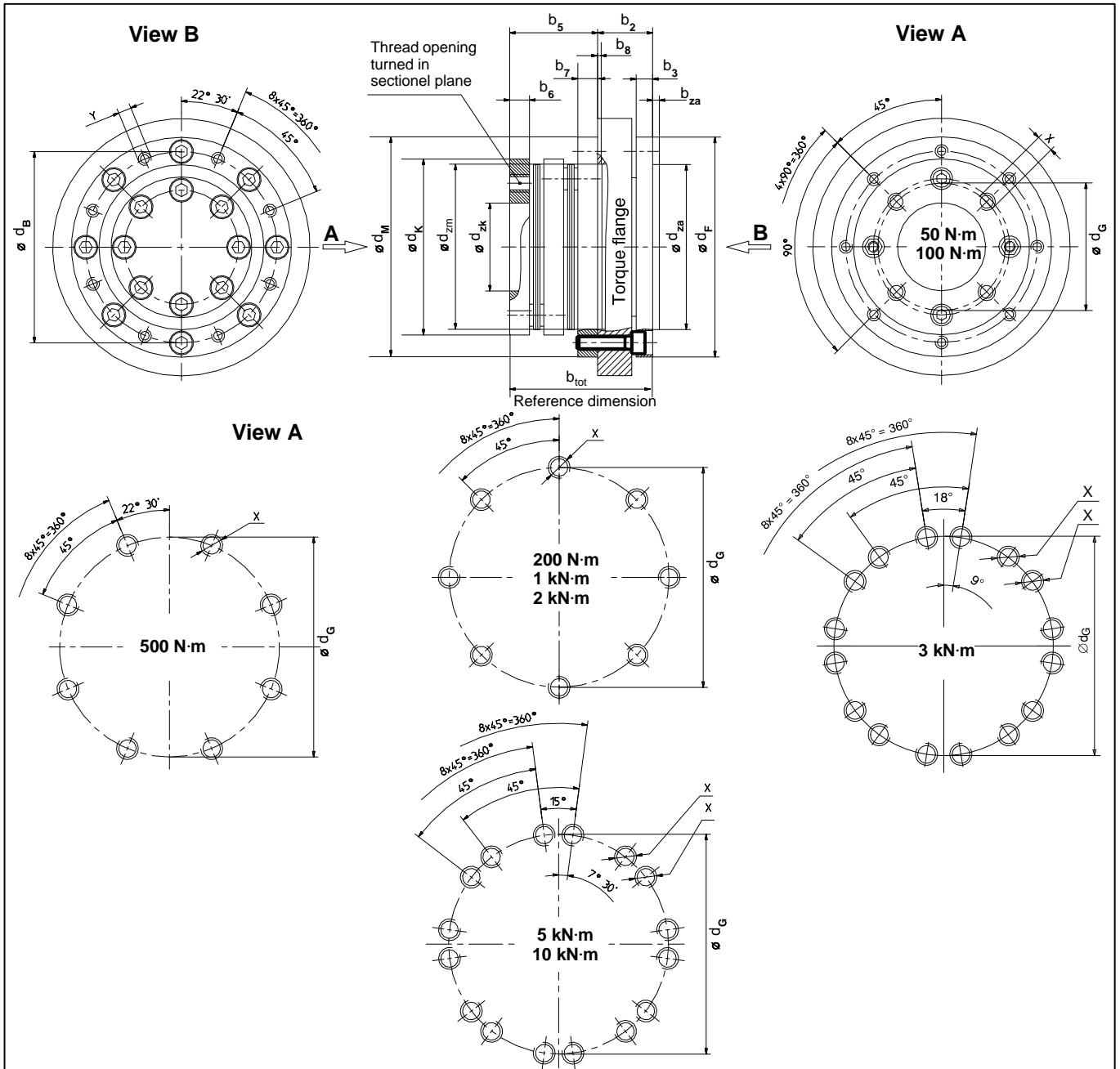


HK-Couplings Torsionally Rigid Couplings

for T10F Torque Flange



Dimensions

Nom. range (N-m)	T_{Kmax} (N-m)	Coupling (mm)											Torque flange (mm)							
		$\varnothing d_{zk}^{H7}$	$\varnothing d_K$	$\varnothing d_{zm}$	$\varnothing d_M$	$\varnothing d_G$	b_{tot}	b_5	b_6	b_7	b_8	X	$\varnothing d_{za}$	$\varnothing d_F$	$\varnothing d_B$	b_2	b_3	b_{za}	Y	
50	250	40	80	75 _{g6}	100	58	65	40	9	9	2	M8	75 _{g5}	100	87	25	7.5	3	M6	
100																				
200	400	50	95	90 _{g6}	120	67	81.7	51.2	12	12	1.8	M8	90 _{g5}	121	105	30.5	11	3	M8	
500																				
1k	2800	82	156	110 _{g6}	156	120	94	53.5	12.5	14.5	1.8	M12	110 _{g5}	156	133	40.5	18	3	M12	
2k																				
3k	4500	102	200	140 _{g6}	191	152	136.3	93.8	19	19	2	M16	140 _{g5}	191	165	42.5	55	26	3	M14
5k																				
10k	20000	135	248	174 _{g6}	238	224	180	116	22.8	22.8	2	M16	174 _{g5}	238	206	64	69	33.5	3	M18

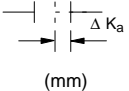
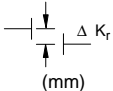

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Technical Data

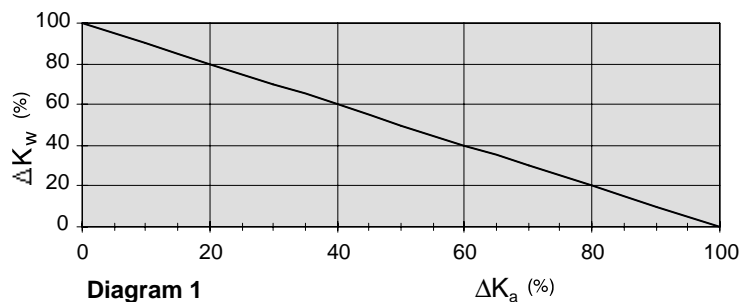
Nominal range T10F (N·m)	Article number	Nominal (rated) torque (N·m)	Maximum rotation speed ¹⁾ (rpm)	Limit torque (N·m)	Oscillation bandwidth (torque) DIN 50100 (peak-to-peak) (N·m)	Weight of the coupling (kg)	Mass moment of inertia J (without torque flange) (kgm ²)	Rotational rigidity C _{T tot} (without torque flange) (10 ⁶ N·m/rad)
50	1-4412.0010	100	15000	200	100	1.15	0.0014	0.024
100	1-4412.0011						0.0014	
200	1-4412.0012	200	12000	400	200	1.95	0.0035	0.050
500	1-4412.0013	500		1000	630	4.0	0.0144	0.280
1k	1-4412.0014	1000	10000	2000	1400	7.1	0.0284	0.690
2k	1-4412.0015	2000		4000	2200	13.2	0.0617	1.195
3k	1-4412.0017	3000	6000	4500	14.6	0.0905	1.940	
5k	1-4412.0016	10000	8000	16000	11000	24.8	0.4920	3.595
10k								

¹⁾ The specified values were ascertained in an available machine plant. The maximum rotation speed and resonance ranges are closely related to the running characteristics and quadratic response of the whole machine plant in which the torque gauging flange and coupling set are used. Note that resonance ranges may change in accordance with the stable and unstable ratios occurring in different machine plants.

Permitted shaft-end misalignment

Nominal range (N·m)	Max. permitted axial misalignment of coupling half members  (mm)	Max. permitted radial misalignment of coupling half members  (mm)	Angular displacement, ΔK _w  (deg.)
50	± 1.4	0.27	1
100			
200	± 1.6	0.17	0.5
500	± 2.6	0.34	1
1k	± 3.0		
2k	± 3.2	0.40	0.5
3k	± 4.0		
5k	± 5.0	0.75	0.75
10k			

The compliance values quoted are maxima when there is compliance in one direction only. If several compliance characteristics are required simultaneously during operation, compliance values are reduced in accordance with diagram 1:



Applicable norms and standards: Coupling characteristics in accordance with DIN 740, Part 2, Section 2.1. Loading quantities in accordance with DIN 740, Part 2, Sections 2.2 and 3 (Coupling design for special applications).

Diagram: axial and radial displacement

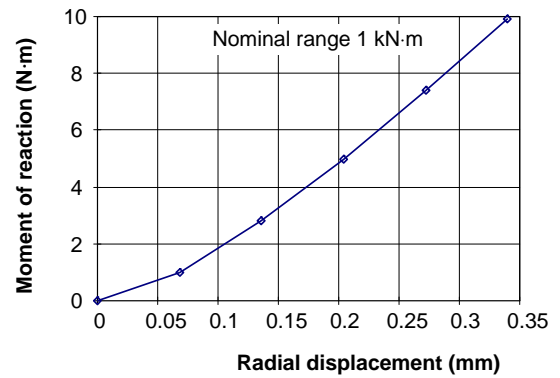
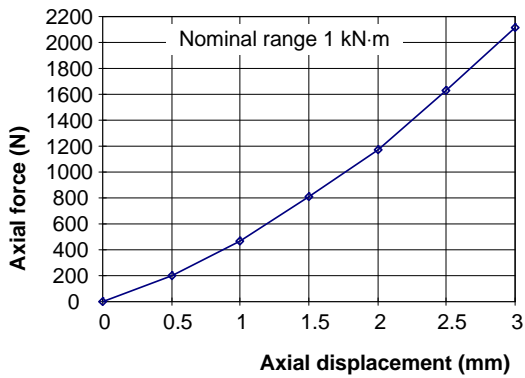
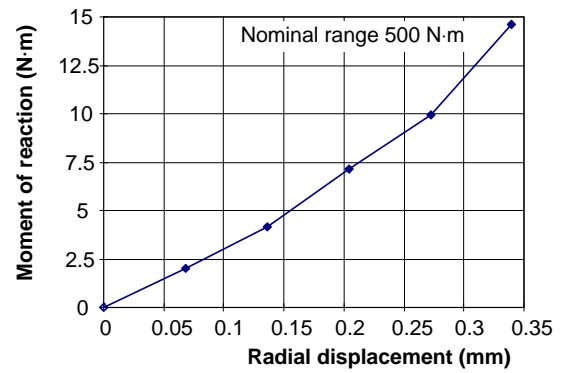
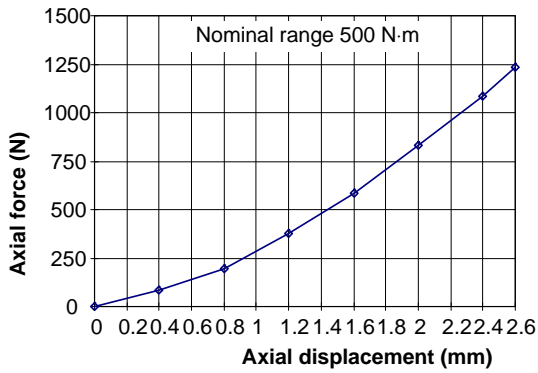
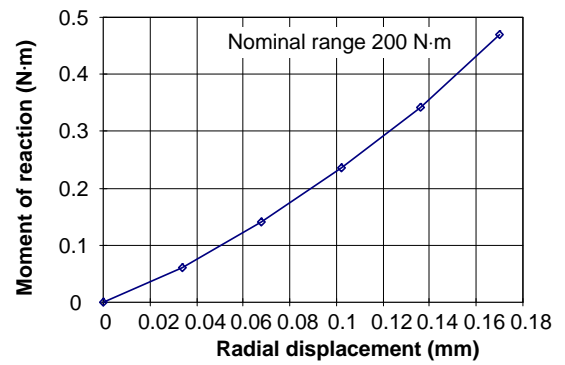
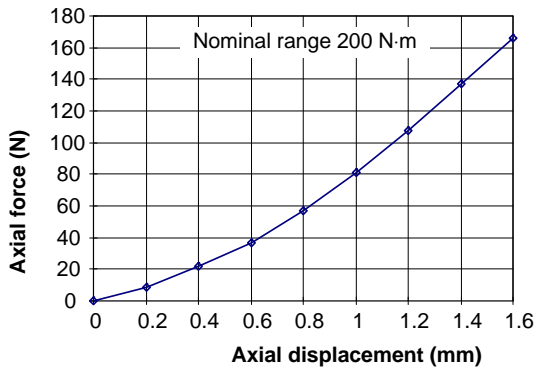
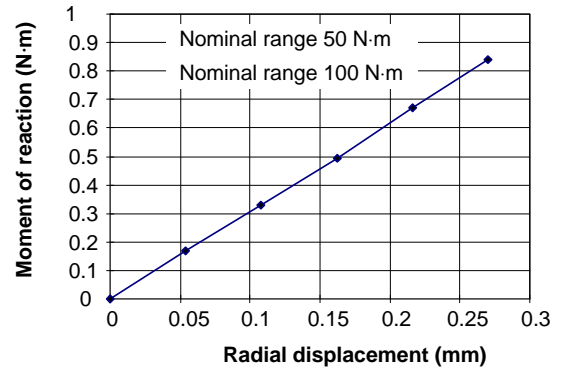
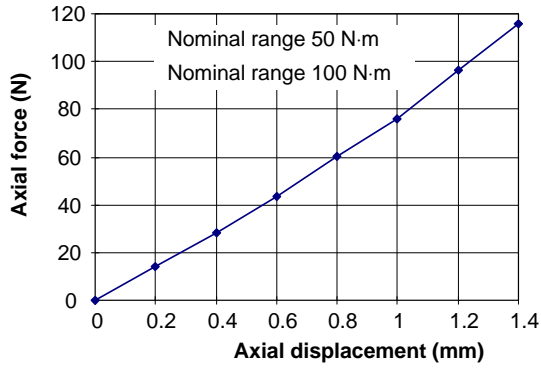
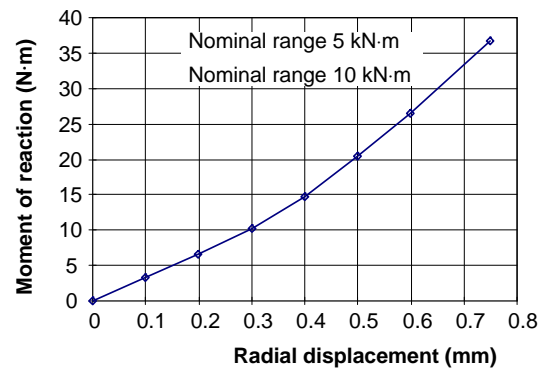
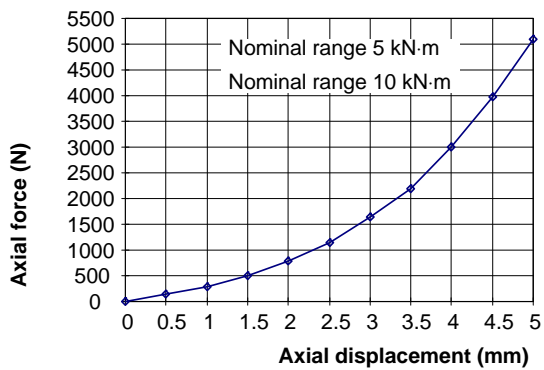
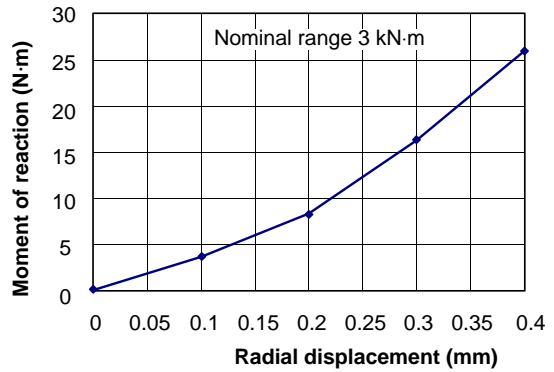
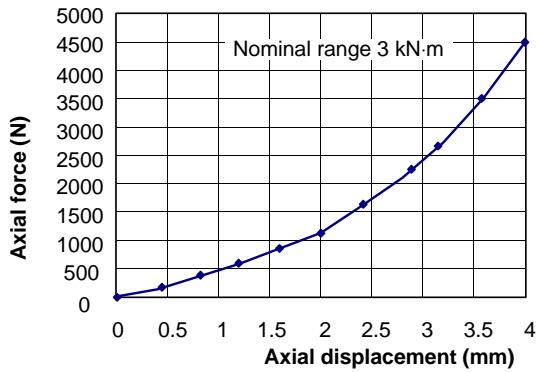
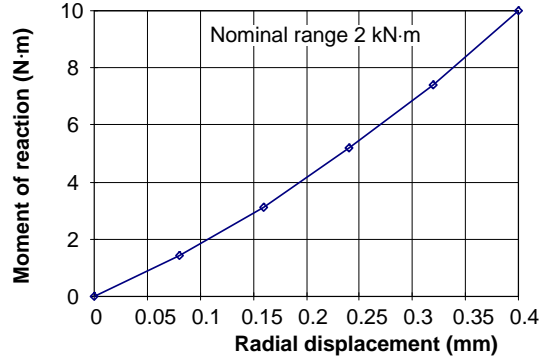
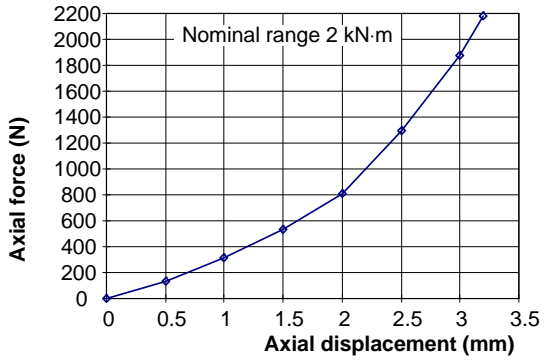


Diagram: axial and radial displacement (continued)



General notes on installation

The laminated packaging of the couplings must not be overstressed beyond the specified permitted compliance values.

Installation position

The HK-coupling can be operated in any installation position (horizontally or vertically) with the T10F/... torque flange. During vertical operation, ensure that the permitted axial force is not exceeded due to the masses present in the test rig.

Delivery state

- If the T10F has been ordered complete with coupling (Code 6: Y; see data sheet B0121-x.x en), the coupling will be fitted to the torque flange at HBM. Couplings and the torque flange are individually balanced in accordance with DIN ISO1940 quality levels G 2.5 (coupling) and G 6.3 (torque flange). Screws for connecting the coupling and torque flange are included in the list of components supplied.
- If the T10F has been ordered without coupling (Code 6: N), the coupling may be re-ordered individually.

Installation

- For perfect function it is essential to conform to reference dimension b_{tot} .
- If the coupling and torque flange are separate when delivered (see delivered status A), you must first fit the coupling to the torque flange before installing the combined unit in the shaft run. Use only screws of the type specified in table 1. (fillister-head screws DIN EN ISO 4762 -10.9 (Nom. range 10 kN·m DIN EN ISO 4762 -12.9), black, oiled, $\mu_{tot}=0.125$).
- Clean the flange and degrease it with a solvent (e.g. acetone).
- First of all tighten the screws "crosswise" with half tightening torque. Then tighten them "crosswise" again with full tightening torque (for tightening torque see table 1).
- Then install the combined unit in the shaft run. First of all tighten the screws "crosswise" with half tightening torque. Then tighten them "crosswise" again with full tightening torque (for tightening torque see table 2).

Caution: The connecting screws on the user side must not impede the function of the couplings (see maximum screwed-in depth, table 2).

After installation, please check that the couplings are not deformed.

Nominal range (N·m)	Number of screws	Fillister-head screw DIN EN ISO 4762 -10.9 bk/oiled/ $\mu_{tot}=0.125$	Prescribed tightening torque (N·m)	Weight of screw (kg/piece)
50	8	M6x25	14	0.00759
100				
200		M8x30	34	0.01690
500		M12x35	115	0.04290
1 k		M12x35		0.04290
2 k		M14x40	185	0.06300
3 k		M14x45		0.06900
5 k		M18x50	400	0.14700
10 k	M18x55 (DIN EN ISO 4762 -12.9)	470	0.15700	

Table 1: Screws for connecting coupling to torque flange T10F (View B)

Nominal range (N·m)	Number of screws	Fastening screws strength class 10.9	Prescribed tightening torque (N·m)	Maximum screwed-in depth (mm)
50	4	M8	34	9
100				
200	8	M8	34	12
500		M12	115	12.5
1 k				15.5
2 k		M16	290	19
3 k	16	M12	115	17
5 k		M16	290	22.8
10 k				

Table 2: Fastening screws for coupling and test rig (View A)

More notes on fitting can be found in the mounting instructions for the T10F torque flange.

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