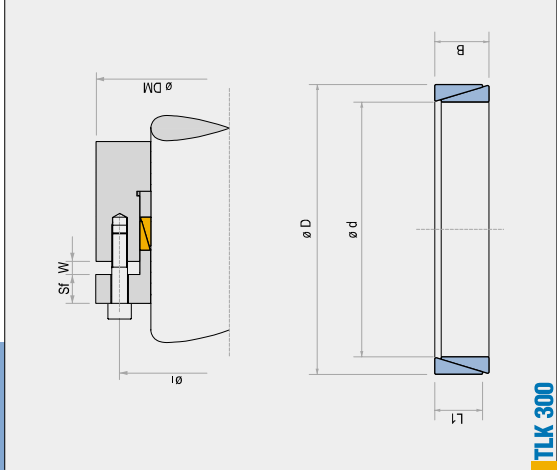


Locking elements not self-centering

TLK 300



TLK 300

Screws center distance $l = D + 12 + dg$ (screws fixed on the hub)
Screws center distance $l = d + 12 - dg$ (screws fixed on the shaft)

Note: On request the type TLK 300 can be supplied also with split rings: therefore the transmissible torque M_t increases. Please contact our technical department.

Characteristics

Medium low torque
Restricted radial encumbrance
Limited installation time
Application economically advantageous

Installation

Carefully clean the hub and shaft contact surfaces and apply a light oil film. Slide the locking elements into the hub bore, insert the shaft and tighten gradually and regularly in crossed sequence all screws to reach the tightening torque M_s as indicated in the table. The values M_t and F_{ass} indicated in the table are valid only in case of oil installation. Do not use any oil with **molybdenum bisulphide** or high pressure additives and not grease. Above substances notably reduce the friction coefficient.

Dismantling

By loosening all tightening screws the locking elements are released and the clamping is free. However in case of difficulties slightly hammer the hub.

DN 912		C=0,140		
		Pv in N	12.9	10.9
dg	8.8	10.9	12.9	10.9
M4	3900	5450	6550	2.9
M5	6350	8950	10700	6
M6	9300	12600	15100	10
[M7]	13200	18500	22200	16
M8	16500	23200	27900	25
[M9]	22000	30900	37100	36
M10	26200	36900	44300	49
M12	38300	54000	64500	86
M14	52500	74000	88500	135
M16	73000	102000	123000	210
M18	89000	124000	149000	290
M20	114000	160000	192000	410
M22	141000	199000	239000	550
M24	164000	230000	276000	710
M27	215000	302000	363000	1050
M30	262000	368000	442000	1450

$P_a = N^{\circ}$ of screws • Pv

Pt = see page 19

$$M_t \text{ transmissible} = \frac{P_a - P_t}{0.54} \cdot 0.12 \cdot d \cdot 2000$$

Flange thickness $S_f = dg \cdot 1.3$ (screws quality 8.8)
Flange thickness $S_f = dg \cdot 1.8$ (screws quality 12.9)

Tolerances, surface finish

A good surface finish by machine tool is sufficient.
Maximum allowable surface finish:
 R_t max 6 μm (Ra 1 μm - Rz 5 μm)

Maximum permissible tolerances:

shaft h6 - hub H7 (up to 40mm d. diameter)
shaft h8 - hub H8 (over 42mm d. diameter)

Mt transmissible

Nr. 1 TLK 300 $M_t = M_t \text{ cat.}$
Nr. 2 TLK 300 $M_t = M_t \text{ cat.} \cdot 1.55$
Nr. 3 TLK 300 $M_t = M_t \text{ cat.} \cdot 1.85$
Nr. 4 TLK 300 $M_t = M_t \text{ cat.} \cdot 2.02$

DM hub calculation

The pressure P_h in the hub can be compared to the inside pressure on a thick hollow cylinder.

For DM calculation see page 38.

For larger diameter please contact us.

Locking elements not self-centering

TLK 300

Dimensions		Pre-load force		Total force		Torque		Axial thrust		Distance W before tightening		Spacer diameter		Surface pressures on shaft		Weight	
		d x d	B	L1	Pt	Pa	N	F ass.	KN	1	2	d1	D1	pw	pn	mm ²	Kg
7 x 10	4.5	3.7	-	-	3900	2	0.84	2.5	2.5	3	4	6.1	8.9	115	75	0.002	
8 x 11	4.5	3.7	-	-	5300	5	1.17	2.5	2.5	3	4	7.1	9.9	105	70	0.002	
9 x 12	4.5	3.7	-	-	7650	8	1.76	2.5	2.5	3	4	8.1	10.9	120	90	0.002	
10 x 13	4.5	3.7	-	-	10600	10	1.91	2.5	2.5	3	4	9.1	11.9	140	105	0.002	
12 x 15	4.5	3.7	-	-	15600	11	1.91	2.5	2.5	3	4	10.1	12.9	135	105	0.002	
13 x 16	4.5	3.7	-	-	15600	13	2.02	2.5	2.5	3	4	12.1	14.9	115	90	0.002	
14 x 18	6.3	5.3	11000	25400	22	3.18	3.5	3.5	3.5	4.5	5.5	14.1	17.9	115	90	0.005	
15 x 19	6.3	5.3	10800	25400	24	3.24	3.5	3.5	3.5	4.5	5.5	15.1	18.9	110	85	0.005	
16 x 20	6.3	5.3	10000	25400	27	3.42	3.5	3.5	3.5	4.5	5.5	16.1	19.9	105	85	0.006	
17 x 21	6.3	5.3	9600	25400	30	3.51	3.5	3.5	3.5	4.5	5.5	17.1	20.9	105	85	0.006	
18 x 22	6.3	5.3	9150	25400	32	3.61	3.5	3.5	3.5	4.5	5.5	18.1	21.9	100	80	0.007	
19 x 24	6.3	5.3	12500	36000	49	5.22	3.5	3.5	3.5	4.5	5.5	19.2	23.8	140	110	0.007	
20 x 25	6.3	5.3	12000	36000	53	5.33	3.5	3.5	3.5	4.5	5.5	20.2	24.8	135	105	0.009	
22 x 26	6.3	5.3	9000	36000	66	6	6	6	6	6	6	22.2	25.8	135	115	0.007	
24 x 28	6.3	5.3	8400	36000	73	6.13	3.5	3.5	3.5	4.5	5.5	24.2	27.8	130	110	0.008	
25 x 30	6.3	5.3	10000	36000	72	5.77	3.5	3.5	3.5	4.5	5.5	25.2	29.8	115	95	0.009	
28 x 32	6.3	5.3	7500	36000	88	6.33	3.5	3.5	3.5	4.5	5.5	28.2	31.8	115	100	0.01	
30 x 35	6.3	5.3	8600	36000	91	6.08	3.5	3.5	3.5	4.5	5.5	30.2	34.8	100	85	0.011	
32 x 36	6.3	5.3	7900	45000	131	8.24	3.5	3.5	3.5	4.5	5.5	32.2	35.8	130	115	0.011	
35 x 40	7	6	10000	54000	171	9.77	3.5	3.5	3.5	4.5	5.5	35.2	39.8	125	110	0.016	
38 x 42	7	6	11000	54000	169	9.39	3.5	3.5	3.5	4.5	5.5	36.2	41.8	115	100	0.019	
40 x 45	8	6.6	13900	66000	181	9.55	3.5	3.5	3.5	4.5	5.5	38.2	43.8	110	95	0.021	
42 x 48	8	6.6	15550	66000	231	11.57	3.5	3.5	3.5	4.5	5.5	40.2	44.8	115	105	0.021	
45 x 52	10	8.6	28300	99000	353	15.71	3.5	3.5	3.5	4.5	5.5	42.2	47.8	110	95	0.026	
48 x 55	10	8.6	24700	132000	572	23.84	3.5	3.5	3.5	4.5	5.5	45.2	51.8	105	95	0.045	
50 x 57	10	8.6	23600	132000	602	24.08	3.5	3.5	3.5	4.5	5.5	46.2	52.8	150	130	0.045	
55 x 62	10	8.6	21700	132000	670	24.35	3.5	3.5	3.5	4.5	5.5	48.2	54.8	150	130	0.045	
56 x 64	12	10.4	29500	157200	790	28.2	3.5	3.5	3.5	4.5	5.5	52.2	58.2	140	125	0.049	
60 x 68	12	10.4	27500	157200	860	28.6	3.5	3.5	3.5	4.5	5.5	56.2	63.8	130	115	0.07	
63 x 71	12	10.4	26500	157200	910	28.8	3.5	3.5	3.5	4.5	5.5	60.2	67.8	125	110	0.08	
65 x 73	12	10.4	25500	157200	950	29.2	3.5	3.5	3.5	4.5	5.5	63.2	70.8	120	105	0.08	
70 x 79	14	12.2	31000	209600	1380	39.4	3.5	3.5	3.5	4.5	5.5	70.3	78.7	125	110	0.09	
72 x 81	14	12.2	31000	209600	1400	39.4	3.5	3.5	3.5	4.5	5.5	71.3	79.7	120	110	0.11	
75 x 84	14	12.2	34700	209600	1450	38.6	3.5	3.5	3.5	4.5	5.5	75.3	83.7	115	100	0.12	
80 x 91	17	15	48500	290000	2200	55	4	6	6.5	8	6	80.3	90.7	125	105	0.21	
85 x 96	17	15	45500	305000	2400	56.4	4	6	6.5	8	6	85.3	95.7	120	105	0.22	
90 x 101	17	15	43600	320000	2730	80.5	4	6	6.5	8	6	90.3	100.7	120	105	0.22	
95 x 106	17	15	41300	330000	3050	84.2	4	6	6.5	8	6	95.3	105.7	120	110	0.23	
100 x 114	21	18.7	61000	445000	4200	84	5	6	7	9	10	100.3	113.7	120	105	0.39	
110 x 124	21	18.7	66000	485000	5150	93.6	5	6	7	9	10	110.3	123.7	120	105	0.42	
120 x 134	21	18.7	60300	510000	6050	100.8	5	6	7	9	10	120.2	133.7	120	105	0.46	
130 x 148	28	25.3	96300	765000	9600	147.6	5	7	9	11	13	130.4	147.6	120	105	0.86	
140 x 158	28	25.3	89000	800500	11000	158.5	6	7	9	11	14	140.4	157.6	120	105	0.96	
150 x 168	28	25.3	85000	860000	12900	172	6	7	9	11	15	150.4	167.6	120	105	1	
160 x 178	30	30	117400	1160000	14600	182.5	6	7	9	11	16	160.4	177.6	120	110	1	
170 x 191	33	30	114300	1160000	19500	229	7	9	10	12	17	170.5	190.5	120	105	1.54	
180 x 201	33	30	111300	1200000	21300	236	7	9	10	12	18	180.5	200.5	120	105	1.5	
190 x 211	33	30	105000	1260000	24200	255	7	9	10	12	19	190.5	210.5	120	110	1.8	
200 x 224	38	34.8	134200	1550000	31000	310	7	8	11	13	20	200.6	223.4	120	105	2.4	
210 x 234	38	34.8	127200	1610000	35000	333	7	9	11	13	21	210.6	233.4	120	110	2.5	
220 x 244	38	34.8	122100	1690000	38000	345	7	10	11	13	22	220.6	243.4	120	110	2.6	
230 x 257	43	39.5	164500	2000000	47000	408	7	10	12	14	23	230.6	256.4	120	105	3.4	
240 x 267	43	39.5	157400	2250000	51000	425	7	10	12	14	24	240.6	266.4	120	110	3.8	
250 x 280	48	44	190000	2060000	52000	415	7	10	13	16	25	250.6	279.2	100	89	4.8	
260 x 290	48	44	182000	2132000	56500	435	7	10	13	16	26	260.8	289.2	100	89	4.9	
270 x 300	48	44	177000	2207000	61000	450	7	10	13	16	27	270.8	299.2	100	89	5	
280 x 313	53	49	206000	2536000	77500	520	7	11	14	17	28	280.8	312.2	100	89	6.4	
290 x 323	53	49	222000	2632000	83000	555	7	11	14	17	29	290.8	322.2	100	89	6.8	
300 x 333	53	49	214000	2704000	83000	555	7	11	14	17	30						