may last only a short while, i.e. fractions of a second.

$$T_{KOL} \geq T_{OL} \cdot FT$$

Technical data

Power ratings

| Size | Rated torque | Maximum torque | Overload torque | Fatigue torque | Dynamic torsional stiffness for 100 % capacity utilization | Stiffness | | Permitted shaft misalignment at speed n = 1500 rpm | | |
|------------|----------------|------------------|-----------------|----------------|--|------------------------|-------------------------|--|------------------------------|---------------------------------|
| | T_{KN} Nm | T_{Kmax} Nm | T_{KOL} Nm | T_{KW} Nm | C_{Tdyn} kNm/rad | Axial C_a N/mm | Radial C_r N/mm | Axial ΔK_a mm | Radial ΔK_r mm | Angle ΔK_w Degree |
| 270 | 1600 | 4800 | 6400 | 640 | 22.0 | 660 | 770 | 2.2 | 2.2 | 0.2 |
| 320 | 2800 | 8400 | 11200 | 1120 | 38.0 | 780 | 910 | 2.6 | 2.6 | 0.2 |
| 375 | 4500 | 13500 | 18000 | 1800 | 63.0 | 970 | 1130 | 3 | 3 | 0.2 |
| 430 | 7100 | 21300 | 28400 | 2840 | 97.0 | 1160 | 1350 | 3.4 | 3.4 | 0.2 |
| 500 | 11200 | 33600 | 44800 | 4480 | 155 | 1410 | 1630 | 3.8 | 3.8 | 0.2 |
| 590 | 18000 | 54000 | 72000 | 7200 | 240 | 1710 | 1990 | 4.2 | 4.2 | 0.2 |
| 690 | 28000 | 84000 | 112000 | 11200 | 365 | 2060 | 2390 | 4.6 | 4.6 | 0.2 |
| 840 | 45000 | 135000 | 180000 | 18000 | 685 | 2570 | 2990 | 5 | 5 | 0.2 |
| 970 | 90000 | 270000 | 360000 | 36000 | 1100 | 3020 | 3510 | 5.5 | 5.5 | 0.2 |

The damping coefficient is $\Psi = 1.1$

Torsional stiffness

The dynamic torsional stiffness is load-dependent and increases in proportion to capacity utilization. The values specified in the selection table apply to a capacity utilization of 100 %. The following table shows the correction factors for different rated loads.

$$C_{Tdyn} = C_{Tdyn 100\%} \cdot FKC$$

| | Capacity utilization T_N / T_{KN} | | | | | | |
|-----------------------|-------------------------------------|------|------|------|------|-------|-------|
| | 20 % | 50 % | 60 % | 70 % | 80 % | 100 % | 200 % |
| Correction factor FKC | 0.3 | 0.56 | 0.65 | 0.74 | 0.82 | 1 | 1.9 |

Torsional stiffness also depends on the ambient temperature and the frequency and amplitude of the torsional vibration excitation. More precise torsional stiffness and damping parameters on request.

Permitted shaft misalignment

The permitted shaft misalignment depends on the operating speed. As the speed increases, lower shaft misalignment values are permitted. The following table shows the correction factors for different speeds.

The maximum speed for the respective coupling size must be noted!

$$\Delta K_{perm} = \Delta K_{1500} \cdot FKV$$

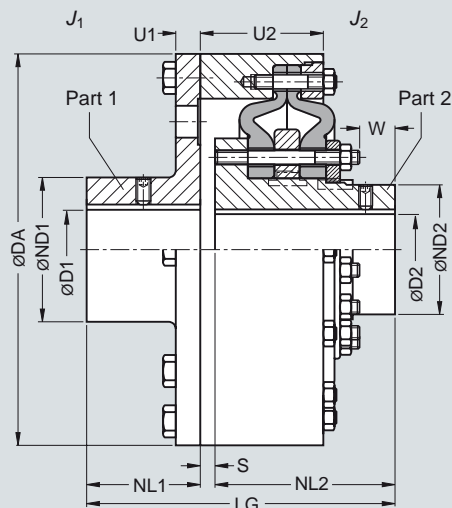
| | Speed in rpm | | | |
|-----------------------|--------------|------|------|------|
| | 500 | 1000 | 1500 | 3000 |
| Correction factor FKV | 1.6 | 1.25 | 1.0 | 0.70 |

FLENDER Standard Couplings

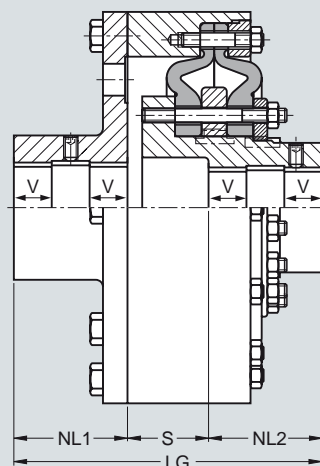
Highly Flexible Couplings - ELPEX Series

Types ENG/ENGs

Selection and ordering data



Sizes 270 ... 430



Sizes 500 ... 970

| Size | Rated torque | Max. speed n_{Kmax} Type | Dimensions in mm | | | | | | | | | | | | | | Mass moment of inertia | | Product code with order codes for bore diameter and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------|--------------|----------------------------------|--------------------|---|-------|------|-----|-----|-----|-----|-----|-----|----|-------|-----|-----|------------------------|------------------|---|------------------|-----------------------|
| | | | Keyway DIN 6885 | | | | | | | | | | | | | | | | | | |
| | | | T_{KN} | Cast iron | Steel | D1 | D2 | DA | ND1 | ND2 | NL1 | NL2 | S | U1 | U2 | LG | W | J_1 | | | J_2 |
| | Nm | rpm | rpm | min. | max. | max. | | | | | | | | | | | kgm ² | kgm ² | kg | | |
| 270 | 1600 | 3000 | 4250 | 45 | 80 | 70 | 270 | 128 | 94 | 80 | 155 | 10 | 14 | 86 | 245 | 42 | 0.21 | 0.037 | 2LC0200-3A ■■■ -0AA0 | 29 | |
| 320 | 2800 | 2500 | 3600 | 55 | 100 | 85 | 320 | 160 | 115 | 100 | 180 | 6 | 16 | 97.5 | 286 | 48 | 0.49 | 0.082 | 2LC0200-4A ■■■ -0AA0 | 50 | |
| 375 | 4500 | 2100 | 3100 | 65 | 115 | 105 | 375 | 184 | 143 | 120 | 205 | 10 | 18 | 118.8 | 335 | 62 | 1.0 | 0.21 | 2LC0200-5A ■■■ -0AA0 | 80 | |
| 430 | 7100 | 1900 | 2650 | 75 | 130 | 120 | 430 | 208 | 165 | 140 | 235 | 8 | 22 | 126 | 383 | 68 | 2.0 | 0.37 | 2LC0200-6A ■■■ -0AA0 | 113 | |
| 500 | 11200 | 1600 | 2300 | 90 | 150 | 150 | 500 | 240 | 202 | 160 | 160 | 112 | 25 | 139.7 | 432 | 80 | 3.9 | 0.85 | 2LC0200-7A ■■■ -0AA0 | 174 | |
| 590 | 18000 | 1360 | 2000 | 100 | 140 | 170 | 590 | 224 | 230 | 190 | 190 | 130 | 28 | 162.7 | 510 | 95 | 8.2 | 1.7 | 2LC0200-8A ■■■ -0AA0 | 254 | |
| | | | | 140 | 180 | | | 288 | | | | | | | | | 8.4 | | 2LC0200-8A ■■■ -0AA0 | 284 | |
| 690 | 28000 | 1200 | 1650 | 110 | 140 | 200 | 690 | 224 | 278 | 220 | 220 | 140 | 32 | 175.6 | 580 | 102 | 16.3 | 3.7 | 2LC0201-0A ■■■ -0AA0 | 350 | |
| | | | | 140 | 180 | | | 288 | | | | | | | | | 16.8 | | 2LC0201-0A ■■■ -0AA0 | 370 | |
| | | | | 180 | 210 | | | 336 | | | | | | | | | 16.9 | | 2LC0201-0A ■■■ -0AA0 | 385 | |
| 840 | 45000 | 1000 | 1350 | 140 | 180 | 240 | 840 | 288 | 342 | 280 | 280 | 125 | 42 | 231 | 685 | 105 | 49 | 11 | 2LC0201-1A ■■■ -0AA0 | 700 | |
| | | | | 180 | 220 | | | 352 | | | | | | | | | 50 | | 2LC0201-1A ■■■ -0AA0 | 725 | |
| 970 | 90000 | 850 | 1180 | 160 | 200 | 280 | 970 | 320 | 390 | 350 | 350 | 167 | 70 | 290 | 867 | 137 | 104 | 26 | 2LC0201-2A ■■■ -0AA0 | 1265 | |
| | | | | 200 | 240 | | | 384 | | | | | | | | | 106 | | 2LC0201-2A ■■■ -0AA0 | 1310 | |
| | | | | 240 | 280 | | | 448 | | | | | | | | | 110 | | 2LC0201-2A ■■■ -0AA0 | 1350 | |
| | | | | 280 | 320 | | | 512 | | | | | | | | | 115 | | 2LC0201-2A ■■■ -0AA0 | 1410 | |
| Type | | | | • ENG cast iron • ENG steel • ENG S cast iron • ENG S steel | | | | | | | | | | | | | | | | F L G M | |
| ØD1: | | | | • Without finished bore – Without order codes • Without finished bore from size 590 for 2nd diameter range D1 – Without order codes • Without finished bore from size 690 for 3rd diameter range D1 – Without order codes • Without finished bore for size 970 for 4th diameter range D1 – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 1 2 3 4 9 |
| ØD2: | | | | • Without finished bore – Without order codes • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | 1 9 |

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to cast iron version with maximum bore.

From size 500, the bores D1 and D2 are each provided with a recess of $D = +1$ mm halfway along the hub. $V \approx 1/3$ NL

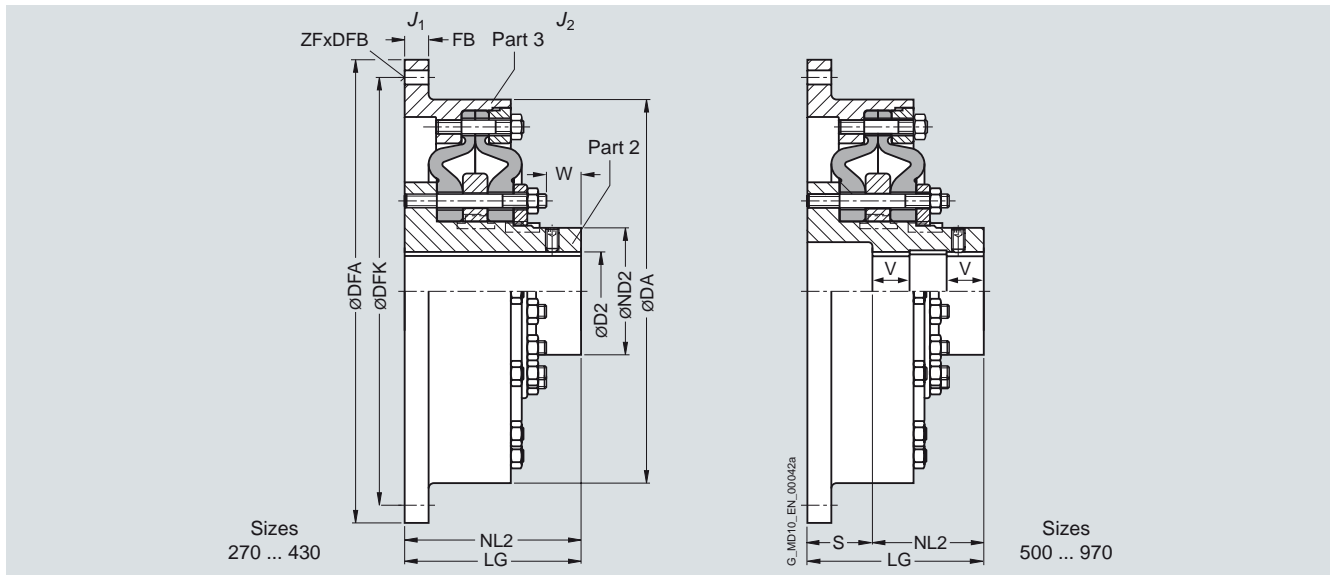
Ordering example:

ELPEX coupling ENG, size 690, cast iron version, bore $\varnothing D1 = 180H7$ mm with keyway to DIN 6885 and set screw, the hub diameter $ND1 = 288$ mm is thus assigned; bore $\varnothing D2 = 200H7$ mm, with keyway to DIN 6885 and set screw, the hub diameter $ND2 = 278$ mm is thus assigned.

Product code:

2LC0201-0AF99-0AA0
L2B+M2D

Selection and ordering data



| Size | Rated torque | Max. speed n_{Kmax} Type | Dimensions in mm | | | | | | | | | | Flange connection dimensions ¹⁾ | | | | | | Mass moment of inertia | | Product code with order codes for bore diameter and tolerances (product code without -Z) – selection in catalog part 3 | Weight m |
|------|--------------|----------------------------------|--------------------|-------|-----|-----|-----|-----|-----|-----|-----------------------------------|---------------------|--|----|----|------|-------|------------------------|------------------------|------|--|---------------|
| | | | Keyway DIN 6885 | | D2 | DA | ND2 | NL2 | S | LG | W | DFA | DFK | FB | ZF | DFB | J_1 | J_2 | | | | |
| | | | Cast iron | Steel | | | | | | | | | | | | | | | rpm | rpm | | |
| | T_{KN} | | | | | | | | | | | | | | | | | | | | | |
| | Nm | | | | | | | | | | | | | | | | | kgm ² | kgm ² | | kg | |
| 270 | 1600 | 3000 | 4250 | 70 | 270 | 94 | 155 | – | 155 | 42 | 466.7 ₉₇ ¹⁾ | 438.2 ¹⁾ | 12 | 8 | 13 | 0.47 | 0.037 | 2LC0200-3A ■ 2 ■ -0AA0 | | 27 | | |
| | | | | | | | | | | | 325.6 ₆ | 300 | | 8 | 14 | 0.16 | | 2LC0200-3A ■ 1 ■ -0AA0 | | 19 | | |
| 320 | 2800 | 2500 | 3600 | 85 | 320 | 115 | 180 | – | 180 | 48 | 517.5 ₉₇ ¹⁾ | 489 ¹⁾ | 14 | 8 | 13 | 0.87 | 0.082 | 2LC0200-4A ■ 2 ■ -0AA0 | | 42 | | |
| | | | | | | | | | | | 392.6 ₆ | 360 | | 8 | 18 | 0.39 | | 2LC0200-4A ■ 1 ■ -0AA0 | | 33.5 | | |
| 375 | 4500 | 2100 | 3100 | 105 | 375 | 143 | 205 | – | 205 | 62 | 571.5 ₉₇ ¹⁾ | 542.9 ¹⁾ | 16 | 6 | 17 | 1.5 | 0.21 | 2LC0200-5A ■ 2 ■ -0AA0 | | 65 | | |
| | | | | | | | | | | | 448.6 ₆ | 415 | | 8 | 18 | 0.78 | | 2LC0200-5A ■ 1 ■ -0AA0 | | 53 | | |
| 430 | 7100 | 1900 | 2650 | 120 | 430 | 165 | 235 | – | 235 | 68 | 673.5 ₉₇ ¹⁾ | 641.4 ¹⁾ | 20 | 12 | 17 | 3.4 | 0.37 | 2LC0200-6A ■ 2 ■ -0AA0 | | 100 | | |
| | | | | | | | | | | | 515.6 ₆ | 475 | | 8 | 22 | 1.5 | | 2LC0200-6A ■ 1 ■ -0AA0 | | 78 | | |
| 500 | 11200 | 1600 | 2300 | 150 | 500 | 202 | 160 | 100 | 260 | 80 | 673.5 ₉₇ ¹⁾ | 641.4 ¹⁾ | 20 | 12 | 17 | 4.0 | 0.85 | 2LC0200-7A ■ 2 ■ -0AA0 | | 150 | | |
| | | | | | | | | | | | 585.6 ₆ | 545 | | 10 | 22 | 2.7 | | 2LC0200-7A ■ 1 ■ -0AA0 | | 140 | | |
| 590 | 18000 | 1350 | 2000 | 170 | 590 | 230 | 190 | 120 | 310 | 95 | 733.5 ₉₇ ¹⁾ | 692.2 ¹⁾ | 24 | 12 | 21 | 7.0 | 1.7 | 2LC0200-8A ■ 2 ■ -0AA0 | | 200 | | |
| | | | | | | | | | | | 692.6 ₆ | 645 | | 10 | 26 | 6.0 | | 2LC0200-8A ■ 1 ■ -0AA0 | | 190 | | |
| 690 | 28000 | 1200 | 1650 | 200 | 690 | 278 | 220 | 130 | 350 | 102 | 890 ₉₇ ¹⁾ | 850 ¹⁾ | 24 | 32 | 17 | 15 | 3.7 | 2LC0201-0A ■ 2 ■ -0AA0 | | 270 | | |
| | | | | | | | | | | | 800.6 ₆ | 750 | | 12 | 26 | 11 | | 2LC0201-0A ■ 1 ■ -0AA0 | | 250 | | |
| 840 | 45000 | 1000 | 1350 | 240 | 840 | 342 | 280 | 115 | 395 | 105 | 1105 ₉₇ ¹⁾ | 1060 ¹⁾ | 30 | 32 | 21 | 46 | 11 | 2LC0201-1A ■ 2 ■ -0AA0 | | 530 | | |
| | | | | | | | | | | | 960.6 ₆ | 908 | | 16 | 30 | 32 | | 2LC0201-1A ■ 1 ■ -0AA0 | | 470 | | |
| 970 | 90000 | 850 | 1180 | 280 | 970 | 390 | 350 | 155 | 505 | 137 | 1385 ₉₇ ¹⁾ | 1320 ¹⁾ | 35 | 24 | 31 | 130 | 26 | 2LC0201-2A ■ 2 ■ -0AA0 | | 1050 | | |
| | | | | | | | | | | | 1112.6 ₆ | 1051 | | 16 | 35 | 76 | | 2LC0201-2A ■ 1 ■ -0AA0 | | 920 | | |
| Type | | • EFG | cast iron | | | | | | | | | | | | | | | | B | | | |
| | | • EFG | steel | | | | | | | | | | | | | | | | J | | | |
| | | • EFGS | cast iron | | | | | | | | | | | | | | | | C | | | |
| | | • EFGS | steel | | | | | | | | | | | | | | | | K | | | |
| ØD2: | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | | | | | | | | | | | | | | | | | | | 9 | | |

The hub diameter of the component part is assigned according to the diameter of the finished bore. Where bore diameters overlap, the component with the smaller hub diameter is always selected.

Weights and mass moments of inertia apply to cast iron version with maximum bore.

From size 500, the bores D1 and D2 are each provided with a recess of $D = +1$ mm halfway along the hub. $V \approx 1/3$ NL

Notice: The application factor FB in the coupling selection section must be noted.

Ordering example:

ELPEX EFG coupling, size 430, steel version, bore $\varnothing D1 = 100H7$ mm with keyway to DIN 6885 and set screw, flange to SAE J620d size 21 with $DFA = 673.5g7$ mm.

Coupling balanced G6.3 in accordance with the half parallel key standard.

Product code:
2LC0200-6AJ29-0AA0-Z
M1N+W02

¹⁾ The top line of the flange connection dimensions in accordance with the SAE J620d or DIN 6288 standards.

FLENDER Standard Couplings

Highly Flexible Couplings - ELPEX Series

Spare and wear parts

Selection and ordering data

Flexible rings

The flexible rings are wear parts. The service life depends on the operating conditions.

| Size | Product code Flexible rings for a coupling | Weight kg | Types EFG, ENG Flexible ring screw connection set of pins and bolts | Types EFGS, ENGS Flexible ring screw connection set of pins and bolts |
|------|---|--------------|---|---|
| 270 | 2LC0200-3XV00-0AA0 | 1.6 | 2LC0200-3XU00-0AA0 | 2LC0200-3XW00-0AA0 |
| 320 | 2LC0200-4XV00-0AA0 | 2.6 | 2LC0200-4XU00-0AA0 | 2LC0200-4XW00-0AA0 |
| 375 | 2LC0200-5XV00-0AA0 | 4.4 | 2LC0200-5XU00-0AA0 | 2LC0200-5XW00-0AA0 |
| 430 | 2LC0200-6XV00-0AA0 | 6.8 | 2LC0200-6XU00-0AA0 | 2LC0200-6XW00-0AA0 |
| 500 | 2LC0200-7XV00-0AA0 | 9.4 | 2LC0200-7XU00-0AA0 | 2LC0200-7XW00-0AA0 |
| 590 | 2LC0200-8XV00-0AA0 | 18 | 2LC0200-8XU00-0AA0 | 2LC0200-8XW00-0AA0 |
| 690 | 2LC0201-0XV00-0AA0 | 36 | 2LC0201-0XU00-0AA0 | 2LC0201-0XW00-0AA0 |
| 840 | 2LC0201-1XV00-0AA0 | 68 | 2LC0201-1XU00-0AA0 | 2LC0201-1XW00-0AA0 |
| 970 | 2LC0201-2XV00-0AA0 | 120 | 2LC0201-2XU00-0AA0 | 2LC0201-2XW00-0AA0 |



| | | | |
|--------------|--|--------------|---|
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FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information

Overview



**Coupling suitable for potentially explosive environments.
Complies with Directive 94/9/EC for:**

CE II 2 Gc T3 D160 °C II B
-30 °C ≤ T_a ≤ +50 °C

CE I M2

For Ex zones 2 and 2Z, device category 3 is available upon request:

CE II 3 Gc T4 D120 °C II B

FLUDEX couplings marked with Ex are constructed with fusible safety plugs 110 °C.

Benefits

FLUDEX couplings are hydrodynamic fluid couplings which operate on the Föttinger principle. The coupling parts on the input and output sides are not mechanically connected to each other. Output is transmitted via the oil filling which rotates in the coupling and is conducted over radially arranged blades.

FLUDEX couplings limit starting and maximum torque in the drive train and, through the property of rotational slip, serve as an aid to starting the motor, as overload protection in the event of fault and for isolating torsional vibration.

When large masses are started up, the drive train is accelerated only at the torque determined by the coupling characteristic. The starting operation is spread over time, the driven machine started softly and smoothly.

In the case of special operating conditions, such as overload or blocking of the driven machine, the effect of the motor mass is eliminated and the maximum torque load of the drive train limited by the FLUDEX coupling.

The coupling then acts as a load-holding safety clutch until the drive is shut off by the motor control or coupling monitoring system.

The FLUDEX coupling further acts as a means of decoupling during torsional vibration excitation. Torsional vibration excitation with a frequency of > 5 Hz is virtually absorbed by the coupling.

To compensate for shaft misalignment, the FLUDEX coupling is combined with a displacement coupling e.g. of the N-EUPEX type.

All FLUDEX couplings are designed with radial unset blades and are therefore suitable for rotation in both directions and reversing operation. They can be fitted horizontally, at an angle or vertically. In the case of FLUDEX couplings with a delay chamber it must be ensured, when fitting at an angle or vertically, that the delay chamber is below the working chamber.

Application

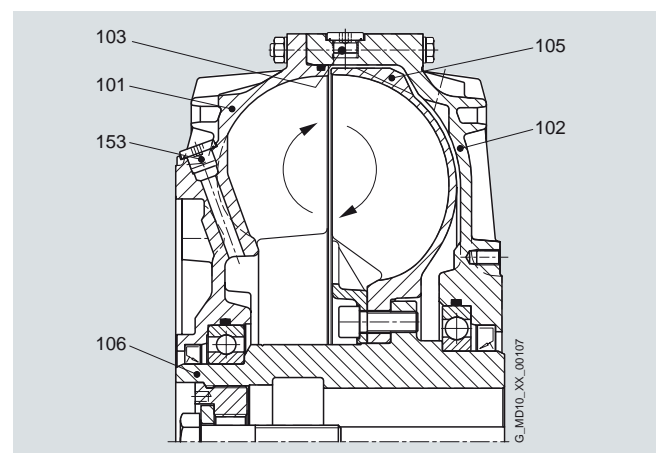
FLUDEX couplings are used in drives for conveyor systems such as belt conveyors, bucket elevators and chain conveyors. In heavy industry FLUDEX couplings are used for applications such as blade wheel drives, crushers, roller presses, mixers, large ventilators, boiler feed pumps, large compressors, centrifuges and auxiliary drives for mills.

Further applications are, for example, pump drives, PTO generator drives, windpower systems and door and gate drives.

In drives with diesel engine FLUDEX couplings are used on driven machines with a high mass moment of inertia.

Design

FLUDEX couplings are constructed of just a few, robust components. Internal components include the hollow shaft or solid shaft (106), to which the blade wheel (105) is connected. The outer housing comprises the cover (102) and the blade wheel housing (101). The joint is constructed as a bolted flange joint and sealed with an O ring. The outer housing and the shaft or hollow shaft have double bearing support and are sealed off to the outside with radial shaft seals. The coupling is provided with two filler plugs (153) with integral overflow protection and with one or two fusible safety plugs (103) in the coupling housing for protection against overheating. The fusible safety plug or a screw plug fitted in the same position also serves as a fluid drain plug and with the aid of a scale marking on the housing can be used as a level indicator.



FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information

Materials

Blade wheel and housing

Cast aluminum AISi10Mg

Shaft and hollow shaft

Steel with a yield point higher than 400 N/mm²

Static seals and radial shaft seals

Perbunan NBR or Viton FPM

Add-on parts

Grey cast iron EN-GJL-250, spheroidal graphite cast iron EN-GJS-400 or steel with a yield point higher than 400 N/mm²

Fusible safety plugs

If a FLUDEX coupling is operated with an impermissibly high slip for a prolonged period, the oil filling and the coupling housing will overheat. Fusible safety plugs which release the oil filling into the environment upon reaching a preset temperature are therefore fitted in each coupling housing. These protect the coupling from irreparable damage through overheating or overpressure and disconnect the drive motor from the driven machine.

Thermal switching equipment

By adding thermal switching equipment leakage and loss of the hydraulic fluid as well as a risk to and contamination of the environment in the event that the coupling overheats can be avoided.

The thermal switching equipment does not work if a machine side is blocked and the coupling housing is connected to this side. If the coupling is stationary, the switching pin cannot actuate the switching equipment.

The thermal switching equipment comprises the thermal switch and the switchgear.

The switchgear comprises a limit switch with a make-and-break contact and a swiveling cam. Limit switch and cam are mounted on a common base plate. The thermal switch is screwed into the housing in place of a screw plug. The fusible safety plug (with a higher response temperature) remains in the coupling for additional safety.

If the set temperature is exceeded, the switching pin is released from the fusible element, emerges 10 mm from the housing and actuates the switchgear while the coupling is rotating. The switchgear can cut out the drive motor and/or trigger an optical or acoustic alarm signal.

The housing of the coupling remains closed and no operating fluid will escape.

Assignment

| Continuous operating temperature | Thermal switch | Fusible safety plug |
|----------------------------------|----------------|---------------------|
| ≤ 85 °C | 110 °C | 140 °C |
| > 85 ° ... 110 °C | 140 °C | 160 °C |

Thermal equipment

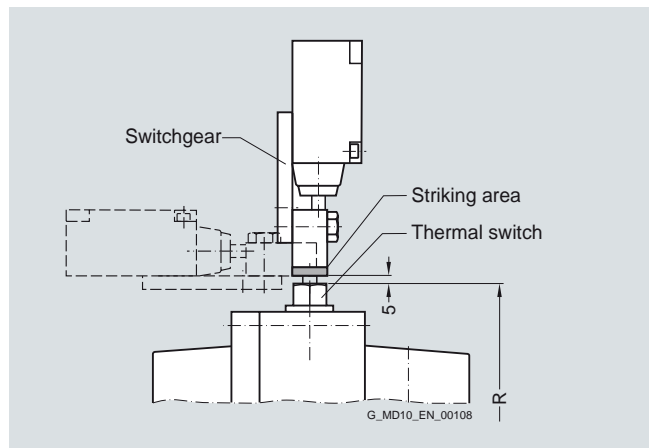
| Equipment | Suitability | Fusible safety plug | Sealing material | Additional order info -Z with order code |
|---|-------------|-----------------------------------|------------------|--|
| | 1 | 110 °C | NBR | F01 |
| | | | FPM | F05 |
| Standard | 1 | 140 °C | NBR | – |
| | 1 | 140 °C | FPM | F07 |
| | 2 | 160 °C | FPM | F08 |
| ATEX | 1 | 110 °C ex | NBR | F02 |
| | | | FPM | F06 |
| With thermal switch ¹⁾ | 1 | 140 °C + thermal switch 110 °C | NBR | F03 |
| | | | FPM | F10 |
| | 2 | 160 °C + thermal switch 140 °C | FPM | F11 |
| With EOC system ¹⁾ transmitter | 2 | 160 °C + EOC transmitter (125 °C) | NBR | F04 |
| | | | FPM | F12 |

¹⁾ not available for size 222

Suitability:

- 1** = suitable for continuous coupling operation temperatures up to 85 °C
- 2** = suitable for continuous coupling operation temperatures up to 110 °C

The switchgear or sensor and evaluation instrument for the EOC system must be ordered separately, using the product code.



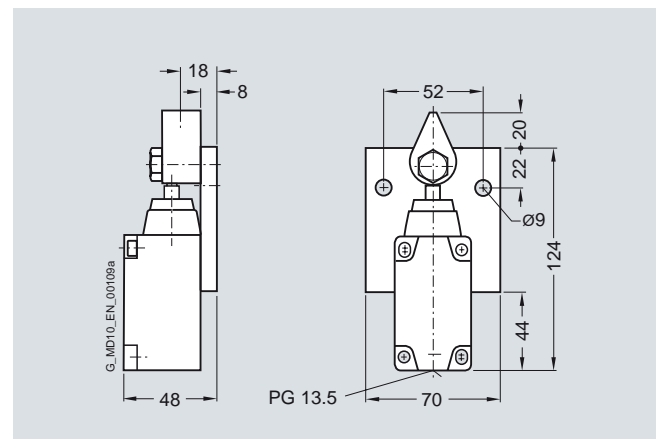
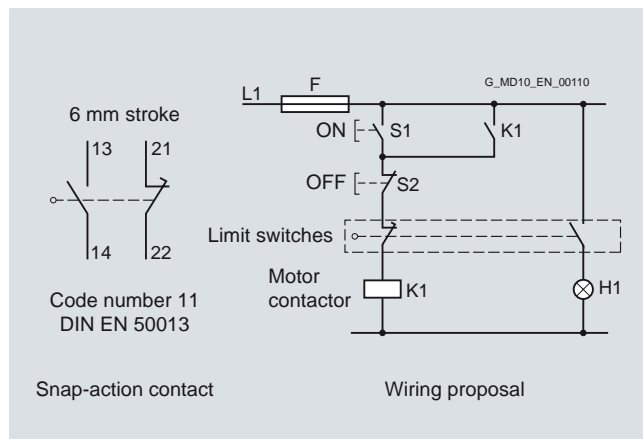
| | Size | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 297 | 342 | 370 | 395 | 425 | 450 | 490 | 516 | 565 | 590 | 655 | 755 | 887 |
| Perm. speed in rpm | 2500 | 2240 | 2100 | 2000 | 1900 | 1800 | 1650 | 1600 | 1500 | 1450 | 1250 | 1100 | 1000 |
| Radius of travel R in mm | 188 | 215 | 226 | 239 | 251 | 271 | 292 | 307 | 330 | 346 | 383 | 435 | 507 |

From coupling size 297, the thermal switching equipment can be used up to a peripheral speed of 50 m/s. At higher speeds, an EOC system should be provided.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information

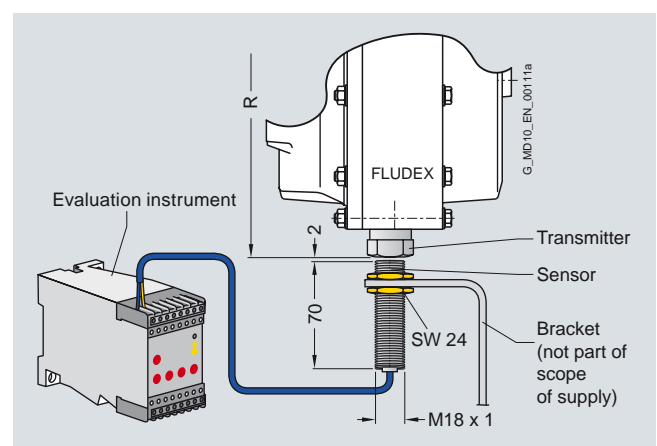


Switchgear: FFA 000000652020

EOC system

On the EOC system the temperature-dependent magnitude of the magnetic field of the EOC transmitter is measured and used for a switching pulse. The transmitter signal is transmitted via the fixed sensor to the evaluation instrument and there compared with the set value. If the signal does not exceed the minimum value or no signal is received, the relay of the evaluation instrument switches over. This can cause a malfunction message to be sent and the motor cut out. The coupling housing remains closed. The fusible safety plug with a higher response temperature remains in the coupling for additional safety.

The response temperature of the EOC system is 125 °C.

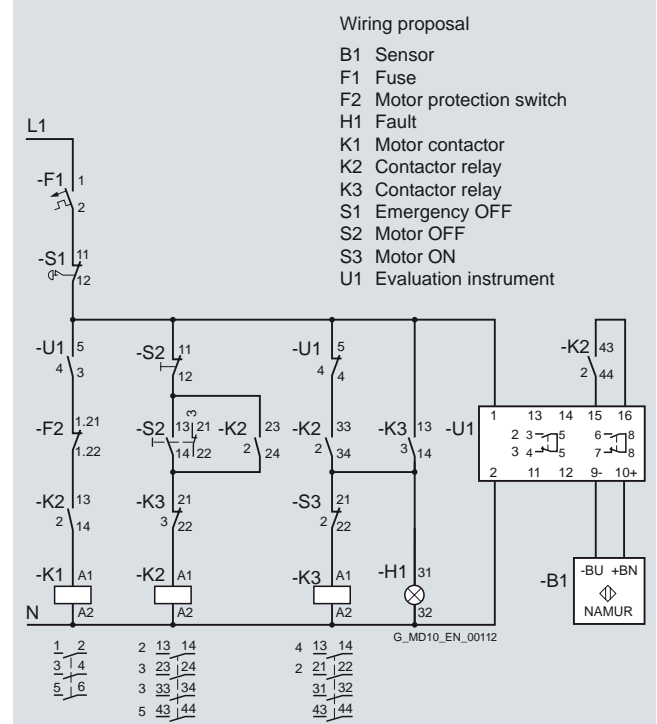


Radius of travel R to the transmitter

| Size | 297 | 342 | 370 | 395 | 425 | 450 | 490 | 516 | 565 | 590 | 655 | 755 | 887 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| R in mm | 188 | 215 | 226 | 239 | 251 | 271 | 292 | 346 | 330 | 346 | 383 | 435 | 507 |

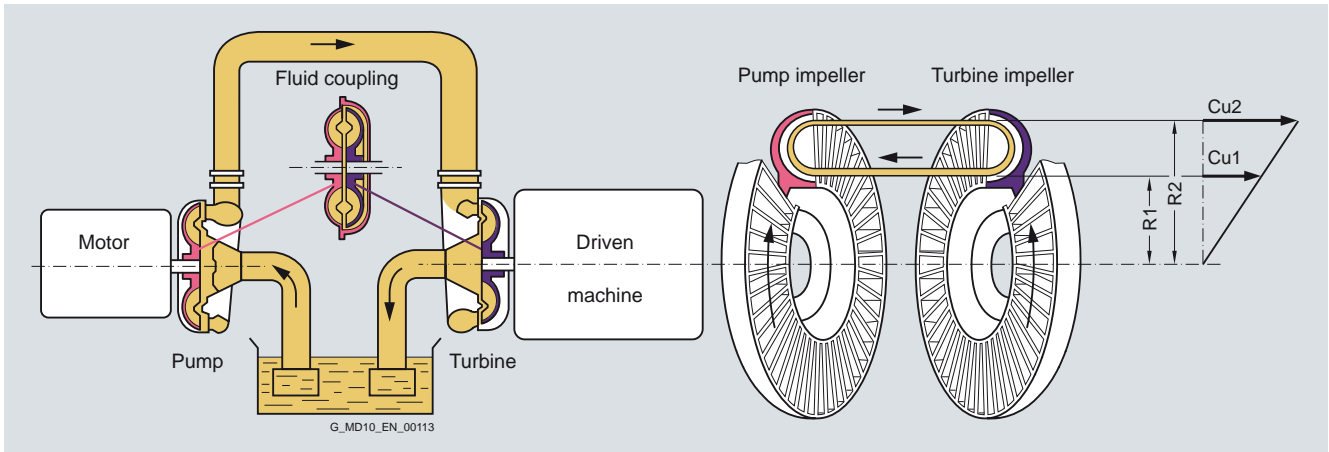
Components of the EOC system

| Component | Product code | Note |
|---------------------------|------------------|--------------------------|
| EOC transmitter | FFA 000000652781 | Supplied with coupling |
| Seal | FFA 000000306525 | |
| Sensor EOC | FFA 000000361460 | To be ordered separately |
| Evaluation instrument EWD | FFA 000001205294 | |



Function

Föttinger principle



Two opposing, radially bladed impellers are housed in a leak-proof housing. The impellers are not mechanically connected to each other. Because of the axially parallel arranged blades, the torque is transmitted independently of the direction of rotation and solely by the oil filling.

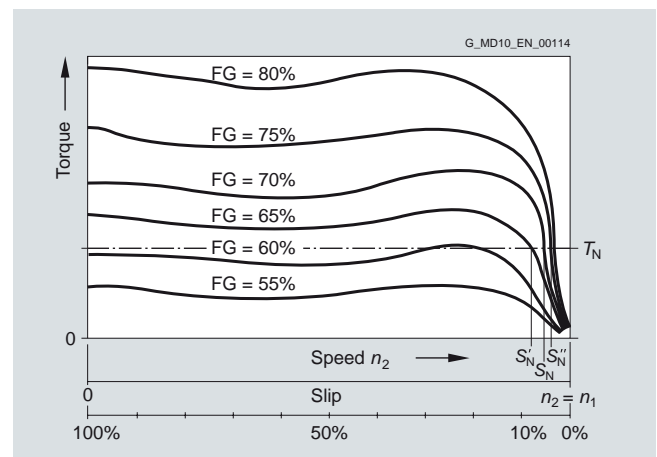
Hydrodynamic couplings have the characteristic properties of fluid flow engines. The transmissible torque depends on the density and quantity of the operating fluid and increases as the square of the drive speed and the fifth power of the profile diameter denoting the coupling size. In the driven pump impeller, mechanical energy is converted into kinetic flow energy of the operating fluid. In the turbine impeller, which is connected to the output side, flow energy is converted back to mechanical energy.

To generate the operating fluid circulation necessary for torque transmission, a difference in speed is necessary between the pump and turbine impellers. A centrifugal force pressure field is set up that is greater in the faster rotating pump impeller than in the turbine impeller. The difference in speed, usually termed "slip", at the continuous operating point of the coupling is between 2 % and 6 %, depending on application and coupling size. Immediately after drive motor start-up slip is 100 %, i.e. the pump impeller is driven at the speed of the motor, but the turbine impeller remains stationary.

Slip multiplied by the transmitted power represents the power loss of the coupling, which is converted into heat inside the oil filling. The amount of heat generated must be released into the environment via the coupling housing to prevent an impermissible temperature rise. The rated coupling output is mainly determined by the power loss which can be dissipated at a still acceptable operating temperature or a reasonable set slip limit. This distinguishes the FLUDEX coupling from all positively acting coupling assembly options for which the rated coupling torque is the defining characteristic.

Depending on the FLUDEX coupling series, drive is via the inner rotor (shaft/hollow shaft with rigidly connected blade wheel) or via the bladed housing impeller (blade wheel housing). The driving impeller is the pump impeller, and the driven impeller is the turbine impeller.

A low-viscosity mineral oil VG 22/VG 32, which also serves to lubricate the bearings, is used as fluid. In special types water, a water emulsion or low-flammability fluid may be used as a non-combustible fluid.



Slip-torque characteristics for different filling levels FG

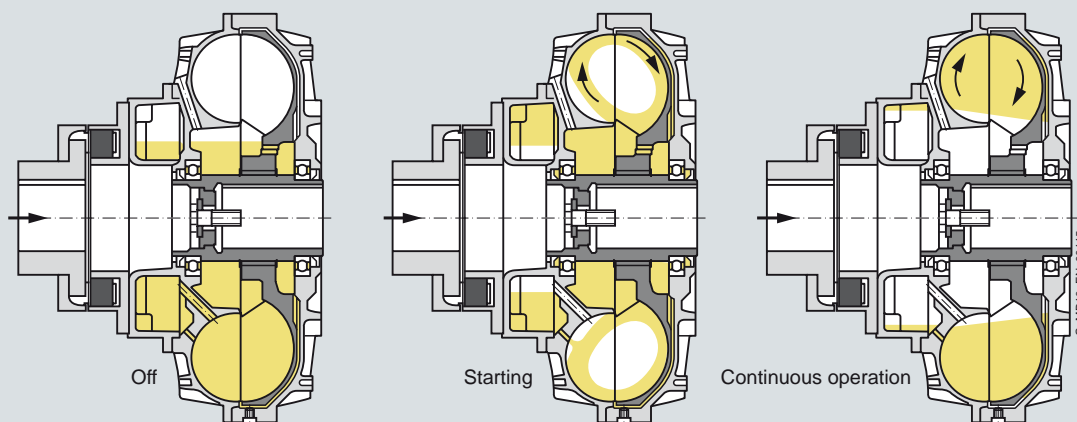
The torque characteristic depends on the oil filling quantity FG in the coupling. This enables the transmissible torque on starting up to be set via the filling level. With a higher filling level the starting torque increases, while the operating slip and thus the coupling temperature rise decreases.

Conversely, with a lower filling level the starting torque decreases, the coupling becomes softer, while slip and coupling temperature rise.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information



Operation of the delay chamber

Starting torque can be reduced without increasing continuous operating slip by using a type of coupling with a delay chamber. On these couplings part of the oil filling is initially stored inactively in the delay chamber. The starting torque is considerably reduced because of the thus reduced starting filling in the work-

ing chamber of the coupling. The filling in the delay chamber runs very slowly, mostly only at the finish of the starting operation, from the delay chamber into the working chamber, causing the active filling in it to rise gradually and the continuous operating slip to reach a value corresponding to the whole filling.

Technical data

Balancing FLUDEX couplings

In deviation from the balancing specifications in catalog section 2, all FLUDEX couplings complying with DIN ISO 1940 are balanced to balancing quality G6.3 for 1800 rpm. For operating speeds higher than 1800 rpm micro-balancing, based on operating speed, can be requested (order code +W03 required).

Balancing is a two-level balancing with the specified oil quantity or a 75 % filling.

FLUDEX couplings are balanced in accordance with the half parallel key standard. Other balancing standards must be specified in the order, using the product code key (see catalog section 2).

Add-on couplings are subject to the standards as set out in catalog section 2.

Oil filling


FLUDEX couplings can be delivered with or without oil filling.

- Delivery without oil filling: without order code
- Delivery with oil filling: product code with **-Z** and order code **F16** and **Y90** with plain text specification of the oil filling quantity in liters.
- Delivery without oil filling but with oil filling quantity specification: Product code with **-Z** and order code **Y90** with plain text specification of the oil filling quantity in liters.


Hollow shafts of the FA, FG and FV series


Variant of FLUDEX hollow shafts only with finished bore: Order code for bore diameter is required.

Operating conditions for FLUDEX couplings in potentially explosive environments

The coupling with fusible safety plugs with identity marking  T3 is suitable for the operating conditions set out in Directive 94/9/EC:

- Equipment group II (above-ground applications) temperature class T3 of categories 2 and 3 for environments where there are potentially explosive gas, vapors, mist and air mixtures and for environments where dust can form potentially explosive atmospheres.
- Equipment group I (below-ground applications) of category M2

 If used in potentially explosive environments under ground, aluminum couplings must be provided with a robust enclosure to preclude the risk of ignition caused by e.g. friction, impact or friction sparks. The deposit of heavy-metal oxides (rust) on the coupling housing must be prevented by the enclosure or other suitable means.

 FLUDEX couplings can be delivered with fitted brake disk or V-belt pulley. Designing the belt drive or the brake disk to conform with the guidelines is the responsibility of the subassembly supplier. It should be noted that there is a risk from, amongst other things, electrostatic charges and hot surfaces. Under BGR 132 (regulations of German Institute for Occupational Safety) the use of V-belts in conjunction with IIC gases is not permitted.

Axial retention

Axial retention is provided by a set screw or end washer with a retaining screw for shaft ends to DIN 748/1 with a centering thread to DIN 332/2. Other methods must be specified in the order, using the product code with **-Z** and order code **Y99** with plain text specification, unless ordering options are available.

Bore and keyway width tolerances are specified in catalog section 15.

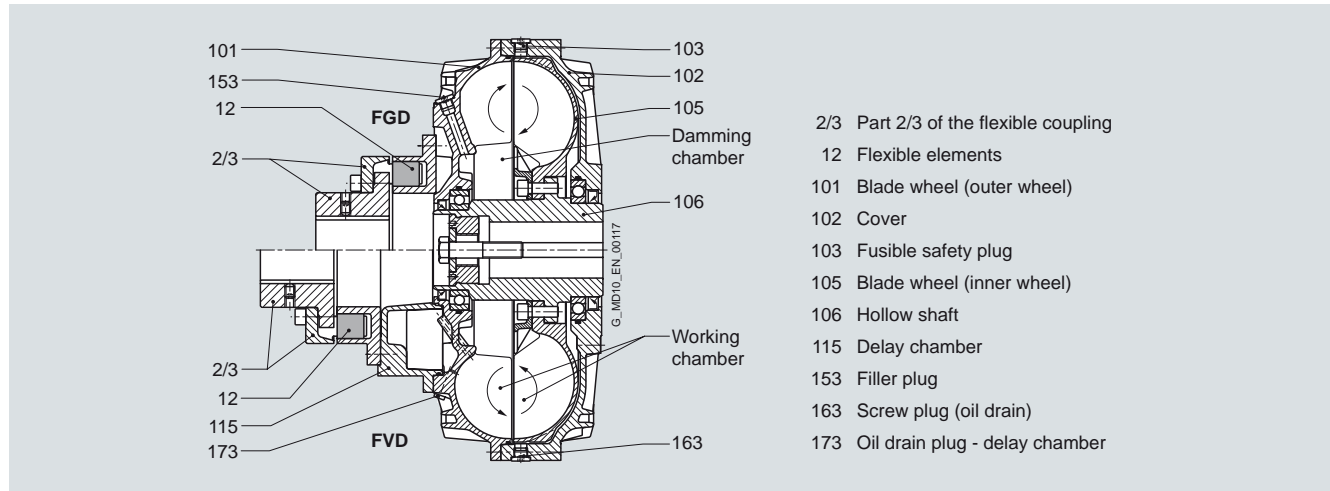
Weights specified in the dimension order tables apply to maximum bore diameters without oil filling.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information

FG and FV series – drive via the housing



FLUDEX FG and FV series couplings are designed for drive via the coupling housing. In the FV series (coupling with delay chamber), the motor drives the coupling housing, comprising a blade wheel (101) and a cover (102), via the flexible N-EUPEX coupling (part 2/3) and the delay chamber (115). The rotational flow of the coupling filling drives the blade wheel (105) and the hollow shaft (106) on the output side, which is mounted on the gear unit or driven machine shaft. In the FG series (basic coupling), there is no delay chamber, and the flexible coupling is directly flange-mounted on the blade wheel.

When the coupling is started up, part of the oil filling is forced into the damming chamber. This enables the desired torque limitation (approx. twice T_N) to be achieved during starting. In the FV series the delay chamber also receives part of the oil filling in accordance with the fluid level when the coupling is stationary. During starting the effective oil filling in the working chamber is

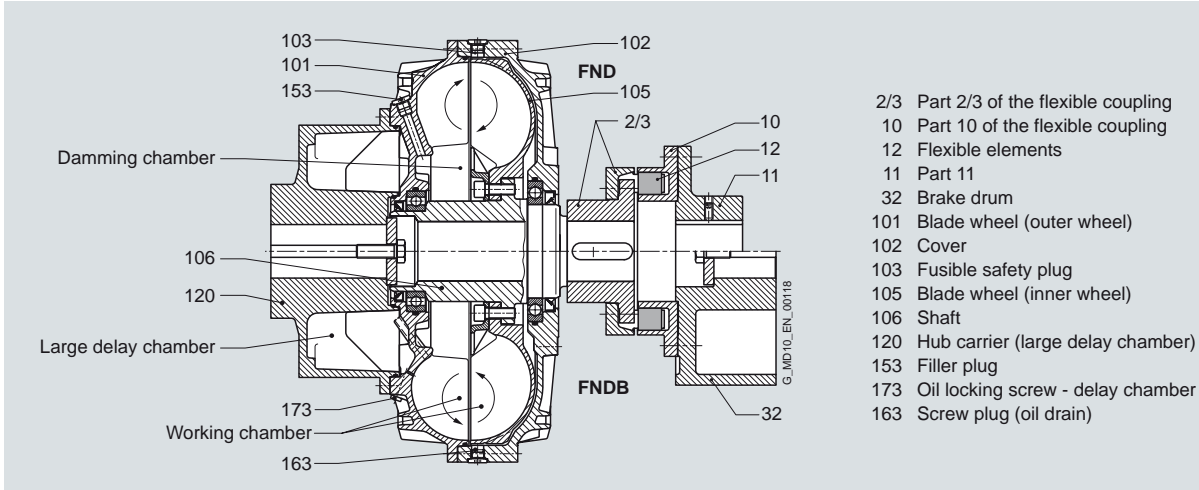
reduced by the amount of fluid in the delay chamber, thus considerably reducing the starting torque (approx. 1.5 times T_N). From the delay chamber located on the drive side, the oil is fed back time-dependently to the working chamber via small holes and the coupling torque is raised, even if the output is blocked.

This replenishing function enables a drive to be soft-started with a very low starting torque and with an almost load-free motor. At the same time, however, increased load torques can be overcome by the torque increase in the coupling.

The property of the coupling with delay chamber can be used advantageously, for example, to soft-start empty, partly loaded and fully loaded conveyor belts.

FG series couplings are used for normal starting torque limitation, as a starting clutch for isolating vibration and for overload limitation in the event of drive blockage.

FN series – drive via the housing

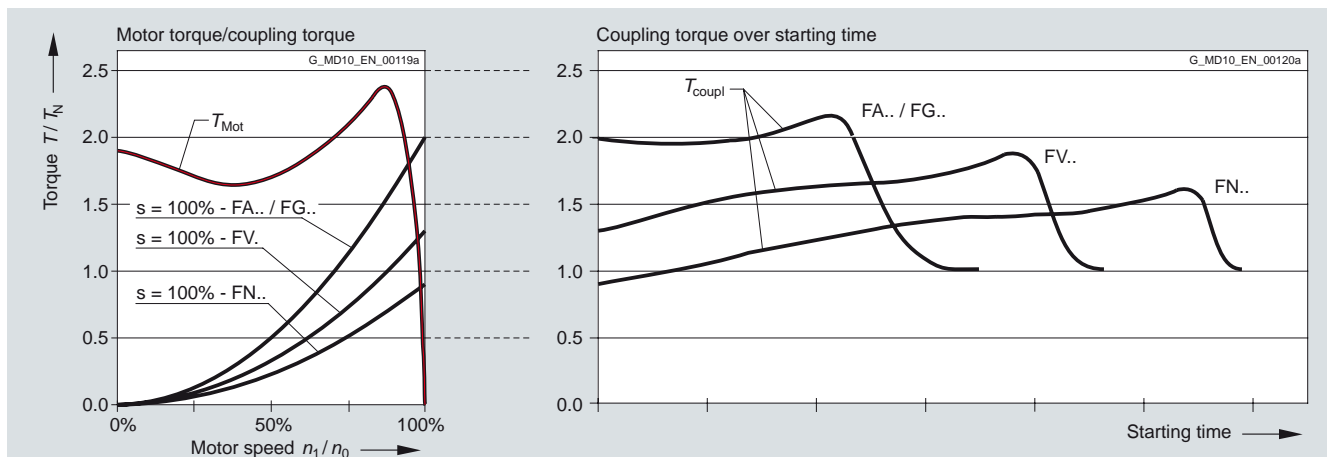


FLUDEX FN series couplings have a larger delay chamber than the FV series. The delay chamber is designed as a hub carrier (120) and is mounted on the motor shaft. The hub carrier is flange-fitted to the housing (101, 102) of the FLUDEX coupling. Output is via the blade wheel (105) and the shaft (106) to the flexible N-EUPEX coupling connecting to the gear unit or driven machine. With types FND, FNDB and FNDS the coupling can be dismantled radially without moving the coupled machines.

Because of the larger delay chamber, FN couplings enable even softer starting than FV couplings. Torque limitation during starting is approx. 1.3 times T_N . A further advantage of types FNDB and FNDS is the favorable weight distribution.

The normally stronger motor shaft bears the weight of the hub carrier (cast version) and the main coupling. The gear unit shaft carries only the brake drum or disk and the output-side part of the flexible coupling. At the same time, the principle of the drive-side delay chamber with the capacity for increasing torque time-dependently is retained. FN couplings have the same fields of application as FV couplings. However, they offer special advantages in the brake disk design because of the weight distribution.

Depending on the series selected, different starting characteristics arise during starting.



FLUDEX series:

| Series | Description |
|------------------|--------------------------------------|
| FA../FG.. | Basic coupling without delay chamber |
| FV.. | Coupling with delay chamber |
| FN.. | Coupling with large delay chamber |

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

General information

Selection of FLUDEX type

Listed in the catalog are FLUDEX couplings with pulley, brake drum, brake disk and flexible N-EUPEX coupling. Further types, e.g. in combination with a torsionally rigid steel

membrane coupling of the ARPEX series or a highly flexible coupling of the ELPEX or ELPEX-S series, are available.

| Series | Type | Add-on coupling | Characteristic feature |
|--|---------|------------------|--|
| FA - without delay chamber - impeller-driven - Starting torque: $T_{\max} = 2.0 \times T_{\text{eff}}$ - Starting aid for standard motors and torsional vibration isolation | FAO | Without | Basic coupling with connecting flange |
| | FAR | Without | with attached pulley |
| | FAD | N-EUPEX D | ¹⁾ |
| | FAE | N-EUPEX E | enables larger bores on the output side |
| | FAM | N-EUPEX M | enables a short fitting length |
| | FADB | N-EUPEX D | with brake drum |
| | FADS SB | N-EUPEX D | ¹⁾ with brake disk for stopping brakes |
| FG - without delay chamber - Housing-driven - Starting torque: $T_{\max} = 2.0 \times T_{\text{eff}}$ - Starting aid for standard motors, for torsional vibration isolation and for overload limitation in the event of drive blockage. | FGO | Without | Basic coupling with connecting flange |
| | FGD | N-EUPEX D | ¹⁾ |
| | FGE | N-EUPEX E | enables larger bores on the output side |
| | FGM | N-EUPEX M | enables a short fitting length |
| FV - with delay chamber - Housing-driven - Starting torque: $T_{\max} = 1.5 \times T_{\text{eff}}$ - Starting aid for motors and soft-starting of conveyor equipment | FVO | Without | Coupling with connecting flange |
| | FVD | N-EUPEX D | ¹⁾ |
| | FVE | N-EUPEX E | enables larger bores on the output side |
| | FVM | N-EUPEX M | enables a short fitting length |
| FN - with large delay chamber - Housing drive via hub carrier - Starting torque: $T_{\max} = 1.3 \times T_{\text{eff}}$ - Starting aid for motors with very unfavorable characteristic and soft-starting of empty and full conveying equipment - favorable weight distribution on brake-drum variant | FNO | Without | Coupling with connecting shaft |
| | FNA | N-EUPEX A | ¹⁾ enables a short fitting length |
| | FND | N-EUPEX D | ^{1) 2)} |
| | FNDB | N-EUPEX D | ^{1) 2)} with brake drum |
| | FNDS SB | N-EUPEX D | ^{1) 2)} with brake disk for stopping brakes |
| | FNDS HB | N-EUPEX D | ^{1) 2)} with brake disk for blocking brakes |

The maximum shaft displacements permissible for an N-EUPEX add-on coupling are shown in catalog section 7. For greater shaft displacements FLUDEX couplings can be combined with cardan shafts or other displacement couplings.

¹⁾ Enables change of flexible elements without moving the machines axially.

²⁾ Enables the coupling to be fitted or dismantled without displacing the coupled machines.

Selection of FLUDEX size

The FLUDEX size is determined by the output to be transmitted in comparison with the rated outputs listed in the following tables. No application factors or additional safety factors need be taken into consideration. The rated outputs stated in the tables normally require the maximum permissible filling (80 % to 85 %) of the coupling and because of operating slip, lead to the coupling heating up by approx. 50 °C relative to the ambient (cooling air) temperature. With lower outputs, coupling heating will be proportionately lower. If for continuous operation of the coupling an absolute temperature (ambient temperature + coupling heating) of > 85 °C is expected, the coupling must be fitted with FPM seals and 160 °C fusible safety plugs.

FA series

| Speed in rpm | | 600 | 740 | 890 | 980 | 1180 | 1350 | 1470 | 1600 | 1770 | 2000 | 2300 | 2600 | 2950 | 3550 | Size |
|--------------------------|-----|-----|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------------|
| Rated output P_N in kW | | | | | | | | | | | | | | | | |
| | | | | 1.2 | 1.6 | 2.8 | 4.2 | 5.5 | 6.9 | 8.7 | 11.7 | 15 | 19 | 24 | 33 | 222 |
| 1.2 | 2.3 | 4 | 5.5 | 9 | 14 | 18.5 | 23 | 29 | 37 | 48 | 60 | 70 | 90 | | | 297 |
| 2.6 | 4.8 | 8.7 | 11.5 | 18 | 27 | 34 | 40 | 51 | 65 | 82 | 97 | 120 | 145 | | | 342 |
| 5.7 | 10 | 16 | 21 | 36 | 49 | 61 | 74 | 87 | 105 | 135 | 165 | 180 | | | | 395 |
| 11 | 21 | 32 | 41 | 65 | 90 | 110 | 127 | 155 | 190 | 230 | 290 | 370 | | | | 450 |
| 19 | 36 | 60 | 75 | 115 | 154 | 190 | 215 | 260 | 310 | 395 | | | | | | 516 |
| 37 | 69 | 109 | 134 | 200 | 260 | 320 | 360 | 435 | 540 | | | | | | | 590 |

FG, FV and FN series

| Speed in rpm | | 600 | 740 | 890 | 980 | 1180 | 1350 | 1470 | 1600 | 1770 | 2000 | 2300 | 2600 | 2950 | 3550 | Size |
|--------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------------|
| Rated output P_N in kW | | | | | | | | | | | | | | | | |
| 4 | 7.5 | 12 | 16 | 26 | 38 | 48 | 61 | 85 | 110 | 140 | 170 | 220 | 290 | | | 370 |
| 7.5 | 15 | 23 | 30 | 48 | 70 | 90 | 115 | 140 | 175 | 220 | 280 | 340 | | | | 425 |
| 15 | 30 | 45 | 58 | 95 | 140 | 180 | 210 | 245 | 300 | 380 | 480 | | | | | 490 |
| 28 | 55 | 85 | 110 | 180 | 255 | 300 | 350 | 420 | 525 | 660 | | | | | | 565 |
| 55 | 110 | 170 | 220 | 350 | 450 | 520 | 600 | 730 | 900 | | | | | | | 655 |
| 110 | 210 | 330 | 440 | 600 | 760 | 870 | 1010 | 1220 | | | | | | | | 755 |
| 240 | 440 | 700 | 810 | 1130 | 1440 | 1660 | | | | | | | | | | 887 |
| 480 | 880 | 1400 | 1600 | 2000 | 2350 | 2500 | | | | | | | | | | 887D¹⁾ |

¹⁾ D = double-flow variant on request.

FLENDER Standard Couplings

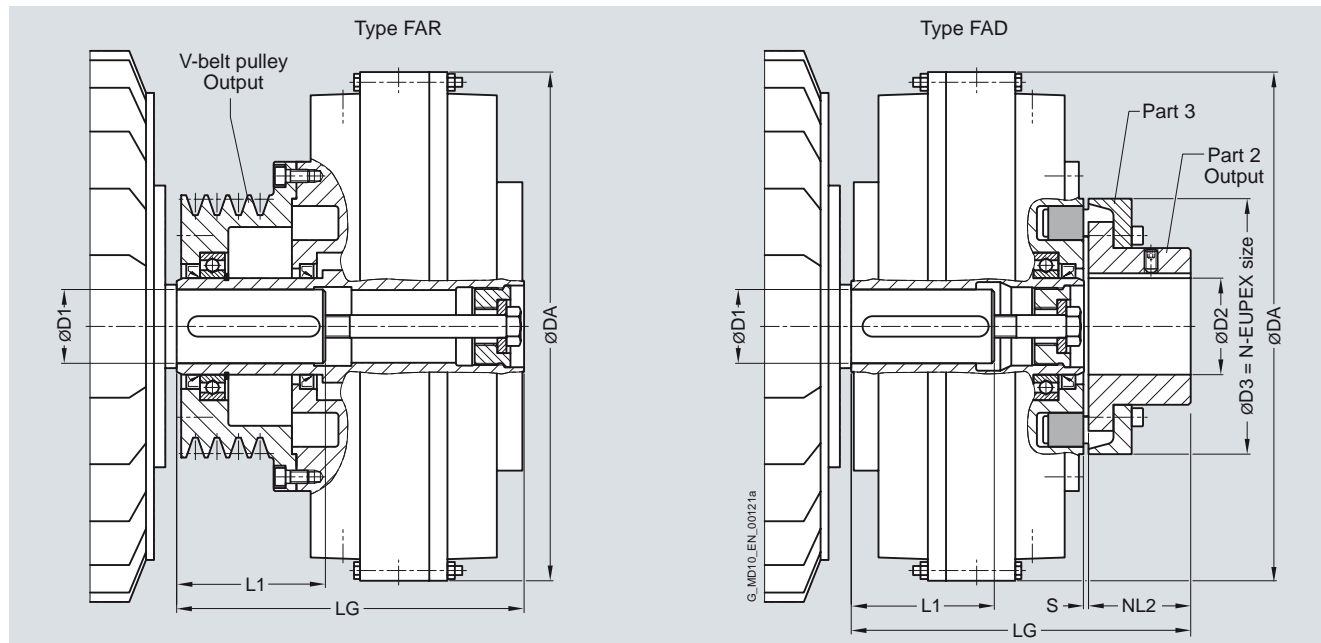
Fluid Couplings - FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

Selection and ordering data

Speed $n = 1500 \text{ rpm}$

This assignment offers safety in normal load cases and includes standard types with 140 °C fusible safety plugs, for horizontal fitting and an ambient air temperature from -40 °C to +40 °C.



| Three-phase motor | | | FLUDEX | | | Type FAR (with V-belt pulley) | | | | | | Type FAD (with N-EUPEX D add-on coupling) | | | | | | | |
|-------------------|----------------------|---------------|------------|----------------|------------|--------------------------------------|-------------------|---|-----------------------------------|--|--------|--|-----|-----|------------------|--|---|----|---|
| Size | P_M 1500 rpm | D1 x L1 | Size | Oil filling | DA | Pro- file, pitch Ø | No. of grooves | Recom- mended no. of belts ¹⁾ | LG | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | LG | NL2 | D3 | D2 ²⁾ | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | | |
| | | | | | | | | | | Available ex stock | | | | | | | | | |
| | | | | | | | | | | Available at short term | m | | | | | max. | Available at short term | m | |
| | | | | | | | | | | | kg | | | | | | | kg | |
| 80 M | 0.55 | 19 x 40 | 222 | 0.9 | 263 | SPZ 100 | 2 | 1 | 153 | 2LC0900-0AF90-0AA0 L0L | 12 | 180 | 40 | 110 | 38 | | 2LC0900-0AA9 ■ -0AA0 L0L+M.. | 12 | |
| 80 M | 0.75 | 19 x 40 | | 1.0 | | SPZ 100 | 2 | 1 | | 2LC0900-0AF90-0AA0 L0L | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0L+M.. | | |
| 90 S | 1.1 | 24 x 50 | | 1.1 | | SPZ 100 | 2 | 1 | | 2LC0900-0AF90-0AA0 L0P | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0P+M.. | | |
| 90 L | 1.5 | 24 x 50 | | 1.2 | | SPZ 100 | 2 | 1 | | 2LC0900-0AF90-0AA0 L0P | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0P+M.. | | |
| 100 L | 2.2 | 28 x 60 | | 1.4 | | SPZ 100 | 2 | 2 | | 2LC0900-0AF90-0AA0 L0R | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0R+M.. | | |
| 100 L | 3 | 28 x 60 | | 1.5 | | SPZ 100 | 2 | 2 | | 2LC0900-0AF90-0AA0 L0R | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0R+M.. | | |
| 112 M | 4 | 28 x 60 | | 1.6 | | SPZ 160 | 3 | 2 | | 2LC0900-0AF91-0AA0 L0R | 14 | | | | | | 2LC0900-0AA9 ■ -0AA0 L0R+M.. | | |
| 132 S | 5.5 | 38 x 80 | 1.65 | | SPZ 160 | 3 | 2 | | 2LC0900-0AF91-0AA0 L0V | | | | | | | 2LC0900-0AA9 ■ -0AA0 L0V+M.. | | | |
| ØD2: | | | | | | | | | | • Without finished bore | | | | | | | | | 1 |
| | | | | | | | | | | • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | 9 |

¹⁾ If the recommended number of belts is ..X, raw-edged belts are required.

²⁾ Larger bores on the output side are possible with type FAE.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

| Three-phase motor | | | FLUDEX | | | Type FAR (with V-belt pulley) | | | | Type FAD (with N-EUPEX D add-on coupling) | | | | | | | | |
|--|----------------------|---------------|------------|----------------|-----|--------------------------------------|-------------------|---|-----|--|----------|-----|-----|-----|------------------|--|-----------------------------------|----------|
| Size | P_M 1500 rpm | D1 x L1 | Size | Oil filling | DA | Pro- file, pitch Ø | No. of grooves | Recom- mended no. of belts ¹⁾ | LG | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | LG | NL2 | D3 | D2 ²⁾ | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
| | | | | | | | | | | Available ex stock | | | | | | | | |
| | | | | | | | | | | Available at short term | <i>m</i> | | | | | max. | Available at short term | <i>m</i> |
| | kW | mm | | l | mm | mm | | | mm | | kg | mm | mm | mm | mm | | | kg |
| 132 M | 7.5 | 38 x 80 | 297 | 3.2 | 340 | SPZ 150 | 5 | 3 | 226 | 2LC0900-1AF90-0AA0 L0V | 27 | 233 | 50 | 125 | 45 | | 2LC0900-1AA9 -0AA0 L0V+M.. | 24 |
| 160 M | 11 | 42 x 110 | | 3.5 | | SPZ 150 | 5 | 4 | | 2LC0900-1AF90-0AA0 L0X | | | | | | | 2LC0900-1AA9 -0AA0 L0X+M.. | |
| 160 L | 15 | 42 x 110 | | 3.8 | | SPZ 150 | 5 | 5 | | 2LC0900-1AF90-0AA0 L0X | | | | | | | 2LC0900-1AA9 -0AA0 L0X+M.. | |
| 180 M | 18.5 | 48 x 110 | | 4.0 | | SPA 190 | 4 | 4 | | 2LC0900-1AF91-0AA0 L1B | 32 | | | | | | 2LC0900-1AA9 -0AA0 L1B+M.. | |
| 180 L | 22 | 48 x 110 | 342 | 5.5 | 400 | SPA 180 | 5 | 5 | 278 | 2LC0900-2AF90-0AA0 L1B | 40 | 271 | 55 | 140 | 50 | | 2LC0900-2AA9 -0AA0 L1B+M.. | 34 |
| 200 L | 30 | 55 x 110 | | 6.0 | | SPA 180 | 5 | 5X | | 2LC0900-2AF90-0AA0 L1D | | | | | | | 2LC0900-2AA9 -0AA0 L1D+M.. | |
| 225 S | 37 | 60 x 140 | 395 | 7.6 | 448 | SPB 224 | 5 | 5 | 325 | 2LC0900-3AF90-0AA0 L1E | 63 | 299 | 90 | 225 | 85 | | 2LC0900-3AA9 -0AA0 L1E+M.. | 53 |
| 225 M | 45 | 60 x 140 | | 7.9 | | SPB 224 | 5 | 5 | | 2LC0900-3AF90-0AA0 L1E | | | | | | | 2LC0900-3AA9 -0AA0 L1E+M.. | |
| 250 M | 55 | 65 x 140 | | 8.4 | | SPB 224 | 5 | 5X | | 2LC0900-3AF90-0AA0 L1F | | | | | | | 2LC0900-3AA9 -0AA0 L1F+M.. | |
| 280 S | 75 | 75 x 140 | 450 | 10.8 | 512 | SPB 250 | 8 | 7 | 410 | 2LC0900-4AF90-0AA0 L1H | 94 | 338 | 100 | 250 | 95 | | 2LC0900-4AA9 -0AA0 L1H+M.. | 70 |
| 280 M | 90 | 75 x 140 | | 11.3 | | SPB 250 | 8 | 8 | | 2LC0900-4AF90-0AA0 L1H | | | | | | | 2LC0900-4AA9 -0AA0 L1H+M.. | |
| 315 S | 110 | 80 x 170 | | 12.0 | | SPB 250 | 8 | 8X | | 2LC0900-4AF90-0AA0 L1J | | | | | | | 2LC0900-4AA9 -0AA0 L1J+M.. | |
| 315 M | 132 | 80 x 170 | 516 | 17.7 | 584 | SPB 315 | 10 | 10 | 491 | 2LC0900-5AF90-0AA0 L1J | 152 | 398 | 125 | 315 | 120 | | 2LC0900-5AA9 -0AA0 L1J+M.. | 113 |
| 315 M | 160 | 80 x 170 | | 18.6 | | SPB 315 | 10 | 10X | | 2LC0900-5AF90-0AA0 L1J | | | | | | | 2LC0900-5AA9 -0AA0 L1J+M.. | |
| ØD2: | | | | | | | | | | | | | | | | | 1 | |
| • Without finished bore for sizes 222 to 450 and 516 with small hub (ØD2 max. 100 mm) – Without order code M.. | | | | | | | | | | | | | | | | | 2 | |
| • Without finished bore only for size 516 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M.. | | | | | | | | | | | | | | | | | 9 | |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | |

- ØD2: • Without finished bore for sizes 222 to 450 and 516 with small hub (ØD2 max. 100 mm) – Without order code M..
 • Without finished bore only for size 516 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M..
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

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Delivery without oil filling: Without order code.

Delivery with oil filling (only above –20 °C): Product code with **“-Z”** and order codes **“F16”** and **“Y90”** with plain text specification of the oil filling quantity in liters.

Delivery with specification of oil filling quantity: Product code with **“-Z”** and order code **“Y90”** with plain text specification of the oil filling quantity in liters.

Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 with a centering thread to DIN 332/2.

Other methods must be specified in the order using the product code with **“-Z”** and order code **“Y99”** with plain text specification.

Ordering example:

Drive with motor 200 L, 30 kW at 1470 rpm with starting clutch and pulley

Selection:

FLUDEX FAR 342 coupling, standard type,
 Hollow shaft: Bore ØD1 = 55H7 with keyway to DIN 6885/1 and retaining screw,
 with pulley 5xSPA Ø180.

Product code:

- Delivery without oil filling:
2LC0900-2AF90-0AA0 L1D
- Delivery with oil filling:
2LC0900-1AF90-0AA0-Z L1D+F16+Y90
plain text to Y90: **6.0 l**
- Delivery with specification of oil filling quantity:
2LC0900-1AF90-0AA0-Z L1D+Y90
plain text to Y90: **6.0 l**

¹⁾ If the recommended number of belts is ..X, raw-edged belts are required.

²⁾ Larger bores on the output side are possible with type FAE.

FLENDER Standard Couplings

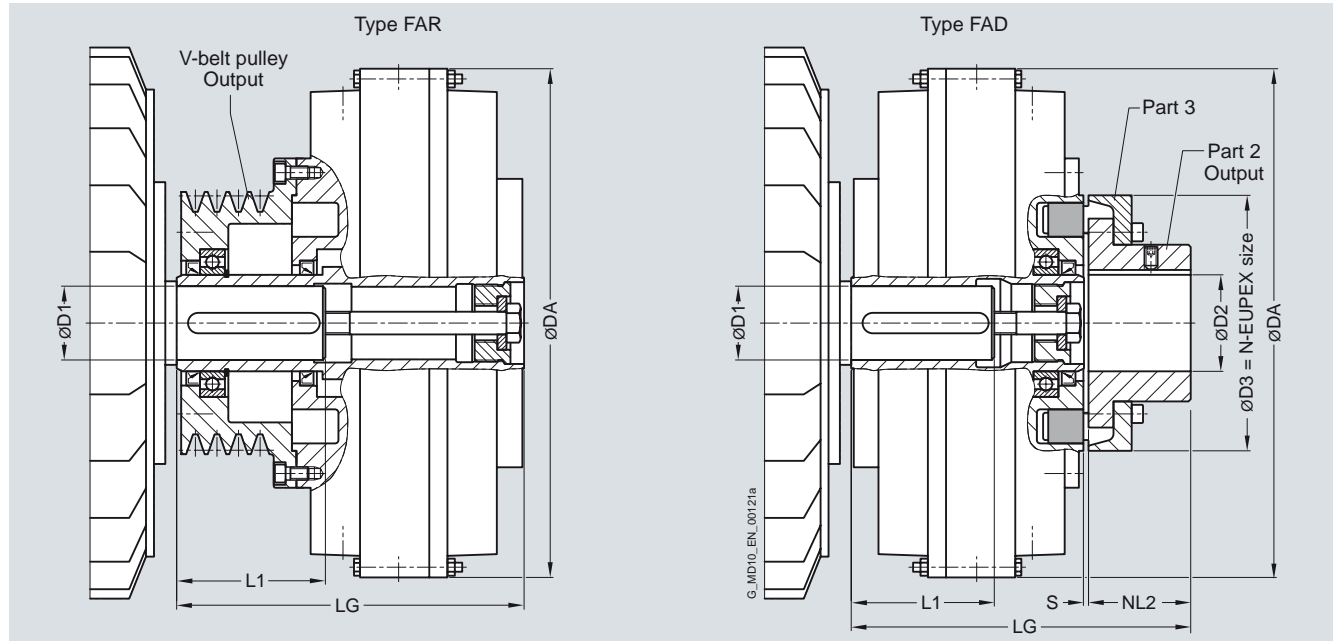
Fluid Couplings - FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

Selection and ordering data

Speed $n = 3000 \text{ rpm}$

This assignment offers safety in normal load cases and includes standard types with 140 °C fusible safety plugs, for horizontal fitting and an ambient air temperature from -40 °C to +40 °C.



| Three-phase motor | | | FLUDEX | | | Type FAR (with V-belt pulley) | | | | | Type FAD (with N-EUPEX D add-on coupling) | | | | | | | | | |
|-------------------|----------------------|------------------------|------------|---------------------|---------|--------------------------------------|-------------------|---|-------------------------------------|--|--|-----|-----|-----|---|--|----------------|--|--|--|
| Size | P_M 3000 rpm | D1 x L1 | Size | Oil fill- ing | DA | Pro- file, pitch Ø | No. of grooves | Recom- mended no. of belts ¹⁾ | LG | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | LG | NL2 | D3 | D2 ²⁾ max. | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | | | |
| | kW | mm | | l | mm | mm | | | mm | Available at short term | <i>m</i> kg | mm | mm | mm | mm | Available at short term | <i>m</i> kg | | | |
| 90 S | 1.5 | 24 x 50 | 222 | 0.7 | 263 | SPZ 100 | 2 | 1 | 153 | 2LC0900-0AF90-0AA0-Z L0P+W03 | 12 | 180 | 40 | 110 | 38 | 2LC0900-0AA9 ■ -0AA0-Z L0P+M..+W03 | 12 | | | |
| 90 L | 2.2 | 24 x 50 | | 0.8 | | SPZ 100 | 2 | 1 | | 2LC0900-0AF90-0AA0-Z L0P+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0P+M..+W03 | | | | |
| 100 L | 3 | 28 x 60 | | 0.9 | | SPZ 100 | 2 | 1 | | 2LC0900-0AF90-0AA0-Z L0R+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0R+M..+W03 | | | | |
| 112 M | 4 | 28 x 60 | | 1.0 | | SPZ 100 | 2 | 2 | | 2LC0900-0AF90-0AA0-Z L0R+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0R+M..+W03 | | | | |
| 132 S | 5.5 | 38 x 80 | | 1.0 | | SPZ 100 | 2 | 2 | | 2LC0900-0AF90-0AA0-Z L0V+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0V+M..+W03 | | | | |
| 132 S | 7.5 | 38 x 80 | | 1.1 | | SPZ 160 | 3 | 2 | | 2LC0900-0AF91-0AA0-Z L0V+W03 | 14 | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0V+M..+W03 | | | | |
| 160 M | 11 | 42 ³⁾ x 110 | | 1.2 | | SPZ 160 | 3 | 2 | | 2LC0900-0AF91-0AA0-Z L0X+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0X+M..+W03 | | | | |
| 160 M | 15 | 42 ³⁾ x 110 | | 1.3 | | SPZ 160 | 3 | 3 | | 2LC0900-0AF91-0AA0-Z L0X+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0X+M..+W03 | | | | |
| 160 L | 18.5 | 42 ³⁾ x 110 | 1.4 | | SPZ 160 | 3 | 3 | | 2LC0900-0AF91-0AA0-Z L0X+W03 | | | | | | 2LC0900-0AA9 ■ -0AA0-Z L0X+M..+W03 | | | | | |

ØD2: • Without finished bore – Without order code M..
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

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¹⁾ If the recommended number of belts is ..X, raw-edged belts are required.

²⁾ Larger bores on the output side are possible with type FAE.

³⁾ Variant with shallow keyway to DIN 6885/3.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

| Three-phase motor | | | FLUDEX | | | Type FAR (with V-belt pulley) | | | | Type FAD (with N-EUPEX D add-on coupling) | | | | | | | | |
|--|-------------------|------------------------|------------|-------------|-----|--------------------------------------|----------------|--|-------|--|---------|-----|-----|-----|--------------------------|--|--|---------|
| Size | P_M 3000 rpm | D1 x L1 | Size | Oil filling | DA | Profile, pitch Ø | No. of grooves | Recommended no. of belts ¹⁾ | LG | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | LG | NL2 | D3 | D2 ²⁾ max. | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
| | kW | mm | | l | mm | mm | | | mm | Available at short term | m kg | | mm | mm | mm | mm | Available at short term | m kg |
| 180 M | 22 | 48 x 110 | 297 | 2.5 | 340 | SPZ 150 | 5 | 4 | 226 | 2LC0900-1AF90-0AA0-Z L1B+W03 | 27 | 233 | 50 | 125 | 45 | 2LC0900-1AA9 L1B+M..+W03 ■ -0AA0-Z | 24 | |
| 200 L | 30 | 55 x 110 | | 2.7 | | SPZ 150 | 5 | 5 | | 2LC0900-1AF90-0AA0-Z L1D+W03 | | | | | | 2LC0900-1AA9 L1D+M..+W03 ■ -0AA0-Z | | |
| 200 L | 37 | 55 x 110 | | 2.8 | | SPA 190 | 4 | 4 | | 2LC0900-1AF91-0AA0-Z L1D+W03 | 32 | | | | | 2LC0900-1AA9 L1D+M..+W03 ■ -0AA0-Z | | |
| 225 M | 45 | 55 x 110 | | 2.9 | | SPA 224 | 5 | 4 | | 2LC0900-1AF92-0AA0-Z L1D+W03 | 35 | | | | | | 2LC0900-1AA9 L1D+M..+W03 ■ -0AA0-Z | |
| 250 M | 55 | 60 ³⁾ x 140 | | 3.1 | | SPA 224 | 5 | 5 | | 2LC0900-1AF92-0AA0-Z L1E+W03 | | | | | | | 2LC0900-1AA9 L1E+M..+W03 ■ -0AA0-Z | |
| 280 S | 75 | 65 x 140 | 395 | 5.3 | 448 | SPB 236 | 7 | 5 | 363.5 | 2LC0900-3AF91-0AA0-Z L1F+W03 | 70 | 299 | 90 | 225 | 85 | 2LC0900-3AA9 L1F+M..+W03 ■ -0AA0-Z | 53 | |
| 280 M | 90 | 65 x 140 | | 5.6 | | SPB 236 | 7 | 6 | | 2LC0900-3AF91-0AA0-Z L1F+W03 | | | | | | 2LC0900-3AA9 L1F+M..+W03 ■ -0AA0-Z | | |
| 315 S | 110 | 65 x 140 | | 5.9 | | SPB 236 | 7 | 7 | | 2LC0900-3AF91-0AA0-Z L1F+W03 | | | | | | 2LC0900-3AA9 L1F+M..+W03 ■ -0AA0-Z | | |
| 315 M | 132 | 65 x 140 | | 6.2 | | SPB 236 | 7 | 7X | | 2LC0900-3AF91-0AA0-Z L1F+W03 | | | | | | 2LC0900-3AA9 L1F+M..+W03 ■ -0AA0-Z | | |
| 315 L | 160 | 65 x 140 | | 6.8 | | SPB 280 | 7 | 7X | | 2LC0900-3AF92-0AA0-Z L1F+W03 | 83 | | | | | | 2LC0900-3AA9 L1F+M..+W03 ■ -0AA0-Z | |
| ØD2: • Without finished bore – Without order code M.. | | | | | | | | | | | | | | | | | | 1 |
| • With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | | | 9 |

Delivery without oil filling: Without order code.

Delivery with oil filling (only above –20 °C): Product code with **“-Z”** and order codes **“F16”** and **“Y90”** with plain text specification of the oil filling quantity in liters.

Delivery with specification of oil filling quantity: Product code with **“-Z”** and order code **“Y90”** with plain text specification of the oil filling quantity in liters.

Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 with a centering thread to DIN 332/2.

Other methods must be specified in the order using the product code with **“-Z”** and order code **“Y99”** with plain text specification.

Ordering example:

Drive with motor 280 M, 90 kW at 2950 rpm with starting clutch for connecting two shafts.

Selection:

FLUDEX FAD 395 coupling, standard type,
Hollow shaft: Bore ØD1 = 65H7 with keyway to DIN 6885/1 and retaining screw,
Part 2: Bore ØD2 = 60H7 with keyway to DIN 6885/1 and set screw.

Product code:

- Delivery without oil filling:
2LC0900-3AA99-0AA0-Z L1F+M1E+W03
- Delivery with oil filling:
2LC0900-3AA99-0AA0-Z L1F+M1E+W03+F16+Y90
plain text to Y90: **5.6 l**
- Delivery with specification of oil filling quantity:
2LC0900-3AA99-0AA0-Z L1F+M1E+W03+Y90
plain text to Y90: **5.6 l**

¹⁾ If the recommended number of belts is ..X, raw-edged belts are required.

²⁾ Larger bores on the output side are possible with type FAE.

³⁾ Variant with shallow keyway to DIN 6885/3.

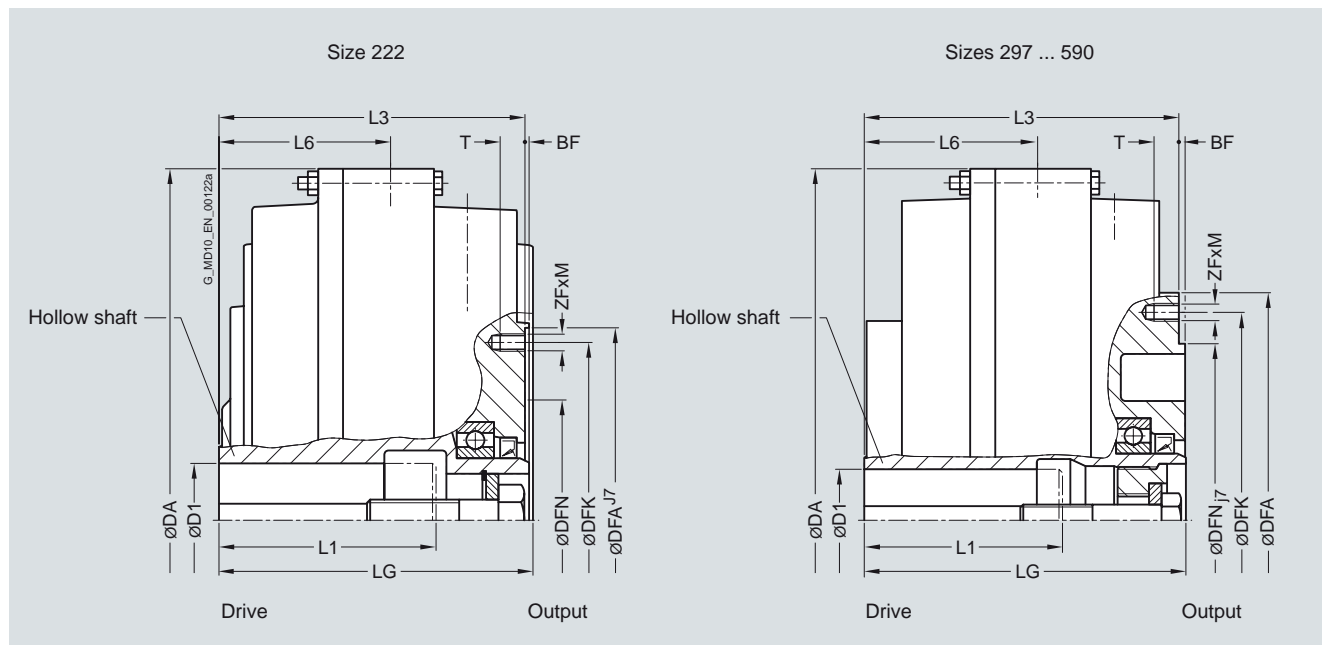
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FAO

Selection and ordering data

Basic coupling of the FA series with connecting flange.



| Size | Maxi- mum speed | Dimensions in mm | | | | | | | | | | | | | Tightening torque for screws in thread ZF x M T_A | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------|-----------------------|-------------------|------------------------|------|-----|-----|-------|-------|-----|-----|----|-----|---------|----|--|--|--------|--|
| | n_{Kmax} | D1 | | L1 | DA | LG | L3 | L6 | DFN | DFA | BF | DFK | ZF x M | T | | m | | |
| | min. | max. | Pre- ferred bore | max. | | | | | | | | | | | | In standard type avail- able ex stock | | |
| | | | | | | | | | | | | | | | | Available at short term | | |
| | rpm | | | | | | | | | | | | | | Nm | | kg | |
| 222 | 3600 | 38 | 28 | 80 | 263 | 112 | 110 | 58 | 90 | 144 | 2 | 128 | 6 x M8 | 12 | 18.7 | 2LC0900-0AG90-0AA0 L.. | 10 | |
| | | >38 ¹⁾ | 42 ¹⁾ | | | | | | | | | | | | | | | |
| 297 | 3600 | 38 | | 80 | 340 | 150 | 145 | 83 | 125 | 195 | 3 | 172 | 6 x M8 | 12 | 18.7 | 2LC0900-1AG90-0AA0 L.. | 18 | |
| | | >38 | 55 | 42 | 110 | | | | | | | | | | | | | |
| | | >55 ¹⁾ | 60 ¹⁾ | 110 | | | | | | | | | | | | | | |
| 342 | 3600 | 55 | 48 + 55 | 110 | 400 | 180 | 174 | 101 | 140 | 230 | 4 | 205 | 8 x M10 | 15 | 31 | 2LC0900-2AG90-0AA0 L.. | 26 | |
| | | >55 ¹⁾ | 60 ¹⁾ | 120 | | | | | | | | | | | | | | |
| 395 | 3000 | 65 | 60 + 65 | 140 | 448 | 205 | 200.5 | 110.5 | 225 | 290 | 4 | 265 | 8 x M12 | 18 | 54 | 2LC0900-3AG90-0AA0 L.. | 40 | |
| 450 | 3000 | 75 | 65 + 75 | 140 | 512 | 233 | 228 | 126 | 250 | 310 | 4 | 285 | 8 x M12 | 18 | 54 | 2LC0900-4AG90-0AA0 L.. | 53 | |
| | | >75 | 80 | 170 | | | | | | | | | | | | | | |
| 516 | 2300 | 55 | | 140 | 584 | 270 | 263 | 147 | 315 | 390 | 5 | 360 | 8 x M16 | 24 | 135 | 2LC0900-5AG90-0AA0 L.. | 84 | |
| | | >55 | 90 | 80 | 170 | | | | | | | | | | | | | |
| 590 | 2000 | 75 | | 140 | 662 | 305 | 298 | 166 | 315 | 390 | 5 | 360 | 8 x M16 | 24 | 135 | 2LC0900-6AG90-0AA0 L.. | 109 | |
| | | >75 | 95 | 170 | | | | | | | | | | | | | | |
| | | >95 | 100 | 210 | | | | | | | | | | | | | | |

Ordering example:

Motor 37 kW, $P_{eff} = 30$ kW, $n_1 = 1470$ rpm, maximum output torque: $T_{max} = 2.0 \times T_{eff}$.

Selection:

FLUDEX FAO coupling size 342,

Hollow shaft: Bore $\varnothing D1 = 60H7$ mm with keyway to DIN 6885/3 and retaining screw,

seal set Viton.

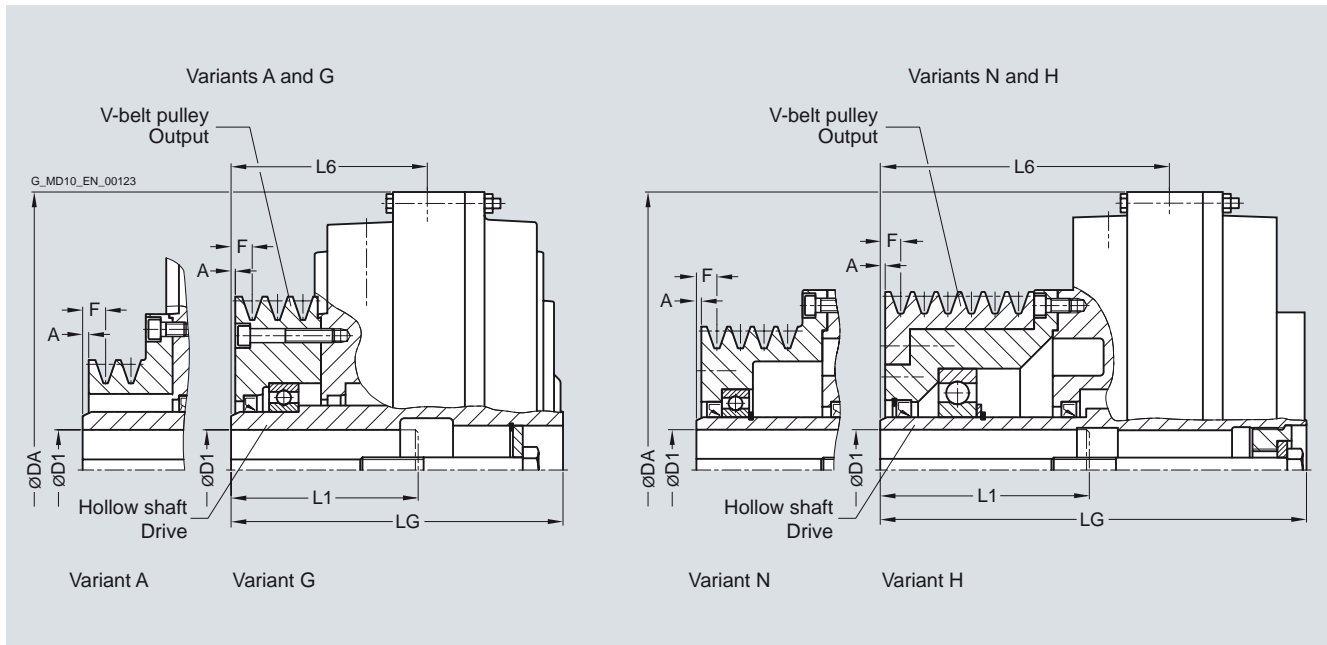
Specification of oil filling quantity: 6.0 l (see under oil filling quantities for the FA series in this catalog section).

Product code:

- With 110°C fuse:
2LC0900-2AG90-0AA0-Z
L1E+Y90+F05
plain text to Y90: **6.0 l**
- With 140°C fuse:
2LC0900-2AG90-0AA0-Z
L1E+Y90+F07
plain text to Y90: **6.0 l**

¹⁾ Variant with shallow keyway to DIN 6885/3.

Selection and ordering data



| Size | Maximum speed n_{kmax} | Dimensions in mm | | | | | | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight m |
|------|-----------------------------|-------------------|--------------------|---------|-----|---------------|----------------------------|----------------------|----|---|---------|---|--|---------------|
| | | | | | | V-belt pulley | | | | | | | | |
| | D1 Keyway to DIN 6885 | | L1 | DA | LG | L6 | Profile, pitch diameter | No. of grooves | A | F | Variant | | | |
| | min. | max. | Pre-ferred bore | max. | | | | | | | | | | |
| | rpm | | | | | | | | | | | | In standard type available ex stock | kg |
| | | | | | | | | | | | | | Available at short term | |
| 222 | 3600 | 28 | 28 | 60 | 263 | 153 | 95 | SPZ 100 | 2 | 1 | 9 | A | 2LC0900-0AF90-0AA0 L.. | 12 |
| | | >28 | 38 | 105 | | | | SPZ 160 | 3 | | | G | 2LC0900-0AF91-0AA0 L.. | 14 |
| | | >38 ¹⁾ | 42 ¹⁾ | 110 | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 297 | 3600 | 38 | | 80 | 340 | 226 | 143 | SPZ 150 | 5 | 2 | 10 | N | 2LC0900-1AF90-0AA0 L.. | 27 |
| | | >38 | 55 | 42 | 110 | | | SPZ 150 | 5 | 2 | | N | 2LC0900-1AF90-0AA0 L.. | 27 |
| | | >55 ¹⁾ | 59 ¹⁾ | 110 | | | | SPA 190 | 4 | 0 | | H | 2LC0900-1AF91-0AA0 L.. | 32 |
| | | >59 ¹⁾ | 60 ¹⁾ | 140 | | | | SPA 224 | 5 | 0 | | G | 2LC0900-1AF92-0AA0 L.. | 35 |
| | | | | | | | | | | | | | | |
| 342 | 3600 | 55 | 55 | 110 | 400 | 278 | 177 | SPA 180 | 5 | 4 | 14 | N | 2LC0900-2AF90-0AA0 L.. | 40 |
| 395 | 3000 | 55 | | 110 | 448 | 325 | 214.5 | SPB 224 | 5 | 4 | 16.5 | N | 2LC0900-3AF90-0AA0 L.. | 63 |
| | | >55 | 65 | 60 + 65 | 140 | | | | | | | | | |
| | 3000 | 55 | | 110 | 448 | 363.5 | 253 | SPB 236 | 7 | | | N | 2LC0900-3AF91-0AA0 L.. | 70 |
| | 2700 | >55 | 75 | 140 | | | | SPB 280 | 7 | | | H | 2LC0900-3AF92-0AA0 L.. | 83 |
| 450 | 3000 | 55 | | 110 | 512 | 410 | 284 | SPB 250 | 8 | 4 | 16.5 | N | 2LC0900-4AF90-0AA0 L.. | 94 |
| | | >55 | 75 | 65 + 75 | 140 | | | | | | | | | |
| | | >75 | 80 | 170 | | | | | | | | | | |
| 516 | 2300 | 55 | | 110 | 584 | 491 | 344 | SPB 315 | 10 | 4 | 16.5 | N | 2LC0900-5AF90-0AA0 L.. | 152 |
| | | >55 | 75 | 140 | | | | | | | | | | |
| | | >75 | 95 | 170 | | | | | | | | | | |
| | | >95 | 100 | 210 | | | | | | | | | | |
| 590 | 2000 | 55 | | 110 | 662 | 642 | 476 | SPC 315 | 12 | 4 | 21 | N | 2LC0900-6AF90-0AA0 L.. | 208 |
| | | >55 | 75 | 140 | | | | | | | | | | |
| | | >75 | 95 | 170 | | | | | | | | | | |
| | | >95 | 100 | 210 | | | | | | | | | | |

General specifications and ordering instructions on page 13/10, 13/11. **Ordering example on page 13/24.**

¹⁾ Variant with shallow keyway to DIN 6885/3.

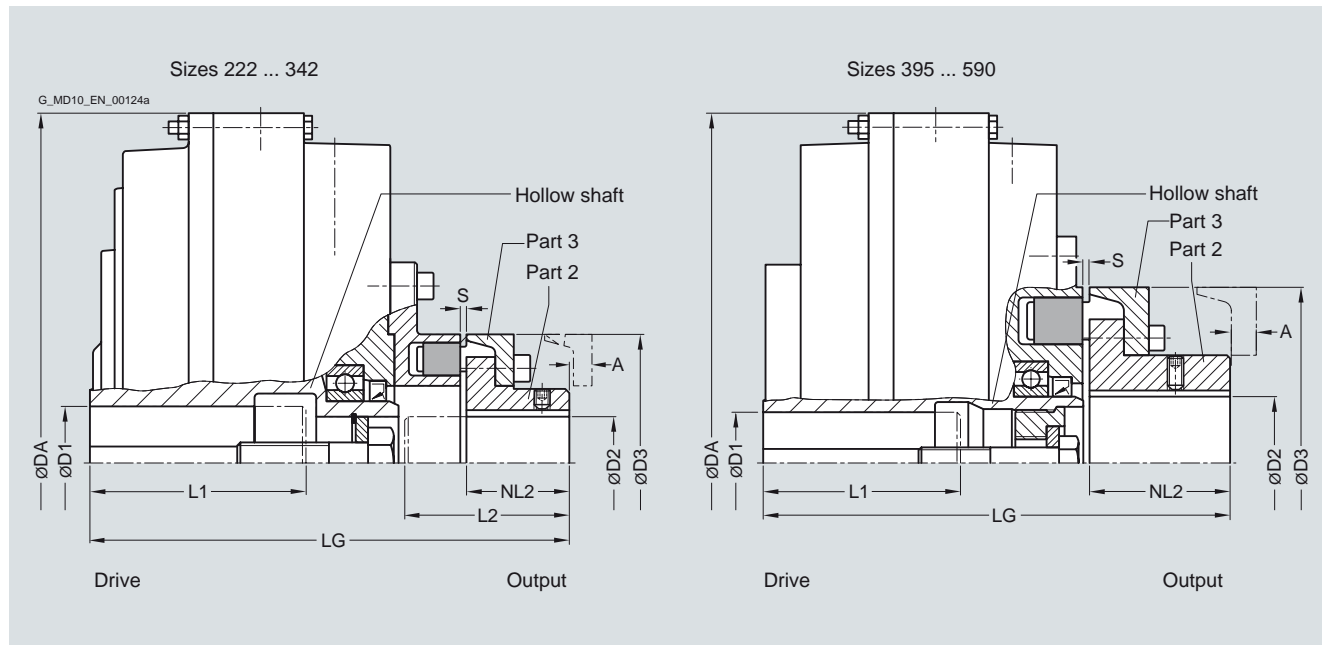
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FAD

Selection and ordering data

Type with attached N-EUPEX D coupling. Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



| Size | Maximum speed n_{kmax} | Dimensions in mm | | | | | | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight < |
|------|-----------------------------|------------------|--|--|--|--|--|--|--|--|--|--|--|---|
|------|-----------------------------|------------------|--|--|--|--|--|--|--|--|--|--|--|---|

ØD2: • Without finished bore for sizes 222 to 450, 516 and 590 with small hub (ØD2 max. 100 mm) – Without order code M...
• Without finished bore only for sizes 516 and 590 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M...
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

Ordering example:
Motor 160 kW, $P_{eff} = 132$ kW, $n_1 = 1470$ rpm, maximum output torque: $T_{max} = 2.0 \times T_{eff}$.

Selection:
FLUDEX FAD coupling size 516,
Hollow shaft: Bore ØD1 = 80H7 mm with keyway to DIN 6885/1 and retaining screw,
Part 2: with finished bore ØD2 = 80H7

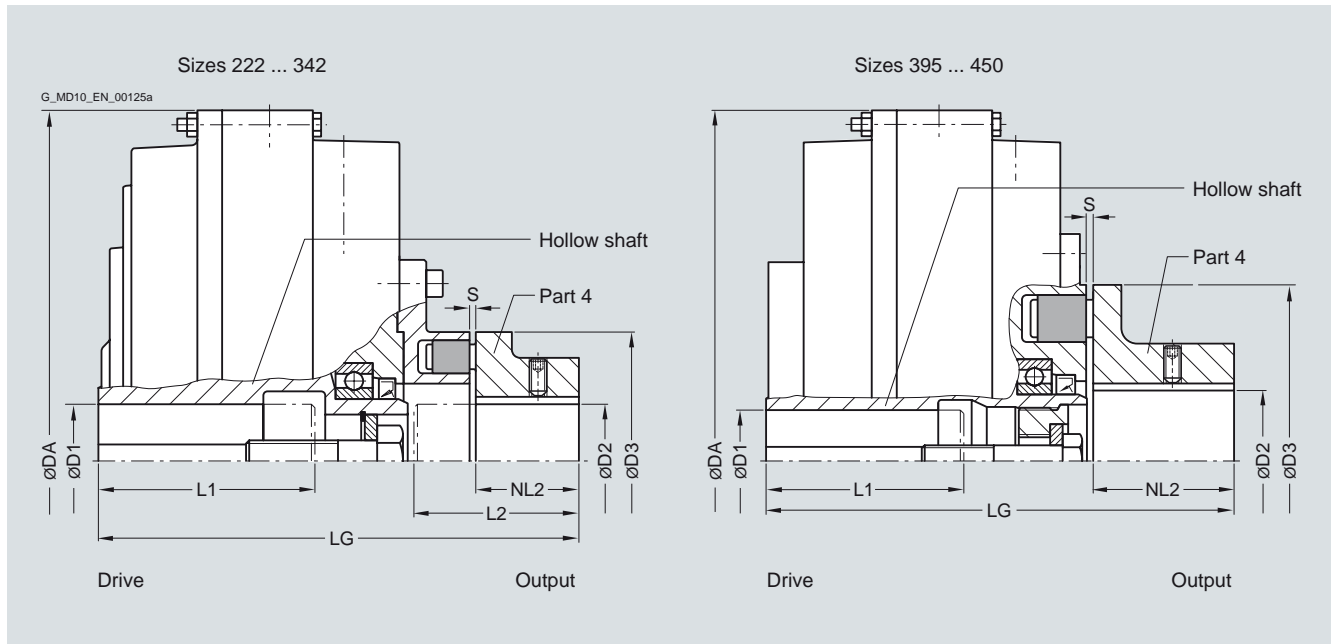
Specification of oil filling quantity: 16.9 l (see under oil filling quantities for the FA series in this catalog section).

Product code:
2LC0900-5AA99-0AA0-Z
L1J+M1J+Y90
plain text to Y90: **16.9 l**

¹⁾ Variant with shallow keyway to DIN 6885/3.

Selection and ordering data

Type with attached N-EUPEX E coupling. Enables larger bores on the output side.



| Size | Maxi- mum speed | Dimensions in mm | | | | | | | | | | Product code | Weight | |
|--|-----------------------|--------------------|------------------|-------------------|------|-----|--------------------|------|-----|-----------------|-----|--|----------------------------------|----|
| | n_{Kmax} | FLUDEX coupling | | | | | N-EUPEX E coupling | | | | | with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | | |
| | | D1 | | L1 | DA | LG | D2 | L2 | NL2 | D3 | S | m | | |
| | | Keyway to DIN 6885 | | | | | | | | | | | | |
| | | min. | max. | Preferred bore | max. | | max. | max. | | N-EUPEX size | | In standard type avail- able ex stock | | |
| | rpm | | | | | | | | | | | Available at short term | kg | |
| 222 | 3600 | | 38 | 28 | 80 | 263 | 180 | 48 | 65 | 40 | 110 | 2...4 | 2LC0900-0AB9 ■ -0AA0 L...+M.. | 12 |
| | | >38 ¹⁾ | 42 ¹⁾ | | | | | | | | | | | |
| 297 | 3600 | | 38 | | 80 | 340 | 233 | 55 | 80 | 50 | 125 | 2...4 | 2LC0900-1AB9 ■ -0AA0 L...+M.. | 24 |
| | | >38 | 55 | 42 | 110 | | | | | | | | | |
| | | >55 ¹⁾ | 60 ¹⁾ | | 110 | | | | | | | | | |
| 342 | 3600 | | 55 | 48 + 55 | 110 | 400 | 271 | 60 | 88 | 55 | 140 | 2...4 | 2LC0900-2AB9 ■ -0AA0 L...+M.. | 34 |
| | | >55 ¹⁾ | 60 ¹⁾ | | 120 | | | | | | | | | |
| 395 | 3000 | | 65 | 60 + 65 | 140 | 448 | 299 | 90 | 90 | 90 | 225 | 3...6 | 2LC0900-3AB9 ■ -0AA0 L...+M.. | 50 |
| 450 | 3000 | | 75 | 65 + 75 | 140 | 512 | 338 | 100 | 100 | 100 | 250 | 3...8 | 2LC0900-4AB9 ■ -0AA0 L...+M.. | 68 |
| | | >75 | 80 | | 170 | | | | | | | | | |
| ØD2: <div>• Without finished bore – Without order codes</div> <div>• With finished bore – With order codes for diameter and tolerance (product code without -Z)</div> | | | | | | | | | | | | | 1 | |
| | | | | | | | | | | | | | 9 | |

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

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9

Weights specified in the table apply to maximum bore diameters without oil filling.

Ordering example:

Motor 45 kW, $P_{eff} = 42$ kW, $n_1 = 2950$ rpm

Selection:

FLUDEX FAE coupling size 342,
Hollow shaft: Bore ØD1= 55H7 mm with keyway to DIN 6885/1 and retaining screw,
Part 4: Bore ØD2= 60H7 with keyway to DIN 6885/1 and set screw,

with micro-balancing (high speed),
with electronic or mechanical operation monitoring, seal set Perbunan.
Delivery without oil filling, no oil filling quantity specification.

Product code:

• With 110 °C thermal switch:

2LC0900-2AB99-0AA0-Z

L1D+M1E+W03+F03

plain text to Y90: **16.9 I**

• With 125 °C EOC transmitter:

2LC0900-2AB99-0AA0-Z

L1D+M1E+W03+F04

¹⁾ Variant with shallow keyway to DIN 6885/3.

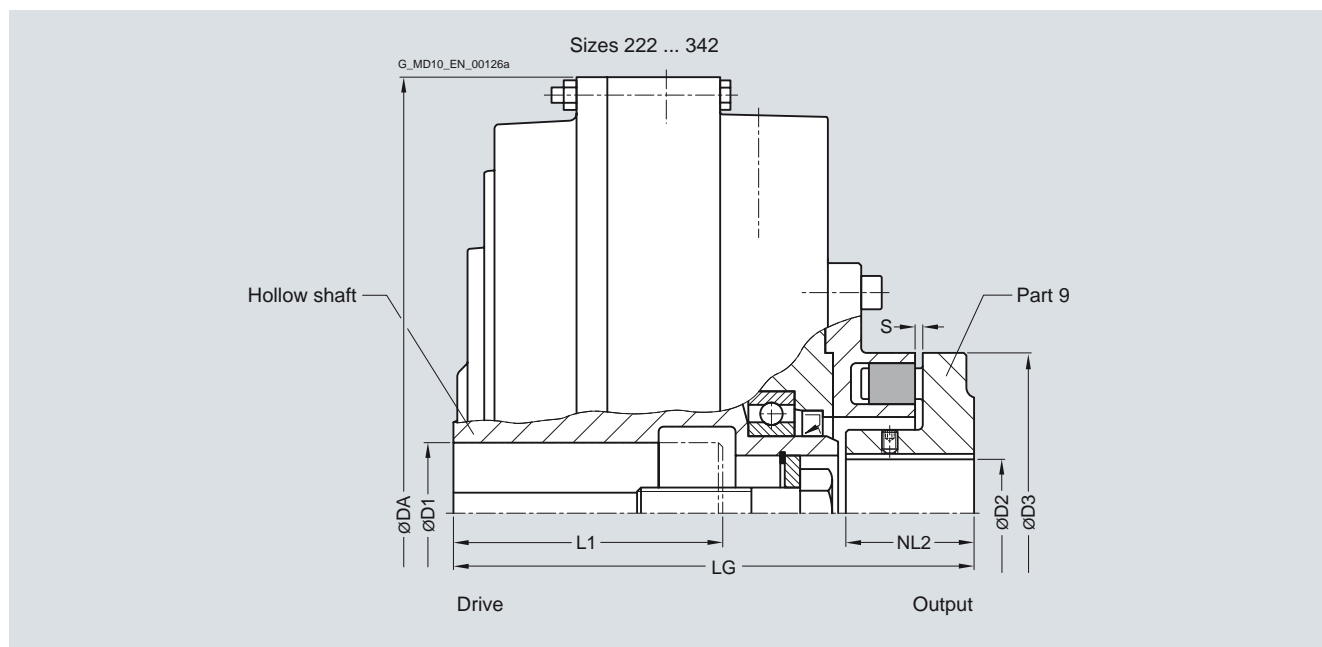
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FAM

Selection and ordering data

Type with attached N-EUPEX M coupling. Enables a short fitting length.



| Size | Maximum speed n_{Kmax} rpm | Dimensions in mm FLUDEX coupling | | | | | N-EUPEX M coupling | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 In standard type available ex stock Available at short term | Weight kg |
|------------|--|-------------------------------------|------------------|-------------------|------|-----|--------------------|-----|-----------------|-------|--|----------------------|
| | | D1 Keyway to DIN 6885 | | L1 | DA | LG | D2 | NL2 | D3 | S | | |
| | | min. | max. | Preferred bore | max. | | max. | | N-EUPEX size | | | |
| 222 | 3600 | 38 | 42 ¹⁾ | 28 | 80 | 263 | 38 | 36 | 110 | 2...4 | 2LC0900-0AH9 -0AA0 L...M... | 12 |
| 297 | 3600 | 38 | 55 | 42 | 80 | 340 | 48 | 50 | 125 | 2...4 | 2LC0900-1AH9 -0AA0 L...M... | 24 |
| | | >38 ¹⁾ | 60 ¹⁾ | | 110 | | | | | | | |
| 342 | 3600 | 55 | 60 ¹⁾ | 48 + 55 | 110 | 400 | 52 | 55 | 140 | 2...4 | 2LC0900-2AH9 -0AA0 L...M... | 34 |
| | | >55 ¹⁾ | | | 120 | | | | | | | |

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1
9

Ordering example:

Motor 37 kW, $P_{eff} = 30$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FAM coupling size 342,

Hollow shaft: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and retaining screw,

Part 9: Bore ØD2 = 50H7 mm with keyway to DIN 6885/1 and set screw.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- With drive via hollow shaft:

2LC0900-2AH99-0AA0-Z

L1E+M1C

plain text to Y90: **16.9 I**

- With drive via housing:

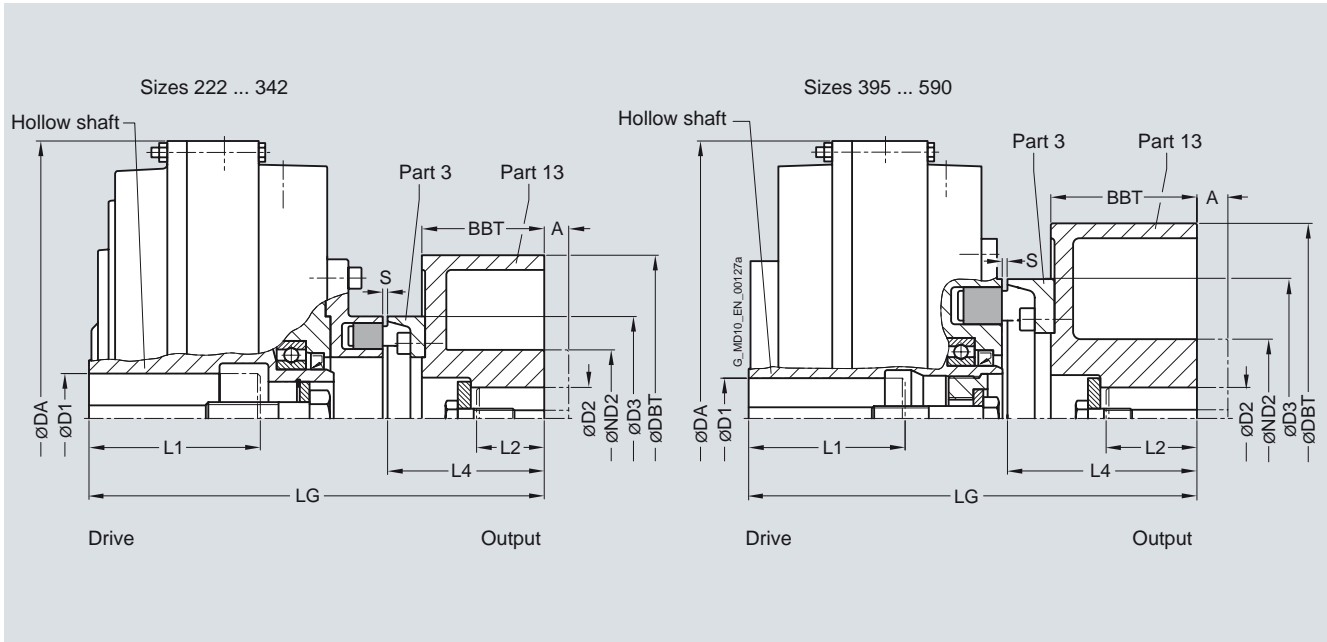
2LC0900-2AH99-0AA0-Z

L1E+M1C+F23

¹⁾ Variant with shallow keyway to DIN 6885/3.

Selection and ordering data

Type with attached N-EUPEX coupling and brake drum.



| Size | Maxi- mum speed | Dimensions in mm | | | | | | | | | | | | | Product code | Weight | |
|------|-----------------------|-----------------------|------------------|------|-----|------------------|-------|-----|---------|-----|-----|-----|-----|---|-------------------------|--------|-----|
| | n_{Kmax} | FLUDEX coupling | | | | N-EUPEX coupling | | | Part 13 | | | | | with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | | | |
| | | D1 | L1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBT | BBT | A | | | | |
| | | Keyway to DIN 6885 | | | | | | | | | | | | | | | |
| | rpm | min. | max. | max. | | N-EUPEX size | | | max. | | | | | | Available at short term | kg | |
| 222 | 3600 | 38 | 80 | 263 | 232 | 110 | 2...4 | 92 | 42 | 84 | 200 | 75 | 30 | 2LC0900-0AC9 | -0 | A0-Z | 17 |
| | | >38 ¹⁾ | 42 ¹⁾ | | | | | | | | | | | | L...+M...+Y.. | | |
| 297 | 3600 | 38 | 80 | 340 | 279 | 125 | 2...4 | 96 | 55 | 84 | 200 | 75 | 30 | 2LC0900-1AC9 | -0 | A0-Z | 29 |
| | | >38 | 55 | 110 | | | | | | | | | | | L...+M...+Y.. | | |
| | | >55 ¹⁾ | 60 ¹⁾ | 110 | | | | | | | | | | | | | |
| 342 | 3000 | 55 | 110 | 400 | 337 | 140 | 2...4 | 121 | 60 | 128 | 250 | 95 | 50 | 2LC0900-2AC9 | -0 | A0-Z | 48 |
| | | >55 ¹⁾ | 60 ¹⁾ | 120 | | | | | | | | | | | L...+M...+Y.. | | |
| 395 | 2400 | 65 | 140 | 448 | 362 | 225 | 3...6 | 153 | 80 | 128 | 315 | 118 | 50 | 2LC0900-3AC9 | -0 | A0-Z | 71 |
| 450 | 2400 | 75 | 140 | 512 | 395 | 250 | 3...8 | 157 | 80 | 128 | 315 | 118 | 50 | 2LC0900-4AC9 | -0 | A0-Z | 86 |
| | | >75 | 80 | 170 | | | | | | | | | | | L...+M...+Y.. | | |
| 516 | 1900 | 55 | 140 | 584 | 466 | 315 | 3...8 | 193 | 100 | 160 | 400 | 150 | 80 | 2LC0900-5AC9 | -0 | A0-Z | 146 |
| | | >55 | 90 | 170 | | | | | | | | | | | L...+M...+Y.. | | |
| 590 | 1500 ²⁾ | 75 | 140 | 662 | 540 | 315 | 3...8 | 232 | 110 | 175 | 500 | 190 | 110 | 2LC0900-6AC9 | -0 | A0-Z | 207 |
| | | >75 | 95 | 170 | | | | | | | | | | | L...+M...+Y.. | | |
| | | >95 | 100 | 210 | | | | | | | | | | | | | |

ØD2: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

Part 13 • Standard brake drum, without extension A
• Long brake drum (increase of lengths L4 and LG by the amount A)

1
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A
B

L2 denotes the shaft insertion depth.
In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text with **Y29**.

For ordering example, see page 13/24.

¹⁾ Variant with shallow keyway to DIN 6885/3.

²⁾ With version of brake drum in grey cast iron: Maximum speed 1800 rpm possible.

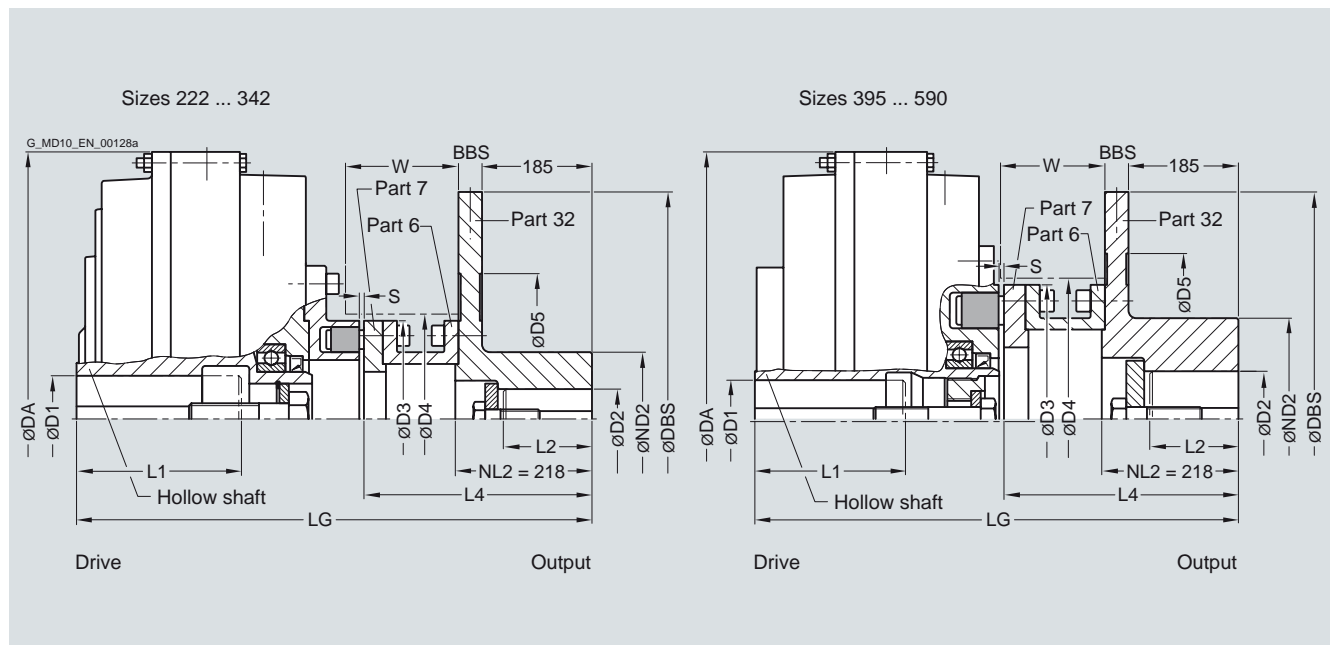
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FADS SB

Selection and ordering data

Type with attached N-EUPEX coupling and brake drum for stopping brakes.



| Size | Maxi- mum speed | Dimensions in mm | | | | | | | | | | | | Product code | | Weight | |
|------|--|-------------------|------------------|-----|-------|-----|------------------|-------|-----|-----------------------|-----|-----|-----|-----------------------|-----|-----------------------------------|--|
| | n_{Kmax} | FLUDEX coupling | | | | | N-EUPEX coupling | | | Part 32 ¹⁾ | | | | Space dimen- sions | | | with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 |
| | | D1 | L1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBS | BBS | D5 | D4 | W | | |
| | | | | | | | | | | | | | | | | | |
| | rpm | | | | | | | | | | | | | | | | kg |
| 222 | 3000 | 38 | 80 | 263 | 494 | 110 | 5...6 | 352 | 42 | 100 | 315 | 30 | 165 | 115 | 149 | 2LC0900-0AD9 ■ -0AA0 L...+M... | 35 |
| | | >38 ²⁾ | 42 ²⁾ | | | | | | | | | | | | | | |
| 297 | 2600 | 38 | 80 | 340 | 537 | 125 | 5...6 | 352 | 60 | 120 | 355 | 30 | 205 | 130 | 154 | 2LC0900-1AD9 ■ -0AA0 L...+M... | 68 |
| | | >38 | 55 | 110 | | | | | | | | | | | | | |
| 342 | 2300 | 55 | 110 | 400 | 570 | 140 | 5...6 | 352 | 60 | 120 | 400 | 30 | 250 | 145 | 155 | 2LC0900-2AD9 ■ -0AA0 L...+M... | 83 |
| | | >55 ²⁾ | 60 ²⁾ | 120 | | | | | | | | | | | | | |
| 395 | 2100 | 65 | 140 | 448 | 602 | 225 | 6...7 | 391.5 | 80 | 150 | 450 | 30 | 300 | 230 | 182 | 2LC0900-3AD9 ■ -0AA0 L...+M... | 102 |
| 450 | 1700 | 75 | 140 | 512 | 631.5 | 250 | 8...9 | 390.5 | 90 | 160 | 560 | 30 | 370 | 260 | 182 | 2LC0900-4AD9 ■ -0AA0 L...+M... | 141 |
| 516 | 1500 | 55 | 140 | 584 | 706.5 | 315 | 8...9 | 430.5 | 100 | 160 | 630 | 30 | 440 | 325 | 222 | 2LC0900-5AD9 ■ -0AA0 L...+M... | 199 |
| | | >55 | 90 | 170 | | | | | | | | | | | | | |
| 590 | 1500 | 75 | 140 | 662 | 741.5 | 315 | 8...9 | 430.5 | 100 | 160 | 630 | 30 | 440 | 325 | 222 | 2LC0900-6AD9 ■ -0AA0 L...+M... | 224 |
| | | >75 | 95 | 170 | | | | | | | | | | | | | |
| | | >95 | 100 | 210 | | | | | | | | | | | | | |
| ØD2: | Without finished bore – Without order codes | | | | | | | | | | | | | | | | 1 |
| | With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | | | 9 |

Ordering example:

Motor 90 kW, $P_{eff} = 75$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FADS SB coupling size 450,
Hollow shaft: Bore ØD1 = 75H7 mm with keyway to DIN 6885/1
and retaining screw,
Part 32: Bore ØD2 = 80H7 mm with keyway to DIN 6885/1 and
retaining screw,
with preservative suitable for storage indoors,
shaft end insertion depth L2 = 90 mm.
Delivery without oil filling, no oil filling quantity specification.

Product code:

with preservation 24 months:

2LC0900-4AD99-0AA0-Z

L1H+M1J+B28+Y29

plain text Y29: **L2 = 90 mm**

L2 denotes the shaft insertion depth.

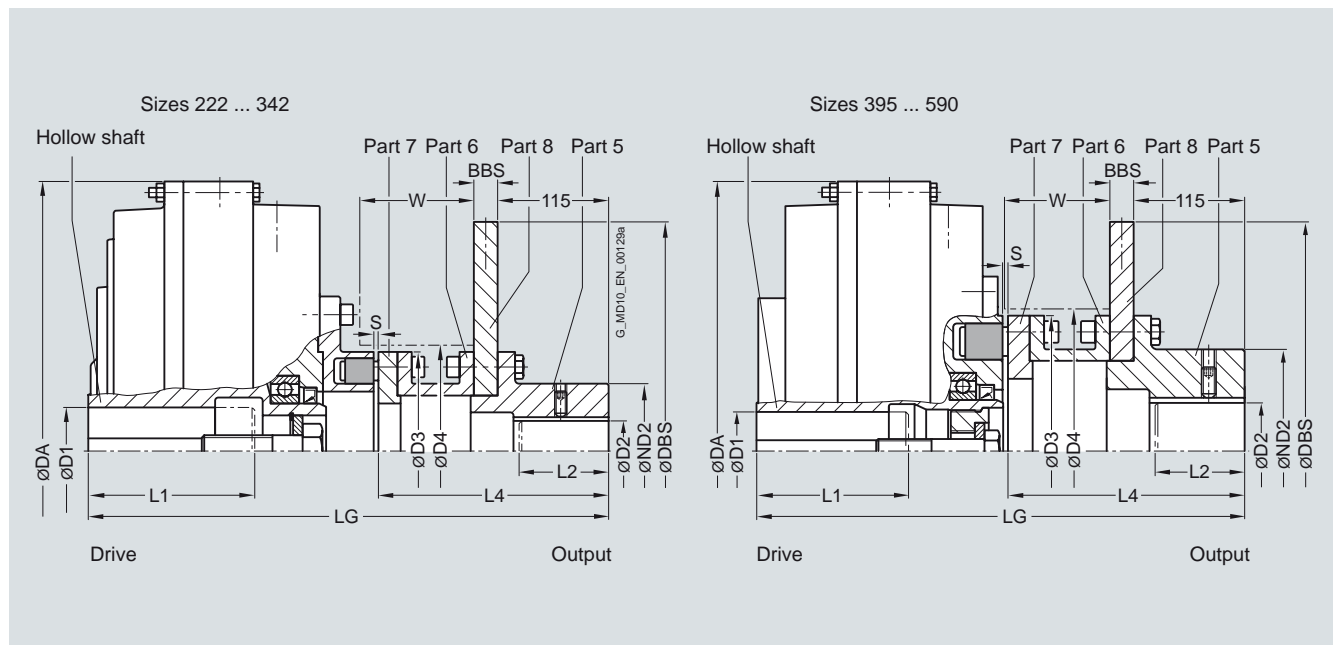
In the case of shaft ends deviating from DIN 748 the insertion
depth must be specified in plain text with **Y29**.

¹⁾ Hub reduction possible; specify product code with **"-Z"** and order code
"Y99" with dimension NL2 in plain text..

²⁾ Variant with shallow keyway to DIN 6885/3.

Selection and ordering data

Type with attached N-EUPEX coupling and brake disk for blocking brakes.



| Size | Maxi- mum speed | Dimensions in mm | | | | | | | | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------|-----------------------|-----------------------|------------------|------|-------|-----------------|------------------|-------|------|------------------------|-----|------|---------------------|-------------------------|--|--------|
| | n_{Kmax} | FLUDEX coupling | | | | | N-EUPEX coupling | | | Part 5/8 ¹⁾ | | | Space dimensions | | | |
| | | D1 | L1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBS | BBS | D4 | W | | |
| | | Keyway to DIN 6885 | | | | | | | | | | | | | | |
| | rpm | min. | max. | max. | | N-EUPEX size | | | max. | | | | | Available at short term | | |
| 222 | 3600 | 38 | 80 | 263 | 366.5 | 110 | 5...6 | 224.5 | 42 | 70 | 250 | 12.5 | 115 | 109 | 2LC0900-0AE9 ■ -0AA0 L...M.. | 22 |
| | | >38 ²⁾ | 42 ²⁾ | | | | | | | | | | | | | |
| 297 | 3600 | 38 | 80 | 340 | 409.5 | 125 | 5...6 | 224.5 | 60 | 85 | 250 | 12.5 | 130 | 114 | 2LC0900-1AE9 ■ -0AA0 L...M.. | 33 |
| | | >38 | 55 | 110 | | | | | | | | | | | | |
| | | >55 ²⁾ | 60 ²⁾ | 110 | | | | | | | | | | | | |
| 342 | 3600 | 55 | 110 | 400 | 442.5 | 140 | 5...6 | 224.5 | 60 | 90 | 250 | 12.5 | 145 | 115 | 2LC0900-2AE9 ■ -0AA0 L...M.. | 45 |
| | | >55 ²⁾ | 60 ²⁾ | 120 | | | | | | | | | | | | |
| 395 | 3000 | 65 | 140 | 448 | 478 | 225 | 6...7 | 267.5 | 80 | 150 | 355 | 16 | 230 | 142 | 2LC0900-3AE9 ■ -0AA0 L...M.. | 80 |
| 450 | 3000 | 75 | 140 | 512 | 546.5 | 250 | 8...9 | 306.5 | 90 | 160 | 355 | 16 | 260 | 182 | 2LC0900-4AE9 ■ -0AA0 L...M.. | 101 |
| | | >75 | 80 | 170 | | | | | | | | | | | | |
| 516 | 2300 | 55 | 140 | 584 | 566.5 | 315 | 8...9 | 290.5 | 100 | 160 | 450 | 16 | 325 | 166 | 2LC0900-5AE9 ■ -0AA0 L...M.. | 154 |
| | | >55 | 90 | 170 | | | | | | | | | | | | |
| 590 | 2000 | 75 | 140 | 662 | 601.5 | 315 | 8...9 | 290.5 | 100 | 160 | 450 | 16 | 325 | 166 | 2LC0900-6AE9 ■ -0AA0 L...M.. | 179 |
| | | >75 | 95 | 170 | | | | | | | | | | | | |
| | | >95 | 100 | 210 | | | | | | | | | | | | |

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
9

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text with **Y29**.

For ordering example, see page 13/25.

¹⁾ Hub reduction possible; specify product code with "-Z" and order code "Y99" in plain text.

²⁾ Variant with shallow keyway to DIN 6885/3.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Oil filling quantities for FA series

Selection and ordering data

This assignment is valid for a maximum starting torque
 $T_{\max} = 2.0 \times T_{\text{eff}}$ and mineral oils with a viscosity of
 VG 22/VG 32, with drive via the hollow shaft.

If other operating fluids are used, or with drive via the housing or
 $T_{\max} \neq 2.0 \times T_{\text{eff}}$, changed filling quantities must be observed!

| P_{eff} | Speed in rpm | | | | | | | | | | Size |
|------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|
| | 600 | 740 | 890 | 980 | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 | |
| kW | Oil filling quantity in l | | | | | | | | | | |
| 0.55 | 4.3 | 1.5 | 1.4 | 1.3 | 1.1 | | | | | | |
| 0.75 | 4.7 | 1.65 | 1.5 | 1.4 | 1.2 | | | | | | |
| 1.1 | 5.1 | 4.4 | 1.65 | 1.6 | 1.4 | 1.1 | | | | | |
| 2.2 | 6.2 | 5.2 | 4.5 | 4.2 | 1.6 | 1.4 | 1.2 | | | | |
| 3.0 | 9.5 | 5.6 | 4.9 | 4.6 | 1.65 | 1.5 | 1.3 | 1.0 | | | |
| 4.0 | 10.2 | 6.1 | 5.3 | 4.9 | 4.3 | 1.6 | 1.4 | 1.1 | | | |
| 5.5 | 11.0 | 9.4 | 5.7 | 5.3 | 4.6 | 1.65 | 1.5 | 1.2 | 1.0 | | |
| 7.5 | 12.0 | 10.2 | 6.2 | 5.8 | 5.0 | 4.3 | 1.6 | 1.3 | 1.1 | | |
| 11 | 13.4 | 11.2 | 9.7 | 6.4 | 5.5 | 4.7 | 4.1 | 1.5 | 1.2 | 1.0 | 222 |
| 15 | 24.8 | 12.2 | 10.5 | 9.8 | 6.0 | 5.0 | 4.4 | 1.6 | 1.3 | 1.1 | |
| 18 | 25.9 | 12.9 | 11.0 | 10.3 | 6.3 | 5.3 | 4.6 | 3.9 | 1.4 | 1.2 | |
| 22 | 27.3 | 23.3 | 11.6 | 10.8 | 9.4 | 5.5 | 4.8 | 4.0 | 1.4 | 1.25 | |
| 30 | 29.7 | 25.2 | 12.7 | 11.7 | 10.1 | 6.0 | 5.2 | 4.3 | 3.7 | 1.4 | |
| 37 | 31.5 | 26.5 | 23.1 | 12.4 | 10.7 | 9.1 | 5.5 | 4.5 | 3.9 | 1.5 | |
| 45 | | 27.9 | 24.2 | 22.6 | 11.2 | 9.5 | 5.8 | 4.7 | 4.0 | 3.5 | 342 |
| 55 | | 29.5 | 25.5 | 23.7 | 11.9 | 10.0 | 8.8 | 5.0 | 4.2 | 3.7 | |
| 75 | | | 27.6 | 25.7 | 22.3 | 10.8 | 9.4 | 5.4 | 4.5 | 3.9 | |
| 90 | | | 29.0 | 26.9 | 23.4 | 11.3 | 9.8 | 8.1 | 4.7 | 4.1 | |
| 110 | | | | 28.3 | 24.5 | 12.0 | 10.4 | 8.6 | 4.9 | 4.3 | |
| 132 | | | | 29.7 | 25.7 | 21.9 | 10.8 | 8.9 | 7.6 | 4.5 | |
| 160 | | | | | 27.0 | 22.9 | 20.0 | 9.3 | 7.8 | | 450 |
| 180 | | | | | 27.8 | 23.5 | 20.6 | 10.0 | 8.0 | | |
| 200 | | | | | 28.6 | 24.2 | 21.2 | 10.9 | 8.2 | | |
| 225 | | | | | | 24.9 | 21.8 | 11.5 | 8.5 | | |
| 250 | | | | | | 25.6 | 22.3 | | 9.6 | | |
| 280 | | | | | | 26.3 | 22.9 | | 9.9 | | |
| 315 | | | | | | 27.1 | 23.6 | | 10.5 | | |
| 350 | | | | | | | 24.2 | | | | 590 |
| 400 | | | | | | | 26.4 | | | | |

Ordering example type FAR from page 13/17:

Motor 45 kW, $P_{\text{eff}} = 37$ kW, $n_1 = 1470$ rpm, maximum output torque: $T_{\max} = 2.0 \times T_{\text{eff}}$.

Selection:

FLUDEX FAR coupling size 395,

Hollow shaft: Bore $\varnothing D1 = 60H7$ mm with keyway to DIN 6885/1 and retaining screw.

Specification of oil filling quantity: 7.6 l (see under oil filling quantities for the FA series in this catalog section).

Product code:

- With pulley 5xSPB224:
2LC0900-3AF90-0AA0-Z
L1E+Y90
 plain text to Y90: **7.6 l**
- With pulley 7xSPB236:
2LC0900-3AF91-0AA0-Z
L1E+Y90
 plain text to Y90: **7.6 l**
- With 160°C fuse:
2LC0900-3AF90-0AA0-Z
L1E+Y90+F08
 plain text to Y90: **7.6 l**

Ordering example type FADB from page 13/21:

Motor 30 kW, $P_{\text{eff}} = 22$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FADB coupling size 342, standard type,

Hollow shaft: Bore $\varnothing D1 = 55H7$ mm with keyway to DIN 6885/1 and retaining screw,

Part 13: Bore $\varnothing D2 = 50H7$ mm with keyway to DIN 6885/1 and set screw,

shaft end insertion depth $L2 = 90$ mm.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- Part 13: Standard brake drum
2LC0900-2AC99-0AA0-Z
L1D+M1C+Y29
 plain text to Y29: **90 mm**
- Part 13: Long brake drum
2LC0900-2AC99-0BA0-Z
L1D+M1C+Y29
 plain text to Y29: **90 mm**

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Oil filling quantities for FA series

| P_{eff} | Speed in rpm | | | | | | | | | | Size |
|------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|
| | 600 | 740 | 890 | 980 | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 | |
| kW | Oil filling quantity in l | | | | | | | | | | |
| 0.55 | 3.2 | 2.8 | | | | | | | | | |
| 0.75 | 3.5 | 3.0 | 2.6 | | | | | | | | |
| 1.1 | 3.9 | 3.3 | 2.9 | 2.7 | | | | | | | |
| 2.2 | 7.3 | 4.0 | 3.4 | 3.2 | 2.8 | | | | | | |
| 3.0 | 7.9 | 6.8 | 3.7 | 3.4 | 3.0 | 2.5 | | | | | |
| 4.0 | 8.5 | 7.3 | 4.0 | 3.7 | 3.2 | 2.7 | | | | | |
| 5.5 | 9.4 | 7.9 | 6.8 | 4.1 | 3.5 | 2.9 | 2.6 | | | | |
| 7.5 | 17.0 | 8.5 | 7.4 | 6.9 | 3.8 | 3.2 | 2.8 | 2.4 | | | |
| 11 | 18.7 | 16.0 | 8.1 | 7.6 | 6.6 | 3.5 | 3.0 | 2.5 | | | |
| 15 | 20.3 | 17.3 | 8.9 | 8.2 | 7.1 | 3.8 | 3.3 | 2.7 | | | |
| 18 | 21.4 | 18.0 | 15.7 | 8.6 | 7.4 | 4.0 | 3.4 | 2.8 | 2.4 | | |
| 22 | | 19.0 | 16.5 | 15.4 | 7.8 | 6.6 | 3.6 | 3.0 | 2.5 | | |
| 30 | | 20.6 | 17.8 | 16.6 | 8.5 | 7.2 | 6.3 | 3.2 | 2.7 | 2.4 | 297 |
| 37 | | | 18.8 | 17.5 | 15.2 | 7.6 | 6.6 | 3.4 | 2.8 | 2.5 | |
| 45 | | | 19.8 | 18.4 | 16.0 | 7.9 | 6.9 | 3.6 | 2.9 | 2.6 | |
| 55 | | | 21.0 | 19.3 | 16.8 | 8.4 | 7.3 | 6.0 | 3.1 | 2.7 | |
| 75 | | | | 21.1 | 18.1 | 15.4 | 7.9 | 6.5 | 5.3 | 2.9 | |
| 90 | | | | | 19.0 | 16.1 | 14.1 | 6.7 | 5.6 | 3.0 | |
| 110 | | | | | 20.1 | 16.9 | 14.8 | 7.1 | 5.9 | | 395 |
| 132 | | | | | | 17.7 | 15.4 | 7.9 | 6.2 | | |
| 160 | | | | | | 18.6 | 16.2 | 13.4 | 6.8 | | |
| 180 | | | | | | 19.2 | 16.7 | 13.8 | 7.2 | | |
| 200 | | | | | | | 17.1 | 14.1 | | | 516 |
| 225 | | | | | | | 17.6 | 14.6 | | | |
| 250 | | | | | | | 18.1 | 14.9 | | | |
| 280 | | | | | | | | 15.3 | | | |
| 315 | | | | | | | | 15.8 | | | |
| 350 | | | | | | | | 17.1 | | | |

Ordering example type FADS HB from page 13/23:

Motor 160 kW, $P_{\text{eff}} = 132$ kW, $n_1 = 2950$ rpm

Selection:

FLUDEX FADS HB coupling size 395,

Hollow shaft: Bore $\varnothing D1 = 65H7$ mm with keyway to DIN 6885/1 and retaining screw,

Part 5: Bore $\varnothing D2 = 80H7$ mm with keyway to DIN 6885/1 and set screw,

Fitting position: horizontal/vertical, motor overhead (MO)/motor underneath (MU),

shaft insertion depth $L2 = 80$ mm.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- Horizontal version:
2LC0900-3AE99-0AA0-Z
L1F+M1J+Y29
plain text to Y29: **80 mm**
- Vertical version MO:
2LC0900-3AE99-0AA0-Z
L1F+M1J+F13+Y29
plain text to Y29: **80 mm**
- Vertical version MU:
2LC0900-3AE99-0AA0-Z
L1F+M1J+F14+Y29
plain text to Y29: **80 mm**

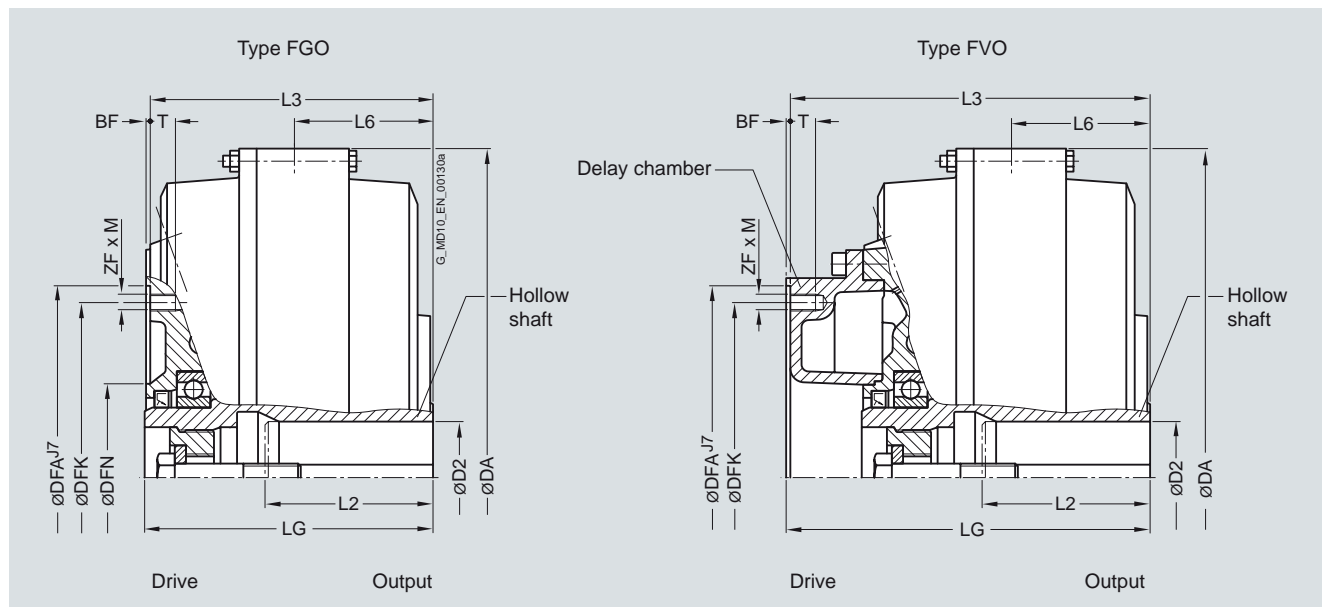
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Types FGO/FVO

Selection and ordering data

Basic coupling of the FG series and delay chamber coupling of the FV series with connecting flange.



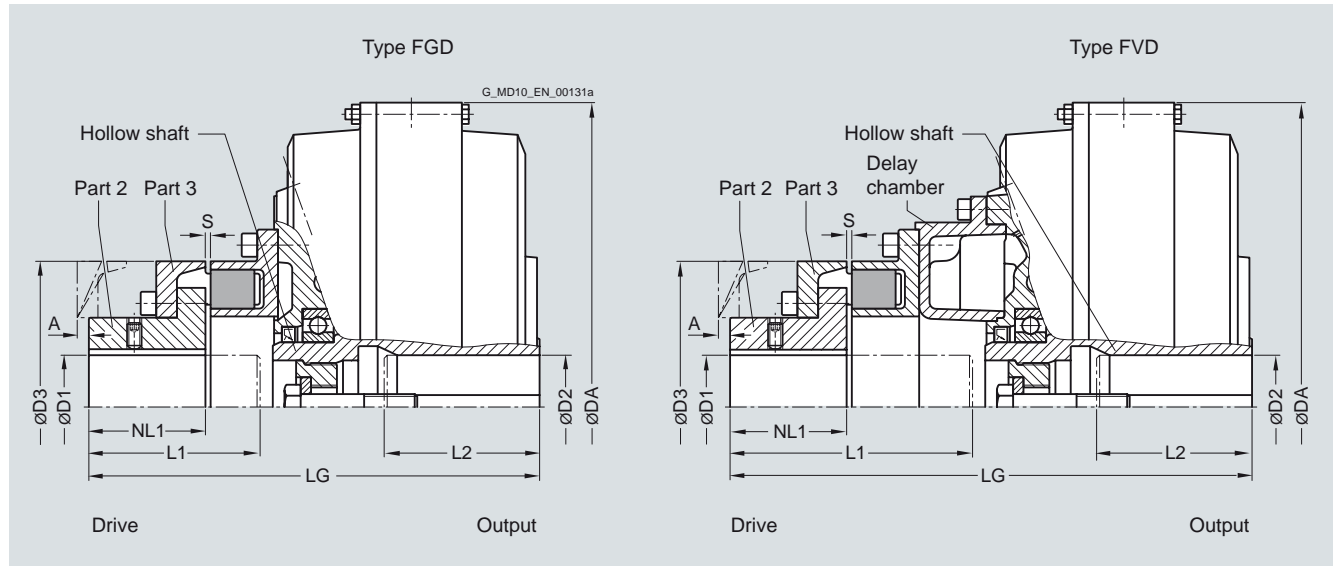
| Size | Type | Maximum speed | Dimensions in mm | | | | | | | | | | | Tightening torque for screws in thread ZF x M T_A | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------|------|-------------------|----------------------------|-----------|------------|-----|-----|------------------------------|-----|-----|----|-----|----------|--|---|------------------------|-----|
| | | | Installation dimensions | | | | | Flange connection dimensions | | | | | | | | | |
| | | | D2 | L2 | DA | LG | L3 | L6 | DFN | DFA | BF | DFK | ZF x M | | | | T |
| | | n_{kmax} rpm | Keyway to DIN 6885 min. | max. | max. | | | | | | | | | Nm | | kg | |
| 370 | FGO | 3600 | 75 | 140 | 420 | 185 | 182 | 84 | 125 | 220 | 3 | 200 | 8 x M10 | 15 | 31 | 2LC0900-8CE09-0AA0 M.. | 35 |
| | FVO | | | | | 228 | 225 | | – | | | | | | | 2LC0900-8ED09-0AA0 M.. | 38 |
| 425 | FGO | 3000 | 80 | 140 | 470 | 205 | 202 | 99 | 134 | 274 | 3 | 250 | 8 x M12 | 18 | 54 | 2LC0901-0CE09-0AA0 M.. | 46 |
| | FVO | | | | | 260 | 257 | | – | | | | | | | 2LC0901-0ED09-0AA0 M.. | 50 |
| 490 | FGO | 2600 | 55 | 110 | 555 | 236 | 232 | 105 | 138 | 314 | 4 | 282 | 8 x M16 | 24 | 135 | 2LC0901-1CE09-0AA0 M.. | 77 |
| | FVO | | >55 >75 | 75 100 | 140 170 | 301 | 297 | | – | | | | | | | 2LC0901-1ED09-0AA0 M.. | 83 |
| 565 | FGO | 2300 | 110 | 170 | 630 | 254 | 250 | 123 | 170 | 344 | 4 | 312 | 8 x M16 | 24 | 135 | 2LC0901-2CE09-0AA0 M.. | 98 |
| | FVO | | | | | 337 | 333 | | – | | | | | | | 2LC0901-2ED09-0AA0 M.. | 106 |
| 655 | FGO | 2000 | 130 | 210 | 736 | 301 | 296 | 145 | 180 | 430 | 5 | 390 | 8 x M20 | 25 | 260 | 2LC0901-3CE09-0AA0 M.. | 144 |
| | FVO | | | | | 389 | 384 | | – | | | | | | | 2LC0901-3ED09-0AA0 M.. | 156 |
| 755 | FGO | 1800 | 150 | 240 | 840 | 346 | 341 | 176 | 226 | 480 | 5 | 440 | 10 x M20 | 25 | 260 | 2LC0901-4CE09-0AA0 M.. | 210 |
| | FVO | | | | | 445 | 440 | | – | | | | | | | 2LC0901-4ED09-0AA0 M.. | 223 |
| 887 | FGO | 1500 | 150 | 275 | 990 | 396 | 391 | 217 | 244 | 520 | 5 | 480 | 10 x M20 | 25 | 260 | 2LC0901-5CE09-0AA0 M.. | 380 |
| | FVO | | | | | 498 | 493 | | – | | | | | | | 2LC0901-5ED09-0AA0 M.. | 404 |

For ordering example, see page 13/30.

Selection and ordering data

Type with attached N-EUPEX D coupling.

Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



| Size | Type | Maximum speed n_{Kmax} rpm | Dimensions in mm FLUDEX coupling | | | | N-EUPEX D coupling | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) - selection in catalog part 3 | Weight <i>m</i> |
|------|------|------------------------------------|-------------------------------------|-----------|------------|-----|--------------------|------|------|-----|-----------------|----|--|--------------------|
| | | | D2 | | L2 | DA | LG | D1 | L1 | NL1 | D3 | S | A | |
| | | | min. | max. | max. | | | max. | max. | | N-EUPEX size | | | |
| 370 | FGD | 3600 | 75 | 140 | 420 | 298 | 65 | 110 | 70 | 180 | 2...6 | 10 | 2LC0900-8CA ■ 9-0AA0 L..+M.. | 46 |
| | FVD | | | | | 341 | | 150 | | | | | 2LC0900-8EA ■ 9-0AA0 L..+M.. | 49 |
| 425 | FGD | 3000 | 80 | 140 | 470 | 348 | 85 | 140 | 90 | 225 | 2...6 | 9 | 2LC0901-0CA ■ 9-0AA0 L..+M.. | 66 |
| | FVD | | | | | 403 | | 195 | | | | | 2LC0901-0EA ■ 9-0AA0 L..+M.. | 70 |
| 490 | FGD | 2600 | 55 | 110 | 555 | 397 | 95 | 158 | 100 | 250 | 3...8 | 11 | 2LC0901-1CA ■ 9-0AA0 L..+M.. | 106 |
| | FVD | | >55 >75 | 75 100 | 140 170 | 462 | | 220 | | | | | 2LC0901-1EA ■ 9-0AA0 L..+M.. | 112 |
| 565 | FGD | 2300 | 110 | 170 | 630 | 430 | 105 | 170 | 110 | 280 | 3...8 | 5 | 2LC0901-2CA ■ 9-0AA0 L..+M.. | 134 |
| | FVD | | | | | 513 | | 255 | | | | | 2LC0901-2EA ■ 9-0AA0 L..+M.. | 142 |
| 655 | FGD | 2000 | 130 | 210 | 736 | 515 | 140 | 210 | 140 | 350 | 3...8 | 0 | 2LC0901-3CA ■ 9-0AA0 L..+M.. | 214 |
| | FVD | | | | | 603 | | 295 | | | | | 2LC0901-3EA ■ 9-0AA0 L..+M.. | 225 |
| 755 | FGD | 1800 | 150 | 240 | 840 | 584 | 150 | 230 | 160 | 400 | 3...8 | 0 | 2LC0901-4CA ■ 9-0AA0 L..+M.. | 302 |
| | FVD | | | | | 683 | | 330 | | | | | 2LC0901-4EA ■ 9-0AA0 L..+M.. | 316 |
| 887 | FGD | 1500 | 150 | 275 | 990 | 665 | 160 | 260 | 180 | 440 | 5...10 | 0 | 2LC0901-5CA ■ 9-0AA0 L..+M.. | 502 |
| | FVD | | | | | 767 | | 365 | | | | | 2LC0901-5EA ■ 9-0AA0 L..+M.. | 526 |

ØD1: Without finished bore from size 655 with small hub for:

- Size 655 ØD1max = 110 mm
- Size 755 ØD1max = 120 mm
- Size 887 ØD1max = 130 mm – Without order code L..

Without finished bore from size 655 with large hub for:

- Size 655 ØD1 = 88 ... 140
- Size 755 ØD1 = 98 ... 150
- Size 887 ØD1 = 118 ... 160 – Without order code L..

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
2
9

For ordering example, see page 13/31.

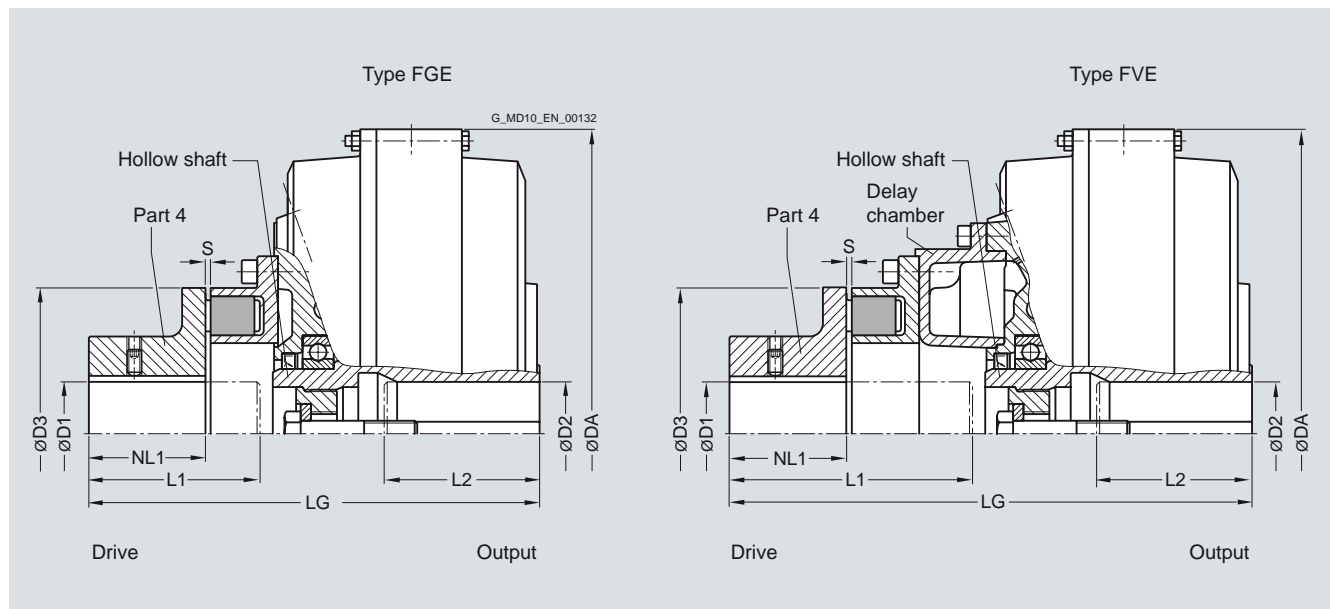
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Types FGE/FVE

Selection and ordering data

Type with attached N-EUPEX E coupling. Enables larger bores on the drive side.



| Size | Type | Maximum speed n_{Kmax} | Dimensions in mm FLUDEX coupling | | | | | N-EUPEX E coupling | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight <i>m</i> |
|------|------|-----------------------------|-------------------------------------|-----------|------------|------|------|--------------------|-----------------|-------------------------|-------|---------------------------------|--|------------------------|
| | | | D2 | L2 | DA | LG | D1 | L1 | NL1 | D3 | S | | | |
| | | min. | max. | max. | | max. | max. | | N-EUPEX size | Available at short term | kg | | | |
| | | rpm | | | | | | | | | | | | |
| 370 | FGE | 3600 | 75 | 140 | 420 | 298 | 75 | 110 | 70 | 180 | 2...6 | 2LC0900-8CB ■ 9-0AA0 L..+M.. | 45 | |
| | FVE | | | | | 341 | | 150 | | | | 2LC0900-8EB ■ 9-0AA0 L..+M.. | 49 | |
| 425 | FGE | 3000 | 80 | 140 | 470 | 348 | 90 | 140 | 90 | 225 | 2...6 | 2LC0901-0CB ■ 9-0AA0 L..+M.. | 63 | |
| | FVE | | | | | 403 | | 195 | | | | 2LC0901-0EB ■ 9-0AA0 L..+M.. | 67 | |
| 490 | FGE | 2600 | | 55 | 110 | 555 | 397 | 100 | 158 | 100 | 250 | 3...8 | 2LC0901-1CB ■ 9-0AA0 L..+M.. | 104 |
| | FVE | | >55 >75 | 75 100 | 140 170 | | 462 | | 220 | | | 2LC0901-1EB ■ 9-0AA0 L..+M.. | 110 | |
| 565 | FGE | 2300 | 110 | 170 | 630 | 430 | 110 | 170 | 110 | 280 | 3...8 | 2LC0901-2CB ■ 9-0AA0 L..+M.. | 138 | |
| | FVE | | | | | 513 | | 255 | | | | 2LC0901-2EB ■ 9-0AA0 L..+M.. | 146 | |

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1
9

Ordering example:

Motor 45 kW, $P_{eff} = 37$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FVE coupling size 370,

Hollow shaft: Bore ØD2 = 60H7 mm with keyway to DIN 6885/1 and retaining screw,

Part 4: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and set screw,
with electronic or mechanical operation monitoring, seal set Perbunan.

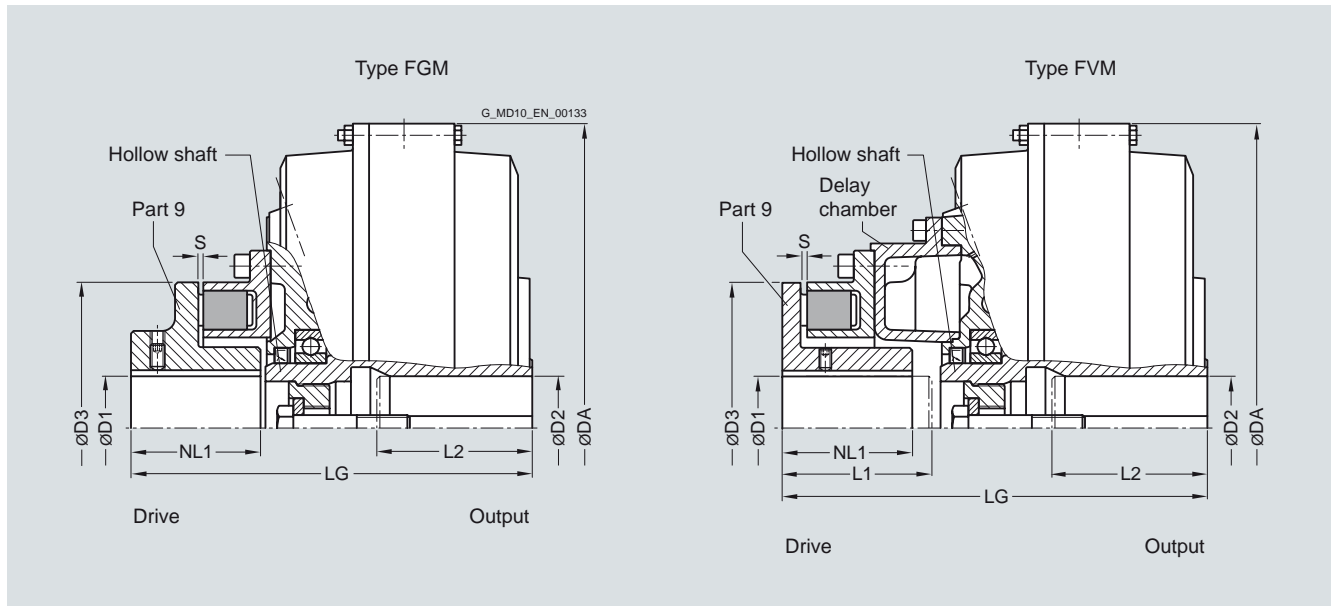
Delivery without oil filling, no oil filling quantity specification.

Product code:

- With 110 °C thermal switch:
**2LC0900-8EB99-0AA0-Z
L1E+M1E+F03**
- With 125 °C EOC transmitter:
**2LC0900-8EB99-0AA0-Z
L1E+M1E+F04**

Selection and ordering data

Type with attached N-EUPEX M coupling. Enables a short fitting length.



| Size | Type | Maximum speed n_{Kmax} | Dimensions in mm | | | | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight m |
|------|------|-------------------------------------|------------------|-----------|------------|------------|--------------------|-----|-----|-----|-----------------|--|-------------------|
| | | | FLUDEX coupling | | | | N-EUPEX M coupling | | | | | | |
| | | D2 Keyway to DIN 6885 min. | L2 max. | DA | LG | D1 max. | L1 max. | NL1 | D3 | S | N-EUPEX size | Available at short term | kg |
| 370 | FGM | 3600 | 75 | 140 | 420 | 274 | 70 | 80 | 80 | 180 | 2...6 | 2LC0900-8CD ■ 9-0AA0 L...+M... | 48 |
| | FVM | | | | | 288 | | 100 | 85 | | | 2LC0900-8EC ■ 9-0AA0 L...+M... | 51 |
| 425 | FGM | 3000 | 80 | 140 | 470 | 310 | 85 | 100 | 100 | 225 | 2...6 | 2LC0901-0CD ■ 9-0AA0 L...+M... | 67 |
| | FVM | | | | | 327 | | 120 | 100 | | | 2LC0901-0EC ■ 9-0AA0 L...+M... | 71 |
| 490 | FGM | 2600 | 55 | 110 | 555 | 350 | 90 | 105 | 105 | 250 | 3...8 | 2LC0901-1CD ■ 9-0AA0 L...+M... | 105 |
| | FVM | | >55 >75 | 75 100 | 140 170 | 382 | | 140 | 110 | | | 2LC0901-1EC ■ 9-0AA0 L...+M... | 112 |
| 565 | FGM | 2300 | 110 | 170 | 630 | 380 | 100 | 120 | 120 | 280 | 3...8 | 2LC0901-2CD ■ 9-0AA0 L...+M... | 134 |
| | FVM | | | | | 425 | | 165 | 130 | | | 2LC0901-2EC ■ 9-0AA0 L...+M... | 142 |

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1

9

Ordering example:

Motor 45 kW, $P_{eff} = 37$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FGM coupling size 370,

Hollow shaft: Bore ØD2 = 60H7 mm with keyway (for number of keyways, see "Special types") to DIN 6885/1 and retaining screw,
Part 4: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and set screw.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- With one keyway:
**2LC0900-8CD99-0AA0
L1E+M1E**
- With two keyways set 180° apart:
**2LC0900-8CD99-0AA0-Z
L1E+M1E+L46**
- With two keyways set 120° apart:
**2LC0900-8CD99-0AA0-Z
L1E+M1E+L47**

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Oil filling quantities for FG/FV series

Selection and ordering data

This assignment is valid for a maximum starting torque $T_{\max} = 2.0 \times T_{\text{eff}}$ (FG series) or $T_{\max} = 1.5 \times T_{\text{eff}}$ (FV series), and mineral oils with a viscosity of VG 22/VG 32.

If other operating fluids are used, or with drive via the hollow shaft or $T_{\max} \neq 2.0 \times T_{\text{eff}}$ or $T_{\max} \neq 1.5 \times T_{\text{eff}}$, changed filling quantities must be observed!

| P _{eff} | Speed in rpm | | | | | | | | | | | | | | | | | | | | Size |
|------------------|---------------------------|-------|-------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|-----|------|-----|-----|------|
| | 600 | | 740 | 890 | | 980 | | 1180 | | 1470 | | 1770 | | 2300 | | 2950 | | 3550 | | | |
| | Series | | | | | | | | | | | | | | | | | | | | |
| | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | |
| kW | Oil filling quantity in l | | | | | | | | | | | | | | | | | | | | |
| 1.1 | | 5.3 | | | | | | | | | | | | | | | | | | | |
| 2.2 | 6.4 | 6.7 | | 5.5 | | | | | | | | | | | | | | | | | |
| 3.0 | 7.0 | 7.4 | 5.9 | 6.1 | | 5.0 | | | | | | | | | | | | | | | |
| 4.0 | 7.2 | 8.0 | 6.4 | 6.6 | | 5.6 | | 5.0 | | | | | | | | | | | | | |
| 5.5 | 13.0 | 13.8 | 6.9 | 7.4 | 6.0 | 6.2 | | 5.6 | | | | | | | | | | | | | |
| 7.5 | 14.4 | 15.2 | 7.2 | 8.0 | 6.5 | 6.8 | 6.0 | 6.2 | | 5.1 | | | | | | | | | | | |
| 11 | 15.9 | 17.4 | 13.3 | 14.1 | 7.2 | 7.7 | 6.7 | 7.1 | 5.7 | 5.9 | | | | | | | | | | | |
| 15 | 17.0 | 18.5 | 14.7 | 15.6 | 12.4 | 13.0 | 7.2 | 7.7 | 6.2 | 6.5 | | 5.2 | | | | | | | | | |
| 18 | 17.0 | 31.6 | 15.4 | 16.6 | 13.1 | 13.8 | 12.0 | 12.5 | 6.5 | 6.9 | | 5.5 | | | | | | | | | |
| 22 | 31.1 | 33.2 | 16.2 | 17.7 | 14.0 | 14.8 | 12.7 | 13.4 | 6.9 | 7.3 | 5.7 | 5.9 | | 4.8 | | | | | | | |
| 30 | 35.9 | 36.5 | 17.0 | 18.5 | 15.2 | 16.3 | 14.1 | 14.9 | 11.8 | 12.3 | 6.3 | 6.5 | 5.3 | 5.5 | | | | | | | |
| 37 | 37.9 | 39.9 | 29.9 | 32.4 | 16.1 | 17.5 | 14.9 | 15.9 | 12.6 | 13.3 | 6.6 | 7.0 | 5.7 | 5.9 | | 4.2 | | | | | |
| 45 | 39.7 | 44.0 | 32.3 | 34.0 | 17.0 | 18.5 | 15.7 | 17.0 | 13.4 | 14.1 | 7.0 | 7.5 | 6.0 | 6.2 | | 4.6 | | | | | |
| 55 | 40.0 | 44.0 | 35.5 | 36.2 | 28.4 | 31.0 | 16.6 | 18.1 | 14.3 | 15.1 | 11.6 | 12.0 | 6.4 | 6.7 | 5.0 | 5.1 | | | | | |
| 75 | 70.5 | 75.8 | 38.7 | 41.4 | 31.7 | 33.6 | 28.5 | 31.2 | 15.5 | 16.7 | 12.7 | 13.5 | 6.9 | 7.4 | 5.5 | 5.7 | 4.3 | 4.2 | | | |
| 90 | 74.7 | 80.0 | 40.0 | 44.0 | 34.4 | 35.4 | 30.4 | 32.7 | 16.3 | 17.7 | 13.5 | 14.3 | 11.4 | 11.6 | 5.9 | 6.1 | 4.6 | 4.5 | | | |
| 110 | 81.0 | 84.3 | 40.0 | 44.0 | 37.0 | 38.2 | 33.0 | 34.5 | 27.3 | 29.9 | 14.4 | 15.2 | 12.1 | 12.6 | 6.2 | 6.4 | 4.9 | 5.0 | 4.0 | 4.1 | |
| 132 | 88.2 | 89.2 | 69.3 | 74.6 | 38.8 | 41.6 | 36.0 | 36.7 | 28.6 | 31.3 | 15.1 | 16.2 | 12.8 | 13.5 | 6.5 | 6.9 | 5.2 | 5.4 | 4.4 | 4.2 | |
| 160 | 93.5 | 96.3 | 73.3 | 78.7 | 40.0 | 44.0 | 37.8 | 39.8 | 30.6 | 32.9 | 15.9 | 17.3 | 13.6 | 14.4 | 10.6 | 10.4 | 5.5 | 5.7 | 4.7 | 4.6 | |
| 180 | 96.4 | 101.8 | 76.5 | 81.3 | 65.4 | 44.0 | 38.9 | 42.1 | 32.1 | 33.9 | 26.2 | 17.9 | 14.1 | 14.9 | 11.0 | 11.0 | 5.8 | 6.0 | 4.9 | 4.9 | |
| 200 | 98.0 | 107.0 | 79.8 | 83.6 | 67.0 | 72.1 | 39.9 | 44.0 | 33.7 | 34.9 | 26.9 | 29.4 | 14.6 | 15.4 | 11.4 | 11.7 | 6.0 | 6.2 | 5.0 | 5.1 | |
| 250 | 98.0 | 107.0 | 88.7 | 89.5 | 70.9 | 76.3 | 40.0 | 44.0 | 36.8 | 37.9 | 28.4 | 31.1 | 15.4 | 16.7 | 12.2 | 12.8 | | | 5.4 | 5.5 | |
| 315 | | 84.7 | 98.5 | 76.6 | 81.5 | 69.8 | 75.6 | 39.0 | 42.1 | 30.8 | 33.0 | 26.2 | 28.6 | 13.1 | 13.9 | | | | | 490 | |
| 350 | | 97.2 | 103.6 | 80.0 | 83.7 | 71.8 | 77.7 | 39.9 | 44.0 | 32.2 | 33.9 | 26.9 | 29.5 | 13.6 | 14.4 | | | | | | |
| 400 | | 98.0 | 107.0 | 85.1 | 86.9 | 75.2 | 80.5 | 64.5 | 68.4 | 34.2 | 35.3 | 27.8 | 30.4 | | | | | | | 655 | |
| 500 | | 98.0 | 107.0 | 92.4 | 94.5 | 82.5 | 85.3 | 68.1 | 73.8 | 37.1 | 38.4 | 29.7 | 32.3 | | | | | | | | |
| 600 | | | | | 96.9 | 102.9 | 90.1 | 90.6 | 71.5 | 77.3 | 38.8 | 41.8 | 31.9 | 33.8 | | | | | | | |
| 750 | | | | | 98.0 | 107.0 | 95.3 | 99.6 | 77.3 | 81.9 | 64.0 | 67.8 | 35.4 | 36.2 | | | | | | | |
| 900 | | | | | | 98.0 | 107.0 | 83.7 | 86.0 | 67.0 | 72.7 | | | | | | | | | 887 | |
| 1100 | | | | | | | | 81.1 | 92.3 | 70.4 | 76.2 | | | | | | | | | | |
| 1300 | | | | | | | | 95.2 | 99.3 | 74.2 | 79.8 | | | | | | | | | | |
| 1600 | | | | | | | | | | 80.6 | 84.0 | | | | | | | | | | |

Ordering example type FGO/FVO from page 13/26:

Motor 132 kW, $P_{\text{eff}} = 110$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FGO/FGV coupling size 490,

Hollow shaft: Bore $\varnothing D2 = 70H7$ mm with keyway to DIN 6885/1 and retaining screw.

Delivery with oil filling: FGO = 14.4 l / FVO = 15.2 l (see under oil filling quantities for FG/FV series in this catalog section).

Product code:

- In type FGO:
2LC0901-1CE09-0AA0-Z
L1G+F16+Y90
plain text to Y90: **14.4 l**
- In type FGV:
2LC0901-1ED09-0AA0-Z
L1G+F16+Y90
plain text to Y90: **15.2 l**

| P _{eff} | Speed in rpm | | | | | | | | | | | | | | | | | | | | Size |
|------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|----|-----|------|
| | 600 | | 740 | 890 | | 980 | | 1180 | | 1470 | | 1770 | | 2300 | | 2950 | | 3550 | | | |
| | Series | | | | | | | | | | | | | | | | | | | | |
| | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | FG | FV | |
| kW | Oil filling quantity in l | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 8.7 | 9.1 | | | | | | | | | | | | | | | | | | | |
| 4.0 | 9.5 | 9.9 | | 8.1 | | | | | | | | | | | | | | | | | |
| 5.5 | 10.3 | 11.1 | 8.7 | 9.0 | | | | | | | | | | | | | | | | | |
| 7.5 | 10.9 | 12.0 | 9.5 | 9.9 | | 8.3 | | 7.4 | | | | | | | | | | | | | |
| 11 | 19.9 | 21.4 | 10.5 | 11.3 | 9.1 | 9.4 | | 8.6 | | | | | | | | | | | | | |
| 15 | 22.0 | 23.7 | 10.9 | 12.0 | 9.8 | 10.4 | 9.1 | 9.5 | | 7.8 | | | | | | | | | | | |
| 18 | 23.2 | 25.2 | 19.1 | 20.5 | 10.3 | 11.1 | 9.6 | 10.1 | | 8.4 | | | | | | | | | | | |
| 22 | 24.3 | 27.0 | 20.3 | 21.9 | 10.9 | 11.7 | 10.1 | 10.8 | 8.6 | 9.0 | | | | | | | | | | | |
| 30 | 42.0 | 45.0 | 22.4 | 24.2 | 18.9 | 20.1 | 10.9 | 11.8 | 9.5 | 9.9 | | 7.9 | | | | | | | | | |
| 37 | 44.4 | 47.5 | 23.7 | 26.0 | 20.1 | 21.7 | 18.5 | 19.5 | 10.0 | 10.7 | 8.2 | 8.6 | | 6.7 | | | | | | | |
| 45 | 47.7 | 50.0 | 24.9 | 27.7 | 21.5 | 23.1 | 19.5 | 21.0 | 10.5 | 11.3 | 8.8 | 9.2 | | 7.5 | | | | | | | |
| 55 | 52.0 | 53.0 | 25.5 | 28.0 | 22.8 | 24.6 | 20.8 | 22.5 | 17.5 | 18.3 | 9.3 | 9.7 | 7.8 | 8.1 | | | | | | | |
| 75 | 58.0 | 59.5 | 45.6 | 48.5 | 24.6 | 27.4 | 22.9 | 24.8 | 19.3 | 20.7 | 10.1 | 10.8 | 8.6 | 9.0 | | 6.5 | | | | | |
| 90 | 60.5 | 65.5 | 49.1 | 50.5 | 25.5 | 28.9 | 23.9 | 26.5 | 20.4 | 22.0 | 10.7 | 11.4 | 9.2 | 9.5 | 7.2 | 7.1 | | | | | |
| 110 | 61.0 | 67.0 | 54.0 | 54.0 | 43.2 | 46.4 | 25.5 | 28.0 | 21.8 | 23.4 | 17.7 | 18.7 | 9.7 | 10.2 | 7.6 | 7.8 | | | | | |
| 132 | | | 57.0 | 58.0 | 45.8 | 48.7 | 42.1 | 45.1 | 23.0 | 24.9 | 18.7 | 19.9 | 10.1 | 10.9 | 8.1 | 8.4 | 6.3 | 6.1 | | 425 | |
| 160 | | | 60.0 | 63.5 | 49.5 | 51.0 | 44.3 | 47.4 | 24.0 | 26.7 | 19.8 | 21.4 | 16.7 | 16.8 | 8.6 | 8.9 | 6.8 | 6.6 | | | |
| 180 | | | 61.5 | 67.0 | 52.3 | 53.0 | 46.2 | 49.0 | 24.8 | 27.6 | 20.6 | 22.2 | 17.3 | 18.0 | 8.8 | 9.3 | 7.0 | 6.9 | | | |
| 200 | | | 62.5 | 67.0 | 55.0 | 55.0 | 48.1 | 50.0 | 25.5 | 43.7 | 21.4 | 23.0 | 17.9 | 18.9 | 9.2 | 9.6 | 7.3 | 7.3 | | | |
| 250 | | | | | 58.5 | 60.5 | 53.5 | 53.5 | 42.9 | 46.0 | 22.8 | 24.7 | 19.2 | 20.6 | 14.6 | 14.7 | 7.8 | 8.0 | | | |
| 315 | | | | | 61.0 | 67.0 | 57.5 | 58.5 | 46.2 | 49.0 | 24.2 | 26.8 | 20.6 | 22.3 | 16.1 | 16.1 | 8.3 | 8.7 | | | |
| 350 | | | | | 62.5 | 67.0 | 59.0 | 61.5 | 48.2 | 50.0 | 39.7 | 42.4 | 21.4 | 23.0 | 16.7 | 16.8 | | | | 565 | |
| 400 | | | | | | | 61.0 | 66.0 | 51.0 | 52.0 | 41.0 | 44.0 | 22.2 | 24.0 | 17.4 | 18.1 | | | | | |
| 500 | | | | | | | 61.0 | 67.0 | 56.0 | 56.5 | 43.3 | 46.5 | 37.8 | 40.0 | 18.7 | 19.9 | | | | | |
| 600 | | | | | | | | | 59.0 | 61.0 | 46.0 | 49.0 | 39.5 | 42.1 | | 21.2 | | | | | |
| 750 | | | | | | | | | | | 50.5 | 51.5 | 41.7 | 45.0 | | | | | | 755 | |
| 900 | | | | | | | | | | | 55.5 | 55.0 | 43.7 | 47.0 | | | | | | | |
| 1100 | | | | | | | | | | | | | 46.8 | 49.5 | | | | | | | |

Ordering example type FGD from page 13/27:

Motor 350 kW, $P_{eff} = 315$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FGD coupling size 655, standard type,
Hollow shaft: Bore $\varnothing D_2 = 120H7$ mm with keyway to DIN 6885/1
and retaining screw,

Part 2: Bore $\varnothing D_1 =$ see ordering data table "Without finished
bore" and "With finished bore",

keyway to DIN 6885/1 and set screw.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- Without finished bore for $\varnothing D_1 = 110$ mm:
2LC0901-3CA19-0AA0
L1S
- Without finished bore for $\varnothing D_1 = 130$ mm:
2LC0901-3CA29-0AA0
L1S
- With finished bore for $\varnothing D_1 = 140H7$ mm:
2LC0901-3CA99-0AA0
L1S+M1V

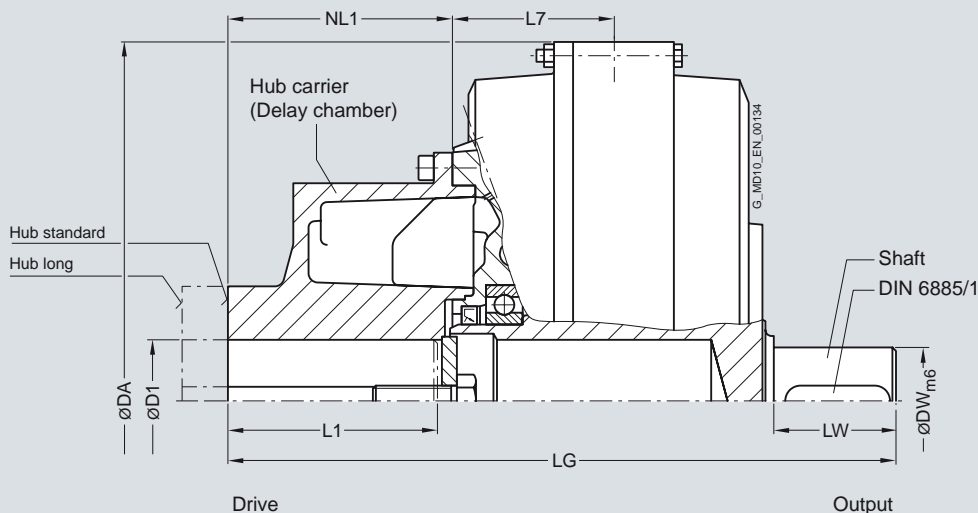
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FNO

Selection and ordering data

Type with large delay chamber and connecting shaft.



| Size | Maximum speed | Hub carrier | Dimensions in mm | | | | | | | | Connection dimensions | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------|---------------|-------------|-------------------------|------|------|-----|-----|-----|-----|-----|-----------------------|--------------------------|---|--------|
| | n_{Kmax} | | Installation dimensions | | | D1 | L1 | NL1 | DA | LG | | | | L7 |
| | rpm | Hub | min. | max. | max. | | | | | DW | LW | Available at short term | kg | |
| 370 | 3600 | Standard | 38 | 55 | 110 | 115 | 420 | 380 | 101 | 60 | 70 | 2LC0900-8GA ■ 0-1AA0 L.. | 56 | |
| | | Long | 38 | 80 | 140 | 145 | 420 | 410 | | | | 2LC0900-8GA ■ 0-2AA0 L.. | 54 | |
| 425 | 3000 | Standard | 42 | 75 | 140 | 147 | 470 | 437 | 106 | 70 | 80 | 2LC0901-0GA ■ 0-1AA0 L.. | 77 | |
| | | Long | 42 | 100 | 170 | 177 | 470 | 467 | | | | 2LC0901-0GA ■ 0-2AA0 L.. | 74 | |
| 490 | 2600 | Standard | 48 | 75 | 140 | 148 | 555 | 485 | 131 | 70 | 90 | 2LC0901-1GA ■ 0-1AA0 L.. | 120 | |
| | | Long | 48 | 110 | 170 | 178 | 555 | 515 | | | | 2LC0901-1GA ■ 0-2AA0 L.. | 115 | |
| 565 | 2300 | Standard | 65 | 95 | 170 | 178 | 630 | 543 | 131 | 90 | 100 | 2LC0901-2GA ■ 0-1AA0 L.. | 161 | |
| | | Long | 65 | 120 | 210 | 218 | 630 | 583 | | | | 2LC0901-2GA ■ 0-2AA0 L.. | 159 | |
| 655 | 2000 | Standard | 65 | 110 | 210 | 218 | 736 | 644 | 156 | 100 | 125 | 2LC0901-3GA ■ 0-1AA0 L.. | 233 | |
| | | Long | 65 | 135 | 250 | 258 | 736 | 684 | | | | 2LC0901-3GA ■ 0-2AA0 L.. | 232 | |
| 755 | 1800 | Standard | 65 | 120 | 210 | 219 | 840 | 705 | 170 | 110 | 140 | 2LC0901-4GA ■ 0-1AA0 L.. | 309 | |
| | | Long | 65 | 150 | 250 | 259 | 840 | 745 | | | | 2LC0901-4GA ■ 0-2AA0 L.. | 307 | |
| 887 | 1500 | Standard | 65 | 150 | 250 | 251 | 990 | 835 | 187 | 120 | 178 | 2LC0901-5GA ■ 0-1AA0 L.. | 541 | |
| | | Long | 65 | 170 | 300 | 301 | 990 | 885 | | | | 2LC0901-5GA ■ 0-2AA0 L.. | 544 | |

ØD1: Without finished bore – Without order codes

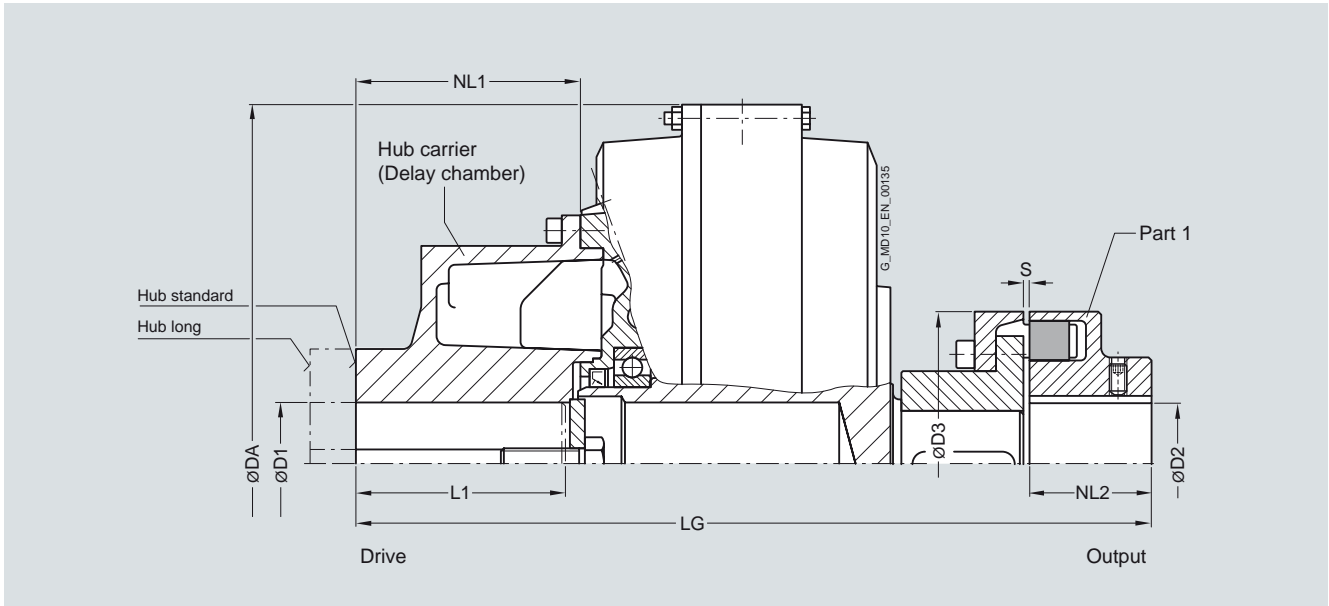
With finished bore – With order codes for diameter and tolerance (product code without -Z)

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For ordering example, see page 13/39.

Selection and ordering data

Type with large delay chamber and attached N-EUPEX A coupling. Enables a short fitting length.



| Size | Maximum speed n_{Kmax} | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | N-EUPEX A coupling | | | | S | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight m |
|------|-----------------------------|-----------------|-------------------------------------|------------|------------|-----|-----|--------------------|------------|-----|-----------------------|--------|---|-----------------|
| | | | D1 min. | D1 max. | L1 max. | NL1 | DA | LG | D2 max. | NL2 | D3 N-EUPEX size | | | |
| 370 | 3600 | Hub Standard | 38 | 55 | 110 | 115 | 420 | 454 | 75 | 70 | 180 | 3...6 | 2LC0900-8GB ■ ■ -1AA0 L...M... | 69 |
| | | Long | 38 | 80 | 140 | 145 | 420 | 484 | | | | | 2LC0900-8GB ■ ■ -2AA0 L...M... | 67 |
| 425 | 3000 | Standard | 42 | 75 | 140 | 147 | 470 | 521 | 85 | 80 | 200 | 3...6 | 2LC0901-0GB ■ ■ -1AA0 L...M... | 99 |
| | | Long | 42 | 100 | 170 | 177 | 470 | 551 | | | | | 2LC0901-0GB ■ ■ -2AA0 L...M... | 96 |
| 490 | 2600 | Standard | 48 | 75 | 140 | 148 | 555 | 579 | 90 | 90 | 225 | 3...6 | 2LC0901-1GB ■ ■ -1AA0 L...M... | 149 |
| | | Long | 48 | 110 | 170 | 178 | 555 | 609 | | | | | 2LC0901-1GB ■ ■ -2AA0 L...M... | 144 |
| 565 | 2300 | Standard | 65 | 95 | 170 | 178 | 630 | 648 | 100 | 100 | 250 | 3...8 | 2LC0901-2GB ■ ■ -1AA0 L...M... | 200 |
| | | Long | 65 | 120 | 210 | 218 | 630 | 688 | | | | | 2LC0901-2GB ■ ■ -2AA0 L...M... | 199 |
| 655 | 2000 | Standard | 65 | 110 | 210 | 218 | 736 | 774 | 120 | 125 | 315 | 3...8 | 2LC0901-3GB ■ ■ -1AA0 L...M... | 308 |
| | | Long | 65 | 135 | 250 | 258 | 736 | 814 | | | | | 2LC0901-3GB ■ ■ -2AA0 L...M... | 307 |
| 755 | 1800 | Standard | 65 | 120 | 210 | 219 | 840 | 850 | 140 | 140 | 350 | 3...8 | 2LC0901-4GB ■ ■ -1AA0 L...M... | 426 |
| | | Long | 65 | 150 | 250 | 259 | 840 | 890 | | | | | 2LC0901-4GB ■ ■ -2AA0 L...M... | 424 |
| 887 | 1500 | Standard | 65 | 150 | 250 | 251 | 990 | 1023 | 160 | 180 | 440 | 5...10 | 2LC0901-5GB ■ ■ -1AA0 L...M... | 693 |
| | | Long | 65 | 170 | 300 | 301 | 990 | 1073 | | | | | 2LC0901-5GB ■ ■ -2AA0 L...M... | 697 |

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

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ØD2: Without finished bore from size 655 with small hub for:

Size 655 ØD2max = 100 mm, size 755 ØD2max = 110 mm, size 887 ØD2max = 130 mm – Without order codes

Without finished bore from size 655 with large hub for:

Size 655 ØD2 = 88 ... 120, size 755 ØD2 = 88 ... 140, size 887 ØD2 = 118 ... 160 – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

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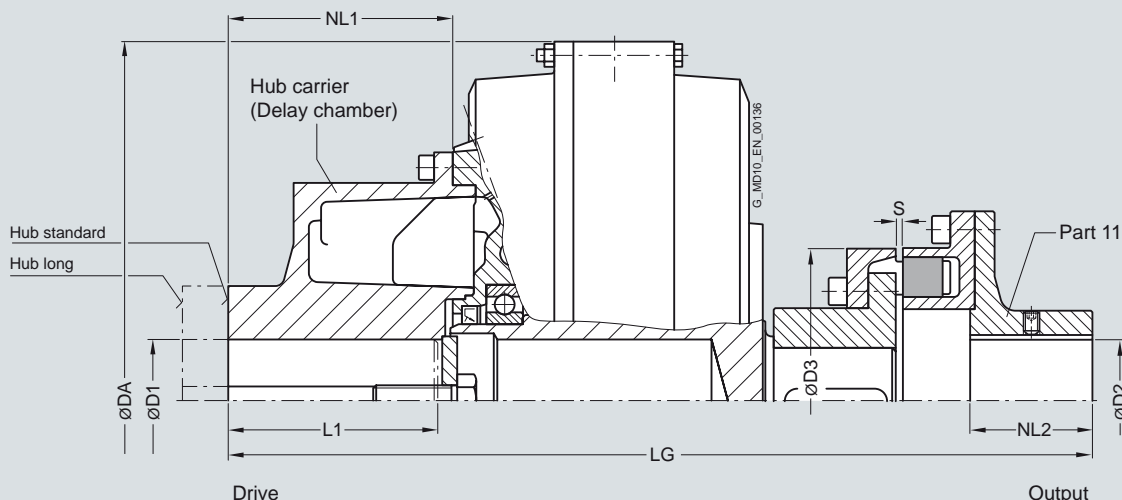
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FND

Selection and ordering data

Type with large delay chamber and attached N-EUPEX D coupling.
Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | | N-EUPEX D coupling | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------|---------------|-------------|-------------------------------------|------|-----|-----|------|------|--------------------|-----|-----|----------|---|--------|
| | n_{Kmax} | | D1 | L1 | NL1 | DA | LG | D2 | NL2 | D3 | S | <i>m</i> | | |
| | rpm | min | max. | max. | | | max. | | N-EUPEX size | | | kg | | |
| 370 | 3600 | Standard | 38 | 55 | 110 | 115 | 420 | 494 | 70 | 70 | 180 | 4...6 | 2LC0900-8GC ■ ■ ■ -1AA0 L..+M.. | 74 |
| | | Long | 38 | 80 | 140 | 145 | 420 | 524 | | | | | 2LC0900-8GC ■ ■ ■ -2AA0 L..+M.. | 72 |
| 425 | 3000 | Standard | 42 | 75 | 140 | 147 | 470 | 566 | 80 | 80 | 200 | 4...6 | 2LC0901-0GC ■ ■ ■ -1AA0 L..+M.. | 101 |
| | | Long | 42 | 100 | 170 | 177 | 470 | 596 | | | | | 2LC0901-0GC ■ ■ ■ -2AA L..+M..0 | 99 |
| 490 | 2600 | Standard | 48 | 75 | 140 | 148 | 555 | 629 | 90 | 90 | 225 | 4...6 | 2LC0901-1GC ■ ■ ■ -1AA0 L..+M.. | 153 |
| | | Long | 48 | 110 | 170 | 178 | 555 | 659 | | | | | 2LC0901-1GC ■ ■ ■ -2AA0 L..+M.. | 149 |
| 565 | 2300 | Standard | 65 | 95 | 170 | 178 | 630 | 706 | 100 | 100 | 250 | 5...8 | 2LC0901-2GC ■ ■ ■ -1AA0 L..+M.. | 207 |
| | | Long | 65 | 120 | 210 | 218 | 630 | 746 | | | | | 2LC0901-2GC ■ ■ ■ -2AA0 L..+M.. | 206 |
| 655 | 2000 | Standard | 65 | 110 | 210 | 218 | 736 | 842 | 110 | 125 | 315 | 5...8 | 2LC0901-3GC ■ ■ ■ -1AA0 L..+M.. | 315 |
| | | Long | 65 | 135 | 250 | 258 | 736 | 882 | | | | | 2LC0901-3GC ■ ■ ■ -2AA0 L..+M.. | 314 |
| 755 | 1800 | Standard | 65 | 120 | 210 | 219 | 840 | 921 | 120 | 140 | 350 | 5...8 | 2LC0901-4GC ■ ■ ■ -1AA0 L..+M.. | 433 |
| | | Long | 65 | 150 | 250 | 259 | 840 | 961 | | | | | 2LC0901-4GC ■ ■ ■ -2AA0 L..+M.. | 431 |
| 887 | 1500 | Standard | 65 | 150 | 250 | 251 | 990 | 1104 | 130 | 180 | 440 | 5...10 | 2LC0901-5GC ■ ■ ■ -1AA0 L..+M.. | 719 |
| | | Long | 65 | 170 | 300 | 301 | 990 | 1154 | | | | | 2LC0901-5GC ■ ■ ■ -2AA0 L..+M.. | 723 |

ØD1: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

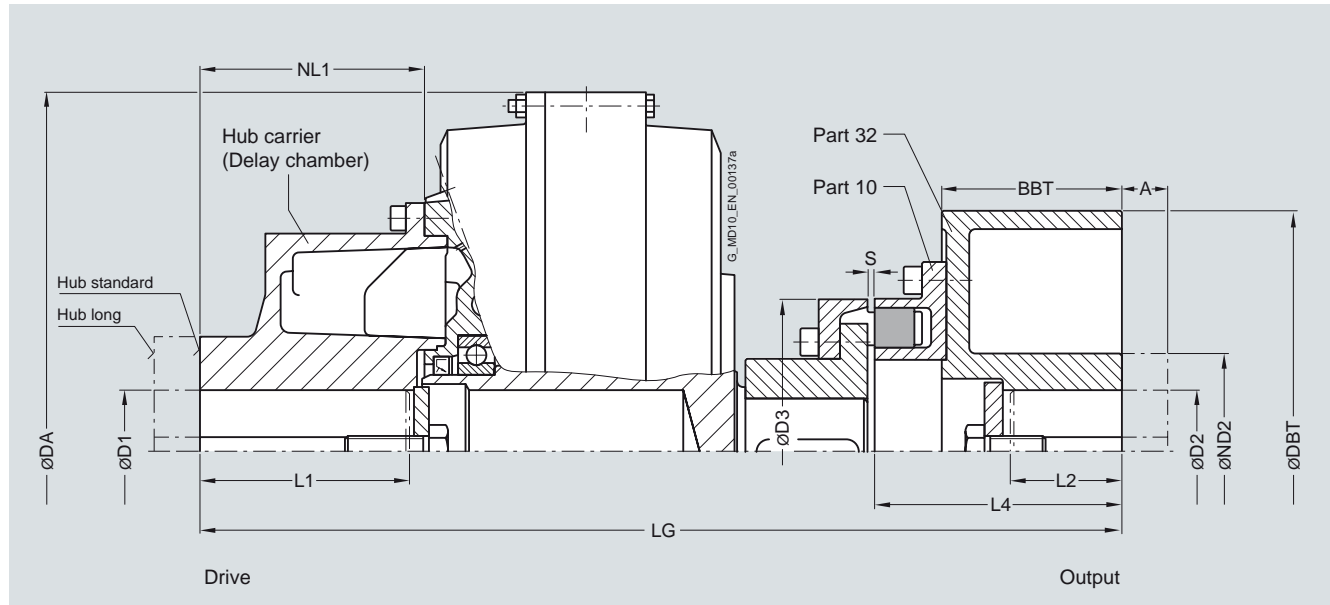
ØD2: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

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For ordering example, see page 13/39.

Selection and ordering data

Type with large delay chamber and attached N-EUPEX coupling and brake drum.
Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | | N-EUPEX coupling | | | Part 32 – Brake drum | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|----------|-----------------------|--|-------------------------------------|------|------|-----|-----|-----------------|------------------|-------|-----|----------------------|-----|-----|-----|-------------------------------------|---|--------|
| | n_{Kmax} | | D1 | L1 | NL1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBT | BBT | A | | | |
| | Keyway to DIN 6885 | | | | | | | | | | | | | | | | | |
| | rpm | Hub | min. | max. | max. | | | N-EUPEX size | | max. | | | | | | Available at short term | kg | |
| 370 | 2400 | Standard | 38 | 55 | 110 | 115 | 420 | 542 | 180 | 4...6 | 157 | 80 | 128 | 315 | 118 | 50 | 2LC0900-8GD ■ ■ -1 ■ A0 L...+M.. | 98 |
| | | Long | 38 | 80 | 140 | 145 | 420 | 572 | | | | | | | | 2LC0900-8GD ■ ■ -2 ■ A0 L...+M.. | 97 | |
| | 1900 | Standard | 38 | 55 | 110 | 115 | 420 | 574 | | | 189 | 90 | 160 | 400 | 150 | 80 | 2LC0900-8GD ■ ■ -1 ■ A0 L...+M.. | 125 |
| | | Long | 38 | 80 | 140 | 145 | 420 | 604 | | | | | | | | | 2LC0900-8GD ■ ■ -2 ■ A0 L...+M.. | 124 |
| 425 | 2400 | Standard | 42 | 75 | 140 | 147 | 470 | 604 | 200 | 4...6 | 162 | 80 | 128 | 315 | 118 | 50 | 2LC0901-0GD ■ ■ -1 ■ A0 L...+M.. | 126 |
| | | Long | 42 | 100 | 170 | 177 | 470 | 634 | | | | | | | | | 2LC0901-0GD ■ ■ -2 ■ A0 L...+M.. | 125 |
| | 1900 | Standard | 42 | 75 | 140 | 147 | 470 | 636 | | | 194 | 90 | 160 | 400 | 150 | 80 | 2LC0901-0GD ■ ■ -1 ■ A0 L...+M.. | 151 |
| | | Long | 42 | 100 | 170 | 177 | 470 | 666 | | | | | | | | | 2LC0901-0GD ■ ■ -2 ■ A0 L...+M.. | 150 |
| | | | | | | | | | | | | | | | | | | |
| ØD1: | | Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | | |
| | | With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | | |
| ØD2: | | Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | | |
| | | With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | | |
| Part 32: | | Small brake drum, without extension A | | | | | | | | | | | | | | A | | |
| | | Small brake drum, with extension A (increase of lengths L4 and LG by the amount A) | | | | | | | | | | | | | | B | | |
| | | Large brake drum, without extension A | | | | | | | | | | | | | | C | | |
| | | Large brake drum, with extension A (increase of lengths L4 and LG by the amount A) | | | | | | | | | | | | | | D | | |

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text and with **Y29**.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FNDB

| Size | Maximum speed n_{Kmax} | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | | | N-EUPEX coupling | | | Part 32 – Brake drum | | | | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|--------------------|-----------------------------|--|-------------------------------------|------|------|------|-----|-----------------|------|------------------|-------|-----|----------------------|-----|-----|------------------------------------|------------------------------------|------------------------------------|---|--------|
| | | | D1 | L1 | NL1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBT | BBT | A | | | | | |
| | | | Keyway to DIN 6885 | min. | max. | max. | | N-EUPEX size | | max. | | | | | | | Available at short term | kg | | |
| 490 | 1900 | Standard | 48 | 75 | 140 | 148 | 555 | 689 | 225 | 4...6 | 199 | 90 | 160 | 400 | 150 | 80 | 2LC0901-1GD ■ ■ -1 ■ A0 L..+M.. | 201 | | |
| | | Long | 48 | 110 | 170 | 178 | 555 | 719 | | | | | | | | 2LC0901-1GD ■ ■ -2 ■ A0 L..+M.. | 198 | | | |
| | 1500 ¹⁾ | Standard | 48 | 75 | 140 | 148 | 555 | 729 | | | 247 | 100 | 175 | 500 | 190 | 110 | 2LC0901-1GD ■ ■ -1 ■ A0 L..+M.. | 240 | | |
| | | Long | 48 | 110 | 170 | 178 | 555 | 759 | | | | | | | | 2LC0901-1GD ■ ■ -2 ■ A0 L..+M.. | 237 | | | |
| | 565 | 1900 | Standard | 65 | 95 | 170 | 178 | 630 | 756 | 250 | 5...8 | 207 | 90 | 160 | 400 | 150 | 80 | 2LC0901-2GD ■ ■ -1 ■ A0 L..+M.. | 258 | |
| Long | | | 65 | 120 | 210 | 218 | 630 | 796 | | | | | | | | 2LC0901-2GD ■ ■ -2 ■ A0 L..+M.. | 256 | | | |
| 1500 ¹⁾ | | Standard | 65 | 95 | 170 | 178 | 630 | 796 | | | 247 | 100 | 175 | 500 | 190 | 110 | 2LC0901-2GD ■ ■ -1 ■ A0 L..+M.. | 291 | | |
| | | Long | 65 | 120 | 210 | 218 | 630 | 836 | | | | | | | | 2LC0901-2GD ■ ■ -2 ■ A0 L..+M.. | 293 | | | |
| 655 | | 1500 ¹⁾ | Standard | 65 | 110 | 210 | 218 | 736 | 907 | 315 | 5...8 | 257 | 100 | 175 | 500 | 190 | 110 | 2LC0901-3GD ■ ■ -1 ■ A0 L..+M.. | 394 | |
| | Long | | 65 | 135 | 250 | 258 | 736 | 947 | | | | | | | | 2LC0901-3GD ■ ■ -2 ■ A0 L..+M.. | 390 | | | |
| | 1500 | Standard | 65 | 120 | 210 | 218 | 736 | 953 | | | 303 | 140 | 224 | 630 | 236 | 100 | 2LC0901-3GD ■ ■ -1 ■ A0 L..+M.. | 449 | | |
| | | Long | 65 | 135 | 250 | 258 | 736 | 993 | | | | | | | | 2LC0901-3GD ■ ■ -2 ■ A0 L..+M.. | 445 | | | |
| | 755 | 1500 | Standard | 65 | 120 | 210 | 219 | 840 | 1018 | 350 | 5...8 | 307 | 140 | 224 | 630 | 236 | 100 | 2LC0901-4GD ■ ■ -1 ■ A0 L..+M.. | 569 | |
| Long | | | 65 | 150 | 250 | 259 | 840 | 1058 | | | | | | | | 2LC0901-4GD ■ ■ -2 ■ A0 L..+M.. | 572 | | | |
| 887 | 1300 | Standard | 65 | 150 | 250 | 251 | 990 | 1190 | 440 | 5...10 | 347 | 160 | 265 | 710 | 265 | - | 2LC0901-5GD ■ ■ -1 A A0 L..+M.. | 902 | | |
| | | Long | 65 | 170 | 300 | 301 | 990 | 1240 | | | | | | | | 2LC0901-5GD ■ ■ -2 A A0 L..+M.. | 915 | | | |
| ØD1: | | Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | | | | |
| | | With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | | | | |
| ØD2: | | Without finished bore – Without order codes | | | | | | | | | | | | | | 1 | | | | |
| | | With finished bore – With order codes for diameter and tolerance (product code without -Z) | | | | | | | | | | | | | | 9 | | | | |
| Part 32: | | Small brake drum, without extension A | | | | | | | | | | | | | | A | | | | |
| | | Small brake drum, with extension A (increase of lengths L4 and LG by the amount A) | | | | | | | | | | | | | | B | | | | |
| | | Large brake drum, without extension A | | | | | | | | | | | | | | C | | | | |
| | | Large brake drum, with extension A (increase of lengths L4 and LG by the amount A) | | | | | | | | | | | | | | D | | | | |

Ordering example:

Motor 55 kW, $P_{eff} = 45$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FNDB coupling size 370, standard type,
 Hub carrier: Long hub bore ØD1 = 65H7 mm with keyway to
 DIN 6885/1 and set screw,
 Part 32: Ø315 x 118, bore ØD2 = 80H7 mm with keyway to
 DIN 6885/1 and retaining screw,
 with electronic or mechanical operation monitoring, seal set
 Perbunan.
 Delivery without oil filling, no oil filling quantity specification.

Product code:

- With brake drum part 32 Ø315 x 118:
2LC0900-8GD99-2AA0
L1F+M1J
- With brake drum part 32 Ø400 x 150 extended:
2LC0900-8GD99-2DA0
L1F+M1J

¹⁾ With version of brake drum in grey cast iron: Maximum speed 1800 rpm possible.

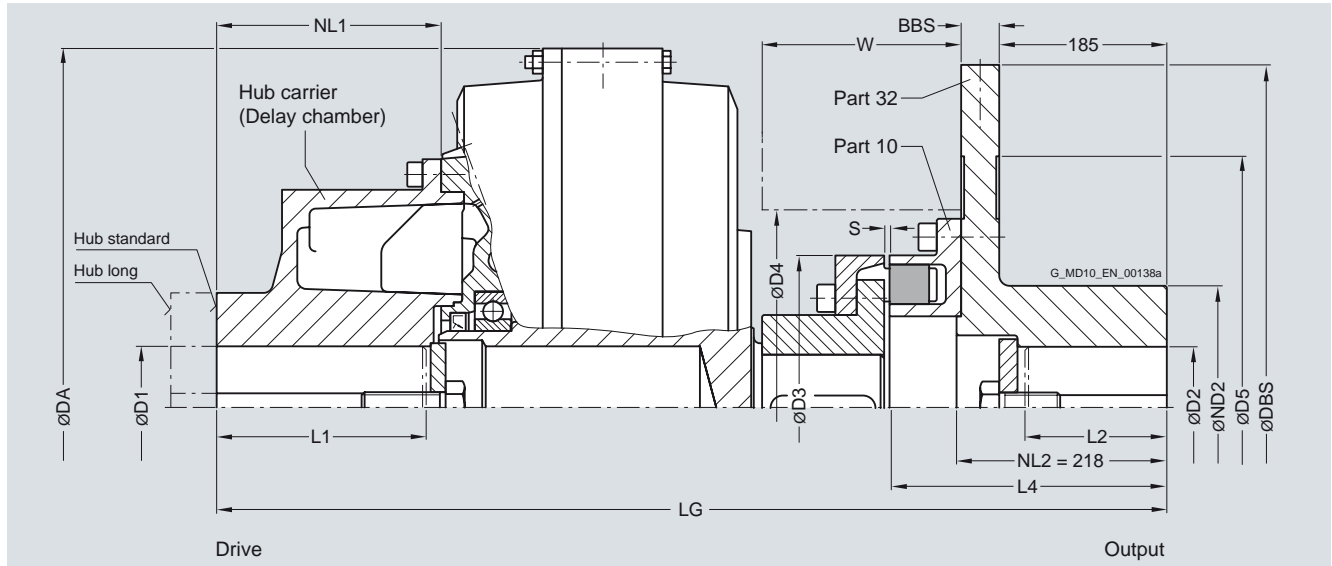
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FNDS SB with large delay chamber and brake disk for stopping brake

Selection and ordering data

Type with large delay chamber, attached N-EUPEX coupling and brake disk for stopping brakes. Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed n_{Kmax} | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | | | N-EUPEX coupling | | | Part 32 – Brake disk ¹⁾ | | | Space dimensions | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight <i>m</i> |
|------------|-----------------------------|-------------|---|----|-----|----|----|-----|--------|------------------|-----|-----|------------------------------------|-----|-----|------------------|---|--|------------------------|
| | rpm | Hub | D1 Keyway to DIN 6885 min. max. max. | L1 | NL1 | DA | LG | D3 | S | L4 | D2 | ND2 | DBS | BBS | D5 | D4 | W | | kg |
| 370 | 2100 | Standard | 38 55 110 115 420 642 | | | | | 180 | 4...6 | 257 80 | 145 | 450 | 30 | 300 | 222 | 127 | | 2LC0900-8GE ■ ■ ■ -1CA0 L..+M.. | 109 |
| | | Long | 38 80 140 145 420 672 | | | | | | | | | | | | | | | 2LC0900-8GE ■ ■ ■ -2CA0 L..+M.. | 108 |
| 425 | 1900 | Standard | 42 75 140 147 470 704 | | | | | 200 | 4...6 | 262 80 | 160 | 500 | 30 | 340 | 250 | 144 | | 2LC0901-0GE ■ ■ ■ -1BA0 L..+M.. | 161 |
| | | Long | 42 100 170 177 470 734 | | | | | | | | | | | | | | | 2LC0901-0GE ■ ■ ■ -2BA0 L..+M.. | 159 |
| 490 | 1800 | Standard | 48 75 140 148 555 757 | | | | | 225 | 4...6 | 267 90 | 160 | 560 | 30 | 370 | 276 | 159 | | 2LC0901-1GE ■ ■ ■ -1BA0 L..+M.. | 214 |
| | | Long | 48 110 170 178 555 787 | | | | | | | | | | | | | | | 2LC0901-1GE ■ ■ ■ -2BA0 L..+M.. | 211 |
| 565 | 1800 | Standard | 65 95 170 178 630 824 | | | | | 250 | 5...8 | 275 100 | 175 | 630 | 30 | 440 | 317 | 181 | | 2LC0901-2GE ■ ■ ■ -1BA0 L..+M.. | 290 |
| | | Long | 65 120 210 218 630 864 | | | | | | | | | | | | | | | 2LC0901-2GE ■ ■ ■ -2BA0 L..+M.. | 291 |
| 655 | 1800 | Standard | 65 110 210 218 736 935 | | | | | 315 | 5...8 | 285 100 | 175 | 630 | 30 | 440 | 385 | 203 | | 2LC0901-3GE ■ ■ ■ -1AA0 L..+M.. | 382 |
| | | Long | 65 135 250 258 736 975 | | | | | | | | | | | | | | | 2LC0901-3GE ■ ■ ■ -2AA0 L..+M.. | 385 |
| 755 | 1500 | Standard | 65 120 210 219 840 1000 | | | | | 350 | 5...8 | 289 140 | 220 | 710 | 30 | 520 | 435 | 222 | | 2LC0901-4GE ■ ■ ■ -1AA0 L..+M.. | 508 |
| | | Long | 65 150 250 259 840 1040 | | | | | | | | | | | | | | | 2LC0901-4GE ■ ■ ■ -2AA0 L..+M.. | 511 |
| 887 | 1200 | Standard | 65 150 250 251 990 1144 | | | | | 440 | 5...10 | 301 140 | 220 | 800 | 30 | 610 | 525 | 268 | | 2LC0901-5GE ■ ■ ■ -1AA0 L..+M.. | 788 |
| | | Long | 65 170 300 301 990 1194 | | | | | | | | | | | | | | | 2LC0901-5GE ■ ■ ■ -2AA0 L..+M.. | 801 |

| | | |
|------|--|---|
| ØD1: | Without finished bore – Without order codes | 1 |
| | With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |
| ØD2: | Without finished bore – Without order codes | 1 |
| | With finished bore – With order codes for diameter and tolerance (product code without -Z) | 9 |

L2 denotes the shaft insertion depth.
In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text and with **Y29**.

For ordering example, see page 13/40.

¹⁾ Hub reduction possible; specify product code with “-Z” and order code “Y99” with dimension NL2 in plain text.

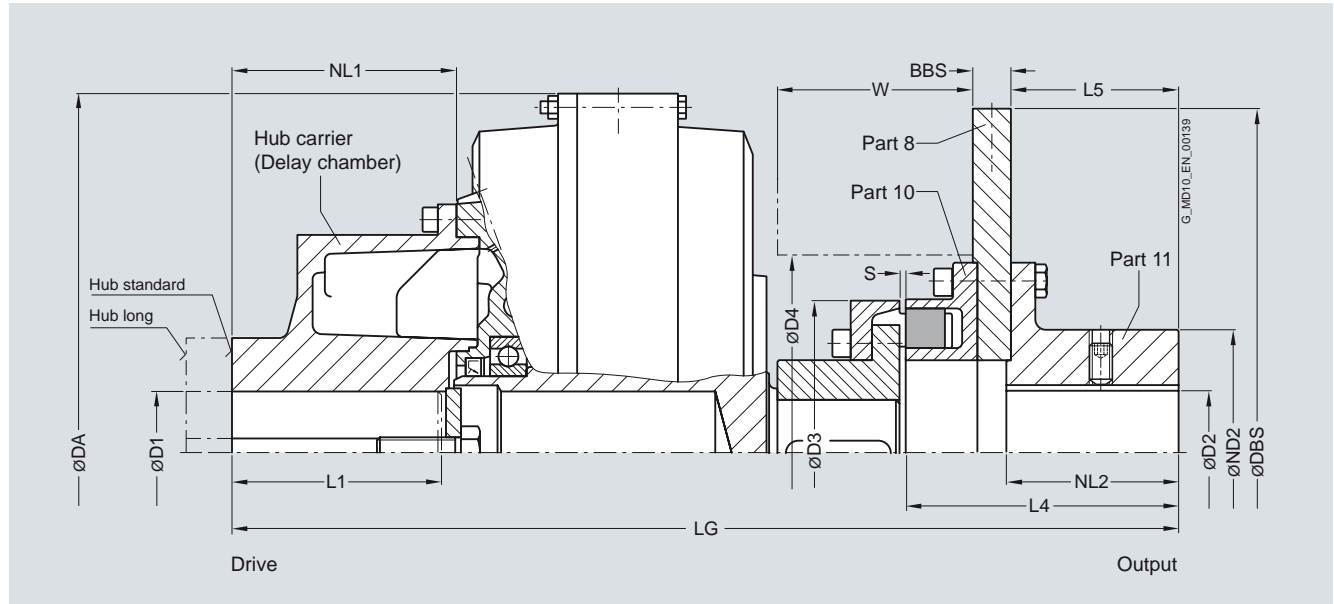
FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Type FNDS HB with large delay chamber and brake disk for blocking brake

Selection and ordering data

Type with large delay chamber, attached N-EUPEX coupling and brake disk for blocking brakes. Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed | Hub carrier | Dimensions in mm FLUDEX coupling | | | | | | N-EUPEX coupling | | | Part 8 – Brake disk/ part 11 – hub | | | | | | Space dimensions | | | Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3 | Weight |
|------|---------------|-------------|-------------------------------------|------|------|-----|-----|-----------------|------------------|--------|-----|---------------------------------------|-----|-----|-----|----------|-----|------------------|-------------------------|-----------------------------------|--|--------|
| | | | D1 | L1 | NL1 | DA | LG | D3 | S | L4 | D2 | NL2 | ND2 | DBS | BBS | L5 1) | D4 | W | | | | |
| | n_{Kmax} | | Keyway to DIN 6885 min. | max. | max. | | | N-EUPEX size | | max. | | | | | | | | | Available at short term | m | | |
| 370 | 3200 | Standard | 38 | 55 | 110 | 115 | 420 | 555 | 180 | 4...6 | 170 | 80 | 118 | 130 | 355 | 16 | 115 | 222 | 127 | 2LC0900-8GF ■ ■ -1AA0 L...+M.. | 84 | |
| | | Long | 38 | 80 | 140 | 145 | 420 | 585 | | | | | | | | | | | | 2LC0900-8GF ■ ■ -2AA0 L...+M.. | 83 | |
| 425 | 3000 | Standard | 42 | 75 | 140 | 147 | 470 | 617 | 200 | 4...6 | 175 | 80 | 118 | 130 | 355 | 16 | 115 | 250 | 144 | 2LC0901-0GF ■ ■ -1AA0 L...+M.. | 116 | |
| | | Long | 42 | 100 | 170 | 177 | 470 | 647 | | | | | | | | | | | | 2LC0901-0GF ■ ■ -2AA0 L...+M.. | 115 | |
| 490 | 2600 | Standard | 48 | 75 | 140 | 148 | 555 | 670 | 225 | 4...6 | 180 | 90 | 118 | 135 | 400 | 16 | 115 | 276 | 159 | 2LC0901-1GF ■ ■ -1AA0 L...+M.. | 169 | |
| | | Long | 48 | 110 | 170 | 178 | 555 | 700 | | | | | | | | | | | | 2LC0901-1GF ■ ■ -2AA0 L...+M.. | 166 | |
| 565 | 2300 | Standard | 65 | 95 | 170 | 178 | 630 | 737 | 250 | 5...8 | 188 | 100 | 118 | 160 | 450 | 16 | 115 | 317 | 181 | 2LC0901-2GF ■ ■ -1AA0 L...+M.. | 227 | |
| | | Long | 65 | 120 | 210 | 218 | 630 | 777 | | | | | | | | | | | | 2LC0901-2GF ■ ■ -2AA0 L...+M.. | 229 | |
| 655 | 2000 | Standard | 65 | 110 | 210 | 218 | 736 | 848 | 315 | 5...8 | 198 | 100 | 118 | 170 | 500 | 16 | 115 | 385 | 203 | 2LC0901-3GF ■ ■ -1AA0 L...+M.. | 348 | |
| | | Long | 65 | 135 | 250 | 258 | 736 | 888 | | | | | | | | | | | | 2LC0901-3GF ■ ■ -2AA0 L...+M.. | 351 | |
| 755 | 1800 | Standard | 65 | 120 | 210 | 219 | 840 | 961 | 350 | 5...8 | 250 | 140 | 164 | 225 | 630 | 20 | 160 | 435 | 222 | 2LC0901-4GF ■ ■ -1AA0 L...+M.. | 486 | |
| | | Long | 65 | 150 | 250 | 259 | 840 | 1001 | | | | | | | | | | | | 2LC0901-4GF ■ ■ -2AA0 L...+M.. | 489 | |
| 887 | 1500 | Standard | 65 | 150 | 250 | 251 | 990 | 1105 | 440 | 5...10 | 262 | 140 | 164 | 225 | 710 | 20 | 160 | 525 | 268 | 2LC0901-5GF ■ ■ -1AA0 L...+M.. | 769 | |
| | | Long | 65 | 170 | 300 | 301 | 990 | 1155 | | | | | | | | | | | | 2LC0901-5GF ■ ■ -2AA0 L...+M.. | 782 | |

ØD1: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

ØD2: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

For ordering example, see page 13/40.

1) Hub reduction possible; specify product code with **"-Z"** and order code **"Y99"** with dimension L5 in plain text.

Selection and ordering data

This assignment is valid for a maximum starting torque
 $T_{\max} = 1.3 \times T_{\text{eff}}$ and mineral oils with a viscosity of
 VG 22/VG 32.

If other operating fluids are used, or with drive via the shaft or
 $T_{\max} \neq 1.3 \times T_{\text{eff}}$, changed filling quantities must be observed!

| P_{eff} | Speed in rpm | | | | | | | | | | Size |
|------------------|---------------------------|-------|-------|-------|------|------|------|------|------|------|------|
| | 600 | 740 | 890 | 980 | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 | |
| kW | Oil filling quantity in l | | | | | | | | | | |
| 1.1 | 5.6 | | | | | | | | | | |
| 2.2 | 7.1 | 5.7 | | | | | | | | | |
| 3.0 | 7.9 | 6.4 | 5.1 | | | | | | | | |
| 4.0 | 8.2 | 7.0 | 5.8 | 5.1 | | | | | | | |
| 5.5 | 14.4 | 7.8 | 6.5 | 5.9 | | | | | | | |
| 7.5 | 16.0 | 8.2 | 7.2 | 6.5 | 5.3 | | | | | | |
| 11 | 18.2 | 14.7 | 8.2 | 7.4 | 6.2 | | | | | | |
| 15 | 19.0 | 16.3 | 13.4 | 8.2 | 6.8 | 5.4 | | | | | |
| 18 | 33.5 | 17.3 | 14.4 | 12.9 | 7.2 | 5.8 | | | | | |
| 22 | 35.4 | 18.6 | 15.4 | 13.9 | 7.8 | 6.2 | 4.9 | | | | |
| 30 | 38.5 | 19.0 | 17.0 | 15.5 | 12.5 | 6.9 | 5.7 | | | | |
| 37 | 41.6 | 34.3 | 18.4 | 16.6 | 13.7 | 7.4 | 6.1 | 4.4 | | | |
| 45 | 45.0 | 36.2 | 19.0 | 17.7 | 14.7 | 7.9 | 6.6 | 4.7 | | | |
| 55 | 45.0 | 38.2 | 32.9 | 19.0 | 15.8 | 12.2 | 7.0 | 5.3 | | | |
| 75 | 76.5 | 43.0 | 35.8 | 33.1 | 17.4 | 14.0 | 7.8 | 6.0 | 4.3 | | |
| 90 | 80.5 | 45.0 | 37.6 | 34.8 | 18.7 | 14.9 | 11.7 | 6.4 | 4.6 | | |
| 110 | 85.2 | 45.0 | 40.1 | 36.7 | 31.8 | 16.0 | 13.1 | 6.8 | 5.1 | | |
| 132 | 89.5 | 74.7 | 43.3 | 38.6 | 33.2 | 16.9 | 14.0 | 7.2 | 5.6 | 4.3 | 370 |
| 160 | 95.6 | 80.0 | 45.0 | 41.5 | 35.0 | 18.1 | 15.0 | 10.7 | 6.0 | 4.7 | |
| 200 | 105.5 | 84.5 | 71.5 | 45.0 | 37.1 | 31.1 | 16.2 | 11.8 | 6.5 | 5.2 | |
| 250 | 110.0 | 89.7 | 76.9 | 45.0 | 39.7 | 33.0 | 17.4 | 13.2 | | 5.8 | |
| 315 | | 97.5 | 82.4 | 76.5 | 43.8 | 35.1 | 30.2 | 14.5 | | | 490 |
| 350 | | 102.1 | 84.6 | 78.4 | 45.0 | 36.1 | 31.2 | 15.0 | | | |
| 400 | | 108.9 | 87.6 | 81.2 | 45.0 | 37.4 | 32.3 | | | | 655 |
| 500 | | | 94.1 | 86.1 | 73.3 | 40.2 | 34.2 | | | | |
| 600 | | | 101.4 | 90.6 | 78.1 | 43.5 | 35.9 | | | | |
| 750 | | | 110.0 | 98.5 | 82.9 | 66.9 | 38.2 | | | | |
| 900 | | | | 107.2 | 86.8 | 72.7 | | | | | 887 |
| 1100 | | | | | 92.1 | 77.1 | | | | | |
| 1300 | | | | | 98.2 | 80.4 | | | | | |
| 1600 | | | | | | 84.9 | | | | | |

Ordering example type FNO from page 13/32:

Motor 110 kW, $P_{\text{eff}} = 90$ kW, $n_1 = 1470$ rpm, maximum output
 torque $T_{\max} = 1.3 \times T_{\text{eff}}$

Selection:

FLUDEX FNO coupling size 425,
 Hub carrier: Standard hub bore $\varnothing D1 = 75H7$ mm with keyway to
 DIN 6885/1 and retaining screw,
 seal set Viton.

Specification of oil filling quantity: 12.4 l (see under oil filling
 quantities for the FN series in this catalog section).

Product code:

- With 110 °C fuse:
2LC0901-0GA90-1AA0-Z
L1H+Y90+F05
 plain text to Y90: **12.4 l**
- With 140 °C fuse:
2LC0901-0GA90-1AA0-Z
L1H+Y90+F07
 plain text to Y90: **12.4 l**
- With 160 °C fuse:
2LC0901-0GA90-1AA0-Z
L1H+Y90+F08
 plain text to Y90: **12.4 l**

Ordering example type FND from page 13/34:

Motor 132 kW, $P_{\text{eff}} = 110$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FND coupling size 490,
 Hub carrier: Long hub bore $\varnothing D1 = 80H7$ mm with keyway to
 DIN 6885/1 and set screw,
 Part 11: Bore $\varnothing D1 = 80H7$ mm with keyway to DIN 6885/1 and
 set screw,
 with electronic or mechanical operation monitoring, seal set
 Perbunan.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- With 110 °C thermal switch:
2LC0901-1GC99-2AA0-Z
L1J+M1J+F03
- With 125 °C EOC transmitter:
2LC0901-1GC99-2AA0-Z
L1J+M1J+F04

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Oil filling quantities for FN series

| P_{eff} | Speed in rpm | | | | | | | | | | Size |
|------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|
| | 600 | 740 | 890 | 980 | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 | |
| kW | Oil filling quantity in l | | | | | | | | | | |
| 3.0 | 9.7 | | | | | | | | | | |
| 4.0 | 10.7 | 8.6 | | | | | | | | | |
| 5.5 | 12.0 | 9.7 | | | | | | | | | |
| 7.5 | 12.5 | 10.7 | 8.8 | 7.7 | | | | | | | |
| 11 | 22.6 | 12.2 | 10.2 | 9.2 | | | | | | | |
| 15 | 25.2 | 12.5 | 11.2 | 10.2 | 8.3 | | | | | | |
| 18 | 26.6 | 21.4 | 12.0 | 10.8 | 8.9 | | | | | | |
| 22 | 28.6 | 23.1 | 12.5 | 11.6 | 9.6 | | | | | | |
| 30 | 46.3 | 25.7 | 21.1 | 12.5 | 10.7 | 8.5 | | | | | |
| 37 | 48.6 | 27.5 | 22.9 | 20.5 | 11.4 | 9.2 | 7.1 | | | | |
| 45 | 51.5 | 29.0 | 24.5 | 22.0 | 12.3 | 9.8 | 7.8 | | | | |
| 55 | 54.0 | 29.0 | 26.1 | 23.7 | 18.7 | 10.5 | 8.6 | | | | |
| 75 | 60.0 | 49.5 | 29.0 | 26.3 | 21.7 | 11.6 | 9.7 | 6.9 | | | |
| 90 | 65.0 | 52.0 | 29.0 | 27.9 | 23.2 | 12.4 | 10.3 | 7.4 | | | |
| 110 | 69.0 | 55.0 | 47.5 | 29.0 | 24.9 | 19.0 | 11.0 | 8.3 | | | |
| 132 | | 58.5 | 50.0 | 46.4 | 26.3 | 20.9 | 11.7 | 8.9 | 6.6 | | 425 |
| 160 | | 63.5 | 52.5 | 48.5 | 28.1 | 22.5 | 17.4 | 9.6 | 6.9 | | |
| 180 | | 67.5 | 54.0 | 50.0 | 29.0 | 23.4 | 18.4 | 10.0 | 7.2 | | |
| 200 | | 69.0 | 55.5 | 51.5 | 44.4 | 24.3 | 19.5 | 10.3 | 7.6 | | |
| 250 | | | 60.5 | 54.5 | 47.0 | 26.2 | 21.6 | 16.0 | 8.6 | | |
| 315 | | | 67.5 | 59.0 | 50.0 | 28.3 | 23.5 | 16.7 | 9.3 | | |
| 350 | | | | 62.0 | 51.5 | 43.1 | 24.4 | 17.4 | | | 565 |
| 400 | | | | 66.0 | 53.5 | 44.9 | 25.5 | 18.5 | | | |
| 500 | | | | | 57.0 | 47.5 | 40.7 | 20.8 | | | |
| 600 | | | | | 61.0 | 50.0 | 42.9 | 22.3 | | | |
| 750 | | | | | | 53.0 | 45.9 | | | | 755 |
| 900 | | | | | | 55.5 | 48.0 | | | | |
| 1100 | | | | | | | 50.5 | | | | |
| 1200 | | | | | | | 53.0 | | | | |

Ordering example type FNDS SB from page 13/37:

Motor 37 kW, $P_{\text{eff}} = 30$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FNDS SB coupling size 370,
Hub carrier: Standard hub bore $\varnothing D1 = 55H7$ mm with keyway to DIN 6885/1 and retaining screw,
Part 32: Bore $\varnothing D2 = 75H7$ mm with keyway to DIN 6885/1 and retaining screw,
with preservation suitable for indoor storage.
Delivery without oil filling, no oil filling quantity specification.

Product code:

- With standard preservation:
2LC0900-8GE99-1CA0
L1D+M1H
- With preservation for 6 months:
2LC0900-8GE99-1CA0-Z
L1D+M1H+B31
- With preservation for 24 months:
2LC0900-8GE99-1CA0-Z
L1D+M1H+B28
- With preservation for 36 months:
2LC0900-8GE99-1CA0-Z
L1D+M1H+B34

Ordering example type FNDS HB from page 13/38:

Motor 200 kW, $P_{\text{eff}} = 160$ kW, $n_1 = 1470$ rpm

Selection:

FLUDEX FNDS HB coupling size 490,
Hub carrier: Long hub bore $\varnothing D1 = 110H7$ mm with keyway to DIN 6885/1 and set screw,
Part 11: Bore $\varnothing D2 = 80H7$ mm with keyway to DIN 6885/1 and set screw,
Fitting position: Horizontal/vertical motor underneath (MU).
Delivery without oil filling, no oil filling quantity specification.

Product code:

- In horizontal version:
2LC0901-1GF99-2AA0
L1Q+M1J
- In vertical version MU:
2LC0901-1GF99-2AA0-Z
L1Q+M1J+F14

Selection and ordering data

Apply to standard catalog couplings

Flexible elements for N-EUPEX add-on coupling

| Series | FLUDEX size | Type | N-EUPEX size | Number flexibles per set | Product code for one set flexibles |
|--------|-------------|--|--------------|--------------------------|------------------------------------|
| FA | 222 | FAK ¹⁾ ; FAKB ¹⁾ | 95 | 6 | FFA:000001194870 |
| | | Other types | 110 | 6 | FFA:000001194871 |
| | 297 | FAK ¹⁾ ; FAKB ¹⁾ | 125 | 6 | FFA:000001194872 |
| | | FAK ²⁾ ; FAKB ²⁾ | 125 | 6 | FFA:000001194873 |
| | | Other types | 125 | 6 | FFA:000001194873 |
| | 342 | All types | 140 | 6 | FFA:000001194874 |
| | 395 | FAD ¹⁾ ; FAE ¹⁾ ; FADB ¹⁾ | 225 | 8 | FFA:000001194875 |
| | | FAD ²⁾ ; FAE ²⁾ ; FADB ²⁾ | 225 | 8 | FFA:000001194876 |
| | | Other types | 225 | 8 | FFA:000001194876 |
| | 450 | FAD ¹⁾ ; FAE ¹⁾ ; FADB ¹⁾ | 250 | 8 | FFA:000001194877 |
| | | FAD ²⁾ ; FAE ²⁾ ; FADB ²⁾ | 250 | 8 | FFA:000001194878 |
| | | Other types | 250 | 8 | FFA:000001194878 |
| | 516 | FAD ¹⁾ ; FADB ¹⁾ | 315 | 9 | FFA:000001194879 |
| | | FAD ²⁾ ; FADB ²⁾ | 315 | 9 | FFA:000001194880 |
| | | Other types | 315 | 9 | FFA:000001194880 |
| | 590 | All types | 315 | 9 | FFA:000001194879 |
| FG/FV | 370 | All types | 180 | 8 | FFA:000001194881 |
| | 425 | | 225 | 8 | FFA:000001194876 |
| | 490 | | 250 | 8 | FFA:000001194878 |
| | 565 | | 280 | 8 | FFA:000001194882 |
| | 655 | | 350 | 9 | FFA:000001194883 |
| | 755 | | 400 | 10 | FFA:000001194884 |
| | 887 | | 440 | 10 | FFA:000001194885 |
| FN | 370 | FNDB ØDBT = 400 ³⁾ | 200 | 8 | FFA:000001194886 |
| | | All types | 180 | 8 | FFA:000001194881 |
| | 425 | All types | 200 | 8 | FFA:000001194886 |
| | 490 | FNDB ØDBT = 500 ³⁾ | 250 | 8 | FFA:000001194878 |
| | | All types | 225 | 8 | FFA:000001194876 |
| | 565 | All types | 250 | 8 | FFA:000001194878 |
| | 655 | | 315 | 9 | FFA:000001194879 |
| | 755 | | 350 | 9 | FFA:000001194883 |
| | 887 | | 440 | 10 | FFA:000001194885 |

¹⁾ For couplings up to and including year of construction 2003.

²⁾ For couplings from year of construction 2004.

³⁾ For couplings up to and including year of construction 2007.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Spare parts

Thermal equipment

| FLUDEX size | Thread | Part no. | Fuse element | Response temperature | Product code (FFA) for one unit |
|------------------|-----------|------------------------|---|----------------------|---------------------------------|
| 222 | M10 | 103 + 104 203 + 204 | Fusible safety plug | 110 °C | FFA:000001194896 |
| | | | | 140 °C | FFA:000001194897 |
| | | | | 160 °C | FFA:000001194898 |
| | M10 | 153 + 104 | Oil filler plug | – | FFA:000001194894 |
| 297 | M10 | 153 + 104 | Oil filler plug | – | FFA:000001194894 |
| 297 - 887 | M18 x 1.5 | 103 203 | Fusible safety plug | 110 °C | FFA:000001250338 |
| | | | | 140 °C | FFA:000001250339 |
| | | | | 160 °C | FFA:000001250380 |
| | M18 x 1.5 | 110 210 | Thermal switch | 110 °C | FFA:000001361795 |
| | | | | 140 °C | FFA:000001361796 |
| | M18 x 1.5 | 153 163 | Oil filler plug (except size 887) Screw plug | – | FFA:000001337653 |
| | – | 301 | Cut-out device | – | FFA:000000652020 |
| 370 - 755 | M10 | 173 + 174 | Oil drain plug - delay chamber | – | FFA:000001194894 |
| 887 | M30 x 1.5 | 153 + 154 | Oil filler plug (up to and including year of construction 2007) | – | FFA:000001194893 |
| | | 153 | Oil filler plug (from year of construction 2008) | – | FFA:000001349554 |
| | M16 | 173 + 174 | Oil drain plug - delay chamber | – | FFA:000001154895 |

Sealing and rolling bearing sets for the FA series (except type FAR)

| FLUDEX size | Seal set material | Product code (FFA) for one seal set | Product code (FFA) for one rolling bearing set |
|---|-------------------|-------------------------------------|--|
| 222 (Up to and including year of construction 2000) | NBR | FFA:000001194900 | FFA:000001194800 |
| 222 (From year of construction 2001) | NBR | FFA:000001194901 | FFA:000001194801 |
| | FPM | FFA:000001194902 | |
| 297 (Up to and including year of construction 2000) | NBR | FFA:000001194903 | FFA:000001194802 |
| | FPM | FFA:000001194904 | |
| 297 (From year of construction 2001) | NBR | FFA:000001194905 | FFA:000001194803 |
| | FPM | FFA:000001194906 | |
| 342 | NBR | FFA:000001194907 | FFA:000001194804 |
| | FPM | FFA:000001194908 | |
| 395 | NBR | FFA:000001194909 | FFA:000001194805 |
| | FPM | FFA:000001194910 | |
| 450 | NBR | FFA:000001194911 | FFA:000001194806 |
| | FPM | FFA:000001194912 | |
| 516 | NBR | FFA:000001194913 | FFA:000001194807 |
| | FPM | FFA:000001194914 | |
| 590 | NBR | FFA:000001194915 | FFA:000001194808 |
| | FPM | FFA:000001194916 | |

Seal and rolling bearing sets for type FAR ¹⁾

| FLUDEX size | Variant | Up to and including year of construction | From year of construction | Seal set material | Product code (FFA) for one seal set | Product code (FFA) for one rolling bearing set | | |
|-------------|--------------|--|---------------------------|-------------------|-------------------------------------|--|------------------|------------------|
| 222 | 2 x SPZ 100 | 2000 | 2001 | NBR | FFA:000001194917 | FFA:000001194809 | | |
| | | | | NBR | FFA:000001194918 | FFA:000001194810 | | |
| | | | | FPM | FFA:000001194919 | | | |
| | 3 x SPZ 160 | 2001 | NBR | FFA:000001194920 | FFA:000001194811 | | | |
| | | | FPM | FFA:000001194921 | | | | |
| 297 | 5 x SPZ 140 | 2000 | | NBR | FFA:000001194922 | FFA:000001194812 | | |
| | | | | FPM | FFA:000001194923 | | | |
| | 7 x SPZ 140 | 2000 | | NBR | FFA:000001194924 | FFA:000001194813 | | |
| | | | | FPM | FFA:000001194925 | | | |
| | 5 x SPZ 150 | 2001 | | NBR | FFA:000001194926 | FFA:000001194814 | | |
| | | | | FPM | FFA:000001194927 | | | |
| | 4 x SPA 190 | | | | | | | |
| | | | | | | | | |
| 5 x SPA 224 | 2001 | | NBR | FFA:000001194928 | | | | |
| | | | FPM | FFA:000001194929 | | | | |
| 342 | 5 x SPA 180 | | | NBR | FFA:000001194930 | FFA:000001194815 | | |
| | | | | FPM | FFA:000001194931 | | | |
| | 7 x SPA 180 | | | 2000 | NBR | FFA:000001194932 | FFA:000001194816 | |
| | | | | | FPM | FFA:000001194933 | | |
| 395 | 5 x SPB 224 | 2000 | | NBR | FFA:000001194934 | FFA:000001194817 | | |
| | | | | FPM | FFA:000001194935 | | | |
| | 7 x SPB 224 | | | | NBR | FFA:000001194936 | FFA:000001194818 | |
| | | | | | FPM | FFA:000001194937 | | |
| | 7 x SPB 236 | | | 2001 | NBR | FFA:000001194938 | FFA:000001194819 | |
| | | | | | FPM | FFA:000001194939 | | |
| | 7 x SPB 280 | | | 2001 | NBR | FFA:000001194938 | | |
| | | | | | FPM | FFA:000001194939 | | |
| 450 | 8 x SPB 250 | 2000 (ØD1 ≤ 75) | | NBR | FFA:000001194940 | FFA:000001194820 | | |
| | | | | FPM | FFA:000001194941 | | | |
| | | | | 2001 | NBR | FFA:000001194942 | FFA:000001194821 | |
| | | | | | FPM | FFA:000001194943 | | |
| | | ØD1 = 73.025 ØD1 > 75 | 2001 | NBR | FFA:000001194944 | FFA:000001194822 | | |
| | | | | FPM | FFA:000001194945 | | | |
| | | | | 10 x SPB 250 | 2000 | NBR | FFA:000001194946 | FFA:000001194823 |
| | | | | | | FPM | FFA:000001194947 | |
| 516 | 10 x SPB 315 | 2000 | | NBR | FFA:000001194948 | FFA:000001194824 | | |
| | | | | FPM | FFA:000001194949 | | | |
| | | | | 2001 | NBR | FFA:000001194950 | FFA:000001194825 | |
| | | | | | FPM | FFA:000001194951 | | |
| | 12 x SPB 315 | 2000 | NBR | FFA:000001194952 | FFA:000001194826 | | | |
| | | | FPM | FFA:000001194953 | | | | |
| 590 | 12 x SPC 315 | 2000 | | NBR | FFA:000001194954 | FFA:000001194827 | | |
| | | | | FPM | FFA:000001194955 | | | |
| | | | | 2001 | NBR | FFA:000001194956 | FFA:000001194828 | |
| | | | | | FPM | FFA:000001194957 | | |

¹⁾ Spare parts valid only for specified pulleys. When enquiring for other numbers of grooves, please quote original delivery number.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Spare parts

Seal and rolling bearing sets for the FG/FV/FN series

| FLUDEX size | Series | Additional bore specifications | Seal set material | Product code (FFA) for one seal set | Product code (FFA) for one rolling bearing set |
|-------------|--------|--------------------------------|-------------------|-------------------------------------|--|
| 370 | FG | | NBR | FFA:000001194958 | Up to and including year of construction 2000: FFA:000001194850 |
| | | | FPM | FFA:000001194959 | |
| | FV/FN | | NBR | FFA:000001194960 | From year of construction 2001: FFA:000001194851 |
| | | | FPM | FFA:000001194961 | |
| 425 | FG | | NBR | FFA:000001194962 | FFA:000001194852 |
| | | | FPM | FFA:000001194963 | |
| | FV/FN | | NBR | FFA:000001194964 | |
| | | | FPM | FFA:000001194965 | |
| 490 | FG | | NBR | FFA:000001194966 | FFA:000001194853 |
| | | | FPM | FFA:000001194967 | |
| | FV/FN | | NBR | FFA:000001194968 | |
| | | | FPM | FFA:000001194969 | |
| 565 | FG | | NBR | FFA:000001194970 | FFA:000001194854 |
| | | | FPM | FFA:000001194971 | |
| | FV/FN | | NBR | FFA:000001194972 | |
| | | | FPM | FFA:000001194973 | |
| 655 | FG | ØD2 ≤ 100 | NBR | FFA:000001194974 | FFA:000001194855 |
| | | | FPM | FFA:000001194975 | |
| | | ØD2 > 100 | NBR | FFA:000001194976 | FFA:000001194856 |
| | | | FPM | FFA:000001194977 | |
| | FV | ØD2 ≤ 100 | NBR | FFA:000001194978 | FFA:000001194855 |
| | | | FPM | FFA:000001194979 | |
| | | ØD2 > 100 | NBR | FFA:000001194980 | FFA:000001194856 |
| | | | FPM | FFA:000001194981 | |
| | FN | | NBR | FFA:000001194978 | FFA:000001194855 |
| | | | FPM | FFA:000001194979 | |
| 755 | FG | ØD2 ≤ 110 | NBR | FFA:000001194982 | FFA:000001194857 |
| | | | FPM | FFA:000001194983 | |
| | | ØD2 > 110 | NBR | FFA:000001194984 | FFA:000001194858 |
| | | | FPM | FFA:000001194985 | |
| | FV | ØD2 ≤ 110 | NBR | FFA:000001194986 | FFA:000001194857 |
| | | | FPM | FFA:000001194987 | |
| | | ØD2 > 110 | NBR | FFA:000001194988 | FFA:000001194858 |
| | | | FPM | FFA:000001194989 | |
| | FN | | NBR | FFA:000001194990 | FFA:000001194859 |
| | | | FPM | FFA:000001194991 | |
| 887 | FG | | FPM | FFA:000001194993 | FFA:000001194860 |
| | FV/FN | | FPM | FFA:000001194992 | |

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Mass moments of inertia
and maximum oil filling quantities

Technical data

FA series (for type FAR, see separate table)

| FLUDEX size | Series FA J_I kgm ² | Types FAO J_A kgm ² | FAD J_A kgm ² | FAE J_A kgm ² | FAM J_A kgm ² | FADB J_A kgm ² | FADS SB J_A kgm ² | FADS HB J_A kgm ² | Oil filling quantity max. l |
|-------------|--|--|---|---|---|--|---|---|-----------------------------------|
| 222 | 0.014 | 0.056 | 0.061 | 0.061 | 0.060 | 0.084 | 0.287 | 0.109 | 1.65 |
| 297 | 0.040 | 0.173 | 0.193 | 0.193 | 0.193 | 0.226 | 0.673 | 0.246 | 4.2 |
| 342 | 0.092 | 0.314 | 0.356 | 0.352 | 0.353 | 0.469 | 1.002 | 0.420 | 6.6 |
| 395 | 0.203 | 0.660 | 0.745 | 0.730 | – | 1.030 | 1.814 | 1.150 | 9.5 |
| 450 | 0.404 | 1.087 | 1.217 | 1.217 | – | 1.497 | 3.611 | 1.818 | 13.4 |
| 516 | 0.896 | 2.109 | 2.439 | – | – | 3.359 | 5.969 | 3.238 | 22.7 |
| 590 | 1.295 | 3.455 | 3.785 | – | – | 6.605 | 7.315 | 4.584 | 33 |

Type FAR

| FLUDEX size | J_I kgm ² | J_A kgm ² | Oil filling quantity max. l |
|-------------|------------------------------------|---------------------------|---|
| 222 | 0.014 | 2 x SPZ 100 0.062 | 3 x SPZ 160 0.071 1.65 |
| 297 | 0.107 | 5 x SPZ 150 0.202 | 4 x SPA 190 0.235 5 x SPA 224 0.273 4.2 |
| 342 | 0.095 | 5 x SPA 180 0.386 | 6.6 |
| 395 | 5 x SPB = 0.214 7 x SPB = 0.210 | 5 x SPB 224 0.840 | 7 x SPB 236 0.960 7 x SPB 280 1.144 9.5 |
| 450 | 0.426 | 8 x SPB 250 1.467 | 13.4 |
| 516 | 0.946 | 10 x SPB 315 3.209 | 22.7 |
| 590 | 1.375 | 12 x SPC 315 4.955 | 33 |

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Mass moments of inertia
and maximum oil filling quantities

FG/FV series

| FLUDEX size | Series | | Types | | | | | | | | Oil filling quantity | |
|----------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------|-----------|
| | FG | FV | FGO | FVO | FGD | FVD | FGE | FVE | FGM | FVM | FG | FV |
| | J_I kgm ² | J_I kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | J_A kgm ² | max. l | max. l |
| 370 | 0.191 | 0.191 | 0.519 | 0.551 | 0.571 | 0.603 | 0.571 | 0.603 | 0.571 | 0.603 | 7.2 | 8 |
| 425 | 0.342 | 0.342 | 0.819 | 0.876 | 0.989 | 1.046 | 0.974 | 1.031 | 0.963 | 1.020 | 11 | 12 |
| 490 | 0.723 | 0.723 | 1.992 | 2.110 | 2.312 | 2.430 | 2.272 | 2.390 | 2.264 | 2.382 | 17 | 18.5 |
| 565 | 1.269 | 1.269 | 3.216 | 3.441 | 3.696 | 3.921 | 3.636 | 3.861 | 3.616 | 3.841 | 25.5 | 28 |
| 655 | 2.567 | 2.567 | 7.287 | 7.757 | 8.687 | 9.157 | – | – | – | – | 40 | 44 |
| 755 | 4.856 | 4.856 | 12.575 | 13.291 | 14.775 | 15.491 | – | – | – | – | 61 | 67 |
| 887 | 11.817 | 11.817 | 26.832 | 28.212 | 30.102 | 31.482 | – | – | – | – | 98 | 107 |

FN series (for type FNDB, see separate table)

| FLUDEX size | Hub carrier | Series | Types | | | | | Weights | | Oil filling quantity | |
|----------------|-------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------|----------------|----------------------|--|
| | | FN | FNO | FNA | FND | FNDS SB | FNDS HB | Y | F _Y | max. l | |
| | Hub | J_A kgm ² | J_I kgm ² | J_I kgm ² | J_I kgm ² | J_I kgm ² | J_I kgm ² | mm | N | | |
| 370 | Standard | 0.657 | 0.237 | 0.281 | 0.320 | 1.180 | 0.386 | 197 | 665 | 8.2 | |
| | Long | 0.647 | | | | | | 227 | | | |
| 425 | Standard | 1.107 | 0.343 | 0.470 | 0.491 | 1.841 | 0.659 | 224 | 940 | 12.5 | |
| | Long | 1.102 | | | | | | 254 | | | |
| 490 | Standard | 2.480 | 0.737 | 0.954 | 0.999 | 3.009 | 1.285 | 235 | 1420 | 19 | |
| | Long | 2.474 | | | | | | 265 | | | |
| 565 | Standard | 4.175 | 1.364 | 1.715 | 1.835 | 5.075 | 2.081 | 278 | 1900 | 29 | |
| | Long | 4.251 | | | | | | 318 | | | |
| 655 | Standard | 9.319 | 2.567 | 3.587 | 3.777 | 6.777 | 4.701 | 330 | 3000 | 45 | |
| | Long | 9.523 | | | | | | 370 | | | |
| 755 | Standard | 15.616 | 4.910 | 6.878 | 7.198 | 12.078 | 9.689 | 352 | 4200 | 69 | |
| | Long | 15.950 | | | | | | 392 | | | |
| 887 | Standard | 33.662 | 11.832 | 15.132 | 16.632 | 24.030 | 20.428 | 406 | 6900 | 110 | |
| | Long | 34.462 | | | | | | 456 | | | |

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Mass moments of inertia
and maximum oil filling quantities

Type FNDB

| FLUDEX size | Hub carrier | Brake drum | J_A | J_I | Weights Y | F_Y | Oil filling quantity max. |
|-------------|-------------|------------|------------------|------------------|--------------|-------|------------------------------|
| | Hub | ØDBT x BBT | kgm ² | kgm ² | mm | N | l |
| 370 | Standard | Ø315 x 118 | 0.657 | 0.640 | 197 | 665 | 8.2 |
| | | Ø400 x 150 | | 1.341 | | | |
| | Long | Ø315 x 118 | 0.647 | 0.640 | 227 | | |
| 425 | Standard | Ø315 x 118 | 1.107 | 0.811 | 224 | 940 | 12.5 |
| | | Ø400 x 150 | | 1.492 | | | |
| | Long | Ø315 x 118 | 1.102 | 0.811 | 254 | | |
| 490 | Standard | Ø400 x 150 | 2.480 | 1.994 | 235 | 1420 | 19 |
| | | Ø500 x 190 | | 4.009 | | | |
| | Long | Ø400 x 150 | 2.474 | 1.994 | 265 | | |
| 565 | Standard | Ø400 x 150 | 4.175 | 2.835 | 278 | 1900 | 29 |
| | | Ø500 x 190 | | 4.775 | | | |
| | Long | Ø400 x 150 | 4.251 | 2.835 | 318 | | |
| 655 | Standard | Ø500 x 190 | 9.319 | 6.677 | 330 | 3000 | 45 |
| | | Ø630 x 236 | | 11.577 | | | |
| | Long | Ø500 x 190 | 9.523 | 6.677 | 370 | | |
| 755 | Standard | Ø630 x 236 | 15.616 | 15.178 | 352 | 4200 | 69 |
| | | | 15.950 | | | | |
| | Long | | | | | | |
| 887 | Standard | Ø710 x 265 | 33.662 | 30.832 | 406 | 6900 | 110 |
| | Long | | 34.462 | | | | |

J_I Mass moment of inertia of the inner rotor (hollow shaft (106)/shaft (106) + blade wheel (105) + any parts of the add-on coupling connected to them) in kgm²

J_A Mass moment of inertia of the outer housing (shell (101) + cover (102) + any hub carrier (120) or add-on coupling) in kgm²

Mass moments of inertia J (including the power-transmitting oil filling components) apply to maximum bores

Y Centroidal distance of the drive-side coupling masses, measured from the hub end face of the hub carrier.

F_Y Effective weight in mass center

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Special types

Selection and ordering data

Selection of additional ordering data

| Special types | Additional ordering data -Z with order code and, if necessary with plain text specification |
|---|--|
| Oil filling | |
| Without oil filling and without oil filling quantity specification stamped on the coupling | Without addition – standard |
| With oil filling (specification of oil filling quantity "+Y90" required) | F16 |
| With specification of oil filling quantity | Y90 • and orderer specification |
| Thermal equipment | |
| Standard type (fuse 140 °C, seal set Perbunan) | Without addition – standard |
| Fuse 110 °C, seal set Perbunan | F01 |
| Explosion protection in conformity to 94/9EG ATEX100A, seal set Perbunan | F02 |
| Thermal switch 110 °C, fuse 140 °C, seal set Perbunan (option not available with size 222) | F03 |
| EOC transmitter 125 °C, fuse 160 °C, seal set Perbunan (option not available with size 222) | F04 |
| Explosion protection in conformity to 94/9EG ATEX100A, seal set Viton | F06 |
| Fuse 110 °C, seal set Viton | F05 |
| Fuse 140 °C, seal set Viton | F07 |
| Fuse 160 °C, seal set Viton | F08 |
| Thermal switch 110 °C, fuse 140 °C, seal set Viton (option not available with size 222) | F10 |
| Thermal switch 140 °C, fuse 160 °C, seal set Viton (option not available with size 222) | F11 |
| EOC transmitter 125 °C, fuse 160 °C, seal set Viton (option not available with size 222) | F12 |
| For preservation, see catalog section 3 | |
| Drive | |
| Standard drive side | Without addition – standard |
| FA series with housing drive | F23 |
| FG/FV/FN series with impeller drive | F24 |
| Position | |
| Horizontal version | Without addition – standard |
| Vertical version, motor overhead (option not permitted in FV and FN series) | F13 |
| Vertical version, motor underneath | F14 |

| Special types | Additional ordering data -Z with order code and, if necessary with plain text specification |
|--|--|
| Shaft and bore | |
| Shaft insertion depth to DIN 748/1 | Without addition – standard |
| Shaft insertion depth 1 deviating from DIN 748/1 | Y28 and plain text specification for L1 |
| Shaft insertion depth 2 deviating from DIN 748/1 | Y29 and plain text specification for L2 |
| Bore tolerance ISO H7 | Without addition – standard ¹⁾ |
| Bore tolerance ISO K7 for hollow shafts with imperial bores | L13/M13 ¹⁾ |
| Bore tolerance ISO M7 for hub parts with imperial bores | L14/M14 ¹⁾ |
| Keyway to DIN 6885/1 or DIN 6885/3 keyway width JS9 | Without addition – standard |
| Keyway to ASME B17.1, if necessary with reduced keyway depth | L43/M43 ¹⁾ |
| 2 parallel keyways set 180° apart | L46/M46 ¹⁾ |
| Half parallel key balancing (before keyseating) | Without addition – standard |
| Full parallel key balancing (after keyseating) | L52/M52 ¹⁾ |
| Internal add-on parts | |
| No additional internal add-on parts | Without addition – standard |
| With baffle plate (only for FA series) | F17 |
| With damming ring | F18 |
| With damming delay chamber (only for FV and FN series) | F19 |
| For documentation, test certificates and acceptances, see catalog section 3 ²⁾ | |
| No test certificate, acceptance certificates | Without addition – standard |
| Other additions | |
| Micro-balancing, high speed | W03 |
| With special fixed bearings | F20 ³⁾ |
| With additional dust seal | F21 ³⁾ |
| Special data | Y99 and plain text specification |

- This order code designates only the type price – plain text required additionally.

¹⁾ Order code “**L..**” for hollow shaft side and “**M..**” for opposite side.

²⁾ Surface crack and ultrasound testing are not possible on FLUDEX couplings.

³⁾ Fitting length on request.

FLENDER Standard Couplings

Fluid Couplings - FLUDEX Series

Technical specifications for the selection of type and size for FLUDEX fluid couplings

Please complete as far as possible and return to your Siemens Sales Office.

1. Intended use of coupling

- ☐ As starting aid ☐ For overload protection ☐ For torsional vibration isolation

2. Data for prime mover

- 2.1. ☐ Electric motor ☐ characteristic enclosed
 Power rating $P_1 =$ kW at speed $n_1 =$ rpm
 Starting: ☐ Direct ☐ Star delta ☐ Other:
 Motor shaft: \varnothing x length mm
- 2.2. ☐ Internal combustion engine Number of cylinders:
 Planned max. power rating: kW at rpm
 Operating range min. power rating: kW at rpm
☐ Attachment via shaft \varnothing x length mm ☐ Attachment to flywheel SAE "
☐ Motor rigidly ☐ Motor flexibly installed on foundation/base frame

3. Data for driven machine

- 3.1. Type of driven machine:
 3.2. Required power rating P_2 : kW at $n_2 =$ rpm
 3.3. Mass moment of inertia $J =$ kgm^2 (based on n_2)
 3.4. Operational cycle: ☐ uniform operation ☐ non uniform operation
 3.4.1. Starting frequency min.: ☐ 1 x / day ☐ 1 x / week ☐ 1 x / month ☐ Continuous operation (min. 2 months without stopping)
 Starting frequency max.: ☐ < 3 x in succession Number in succession:
☐ < 5 x / hour Number per hour:
 3.4.2. Duty cycle per operational cycle: ☐ 60 - 100 % ☐ DC = %
 3.4.3. Dimensions of the gear unit/machine shaft on the coupling side \varnothing x length mm

4. Ambient conditions

- 4.1. Place of installation: ☐ < 1000 m above sea-level ☐ m above sea-level
☐ out of doors ☐ in narrow space ☐ other:
 4.2. Temperature of the ambient air (cooling air): min °C max °C
 4.3. ☐ Fitting into guard ☐ bell housing
 Holes: ☐ with large (well ventilated) ☐ with small (less well ventilated)
☐ without holes: ☐ with forced ventilation ☐ without forced ventilation
 4.4. Environment: ☐ normally dusty ☐ extremely dusty ☐ abrasively dusty
☐ aggressive atmosphere:
 4.5. Use in potentially explosive environment
☐ in conformity with ATEX 95: || 2 G c T3 D160 °C || B -30 °C = $T_a = +50$ °C / | M2
☐ other class:

5. Arrangement of coupling

- 5.1. ☐ horizontal ☐ at an angle (max 20°) ☐ vertical: motor overhead ☐ vertical: motor underneath
- 5.2. between: and:
 Motor ☐ ☐ Driven machine
 Gear unit ($n_1 =$ rpm) ☐ ☐ Gear unit
 Transmission/belt drives ☐ ☐ Transmission/belt drives

Taper Clamping Bushes



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14/2 [Benefits](#)

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14/3 [Design](#)

14/4 **Bores in metric sizes**

14/4 [Selection and ordering data](#)

14/5 Available metric bore diameters and order codes

14/5 Shallow keyway dimensions

14/6 **Bores in imperial sizes (inches)**

14/6 [Selection and ordering data](#)

14/7 Available imperial bore diameters (inches) and order codes

14/7 Shallow keyway dimensions

FLENDER Standard Couplings

Taper Clamping Bushes

General information

Overview



Taper clamping bushes are machine elements which connect a machine shaft with a hub part positively and non-positively. The machine shaft must be designed as a cylinder with a keyway. The hub part must have a conical mounting hole with special threads and forcing-off holes.

Each Taper clamping bush size is available with a large number of metric or imperial holes in inches and can therefore connect the respective hub part to shafts of different diameters.

Benefits

Hub parts must frequently be provided with a finished bore to receive the machine shaft. In the case of very economically priced hub parts, this remachining is frequently costlier than the component itself. With the Taper clamping bush, a very simple and economically priced shaft/hub connection which can be used without remachining is achieved.

Although the dimensions of the Taper clamping bushes are not standardized, standard dimensions have become accepted, so that replacement Taper clamping bushes are nearly always available locally. Since in Europe and North America unfortunately different fixing bolts (UNC and BSW threads) are used, these Taper clamping bushes are not interchangeable.

Thanks to standard dimensioning, Taper clamping bushes can be used in different hub parts, thus facilitating storage. Taper clamping bushes are also standard stock at many specialist dealers and so are readily available.

Application

Taper clamping bushes are used in BIPEX, ELPEX-B and ELPEX-S coupling types. Taper clamping bushes are also used in pulleys, sprockets and, with the aid of a welded-on hub, in other components.

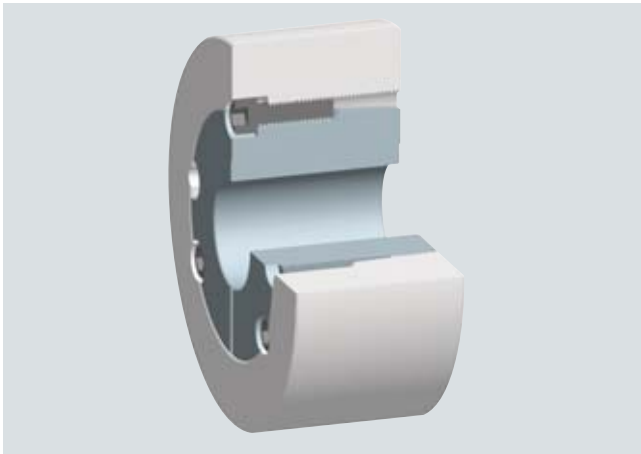
Design

Taper clamping bushes are designed with a cylindrical bore and a parallel keyway. A Taper clamping bush has a tapered outside diameter and fits into the taper bore of the hub part. The Taper clamping bush has a slot running along its length. To fit, half blind holes are drilled in the Taper clamping bush, while on the opposite side half thread turns are cut in the hub part. With the aid of the fitting bolts, which are supported on the base of the blind holes, the Taper clamping bush is pushed into the taper bore. The Taper clamping bush is compressed, thus generating a parallel key and clamp connection between shaft and hub part.

To dismantle, the fitting bolts are removed and screwed into the forcing-off threads. The forcing-off threads are cut half in the Taper clamping bush and half in a blind hole in the hub part. When the forcing-off bolts are fitted, the Taper clamping bush is forced out of the taper hub bore. The connection is broken.

The Taper clamping bush and the fitting and dismantling bolts are always screwed in from the larger outer diameter side of the taper.

The torque is transmitted via the clamping connection and the parallel key. No axial fixture is required with normal axial forces, as the clamping connection is sufficient.



Materials

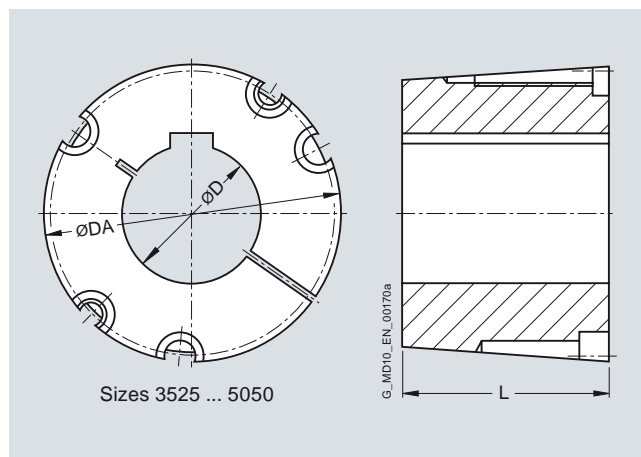
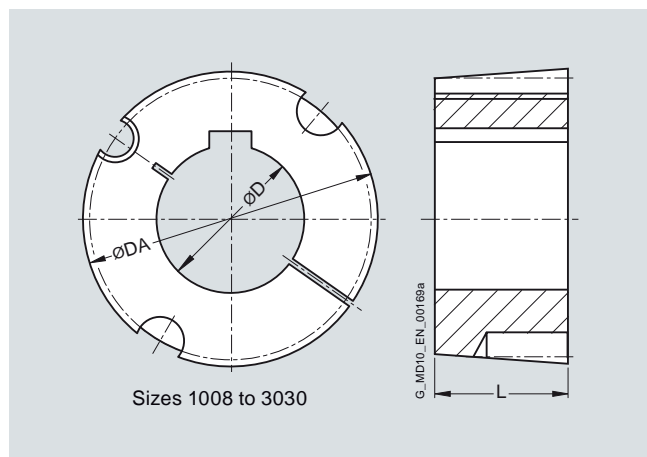
Grey cast iron EN-GJL-220 to 250
alternatively: Steel in quality $R_e > 300 \text{ N/mm}^2$

FLENDER Standard Couplings

Taper Clamping Bushes

Bores in metric sizes

Selection and ordering data



Fitting with 2 set screws

Fitting with 3 bolts with hexagon socket

| Size | Dimensions in mm | | | | Fixing bolts | | | | Product code with order codes for bore diameter and tolerances (product code without -Z) – selection in catalog part 3 | Weight | |
|------|--------------------|------|-----|-----|--------------|--|--------------------|-------------------------------|--|--------------|----------|
| | D | DA | L | DS | LS | Offset screwdriver DIN ISO 2936 (DIN 911) | | min. bore | | max. bore | |
| | Keyway DIN 6885 | | | | | | Spanner width S | Space require- ment S+l | | <i>m</i> | <i>m</i> |
| | min. | max. | | | | | | | | | |
| | | | | | BSW | Inch | mm | mm | | kg | kg |
| 1008 | 10 | 25 | 35 | 22 | 1/4 | 1/2 | 3 | 23 | 2LC0020-0AA90-0AA0 | 0.12 | 0.06 |
| 1108 | 10 | 28 | 38 | 22 | 1/4 | 1/2 | 3 | 23 | 2LC0020-1AA90-0AA0 | 0.15 | 0.07 |
| 1210 | 11 | 32 | 47 | 25 | 3/8 | 5/8 | 5 | 33 | 2LC0020-2AA90-0AA0 | 0.27 | 0.15 |
| 1215 | 11 | 32 | 47 | 38 | 3/8 | 5/8 | 5 | 33 | 2LC0020-3AA90-0AA0 | 0.39 | 0.20 |
| 1610 | 14 | 42 | 57 | 25 | 3/8 | 5/8 | 5 | 33 | 2LC0020-5AA90-0AA0 | 0.38 | 0.18 |
| 1615 | 14 | 42 | 57 | 38 | 3/8 | 5/8 | 5 | 33 | 2LC0020-6AA90-0AA0 | 0.56 | 0.25 |
| 2012 | 14 | 50 | 70 | 32 | 7/16 | 7/8 | 5 | 33 | 2LC0020-7AA90-0AA0 | 0.75 | 0.36 |
| 2517 | 16 | 60 | 85 | 45 | 1/2 | 1 | 6 | 38 | 2LC0021-0AA90-0AA0 | 1.58 | 0.78 |
| 3020 | 25 | 75 | 108 | 51 | 5/8 | 1 1/4 | 8 | 44 | 2LC0021-2AA90-0AA0 | 2.79 | 1.44 |
| 3030 | 35 | 75 | 108 | 76 | 5/8 | 1 1/4 | 8 | 44 | 2LC0021-3AA90-0AA0 | 3.78 | 2.00 |
| 3525 | 35 | 90 | 127 | 65 | 1/2 | 1 1/2 | 10 | 50 | 2LC0021-4AA90-0AA0 | 4.77 | 2.07 |
| 3535 | 35 | 90 | 127 | 89 | 1/2 | 1 1/2 | 10 | 50 | 2LC0021-5AA90-0AA0 | 6.34 | 3.08 |
| 4030 | 40 | 100 | 146 | 77 | 5/8 | 1 3/4 | 12 | 57 | 2LC0021-6AA90-0AA0 | 7.61 | 4.80 |
| 4040 | 40 | 100 | 146 | 102 | 5/8 | 1 3/4 | 12 | 57 | 2LC0021-7AA90-0AA0 | 9.62 | 5.06 |
| 4535 | 55 | 125 | 162 | 89 | 3/4 | 2 | 14 | 70 | 2LC0021-8AA90-0AA0 | 10.06 | 4.09 |
| 4545 | 55 | 110 | 162 | 114 | 3/4 | 2 | 14 | 70 | 2LC0022-0AA90-0AA0 | 12.56 | 7.06 |
| 5040 | 70 | 125 | 178 | 102 | 7/8 | 2 1/4 | 14 | 70 | 2LC0022-1AA90-0AA0 | 11.42 | 4.92 |
| 5050 | 70 | 125 | 178 | 127 | 7/8 | 2 1/4 | 14 | 70 | 2LC0022-2AA90-0AA0 | 15.99 | 8.75 |

Ordering example:

Taper clamping bush 3020 with bore D1 = 55 mm

Product code:

2LC0021-2AA90-0AA0

L1D

Taper clamping bushes must be fitted with a parallel key. The positively operating torque transmission via shaft without keyway is not permitted.

FLENDER Standard Couplings

Taper Clamping Bushes

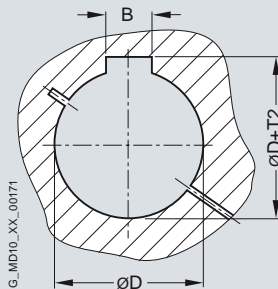
Bores in metric sizes

Available metric bore diameters in mm and order codes

| Bore diameter D | Taper clamping bush size | | | | | | | | | | | | | | | Order code for bore diameter (without -Z) |
|--------------------|--------------------------|-------|------|-------|-------|------|------|------|------|-------|-------|------|------|------|------|--|
| | 1008 | 1108 | 1210 | 1610 | 1615 | 2012 | 2517 | 3020 | 3030 | 3525 | 3535 | 4030 | 4040 | 4535 | 4545 | 5040 5050 |
| 10 | | | | | | | | | | | | | | | | LOE |
| 11 | | | | | | | | | | | | | | | | LOF |
| 12 | | | | | | | | | | | | | | | | LOG |
| 14 | | | | | | | | | | | | | | | | LOH |
| 16 | | | | | | | | | | | | | | | | LOJ |
| 18 | | | | | | | | | | | | | | | | LOK |
| 19 | | | | | | | | | | | | | | | | LOL |
| 20 | | | | | | | | | | | | | | | | LOM |
| 22 | | | | | | | | | | | | | | | | LON |
| 24 | ST-FN | | | | | | | | | | | | | | | LOP |
| 25 | ST-FN | | | | | | | | | | | | | | | LOQ |
| 28 | | ST-FN | | | | | | | | | | | | | | LOR |
| 30 | | | | | | | | | | | | | | | | LOS |
| 32 | | | ST | | | | | | | | | | | | | LOT |
| 35 | | | | | | | | | | | | | | | | LOU |
| 38 | | | | | | | | | | | | | | | | LOV |
| 40 | | | | | | | | | | | | | | | | LOW |
| 42 | | | | ST-FN | ST-FN | | | | | | | | | | | LOX |
| 45 | | | | | | | | | | | | | | | | L1A |
| 48 | | | | | | | | | | | | | | | | L1B |
| 50 | | | | | | | | | | | | | | | | L1C |
| 55 | | | | | | | | | | | | | | | | L1D |
| 60 | | | | | | | | | | | | | | | | L1E |
| 65 | | | | | | | | | | | | | | | | L1F |
| 70 | | | | | | | | | | | | | | | | L1G |
| 75 | | | | | | | | | | | | | | | | L1H |
| 80 | | | | | | | | | | | | | | | | L1J |
| 85 | | | | | | | | | | | | | | | | L1K |
| 90 | | | | | | | | | | | | | | | | L1L |
| 95 | | | | | | | | | | ST | | | | | | L1M |
| 100 | | | | | | | | | | ST-FN | | | | | | L1N |
| 105 | | | | | | | | | | | ST | | | | | L1P |
| 110 | | | | | | | | | | | ST | | | | | L1Q |
| 115 | | | | | | | | | | | ST-FN | | ST | | | L1R |
| 120 | | | | | | | | | | | | | ST | | | L1S |
| 125 | | | | | | | | | | | | | ST | | | L1T |

ST = Taper clamping bush in steel
 FN = Taper clamping bush with shallow keyway

Shallow keyway dimensions



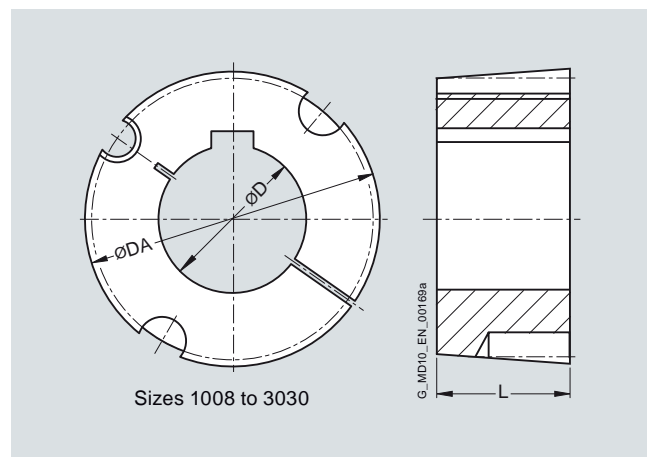
| Taper clamping bush | | Keyway to DIN 6885 | |
|---------------------|---------------------|-------------------------|------------------------------|
| Size | Diameter D mm | Keyway width B mm | Keyway depth D + T2 mm |
| 1008 | 24 | 8 | D + 2.0 |
| 1008 | 25 | 8 | D + 1.3 |
| 1108 | 28 | 8 | D + 2.0 |
| 1610/15 | 42 | 12 | D + 2.2 |
| 3525 | 100 | 28 | D + 4.4 |
| 4030 | 115 | 32 | D + 5.4 |

FLENDER Standard Couplings

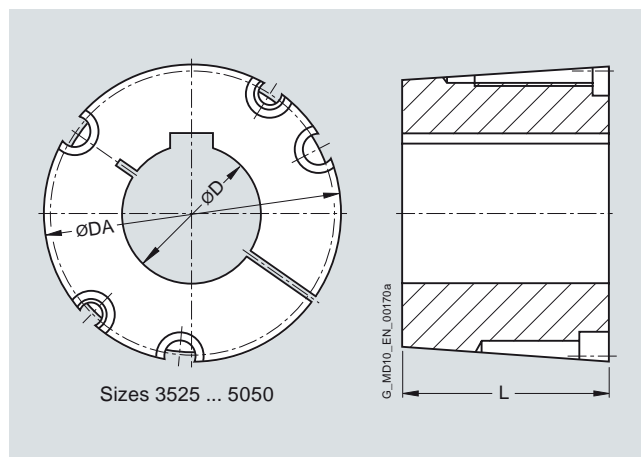
Taper Clamping Bushes

Bores in imperial sizes (inches)

Selection and ordering data



Sizes 1008 to 3030



Sizes 3525 ... 5050

Fitting with 2 set screws

Fitting with 3 bolts with hexagon socket

| Size | Dimensions | | | Fixing bolts | | | | | Product code | Weight | |
|------|------------|-------|-----|--------------|------|--|-----------------------------|----------|--------------------|--------------|--------------|
| | D1 | DA | L | DS | LS | Offset screwdriver DIN ISO 2936 (DIN 911) | | | | min. bore | max. bore |
| | min. | max. | | | | Spanner width S | Space requirement S+l | <i>m</i> | | <i>m</i> | |
| | inch | inch | mm | | BSW | Inch | mm | mm | | kg | kg |
| 1008 | 3/8 | 1 | 35 | 22 | 1/4 | 1/2 | 3 | 23 | 2LC0020-0AA90-0AA0 | 0.12 | 0.06 |
| 1108 | 3/8 | 1 1/8 | 38 | 22 | 1/4 | 1/2 | 3 | 23 | 2LC0020-1AA90-0AA0 | 0.15 | 0.06 |
| 1210 | 5/8 | 1 1/4 | 47 | 25 | 3/8 | 5/8 | 5 | 33 | 2LC0020-2AA90-0AA0 | 0.25 | 0.15 |
| 1215 | 5/8 | 1 1/4 | 47 | 38 | 3/8 | 5/8 | 5 | 33 | 2LC0020-3AA90-0AA0 | 0.36 | 0.21 |
| 1610 | 1/2 | 1 5/8 | 57 | 25 | 3/8 | 5/8 | 5 | 33 | 2LC0020-5AA90-0AA0 | 0.39 | 0.18 |
| 1615 | 1/2 | 1 5/8 | 57 | 38 | 3/8 | 5/8 | 5 | 33 | 2LC0020-6AA90-0AA0 | 0.57 | 0.26 |
| 2012 | 5/8 | 2 | 70 | 32 | 7/16 | 7/8 | 5 | 33 | 2LC0020-7AA90-0AA0 | 0.74 | 0.34 |
| 2517 | 5/8 | 2 1/2 | 85 | 45 | 1/2 | 1 | 6 | 38 | 2LC0021-0AA90-0AA0 | 1.55 | 0.67 |
| 3020 | 1 1/8 | 3 | 108 | 51 | 5/8 | 1 1/4 | 8 | 44 | 2LC0021-2AA90-0AA0 | 2.74 | 1.39 |
| 3030 | 1 1/4 | 3 | 108 | 76 | 5/8 | 1 1/4 | 8 | 44 | 2LC0021-3AA90-0AA0 | 3.87 | 1.93 |
| 3525 | 1 1/2 | 4 | 127 | 65 | 1/2 | 1 1/2 | 10 | 50 | 2LC0021-4AA90-0AA0 | 4.69 | 1.62 |
| 3535 | 1 1/2 | 3 1/2 | 127 | 89 | 1/2 | 1 1/2 | 10 | 50 | 2LC0021-5AA90-0AA0 | 6.23 | 3.18 |
| 4030 | 1 3/4 | 4 1/2 | 146 | 77 | 5/8 | 1 3/4 | 12 | 57 | 2LC0021-6AA90-0AA0 | 7.30 | 3.00 |
| 4040 | 1 3/4 | 4 | 146 | 102 | 5/8 | 1 3/4 | 12 | 57 | 2LC0021-7AA90-0AA0 | 9.41 | 4.89 |
| 4535 | 2 1/4 | 5 | 162 | 89 | 3/4 | 2 | 14 | 70 | 2LC0021-8AA90-0AA0 | 9.94 | 3.86 |
| 4545 | 2 1/4 | 4 1/2 | 162 | 114 | 3/4 | 2 | 14 | 70 | 2LC0022-0AA90-0AA0 | 12.4 | 6.47 |
| 5040 | 2 7/8 | 5 | 178 | 102 | 7/8 | 2 1/4 | 14 | 70 | 2LC0022-1AA90-0AA0 | 12.9 | 7.07 |
| 5050 | 2 7/8 | 5 | 178 | 127 | 7/8 | 2 1/4 | 14 | 70 | 2LC0022-2AA90-0AA0 | 15.7 | 8.41 |

Ordering example:

Taper clamping bush 3020 with bore D1 = 2 in

Product code:

2LC0021-2AA90-0AA0

L6G

FLENDER Standard Couplings **Taper Clamping Bushes**

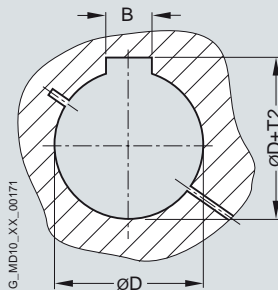
Bores in imperial sizes (inches)

Available imperial bore diameters in inches and order codes

| Bore diameter D | Taper clamping bush size | | | | | | | | | | | | | | | | Order code for bore diameter (without -Z) |
|--------------------|--------------------------|-------|------|------|------|------|------|------|------|-------|------|-------|------|-------|------|------|---|
| | 1008 | 1108 | 1210 | 1610 | 1615 | 2012 | 2517 | 3020 | 3030 | 3525 | 3535 | 4030 | 4040 | 4535 | 4545 | 5040 | |
| 0.375 | | | | | | | | | | | | | | | | | L5D |
| 0.500 | | | | | | | | | | | | | | | | | L5E |
| 0.625 | | | | | | | | | | | | | | | | | L5G |
| 0.750 | | | | | | | | | | | | | | | | | L5J |
| 0.875 | | | | | | | | | | | | | | | | | L5L |
| 1.000 | FN | | | | | | | | | | | | | | | | L5N |
| 1.125 | | ST-FN | | | | | | | | | | | | | | | L5Q |
| 1.250 | | | | | | | | | | | | | | | | | L5S |
| 1.375 | | | | | | | | | | | | | | | | | L5U |
| 1.500 | | | | | | | | | | | | | | | | | L5W |
| 1.625 | | | | | FN | | | | | | | | | | | | L6A |
| 1.750 | | | | | | | | | | | | | | | | | L6C |
| 1.875 | | | | | | | | | | | | | | | | | L6E |
| 2.000 | | | | | | | | | | | | | | | | | L6G |
| 2.125 | | | | | | | | | | | | | | | | | L6J |
| 2.250 | | | | | | | | | | | | | | | | | L6L |
| 2.375 | | | | | | | | | | | | | | | | | L6N |
| 2.500 | | | | | | | | | | | | | | | | | L6Q |
| 2.625 | | | | | | | | | | | | | | | | | L6S |
| 2.750 | | | | | | | | | | | | | | | | | L6U |
| 2.875 | | | | | | | | | | | | | | | | | L6W |
| 3.000 | | | | | | | | | | | | | | | | | L7A |
| 3.125 | | | | | | | | | | | | | | | | | L7C |
| 3.250 | | | | | | | | | | | | | | | | | L7E |
| 3.375 | | | | | | | | | | | | | | | | | L7G |
| 3.500 | | | | | | | | | | | | | | | | | L7J |
| 3.750 | | | | | | | | | | ST-FN | | | | | | | L7N |
| 4.000 | | | | | | | | | | ST-FN | | | | | | | L7S |
| 4.250 | | | | | | | | | | | | ST | | | | | L7U |
| 4.500 | | | | | | | | | | | | ST-FN | | | | | L7X |
| 4.750 | | | | | | | | | | | | | | ST | | | L8A |
| 5.000 | | | | | | | | | | | | | | ST-FN | | | L8D |

ST = Taper clamping bush in steel
 FN = Taper clamping bush with shallow keyway

Shallow keyway dimensions



| Taper clamping bush | | Keyway to BS 46 - 1 | |
|---------------------|------------------|----------------------|---------------------------|
| Size | Diameter D mm | Keyway width B mm | Keyway depth D + T2 mm |
| 1008 | 25.400 | 6.350 | D + 1.321 |
| 1108 | 28.575 | 7.925 | D + 1.626 |
| 1615 | 41.275 | 11.100 | D + 2.616 |
| 3525 | 95.250 | 25.400 | D + 6.223 |
| 3525 | 101.600 | 25.400 | D + 3.937 |
| 4030 | 114.300 | 31.750 | D + 6.477 |
| 4535 | 127.000 | 31.750 | D + 6.553 |

FLENDER Standard Couplings

Taper Clamping Bushes

Notes



| | |
|--------------|--|
| 15/2 | Fits |
| 15/2 | <u>Overview</u> |
| 15/2 | Fitting recommendations |
| 15/2 | Deviation table to DIN ISO 286 |
| 15/3 | Parallel key connections |
| 15/3 | <u>Overview</u> |
| 15/3 | Parallel key connections to DIN 6885-1 |
| 15/4 | Siemens contact partners worldwide |
| 15/5 | Online Services – Information and Ordering in the Internet and on DVD |
| 15/5 | Siemens Industry Automation and Drive Technologies in the WWW |
| 15/5 | Product Selection Using the Offline Mall of Industry |
| 15/5 | Easy Shopping with the Industry Mall |
| 15/6 | Service & Support |
| 15/6 | Online Support |
| 15/6 | Technical Support |
| 15/6 | Technical Consulting |
| 15/6 | Engineering Support |
| 15/6 | Field Service |
| 15/6 | Spare Parts and Repairs |
| 15/6 | Optimization and Upgrading |
| 15/7 | Knowledge Base on DVD |
| 15/7 | Automation Value Card |
| 15/8 | Subject index |
| 15/15 | Product code index |
| 15/16 | Conditions of sale and delivery, Export regulations |

FLENDER Standard Couplings

Appendix

Fits

Overview

Fitting recommendations

| Description | Application | Shaft tolerance | Bore tolerance |
|---|--|-----------------|----------------|
| Sliding fit with parallel key connection not suitable for reversing operation | For steel and cast hubs | j6 | H7 |
| | | h6 | J7 |
| Press fit with parallel key connection not suitable for reversing operation | For steel and cast hubs | h6 | K7 |
| | | k6 | H7 |
| Interference fit with parallel key connection suitable for reversing operation | For steel and cast hubs | m6 | H7 |
| | | n6 | H7 |
| | | h6 | M7 |
| | | h6 | P7 |
| Interference fit with parallel key connection suitable for reversing operation | Only for steel hubs Preferred for ZAPEX and ARPEX coupling series. | k6 | M7 |
| | | m6 | K7 |
| | | n6 | J7 |
| | | p6 | H7 |
| | | s6 | F7 |
| | | u6 | H6 |
| Shrink fit connection without parallel key | Only for steel hubs The permitted hub tension must be urgently checked. | v6 | H6 |
| | | x6 | H6 |

For many applications, the fit assignment m6/H7 is especially suitable.

Deviation table to DIN ISO 286 for above-mentioned fits for bore diameters from 10 mm to 250 mm

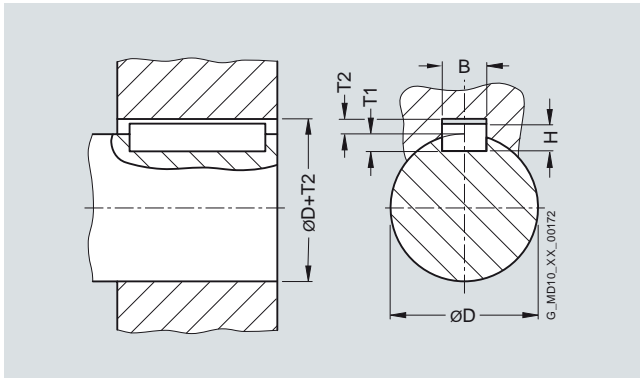
| Diameter | | Bore | | | | | | Shaft | | | | | |
|----------|-----|------------------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| | | F7 | H7 | J7 | K7 | M7 | P7 | h6 | j6 | k6 | m6 | n6 | p6 |
| over | to | Deviations in µm | | | | | | | | | | | |
| 10 | 18 | +34 | +18 | +10 | +6 | 0 | −11 | 0 | +8 | +12 | +18 | +23 | +29 |
| | | +16 | 0 | −8 | −12 | −18 | −29 | −11 | −3 | +1 | +7 | +12 | +18 |
| 18 | 30 | +41 | +21 | +12 | +6 | 0 | −14 | 0 | +9 | +15 | +21 | +28 | +35 |
| | | +20 | 0 | −9 | −15 | −21 | −35 | −13 | −4 | +2 | +8 | +15 | +22 |
| 30 | 50 | +50 | +25 | +14 | +7 | 0 | −17 | 0 | +11 | +18 | +25 | +33 | +42 |
| | | +25 | 0 | −11 | −18 | −25 | −42 | −16 | −5 | +2 | +9 | +17 | +26 |
| 50 | 80 | +60 | +30 | +18 | +9 | 0 | −21 | 0 | +12 | +21 | +30 | +39 | +51 |
| | | +30 | 0 | −12 | −21 | −30 | −51 | −19 | −7 | +2 | +11 | +20 | +32 |
| 80 | 120 | +71 | +35 | +22 | +10 | 0 | −24 | 0 | +13 | +25 | +35 | +45 | +59 |
| | | +36 | 0 | −13 | −25 | −35 | −59 | −22 | −9 | +3 | +13 | +23 | +37 |
| 120 | 180 | +83 | +40 | +26 | +12 | 0 | −28 | 0 | +14 | +28 | +40 | +52 | +68 |
| | | +43 | 0 | −14 | −28 | −40 | −68 | −25 | −11 | +3 | +15 | +27 | +43 |
| 180 | 250 | +96 | +46 | +30 | +13 | 0 | −33 | 0 | +16 | +33 | +46 | +60 | +79 |
| | | +50 | 0 | −16 | −33 | −46 | −79 | −29 | −13 | +4 | +17 | +31 | +50 |

Cylindrical shaft ends, extract from DIN 748 Part 1

| | Diameter in mm | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|----------------|----|----|----|----|----|----|-----|----|----|----|----|-----|----|----|----|----|-----|----|----|----|-----|-----|
| | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | |
| ISO tolerance zone | k6 | | | | | | | | | | | | m6 | | | | | | | | | | |
| End length in mm | 50 | 60 | 80 | | | | | 110 | | | | | 140 | | | | | 170 | | | | | 210 |

Overview

Parallel key connections to DIN 6885-1



In harsh operating conditions or during reversing operation, the keyway width tolerance P9 must be chosen.

| Diameter | | Keyway width | Parallel key height | Shaft keyway depth | Hub keyway depth | Deviation for shaft and hub keyway depth | Deviation table for keyway width B | |
|--------------|------------|--------------|---------------------|--------------------|------------------|--|------------------------------------|-------------|
| over D mm | to mm | B mm | H mm | T1 mm | T2 mm | mm | JS9 μm | P9 μm |
| | 10 | 3 | 3 | 1.8 | 1.4 | +0.1 | +12.5 -12.5 | -6 -31 |
| 10 | 12 | 4 | 4 | 2.5 | 1.8 | +0.1 | +15 -15 | -12 -42 |
| 12 | 17 | 5 | 5 | 3 | 2.3 | +0.1 | +15 -15 | -12 -42 |
| 17 | 22 | 6 | 6 | 3.5 | 2.8 | +0.1 | +15 -15 | -12 -42 |
| 22 | 30 | 8 | 7 | 4 | 3.3 | +0.2 | +18 -18 | -15 -51 |
| 30 | 38 | 10 | 8 | 5 | 3.3 | +0.2 | +18 -18 | -15 -51 |
| 38 | 44 | 12 | 8 | 5 | 3.3 | +0.2 | +21.5 -21.5 | -18 -61 |
| 44 | 50 | 14 | 9 | 5.5 | 3.8 | +0.2 | +21.5 -21.5 | -18 -61 |
| 50 | 58 | 16 | 10 | 6 | 4.3 | +0.2 | +21.5 -21.5 | -18 -61 |
| 58 | 65 | 18 | 11 | 7 | 4.4 | +0.2 | +21.5 -21.5 | -18 -61 |
| 65 | 75 | 20 | 12 | 7.5 | 4.9 | +0.2 | +26 -26 | -22 -74 |
| 75 | 85 | 22 | 14 | 9 | 5.4 | +0.2 | +26 -26 | -22 -74 |
| 85 | 95 | 25 | 14 | 9 | 5.4 | +0.2 | +26 -26 | -22 -74 |
| 95 | 110 | 28 | 16 | 10 | 6.4 | +0.2 | +26 -26 | -22 -74 |
| 110 | 130 | 32 | 18 | 11 | 7.4 | +0.2 | +31 -31 | -26 -88 |
| 130 | 150 | 36 | 20 | 12 | 8.4 | +0.3 | +31 -31 | -26 -88 |
| 150 | 170 | 40 | 22 | 13 | 9.4 | +0.3 | +31 -31 | -26 -88 |
| 170 | 200 | 45 | 25 | 15 | 10.4 | +0.3 | +31 -31 | -26 -88 |
| 200 | 230 | 50 | 28 | 17 | 11.4 | +0.3 | +31 -31 | -26 -88 |
| 230 | 260 | 56 | 32 | 20 | 12.4 | +0.3 | +37 -37 | -32 -106 |
| 260 | 290 | 63 | 32 | 20 | 12.4 | +0.3 | +37 -37 | -32 -106 |
| 290 | 330 | 70 | 36 | 22 | 14.4 | +0.3 | +37 -37 | -32 -106 |
| 330 | 380 | 80 | 40 | 25 | 15.4 | +0.3 | +37 -37 | -32 -106 |
| 380 | 440 | 90 | 45 | 28 | 17.4 | +0.3 | +43.5 -43.5 | -37 -124 |
| 440 | 500 | 100 | 50 | 31 | 19.4 | +0.3 | +43.5 -43.5 | -37 -124 |

FLENDER Standard Couplings

Appendix

Siemens contact partners worldwide

The screenshot shows the 'Local Partners Worldwide' page for Siemens. The user has selected 'Germany' as the country. The page asks the user to select a city (Berlin is shown) and then to select the appropriate team (Sales is shown). A 'Next >' button is visible at the bottom right.

The screenshot shows the 'Please select a sector' screen. The user has selected 'Berlin' as the city. The page asks the user to select a sector from a list. The 'Add Features' section is expanded, showing a list of sectors including 'Video Systems, Visualization Systems', 'Electrical/Powerwater', 'Material Flow Controlling, Distribution and Logistics', 'Assembly Control', 'Paper Machines', 'Production Automation in the Automotive Industry and Suppliers', 'Production Logistics and Control Systems', 'Production Machinery, Tooling, Pallets, Metal Forming, Welding, Glass, Ceramic processing, Sheet processing, Packaging, Printing, Cores', 'Process Control Systems', and 'Tooling/Final Assembly'. A 'Next >' button is visible at the bottom right.

The screenshot shows the 'Please select a Siemens product group' screen. The user has selected 'Berlin' as the city and 'Production Machinery, Tooling, Pallets, Metal Forming, Welding, Glass, Ceramic processing, Sheet processing, Packaging, Printing, Cores' as the sector. The page asks the user to select a product group from a list. The 'Add Product Catalog' section is expanded, showing a list of product groups including 'Drive Technology', 'Automation systems', 'Communication/Networks', 'Low-Voltage Controls', 'Electrical Installation Technology', 'Process automation', 'Sensors, measuring and testing technology', 'Power supplies', 'Safety systems - Safety Integrated', and 'System solutions and products for branches'. A 'Next >' button is visible at the bottom right.

At

<http://www.siemens.com/automation/partner>

you can find details of Siemens contact partners worldwide responsible for particular technologies.

You can obtain in most cases a contact partner for

- Technical Support,
- Spare parts/repairs,
- Service,
- Training,
- Sales or
- Consultation/engineering.

You start by selecting a

- Country,
- Product or
- Sector.

By further specifying the remaining criteria you will find exactly the right contact partner with his/her respective expertise.

Siemens Industry Automation and Drive Technologies in the WWW



A detailed knowledge of the range of products and services available is essential when planning and configuring automation systems. It goes without saying that this information must always be fully up-to-date.

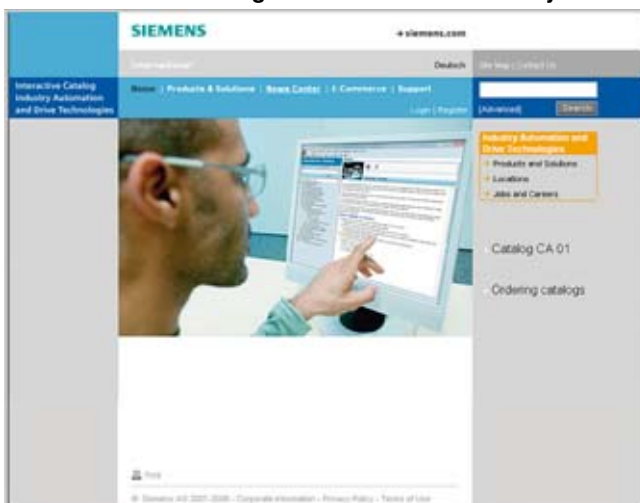
Siemens Industry Automation and Drive Technologies has therefore built up a comprehensive range of information in the World Wide Web, which offers quick and easy access to all data required.

Under the address

<http://www.siemens.com/automation>

you will find everything you need to know about products, systems and services.

Product Selection Using the Offline Mall of Industry



Detailed information together with convenient interactive functions:

The Offline Mall CA 01 covers more than 80,000 products and thus provides a full summary of the Siemens Industry Automation and Drive Technologies product base.

Here you will find everything that you need to solve tasks in the fields of automation, switchgear, installation and drives. All information is linked into a user interface which is easy to work with and intuitive.

After selecting the product of your choice you can order at the press of a button, by fax or by online link.

Information on the Offline Mall CA 01 can be found in the Internet under

<http://www.siemens.com/automation/ca01>

or on DVD.

Easy Shopping with the Industry Mall



The Industry Mall is the virtual department store of Siemens AG in the Internet. Here you have access to a huge range of products presented in electronic catalogs in an informative and attractive way.

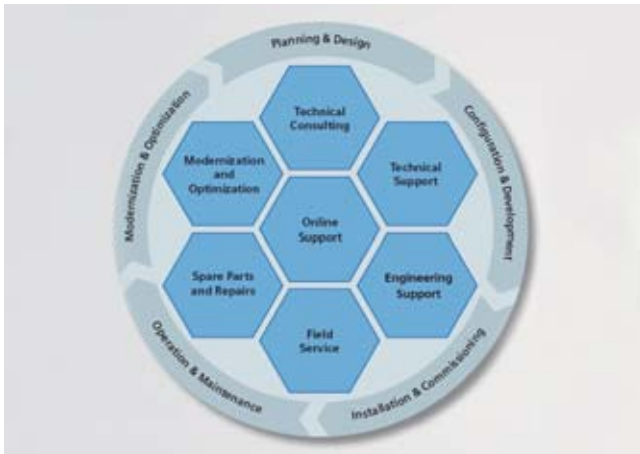
Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking of the order to be carried out online via the Internet.

Numerous functions are available to support you.

For example, powerful search functions make it easy to find the required products, which can be immediately checked for availability. Customer-specific discounts and preparation of quotes can be carried out online as well as order tracking and tracing.

Please visit the Industry Mall on the Internet under:

<http://www.siemens.com/automation/mall>



Our Service & Support accompanies you worldwide in all concerns related to the automation and drive technology of Siemens. In more than 100 countries directly on site and covering all phases of the life cycle of your machines and plants. Round the clock.

An experienced team of specialists with their combined knowhow is ready to assist you. Regular training courses and a close contact of our employees among each other - also across continents - assure a reliable service for multifaceted scopes.

Online Support



The comprehensive information system available round the clock via Internet ranging from Product Support and Service & Support services to Support Tools in the Shop.

<http://www.siemens.com/automation/service&support>

Technical Support



Competent consulting in technical questions covering a wide range of customer-oriented services for all our products and systems.

<http://www.siemens.com/automation/support-request>

Technical Consulting



Support in the planning and designing of your project from detailed actual-state analysis, target definition and consulting on product and system questions right to the creation of the automation solution.

Engineering Support



Support in configuring and developing with customer-oriented services from actual configuration to implementation of the automation project.

Field Service



With Field Service, we offer services for startup and maintenance essential for ensuring system availability.

Spare Parts and Repairs



In the operating phase of a machine or automation system, we provide a comprehensive repair and spare parts service ensuring the highest degree of plant availability.

Optimization and Upgrading



After startup or during the operating phase, additional potential for increasing the productivity or for reducing costs often arises. For this purpose, we offer you high-quality services in optimization and upgrading.

You find contact details in the Internet under:
<http://www.siemens.com/automation/service&support>

Knowledge Base on DVD



For locations without online connections to the Internet there are excerpts of the free part of the information sources available on DVD (Service & Support Knowledge Base). This DVD contains all the latest product information at the time of production (FAQs, Downloads, Tips and Tricks, Updates) as well as general information on Service & Support.

The DVD also includes a full-text search and our Knowledge Manager for targeted searches for solutions. The DVD will be updated every 4 months.

Just the same as our online offer in the Internet, the Service & Support Knowledge Base on DVD comes complete in 5 languages (German, English, French, Italian, Spanish).

You can order the **Service & Support Knowledge Base** DVD from your Siemens contact.

Order no. **6ZB5310-0EP30-0BA2**

Automation Value Card



Small card - great support

The Automation Value Card is an integral component of the comprehensive service concept with which Siemens Automation and Drives will accompany you in each phase of your automation project.

It doesn't matter whether you want just specific services from our Technical Support or want to purchase something on our Online portal, you can always pay with your Automation Value Card. No invoicing, transparent and safe. With your personal card number and associated PIN you can view the state of your account and all transactions at any time.

Services on card. This is how it's done.

Card number and PIN are on the back of the Automation Value Card. When delivered, the PIN is covered by a scratch field, guaranteeing that the full credit is on the card.

By entering the card number and PIN you have full access to the Service & Support services being offered. The charge for the services procured is debited from the credits on your Automation Value Card.

All the services offered are marked in currency-neutral credits, so you can use the Automation Value Card worldwide.

Order your Automation and Value Card easily and comfortably like a product with your sales contact.

Automation Value Card order numbers

| Credits | Order no. |
|---------|----------------------------|
| 200 | 6ES7 997-0BA00-0XA0 |
| 500 | 6ES7 997-0BB00-0XA0 |
| 1000 | 6ES7 997-0BC00-0XA0 |
| 10000 | 6ES7 997-0BG00-0XA0 |

Detailed information on the services offered is available on our Internet site at:

<http://www.siemens.com/automation/service&support>

Service & Support à la Card: Examples

Technical Support

| | |
|-------------------|---|
| "Priority" | Priority processing for urgent cases |
| "24 h" | Availability round the clock |
| "Extended" | Technical consulting for complex questions |
| "Mature Products" | Consulting service for products that are not available any more |

Support Tools in the Support Shop

Tools that can be used directly for configuration, analysis and testing

FLENDER Standard Couplings

Appendix

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