

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



TORSIONALLY RIGID COUPLINGS
N-ZAPEX, N-ARPEX, ARPEX, SKZF

TORSIONALLY RIGID COUPLINGS



Catalog FLE 10.1 EDITION 2026.1 EN

Introduction

Torsionally Rigid Gear Couplings

N-ZAPEX XW

N-ZAPEX XN

Torsionally Rigid All-Steel Couplings

N-ARPEX, ARPEX

Flexible Couplings

N-EUPEX

RUPEX

BIPEX

Highly Flexible Couplings

ELPEX-B

ELPEX-S

ELPEX

Fluid Couplings

FLUDEX

Rigid Couplings

SKZF

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FLE 10 CATALOG GROUP

FLENDER COUPLINGS
CATALOG **FLE 10.1**
EDITION EN



TORSIONALLY RIGID COUPLINGS
N-ZAPEX, N-ARPEX, ARPEX, SKZF

[flender.com](https://www.flender.com)

FLENDER

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

FLENDER COUPLINGS
CATALOG **FLE 10.3**
EDITION EN



HIGHLY FLEXIBLE COUPLINGS
ELPEX-B, ELPEX-S AND ELPEX

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FLENDER

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

FLENDER COUPLINGS
CATALOG **FLE 10.2**
EDITION 2024.1 EN



FLEXIBLE COUPLINGS
N-EUPEX, RUPEX AND BIPEX

[flender.com](https://www.flender.com)

FLENDER

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

FLENDER COUPLINGS
CATALOG **FLE 10.4**
EDITION EN



FLUID COUPLINGS
FLUDEX

[flender.com](https://www.flender.com)

FLENDER

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

For further coupling catalogs, see page A/6

FLENDER COUPLINGS
CATALOG **FLE 10.5**
EDITION EN



HIGH PERFORMANCE COUPLINGS
ARPEX

flender.com

FLENDER

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

FLENDER-COUPLINGS
CATALOG **FLE 10.7**
EDITION EN



SAFETY COUPLINGS
ARPEX

flender.com

FLENDER

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

INTRODUCTION

E

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.

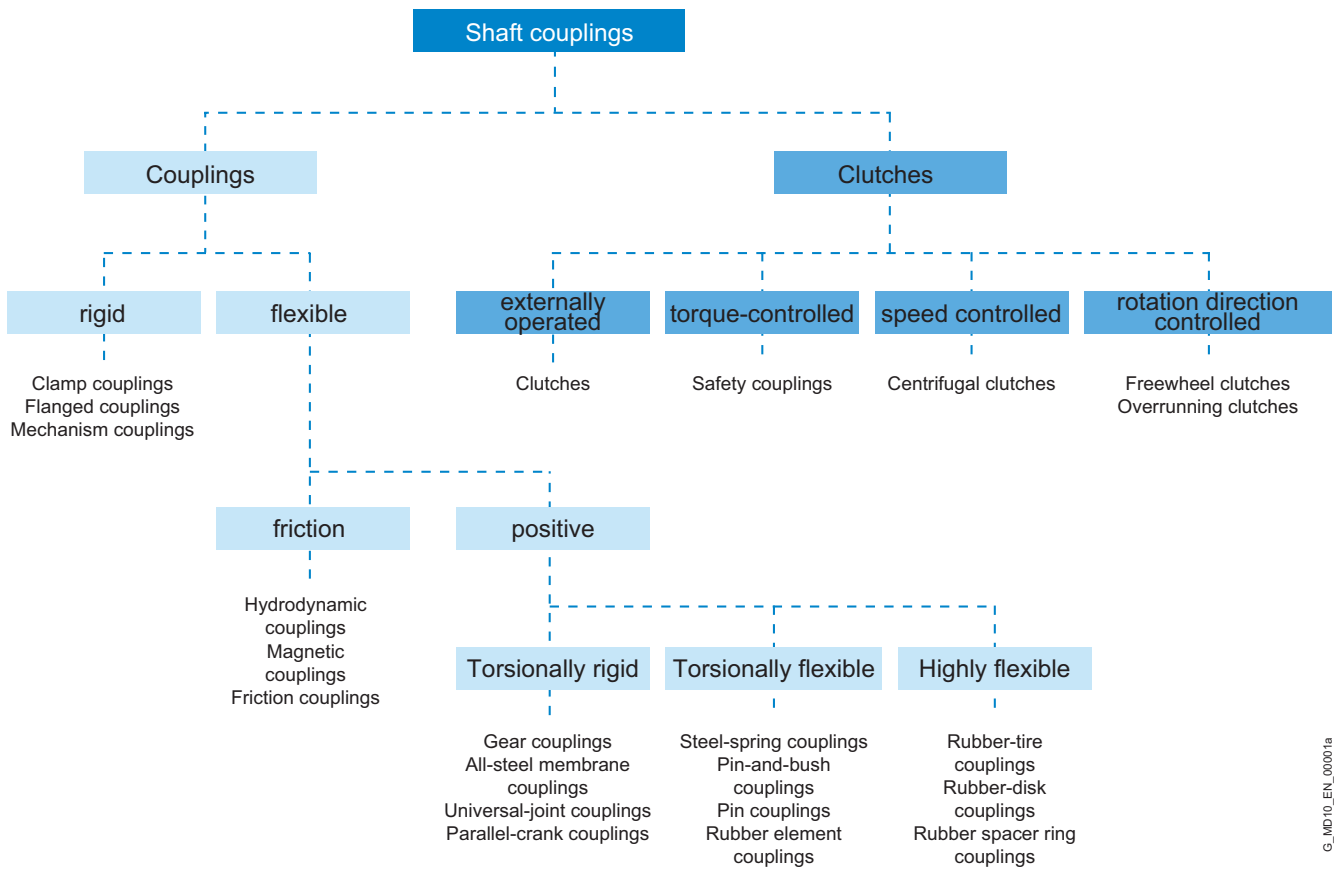
Clutches interrupt or limited the transmissible torque. The engaging and disengaging forces on externally operated clutches are introduced via a mechanically, electrically, hydraulically or pneumatically operating mechanism. Overload, centrifugal or freewheel clutches draw their engaging energy from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



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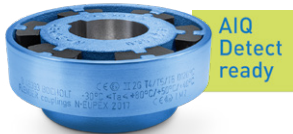
OUR COUPLING GROUPS AT A GLANCE

E

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

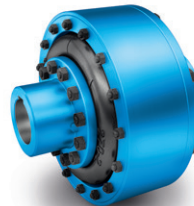


BIPEX
cam couplings
Rated torque:
21 Nm ... 5,100 Nm

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

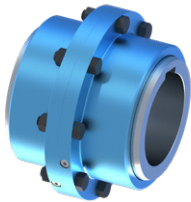


ELPEX-S
rubber disk couplings
Rated torque:
200 Nm ... 63,000 Nm

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.

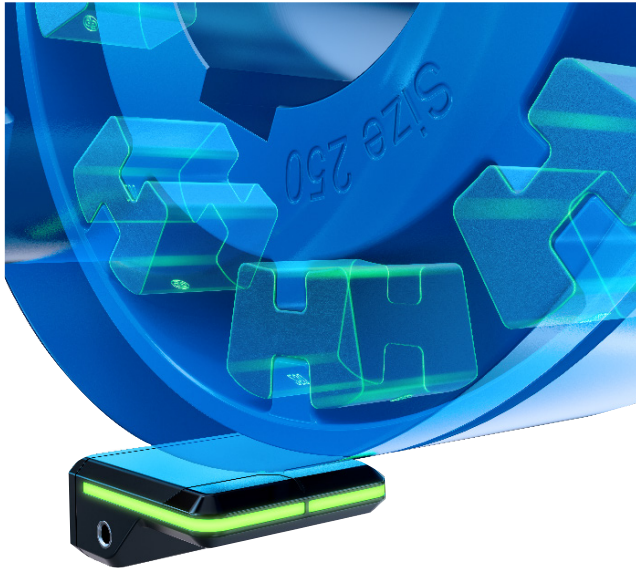


Wind turbine couplings
Rated torque:
10,000 Nm ... 60,000 Nm

AIQ DETECT

for wear detection on the N-EUPEX and RUPEX

E



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

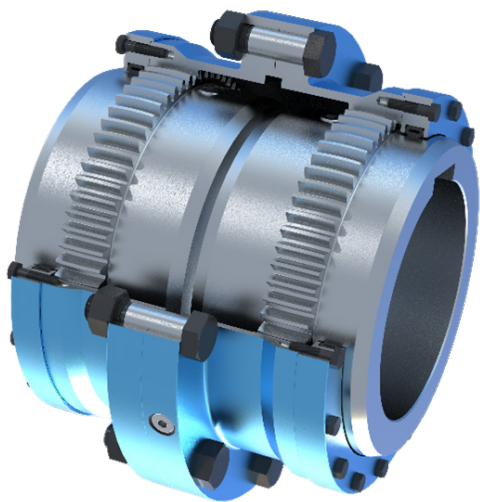
- N-EUPEX coupling A, size 110 with the status "AIQ Detect-ready" (Article No. addition A99)
- AIQ Detect for wear monitoring of N-EUPEX coupling A, size 110

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

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

TORSIONALLY RIGID COUPLINGS

N-ZAPEX XW SERIES

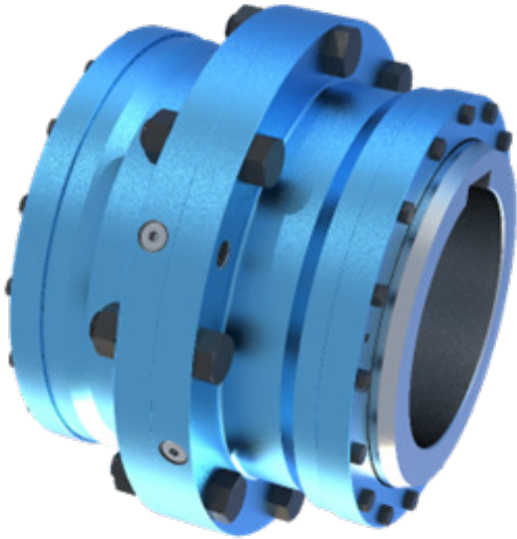


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N-ZAPEX XW
FLENDER

GENERAL



Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

CE  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

4

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	Maximum torque	Fatigue torque	Torsional stiffness XW	Maximum permissible radial misalignment ¹⁾ (XWN) $\pm \Delta K_r$	Permitted axial shaft misalignment $\pm \Delta K_a$
	T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	C_{Tdyn} kNm/rad	mm	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: $\Delta K_w = 1.3^\circ$

Types XWNA, XWZA, XWBG: $\Delta K_w = 0.2^\circ$

Radial misalignment ΔK_r ¹⁾

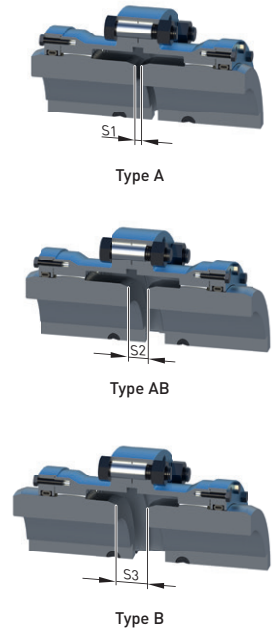
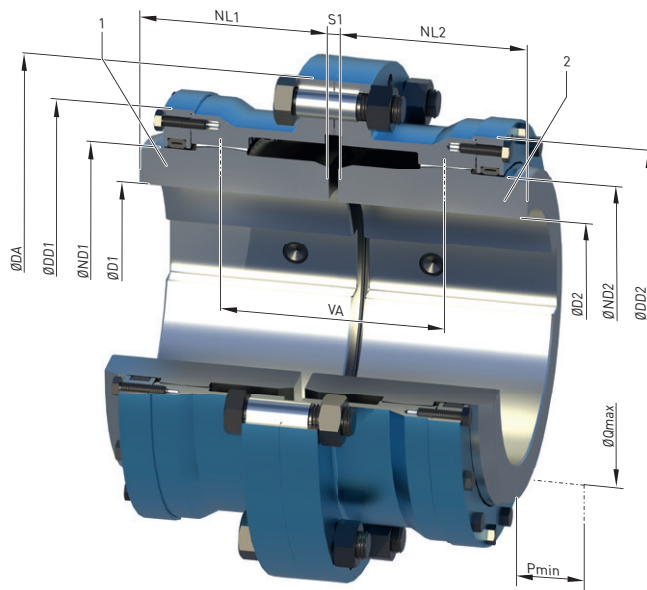
Types XWN, XWZS, XWH, XWB, XWNV: $\Delta K_r \leq VA \cdot \tan 1.3^\circ$

Types XWNA, XWZA, XWBG: $\Delta K_r \leq VA \cdot \tan 0.2^\circ$

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



Size	Rated torque	Maximum speed $n_{Kmax}^{2)}$	Dimensions in mm												Mass moment of inertia J	Article no. ¹⁾			Weight
	T_{KN}		D1, D2 Keyway DIN 6885-1	DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S1	S2	S3	VA	Q	P	Type					
	Nm													min.		max.	A	B	AB
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 variants¹⁾

- | | |
|-------|---|
| • 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. |

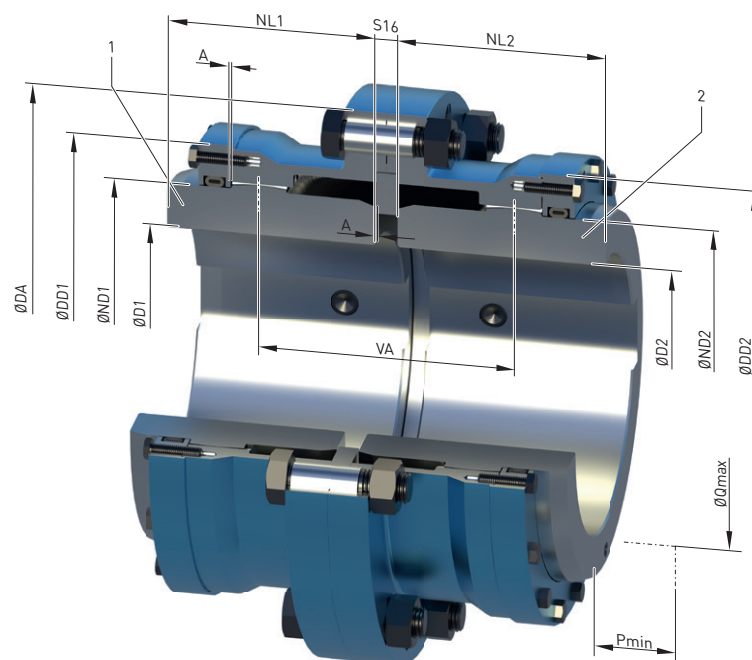
¹⁾ To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

²⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.flender.com), click on the item no.

TYPE XWNA

4



Size	Rated torque	Maximum speed	Dimensions in mm												Mass moment of inertia <i>J</i>	⌈ Article no. ¹⁾	Weight
	<i>T</i> _{KN}	<i>n</i> _{Kmax} ²⁾	D1, D2 Keyway DIN 6885-1		DA	ND1/ND2	NL1/NL2	DD1/DD2	S16	A	VA	Q	P	<i>m</i>			
	Nm	rpm	min.	max.										kgm ²	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 variants¹⁾

- | | |
|-------|---|
| • ØD1 | Without finished bore
With finished bore |
| • ØD2 | Without finished bore
With finished bore |

Notes

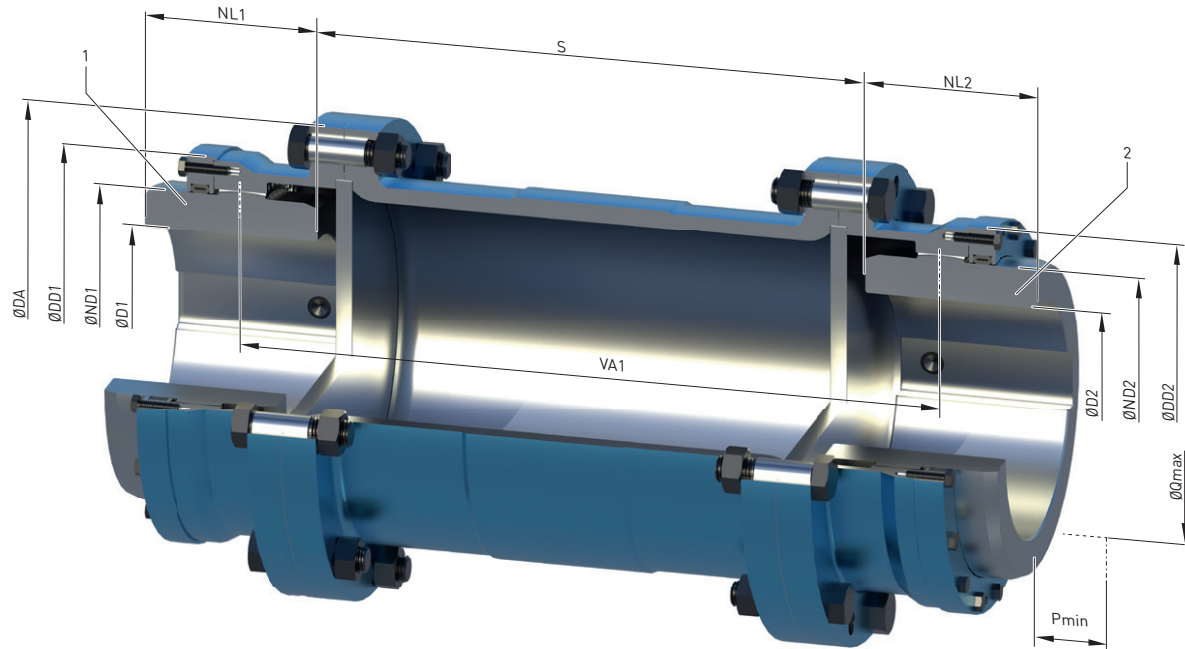
- | | |
|---|--|
| • | Weights and moments of inertia apply to the entire coupling with maximum bores. |
| • | Variant limited in displacement and axial movement.
Max. displacement 0.2°. |
| • | Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings. |

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](https://www.flender.com).

²⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.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}	<i>n</i> _{Kmax} 3/4)	D1, D2 Keyway DIN 6885-1		DA	ND1/ND2	NL1/NL2	DD1/DD2	S		VA1	Q	P	S	<i>m</i>	<i>J</i>
	Nm	rpm	min.	max.					min.	std. 5)					Ref. 2)	kg
160	9800	6200	25	100	213	134	76	177	115	200	S + 66	113	47	2LC0350-3AE	<325 23.99 + 0.021 · S ≥325 21.32 + 0.031 · S	0.147 + 0.0001 · 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 ≥329 31.94 + 0.050 · S	0.282 + 0.0003 · 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 ≥332 51.45 + 0.052 · S	0.600 + 0.0004 · 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 ≥340 70.74 + 0.078 · S	1.124 + 0.0007 · 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 ≥346 89.45 + 0.097 · S	1.629 + 0.0012 · 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 ≥352 129.6 + 0.108 · S	2.833 + 0.0018 · 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 ≥358 177.8 + 0.139 · S	4.870 + 0.0028 · 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 ≥362 226.4 + 0.118 · S	6.870 + 0.0032 · 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 ≥378 352.7 + 0.222 · S	15.47 + 0.0070 · 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 ≥474 565.1 + 0.259 · S	32.91 + 0.0199 · 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 ≥490 790.3 + 0.291 · S	55.37 + 0.0199 · 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 ≥500 1211 + 0.392 · S	110.8 + 0.0326 · 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 ≥510 1500 + 0.542 · S	162.2 + 0.0541 · 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 ≥521 2164 + 0.579 · S	279.3 + 0.0759 · 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 ≥635 2733 + 0.654 · S	418.0 + 0.1116 · 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}	<i>n</i> _{Kmax} ³⁾⁴⁾	D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S		VA1	Q	P	A	S	<i>m</i>	<i>J</i>
	Nm	rpm	min.	max.					min.	std. ⁵⁾					Ref. ²⁾	kg	kgm²
1019	2250000	1100	430	650	1138	874	520	1019	435	-	S + 435	820	123	2LC0352-0AE	<645 ≥645	3327 + 0.724 · S 3272 + 0.821 · S	578.4 + 0.1625 · S 565.0 + 0.1858 · S
1097	2900000	1000	470	700	1238	942	540	1097	490	-	S + 450	888	126	2LC0352-1AE	<655 ≥655	4193 + 0.838 · S 4119 + 0.963 · S	869.7 + 0.1978 · S 850.8 + 0.2297 · S
1158	3500000	1000	520	750	1303	1002	570	1158	500	-	S + 475	948	126	2LC0352-2AE	<665 ≥665	4773 + 0.893 · S 4664 + 1.073 · S	1101 + 0.2615 · S 1067 + 0.3180 · S
1230	4000000	900	550	800	1391	1073	620	1230	556	-	S + 522	1012	137	2LC0352-3AE	<676 ≥676	6005 + 0.948 · S 5885 + 1.138 · S	1590 + 0.3123 · S 1547 + 0.3795 · S
1339	5000000	900	575	850	1503	1146	660	1339	568	-	S + 556	1085	137	2LC0352-4AE	<838 ≥838	7280 + 1.206 · S 7136 + 1.398 · S	2208 + 0.4746 · S 2147 + 0.5557 · S
1404	5750000	900	610	900	1569	1209	700	1404	580	-	S + 590	1149	145	2LC0352-5AE	<850 ≥850	8337 + 1.285 · S 8196 + 1.470 · S	2781 + 0.5600 · S 2716 + 0.6461 · S
1484	6900000	800	640	950	1644	1289	730	1484	595	-	S + 615	1229	145	2LC0352-6AE	<865 ≥865	9944 + 1.342 · S 9780 + 1.555 · S	3698 + 0.6533 · S 3613 + 0.7637 · S
1548	8400000	800	680	1000	1719	1351	770	1548	627	-	S + 649	1291	145	2LC0352-7AE	<877 ≥877	11411 + 1.593 · S 11251 + 1.797 · S	4667 + 0.8398 · S 4577 + 0.9546 · S
1676	10000000	700	750	1100	1847	1478	850	1676	655	-	S + 715	1405	168	2LC0352-8AE	<905 ≥905	14335 + 1.733 · S 14156 + 1.954 · S	6893 + 1.0820 · 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 (n_{krit} in [min-1]; D4 and S in [mm])

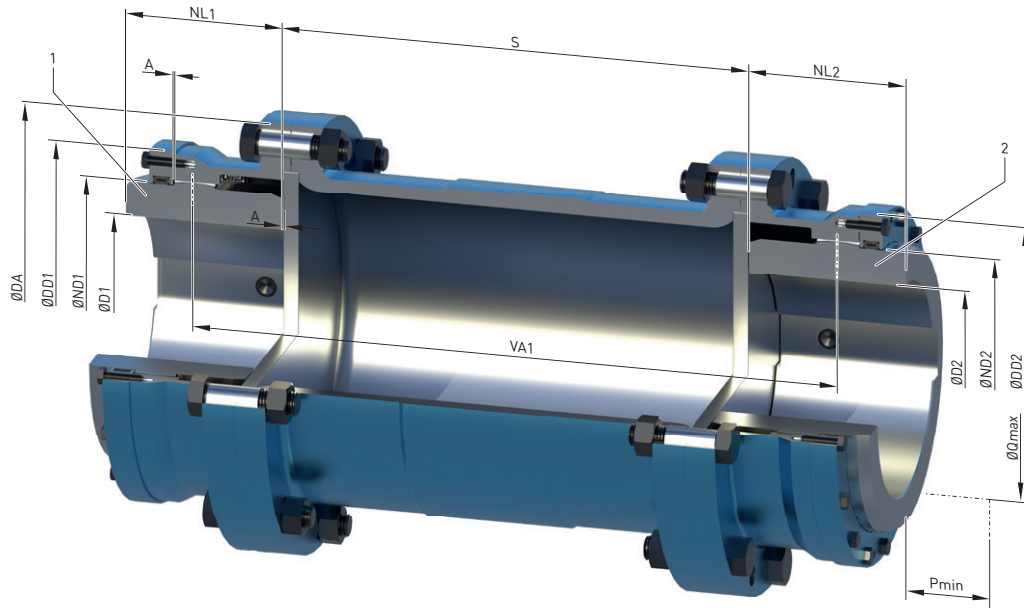
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

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	kgm ²
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 ≥309 21.82 + 0.031 · S	0.149 + 0.0001 · 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 ≥311 32.83 + 0.050 · S	0.288 + 0.0003 · 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 ≥311 52.54 + 0.052 · S	0.609 + 0.0004 · 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 ≥312 72.94 + 0.078 · S	1.144 + 0.0007 · 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 ≥314 92.6 + 0.097 · S	1.666 + 0.0012 · 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 ≥317 133.4 + 0.108 · S	2.896 + 0.0018 · 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 ≥317 183.5 + 0.139 · S	4.986 + 0.0028 · 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 ≥317 231.7 + 0.118 · S	7.013 + 0.0032 · 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 ≥322 365.2 + 0.222 · S	15.86 + 0.0070 · 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 ≥383 588.8 + 0.259 · S	34.15 + 0.0199 · 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 ≥388 820.0 + 0.291 · S	57.40 + 0.0199 · 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 ≥388 1254.7 + 0.392 · S	114.41 + 0.0326 · S 112.10 + 0.0395 · S

Configurable variants¹⁾

- | | |
|-------|---|
| • 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](https://www.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 (n_{krit} in [min⁻¹]; D4 und S in [mm])

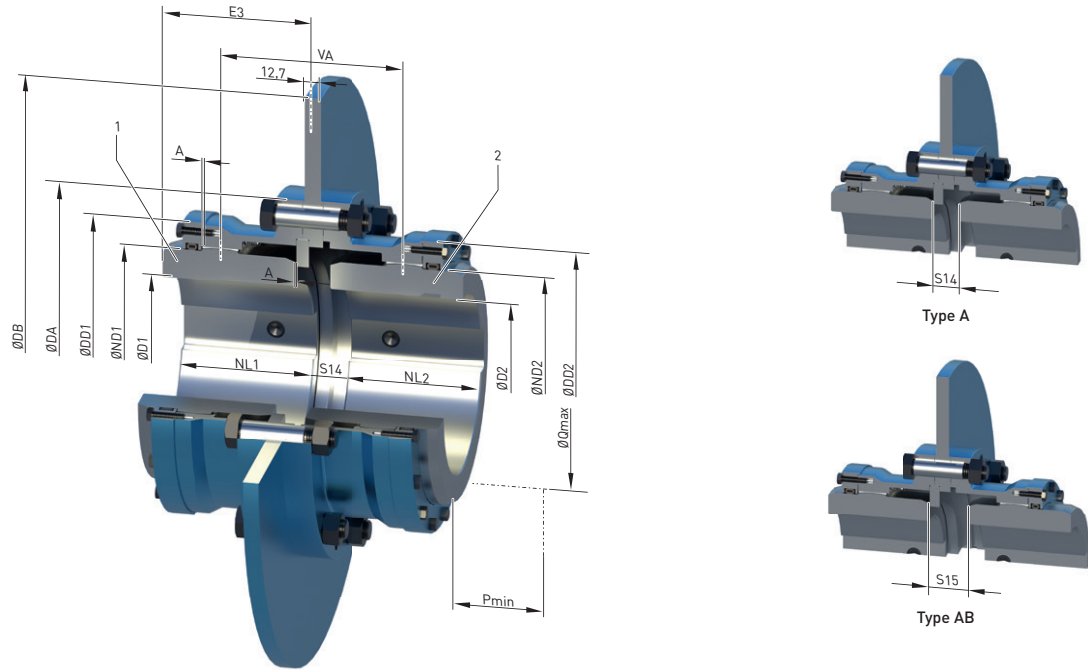
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

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](https://www.flender.com), click on the item no.

TYPE XWBG



Size	Rated torque	Maximum speed n_{Kmax} ²⁾	Dimensions in mm													Mass moment of inertia		Brake disk	Article no. ¹⁾		Weight	
	T _{KN}		D1, D2 Nut DIN 6885-1	DA	ND1/ND2	NL1/NL2	DD1/DD2	S14	S15	A	VA	Q	P	J	DB	E3	Type					
	Nm													min.	max.	kgm ²			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 variants¹⁾

- | | |
|-------|---|
| • 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. |

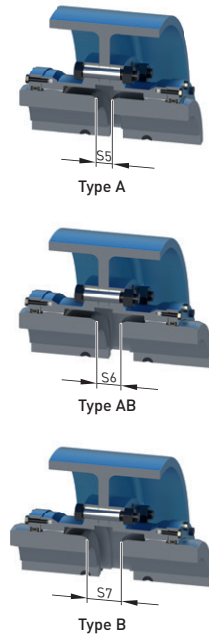
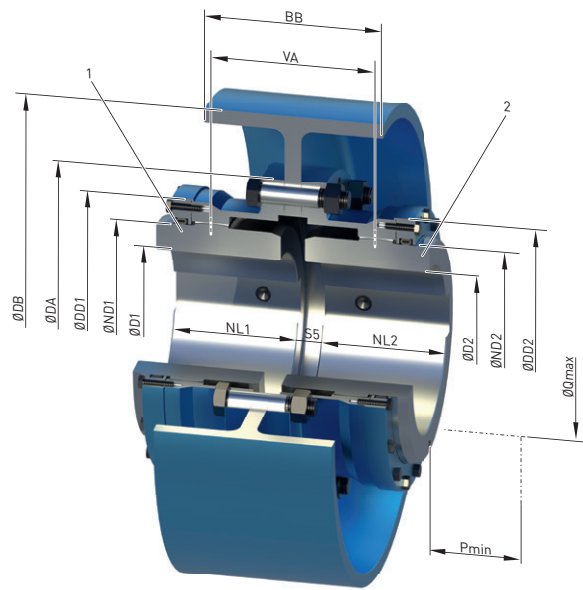
¹⁾ To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

²⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.flender.com), click on the item no.

TYPE XWB

4



Size	Rated torque	Maximum speed	Dimensions in mm													Mass moment of inertia J_1/J_2	Brake disk		↗ Article no. ¹⁾			Weight
			D1, D2 Keyway DIN 6885-1		DA	ND1/ ND2	NL1/ NL2	DD1/ DD2	S5	S6	S7	VA	Q	P	DB		BB	Type		m		
	Nm	rpm	min.	max.													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

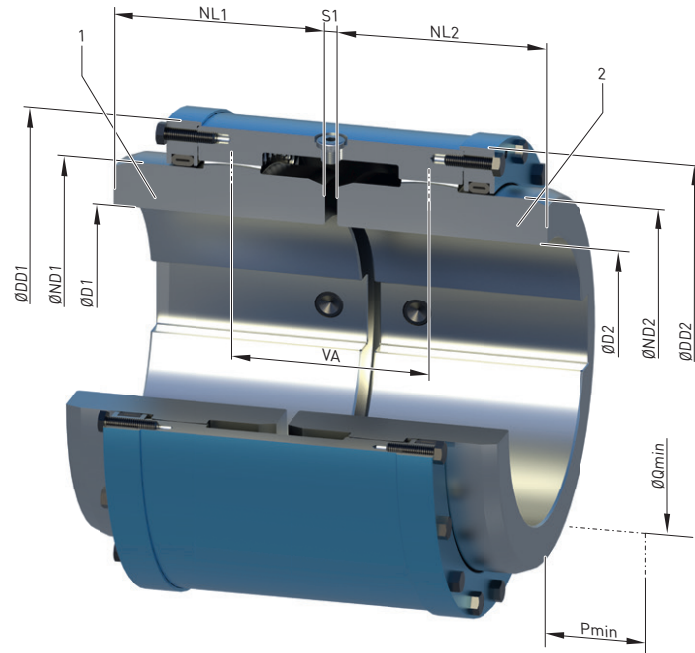
- Weights and moments of inertia apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings.

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 $\geq 0.3^\circ$, 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	Maximum speed $n_{Kmax}^{2)}$ rpm	Dimensions in mm									Mass moment of inertia J_1/J_2 kgm ²	↗ Article no. ¹⁾	Weight m kg
	T_{KN}		D1, D2 Keyway DIN 6885-1		ND1/ ND2	NL1/ NL2	DD1/ DD2	S1	VA	Q	P			
	Nm		min.	max.										
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.

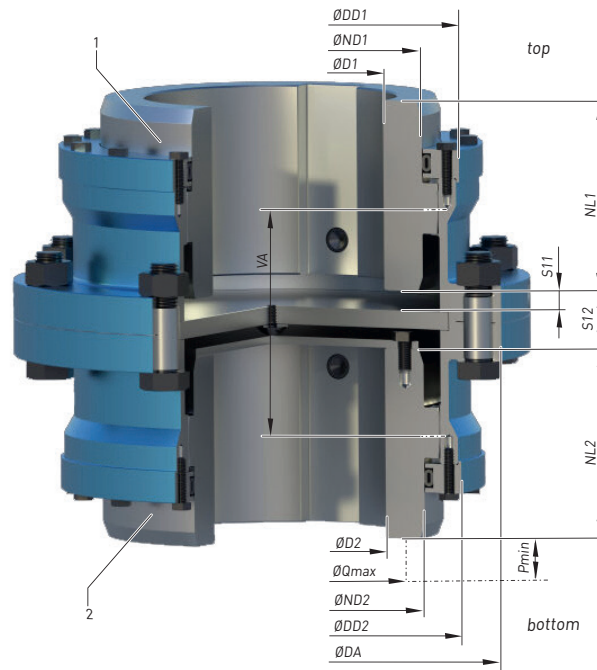
¹⁾ To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

²⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.flender.com), click on the item no.

TYPE XWNV

4



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.										kgm ²		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 $\geq 0.3^\circ$, 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.

4

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

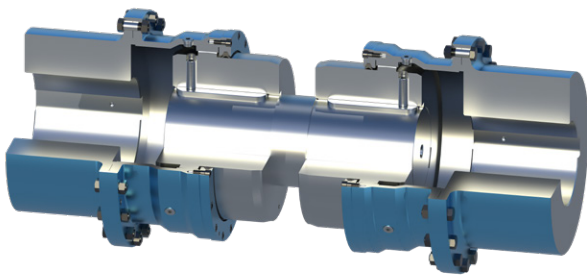
Sealing compound

Container	Content ml	Article no.
Tube	60	FFA:000001443780

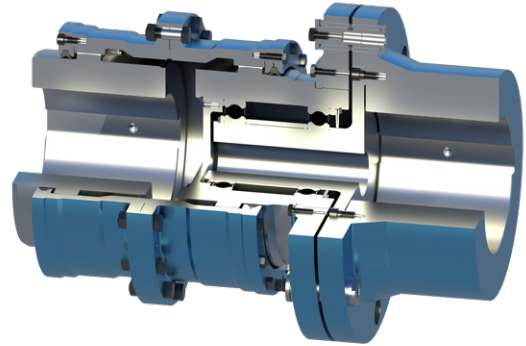
FURTHER TYPES

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.

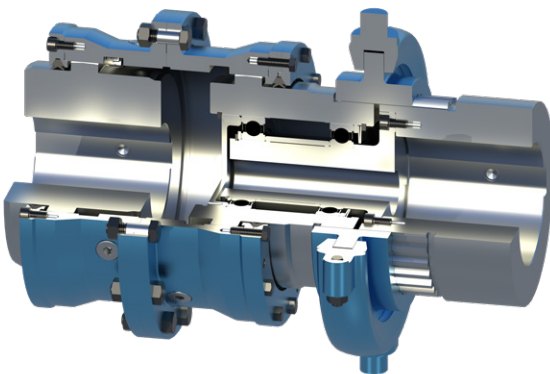
4



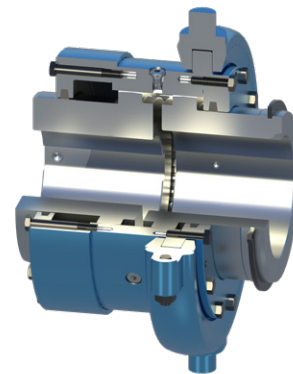
ZAPEX ZZW - with intermediate shaft



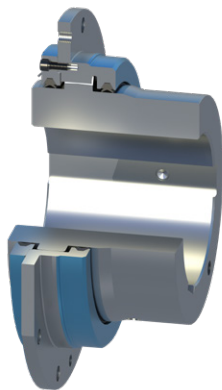
ZAPEX ZBR - with shear pins



ZAPEX ZWS - Clutch



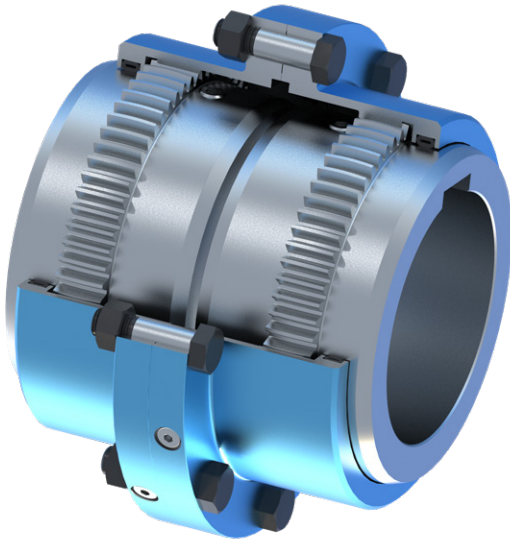
ZAPEX ZWSE - Simple clutch-coupling combination



ZAPEX ZWTR - for rope drums

TORSIONALLY RIGID GEAR COUPLINGS

N-ZAPEX XN SERIES

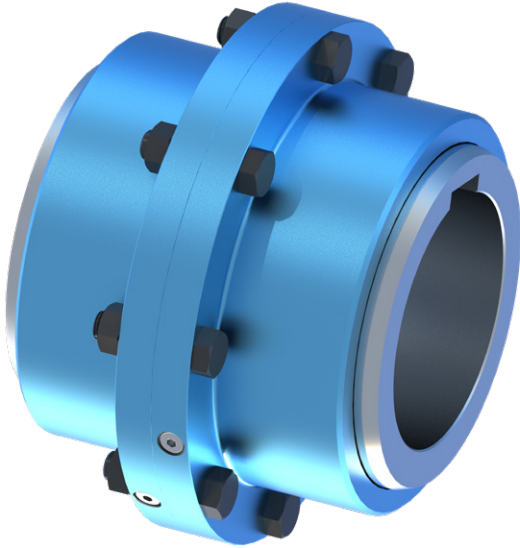


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N-ZAPEX XN
FLENDER

GENERAL



Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

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

 II 2D Ex h IIC 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	Maximum torque	Fatigue torque	Torsional stiffness XN	Maximum permissible radial misalignment ¹⁾ (XWN) $\pm \Delta K_r$	Permitted axial shaft misalignment $\pm \Delta K_a$
	T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	C_{Tdyn} kNm/rad	mm	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 $1/2 \cdot \Delta K_a$.
The axial misalignment does not apply to types XNNA and XNZA.

Angular misalignment ΔK_w ¹⁾

Types XNN, XNZS: $\Delta K_w = 0.8^\circ$

Types XNBG, XNNA, XNZA: $\Delta K_w = 0.2^\circ$

Radial misalignment ΔK_r ¹⁾

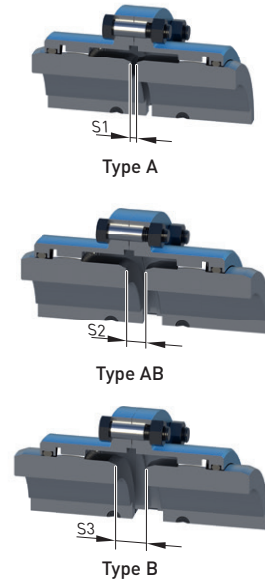
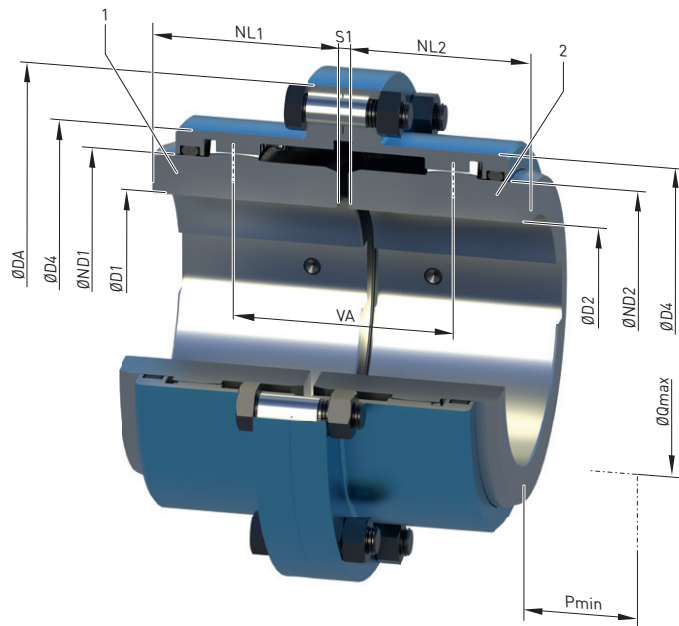
Types XNN, XNZS: $\Delta K_r \leq VA \cdot \tan 0.8^\circ$

Types XNBG, XNZA: $\Delta K_r \leq VA \cdot \tan 0.2^\circ$

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 n_{Kmax} ²⁾	Dimensions in mm													Mass moment of inertia J	Article no. ¹⁾			Weight m
	T_{KN}		D1, D2 Keyway DIN 6885-1	DA	ND1/ ND2	NL1/ NL2	D4	S1	S2	S3	VA	Q	P	Type	A		B	AB		
	Nm																		min.	
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

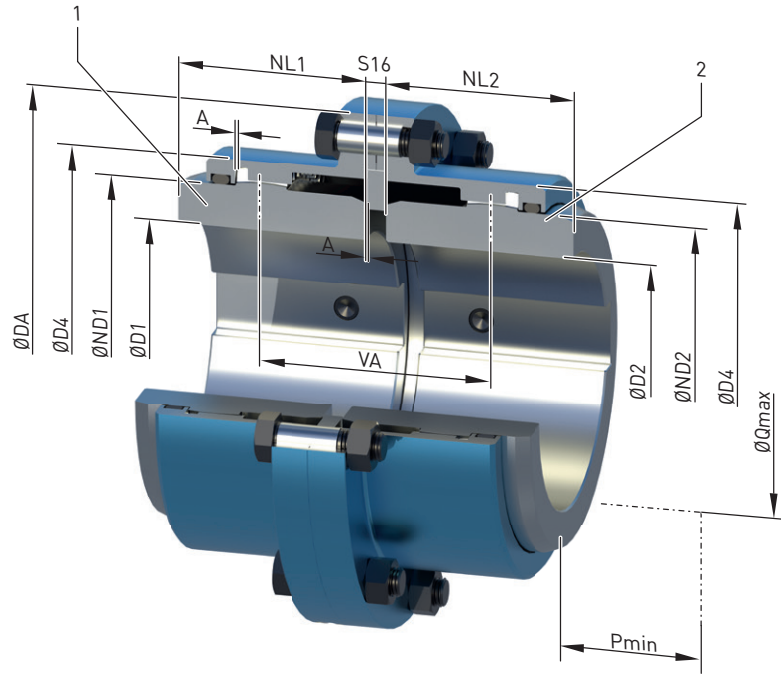
- Weights and moments of inertia apply to the complete coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

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 $\geq 0.3^\circ$, 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.										kgm ²	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 variants¹⁾

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

Notes

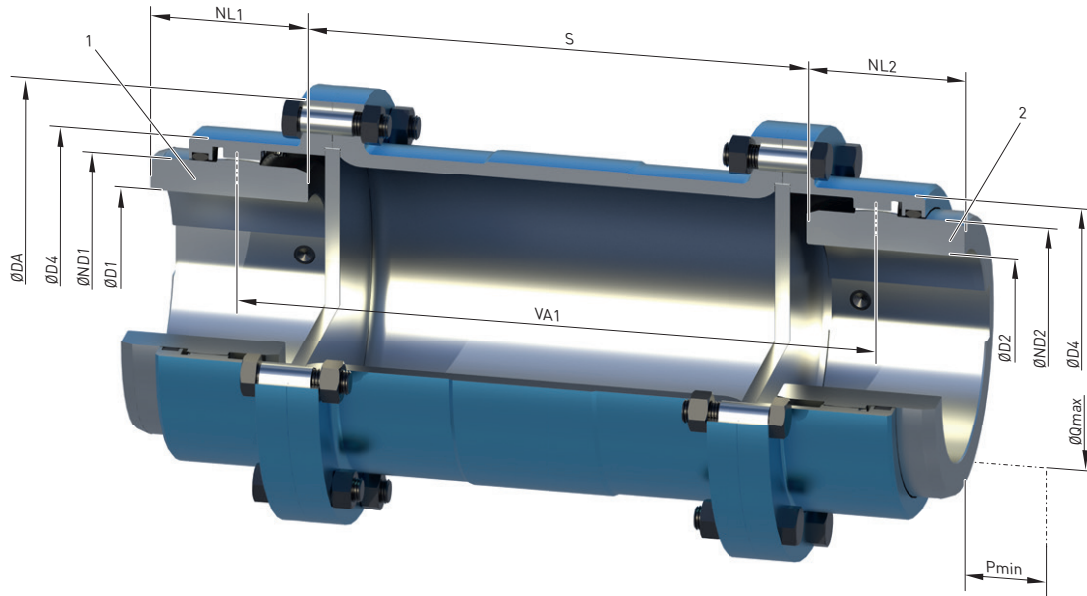
- Weights and moments of inertia apply to the complete coupling with maximum bores.
- Restricted design in deflection and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.
P Length required for renewing the sealing rings, aligning the coupling parts and tightening 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 $\geq 0.3^\circ$, 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	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	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 ≥ 309	4.267 + 0.007 · S 3.447 + 0.011 · S	0.007 + 0.00001 · S 0.005 + 0.00002 · S
114	3200	8700	20	70	150	95	50	76	180	S + 46	74	35	2LC0340-1AE	< 311 ≥ 311	7.691 + 0.011 · S 5.962 + 0.019 · S	0.025 + 0.00003 · S 0.019 + 0.00005 · S
134	5200	7200	25	80	179	110	62	96	180	S + 53	85	42	2LC0340-2AE	< 321 ≥ 321	12.74 + 0.016 · S 11.13 + 0.022 · S	0.055 + 0.00006 · S 0.048 + 0.00009 · S
160	9800	6200	25	100	213	134	76	115	200	S + 66	110	50	2LC0340-3AE	< 325 ≥ 325	22.24 + 0.021 · S 19.57 + 0.031 · S	0.136 + 0.00012 · S 0.118 + 0.00019 · S
191	17500	5400	30	120	243	161	90	119	200	S + 78	130	60	2LC0340-4AE	< 329 ≥ 329	33.01 + 0.036 · S 29.45 + 0.050 · S	0.259 + 0.00029 · S 0.227 + 0.00042 · S
219	27200	4600	40	140	286	188	105	142	200	S + 92	155	70	2LC0340-5AE	< 332 ≥ 332	52.06 + 0.039 · S 48.69 + 0.052 · S	0.565 + 0.00042 · S 0.526 + 0.00057 · S
257	42000	4000	50	160	326	218	120	150	250	S + 103	175	75	2LC0340-6AE	< 340 ≥ 340	74.33 + 0.046 · S 65.22 + 0.078 · S	1.028 + 0.00072 · S 0.872 + 0.00127 · S
282	57000	3700	80	180	350	243	135	156	250	S + 116	195	80	2LC0340-7AE	< 346 ≥ 346	93.9 + 0.062 · S 83.7 + 0.097 · S	1.508 + 0.00115 · S 1.296 + 0.00188 · S
317	78000	3300	90	200	399	267	150	172	250	S + 128	220	90	2LC0340-8AE	< 352 ≥ 352	132.8 + 0.077 · S 123.6 + 0.108 · S	2.682 + 0.00181 · S 2.446 + 0.00261 · S
358	110000	3000	110	230	443	307	175	178	300	S + 150	250	105	2LC0341-0AE	< 358 ≥ 358	180.3 + 0.094 · S 166.7 + 0.139 · S	4.496 + 0.00284 · S 4.051 + 0.00431 · S
390	138000	2800	120	250	473	335	190	182	300	S + 163	275	125	2LC0341-1AE	< 362 ≥ 362	223.9 + 0.089 · S 215.0 + 0.118 · S	6.433 + 0.00318 · S 6.095 + 0.00428 · S
458	245000	2400	160	300	561	400	220	218	300	S + 186	320	140	2LC0341-2AE	< 378 ≥ 378	362.2 + 0.142 · S 335.9 + 0.222 · S	14.558 + 0.00697 · S 13.153 + 0.01126 · S

Configurable variants¹⁾

- | | |
|-------|---|
| • 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](https://www.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 (n_{krit} in [min⁻¹]; D4 und S in [mm])

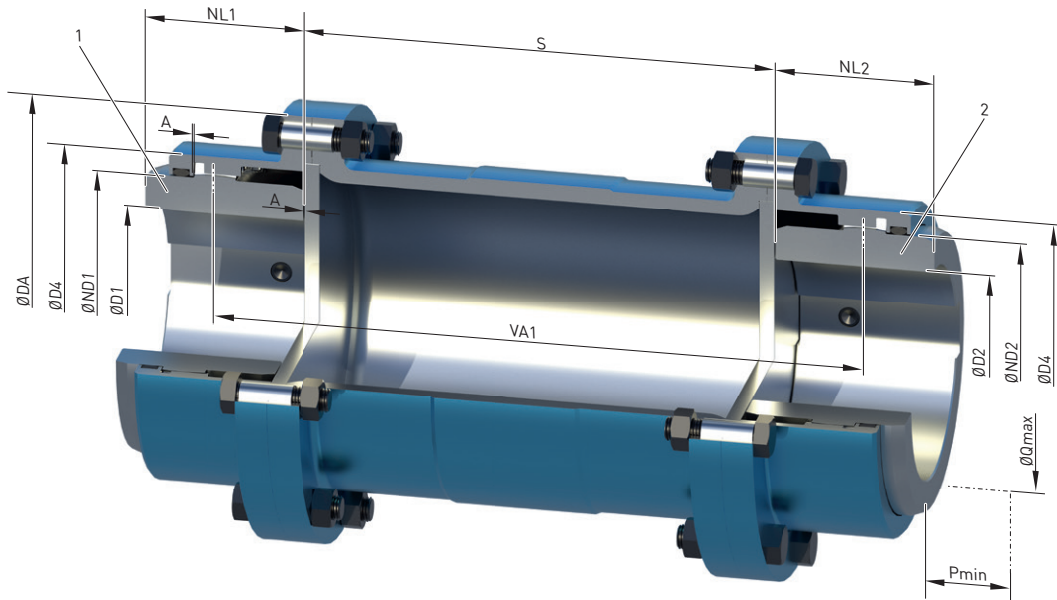
$$n_{krit} = 92.3 \cdot 10^6 \cdot \frac{D4}{S^2}$$

⁴⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.flender.com), click on the item no.

TYPE XNZA



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	S		A	VA1	Q	P		S Ref. ²⁾	m	J
	Nm	rpm	min.	max.				min.	std. ⁵⁾							kg	kgm ²
87	1400	11400	20	50	114	68	43	70	140	0.5	S + 46	52	30	2LC0340-0AG	< 305 ≥ 305	4.295 + 0.007 · S 3.490 + 0.011 · S	0.007 + 0.00001 · 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 ≥ 305	7.760 + 0.011 · S 6.074 + 0.019 · S	0.025 + 0.00003 · 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 ≥ 305	12.990 + 0.016 · S 11.490 + 0.022 · S	0.056 + 0.00006 · 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 ≥ 309	22.580 + 0.021 · S 20.070 + 0.031 · S	0.138 + 0.00012 · 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 ≥ 311	33.660 + 0.036 · S 30.340 + 0.050 · S	0.264 + 0.00029 · 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 ≥ 311	52.880 + 0.039 · S 49.770 + 0.052 · S	0.574 + 0.00042 · S 0.538 + 0.00057 · S
257	42000	4000	50	160	326	218	120	122	250	1	S + 137	175	75	2LC0340-6AG	< 312 ≥ 312	75.620 + 0.046 · S 67.420 + 0.078 · S	1.048 + 0.00072 · S 0.907 + 0.00127 · S
282	57000	3700	80	180	350	243	135	124	250	1	S + 154	195	80	2LC0340-7AG	< 314 ≥ 314	95.900 + 0.062 · S 86.770 + 0.097 · S	1.545 + 0.00115 · S 1.356 + 0.00188 · S
317	78000	3300	90	200	399	267	150	137	250	1	S + 172	220	90	2LC0340-8AG	< 317 ≥ 317	135.500 + 0.077 · S 127.400 + 0.108 · S	2.746 + 0.00181 · S 2.537 + 0.00261 · S
358	110000	3000	110	230	443	307	175	137	300	1	S + 200	250	105	2LC0341-0AG	< 317 ≥ 317	184.100 + 0.094 · S 172.400 + 0.139 · S	4.612 + 0.00284 · S 4.227 + 0.00431 · S
390	138000	2800	120	250	473	335	190	137	300	1	S + 217	275	125	2LC0341-1AG	< 317 ≥ 317	227.800 + 0.089 · S 220.300 + 0.118 · S	6.576 + 0.00318 · S 6.287 + 0.00428 · S
458	245000	2400	160	300	561	400	220	162	300	1	S + 254	320	140	2LC0341-2AG	< 322 ≥ 322	370.100 + 0.142 · S 348.400 + 0.222 · S	14.949 + 0.00697 · S 13.783 + 0.01126 · S

Configurable variants¹⁾

- 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](https://www.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 (n_{krit} in [min-1]; D4 und S in [mm])

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

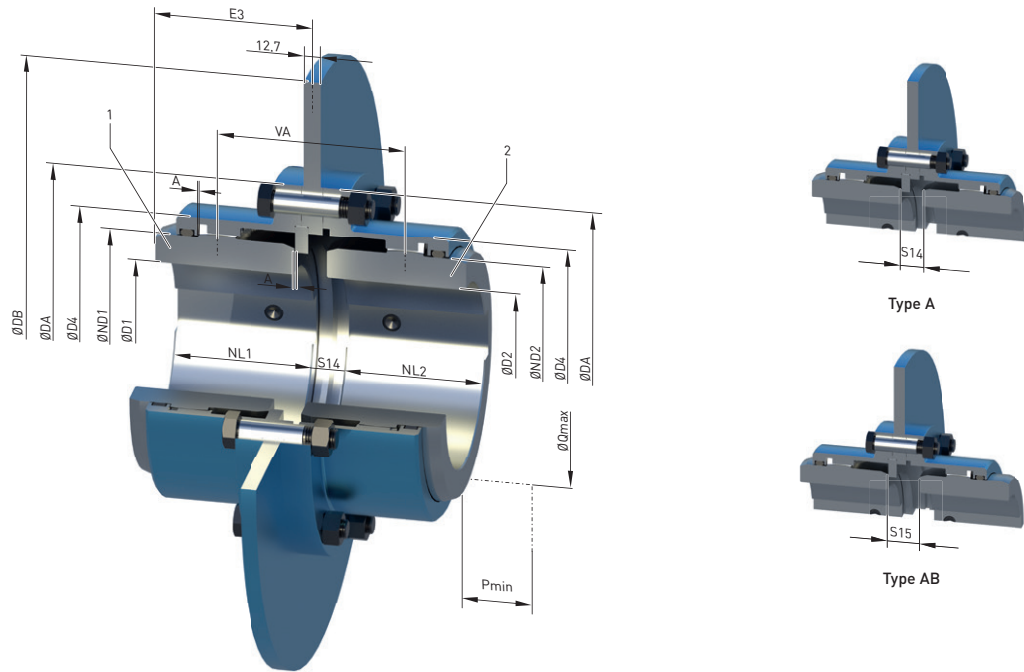
⁴⁾ For angular misalignments ≥ 0.3°, the maximum permissible speed is limited in accordance with the table under "Checking the maximum speed" on [page E/21](#).

⁵⁾ Preferred dimensions for S

➤ For online configuration on [flender.com](https://www.flender.com), click on the item no.

TYPE XNBG

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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.												kgm ²	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
219	27200	3300	40 140	286	188	105	21.5	34.5	0.5	139.5	155	70	514	117	0.85	2LC0340-4AQ	2LC0340-4AR	42.0
		2800											514		0.79	2LC0340-5AQ	2LC0340-5AR	50.2
257	42000	3300	50 160	326	218	120	22	39	1	159	175	75	514	132.5	1.05	2LC0340-5AQ	2LC0340-5AR	54.5
		2800											610		1.72	2LC0340-5AQ	2LC0340-5AR	63.0
282	57000	3300	80 180	350	243	135	24	43	1	178	195	80	514	148.5	1.39	2LC0340-6AQ	2LC0340-6AR	72.7
		2400											610		2.06	2LC0340-6AQ	2LC0340-6AR	81.1
317	78000	3300	90 200	399	267	150	25.5	47.5	1	197.5	220	90	514	165	3.21	2LC0340-6AQ	2LC0340-6AR	91.6
		2800											711		1.75	2LC0340-7AQ	2LC0340-7AR	87.3
358	110000	2800	110 230	443	307	175	25.5	50.5	1	225.5	250	105	610	190	2.43	2LC0340-7AQ	2LC0340-7AR	95.8
		2100											711		3.57	2LC0340-7AQ	2LC0340-7AR	106
358	110000	2800	110 230	443	307	175	25.5	50.5	1	225.5	250	105	812	190	5.33	2LC0340-7AQ	2LC0340-7AR	118
		2100											812		3.24	2LC0340-8AQ	2LC0340-8AR	122
358	110000	2800	110 230	443	307	175	25.5	50.5	1	225.5	250	105	711	165	4.38	2LC0340-8AQ	2LC0340-8AR	133
		2100											812		6.14	2LC0340-8AQ	2LC0340-8AR	146
358	110000	2800	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 variants¹⁾

- 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](https://www.flender.com).

²⁾ For angular misalignments $\geq 0.3^\circ$, 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](https://www.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.

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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

