

Flange couplings

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BoWex® FLE-PA



BoWex® FLE-PAC



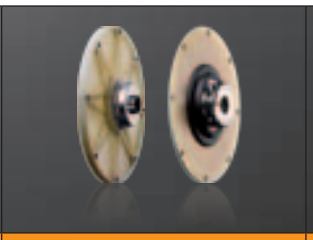
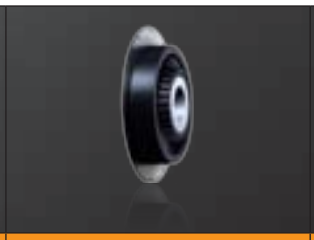
BoWex® ELASTIC®



MONOLASTIC®



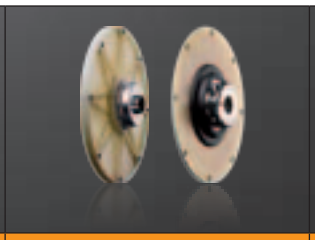
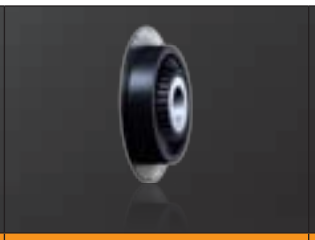
Properties of flange couplings

			
Product	**BoWex® FLE-PA/-PAC**	**BoWex-ELASTIC®**	**MONOLASTIC®**
Type	Torsionally rigid flange coupling	Highly flexible flange coupling	Flexible flange coupling
Properties			
Torsionally rigid	●		
Torsionally flexible		●	●
Highly flexible		●	
Damping vibrations		●	●
Maintenance-free	●	●	●
Axial plug-in	●	●	●
Special features/applications			
Variant diversity	very high	very high	high
Flange dimension	SAE standard and special dimensions	SAE standard and special dimensions	Type 3/4 hole, SAE standard, special dimensions
Internal spline	see standard programme of BoWex® hubs	see standard programme of BoWex® hubs	for SAE or DIN pump shafts
Applications	hydrostatic drives of construction machines, agricultural machines, …	generators, splitterboxes, water pumps, piston compressors, agricultural machines, gensets, mill drives, separator drives, …	hydrostatic drives of construction machines, agricultural machines, …
Performance data			
Max. rated torque T_{KN} [Nm]	5.300	39.000	1.500
Max. speed n [rpm]	6.000	6.200	6.000
Flange (standard and special)			
Material	fibre-glass reinforced Polyamide (PA) combination of polyamide with carbon fibre share and steel flange (PAC)	Natural rubber	Natural rubber
Elastomer hardness	torsionally rigid	"various kinds of hardness for vibration adaptation of drives"	65, 70 Shore A
Flange (Standard)			
Temperature range [°C] min. / max.	- 25 / + 130 (PA) - 25 / + 130 (PAC)	- 40/+ 90	- 40/+ 90
Engine power [kW]			
Max.	800	2.500	250

● ≈ Standard
O ≈ On request
* ≈ Depending on size

FLANGE COUPLINGS
TYPES AND OPERATING DESCRIPTION

Product finder of flange couplings

			
Product	**BoWex® FLE-PA/-PAC**	**BoWex-ELASTIC®**	**MONOLASTIC®**
Type	Torsionally rigid flange coupling	Highly flexible flange coupling	Flexible flange coupling
Geometries			
Design	extremely short	short	short
Max. radial displacement	0,4 mm	–	1 mm
Shaft diameter min. / max. [mm]	20 / 125	21 / 180	20/60
Types (extract)			
Intermediate shaft types » bridging larger shaft distances	–	HE-ZS	–
Shaft-to-shaft connection		HEW 1 and 2, HEW-ZS	–
Flange-to-shaft connection	standard	HE 1, 2, 3, and 4, HE-ZS	standard
For cardan shafts » Intermediate couplings for I. C.-engines	–	HEG 1 and 2	–
Combination with pump mounting flange	●	●	●
Certifications/type examinations			
ATEX		●	
Bureau Vertias	●	●	
DNV/GL		●	
GOST R/ GOST TR	●	●	●

● ≈ Standard

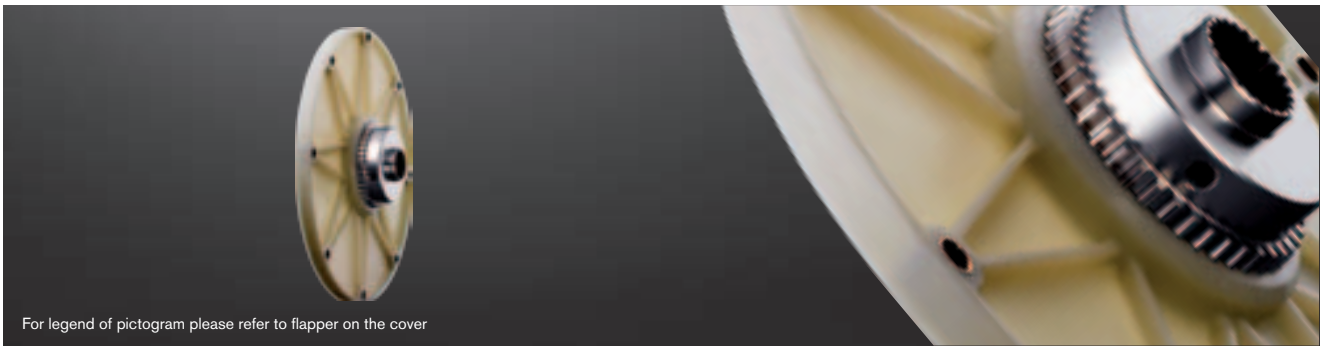
Please note: Pump mounting flanges

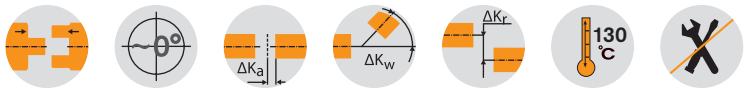


For connecting hydraulic pumps to the diesel engine KTR supplies mounting flanges sizes SAE 6 to SAE 1. These flanges are made of steel with hydraulic connections in accordance with SAE-A, -B, -C, -D and -E both as type with 2 and 4 holes.
Pump connection housings made of EN-GJL-250 (GG 25) to be mounted directly to the back plate of the engine.

BoWex® FLE-PA
Torsionally rigid flange couplings

Axial plug-in, maintenance-free, torsionally rigid





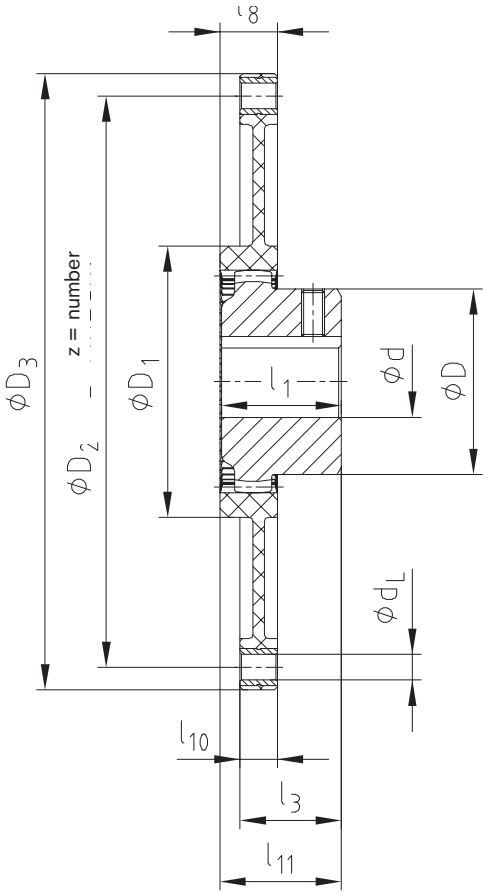
BoWex® FLE-PA – Dimensions/nominal dimension to SAE

Size	Pilot bore	Finish bore d		Dimensions [mm]								Special length l1 max.	Nominal dimension to SAE (D_3)						Max. axial displacement [mm]
		min.	max.	D	D_1	l_1	l_3	l_7	l_8	l_{10}	l_{11}		6 ½"	7 ½"	8"	10"	11 ½"	14"	
48	-	20	48	68	100	50	41	50	20	13	48	bis 60	●	●	●	●			± 2
T 48	13	20	48	68	100	50	38	45	20	13	46	-	●	●	●	●			± 1
T 55	17	20	55	85	115	50	37	48	24	13	48	-	●	●	●	●			± 2
65 / T 65	21	30	65	96	132	55	45	54	27	21	51	bis 70			●	●	●		± 2
T 70	26	30	70	100	153	60	48	56	30	21	57	-				●			± 2
80 / T 80	31	35	80	124	170	90	78	87	30	21	87	-				●	●		± 2
100 / T 100	38	40	100	152	265	110	78	108	35	21	110	-					●	●	± 2
125 / T 125	45	50	125	192	250	140	37	133	50	28	97	-					●	●	± 2

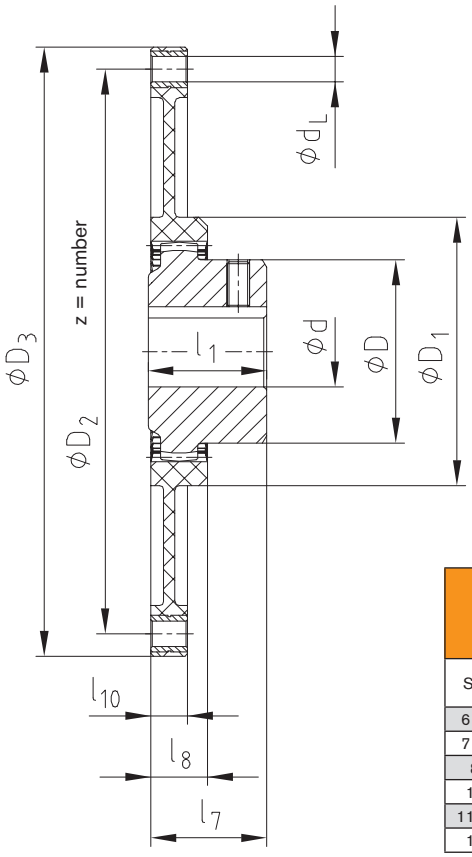
Technical data of BoWex® FLE-PA – Torques/Weights/Mass moments of inertia/Torsion spring stiffness

Size	Torque T_K [Nm]			Weight / Mass moment of inertia J	Hub with max. bore Ø	FLE-PA flanges according to SAE						Dynamic torsion spring stiffness with + 60 °C / ψ = 0.4 [Nm/rad]			
	T_{KN}	$T_{K\,max.}$	T_{KW}			6 ½"	7 ½"	8"	10"	11 ½"	14"	0,30 T_{KN}	0,50 T_{KN}	0,75 T_{KN}	1,00 T_{KN}
48	240	600	120	[kg]	0,79	0,32	0,43	0,51	0,64	–	–	35 x 10^3	75 x 10^3	105 x 10^3	125 x 10^3
				[kgm²]	0,0007	0,0021	0,0035	0,0049	0,0085						
T 48	300	750	150	[kg]	0,79	0,32	0,43	0,51	0,64	–	–	40 x 10^3	86 x 10^3	120 x 10^3	143 x 10^3
				[kgm²]	0,0007	0,0021	0,0035	0,0049	0,0085						
T 55	450	1125	225	[kg]	1,12	0,34	0,62	0,45	0,646	–	–	90 x 10^3	140 x 10^3	170 x 10^3	195 x 10^3
				[kgm²]	0,0016	0,0022	0,0053	0,0044	0,0086						
65	650	1600	325	[kg]	2,30	–	–	0,63	0,64	0,89	–	110 x 10^3	160 x 10^3	200 x 10^3	230 x 10^3
				[kgm²]	0,0044			0,0064	0,0065	0,012					
T 65	800	2000	400	[kg]	2,40	–	–	0,63	0,64	0,89	–	130 x 10^3	190 x 10^3	240 x 10^3	280 x 10^3
				[kgm²]	0,0044			0,0064	0,0065	0,012					
T 70	1000	2500	500	[kg]	2,60	–	–	–	0,941	–	–	230 x 10^3	345 x 10^3	440 x 10^3	517 x 10^3
				[kgm²]	0,0059				0,0132						
80	1200	3000	600	[kg]	5,20	–	–	–	1,05	1,12	–	200 x 10^3	410 x 10^3	580 x 10^3	700 x 10^3
				[kgm²]	0,0151				0,015	0,022					
T 80	1500	3750	750	[kg]	5,20	–	–	–	1,05	1,12	–	240 x 10^3	450 x 10^3	638 x 10^3	770 x 10^3
				[kgm²]	0,0151				0,015	0,022					
100	2050	5150	1025	[kg]	9,37	–	–	–	–	1,16	8,45	500 x 10^3	700 x 10^3	856 x 10^3	950 x 10^3
				[kgm²]	0,0401					0,021	0,234				
T 100	2500	6250	1250	[kg]	9,37	–	–	–	–	1,16	8,45	600 x 10^3	830 x 10^3	960 x 10^3	1070 x 10^3
				[kgm²]	0,0401					0,021	0,234				
125	4250	10700	2125	[kg]	19,73	–	–	–	–	2,09	9,85	1280 x 10^3	1885 x 10^3	2280 x 10^3	2665 x 10^3
				[kgm²]	0,1359					0,043	0,306				
T 125	5300	13250	2650	[kg]	19,73	–	–	–	–	2,09	9,85	1600 x 10^3	2250 x 10^3	2700 x 10^3	3200 x 10^3
				[kgm²]	0,1359					0,043	0,306				

Short mounting



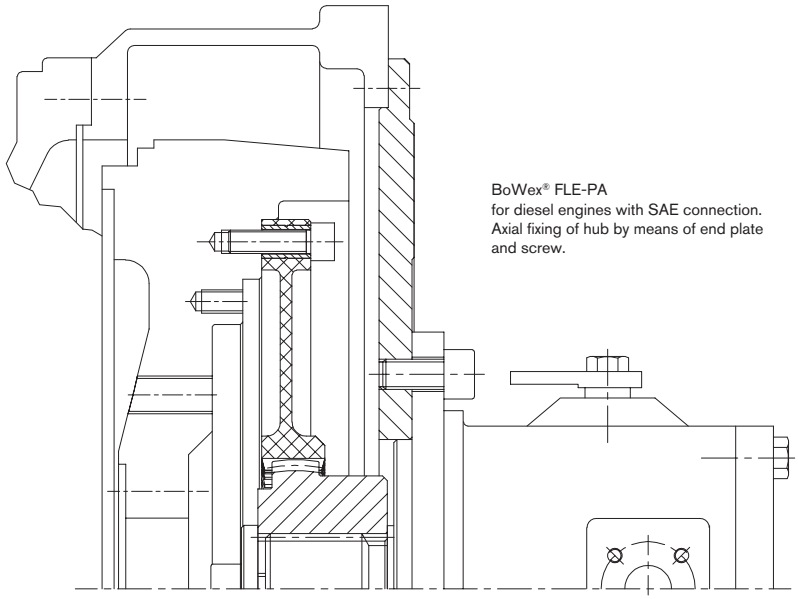
Long mounting



Flange dimensions acc. to SAE J 620 [mm]

Size	D_3	D_2	z	d_L
6 ½"	215,9	200,02	6	9
7 ½"	241,3	222,25	8	9
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11
14"	466,72	438,15	8	13

Example of installation

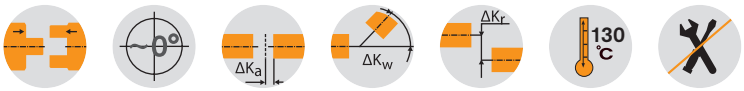


BoWex® FLE-PA
for diesel engines with SAE connection.
Axial fixing of hub by means of end plate and screw.

BoWex® FLE-PAC
Torsionally rigid flange couplings

Axial plug-in, extremely short design, carbon-fibre reinforced material





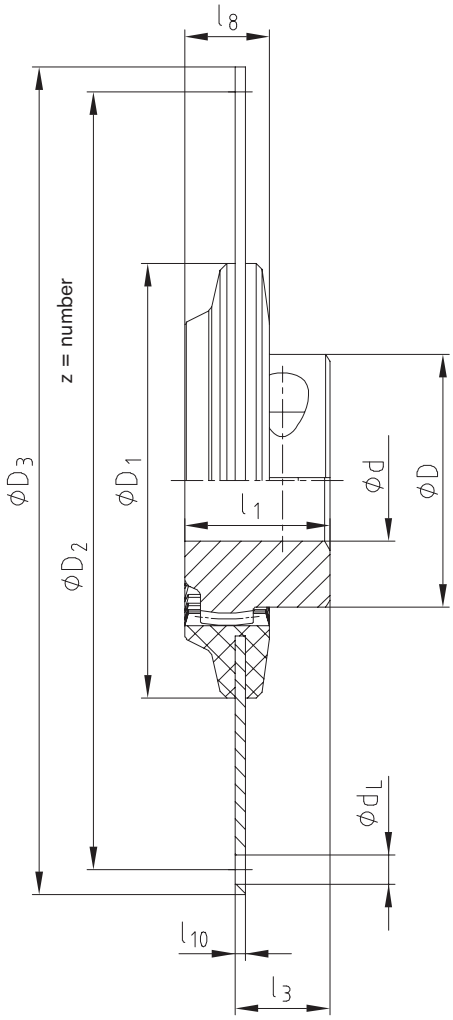
BoWex® FLE-PAC – Dimensions/nominal dimension to SAE

Size	Pilot bore	Finish bore d		Dimensions [mm]							Special length l1 max.	Nominal dimension to SAE (D_3)						Max. axial displacement [mm]
		min.	max.	D	D_1	l_1	l_3	l_7	l_8	l_{10}		6 ½"	7 ½"	8"	10"	11 ½"	14"	
48 / T 48	13	20	48	68	110	50	35	46	25	3	up to 60	●	●	●	●			± 3
65 / T 65	21	30	65	96	165	55	36	46	32	4	up to 70			●	●	●		± 3
80 / T 80	31	35	80	124	220	90	72	76	35	4	-				●	●	●	± 3
100 / T 100	38	40	100	152	280	110	85	102	47	5	-					●	●	± 3
125 / T 125	45	50	125	192	250	140	37	133	50	28	-					●	●	± 3

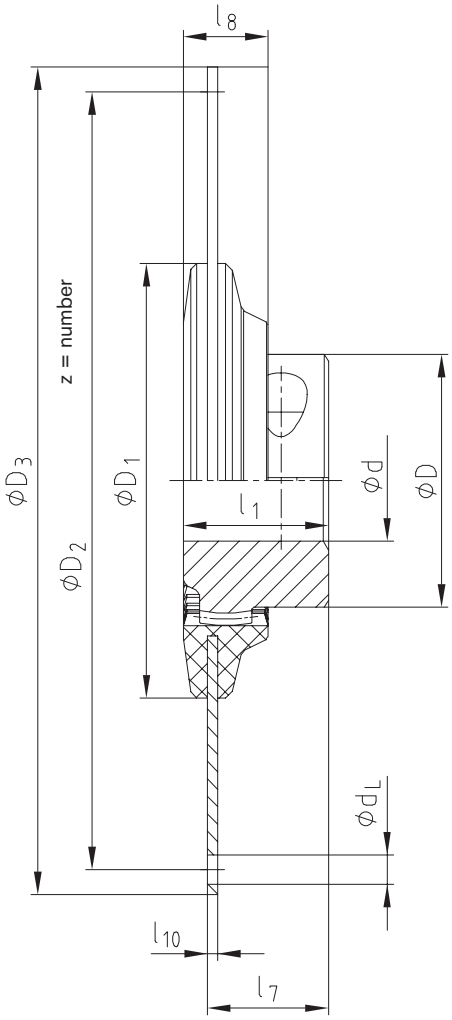
Technical data of BoWex® FLE-PAC – Torques/Weights/Mass moments of inertia/Torsion spring stiffness

Size	Torque T_K [Nm]			Weight / Mass moment of inertia J	Hub with max. bore Ø	FLE-PAC flanges according to SAE						Dynamic torsion spring stiffness with + 60 °C / ψ = 0.45 [Nm/rad]			
	T_{KN}	$T_{K\,max.}$	T_{KW}			6 ½"	7 ½"	8"	10"	11 ½"	14"	0,30 T_{KN}	0,50 T_{KN}	0,75 T_{KN}	1,00 T_{KN}
48	240	600	120	[kg]	0,79	0,77	0,98	1,19	1,73			57 x 10^3	89 x 10^3	109 x 10^3	126 x 10^3
				[kgm²]	0,0007	0,0049	0,0077	0,0109	0,0221						
T 48	300	750	150	[kg]	0,79	0,77	0,98	1,19	1,73			74 x 10^3	115 x 10^3	141 x 10^3	164 x 10^3
				[kgm²]	0,0007	0,0049	0,0077	0,0109	0,0221						
65	650	1600	325	[kg]	2,30			1,48	2,20	2,83		164 x 10^3	286 x 10^3	365 x 10^3	411 x 10^3
				[kgm²]	0,0044			0,0145	0,0294	0,0467					
T 65	800	2000	400	[kg]	2,40			1,48	2,20	2,83		202 x 10^3	328 x 10^3	420 x 10^3	473 x 10^3
				[kgm²]	0,004			0,0145	0,0294	0,0467					
80	1200	3000	600	[kg]	5,20				2,27	2,90	5,20	378 x 10^3	620 x 10^3	790 x 10^3	985 x 10^3
				[kgm²]	0,0151				0,0312	0,0485	0,1462				
T 80	1500	3750	750	[kg]	5,20				2,27	2,90	5,20	430 x 10^3	700 x 10^3	900 x 10^3	1120 x 10^3
				[kgm²]	0,0151				0,0312	0,0485	0,1462				
100	2050	5150	1025	[kg]	9,37					3,35	6,22	600 x 10^3	810 x 10^3	1050 x 10^3	1280 x 10^3
				[kgm²]	0,0401					0,0606	0,1828				
T 100	2500	6250	1250	[kg]	9,37					3,35	6,22	700 x 10^3	900 x 10^3	1170 x 10^3	1400 x 10^3
				[kgm²]	0,0401					0,0606	0,1828				
125	4250	10700	2125	[kg]	19,73					2,09	9,85	1280 x 10^3	1885 x 10^3	2280 x 10^3	2665 x 10^3
				[kgm²]	0,1359					0,043	0,306				
T 125	5300	13250	2650	[kg]	19,73					2,09	9,85	1600 x 10^3	2250 x 10^3	2700 x 10^3	3200 x 10^3
				[kgm²]	0,1359					0,043	0,306				

Short mounting



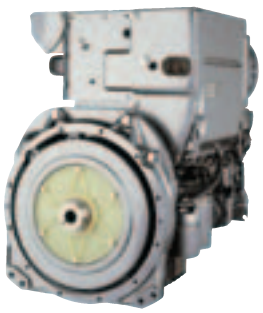
Long mounting



Flange dimensions acc. to SAE J 620 [mm]				
Size	D_3	D_2	z	d_L
6 ½"	215,9	200,02	6	9
7 ½"	241,3	222,25	8	9
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11
14"	466,72	438,15	8	14

BoWex® FLE-PAC
Torsionally rigid flange coupling

Selection according to SAE standard



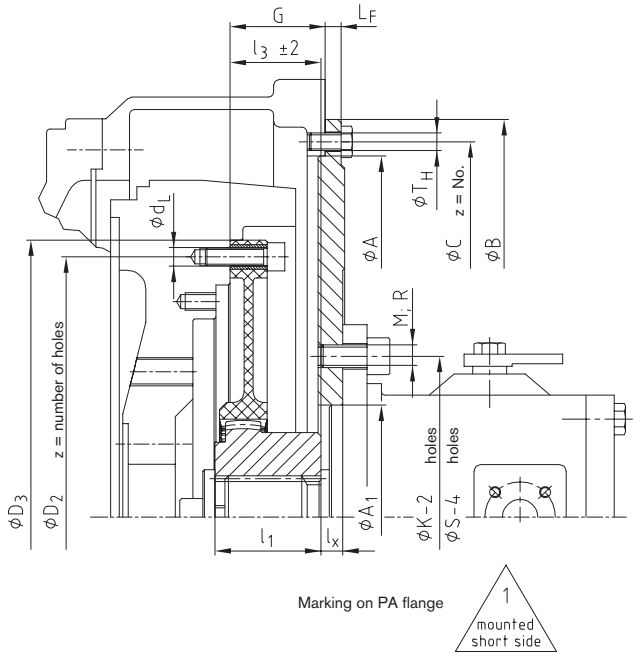
Determination of coupling

Determination of coupling size	**Table 1**
Connection dimension of coupling	**Table 2**
Hub design/Mounting length	**Table 3**

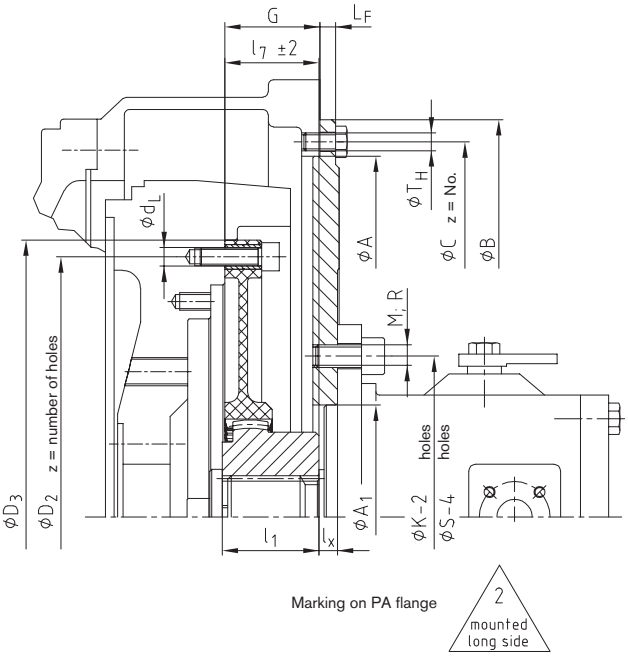
SAE pump mounting flange

Flange size according to SAE 617	**Table 4**
Mounting flange of hydraulic pump	**Table 5**

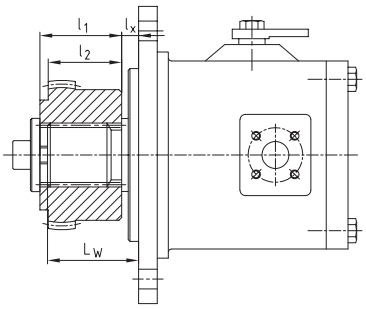
Short mounting of coupling (l3)



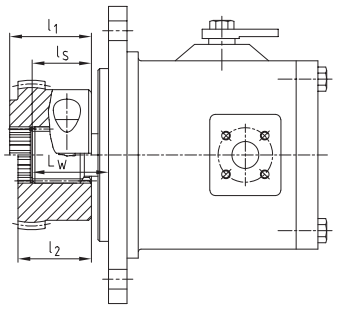
Long mounting of coupling (l7)



Spline hub



Clamping hub



Determination of mounting length l3 or l7	
SAE-Welle	$l_3 / l_7 = G + L_F - L_W + l_S$
DIN-Welle	$l_3 / l_7 = G + L_F - l_X$

If axial fixing of the hub by means of an end plate and a screw is not possible for a pump shaft with involute spline, we would recommend to use our clamping hub.

Mounting instructions:
The flange can be fastened to the engine flywheel by means of socket head cap screws according to DIN EN ISO 4762 quality 8.8 or by hexagon head screws quality 8.8. We recommend screws are loctited in position.

Screw tightening torque of FLE-PA flange to flywheel	
M8	25 Nm
M10	49 Nm
M12	86 Nm

Screw tightening torque of spline clamping hubs DIN EN ISO 4762		
42/48	M10	49 Nm
65	M12	86 Nm
80/100	M16	210 Nm

Mounting dimensions according to SAE standard

1. Selection of coupling for diesel engine

Ⓧ	Diesel engine power		Coupling size	Flywheel to SAE			Pump mounting flange			Driving shaft of pump
	kW	HP			G			LF		
	bis 30 kW	bis 40 PS	48 FLE-PA	6 1/2"	30,15	1,19"	For dimensions to SAE see tables 3 and 4			See table 3 Hub design SAE J 498 / DIN 5480
				7 1/2"	30,15	1,19"				
				8"	62	2,44"		9,5	0,375"	
				10"	54	2,12"				
	bis 90 kW	bis 120 PS	65 FLE-PA	8"	62	2,44"				
				10"	54	2,12"		9,5	0,375"	
				11 1/2"	39,6	1,56"		12,7	0,5"	
	bis 180 kW	bis 240 PS	80 FLE-PA	11 1/2"	39,6	1,56"		12,7	0,5"	

2. Dimensions of coupling flange acc. to SAE J 620 [mm]

Ⓧ	Size	D_3	D_2	z=number	d_L
	6 1/2"	215,90	200,02	6	9
	7 1/2"	241,30	222,25	8	9
	8"	263,52	244,47	6	11
	10"	314,32	295,27	8	11
	11 1/2"	352,42	333,37	8	11

4. Housing dimensions according to SAE 617 [mm]

Ⓧ	SAE size	A	B	C	Z	TH	
	SAE-1	511,18	552	530,2	12	M10	3/8"
	SAE-2	447,68	489	466,7	12	M10	3/8"
	SAE-3	409,58	451	428,6	12	M10	3/8"
	SAE-4	361,95	403	381,0	12	M10	3/8"
	SAE-5	314,33	356	333,4	8	M10	3/8"

5. Mounting flange for hydraulic pump acc. to SAE [mm]

Ⓧ	SAE size	SAE flange with 2 holes					SAE flange with 4 holes				
		A_1	K-2	M		Z	A_1	S-4	R		Z
	A	82,55	106,4	M10		2	82,55	104,6	M10	3/8"	4
	B	101,6	146,0	M12	1/2"	2	101,6	127,0	M12	1/2"	4
	C	127,0	181,0	M16		2	127,0	162,0	M12	1/2"	4
	D	152,4	228,6	M16	5/8"	2	152,4	228,6	M16	5/8"	4
	E	-	-	-	-	-	165,1	317,5	M20	3/4"	4

3. Selection of coupling hub - determination of mounting length l_3 or l_7

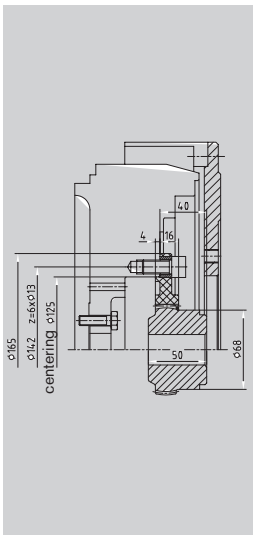
Specify type Ⓧ	BoWex® coupling size	Pump shaft to SAE J 498 and DIN 5480	Spline hub	Spline clamping hub	Dimensions of coupling hub [mm]			Mounting lenght of coupling l3 or l7								Code to order coupling hub
								Flange size 6 1/2" and 7 1/2"		Flange size 8"		Flange size 10"		Flange size 11 1/2"		
								K	L	K	L	K	L	K	L	Specify coupling size
					l_1	l_2	l_S	l_3	l_7	l_3	l_7	l_3	l_7	l_3	l_7	
◯	42	SAE-16/32 DP		x	42	-	33	33	42							P559101
		PI-S 3/4"														
		z=11														
	42	SAE-16/32 DP		x	42	-	-	33	42							P567101
		PB-S 7/8"														
		z=13														
	42	SAE-16/32 DP		x	42	-	27	33	42							P660201
		PB-BS 1"														
		z=15														
	48	SAE-16/32 DP		x	50	-	45	41	50		50	41	50			P663301
	65	PA-S 1 3/8"		x	50	-	48				54	45	54	41		P663301
		z=21														
	65	SAE-12/24 DP		x	55	-	44				54	45	54	41		P656201
		PC-S 1 1/4"														
		z=14														
	65	SAE-16/32 DP		x	-	49	45						53	41		P664301
		PD-S 1 1/2"														
		z=23														
	80	SAE-16/32 DP		x	55	-	-							44	33	P565402
		PE-S 1 3/4"														
		z=27														
	42	25 x 1,25 x 18 DIN 5480	x		42	-	-	33	42							P000205
	42			x	42	-	-	33	42							P500202
	42	30 x 2 x 14 DIN 5480		x	42	-	-	33	42							P500203
	48		x		50	-	-	41	50							P000206
	48			x	50	-	-	41	50		50		50			P500203
	48	35 x 2 x 16 DIN 5480	x		46	-	-	37	46							P000303
	65		x		55	-	-						54	39		P000303
	65			x	60	-	-			50	59	50	59	39		P500301
	65	40 x 2 x 18 DIN 5480	x		55	-	-						54	39		P000304
	65			x	55	-	-				54	45	54	39		P500302
	65	45 x 2 x 21 DIN 5480	x		-	64	-			60	69	60	69	39		P000403
	65			x	55	-	-				54	45	54	39		P500401
	80	50 x 2 x 24 DIN 5480		x	55	-	-							42	37	P500405

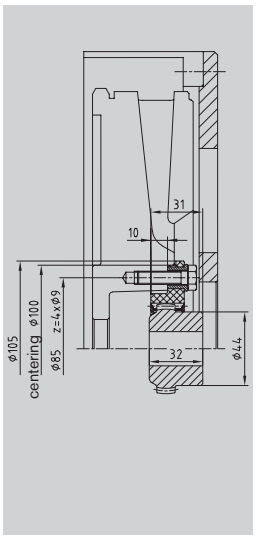
Please photocopy dimension sheet and mark the design required with a cross.

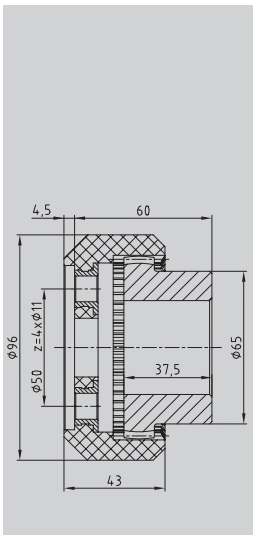
Ordering example: Coupling FLE-PA / FLE PAC			SAE pump mounting flange	
BoWex® 48 FLE-PA	7 1/2"	P663301	SAE-4	B-2L
Coupling size	SAE connection of coupling	Code of coupling hub	Pump mounting flange for engine housing	Pump flange to SAE 2 holes/4 holes standard metric fastening thread
Table 1	Table 2	Table 3	Table 4	Table 5

Special flange programme, deviations from the SAE standard

Fitting to: Hatz diesel engines

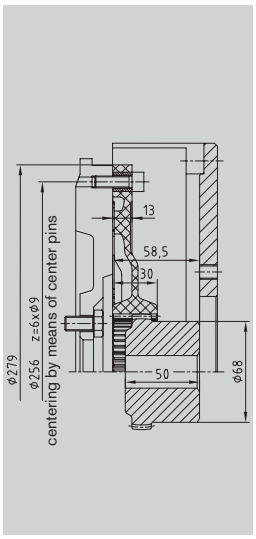


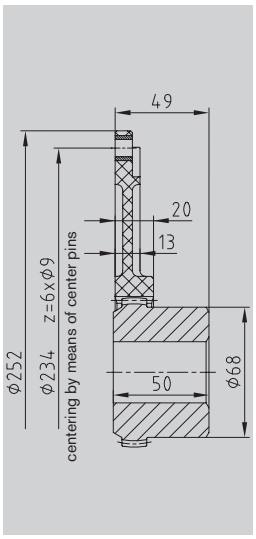


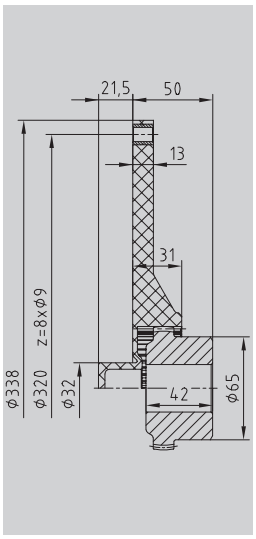


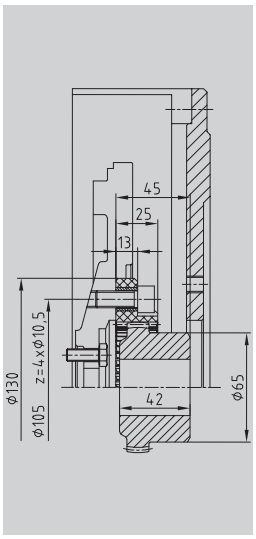
Coupling size	BoWex® 48 FLE-PA, Ø165	BoWex® 28 FLE-PA, Ø105	BoWex® 48 FLE-PA, Ø96
Engine type	Hatz 2L/3L/4L41C 2M/3M/4M41 4.M42,4L42C	Hatz 1.D81 / 1D90	Hatz Z788 / Z789 / Z790

Fitting to: VW Mitsubishi diesel engines



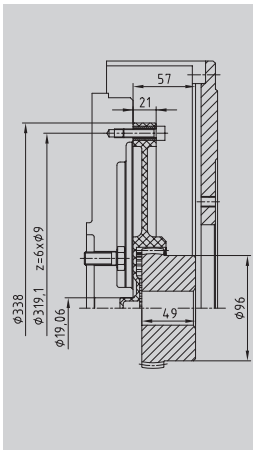


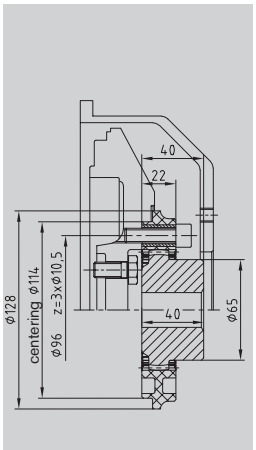


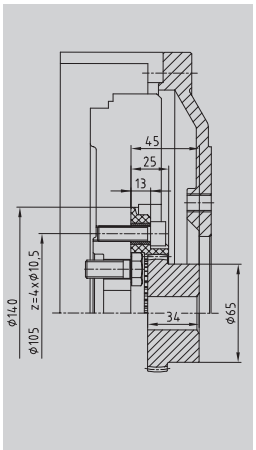


Coupling size	BoWex® 48 FLE-PA, Ø279	BoWex® 48 FLE-PA, Ø252	BoWex® 48 FLE-PA	BoWex® 48 FLE-PA, Ø130
Engine type	VW 028.B / M344	VW 062.2 / 068.5 / 6 / A / D	Mitsubishi Ø338-32	Mitsubishi Series L / Series K

Fitting to: Perkins Lombardini diesel engines





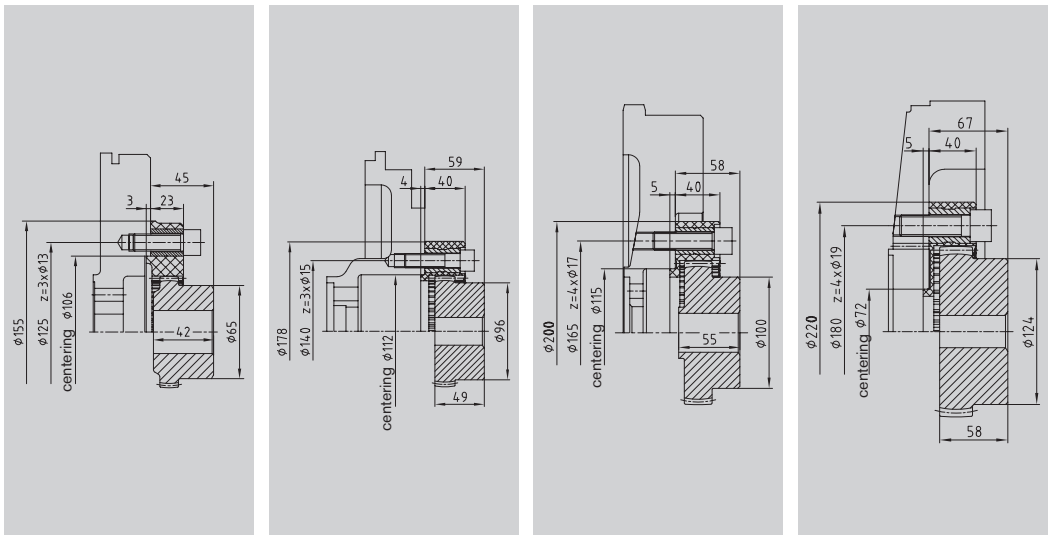


Coupling size	BoWex® 65 FLE-PA, Ø338	BoWex® 48 FLE-PA, Ø128	BoWex® 48 FLE-PA, Ø140
Engine type	Perkins 1104C-44T Flywheel No. D0014	Lombardini FOCS series	Lombardini LDW

BoWex® FLE-PA
Torsionally rigid flange couplings

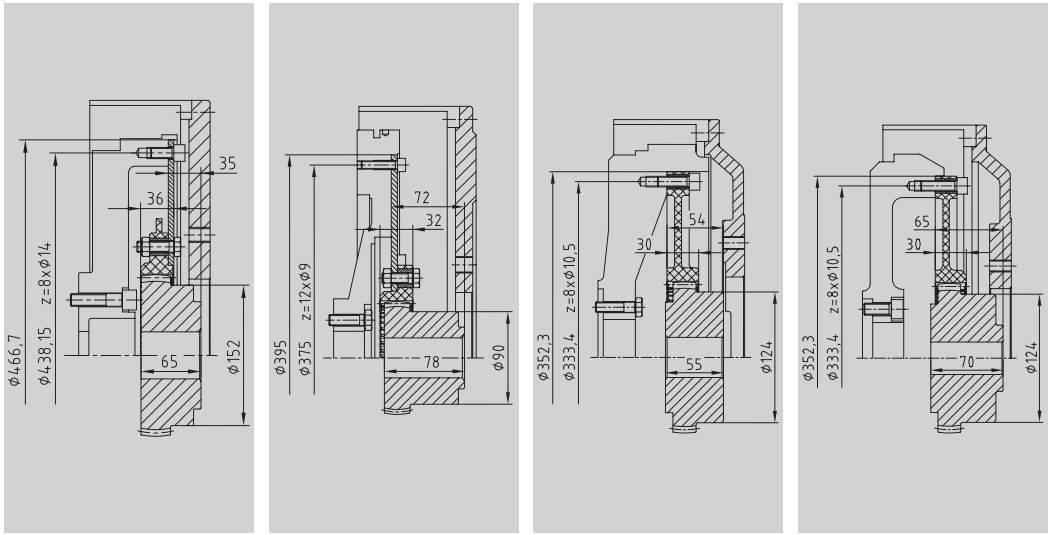
Special flange programme, deviations from the SAE standard

Fitting to: Perkins Isuzu Cummins diesel engines



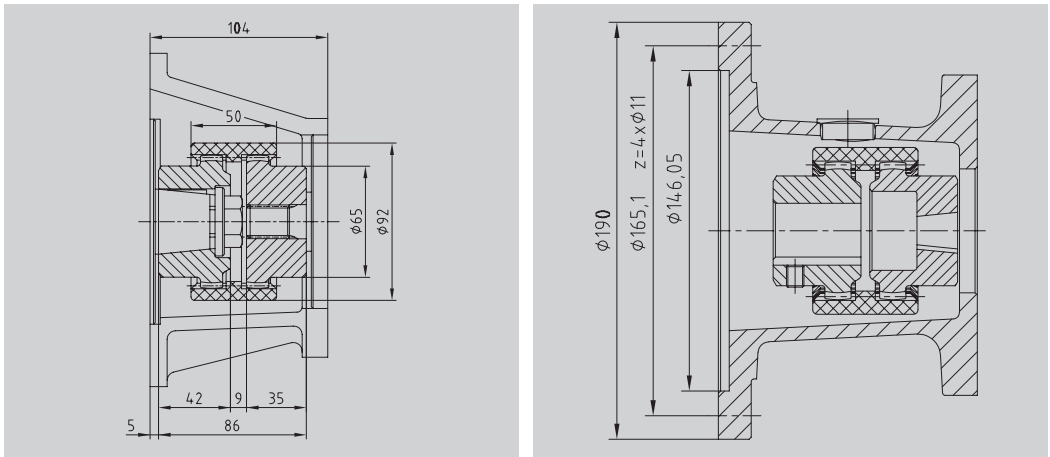
Coupling size	BoWex® 48 FLE-PA, Ø 155	BoWex® 65 FLE-PA, Ø 178	BoWex® 70 FLE-PA, Ø 200	BoWex® 80 FLE-PA, Ø 220
Engine type	3 holes, Ø 125	3 holes, Ø 140	4 holes, Ø 165	4 holes, Ø 180

Fitting to: Caterpillar Daimler Cummins John-Deere diesel engines



Coupling size	BoWex® T100 FLE-PA, 14"	BoWex® T65 FLE-PA, Ø395	BoWex® 80 FLE-PA, 11 1/2"	BoWex® 80 FLE-PA 11 1/2"
Engine type	Caterpillar C 10 / C 12	Daimler OM904	Cummins QSX/QSB	John Deere

Fitting to shaft motors: Hatz Honda Briggs-Stratton Yanmar Kohler Robin



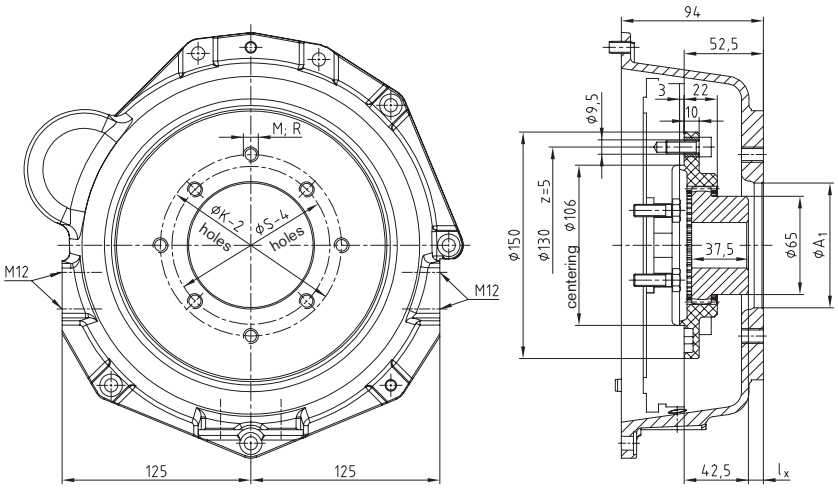
Coupling size	BoWex® M42	BoWex® shaft coupling type M28 and M32
Engine type	Hatz 2G30	Housing connection acc. to SAE J609A

BoWex® FLE-PA
Torsionally rigid flange couplings and pump mounting flanges

Flange couplings and pump connection housings for KUBOTA engines

KUBOTA
Super MINI series

Z-400
Z-442-B
Z-482-B
D-600
D-662-B
D-902-B
V-800



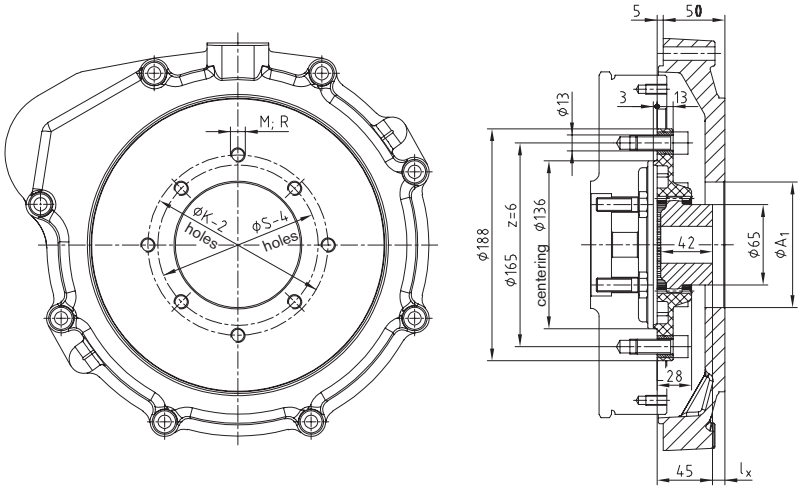
BoWex® 48 FLE-PA Ø 150 / pump connection housings

KUBOTA
Super 3 series

D 1403/1703
flywheel
No. 190027991

V 1903/2203
flywheel
No. 190002369

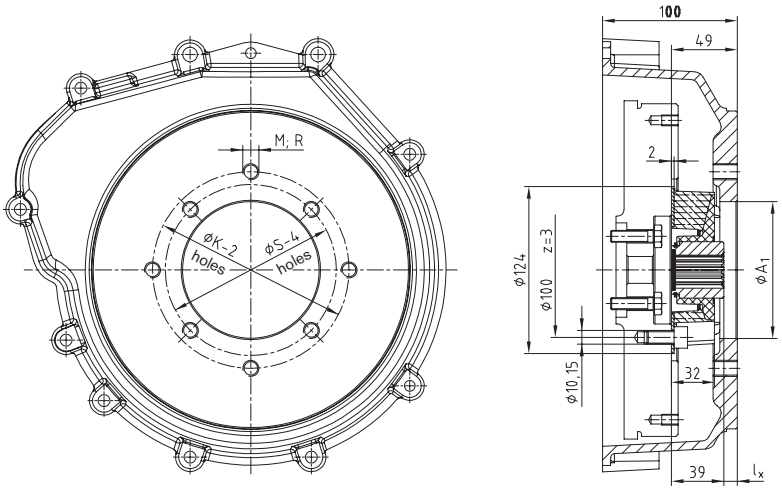
V 2003-T



BoWex® 48 FLE-PA Ø 188 / pump connection housings

KUBOTA
Super 5 series

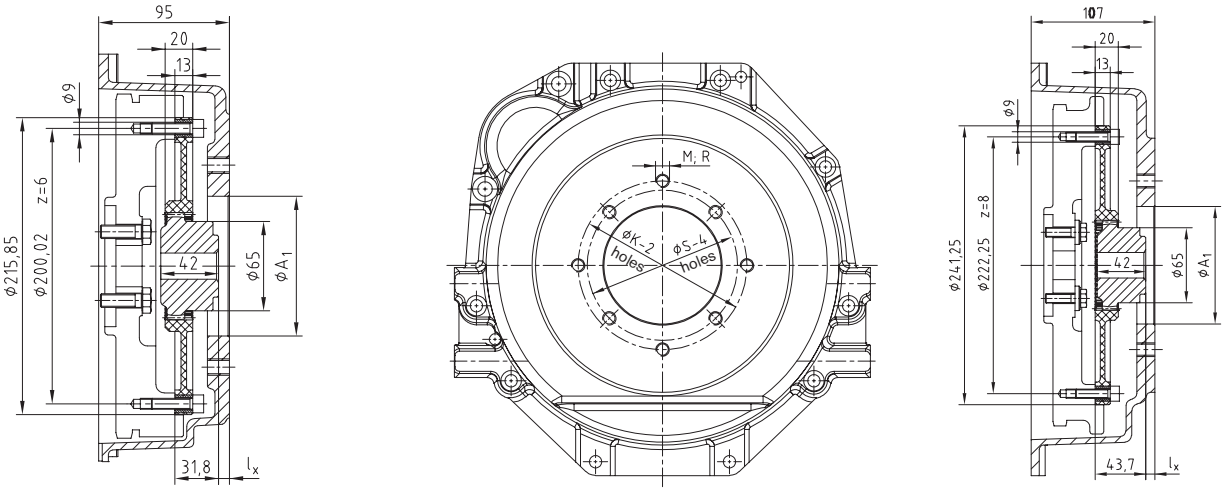
D 905
D 1005
D 1105
D 1105-T
V 1205
V 1305
V 1505



MONOLASTIC® 28 Ø 124 / pump connection housings

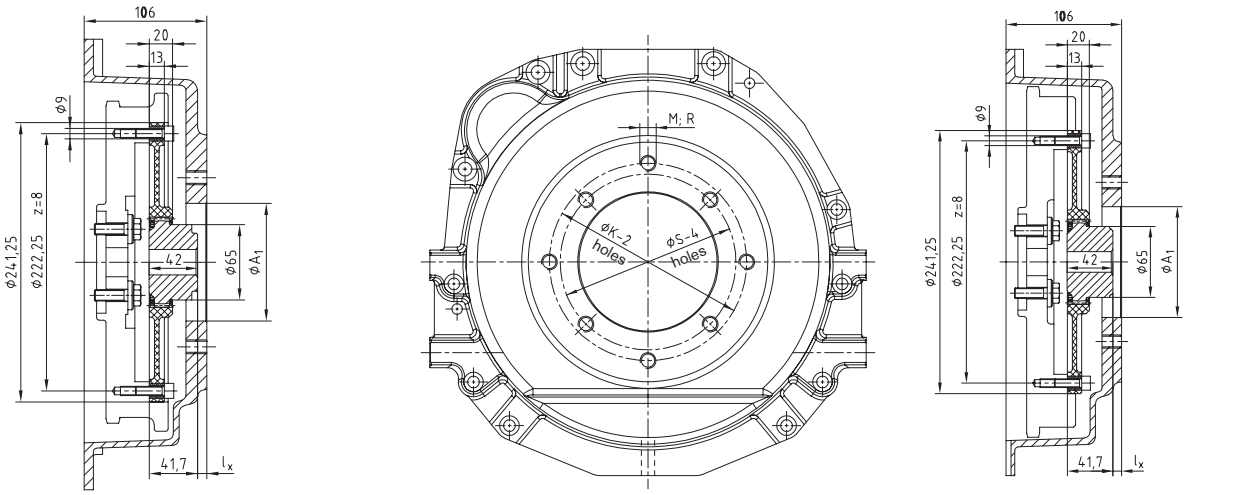
BoWex® FLE-PA
Torsionally rigid flange couplings and pump mounting flanges

Flange couplings and pump connection housings for Perkins engines



Perkins 403D - 10/11

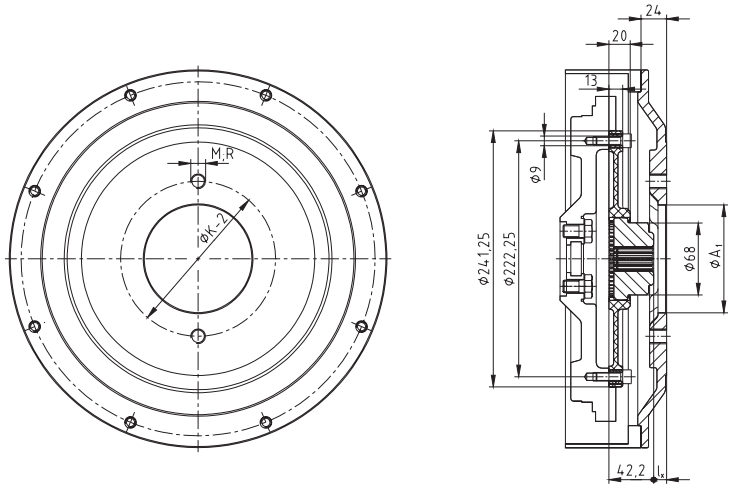
Perkins 403D - 13/15



Perkins 404D - 20

Perkins 404D - 22

Other selections on request for Yanmar Mitsubishi etc.



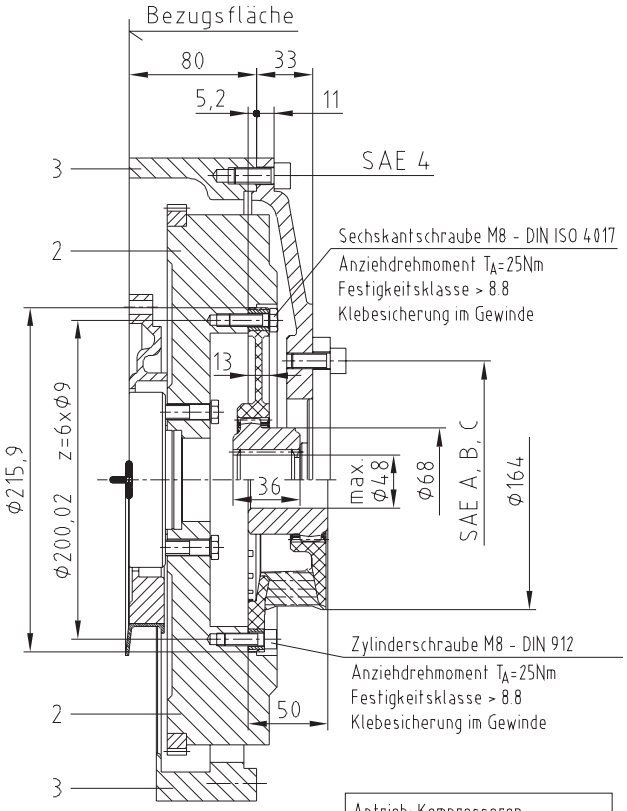
Mitsubishi SL Series

Yanmar TMV-Series

Selection of DEUTZ engines FL/M 1011 and FL/M 2011, TCD/TD/D 2.9 L4, TDC/T 3.6 L

Anbaukombination A

Antrieb: Hydraulikpumpen
BoWex® 48 FLE-PA 6 1/2"
SAE-4.0/33 Pumpenanbauflansch

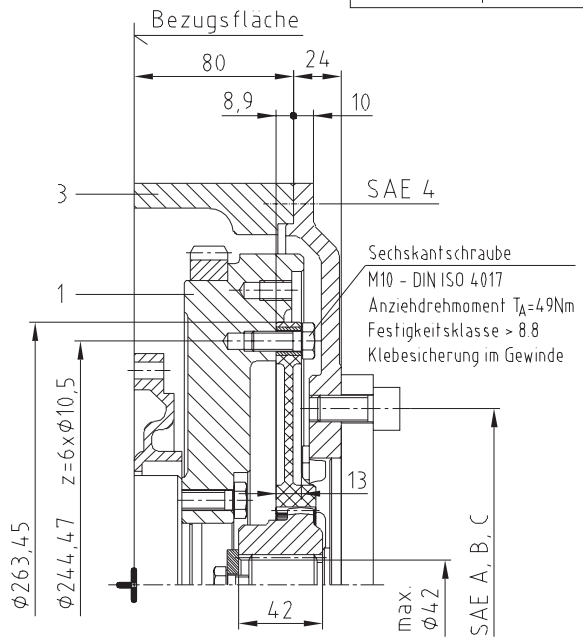


Anbaukombination B

Antrieb: Kompressoren,
Wasserpumpen usw.
BoWex-Elastic® HE 6 1/2"

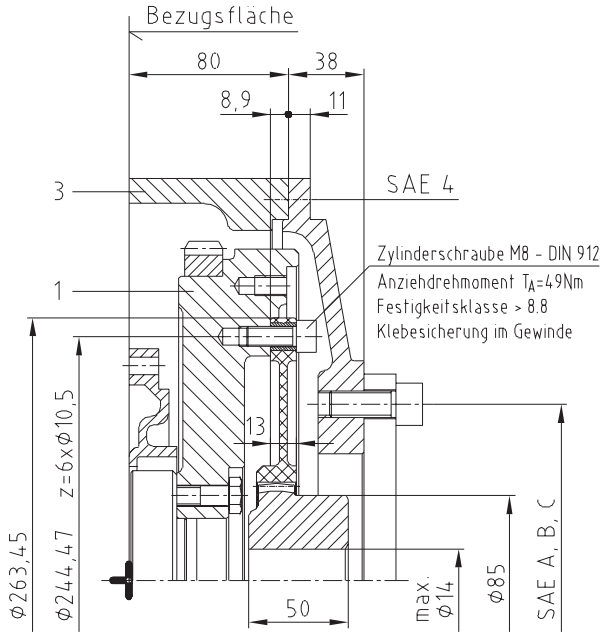
Anbaukombination C

Antrieb: Hydraulikpumpen
BoWex® 48 FLE-PA 8"
SAE-4.3/24 Pumpenanbauflansch



Anbaukombination D

Antrieb: Hydraulikpumpen
BoWex® T55 FLE-PA 8"
SAE-4.0/38 Pumpenanbauflansch



ACHTUNG: Entsprechend der Motorleistung ist die Kupplungsanordnung durch den Anwender zu prüfen. Nach erfolgtem Kupplungsanbau Kurbelwellenlängsspiel prüfen. Sollmaß für Lagerluft 0,1 ... 0,3 mm.
DEUTZ übernimmt keine Haftung für außerhalb des DEUTZ Lieferumfanges liegende Maßgaben und/oder Teile.

Bei techn. Rückfragen hinsichtlich der Kupplungsausführung wenden Sie sich bitte an:
KTR-Kupplungstechnik GmbH
Postfach 1763 D-48407 Rheine
Telefon +49 - 05971 / 798-0

D	C	B	A	Pos.	Benennung	Nummer	G (kg)	Baus.-Nr.
1	1	1	1	3	Zwischengehäuse (SAE-4)	0427 0980 KZ 0138-52 0417 1040 UA 0138-52	15	0553
-	-	1	1	2	Schwungrad (SAE 6 1/2") J= 0,499 kgm²	0428 0586 KZ 0138-05 0417 1301 UA 0138-05	30,3	3174
1	1	-	-	1	Schwungrad (SAE 8 u.10") J= 0,405 kgm²	0427 2426 KZ 0138-05 0417 1301 UA 0138-05	25,3	2461

Anbau-kombination

Bauart TYPE	FL/M1011 FL/M2011
Maßstab SCALE	1:1
Gewicht WEIGHT	-
Werkst.-nr. Rohteil-Nr. BLANK NO.	-
Benennung TITLE	Kupplungsanbau BoWex® FLE-PA / ELASTIC HE
Bearb.	17.12.13 Sha
Gepr.	12.12.13 Sh
Norm	
QE DEPT.	Ges.
DEUTZ AG	
Toleranzmaß Blatt-Nennmaß DIN	0428 0967 UB
Ers.-Kz./Rev.	
Techn. Ordnungsnummer	0138-97
Blatt SHEET	1 von 1 Bl.
Ers.-vr. REPLACES-	
Ursp.-ORIGIN.	

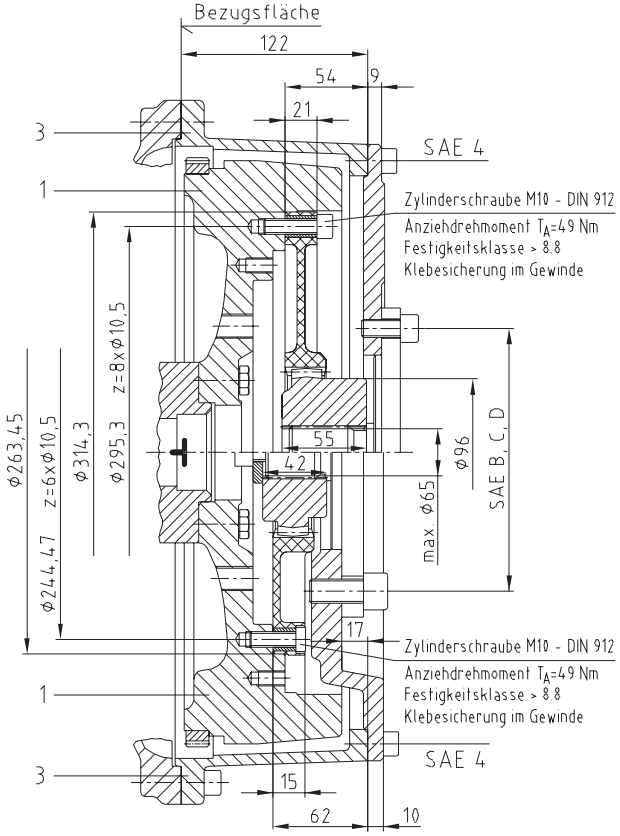
BoWex® FLE-PA
Torsionally rigid flange couplings and pump mounting flanges

Selection of DEUTZ engines BFM 1012/1013/2012/2013/1015

Anbaukombination A

BoWex® 65 FLE-PA 10"
SAE-4/9 Pumpenanbauflansch

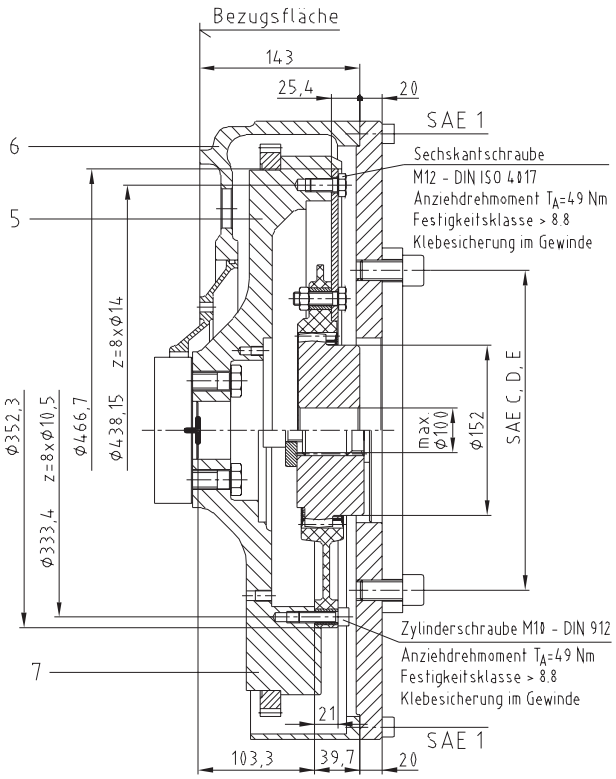
Deutz-Motor
BF4/6M 1012/2012, BF4/6 1013/2013,
TCD/TD 2012 L04/06 2V/4V, TCD/TD 2013 L04 2V, TCD 4.1 L4



Anbaukombination D

BoWex® 100 FLE-PA 14"
SAE-1/20 Pumpenanbauflansch

Deutz-Motor
BF6/8M 1015/2015,
TCD 2015 V06, TCD 12.0 V6



Anbaukombination B

BoWex® 65 FLE-PA 8"
SAE-4 2/-17 Pumpenanbauflansch

Deutz-Motor
BF4/6M 1012/2012, BF4/6 1013/2013,
TCD/TD 2012 L04/06 2V/4V, TCD/TD 2013 L04 2V, TCD 4.1 L4

Anbaukombination E

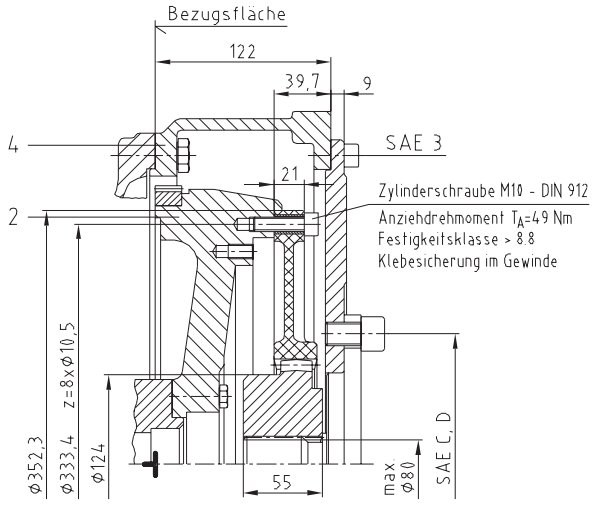
BoWex® 100 FLE-PA 11 1/2"
SAE-1/20 Pumpenanbauflansch

Deutz-Motor
BF6/8M 1015/2015,
TCD 2015 V06, TCD 12.0 V6

Anbaukombination C

BoWex® 80 FLE-PA 11 1/2"
SAE-3/9 Pumpenanbauflansch

Deutz-Motor
BF4/6M 1012/2012, BF4/6 1013/2013,
TCD/TD 2012 L04/06 2V/4V, TCD/TD 2013 L04/06 2V, TCD 4.1 L4, TCD 6.1 L6



ACHTUNG: Entsprechend der Motorleistung ist die Kupplungsanordnung durch den Anwender zu prüfen. Nach erfogtem Kupplungsanbau Kurbelwellenlängsspiel prüfen. Sollmaß für Lagerluft: Motor 1012/1013/2012/2013 = 0,1 - 0,28 mm; Motor 1015 = 0,2 - 0,4 mm
DEUTZ übernimmt keine Haftung für außerhalb des DEUTZ Lieferumfanges liegende Maßgaben und/oder Teile.

Bei techn. Rückfragen hinsichtlich der Kupplungsausführung wenden Sie sich bitte an:
KTR-Kupplungstechnik GmbH; Postfach 1763; D-48407 Rheine; Tel.: 05971/798-0

E	D	C	B	A	Pos.	Benennung	Nummer	G (kg)	Baus.-Nr.
1	-	-	-	-	7	Schwungrad (SAE-11 1/2") J= 2,255 kgm²		66,7	
1	1	-	-	-	6	Anschlußgehäuse (SAE-1)		45,6	
-	1	-	-	-	5	Schwungrad (SAE-14") J= 2,264 kgm²		61,6	
-	-	1	-	-	4	Anschlußgehäuse (SAE-3)			
-	-	-	1	1	3	Anschlußgehäuse (SAE-4)			
-	-	1	-	-	2	Schwungrad (SAE-10 u. 11 1/2") J= 0,872 kgm²			
-	-	-	1	1	1	Schwungrad (SAE-8 u. 10") J= 1,03 kgm²			

Anbau-kombination

DEUTZ 1012 / 1013
siehe 0420 8900 UB 0130-97

Technical data and displacements

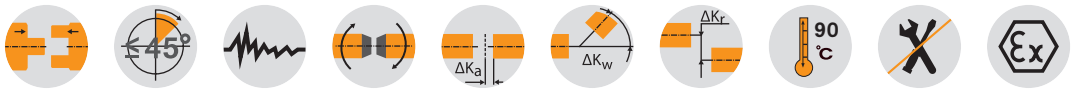
Technical data												
Size	Shore	Torque [Nm]			Perm. damping power P_{KW} [W]			Perm. operating speed $n_{max.}$ [rpm]	Dynamic torsion spring stiffness $C_{dyn.}$ [Nm/rad]	Relative damping ψ	Resonance factor $V_R \approx 2 \bullet \pi / \psi$	Radial spring stiffness Cr [N/mm]
		T_{KN}	$T_{K\ max.}$	bei 10 Hz T_{KW}	60 °C	80 °C	90 °C					
	T40 Sh	130	390	39					550	0,6	10,5	142
	T50 Sh	150	450	45	26	13	6,5		850	0,8	7,9	219
42 HE	T65 Sh	180	540	54				6200	2700	1,2	5,2	697
	40 Sh*	130	390	39					550	0,6	10,5	142
	50 Sh*	150	450	45	20	6,5	–		850	0,8	7,9	219
	65 Sh*	180	540	54					2700	1,2	5,2	697
	T40 Sh	200	600	60					850	0,6	10,5	176
	T50 Sh	230	690	69	36	18	9		1300	0,8	7,9	269
48 HE	T65 Sh	280	840	84				5600	3500	1,2	5,2	724
	40 Sh*	200	600	60					850	0,6	10,5	176
	50 Sh*	230	690	69	27	9	–		1300	0,8	7,9	269
	65 Sh*	280	840	84					3500	1,2	5,2	724
	T40 Sh	350	1050	105					1600	0,6	10,5	209
	T50 Sh	400	1200	120	60	30	15		2200	0,8	7,9	288
65 HE	T65 Sh	500	1500	150				4500	6000	1,2	5,2	784
	40 Sh*	350	1050	105					1600	0,6	10,5	209
	50 Sh*	400	1200	120	45	15	–		2200	0,8	7,9	288
	65 Sh*	500	1500	150					6000	1,2	5,2	784
	T40 Sh	430	1290	129					2350	0,6	10,5	259
	T50 Sh	500	1500	150	68	34	17		3000	0,8	7,9	346
G 65 HE	T65 Sh	620	1860	186				4300	8500	1,2	5,2	975
	40 Sh*	430	1290	129					2350	0,6	10,5	259
	50 Sh*	500	1500	150	51	17	–		3000	0,8	7,9	346
	65 Sh*	620	1860	186					8500	1,2	5,2	975
	T40 Sh	600	1800	180					3650	0,6	10,5	240
GG65 HE	T50 Sh	700	2100	210	76	38	19	4000	4800	0,8	7,9	324
	T65 Sh	850	2550	255					13500	1,2	5,2	911
	T40 Sh	750	2250	225					4500	0,6	10,5	351
	T50 Sh	950	2850	285	120	60	30		6500	0,8	7,9	507
80 HE	T65 Sh	1200	3600	360				3600	18000	1,2	5,2	1404
	40 Sh*	750	2250	225					4500	0,6	10,5	351
	50 Sh*	950	2850	285	90	30	–		6500	0,8	7,9	507
	65 Sh*	1200	3600	360					18000	1,2	5,2	1404
	T40 Sh	1250	3750	375					7500	0,6	10,5	476
	T50 Sh	1600	4800	480	180	90	45		12000	0,8	7,9	762
G 80 HE	T65 Sh	2000	6000	600				3000	32000	1,2	5,2	2031
	40 Sh*	1250	3750	375					7500	0,6	10,5	476
	50 Sh*	1600	4800	480	135	45	–		12000	0,8	7,9	762
	65 Sh*	2000	6000	600					32000	1,2	5,2	2031
	T40 Sh	1550	4650	465					9200	0,6	10,5	395
GG80 HE	T50 Sh	2000	6000	600	196	98	49	3000	14200	0,8	7,9	635
	T65 Sh	2500	7500	750					39600	1,2	5,2	1650
	T40 Sh	2000	6000	600					12000	0,6	10,5	366
	T50 Sh	2500	7500	750	212	106	53		19000	0,8	7,9	570
100 HE	T65 Sh	3200	9600	960				2700	48000	1,2	5,2	1200
	40 Sh*	2000	6000	600					12000	0,6	10,5	366
	50 Sh*	2500	7500	750	160	53	–		19000	0,8	7,9	570
	65 Sh*	3200	9600	960					48000	1,2	5,2	1200
	T40 Sh	3000	9000	900					19000	0,6	10,5	617
	T50 Sh	4000	12000	1200	240	120	60		30000	0,8	7,9	974
125 HE	T65 Sh	5000	15000	1500				2300	75000	1,2	5,2	2434
	40 Sh*	3000	9000	900					19000	0,6	10,5	617
	50 Sh*	4000	12000	1200	180	60	–		30000	0,8	7,9	974
	70 Sh*	5000	15000	1500					75000	1,2	5,2	2434
	T40 Sh	4000	12000	1200					30000	0,6	10,5	560
	T50 Sh	5200	16000	1600	268	134	67		44000	0,8	7,9	920
G 125 HE	T65 Sh	6500	20000	2000				2250	110000	1,2	5,2	1915
	40 Sh*	4000	12000	1200					30000	0,6	10,5	560
	50 Sh*	5200	16000	1600	200	67	–		44000	0,8	7,9	920
	70 Sh*	6500	20000	2000					110000	1,2	5,2	1915
	T40 Sh	5500	16500	1650				1950	42000	0,6	10,5	714
150 HE	T50 Sh	7000	21000	2100	300	150	75	2050	67000	0,8	7,9	1200
	T65 Sh	9000	27000	2700				2200	166000	1,2	5,2	2500
	T40 Sh	7000	21000	2100				1900	60000	0,6	10,5	1485
G 150 HE	T50 Sh	9200	27600	2760	320	160	80	2000	95000	0,8	7,9	2372
	T65 Sh	11500	34500	3450				2100	236000	1,2	5,2	5874
	T40 Sh	9500	28500	2850				1700	85000	0,6	10,5	1720
200 HE	T50 Sh	12500	37500	3750	392	196	98	1800	136000	0,8	7,9	2740
	T65 Sh	16000	48000	4800				1900	335000	1,2	5,2	6769
	T40 Sh	19000	57000	5700				1700	170000	0,6	10,5	3440
200D HE	T50 Sh	25000	75000	7500	784	392	196	1800	272000	0,8	7,9	5480
	T65 Sh	32000	96000	9600				1900	670000	1,2	5,2	13538
	T40 Sh	11500	34500	3450				1600	105000	0,6	10,5	1952
G 200 HE	T50 Sh	15000	45000	4500	428	214	107	1700	167000	0,8	7,9	3114
	T65 Sh	19500	58500	5850				1800	412000	1,2	5,2	7708
	T40 Sh	23000	69000	6900				1600	210000	0,6	10,5	3904
G 200D HE	T50 Sh	30000	90000	9000	856	428	214	1700	334000	0,8	7,9	6228
	T65 Sh	39000	117000	11700				1800	824000	1,2	5,2	15416

T = Temperature stable rubber compound. The technical data mentioned apply for an ambient temperature of T = 60 °C.
* Expiring as a standard

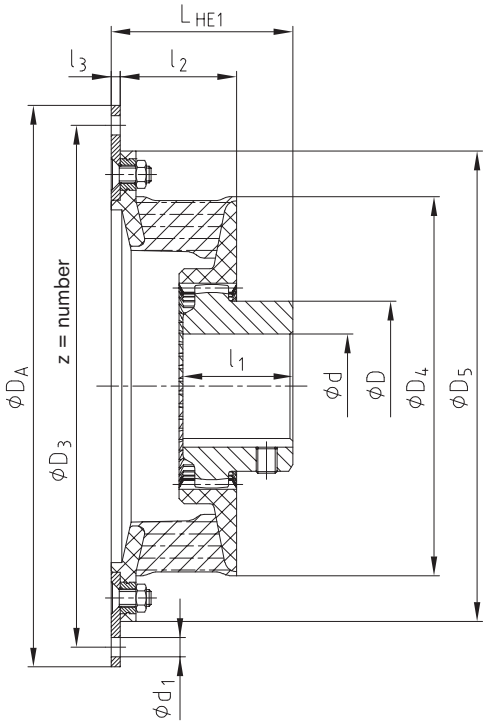
BoWex-ELASTIC® HE1 und HE2
Highly flexible flange couplings

Axial plug-in, available in different kinds of hardness

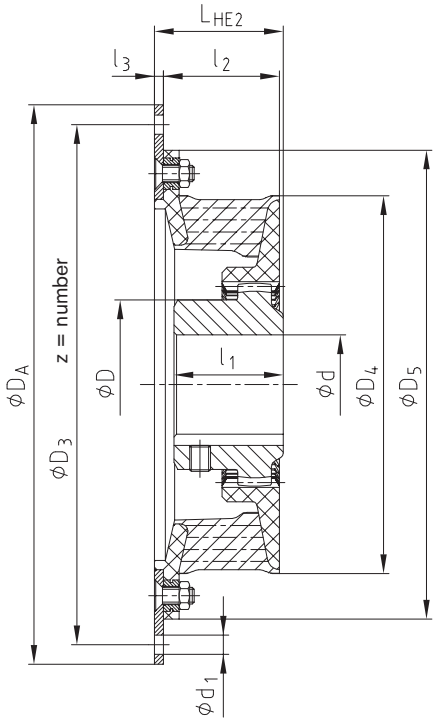




Components



Type HE1



Type HE2

Flange dimensions acc. to SAE J 620 [mm]

Size	D_A	D_3	z	d_1
6 ½"	215,90	200,02	6	9
7 ½"	241,30	222,25	8	9
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11
14"	466,72	438,15	8	13

BoWex-ELASTIC® Type HE1 and HE2

Size	Bore d [mm]		Flange connection according to SAE - J 620						Dimensions [mm]								Weight with pilot bored coupling [kg]	Mass moment of inertia with pilot bored coupling	
	Pilot bored	max.	6 ½"	7 ½"	8"	10"	11 ½"	14"	l_3	l_2	D_4	D_5	D	l_1	L_{HE1}	L_{HE2}		J_A [kgm²]	J_L [kgm²]
42 HE	-	42	●	●					4	45	146	180	65	42	70	50	2,7	0,0061	0,0014
					●												2,9	0,0083	0,0014
48 HE	-	48	●	●					4	45	164	198	68	50	78	50	2,9	0,0106	0,0019
					●												3,1	0,0148	0,0019
						●											3,9	0,0298	0,0019
65 HE	21	65				●			5	55	205	244	96	55	85	62	6,4	0,0377	0,0064
							●										7,2	0,0594	0,0064
80 HE	31	80				●			-	70	266	-	124	90	126	74	10,9	0,0211	0,0283
							●		6			316			132	80	13,0	0,0726	0,0283
G 80 HE	31	80					●		-	80	302	-	124	90	136	84	12,5	0,0402	0,0428
								●	6			356			142	90	17,3	0,2251	0,0428

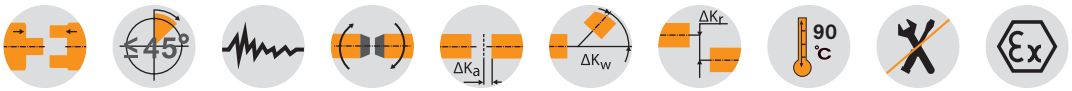
Ordering example:

BoWex-ELASTIC® 42	HE1	40	8	70	U
Coupling size	Type	Elastomer hardness	Flange Ø D_A acc. to SAE or special	Mounting length LHE	Unbored or with finish bore

BoWex-ELASTIC® HE3 und HE4
Highly flexible flange couplings

Axial plug-in, available in different kinds of hardness





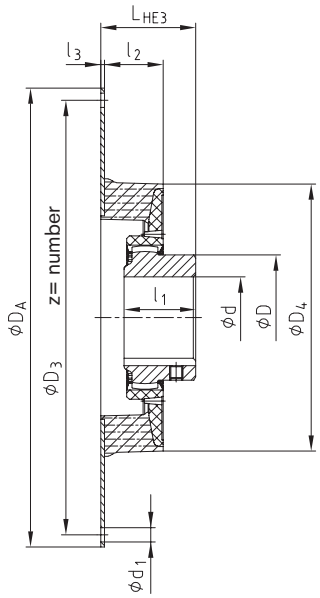
BoWex-ELASTIC® Type HE3 and HE4

Size	Bore d [mm]		Flange connection according to SAE - J 620										Dimensions [mm]							Weight with pilot bored coupling [kg]	Mass moment of inertia with pilot bored coupling	
	Pilot bored	max.	6 ½"	7 ½"	8"	10"	11 ½"	14"	16"	18"	21"	24"	l_3	l_2	D_4	D	l_1	L_{HE3}	L_{HE4}		J_A [kgm²]	J_L [kgm²]
42 HE	-	42	●	●									2	33	145	65	42	55	40	1,7	0,0057	0,0014
				●																1,8	0,0060	0,0020
48 HE	-	48			●								2	37	163	68	50	68	42	2,0	0,0062	0,0020
						●														2,2	0,0065	0,0020
G 65 HE	21	65				●							3	45	205	96	55	73	50	5,3	0,0242	0,0076
							●													5,7	0,0372	0,0076
GG 65 HE	21	65			●								3	48	220	96	55	73	50	5,3	0,0251	0,0085
						●														5,6	0,0273	0,0085
							●													5,9	0,034	0,0085
80 HE	31	80				●														11,4	0,0388	0,0305
G 80 HE	31	80					●						4	66	300	124	90	122	70	11,6	0,0702	0,0465
100 HE	38	100						●					4	80	350	152	110	150	82	24,1	0,1951	0,1019
125 HE	45	125						●					-	92	416	192	140	186	103	45,8	0,3013	0,2861
									●				6					192	109	47,7	0,4123	0,2861
G 125 HE	45	125							●				6	89	440	192	140	179	91	48,4	0,4781	0,2916
										●										50,5	0,6380	0,2916
150 HE	44	160								●			6	140	470	225	150	205	160	66,7	0,6918	0,5192
											●										1,1410	0,5192
G 150 HE	44	160								●			6	140	504	225	150	205	160	76	0,754	0,651
											●										1,246	0,651
200 HE	46	180									●		6	149	568	250	175	240	160	100	1,535	1,145
												●									1,514	1,145
200D HE	46	180									●		25	325	568	250	300	350	-	355	16,75	2,98
												●									22,89	2,98
G200 HE	46	180									●		6	149	600	250	175	240	160	105	1,727	1,347
												●									2,106	1,347
G200D HE	46	180									●		25	325	600	250	300	350	-	370	18,65	3,28
												●									25,12	3,28

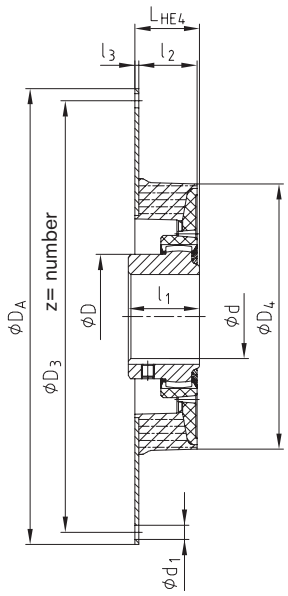
Ordering example:

BoWex-ELASTIC® 80	HE3	40	10	112	U
Coupling size	Type	Elastomer hardness	Flange Ø D_A acc. to SAE or special	Mounting length LHE	Unbored or with finish bore

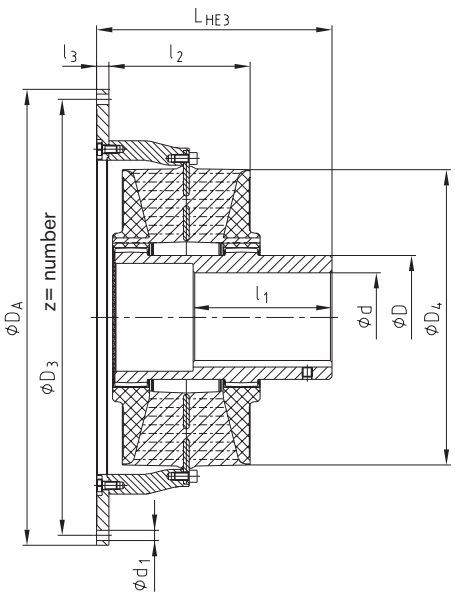
Type HE3



Type HE4



Type D



Flange dimensions acc. to SAE J 620 [mm]

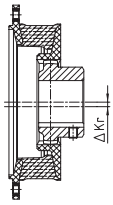
Size	D_A	D_3	z	d_1
6 ½"	215,90	200,02	6	9
7 ½"	241,30	222,25	8	9
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11
14"	466,72	438,15	8	13
16"	517,50	489,00	8	13
18"	571,50	542,90	6	17
21"	673,10	641,35	12	17
24"	733,42	692,15	12	21

Displacements

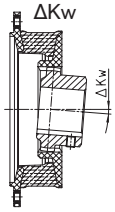
For other operating speeds or higher operating temperatures the permissible radial displacement is calculated as follows:

$$\Delta Kr_{perm.} = \Delta Kr \bullet St \bullet \sqrt{1500 / nx}$$

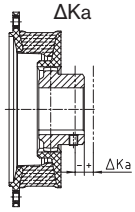
Radial displacement ΔKr



Angular displacement ΔKw



Axial displacement ΔKa



Displacements

Size		42 HE			48 HE			65 HE/G 65 HE			80 HE/G 80 HE			100 HE			125 HE/G 125 HE			150 HE/G 150 HE			200HE/G 200 HE		
Elastomer hardness [Shore A]		T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T70 Sh	T40 Sh	T50 Sh	T65 Sh	T40 Sh	T50 Sh	T65 Sh
Perm. radial displacement ΔKr [mm]	n=1500 rpm	1,1	1,0	0,5	1,2	1,1	0,5	1,6	1,5	0,7	1,8	1,7	0,8	2,2	2,0	1,0	2,5	2,3	1,1	2,8	2,5	1,3	3,0	2,7	1,5
	max. [1]	3,6	3,3	1,5	3,8	3,5	1,7	5,1	4,7	2,2	5,7	5,3	2,4	6,5	6,0	3,0	7,5	6,9	3,3	8,0	7,5	4,0	8,5	8,0	4,5
Perm. angular displacement ΔKw [°]	n=1500 rpm	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5	1,0	0,75	0,5
	n=3000 rpm	0,5	0,4	0,25	0,5	0,4	0,25	0,5	0,4	0,25	0,5	0,4	0,25	0,5	0,4	0,25	0,5	0,4	0,25						
Perm. angular displacement ΔKw [mm]	max. [1]	1,5			1,5			1,5			1,5			1,5			1,5			1,5			1,5		
Perm. axial displacement ΔKa [mm]		± 2			± 2			± 2			± 2			± 3			± 3			± 5			± 5		

[1] for short-term starting operation

Process of assembly, screw type with quality, tightening torques according to KTR assembly instructions (see www.ktr.com).

BoWex-ELASTIC® HE-ZS and HEW
Highly flexible flange couplings

With drop-out center part for pump drives, highly flexible shaft-to-shaft coupling





BoWex-ELASTIC® Type HE-ZS

Size	Max. finish bore d4	Flange connection to SAE-J 620 DA for HE-ZS										Dimensions [mm]									Drop-out center part HE-ZS L_Z [mm]					Weight with max. bore [kg]	Mass moment of inertia [kgm²]	
		6 ½"	7 ½"	8"	10"	11 ½"	14"	16"	18"	21"	24"	D_1	D_4	D_5	D_7	D_8	l_1	l_2	l_3	l_6	100	120	140	180	250		J_A	J_L
		●																48	10		●	●				2,9[1]	0,0026	0,0033
48	28		●									160	164	200	78	45	40			37	●	●				3,6[1]	0,0106	0,0033
				●														37	4		●	●				3,9[1]	0,0148	0,0033
					●																●	●				4,6[1]	0,0298	0,0033
G65	45				●								205		110	72	60	48	3	56		●	●			7,3[1]	0,0242	0,0129
						●																	●	●		8,9[2]	0,0372	0,0150
80	65				●							265	266	318	145	100	80	70	11	76			●	●		13,7[2]	0,0211	0,0497
						●													6				●	●		15,9[2]	0,0726	0,0497
G80	65					●						300	302	358	145	100	80	80	11	76			●	●		14,6[2]	0,0402	0,0634
							●												6					●	●	19,5[2]	0,2251	0,0634
100	95						●						350		202	148	110	80	4	106				●	●	29,8[2]	0,1951	0,1779
125	100						●						416		225	165	120	99	6	116				●	●	41,7[2]	0,3013	0,3363
								●																●	●	43,6[2]	0,4123	0,3363
G125	120							●					440		225	165	120	95	6	116				●	●	45,6[2]	0,4781	0,3700
									●															●	●	47,7[2]	0,6380	0,3700
150	135								●				470		245	185	140	140	6	136					●	63,2	0,6918	0,6647
										●															●	67,9	1,1410	0,6647
G150	135								●				504		245	185	140	140	6	136					●	68,3	0,7540	0,7677
										●															●	73,0	1,2460	0,7677
200	150									●			568		270	205	160	149	6	156					●	98,7	1,5348	1,4109
											●														●	101,7	1,9138	1,4109
G200	150									●			600		270	205	160	149	6	156					●	103,5	1,7270	1,6401
											●														●	106,6	2,1060	1,6401

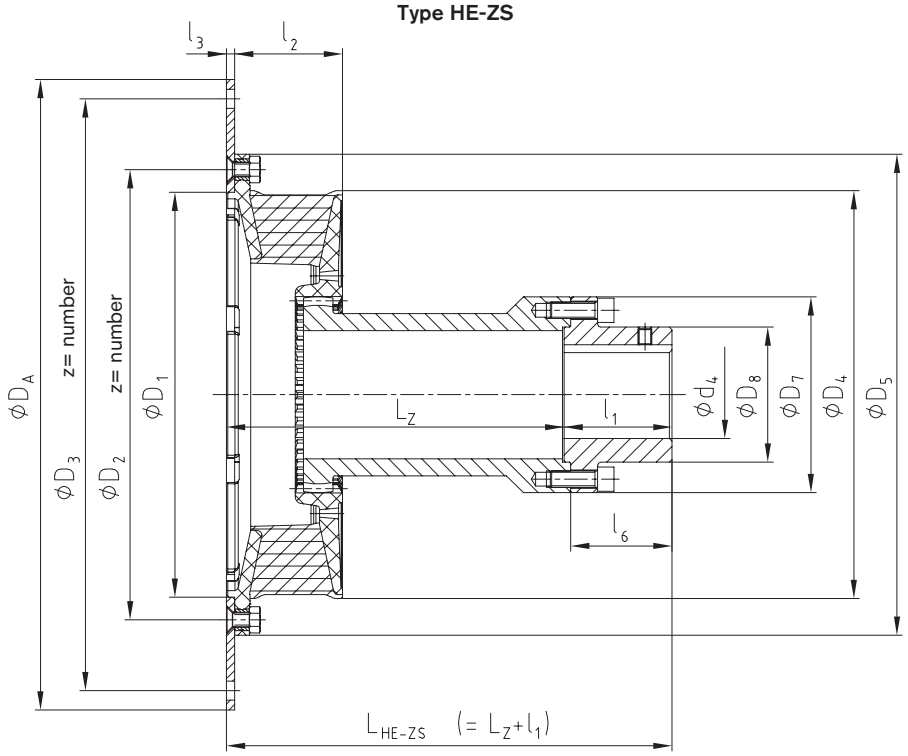
[1] with L_Z 120 [2] with L_Z 100

BoWex-ELASTIC® Type HEW

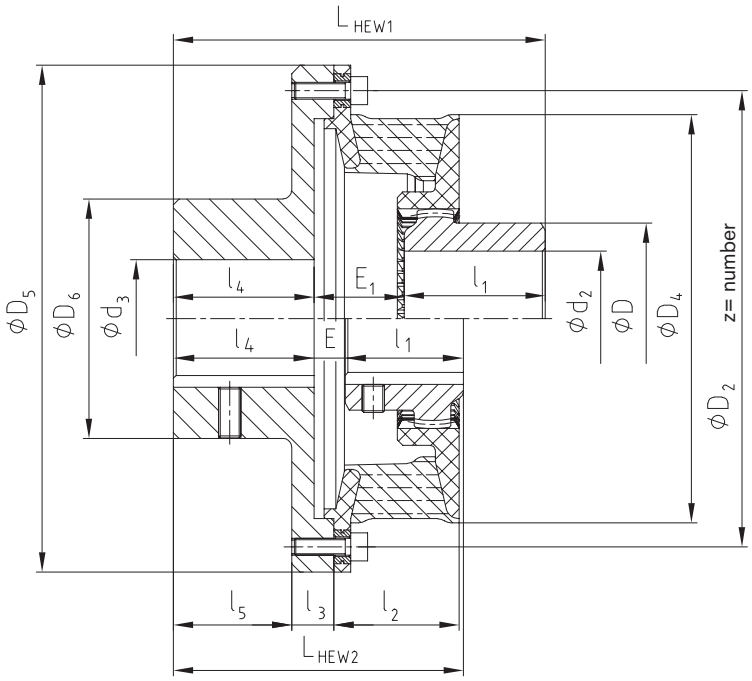
Size	Max. finish bore		Dimensions [mm]																	Weight with max. bore [kg]	Mass moment of inertia [kgm²]	
	d_2	d_3	D	D_2	z x M		D_4	D_5	D_6	l_1	l_2	l_3	l_4	l_5	E	E_1	L_{HEW1}	L_{HEW2}		J_A	J_L
42	48	50	68	162	6	M6	146	180	85	50	45	15	50	42	4	32	132	104	4,3	0,0121	0,0015
48	48	55	68	180	8	M6	164	200	92	50	45	17	55	45	4	32	137	109	5,5	0,0204	0,0019
65	65	75	96	224	8	M8	205	245	125	70	55	28	75	63	5	42	187	150	13,2	0,0752	0,0071
80	80	80	124	295,27	8	M10	266	318	130	90	70	17	80	70	5	45	215	160	19,7	0,1449	0,0285
G 80	85	95	124	333,4	8	M10	302	358	145	90	80	22	90	78	5	55	235	185	25,9	0,2748	0,0422
100	100	110	152	438,15	8	M12	350	478	158	110	80	14	111,5	113	26	57	278	207	48,5	0,8356	0,1050
125	125	125	192	438,15	8	M12	416	478	175	140	99	14	170	158	-	45	327	-	67,2	0,9498	0,2617
G125	125	125	192	489	8	M12	440	530	175	140	95	14	170	158	-	45	327	-	76,6	1,4492	0,3034
150	160	160	225	542,9	6	M16	470	585	225	150	100	18	150	145	-	70	380	-	110	2,7206	0,5303
G150	160	160	225	542,9	6	M16	504	585	225	150	108	18	150	145	-	70	380	-	113,4	2,7809	0,5861
200	180	200	250	641,35	12	M16	568	683	280	175	149	26	220	214	-	85	480	-	195	6,6418	1,1406
G200	180	200	250	641,35	12	M16	600	683	280	175	149	26	220	214	-	85	480	-	200	6,6099	1,3419

Other sizes available. Please consult with us.

Type HE-ZS



Type HEW1

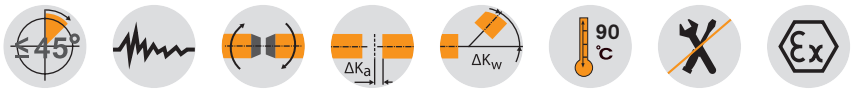


Type HEW2

BoWex-ELASTIC® HEG
Highly flexible flange couplings

Cardan shaft auxiliary coupling





BoWex-ELASTIC® Type HEG1 and Type HEG2

Size	Flywheel connection to SAE-J 620					Metric flange connection HEG1 dimensions [mm]										MECHANICS cardan shaft connection HEG2 dimensions [mm]								Dimensions [mm]			Weight [kg]	Mass moment of inertia	
	8"	10"	11 ½"	14"	16"	58	65	75	90	100	120	150	180	l_4	L	2 C	4 C	5 C	6 C	7 C	8,5 C	8 C	L_1	D_4	l_2	l_3		JA [kgm²]	JL [kgm²]
48	●					●	●	●						8	58,5									163	43,5	8	7	0,03	0,006
		●				●	●	●																			8	0,06	0,006
G 65		●						●	●	●				8	66	●	●	●					71	205	48,0	10	12	0,07	0,02
			●					●	●	●						●	●	●									14	0,10	0,02
80		●						●	●	●	●			10	88,5		●	●	●				104	265	68,5	23	21	0,11	0,06
			●					●	●	●	●						●	●	●							12	23	0,17	0,06
G 80			●						●	●	●	●		10	96			●	●	●			110	302	74,0	23	26	0,18	0,09
				●					●	●	●	●						●	●	●						12	33	0,48	0,09
100				●						●	●	●	●	12	98					●	●		128	350	78,0	16	41	0,63	0,19
125				●						●	●	●	●	12	111						●	●	135	416	96,0	18	56	0,74	0,42
					●					●	●	●	●								●	●				12	59	0,97	0,42

Flywheel connection to SAE-J 620 [mm]

Size	D_A	D_1	z_1	d_1
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11
14"	466,72	438,15	8	14
16"	517,50	489,00	8	14

Metric flange connection HEG1 [mm]

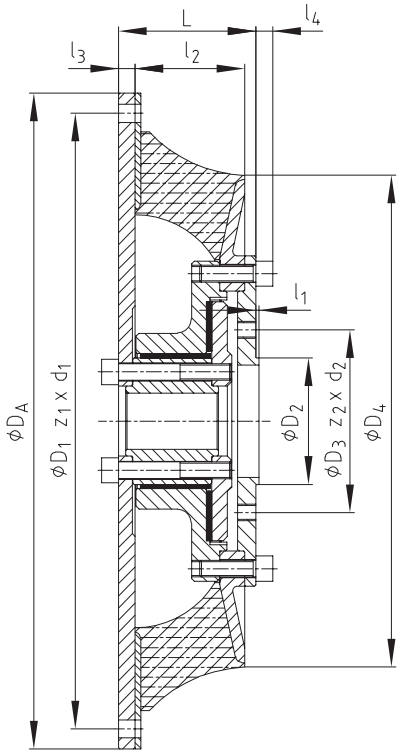
Size	D_2	l_1	D_3	z_2	d_2
58	30	1,0	47,0	4	M5
65	35	1,0	52,0	4	M6
75	42	1,5	62,0	6	M6
90	47	2,0	74,5	4	M8
100	57	2,0	84,0	6	M8
120	75	2,0	101,5	8	M10
150	90	2,5	130,0	8	M12
180	110	2,5	155,5	8	M14

MECHANICS cardan shaft connection HEG 2 [mm]

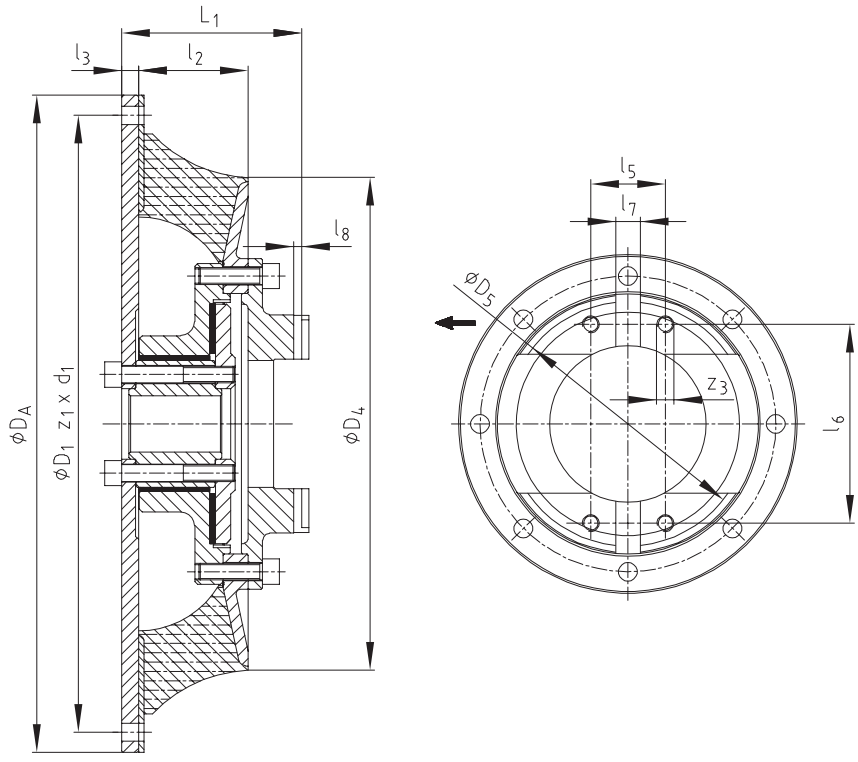
Size	D_5	l_5	l_6	l_7	l_8	z_3
2 C	79,35	33,3	59,5	9,50	3,8	M8
4 C	107,92	36,5	87,3	9,50	3,8	M8
5 C	115,06	42,9	88,9	14,26	5,1	M10
6 C	140,46	42,9	114,3	14,26	5,1	M10
7 C	148,39	49,2	117,5	15,85	6,0	M12
8,5 C	165,08	71,4	123,8	15,85	6,0	M12
8 C	206,32	49,2	174,6	15,85	6,0	M12

BoWex-ELASTIC® type HEG has a maintenance-free plain bearing compensating for the radial loads generated by the cardan shaft. Moreover, the coupling has a friction disk which is axially prestressed by the elastomer part. The elastomer part is made of natural rubber via vulcanizing.
The permanent friction provides the coupling with excellent damping properties reducing the high vibratory torques arising in the coupling during the starting process and running through resonance considerably.

Type HEG1



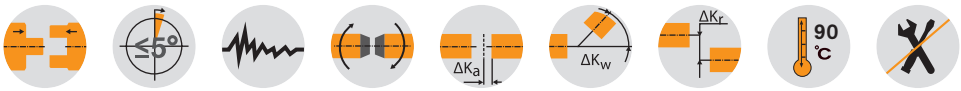
Type HEG2

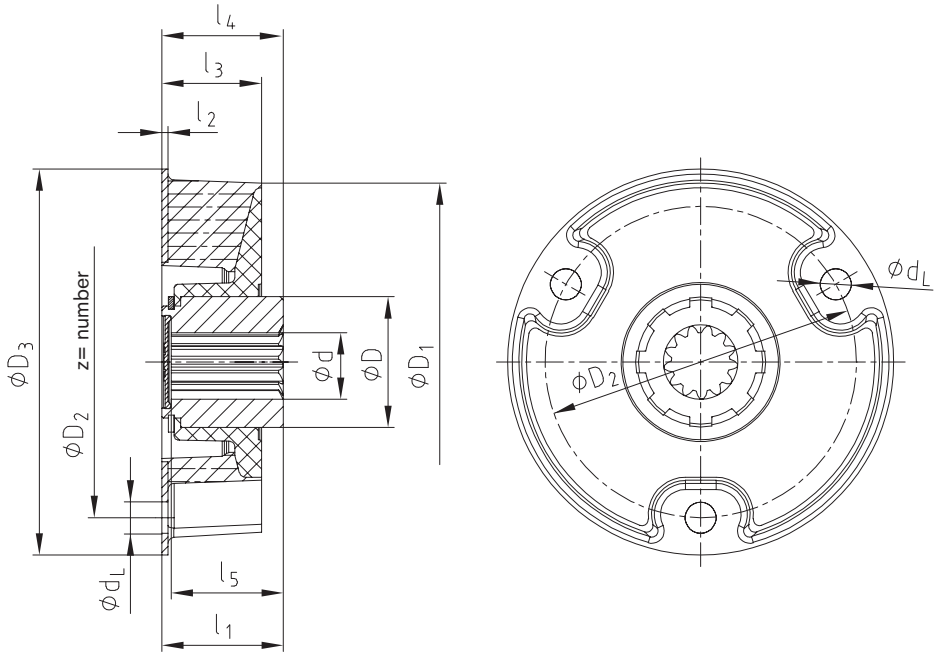


MONOLASTIC®
One-piece, flexible flange couplings

Type with 3 holes (EP 0853203/U.S. Patent 6,117,017)





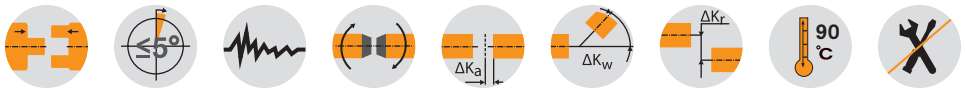


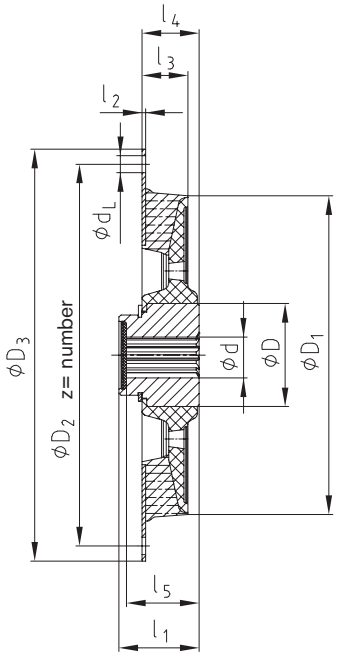
MONOLASTIC®																
Size	Elastomer hardness [Shore A]	Torque [Nm]			Dimensions [mm]											
		T_{KN}	$T_{K\,max.}$	T_{KW}	d	D	D_1	D_2	z	d_L	D_3	l_1	l_2	l_3	l_4	l_5
22	65	40	100	20	20	34	93	80	3	8,10	100	33	1,5	32	34	30
28	65	70	175	35	25	42	115	100	3	10,10	124	40	2	32	40	38
	70	100	300	50												
32	65	160	400	80	32	50	140	125	3	12,10	150	42	2	42	43	38
	70	225	675	112												
50-140	70	260	650	130	32	50	167	140	3	14,10	175	46	3	35	46	43
50-165	70	300	750	150	32	50	175	165	3	16,15	200	46	3	35	46	43
50-170	70	300	750	150	32	50	175	170	3	16,15	200	46	3	35	46	43
60-165	70	400	1000	200	48	68	191	165	3	16,15	205	50	3	40	55	46

Technical data									
Size	Elastomer hardness [Shore A]	Cdyn. with 60 °C [Nm/rad]	Perm. damping power with 60 °C PKW [W]	Max. displacement with 2200 rpm ΔKr [mm]	Perm. angular displacement with 2200 rpm ΔKw [°]	Radial spring stiffness Cr [N/mm]	Mass moment of inertia [kgm²]		Max. perm. operating speed $n_{max.}$ [rpm]
							J_A	J_L	
22	65	600	10	0,6		200	0,00017	0,00010	6000
28	65	900	15	0,6		300	0,00054	0,00033	6000
	70	1300		0,5		400			
32	65	1800	25	0,6		400	0,00120	0,00081	6000
	70	2400		0,5	1	500			
50-140	70	4200	35	0,5		1365	0,00210	0,00130	6000
50-165		5600	40	0,5		1550	0,00250	0,00130	6000
50-170									
60-165	70	7800	40	0,5		1500	0,00599	0,00358	6000

Type SAE (EP 0853203/U.S. Patent 6,117,017)







Flange dimensions acc. to SAE J 620 [mm]

Size	D_3	D_2	z	d_L
6 ½"	215,9	200,02	6	9
7 ½"	241,3	222,25	8	9
8"	263,52	244,47	6	11
10"	314,32	295,27	8	11
11 ½"	352,42	333,37	8	11

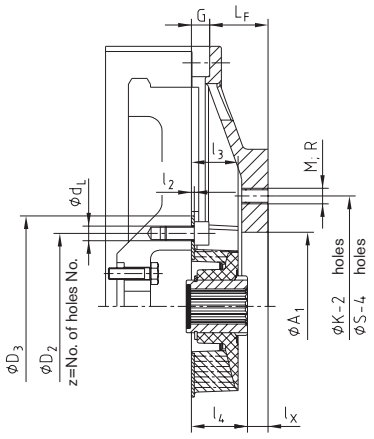
MONOLASTIC®

Size	Elastomer hardness [Shore A]	Torque [Nm]			Dimensions [mm]								MONOLASTIC® flanges according to SAE				
		T_{KN}	$T_{K\,max.}$	T_{KW}	d	D	D_1	l_1	l_2	l_3	l_4	l_5	6 ½"	7 ½"	8"	10"	11 ½"
30	65	160	400	80	25	42	120	39	2	21	30	36	X	X			
	70	200	500	100													
50	65	300	750	150	32	50	167	42	2	24	30	38	X	X	X	X	
	70	400	1000	200													
G50	70	550	1375	275	32	50	178	42	2	24	36	38		X	X	X	
65	65	600	1500	300	48	68	200	45	3	32	45	42				X	X
	70	800	2000	400													
75	65	1200	3000	600	60	90	265	58	3	35	50	54				X	X
	70	1500	3750	750													

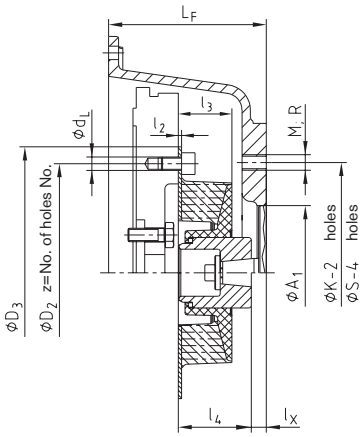
Technical data

Size	Elastomer hardness [Shore A]	Cdyn.with 60 °C [Nm/rad]	Perm. damping power with 60 °C PKW [W]	Max. displacement with 2200 rpm ΔKr [mm]	Perm. angular displacement with 2200 rpm ΔK_W [°]	Radial spring stiffness Cr [N/mm]	Mass moment of inertia [kgm²]			Max. permissible operating speed nmax. [rpm]
								J_A	J_L	
30	65	3750	25	0,5	1	1150	6,5"	0,0038	0,00030	6000
	70	4875				1500	7,5"	0,0057		
50	65	9000	35	0,5	1	1300	8"	0,0078	0,00120	6000
	70	12000				1700	10"	0,0153		
G50	70	17500	40	0,5	1	1910	7 ½"	0,0060	0,00120	6000
							8"	0,0080		
							10"	0,0162		
65	65	14000	45	0,5	1	1900	10"	0,0238	0,00380	6000
	70	18000				2450	11,5"	0,0368		
75	65	34000	80	0,5	1	1850	10"	0,0272	0,01450	6000
	70	42000				2400	11,5"	0,0402		

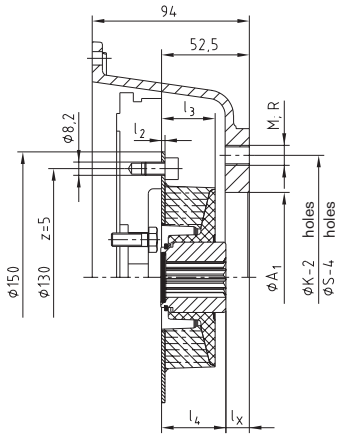
Examples of installation for type with 3 holes (EP 0853203/U.S. Patent 6,117,017)



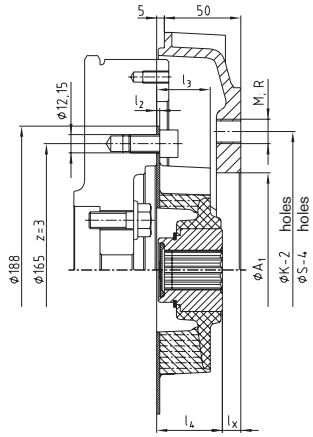
MONOLASTIC® 28
with spline shaft



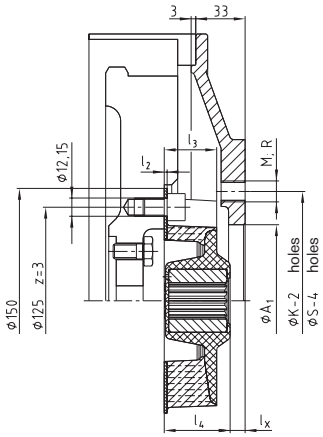
MONOLASTIC® 28
with taper shaft



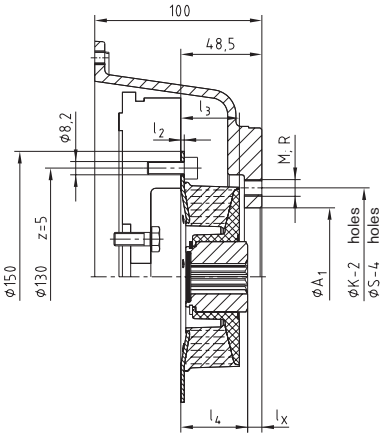
MONOLASTIC® 28
KUBOTA - Mini



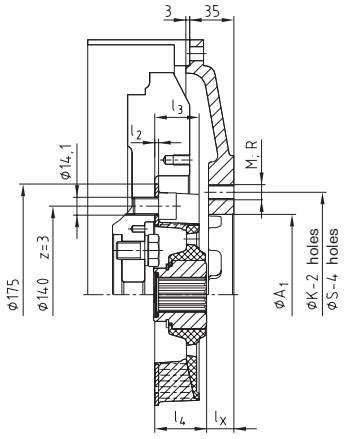
MONOLASTIC® 32 - 188
KUBOTA Super Three Series



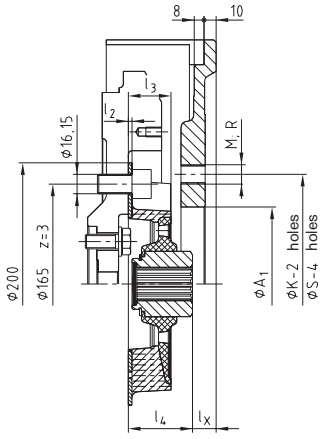
MONOLASTIC® 32 S



MONOLASTIC® 28
KUBOTA Super Mini

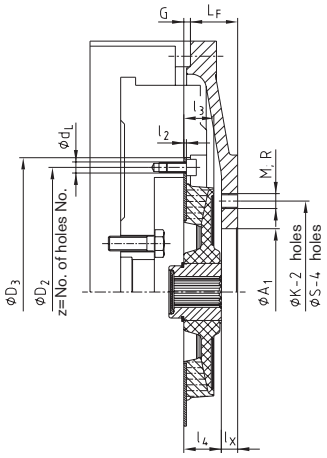


MONOLASTIC® 50 - 140

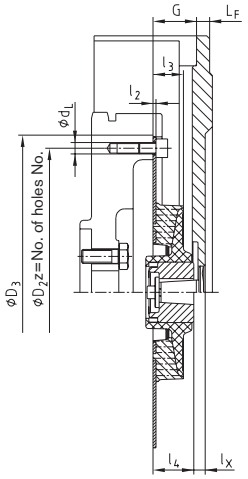


MONOLASTIC® 50 - 165

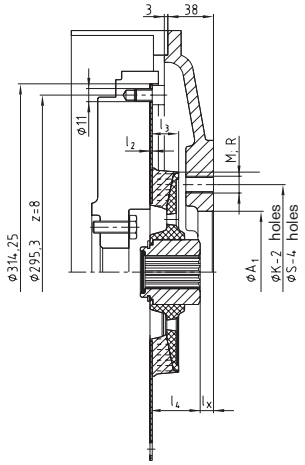
Examples of installation for SAE type (EP 0853203/U.S. Patent 6,117,017)



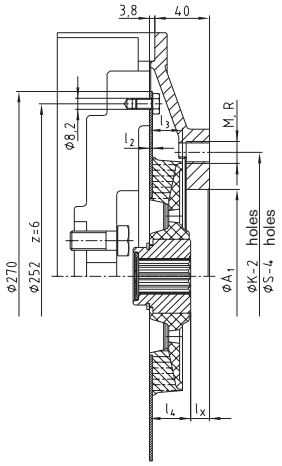
MONOLASTIC® 30
with spline shaft



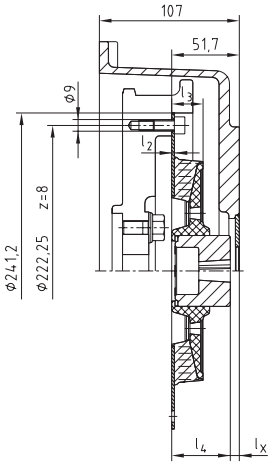
MONOLASTIC® 30
with taper shaft



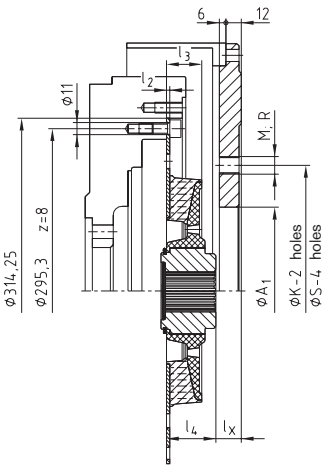
MONOLASTIC® 50 - 10“



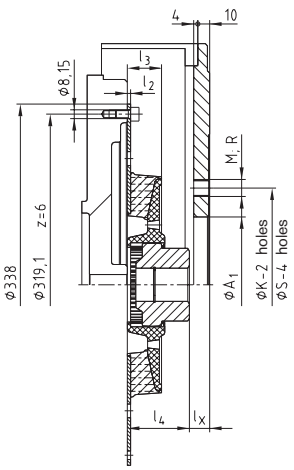
MONOLASTIC® 50 - 270
KUBOTA engine
D1803, V2403, V2403T



MONOLASTIC® 50
Perkins engine
403-13/403-15



MONOLASTIC® 65 - 10“



MONOLASTIC® 65 / T48