

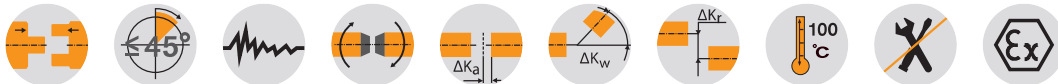
# BoWex-ELASTIC® HE3 / HE4 / HE-D

## Highly flexible flange couplings

Axial plug-in, available in different kinds of hardness



For legend of pictogram please refer to flapper on the cover

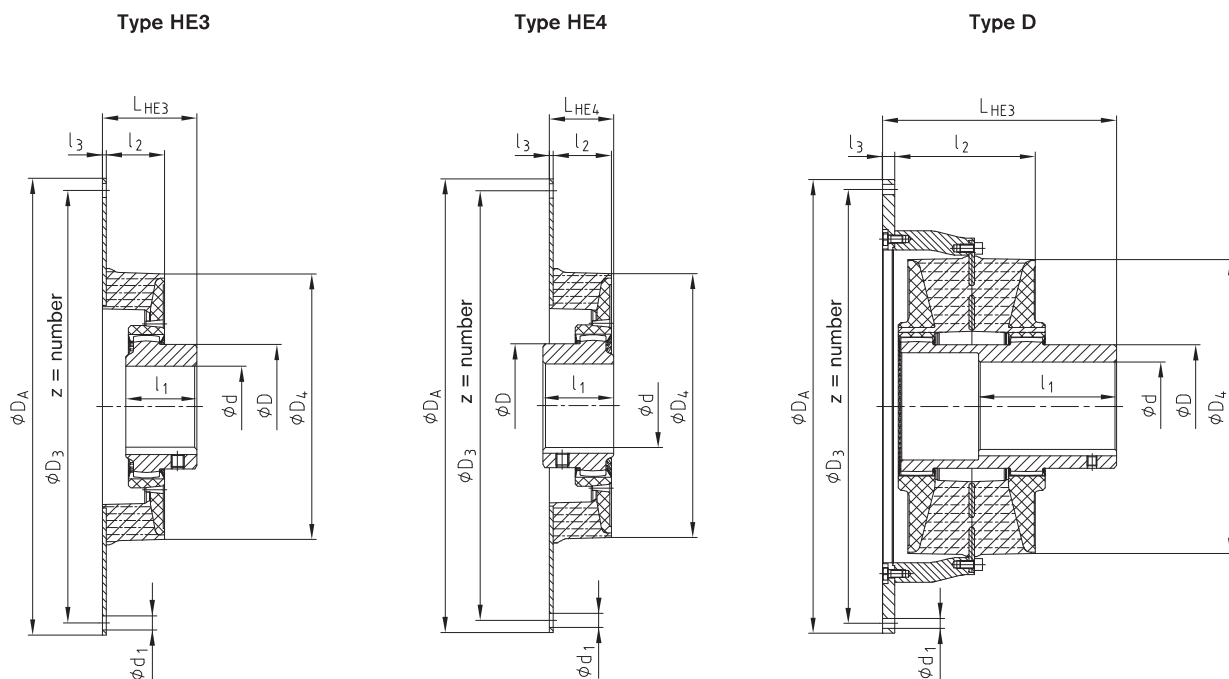


BoWex-ELASTIC® Type HE3, HE4 and HE-D																			
Size	Bore d [mm]		Flange connection acc. to SAE - J620						Dimensions [mm]						Weight with max. bore [kg]	Mass moment of inertia with max. bore [kgm <sup>2</sup> ]			
	Pilot bored	Max.	14"	16"	18"	21"	24"	Ø800	Ø885	l <sub>3</sub>	l <sub>2</sub>	D <sub>4</sub>	D	l <sub>1</sub>		LHE3	LHE4	J <sub>A</sub>	J <sub>L</sub>
125 HE	45	125	●							6	92	416	192	140	186	103	33.1	0.3142	0.2750
G125 HE	45	125		●						6	89	440	192	140	179	91	34.8	0.4231	0.2750
150 HE	44	160			●					6	140	470	225	150	205	160	46.8	0.7277	0.5414
150 HE-D	44	160			●					-	286	470	225	275	291	-	51.5	1.2120	0.5414
																		113	3.0045
G150 HE	44	160			●					6	140	504	225	150	205	160	51.9	0.8164	0.6500
G150 HE-D	44	160			●					-	286	504	225	275	291	-	56.6	1.3007	0.6500
																		123	3.1820
200 HE	46	180			●					6	149	568	250	175	240	160	76.8	1.4880	1.2952
200 HE-D	46	180			●					-	325	568	250	298	310	-	81.2	2.0390	1.2952
																		228	11.80
G200 HE	46	180			●					6	149	600	250	175	240	160	81.6	1.6272	1.5409
G200 HE-D	46	180			●					-	325	600	250	298	310	-	86.0	2.1782	1.5409
																		238	12.00
240 HE	80	240						●		8	172	772	326	200	270	205	230	10.92	3.0387
275 HE	80	275						●		10	185	810	372	240	312	215	206	7.3696	7.6845

Technical data													
Size	Shore	Torque [Nm]				Perm. damping power PKW [W]			Perm. operating speed n <sub>max.</sub> [rpm]	Dynamic torsion spring stiffness C <sub>dyn.</sub> [Nm/rad] 60 °C	Relative damping ψ	Resonance factor V <sub>R</sub> ≈ 2 • π / ψ	Radial spring stiffness C <sub>r</sub> [N/mm]
		T <sub>KN</sub> [Nm]	T <sub>K</sub> max 10,000 LW [Nm]	T <sub>K</sub> max 50,000 LW [Nm]	T <sub>KW</sub> [Nm]	60 °C	80 °C	90 °C					
125 HE	T50 Sh	4300	12900	6450	1075	221	133	88	2300	30000	0.8	7.9	617
	T70 Sh	7500	22500	11250	1875								
G125 HE	T50 Sh	6100	18300	9150	1525	240	144	96	2250	51000	0.8	7.9	560
	T70 Sh	9750	29250	14625	2438								
150 HE	T50 Sh	8000	24000	12000	2000	262	157	105	2200	67500	0.8	7.9	714
	T70 Sh	14000	42000	21000	3500								
150 HE-D	T50 Sh	16000	48000	24000	4000	524	314	210	2200	134000	0.8	7.9	1428
	T70 Sh	28000	84000	42000	7000								
G150 HE	T50 Sh	10000	30000	15000	2500	278	167	111	2100	85000	0.8	7.9	1485
	T70 Sh	18000	54000	27000	4500								
G150 HE-D	T50 Sh	20000	60000	30000	5000	556	334	222	2100	170000	0.8	7.9	2970
	T70 Sh	36000	108000	54000	9000								
200 HE	T50 Sh	14500	43500	21750	3625	308	185	123	1900	119000	0.8	7.9	1720
	T70 Sh	25000	75000	37500	6250								
200 HE-D	T50 Sh	29000	87000	43500	7250	616	370	246	1900	238000	0.8	7.9	3440
	T70 Sh	50000	150000	75000	12500								
G200 HE	T50 Sh	17500	52500	26250	4375	324	194	130	1800	139000	0.8	7.9	1952
	T70 Sh	30000	90000	45000	7500								
G200 HE-D	T50 Sh	35000	105000	52500	8750	648	388	260	1800	278000	0.8	7.9	3904
	T70 Sh	60000	180000	90000	15000								
240 HE	T50 Sh	29000	87000	43500	7250	372	223	149	1500	259000	0.8	7.9	2326
	T70 Sh	49000	147000	73500	12250								
275 HE	T50 Sh	42000	126000	63000	10500	410	246	164	1500	375000	0.8	7.9	2950
	T70 Sh	70000	210000	105000	17500								

■ = Years of experience with applications at customer sites and additional test series in the KTR test field in Rheine enabled us to determine potentials allowing for an increase of the rated torques with some sizes of this series.

Ordering example:	BoWex-ELASTIC® 80	HE3	40	10	112	U
	Coupling size	Type	Elastomer hardness	Flange Ø D <sub>A</sub> according to SAE or special	Mounting length L <sub>HE</sub>	Unbored or with finish bore



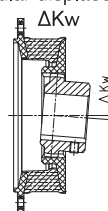
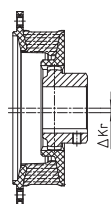
Flange dimensions according to SAE J620 [mm]				
Nominal size	$D_A$	$D_3$	$z$	$d_1$
14"	466.72	438.15	8	13
16"	517.50	489.00	8	13
18"	571.50	542.90	6	17
21"	673.10	641.35	12	17
24"	733.42	692.15	12	21
Ø800	800	770	32	17
Ø885	885	855	36	17

## Displacements

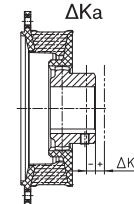
For different operating speeds or higher operating temperatures the permissible radial displacement is calculated as follows:

$$\Delta K_{r\text{perm.}} = \Delta K_r \cdot St \cdot \sqrt{1500 / nx}$$

Radial displacement  $\Delta K_r$  Angular displacement



Axial displacement  $\Delta K_a$



Displacements																
Size	125 HE G125 HE			150 HE G150 HE			200 HE G200 HE			240 HE			275 HE			
	T40 Sh	T50 Sh	T70 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	
Perm. radial displacement $\Delta K_r$ [mm]	n=1500 rpm	2.5	2.3	1.1	2.8	2.5	1.3	3.0	2.7	1.5	3.2	2.9	1.6	3.4	3.1	1.8
	max. <sup>1)</sup>	7.5	6.9	3.3	8.0	7.5	4.0	8.5	8.0	4.5	9.0	8.5	5.0	9.5	9.0	5.5
Perm. angular displacement $\Delta K_w$ [°]	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
	n=3000 rpm	0.5	0.4	0.25	-	-	-	-	-	-	-	-	-	-	-	-
Perm. angular displacement $\Delta K_w$ [mm]	max. <sup>1)</sup>	1.5			1.5			1.5			1.5			1.5		
Perm. axial displacement $\Delta K_a$ [mm]		± 3			± 4			± 4			± 4			± 4		

<sup>1)</sup> For short-term start-up operation

Mounting procedure, screw type with property class, tightening torques as per KTR assembly instructions (see www.ktr.com).