

## Characteristics

Precision Locking Assembly for the transmission of maximum torques and axial forces with special requirements for the concentricity of the parts being clamped, as well as for applications subjected to bending moments.

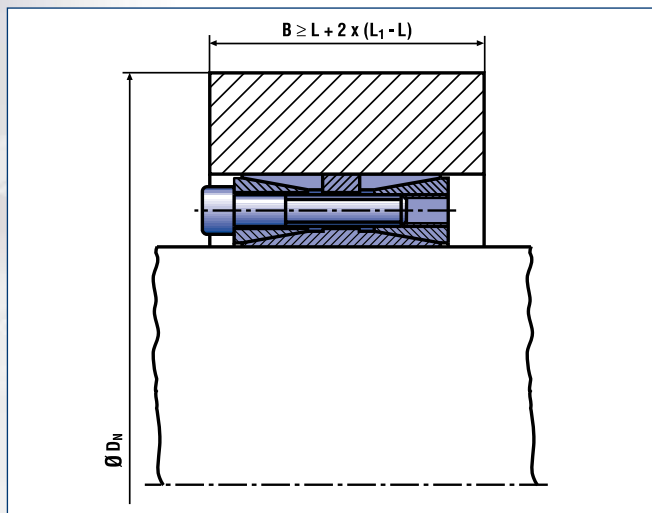
**Large transmission of peripheral forces** – Due to the long, flat tapers it is possible to transmit maximum torques and axial forces with one RfN 7015.0 Locking Assembly.

**⚠ Bending moment and radial loads** – Combined loads can be transmitted (Please contact our specialists for assistance). During installation, the Locking Assembly, shaft and hub remain positioned relative to one another. Compared to 3-part versions, an additional safety is provided. Shaft and hub are only compression-loaded.

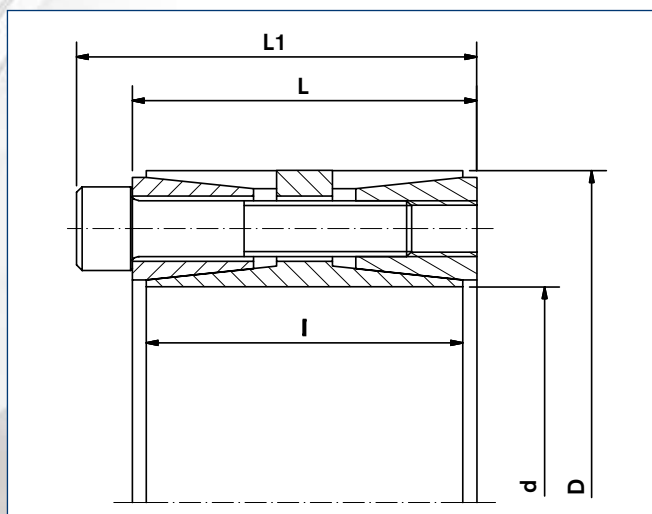
**Excellent centering ability** – With a relatively wide design (giving increased guiding lengths) and the precentering web, the RfN 7015.0 Locking Assembly has excellent centering ability.

## Example applications:

**Belt drums, crusher rotors, precision drives**



Locking Assembly RfN 7015.0 · Typical installation



Locking Assembly RfN 7015 · Dimensions



Drive unit for high-speed elevator

Locking Assembly dimensions								Transmissible torques or axial forces		Surface Pressure		Locking screws DIN EN ISO 4762-12.9			Weight	min. D <sub>N</sub> *			
d x D	d	C <sub>1</sub>	D	C <sub>2</sub>	L	I	L <sub>1</sub>	T	F <sub>ax</sub>	Shaft P <sub>w</sub>	Hub P <sub>N</sub>	n	Thread d <sub>G</sub>	T <sub>A</sub>	WT	Rp0,2[psi] 36000 45000 62000			T <sub>max</sub>
mm	Inch							lb-ft	lbs	psi			mm	lb-ft	lbs	Inch			lb-ft
100 x 145	3.937		5.709	-0	2.559	2.362	3.031	10622	65198	27559	18856	10	M 12 x 55	107	9.0	8.922	8.091	7.318	12540
110 x 155	4.331	+0 -0.0021	6.102	+0.0021	2.559	2.362	3.031	11692	65198	26108	17405	10	M 12 x 55	107	9.7	9.176	8.403	7.668	13868
120 x 165	4.724		6.496		2.559	2.362	3.031	15306	78687	27559	20306	12	M 12 x 55	107	11	10.564	9.480	8.495	18146
130 x 180	5.118		7.087		2.913	2.677	3.386	20728	96673	27559	20306	15	M 12 x 60	107	14	11.525	10.343	9.268	24342
140 x 190	5.512		7.480		2.913	2.677	3.386	26776	116906	30459	23207	18	M 12 x 60	107	15	13.233	11.599	10.187	31718
150 x 200	5.906		7.874		2.913	2.677	3.386	28768	116906	29009	21757	18	M 12 x 60	107	16	13.344	11.841	10.507	34005
160 x 210	6.299	-0.0025	8.268	+0.0025	2.913	2.677	3.386	35775	134892	31910	24658	21	M 12 x 60	107	17	15.300	13.231	11.496	42340
170 x 225	6.693		8.858		3.189	2.953	3.740	44701	159622	31910	23207	18	M 14 x 65	170	22	15.671	13.736	12.064	53183
180 x 235	7.087		9.252		3.189	2.953	3.740	47282	159622	29009	23207	18	M 14 x 65	170	23	16.368	14.347	12.601	56282
190 x 250	7.480		9.843		3.701	3.465	4.252	55470	177608	26108	20306	20	M 14 x 75	170	32	16.007	14.365	12.872	66018
200 x 260	7.874	+0	10.236	-0	3.701	3.465	4.252	70075	213579	29009	23207	24	M 14 x 75	170	33	18.109	15.873	13.941	83427
220 x 285	8.661	-0.0028	11.220	+0.0028	4.094	3.858	4.724	80402	222572	26108	20306	18	M 16 x 90	262	44	18.246	16.375	14.672	93090
240 x 305	9.449		12.008		4.094	3.858	4.724	116546	296763	31910	26108	24	M 16 x 90	262	47	23.297	19.849	17.050	135430
260 x 325	10.236		12.795		4.094	3.858	4.724	131299	308004	31910	24658	25	M 16 x 90	262	51	23.677	20.476	17.790	152764
280 x 355	11.024	+0 -0.0032	13.976	-0 +0.0032	4.961	4.724	5.669	164124	357464	27559	21757	24	M 18 x 110	358	78	23.685	21.018	18.649	193187
300 x 375	11.811		14.764		4.961	4.724	5.669	182933	370953	26108	21757	25	M 18 x 110	358	82	25.021	22.203	19.701	215611
320 x 405	12.598		15.945		5.591	5.315	6.378	253746	481115	27559	21757	25	M 20 x 120	509	113	27.022	23.979	21.277	292325
340 x 425	13.386		16.732		5.591	5.315	6.378	269237	481115	26108	20306	25	M 20 x 120	509	119	27.210	24.419	21.880	310618
360 x 455	14.173	+0 -0.0035	17.913	-0 +0.0035	6.496	6.220	7.362	354065	600270	26108	20306	25	M 22 x 130	686	166	29.131	26.143	23.425	406216
380 x 475	14.961		18.701		6.496	6.220	7.362	374719	600270	24658	18856	25	M 22 x 130	686	174	29.227	26.503	23.971	428787
400 x 495	15.748		19.488		6.496	6.220	7.362	394635	600270	23207	20306	25	M 22 x 130	686	183	31.692	28.441	25.485	451359
420 x 515	16.535		20.276		6.496	6.220	7.362	496797	719424	26108	21757	30	M 22 x 130	686	191	34.362	30.492	27.056	568717
440 x 545	17.323		21.457		7.087	6.772	8.031	601172	831835	26108	20306	30	M 24 x 150	885	243	34.894	31.315	28.059	700458
460 x 565	18.110	+0 -0.0038	22.244	-0 +0.0038	7.087	6.772	8.031	628465	831835	24658	20306	30	M 24 x 150	885	251	36.174	32.463	29.089	732324
480 x 585	18.898		23.031		7.087	6.772	8.031	699278	888040	26108	20306	32	M 24 x 150	885	262	37.454	33.612	30.118	815087
500 x 605	19.685		23.819		7.087	6.772	8.031	728783	888040	24658	20306	32	M 24 x 150	885	271	38.735	34.762	31.148	822537
520 x 630	20.472		24.803		7.874	7.480	8.937	829102	971223	23207	18856	30	M 27 x 160	1180	326	38.763	35.151	31.793	993225
540 x 650	21.26		25.591		7.874	7.480	8.937	860820	971223	21757	18856	30	M 27 x 160	1180	340	39.995	36.268	32.803	1031435
560 x 670	22.047	+0 -0.0041	26.378	-0 +0.0041	7.874	7.480	8.937	892538	971223	21757	17405	30	M 27 x 160	1180	353	39.668	36.323	33.149	1069644
580 x 690	22.835		27.165		7.874	7.480	8.937	924257	971223	20306	17405	30	M 27 x 160	1180	364	40.852	37.406	34.138	1107854
600 x 710	23.622		27.953		7.874	7.480	8.937	1017936	1036421	21757	17405	32	M 27 x 160	1180	375	42.037	38.492	35.128	1222482

\* B ≥ L+2x (L1-L) necessary

More sizes on request

#### ■ Mounting of Locking Assembly

The values for T, F<sub>ax</sub>, P<sub>w</sub> and P<sub>N</sub> apply to Locking Assemblies installed in oiled condition.

#### ■ Surface finishes

For shafts and hub bores

**R<sub>a</sub> ≤ 125 RMS**

#### ■ Tolerances

We recommend the following mounting tolerances

**shaft: h8 · : H8 - see table above**

#### ■ Location of several Locking Assemblies RfN 7015.0

Two RfN 7015 Locking Assemblies can be used in series, the transmissible torques and axial forces are added.

#### ■ Change of screw tightening torques

A reduction of the contact pressures and the transmission values by reducing the tightening torque of the screws is possible. The admissible lower limit is a 20% reduction of tightening torque. There is an approximate linear relationship between T, T<sub>A</sub>, F<sub>ax</sub>, P<sub>w</sub> and p<sub>N</sub>.

## Explanations to tables

$d, D, L, l, L_1$  = Basic dimensions, Locking Assemblies not tightened

$T$  = transmissible torque

$F_{ax}$  = transmissible axial force

$p_W$  = surface pressure between Locking Assembly and shaft

$p_N$  = surface pressure between Locking Assembly and hub

$n$  = fastener quantity

$d_G$  = clamping thread

$d_D$  = metric pullout thread dia.

$T_A$  = maximum tightening torque for the screws considered in order to determine the values  $T, F_{ax}, p_W$  and  $p_N$

$D_N$  = minimum required outside hub diameter

$R_{p0,2}$  = minimum required yield point of hub material

$T_{max}$  = maximum theoretical transmissible torque

$B$  = minimum hub width (calculation formula at [www.ringfeder.com](http://www.ringfeder.com))

$C_1$  = Shaft Tolerances

$C_2$  = Bore Tolerances

$s$  = metric hex key size (across flats)



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