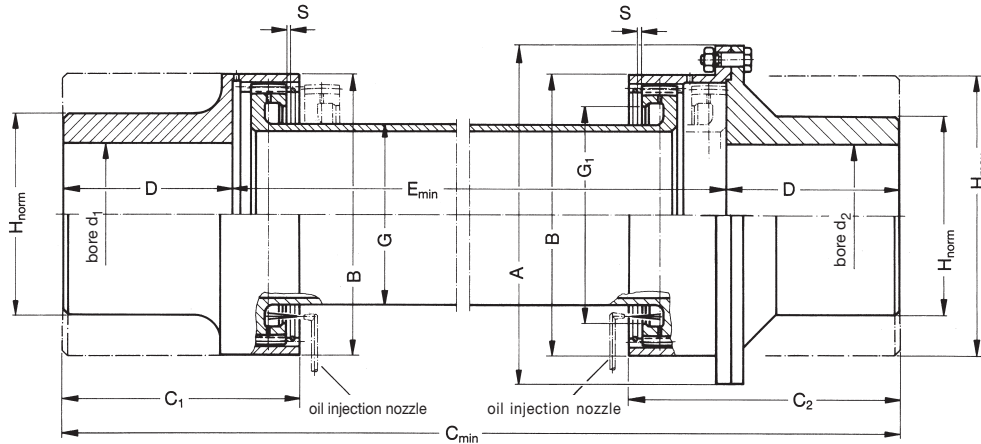


Curved Tooth Couplings High-Speed Series TFH



Hardened gear teeth

Dimension table No. 243 115/1



For coupling selection and size determination, please see page 5.

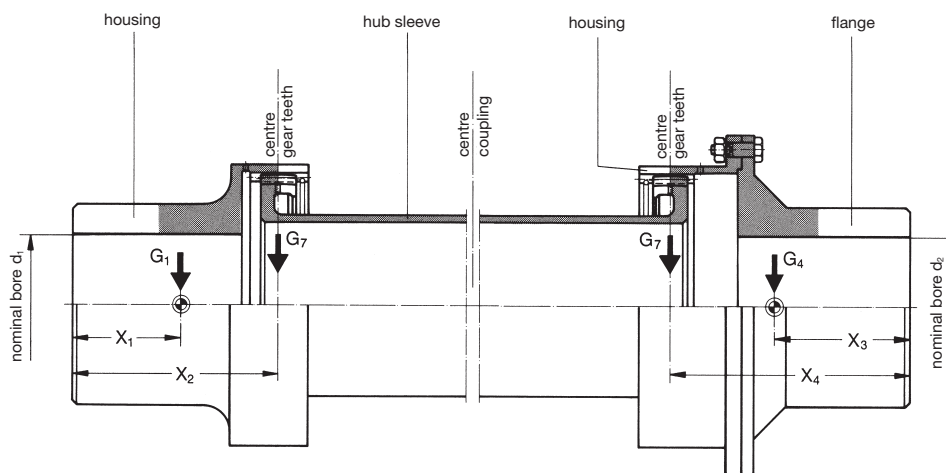
1) Values of the complete coupling, series TFH, with $E = E_{min}$, H_{norm} and bore d_1 ; $d_2\ nenn$

Larger sizes on request.

Coupling Type TFH	Normal Speed cont. operation $\frac{P_{KN}}{n}$ n_{max}	Dimensions																Oil injection nozzles per half Quantity and size	Total oil require- ment per min at 1.5 bar pressure	Mass moment of inertia J ¹⁾	per 10 mm tube length, if $E > E_{min}$	Weight ¹⁾
		bore d_1 ; d_2			A	B	C_{min}	C_1	C_2	D	E_{min}	G	G_1	H_{norm}	H_{max}	S						
Size	kW·min	rpm	min mm	nom mm	max mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	litre	kgm ²	kgm ²	kg
30	0,089	25.000	12	50	55	120	85	200	79	103	50	100	46	53	80	85	1,5	1xØ2	4,5	0,0075	0,000023	5,5
40	0,161	22.500	22	55	65	145	105	232	95	125	60	112	60	72	90	105	1,5	1xØ2	4,5	0,018	0,000065	9,0
50	0,287	20.000	22	60	75	165	125	265	107	139	70	125	70	88	100	125	1,5	1xØ2	4,5	0,035	0,000098	13,5
60	0,560	18.000	28	70	90	200	145	300	122	158	80	140	86	105	112	148	1,5	1xØ2,5	7	0,080	0,00024	21
70	0,893	16.000	28	80	100	215	168	340	138	180	90	160	100	120	125	168	2	1xØ2,5	7	0,125	0,00046	28
80	1,278	14.000	32	90	115	235	185	380	151	196	100	180	115	135	140	185	2	1xØ3	10	0,200	0,00072	37
90	1,803	12.500	32	100	125	270	210	420	167	216	110	200	130	155	160	210	2	1xØ3	10	0,360	0,0013	54
100	2,240	11.200	55	110	140	275	224	465	177	226	120	225	145	170	180	224	2	1xØ3,5	13	0,475	0,0015	64
110	3,238	10.000	65	125	160	305	245	510	190	242	130	250	158	185	200	245	2,5	1xØ3,5	13	0,825	0,0022	85
125	4,498	9.000	75	140	180	335	268	580	220	280	150	280	185	205	225	272	3	1xØ3,5	13	1,38	0,0040	116
140	6,370	8.000	85	160	200	380	305	645	241	307	165	315	200	235	250	305	3	2xØ3	20	2,40	0,0059	160
160	10,063	7.100	120	180	225	430	347	735	279	356	190	355	225	265	280	348	4	2xØ3	20	4,65	0,0086	240
180	14,368	6.300	140	200	250	470	392	840	318	404	220	400	250	300	315	392	4	2xØ3,5	26	7,88	0,013	335
200	20,125	5.600	160	220	280	545	437	940	357	455	245	450	280	340	350	445	4	2xØ3,5	26	15,63	0,022	490

Subject to change due to technical improvement.

Centres of Gravity, Torsional Spring Rates



Determination of the centres of gravity

Details for determining the centres of gravity

- X_1 = Distance to centre of gravity G_1
- X_2 = Distance to weight take-up
- X_3 = Distance to centre of gravity
- X_4 = Distance to weight take-up
- G_1 = Weight of housing
- G_2 = Weight of housing
- G_3 = Weight of flange
- $G_4 = G_2 + G_3$
- G_5 = Weight of hub sleeve, if $E = E_{min}$
- G_6 = Extra weight of hub sleeve per 1 mm length, if $E > E_{min}$

$$G_7 = \frac{1}{2} \cdot G_5 \quad \text{if } E = E_{min}$$

or

$$G_7 = \frac{1}{2} \cdot G_5 + \frac{1}{2} \cdot (E - E_{min}) \cdot G_6 \quad \text{if } E > E_{min}$$

Determination of the torsional spring rates

Details for determining the torsional spring rates

- C_{T1} = torsional spring rate of the complete coupling, if $E = E_{min}$
- C_{T2} = torsional spring rate of hub sleeve per 1 mm length, if $E > E_{min}$
- C_{T3} = torsional spring rate of the complete coupling if $E > E_{min}$

²⁾ Details based on H_{norm} and bore d_1 ; $d_2 \text{ nom}$

$$C_{T3} = \frac{1}{\frac{1}{C_{T1}} + \frac{E - E_{min}}{C_{T2}}}$$

Coupling Type	Weights and Centre of Gravity Distances ²⁾												Torsional Spring Rates ²⁾		
	bore d_1 ; d_2 nom	X_1	X_2	X_3	X_4	G_1	G_2	G_3	G_4	G_5	G_6	G_7	C_{T1}	C_{T2}	C_{T3}
TFH	mm	mm	mm	mm	mm	kg	kg	kg	kg	kg	kg/mm	kg	MNm/rad	MNm-mm/rad	MNm/rad
30	50	36	65	46,7	89	1,7	1,3	1,7	3	0,76	0,005		0,36	23,2	
40	55	43,5	76	55,6	106	2,8	2	2,9	4,9	1,2	0,009		0,87	66,2	
50	60	50,7	88	64	120	4,3	2,8	4	6,8	2,3	0,01		1,24	99	
60	70	59,8	100,5	74,2	136,5	6	4,6	6,5	11,1	3,9	0,015		2,55	239	
70	80	67,6	112,5	83,3	154,5	9	5,4	8	13,4	5,3	0,022		3,91	460,9	
80	90	72,4	124	89	169	11,7	6,1	10,8	16,9	7,9	0,026		5,21	729	
90	100	79,7	139,5	98	188,5	17	9,6	16,5	26,1	11	0,036		8,46	1280	
100	110	81,8	148,5	99,8	197,5	22	9,8	20	29,8	11,7	0,033		8,73	1544	
110	125	87,3	161	107,9	213	27,5	11,8	28	39,8	16,5	0,041		11,47	2270	
125	140	100	186	122,8	246	39	15	39	54	21,7	0,053		17,04	4025	
140	160	109,5	204	130,3	270	51	23	52	75	34	0,068		23,18	5966	
160	180	128,4	235,5	158,3	312,5	78	35	75	110	48	0,078		31,55	8714	
180	200	146,2	268	177	354	114	45	106	151	69	0,092		40,8	12854	
200	220	166,1	301	196,7	399	164	69	150	219	101	0,13		61,36	22068	

Subject to change due to technical improvement.