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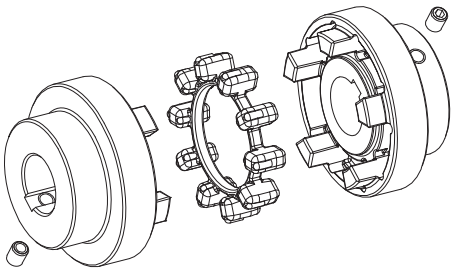
Coupling description

General description

The POLY-NORM® coupling is a torsionally flexible, shear type shaft coupling. It has an axial plug-in design with a unique short over all length. The POLY-NORM® can be used in nearly all types of machinery and is ideal for the pump industry.
The POLY-NORM® coupling compensates for shaft misalignment of all kinds and safely transmits the torque.



Function/Design

The coupling consists of two hubs, with fingers separated by elastomeric elements. The hubs are assembled blindly plugging the hub fingers into each other axially and the elastomer ring is trapped in a groove between both coupling hubs. The compact POLY-NORM® coupling transmits torque with the elastomer in compression.
Shaft misalignments, vibrations and shock loads are effectively absorbed by the POLY-NORM®.
The coupling is maintenance-free and used in general machinery, the pump industry and in compressors. Torques of up to 26,800 Nm are stocked in 17 different sizes and 7 designs. In addition to the standard coupling models, flange drop out center and spacer options are available in many variations.

Explosion-roof use

POLY-NORM® couplings are suitable for the use in drives in hazardous areas. The couplings are certified according to EC Standard 94/9/EC (ATEX 95) and belong to category 2G/2D, are confirmed and thus suitable for the use in hazardous areas of zone 1, 2, 21 and 22. Please read our information in the respective Type Examination Certificate and the operating and mounting instructions under www.ktr.com.

Variety of Options

The coupling can be adapted to many applications due to the many options that are possible with the building block arrangement. The POLY-NORM® components of a given model can be mixed and matched with each other to obtain different shaft distances using the same basic component.
On request, we can provide customized variations of the POLY-NORM® to fit your needs – for example, our POLY-NORM® overload coupling with RUFLEX® torque limiter. Just ask us!

Coupling selection

Selection of the POLY-NORM® coupling meets the DIN 740 part 2 specification. The coupling must be sized such that the coupling rated nominal torque is not exceeded in any operating condition. A comparison must be made between the application torque vs. the rating of the coupling. The selection process for torsionally flexible shaft couplings is described in detail in the ROTEX® catalogue which can be used for POLY-NORM® couplings as well. The torques T_{KN}/T_{Kmax} mentioned refer to the elastomer ring. The shaft-hub-connection has to be investigated by the customer.

Service factor S_t for temperature				
	-30 °C +30 °C	+40 °C	+60 °C	+80 °C
S_t	1,0	1,2	1,4	1,8

Service factor S_Z for starting frequency				
starting frequency/h	100	200	400	800
S_Z	1,0	1,2	1,4	1,6

Service factor S_A/S_L for shocks	
	S_A/S_L
gentle shocks	1,5
average shocks	1,8
heavy shocks	2,5

Example of calculation – Pump drive with three-phase motor

Given: Details of driving side

Power	P = 75 kW	
Speed	n = 1485 rpm	
Mass moment of inertia	J_A = 1,06 kgm²	⇒ S_A = 1,5
Starting frequency	z = 6 $^1/_h$	⇒ S_z = 1,0
Ambient temperature	= + 60 °C	⇒ S_t = 1,4

Given: Details of driving side

Pump

Nominal torque	T_{LN} = 400 Nm	
Peak torque [1]	T_{LS} = 300 Nm	[1] Peak value with shock load
Mass moment of inertia	J_L = 2,3 kgm²	⇒ S_L = 1,5

Calculation

● Rated driving torque

$$T_{AN}\ [Nm] = 9550 \cdot \frac{P_{AN}[kW]}{n_{AN}\ [rpm]}$$

$$T_{AN} = 9550 \cdot \frac{75\ kW}{1485\ rpm} = \underline{484\ Nm}$$

Coupling selection

● Load produced by rated torque:

$$T_{KN} \geq T_{AN} \cdot S_t$$

$$T_{KN} \geq 484Nm \cdot 1,4 = \underline{678\ Nm}$$

Selected: POLY-NORM® AR Size 75:

T_{KN} = 850 Nm

$T_{K\,max}$ = 1700 Nm

● Load produced by torque shocks:

$T_{K\,max} \geq T_S \cdot S_z \cdot S_t$

Drive-sided shock
$T_S = T_{AS} \cdot M_A \cdot S_A$

● Driving torque:

$T_{AS} = 2 \cdot T_{AN}$

$= 2 \cdot 484\ Nm = 968\ Nm$

$$M_A = \frac{J_L}{(J_A + J_L)} = \frac{2,3\ kgm^2}{(1,06kgm^2 + 2,3\ kgm^2)} = \underline{0,68}$$

$T_S = 968\ Nm \cdot 0,68 \cdot 1,5 = \underline{987\ Nm}$

$T_{K\,max} \geq 987\ Nm \cdot 1 \cdot 1,4 = \underline{1381Nm}$

$T_{K\,max}$ with 1700 Nm ≥ 1381 Nm ✓

$T_{K\,max} \geq T_S \cdot S_z \cdot S_t$

Shock on driven side
$T_S = T_{LS} \cdot M_L \cdot S_L$

$$M_A = \frac{J_A}{(J_L + J_A)} = \frac{1,06\ kgm^2}{(2,3\ kgm^2 + 1,06\ kgm^2)} = \underline{0,32}$$

$T_S = 300\ Nm \cdot 0,32 \cdot 1,5 = 144\ Nm$

$T_{K\,max} \geq 144\ Nm \cdot 1,0 \cdot 1,4 + 400\ Nm \cdot 1,4 = 762\ Nm$

$T_{K\,max}$ with 1700 Nm ≥ 762 Nm ✓

Technical data

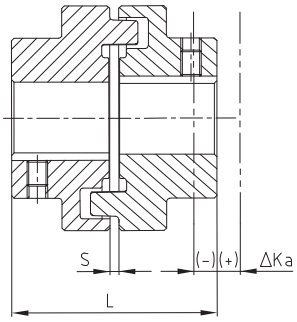
POLY-NORM® Technical data

Size	Torque [Nm]			Max. speed [rpm] at V = 35 m/s	Twisting angle with		Torsion spring stiffness C_{dyn} [Nm/rad]				Max. permissible displacement [mm] 1)		
	Nominal T_{KN}	Max. $T_{Kmax.}$	Alternating T_{KW}		T_{KN}	T_{Kmax}	1,0 T_{KN}	0,75 T_{KN}	0,5 T_{KN}	0,25 T_{KN}	Axial ΔKa	Radial ΔKr	Angular ΔKw
28	40	80	16	9650	4,5	6,0	5200	3318	1867	897	± 1,0	0,20	1,2
32	60	120	24	8550			7820	4989	2821	1349	± 1,0	0,25	1,4
38	90	180	36	7650			13540	8639	4885	2336	± 1,0	0,25	1,5
42	150	300	60	6950			26250	16748	9471	4528	± 1,0	0,25	1,7
48	220	440	88	6300	4,0	5,5	29896	19074	10786	5157	± 1,5	0,30	1,8
55	300	600	120	5650			38500	24563	13891	6641	± 1,5	0,30	2,0
60	410	820	164	5150			67600	43129	23200	11661	± 1,5	0,30	2,2
65	550	1100	220	4750			81800	52188	26994	14111	± 1,5	0,35	2,4
75	850	1700	340	4200			122900	78410	40557	21200	± 1,5	0,40	2,7
85	1350	2700	540	3650			243045	155063	74858	41925	± 1,5	0,40	3,0
90	2000	4000	800	3300	2,5	3,5	361571	230682	111364	62371	± 1,5	0,45	3,4
100	2900	5800	1160	2950			548200	349752	168846	94565	± 3,0	0,50	3,9
110	3900	7800	1560	2650			792300	505487	244028	136672	± 3,0	0,60	4,3
125	5500	11000	2200	2350			1023240	652827	315158	176509	± 3,0	0,60	4,8
140	7200	14400	2880	2100			1640430	1046594	508533	282974	± 3,0	0,60	5,5
160	10000	20000	4000	1900			2090930	1334013	648188	360685	± 3,0	0,65	6,1
180	13400	26800	5360	1650			2670700	1703907	827917	460696	± 3,0	0,65	6,0

1) Displacement at n = 1500 rpm.
Angular and radial displacement can occur at the same time. The sum of all displacements must not exceed the figures set forth in the table. Couplings may be dynamically balanced on request. (Semi-wedge balancing G 6,3 with 1500 rpm). For circumferential speeds exceeding V = 20 m/s we would recommend dynamic balancing.

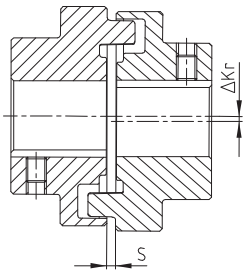
Displacements

Axial displacement ΔKa

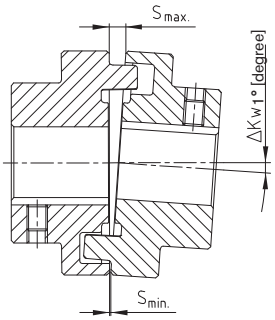


$L_{max./min} = L + \Delta Ka$ [mm]

Radial displacement ΔKr



Angular displacement ΔKw



$\Delta Kw = S_{max.} - S_{min.}$ [mm]

Assembly Guidelines

During assembly, the coupling halves must be mounted in a way that the coupling hub faces are flush to the end of the shafts. The alignment of the shafts must be adjusted that radial and the angular displacements are minimal. The life of the coupling and bearings is extended by precise alignment. Steps must be taken to ensure that the alignment will not change during all operating conditions. Shaft displacements which cannot be avoided must not exceed the figures indicated in the table. Angular and radial displacements can occur at the same time but the sum of these displacements must not exceed the figures set forth in the table above. See the KTR mounting instructions, KTR standard 49510 at our homepage www.ktr.com.

General information about the elastomer

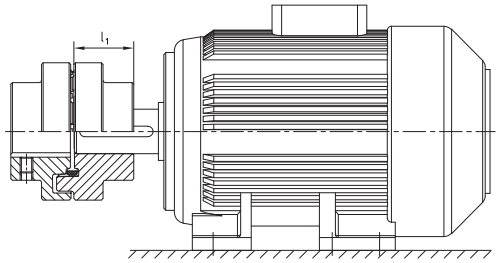
Material/Hardness	Perbunan [NBR]/78 Shore A
Permanent temperature range [°C]	- 30 to + 80
Max. temperature (short time) [°C]	- 50 to + 120
Applications	General machine construction Pump industry ATEX applications Chemical industry Applications of average elasticity
Resistant to	Gasoline, diesel Acids, bases Tropics (Salt-) Water (hot/cold) Oils, greases Propane, butane Natural gas, city gas

Elastomer ring

Elastomer ring Viton

Elastomeres Viton [FKM] 60 Shore A for the high-temperature range

Selection of standard IEC motors



POLY-NORM® couplings for standard IEC motors, protection IP 54/IP 55 (elastomer ring 78 Shore A)

A. C. motor 50 Hz			Motor output n = 3000 rpm 2-pole		POLY-NORM® coupling size	Motor output n = 1500 rpm 4-pole		POLY-NORM® coupling size	Motor output n = 1000 rpm 6-pole		POLY-NORM® coupling size	Motor output n = 750 rpm 8-pole		POLY-NORM® coupling size
Size	Shaft end dxl [mm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]	
	2-pole	4,6,8 pole												
56	9 x 20		0,09	0,32		0,06	0,43		0,037	0,43				
			0,12	0,41		0,09	0,64		0,045	0,52				
63	11 x 23		0,18	0,62		0,12	0,88		0,06	0,7				
			0,25	0,86		0,18	1,3		0,09	1,1				
71	14 x 30		0,37	1,3		0,25	1,8		0,18	2		0,09	1,4	
			0,55	1,9		0,37	2,5		0,25	2,8		0,12	1,8	
80	19 x 40		0,75	2,5	**28/32**	0,55	3,7	**28/32**	0,37	3,9	**28/32**	0,18	2,5	**28/32**
			1,1	3,7		0,75	5,1		0,55	5,8		0,25	3,5	
90S	24 x 50		1,5	5		1,1	7,5		0,75	8		0,37	5,3	
90L			2,2	7,4		1,5	10		1,1	12		0,55	7,9	
100L	28 x 60		3	9,8		2,2	15		1,5	15		0,75	11	
						3	20					1,1	16	
112M			4	13		4	27		2,2	22		1,5	21	
132S	38 x 80		5,5	18		5,5	36		3	30		2,2	30	
			7,5	25	**38**			**38**			**38**			**38**
132M						7,5	49		4	40		3	40	
									5,5	55				
160M	42 x 110		11	36		11	72		7,5	75		4	54	
			15	49	**42**			**42**			**42**	5,5	74	**42**
160L			18,5	60		15	98		11	109		7,5	100	
180M	48 x 110		22	71	**48**	18,5	121	**48**			**48**			**48**
180L						22	144		15	148		11	145	
200L	55 x 110		30	97		30	196	55	18,5	181	**55**	15	198	**55**
			37	120	**55**				22	215				
225S	55 x 110	60 x 140				37	240	**60**			**60**	18,5	244	**60**
225M			45	145		45	292		30	293		22	290	
250M	60 x 140	65 x 140	55	177	**60**	55	356	**65**	37	361	**65**	30	392	**65**
280S		75 x 140	75	241		75	484	**75**	45	438	**75**	37	483	**75**
280M			90	289	**65**	90	581		55	535		45	587	
315S			110	353		110	707	**85**	75	727	**85**	55	712	**85**
315M		80 x 170	132	423	**75**	132	849		90	873		75	971	
	65 x 140		160	513		160	1030		110	1070	**90**	90	1170	**90**
315L			200	641		200	1290	**90**	132	1280		110	1420	
					85				160	1550	**100**	132	1710	**100**
315		85 x 170	250	802		250	1600	**100**	200	1930		160	2070	
			315	1010		315	2020		250	2410	**110**	200	2580	**110**
			355	1140	**90**	355	2280	**110**	315	3040	**125**	250	3220	**125**
355	75 x 140	95 x 170	400	1280		400	2570		400	3850		315	4060	
			500	1600		500	3210				**140**			**140**
			560	1790	**100**	560	3580	**125**	450	4330		355	4570	
400	80 x 170	110 x 210	630	2020		630	4030		500	4810		400	5150	
			710	2270	**110**	710	4540	**140**	560	5390	**160**	450	5790	**160**
			800	2560		800	5120		630	6060		500	6420	
450	90 x 170	120 x 200	900	2880	**125**	900	5760	**160**	710	6830	**180**	560	7190	**180**
			1000	3200		1000	6400		800	7690		630	8090	

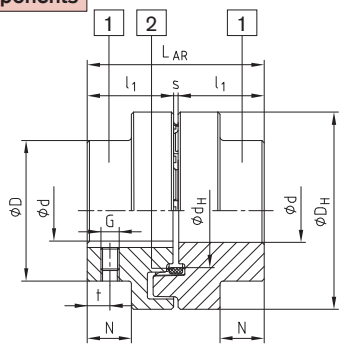
The arrangement of couplings is valid for an ambient temperature of up to + 30 °C. For the selection there is a minimum safety factor of 2 of the max. coupling torque ($T_{Kmax.}$). A detailed arrangement is possible according to catalogue, page 55. Drives with periodical torque curves must be selected according to DIN 740 part 2. If requested, KTR will make the selection.

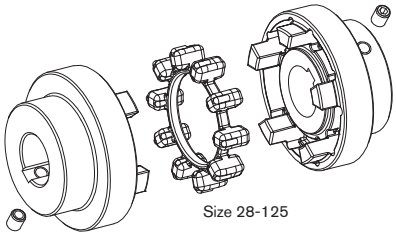
The coupling selection assumes normal operating conditions. Torque T = nominal torque according to Siemens catalogue M 11 · 1994/95.

Type AR

- Torsionally flexible, reduces vibrations
- Failsafe
- Maintenance-free
- Very short design
- Axial plug-in
- According to DIN 740
- Ex Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Detailed mounting instructions and further information available at www.ktr.com

Components





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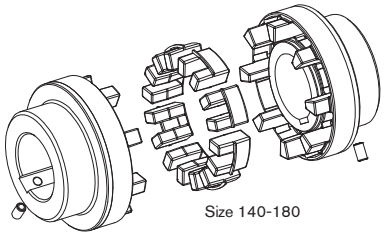


Size 140-180

1 = Standard hub
2 = Elastomer ring

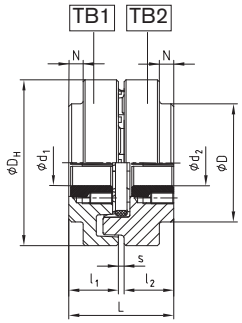
Componets:
Type AR
(GJL)
(NBR 78 ShA)

POLY-NORM® Type AR

Size	Elastomer ring (part 2) [1] Torque [Nm]		Finish-bore	Dimensions [mm]									Mass moment of inerrtia	AR [3] Weight
				General							Feststellgewinde [2]			
	T_{KN}	$T_{K\,max.}$	Ø d_{max} [2]	L_{AR}	l_1	s	D_H	D	d_H	N	G	t	[kgm²] [3]	[kg]
28	40	80	28	59	28	3	69	46	36,5	12	M5	7	0,0004	0,9
32	60	120	32	68	32	4	78	53	41,5	14	M8	7	0,0008	1,4
38	90	180	38	80	38	4	87	62	50	19,5	M8	10	0,0016	2,0
42	150	300	42	88	42	4	96	69	55,5	20	M8	10	0,0026	2,7
48	220	440	48	101	48	5	106	78	64	24	M8	15	0,0042	3,7
55	300	600	55	115	55	5	118	90	73	29	M8	14	0,0070	5,5
60	410	820	60	125	60	5	129	97	81	33	M8	15	0,0112	6,9
65	550	1100	65	135	65	5	140	105	86	36	M10	20	0,0174	8,8
75	850	1700	75	155	75	5	158	123	100	42,5	M10	20	0,028	13,5
85	1350	2700	85	175	85	5	182	139	116	48,5	M10	25	0,052	19,5
90	2000	4000	90	185	90	5	200	148	128	49	M12	25	0,090	23,2
100	2900	5800	100	206	100	6	224	165	143	55	M12	25	0,160	31,9
110	3900	7800	50-110	226	110	6	250	185	158	60	M16	30	0,317	38,0
125	5500	11000	55-125	256	125	6	280	210	178	70	M16	35	0,570	55,2
140	7200	14400	65-140	286	140	6	315	235	216	76,5	M20	35	1,030	92,6
160	10000	20000	75-160	326	160	6	350	265	246	94,5	M20	45	1,746	126,9
180	13400	26800	75-180	366	180	6	400	300	290	111,5	M20	50	3,239	181,8

[1] Standard material perbunane (NBR) 78 Shore A, size 140 - 180 double tooth elastomers
[2] Bore H7 with keyway DIN 6885 sheet 1 [JS9] and threads for setscrews on the feather keyway.
[3] Refer to medium bore

Components



POLY-NORM® with taper clamping sleeve

Size	Taper clamping sleeve	Dimensions [mm] max. d_1; d_2	l_1; l_2	Fixing screws [1] for taper sleeve Size [Inch]	Length [mm]	SW [mm]	T_A [Nm]	Size	Taper clamping sleeve	Dimensions [mm] max. d_1; d_2	l_1; l_2	Fixing screws [1] for taper sleeve Size [Inch]	Length [mm]	SW [mm]	T_A [Nm]
32	1108	25	25,5	1/4"	13	3	5,7	**85**	2517	60	46,5	1/2"	25	6	49
48	1610	40	30,0	3/8"	16	5	20	**90**	3020	75	52,0	5/8"	32	8	92
	1615	40	42,5	3/8"	16	5	20	**100**	3535	90	98,0	1/2"	38	10	115
60	2012	50	38,5	7/16"	22	6	31	**125**	4040	100	111,5	5/8"	45	12	172
75	2517	60	52,5	1/2"	25	6	49	[1] 2 fixing screws except for 3535/4040 3 fixing screws.							

Coupling design TB 1 Cam-sided screwing TB 2 Collar-sided screwing
Combination possible Please ask for our seperate data sheet M407045

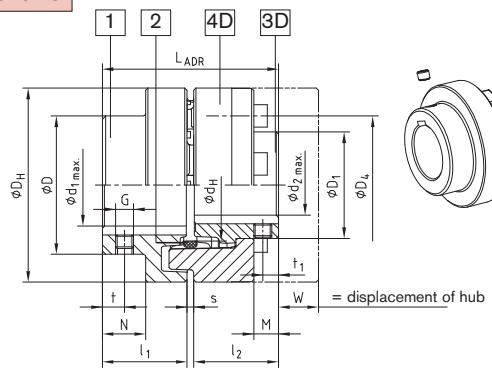
Order form:

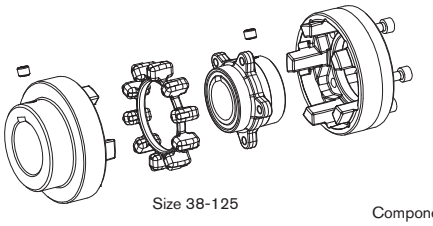
POLY-NORM® 38	AR	∅38	∅30
Coupling size	Type	Finish bore	Finish bore

Type ADR (3-part design)

- Torsionally flexible, reduces vibrations
- Elastomer ring can be exchanged in assembled condition
- Failsafe
- Maintenance-free
- Short design
- Axial plug-in
- According to DIN 740
- Ⓔx Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Detailed mounting instructions and further information available at www.ktr.com

Components





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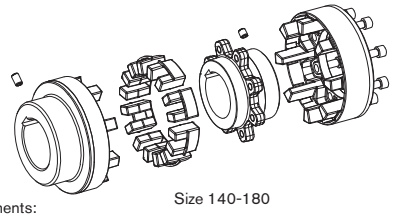


Size 140-180

Components:

Type ADR (3-part)

1	=	Standard hub*	(GJL)
2	=	Elastomer ring	(NBR 78 ShA)
3D	=	Flange hub	(GJS)
4D	=	Cam ring	(GJL)

* To be preferably used drive-sided

POLY-NORM® Type ADR

Size	Elastomer ring torque [Nm] 1)		Dimensions [mm]															
			Finish bore 2)		General										Thread for setscrew			
	T_{KN}	$T_{Kmax.}$	d_1 max.	d_2 max.	L_{ADR}	l_1/l_2	s	D_H	D	D_1	d_H	N	M	W	G	t	t_1	T_A [Nm]
38	90	180	38	34	80	38	4	87	62	48	50	19,5	11,0	12	M8	10	7	10
42	150	300	42	38	88	42	4	96	69	54	55,5	20	12,0	16	M8	10	7	10
48	220	440	48	44	101	48	5	106	78	62	64	24	13,7	16	M8	15	7	10
55	300	600	55	50	115	55	5	118	90	72	73	29	18,7	15	M8	14	14	10
60	410	820	60	56	125	60	5	129	97	80	81	33	22,2	14	M8	15	15	10
65	550	1100	65	60	135	65	5	140	105	86	86	36	26,7	11	M10	20	20	17
75	850	1700	75	68	155	75	5	158	123	98	100	42,5	27,8	16	M10	20	20	17
85	1350	2700	85	78	175	85	5	182	139	112	116	48,5	33,7	18	M10	25	25	17
90	2000	4000	90	85	185	90	5	200	148	122	128	49	31,5	26	M12	25	25	40
100	2900	5800	100	95	206	100	6	224	165	136	143	55	37,5	28	M12	25	25	40
110	3900	7800	110	105	226	110	6	250	185	150	158	60	39,5	30	M16	30	30	80
125	5500	11000	125	115	256	125	6	280	210	168	178	70	48,0	35	M16	35	35	80
140	7200	14400	65-140	55-135	286	140	6	315	235	195	216	76,5	47,0	59	M20	35	35	140
160	10000	20000	75-160	65-155	326	160	6	350	265	225	246	94,5	65,0	43	M20	45	45	140
180	13400	26800	75-180	65-175	366	180	6	400	300	255	290	111,5	79,0	33	M20	50	50	140

1) Standard material perbunane (NBR) 78 Shore A, size 140 - 180 double tooth elastomers

2) Bore H7 with keyway to DIN 6885 sheet 1(JS9) with thread for set screws

Classification of cap crews DIN EN ISO 4762–12.9

Size	M x l [mm]	Number z	Separation z x angle	D_4 [mm]	T_A [Nm] 3)	Size	M x l [mm]	Number z	Separation z x angle	D_4 [mm]	T_A [Nm] 3)
38	M6x16	5	5x72	62	10	**90**	M16x30	6	6x60	149	210
42	M8x16	5	5x72	69	25	**100**	M16x30	6	6x60	163	210
48	M8x20	6	6x60	78	25	**110**	M16x40	8	8x45	183	210
55	M8x20	6	6x60	88	25	**125**	M20x40	8	8x45	202	410
60	M8x20	6	6x60	98	25	**140**	M20x50	8	8x45	237	410
65	M10x20	6	6x60	104	49	**160**	M20x55	9	9x40	267	410
75	M10x25	6	6x60	120	49	**180**	M20x60	10	10x36	304	410
85	M12x25	6	6x60	138	86						

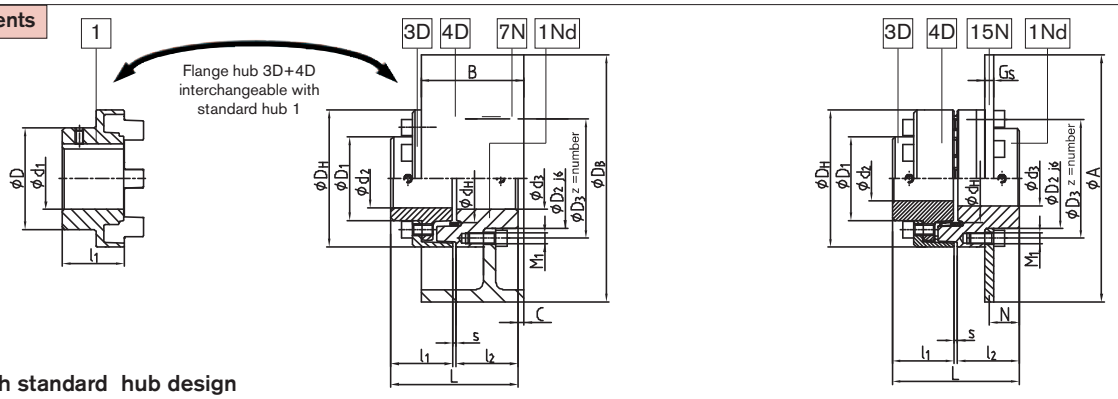
Order form:

POLY-NORM® 65	ADR	d_1 = ∅55	d_2 = ∅60
Coupling size	Type	Finish bore part 1	Finish bore part 3D

Type BTA and SBA with Brake drum/Brake disk for brake stop

- Shaft coupling POLY-NORM® ADR-BTA with brake drum to be mounted to external drum brakes with double shoes according to DIN 15431/15435
- Shaft coupling POLY-NORM® ADR-SBA with disk for braking calipers
- Each coupling type to be combined with various sizes of brake drum disks (see selection)
- The brake drum or brake disk has to be placed onto the shaft end with the biggest mass moment of inertia
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9

Components



With standard hub design AR-BTA or AR-SBA

Brake drum design ADR-BTA

Brake disk design ADR-SBA

POLY-NORM® type AR-BTA, AR-SBA, ADR-BTA and ADR-SBA

Size	Elastomer ring torque [Nm] 1)		Dimensions [mm]												
				Finish bore max.											
	T_{KN}	$T_{Kmax.}$	$D; D_1$	d_1	d_2	d_3	D_H	D_2	D_3	z x ∢	M_1	$l_1; l_2$	s	L
38	90	180	For dimension diameter ∅D, ∅D_1 please see our company catalogue on page 55 and 56.	38	34	38	87	61	75	5 x 72°	M6	38	4	80
42	150	300		42	38	42	96	68	82	5 x 72°	M8	42	4	90
48	220	440		48	44	48	106	77	92	6 x 60°	M8	48	5	101
55	300	600		55	50	55	118	88	104	6 x 60°	M8	55	5	115
60	410	820		60	56	60	129	96	114	6 x 60°	M8	60	5	125
65	550	1100		65	60	65	140	104	122	6 x 60°	M10	65	5	135
75	850	1700		75	68	75	158	121	140	6 x 60°	M10	75	5	155
85	1350	2700		85	78	85	182	137	160	6 x 60°	M12	85	5	175
90	2000	4000		90	85	90	200	146	174	6 x 60°	M16	90	5	185
100	2900	5800		100	95	100	224	164	195	6 x 60°	M16	100	6	206
110	3900	7800		50-110	105	50-110	250	184	218	8 x 45°	M16	110	6	226
125	5500	11000		55-125	115	55-125	280	208	245	8 x 45°	M20	125	6	256
140	7200	14400		65-140	55-135	65-140	315	233	276	8 x 45°	M20	140	6	286
160	10000	20000		75-160	65-155	75-160	350	263	308	9 x 40°	M20	160	6	326
180	13400	26800		75-180	65-175	75-180	400	298	349	10 x 36°	M20	180	6	366

POLY-NORM® BTA

POLY-NORM® Size / 2) D_BxB Brake drum	Dimensions [mm] C															Speed rpm with v= 60 m/s 3)
	38	42	48	55	60	65	75	85	90	100	110	125	140	160	180	
160x60	4															7150
200x75	9	8	4													5725
250x95	17	16	20	7	3	0										4575
315x118		25	21	16	12	9	2,5	-3,5								3625
400x150			34	28	25	22	15,5	9,5	9	3						2850
500x190										18	12	-2				2275
630x236												20	13	-4		1800
710x265													24	7	-11	1600

POLY-NORM® SBA

POLY-NORM® Size / 2) Brake disk	Dimensions [mm] N															Speed rpm with v= 60 m/s 3)
	38	42	48	55	60	65	75	85	90	100	110	125	140	160	180	
200x12,5	13,75															5725
250x12,5	13,75	14,75	18,75													4575
315x16		13	17	22	26	29	35,5									3625
400x16			17	22	26	29	35,5	41,5	42	48						2850
500x16				22	26	29	35,5	41,5	42	48	54	64				2275
630x20										46	52	62	69	86		1800
710x20										46	52	62	69	86	104	1600
800x25										43,5	49,5	59,5	66,5	83,5	101,5	1425
900x25											49,5	59,5	66,5	83,5	101,5	1250

1) Standard material Perbunan [NBR]
2) Steel
3) Dynamical balancing necessary

Futher sizes on request

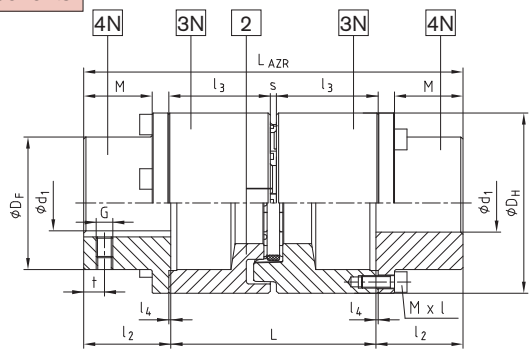
Order form:

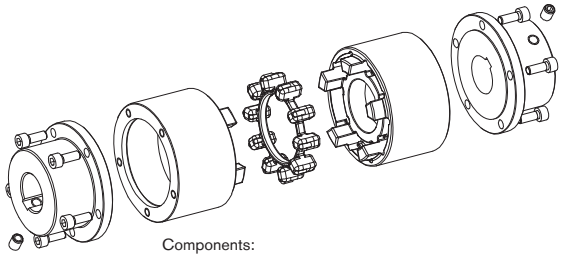
POLY-NORM® 38	ADR-BTA	∅200 x 75	d_2 - ∅32 NnD	d_3 - ∅25 NnD
Coupling size	Type	∅ brake drum	Component with finish bore	Component with finish bore

Type AZR

- Connection of long shaft gaps with spacers
- Enables a change of the elastomer without disassembly of the drive and the driven components.
- No movement of driver and driven components is necessary for disassembly of pump thrust bearing.
- Custom designs are available (AZVR)
- Ex Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Detailed mounting instructions and further information available at www.ktr.com

Components





Components:
Type AZR

2	=	Elastomer ring	(NBR 78 ShA)
3N	=	Driving flange	(GJS)
4N	=	Coupling flange	(Steel)

POLY-NORM® Type AZR

Size	Drop out center length L [mm] *	Elastomer ring (p. 2) [1] torque [Nm] T_{KN}	T_{Kmax}	Finish bore [2] Ø d_1 max	Dimensions [mm] General L_{AZR}	l_2	l_3	s	l_4	D_H	D_F	M	Mxl	T_A [Nm]	Thread for setscrew [2] G	t	Mass moment of inertia [3] [kgm²]	AZR Weight [3] [kg]
28	100	40	80	30	170	35	49,5	3	1	69	46	26	M6x18	14	M5	7	0,0020	2,4
	140				210		69,5										0,0030	2,9
32	100	60	120	35	170	35	49	4	1	78	53	26	M6x18	14	M8	7	0,0042	3,2
	140				210		69										0,0062	3,9
38	100	90	180	40	184	42	49	4	1	87	62	33	M6x20	14	M8	10	0,0048	4,3
	140				224		69										0,0068	5,1
42	100	150	300	45	190	45	49	4	1	96	69	35	M6x20	14	M8	10	0,0094	5,1
	140				230		69										0,0128	6,0
48	100	220	440	50	204	52	49	5	1,5	106	78	41,5	M6x20	14	M8	15	0,0170	6,6
	140				244		69										0,0216	7,5
	100				210		49										0,0188	9,4
55	140	300	600	60	250	55	69	5	1,5	118	88	43,5	M8x25	35	M8	14	0,0240	10,8
	180				290		89										0,0232	12,2
	100				220		49										0,0326	11,2
60	140	410	820	65	260	60	69	5	1,5	129	97	47,5	M8x25	35	M8	15	0,0414	13,0
	180				300		89										0,0504	14,6
	100				230		49										0,0564	14,0
65	140	550	1100	70	270	65	69	5	1,5	140	105	51,5	M8x25	35	M10	20	0,0730	15,8
	180				310		89										0,0894	17,5
	140				290		69										0,0824	23,2
75	180	850	1700	80	330	75	89	5	1,5	158	123	60,5	M10x30	69	M10	20	0,1008	25,6
	250				400		124										0,1332	29,8
	140				310		69										0,1570	32,1
85	180	1350	2700	90	350	85	89	5	1,5	182	139	69,5	M10x30	69	M10	25	0,1658	35,2
	250				420		124										0,1812	40,7
	140				320		69										0,2466	38,2
90	180	2000	4000	100	360	90	89	5	1,5	200	148	73,5	M12x35	120	M12	25	0,2880	42,2
	250				430		124										0,3566	49,3
	140				340		69										0,3988	50,0
100	180	2900	5800	110	380	100	89	6	2	224	165	83	M12x35	120	M12	25	0,4450	54,8
	250				450		124										0,5465	63,2

[1] Standard material Perbunan (NBR) 78 Shore-A
[2] Bore H7 with keyway DIN 6885 sheet 1 [JS9] and threads for setscrews on the feather keyway.
[3] Refer to medium bore
*For other extendable lengthes (L=120/160/195/215) it is possible to combine two driving flanges 3N with various lengthes (as an example: driving flanges POLY-NORM® 85 for extendable length 140 and 250 result in an extendable length of 195 mm (140 mm + 250 mm = 390 mm 390 mm/2 = 195 mm).

Order form:

POLY-NORM® 42	AZR	140	∅38	∅42
Coupling size	Type	Drop out center lenght L	Finish bore	Finish bore