

PRODUCT CATALOGUE

Couplings >

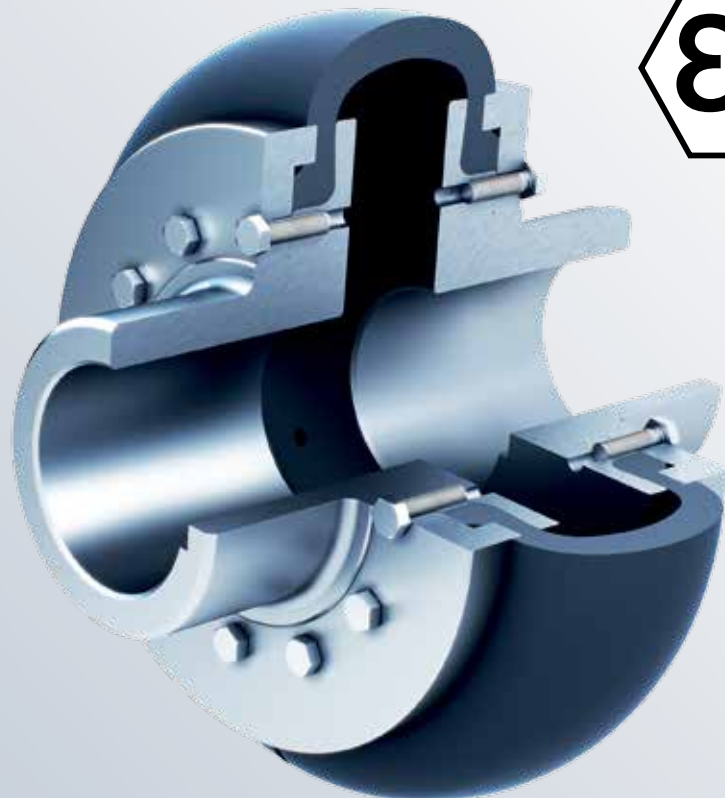


**GKN STROMAG PERIFLEX® TT**  
Top Torque Shaft Coupling

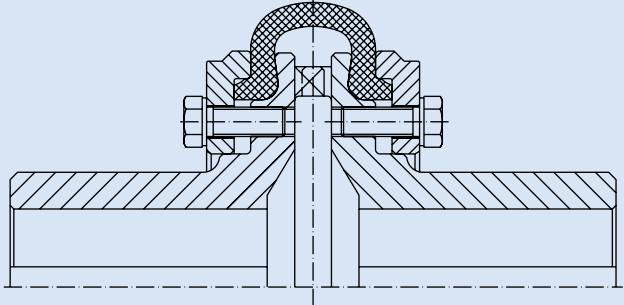
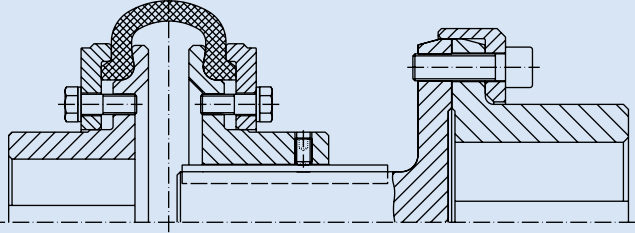
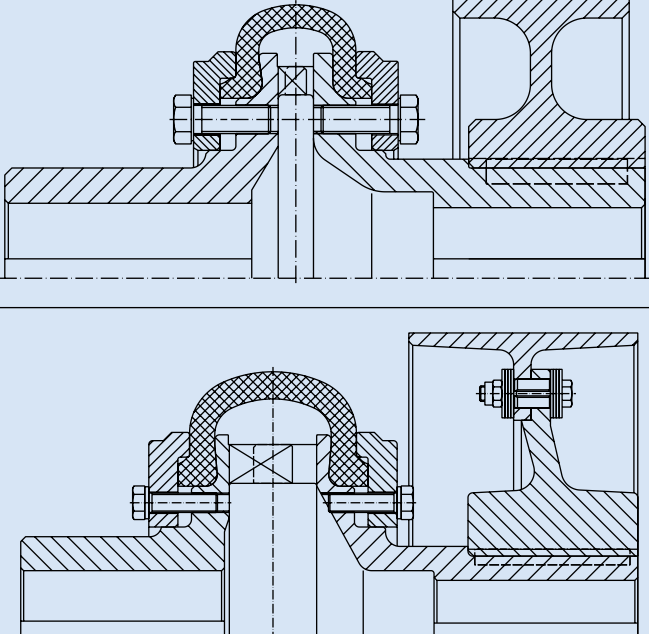
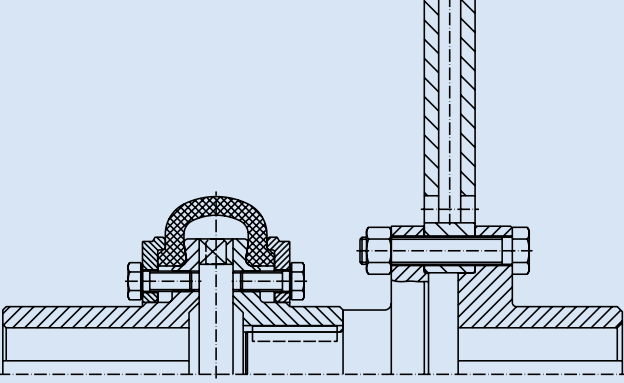
robust

backlash-free

ease of  
installation



**Further shaft coupling variants**

<p style="text-align: center;"><b>PNC</b></p> <p>Shaft coupling with fail-safe device</p> <p>Nominal torque range 35 – 15000 Nm</p>	
<p style="text-align: center;"><b>PNP</b></p> <p>Shaft coupling with dismantling part (SPN/SPL) for pump drives</p> <p>Nominal torque range 35 – 1600 Nm</p>	
<p style="text-align: center;"><b>PNB</b></p> <p>Shaft coupling with brake drum</p> <p>Nominal torque range 300 – 10000 Nm</p>	
<p>Shaft coupling with brake disc</p> <p>Rated torque range 300 – 10000 Nm</p>	

**Catalogue no. D 801, 6.2013**

All issues containing details on GKN Stromag Periflex® Top Torque prior to this publication may no longer apply.

We reserve the right to modify measurements and designs without prior notice.

GKN Stromag products conform to the quality standard under DIN ISO 9001.

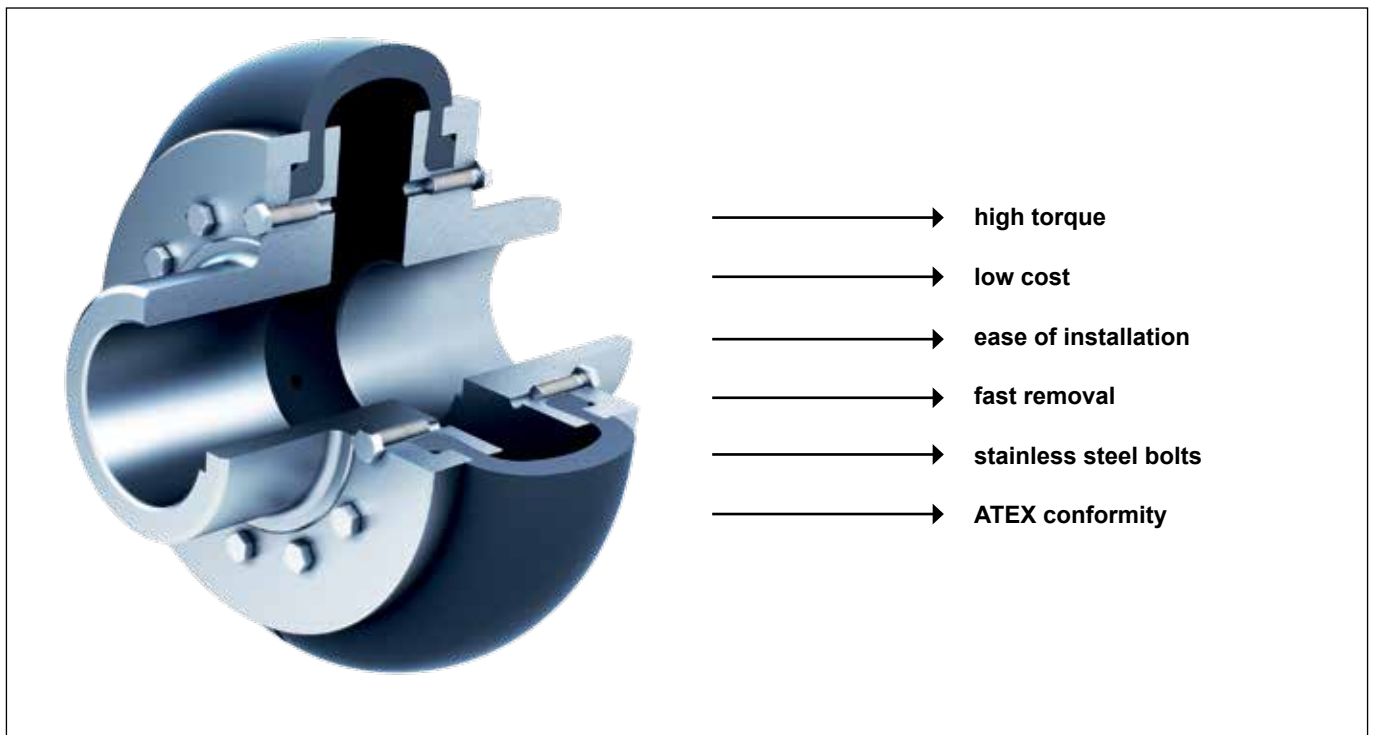
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## The GKN Stromag Periflex® Top Torque concept

GKN Stromag Periflex® Top Torque is a highly flexible rubber-fabric coupling ideal for connecting two shafts in diesel engine and electric drives. The series covers the torque range 35 – 20500 Nm.

Owing to the special design of its shaft tyre, GKN Stromag Periflex® Top Torque can absorb extremely large displacements, under low returning forces, in every direction (see specifications list) without suffering wear. On delivery, the tyre features as standard a separation joint for radial installation and removal. The connected machine therefore does not need to be displaced.

GKN Stromag Periflex® Top Torque transfers torque absolutely free of backlash. It is suitable for absorbing torque shocks and dampens vibrations.



GKN Stromag Periflex® Top Torque complies with the requirements under the Directive 94/9/EC (ATEX 95). It can also be delivered with EN 10204 acceptance as defined in the classification societies' rules.

**Periflex Top Torque conforms to the requirements under Directive 94/9/EC (ATEX 95).**



From 1 July 2003, only those devices and components may be used in potentially explosive environments that comply with the requirements under the European Directive 94/9/EC. In other words, also nonelectrical equipment must be examined for compliance with these conditions before it is approved for use in potentially explosive environments.

GKN Stromag Periflex® shaft couplings have been used in potentially explosive environments for many years, providing us with a wealth of invaluable experience. GKN Stromag Periflex® Top Torque can be classified according to Directive 94/9/EC as follows:

**Device Group II (above ground)**

- Device Category 2G (Zone 1) and 3G (Zone 2) in atmospheres with flammable gases, aerosols, and vapours, and Device Category 2D (Zone 21) and 3D (Zone 22) in flammable dust-air atmospheres
- Temperature category T4 for gases and vapours, or a max surface temperature of 120 °C for dust
- The coupling's type of protection is "c". In other words, the protective measures satisfy prEN 13463-5 ("Protection by constructional safety 'c'")

**Device Group I (below ground with max shaft tyre size 426)**

- Device Category M2 with high safety level – The system must be able to switch OFF the devices when explosive atmospheres are generated

Probability of explosive atmosphere	Explosive atmosphere/ zone		Category		Temperature categories		Max surface temperature
	gas	dust	gas	dust	gas		
Constantly or often	0	20	1G	1D	T6	85 °C	> 120 °C
					T5	100 °C	
occasionally	1	21	2G	2D	T4	135 °C	
					T3	200 °C	
rarely or briefly	2	22	3G	3D	T2	300 °C	< 120 °C
					T1	450 °C	

PTT use not permitted

PTT use permitted

The Periflex® Top Torque 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 below ground:

I M2

## GKN Stromag Periflex® Top Torque assignments to electric motors

GKN Stromag Periflex® Top Torque assignments to EN 50347 three phase asynchronous motors with squirrel cage, sizes 56–315

Motor size	Motor power output at 3000 rpm (2 pole)		Coupling size PTT	Motor power output at 1500 rpm (4 pole)		Coupling size PTT	Cyl shaft end D x L [mm]	
	P [kW]	T [Nm]		P [kW]	T [Nm]		3000 min <sup>-1</sup>	≤ 1500 min <sup>-1</sup>
56 M	0,09	0,3	86	0,06	0,4	86	9 x 20	
	0,12	0,4		0,09	0,6			
63 M	0,18	0,6	86	0,12	0,8	86	11 x 23	
	0,25	0,8		0,18	1,2			
71 M	0,37	1,2	86	0,25	1,6	86	14 x 30	
	0,55	1,8		0,37	2,4			
80 M	0,75	2,4	86	0,55	3,5	86	19 x 40	
	1,1	3,5		0,75	4,8			
90 S	1,5	4,8	86	1,1	7,0	86	24 x 50	
90 L	2,2	7,0	86	1,5	9,6	86	24 x 50	
100 L	3	9,6	104	2,2	14	104	28 x 60	
				3	19			
112 M	4	13	104	4	25	104	28 x 60	
132 S	5,5	18	104	5,5	35	104	38 x 80	
	7,5	24						
132 M	-	-	-	7,5	48	104	38 x 80	
160 M	11	35	136	11	70	136	42 x 110	
	15	48						
160 L	18,5	59	136	15	96	178	42 x 110	
180 M	22	70	178	18,5	118	178	48 x 110	
180 L	-	-	-	22	140	178	48 x 110	
200 L	30	96	178	30	191	211	55 x 110	
	37	118						
225 S	-	-	-	37	236	211	55 x 110	60 x 140
225 M	45	143	178	45	287	211	55 x 110	60 x 140
250 M	55	175	211	55	350	211	60 x 140	65 X 140
280 S	75	239	211	75	478	263	60 x 140	75 X 140
280 M	75	287	211	90	573	263	60 x 140	75 X 140
315 S	110	350	211	110	700	263	60 x 140	80 X 170
315 M	132	420	263	132	840	310	60 x 140	80 X 170

The assignments are based on application factor II for the usual load cases.

When there are predominantly periodic vibrations on the system, the design must be based on DIN 740 Part 2.

The GKN Stromag department can provide support, specifically in calculating the torsional vibrations.

## GKN Stromag Periflex® Top Torque assignments to electric motors

GKN Stromag Periflex® Top Torque assignments to EN 50347 three phase asynchronous motors with squirrel cage, sizes 56–315

Motor size	Motor power output at 3000 rpm (2 pole)		Coupling size PTT	Motor power output at 1500 rpm (4 pole)		Coupling size PTT	Cyl shaft end D x L [mm]	
	P [kW]	T [Nm]		P [kW]	T [Nm]		3000 min <sup>-1</sup>	≤ 1500 min <sup>-1</sup>
56 M	-	-	-	-	-	-	9 x 20	
63 M	-	-	-	-	-	-	11 x 23	
71 M	-	-	-	-	-	-	14 x 30	
80 M	0,37 0,55	3,5 5,3	86 86	-	-	-	19 x 40	
90 S	0,75	7,2	86	-	-	-	24 x 50	
90 L	1,1	11	86	-	-	-	24 x 50	
100 L	1,5	14	104	0,75 1,1	10 14	104 104	28 x 60	
112 M	2,2	21	104	1,5	19	104	28 x 60	
132 S	3	29	104	2,2	28	104	38 x 80	
132 M	4 5,5	38 53	104 136	3	38	104	38 x 80	
160 M	7,5	72	136	4 5,5	51 70	136 136	42 x 110	
160 L	11	105	178	7,5	96	178	42 x 110	
180 M	-	-	-	-	-	-	48 x 110	
180 L	15	143	178	11	140	178	48 x 110	
200 L	18,5 22	177 210	178 211	15	191	211	55 x 110	
225 S	-	-	-	18,5	236	211	55 x 110	60 x 140
225 M	30	287	211	22	280	211	55 x 110	60 x 140
250 M	37	353	211	30	382	263	60 x 140	65 x 140
280 S	45	430	263	37	471	263	65 x 140	75 x 140
280 M	55	525	263	45	573	263	65 x 140	75 x 140
315 S	75	716	263	55	700	263	65 x 140	80 x 170
315 M	90	860	310	75	955	310	65 x 140	80 x 170

The assignments are based on application factor II for the usual load cases.

When there are predominantly periodic vibrations on the system, the design must be based on DIN 740 Part 2.

The GKN Stromag department can provide support, specifically in calculating the torsional vibrations.

## Leistungstabelle

Coupling size	Tyre	Nominal torque	Max. torque	Max. speed	adm. axial displacement	Axial stiffness	adm. radial displacement	Radial stiffness	adm. angular displacement
		$T_{KN}$ Nm	$T_{Kmax}$ Nm	$n_{Kmax}$ min <sup>-1</sup>	$\Delta K_a$ mm <sup>1)2)</sup>	$C_a$ N/mm <sup>2)</sup>	$\Delta K_r$ mm <sup>1)2)</sup>	$C_r$ N/mm <sup>2)</sup>	$\Delta K_w$ ° <sup>1)2)</sup>
86 R 86 X	201 R 201 X	35	75	5000	1,0	60 90	0,7	60 150	2,0
104 R 104 X	203 R 203 X	70	150	5000	1,0	110 140	0,75	120 250	2,0
136 R 136 X	206 R 206 X	135	300	5000	1,5	130 150	1,0	120 350	2,0
178 R 178 X	210 R 210 X	270	600	4000	2,0	120 150	1,3	110 300	2,0
211 R 211 X	214 R 414 X	545	1200	4000	2,5	150 80	1,6	150 650	2,0
263 R 263 X	218 R 418 X	1000	2400	3000	3,0	160 80	2,1	150 900	2,0
310 R 310 X	222 R 422 X	2200	4800	3000	3,5	180 100	2,5	200 900	2,0
370 R 370 X	225 R 225 X	3400	7500	2500	4,5	400 400	3,0	400 2500	2,0
402 R 402 X	426 R 426 X	5500	12000	2300	5,0	340 400	3,5	500 1650	2,0
450 R 450 X	828 R 828 X	8200	18000	1800	5,5	250 300	3,7	400 1800	2,0
550 R 550 X	1230 R 1230 X	13700	30000	1500	6,0	1000 1000	4,2	1200 3500	2,0
700 R 700 X	1832 R 1832 X	20500	45000	1000	6,0	1800 1800	5,2	1500 4000	2,0

Further specifications like e.g. dynamic torsional spring stiffness  $C_{Tdyn}$ , max damping power  $P_{KV}$ , proportional damping  $\Psi$ , etc. can be requested.

- 1) At max speed
- 2) This value must be reduced by the temperature factor when the coupling temperatures are higher than 30 °C (see page 17).



## PTT and PTS Series

Highly flexible rubber-fabric coupling for absorbing radial, axial, and angular displacements



### **GKN Stromag Periflex® Top Torque – PTT –**

Standard design with variable hubs for shaft-shaft, flange-shaft, and similar connections

**Nominal torque range 35 – 20.500 Nm**

### **GKN Stromag Periflex® Top Torque with clamping bush – PTS –**

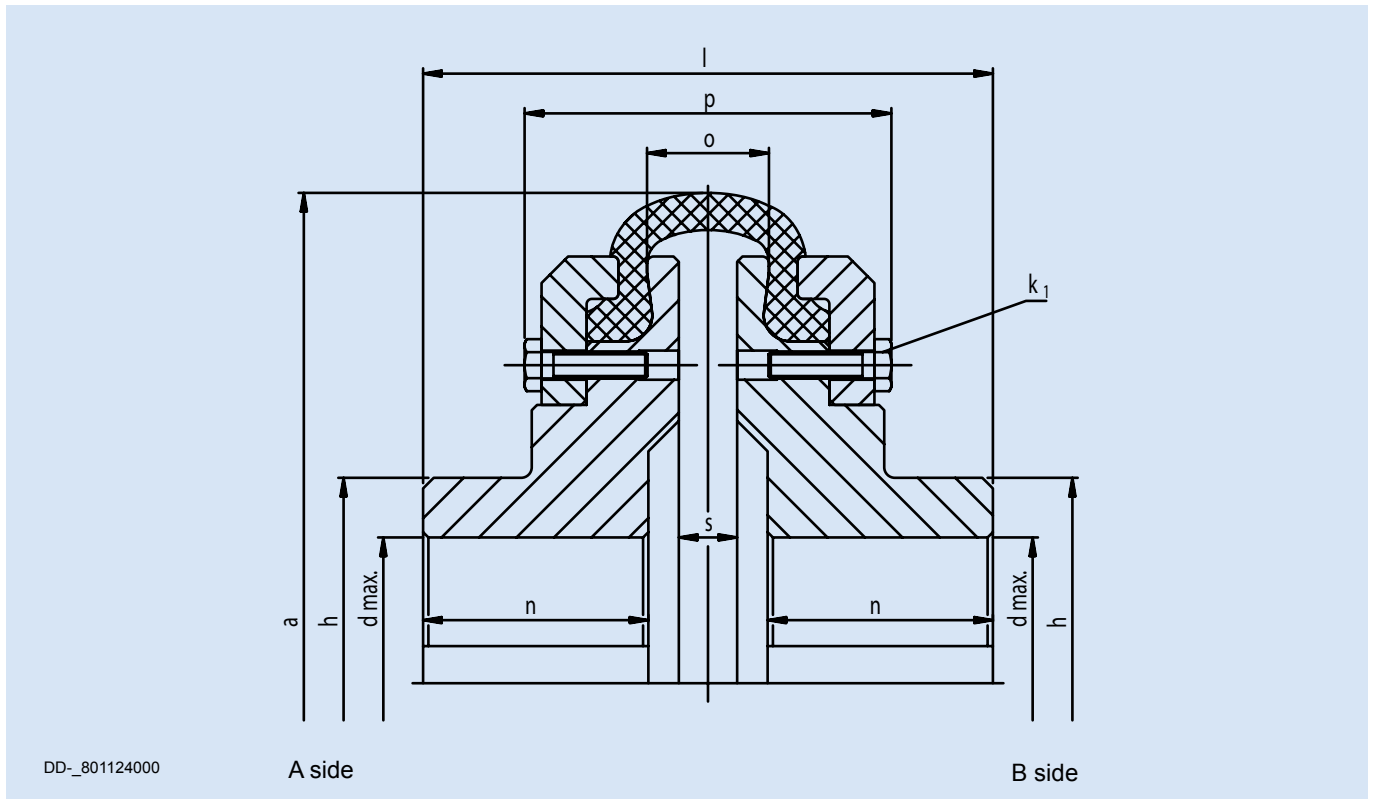
Shaft coupling version for short installations. Shaft installation and removal is fast and simple thanks to the tapered clamping bush.

**Max. transmittable torque range 130 – 14.200 Nm**

(depending on the clamping bush and keyway)

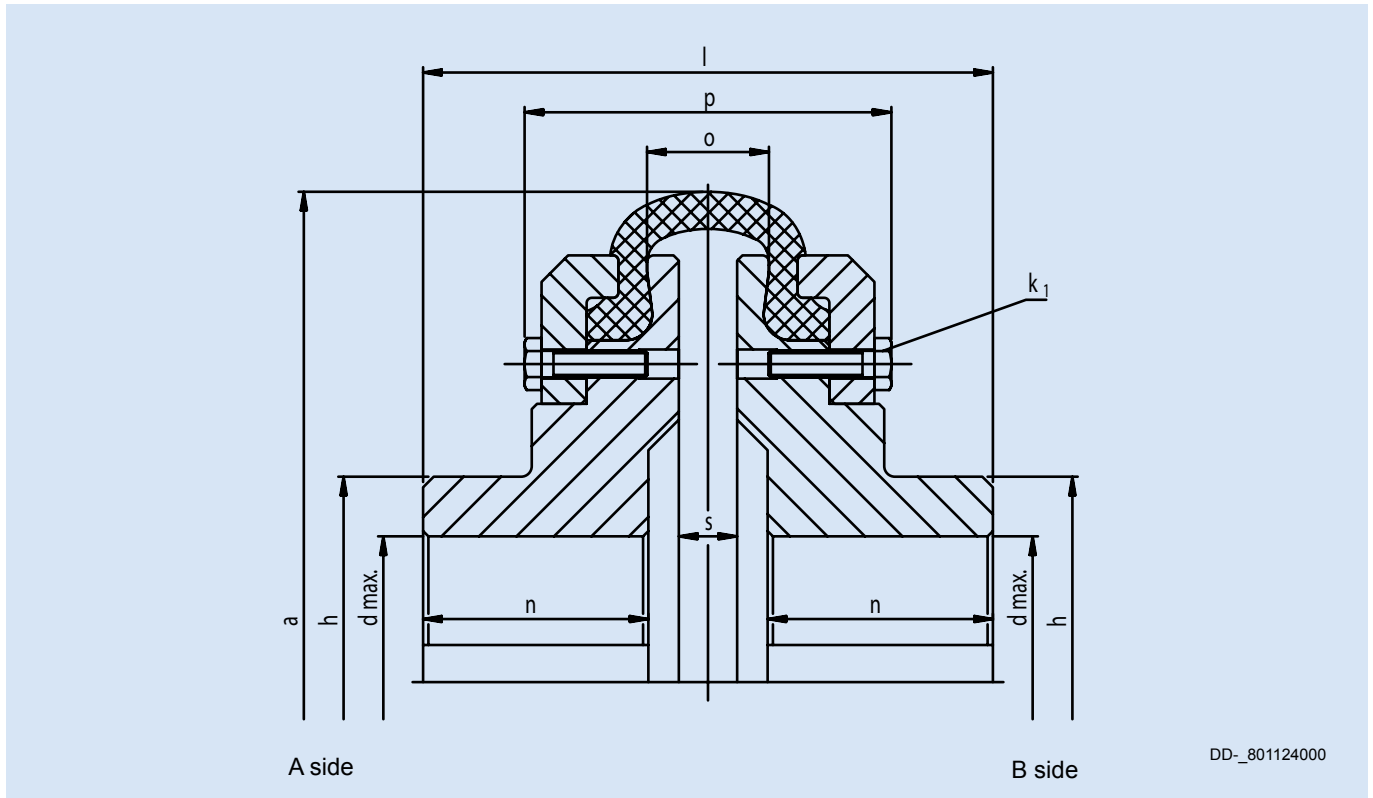


**PTT...R and ...X Series**



PTT...R Series							
Size	86 R	104 R	136 R	178 R	211 R	263 R	
Tyre	201 R	203 R	206 R	210 R	214 R	218 R	
PTT...X Series							
Size	86 X	104 X	136 X	178 X	211 X	263 X	
Tyre	201 X	203 X	206 X	210 X	214 X	218 X	
<b>Nominal torque range <math>T_{KN}</math> [Nm]</b>		35	70	135	270	545	1000
Diameter [mm]	a	86	104	136	178	210	263
	$d_{max}$	24	30	42	55	65	85
	h	34	43	58	76	92	120
<b>Bolts</b>	$k_1$	4xM5	4xM6	6xM6	6xM8	6xM10	6xM10
Lengths [mm]	l	60	70	110	130	160	190
	n	26	31	51	55,5	70	84,5
	o	16	16	18	35	38	44
	p <sub>untightened</sub>	60	85	77	103	112	130
	s	8	8	8	19	20	21
<b>Mass with max bore [kg]</b>		0,8	1,5	2,6	5,2	9,9	20,4

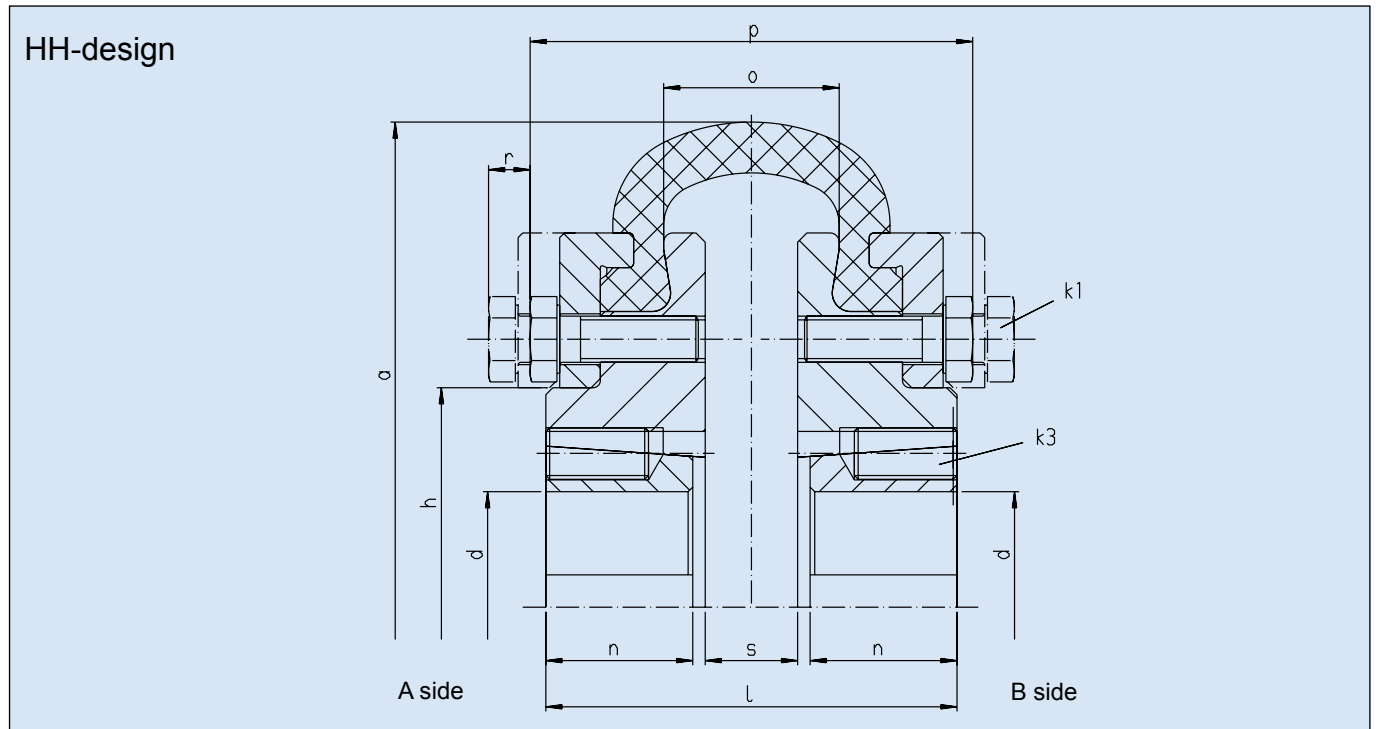
**PTT...R and ...X Series**



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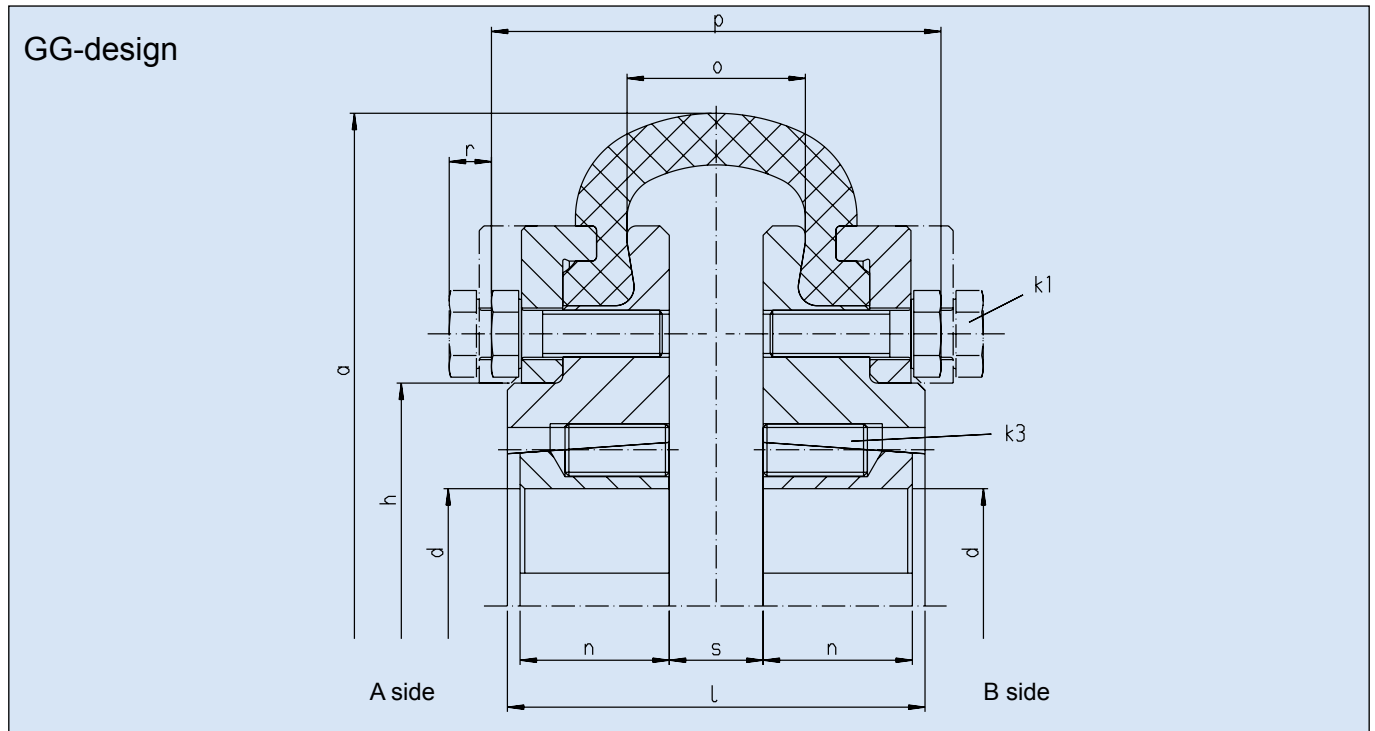
PTT...R Series							
Size	310 R	370 R	402 R	450 R	550 R	700 R	
Tyre	222 R	225 R	426 R	828 R	1230 R	1832 R	
PTT...X Series							
Size	310 X	370 X	402 X	450 X	550 X	700 X	
Tyre	222 X	225 X	426 X	828 X	1230 X	1832 X	
Nominal torque range $T_{KN}$ [Nm]		2200	3400	5500	8200	13700	20500
Diameter [mm]	a	310	370	402	450	550	700
	$d_{max}$	110	110	120	130	150	180
	h	154	155	170	185	210	255
Schrauben $k_1$		8xM10	8xM10	12xM12	12xM16	12xM16	12xM20
Lengths [mm]	l	240	235	294	340	480	530
	n	110	106,5	135	153	198	217
	o	42	46	50	70	120	150
	$p_{untightened}$	146	160	163	197	296	380
	s	20	22	24	34	84	96
Masse bei max. Bohrung kg		35,8	59,8	79,3	104,8	171,6	339,6

## PTS...R and ...X Series in HH-/GG-design



PTS...R Series											
Size		104 R		136 R		178 R		211 R		263 R	
Tyre		203 R		206 R		210 R		214 R		218 R	
PTS...X Series											
Size		104 X		136 X		178 X		211 X		263 X	
Tyre		203 X		206 X		210 X		214 X		218 X	
Design		HH	GG	HH	GG	HH	GG	HH	GG	HH	GG
Clamping bush		1008	1008	1108	1210	1615	1615	2012	2012	2517	3020
max. transmittable torque [Nm] $T_{kmax}$		130	130	140	300	480	480	800	800	1300	2400
Diameter [mm]	a	104	104	136	136	178	178	211	211	263	263
	h	43	43	59	59	77	77	95	95	122	122
	dmax	24	24	25	30	40	40	50	50	65	75
Bolts	k1	4 x M6		6 x M6		6 x M8		6 x M10		6 x M10	
	k3	2 x 1/4"	2 x 1/4"	2 x 1/4"	2 x 3/8"	2 x 3/8"	2 x 3/8"	2 x 7/16"	2 x 7/16"	2 x 1/2"	2 x 5/8"
Length [mm]	l	53	53	53	59	95	95	89	89	111	123
	n	20	20	20	25,5	38	38	30,5	30,5	43	50,8
	o	16	16	18	18	35	35	38	38	44	44
	p	54,4	54,4	62,8	62,8	87,6	87,6	95,8	95,8	110,1	110,1
	r	3,4	3,4	6,6	6,6	8,7	8,7	9	9	11,4	11,4
	s	8	8	8	8	19	19	20	20	21	21
Mass excl bush [kg]		1,1	1,1	2,1	2,0	4,7	4,7	8,0	8,0	17,2	15,2

**PTS...R and ...X Series in HH-/GG-design**



PTS...R Series											
Size Tyre		310 R		370 R		402 R		450 R		550 R	
		222 R		225 R		426 R		828 R		1230 R	
PTS...X Series											
Size Tyre		310 X		370 X		402 X		450 X		550 X	
		422 X		225X		426 X		828 X		1230 X	
Design		HH	GG	HH	GG	HH	GG	HH	GG	HH	GG
Clamping bush		3030	3525	3525	3525	3525	4030	4030	4535	4545	5050
max. transmittable torque [Nm] T <sub>kmax</sub>		2700	4800	5050	5050	5050	8700	8700	12400	12400	14200
Diameter [mm]	a	310	310	370	370	402	402	450	450	550	550
	h	158	158	210	210	235	235	220	220	250	250
	d <sub>max</sub>	125	95	95	95	95	115	115	125	115	125
Bolts	k1	8 x M10		8 x M10		12 x M12		12 x M16		12 x M16	
	k3	2 x 5/8"	3 x 1/2"	3 x 1/2"	3 x 1/2"	3 x 1/2"	3 x 5/8"	3 x 5/8"	3 x 3/4"	3 x 3/4"	3 x 7/8"
Length [mm]	l	174	148	150	150	152	176	186	214	312	340
	n	76	64	64	64	64	76	76	89	114	127
	o	42	42	46	46	50	50	70	70	120	120
	p	121	121	133,4	133,4	139,8	139,8	178,6	178,6	262,4	262,4
	r	14,4	14,4	14,7	14,7	14,6	14,6	15,7	15,7	21,8	21,8
	s	20	20	22	22	24	24	34	34	84	84
Mass excl bush [kg]		32,8	27,0	51,4	51,4	66,4	63,7	85,8	83,0	147,6	142,8

## Instructions for the designer

### General

The coupling hubs and the thrust rings are of C45, St52, or similar and are provided with an anticorrosion coating. The coupling is secured with stainless steel grade A4 bolts that prevent rusting in the threads. The shaft tyre is of natural rubber with fabric inlays placed across the radius or diagonal. The torsional stiffness depends on how these fabric inlays are arranged.

Flame retardant, electrically insulating, and oil resistant shaft tyres are available on request.

On delivery, the shaft tyre features as standard a separation joint for radial installation, but can also be dismantled in two parts of equal weight for easier handling. This has no effect on the transferred torque characteristics.

Under the effects of torque and speed, GKN Stromag Periflex® Top Torque develops a certain axial force that must be absorbed by a suitable bearing. These axial forces are calculated on the basis of the technical document "Determining the resulting axial forces  $F_A$ " that can be requested from GKN Stromag AG.

GKN Stromag Periflex® Top Torque can be used in the temperature range -50 °C to +80 °C. Damping work may cause the flexible element to reach temperatures higher than ambient. This must be considered when the coupling is to be fitted with a guard or cowl, and adequate ventilation and heat dissipation must be provided.

As a rule, flexible couplings are a safety feature in the form of a predetermined breaking point on a drive train. Hence, overloading a drive train generally leads to failure of the flexible coupling element. This behaviour is intentional and protects the entire system from unforeseen damage. Any consequential damage arising from this safety function of the coupling must be considered in advance by the system designer and monitored or eliminated with suitable measures.

### Classification rules

The acceptance of a coupling by a classification society must observe the rules issued by this society. Under certain circumstances, the coupling characteristics may differ from the definitions provided in this catalogue.

### Application factor

When no safety factors have yet been considered in the system's design, the project planning phase should include the following application factors ( $f_{APP}$ ):

Application factor  $f_{APP}$

I	II	III
1.25	1.5	2.0

Determining the application factor involves categorising the driven machine into one of the following groups:

- I. Machines with uniform PTO e.g. small machine tools with rotary main movement, small woodworking machines, small fans, small centrifugal pumps, generators, belt conveyors
- II. Machines for medium duty or with nonuniform PTO e.g. diesel and gas engines, chain conveyors, crane travelling gear, generators, lifts, weaving looms
- III. Machines for heavy duty or with nonuniform PTO e.g. excavator drives, shakers, heavy drilling rigs, calender machines, centrifuges

**Instructions on choosing the coupling size**

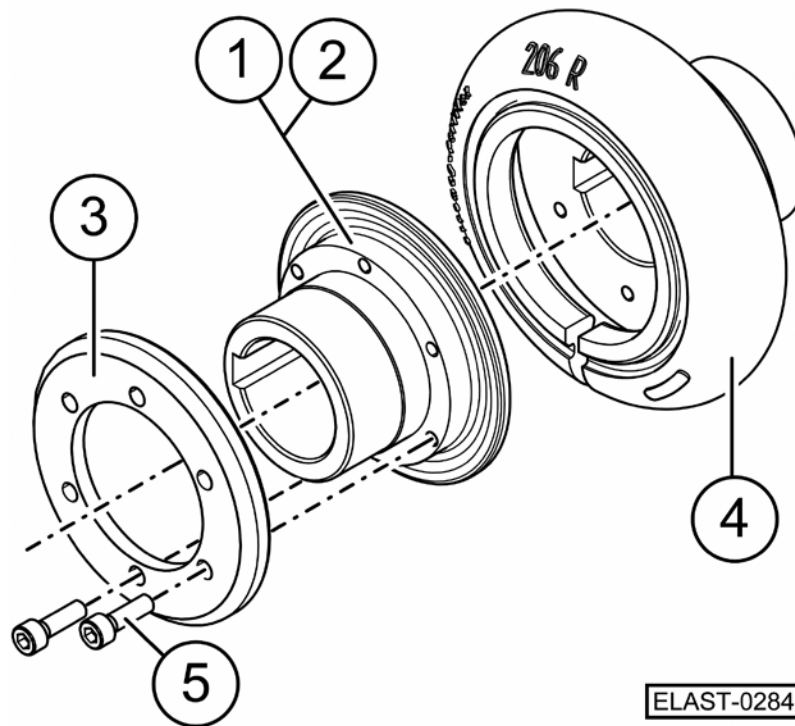
The static and dynamic characteristics of GKN Stromag Periflex® Top Torque are available. These can help in the choice of a coupling size suitable for the specific application. The key factors are the loads induced by the transferred power and torsional vibrations. Stationary operating modes must be based on  $T_{KN}$ , nonstationary operating modes on  $T_{Kmax}$ .

Choosing a GKN Stromag Periflex® Top Torque on the basis of system torque may have to take account of the application factors  $F_{APP}$  (see page 14).

GKN Stromag departments can provide support, specifically in calculating the torsional vibrations. We therefore ask you to complete and send us a copy of the question sheet annexed to this catalogue.

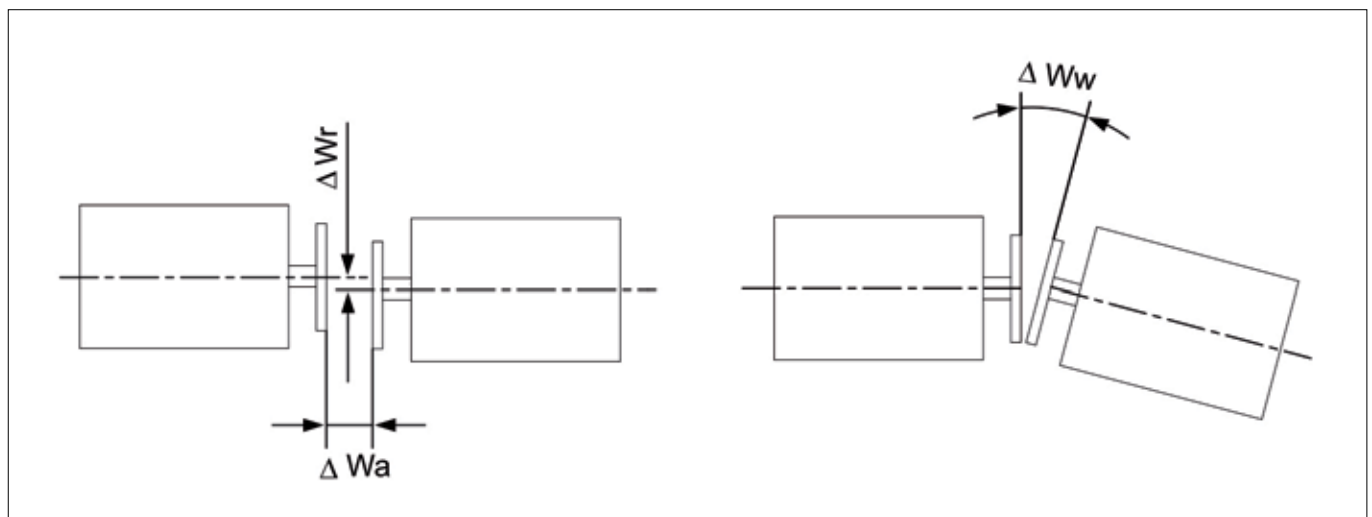
Delivery of the standard ver:

- 1 = hub
- 2 = hub
- 3 = thrust ring
- 4 = shaft tyre
- 5 = bolts



**Periflex® Top Torque characteristics**

<b>T<sub>KN</sub></b>	
The coupling's rated torque can be permanently transferred over the whole permitted speed range. It must be higher than the system's nominal torque T <sub>N</sub> .	$T_{KN} \geq T_N$
<b>T<sub>Kmax</sub></b>	
<p>The coupling max torque T<sub>Kmax</sub> can be endured as a peak load and may not be exceeded by peak torques T<sub>max</sub> when the system is operating in normal, nonstationary mode.</p> <p>A system's normal nonstationary modes are unavoidable and occur repeatedly (e.g. starting/stopping, resonance passes, switchovers, accelerations, etc.).</p> <p>The coupling's max torque may be endured briefly, i.e. without thermal effects on the coupling, as a pulsating or alternating load.</p> <p>Overloading the GKN Stromag Periflex® Top Torque with peak torques in a system's irregular nonstationary mode shortens the service life.</p> <p>A system's irregular nonstationary modes are avoidable and are not part of the planned operating scheme (e.g. emergency stops, sync failure, short circuits, etc.).</p>	$T_{Kmax} \geq T_{max}$
<b>ΔK<sub>a</sub></b>	
Adm. axial displacement of the coupling. The shafts' axial displacement ΔW <sub>a</sub> must be less than ΔK <sub>a</sub> .	$\Delta K_a \geq \Delta W_a$
<b>ΔK<sub>r</sub></b>	
<p>Adm. radial displacement of the coupling. The shafts' radial displacement ΔW<sub>r</sub> must be less than ΔK<sub>r</sub>.</p> <p>The values specified for ΔK<sub>r</sub> are based on the coupling's max speed. The max radial displacement must be reduced by the temperature factor S<sub>9Kr</sub> for ambient temperatures higher than 30 °C (see diagram on page 17).</p>	$\Delta K_r \geq \Delta W_r$ $\Delta K_r(T_u) = \frac{\Delta K_r}{S_{9Kr}}$
<b>ΔK<sub>w</sub></b>	
<p>Max angular displacement of the coupling. The shafts' angular displacement ΔW<sub>w</sub> must be less than ΔK<sub>w</sub>.</p> <p>A ΔK<sub>w</sub> value of 2° is permitted for GKN Stromag Periflex® Top Torque, based on the coupling's max speed. The max radial displacement must be reduced by the temperature factor S<sub>9Kw</sub> for ambient temperatures higher than 30 °C (see diagram on page 17).</p>	$\Delta K_w \geq \Delta W_w$ $\Delta K_w(T_u) = \frac{\Delta K_w}{S_{9Kw}}$





**Periflex® Top Torque characteristics**

<b>C<sub>a</sub></b>	
The axial stiffness represents the ratio of axial reaction force to axial displacement. The specified values must be reduced by the temperature factor S <sub>9C</sub> for ambient temperatures higher than 30 °C (see diagram on page 17).	$C_a(T_U) = \frac{C_a}{S_{9C}}$

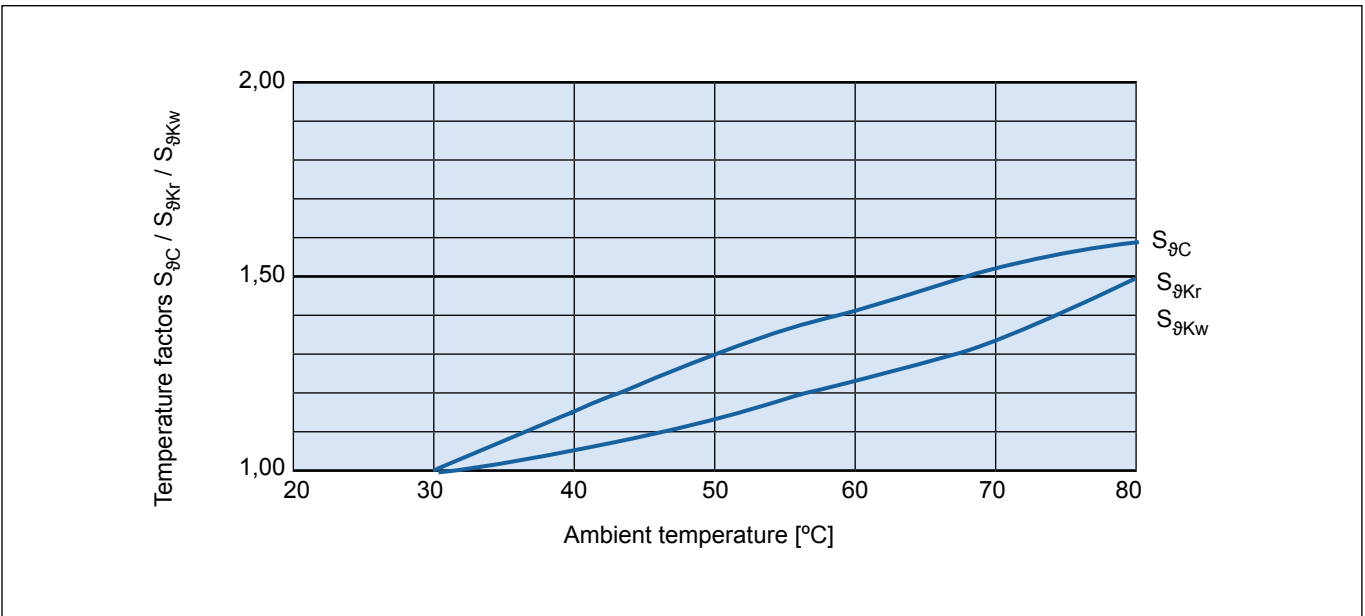
<b>C<sub>r</sub></b>	
The radial stiffness represents the ratio of radial reaction force to radial displacement. The specified values must be reduced by the temperature factor S <sub>9C</sub> for ambient temperatures higher than 30 °C (see diagram on page 17).	$C_r(T_U) = \frac{C_{ar}}{S_{9C}}$

**S<sub>9Kr</sub>, S<sub>9Kw</sub> und S<sub>9C</sub>**

Temperature factors should take into account the degradation of a flexible rubber element's physical properties at too high a temperature.

The coupling temperature is defined by the ambient temperature plus internal heating caused by the rubber material's internal friction as a result of vibratory torques and alternating loads from shaft displacements.

At higher ambient temperatures, the coupling characteristics ΔK<sub>r</sub> and ΔK<sub>w</sub> must be reduced by their temperature factors S<sub>9Kr</sub> and S<sub>9Kw</sub> respectively. Owing to this heating, C<sub>r</sub> and C<sub>a</sub> assume values that are lower by the temperature factor S<sub>9C</sub>.



**Question sheet for flexible coupling designs**

Driving machine	
Engine type (electric motor, IC engine, etc.)	—
Engine designation (make, type no.)	
Engine mounting (rigid, flexible)	—
SAE engine casing	—
Flywheel centring diameter	(mm)
Nominal power	(kW)
Nominal speed	(rpm)
Speed range	(rpm)
Nominal torque	(Nm)
Max torque	(breakdown torque) (Nm)
Moment of inertia	(kg m <sup>2</sup> )
Number of hourly startups or reversals	
Gears	
Reduction ratio	—
Moment of inertia	(kg m <sup>2</sup> )
Driven machine	
Type (generator, fan, compressor, fixed or variable pitch propeller)	—
Main or secondary drive	—
Installation type (standalone or flanged on)	—
Moment of inertia	(kg m <sup>2</sup> )
Coupling	
Installed location in drive train (attach schematic)	—
Bore dimensions for coupling hub	(mm)
Ambient temperature	(°C)
<b>Classification society</b>	—

**Use in potentially explosive environments as defined under Directive 94/9/EC (ATEX 95) **

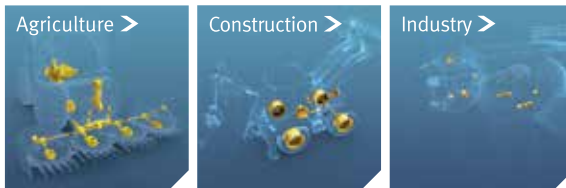
Applications		<input type="radio"/>	Group II (mining)
Potentially explosive atmosphere of air and		<input type="radio"/>	gas
		<input type="radio"/>	dust
Zone (Category)	gas	<input type="radio"/>	Zone 1 (Category 2G)
		<input type="radio"/>	Zone 2 (Category 3G)
	dust	<input type="radio"/>	Zone 21 (Category 2D)
		<input type="radio"/>	Zone 22 electrically conducting (Category 2D)
		<input type="radio"/>	Zone 22 not electrically conducting (Category 3D)
Temperature category in atmosphere with gas	gas	<input type="radio"/>	T1
		<input type="radio"/>	T2
		<input type="radio"/>	T3
		<input type="radio"/>	T4
Max surface temperature	dust	<input type="radio"/>	120 °C
		<input type="radio"/>	< 120 °C
		<input type="radio"/>	-20 °C to +40 °C
Ambient temperature		<input type="radio"/>	other ambient temperatures only with certain restrictions



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## INTEGRATED POWERTRAIN COMPONENTS, SYSTEMS AND SOLUTIONS



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