FLENDER COUPLINGS
CATALOG **FLE 10.1**
EDITION 2026.1 EN



TORSIONALLY RIGID COUPLINGS

N-ZAPEX, N-ARPEX, ARPEX, SKZF

flender.com

FLENDER

FLENDER

TORSIONALLY RIGID COUPLINGS



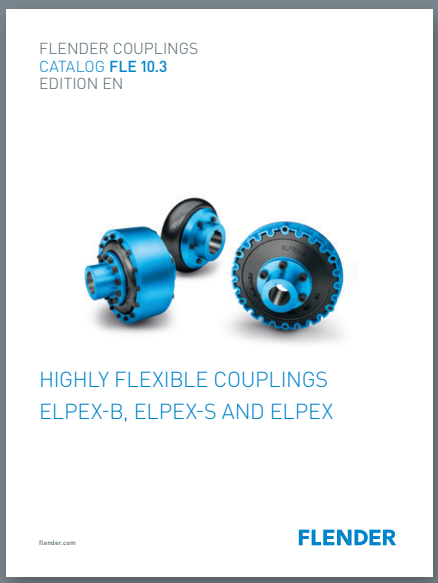
Catalog FLE 10.1 EDITION 2026.1 EN

Introduction		E
Torsionally Rigid Gear Couplings	N-ZAPEX XW	4
	N-ZAPEX XN	5
Torsionally Rigid All-Steel Couplings	N-ARPEX, ARPEX	6
Flexible Couplings	N-EUPEX	7
	RUPEX	8
	BIPEX	9
Highly Flexible Couplings	ELPEX-B	10
	ELPEX-S	11
	ELPEX	12
Fluid Couplings	FLUDEX	13
Rigid Couplings	SKZF	16
Appendix		A

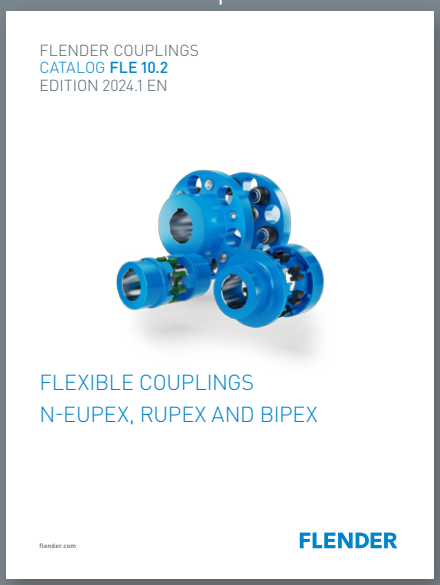
FLE 10 CATALOG GROUP



Product catalog FLE 10.1
FLEX-C10001-00-7600
Torsionally Rigid Couplings



Product catalog FLE 10.3
FLEX-C10003-00-7600
Highly Flexible Couplings



Product catalog FLE 10.2
FLEX-C10001-00-7600
Flexible Couplings



Product catalog FLE 10.4
FLEX-C10004-00-7600
Fluid Couplings

For further coupling catalogs, see page A/6



Product catalog FLE 10.5
FLEX-C10120-00-7600
High Performance Couplings



Product catalog FLE 10.7
FLEX-C10122-00-7600
Safety couplings

INTRODUCTION

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 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.

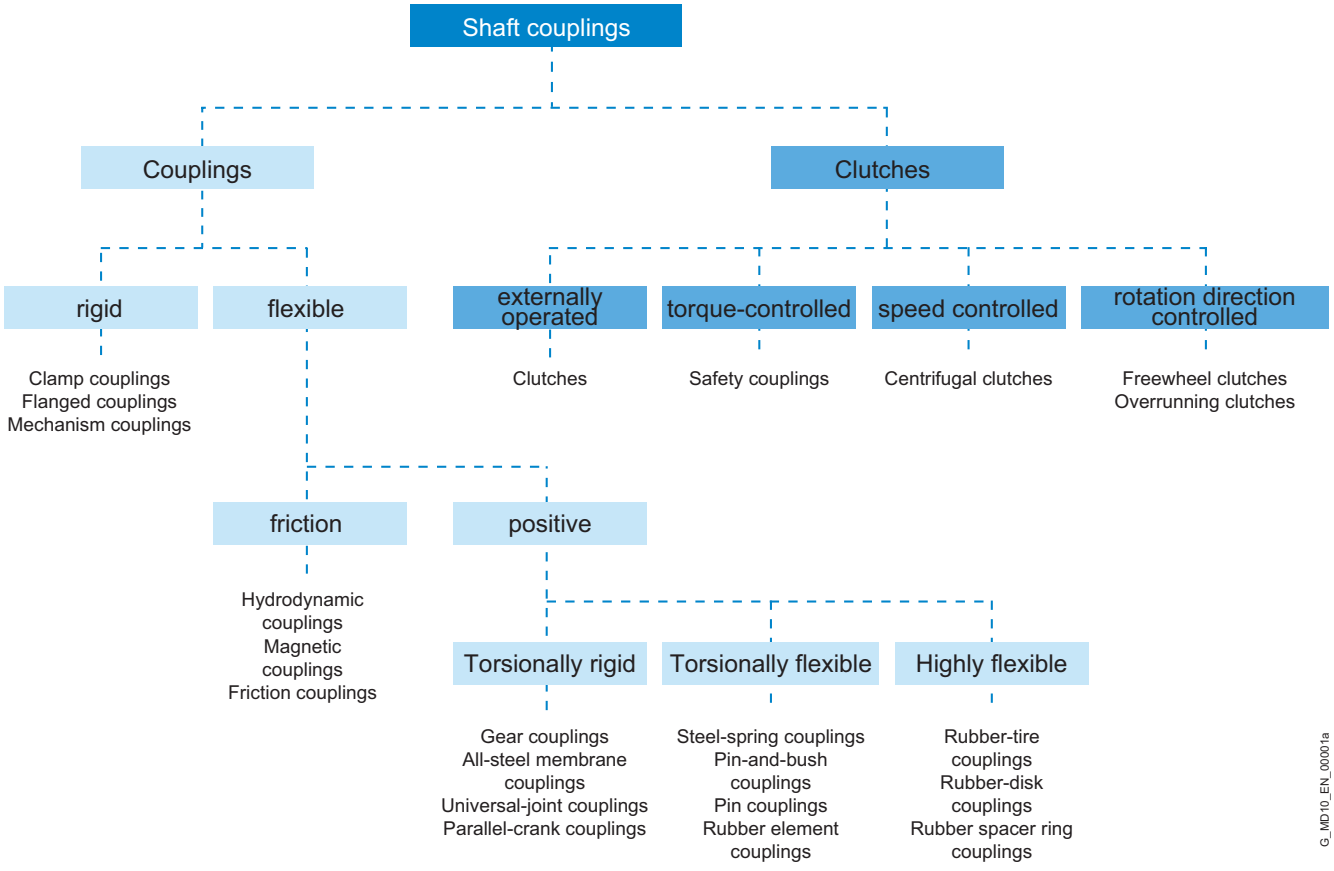
Clutches interrupt or limited the transmissible torque. The engaging and disengaging forces on externally operated clutches are introduced via a mechanically, electrically, hydraulically or pneumatically operating mechanism. Overload, centrifugal or freewheel clutches draw their engaging energy from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


Shaft couplings
Couplings
Clutches
rigid
flexible
externally operated
torque-controlled
speed controlled
rotation direction controlled
Clamp couplings
Flanged couplings
Mechanism couplings
Clutches
Safety couplings
Centrifugal clutches
Freewheel clutches
Overrunning clutches
friction
positive
Hydrodynamic couplings
Magnetic couplings
Friction couplings
Torsionally rigid
Torsionally flexible
Highly flexible
Gear couplings
All-steel membrane couplings
Universal-joint couplings
Parallel-crank couplings
Steel-spring couplings
Pin-and-bush couplings
Pin couplings
Rubber element couplings
Rubber-tire couplings
Rubber-disk couplings
Rubber spacer ring couplings
G_MD10_EN_00001a

OUR COUPLING GROUPS AT A GLANCE

N-EUPEX, RUPEX and BIPEX

Flexible Couplings

Flexible Flender couplings have a wide range of possible applications. A broad standard modular system as well as specially designed application-specific couplings are available.



N-EUPEX
cam couplings
Rated torque:
12 Nm ... 93,500 Nm



RUPEX
pin-and-bush couplings
Rated torque:
120 Nm ... 1,690,000 Nm



BIPEX
cam couplings
Rated torque:
21 Nm ... 5,100 Nm

ELPEX, ELPEX-B and ELPEX-S

Highly Flexible Couplings

ELPEX® couplings are free of circumferential back-lash. Their damping capacity and low torsional stiff-ness make them especially well-suited for coupling machines with strongly non-uniform torque characteristics or large shaft misalignment.



ELPEX
elastic ring couplings
Rated torque:
1,600 Nm ... 90,000 Nm



ELPEX-B
elastic tire couplings
Rated torque:
57 Nm ... 19,000 Nm

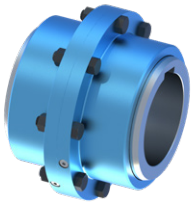


ELPEX-S
rubber disk couplings
Rated torque:
200 Nm ... 63,000 Nm

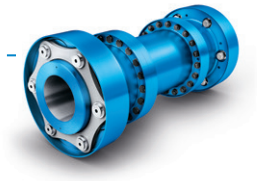
N-ZAPEX gear couplings and ARPEX all-steel couplings

Torsionally rigid couplings

For transmission of high torques, we offer both ARPEX all-steel couplings and N-ZAPEX gear couplings in a range
of versions. Their purposes of application vary according to specific requirements with respect to shaft misalignment, temperature and torque.



N-ZAPEX
gear couplings
Rated torque:
1,400 Nm ... 10,000,000 Nm



ARPEX
high performance
couplings
Rated torque:
1,100 Nm ... 936,000 Nm



N-ARPEX and ARPEX
all-steel couplings
Rated torque:
92 Nm ... 2,000,000 Nm

FLUDEX

Hydrodynamic couplings

The FLUDEX hydrodynamic fluid coupling works according to the Föttinger principle. It functions entirely free of wear.



FLUDEX
fluid couplings
Power:
1.2 kW ... 2,500 kW

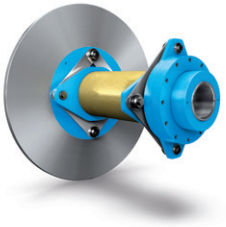
Application-specific couplings

Couplings for rail vehicles must meet high demands. Due to their high degree of standardization and wide variety, they can be used in the most diverse vehicle types.



Railway coupling
Rated torque:
1,000 Nm ... 9,500 Nm

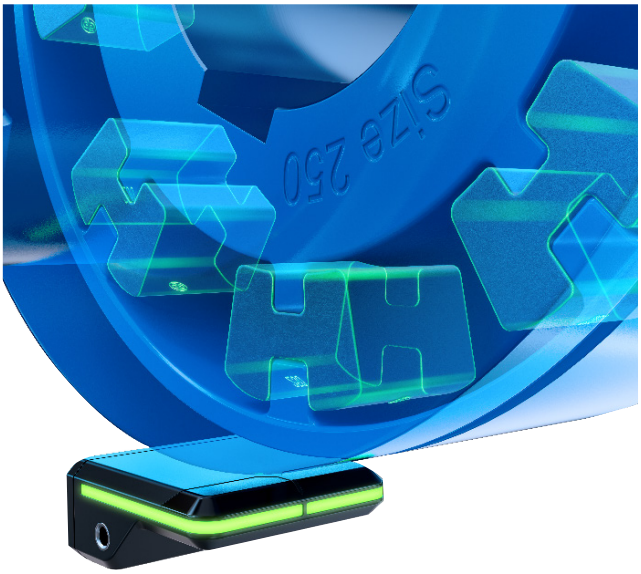
Each wind turbine coupling is designed to optimally meet the requirements of the respective wind turbine. The coupling connects the fast-running gear shaft with the generator shaft and is available for wind turbines with a capacity of up to 12 MW.



Wind turbine couplings
Rated torque:
10,000 Nm ... 60,000 Nm

AIQ DETECT

for wear detection on the N-EUPEX and RUPEX



The AIQ Detect uses several Hall sensors to determine the wear on the flexible Flender couplings of the N-EUPEX and RUPEX via sensor magnets installed on the coupling side. The progressive wear of the elastomer components of the RUPEX and N-EUPEX results in a torsion angle between the coupling halves. This angle of rotation and the resulting time difference between the coupling halves make it possible to detect the degree of wear of the RUPEX and N-EUPEX flexible couplings. The speed of the coupling is also determined.

This information can be evaluated in the customer's control system via analogue and digital outputs that can be configured by the customer. The AIQ Detect also enables the wear status to be output via the built-in LED light strip on the sensor (green = the wear status is OK, yellow = the elastomer components must be replaced, red = the drive-train must be stopped). This information can also be analyzed and displayed via a Bluetooth interface with a mobile device using the AIQ app.

Benefits:

- Continuous wear monitoring
- Coupling status at a glance
- Prevents system failures = maximum operational reliability
- Supports service and maintenance personnel
- Waste reduction (replacement of elastomers only if necessary)
- No annual testing of elastomers necessary
- Flexible and easy to use

Functions:

- Detects wear on elastomers
- Speed measurement
- Remaining life forecast
- Coupling failure detection
- Configurable output signals
- Firmware upgrades via AIQ app

Coupling	Types	Size	Article No.
N-EUPEX	A, B, H	80 – 140	F2E01528467
		160 – 280	F2E01528468
		315 – 710	F2E01528469
RUPEX	RWN, RWS	105 – 1120	F2E01528472
		1250 – 2000	F2E01528473

Notes

- The AIQ Detect is used for continuous wear monitoring of Flender N-EUPEX and RUPEX couplings and can be ordered as an accessory to the coupling
- Make sure that the Flender coupling has the 'AIQ Detect-ready' status (see ordering example)

Ordering example

- N-EUPEX coupling A, size 110 with the status "AIQ Detect-ready" (Article No. addition A99)
- AIQ Detect for wear monitoring of N-EUPEX coupling A, size 110

Article No. N-EUPEX: **2LC0170-4AB99-0AA0-Z L0M+M0P+A99**

Article No. AIQ Detect: **F2E01528467 (according to the table)**

TECHNICAL INFORMATION AND COUPLING SELECTION

Technical information **E/12**

Shaft misalignment E/12

Balancing E/13

Shaft-hub connections E/15

Standards E/16

Key to symbols E/17

Selection of the coupling series **E/18**

Typical coupling solutions for different example applications E/19

Selection of the coupling size **E/20**

Coupling load in continuous operation E/20

Coupling load at maximum and overload conditions E/21

Coupling load due to dynamic torque load E/21

Checking the maximum speed E/21

Checking permitted shaft misalignment E/22

Checking bore diameter, mounting geometry and coupling design E/22

Coupling behavior under overload conditions E/22

Checking shaft-hub connection E/22

Checking low temperature and chemically aggressive environment E/22

Features of the standard type **E/23**

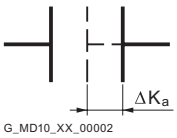
TECHNICAL INFORMATION

Shaft misalignment

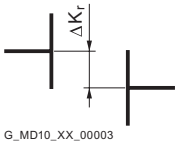
Shaft misalignment is the result of displacement during assembly and operation and, where machines constructed with two radial bearings each are rigidly coupled, will cause high loads being placed on the bearings. Elastic deformation of base frame, foundation and machine housing will lead to shaft misalignment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

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 operating instructions.

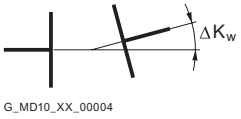
Depending on the direction of the effective shaft misalignment a distinction is made between:



Axial misalignment



Radial misalignment



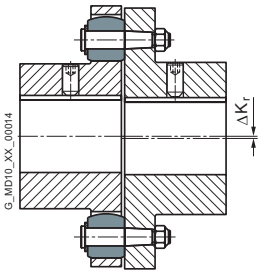
Angular misalignment

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.

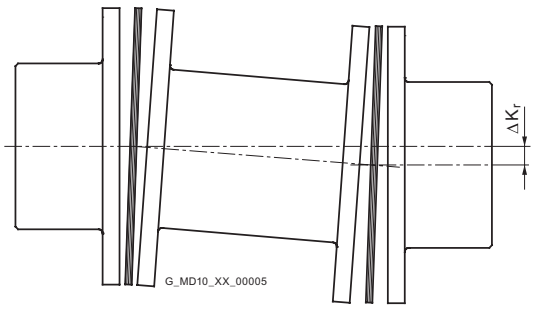
Example:
In the case of a RUPEX RWN 198 coupling with an outer diameter of 198 mm and a speed of 1500 rpm, the permitted radial misalignment is Δ_{Kr} = 0.3 mm.



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:
N-ARPEX ARN-6 NEN 217-6 with a shaft distance of 140 mm with a permitted radial misalignment of ΔK_r = 2.2 mm (angle per joint level 1.0°).



Balancing

Balance quality levels
The so-called quality level G to DIN ISO 21940 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.

Balancing standard in accordance with DIN ISO 21940-32
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 article number the balancing quality can be preset with the help of the order code. Additionally, also the balance quality level to DIN ISO 21940 can be preset together with the operating speed belonging to it, which then be taken as priority.

$$e_{perm} = 9550 \cdot \frac{G}{n}$$

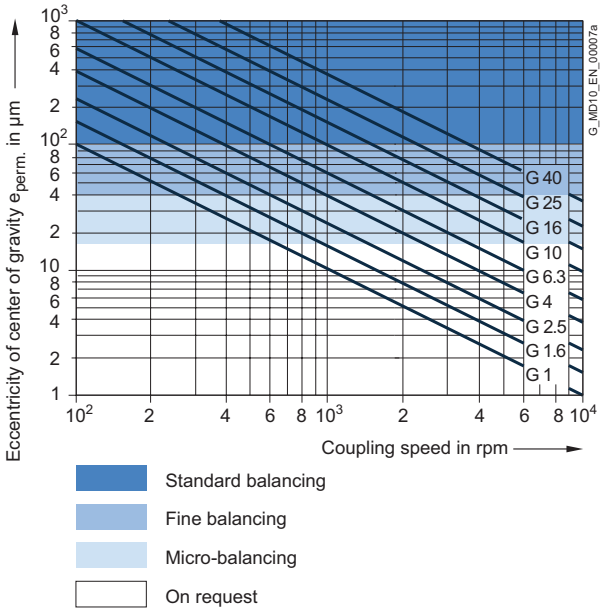
$$e_{coupl} \leqslant e_{perm}$$

Permitted eccentricity of center of gravity	e_{perm}	in µm
Eccentricity of center of gravity of coupling	e_{coupl}	in µm
Balancing quality level	G	in mm/s
Coupling speed	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

TECHNICAL INFORMATION

E



Example:
Coupling speed = 1450 rpm
required balancing quality level G 6.3

$$e_{perm} = 9550 \cdot \frac{G}{n} = 9550 \cdot \frac{6.3}{1450}\ \mu m$$

Thus, the required eccentricity of center of gravity is 41.5 µm. The fine balancing with a maximum eccentricity of center of gravity of 40 mm fulfills this requirement; therefore, the order code W02 has to be specified when ordering.

For many applications the following balancing quality recommendation applies:

Coupling	standard balancing $v = DA \cdot n/19100$	fine balancing
short version with LG ⩽ 3 × DA	v ⩽ 30 m/s	v > 30 m/s
long version with LG > 3 × DA	v ⩽ 15 m/s	v > 15 m/s

Peripheral speed	v	in mm/s
Coupling outer diameter	DA	in mm
Coupling speed	n	in rpm
Coupling length	LG	in mm

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.

TECHNICAL INFORMATION

Standards

Machines

2006/42/EG	EC Machinery Directive
2014/34/EU	ATEX Directive – Manufacturer
1999/92/EG	ATEX Directive – Operator – and ATEX Guideline to Directive 1999/92/EC
DIN EN 80079-36	Non-electrical equipment for use in potentially explosive atmospheres
DIN EN 1127	Explosive atmospheres, explosion prevention and protection
DIN EN 50347	General-purpose three-phase induction motors having standard dimensions and outputs

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 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
ISO 13709	Centrifugal pumps for petroleum, petrochemical and natural gas industries

Balancing

DIN ISO 21940	Requirements for the balancing quality of rigid rotors
DIN ISO 21940-32	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	Reciprocating internal combustion engines Dimensions and requirements for flywheels and flexible couplings
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

Key to symbols

Name	Symbols	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
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

SELECTION OF THE COUPLING SERIES

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 criteria	Torque range Rated coupling torque T_{KN}	Speed range Peripheral speed $v_{max} = DA \cdot n_{max}/19100$	Torsional stiffness torsionally rigid	 torsionally flexible	 Highly flexible	Operating temperature range
N-ZAPEX	1420 ... 10000000 Nm	60 m/s	■	–	–	-30 ... +80 °C
N-ARPEX	350 ... 2000000 Nm	110 m/s	■	–	–	-60 ... +280 °C
N-EUPEX	12 ... 93500 Nm	36 m/s	–	■	–	-60 ... +100 °C
N-EUPEX DS	19 ... 21200 Nm	36 m/s	–	■	–	-30 ... +80 °C
RUPEX	120 ... 1690000 Nm	60 m/s	–	■	–	-60 ... +100 °C
BIPEX	21 ... 5100 Nm	40 m/s	–	■	–	-50 ... +100 °C
ELPEX-B	57 ... 19000 Nm	45 m/s	–	–	■	-50 ... +70 °C
ELPEX-S	200 ... 63000 Nm	66 m/s	–	–	■	-40 ... +80 °C
ELPEX	1600 ... 90000 Nm	60 m/s	–	–	■	-40 ... +80 °C

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

Example applications	Application factor FB
Electric motor without gear unit	
Centrifugal pumps	1.0
Piston pumps	1.5
Vacuum pumps	1.5
Fans with T_N less than 75 Nm	1.5
Fans with T_N from 75 to 750 Nm	1.75
Fans with T_N larger than 750 Nm	1.75
Blowers	1.5
Frequency converters / generators	1.25
Reciprocating compressors	1.75
Screw-type compressors	1.5
Internal-combustion engine without gear unit	
Generators	1.75
Pumps	1.5
Fans	1.75
Hydraulic pumps, excavators, construction machines	1.5
Compressors / screw-type compressors	1.5
Agricultural machinery	1.75
Other	
Turbine gear units	1.5
Hydraulic motor - gear unit	1.25
Electric motor with gear unit	
Chemical industry	
Extruders	1.5
Pumps - centrifugal pumps	1.0
Pumps - piston pumps	1.75
Pumps - plunger pumps	1.5
Reciprocating compressors	1.75
Calenders	1.5
Kneaders	1.75
Cooling drums	1.25
Mixers	1.25
Stirrers	1.25
Toasters	1.25
Drying drums	1.25
Centrifuges	1.25
Crushers	1.5
Power generation and conversion	
Compressed air, reciprocating compressors	1.75
Compressed air, screw-type compressors	1.25
Air - Blowers	1.5
Air - Cooling tower fans	1.5
Air - Turbine blowers	1.5
Generators, converters	1.25
Welding generators	1.25
Metal production, iron and steel works	
Plate tilters	1.5
Ingot pushers	1.75
Slabbing mill	1.75
Coiling machines	1.5
Roller straightening machines	1.5
Roller tables	1.75
Shears	1.75
Rollers	1.75
Metal working machines	
Plate bending machines	1.5
Plate straightening machines	1.5
Hammers	1.75
Planing machines	1.75
Presses, forging presses	1.75
Shears	1.5
Grinding machines	1.25
Punches	1.5
Machine tools: Main drives	1.5
Machine tools: Auxiliary drives	1.25
Food industry	
Filling machines	1.25
Kneading machines	1.5
Mashers	1.5
Sugar cane production	1.5
Production machines	
Construction machines, hydraulic pumps	1.25
Construction machines, traversing gears	1.5
Construction machines, suction pumps	1.5
Construction machines, concrete mixers	1.5
Printing machines	1.25
Woodworking - barking drums	1.5
Woodworking - planing machines	1.5
Woodworking - reciprocating saws	1.5
Grinding machines	1.5
Textile machines - winders	1.5
Textile machines - printing machines	1.5
Textile machines - tanning vats	1.5
Textile machines - shredders	1.5
Textile machines - looms	1.5
Packaging machines	1.5
Brick molding machines	1.75
Transport and logistics	
Passenger transport - elevators	1.5
Passenger transport - escalators	1.5
Conveyor systems - bucket elevators	1.5
Conveyor systems - hauling winches	1.5
Conveyor systems - belt conveyors	1.5
Conveyor systems - endless-chain conveyors	1.5
Conveyor systems - circular conveyors	1.5
Conveyor systems - screw conveyors	1.5
Conveyor systems - inclined hoists	1.5
Crane traversing gear	1.5
Hoisting gear	1.5
Crane lifting gear	2.0
Crane traveling gear	1.5
Crane slewing gear	1.5
Crane fly jib hoists	1.5
Cable railways	1.5
Drag lifts	1.5
Winches	1.5
Cellulose and paper	
Paper-making machines, all	1.5
Pulper drives	1.5
Cement industry	
Crushers	1.75
Rotary furnaces	1.5
Hammer mills	1.75
Ball mills	1.75
Pug mills	1.75
Mixers	1.5
Pipe mills	1.5
Beater mills	1.75
Separators	1.5
Roller presses	1.75

SELECTION OF THE COUPLING SIZE

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

Rated coupling load $T_N = 9550 \times P_N / n_N$
(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 for N-EUPEX, N-EUPEX-DS, RUPEX, BIPEX, ELPEX-B, N-ARPEX, ARPEX, N-ZAPEX and FLUDEX

Application factor FB

Torque characteristic of the driving machine	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

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/smelting machinery

Temperature factor FT

Coupling	Elastomer material	Low temperature °C	Temperature T_a on the coupling: under -30 °C	-30 °C up to 50 °C	up to 60 °C	up to 70 °C	up to 80 °C	up to 90 °C	up to 100 °C	up to 110 °C	up to 120 °C
N-EUPEX	NBR	-50	1.0	1.0	1.0	1.0	1.0	–	–	–	–
N-EUPEX	NR	-60	1.0	1.0	–	–	–	–	–	–	–
N-EUPEX	HNBR	-10	–	1.0	1.0	1.0	1.0	1.25	1.25	–	–
N-EUPEX	TPU	-50	1.0	1.0	1.05	1.10	1.15	–	–	–	–
N-EUPEX DS	NBR	-30	–	1.0	1.0	1.0	1.0	–	–	–	–
RUPEX	NBR	-50	1.0	1.0	1.0	1.0	1.0	–	–	–	–
RUPEX	NR	-60	1.0	1.0	–	–	–	–	–	–	–
RUPEX	HNBR	-10	–	1.0	1.0	1.0	1.0	1.25	1.25	–	–
BIPEX	TPU	-50	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.5
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	–	–	–	–

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)
TPU = polyurethane

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

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

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.

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

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

$T_{KW} \geq T_{W} \cdot FF$

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 = $\sqrt{(f_{err}/10\ Hz)}$

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

Checking the maximum speed

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

The maximum permissible speeds can be found in the type tables. For N-ZAPEX couplings, the permissible speeds must be reduced depending on the misalignment, in accordance with the following table.

	Speed correction factor FN													
Misalignment angle	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
Correction factor	1.00	1.00	1.00	0.84	0.72	0.59	0.50	0.42	0.36	0.32	0.28	0.24	0.22	0.20

$n_{perm} = FN \cdot n_{max}$

SELECTION OF THE COUPLING SIZE

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 N-ZAPEX, N-ARPEX, 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. Flender 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 the **Appendix**.

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.

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
N-ARPEX and ARPEX clamping hubs	Bore tolerance G6 (suitable for shaft 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 N-ZAPEX, N-ARPEX 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
N-ZAPEX, N-ARPEX, 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

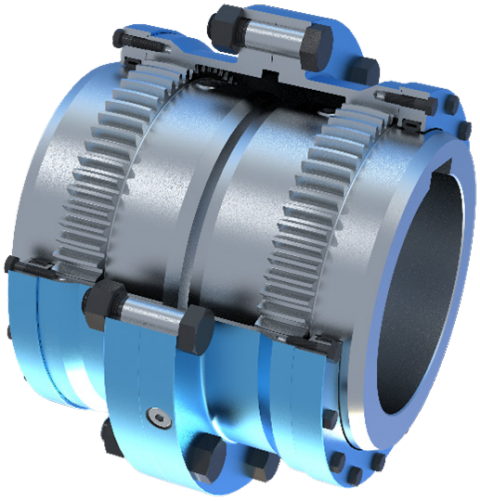
Configurator

The article number can be obtained with the help of the Configurator. The coupling can be selected in a product configurator and specified using selection menus.

The Configurator is available under **flender.com**.

The coupling can be selected via "Technical selection" (technical selection) or via "Direct selection" (via article no.).

TORSIONALLY RIGID COUPLINGS
N-ZAPEX XW SERIES

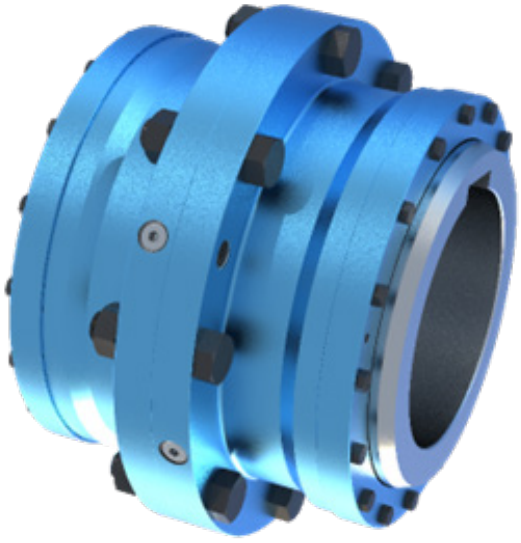


General	**4/3**
Benefits	4/3
Application	4/3
Design and configurations	4/4
Function	4/4
Technical specifications	4/5
Type XWN	**4/6**
Type XWNA	**4/8**
Type XWZS	**4/10**
Type XWZA	**4/12**
Type XWBG	**4/14**
Type XWB	**4/16**
Type XWH	**4/17**
Type XWNV	**4/18**
Spare and wear parts	**4/19**
Further types	**4/20**

4

N-ZAPEX XW
FLENDER

GENERAL



Coupling suitable for use in potentially explosive atmospheres.
Complies with the current ATEX Directive for:

- II 2G Ex h IIC T6 ... T5 Gb X
- II 2D Ex h IIIC T85 °C ... 100 °C Db X
- I M2 Ex h Mb X

Benefits

N-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 N-ZAPEX couplings. N-ZAPEX coupling types are constructed on a modular principle.

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

Application

N-ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry.

N-ZAPEX couplings are suitable for reverse operation and horizontal mounting positions and, in the case of type XWNV, for vertical mounting positions.

GENERAL

Design and configurations

A N-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 N-ZAPEX type XW, HO sealing rings are used to seal the tooth space. The HO 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.

Type	Description
XWN	Standard type
XWNA	With axial backlash limiter
XWZS	With intermediate spacer
XWZA	With intermediate spacer and axial backlash limiter
XWBG	With straight brake disk
XWB	With brake drum
XWH	With coupling sleeve
XWNV	Vertical type

Further application-specific 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.

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.

Technical specifications

Power ratings						
Size	Rated torque T_{KN} Nm	Maximum torque T_{Kmax} Nm	Fatigue torque T_{KW} Nm	Torsional stiffness XW C_{Tdyn} kNm/rad	Maximum permissible radial misalignment [1] (XWN) $\pm \Delta K_r$ mm	Permitted axial shaft misalignment $\pm \Delta K_a$ mm
160	9800	19600	3920	9330	2.1	1
191	17500	35000	7000	15200	2.4	1
219	27200	54400	10880	23100	2.8	1
257	42000	84000	16800	34200	3.3	1
282	57000	114000	22800	44000	3.7	1.5
317	78000	156000	31200	61500	4.1	1.5
358	110000	220000	44000	83800	4.7	1.5
390	138000	276000	55200	112000	5.1	1.5
458	245000	490000	98000	184000	6.0	1.5
565	380000	760000	152000	288000	8.4	2
632	540000	1080000	216000	391000	9.3	2
720	781000	1562000	312400	571000	10.4	2
784	960000	1920000	384000	712000	11.3	2
857	1350000	2700000	540000	1020000	12.7	2
949	1800000	3600000	720000	1280000	13.7	3
1019	2250000	4500000	900000	1610000	14.3	3
1097	2900000	5800000	1160000	2190000	14.9	3
1158	3500000	7000000	1400000	2630000	15.7	3
1230	4000000	8000000	1600000	3130000	17.0	3
1339	5000000	10000000	2000000	3680000	18.0	3
1404	5750000	11500000	2300000	4230000	19.1	3
1484	6900000	13800000	2760000	5370000	20.0	4
1548	8400000	16800000	3360000	6500000	21.0	4
1676	10000000	20000000	4000000	7840000	23.1	4

The stated torsional stiffness "XW" applies to coupling types XWN, XWNA and XWNV. Torsional stiffness of the remaining types on request.

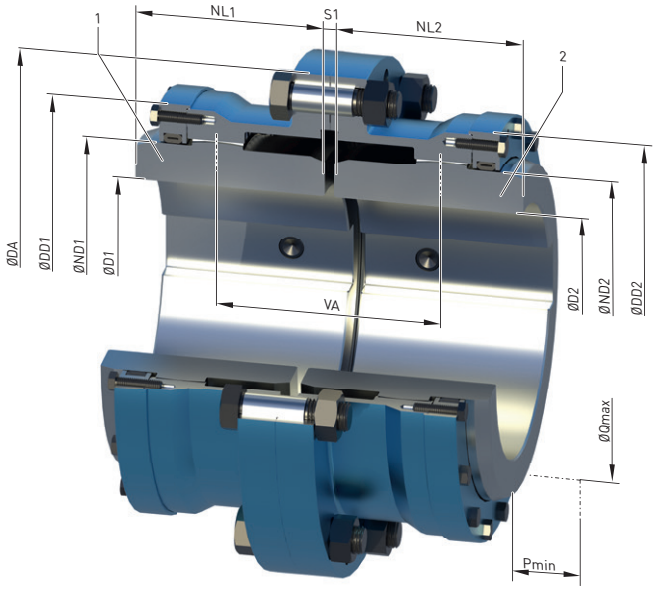
The axial misalignment for the types XWBG and XWNV is $1/2 \cdot \Delta K_a$. The axial misalignment does not apply to types XWNA and XWZA.

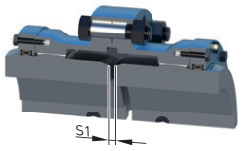
Angular misalignment ΔK_w [1]
Types XWN, XWZS, XWH, XWB, XWNV: $\Delta K_w = 1.3°$
Types XWNA, XWZA, XWBG: $\Delta K_w = 0.2°$

Radial misalignment ΔK_r [1]
Types XWN, XWZS, XWH, XWB, XWNV: $\Delta K_r \leqslant VA \cdot \tan 1.3°$
Types XWNA, XWZA, XWBG: $\Delta K_r \leqslant VA \cdot \tan 0.2°$
For the tooth distance VA, see the relevant table for the subassembly.

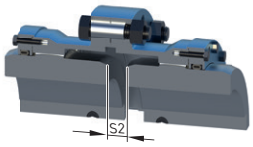
[1] At higher rotational speeds and torque, the maximum permissible misalignment may be reduced. The corresponding correction factors are specified in the operating instructions.

TYPE XWN

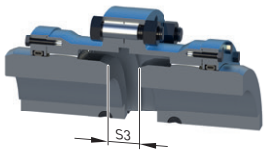




Type A



Type AB



Type B

Size	Rated torque	Maximum speed	Dimensions in mm												Mass moment of inertia	↗ Article no. [1]			Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S1	S2	S3	VA	Q	P	J	Type			m
	Nm	rpm	min.	max.											kgm²	A	B	AB	kg
160	9800	6200	25	**100**	213	134	76	177	5	15	25	91	113	47	0.1	2LC0350-3AA	2LC0350-3AB	2LC0350-3AC	17
191	17500	5400	30	**120**	243	161	90	207	5	17	29	107	140	50	0.2	2LC0350-4AA	2LC0350-4AB	2LC0350-4AC	26
219	27200	4600	40	**140**	286	188	105	234	6	19	32	124	166	50	0.4	2LC0350-5AA	2LC0350-5AB	2LC0350-5AC	40
257	42000	4000	50	**160**	326	218	120	278	6	23	40	143	196	53	0.8	2LC0350-6AA	2LC0350-6AB	2LC0350-6AC	62
282	57000	3700	80	**180**	350	243	135	302	8	27	46	162	221	53	1.2	2LC0350-7AA	2LC0350-7AB	2LC0350-7AC	78
317	78000	3300	90	**200**	399	267	150	334	8	30	52	180	246	57	2.1	2LC0350-8AA	2LC0350-8AB	2LC0350-8AC	106
358	110000	3000	110	**230**	443	307	175	382	8	33	58	208	281	65	3.8	2LC0351-0AA	2LC0351-0AB	2LC0351-0AC	153
390	138000	2800	120	**250**	473	335	190	412	8	35	62	225	308	68	5.5	2LC0351-1AA	2LC0351-1AB	2LC0351-1AC	191
458	245000	2400	160	**300**	561	400	220	483	10	44	78	264	370	74	12.3	2LC0351-2AA	2LC0351-2AB	2LC0351-2AC	303
565	380000	2000	210	**360**	641	476	300	565	16	70	124	370	447	74	29.3	2LC0351-3AA	2LC0351-3AB	2LC0351-3AC	533
632	540000	1900	260	**400**	708	532	330	632	20	80	140	410	495	86	49.5	2LC0351-4AA	2LC0351-4AB	2LC0351-4AC	730
720	781000	1600	300	**450**	820	604	375	720	20	85	150	460	567	86	96.2	2LC0351-5AA	2LC0351-5AB	2LC0351-5AC	1099
784	960000	1500	330	**500**	884	667	410	784	20	90	160	500	622	98	145.2	2LC0351-6AA	2LC0351-6AB	2LC0351-6AC	1393
857	1350000	1300	360	**550**	975	738	460	857	25	98	171	558	693	98	246.7	2LC0351-7AA	2LC0351-7AB	2LC0351-7AC	1967
949	1800000	1200	400	**600**	1067	804	500	949	25	105	185	605	760	98	377.1	2LC0351-8AA	2LC0351-8AB	2LC0351-8AC	2518
1019	2250000	1100	430	**650**	1138	874	520	1019	25	110	195	630	820	123	531.1	2LC0352-0AA	2LC0352-0AB	2LC0352-0AC	3055
1097	2900000	1000	470	**700**	1238	942	540	1097	25	115	205	655	888	126	772.4	2LC0352-1AA	2LC0352-1AB	2LC0352-1AC	3783
1158	3500000	1000	520	**750**	1303	1002	570	1158	25	120	215	690	948	126	1005.4	2LC0352-2AA	2LC0352-2AB	2LC0352-2AC	4378
1230	4000000	900	550	**800**	1391	1073	620	1230	30	128	226	748	1012	137	1433.1	2LC0352-3AA	2LC0352-3AB	2LC0352-3AC	5478
1339	5000000	900	575	**850**	1503	1146	660	1339	30	134	238	794	1085	137	2019.9	2LC0352-4AA	2LC0352-4AB	2LC0352-4AC	6724
1404	5750000	900	610	**900**	1569	1209	700	1404	30	140	250	840	1149	145	2570.4	2LC0352-5AA	2LC0352-5AB	2LC0352-5AC	7753
1484	6900000	800	640	**950**	1644	1289	730	1484	35	150	265	880	1229	145	3453.5	2LC0352-6AA	2LC0352-6AB	2LC0352-6AC	9316
1548	8400000	800	680	**1000**	1719	1351	770	1548	35	156	277	926	1291	145	4390.3	2LC0352-7AA	2LC0352-7AB	2LC0352-7AC	10763
1676	10000000	700	750	**1100**	1847	1478	850	1676	35	170	305	1020	1405	168	6563.3	2LC0352-8AA	2LC0352-8AB	2LC0352-8AC	13634

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

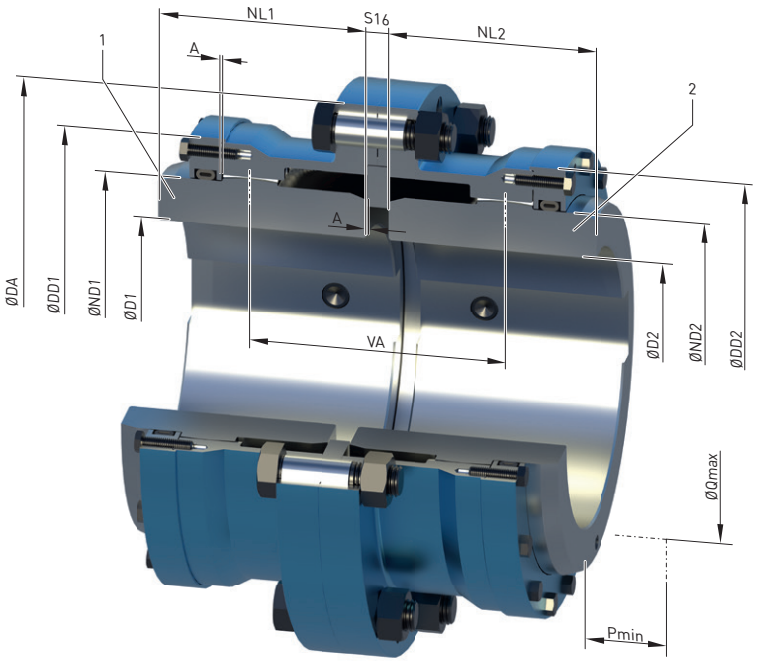
- Weights and mass moments of inertia apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21 page E/21 page E/21 page E/21 page E/21 page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XWNA



Size	Rated torque	Maximum speed	Dimensions in mm											Mass moment of inertia	↗ Article no. [1]	Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S16	A	VA	Q	P	J		m
	Nm	rpm	min.	max.										kgm²		kg
160	9800	6200	25	**100**	213	134	76	177	9	0.5	95	113	47	0.102	2LC0350-3AF	17.7
191	17500	5400	30	**120**	243	161	90	207	11	0.5	113	140	50	0.210	2LC0350-4AF	27.2
219	27200	4600	40	**140**	286	188	105	234	11	0.5	129	166	50	0.427	2LC0350-5AF	41.1
257	42000	4000	50	**160**	326	218	120	278	12	1	149	196	53	0.860	2LC0350-6AF	63.7
282	57000	3700	80	**180**	350	243	135	302	14	1	168	221	53	1.28	2LC0350-7AF	80.0
317	78000	3300	90	**200**	399	267	150	334	17	1	189	246	57	2.18	2LC0350-8AF	110
358	110000	3000	110	**230**	443	307	175	382	17	1	217	281	65	3.92	2LC0351-0AF	157
390	138000	2800	120	**250**	473	335	190	412	17	1	234	308	68	5.64	2LC0351-1AF	195
458	245000	2400	160	**300**	561	400	220	483	22	1	276	370	74	12.6	2LC0351-2AF	310
565	380000	2000	210	**360**	641	476	300	565	32.5	1.25	386.5	447	74	29.9	2LC0351-3AF	544
632	540000	1900	260	**400**	708	532	330	632	38	1.5	428	495	86	50.9	2LC0351-4AF	748
720	781000	1600	300	**450**	820	604	375	720	38	1.5	478	567	86	98.2	2LC0351-5AF	1120

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

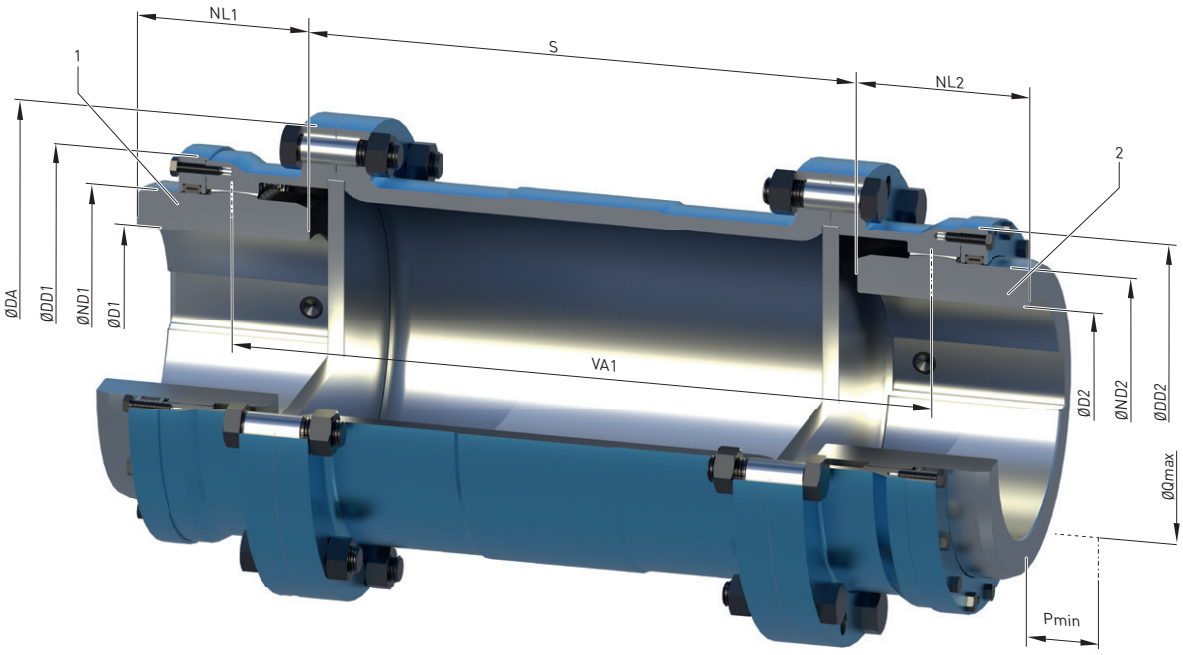
- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XWZS



Size	Rated torque	Maximum speed	Dimensions in mm													↗ Article no. [1]		Weight	Mass moment of inertia
D4	T_{KN}	n_{Kmax} [3][4]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S		VA1	Q	P		S	m	J
	Nm	rpm	min.	max.					min.	std. [5]				A	Ref. [2]	kg	kgm²
160	**9800**	6200	25	**100**	213	134	76	177	115	200	S + 66	113	47	2LC0350-3AE	<325	23.99 + 0.021 · S	0.147 + 0.0001 · S
															≥325	21.32 + 0.031 · S	0.129 + 0.0002 · S
191	**17500**	5400	30	**120**	243	161	90	207	119	200	S + 78	140	50	2LC0350-4AE	<329	35.50 + 0.036 · S	0.282 + 0.0003 · S
															≥329	31.94 + 0.050 · S	0.250 + 0.0004 · S
219	**27200**	4600	40	**140**	286	188	105	234	142	200	S + 92	166	50	2LC0350-5AE	<332	54.82 + 0.039 · S	0.600 + 0.0004 · S
															≥332	51.45 + 0.052 · S	0.560 + 0.0006 · S
257	**42000**	4000	50	**160**	326	218	120	278	150	250	S + 103	196	53	2LC0350-6AE	<340	79.86 + 0.046 · S	1.124 + 0.0007 · S
															≥340	70.74 + 0.078 · S	0.967 + 0.0013 · S
282	**57000**	3700	80	**180**	350	243	135	302	156	250	S + 116	221	53	2LC0350-7AE	<346	99.71 + 0.062 · S	1.629 + 0.0012 · S
															≥346	89.45 + 0.097 · S	1.418 + 0.0019 · S
317	**78000**	3300	90	**200**	399	267	150	334	172	250	S + 128	246	57	2LC0350-8AE	<352	138.8 + 0.077 · S	2.833 + 0.0018 · S
															≥352	129.6 + 0.108 · S	2.596 + 0.0026 · S
358	**110000**	3000	110	**230**	443	307	175	382	178	300	S + 150	281	65	2LC0351-0AE	<358	191.3 + 0.094 · S	4.870 + 0.0028 · S
															≥358	177.8 + 0.139 · S	4.425 + 0.0043 · S
390	**138000**	2800	120	**250**	473	335	190	412	182	300	S + 163	308	68	2LC0351-1AE	<362	235.3 + 0.089 · S	6.870 + 0.0032 · S
															≥362	226.4 + 0.118 · S	6.532 + 0.0043 · S
458	**245000**	2400	160	**300**	561	400	220	483	218	300	S + 186	370	74	2LC0351-2AE	<378	379.0 + 0.142 · S	15.47 + 0.0070 · S
															≥378	352.7 + 0.222 · S	14.07 + 0.0113 · S
565	**380000**	2000	210	**360**	641	476	300	565	289	-	S + 246	447	74	2LC0351-3AE	<474	589.6 + 0.285 · S	32.91 + 0.0199 · S
															≥474	565.1 + 0.259 · S	31.11 + 0.0180 · S
632	**540000**	1900	260	**400**	708	532	330	632	305	-	S + 270	495	86	2LC0351-4AE	<490	815.7 + 0.231 · S	55.37 + 0.0199 · S
															≥490	790.3 + 0.291 · S	53.04 + 0.0254 · S
720	**781000**	1600	300	**450**	820	604	375	720	350	-	S + 310	567	86	2LC0351-5AE	<500	1240 + 0.327 · S	110.8 + 0.0326 · S
															≥500	1211 + 0.392 · S	107.7 + 0.0395 · S
784	**960000**	1500	330	**500**	884	667	410	784	360	-	S + 340	622	98	2LC0351-6AE	<510	1559 + 0.411 · S	162.2 + 0.0541 · S
															≥510	1500 + 0.542 · S	153.8 + 0.0727 · S
857	**1350000**	1300	360	**550**	975	738	460	857	411	-	S + 387	693	98	2LC0351-7AE	<521	2202 + 0.499 · S	279.3 + 0.0759 · S
															≥521	2164 + 0.579 · S	273.0 + 0.0889 · S
949	**1800000**	1200	400	**600**	1067	804	500	949	425	-	S + 420	760	98	2LC0351-8AE	<635	2777 + 0.575 · S	418.0 + 0.1116 · S
															≥635	2733 + 0.654 · S	408.8 + 0.1279 · S

Size	Rated torque	Maxi-mum speed	Dimensions in mm												↗ Article no. [1]		Weight	Mass moment of inertia
D4	T_{KN}	n_{Kmax} [3][4]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S		VA1	Q	P		S	m	J
	Nm	rpm	min.	max.					min.	std. [5]				A	Ref. [2]	kg	kgm²
1019	**2250000**	1100	430	**650**	1138	874	520	1019	435	-	S + 435	820	123	2LC0352-0AE	<645	3327 + 0.724 · S	578.4 + 0.1625 · S
															⩾645	3272 + 0.821 · S	565.0 + 0.1858 · S
1097	**2900000**	1000	470	**700**	1238	942	540	1097	490	-	S + 450	888	126	2LC0352-1AE	<655	4193 + 0.838 · S	869.7 + 0.1978 · S
															⩾655	4119 + 0.963 · S	850.8 + 0.2297 · S
1158	**3500000**	1000	520	**750**	1303	1002	570	1158	500	-	S + 475	948	126	2LC0352-2AE	<665	4773 + 0.893 · S	1101 + 0.2615 · S
															⩾665	4664 + 1.073 · S	1067 + 0.3180 · S
1230	**4000000**	900	550	**800**	1391	1073	620	1230	556	-	S + 522	1012	137	2LC0352-3AE	<676	6005 + 0.948 · S	1590 + 0.3123 · S
															⩾676	5885 + 1.138 · S	1547 + 0.3795 · S
1339	**5000000**	900	575	**850**	1503	1146	660	1339	568	-	S + 556	1085	137	2LC0352-4AE	<838	7280 + 1.206 · S	2208 + 0.4746 · S
															⩾838	7136 + 1.398 · S	2147 + 0.5557 · S
1404	**5750000**	900	610	**900**	1569	1209	700	1404	580	-	S + 590	1149	145	2LC0352-5AE	<850	8337 + 1.285 · S	2781 + 0.5600 · S
															⩾850	8196 + 1.470 · S	2716 + 0.6461 · S
1484	**6900000**	800	640	**950**	1644	1289	730	1484	595	-	S + 615	1229	145	2LC0352-6AE	<865	9944 + 1.342 · S	3698 + 0.6533 · S
															⩾865	9780 + 1.555 · S	3613 + 0.7637 · S
1548	**8400000**	800	680	**1000**	1719	1351	770	1548	627	-	S + 649	1291	145	2LC0352-7AE	<877	11411 + 1.593 · S	4667 + 0.8398 · S
															⩾877	11251 + 1.797 · S	4577 + 0.9546 · S
1676	**10000000**	700	750	**1100**	1847	1478	850	1676	655	-	S + 715	1405	168	2LC0352-8AE	<905	14335 + 1.733 · S	6893 + 1.0820 · S
															⩾905	14156 + 1.954 · S	6774 + 1.2287 · S

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- The weight and moment of inertia of the coupling with maximum bores D1/D2 can be determined using the corresponding equations as a function of the shaft spacing S [mm].
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For shaft spacings above the reference value (S Ref.), the cross-section at the center of the intermediate spacer is larger.

[3] For large S-dimensions, it may be necessary to limit the maximum permissible speed according to the critical bending speed.
Using the following equation, the minimum critical bending speed can be approximated (nkrit in [min-1]; D4 und S in [mm])

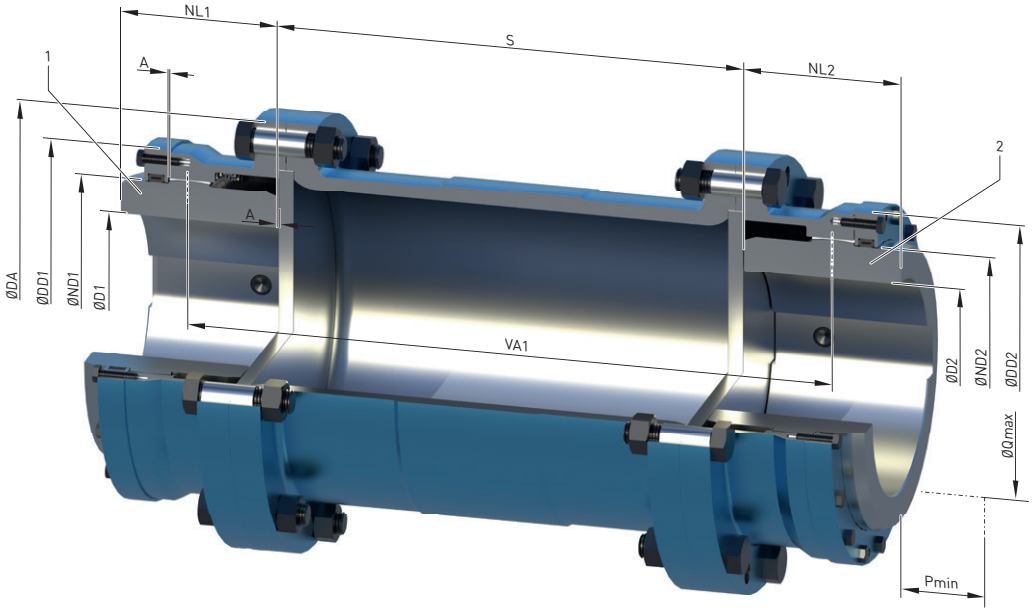
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

[4] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

[5] Preferred dimensions for S.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XWZA



Size	Rated torque	Maximum speed	Dimensions in mm													Article no. [1]		Weight	Mass moment of inertia
D4	T_{KN}	n_{Kmax} [3][4]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S		A	VA1	Q	P		S	m	J
	Nm	rpm	min.	max.					min.	std. [5]					A	Ref. [2]	kg	kgm²
160	9800	6200	25	100	213	134	76	177	99	200	0.5	S + 86	113	47	2LC0350-3AG	<309	24.32 + 0.021 · S	0.149 + 0.0001 · S
																⩾309	21.82 + 0.031 · S	0.132 + 0.0002 · S
191	17500	5400	30	120	243	161	90	207	101	200	0.5	S + 102	140	50	2LC0350-4AG	<311	36.15 + 0.036 · S	0.288 + 0.0003 · S
																⩾311	32.83 + 0.050 · S	0.257 + 0.0004 · S
219	27200	4600	40	140	286	188	105	234	121	200	0.5	S + 118	166	50	2LC0350-5AG	<311	55.65 + 0.039 · S	0.609 + 0.0004 · S
																⩾311	52.54 + 0.052 · S	0.572 + 0.0006 · S
257	42000	4000	50	160	326	218	120	278	122	250	1	S + 137	196	53	2LC0350-6AG	<312	81.15 + 0.046 · S	1.144 + 0.0007 · S
																⩾312	72.94 + 0.078 · S	1.003 + 0.0013 · S
282	57000	3700	80	180	350	243	135	302	124	250	1	S + 154	221	53	2LC0350-7AG	<314	101.7 + 0.062 · S	1.666 + 0.0012 · S
																⩾314	92.6 + 0.097 · S	1.478 + 0.0019 · S
317	78000	3300	90	200	399	267	150	334	137	250	1	S + 172	246	57	2LC0350-8AG	<317	141.5 + 0.077 · S	2.896 + 0.0018 · S
																⩾317	133.4 + 0.108 · S	2.688 + 0.0026 · S
358	110000	3000	110	230	443	307	175	382	137	300	1	S + 200	281	65	2LC0351-0AG	<317	195.2 + 0.094 · S	4.986 + 0.0028 · S
																⩾317	183.5 + 0.139 · S	4.601 + 0.0043 · S
390	138000	2800	120	250	473	335	190	412	137	300	1	S + 217	308	68	2LC0351-1AG	<317	239.3 + 0.089 · S	7.013 + 0.0032 · S
																⩾317	231.7 + 0.118 · S	6.724 + 0.0043 · S
458	245000	2400	160	300	561	400	220	483	162	300	1	S + 254	370	74	2LC0351-2AG	<322	386.9 + 0.142 · S	15.86 + 0.0070 · S
																⩾322	365.2 + 0.222 · S	14.70 + 0.0113 · S
565	380000	2000	210	360	641	476	300	565	197.5	-	1.25	S + 354	447	74	2LC0351-3AG	<383	607.9 + 0.285 · S	34.15 + 0.0199 · S
																⩾383	588.8 + 0.259 · S	32.76 + 0.0180 · S
632	540000	1900	260	400	708	532	330	632	203	-	1.5	S + 390	495	86	2LC0351-4AG	<388	839.2 + 0.231 · S	57.40 + 0.0199 · S
																⩾388	820.0 + 0.291 · S	55.63 + 0.0254 · S
720	781000	1600	300	450	820	604	375	720	238	-	1.5	S + 440	567	86	2LC0351-5AG	<388	1276.2 + 0.327 · S	114.41 + 0.0326 · S
																⩾388	1254.7 + 0.392 · S	112.10 + 0.0395 · S

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- The weight and moment of inertia of the coupling with maximum bores D1/D2 can be determined using the corresponding equations as a function of the shaft spacing S [mm].
- Variant limited in displacement and axial movement.
  Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**

[2] For shaft spacings above the reference value (S Ref.), the cross-section at the center of the intermediate spacer is larger.

[3] For large S-dimensions, it may be necessary to limit the maximum permissible speed according to the critical bending speed.
Using the following equation, the minimum critical bending speed can be approximated (nkrit in [min-1]; D4 und S in [mm])

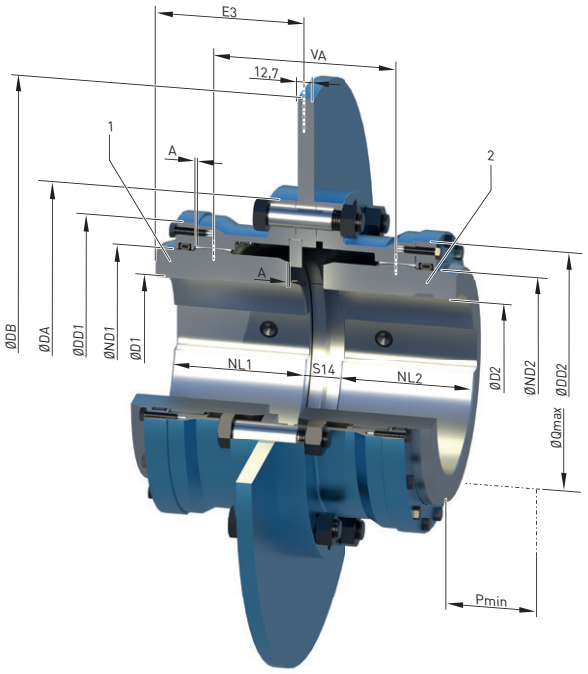
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

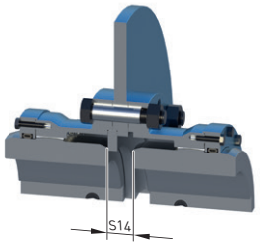
[4] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

[5] Preferred dimensions for S.

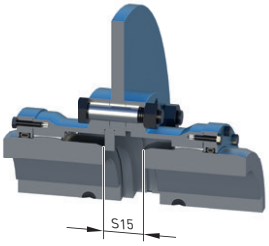
↗ For online configuration on **flender.com**, click on the item no.

TYPE XWBG





Type A



Type AB

Size	Rated torque	Maximum speed	Dimensions in mm												Mass moment of inertia		Brake disk	Article no. [1]		Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Nut DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S14	S15	A	VA	Q	P	J	DB	E3	Type		m
	Nm	rpm	min.	max.											kgm²			A	AB	kg
160	9800	4200	25	100	213	134	76	177	20	30	0.5	106	113	47	0.361	406	87	2LC0350-3AU	2LC0350-3AV	28.3
		3700													0.522	457				31.7
191	17500	4200	30	120	243	161	90	207	21	33	0.5	123	140	50	0.459	406	102	2LC0350-4AU	2LC0350-4AV	36.7
		3700													0.62	457				40.1
		3300													0.876	514				44.4
219	27200	3700	40	140	286	188	105	234	21.5	34.5	0.5	139.5	166	50	0.824	457	117	2LC0350-5AU	2LC0350-5AV	53.0
		3300													1.08	514				57.3
		2800													1.75	610				65.8
257	42000	3300	50	160	326	218	120	278	22	39	1	159	196	53	1.49	514	132.5	2LC0350-6AU	2LC0350-6AV	78.2
		2800													2.16	610				86.7
		2400													3.31	711				97.1
282	57000	3300	80	180	350	243	135	302	24	43	1	178	221	53	1.88	514	148.5	2LC0350-7AU	2LC0350-7AV	93.1
		2800													2.55	610				102
		2400													3.69	711				112
		2100													5.45	812				124
317	78000	2800	90	200	399	267	150	334	25.5	47.5	1	197.5	246	57	3.39	610	165	2LC0350-8AU	2LC0350-8AV	128
		2400													4.54	711				138
		2100													6.29	812				151
358	110000	2400	110	230	443	307	175	382	25.5	50.5	1	225.5	281	65	6.19	711	190	2LC0351-0AU	2LC0351-0AV	183
		2100													7.94	812				195
390	138000	2100	120	250	473	335	190	412	25.5	52.5	1	242.5	308	68	9.57	812	205	2LC0351-1AU	2LC0351-1AV	232

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

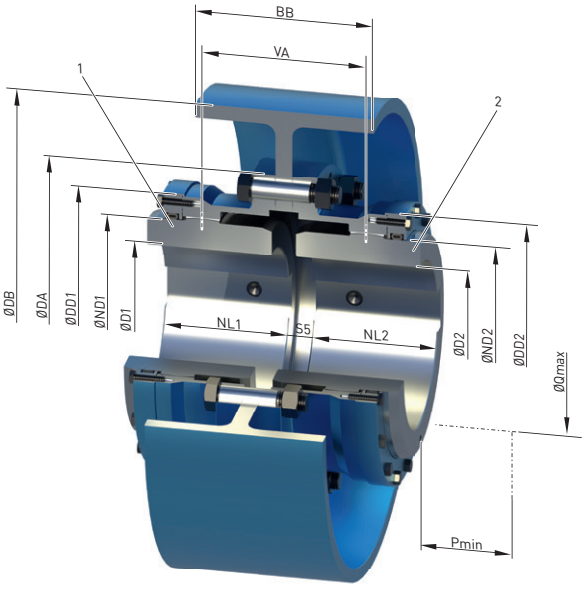
- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

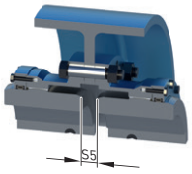
[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

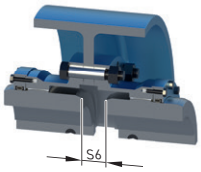
↗ For online configuration on **flender.com**, click on the item no.

TYPE XWB

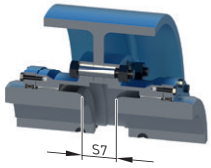




Type A



Type AB



Type B

Size	Rated torque	Maximum speed	Dimensions in mm												Mass moment of inertia	Brake disk		↗ Article no. [1]			Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S5	S6	S7	VA	Q	P	J_1/J_2	DB	BB	Type			m
	Nm	rpm	min.	max.											kgm²			A	B	AB	kg
160	9800	5400	25	100	213	134	76	177	18	28	38	104	113	47	0.391	315	118	2LC0350-3AW	2LC0350-3AX	2LC0350-3BA	31.6
		4200													0.941	400	150				43.6
191	17500	4200	30	120	243	161	90	207	18	30	42	120	140	50	1.03	400	150	2LC0350-4AW	2LC0350-4AX	2LC0350-4BA	51.8
		3400													2.45	500	190				70.9
219	27200	3400	40	140	286	188	105	234	19	32	45	137	166	50	2.64	500	190	2LC0350-5AW	2LC0350-5AX	2LC0350-5BA	83.5
		2700													6.2	630	236				113

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

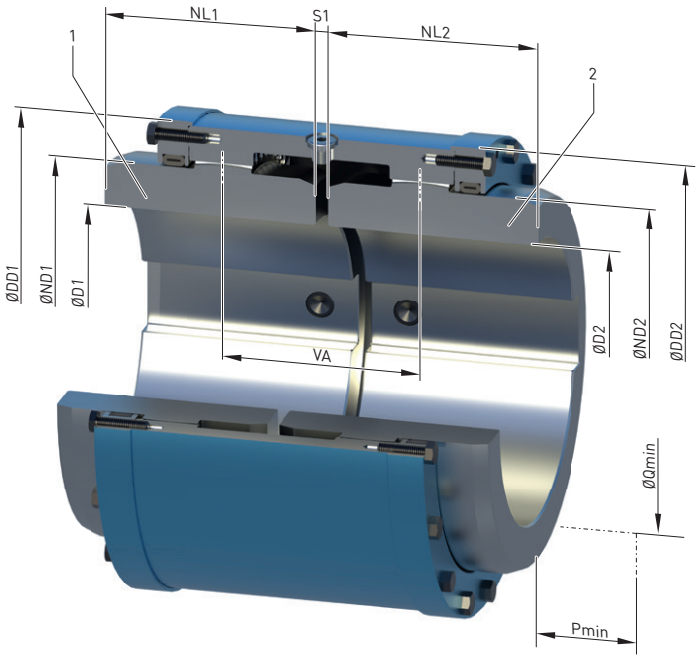
- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XWH



Size	Rated torque T_{KN}	Maximum speed n_{Kmax} [2]	Dimensions in mm D1, D2 Keyway DIN 6885-1		ND1/ ND2	NL1/ NL2	DD1/ DD2	S1	VA	Q	P	Mass moment of inertia J_1/J_2	↗ Article no. [1]	Weight m
	Nm	rpm	min.	max.								kgm²		kg
160	**9800**	6200	25	**100**	134	76	177	5	71	113	47	0.071	2LC0350-3BB	14.2
191	**17500**	5400	30	**120**	161	90	207	5	83	140	50	0.160	2LC0350-4BB	23.1
219	**27200**	4600	40	**140**	188	105	234	6	98	166	50	0.295	2LC0350-5BB	33.1
257	**42000**	4000	50	**160**	218	120	278	6	109	196	53	0.688	2LC0350-6BB	56
282	**57000**	3700	80	**180**	243	135	302	8	124	221	53	1.05	2LC0350-7BB	71.3
317	**78000**	3300	90	**200**	267	150	334	8	136	246	57	1.69	2LC0350-8BB	94.5
358	**110000**	3000	110	**230**	307	175	382	8	158	281	65	3.39	2LC0351-0BB	144
390	**138000**	2800	120	**250**	335	190	412	8	171	308	68	4.96	2LC0351-1BB	181
458	**245000**	2400	160	**300**	400	220	483	10	196	370	74	10.9	2LC0351-2BB	284
565	**380000**	2000	210	**360**	476	300	565	16	262	447	74	26.5	2LC0351-3BB	502
632	**540000**	1900	260	**400**	532	330	632	20	290	495	86	45.4	2LC0351-4BB	692
720	**781000**	1600	300	**450**	604	375	720	20	330	567	86	89.3	2LC0351-5BB	1055

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

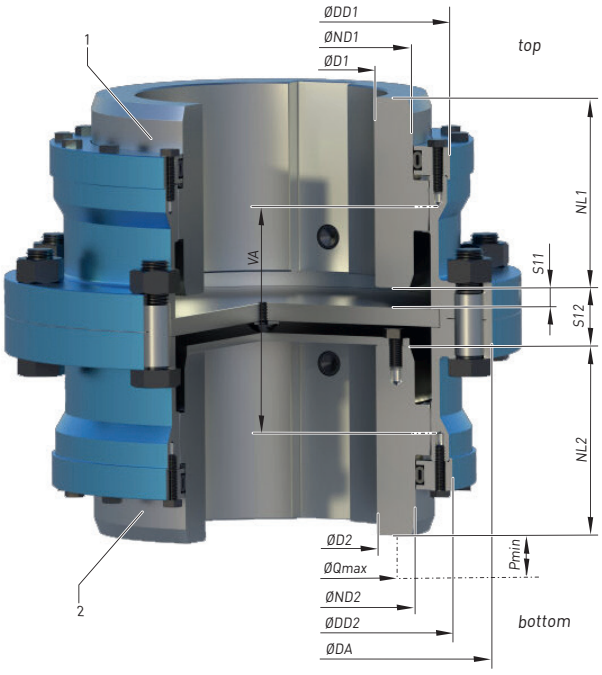
- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Larger size couplings on request.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XWNV



Size	Rated torque	Maximum speed	Dimensions in mm											Mass moment of inertia	↗ Article no. [1]	Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S11	S12	VA	Q	P	J_1/J_2		m
	Nm	rpm	min.	max.										kgm²		kg
160	**9800**	6200	25	**100**	213	134	76	177	9	27	93	113	47	0.106	2LC0350-3AH	19
191	**17500**	5400	30	**120**	243	161	90	207	10	30	108	140	50	0.214	2LC0350-4AH	29
219	**27200**	4600	40	**140**	286	188	105	234	11	32	124	166	50	0.434	2LC0350-5AH	44
257	**42000**	4000	50	**160**	326	218	120	278	15	40	143	196	53	0.878	2LC0350-6AH	68
282	**57000**	3700	80	**180**	350	243	135	302	17	46	162	221	53	1.31	2LC0350-7AH	86
317	**78000**	3300	90	**200**	399	267	150	334	18	51	179	246	57	2.24	2LC0350-8AH	118
358	**110000**	3000	110	**230**	443	307	175	382	21,5	58	208	281	65	4.02	2LC0351-0AH	168
390	**138000**	2800	120	**250**	473	335	190	412	23,5	62	225	308	68	5.81	2LC0351-1AH	210

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

SPARE AND WEAR PARTS

Sealing rings

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

Size	Hub diameter ND1/ND2 mm	Article no.
160	134	2LC0350-3XG00-0AA0
191	161	2LC0350-4XG00-0AA0
219	188	2LC0350-5XG00-0AA0
257	218	2LC0350-6XG00-0AA0
282	243	2LC0350-7XG00-0AA0
317	267	2LC0350-8XG00-0AA0
358	307	2LC0351-0XG00-0AA0
390	335	2LC0351-1XG00-0AA0
458	400	2LC0351-2XG00-0AA0
565	476	2LC0351-3XG00-0AA0
632	532	2LC0351-4XG00-0AA0
720	604	2LC0351-5XG00-0AA0
784	667	2LC0351-6XG00-0AA0
857	738	2LC0351-7XG00-0AA0
949	804	2LC0351-8XG00-0AA0
1019	874	2LC0352-0XG00-0AA0
1097	942	2LC0352-1XG00-0AA0
1158	1002	2LC0352-2XG00-0AA0
1230	1073	2LC0352-3XG00-0AA0
1339	1146	2LC0352-4XG00-0AA0
1404	1209	2LC0352-5XG00-0AA0
1484	1289	2LC0352-6XG00-0AA0
1548	1351	2LC0352-7XG00-0AA0
1676	1478	2LC0352-8XG00-0AA0

High-performance grease

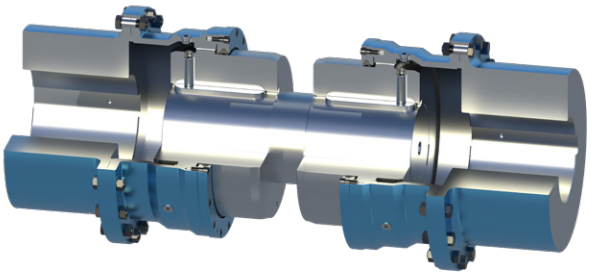
Container	Content g	Article no.
Cartridge	300	FFA:000000501027

Sealing compound

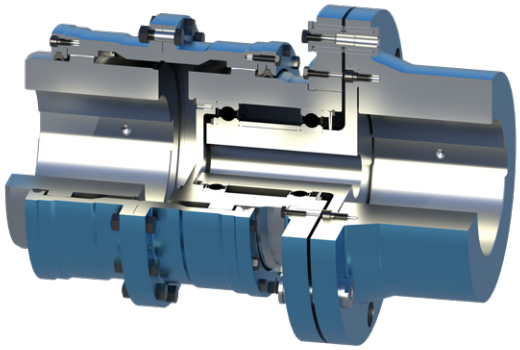
Container	Content ml	Article no.
Tube	60	FFA:000001443780

FURTHER TYPES

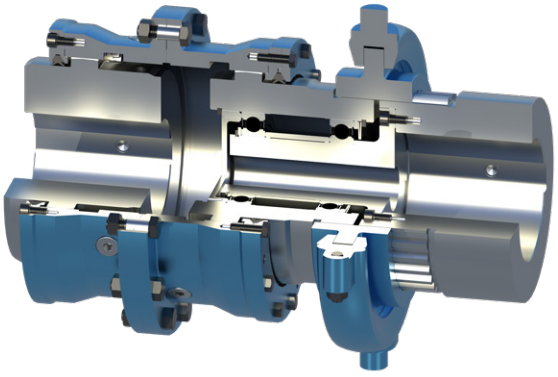
Additional coupling types of the ZAPEX series are available. Dimensional drawings and technical data sheets are available on **flender.com**. If you have any questions, please contact your customer representative.



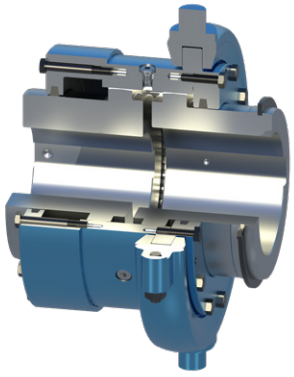
ZAPEX ZZW - with intermediate shaft



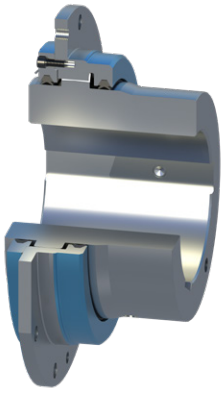
ZAPEX ZBR - with shear pins



ZAPEX ZWS - Clutch

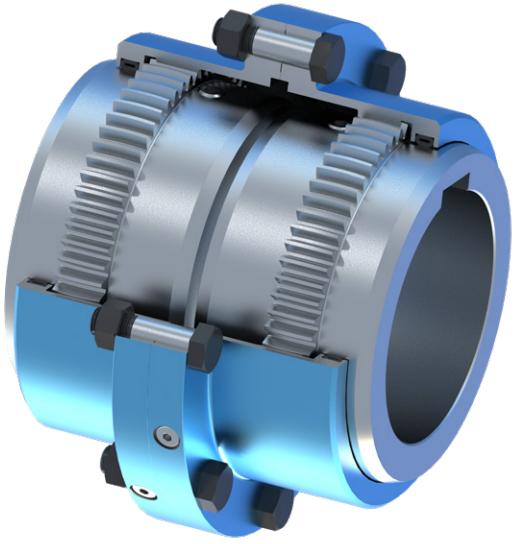


ZAPEX ZWSE - Simple clutch-coupling combination



ZAPEX ZWTR - for rope drums

TORSIONALLY RIGID GEAR COUPLINGS N-ZAPEX XN SERIES

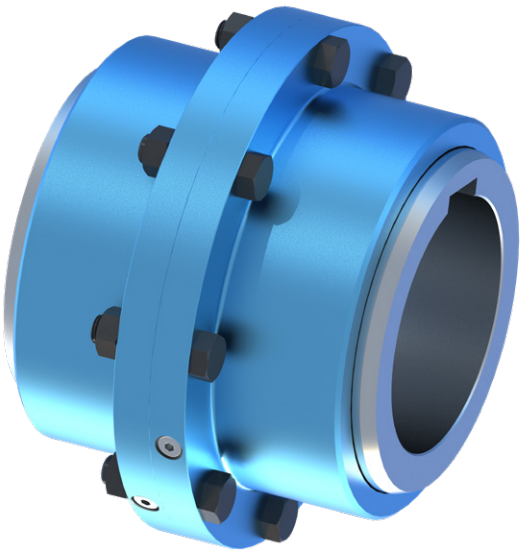


General	**5/3**
Benefits	5/3
Application	5/3
Design and configurations	5/4
Function	5/4
Technical specifications	5/5
Type XNN	**5/6**
Type XNNA	**5/7**
Type XNZS	**5/8**
Type XNZA	**5/10**
Type XNBG	**5/12**
Spare and wear parts	**5/14**

5

N-ZAPEX XN
FLENDER

GENERAL



Coupling suitable for use in potentially explosive atmospheres.
Complies with the current ATEX Directive for:

II 2G Ex h IIC T6 ... T5 Gb X

II 2D Ex h IIIC T85 °C ... 100 °C Db X

I M2 Ex h Mb X

Materials

- Hubs and flanged sleeves: Steel
- Seal: NBR
- Lubricant: Grease filling

Benefits

N-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 N-ZAPEX couplings. N-ZAPEX coupling types are constructed on a modular principle.

This means that application-specific solutions can be delivered quickly. N-ZAPEX couplings require very little maintenance. Regular grease changes ensure a very long service life for the coupling.

Application

N-ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry.

This coupling is suitable for reversing operation and horizontal mounting positions.

GENERAL

Design and configurations

The N-ZAPEX coupling consists of two externally toothed hub parts that are mounted onto 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 grease. O-rings are used to seal the toothed area in the N-ZAPEX XN series. The O-rings prevent the lubricant from escaping and dirt from entering the tooth space.

Type	Description
XNN	Standard type
XNNA	With axial backlash limiter
XNZS	With intermediate spacer
XNZA	With intermediate spacer and axial backlash limiter
XNBG	With straight brake disk

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.

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.

Technical specifications

Power ratings						
Size	Rated torque T_{KN} Nm	Maximum torque T_{Kmax} Nm	Fatigue torque T_{KW} Nm	Torsional stiffness XN C_{Tdyn} kNm/rad	Maximum permissible radial misalignment [1] (XWN) ± ΔK_r mm	Permitted axial shaft misalignment ± ΔK_a mm
87	1400	2800	560	1770	0.68	1
114	3200	6400	1280	3520	0.79	1
134	5200	10400	2080	5330	1.03	1
160	9800	19600	3920	9330	1.27	1
191	17500	35000	7000	15200	1.49	1
219	27200	54400	10880	23100	1.73	1
257	42000	84000	16800	34200	1.99	1
282	57000	114000	22800	44000	2.26	1.5
317	78000	156000	31200	61500	2.51	1.5
358	110000	220000	44000	83800	2.90	1.5
390	138000	276000	55200	112000	3.14	1.5
458	245000	490000	98000	184000	3.68	1.5

The stated torsional stiffness "XN" applies to coupling types XNN and XNNA. Torsional stiffness of the remaining types on request.

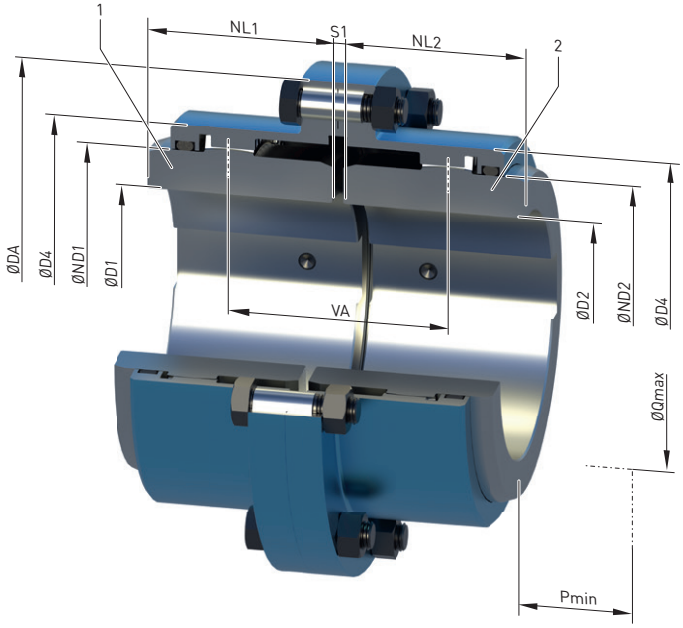
The axial misalignment for the type XNBG is 1/2 · ΔK_a.
The axial misalignment does not apply to types XNNA and XNZA.

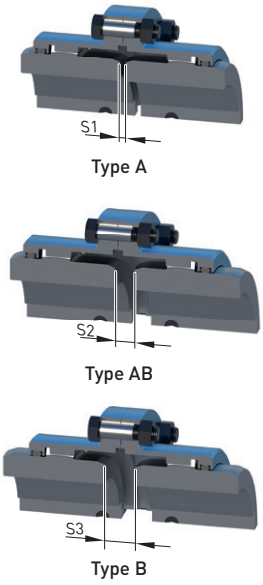
Angular misalignment ΔK_w [1]
Types XNN, XNZS: $\Delta K_w = 0.8°$
Types XNBG, XNNA, XNZA: $\Delta K_w = 0.2°$

Radial misalignment ΔK_r [1]
Types XNN, XNZS: $\Delta K_r \leqslant VA \cdot \tan 0.8°$
Types XNBG, XNZA: $\Delta K_r \leqslant VA \cdot \tan 0.2°$
For the tooth distance VA, see the relevant table for the subassembly.

[1] At higher rotational speeds and torque, the maximum permissible misalignment may be reduced. The corresponding correction factors are specified in the operating instructions.

TYPE XNN





Size	Rated torque	Maximum speed	Dimensions in mm												Mass moment of inertia	↗ Article no. [1]			Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	D4	S1	S2	S3	VA	Q	P	J	Type			m
	Nm	rpm	min.	max.											kgm²	A	B	AB	kg
87	**1400**	11400	20	50	114	68	43	87	3	6	9	49	52	30	0.0045	2LC0340-0AA	2LC0340-0AB	2LC0340-0AC	2.8
114	**3200**	8700	20	70	150	95	50	114	3	7	11	57	74	35	0.015	2LC0340-1AA	2LC0340-1AB	2LC0340-1AC	5.3
134	**5200**	7200	25	80	179	110	62	134	3	12	21	74	85	42	0.036	2LC0340-2AA	2LC0340-2AB	2LC0340-2AC	9.3
160	**9800**	6200	25	100	213	134	76	160	5	15	25	91	110	50	0.089	2LC0340-3AA	2LC0340-3AB	2LC0340-3AC	15
191	**17500**	5400	30	120	243	161	90	191	5	17	29	107	130	60	0.18	2LC0340-4AA	2LC0340-4AB	2LC0340-4AC	24
219	**27200**	4600	40	140	286	188	105	219	6	19	32	124	155	70	0.38	2LC0340-5AA	2LC0340-5AB	2LC0340-5AC	37
257	**42000**	4000	50	160	326	218	120	257	6	23	40	143	175	75	0.74	2LC0340-6AA	2LC0340-6AB	2LC0340-6AC	57
282	**57000**	3700	80	180	350	243	135	282	8	27	46	162	195	80	1.1	2LC0340-7AA	2LC0340-7AB	2LC0340-7AC	72
317	**78000**	3300	90	200	399	267	150	317	8	30	52	180	220	90	2.0	2LC0340-8AA	2LC0340-8AB	2LC0340-8AC	100
358	**110000**	3000	110	230	443	307	175	358	8	33	58	208	250	105	3.4	2LC0341-0AA	2LC0341-0AB	2LC0341-0AC	142
390	**138000**	2800	120	250	473	335	190	390	8	35	62	225	275	125	5.1	2LC0341-1AA	2LC0341-1AB	2LC0341-1AC	179
458	**245000**	2400	160	300	561	400	220	458	10	44	78	264	320	140	11.4	2LC0341-2AA	2LC0341-2AB	2LC0341-2AC	286

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

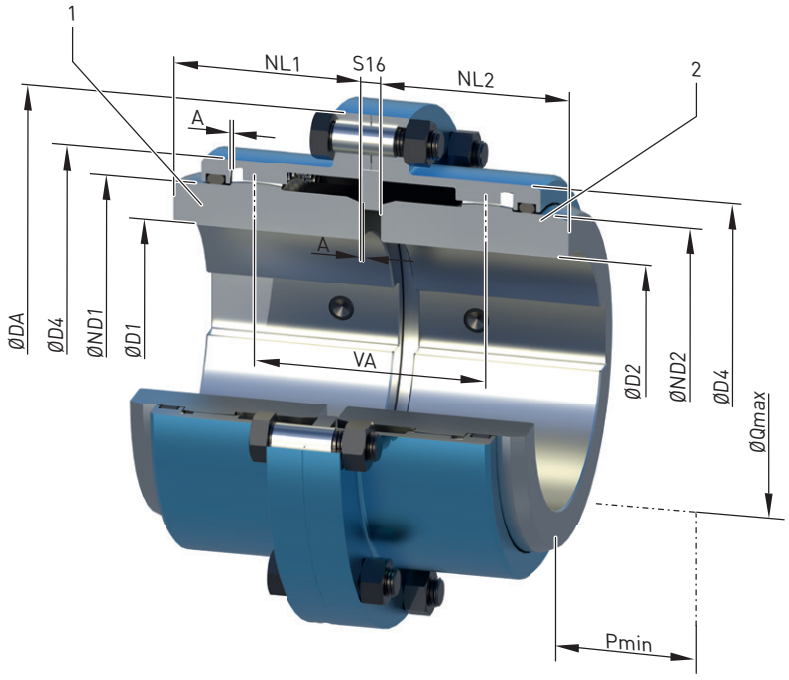
- Weights and moments of inertia apply to the complete coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XNNA



Size	Rated torque	Maximum speed	Dimensions in mm											Mass moment of inertia	↗ Article no.[1]	Weight
	T_{KN}	n_{Kmax} [2]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	D4	S16	A	VA	Q	P	J		m
	Nm	rpm	min.	max.										kgm²		kg
87	**1400**	11400	20	50	114	68	43	87	5	0.5	51	52	30	0,0047	2LC0340-0AF	2.9
114	**3200**	8700	20	70	150	95	50	114	5	0.5	59	74	35	0,016	2LC0340-1AF	5.5
134	**5200**	7200	25	80	179	110	62	134	5	0.5	76	85	42	0.037	2LC0340-2AF	9.4
160	**9800**	6200	25	100	213	134	76	160	9	0.5	95	110	50	0.091	2LC0340-3AF	16
191	**17500**	5400	30	120	243	161	90	191	11	0.5	113	130	60	0.19	2LC0340-4AF	25
219	**27200**	4600	40	140	286	188	105	219	11	0.5	129	155	70	0.39	2LC0340-5AF	38
257	**42000**	4000	50	160	326	218	120	257	12	1	149	175	75	0.76	2LC0340-6AF	58
282	**57000**	3700	80	180	350	243	135	282	14	1	168	195	80	1.2	2LC0340-7AF	74
317	**78000**	3300	90	200	399	267	150	317	17	1	189	220	90	2.0	2LC0340-8AF	104
358	**110000**	3000	110	230	443	307	175	358	17	1	217	250	105	3.6	2LC0341-0AF	146
390	**138000**	2800	120	250	473	335	190	390	17	1	234	275	125	5.2	2LC0341-1AF	184
458	**245000**	2400	160	300	561	400	220	458	22	1	276	320	140	11.7	2LC0341-2AF	293

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

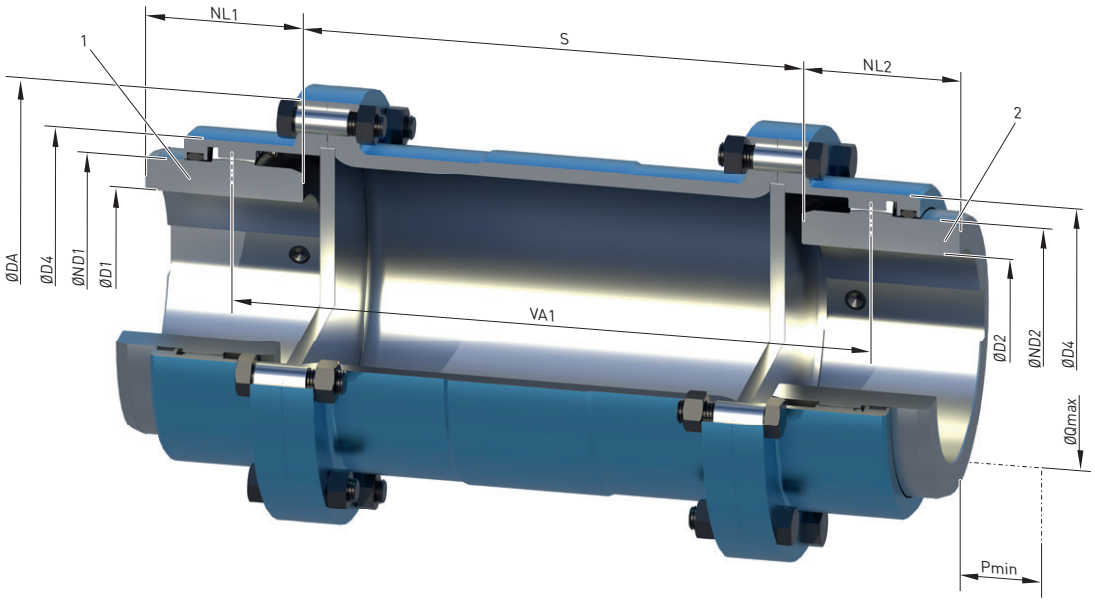
- Weights and moments of inertia apply to the complete coupling with maximum bores.
- Restricted design in deflection and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.
  P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE XNZS



Size	Rated torque	Maxi-mum speed	Dimensions in mm											↗ Article no. [1]		Weight	Mass moment of inertia
D4	T_{KN}	n_{Kmax} [3][4]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	S		VA1	Q	P		S Ref. [2]	m	J
	Nm	rpm	min.	max.				min.	std. [5]						kg	kgm²
87	**1400**	11400	20	50	114	68	43	74	140	S + 40	52	30	2LC0340-0AE	< 309	4.267 + 0.007 · S	0.007 + 0.00001 · S
														⩾ 309	3.447 + 0.011 · S	0.005 + 0.00002 · S
114	**3200**	8700	20	70	150	95	50	76	180	S + 46	74	35	2LC0340-1AE	< 311	7.691 + 0.011 · S	0.025 + 0.00003 · S
														⩾ 311	5.962 + 0.019 · S	0.019 + 0.00005 · S
134	**5200**	7200	25	80	179	110	62	96	180	S + 53	85	42	2LC0340-2AE	< 321	12.74 + 0.016 · S	0.055 + 0.00006 · S
														⩾ 321	11.13 + 0.022 · S	0.048 + 0.00009 · S
160	**9800**	6200	25	100	213	134	76	115	200	S + 66	110	50	2LC0340-3AE	< 325	22.24 + 0.021 · S	0.136 + 0.00012 · S
														⩾ 325	19.57 + 0.031 · S	0.118 + 0.00019 · S
191	**17500**	5400	30	120	243	161	90	119	200	S + 78	130	60	2LC0340-4AE	< 329	33.01 + 0.036 · S	0.259 + 0.00029 · S
														⩾ 329	29.45 + 0.050 · S	0.227 + 0.00042 · S
219	**27200**	4600	40	140	286	188	105	142	200	S + 92	155	70	2LC0340-5AE	< 332	52.06 + 0.039 · S	0.565 + 0.00042 · S
														⩾ 332	48.69 + 0.052 · S	0.526 + 0.00057 · S
257	**42000**	4000	50	160	326	218	120	150	250	S + 103	175	75	2LC0340-6AE	< 340	74.33 + 0.046 · S	1.028 + 0.00072 · S
														⩾ 340	65.22 + 0.078 · S	0.872 + 0.00127 · S
282	**57000**	3700	80	180	350	243	135	156	250	S + 116	195	80	2LC0340-7AE	< 346	93.9 + 0.062 · S	1.508 + 0.00115 · S
														⩾ 346	83.7 + 0.097 · S	1.296 + 0.00188 · S
317	**78000**	3300	90	200	399	267	150	172	250	S + 128	220	90	2LC0340-8AE	< 352	132.8 + 0.077 · S	2.682 + 0.00181 · S
														⩾ 352	123.6 + 0.108 · S	2.446 + 0.00261 · S
358	**110000**	3000	110	230	443	307	175	178	300	S + 150	250	105	2LC0341-0AE	< 358	180.3 + 0.094 · S	4.496 + 0.00284 · S
														⩾ 358	166.7 + 0.139 · S	4.051 + 0.00431 · S
390	**138000**	2800	120	250	473	335	190	182	300	S + 163	275	125	2LC0341-1AE	< 362	223.9 + 0.089 · S	6.433 + 0.00318 · S
														⩾ 362	215.0 + 0.118 · S	6.095 + 0.00428 · S
458	**245000**	2400	160	300	561	400	220	218	300	S + 186	320	140	2LC0341-2AE	< 378	362.2 + 0.142 · S	14.558 + 0.00697 · S
														⩾ 378	335.9 + 0.222 · S	13.153 + 0.01126 · S

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- The weight and moment of inertia of the coupling with maximum bores D1/D2 can be determined using the corresponding equations as a function of the shaft spacing S [mm].
- 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.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For shaft spacings above the reference value (S Ref.), the cross-section at the center of the intermediate spacer is larger.

[3] For large S-dimensions, it may be necessary to limit the maximum permissible speed according to the critical bending speed.
Using the following equation, the minimum critical bending speed can be approximated (nkrit in [min-1]; D4 und S in [mm])

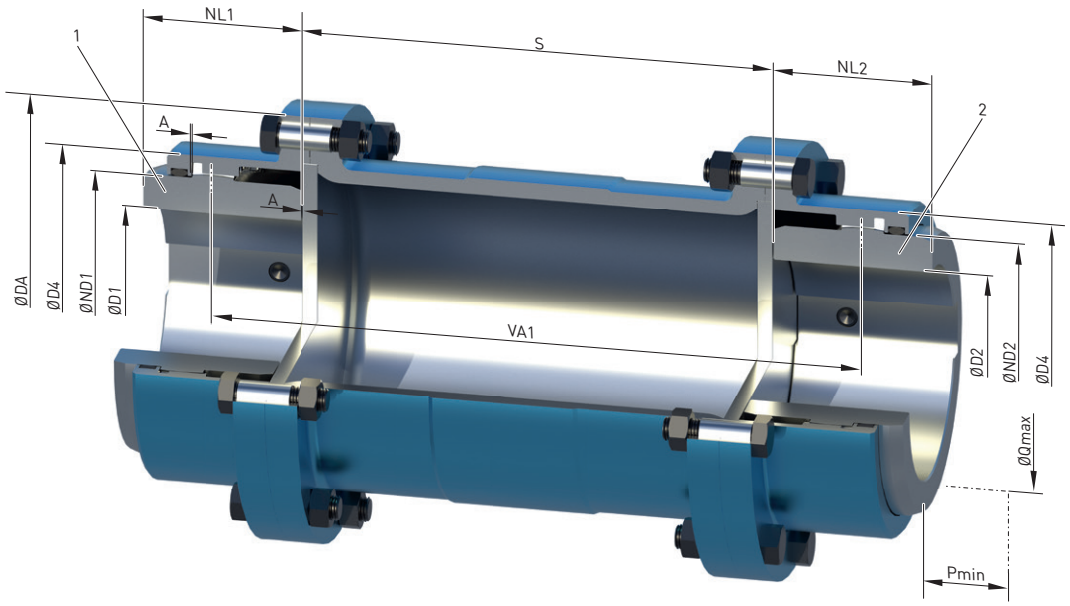
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

[4] For angular misalignments ≥ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

[5] Preferred dimensions for S

↗ For online configuration on **flender.com**, click on the item no.

TYPE XNZA



Size	Rated torque	Maximum speed	Dimensions in mm											Article no. [1]	S Ref. [2]	Weight	Mass moment of inertia
D4	T_{KN}	n_{Kmax} [3][4]	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	S		A	VA1	Q	P			m	J
	Nm	rpm	min.	max.				min.	std. [5]							kg	kgm²
87	**1400**	11400	20	50	114	68	43	70	140	0.5	S + 46	52	30	2LC0340-0AG	< 305	4.295 + 0.007 · S	0.007 + 0.00001 · S
															⩾ 305	3.490 + 0.011 · S	0.005 + 0.00002 · S
114	**3200**	8700	20	70	150	95	50	70	180	0.5	S + 54	74	35	2LC0340-1AG	< 305	7.760 + 0.011 · S	0.025 + 0.00003 · S
															⩾ 305	6.074 + 0.019 · S	0.020 + 0.00005 · S
134	**5200**	7200	25	80	179	110	62	80	180	0.5	S + 71	85	42	2LC0340-2AG	< 305	12.990 + 0.016 · S	0.056 + 0.00006 · S
															⩾ 305	11.490 + 0.022 · S	0.049 + 0.00009 · S
160	**9800**	6200	25	100	213	134	76	99	200	0.5	S + 86	110	50	2LC0340-3AG	< 309	22.580 + 0.021 · S	0.138 + 0.00012 · S
															⩾ 309	20.070 + 0.031 · S	0.121 + 0.00019 · S
191	**17500**	5400	30	120	243	161	90	101	200	0.5	S + 103	130	60	2LC0340-4AG	< 311	33.660 + 0.036 · S	0.264 + 0.00029 · S
															⩾ 311	30.340 + 0.050 · S	0.234 + 0.00042 · S
219	**27200**	4600	40	140	286	188	105	121	200	0.5	S + 118	155	70	2LC0340-5AG	< 311	52.880 + 0.039 · S	0.574 + 0.00042 · S
															⩾ 311	49.770 + 0.052 · S	0.538 + 0.00057 · S
257	**42000**	4000	50	160	326	218	120	122	250	1	S + 137	175	75	2LC0340-6AG	< 312	75.620 + 0.046 · S	1.048 + 0.00072 · S
															⩾ 312	67.420 + 0.078 · S	0.907 + 0.00127 · S
282	**57000**	3700	80	180	350	243	135	124	250	1	S + 154	195	80	2LC0340-7AG	< 314	95.900 + 0.062 · S	1.545 + 0.00115 · S
															⩾ 314	86.770 + 0.097 · S	1.356 + 0.00188 · S
317	**78000**	3300	90	200	399	267	150	137	250	1	S + 172	220	90	2LC0340-8AG	< 317	135.500 + 0.077 · S	2.746 + 0.00181 · S
															⩾ 317	127.400 + 0.108 · S	2.537 + 0.00261 · S
358	**110000**	3000	110	230	443	307	175	137	300	1	S + 200	250	105	2LC0341-0AG	< 317	184.100 + 0.094 · S	4.612 + 0.00284 · S
															⩾ 317	172.400 + 0.139 · S	4.227 + 0.00431 · S
390	**138000**	2800	120	250	473	335	190	137	300	1	S + 217	275	125	2LC0341-1AG	< 317	227.800 + 0.089 · S	6.576 + 0.00318 · S
															⩾ 317	220.300 + 0.118 · S	6.287 + 0.00428 · S
458	**245000**	2400	160	300	561	400	220	162	300	1	S + 254	320	140	2LC0341-2AG	< 322	370.100 + 0.142 · S	14.949 + 0.00697 · S
															⩾ 322	348.400 + 0.222 · S	13.783 + 0.01126 · S

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- The weight and moment of inertia of the coupling with maximum bores D1/D2 can be determined using the corresponding equations as a function of the shaft spacing S [mm].
- Restricted design in deflection and axial movement. Max. displacement 0.2°.
- 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.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For shaft spacings above the reference value (S Ref.), the cross-section at the center of the intermediate spacer is larger.

[3] For large S-dimensions, it may be necessary to limit the maximum permissible speed according to the critical bending speed.
Using the following equation, the minimum critical bending speed can be approximated (nkrit in [min-1]; D4 und S in [mm])

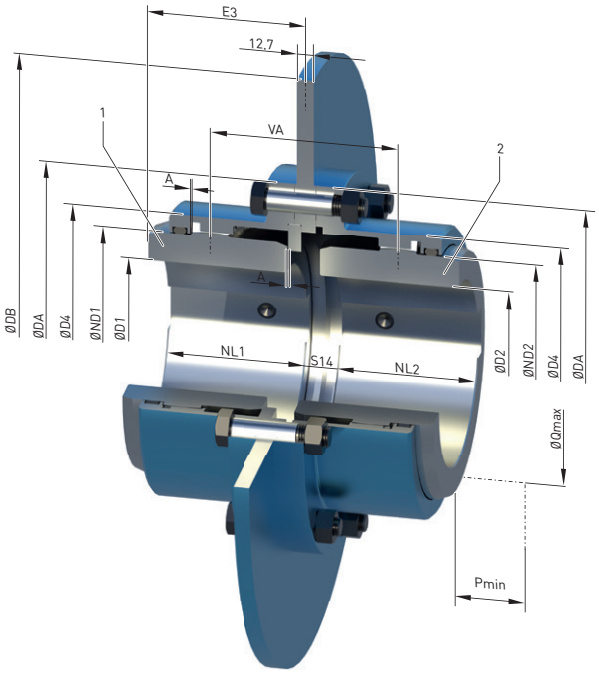
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

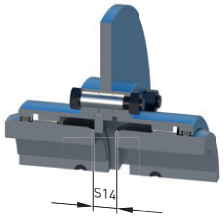
[4] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

[5] Preferred dimensions for S

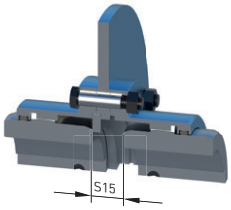
↗ For online configuration on **flender.com**, click on the item no.

TYPE XNBG





Type A



Type AB

Size	Rated torque	Maximum speed	Dimensions in mm										Brake disk		Mass moment of inertia	↗ Article no. [1]		Weight
D4	T_{KN}	n_{Kmax} [2]	D1 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	S14	S15	A	VA	Q	P	DB	E3	J	Type		m
	Nm	rpm	min.	max.												kgm²	A	AB	kg
87	1400	5700	20	50	114	68	43	17	20	0.5	63	52	30	300	52	0.08	2LC0340-0AQ	2LC0340-0AR	9.30
114	3200	4800	20	70	150	95	50	17	21	0.5	71	74	35	356	59	0.17	2LC0340-1AQ	2LC0340-1AR	14.3
134	5200	4800	25	80	179	110	62	17	26	0.5	88	85	42	356	71	0.19	2LC0340-2AQ	2LC0340-2AR	17.9
		4200												406		0.30	2LC0340-2AQ	2LC0340-2AR	20.9
160	9800	4200	25	100	213	134	76	20	30	0.5	106	110	50	406	87	0.35	2LC0340-3AQ	2LC0340-3AR	26.6
		3700												457		0.51	2LC0340-3AQ	2LC0340-3AR	30.0
191	17500	4200	30	120	243	161	90	21	33	0.5	123	130	60	406	102	0.44	2LC0340-4AQ	2LC0340-4AR	34.2
		3700												457		0.60	2LC0340-4AQ	2LC0340-4AR	37.7
		3300												514		0.85	2LC0340-4AQ	2LC0340-4AR	42.0
219	27200	3700	40	140	286	188	105	21,5	34.5	0.5	139.5	155	70	457	117	0.79	2LC0340-5AQ	2LC0340-5AR	50.2
		3300												514		1.05	2LC0340-5AQ	2LC0340-5AR	54.5
		2800												610		1.72	2LC0340-5AQ	2LC0340-5AR	63.0
257	42000	3300	50	160	326	218	120	22	39	1	159	175	75	514	132.5	1.39	2LC0340-6AQ	2LC0340-6AR	72.7
		2800												610		2.06	2LC0340-6AQ	2LC0340-6AR	81.1
		2400												711		3.21	2LC0340-6AQ	2LC0340-6AR	91.6
282	57000	3300	80	180	350	243	135	24	43	1	178	195	80	514	148.5	1.75	2LC0340-7AQ	2LC0340-7AR	87.3
		2800												610		2.43	2LC0340-7AQ	2LC0340-7AR	95.8
		2400												711		3.57	2LC0340-7AQ	2LC0340-7AR	106
		2100												812		5.33	2LC0340-7AQ	2LC0340-7AR	118
317	78000	2800	90	200	399	267	150	25,5	47.5	1	197.5	220	90	610	165	3.24	2LC0340-8AQ	2LC0340-8AR	122
		2400												711		4.38	2LC0340-8AQ	2LC0340-8AR	133
		2100												812		6.14	2LC0340-8AQ	2LC0340-8AR	146
358	110000	2400	110	230	443	307	175	25,5	50.5	1	225.5	250	105	711	190	5.81	2LC0341-0AQ	2LC0341-0AR	172
		2100												812		7.57	2LC0341-0AQ	2LC0341-0AR	184

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- Weights and moments of inertia apply to the complete coupling with maximum bores
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- 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.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] For angular misalignments ⩾ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on **page E/21**.

↗ For online configuration on **flender.com**, click on the item no.

SPARE AND WEAR PARTS

Sealing rings

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

Size	Hub diameter ND1/ND2 mm	Article No.
87	68	2LC0340-0XE00-0AA0
114	95	2LC0340-1XE00-0AA0
134	110	2LC0340-2XE00-0AA0
160	134	2LC0340-3XE00-0AA0
191	161	2LC0340-4XE00-0AA0
219	188	2LC0340-5XE00-0AA0
257	218	2LC0340-6XE00-0AA0
282	243	2LC0340-7XE00-0AA0
317	267	2LC0340-8XE00-0AA0
358	307	2LC0341-0XE01-0AA0
390	335	2LC0341-1XE01-0AA0
458	400	2LC0341-2XE01-0AA0

High-performance grease

Container	Content g	Article No.
Cartridge	300	FFA:000000501027

Sealing compound

Container	Content ml	Article No.
Tube	60	FFA:000001443780

TORSIONALLY RIGID ALL-STEEL COUPLINGS N-ARPEX AND ARPEX SERIES



Series N-ARPEX ARN-6/-8/-10 6/3

General 6/3

Benefits 6/3

Application 6/4

Design and configurations 6/5

Technical specifications 6/8

Available standard dimensions for the shaft spacing S 6/10

Type NEN/NHN 6/12

Type MCECM/MCHCM 6/14

Type MFEFM/MFHFM 6/16

Type BEB 6/18

Further hubs 6/19

Further spacers 6/22

Spare and wear parts 6/25

Length-dependent specifications 6/26

Other design options 6/30

Series ARPEX ARW-4/-6 6/31

General 6/31

Benefits 6/31

Application 6/31

Design and configurations 6/32

Technical specifications 6/33

Type NHN 6/35

Spare and wear parts 6/37

Series ARPEX ARF-6 6/38

General 6/38

Benefits 6/38

Application 6/38

Design and configurations 6/39

Technical specifications 6/40

Types GG and GJ 6/41

Spare and wear parts 6/43

N-ARPEX
FLENDER

GENERAL



Coupling suitable for use in potentially explosive atmospheres.
Complies with the current ATEX Directive for:

CE II 2G Ex h IIC T6 ... T2 Gb X

II 2D Ex h IIIC T85 °C ... 250 °C Db X

I M2 Ex h Mb X

Temperature range:

- Extended temperature range from -60 °C to +280 °C
- Use in extremely cold environments as standard version
- Use in potentially explosive environments

Benefits

N-ARPEX couplings of the ARN-6/-8/-10 series are outstanding for their application-optimized construction. The NEN, BEB, MCECM, MFEFM series meet the requirement of **API 610**. Coupling type in accordance with **API 671** is also possible. For speeds of over 1,800 rpm the five-part version with pre-assembled intermediate unit is used.

A special catching device acts to secure the intermediate spacer in the event of plate breakage. Application of the N-ARPEX couplings in potentially explosive atmospheres in accordance with the current ATEX Directive is permitted.

GENERAL

Application

N-ARPEX couplings of the ARN-6/-8/-10 series are used wherever reliable torque transmission is called for, even in cases of often unavoidable shaft misalignment. They are universally applicable over a temperature range of from -60 °C up to +280 °C, are torsionally rigid, free of torsional backlash and enable quiet running at a constant angular velocity. They are wear-free and maintenance-free and, if correctly fitted, can be expected to have an unlimited service life.

Especial consideration is given to use in pump and compressor drives. Available for this are couplings with standardised intermediate spacer lengths from stock (see following tables).

Main areas of application for the ARN-6/-8-/10 series:

- Pumps
- Fans
- Compressors
- Generator and turbine drives
- Axial and radial blowers
- Paper-making machines and printing machines
- Mixers, Stirrers
- Extruders
- Lifting and traversing gears
- Marine drive
- Water screw drives

By the launch of the new FLENDER N-ARPEX all-steel multiple-disk couplings Flender is continuing the success story of the proven ARPEX coupling series.

An optimised plate pack and a reworked component part design enable even higher torques and speeds to be transmitted.

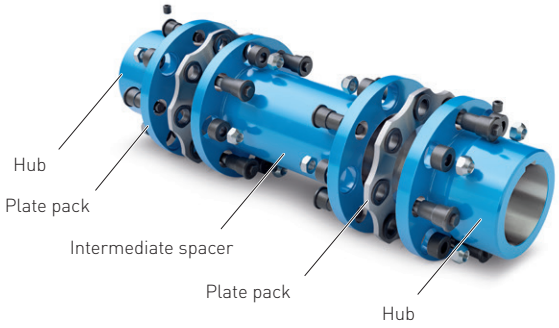
In short, the new design of the plate packs, the closed flange geometry, the standard catching device of the intermediate spacer and FEM-optimised force distribution inside the all-steel multiple-disk coupling clearly show that the development has paid off.



Design and configurations

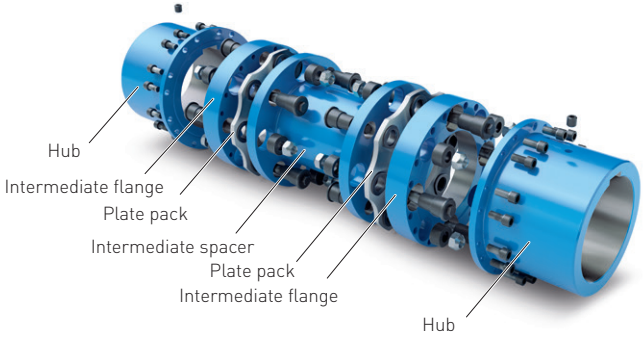
NEN

The design of an N-ARPEX type NEN is shown in the following illustration. The coupling comprises two hubs, an intermediate spacer and two plate packs that in the ARN-6 series are bolted together alternatingly with close-fitting bolts and in the ARN-8/-10 series by means of a Flender conical screw connection. The coupling is available in fixed lengths from stock. Other spacer lengths are manufactured to order. Hubs are designed with threaded pull-off holes.



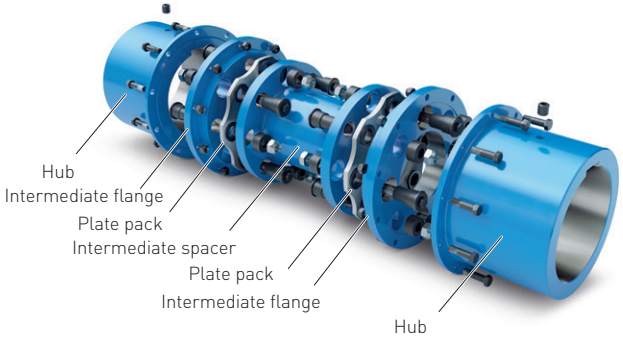
MCECM

The design of an N-ARPEX type MCECM is shown in the following illustration. The coupling comprises two hubs and a pre-assembled intermediate unit (CEC), where the plate packs are bolted together with an intermediate spacer and intermediate flanges at the factory. All that need be done at the construction site is to bolt the hubs with the intermediate flanges. The coupling is available in fixed lengths from stock. Other spacer lengths are manufactured to order. Hubs are designed with threaded pull-off holes.



MFEFM

The following illustration shows the N-ARPEX type MFEFM. It most differs from the type MCECM by the considerably increased bore capacity, for which reason this type is intended precisely for comparatively large shaft diameters. The coupling is available in fixed lengths from stock. Other spacer lengths are manufactured to order. Hubs are designed with threaded pull-off holes.



GENERAL

Variants of the N-ARPEX coupling, ARN-6/-8/-10 series

Type	Series ARN-6	ARN-8	ARN-10	Description
NEN	■	■	■	Variant with intermediate spacer machined on all sides, length variable
BEB	■	–	–	Variant with intermediate spacer machined on all sides
MCECM	■	■	–	Variant with preassembled intermediate unit and intermediate spacer machined on all sides, length variable
MFEFM	■	■	■	
NHN	■	■	■	Version with variable spacer tube – specially for greater shaft distances (up to 6,500 mm)
MCHCM	■	■	–	Version with pre-assembled intermediate unit and with variable spacer tube – specially for greater shaft distances (up to 6,500 mm)
MFHFM	■	■	■	

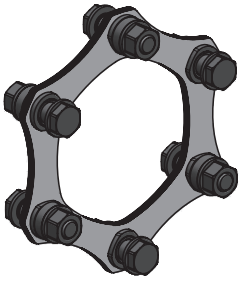
The coupling parts of the N-ARPEX ARN-6/-8/-10 series with the exception of the H spacers have been machined on all sides. The H spacers are delivered with unmachined, primed spacer tube.

Dimension sheets and 3D models of the standard types as well as application-related coupling types are available from the DTK selection module at **flender.com**.

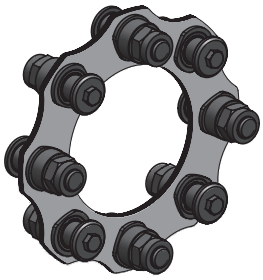
Plate-pack designs

The plate packs of the N-ARPEX ARN series are designed with hexagon, octagon and decagon plates, depending on the coupling size. The number of screw connections is indicated in the denomination of the ARN-6/-8/-10 series. Hexagon plates have 6 bolting points, octagon plates have 8 bolting points and decagon plates have 10 bolting points.

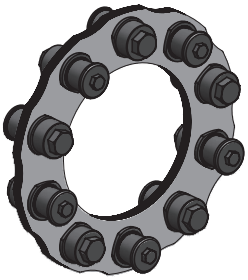
The hexagon plates, octagon plates and decagon plates up to size 631 are designed as ring plates. Sizes 694 to 988 are designed as segmented plates.



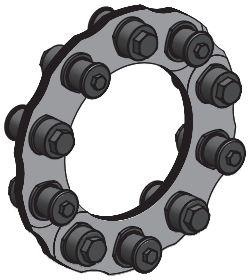
Size 86-6 to 343-6
(hexagon plates)



Size 219-8 to 631-8
(octagon plates)



Size 495-10 to 631-10
(decagon plates)

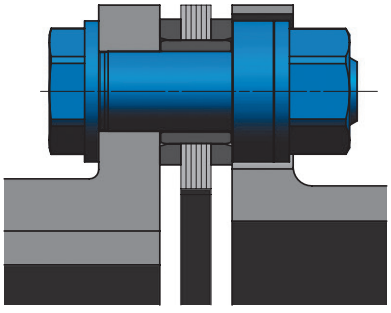


Size 694-10 to 988-10
(decagon plates/segment)

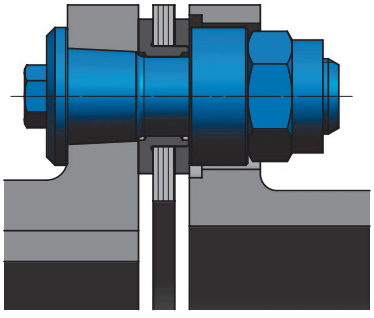
Plate pack screw connection

In the ARN-6 series the plate pack screw connection on N-ARPEX couplings is designed in the form of a close-fitting screw connection. In the ARN-8 and ARN-10 series a conical bolt connection by Flender is used.

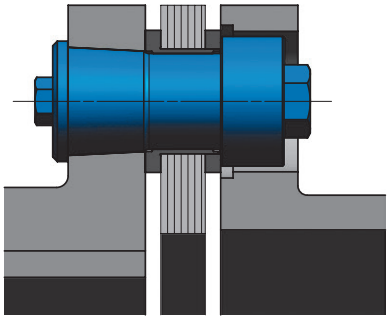
The advantage of this screw connection is the considerably simplified installation in the case of large screw connections.



Screw connection / ARN-6 series
Size 86-6 – 343-6



Screw connection / ARN-8 series
Size 219-8 to 354-8



Screw connection / ARN-8 /-10 series
Size 387-8 to 631-8 / Size 495-10 to 988-10

GENERAL

Technical specifications

Power ratings, NEN/NHN, BEB, MCECM/MCHCM and MFEFM/MFHFM series

Size DA mm	Type	Rated torque T_{KN} kNm	Maximum torque T_{Kmax} kNm	Overload torque T_{KOL} kNm	Fatigue torque T_{Kw0} $T_N = 0\%T_{KN}$ kNm	$T_{Kw} = T_{Kw0} \cdot (1 - T_N/T_{KN})$ 25%T_{KN} kNm	50%T_{KN} kNm	75%T_{KN} kNm	Maximum speed n_{Kmax} rpm	Maximum permitted shaft misalignment (The permissible radial misalignment ΔK_r depends on the total length of the coupling) ±ΔK_a mm	±ΔK_w	Torsional stiffness for a plate pack C_{Tdyn} MNm/rad
86-6	6-Bolt	0.35	0.7	0.875	0.175	0.131	0.088	0.044	24000	1.2	1.0 °	0.132
103-6		0.5	1	1.25	0.25	0.188	0.125	0.063	20000	1.4		0.206
122-6		0.95	1.9	2.375	0.475	0.356	0.238	0.119	17000	2		0.463
133-6		1.25	2.5	3.125	0.625	0.469	0.313	0.156	15000	2.2		0.608
159-6		2.1	4.2	5.25	1.05	0.788	0.525	0.263	13000	2.6		0.986
174-6		2.5	5	6.25	1.25	0.938	0.625	0.313	12000	3		1.19
184-6		3.8	7.6	9.5	1.9	1.425	0.95	0.475	11000	3.2		1.83
203-6		5	10	12.5	2.5	1.875	1.25	0.625	10000	3.4		2.59
217-6		6.2	12.4	15.5	3.1	2.325	1.55	0.775	9500	3.4		3.28
251-6		10.5	21	26.25	5.25	3.938	2.625	1.313	8000	4.1		4.12
268-6		13.8	27.6	34.5	6.9	5.175	3.45	1.725	7500	4.2		4.99
291-6		18.2	36.4	45.5	9.1	6.825	4.55	2.275	7000	4.6		6.87
318-6		23	46	57.5	11.5	8.625	5.75	2.875	6500	5		9.42
343-6		28	56	70	14	10.5	7	3.5	6000	5.3		9.95
219-8	8-Bolt	10	20	25	5	3.75	2.5	1.25	9500	1.7	0.4 °	6.31
241-8		15	30	37	7.5	5.625	3.75	1.875	8700	1.9		7.64
262-8		20	40	50	10	7.5	5	2.5	8000	2.1		9.09
285-8		27	54	67	13.5	10.125	6.75	3.375	7300	2.2		11.9
302-8		35	70	87	17.5	13.125	8.75	4.375	6900	2.4		16.2
321-8		43	86	107	21.5	16.125	10.75	5.375	6500	2.5		21.9
354-8		56	112	140	28	21	14	7	5900	3		29.1
387-8		72	144	180	36	27	18	9	5400	3.3		40
411-8		93	186	232	46.5	34.875	23.25	11.625	5100	3.4		46.9
447-8		122	244	305	61	45.75	30.5	15.25	4600	2.5		60.3
495-8		160	320	400	80	60	40	20	4200	3		76.9
546-8		212	424	530	106	79.5	53	26.5	3800	3.4		100
587-8		270	540	675	135	101.25	67.5	33.75	3500	3.6		116
631-8		350	700	875	175	131.25	87.5	43.75	3300	3.8		138
495-10	10-Bolt	200	350	450	80	60	40	20	4200	2	0.3 °	150
546-10		270	473	608	108	81	54	27	3800	2.3		194
587-10		352	616	792	140.8	105.6	70.4	35.2	3500	2.4		236
631-10		450	788	1013	180	135	90	45	3300	2.5		274
694-10		630	1103	1418	252	189	126	63	3000	2.7	0.2 °	405
734-10		760	1330	1710	304	228	152	76	2800	2.8		501
790-10		950	1663	2138	380	285	190	95	2600	3		632
887-10		1400	2450	3150	560	420	280	140	2300	3.5		858
988-10		2000	3500	4500	800	600	400	200	2100	3.9		1163

Notes

- The permitted shaft misalignments ΔK_a, ΔK_r and ΔK_w are maximum values and must not occur at the same time (see table on page **6/9**).
- The maximum permissible radial misalignment depends on the shaft distance S. It can be determined for the stated types by using the following formulas:
  NEN/NHN: $\Delta K_r = (S - S1) \cdot \tan(\Delta K_w)$
  BEB, MCECM/ MCHCM and MFEFM/ MFHFM: $\Delta K_r = (LZ + S1) \cdot \tan(\Delta K_w)$
- T_{Kmax} is permitted five times per hour.
- Length-related values like torsional stiffness, total weight and mass moment of inertia are listed in the tables on **pages 6/26 to 6/28**.
- The torsional stiffness of the plate packs relates to the nominal range of the coupling. For determination of torsional stiffness for a specific operating point outside the nominal range Flender must be consulted.

Permitted shaft misalignments, types NEN/NHN, BEB, MCECM/MCHCM and MFEFM/MFHFM

The permitted shaft misalignments ΔK_a, ΔK_r and ΔK_w are maximum values and must not occur at the same time. The specified axial misalignments apply to the complete coupling. The permissible angular misalignments have been specified per coupling joint. As all N-ARPEX types are designed to be double-jointed, there is a direct interrelation between radial and angular misalignment.

NEN/NHN: $\Delta K_r = (S - S1) \cdot \tan(\Delta K_w)$

BEB, MCECM/MCHCM and MFEFM/MFHFM: $\Delta K_r = (LZ + S1) \cdot \tan(\Delta K_w)$

To determine the permissible misalignment, values must, if necessary, be converted.

6

Size	Permitted angular misalignment $\pm\Delta K_w$										
	0.0 °	0.1 °	0.2 °	0.3 °	0.4 °	0.5 °	0.6 °	0.7 °	0.8 °	0.9 °	1.0 °
DA	Permitted axial misalignment $\pm\Delta K_a$ in mm										
86-6	1.2	1.1	1	0.8	0.7	0.6	0.5	0.4	0.2	0.1	0
103-6	1.4	1.3	1.1	1	0.8	0.7	0.6	0.4	0.3	0.1	0
122-6	2	1.8	1.6	1.4	1.2	1	0.8	0.6	0.4	0.2	0
133-6	2.2	2	1.8	1.5	1.3	1.1	0.9	0.7	0.4	0.2	0
159-6	2.6	2.3	2.1	1.8	1.6	1.3	1	0.8	0.5	0.3	0
174-6	3	2.7	2.4	2.1	1.8	1.5	1.2	0.9	0.6	0.3	0
184-6	3.2	2.9	2.6	2.2	1.9	1.6	1.3	1	0.6	0.3	0
203-6	3.4	3.1	2.7	2.4	2	1.7	1.4	1	0.7	0.3	0
217-6	3.4	3.1	2.7	2.4	2	1.7	1.4	1	0.7	0.3	0
251-6	4.1	3.7	3.3	2.9	2.5	2.1	1.6	1.2	0.8	0.4	0
268-6	4.2	3.8	3.4	2.9	2.5	2.1	1.7	1.3	0.8	0.4	0
291-6	4.6	4.1	3.7	3.2	2.8	2.3	1.8	1.4	0.9	0.5	0
318-6	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5	0
343-6	5.3	4.8	4.2	3.7	3.2	2.7	2.1	1.6	1.1	0.5	0
219-8	1.7	1.28	0.85	0.43	0	-	-	-	-	-	-
241-8	1.9	1.43	0.95	0.48	0	-	-	-	-	-	-
262-8	2.1	1.58	1.05	0.53	0	-	-	-	-	-	-
285-8	2.2	1.65	1.1	0.55	0	-	-	-	-	-	-
302-8	2.4	1.8	1.2	0.6	0	-	-	-	-	-	-
321-8	2.5	1.88	1.25	0.63	0	-	-	-	-	-	-
354-8	3	2.25	1.5	0.75	0	-	-	-	-	-	-
387-8	3.3	2.48	1.65	0.83	0	-	-	-	-	-	-
411-8	3.4	2.55	1.7	0.85	0	-	-	-	-	-	-
447-8	2.5	1.88	1.25	0.63	0	-	-	-	-	-	-
495-8	3	2.25	1.5	0.75	0	-	-	-	-	-	-
546-8	3.4	2.55	1.7	0.85	0	-	-	-	-	-	-
587-8	3.6	2.7	1.8	0.9	0	-	-	-	-	-	-
631-8	3.8	2.85	1.9	0.95	0	-	-	-	-	-	-
495-10	2	1.33	0.67	0	-	-	-	-	-	-	-
546-10	2.3	1.53	0.77	0	-	-	-	-	-	-	-
587-10	2.4	1.6	0.8	0	-	-	-	-	-	-	-
631-10	2.5	1.67	0.83	0	-	-	-	-	-	-	-
694-10	2.7	1.35	0	-	-	-	-	-	-	-	-
734-10	2.8	1.4	0	-	-	-	-	-	-	-	-
790-10	3	1.5	0	-	-	-	-	-	-	-	-
887-10	3.5	1.75	0	-	-	-	-	-	-	-	-
988-10	3.9	1.95	0	-	-	-	-	-	-	-	-

GENERAL

Available standard dimensions for the shaft spacing S

Type NEN/NHN

Size DA	Shaft distance S NEN min.	Shaft distance S NHN min.	Preferred dimension V NEN	100	140	180	200	250	300	(88.9) 3.5"	(127) 5"	(177.8) 7"	(228.6) 9"	-
mm	mm	mm												
86-6	53	300	**100**	■										
103-6	54	300	**100**	■										
122-6	65	300	**100**	■										
133-6	65	300	**100**	■										
159-6	80	300	**100**	■										
174-6	80	300	**100**	■										
184-6	95	350	**140**		■									
203-6	100	350	**140**		■									
217-6	105	350	**140**		■									
251-6	130	350	**180**			■								
268-6	140	350	**180**			■								
291-6	140	350	**180**			■								
318-6	150	400	**200**				■							
343-6	150	400	**200**				■							
219-8	129	350	**140**		■									
241-8	135	350	**140**		■									
262-8	145	350	**180**			■								
285-8	162	350	**180**			■								
302-8	179	350	**180**			■								
321-8	196	400	**200**				■							
354-8	214	400	**250**					■						
387-8	246	400	**250**					■						
411-8	256	400	**300**						■					
447-8	270	400	**300**						■					
495-8	281	600	**300**						■					
546-8	299	600	**300**						■					
587-8	315	600	**320**											■
631-8	334	600	**340**											■
495-10	281	600	**300**						■					
546-10	299	600	**300**						■					
587-10	315	600	**320**											■
631-10	334	600	**340**											■
694-10	400	600	**400**											■
734-10	436	600	**440**											■
790-10	466	750	**470**											■
887-10	543	750	**550**											■
988-10	617	750	**620**											■

Type MCECM/MCHCM

Size DA	Shaft distance S MCECM min.	Shaft distance S MCHCM min.	Preferred dimension V MCECM	100	140	180	200	250	300	(127) 5"	(177.8) 7"	(228.6) 9"	-
mm	mm	mm											
86-6	93	340	**140**		■								
103-6	94	340	**140**		■								
122-6	105	340	**140**		■								
133-6	105	340	**140**		■								
159-6	120	340	**140**		■								
174-6	120	340	**140**		■								
184-6	155	410	**200**				■						
203-6	160	410	**200**				■						
217-6	165	410	**200**				■						
251-6	200	420	**250**					■					
268-6	210	420	**250**					■					
291-6	210	420	**250**					■					
318-6	250	500	**300**						■				
343-6	250	500	**300**						■				

■ Preferred dimensions ■ Available standard dimensions

Type MCECM/MCHCM

Size DA	Shaft distance S MCECM min.	Shaft distance S MCHCM min.	Preferred dimension V MCECM	100	140	180	200	250	300	(127) 5"	(177.8) 7"	(228.6) 9"	-
mm	mm	mm											
219-8	207	428	**218**										■
241-8	217	432	**222**										■
262-8	233	438	**268**										■
285-8	260	448	**278**										■
302-8	285	456	**286**										■
321-8	308	512	**312**										■
354-8	330	516	**366**										■
387-8	338	492	**342**										■
411-8	350	494	**394**										■
447-8	372	502	**402**										■
495-8	387	706	**406**										■
546-8	413	714	**414**										■
587-8	435	720	**440**										■
631-8	458	724	**464**										■

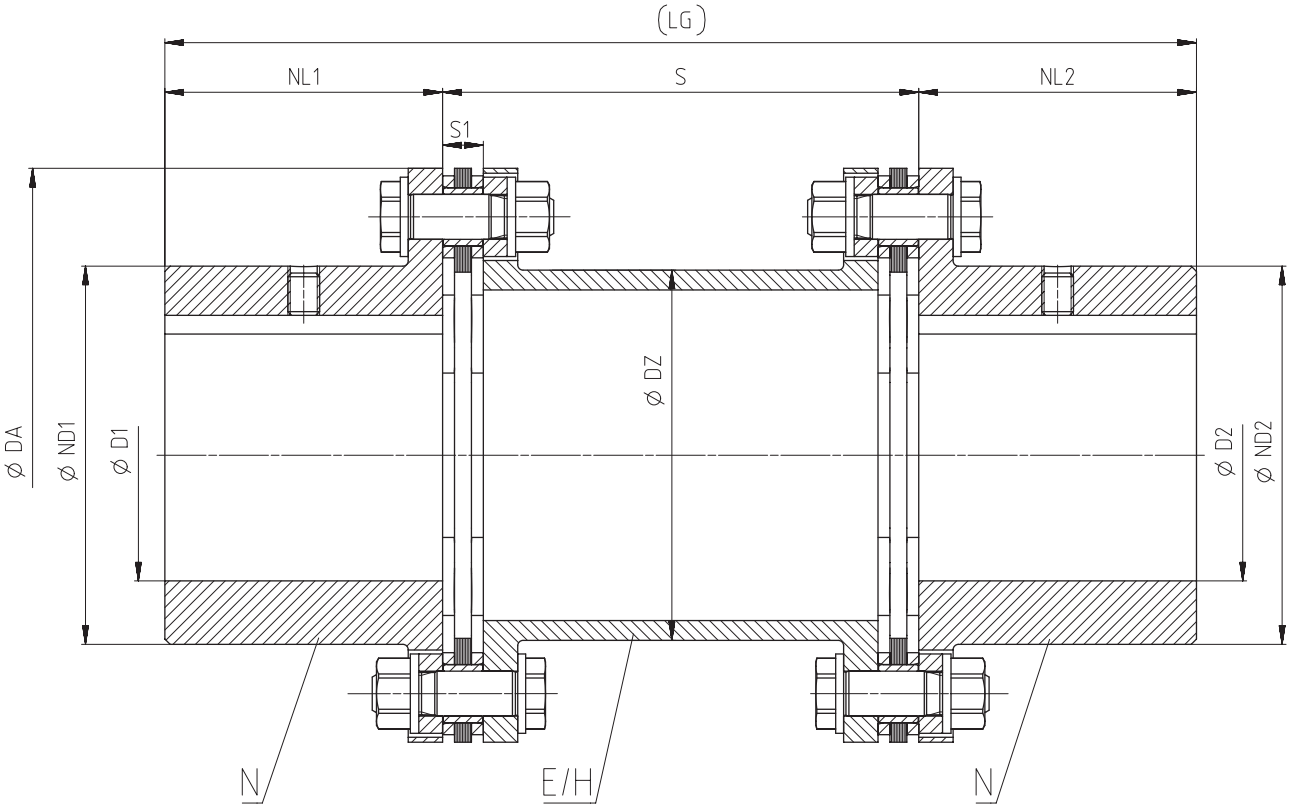
Type MFEFM/MFHFM

Size DA	Shaft distance S MFEFM min.	Shaft distance S MFHFM min.	Preferred dimension V MFEFM	100	140	180	200	250	300	(127) 5"	(177.8) 7"	(228.6) 9"	-
mm	mm	mm											
86-6	93	340	**140**		■								
103-6	94	340	**140**		■								
122-6	105	340	**140**		■								
133-6	105	340	**140**		■								
159-6	120	340	**140**		■								
174-6	120	340	**140**		■								
184-6	155	410	**200**				■						
203-6	160	410	**200**				■						
217-6	165	410	**200**				■						
251-6	200	420	**250**					■					
268-6	210	420	**250**					■					
291-6	210	470	**300**						■				
318-6	250	500	**300**						■				
343-6	250	500	**300**						■				
219-8	207	428	**218**										■
241-8	217	432	**222**										■
262-8	233	438	**268**										■
285-8	260	448	**278**										■
302-8	285	456	**286**										■
321-8	308	512	**312**										■
354-8	330	516	**366**										■
387-8	338	492	**342**										■
411-8	350	494	**394**										■
447-8	372	502	**402**										■
495-8	387	706	**406**										■
546-8	413	714	**414**										■
587-8	435	720	**440**										■
631-8	458	724	**464**										■
495-10	387	706	**406**										■
546-10	413	714	**414**										■
587-10	435	720	**440**										■
631-10	458	724	**464**										■
694-10	552	752	**552**										■
734-10	600	764	**604**										■
790-10	646	930	**650**										■
887-10	749	956	**756**										■
988-10	857	900	**860**										■

■ Preferred dimensions ■ Available standard dimensions

TYPE NEN/NHN

Torsionally rigid couplings of type NEN (NHN) with radially freely demountable intermediate spacer and catching device to secure the intermediate spacer in the event of plate breakage. Standard coupling type in accordance with **API 610**. Coupling type in accordance with **API 671** (up to n = 1800 rpm) possible.



Size DA	Rated torque T_{KN}	Maximum speed n_{Kmax}	Dimensions in mm D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	S1	Shaft distance S NEN min.	Shaft distance S NHN min.	Preferred dimension V NEN	LG	↗ Article no. [1] Intermediate spacer E spacer (NEN)	↗ Article no. [1] Intermediate spacer H spacer (NHN)	Weight m
mm	kNm	rpm	max.											kg
86-6	**0.35**	24000	**42**	56	45	45	8	53	300	100	190	2LC0370-0AA	2LC0370-0AL	1.9
103-6	**0.5**	20000	**55**	73	55	60	8.4	54	300	100	210	2LC0370-1AA	2LC0370-1AL	3
122-6	**0.95**	17000	**65**	85	65	73	8.8	65	300	100	230	2LC0370-2AA	2LC0370-2AL	5.1
133-6	**1.25**	15000	**75**	96	75	85	9.6	65	300	100	250	2LC0370-3AA	2LC0370-3AL	6.4
159-6	**2.1**	13000	**80**	104	80	97	11.6	80	300	100	260	2LC0370-4AA	2LC0370-4AL	9.6
174-6	**2.5**	12000	**90**	118	85	116	12.8	80	300	100	270	2LC0370-5AA	2LC0370-5AL	11.8
184-6	**3.8**	11000	**95**	124	90	123	14.6	95	350	140	320	2LC0370-6AA	2LC0370-6AL	16.4
203-6	**5**	10000	**100**	135	95	128	15	100	350	140	330	2LC0370-7AA	2LC0370-7AL	21.3
217-6	**6.2**	9500	**110**	143	105	140	15.4	105	350	140	350	2LC0370-8AA	2LC0370-8AL	24.4
251-6	**10.5**	8000	**120**	160	110	160	20.6	130	350	180	400	2LC0371-0AA	2LC0371-0AL	38
268-6	**13.8**	7500	**130**	170	130	166	22	140	350	180	440	2LC0371-1AA	2LC0371-1AL	48.6
291-6	**18.2**	7000	**145**	190	140	188	22.8	140	350	180	460	2LC0371-2AA	2LC0371-2AL	62.8
318-6	**23**	6500	**155**	205	150	197	23.2	150	400	200	500	2LC0371-3AA	2LC0371-3AL	83.9
343-6	**28**	6000	**170**	230	160	223	24	150	400	200	520	2LC0371-4AA	2LC0371-4AL	104

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

Size DA	Rated torque T_{KN}	Maximum speed n_{Kmax}	Dimensions in mm									↗ Article no. [1]		Weight
			D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	S1	Shaft distance S		Preferred dimension V	LG	Intermediate spacer		m
								NEN	NHN	NEN		E spacer (NEN)	H spacer (NHN)	
mm	kNm	rpm	max.					min.	min.					kg
219-8	**10**	9500	**100**	137	115	124	12.2	129	350	140	370	2LC0380-0AA	2LC0380-0AL	31.9
241-8	**15**	8700	**110**	150	127	135	12.6	135	350	140	394	2LC0380-1AA	2LC0380-1AL	41.3
262-8	**20**	8000	**120**	163	138	148	13.8	145	350	180	456	2LC0380-2AA	2LC0380-2AL	53.8
285-8	**27**	7300	**130**	177	150	162	15.2	162	350	180	480	2LC0380-3AA	2LC0380-3AL	70.8
302-8	**35**	6900	**140**	192	161	174	17.2	179	350	180	502	2LC0380-4AA	2LC0380-4AL	89.4
321-8	**43**	6500	**150**	206	173	189	21	196	400	200	546	2LC0380-5AA	2LC0380-5AL	109
354-8	**56**	5900	**170**	232	196	216	23.6	214	400	250	642	2LC0380-6AA	2LC0380-6AL	149
387-8	**72**	5400	**190**	258	219	240	26	246	400	250	688	2LC0380-7AA	2LC0380-7AL	193
411-8	**93**	5100	**200**	272	230	250	29.6	256	400	300	760	2LC0380-8AA	2LC0380-8AL	236
447-8	**122**	4600	**220**	299	253	275	32.6	270	400	300	806	2LC0381-0AA	2LC0381-0AL	299
495-8	**160**	4200	**250**	340	288	312	33.8	281	600	300	876	2LC0381-1AA	2LC0381-1AL	402
546-8	**212**	3800	**280**	381	322	351	40	299	600	300	944	2LC0381-2AA	2LC0381-2AL	547
587-8	**270**	3500	**300**	408	345	363	45	315	600	320	1010	2LC0381-3AA	2LC0381-3AL	690
631-8	**350**	3300	**320**	435	368	399	48.8	334	600	340	1076	2LC0381-4AA	2LC0381-4AL	835
495-10	**200**	4200	**250**	340	288	312	33.8	281	600	300	876	2LC0390-0AA	2LC0390-0AL	402
546-10	**270**	3800	**280**	381	322	351	40	299	600	300	944	2LC0390-1AA	2LC0390-1AL	547
587-10	**352**	3500	**300**	408	345	363	45	315	600	320	1010	2LC0390-2AA	2LC0390-2AL	690
631-10	**450**	3300	**320**	435	368	399	48.8	334	600	340	1076	2LC0390-3AA	2LC0390-3AL	834
694-10	**630**	3000	**350**	485	403	435	58	400	600	400	1206	2LC0390-4AA	2LC0390-4AL	1213
734-10	**760**	2800	**370**	512	426	459	63	436	600	440	1292	2LC0390-5AA	2LC0390-5AL	1463
790-10	**950**	2600	**400**	555	460	496	66	466	750	470	1390	2LC0390-6AA	2LC0390-6AL	1837
887-10	**1400**	2300	**450**	627	518	546	78	543	750	550	1586	2LC0390-7AA	2LC0390-7AL	2713
988-10	**2000**	2100	**500**	696	575	596	86	617	750	620	1770	2LC0390-8AA	2LC0390-8AL	3868

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore
- Shaft distance S [2] Metric (mm): 100 mm, 140 mm, 180 mm, 200 mm, 250 mm, 300 mm
  Imperial (inches): 3,5" (88,9 mm), 5" (127 mm), 7" (177,8 mm), 9" (228,6 mm)
  Any required (mm)

Notes

- E-spacers (type NEN) are API compliant.
- Hubs are designed with threaded pull-off holes. Special lengths available upon request.
- The total lengths and the weights apply to the whole coupling of type NEN with maximum bores D1/D2 and the preferred shaft distance S = V.
- In cases with large shaft distances S the intermediate spacer can be designed as an H-spacer. The tube diameters here may slightly diverge. More precise coupling data in cases of variable shaft distances and E- / H-spacers are given on **pages 6/26 to 6/28**.
- E-spacers in preferred lengths up to size 343-6 are available from stock.

Ordering example

- N-ARPEX ARN-6 NEN coupling, size 217-6, with shaft distance S = 140 mm
- Bore ØD1 50H7 mm, keyway to DIN 6885-1 P9 and set screw **(L1C)**
- Bore ØD2 60H7 mm, keyway to DIN 6885-1 P9 and set screw **(M1E)**

Article no.: 2LC0370-8AA99-0AB0-Z L1C+M1E

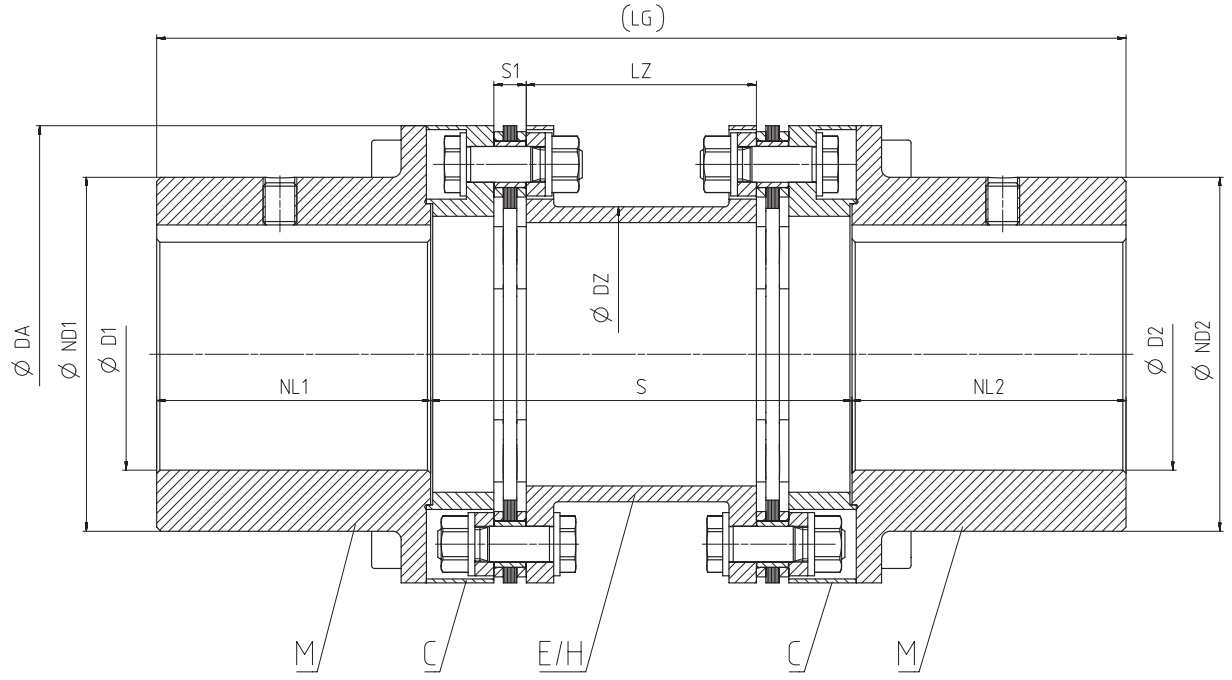
[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE MCECM/MCHCM

Torsionally rigid couplings of type MCECM (MCHCM) with radially freely demountable pre-assembled intermediate unit and catching device to secure 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 DA	Rated torque T_{KN}	Maximum speed n_{Kmax}	Dimensions in mm										↗ Article no. [1]		Weight
			D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	LZ	S1	Shaft distance S		Preferred dimension V	LG	Intermediate spacer		*m*
									MCECM	MCHCM	MCECM		E spacer (MCECM)	H spacer (MCHCM)	
mm	kNm	rpm	max.						min.	min.					kg
86-6	**0.35**	24000	**42**	62	42	45	84	8	93	340	140	224	2LC0370-0AC	2LC0370-0AM	3.1
103-6	**0.5**	20000	**55**	72	55	60	83.2	8.4	94	340	140	250	2LC0370-1AC	2LC0370-1AM	4.7
122-6	**0.95**	17000	**70**	91	70	73	82.4	8.8	105	340	140	280	2LC0370-2AC	2LC0370-2AM	7.7
133-6	**1.25**	15000	**80**	103	80	85	80.8	9.6	105	340	140	300	2LC0370-3AC	2LC0370-3AM	9.6
159-6	**2.1**	13000	**95**	123	95	97	76.8	11.6	120	340	140	330	2LC0370-4AC	2LC0370-4AM	15.9
174-6	**2.5**	12000	**105**	136	105	116	74.4	12.8	120	340	140	350	2LC0370-5AC	2LC0370-5AM	19.3

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore
- Shaft distance S [2] Metric (mm): 100 mm, 140 mm, 180 mm, 200 mm, 250 mm, 300 mm
  Imperial (inches): 5" (127 mm), 7" (177,8 mm), 9" (228,6 mm)
  Any required (mm)

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

Size DA	Rated torque T_{KN}	Maximum speed n_{Kmax}	Dimensions in mm										↗ Article no. [1]		Weight
			D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	LZ	S1	Shaft distance S MCECM min.	Shaft distance S MCHCM min.	Preferred dimension V MCECM	LG	Intermediate spacer E spacer (MCECM)	Intermediate spacer H spacer (MCHCM)	m
mm	kNm	rpm	max.												kg
184-6	**3.8**	11000	**110**	142	110	123	110.8	14.6	155	410	200	420	2LC0370-6AC	2LC0370-6AM	26.6
203-6	**5**	10000	**115**	150	115	128	110	15	160	410	200	430	2LC0370-7AC	2LC0370-7AM	33.7
217-6	**6.2**	9500	**130**	168	130	140	109.2	15.4	165	410	200	460	2LC0370-8AC	2LC0370-8AM	40.3
251-6	**10.5**	8000	**150**	193	150	160	138.8	20.6	200	420	250	550	2LC0371-0AC	2LC0371-0AM	64.4
268-6	**13.8**	7500	**160**	206	160	166	136	22	210	420	250	570	2LC0371-1AC	2LC0371-1AM	78.8
291-6	**18.2**	7000	**170**	221	170	188	134.4	22.8	210	420	250	590	2LC0371-2AC	2LC0371-2AM	98.3
318-6	**23**	6500	**190**	245	190	197	153.6	23.2	250	500	300	680	2LC0371-3AC	2LC0371-3AM	139
343-6	**28**	6000	**205**	267	205	223	152	24	250	500	300	710	2LC0371-4AC	2LC0371-4AM	168
219-8	**10**	9500	**140**	179	140	124	115.6	12.2	207	428	218	498	2LC0380-0AC	2LC0380-0AM	50.3
241-8	**15**	8700	**155**	201	155	135	114.8	12.6	217	432	222	532	2LC0380-1AC	2LC0380-1AM	68.2
262-8	**20**	8000	**165**	218	165	148	152.4	13.8	233	438	268	598	2LC0380-2AC	2LC0380-2AM	89
285-8	**27**	7300	**185**	239	185	162	149.6	15.2	260	448	278	648	2LC0380-3AC	2LC0380-3AM	115
302-8	**35**	6900	**190**	250	190	174	145.6	17.2	285	456	286	666	2LC0380-4AC	2LC0380-4AM	140
321-8	**43**	6500	**205**	269	205	189	158	21	308	512	312	722	2LC0380-5AC	2LC0380-5AM	171
354-8	**56**	5900	**230**	296	230	216	202.8	23.6	330	516	366	826	2LC0380-6AC	2LC0380-6AM	220
387-8	**72**	5400	**255**	329	255	240	198	26	338	492	342	852	2LC0380-7AC	2LC0380-7AM	275
411-8	**93**	5100	**270**	347	270	250	240.8	29.6	350	494	394	934	2LC0380-8AC	2LC0380-8AM	332
447-8	**122**	4600	**290**	375	290	275	234.8	32.6	372	502	402	982	2LC0381-0AC	2LC0381-0AM	419
495-8	**160**	4200	**325**	423	325	312	232.4	33.8	387	706	406	1056	2LC0381-1AC	2LC0381-1AM	561
546-8	**212**	3800	**360**	468	360	351	220	40	413	714	414	1134	2LC0381-2AC	2LC0381-2AM	752
587-8	**270**	3500	**380**	499	380	363	230	45	435	720	440	1200	2LC0381-3AC	2LC0381-3AM	945
631-8	**350**	3300	**410**	535	410	399	242.4	48.8	458	724	464	1284	2LC0381-4AC	2LC0381-4AM	1146

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore
- Shaft distance S [2] Metric (mm): 100 mm, 140 mm, 180 mm, 200 mm, 250 mm, 300 mm
  Imperial (inches): 5" (127 mm), 7" (177,8 mm), 9" (228,6 mm)
  Any required (mm)

Notes

- E-spacers (type MCECM) are API compliant.
- Hubs are designed with threaded pull-off holes. Special lengths available upon request.
- The total lengths, the spacer lenghts and the weights apply to the whole coupling of type MCECM with maximum bores D1/D2 and the preferred shaft distance S = V.
- In cases with large shaft distances S the intermediate spacer can be designed as an H-spacer. The tube diameters here may slightly diverge. More precise coupling data in cases of variable shaft distances and E- / H-spacers are given on **pages 6/26 to 6/28**.
- Plate packs in the CEC/CHC intermediate unit assembled at the factory.
- E-spacers in preferred lengths up to size 343-6 are available from stock.

Ordering example

- N-ARPEX ARN-6 MCECM coupling, size 217-6, with shaft distance S = 200 mm
- Bore ØD1 60H7 mm, keyway to DIN 6885-1 P9 and set screw **(L1G)**
- Bore ØD2 70H7 mm, keyway to DIN 6885-1 P9 and set screw **(M1G)**

Article no.: 2LC0370-8AC99-0AD0-Z L1G+M1G

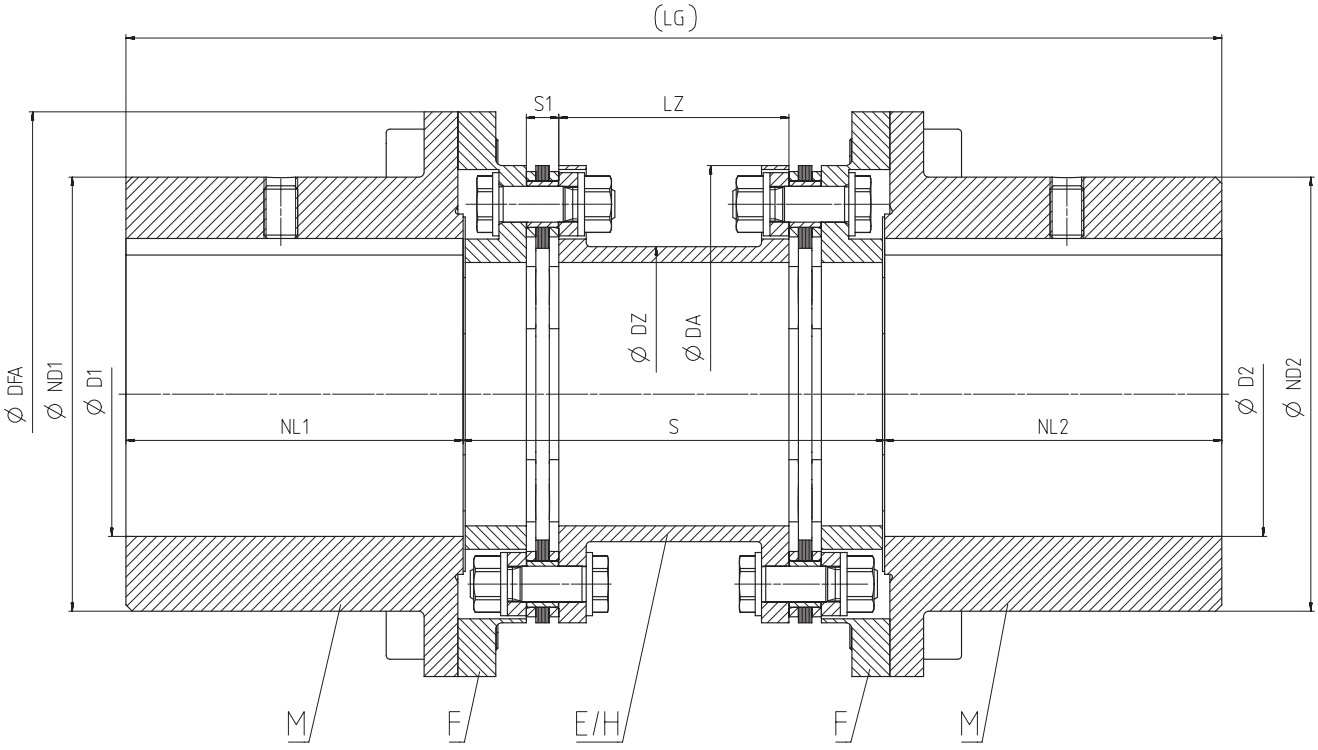
[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE MFEFM/MFHFM

Torsionally rigid type MFEFM (MFHFM) couplings with enlarged bore capacity and radially freely demountable intermediate unit and catching device to secure 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 DA	Rated torque T_{KN}	Maximum speed n_{Kmax}	Dimensions in mm DFA	D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	LZ	S1	Shaft distance S MFEFM min.	Shaft distance S MFHFM min.	Preferred dimension V MFEFM	LG	↗ Article no. [1] Intermediate spacer E spacer (MFEFM)	↗ Article no. [1] Intermediate spacer H spacer (MFHFM)	Weight *m*
mm	kNm	rpm		max.												kg
86-6	**0.35**	17000	122	**70**	91	70	45	84	8	93	340	140	280	2LC0370-0BA	2LC0370-0BC	6
103-6	**0.5**	15000	133	**80**	103	80	60	83.2	8.4	94	340	140	300	2LC0370-1BA	2LC0370-1BC	8
122-6	**0.95**	13000	159	**95**	123	95	73	82.4	8.8	105	340	140	330	2LC0370-2BA	2LC0370-2BC	13.6
133-6	**1.25**	12000	174	**105**	136	105	85	80.8	9.6	105	340	140	350	2LC0370-3BA	2LC0370-3BC	17.1
159-6	**2.1**	10000	203	**115**	150	115	97	76.8	11.6	120	340	140	370	2LC0370-4BA	2LC0370-4BC	22.9
174-6	**2.5**	9500	217	**130**	168	130	116	74.4	12.8	120	340	140	400	2LC0370-5BA	2LC0370-5BC	26.8
184-6	**3.8**	8000	251	**150**	193	150	123	110.8	14.6	155	410	200	500	2LC0370-6BA	2LC0370-6BC	40.1
203-6	**5**	8000	251	**150**	193	150	128	110	15	160	410	200	500	2LC0370-7BA	2LC0370-7BC	52.8
217-6	**6.2**	7500	268	**160**	206	160	140	109.2	15.4	165	410	200	520	2LC0370-8BA	2LC0370-8BC	63.4
251-6	**10.5**	6500	318	**190**	245	190	160	138.8	20.6	200	420	250	630	2LC0371-0BA	2LC0371-0BC	109

Configurable variants [1]

- ØD1 Without finished bore / With finished bore
- ØD2 Without finished bore / With finished bore
- Shaft distance S [2] Metric (mm): 100 mm, 140 mm, 180 mm, 200 mm, 250 mm, 300 mm
  Imperial (inches): 5" (127 mm), 7" (177,8 mm), 9" (228,6 mm)
  Any required (mm)

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

Size	Rated torque	Maxi-mum speed	Dimensions in mm											↗ Article no. [1]		Weight
DA	T_{KN}	n_{Kmax}	DFA	D1/D2 Keyway DIN 6885-1	ND1/ ND2	NL1/ NL2	DZ	LZ	S1	Shaft distance S		Preferred dimension V	LG	Intermediate spacer		m
										MFEFM	MFHFM	MFEFM		E spacer (MFEFM)	H spacer (MFHFM)	
mm	kNm	rpm		max.						min.	min.					kg
268-6	**13.8**	6000	343	**205**	267	205	166	136	22	210	420	250	660	2LC0371-1BA	2LC0371-1BC	136
291-6	**18.2**	5500	356	**230**	302	230	188	134.4	22.8	210	470	300	760	2LC0371-2BA	2LC0371-2BC	190
318-6	**23**	5500	375	**245**	321	245	197	153.6	23.2	250	500	300	790	2LC0371-3BA	2LC0371-3BC	221
343-6	**28**	4500	424	**270**	354	270	223	152	24	250	500	300	840	2LC0371-4BA	2LC0371-4BC	284
219-8	**10**	7800	267	**165**	219	165	124	115.6	12.2	207	428	218	548	2LC0380-0BA	2LC0380-0BC	77.7
241-8	**15**	7200	289	**185**	241	185	135	114.8	12.6	217	432	222	592	2LC0380-1BA	2LC0380-1BC	98.6
262-8	**20**	6600	314	**200**	262	200	148	152.4	13.8	233	438	268	668	2LC0380-2BA	2LC0380-2BC	131
285-8	**27**	6100	339	**215**	285	215	162	149.6	15.2	260	448	278	708	2LC0380-3BA	2LC0380-3BC	169
302-8	**35**	5900	356	**230**	302	230	174	145.6	17.2	285	456	286	746	2LC0380-4BA	2LC0380-4BC	200
321-8	**43**	5600	375	**245**	321	245	189	158	21	308	512	312	802	2LC0380-5BA	2LC0380-5BC	237
354-8	**56**	4900	424	**270**	354	270	216	202.8	23.6	330	516	366	906	2LC0380-6BA	2LC0380-6BC	315
387-8	**72**	4500	457	**295**	387	295	240	198	26	338	492	342	932	2LC0380-7BA	2LC0380-7BC	384
411-8	**93**	4300	481	**315**	411	315	250	240.8	29.6	350	494	394	1024	2LC0380-8BA	2LC0380-8BC	460
447-8	**122**	4000	519	**340**	447	340	275	234.8	32.6	372	502	402	1082	2LC0381-0BA	2LC0381-0BC	586
495-8	**160**	3700	567	**380**	495	380	312	232.4	33.8	387	706	406	1166	2LC0381-1BA	2LC0381-1BC	758
546-8	**212**	3300	624	**420**	546	420	351	220	40	413	714	414	1254	2LC0381-2BA	2LC0381-2BC	1011
587-8	**270**	3100	669	**450**	587	450	363	230	45	435	720	440	1340	2LC0381-3BA	2LC0381-3BC	1270
631-8	**350**	2900	719	**480**	631	480	399	242.4	48.8	458	724	464	1424	2LC0381-4BA	2LC0381-4BC	1581
495-10	**200**	3700	567	**380**	495	380	312	232.4	33.8	387	706	406	1166	2LC0390-0BA	2LC0390-0BC	757
546-10	**270**	3300	624	**420**	546	420	351	220	40	413	714	414	1254	2LC0390-1BA	2LC0390-1BC	1010
587-10	**352**	3100	669	**450**	587	450	363	230	45	435	720	440	1340	2LC0390-2BA	2LC0390-2BC	1268
631-10	**450**	2900	719	**480**	631	480	399	242.4	48.8	458	724	464	1424	2LC0390-3BA	2LC0390-3BC	1578
694-10	**630**	2600	790	**530**	694	530	435	284	58	552	752	552	1612	2LC0390-4BA	2LC0390-4BC	2165
734-10	**750**	2500	830	**560**	734	560	459	314	63	600	764	604	1724	2LC0390-5BA	2LC0390-5BC	2586
790-10	**950**	2300	896	**600**	790	600	496	338	66	646	930	650	1850	2LC0390-6BA	2LC0390-6BC	3263
887-10	**1400**	2000	1013	**680**	887	680	546	394	78	749	956	756	2116	2LC0390-7BA	2LC0390-7BC	4716
988-10	**2000**	1800	1114	**760**	988	760	596	448	86	857	900	860	2380	2LC0390-8BA	2LC0390-8BC	6574

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore
- Shaft distance S [2] Metric (mm): 100 mm, 140 mm, 180 mm, 200 mm, 250 mm, 300 mm
  Imperial (inches): 5" (127 mm), 7" (177,8 mm), 9" (228,6 mm)
  Any required (mm)

Notes

- E-spacers (type MFEFM) are API compliant.
- Hubs are designed with threaded pull-off holes. Special lengths available upon request.
- The total lengths, the spacer lenghts and the weights apply to the whole coupling of type MFEFM with maximum bores D1/D2 and the preferred shaft distance S = V.
- In cases with large shaft distances S the intermediate spacer can be designed as an H-spacer. The tube diameters here may slightly diverge. More precise coupling data in cases of variable shaft distances and E- / H-spacers are given on **pages 6/26 to 6/28**.
- Plate packs in the FEF/FHF intermediate unit assembled at the factory.
- E-spacers in preferred lengths up to size 343-6 are available from stock.

Ordering example

- N-ARPEX ARN-6 MFEFM coupling, size 217-6, with shaft distance S = 200 mm
- Bore ØD1 80H7 mm, keyway to DIN 6885-1 P9 and set screw **(L1J)**
- Bore ØD2 90H7 mm, keyway to DIN 6885-1 P9 and set screw **(M1L)**

Article no.: 2LC0370-8BA99-0AD0-Z L1J+M1L

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

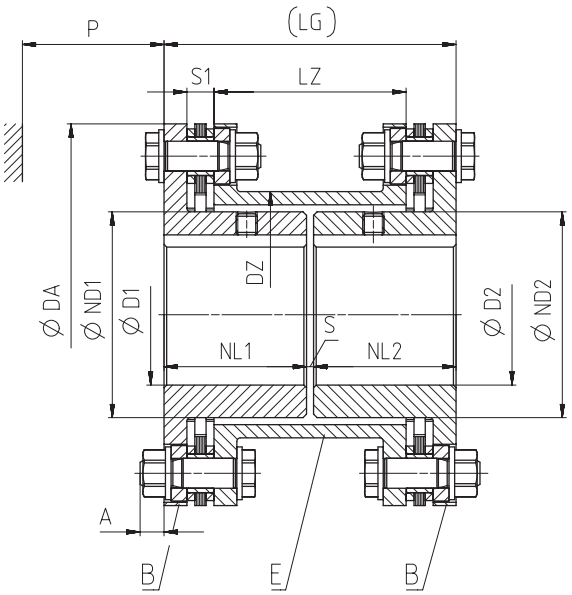
[2] The S shaft spacing standard dimensions available for each size can be found on **Page 6/10**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE BEB

Torsionally rigid type BEB couplings with smallest possible shaft distance.

Type BEB cannot be freely demounted radially without shifting the units.



Size DA mm	Rated torque T_{KN} kNm	Maximum speed n_{Kmax} rpm	Dimensions in mm D1/D2 Keyway DIN 6885-1 max.	ND1/ ND2	NL1/ NL2	DZ	LZ	S1	Shaft distance S	A	P	LG	↗ Article no. [1]	Weight m kg
86-6	**0.35**	24000	**22**	35	30	45	44	8	12	8	32	72	SLC0370-0AB	1.5
103-6	**0.5**	20000	**38**	50	34	60	43.2	8.4	4	8	32	72	SLC0370-1AB	2.0
122-6	**0.95**	17000	**48**	62	56	73	82.4	8.8	4	8	38	116	2LC0370-2AB	4.2
133-6	**1.25**	15000	**55**	72	56	85	80.8	9.6	4	7	38	116	2LC0370-3AB	5.1
159-6	**2.1**	13000	**65**	84	57	97	76.8	11.6	6	9	48	120	2LC0370-4AB	8.1
174-6	**2.5**	12000	**75**	102	77	116	114.4	12.8	4	10	48	158	2LC0370-5AB	11.4
184-6	**3.8**	11000	**80**	106	80	123	110.8	14.6	6	15	64	166	2LC0370-6AB	15.2
203-6	**5**	10000	**85**	111	80	128	110	15	6	14	64	166	2LC0370-7AB	18.2
217-6	**6.2**	9500	**90**	124	81	140	109.2	15.4	4	14	66	166	2LC0370-8AB	22.0
251-6	**10.5**	8000	**100**	137	102	160	138.8	20.6	6	15	77	210	2LC0371-0AB	35.6
268-6	**13.8**	7500	**108**	143	105	166	136	22	12	14	89	222	2LC0371-1AB	44.8
291-6	**18.2**	7000	**120**	162	106	188	134.4	22.8	10	14	89	222	2LC0371-2AB	56.7
318-6	**23**	6500	**130**	164	118	197	153.6	23.2	6	20	100	242	2LC0371-3AB	70.2
343-6	**28**	6000	**150**	186	143	223	202	24	6	19	100	292	2LC0371-4AB	87.7

Configurable variants [1]

- ØD1 Without finished bore / With finished bore
- ØD2 Without finished bore / With finished bore

Notes

- Hubs are designed with threaded pull-off holes. Special lengths available upon request.
- The total lengths and the weights apply to the whole coupling with maximum bores D1/D2 and the preferred shaft distance S = V.

Ordering example

- N-ARPEX ARN-6 BEB coupling, size 217-6, with shaft distance S = 4 mm
- Bore ØD1 50H7 mm, keyway to DIN 6885-1 and set screw **(L1C)**
- Bore ØD2 60H7 mm, keyway to DIN 6885-1 and set screw **(M1E)**

Article no.: 2LC0370-8AB99-0AA0-Z L1C+M1E

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

FURTHER HUBS

Clamping hubs, type 124 and 125

Type 124 and 125 standard clamping hubs can be combined with any spacer of the ARN-6 series.

It should be noted that the clamping hub can be used only as an "N hub" (hub core outside).

Function

N-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.

Transmissible torque

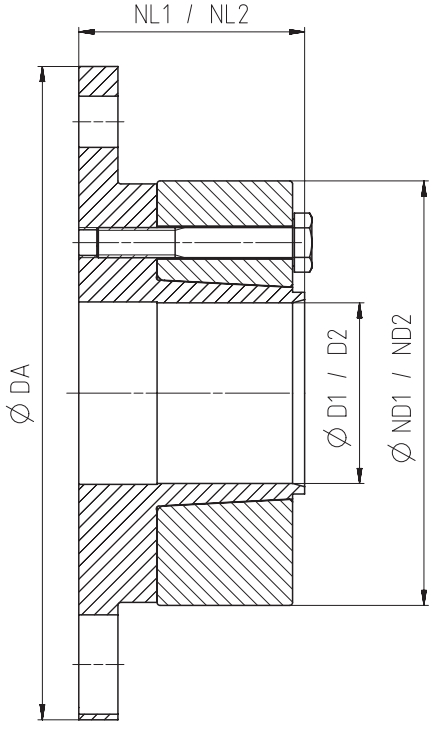
The clamping connections are designed to enable the specified maximum torques to be transmitted.

These maximum torques must not be exceeded, even in the case of overload.

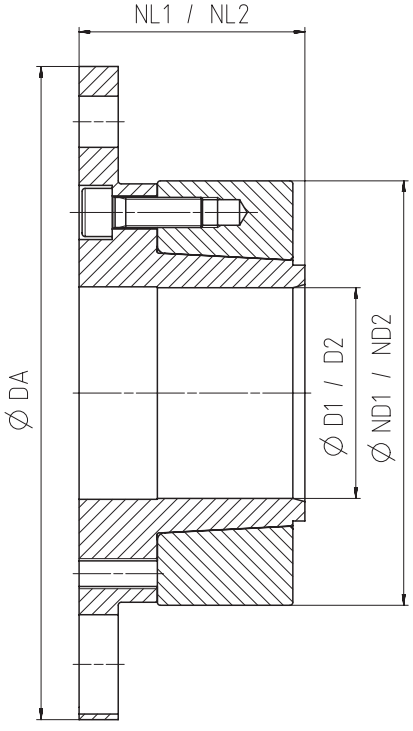
Fitting clearance and surface roughness

The transmissible torques allow for the maximum fitting clearance for a quality IT6 bore and shaft 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 ⩽ Ra = 1.6 µm.

The fit pairing G6/h6 should be used wherever possible.
Divergent shaft tolerances must be specified when ordering.
The article no. for the specification must end in "**-Z**" and include the code "**Y26**" for the fit.



Type 124 (standard type)



Type 125

FURTHER HUBS

Clamping hubs, type 124 and 125

Size DA mm	Clamping hub Type	Dimensions in mm D1/D2 min.	D1/D2 max.	ND1/ND2	NL1/NL2	Mass moment of inertia J kgm²	↗ Article no. [1]	Weight m kg
86-6	124 125	19	**25**	50	35	0.0003	2LC0370-0LM90-0AA0 2LC0370-0LN90-0AA0	0.5
103-6	124 125	25	**38**	67	40	0.0009	2LC0370-1LM90-0AA0 2LC0370-1LN90-0AA0	0.9
122-6	124 125	30	**42**	77	45	0.0021	2LC0370-2LM90-0AA0 2LC0370-2LN90-0AA0	1.5
133-6	124 125	32	**50**	88	50	0.0034	2LC0370-3LM90-0AA0 2LC0370-3LN90-0AA0	2
159-6	124 125	35	**60**	105	55	0.0077	2LC0370-4LM90-0AA0 2LC0370-4LN90-0AA0	3.2
174-6	124 125	40	**70**	120	65	0.0135	2LC0370-5LM90-0AA0 2LC0370-5LN90-0AA0	4.6
184-6	124 125	45	**70**	126	70	0.0195	2LC0370-6LM90-0AA0 2LC0370-6LN90-0AA0	5.9
203-6	124 125	50	**80**	139	75	0.0298	2LC0370-7LM90-0AA0 2LC0370-7LN90-0AA0	7.4
217-6	124 125	60	**90**	147	90	0.0429	2LC0370-8LM90-0AA0 2LC0370-8LN90-0AA0	9.2
251-6	124 125	70	**95**	168	95	0.0837	2LC0371-0LM90-0AA0 2LC0371-0LN90-0AA0	14
268-6	124 125	75	**100**	175	115	0.1236	2LC0371-1LM90-0AA0 2LC0371-1LN90-0AA0	18.5
291-6	124 125	80	**120**	195	125	0.1907	2LC0371-2LM90-0AA0 2LC0371-2LN90-0AA0	22.9
318-6	124 125	85	**120**	209	140	0.2975	2LC0371-3LM90-0AA0 2LC0371-3LN90-0AA0	31.5
343-6	124 125	95	**140**	234	150	0.4539	2LC0371-4LM90-0AA0 2LC0371-4LN90-0AA0	39.6

Note

- Weights and mass moments of inertia apply to a clamping hub with a maximum bore D1/D2.

Ordering example:

- N-ARPEX clamping hub, type 124, size 133-6
- Shaft ØD1 = 40k6 (**L0W**)
- **Y26** / fit specification supplied

Article no.: 2LC0370-3LM90-0AA0-Z L0W+Y26
Plain text Y26: k6

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

Dimensions and torques

Finished bore/shaft in standard fit	DA size in mm													
	86-6	103-6	122-6	133-6	159-6	174-6	184-6	203-6	217-6	251-6	268-6	291-6	318-6	343-6
	Rated coupling torque T_{KN} in Nm													
	350	500	950	1250	2100	2500	3800	5000	6200	10500	13800	18200	23000	28000
$D1^{G6}/_{h6}$ mm	Maximum transmissible torque of the clamping hub Nm													
19	400	-	-	-	-	-	-	-	-	-	-	-	-	-
20	460	-	-	-	-	-	-	-	-	-	-	-	-	-
22	470	-	-	-	-	-	-	-	-	-	-	-	-	-
24	350	-	-	-	-	-	-	-	-	-	-	-	-	-
25	370	480	-	-	-	-	-	-	-	-	-	-	-	-
28	-	870	-	-	-	-	-	-	-	-	-	-	-	-
30	-	1150	1770	-	-	-	-	-	-	-	-	-	-	-
32	-	1140	1830	2300	-	-	-	-	-	-	-	-	-	-
35	-	570	1420	2360	3050	-	-	-	-	-	-	-	-	-
38	-	830	1720	3040	2710	-	-	-	-	-	-	-	-	-
40	-	-	1370	2610	3660	3680	-	-	-	-	-	-	-	-
42	-	-	1670	2930	2180	4020	-	-	-	-	-	-	-	-
45	-	-	-	2120	3750	4110	5780	-	-	-	-	-	-	-
48	-	-	-	2480	4160	4930	6200	-	-	-	-	-	-	-
50	-	-	-	2240	2300	4300	5840	7190	-	-	-	-	-	-
55	-	-	-	-	3310	5370	6410	7970	-	-	-	-	-	-
60	-	-	-	-	3260	3730	5370	8840	7570	-	-	-	-	-
65	-	-	-	-	-	4700	6240	8890	10390	-	-	-	-	-
70	-	-	-	-	-	4150	5920	8460	10640	14050	-	-	-	-
75	-	-	-	-	-	-	-	7960	9590	15350	20710	-	-	-
80	-	-	-	-	-	-	-	7340	8850	13510	20120	31840	-	-
85	-	-	-	-	-	-	-	-	7890	16370	21130	31230	36420	-
90	-	-	-	-	-	-	-	-	6290	14300	20810	33300	39050	-
95	-	-	-	-	-	-	-	-	-	13310	18570	33530	35940	54230
100	-	-	-	-	-	-	-	-	-	-	14440	31710	37500	56580
110	-	-	-	-	-	-	-	-	-	-	-	29020	35200	56900
120	-	-	-	-	-	-	-	-	-	-	-	22600	31490	53580
130	-	-	-	-	-	-	-	-	-	-	-	-	-	50910
140	-	-	-	-	-	-	-	-	-	-	-	-	-	43600

Note

- The maximum transmissible torque of the clamping hub must not be exceeded! Further clamping hub sizes and higher torques on request.

FURTHER SPACERS

Z spacer with enlarged tube cross section

The Z spacers can be used as an alternative to the E and H spacers in any type of the ARN-6 series (except for types with B hubs). Example designs are NZN, MCZCM or MFZFM.

Function
The Z spacer, like the H spacer, is used especially for longer shaft distances (up to 6500 mm). The difference to the H spacer is an increased tube diameter in order to increase the bending-critical speed and the torsional rigidity of the coupling. The Z spacers are delivered with unmachined, primed spacer tube.

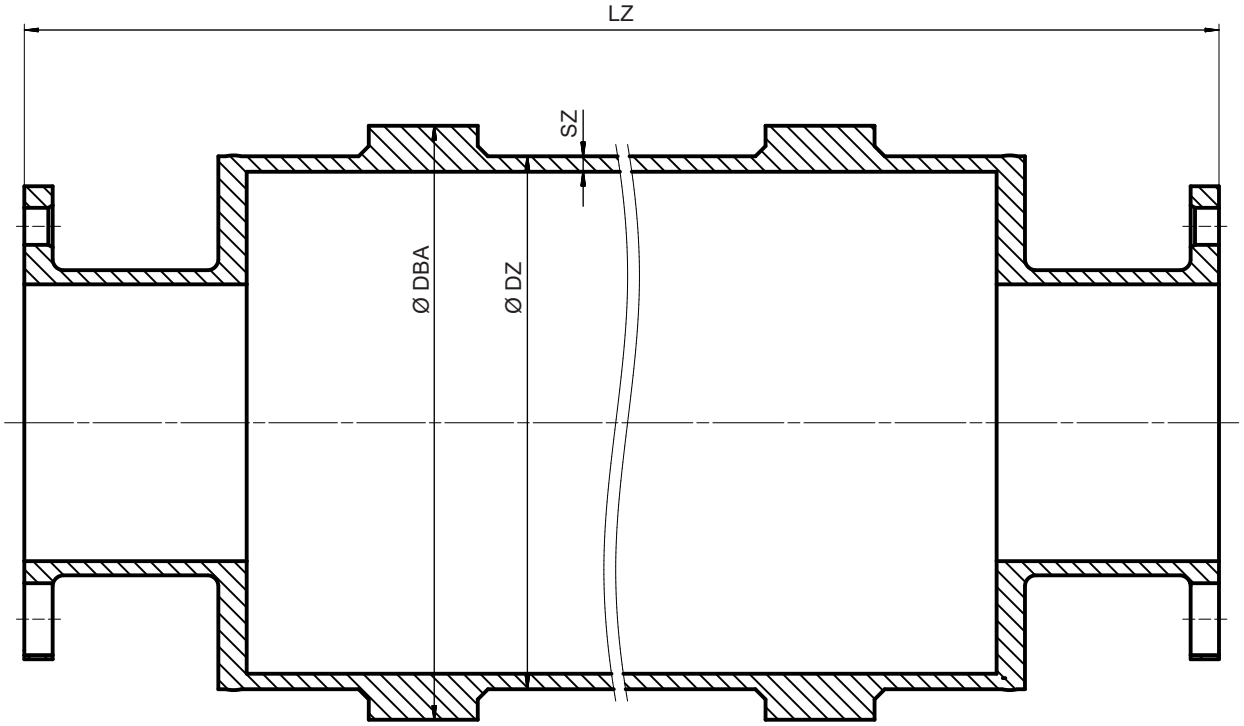
Bending critical speed
The Z spacer has an enlarged tube diameter. Increasing the tube diameter increases the bending critical speed of the coupling and enables a higher operating speed and a larger shaft spacing compared to standard spacers for the same coupling size.

Torsional spring stiffness
The increased tube diameter of the Z spacer also creates an increased torsional spring stiffness of the intermediate spacer and the overall coupling. This increased torsional spring stiffness reduces the torsional angle of the overall coupling when a system torque is applied and enables torsionally rigid torque transmission between the shaft ends to be connected.

Ordering example

- N-ARPEX Z intermediate spacer, size 217-6, with spacer length LZ=3000 mm

Article no.: 2LC0370-8MA00-0AZ0 Q4Y
Plain text to Q4Y: 3000 mm (dimension S)



Z spacer from the ARN-6 series

Size	Dimensions in mm					Mass moment of inertia	↗ Article no. [1]	Weight	Torsional stiffness
DA mm	DBA	DZ	SZ	LZ_{min}	LZ_{max} [2]	*J* kgm²		*m* kg	*C* MNm/rad
86-6	119.5	101.6	5	407	2000	**0.0370**	2LC0370-0MA00-0A	16.7	0.144
103-6	132.5	114.3	5	407	2200	**0.0544**	2LC0370-1MA00-0A	19.3	0.291
122-6	157.5	139.7	5	425	2600	**0.1019**	2LC0370-2MA00-0A	24.8	0.531
133-6	189	168.3	5	425	3000	**0.1912**	2LC0370-3MA00-0A	32.1	0.909
159-6	198	177.8	5.6	455	3500	**0.2406**	2LC0370-4MA00-0A	36.5	1.19
174-6	230.5	203	6.3	420	4000	**0.3868**	2LC0370-5MA00-0A	42.1	2.01
184-6	243.5	216	8	460	4500	**0.5329**	2LC0370-6MA00-0A	52.7	2.59
203-6	247.5	219.1	7.1	460	5000	**0.5299**	2LC0370-7MA00-0A	50.8	2.78
217-6	272.5	244.5	7.1	466	6000	**0.7348**	2LC0370-8MA00-0A	56.9	3.6
251-6	308	273	7.1	500	6500	**1.1183**	2LC0371-0MA00-0A	70.4	5.46
268-6	334	298.5	8.8	550	6500	**1.7058**	2LC0371-1MA00-0A	93.6	6.52
291-6	359	323.9	8.8	552	6500	**2.2355**	2LC0371-2MA00-0A	106.0	10.7
318-6	378	343	8.8	576	6500	**2.7138**	2LC0371-3MA00-0A	119.2	13.5
343-6	403	368	10	576	6500	**3.6737**	2LC0371-4MA00-0A	139.3	20.5

Notes

- The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling (see following table). In the case of individual order of the intermediate spacer, the length (LZ) must be specified.
- Weight, mass moment of inertia and torsional stiffness apply to a Z intermediate spacer with LZ=1000 mm.

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] Other spacer lengths on request.

↗ For online configuration on **flender.com**, click on the item no.

FURTHER SPACERS

Comparison of the bending-critical speed of Z spacers to H spacers depending on the spacer length LZ

The Z spacer has an increased tube diameter compared to the H spacer. Increasing the tube diameter increases the bending-critical speed of the coupling and enables a higher maximum speed n_{max} and a longer spacer length LZ compared to standard spacers for the same coupling size.

Example

Size 174-6

Spacer distance LZ = 3000 mm

- Maximum speed **H spacer** — **n_{max} = 1203 rpm**
- Maximum speed **Z spacer** — **n_{max} = 2074 rpm** (increase 72% compared to H spacer)

Size 343-6

Spacer distance LZ = 4000 mm

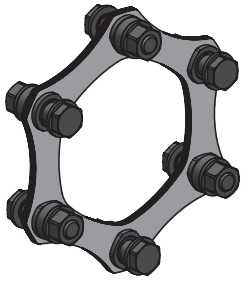
- Maximum speed **H spacer** — **n_{max} = 1254 rpm**
- Maximum speed **Z spacer** — **n_{max} = 2115 rpm** (increase 69% compared to H spacer)

Size	Spacer length LZ in mm									
	1000		2000		3000		4000		5000	
DA	H spacer	Z spacer	H spacer	Z spacer	H spacer	Z spacer	H spacer	Z spacer	H spacer	Z spacer
mm	max. speed n_{max} in rpm									
86-6	4103	9105	1034	2295	-	-	-	-	-	-
103-6	5471	10291	1379	2594	-	-	-	-	-	-
122-6	6647	12668	1676	3195	-	-	-	-	-	-
133-6	7773	15000	1962	3869	875	1725	-	-	-	-
159-6	8857	13000	2240	4072	999	1817	-	-	-	-
174-6	10641	12000	2694	4646	1203	2074	678	1169	-	-
184-6	11000	11000	2811	4905	1255	2191	708	1235	-	-
203-6	10000	10000	2933	4997	1310	2232	739	1259	474	807
217-6	9500	9500	3237	5593	1446	2498	816	1409	523	903
251-6	8000	8000	3619	6231	1620	2788	914	1574	586	1009
268-6	7500	7500	3752	6780	1680	3035	948	1714	608	1099
291-6	7000	7000	4246	7000	1901	3300	1073	1863	689	1195
318-6	6500	6500	4385	6500	1964	3499	1109	1975	711	1267
343-6	6000	6000	4955	6000	2220	3746	1254	2115	804	1357

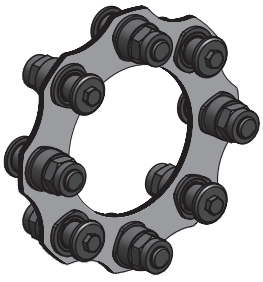
Limited by the general max. speed of the coupling

SPARE AND WEAR PARTS

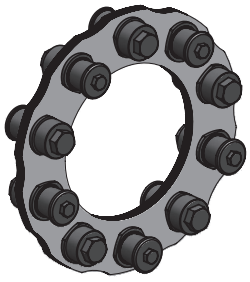
Plate pack



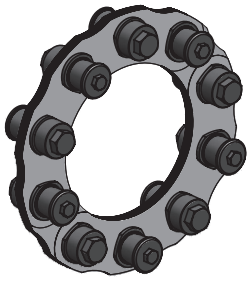
Size 86-6 to 343-6
(hexagon plates)



Size 219-8 to 631-8
(octagon plates)



Size 495-10 to 631-10
(decagon plates)



Size 694-10 to 988-10
(decagon plates/segment)

Size DA	Dimensions S1 mm	Mass moment of inertia *J* kgm²	Article No.	Weight *m* kg
86-6	8	0.00018	2LC0370-0LP00-0AA0	0.17
103-6	8.4	0.00032	2LC0370-1LP00-0AA0	0.19
122-6	8.8	0.001	2LC0370-2LP00-0AA0	0.43
133-6	9.6	0.0014	2LC0370-3LP00-0AA0	0.49
159-6	11.6	0.0033	2LC0370-4LP00-0AA0	0.8
174-6	12.8	0.0047	2LC0370-5LP00-0AA0	0.93
184-6	14.6	0.0078	2LC0370-6LP00-0AA0	1.38
203-6	15	0.012	2LC0370-7LP00-0AA0	1.79
217-6	15.4	0.018	2LC0370-8LP00-0AA0	2.25
251-6	20.6	0.037	2LC0371-0LP00-0AA0	3.61
268-6	22	0.056	2LC0371-1LP00-0AA0	4.83
291-6	22.8	0.08	2LC0371-2LP00-0AA0	5.78
318-6	23.2	0.13	2LC0371-3LP00-0AA0	8.12
343-6	24	0.17	2LC0371-4LP00-0AA0	8.68
219-8	12.2	0.028	2LC0380-0LP00-0AA0	3.58
241-8	12.6	0.042	2LC0380-1LP00-0AA0	4.67
262-8	13.8	0.067	2LC0380-2LP00-0AA0	6.05
285-8	15.2	0.11	2LC0380-3LP00-0AA0	8.28
302-8	17.2	0.15	2LC0380-4LP00-0AA0	10.3
321-8	21	0.22	2LC0380-5LP00-0AA0	13.6
354-8	23.6	0.34	2LC0380-6LP00-0AA0	17
387-8	26	0.49	2LC0380-7LP00-0AA0	20.2
411-8	29.6	0.7	2LC0380-8LP00-0AA0	26
447-8	32.6	1.01	2LC0381-0LP00-0AA0	31.5
495-8	33.8	1.54	2LC0381-1LP00-0AA0	38.7
546-8	40	2.57	2LC0381-2LP00-0AA0	52.9
587-8	45	3.74	2LC0381-3LP00-0AA0	67.2
631-8	48.8	5.38	2LC0381-4LP00-0AA0	85
495-10	33.8	1.76	2LC0390-0LP00-0AA0	43.4
546-10	40	2.9	2LC0390-1LP00-0AA0	58.5
587-10	45	4.19	2LC0390-2LP00-0AA0	73.7
631-10	48.8	5.98	2LC0390-3LP00-0AA0	92.6
694-10	58	11.8	2LC0390-4LP00-0AA0	148
734-10	63	16.3	2LC0390-5LP00-0AA0	182
790-10	66	23.4	2LC0390-6LP00-0AA0	226
887-10	78	43.7	2LC0390-7LP00-0AA0	335
988-10	86	75.8	2LC0390-8LP00-0AA0	468

Notes

- The plate pack of the ARN-6/-8 series is readily available as a spare part.
- The plate pack is delivered with screw connection.
- Mainly ring plates are used for the plate packs. Sizes 694-10 to 988-10 plate packs are designed with segmented plates.

Ordering example

- N-ARPEX ARN-8 plate pack, size 354-8, complete with screw connection

Article no.: **2LC0380-6LP00-0AA0**

LENGTH-DEPENDENT SPECIFICATIONS

of types NEN/ NHN, BEB, MCECM/MCHCM and MFEFM/MFHFM

A variant with an E-spacer is standardly provided for each N-ARPEX type. This has been machined all over in accordance with the requirements of **API 610** and **671**. Particularly for large shaft distances S and therefore for correspondingly long intermediate spacer it is usual to leave the inside and outside diameters of the tube in the condition in which it was delivered. These spacers are then referred to as H-spacers.

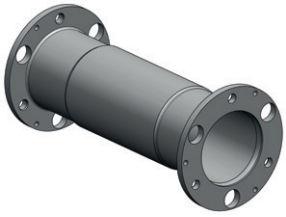
If a coupling is fitted with an H-spacer, the type designation changes accordingly. For example, an NEN becomes an NHN, an MFEFM becomes an MFHFN. No version with an H-spacer is provided for the BEB type. Length-dependent technical specifications for the various coupling types are shown on the following table.
The shaft distance S must be specified in mm. The specifications with regard to weight and mass moment of inertia refer to the whole coupling with maximum bores D1/ D2. The values for torsional stiffness apply to the whole coupling (not including the hubs and customer shafts) and refer to the rated coupling torque T_{KN}. For determination of torsional stiffness for a specific operating point outside the nominal range Flender must be consulted.

Variant with E spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
86-6	NEN	1.55 + 0.003 · S	0.001 + 0.000002 · S	1/(1/0,08 + S/15)
	BEB	1.42 + 0.003 · S	0.001 + 0.000002 · S	1/(1/0,06 + S/15)
	MCECM	2.64 + 0.003 · S	0.003 + 0.000002 · S	1/(1/0,09 + S/15)
	MFEFM	5.54 + 0.003 · S	0.01 + 0.000002 · S	1/(1/0,09 + S/15)
103-6	NEN	2.52 + 0.005 · S	0.004 + 0.000004 · S	1/(1/0,11 + S/42)
	BEB	2.01 + 0.005 · S	0.003 + 0.000004 · S	1/(1/0,1 + S/42)
	MCECM	4 + 0.005 · S	0.006 + 0.000004 · S	1/(1/0,12 + S/42)
	MFEFM	7.28 + 0.005 · S	0.017 + 0.000004 · S	1/(1/0,12 + S/42)
122-6	NEN	4.39 + 0.007 · S	0.009 + 0.000008 · S	1/(1/0,26 + S/82)
	BEB	4.19 + 0.007 · S	0.008 + 0.000008 · S	1/(1/0,2 + S/82)
	MCECM	6.78 + 0.007 · S	0.015 + 0.000008 · S	1/(1/0,29 + S/82)
	MFEFM	12.6 + 0.007 · S	0.042 + 0.000008 · S	1/(1/0,29 + S/82)
133-6	NEN	5.5 + 0.009 · S	0.013 + 0.000014 · S	1/(1/0,33 + S/142)
	BEB	5.09 + 0.009 · S	0.011 + 0.000014 · S	1/(1/0,27 + S/142)
	MCECM	8.44 + 0.009 · S	0.023 + 0.000014 · S	1/(1/0,36 + S/142)
	MFEFM	15.86 + 0.009 · S	0.064 + 0.000014 · S	1/(1/0,36 + S/142)
159-6	NEN	8.54 + 0.011 · S	0.028 + 0.000023 · S	1/(1/0,54 + S/234)
	BEB	8 + 0.011 · S	0.026 + 0.000023 · S	1/(1/0,45 + S/234)
	MCECM	14.35 + 0.011 · S	0.055 + 0.000023 · S	1/(1/0,6 + S/234)
	MFEFM	21.37 + 0.011 · S	0.068 + 0.000023 · S	1/(1/0,6 + S/234)

Variant with H spacer



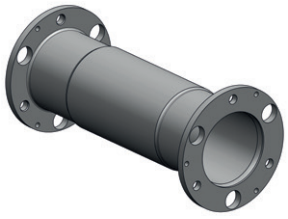
Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
86-6	NHN	1.11 + 0.005 · S	0.001 + 0.000003 · S	1/(1/0,05 + S/25)
	-	-	-	-
	MCHCM	2.13 + 0.005 · S	0.003 + 0.000003 · S	1/(1/0,06 + S/25)
	MFHFM	5.03 + 0.005 · S	0.01 + 0.000003 · S	1/(1/0,06 + S/25)
103-6	NHN	1.91 + 0.008 · S	0.003 + 0.000007 · S	1/(1/0,09 + S/68)
	-	-	-	-
	MCHCM	3.28 + 0.008 · S	0.006 + 0.000007 · S	1/(1/0,1 + S/68)
	MFHFM	6.56 + 0.008 · S	0.016 + 0.000007 · S	1/(1/0,1 + S/68)
122-6	NHN	3.72 + 0.01 · S	0.008 + 0.000012 · S	1/(1/0,21 + S/122)
	-	-	-	-
	MCHCM	6 + 0.01 · S	0.014 + 0.000012 · S	1/(1/0,22 + S/122)
	MFHFM	11.82 + 0.01 · S	0.041 + 0.000012 · S	1/(1/0,22 + S/122)
133-6	NHN	4.52 + 0.013 · S	0.012 + 0.000022 · S	1/(1/0,28 + S/221)
	-	-	-	-
	MCHCM	7.29 + 0.013 · S	0.021 + 0.000022 · S	1/(1/0,29 + S/221)
	MFHFM	14.71 + 0.013 · S	0.062 + 0.000022 · S	1/(1/0,29 + S/221)
159-6	NHN	7.17 + 0.017 · S	0.025 + 0.000037 · S	1/(1/0,45 + S/373)
	-	-	-	-
	MCHCM	12.76 + 0.017 · S	0.051 + 0.000037 · S	1/(1/0,47 + S/373)
	MFHFM	19.78 + 0.017 · S	0.064 + 0.000037 · S	1/(1/0,47 + S/373)

Variant with E spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
174-6	NEN	10.57 + 0.013 · S	0.042 + 0.000039 · S	1/(1/0,64 + S/394)
	BEB	11.36 + 0.013 · S	0.041 + 0.000039 · S	1/(1/0,52 + S/394)
	MCECM	17.54 + 0.013 · S	0.08 + 0.000039 · S	1/(1/0,68 + S/394)
	MFEFM	25.02 + 0.013 · S	0.146 + 0.000039 · S	1/(1/0,68 + S/394)
184-6	NEN	13.94 + 0.017 · S	0.065 + 0.000059 · S	1/(1/1 + S/597)
	BEB	15.1 + 0.017 · S	0.066 + 0.000059 · S	1/(1/0,81 + S/597)
	MCECM	23.12 + 0.017 · S	0.081 + 0.000059 · S	1/(1/1,11 + S/597)
	MFEFM	36.59 + 0.017 · S	0.267 + 0.000059 · S	1/(1/1,11 + S/597)
203-6	NEN	18.62 + 0.019 · S	0.102 + 0.00007 · S	1/(1/1,44 + S/705)
	BEB	18.09 + 0.019 · S	0.096 + 0.00007 · S	1/(1/1,13 + S/705)
	MCECM	29.96 + 0.019 · S	0.185 + 0.00007 · S	1/(1/1,65 + S/705)
	MFEFM	49.06 + 0.019 · S	0.414 + 0.00007 · S	1/(1/1,65 + S/705)
217-6	NEN	21.68 + 0.019 · S	0.137 + 0.000087 · S	1/(1/1,84 + S/870)
	BEB	21.93 + 0.019 · S	0.131 + 0.000087 · S	1/(1/1,43 + S/870)
	MCECM	36.46 + 0.019 · S	0.262 + 0.000087 · S	1/(1/2,11 + S/870)
	MFEFM	59.53 + 0.019 · S	0.579 + 0.000087 · S	1/(1/2,11 + S/870)
251-6	NEN	32.32 + 0.032 · S	0.271 + 0.00018 · S	1/(1/2,24 + S/1827)
	BEB	35.42 + 0.032 · S	0.276 + 0.00018 · S	1/(1/1,85 + S/1827)
	MCECM	56.48 + 0.032 · S	0.539 + 0.00018 · S	1/(1/2,45 + S/1827)
	MFEFM	101.1 + 0.032 · S	1.397 + 0.00018 · S	1/(1/2,45 + S/1827)
268-6	NEN	44.91 + 0.02 · S	0.434 + 0.00013 · S	1/(1/2,78 + S/2063)
	BEB	44.58 + 0.02 · S	0.425 + 0.00013 · S	1/(1/2,27 + S/2063)
	MCECM	73.71 + 0.02 · S	0.8 + 0.00013 · S	1/(1/3,07 + S/2063)
	MFEFM	131.4 + 0.02 · S	2.07 + 0.00013 · S	1/(1/3,07 + S/2063)
291-6	NEN	55.18 + 0.042 · S	0.634 + 0.00034 · S	1/(1/3,77 + S/3400)
	BEB	56.23 + 0.042 · S	0.624 + 0.00034 · S	1/(1/3,17 + S/3400)
	MCECM	87.66 + 0.042 · S	1.124 + 0.00034 · S	1/(1/4,09 + S/3400)
	MFEFM	176.8 + 0.042 · S	3.213 + 0.00034 · S	1/(1/4,09 + S/3400)
318-6	NEN	72.12 + 0.059 · S	0.979 + 0.0005 · S	1/(1/5,13 + S/5040)
	BEB	69.81 + 0.059 · S	0.922 + 0.0005 · S	1/(1/4,29 + S/5040)
	MCECM	121.4 + 0.059 · S	1.89 + 0.0005 · S	1/(1/5,72 + S/5040)
	MFEFM	203.7 + 0.059 · S	4.214 + 0.0005 · S	1/(1/5,72 + S/5040)
343-6	NEN	89.26 + 0.075 · S	1.394 + 0.00081 · S	1/(1/5,26 + S/8178)
	BEB	87.3 + 0.075 · S	1.322 + 0.00081 · S	1/(1/4,55 + S/8178)
	MCECM	145.8 + 0.075 · S	2.639 + 0.00081 · S	1/(1/5,62 + S/8178)
	MFEFM	261.5 + 0.075 · S	6.626 + 0.00081 · S	1/(1/5,62 + S/8178)

Variant with H spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
174-6	NHN	8.79 + 0.02 · S	0.036 + 0.000065 · S	1/(1/0,55 + S/652)
	-	-	-	-
	MCHCM	15.46 + 0.02 · S	0.073 + 0.000065 · S	1/(1/0,57 + S/652)
	MFHFM	22.95 + 0.02 · S	0.139 + 0.000065 · S	1/(1/0,57 + S/652)
184-6	NHN	12.36 + 0.023 · S	0.059 + 0.000083 · S	1/(1/0,89 + S/839)
	-	-	-	-
	MCHCM	21.18 + 0.023 · S	0.074 + 0.000083 · S	1/(1/0,95 + S/839)
	MFHFM	34.65 + 0.023 · S	0.259 + 0.000083 · S	1/(1/0,95 + S/839)
203-6	NHN	16.56 + 0.027 · S	0.093 + 0.0001 · S	1/(1/1,23 + S/1049)
	-	-	-	-
	MCHCM	27.42 + 0.027 · S	0.174 + 0.0001 · S	1/(1/1,33 + S/1049)
	MFHFM	46.52 + 0.027 · S	0.403 + 0.0001 · S	1/(1/1,33 + S/1049)
217-6	NHN	18.96 + 0.03 · S	0.123 + 0.00014 · S	1/(1/1,52 + S/1413)
	-	-	-	-
	MCHCM	33.11 + 0.03 · S	0.245 + 0.00014 · S	1/(1/1,63 + S/1413)
	MFHFM	56.18 + 0.03 · S	0.562 + 0.00014 · S	1/(1/1,63 + S/1413)
251-6	NHN	29.54 + 0.042 · S	0.253 + 0.00025 · S	1/(1/2,05 + S/2505)
	-	-	-	-
	MCHCM	53 + 0.042 · S	0.516 + 0.00025 · S	1/(1/2,18 + S/2505)
	MFHFM	97.57 + 0.042 · S	1.374 + 0.00025 · S	1/(1/2,18 + S/2505)
268-6	NHN	41.38 + 0.043 · S	0.41 + 0.00028 · S	1/(1/2,52 + S/2803)
	-	-	-	-
	MCHCM	68.56 + 0.043 · S	0.765 + 0.00028 · S	1/(1/2,69 + S/2803)
	MFHFM	126.3 + 0.043 · S	2.035 + 0.00028 · S	1/(1/2,69 + S/2803)
291-6	NHN	51.32 + 0.056 · S	0.598 + 0.00046 · S	1/(1/3,48 + S/4627)
	-	-	-	-
	MCHCM	82.87 + 0.056 · S	1.08 + 0.00046 · S	1/(1/3,67 + S/4627)
	MFHFM	171.4 + 0.056 · S	3.163 + 0.00046 · S	1/(1/3,67 + S/4627)
318-6	NHN	67.86 + 0.074 · S	0.936 + 0.00065 · S	1/(1/4,81 + S/6527)
	-	-	-	-
	MCHCM	115.6 + 0.074 · S	1.832 + 0.00065 · S	1/(1/5,2 + S/6527)
	MFHFM	198 + 0.074 · S	4.157 + 0.00065 · S	1/(1/5,2 + S/6527)
343-6	NHN	84.41 + 0.091 · S	1.332 + 0.001 · S	1/(1/5,07 + S/10323)
	-	-	-	-
	MCHCM	139.3 + 0.091 · S	2.556 + 0.001 · S	1/(1/5,33 + S/10323)
	MFHFM	255 + 0.091 · S	6.542 + 0.001 · S	1/(1/5,33 + S/10323)

LENGTH-DEPENDENT SPECIFICATIONS

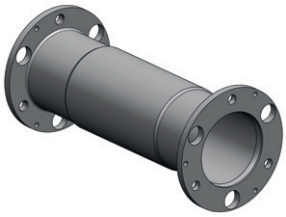
of types NEN/ NHN, BEB, MCECM/MCHCM and MFEFM/MFHFM

Variant with E spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
219-8	NEN	28.17 + 0.027 · S	0.177 + 0.000089 · S	1/(1/3,98 + S/889)
	MCECM	44.48 + 0.027 · S	0.338 + 0.000089 · S	1/(1/6,11 + S/889)
	MFEFM	71.89 + 0.027 · S	0.703 + 0.000089 · S	1/(1/6,11 + S/889)
241-8	NEN	36.79 + 0.032 · S	0.276 + 0.00013 · S	1/(1/4,69 + S/1264)
	MCECM	61.04 + 0.032 · S	0.56 + 0.00013 · S	1/(1/6,74 + S/1264)
	MFEFM	91.45 + 0.032 · S	1.074 + 0.00013 · S	1/(1/6,74 + S/1264)
262-8	NEN	46.53 + 0.04 · S	0.414 + 0.00019 · S	1/(1/5,4 + S/1884)
	MCECM	78.23 + 0.04 · S	0.846 + 0.00019 · S	1/(1/7,22 + S/1884)
	MFEFM	120.1 + 0.04 · S	1.692 + 0.00019 · S	1/(1/7,22 + S/1884)
285-8	NEN	61.59 + 0.051 · S	0.656 + 0.00028 · S	1/(1/7,04 + S/2836)
	MCECM	100.8 + 0.051 · S	1.315 + 0.00028 · S	1/(1/9,31 + S/2836)
	MFEFM	155 + 0.051 · S	2.552 + 0.00028 · S	1/(1/9,31 + S/2836)
302-8	NEN	78.21 + 0.062 · S	0.948 + 0.00039 · S	1/(1/9,87 + S/3948)
	MCECM	122.3 + 0.062 · S	1.774 + 0.00039 · S	1/(1/13,4 + S/3948)
	MFEFM	182 + 0.062 · S	3.359 + 0.00039 · S	1/(1/13,4 + S/3948)
321-8	NEN	96.07 + 0.066 · S	1.317 + 0.0005 · S	1/(1/13,9 + S/5053)
	MCECM	150 + 0.066 · S	2.469 + 0.0005 · S	1/(1/20,1 + S/5053)
	MFEFM	216.6 + 0.066 · S	4.48 + 0.0005 · S	1/(1/20,1 + S/5053)
354-8	NEN	129.1 + 0.079 · S	2.163 + 0.00079 · S	1/(1/18,2 + S/7977)
	MCECM	191.4 + 0.079 · S	3.866 + 0.00079 · S	1/(1/24,7 + S/7977)
	MFEFM	286.5 + 0.079 · S	7.246 + 0.00079 · S	1/(1/24,7 + S/7977)
387-8	NEN	169.6 + 0.093 · S	3.414 + 0.0012 · S	1/(1/25,3 + S/11742)
	MCECM	242.5 + 0.093 · S	5.88 + 0.0012 · S	1/(1/31,5 + S/11742)
	MFEFM	351.7 + 0.093 · S	10.62 + 0.0012 · S	1/(1/31,5 + S/11742)
411-8	NEN	201.9 + 0.113 · S	4.565 + 0.0015 · S	1/(1/29,4 + S/15183)
	MCECM	287.1 + 0.113 · S	7.821 + 0.0015 · S	1/(1/36 + S/15183)
	MFEFM	415.8 + 0.113 · S	14.1 + 0.0015 · S	1/(1/36 + S/15183)
447-8	NEN	260.7 + 0.129 · S	6.985 + 0.0021 · S	1/(1/38 + S/21062)
	MCECM	367.1 + 0.129 · S	11.74 + 0.0021 · S	1/(1/46,5 + S/21062)
	MFEFM	534.1 + 0.129 · S	21.22 + 0.0021 · S	1/(1/46,5 + S/21062)
495-8	NEN	354.4 + 0.157 · S	11.61 + 0.0033 · S	1/(1/46,4 + S/33418)
	MCECM	497.5 + 0.157 · S	19.74 + 0.0033 · S	1/(1/54,5 + S/33418)
	MFEFM	693.8 + 0.157 · S	33.95 + 0.0033 · S	1/(1/54,5 + S/33418)
546-8	NEN	483.3 + 0.212 · S	19.43 + 0.0056 · S	1/(1/59 + S/56448)
	MCECM	663.8 + 0.212 · S	32.27 + 0.0056 · S	1/(1/67 + S/56448)
	MFEFM	923.1 + 0.212 · S	55.39 + 0.0056 · S	1/(1/67 + S/56448)
587-8	NEN	600.7 + 0.279 · S	27.94 + 0.0076 · S	1/(1/67,3 + S/76570)
	MCECM	821.9 + 0.279 · S	45.85 + 0.0076 · S	1/(1/75,3 + S/76570)
	MFEFM	1147 + 0.279 · S	79.25 + 0.0076 · S	1/(1/75,3 + S/76570)
631-8	NEN	731.9 + 0.302 · S	39.04 + 0.01 · S	1/(1/79,6 + S/102143)
	MCECM	1006 + 0.302 · S	64.52 + 0.01 · S	1/(1/88,2 + S/102143)
	MFEFM	1441 + 0.302 · S	114.7 + 0.01 · S	1/(1/88,2 + S/102143)

Variant with H spacer



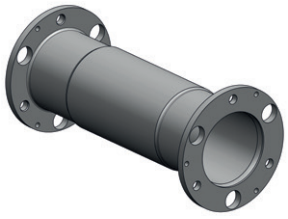
Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
219-8	NHN	26.88 + 0.035 · S	0.172 + 0.00012 · S	1/(1/3,35 + S/1176)
	MCHCM	42.52 + 0.035 · S	0.33 + 0.00012 · S	1/(1/4,3 + S/1176)
	MFHFM	69.94 + 0.035 · S	0.695 + 0.00012 · S	1/(1/4,3 + S/1176)
241-8	NHN	34.62 + 0.044 · S	0.266 + 0.00018 · S	1/(1/3,88 + S/1760)
	MCHCM	57.91 + 0.044 · S	0.546 + 0.00018 · S	1/(1/4,73 + S/1760)
	MFHFM	88.32 + 0.044 · S	1.06 + 0.00018 · S	1/(1/4,73 + S/1760)
262-8	NHN	44.21 + 0.054 · S	0.402 + 0.00025 · S	1/(1/4,72 + S/2549)
	MCHCM	74.72 + 0.054 · S	0.828 + 0.00025 · S	1/(1/5,65 + S/2549)
	MFHFM	116.5 + 0.054 · S	1.673 + 0.00025 · S	1/(1/5,65 + S/2549)
285-8	NHN	59.68 + 0.064 · S	0.643 + 0.00035 · S	1/(1/6,46 + S/3534)
	MCHCM	97.63 + 0.064 · S	1.296 + 0.00035 · S	1/(1/7,87 + S/3534)
	MFHFM	151.8 + 0.064 · S	2.533 + 0.00035 · S	1/(1/7,87 + S/3534)
302-8	NHN	75.6 + 0.078 · S	0.928 + 0.00049 · S	1/(1/8,95 + S/4945)
	MCHCM	118.1 + 0.078 · S	1.744 + 0.00049 · S	1/(1/11,1 + S/4945)
	MFHFM	177.7 + 0.078 · S	3.329 + 0.00049 · S	1/(1/11,1 + S/4945)
321-8	NHN	92.41 + 0.086 · S	1.285 + 0.00065 · S	1/(1/12,2 + S/6577)
	MCHCM	144.2 + 0.086 · S	2.419 + 0.00065 · S	1/(1/15,4 + S/6577)
	MFHFM	210.8 + 0.086 · S	4.43 + 0.00065 · S	1/(1/15,4 + S/6577)
354-8	NHN	126 + 0.098 · S	2.129 + 0.00098 · S	1/(1/16,7 + S/9874)
	MCHCM	186 + 0.098 · S	3.809 + 0.00098 · S	1/(1/20,8 + S/9874)
	MFHFM	281.2 + 0.098 · S	7.189 + 0.00098 · S	1/(1/20,8 + S/9874)
387-8	NHN	164.5 + 0.122 · S	3.343 + 0.0015 · S	1/(1/22,8 + S/15253)
	MCHCM	234.9 + 0.122 · S	5.777 + 0.0015 · S	1/(1/26,4 + S/15253)
	MFHFM	344.1 + 0.122 · S	10.51 + 0.0015 · S	1/(1/26,4 + S/15253)
411-8	NHN	196.8 + 0.141 · S	4.49 + 0.0019 · S	1/(1/27,1 + S/18813)
	MCHCM	279.5 + 0.141 · S	7.712 + 0.0019 · S	1/(1/31,3 + S/18813)
	MFHFM	408.1 + 0.141 · S	13.99 + 0.0019 · S	1/(1/31,3 + S/18813)
447-8	NHN	255.1 + 0.157 · S	6.883 + 0.0026 · S	1/(1/35,1 + S/25615)
	MCHCM	358.7 + 0.157 · S	11.59 + 0.0026 · S	1/(1/40,9 + S/25615)
	MFHFM	525.6 + 0.157 · S	21.07 + 0.0026 · S	1/(1/40,9 + S/25615)
495-8	NHN	345 + 0.2 · S	11.39 + 0.0042 · S	1/(1/43 + S/42683)
	MCHCM	483.5 + 0.2 · S	19.42 + 0.0042 · S	1/(1/48,2 + S/42683)
	MFHFM	679.8 + 0.2 · S	33.62 + 0.0042 · S	1/(1/48,2 + S/42683)
546-8	NHN	474 + 0.255 · S	19.16 + 0.0068 · S	1/(1/56,3 + S/67807)
	MCHCM	649.6 + 0.255 · S	31.86 + 0.0068 · S	1/(1/62,2 + S/67807)
	MFHFM	908.9 + 0.255 · S	54.99 + 0.0068 · S	1/(1/62,2 + S/67807)
587-8	NHN	590 + 0.324 · S	27.6 + 0.0088 · S	1/(1/65 + S/88708)
	MCHCM	806 + 0.324 · S	45.37 + 0.0088 · S	1/(1/71,2 + S/88708)
	MFHFM	1131 + 0.324 · S	78.77 + 0.0088 · S	1/(1/71,2 + S/88708)
631-8	NHN	715.1 + 0.361 · S	38.39 + 0.012 · S	1/(1/76,3 + S/123294)
	MCHCM	981.7 + 0.361 · S	63.61 + 0.012 · S	1/(1/82,6 + S/123294)
	MFHFM	1417 + 0.361 · S	113.8 + 0.012 · S	1/(1/82,6 + S/123294)

Variant with E spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
495-10	NEN	355.1 + 0.157 · S	11.7 + 0.0033 · S	1/(1/113 + S/33418)
	MFEFM	693 + 0.157 · S	33.97 + 0.0033 · S	1/(1/176 + S/33418)
546-10	NEN	483.7 + 0.212 · S	19.56 + 0.0056 · S	1/(1/138 + S/56448)
	MFEFM	921.8 + 0.212 · S	55.43 + 0.0056 · S	1/(1/190 + S/56448)
587-10	NEN	600.5 + 0.279 · S	28.09 + 0.0076 · S	1/(1/165 + S/76570)
	MFEFM	1145 + 0.279 · S	79.29 + 0.0076 · S	1/(1/223 + S/76570)
631-10	NEN	731.3 + 0.302 · S	39.23 + 0.01 · S	1/(1/187 + S/102143)
	MFEFM	1438 + 0.302 · S	114.8 + 0.01 · S	1/(1/241 + S/102143)
694-10	NEN	1057 + 0.39 · S	69.77 + 0.015 · S	1/(1/293 + S/154224)
	MFEFM	1950 + 0.39 · S	188.1 + 0.015 · S	1/(1/412 + S/154224)
734-10	NEN	1265 + 0.45 · S	94.03 + 0.02 · S	1/(1/373 + S/196935)
	MFEFM	2314 + 0.45 · S	248.7 + 0.02 · S	1/(1/542 + S/196935)
790-10	NEN	1587 + 0.53 · S	136.9 + 0.027 · S	1/(1/467 + S/270335)
	MFEFM	2919 + 0.53 · S	363.4 + 0.027 · S	1/(1/677 + S/270335)
887-10	NEN	2335 + 0.687 · S	256 + 0.042 · S	1/(1/644 + S/418343)
	MFEFM	4197 + 0.687 · S	665.8 + 0.042 · S	1/(1/944 + S/418343)
988-10	NEN	3264 + 0.975 · S	447.8 + 0.067 · S	1/(1/856 + S/675886)
	MFEFM	5736 + 0.975 · S	1129 + 0.067 · S	1/(1/1229 + S/675886)

Variant with H spacer



Size DA	Type	*m* kg	*J* kgm²	*C* MNm/rad
495-10	NHN	345.7 + 0.2 · S	11.47 + 0.0042 · S	1/(1/94,7 + S/42683)
	MFHFM	678.9 + 0.2 · S	33.65 + 0.0042 · S	1/(1/124 + S/42683)
546-10	NHN	474.4 + 0.255 · S	19.28 + 0.0068 · S	1/(1/124 + S/67807)
	MFHFM	907.5 + 0.255 · S	55.03 + 0.0068 · S	1/(1/156 + S/67807)
587-10	NHN	589.9 + 0.324 · S	27.76 + 0.0088 · S	1/(1/152 + S/88708)
	MFHFM	1129 + 0.324 · S	78.81 + 0.0088 · S	1/(1/191 + S/88708)
631-10	NHN	714.5 + 0.361 · S	38.57 + 0.012 · S	1/(1/169 + S/123294)
	MFHFM	1414 + 0.361 · S	113.9 + 0.012 · S	1/(1/204 + S/123294)
694-10	NHN	1028 + 0.487 · S	68.47 + 0.019 · S	1/(1/257 + S/193881)
	MFHFM	1906 + 0.487 · S	186.2 + 0.019 · S	1/(1/322 + S/193881)
734-10	NHN	1229 + 0.563 · S	92.27 + 0.025 · S	1/(1/325 + S/247708)
	MFHFM	2260 + 0.563 · S	246.1 + 0.025 · S	1/(1/414 + S/247708)
790-10	NHN	1544 + 0.663 · S	134.4 + 0.034 · S	1/(1/409 + S/340076)
	MFHFM	2852 + 0.663 · S	359.6 + 0.034 · S	1/(1/522 + S/340076)
887-10	NHN	2278 + 0.844 · S	252 + 0.051 · S	1/(1/568 + S/517255)
	MFHFM	4107 + 0.844 · S	659.8 + 0.051 · S	1/(1/734 + S/517255)
988-10	NHN	3192 + 1.154 · S	441.8 + 0.08 · S	1/(1/774 + S/807126)
	MFHFM	5620 + 1.154 · S	1120 + 0.08 · S	1/(1/1006 + S/807126)

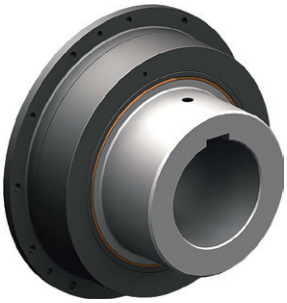
OTHER DESIGN OPTIONS



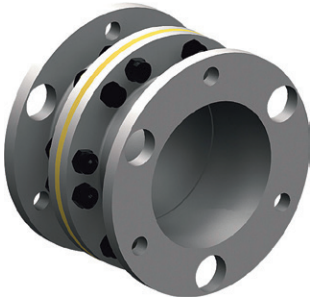
Flange version for adaptation to a customer flange



Intermediate spacer as a torsion shaft
for reducing the torsional stiffness



Slipping flanges for overload protection
against brief high-frequency torque shock loads



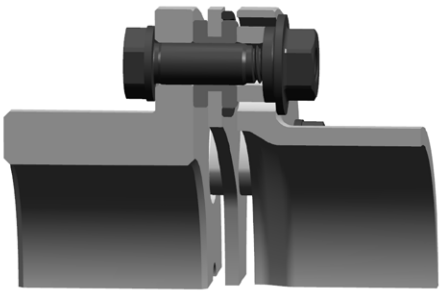
Version for avoiding leakage currents
between the connected units



Slipping hubs for overload protection
against brief high-frequency torque shock loads



Vertical support for avoiding excessive axial loading of the plate
packs by the weight of the intermediate spacer

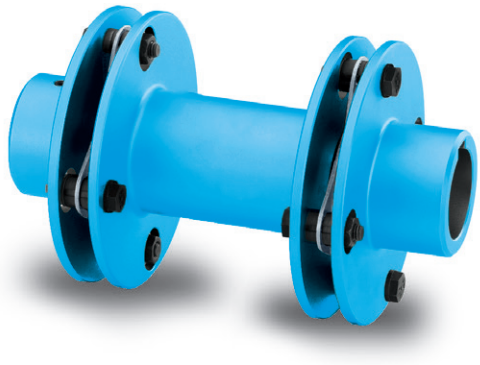


Axial backlash limiter



Brake disk/brake drum

GENERAL



Coupling suitable for use in potentially explosive atmospheres.
Complies with the current ATEX Directive for:

CE II 2G Ex h IIC T6 ... T2 Gb X

II 2D Ex h IIIC T85 °C ... 250 °C Db X

I M2 Ex h Mb X

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:

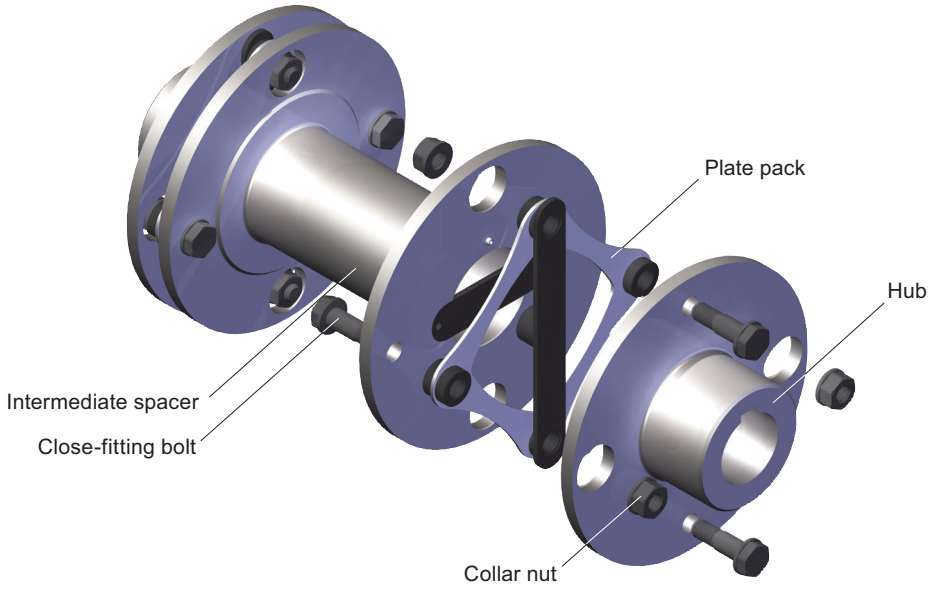
- Paper-making machines
- Wind power systems
- Traction drives

GENERAL

Design and configurations

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.



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

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

Type	Description
NHN	Variant with unmachined intermediate spacer, with variable spacer length

The article number can be obtained with the help of the Configurator. The coupling can be selected in a product configurator and specified using selection menus.

The Configurator is available under **flender.com**

The coupling can be selected via "Technical selection" (technical selection) or via "Direct selection" (via article no.).

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 specifications

Power ratings

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 $+\Delta K_a$ Tension mm	$-\Delta K_a$ Compression mm	$\pm\Delta K_w$	$\pm\Delta K_r$ mm	Torsional stiffness C_{Tdyn} MNm/rad
									for S = 1000 mm	for S = 1000 mm
101-4	92	140	230	37	10400	2.4	2		51.8	0.006
133-4	225	340	560	90	7850	3.3	2.2		51.7	0.012
167-4	450	680	1130	180	6250	4.2	2.2		51.6	0.028
196-4	800	1200	2000	320	5350	5.1	2.2		51.6	0.068
230-4	1250	1880	3200	500	4550	5.7	2.2		51.6	0.108
260-4	2000	3000	5000	800	4000	6.6	2.2		51.5	0.174
292-4	2700	4100	6800	1080	3550	7.5	2.8		51.4	0.275
324-4	3850	5800	9700	1540	3200	8.4	2.8		51.4	0.451
355-4	5250	7900	13200	2100	2950	9	2.8		51.4	0.622
389-4	6650	10000	16700	2660	2700	10	2.8	3.0 °	51.4	0.657
439-4	9850	15000	25000	3940	2350	11.1	3		51.3	1.08
499-4	13300	20000	34000	5320	2100	12.4	4.8		50.8	1.32
547-4	19000	29000	48000	7600	1900	13.4	4.8		50.7	2.03
600-4	25150	38000	63000	10060	1750	14.6	4.8		50.6	2.73
647-4	32500	49000	82000	13000	1600	16	4.8		50.6	3.93
695-6	41000	62000	103000	16400	1500	17	4.8		50.7	10.1
756-6	52000	78000	130000	20800	1350	18	4.8		50.6	14
817-6	65000	98000	163000	26000	1250	20	4.8		50.5	16.9
880-6	80000	120000	200000	32000	1150	22	4.8		50.5	21.2

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: $\Delta K_r = (S - S1) \cdot \tan(\Delta K_w)$

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).

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.
- T_{KW} for medium torque T_N = 0 Nm.
- If T_N and T_{KW} occur at the same time, the manufacturer must be consulted.

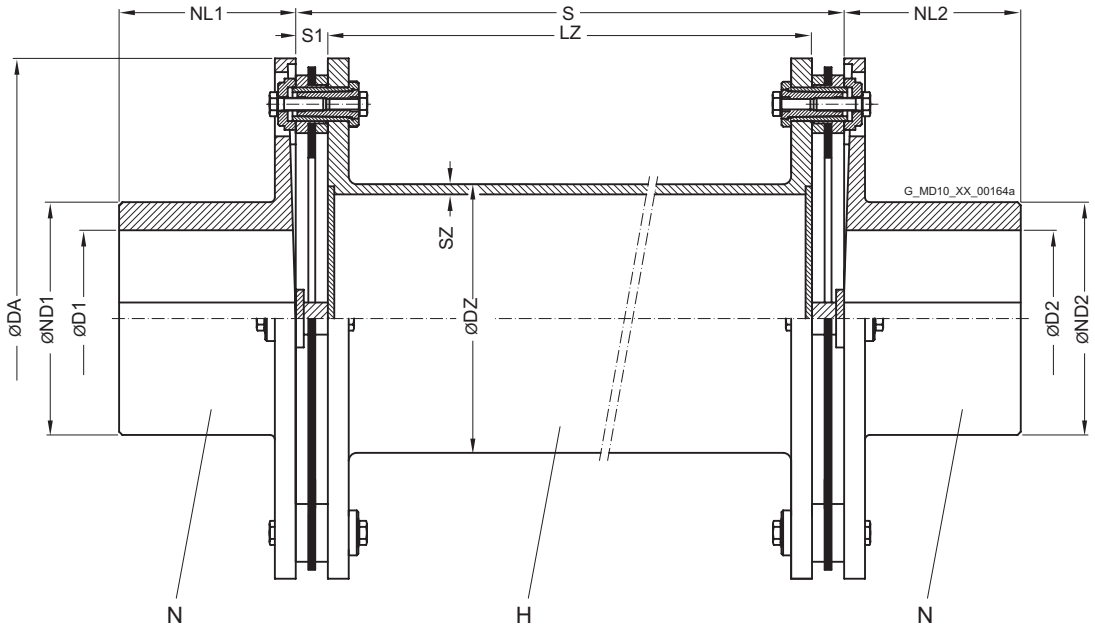
GENERAL

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	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	6	9	2.8	2.8	2.8
389-4	3.3	6.7	10	2.8	2.8	2.8
439-4	3.7	7.4	11.1	3	3	3
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	4.8	4.8	4.8
695-6	5.6	11.4	17	4.8	4.8	4.8
756-6	6	12.1	18	4.8	4.8	4.8
817-6	6.7	13.4	20	4.8	4.8	4.8
880-6	7.3	14.8	22	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 –**).

TYPE NHN

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 DA mm	Rated torque T_{KN} Nm	Maximum speed n_{Kmax} rpm	Dimensions in mm D1, D2 Keyway DIN 6885 max.	ND1/ ND2	DZ	SZ	NL1/ NL2	S1	LZ	Shaft distance S	Mass moment of inertia J kgm²	↗ Article no. [1]	Weight m kg
101-4	**92**	10400	**32**	45	45	2.9	32	11	43	65	0.002	2LC0530-0AD	1.5
133-4	**225**	7850	**45**	60	48	2.9	45	13	59	85	0.008	2LC0530-1AD	3.9
167-4	**450**	6250	**50**	70	64	4	50	15	70	100	0.022	2LC0530-2AD	7.1
196-4	**800**	5350	**60**	80	89	4	60	16	83	115	0.056	2LC0530-3AD	12.1
230-4	**1250**	4550	**75**	100	102	5	75	16	83	115	0.109	2LC0530-4AD	17.9
260-4	**2000**	4000	**90**	120	133	5	90	17	96	130	0.189	2LC0530-5AD	24.6
292-4	**2700**	3550	**100**	130	152	5	100	19	92	130	0.359	2LC0530-6AD	35.1
324-4	**3850**	3200	**110**	145	168	6.3	110	20	120	160	0.52	2LC0530-7AD	43.7
355-4	**5250**	2950	**120**	160	178	7.1	120	20	125	165	0.856	2LC0530-8AD	59.8
389-4	**6650**	2700	**130**	175	194	7.1	130	20	130	170	1.09	2LC0531-0AD	68.9
439-4	**9850**	2350	**150**	200	219	7.1	150	22	166	210	2.23	2LC0531-1AD	106
499-4	**13300**	2100	**165**	220	245	7.1	165	30	170	230	3.81	2LC0531-2AD	142
547-4	**19000**	1900	**190**	250	299	8.8	190	32	176	240	6.24	2LC0531-3AD	191
600-4	**25150**	1750	**205**	275	324	8.8	205	34	182	250	10.2	2LC0531-4AD	257
647-4	**32500**	1600	**225**	300	343	10	225	35	220	290	16.5	2LC0531-5AD	348
695-6	**41000**	1500	**240**	325	368	10	240	33	224	290	23.7	2LC0540-0AD	441
756-6	**52000**	1350	**255**	340	394	12.5	255	34	232	300	33.2	2LC0540-1AD	525
817-6	**65000**	1250	**270**	360	406	12.5	270	36	238	310	49.1	2LC0540-2AD	659
880-6	**80000**	1150	**300**	400	419	12.5	300	37	256	330	72.8	2LC0540-3AD	849

Configurable variants [1]

- ØD1 Without finished bore / With finished bore
- ØD2 Without finished bore / With finished bore

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

TYPE NHN

Permitted shaft distance S of type NHN relative to speed

Size DA mm	Speed n_N 500 rpm	600	700	800	900	1000	1200	1400	1500	2000	2500	3000	4000
	Permitted shaft distance S in 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		Outside the permitted speed range		
647-4	7980	7287	6750	6316	5957	5653	5163	4783	4622				
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							

Notes

- The permitted length of the intermediate spacer depends on the maximum operating speed of the coupling. In the case of individual order of the intermediate spacer, the length (LZ) must be specified.
- Mass moments of inertia and weights apply to the entire NHN coupling with maximum bores D1/D2 and a shaft distance S = S min.

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

Article no.: 2LC0530-1AD99-0AZ0-Z L0W+M1A+Q0Y+M13
Plain text to Q0Y: S = 1000 mm

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

SPARE AND WEAR PARTS

Plate pack, ARW-4/-6 series

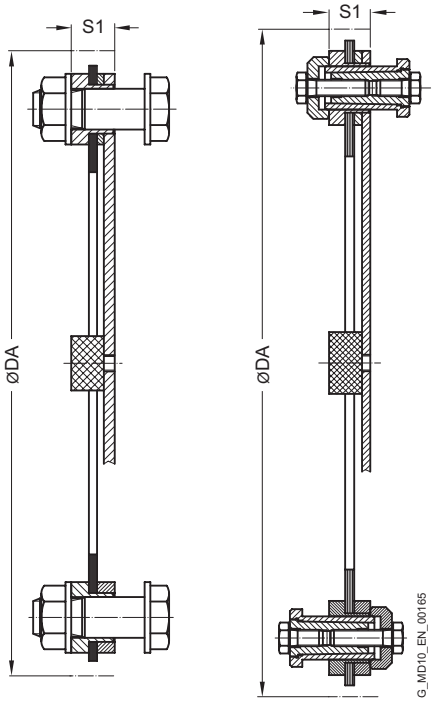


Figure 1

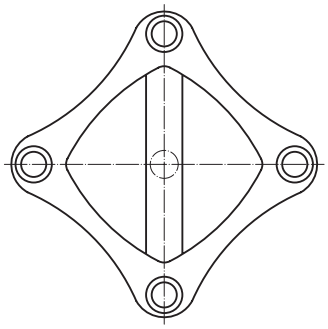
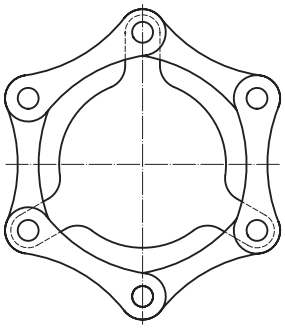


Figure 2



Size DA mm	Dimensions S1 mm	Mass moment of inertia *J* kgm²	Article No.	Weight *m* 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
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	1.225	2LC0540-1AB00-0AA0	20.2
817-6	36	1.7497	2LC0540-2AB00-0AA0	23.9
880-6	37	2.546	2LC0540-3AB00-0AA0	28.9

Notes

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

Ordering example

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

Article no.: 2LC0530-1AB00-0AA0

GENERAL



Coupling suitable for use in potentially explosive atmospheres.
Complies with the current ATEX Directive for:

CE II 2G Ex h IIC T6 ... T2 Gb X

II 2D Ex h IIIC T85 °C ... 250 °C Db X

I M2 Ex h Mb X

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 dismounted and fitted without moving the connected units.

Application

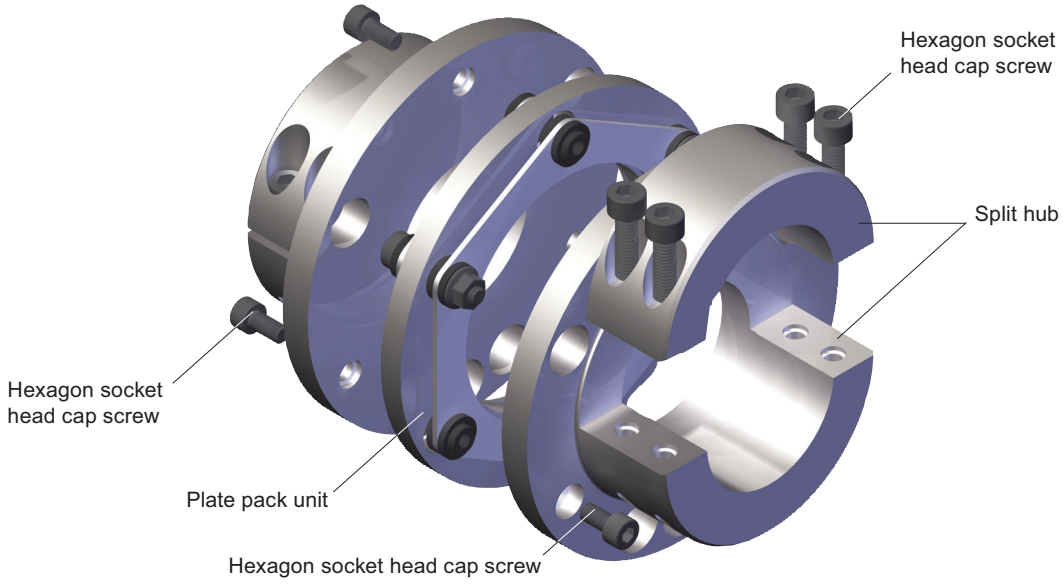
ARPEX couplings of the ARF-6 series are designed for minimum fitting spaces without having to sacrifice the advantages of the two-joint coupling. It is thus possible to compensate for both axial and angular as well as radial misalignment. By using half-shell clamping hubs, the coupling can be radially freely dismounted. 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 and configurations

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

Variants of the ARF coupling

Type	Description
GG	Variant with 2 standard clamping hubs
GJ	Variant with 1 jumbo clamping hub for large bore diameters

The article number can be obtained with the help of the Configurator. The coupling can be selected in a product configurator and specified using selection menus.

The Configurator is available under **flender.com**

The coupling can be selected via "Technical selection" (technical selection) or via "Direct selection" (via article no.).

GENERAL

Technical specifications

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 $\pm\Delta K_a$ mm	$\pm\Delta K_w$	$\pm\Delta K_r$ mm	Torsional stiffness C_T MNm/rad
84-6	120	220	330	55	12500	1.1	0.7 °	0.16	0.07
111-6	190	350	520	90	9450	1.8		0.16	0.13
132-6	350	650	950	160	7950	2.02		0.2	0.2
147-6	500	900	1350	230	7100	2.4		0.2	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	3.7		0.45	1.55
267-6	6100	11000	16500	2800	3900	3.84		0.46	1.8

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.
- T_{KW} for medium torque T_N = 0 Nm.
- If T_N and T_{KW} occur at the same time, the manufacturer must be consulted.

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.

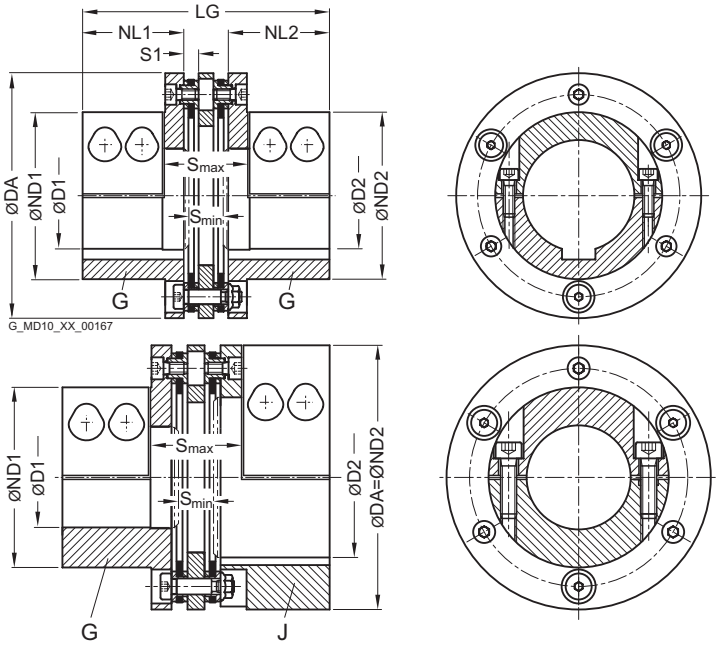
Permitted shaft misalignments

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	1.1	0.94	0.79	0.63	0.47	0.31	0.16	0
111-6	1.8	1.54	1.29	1.03	0.77	0.51	0.26	0
132-6	2.02	1.73	1.44	1.15	0.87	0.58	0.29	0
147-6	2.4	2.06	1.71	1.37	1.03	0.69	0.34	0
171-6	2.74	2.35	1.96	1.57	1.17	0.78	0.39	0
182-6	2.86	2.45	2.04	1.63	1.23	0.82	0.41	0
202-6	3.06	2.62	2.19	1.75	1.31	0.87	0.44	0
218-6	3.14	2.69	2.24	1.79	1.35	0.9	0.45	0
252-6	3.7	3.17	2.64	2.11	1.59	1.06	0.53	0
267-6	3.84	3.29	2.74	2.19	1.65	1.1	0.55	0

TYPES GG AND GJ

Radially freely dismountable, torsionally rigid coupling, available as types GG and GJ.

Complete dismounting without moving the units with extremely short shaft distances.



Size	Rated torque	Maximum speed	Type	Dimensions in mm										Mass moment of inertia	↗ Article no. [1]	Weight
DA	T_{KN}	n_{Kmax}		Keyway DIN 6885 D1 max.	D2 max.		ND1	ND2	NL1/ NL2	S1	Shaft distance S		LG	J		m
mm	Nm	rpm		Parallel key/ Clamping seat	Parallel key	Clamping seat					min	max.		kgm²		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	0.011	2LC0420-2AB99-0AA0	5.7
			GJ		75	80		132						0.0177	2LC0420-2AC99-0AA0	7
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

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

TYPES GG AND GJ

Notes

- The shaft tolerance must be specified in the order.
  To specify, "**-Z**" must be added to the article no. and the order codes "**Y26**" and "**Y27**" with plain text specification of the shaft tolerance for D1 and D2 must be added as well.
- 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 **Page 6/43**.
- 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.

Article no.: 2LC0420-2AB99-0AA0-Z L1A+M1C+L45+Y26+Y27
Plain text to Y26: h6
Plain text to Y27: k6

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

↗ For online configuration on **flender.com**, click on the item no.

SPARE AND WEAR PARTS

Plate pack, ARF-6 series

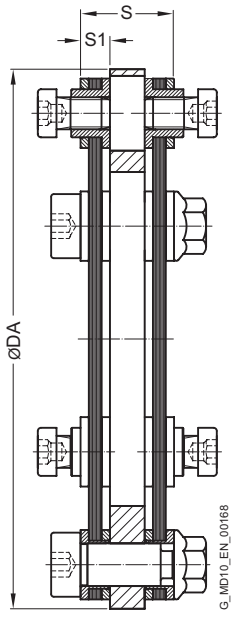
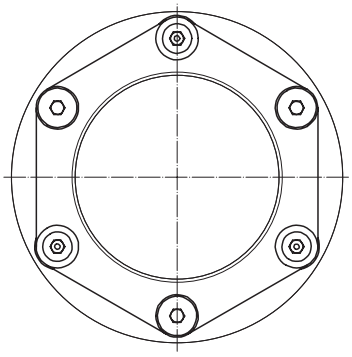


Figure 1

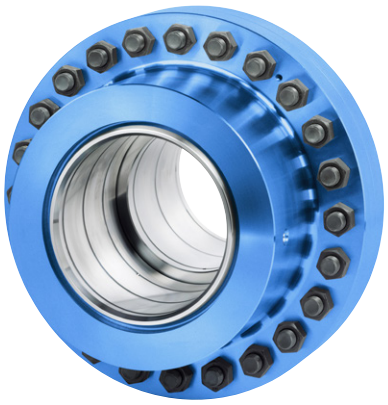


Size DA mm	Type	Dimensions S mm	 S1 mm	Mass moment of inertia *J* kgm²	Article No.	Weight *m* kg
84-6	GG GJ	19	6	0.0003	2LC0420-0AE00-0AA0 2LC0420-0AH00-0AA0	0.3
111-6	GG GJ	19	6	0.0009	2LC0420-1AE00-0AA0 2LC0420-1AH00-0AA0	0.46
132-6	GG GJ	24	8	0.0026	2LC0420-2AE00-0AA0 2LC0420-2AH00-0AA0	0.9
147-6	GG GJ	24	8	0.0038	2LC0420-3AE00-0AA0 2LC0420-3AH00-0AA0	1.07
171-6	GG GJ	29	9	0.0097	2LC0420-4AE00-0AA0 2LC0420-4AH00-0AA0	1.96
182-6	GG GJ	35	11	0.0143	2LC0420-5AE00-0AA0 2LC0420-5AH00-0AA0	2.58
202-6	GG GJ	35	11	0.024	2LC0420-6AE00-0AA0 2LC0420-6AH00-0AA0	3.53
218-6	GG GJ	44	14	0.0383	2LC0420-7AE00-0AA0 2LC0420-7AH00-0AA0	4.89
252-6	GG GJ	54	17	0.0812	2LC0420-8AE00-0AA0 2LC0420-8AH00-0AA0	7.9
267-6	GG GJ	55	17	0.1152	2LC0421-0AE00-0AA0 2LC0421-0AH00-0AA0	9.6

Note

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

RIGID COUPLINGS
SKZF FLANGE COUPLING SERIES



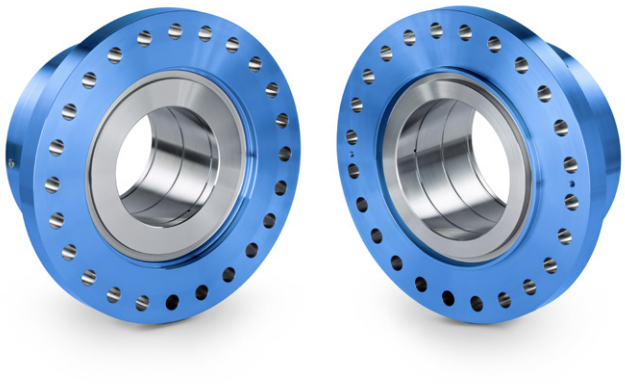
General	**16/2**
Benefits	16/2
Application	16/2
Design and configurations	16/2
Function	16/2
Type SKZF	**16/3**

16

FLANSCHKUPPLUNG SKZF

FLENDER

GENERAL



Benefits

The flange couplings connect two shaft ends torsionally rigid and precisely centrically. They are suitable for clockwise and anti-clockwise rotation.
They are not subject to wear and are maintenance-free.

Design and configurations

The flange couplings are characterized by a compact design. A coupling part is placed on each shaft end.
The two coupling parts are screwed together.

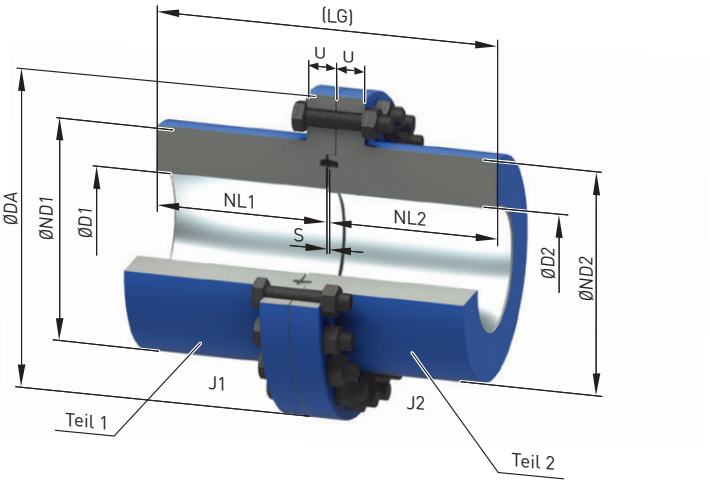
Application

The flange couplings are particularly suitable for heavily loaded shafts where shocks, alternating loads, and axial forces occur, or where large individual forces primarily subject the shafts to bending.

Function

The torque is transmitted via the shaft-hub connections, e.g. shrink fit (optionally with Bratt bushing) or keyway connection and the screw connection.

TYPE SKZF



Size	Rated torque	Permissible speed	Dimensions in mm								Mass moment of inertia	↗ Article no. [1]	Weight
	T_{KN} [2]	n_{max}	D1/D2		DA	ND1/ ND2	NL1/ NL2	S	U	LG	J_1/J_2		m
	Nm	rpm	min.	max.							kgm²		kg
290	24000	7200	–	130	290	190	160	4	25	324	0.24	2LC0640-0AA	52
360	42000	5800	–	150	360	230	160	4	30	324	0.60	2LC0640-1AA	88
400	60000	5200	–	170	400	260	190	4	38	384	1.15	2LC0640-2AA	135
430	82000	4800	–	190	430	290	220	4	38	444	1.75	2LC0640-3AA	180
470	115000	4400	–	200	470	310	220	4	42	444	2.55	2LC0640-4AA	215
490	135000	4200	–	220	490	330	240	4	42	484	3.25	2LC0640-5AA	250
530	180000	3900	–	245	530	370	280	4	48	564	5.5	2LC0640-6AA	350
580	240000	3600	–	270	580	410	320	4	55	644	9.5	2LC0640-7AA	490
620	320000	3300	–	290	620	440	320	4	55	644	12	2LC0640-8AA	560
660	400000	3100	–	310	660	470	370	4	60	744	18	2LC0641-0AA	730
700	490000	3000	–	330	700	500	370	4	60	744	22.5	2LC0641-1AA	820
740	580000	2800	–	350	740	530	420	4	65	844	31.5	2LC0641-2AA	1050
780	670000	2600	–	380	780	580	420	4	65	844	42.5	2LC0641-3AA	1200
820	770000	2500	–	400	820	600	460	4	70	924	54	2LC0641-4AA	1400
860	870000	2400	–	420	860	630	460	4	70	924	66	2LC0641-5AA	1550
900	980000	2300	–	440	900	660	510	4	80	1024	89	2LC0641-6AA	1900
940	1100000	2200	–	460	940	700	510	4	80	1024	110	2LC0641-7AA	2150
1000	1330000	2100	–	480	1000	730	560	4	90	1124	149	2LC0641-8AA	2600
1050	1600000	2000	–	520	1050	790	560	4	90	1124	195	2LC0642-0AA	3000

Configurable variants [1]

- ØD1 Without finished bore
  With finished bore
- ØD2 Without finished bore
  With finished bore

Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.

Ordering example

- Flange coupling SKZF, size 290
- Part 1: Bore D1 120 H6 mm, shrink fit for oil-hydraulic removal
- Part 2: Bore D2 130 H6 mm, shrink fit for oil-hydraulic removal

Article no.: 2LC0640-0AA99-0AA0-Z L1S+L22+L44+M1U+M22+M44

[1] To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

[2] The coupling torques cannot be transferred to the shaft-hub connection without restriction. Additional bending moments that occur can reduce the transferable torque. A corresponding design can be provided on request.

↗ For online configuration on **flender.com**, click on the item no.

APPENDIX

Fits	**A/2**
Fitting recommendations	A/2
Deviation table to DIN ISO 286	A/2
Cylindrical shaft ends	A/3
Central holes according to DIN 332 Part 2	A/3
Parallel key connections to DIN 6885-1	**A/4**
Related catalogs	**A/6**
Suitable gear solutions	**A/8**
The perfect coupling	**A/10**
Individual solutions	**A/12**
Flender Services	**A/16**

FITS

Fitting recommendations

For many applications, the fit assignment m6/H7 is especially suitable.

Description	Application	Shaft tolerance	Bore tolerance
Facile sliding fit	For steel or aluminum hubs	g6	H7
		h7	H7
		k6	F7
		m6	F7
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
	Only for steel hubs	h6	P7
	Preferred for N-ZAPEX and ARPEX coupling series	k6	M7
		m6	K7
		n6	J7
		p6	H7
		s6	F7
Shrink fit connection without parallel key	Only for steel hubs	u6	H6
	The permitted hub tension must be urgently checked.	v6	H6
		x6	H6

Deviation table to DIN ISO 286 for above-mentioned fits for bore diameters from 10 mm to 250 mm

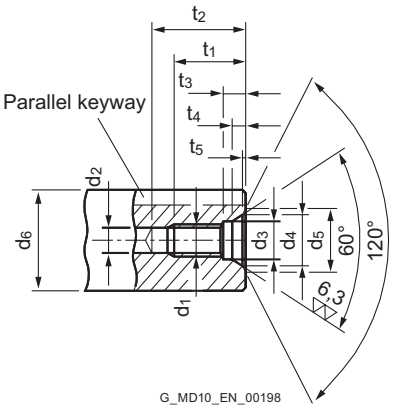
Bore diameter		Deviations in µm											
		Bore						Shaft					
above	up to	F7	H7	J7	K7	M7	P7	h6	j6	k6	m6	n6	p6
10	18	+34	+18	+10	+6	0	-11	0	+8	+12	+18	+23	+29
		+16	0	-8	-12	-18	-29	-11	-3	+1	+7	+12	+18
18	30	+41	+21	+12	+6	0	-14	0	+9	+15	+21	+28	+35
		+20	0	-9	-15	-21	-35	-13	-4	+2	+8	+15	+22
30	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

A

Cylindrical shaft ends, extract from DIN 748 Part 1 (long)

	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

Central holes according to DIN 332 Part 2



Form DS (with thread) DIN 332/2

Recommended diameter ranges d_6 [1]		DS form dimensions									
above	up to	d_1	d_2 [2]	d_3	d_4	d_5	t_1 +2	t_2 min.	t_3 +1	t_4 approx.	t_5 approx.
7	**10**	M3	2.5	3.2	5.3	5.8	9	12	2.6	1.8	0.2
10	**13**	M4	3.3	4.3	6.7	7.4	10	14	3.2	2.1	0.3
13	**16**	M5	4.2	5.3	8.1	8.8	12.5	17	4	2.4	0.3
16	**21**	M6	5	6.4	9.6	10.5	16	21	5	2.8	0.4
21	**24**	M8	6.8	8.4	12.2	13.2	19	25	6	3.3	0.4
24	**30**	M10	8.5	10.5	14.9	16.3	22	30	7.5	3.8	0.6
30	**38**	M12	10.2	13	18.1	19.8	28	37	9.5	4.4	0.7
38	**50**	M16	14	17	23	25.3	36	45	12	5.2	1.0
50	**85**	M20	17.5	21	28.4	31.3	42	53	15	6.4	1.3
85	**130**	M24	21	25	34.2	38	50	63	18	8	1.6
130	**225**	M30 [3]	26.5	31	40.2	44.6	60	77	22	8	1.9
225	**320**	M36 [3]	32	37	49.7	55	74	93	22	11	2.3
320	**500**	M42 [3]	37.5	43	60.3	66.6	84	105	26	15	2.7

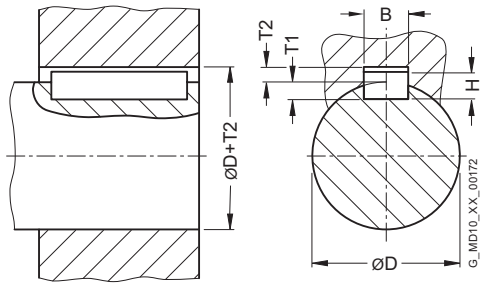
[1] Diameter refers to the finished workpiece

[2] Tap hole drill diameter according to DIN 336 Part 1

[3] Dimensions not acc. to DIN 332 Part 2

A

PARALLEL KEY CONNECTIONS TO DIN 6885-1



For moderate operating conditions, the hub keyway tolerance JS9 is recommended.

In harsh operating conditions or during reversing operation, the keyway width tolerance P9 must be preferred.

With two parallel keyways, the keyway width tolerance JS9 should be specified in order to simplify the assembly.

The shaft keyway width has to be specified with the tolerance N9.

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	
above D mm	up 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	-6
							-12.5	-31
10	12	4	4	2.5	1.8	+0.1	+15	-12
							-15	-42
12	17	5	5	3	2.3	+0.1	+15	-12
							-15	-42
17	22	6	6	3.5	2.8	+0.1	+15	-12
							-15	-42
22	30	8	7	4	3.3	+0.2	+18	-15
							-18	-51
30	38	10	8	5	3.3	+0.2	+18	-15
							-18	-51
38	44	12	8	5	3.3	+0.2	+21.5	-18
							-21.5	-61
44	50	14	9	5.5	3.8	+0.2	+21.5	-18
							-21.5	-61
50	58	16	10	6	4.3	+0.2	+21.5	-18
							-21.5	-61
58	65	18	11	7	4.4	+0.2	+21.5	-18
							-21.5	-61
65	75	20	12	7.5	4.9	+0.2	+26	-22
							-26	-74
75	85	22	14	9	5.4	+0.2	+26	-22
							-26	-74
85	95	25	14	9	5.4	+0.2	+26	-22
							-26	-74

A

Diameter above D mm	Diameter up to mm	Keyway width B mm	Parallel key height H mm	Shaft keyway depth T1 mm	Hub keyway depth T2 mm	Deviation for shaft and hub keyway depth mm	Deviation table for keyway width B JS9 µm	Deviation table for keyway width B P9 µm
95	110	28	16	10	6.4	+0.2	+26	-22
							-26	-74
110	130	32	18	11	7.4	+0.2	+31	-26
							-31	-88
130	150	36	20	12	8.4	+0.3	+31	-26
							-31	-88
150	170	40	22	13	9.4	+0.3	+31	-26
							-31	-88
170	200	45	25	15	10.4	+0.3	+31	-26
							-31	-88
200	230	50	28	17	11.4	+0.3	+31	-26
							-31	-88
230	260	56	32	20	12.4	+0.3	+37	-32
							-37	-106
260	290	63	32	20	12.4	+0.3	+37	-32
							-37	-106
290	330	70	36	22	14.4	+0.3	+37	-32
							-37	-106
330	380	80	40	25	15.4	+0.3	+37	-32
							-37	-106
380	440	90	45	28	17.4	+0.3	+43.5	-37
							-43.5	-124
440	500	100	50	31	19.4	+0.3	+43.5	-37
							-43.5	-124

A

RELATED CATALOGS

Torsionally Rigid Couplings

FLE 10.1
FLEX-C10001-00-7600



Flexible Couplings

FLE 10.2
FLEX-C10002-00-7600



Highly Flexible Couplings

FLE 10.3
FLEX-C10003-00-7600



Fluid Couplings

FLE 10.4
FLEX-C10004-00-7600



ARPEX

High Performance Couplings
FLE 10.5
FLEX-C10120-00-7600



ARPEX

Safety couplings
FLE 10.7
FLEX-C10122-00-7600

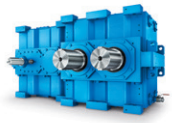


A

FLENDER SIP
Standard Industrial Planetary Gear Units
MD 31.1
PDMD-C10154-00



FLENDER CHG
Helical Gear Units
MD 20.10
PDMD-C10155-00



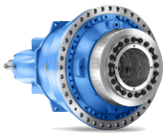
Gear units
Fast Track
MD 20.12
PDMD-C10156-00



Bucket Elevator Drives
MD 20.2
PDMD-C10157-00



PLANUREX 3
Planetary Gear Units
FLE 20.3
FLEX-C10052-00-7600



Paper Machine Drives
MD 20.5
PDMD-C10159-00



Conveyor Belt Drives
MD 20.6
PDMD-C10160-00



Marine Reduction Gearboxes
MD 20.7
PDMD-C10161-00



DUORED 2
Helical Gear Units, Load-sharing
MD 20.8
PDMD-C10162-00



Pinion Drive for Tube Mills
MD 20.9
PDMD-C10163-00



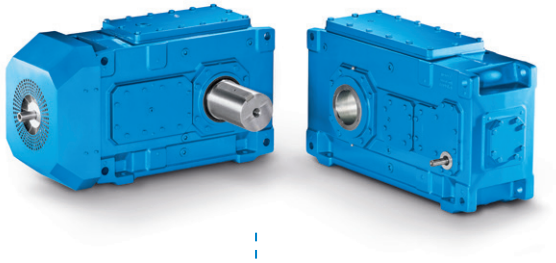
A



THE RIGHT GEAR UNIT SOLUTION FOR ANY REQUIREMENT

We provide helical and planetary gear units made up of standard modules or as a complete application solution.

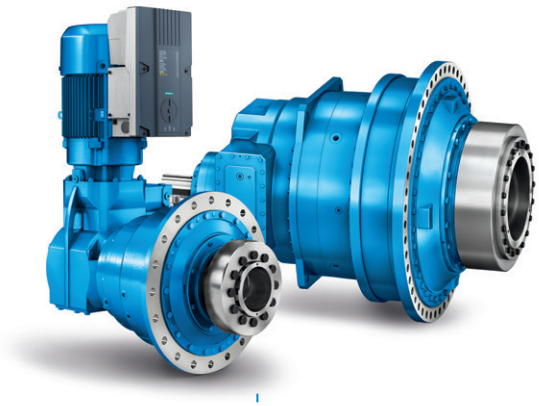
Helical and planetary gear units from Flender are modern drive solutions that satisfy the most varying and extreme demands, day after day and year after year. For decades, plant operators have been achieving high system reliability and low lifecycle costs in every conceivable industry with our helical gear units.



Helical and bevel helical gear units

Flender helical and bevel helical gear units are by far the most comprehensive range of industrial gear units in the world. It ranges from a multi-faceted universal gear unit portfolio and application-specific gear units to customer-specific solutions.

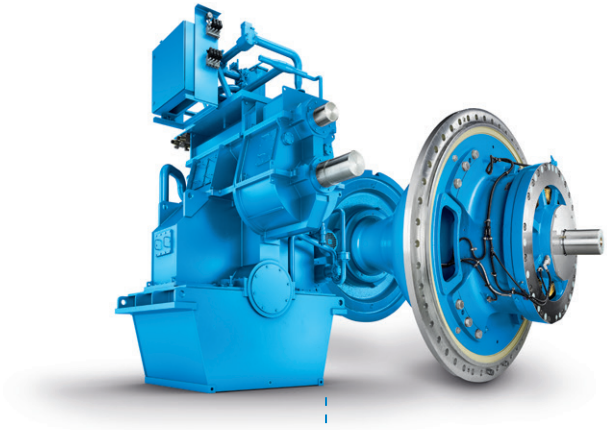
Rated torque: 3,300 Nm ... 1,400,000 Nm



Planetary Gear Units

With Flender planetary gear units, we provide a range of durable, reliable and finely graduated gear unit solutions. The series wins customers over due to its highly integrated planetary geared motor and maximum conformity with all international motor standards. It also brings quality and performance in a good ratio of lifecycle costs to price.

Rated torque: 10,000 Nm ... 5,450,000 Nm



Application-specific gear units

With application-specific gear units, Flender provides by far the most application solutions and thus covers nearly every drive-related need from hundreds of applications in industry and the acquisition of raw materials.

Rated torque: up to 10,000,000 Nm



Customer-specific designs

Our experts are available at any time for special requirements during the development of new products. From designing and simulating complex drive solutions to implementing them, we work together with you to resolve multi-layered tasks.



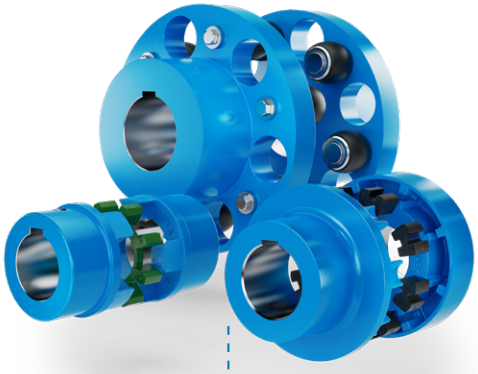
THE PERFECT COUPLING FOR THE PERFECT GEAR UNIT

We provide elastic, highly elastic, rigid and hydrodynamic solutions.

Regardless of which demands are made on the coupling: Low or high performance, demanding operating conditions or high ambient temperatures, dusty or hazardous environments – we have the right portfolio. Our comprehensive range of couplings offers a large number of sizes and designs with a torque range from 0.5 to 10,000,000 Nm.

In over 90 years of development, conception and production, our product portfolio has grown to its current level of diversity. Nearly every matured coupling solution is available as a standard item in our modular system. This saves our customers time and money.

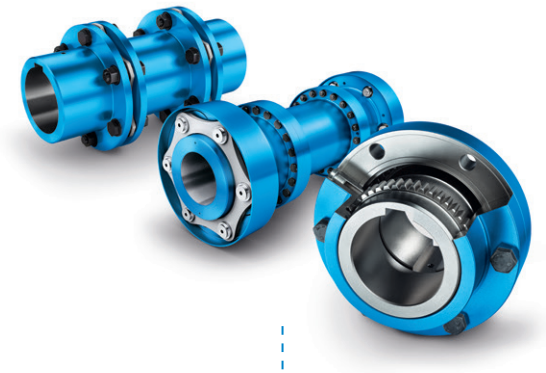
We are a powerful and flexible player in every market in the world – just like our customers. The production of our coupling components aims for maximum quality. As a trio, the setup, material and design result in optimal coupling solutions – rugged, dependable, largely low-maintenance and, above all, available at any time, anywhere. We provide high quality, first class delivery performance, and comprehensive service.



Flexible couplings

Our elastic couplings are pluggable and easy to install. The elastomer element equalizes the shaft offset and absorbs impacts from the motor or driven machine.

Nominal output torque: 12 Nm ... 1,690,000 Nm



Torsionally rigid couplings

Our compact steel couplings provide extremely precise transmission of high torques, especially in harsh operating conditions and extreme temperatures.

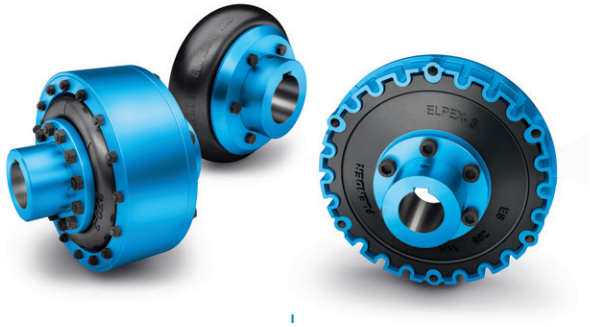
Nominal output torque: 92 Nm ... 10,000,000 Nm



Hydrodynamic couplings

Soft start, overload protection, torsional vibration damping – FLUDEX® fluid couplings allow the torque-limited approach and have very little slippage at rated load.

Power: 1.2 kW ... 2,500 kW

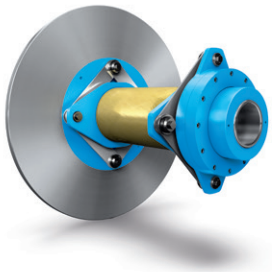


Highly-flexible couplings

Highly flexible couplings are well-suited for connecting machines that operate asymmetrically. They are preferred for use in systems that are periodically operated.

Nominal output torque: 24 Nm ... 90,000 Nm





Application-specific couplings

Flender offers a variety of application-specific couplings for rail vehicles and use in wind energy generation.



Backlash-free couplings

Our couplings act as a modular interface between the motor and the work machine to ensure reliable, backlash-free power transmission in servodrives and positioning drives.

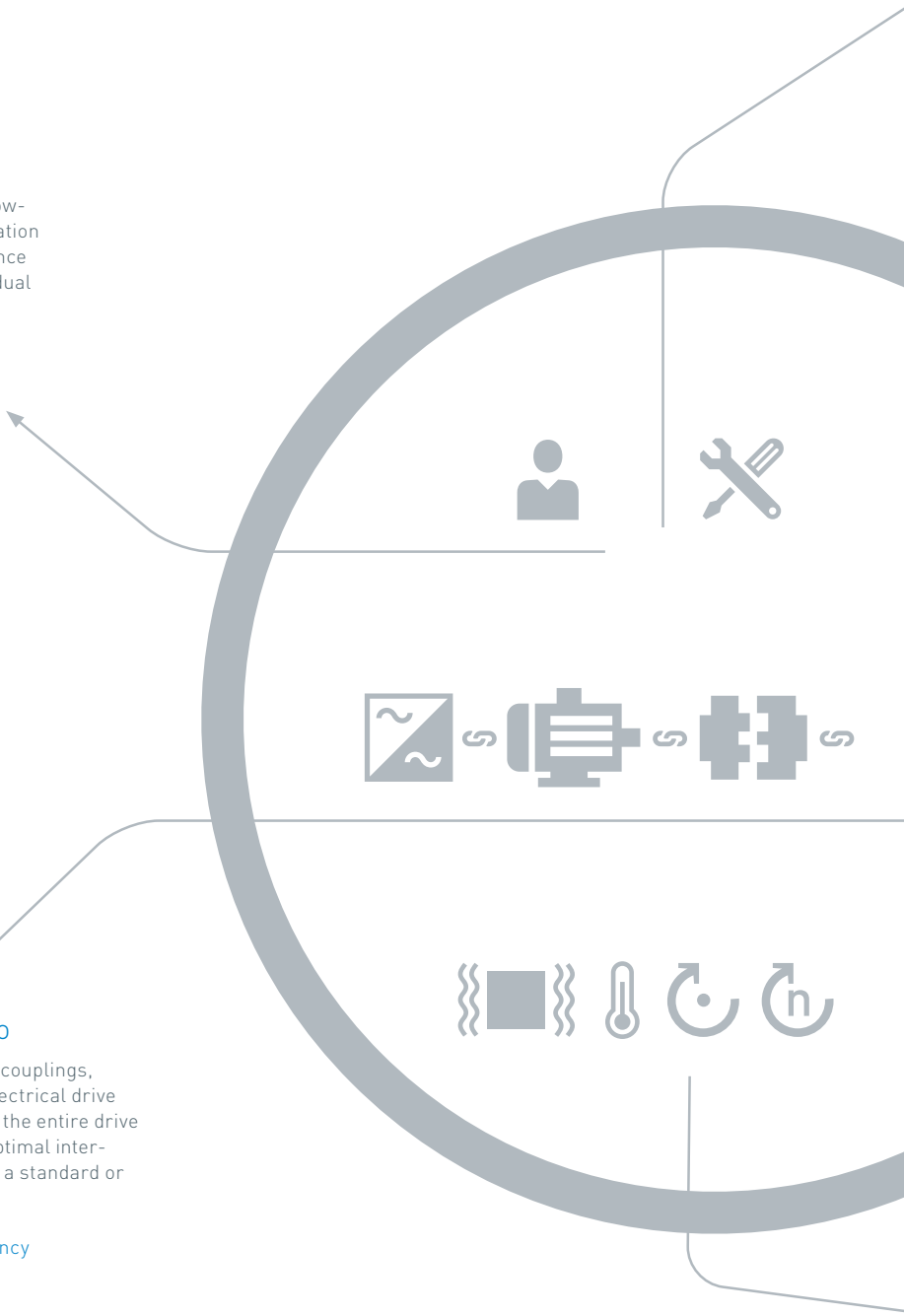
Nominal output torque: 0.1 Nm ... 5,000 Nm

Flender's system competence turns first-class components into systems with tangible added value. Drive systems from Flender ensure maximum productivity, energy efficiency and reliability in any automation environment.

Consultation

Our customers use our interdisciplinary know-how, our application competence, our innovation strength and, last but not least, our experience to find the right drive system for their individual requirements.

Reduced engineering time, lower costs



Integrated drive portfolio

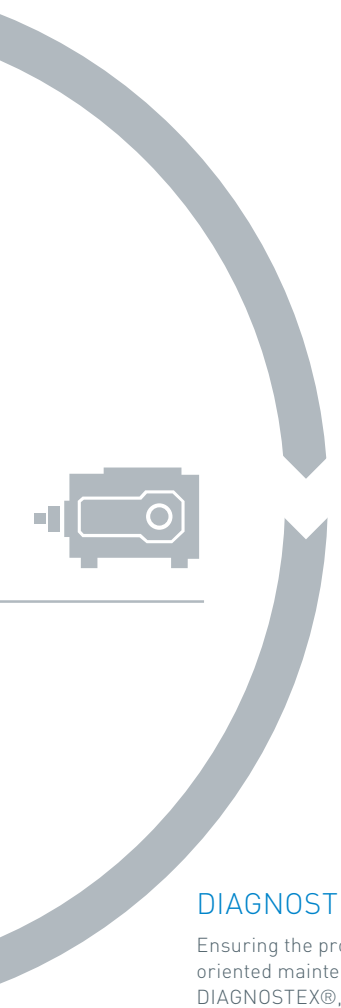
We not only provide gear units and couplings, but also have the competence in electrical drive technology that enables us to offer the entire drive train – perfectly integrated, with optimal interaction between all components, as a standard or individual solution.

Fewer interface risks, more efficiency

Flender service

From diagnostics and support, replacement part and repair services, all the way to maintenance and retrofit services – the Flender service portfolio creates individual solutions, fully and completely tailored to the needs of our customers. In this way, a gear unit remains an original Flender gear unit.

Increased system availability, reduced lifecycle costs



DIAGNOSTEX

Ensuring the process stability requires status-oriented maintenance of the drive train. With DIAGNOSTEX®, sensors measure deviations of our gear units from the target status. These can be analyzed and evaluated in terms of maximized system availability.

Industrie 4.0, reduced costs

INDIVIDUAL SOLUTIONS.

We have the right solution for you, even if your requirements are special. We no longer have to newly develop every special solution. Many solutions are already available.

At **flender.com**, we provide application-specific solutions for your special requirements.

Use our online configurator, which allows you to create tailored product combinations.



GREAT EXPERTISE IN YOUR INDUSTRY TOO.

Each industry has its own conditions. Every application has its own specific requirements. We are looking forward to meeting your challenges.

We probably already have the right solution at hand. Here are a few examples:



Minerals and mining

Requirement:
Perfectly coordinated drive system



Cement

Requirement:
Low maintenance effort and cost, sealing due to dirt in surroundings



Plastics and rubber

Requirement:
Absorption of high axial forces, suitability for explosion protection



Environmental and recycling

Requirement:
Highest possible reliability, rugged design



Pulp and paper

Requirement:
Suitability for centrally located lubrication



Industrial cranes

Requirement:
Quick availability, version with double drive shaft



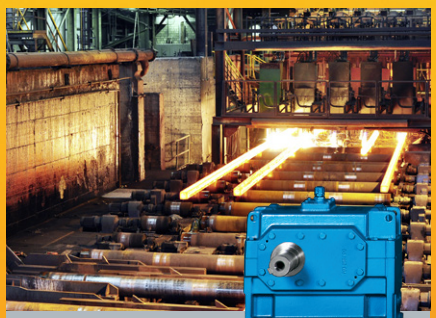
Chemicals

Requirement:
Absorption of forces from the manufacturing process



Power generation

Requirement:
Effective cooling, speed adjustment for motor to fan



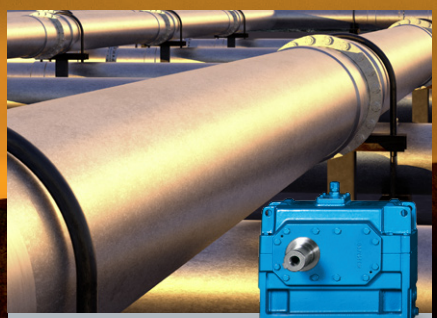
Metals

Requirement:
Harsh working conditions, high peak loads



Harbor cranes

Requirement:
Specific axle clearance, frequent start-up



Oil and gas

Requirement:
Flexible adaptation to speed requirements



Water and wastewater

Requirement:
Absorption of external forces, oil-retaining pipe required



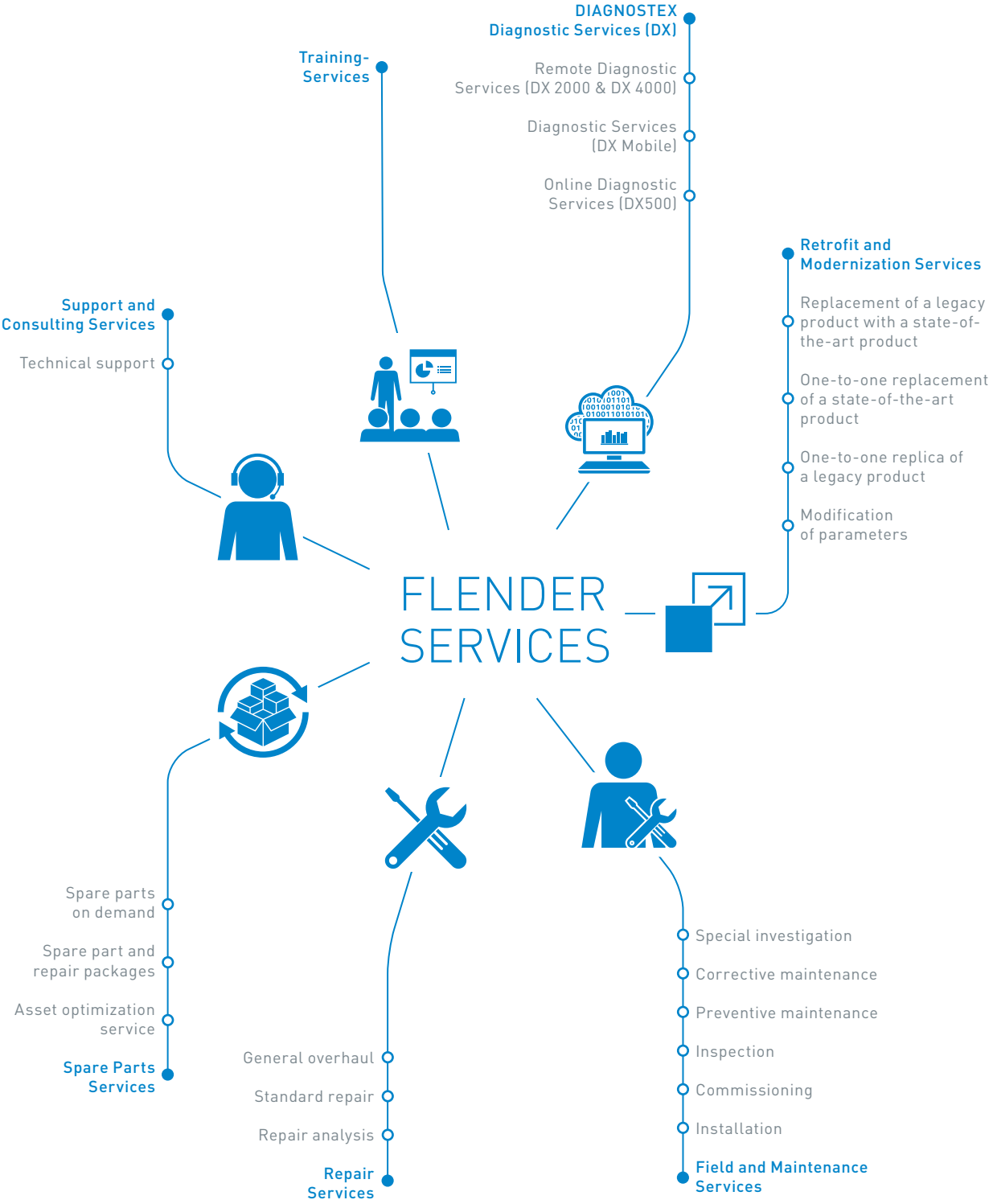
AN ORIGINAL FOR THE LONG TERM WITH ORIGINAL FLENDER SERVICES

Ever increasing requirements make it more and more important for industrial plants to work with maximum productivity and efficiency. Flender Services give companies a decisive advantage over the competition in industry, the acquisition of raw materials and energy production. In view of the high cost pressure, increasing energy prices and stricter and stricter environmental stipulations, our services are becoming a decisive factor to success over the competition.

Enjoy the support of our service experts, from planning, development and operation to the modernization of your plant and benefit from our experience and in-depth know-how of your application – in more than 100 countries, seven days a week, 24 hours a day.

Reduce standstills, minimize downtimes due to failure, and increase the productivity, flexibility and cost efficiency of your plant.

OUR OFFER FOR GEAR UNITS AND COUPLINGS AT A GLANCE.



FLENDER

FLENDER COUPLINGS
CATALOG **FLE 10.1**
EDITION 2026.1 EN



WE **MOVE** the WORLD

Flender GmbH
Alfred-Flender-Straße 77
46395 Bocholt
Germany

Article no.: FLEX-C10001-00-7600

Subject to changes and errors.
The information given in this product catalog includes descriptions and performance features that in specific applications do not always apply in the form described or may change through further-development of the products. The desired performance features are binding only if they are expressly agreed on conclusion of contract. Subject to availability for delivery and to technical changes.