Stromag Periflex® Shaft Couplings







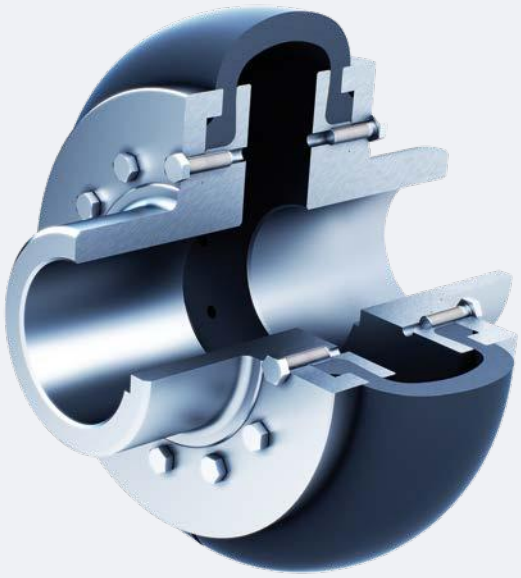


Stromag®
Altra Industrial Motion

Further variants of shaft couplings

PTT and PTS Series

Highly flexible rubber-fabric coupling for compensation of radial, axial and angular misalignments



- PTT -
Stromag Periflex® Top Torque

Standard design with variable hubs for shaft-shaft as well as for flanged shaft etc. connections

Nominal torque from 35 to 20500 Nm

- High torque
- Good value
- Easy assembly
- Quick disassembly
- Stainless steel screws
- ATEX-compliant

- PTS -
Stromag Periflex® Top Torque with taper bush

Short version of the shaft coupling. The taper bushes allow quick and easy assembly and disassembly on a shaft.

Transmittable torque from 130 - 14200 Nm

(depending on the taper bush used and parallel keyway inserted)



All issues containing details on Stromag Periflex® shaft couplings prior to this publication may no longer apply.
We reserve the right to change dimensions and design.
Stromag products meet the quality standard according to DIN ISO 9001.

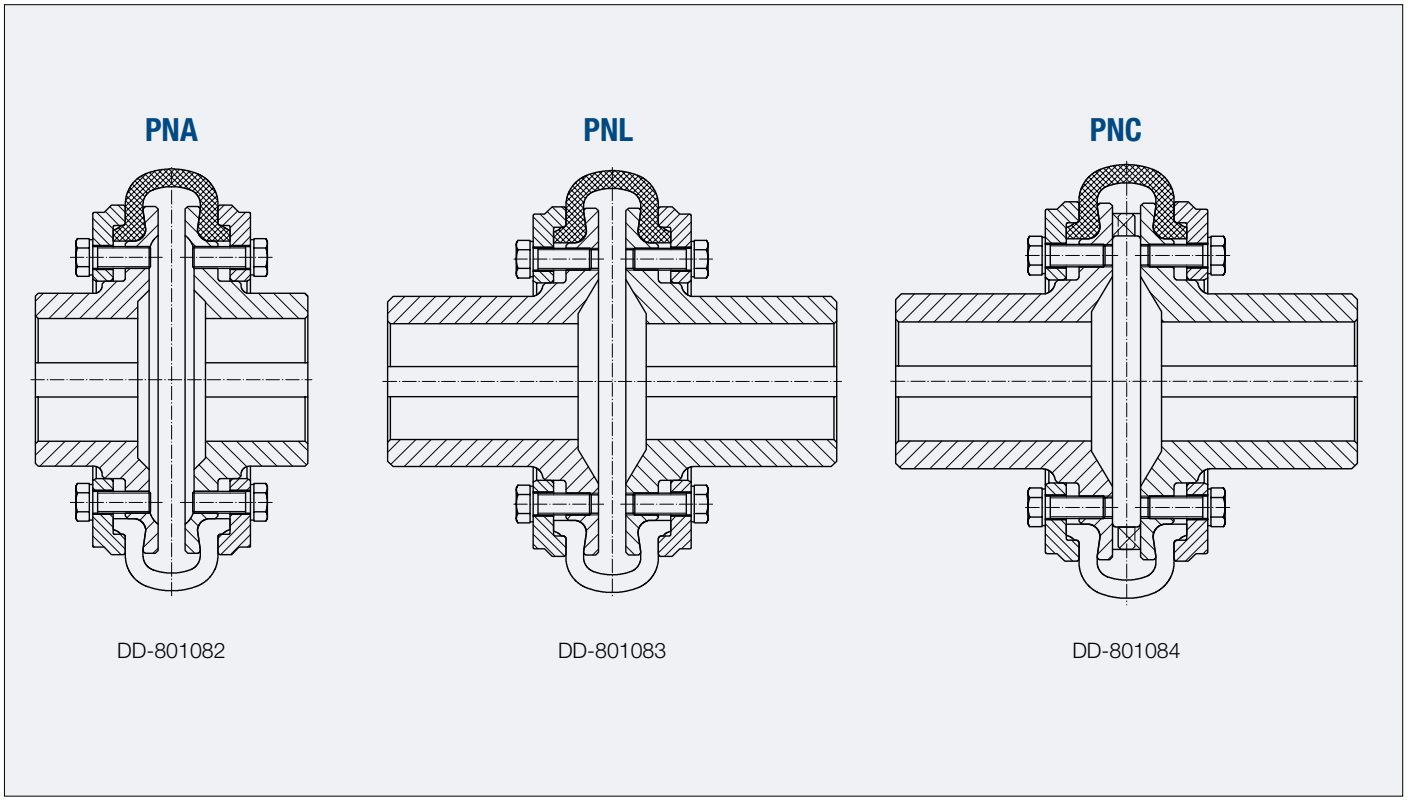
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The Stromag Periflex® shaft coupling concept

The Stromag Periflex® Shaft Coupling is a highly flexible rubber-fabric coupling, particularly suitable for connecting two shafts in diesel engine and electric drives.

The series covers the torque range from 25 to 15000 Nm. Due to the special design of the shaft tyre, the Periflex® shaft coupling is able to absorb extremely large displacements in every direction with low restoring forces, without noticeable wear and tear. As standard, the tyre can be radially mounted and dismantled using a separation joint without moving the connected machines. The Periflex® shaft coupling transmits the torque absolutely free of backlash. It is suitable for absorbing torque shocks and dampens vibrations.



Application fields

The Periflex® shaft coupling is especially suited for use in metallurgical plants, in crane construction as well as for roller table drives. Other areas of application include electrical power units, compressors, the construction machinery industry, crane construction and general mechanical engineering.

Instructions for the designer

The coupling hubs and pressure rings are made of steel and have a corrosion protection layer. The shaft tyre is made of natural rubber with fabric inserts. In the R-tyres, the fabrics are laid in radial alignment and in X-tyres they are diagonal. Different technical properties are achieved by changing the type of fabric arrangement.

The Stromag Periflex® shaft coupling develops a certain axial force under the influence of torque and speed, which must be absorbed by suitable bearings. In order to determine the axial forces that occur, the Stromag technical document "Determining the resulting axial forces F_A" must be requested.

Periflex® shaft couplings can be used in the temperature range from -50°C to +80°C. The flexible element can reach higher temperatures than the ambient temperature as a result of damping work. When covering the coupling with a protective cover, this must be taken into account by ensuring adequate ventilation and heat dissipation.

Flexible couplings usually represent the safety breaking point of a drive train. Overloading the drive train therefore usually leads to failure of the flexible coupling elements. This behaviour is deliberate and protects the entire system from unforeseen damage. Any consequential damage resulting from this safety function of the coupling must be taken into account in advance by the plant designer and monitored or prevented with appropriate measures.

Use in potentially explosive environments

The coupling complies with the requirements of Directive 2014/34/EU and can be used as follows:

Device group II (Above ground application)

- Category 2G (Zone 1) and 3G (Zone 2) in atmospheres with combustible gases, mists and vapours or category 2D (Zone 21) and 3D (Zone 22) in combustible dust-air atmospheres
- Temperature category T4 for gases and vapours or a maximum surface temperature of 120°C for dust
- The ignition protection class of the coupling is "c". This means that the protective measures comply with DIN EN 13463-5 (Protection by constructional safety 'c')

Device group I (underground application up to shaft tyre size 426)

- Category M2 with a high degree of safety: in the event of an explosive atmosphere, the equipment must be able to be switched off via the system

The Periflex® shaft coupling compliance with the requirements for each of these zones/categories is documented in the form of the following codes on our products:

Use in gas atmospheres:	**II 2G c T4**
Use in dust atmospheres:	**II 2D c 120°C**
Use underground:	**I M2**

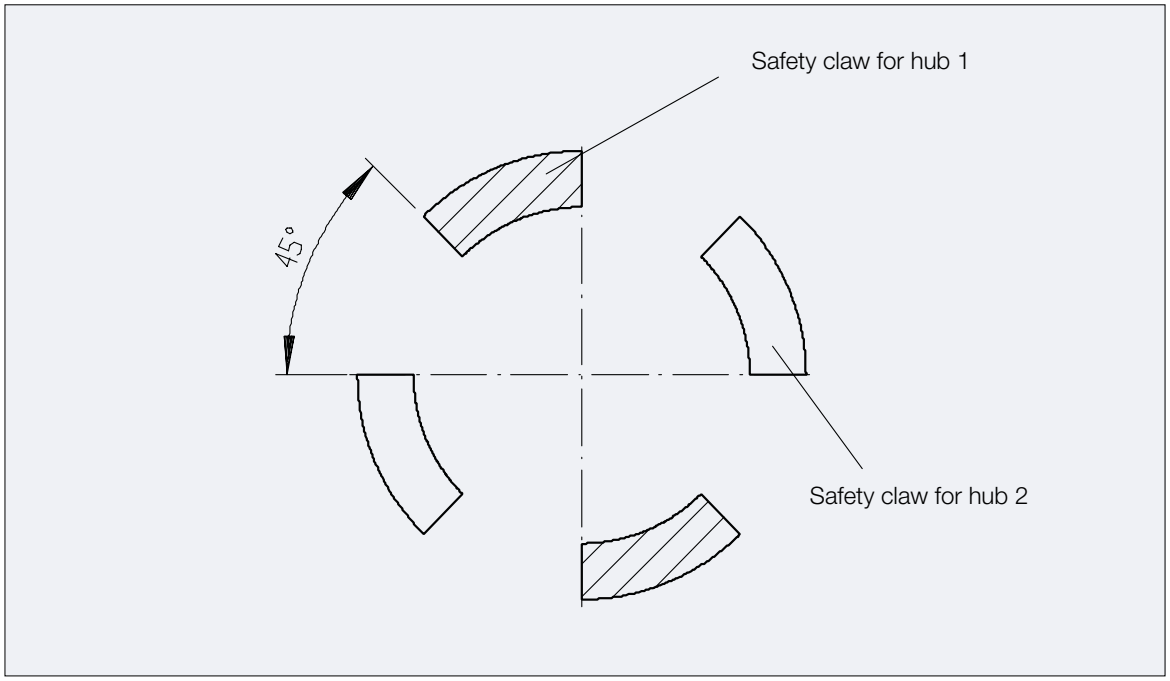
Use in potentially explosive environments must be based on the request form annexed to this catalogue.

Classification rules

For a coupling to be accepted by a classification society, its rules must be observed. The coupling characteristics may differ from the definitions shown in this catalogue. The relevant prepared data sheets are available on request. Some classification societies prescribe fail-safe devices for ship propulsion main engines.

Fail-safe device

The Stromag Periflex® shaft coupling is available with a fail-safe device. A rupture in the flexible element causes claws to intermesh, forming a torsionally rigid, backlash connection between the drive and output sides. Temporary emergency operation is possible with limited torque. The permissible torques and speeds must be calculated separately by means of torsional vibrations transmitted via torsionally rigid structure.



Instructions on choosing the coupling size

Static and dynamic characteristic values are available for Stromag Periflex® shaft couplings. These help you to choose the correct coupling size for the specific drive application.

Versions with R-tyres have a lower torsional stiffness. Couplings with X-tyres are stiffer, but due to diagonally arranged fabric layers they are better suited for reverse operation or shock loads.

The key factors to consider when choosing a Periflex® shaft coupling are the loads from transferred power and torsional vibrations. The value T_{KN} is to be used for stationary operating modes, while T_{Kmax} is to be used for non-stationary operating modes.

When selecting on the basis of the system torque, the application factors f_{ANW} must be taken into account.

Stromag departments can provide support with the design, specifically in calculating the torsional vibrations. We therefore ask you to complete and return the question sheet annexed to this catalogue.

Application factor

If safety factors have not been considered when designing the plant, the following application factors (f_{ANW}) should be considered in the design phase:

Application factor f_{ANW}

I	II	III
1.25	1.5	2.0

To determine the application factor, the driven machines are divided into the following groups:

I. Work machines with uniform power consumption,
such as small machine tools with rotating main movement, small woodworking machines, smal fans, small centrifugal pumps, generators, belt conveyors.

II. Medium-duty work machines with non-uniform power consumption,
such as diesel and gas engines, chain conveyors, crane trolleys, generators, elevators, looms, etc.

III. Heavy-duty machines or with non-uniform power consumption,
such as excavator drives, thrashing machines, heavy drilling rigs, paper calenders, centrifuges.

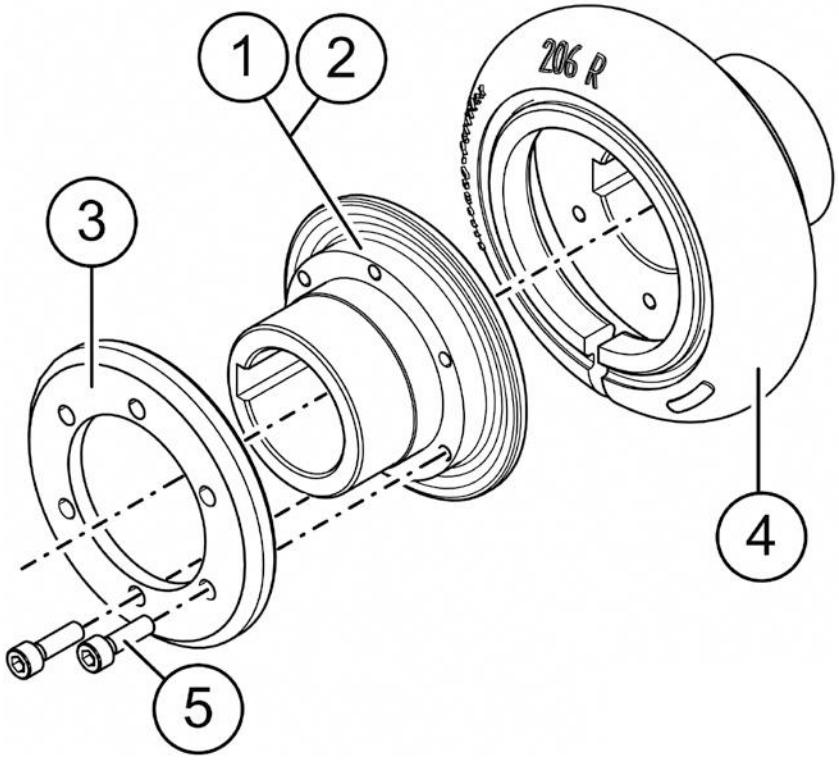
Assembly instructions and scope of delivery

To assemble the Periflex® shaft coupling, mount the hubs (1.2) with pressure rings (3) on the shaft ends and align the system components.

The shaft tyre (4) is mounted on the hubs and secured with pressure rings (3) and screws (5).

The scope of delivery in the standard version includes:

1 = Hub
2 = Hub
3 = Pressure ring
4 = Shaft tyre
5 = Screws



ELAST-0284

Storing flexible rubber elements

Flexible rubber elements retain their properties for several years if stored correctly. It is essential to protect the stored parts from oxygen, ozone, light, heat, moisture and solvents. Solvents, fuels, lubricants, chemicals, acids, disinfectants and similar substances must not be stored in the storage room. The storage temperature should not drop below +10°C and should not exceed +25°C.

All UV light sources are harmful and should be avoided. Ozone-generating devices such as light sources and electric motors must be kept away from the storage location. The relative humidity should not exceed 65%.

Further details can be found in the standards DIN 7716 and ISO 2230.

Assignment of Stromag Periflex® shaft coupling to electric motors

Assignment of Periflex® shaft couplings to three-phase asynchronous motors of gear sizes 56 to 315 with cage rotor according to EN 50347.

Motor size	Motor power at 3000 rpm (2-pole)		Coupling size PNA	Motor power at 1500 rpm (4-pole)		Coupling size PNA	Cylinder shaft end D x L [mm]	
	P [kW]	T [Nm]		P [kW]	T [Nm]		3000 rpm	≤ 1500 rpm
56 M	0.09 0.12	0.3 0.4	1 1	0.06 0.09	0.4 0.6	1 1	9 x 20	
63 M	0.18 0.25	0.6 0.8	1 1	0.12 0.18	0.8 1.2	1 1	11 x 23	
71 M	0.37 0.59	1.2 1.8	1 1	0.25 0.37	1.6 2.4	1 1	14 x 30	
80 M	0.75 1.1	2.4 3.5	1 1	0.55 0.75	3.5 4.8	1 1	19 x 40	
90 S	1.5	4.8	2	1.1	7.0	2	24 x 50	
90 L	2.2	7.0	2	1.5	9.6	2	24 x 50	
100 L	3	9.6	2	2.2 3	14 19	2 2	28 x 60	
112 M	4	13	2	4	25	2	28 x 60	
132 S	5.5 7.5	18 24	6 6	5.5	35	6	38 x 80	
132 M	-	-	-	7.5	48	6	38 x 80	
160 M	11 15	35 48	16 16	11	70	16	42 x 110	
160 L	18.5	59	16	15	96	16	42 x 110	
180 M	22	70	16	18.5	118	16	48 x 110	
180 L	-	-	-	22	140	16	48 x 110	
200 L	30 37	96 118	40 40	30	191	40	55 x 110	
225 S	-	-	-	37	236	40	55 x 110	60 x 140
225 M	45	143	40	45	287	40	55 x 110	60 x 140
250 M	55	175	40	55	350	40	60 x 140	65 x 140
280 S	75	239	40	75	478	63	60 x 140	75 x 140
280 M	75	287	40	90	573	63	60 x 140	75 x 140
315 S	110	350	40	110	700	125	60 x 140	80 x 170
315 M	132	420	63	132	840	125	60 x 140	80 x 170

The assignment takes application factor II into account in normal load cases.

For systems with predominantly periodic excitations, the design must be in accordance with DIN 740 Part 2. Stromag departments can provide support with the design, specifically in calculating the torsional vibrations.

Assignment of Stromag Periflex® shaft couplings to electric motors

Assignment of Periflex® shaft couplings to three-phase asynchronous motors of gear sizes 56 to 315 with cage rotor according to EN 50347.

Motor size	Motor power at 1000 rpm (6-pole)		Coupling size PNA	Motor power at 750 rpm (8-pole)		Coupling size PNA	Cylinder shaft end D x L [mm]	
	P [kW]	T [Nm]		P [kW]	T [Nm]		3000 rpm	≤ 1500 rpm
56 M	-	-	-	-	-	-	9 x 20	
63 M	-	-	-	-	-	-	11 x 23	
71 M	0.25	2.7	1	-	-	-	14 x 30	
80 M	0.37 0.55	3.5 5.3	1 1	-	-	-	19 x 40	
90 S	0.75	7.2	2	0.37	5.3	2	24 x 50	
90 L	1.1	11	2	0.55	7.9	2	24 x 50	
100 L	1.5	14	2	0.75 1.1	10 14	2 2	28 x 60	
112 M	2.2	21	2	1.5	19	2	28 x 60	
132 S	3	29	6	2.2	28	6	38 x 80	
132 M	4 5.5	38 53	6 6	3	38	6	38 x 80	
160 M	7.5	72	16	4 5.5	51 70	16 16	42 x 110	
160 L	11	105	16	7.5	96	16	42 x 110	
180 M	-	-	-	-	-	-	48 x 110	
180 L	15	143	16	11	140	16	48 x 110	
200 L	18.5 22	177 210	40 40	15	191	40	55 x 110	
225 S	-	-	-	18.5	236	40	55 x 110	60 x 140
225 M	30	287	40	22	280	40	55 x 110	60 x 140
250 M	37	353	40	30	382	40	60 x 140	65 x 140
280 S	45	430	63	37	471	63	60 x 140	75 x 140
280 M	55	525	63	45	573	63	60 x 140	75 x 140
315 S	75	716	125	55	700	125	60 x 140	80 x 170
315 M	90	860	125	75	955	125	60 x 140	80 x 170

The assignment takes application factor II into account in normal load cases.

For systems with predominantly periodic excitations, the design must be in accordance with DIN 740 Part 2. Stromag departments can provide support with the design, specifically in calculating the torsional vibrations.

Output table, couplings with R tyres

Coupling size	Tyre	Nominal torque	Max. torque	Admissible alternating torque	Admissible speed	Admissible axial displacement	Axial stiffness
		T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	n_{max} min^{-1}	Δ_{Ka} mm	C_a N/mm 2) 3)
1 R	**201 R**	25	75	2.5	5000	1.0	60
1.6 R **2 R**	**203 R**	35 50	105 150	3.5 5.0	5000	1.0	110
4 R **6 R**	**206 R**	75 100	225 300	10.0 12.5	5000	1.5	130
10 R **16 R**	**210 R**	150 200	450 600	22 31	4000	2.0	120
25 R **40 R**	**214 R**	300 400	900 1200	47 65	4000	2.5	150
50 R **63 R**	**218 R**	600 800	1800 2400	100 145	3000	3.0	160
100 R **125 R**	**222 R**	1200 1600	3600 4800	200 270	3000	3.5	180
160 R **200 R**	**225 R**	2000 2500	6000 7500	340 465	2500	4.5	400
250 R **300 R**	**426 R**	3400 4000	10200 12000	640 770	2300	5.0	340
350 R **400 R**	**828 R**	5400 6000	16200 18000	1000 1230	1800	5.5	250
630 R **800 R**	**1230 R**	9000 10000	27000 30000	1800 2120	1500	6.0	1000
1250 R **1500 R**	**1832 R**	13500 15000	40500 45000	3220 3775	1000	6.0	1800

1) At maximum speed

2) This value must be reduced at coupling temperatures higher than 30°C above the temperature factor (see page 39)

3) Material tolerances up to ± 15% are possible

Admissible radial displacement	Radial stiffness	Admissible angular displacement	Torsional stiffness					Relative damping
Δ_{Kr} mm 1) 2)	C_r N/mm 2) 3)	ΔK_w ° 1) 2)	$C_{T\,dyn}$ Nm/rad 2) 3)					Ψ 3)
			0,0 x T_{KN}	0,25 x T_{KN}	0,5 x T_{KN}	0,75 x T_{KN}	1,0 x T_{KN}	
0.70	60	2.0	350	335	335	340	360	1.2
0.75	120	2.0	910 830	870 780	860 780	870 820	900 900	1.2
1.0	120	2.0	1400 1300	1300 1200	1300 1200	1400 1350	1500 1550	1.2
1.3	110	2.0	2800 2500	2650 2400	2650 2500	2800 2750	3000 3100	1.2
1.6	150	2.0	6500 6000	6200 5700	6100 5800	6300 6000	6700 6400	1.2
2.1	150	2.0	9100 8300	8100 7300	8200 7700	8800 9100	10100 11600	1.2
2.5	200	2.0	18500 16600	16600 15500	17700 17700	20500 23500	25500 33500	1.2
3.0	400	2.0	29000 27000	28000 26000	32000 33000	40000 43000	50000 54000	1.2
3.5	500	2.0	36000 34000	34000 31000	42500 44000	60000 67000	83000 98000	1.2
3.7	400	2.0	37000 35000	34000 32000	44000 44400	64000 68000	91000 101000	1.2
4.2	1200	2.0	51000 49000	48000 45000	61000 64000	89000 94000	120000 128000	1.2
5.2	1500	2.0	163000 160000	157000 155000	162000 162000	174000 176000	192000 198000	1.2

Output table, couplings with X tyres

Coupling size	Tyre	Nominal torque	Max. torque	Admissible alternating torque	Admissible speed	Admissible axial displacement	Axial stiffness
		T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	n_{max} min^{-1}	Δ_{Ka} mm	C_a N/mm 2) 3)
1 X	**201 X**	25	75	2.5	5000	1.0	90
1.6 X **2 X**	**203 X**	35 50	105 150	3.5 5.0	5000	1.0	140
4 X **6 X**	**206 X**	75 100	225 300	10.0 12.5	5000	1.5	150
10 X **16 X**	**210 X**	150 200	450 600	22 31	4000	2.0	150
25 X **40 X**	**414 X**	300 400	900 1200	47 65	4000	2.5	80
50 X **63 X**	**418 X**	600 800	1800 2400	100 145	3000	3.0	80
100 X **125 X**	**422 X**	1200 1600	3600 4800	200 270	3000	3.5	100
160 X **200 X**	**225 X**	2000 2500	6000 7500	340 465	2500	4.5	400
250 X **300 X**	**426 X**	3400 4000	10200 12000	640 770	2300	5.0	400
350 X **400 X**	**828 X**	5400 6000	16200 18000	1000 1230	1800	5.5	300
630 X **800 X**	**1230 X**	9000 10000	27000 30000	1800 2120	1500	6.0	1000
1250 X **1500 X**	**1832 X**	13500 15000	40500 45000	3220 3775	1000	6.0	1800

1) At maximum speed

2) This value must be reduced at coupling temperatures higher than 30°C above the temperature factor (see page 39)

3) Material tolerances up to ± 15% are possible

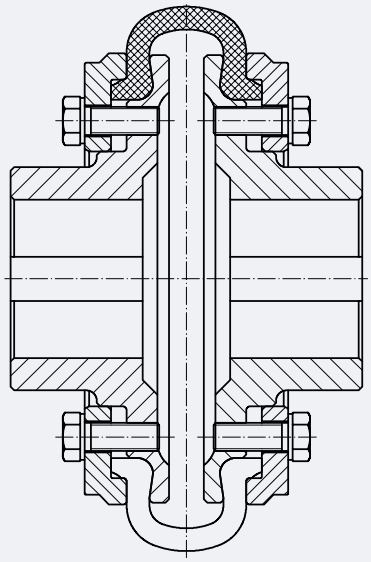
Admissible radial displacement	Radial stiffness	Admissible angular displacement	Torsional stiffness					Relative damping
Δ_{Kr} mm 1) 2)	C_r N/mm 2) 3)	ΔK_w ° 1) 2)	$C_{T\,dyn}$ Nm/rad 2) 3)					Ψ 3)
			0,0 x T_{KN}	0,25 x T_{KN}	0,5 x T_{KN}	0,75 x T_{KN}	1,0 x T_{KN}	
0.70	150	2.0	330	340	430	550	640	1.1
0.75	250	2.0	1400 1300	1500 1400	1600 1500	1700 1550	1800 1750	1.1
1.0	350	2.0	2800 2500	3000 2800	3200 3000	3350 3200	3750 3400	1.1
1.3	300	2.0	5100 4500	6000 5600	6600 6300	7200 6750	7600 7100	1.1
1.6	650	2.0	15000 13500	17000 15500	18000 16700	18600 17500	19000 18000	1.1
2.1	900	2.0	17500 15600	20500 19100	22500 21000	23600 22200	24500 23500	1.1
2.5	900	2.0	27000 24600	33300 32000	39100 38300	44200 43200	47500 45500	1.1
3.0	2500	2.0	76000 68500	88000 83000	98000 93500	105500 100000	109000 100100	1.1
3.5	1650	2.0	94500 90000	105000 105000	112000 107500	117000 111000	118000 112000	1.1
3.7	1800	2.0	106500 101500	99000 95000	103000 100500	116500 116500	136000 140000	1.1
4.2	3500	2.0	175000 168000	162000 154000	161500 153500	168000 163000	180000 179000	1.1
5.2	4000	2.0	380000 400000	360000 365000	358000 362000	375000 380000	405000 410000	1.1

Stromag Periflex® Series

PNA

Standard shaft coupling with short hubs

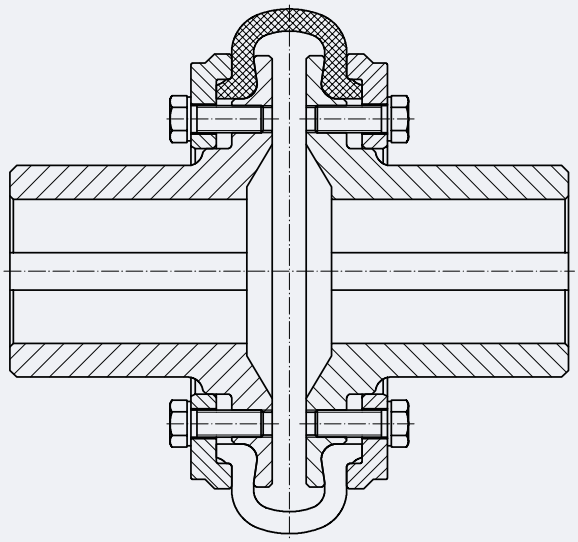
Nominal torque from 25 to 15000 Nm



PNL

Shaft coupling with extended hubs

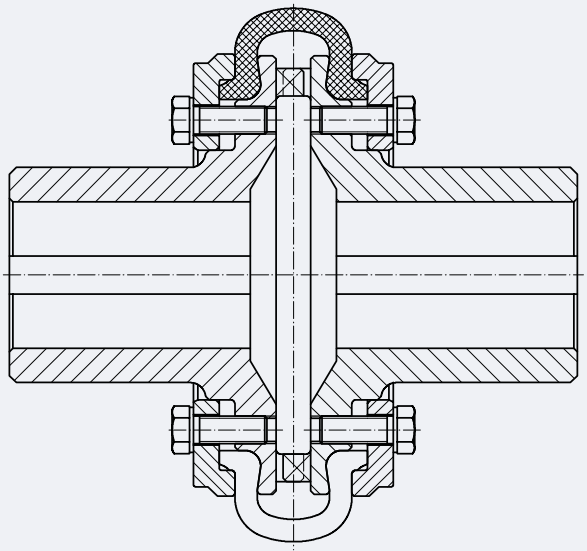
Nominal torque from 35 to 1200 Nm



PNC

Shaft coupling with fail-safe device

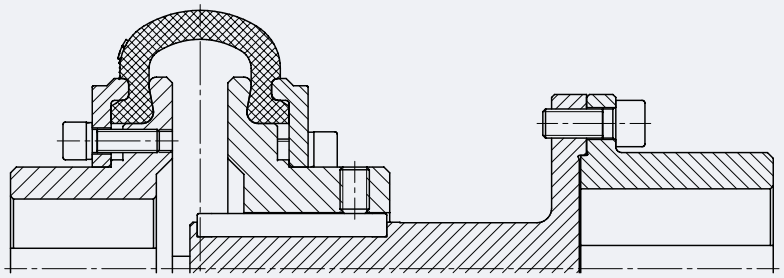
Nominal torque from 35 to 15000 Nm



PNP

Shaft coupling with dismantling part for pump drives

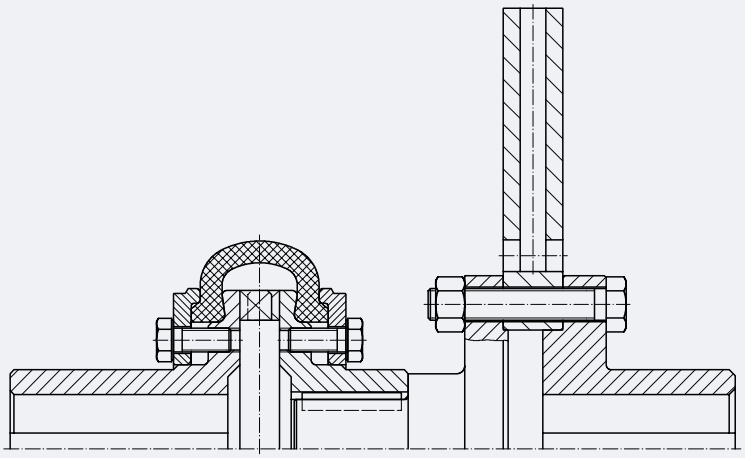
Nominal torque from 25 to 1600 Nm



PND

Shaft coupling with brake disc

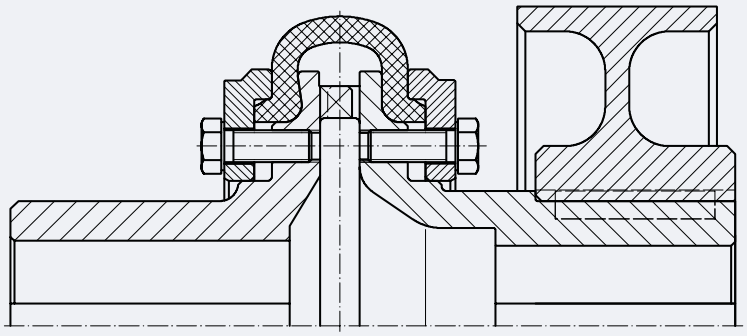
Nominal torque from 300 to 10000 Nm



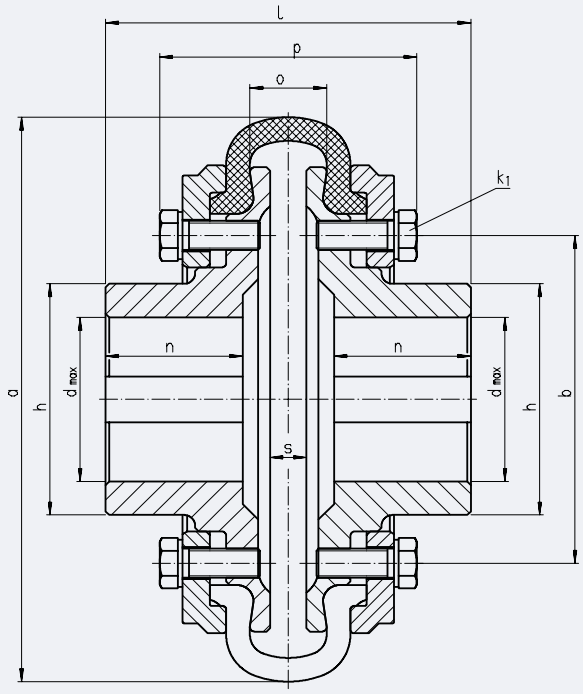
PNB

Shaft coupling with brake drum

Nominal torque from 300 to 10000 Nm



Stromag PNA



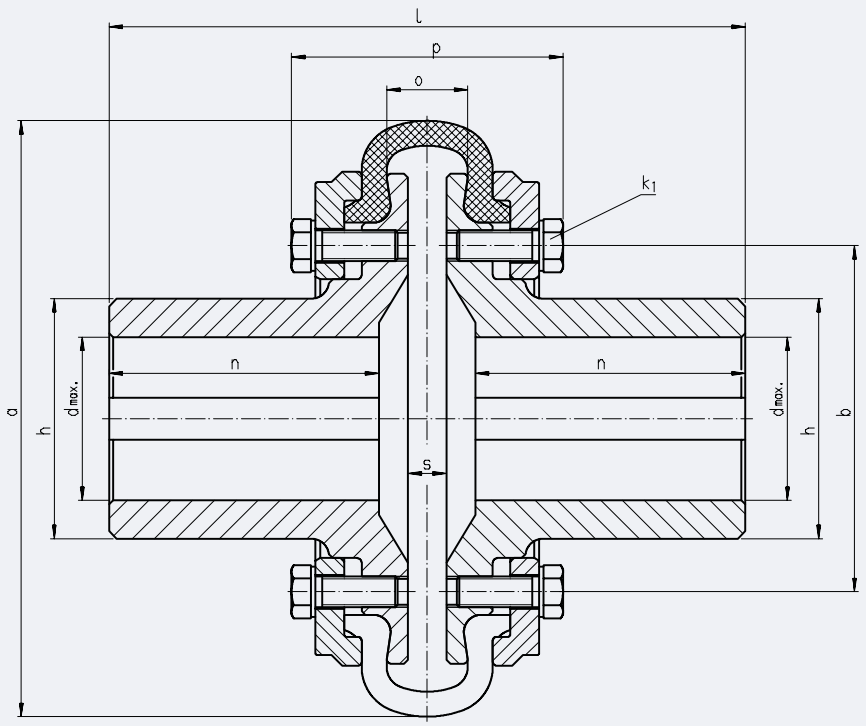
DD-801088

PNA...R Series											
Coupling size	1 R	1.6 R	2 R	4 R	6 R	10 R	16 R	25 R	40 R	50 R	63 R
Tyre	201 R	203 R	203 R	206 R	206 R	210 R	210 R	214 R	214 R	218 R	218 R
PNA...X Series											
Coupling size	1 X	1.6 X	2 X	4 X	6 X	10 X	16 X	25 X	40 X	50 X	63 X
Tyre	201 X	203 X	203 X	206 X	206 X	210 X	210 X	414 X	414 X	418 X	418 X
Nominal torque T_{KN} [Nm]	25	35	50	75	100	150	200	300	400	500	800
Diameter [mm]											
a	86	104	104	136	136	178	178	210	210	263	263
b	43	50	54	65	68	85	88	110	116	140	140
h	31	34	40	44	55	64	70	80	92	95	107
d_{max}	22	24	28	32	38	45	48	55	65	65	75
Screws K_1	4xM5	4xM8	6xM6	6xM8	8xM6	6xM10	8xM8	6xM12	12xM8	8xM12	8xM12
Length [mm]											
l	60	64	70	88	110	125	130	150	160	174	190
n	26	28	30	35	45	47	50	59	65	67	75
o	16	16	16	18	18	35	35	38	38	44	44
$p_{unclamped}$	60	67	67	77	77	103	103	112	112	130	130
s	8	8	8	8	8	19	19	20	20	24	24
Mass moment of inertia J [kgm²]											
J_A side *)	0.00025	0.00050	0.00053	0.00153	0.00185	0.0062	0.0059	0.0153	0.0163	0.0507	0.0531
J_B side *)	0.00025	0.00050	0.00053	0.00153	0.00185	0.0062	0.0059	0.0153	0.0163	0.0507	0.0531
Mass m [kg] *)	0.84	1.10	1.17	2.20	2.50	4.70	5.20	8.32	9.00	16.4	17.0

*) at maximum bore diameter

100 R	125 R	160 R	200 R	250 R	300 R	350 R	400 R	630 R	800 R	1250 R	1500 R
222 R	222 R	225 R	225 R	426 R	426 R	828 R	828 R	1230 R	1230 R	1832 R	1832 R
100 X	125 X	160 X	200 X	250 X	300 X	350 X	400 X	630 X	800 X	1250 X	1500 X
422 X	422 X	225 X	225 X	426 X	426 X	828 X	828 X	1230 X	1230 X	1832 X	1832 X
1200	1600	2000	2500	3400	4000	5400	6000	9000	10000	13500	15000
310	310	370	370	402	402	450	450	550	550	700	700
180	180	235	235	260	260	260	260	280	280	360	360
127	140	150	150	160	160	160	180	183	210	270	260
90	100	100	100	110	110	110	120	130	150	180	180
8xM16	8xM16	8xM16	8xM16	12xM16	12xM16	12xM16	12xM16	12xM20	12xM20	12xM24	12xM24
200	240	215	345	244	364	280	440	360	520	450	640
75	100	85	150	95	155	110	190	130	210	160	255
42	42	46	46	50	50	70	70	120	120	150	150
146	146	159	159	163	163	197	197	296	296	379	379
20	20	22	22	24	24	40	40	90	90	104	104
0.1284	0.1316	0.3222	0.3773	0.4740	0.5410	0.7535	0.8725	1.795	2.022	6.175	6.535
0.1284	0.1316	0.3222	0.3773	0.4740	0.5410	0.7535	0.8725	1.795	2.022	6.175	6.535
28.3	30.0	45.6	63.5	56.5	74.6	78.5	107	130	162	296	366

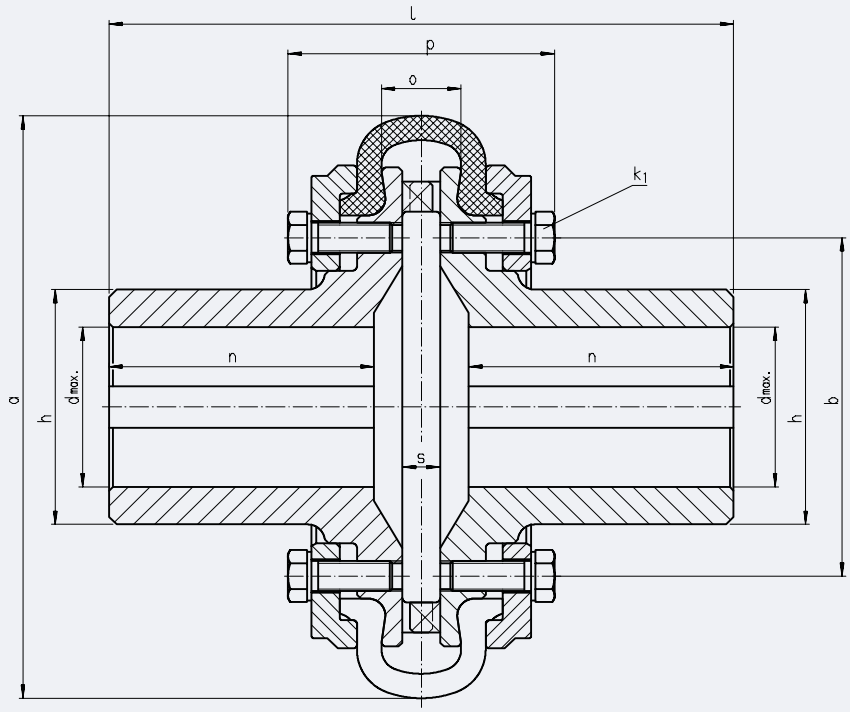
Stromag PNL



PNL...R Series						
Coupling size	1.6 R	4 R	10 R	25 R	50 R	100 R
Tyre	203 R	206 R	210 R	214 R	218 R	222 R
PNL...X Series						
Coupling size	1.6 X	4 X	10 X	25 X	50 X	100 X
Tyre	203 X	206 X	210 X	414 X	418 X	422 X
Nominal torque T_{KN} [Nm]	35	75	150	300	500	1200
Diameter [mm]						
a	104	136	178	210	263	310
b	50	65	85	110	140	180
h	34	48	65	80	95	125
d_{max}	24	34	45	55	65	90
Screws K_1	4xM8	6xM8	6xM10	6xM12	8xM12	8xM16
Length [mm]						
l	88	138	191	252	260	330
n	40	60	80	110	110	140
o	16	18	35	38	44	42
$p_{unclamped}$	67	77	103	112	130	146
s	8	8	19	20	24	20
Mass moment of inertia J [kgm2]						
J_A side *)	0.00051	0.00165	0.0067	0.0168	0.0562	0.1456
J_B side *)	0.00051	0.00165	0.0067	0.0168	0.0562	0.1456
Mass m [kg] *)	1.2	2.6	6.6	12.8	23.0	47.5

*) at maximum bore diameter

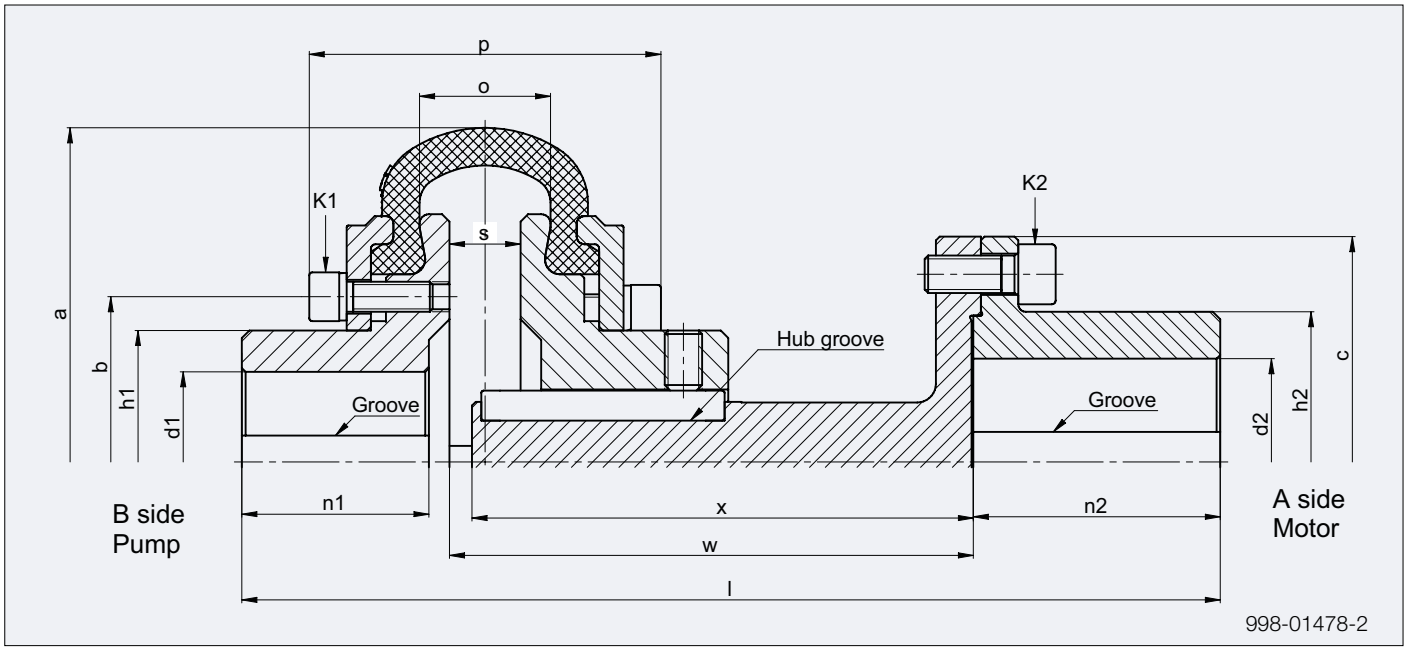
Stromag PNC



PNC...R Series											
Coupling size	1.6 R	4 R	10 R	25 R	50 R	100 R	200 R	300 R	400 R	800 R	1500 R
Tyre	203 R	206 R	210 R	214 R	218 R	222 R	225 R	426 R	828 R	1230 R	1832 R
PNC...X Series											
Coupling size	1.6 X	4 X	10 X	25 X	50 X	100 X	200 X	300 X	400 X	800 X	1500 X
Tyre	203 X	206 X	210 X	414 X	418 X	422 X	225 X	426 X	828 X	1230 X	1832 X
Nominal torque T_{KN} [Nm]	35	75	150	300	500	1200	2500	4000	6000	10000	15000
Diameter [mm]											
a	104	136	178	210	263	310	370	402	450	550	700
b	50	65	85	110	140	180	235	260	260	280	360
h	34	44	64	80	95	127	150	160	180	210	260
d_{max}	24	32	45	55	65	90	100	110	120	150	180
Screws K_1	4xM8	6xM8	6xM10	6xM12	8xM12	8xM16	8xM16	12xM16	12xM16	12xM20	12xM24
Length [mm]											
l	88	138	191	252	260	330	345	364	440	520	640
n	40	60	80	110	110	140	150	155	190	210	255
o	16	18	35	38	44	42	46	50	70	120	150
$p_{unclamped}$	67	77	103	112	130	146	159	163	197	296	359
s	8	8	19	20	24	20	22	24	40	90	104
Mass moment of inertia J [kgm²]											
J_A side *)	0.0004	0.0017	0.0074	0.0179	0.0410	0.1506	0.2503	0.5560	0.9025	2.188	6.935
J_B side *)	0.00054	0.0017	0.0074	0.0179	0.0410	0.1506	0.2503	0.5560	0.9025	2.188	6.935
Mass m [kg] *)	1.25	2.70	6.20	11.1	21.2	38.3	65.0	75.2	109	179	360

*) at maximum bore diameter

Stromag PNP

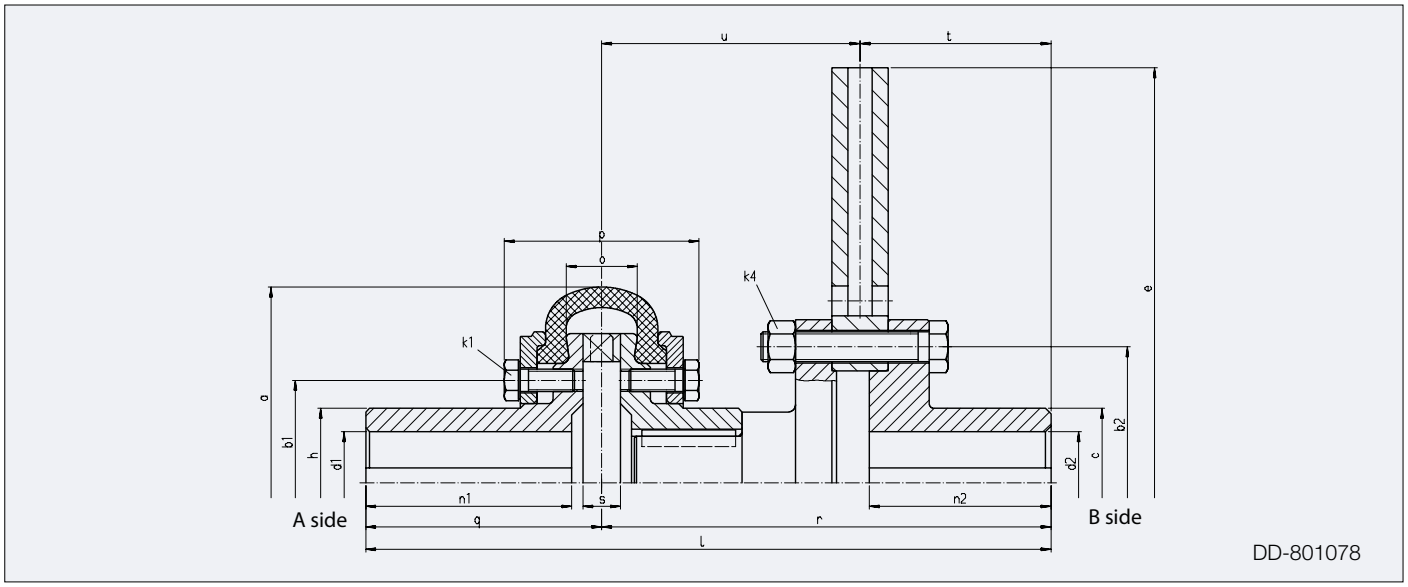


PNP...R Series										
Coupling size	2 R		4 R		6 R		10 R		16 R	
Tyre	203 R		206 R		206 R		210 R		210 R	
PNP...X Series										
Coupling size	2 X		4 X		6 X		10 X		16 X	
Tyre	203 X		206 X		206 X		210 X		210 X	
Design	100	140	100	140	100	140	100	140	100	140
SPN extension	011	012	021	022	021	022	031	032	031	032
Diameter [mm]										
a	104		136		136		178		178	
b	54		65		68		85		88	
c	79		97		97		120		120	
$d_{1\ max}$	28		32		38		45		48	
$d_{2\ max}$	34		45		45		55		55	
h_1	40		44		55		64		70	
h_2	48		65		65		80		80	
Screws K_1	6xM6		6xM8		6xM6		6xM10		8xM8	
Screws K_2	8xM6		8xM8		8xM8		8xM10		8xM10	
Length [mm]										
l	181	221	200	240	211	251	219	259	221.5	261.5
n_1	30	30	35	35	45	45	47	47	50	50
n_2	50	50	60	60	60	60	66	66	66	66
o	16	16	18	18	18	18	35	35	35	35
$p_{unclamped}$	67	67	77	77	77	77	103	103	103	103
s	8	8	8	8	8	8	19	19	19	19
w	100	140	100	140	100	140	100	140	100	140
x	94	134	92	134	92	134	94	134	94	134
Mass moment of inertia J [kgm²]										
J_A side *)	0.0011	0.0011	0.0034	0.0034	0.0036	0.0036	0.0111	0.0111	0.0113	0.0114
J_B side *)	0.0005	0.0005	0.0015	0.0016	0.0016	0.0016	0.0058	0.0059	0.0061	0.0061
Mass m [kg] *)	2.27	2.39	4.26	4.40	4.63	4.88	8.63	8.94	9.00	9.25

*) at maximum bore diameter

25 R			40 R		50 R		63 R		100 R		125 R		
214 R			214 R		218 R		218 R		222 R		222 R		
25 X			40 X		50 X		63 X		100 X		125 X		
414 X			414 X		418 X		418 X		422 X		422 X		
100	140	180	140	180	140	180	140	180	180	250	180	250	350
041	042	043	042	043	051	052	051	052	062	063	062	063	073
210			210		263		263		310		310		310
110			116		140		140		180		180		180
142			142		160		160		218		218		245
55			65		65		75		90		100		100
70			70		80		80		100		100		110
80			92		95		107		127		140		140
100			100		112		112		140		140		168
6xM12			12xM8		8xM12		8xM12		8xM16		8xM16		8xM16
8xM10			8xM10		8xM12		8xM12		10xM16		10xM16		10xM20
240	280	320	285	325	300	340	308	348	375	445	395	465	585
59	59	59	65	65	67	67	75	75	75	75	100	100	100
75	75	75	75	75	85	85	85	85	105	105	105	105	125
38	38	38	38	38	44	44	44	44	42	42	42	42	42
112	112	112	112	112	130	130	130	130	146	146	146	146	146
20	20	20	20	20	24	24	24	24	20	20	20	20	20
100	140	180	140	180	140	180	140	180	180	250	180	250	350
82	122	162	122	162	122	162	122	162	163	233	163	233	333
0.0274	0.0275	0.0276	0.0285	0.0285	0.0760	0.0771	0.0751	0.0752	0.229	0.227	0.230	0.227	0.333
0.0151	0.0151	0.0151	0.0156	0.0156	0.0525	0.0525	0.0508	0.0508	0.131	0.131	0.128	0.128	0.128
14.8	15.3	15.7	15.9	16.3	27.6	28.1	27.5	28.0	52.2	53.2	54.0	55.0	72.0

Stromag PND

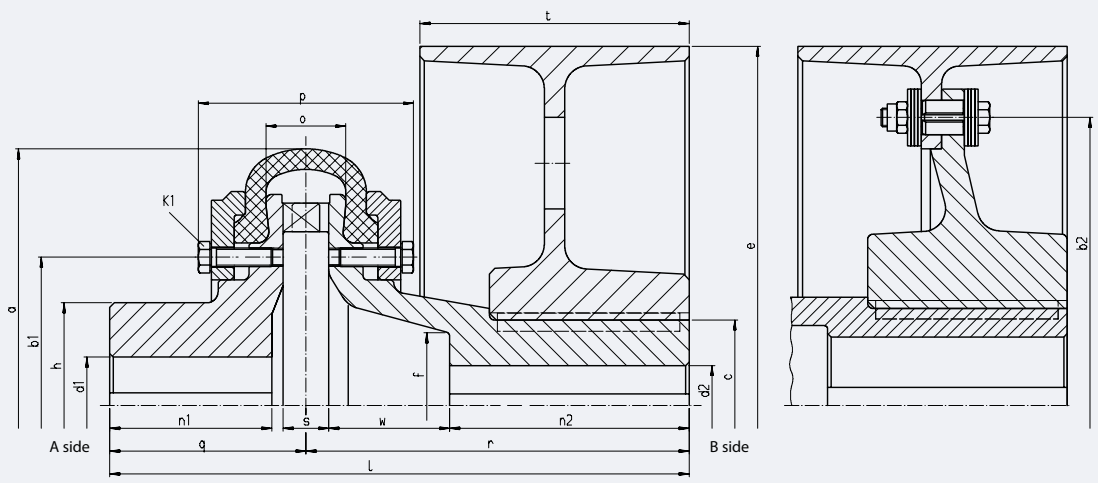


PND...R Series										
Coupling size	25 R		50 R			100 R				
Tyre	214 R		218 R			222 R				
PND...X Series										
Coupling size	25 X		50 X			100 X				
Tyre	414 X		418 X			422 X				
Brake disc Ø [mm]	315	355	315	355	400	355	400	450	500	550
Speed n [min^{-1}]	3000	2500	2700	2500	2400	2500	2400	2100	1900	1800
Diameter [mm]										
a	210	210	263	263	263	310	310	310	310	310
b_1	110	110	140	140	140	180	180	180	180	180
b_2	105	125	105	125	140	125	140	146	190	190
c	80	95	80	95	105	95	105	110	150	150
$d_{1\ max}$	55	55	65	65	65	85	85	85	85	85
$d_{2\ max}$	55	60	50	60	70	60	75	75	100	100
e	315	355	315	355	395	355	395	445	495	550
h	80	80	95	95	95	125	125	125	125	125
Screws K_1	6xM12	6xM12	8xM12	8xM12	8xM12	8xM16	8xM16	8xM16	8xM16	8xM16
Screws K_2	9xM10	9xM12	9xM10	9xM12	9xM14	9xM12	9xM14	12xM16	12xM18	12xM18
Length [mm]										
l	366		393	383		445		478	465	
n_1	110		110	110		140		140	140	
n_2	97		97	97		97		130	130	
o	38		44	44		42		42	42	
$p_{unclamped}$	112		130	130		146		146	146	
q	126		130	130		165		165	165	
r	240		263	253		280		313	300	
s	20		24	24		20		20	20	
t	102		102	102		102		135	135	
u	138		161	151		178		178	165	
Mass moment of inertia J [kgm²]										
J_A side *)	0.0179	0.0179	0.0623	0.0623	0.0623	0.1506	0.1506	0.1506	0.1506	0.1506
J_B side *)	0.1169	0.1847	0.1585	0.2933	0.4158	0.3795	0.4392	0.7266	1.108	1.415
Mass m [kg] *)	27.4	31.4	38.6	42.9	49.2	59.9	66.7	72.8	84.6	90.1

*) at maximum bore diameter

200 R					300 R			400 R			800 R	
225 R					426 R			828 R			1230 R	
200 X					300 X			400 X			800 X	
225 X					426 X			828 X			1230 X	
400	450	500	550	630	500	550	630	630	710	800	710	800
2000	2000	1900	1800	1500	1900	1800	1500	1500	1300	1200	1250	1200
370	370	370	370	370	402	402	402	450	450	450	550	550
235	235	235	235	235	260	260	260	260	260	260	280	280
140	146	190	190	205	190	190	205	205	230	260	230	260
105	110	150	150	150	150	150	150	150	180	200	180	200
100	100	100	100	100	110	110	110	110	110	110	140	140
75	75	100	100	100	100	100	100	100	120	130	120	130
395	445	495	550	625	495	550	625	625	705	795	705	795
150	150	150	150	150	160	160	160	180	180	180	210	210
8xM16	8xM16	8xM16	8xM16	8xM16	12xM16	12xM16	12xM16	12xM16	12xM16	12xM16	12xM20	12xM20
9xM14	12xM16	12xM18	12xM18	12xM20	12xM18	12xM18	12xM20	12xM20	12xM22	12xM24	12xM22	12xM24
467	500			515	622	530		655	575		715	
150	150			150	155	155		190	190		210	
97	130			130	130	130		130	130		130	
46	46			46	50	50		70	70		120	
159	159			159	163	163		197	197		296	
172.5	172.5			172.5	182	182		220	220		260	
294.5	327.5			342.5	440	348		435	355		455	
22	22			22	24	24		40	40		90	
102	135			135	135	135		135	135		135	
192.5	192.5			207.5	305	213		300	220		320	
0.3903	0.3903	0.3903	0.3903	0.3903	0.5560	0.5560	0.5560	0.9030	0.9030	0.9030	2.188	2.188
0.7246	0.9499	1.340	1.827	2.616	1.540	1.814	2.776	3.194	4.610	7.039	5.166	8.384
93.6	99.9	114.6	120.0	139.2	140.7	133.9	152.1	198.2	200.1	233.1	289.7	320.6

Stromag PNB

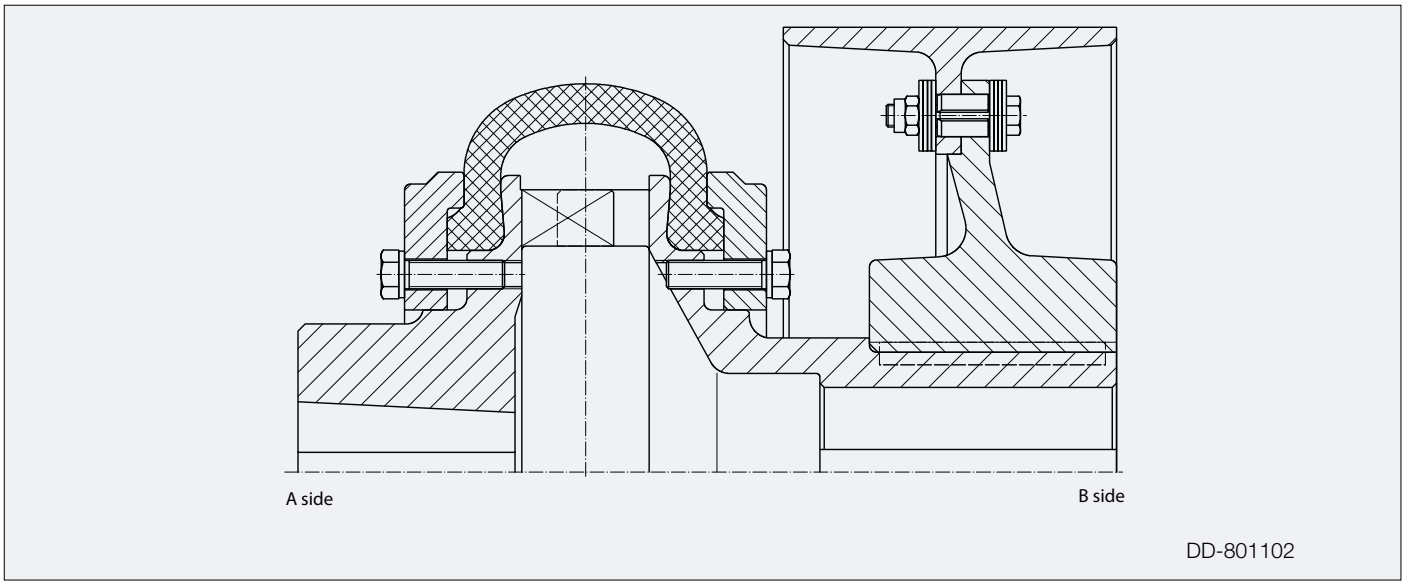


DD-801101

PNB...R Series											
Coupling size	25 R	50 R		100 R	200 R		300 R		400 R	800 R	
Tyre	214 R	218 R		222 R	225 R		426 R		828 R	1230 R	
PNB...X Series											
Coupling size	25 X	50 X		100 X	200 X		300 X		400 X	800 X	
Tyre	414 X	418 X		422 X	225 X		426 X		828 X	1230 X	
Brake drum Ø [mm]	200	200	250	315	315	400	400	500	630	630	710
Speed n [min^{-1}]	3000	2500	2500	2500	2000	2000	2000	2000	1600	1250	1250
Diameter [mm]											
a	210	263	263	310	370	370	402	402	450	550	550
b_1	110	140	140	180	235	235	260	260	260	280	280
b_2	-	-	-	-	-	-	-	-	505	505	505
c	85	85	100	125	140	140	140	140	150	170	170
$d_{1\ max}$	55	65	65	85	100	100	110	110	120	140	140
$d_{2\ max}$	50	50	60	80	90	90	90	90	100	120	120
e	200	200	250	315	315	400	400	500	630	630	710
f	60	70	70	98	105	105	110	110	125	140	140
h	80	95	95	125	150	150	160	160	180	210	210
Screws K_1	6xM12	8xM12		8xM16	8xM16		12xM16		12xM16	12xM20	
Length [mm]											
l	254	267	287	363	378	410	417	447	556	636	665
n_1	110	110	110	140	150	150	155	155	190	210	210
n_2	90	80	100	120	120	130	130	160	210	210	235
o	38	44	44	42	46	46	50	50	70	120	120
$p_{unclamped}$	112	130	130	146	159	159	163	163	197	296	296
q	126	130	130	165	172.5	172.5	182	182	220	260	260
r	128	137	157	198	205.5	237.5	235	265	336	376	405
s	20	24	24	20	22	22	24	24	40	90	90
t	75	75	95	118	118	150	150	190	236	236	265
w	28	45	45	68	74.5	96.5	93	93	106	121	125
Mass moment of inertia J [kgm²]											
J_A side *)	0.0179	0.0623	0.0623	0.1506	0.3903	0.3903	0.5560	0.5560	0.9025	2.188	2.188
J_B side *)	0.0546	0.0937	0.1814	0.4766	0.7063	1.384	1.486	2.746	8.568	9.420	15.87
Mass m [kg] *)	17.3	27.0	35.4	61.6	84.8	109.5	117.0	147.6	269.8	332.3	367.4

*) at maximum bore diameter

48, 53 and 50 Series

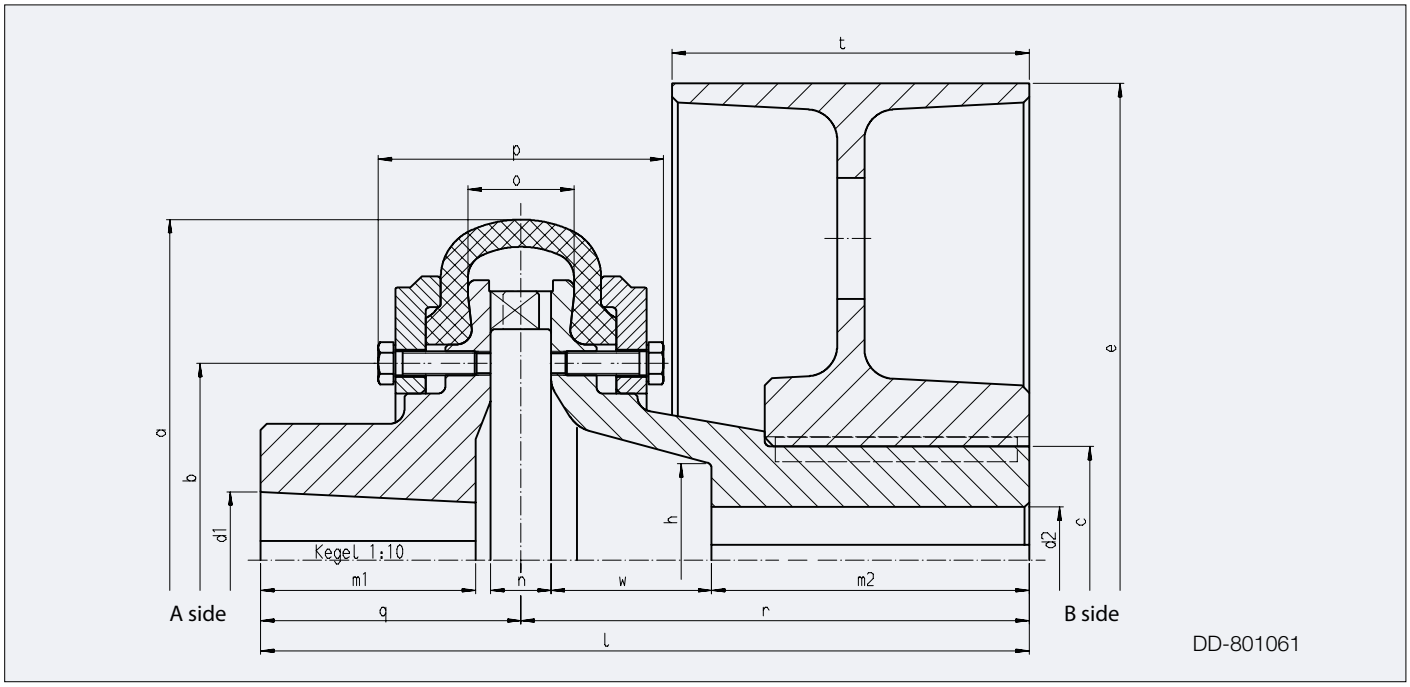


Shaft couplings in accordance with the standards of the metallurgical plants for double-cheek brakes according to DIN 15435.

Nominal torque from 220 to 8500 Nm.

The vertical mounting and dismounting of the motor or gear unit is possible after loosening the shaft tyre without lateral displacement of the motor and gear unit.

48 Series

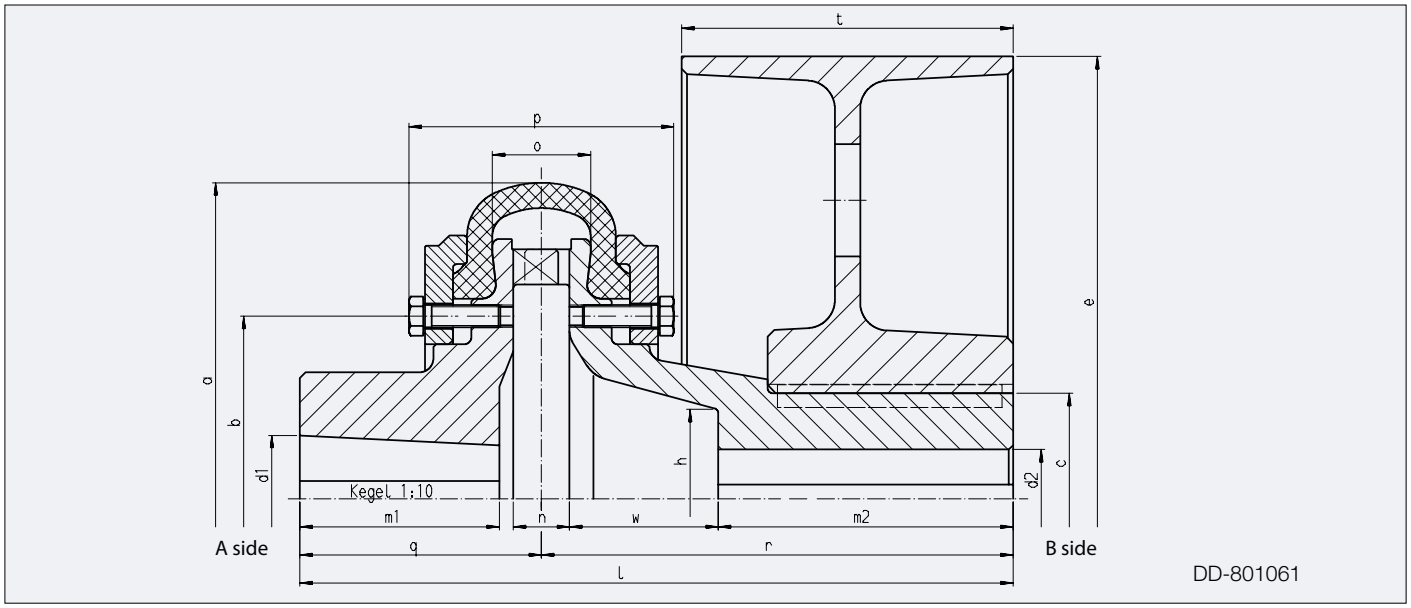


Coupling size		14k-200 -48	18k-200 -48	18k-250 -48	22k-315 -48	22k-315 -48	22k-315 -48	25k-315 -48	25k-400 -48
Tyre		214 R	218 R	218 R	222 R	222 R	222 R	225 R	225 R
Nominal torque T_{KN}	[Nm]	220	450	450	900	900	900	1600	1600
Max. speed n_{max}	rpm	3000	2500	2500	2500	2500	2500	2000	2000
Mass moment of inertia J	[kgm²]	0.075	0.143	0.240	0.575	0.575	0.575	0.925	1.55
Mass m	[kg]	19	28	36	63	63	63	83	108
Motor									
Motor type HDAS		4/6	7.5/6	11/6	15/6	15/8	22/6	22/8	30/6
Power P at 40%ED	[kW]	4	7.5	11	15	15	22	22	30
Speed n	rpm	1000	1000	1000	1000	750	1000	750	1000
Mass moment of inertia J	[kgm²]	0.09	0.20	0.30	0.50	0.75	0.75	1.05	1.05
Diameter	**[mm]**								
a		210	263	263	310	310	310	370	370
b		110	140	140	180	180	180	235	235
c		85	85	100	125	125	125	140	140
d^1		32 *)	40 *)	44.6	49.6	54.5	54.5	59.5	59.5
$d_{1\ max}$		50	50	65	75	75	75	90	90
$d_{2\ max}$		50	50	60	80	80	80	90	90
e		200	200	250	315	315	315	315	400
h		60	70	70	98	98	98	105	105
Length	**[mm]**								
l		213	235	255	298	298	298	338	370
m_1		90	102	84.5	84.5	84.5	84.5	107.5	107.5
m_2		90	80	100	120	120	120	120	130
n		20	24	24	20	20	20	22	22
o		38	44	44	42	42	42	46	46
$p_{unclamped}$		112	130	130	146	146	146	159	159
q		85	98	98	100	100	100	132.5	132.5
r		128	137	157	198	198	198	205.5	237.5
t		75	75	95	118	118	118	118	150
w		28	45	45	68	68	68	74.5	96.5

*) Cylindrical bore

25k-400 -48	26k-400 -48	26k-400 -48	26k-500 -48	26k-500 -48	26k-500 -48	28k-630 -48	28k-630 -48	28k-630 -48	30k-630 -48	30k-710 -48
225 R	426 R	426 R	426 R	426 R	426 R	828 R	828 R	828 R	1230 R	1230 R
1600	3000	3000	3000	3000	3000	5000	5000	5000	8500	8500
2000	2000	2000	2000	2000	2000	1600	1600	1600	1250	1250
1.55	1.85	1.85	3.10	3.10	3.10	8.50	8.50	8.50	9.00	15.25
108	118	118	150	150	150	225	225	225	260	340
30/8	30/10	38/8	38/10	50/8	50/10	63/8	63/10	80/10	100/10	125/10
30	30	38	38	50	50	63	63	80	100	125
750	600	750	600	750	600	750	600	600	600	600
1.40	1.85	1.85	2.50	2.50	3.50	3.50	4.50	6.00	8.00	10.75
370	402	402	402	402	402	450	450	450	550	550
235	260	260	260	260	260	260	260	260	280	280
140	140	140	140	140	140	150	150	150	170	170
69.5	69.5	69.5	79.4	79.4	79.4	79.4	89.4	89.4	99.4	104.3
90	105	105	110	110	110	100	100	100	125	125
90	90	90	90	90	90	100	100	100	120	120
400	400	400	500	500	500	630	630	630	630	710
105	110	110	110	110	110	125	125	125	140	140
370	398	398	443	443	443	506	521	521	556	595
108	123	123	133	133	133	133	143	143	153.5	163.5
130	130	130	160	160	160	210	210	210	210	235
22	24	24	24	24	24	40	40	40	90	90
46	50	50	50	50	50	70	70	70	120	120
159	163	163	163	163	163	197	197	197	296	296
132.5	163	163	178	178	178	170	185	185	180	190
237.5	235	235	265	265	265	336	336	336	376	405
150	150	150	190	190	190	236	236	236	236	265
96.5	93	93	93	93	93	106	106	106	121	125

53 Series



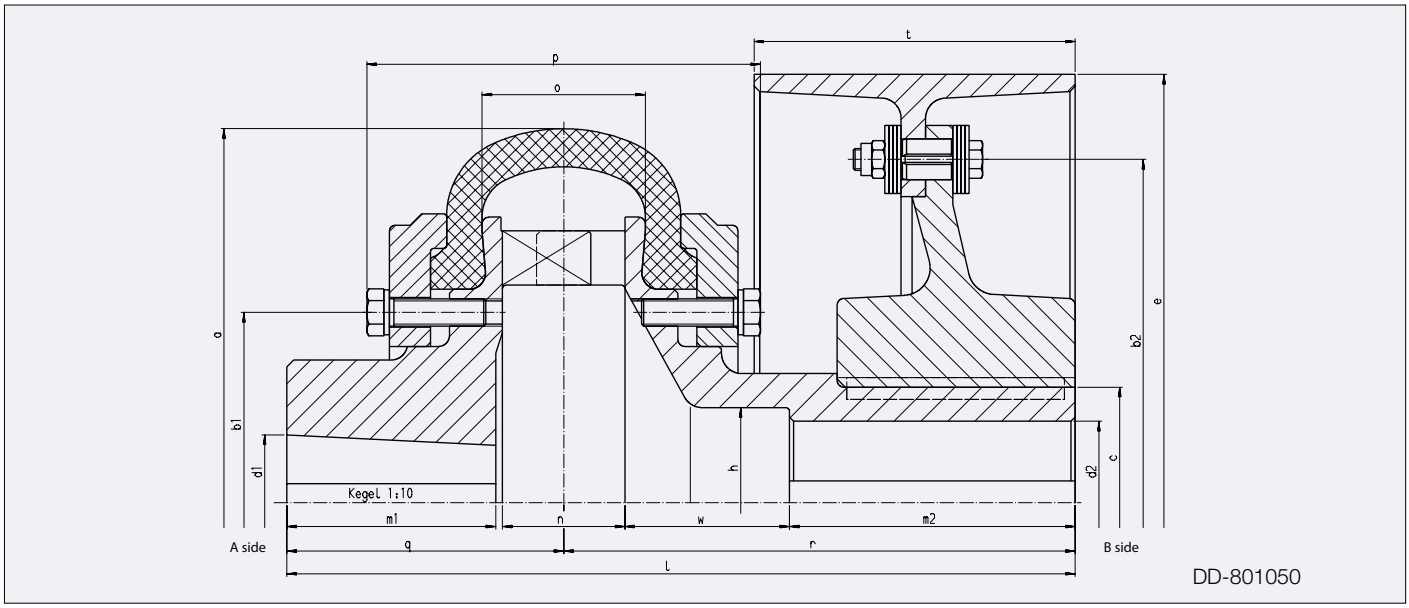
Coupling size		14k-200 -53	18k-200 -53	18k-250 -53	22k-315 -53	22k-315 -53	25k-400 -53	25k-400 -53	25k-400 -53	26k-500 -53
Tyre		214 R	218 R	218 R	222 R	222 R	225 R	225 R	225 R	426 R
Nominal torque T_{KN}	[Nm]	220	450	450	900	900	1600	1600	1600	3000
Max. speed n_{max}	rpm	3000	2500	2500	2500	2500	2000	2000	2000	2000
Mass moment of inertia J	[kgm²]	0.075	0.143	0.245	0.575	0.575	1.550	1.55	1.55	3.10
Mass m	[kg]	19	28	37	63	63	108	108	108	150
Motor										
Motor type HDAS		4.5/6	7/6	10/6	14.5/6	20/6	30/6	30/8	37/8	50/8
Power P at 40%ED	[kW]	4.5	7	10	14.5	20	30	30	37	50
Speed n	rpm	1000	1000	1000	1000	1000	1000	750	750	750
Mass moment of inertia J	[kgm²]	0.063	0.145	0.194	0.328	0.538	0.900	1.35	1.68	2.50
Diameter	[mm]									
a		210	263	263	310	310	370	370	370	402
b		110	140	140	180	180	235	235	235	260
c		85	85	100	125	125	140	140	140	140
d_1		38 *)	42 *)	42 *)	47.5	54.5	59.5	69.5	69.5	79.4
$d_{1\,max}$		50	65	65	75	75	100	100	100	100
$d_{2\,max}$		50	50	60	80	80	90	90	90	90
e		200	200	250	315	315	400	400	400	500
h		60	70	70	98	98	105	105	105	110
Length	[mm]									
l		213	267	287	298	298	370	370	370	443
m_1		90	110	110	84.5	84.5	107.5	108	108	133
m_2		90	80	100	120	120	130	130	130	160
n		20	24	24	20	20	22	22	22	24
o		38	44	44	42	42	46	46	46	50
$p_{unclamped}$		112	130	130	146	146	159	159	159	163
q		85	130	130	100	100	132.5	132.5	132.5	178
r		128	137	157	198	198	237.5	237.5	237.5	265
t		75	75	95	118	118	150	150	150	190
w		28	45	45	68	68	96.5	96.5	96.5	93

*) Cylindrical bore

Coupling size		28k-630 -53	28k-630 -53	28k-630 -53	28k-630 -53	30k-630 -53	30k-710 -53	30k-710 -53
Tyre		828 R	828 R	828 R	828 R	1230 R	1230 R	1230 R
Nominal torque T_{KN}	[Nm]	5000	5000	5000	5000	8500	8500	8500
Max. speed n_{max}	rpm	1600	1600	1600	1600	1250	1250	1250
Mass moment of inertia J	[kgm²]	8.50	8.50	8.50	8.50	9.50	15.25	15.25
Mass m	[kg]	225	225	225	225	260	340	340
Motor								
Motor type HDAS		63/8	80/8	60/10	75/10	100/10	125/10	160/10
Power P at 40%ED	[kW]	63	80	60	75	100	125	160
Speed n	rpm	750	75	600	600	600	600	600
Mass moment of inertia J	[kgm²]	3.05	4.63	5.15	6.00	8.75	11.00	15.50
Diameter	[mm]							
a		450	450	450	450	550	550	550
b_1		260	260	260	260	280	280	280
b_2		505	505	505	505	505	505	505
c		150	150	150	150	170	170	170
d_1		79.4	89.4	89.4	89.4	99.4	99.4	109.3
$d_{1\,max}$		90	100	100	100	125	125	125
$d_{2\,max}$		100	100	100	100	120	120	120
e		630	630	630	630	630	710	710
h		145	145	145	145	140	140	140
Length	[mm]							
l		506	506	506	506	566	595	595
m_1		133	133	133	133	168	168	168
m_2		210	210	210	210	210	235	235
n		40	40	40	40	90	90	90
o		70	70	70	70	120	120	120
$p_{unclamped}$		197	197	197	197	296	296	296
q		170	170	170	170	190	190	190
r		336	336	336	336	376	405	405
t		236	236	236	236	236	265	265
w		106	106	106	106	121	125	125

*) Cylindrical bore

50 Series



Coupling size		28k-630 -50	28k-630 -50	28k-630 -50	30k-630 -50	30k-710 -50
Tyre		828 R	828 R	828 R	1230 R	1230 R
Nominal torque T_{KN}	[Nm]	5000	5000	5000	8500	8500
Max. speed n_{max}	rpm	1600	1600	1600	1250	1250
Mass moment of inertia J	[kgm²]	8.50	8.50	8.50	9.00	15.25
Mass m	[kg]	225	225	225	260	340
Motor						
Motor type HDAS		63/8	63/10	80/10	100/10	125/10
Power P at 40%ED	[kW]	63	63	80	100	125
Speed n	rpm	750	600	600	600	600
Mass moment of inertia J	[kgm²]	3.50	4.50	6.00	8.00	10.75
Diameter	**[mm]**					
a		450	450	450	550	550
b_1		260	260	260	280	280
b_2		505	505	505	505	505
c		150	150	150	170	170
d_1		79.4	89.4	89.4	99.4	104.3
$d_{1\ max}$		90	100	100	125	125
$d_{2\ max}$		100	100	100	120	120
e		630	630	630	630	710
h		145	145	145	140	140
Length	**[mm]**					
l		506	521	521	556	595
m_1		133	143	143	153.5	163.5
m_2		210	210	210	206	235
n		40	40	40	90	90
o		70	70	70	120	120
$p_{unclamped}$		197	197	197	296	296
q		170	185	185	180	190
r		336	336	336	376	405
t		236	236	236	236	265
w		106	106	106	125	125

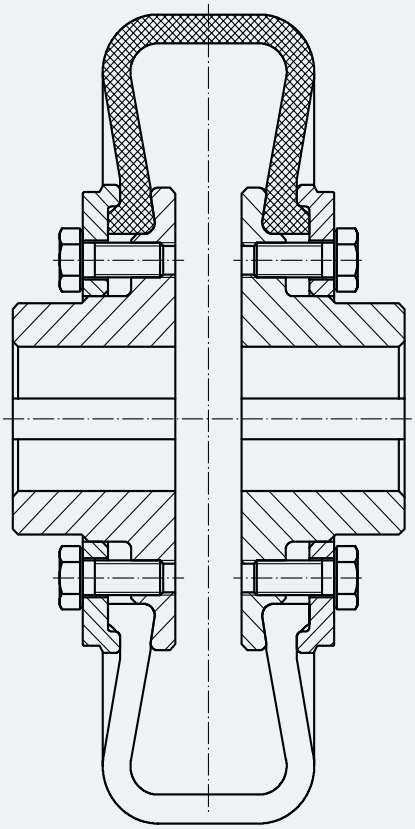
*) Cylindrical bore

Stromag Periflex®, further series

PNE

Coupling with S-shaft tyres for particularly large axial, radial and angular displacements

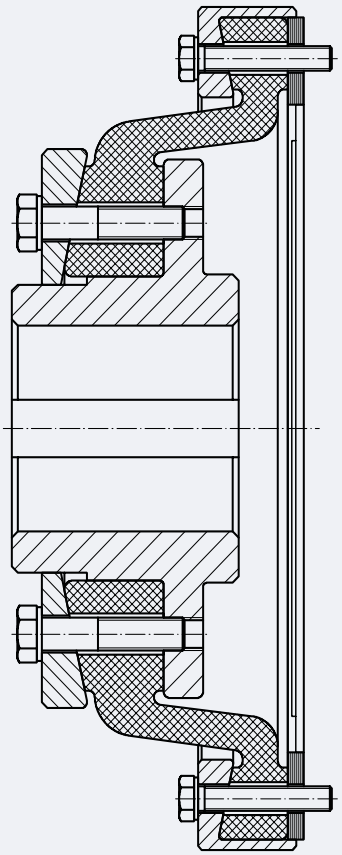
Nominal torque from 20 to 600 Nm



PFS

Coupling with flange tyres for connecting a flange connection to a shaft end

Nominal torque from 200 to 4000 Nm



PNE output table

Coupling size	Tyre	Nominal torque	Max. torque	Admissible alternating torque	Admissible speed	Admissible axial displacement	Axial stiffness
		T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	n_{max} rpm	ΔK_a mm	C_a N/mm 2) 3)
03	203 S	20	40	3.5	3500	6	15
06	206 S	40	80	6.5	3500	6	18
10	210 S	65	130	10.5	2000	8	13
14	214 S	150	300	25.0	2000	8	15
16	216 S	225	450	37.5	2000	8	36
20	220 S	350	700	58.0	2000	8	55
22	222 S	600	1200	100	1000	8	75

1) At maximum speed
2) This value must be reduced at coupling temperatures higher than 30°C by the temperature factor (see page 39)
3) Material tolerances up to ± 15% are possible

PFS output table

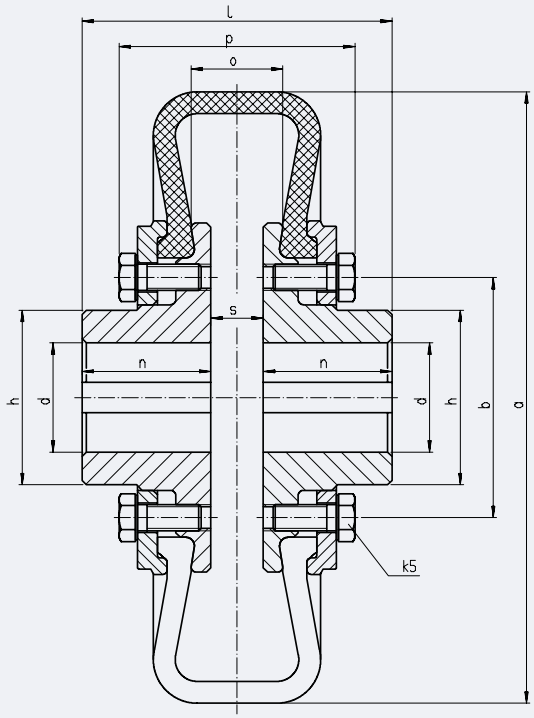
Coupling size	Tyre	Nominal torque	Max. torque	Admissible alternating torque	Admissible speed	Admissible axial displacement
		T_{KN} Nm	T_{Kmax} Nm	T_{KW} Nm	n_{max} rpm	ΔK_a mm
08	F 408	200	500	31	3600	0.3
10	F 410	600	1500	100	3000	0.5
14	F 614	800	2000	135	3000	0.6
18	F 618	2000	5000	465	2000	1.0
22	F 822	4000	10000	770	1800	1.5

1) At maximum speed
2) This value must be reduced at coupling temperatures higher than 30°C by the temperature factor (see page 39)
3) Material tolerances up to ± 15% are possible

Admissible radial displacement	Radial stiffness	Admissible angular displacement	Torsional stiffness					Relative damping
ΔK_r mm 1) 2)	C_r N/mm 2) 3)	ΔKw ° 1) 2)	$C_{T\,dyn}$ Nm/rad 2) 3)					ψ 3)
			0,0 x T_{KN}	0,25 x T_{KN}	0,5 x T_{KN}	0,75 x T_{KN}	1,0 x T_{KN}	
1.0	150	3	560	540	535	550	560	1.06
1.3	200	3	1300	1220	1200	1150	1200	1.06
1.6	200	3	1800	1700	1670	1700	1750	1.06
2.0	300	3	3500	3400	3350	3450	3550	1.06
2.3	300	3	8600	8200	8000	7800	7750	1.06
2.3	500	3	9900	9300	9900	8850	9000	1.06
2.8	1300	3	16300	15700	15300	15400	15650	1.06

Axial stiffness	Admissible radial displacement	Radial stiffness	Admissible angular displacement	Torsional stiffness	Relative damping
C_a N/mm 2) 3)	ΔK_r mm 1) 2)	C_r N/mm 2) 3)	ΔKw ° 1) 2)	$C_{T\,dyn}$ Nm/rad 2) 3)	Ψ 3)
600	0.15	600	2	1800	0.9
800	0.25	750	2	4400	0.9
800	0.25	1100	2	8500	0.9
1100	0.50	1300	2	11500	0.9
1500	0.50	2200	2	23000	0.9

PNE Series

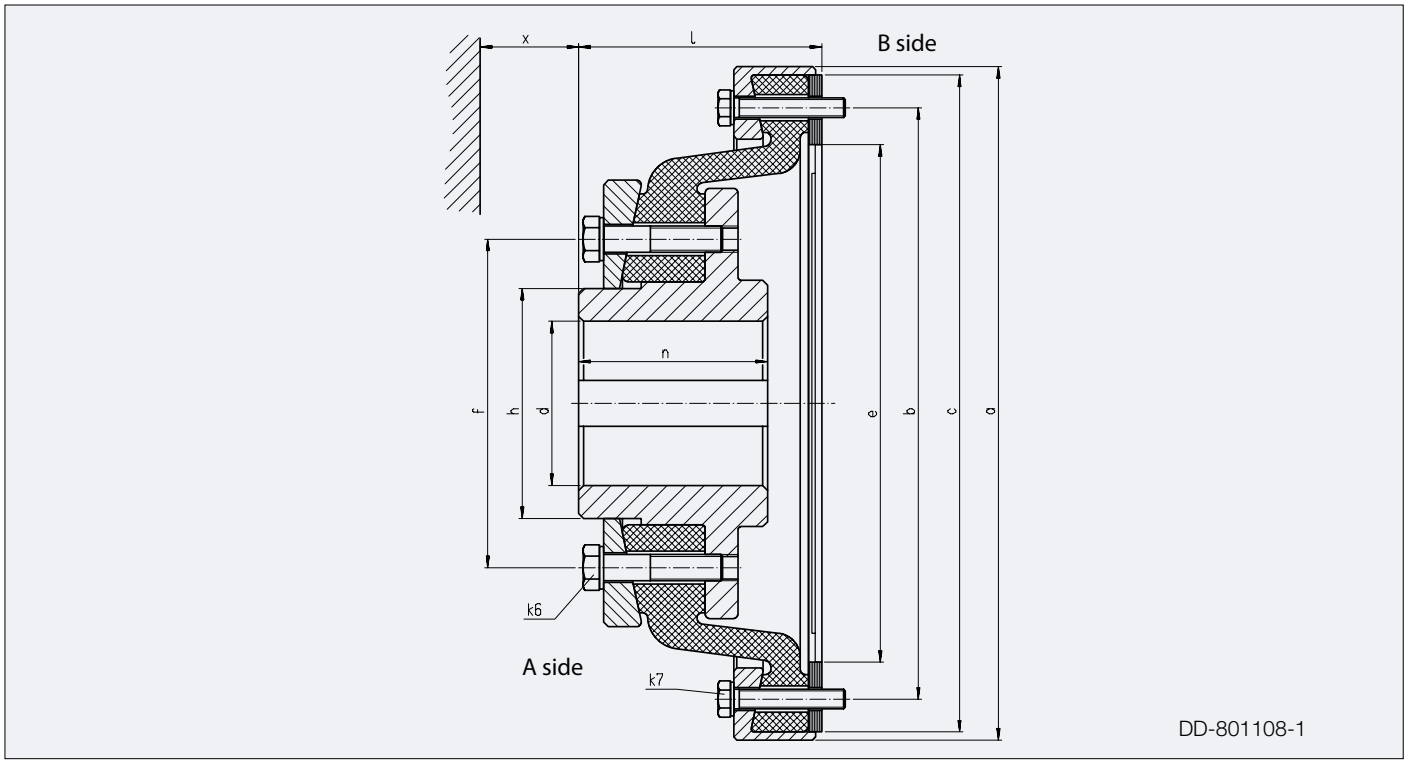


DD-801110

Coupling size	03	06	10	14	16	20 **)	22 **)
Tyre	203 S	206 S	210 S	214 S	216 S	220 S	222 S
Nominal torque T_{KN} [Nm]	20	40	65	150	225	350	600
Diameter [mm]							
a	134	172	222	280	330	376	400
a ***)	145	190	242	305	357	406	420
b	50	65	85	110	110	140	180
d_{max}	22	32	38	55	55	65	75
h	34	44	54	80	80	95	110
Screws K_5	4xM8	6xM8	6xM10	6xM12	8xM12	8xM12	8xM16
Length [mm]							
l	65	92	117	142	178	207	233
n	28	35	47	59	80	110	110
o	17	22	27	42	45	48	48
$p_{unclamped}$	64	77	95	116	129	146	168
s	9	12	11	24	27	18	18
Mass moment of inertia J [kgm²]							
J_A side *)	0.00058	0.00853	0.0343	0.0212	0.0402	0.0934	0.1802
J_B side *)	0.00058	0.00853	0.0343	0.0212	0.0402	0.0934	0.1802
Mass m [kg] *)	1.2	2.2	5.1	9.8	13.9	24.5	38.3

*) at maximum bore diameter
**) design may differ from graphic representation
***) At maximum speed

PFS Series



Coupling size	08	10	14	18	22
Tyre	**F 408**	**F 410**	**F 614**	**F 618**	**F 822**
Nominal torque T_{KN} [Nm]	200	600	800	2000	4000
Diameter [mm]					
a	235	270	310	360	410
b	195	228	265	310	360
c	225	260	300	350	400
d_{max}	48	60	80	90	100
e	170	195	220	265	315
f	95	115	146	170	200
h	70	85	115	128	140
Screws K_6	6xM8	8xM10	8xM10	8xM12	8xM16
Screws K_7	6xM12	8xM12	8xM12	12xM12	16xM12
Length [mm]					
l	82	106	116	141	148
n	55	80	90	110	115
x	40	40	45	45	70
Mass moment of inertia J [kgm²]					
J_A side *)	0.0082	0.0185	0.0385	0.0875	0.2106
J_B side	0.0282	0.0485	0.0860	0.1750	0.3349
Mass m [kg] *)	6.4	9.5	13.0	21.6	30.8

*) at maximum bore diameter

Characteristics of Periflex® couplings

T_{KN}

The nominal torque of the coupling can be permanently transferred over the entire admissible speed range.
It must not exceed the nominal torque T_N of the system.

$$T_{KN} \geq T_N$$

T_{Kmax}

The maximum torque T_{Kmax} of the coupling can be endured as a peak load and must not be exceeded by peak torques T_{max} when the system is operating in normal, transient conditions.

Normal transient operating conditions of a system are unavoidable and occur repeatedly (such as start and stop procedures, resonance passes, switchovers, accelerations, etc.).

The maximum torque of the coupling can be tolerated for a short period of time, i. e. without thermal influences on the coupling, as a swelling or alternating load.

Overloading the Stromag Periflex® coupling with the system's irregular, non-stationary peak torques shortens the service life.

Irregular, transient peak torques of a system can be avoided and are not part of the planned operating pattern (for example, emergency stop, synchronisation failure, short circuit, etc.).

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

T_{Kw}

The admissible continuous alternating torque indicates the amplitude of the continuously permissible periodic torque fluctuation.
This torque may be superimposed on a base load equal to T_{KN}.

ΔK_a

Admissible axial displacement of the coupling. The axial displacement ΔW_a of the shafts must be smaller than ΔK_a.

$$\Delta K_a \geq \Delta W_a$$

ΔK_r

Admissible radial displacement of the coupling. The radial displacement ΔW_r of the shafts must be smaller than ΔK_r.
The specified values for ΔK_r are related to the maximum speed of the coupling. The admissible radial displacement must be reduced at ambient temperatures above 30°C by the temperature factor $S_{\vartheta Kr}$; see diagram on page 39.

$$\Delta K_r \geq \Delta W_r$$

$$\Delta K_r(T_u) = \frac{\Delta K_r}{S_{\vartheta Kr}}$$

ΔK_w

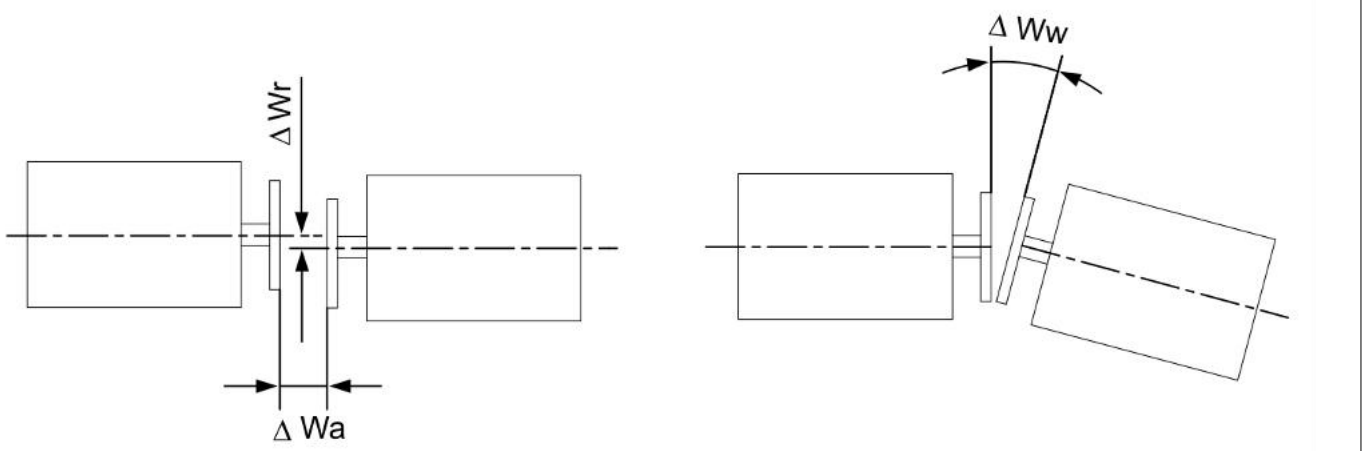
Admissible angular displacement of the coupling. The angular displacement of the shafts ΔW_w must be smaller than ΔK_w.

The specified value for ΔK_w refers to the maximum speed of the coupling.

However, this value may only be fully used if there are no further radial displacements.
The admissible angular displacement must be reduced at ambient temperatures above 30°C by the temperature factor $S_{\vartheta Kw}$; see diagram on page 39.

$$\Delta K_w \geq \Delta W_w$$

$$\Delta K_w(T_u) = \frac{\Delta K_w}{S_{\vartheta Kw}}$$



C_a

The axial stiffness indicates the axial restoring force after axial displacement.
At ambient temperatures above 30°C, the specified values must be reduced by temperature factor $S_{\vartheta C}$; see diagram on page 39.

$$C_a(T_U) = \frac{C_a}{S_{\vartheta C}}$$

C_r

The radial stiffness indicates the radial restoring force after radial displacement.
For ambient temperatures above 30°C, the indicated values must be reduced by the temperature factor $S_{\vartheta C}$; see diagram on page 39.

$$C_r(T_U) = \frac{C_r}{S_{\vartheta C}}$$

C_{Tdyn}

The dynamic torsional stiffness indicates the relationship of a torque amplitude to the rotational angle amplitude during an oscillation process.

With Periflex® couplings, the C_{Tdyn} value is not constant (progressive characteristic) over the coupling torque and also changes with the amplitude, frequency and temperature of the tyre.

The specifications for C_{Tdyn} are based on an alternating torque of 0.25 x T_{KN}, a frequency of 10 Hz and an ambient temperature T_U below 30°C.

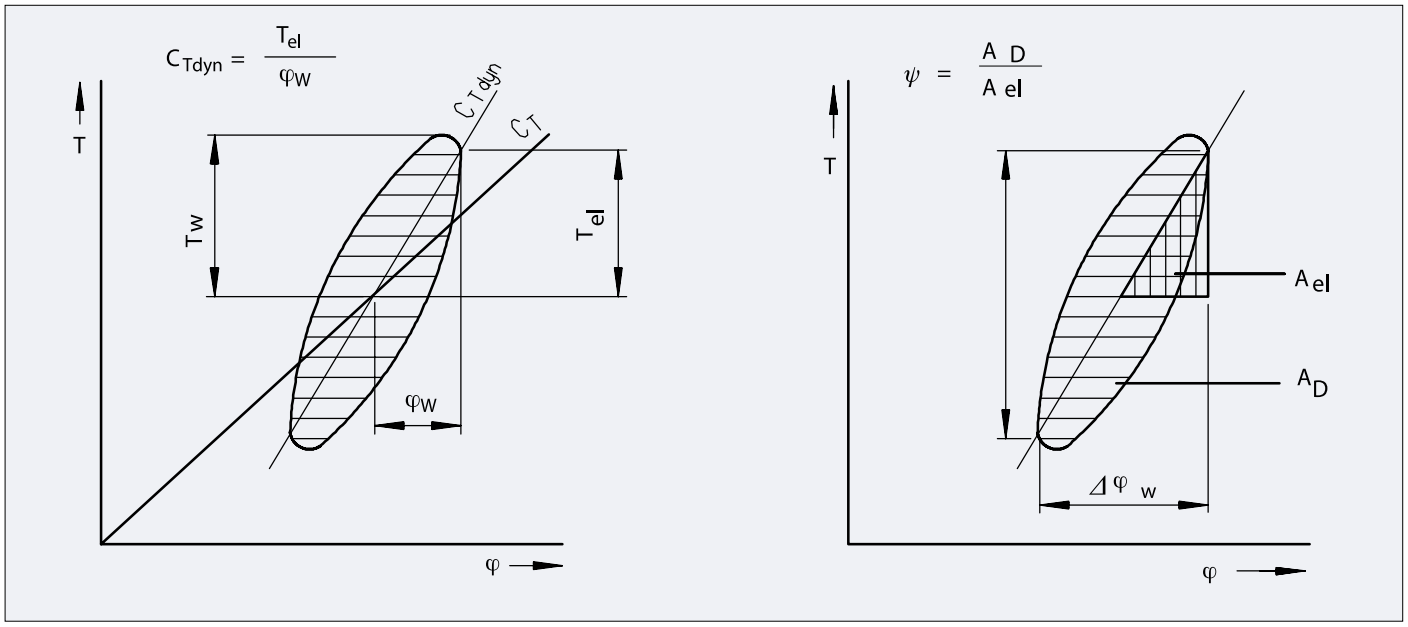
For higher ambient temperatures, the indicated values must be reduced by the temperature factor $S_{\vartheta C}$; see diagram on page 39.

$$C_{Tdyn} = \frac{T_{el}}{\varphi_w}$$

$$C_{Tdyn}(T_U) = \frac{C_{Tdyn}}{S_{\vartheta C}}$$

Characteristics of Periflex® couplings

Ψ	
The relative damping is a measure of the coupling's ability to convert part of the oscillation energy into heat. The relative damping can be determined with the damping loop (hysteresis loop). The area A_D is a measure of the damping work W_D during an oscillation cycle. The area A_{el} represents flexible deformation work W_{el} at a given load. The specifications for Ψ are based on a coupling torque of 0.75 x T_{KN}, an alternating torque of 0.25 x T_{KN} and a frequency of 10 Hz with a coupling in warm operating conditions and a surface temperature of approximately 30°C.	$\Psi = \frac{W_D}{W_{el}} = \frac{A_D}{A_{el}}$

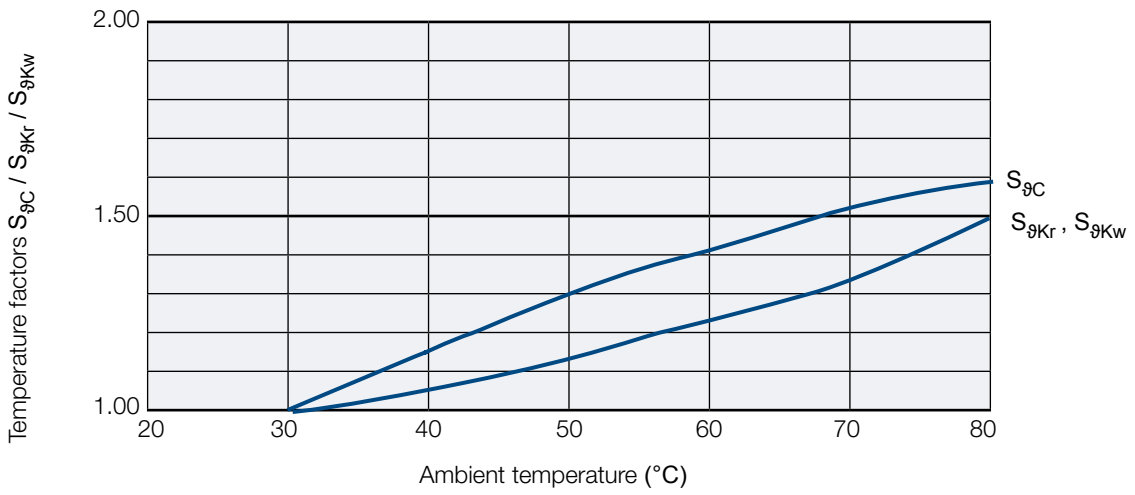


$S_{\vartheta Kr}$, $S_{\vartheta Kw}$ and $S_{\vartheta C}$

Temperature factors should take into account the decrease in the physical properties of flexible rubber materials due to excessive heating.

The coupling temperature is determined by the ambient temperature as well as internal heating caused by internal material friction in the rubber volume as a result of alternating torques and alternating loads due to shaft displacement.

At higher ambient temperatures, the coupling characteristics ΔK_r and ΔK_W must be reduced by the temperature factors $S_{\vartheta Kr}$ and $S_{\vartheta Kw}$. C_{tdyn}, C_r and C_a are set to a value that is reduced by the temperature factor $S_{\vartheta C}$ due to heating.



Coupling design, question sheet

Main engine		
Engine type (electric, internal combustion engine, etc.)		
Motor type (make, type)		
Motor installation (rigid, flexible)		
Engine housing (SAE)		
Flywheel centring diameter		mm
Power rating		kW
Nominal speed		rpm
Speed range		rpm
Nominal torque		Nm
Maximal torque (tilting moment)		Nm
Moment of inertia		kgm^2
Number of hourly starts or reversals		
Gear		
Gear ratio		
Moment of inertia		kgm^2
Driven side		
Type (generator, fan, compressor, fixed or variable pitch propeller)		
Main or auxiliary drive		
Type of construction (free-standing or flange-mounted)		
Moment of inertia		kgm^2
Coupling		
Application site in the drive train (please enclose schematic sketch)		
Bore dimensions for coupling hub		mm
Ambient temperature		°C, °K
Classification society		

Use in potentially explosive environments, question sheet

Field of application		○	Group II (above ground application)
Potentially explosive atmosphere of air with		○	Gas
		○	Dust
Use in zone (category)	Gas	○	Zone 1 (category 2G)
		○	Zone 2 (category 3G)
	Dust	○	Zone 21 (category 2D)
		○	Zone 22, conductive (category 2D)
		○	Zone 22, insulating (category 3D)
Temperature class for gas atmosphere	Gas	○	T1
		○	T2
		○	T3
		○	T4
Maximum admissible surface temperature	Dust	○	120°C
		○	< 120°C
		○	-20°C to +40°C
Ambient temperature		○	Deviating ambient temperatures only with restrictions

Notes

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Our comprehensive product offerings include various types of clutches and brakes, overrunning clutches, engineered bearing assemblies, gearing and gear motors along with linear products, belted drives, couplings and limit switches. With thousands of product solutions available, Altra provides true single source convenience while meeting specific customer requirements. Many major OEMs and end users prefer Altra products as their No. 1 choice for performance and reliability.



ELECTRIC CLUTCHES AND BRAKES

Inertia Dynamics
Matrix
Stromag
Warner Electric



HEAVY DUTY CLUTCHES AND BRAKES

Industrial Clutch
Stromag
Svendborg Brakes
Twiflex
Wichita Clutch



OVERRUNNING CLUTCHES

Formsprag Clutch
Marland Clutch
Stieber



ENGINEERED COUPLINGS AND UNIVERSAL JOINTS

Ameridrives
Bibby Turboflex
Guardian Couplings
Huco
Lamiflex Couplings
Stromag
TB Wood's



GEAR DRIVES

Bauer Gear Motor
Boston Gear
Delroyd Worm Gear
Nuttall Gear



GEAR MOTORS

Bauer Gear Motor











POWER TRANSMISSION COMPONENTS

LINEAR ACTUATORS AND CONTROLS
Warner Linear

ENGINEERED BEARING ASSEMBLIES
Kilian

AIR MOTORS
Huco

BELTED DRIVES AND SHEAVES
TB Wood's

GEARED CAM LIMIT SWITCHES
Stromag