

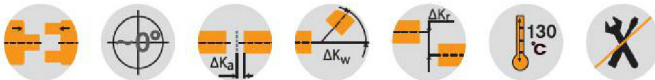
BoWex® FLE-PA

Torsionally rigid flange couplings

Axial plug-in, maintenance-free, torsionally rigid

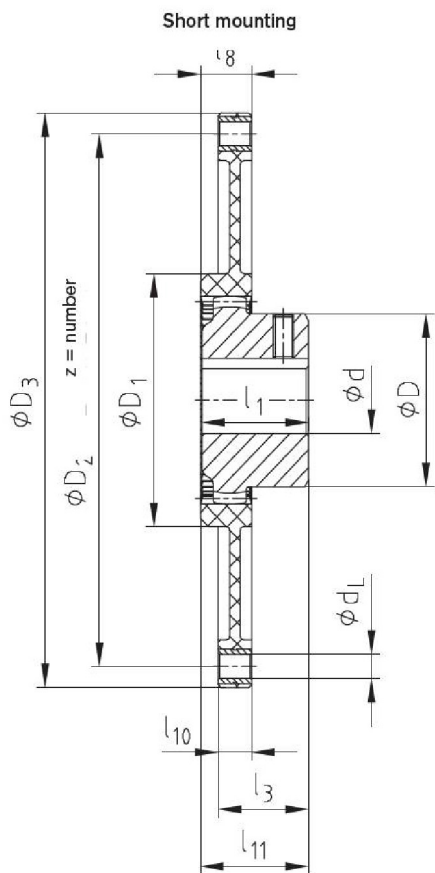


For legend of pictogram please refer to flapper on the cover

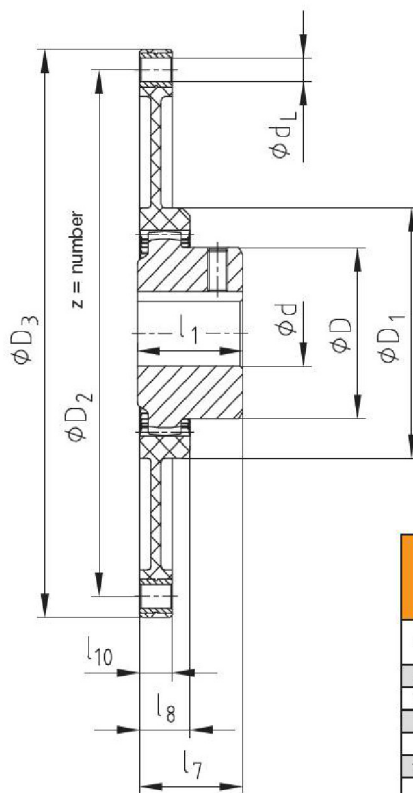


BoWex® FLE-PA – Dimensions/nominal dimension to SAE																			
Size	Pilot bore	Finish bore d		Dimensions [mm]								Special length l1 max.	Nominal dimension to SAE (Dg)						Max. axial displacement [mm]
		min.	max.	D	D1	l1	l3	l7	l8	l10	l11		6 1/2"	7 1/2"	8"	10"	11 1/2"	14"	
48	-	20	48	68	100	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 TK [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]			
	TKN	TK max.	TKW			6 1/2"	7 1/2"	8"	10"	11 1/2"	14"	0,30 TKN	0,50 TKN	0,75 TKN	1,00 TKN
48	240	600	120	[kg]	0,79	0,32	0,43	0,51	0,64	-	-	35 x 10³	75 x 10³	105 x 10³	125 x 10³
				[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 10³	86 x 10³	120 x 10³	143 x 10³
				[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 10³	140 x 10³	170 x 10³	195 x 10³
				[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 10³	160 x 10³	200 x 10³	230 x 10³
				[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 10³	190 x 10³	240 x 10³	280 x 10³
				[kgm²]	0,0044	-	-	0,0064	0,0065	0,012	-				
T 70	1000	2500	500	[kg]	2,60	-	-	-	0,941	-	-	230 x 10³	345 x 10³	440 x 10³	517 x 10³
				[kgm²]	0,0059	-	-	-	0,0132	-	-				
80	1200	3000	600	[kg]	5,20	-	-	-	1,05	1,12	-	200 x 10³	410 x 10³	580 x 10³	700 x 10³
				[kgm²]	0,0151	-	-	-	0,015	0,022	-				
T 80	1500	3750	750	[kg]	5,20	-	-	-	1,05	1,12	-	240 x 10³	450 x 10³	638 x 10³	770 x 10³
				[kgm²]	0,0151	-	-	-	0,015	0,022	-				
100	2050	5150	1025	[kg]	9,37	-	-	-	-	1,16	8,45	500 x 10³	700 x 10³	856 x 10³	950 x 10³
				[kgm²]	0,0401	-	-	-	-	0,021	0,234				
T 100	2500	6250	1250	[kg]	9,37	-	-	-	-	1,16	8,45	600 x 10³	830 x 10³	960 x 10³	1070 x 10³
				[kgm²]	0,0401	-	-	-	-	0,021	0,234				
125	4250	10700	2125	[kg]	19,73	-	-	-	-	2,09	9,85	1280 x 10³	1885 x 10³	2280 x 10³	2665 x 10³
				[kgm²]	0,1359	-	-	-	-	0,043	0,306				
T 125	5300	13250	2650	[kg]	19,73	-	-	-	-	2,09	9,85	1600 x 10³	2250 x 10³	2700 x 10³	3200 x 10³
				[kgm²]	0,1359	-	-	-	-	0,043	0,306				



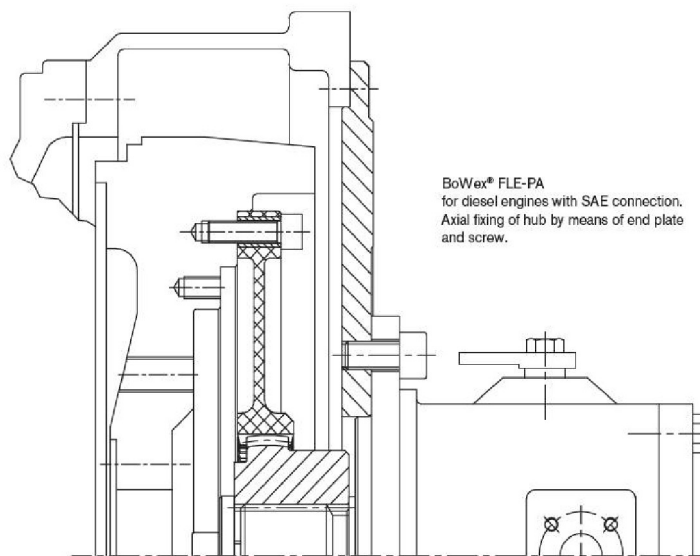
Long mounting



Flange dimensions
acc. to SAE J 620 [mm]

Size	D_3	D_2	z	d_L
6 1/2"	215,9	200,02	6	9
7 1/2"	241,3	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
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 coupling

Selection according to SAE standard



Determination of coupling

- Determination of coupling size
- Connection dimension of coupling
- Hub design/Mounting length

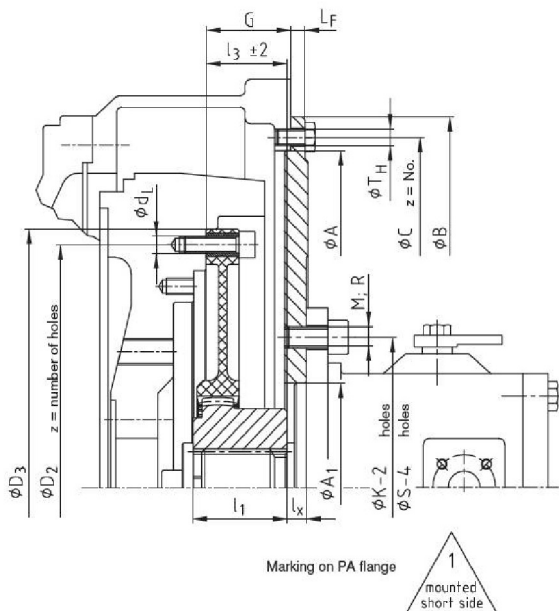
- Table 1
- Table 2
- Table 3

SAE pump mounting flange

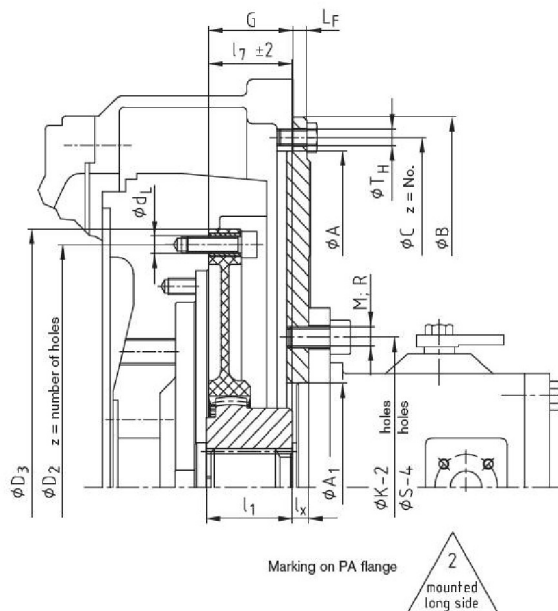
- Flange size according to SAE 617
- Mounting flange of hydraulic pump

- Table 4
- Table 5

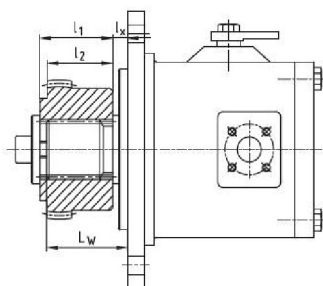
Short mounting of coupling (I3)



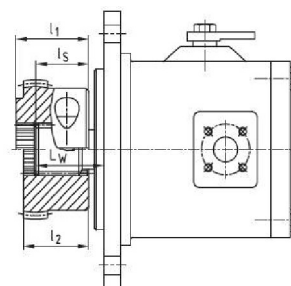
Long mounting of coupling (I7)



Spline hub



Clamping hub



Determination of mounting length I3 or I7	
SAE-Welle	$l_3 / l_7 = G + LF - LW + l_S$
DIN-Welle	$l_3 / l_7 = G + LF - l_X$

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

BoWex® FLE-PAC

Torsionally rigid flange couplings

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	40 PS	48 FLE-PA	6 1/2"	30,15	1,19"	9,5	0,375"	See table 3 Hub design SAE J 498 / DIN 5480	
				7 1/2"	30,15	1,19"				
				8"	62	2,44"				
bis	90 kW	120 PS	65 FLE-PA	8"	62	2,44"	12,7	0,5"		
				10"	54	2,12"				
				11 1/2"	39,6	1,56"				
bis	180 kW	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 _f
	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

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 length of coupling l ₃ or l ₇								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"		
					l ₁	l ₂	l ₃	K	L	K	L	K	L	K	L	
⊗	42	SAE-16/32 DP PI-S 3/4" z=11	x	x	42	-	33	33	42							P559101
	42	SAE-16/32 DP PB-S 7/8" z=13	x	x	42	-	-	33	42							P567101
	42	SAE-16/32 DP PB-BS 1" z=15	x	x	42	-	27	33	42							P660201
	48	SAE-16/32 DP PA-S 1 3/8" z=21	x	x	50	-	45	41	50	50	41	50				P663301
	65	SAE-12/24 DP PC-S 1 1/4" z=14	x	x	55	-	44		54	45	54	41				P656201
	65	SAE-16/32 DP PD-S 1 1/2" z=28	x	x	-	49	45					53	41			P664301
	80	SAE-16/32 DP PE-S 1 3/4" z=27	x	x	55	-	-					44	33			P565402
	42	25 x 1,25 x 18 DIN 5480	x	x	42	-	-	33	42							P000205
	42		x	x	42	-	-	33	42							P500202
	42	30 x 2 x 14 DIN 5480	x	x	42	-	-	33	42							P500203
	48		x	x	50	-	-	41	50							P000206
	48	35 x 2 x 16 DIN 5480	x	x	50	-	-	41	50	50		50				P500203
	48		x	x	46	-	-	37	46							P000303
	65	40 x 2 x 18 DIN 5480	x	x	55	-	-					54	39			P000303
	65		x	x	60	-	-		50	59	50	59	39			P500301
	65	45 x 2 x 21 DIN 5480	x	x	55	-	-					54	39			P000304
	65		x	x	55	-	-		54	45	54	39				P500302
	80	50 x 2 x 24 DIN 5480	x	x	-	64	-		60	69	60	69	39			P000403
	80		x	x	55	-	-		54	45	54	39				P500401
	80		x	x	55	-	-					42	37			P500405

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

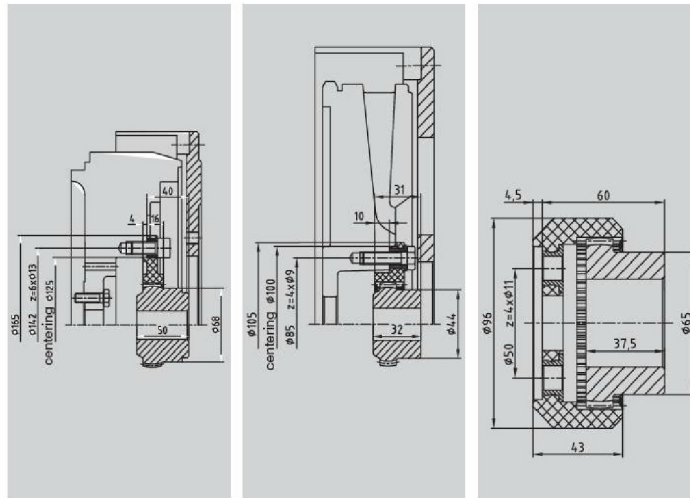
Ordering example: Coupling FLE-PA / FLE PAC			SAE pump mounting flange		
BoWex® 48 FLE-PA	7 1/2"	P663301	SAE-4	B-2L	
Coupling size	SAE connection of coupling	Code of coupling hub	Pump mounting flange for engine housing	Pump flange to SAE 2 holes/4 holes standard metric fastening thread	
Table 1	Table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

BoWex® FLE-PA

Torsionally rigid flange couplings

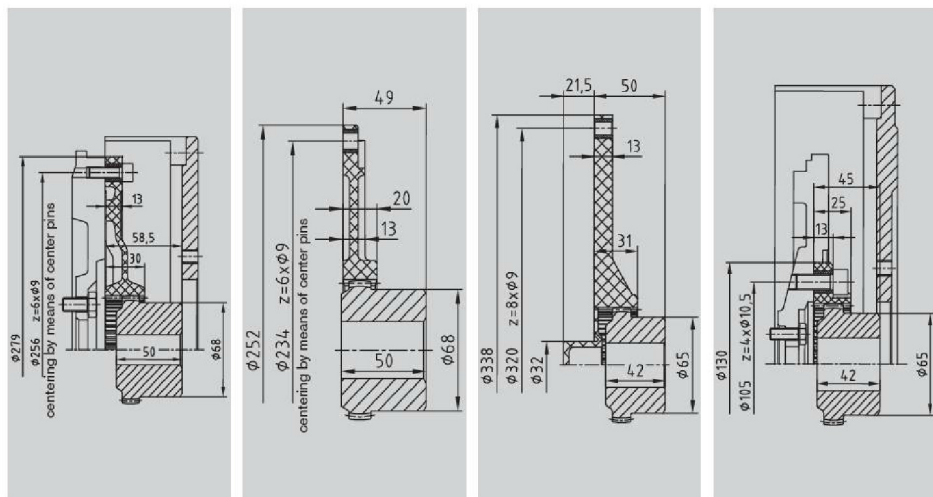
Special flange programme, deviations from the SAE standard

Fitting to:
Hatz
diesel engines



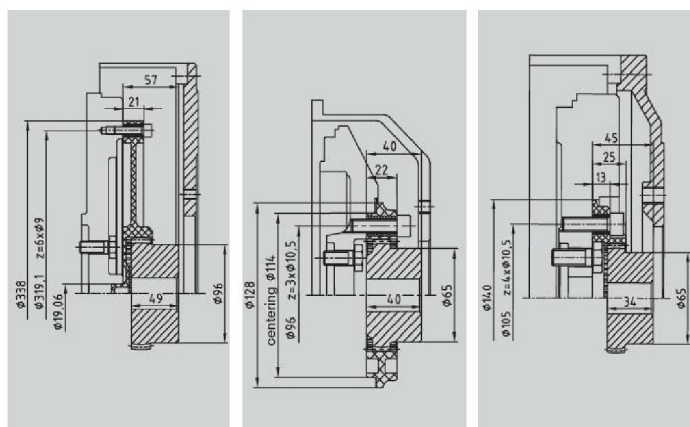
Coupling size	BoWex® 48 FLE-PA, Ø165 Hatz	BoWex® 28 FLE-PA, Ø105 Hatz	BoWex® 48 FLE-PA, Ø96 Hatz
Engine type	2L/3L/4L41C 2M/3M/4M41 4.M42,4L42C	1.D81 / 1D90	Z788 / Z789 / Z790

Fitting to:
VW
Mitsubishi
diesel engines



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

Fitting to:
Perkins
Lombardini
diesel engines



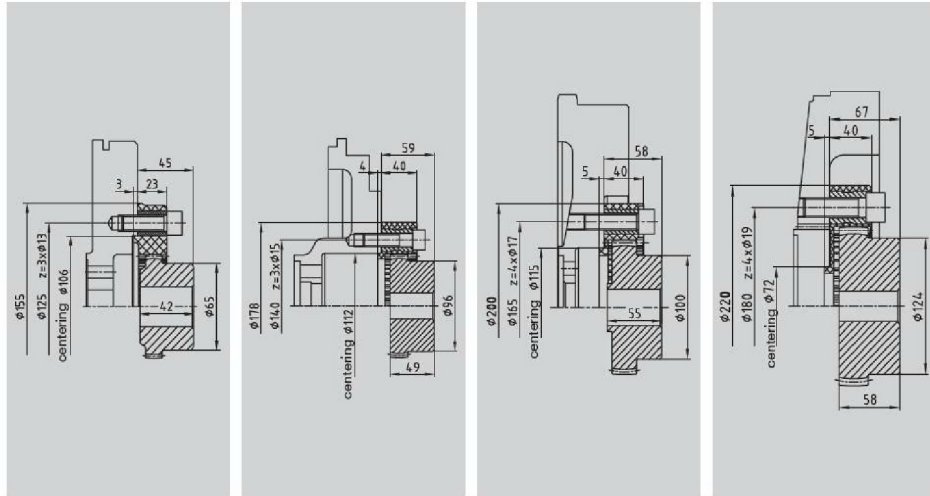
Coupling size	BoWex® 65 FLE-PA, Ø338 Perkins 1104C-44T	BoWex® 48 FLE-PA, Ø128 Lombardini FOCS series	BoWex® 48 FLE-PA, Ø140 Lombardini LDW
Engine type	Flywheel No. D0014		

BoWex® FLE-PA

Torsionally rigid flange couplings

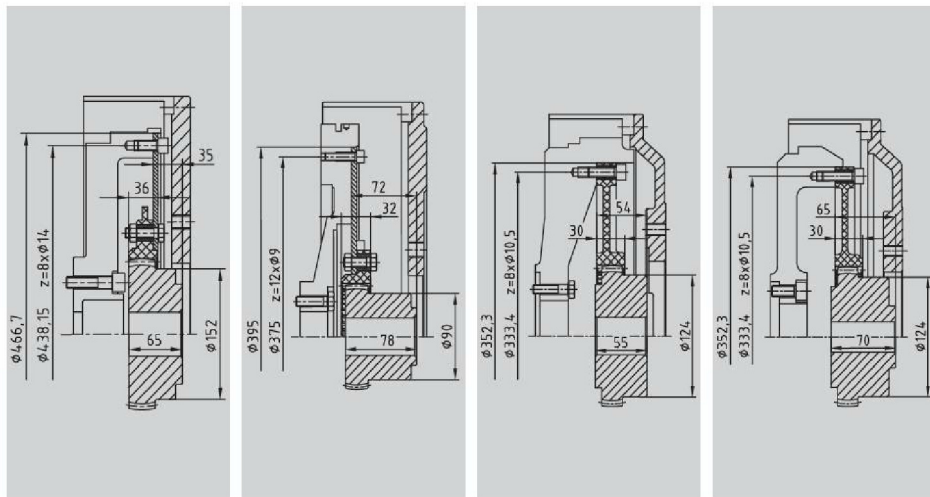
Special flange programme, deviations from the SAE standard

Fitting to:
Perkins
Isuzu
Cummins
diesel engines



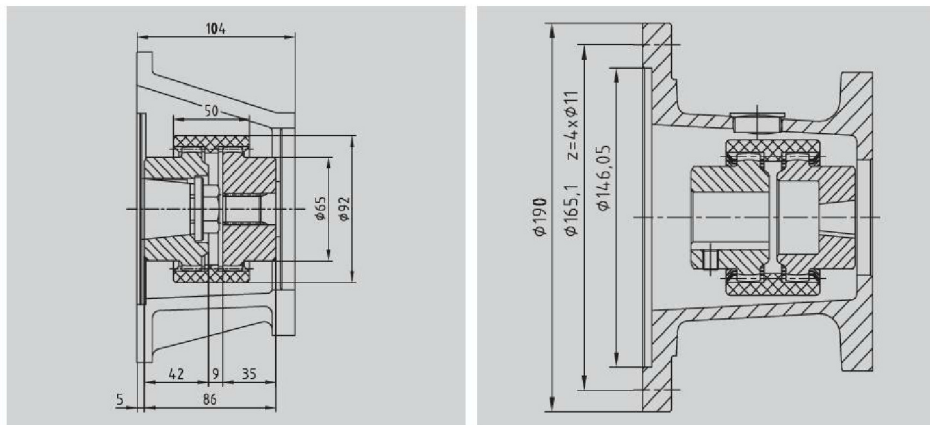
Coupling size	BoWex® 48 FLE-PA, Ø 155	BoWex® 65 FLE-PA, Ø 178	BoWex® 70 FLE-PA, Ø 200	BoWex® 80 FLE-PA, Ø 220
Engine type	3 holes, Ø 125	3 holes, Ø 140	4 holes, Ø 165	4 holes, Ø 180

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

BoWex® FLE-PA/-PAC

BoWex-ELASTIC®

MONOLASTIC®