

## Characteristics

Locking Assembly for transmission of torques, axial forces and high bending moments at reduced contact pressures, with special requirements for concentricity of connected components

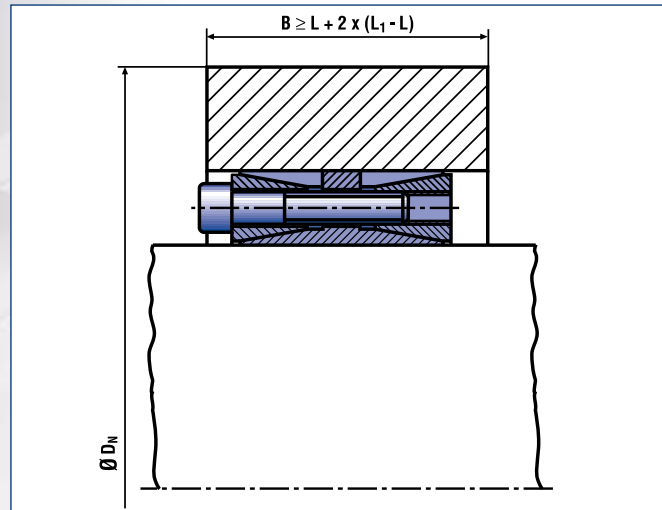
**Low surface pressures** – The RfN 7015.1 Locking Assembly can transmit torques and axial forces and bending loads with significantly lower surface pressures.

**⚠ Bending moment and radial loads** – Combined loads can be transmitted, please contact our specialists for assistance.

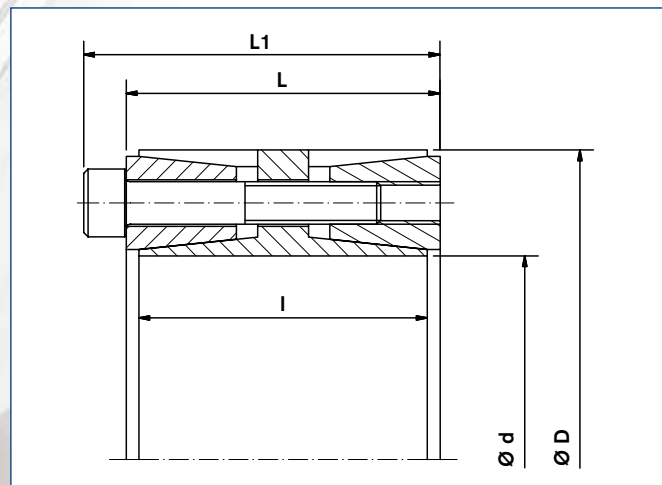
**Excellent centering ability** – With a relatively wide design (giving increased guiding lengths) and the precentering web, the RfN 7015.1 Locking Assembly has excellent centering ability.

## Example applications:

Conveyor pulleys, gears



Locking Assembly RfN 7015.1 · Typical installation



Locking Assembly RfN 7015.1 · Dimensions



Jaw crusher

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	2.953	4942	29227	13054	8703	9	M10 x 55	61	9.0	6.944	6.673	6.390	5680
110 x 155	4.331	+0 -0.0021	6.102	+0.0021	2.559	2.362	2.953	6049	33723	13054	8703	10	M10 x 55	61	9.7	7.422	7.132	6.830	6934
120 x 165	4.724		6.496		2.559	2.362	2.953	7893	40468	14504	10153	12	M10 x 55	61	11	8.172	7.797	7.411	9073
130 x 180	5.118		7.087		2.913	2.677	3.307	10696	49460	13054	10153	15	M10 x 60	61	14	8.916	8.506	8.085	12319
140 x 190	5.512		7.480		2.913	2.677	3.307	11544	49460	13054	8703	15	M10 x 60	61	15	9.098	8.743	8.373	13277
150 x 200	5.906		7.874	-0	2.913	2.677	3.307	13277	53957	13054	8703	16	M10 x 60	61	16	9.578	9.203	8.814	15195
160 x 210	6.299	+0 -0.0025	8.268	+0.0025	2.913	2.677	3.307	16228	62950	13054	10153	18	M10 x 60	61	17	10.402	9.923	9.432	18220
170 x 225	6.693		8.858		3.189	2.953	3.661	20432	74191	13054	10153	15	M12 x 65	107	22	11.144	10.631	10.106	24194
180 x 235	7.087		9.252		3.189	2.953	3.661	23014	78687	13054	10153	16	M12 x 65	107	23	11.640	11.104	10.555	27292
190 x 250	7.480		9.843		3.701	3.465	4.173	27366	87680	11604	8703	18	M12 x 75	107	32	11.973	11.504	11.018	32456
200 x 260	7.874	+0	10.236	-0	3.701	3.465	4.173	32013	96673	13054	10153	20	M12 x 75	107	33	12.878	12.285	11.678	37914
220 x 285	8.661	-0.0028	11.220	+0.0028	4.094	3.858	4.567	40570	112410	11604	8703	21	M12 x 80	107	44	13.648	13.114	12.559	43816
240 x 305	9.449		12.008		4.094	3.858	4.567	51634	130396	13054	10153	24	M12 x 80	107	47	15.107	14.412	13.699	54659
260 x 325	10.236		12.795		4.094	3.858	4.567	66387	155126	13054	10153	27	M12 x 80	107	51	16.097	15.357	14.597	66608
280 x 355	11.024	+0 -0.0032	13.976	-0 +0.0032	4.961	4.724	5.512	88516	186601	13054	10153	28	M14 x 100	170	78	17.583	16.774	15.944	102605
300 x 375	11.811		14.764		4.961	4.724	5.512	92204	186601	13054	10153	28	M14 x 100	170	82	18.574	17.720	16.843	109981
320 x 405	12.598		15.945		5.591	5.315	6.220	137053	260791	14504	11604	28	M16 x 110	262	113	20.759	19.657	18.541	158592
340 x 425	13.386		16.732		5.591	5.315	6.220	147527	260791	13054	10153	28	M16 x 110	262	119	21.050	20.082	19.089	168550
360 x 455	14.173	+0 -0.0035	17.913	-0 +0.0035	6.496	6.220	7.205	158739	269784	10153	8703	24	M18 x 140	358	166	21.789	20.936	20.051	187064
380 x 475	14.961		18.701		6.496	6.220	7.205	188835	303507	11604	8703	27	M18 x 140	358	174	22.747	21.858	20.933	222102
400 x 495	15.748		19.488		6.496	6.220	7.205	236043	359712	13054	10153	32	M18 x 140	358	183	24.517	23.390	22.233	277129
420 x 515	16.535		20.276		6.496	6.220	7.205	258172	359712	13054	10153	32	M18 x 140	358	191	25.509	24.336	23.132	290923
440 x 545	17.323		21.457		7.087	6.772	7.874	289891	402428	11604	10153	27	M20 x 140	509	243	26.994	25.753	24.479	326920
460 x 565	18.110	+0 -0.0038	22.244	-0 +0.0038	7.087	6.772	7.874	303537	402428	11604	8703	27	M20 x 140	509	251	27.057	25.999	24.899	341820
480 x 585	18.898		23.031		7.087	6.772	7.874	343000	433903	11604	10153	30	M20 x 140	509	262	28.975	27.642	26.275	396331
500 x 605	19.685		23.819		7.087	6.772	7.874	357753	433903	11604	10153	30	M20 x 140	509	271	29.966	28.588	27.174	412854
520 x 630	20.472		24.803		7.874	7.480	8.661	396848	465378	10153	8703	32	M20 x 150	509	326	30.169	28.989	27.764	457998
540 x 650	21.260		25.591		7.874	7.480	8.661	413076	465378	10153	8703	32	M20 x 150	509	340	31.128	29.910	28.646	475553
560 x 670	22.047		26.378		7.874	7.480	8.661	480200	521583	11604	10153	36	M20 x 150	509	353	33.185	31.659	30.093	554849
580 x 690	22.835	+0	27.165	-0	7.874	7.480	8.661	498641	521583	10153	8703	36	M20 x 150	509	364	33.042	31.750	30.408	574691
600 x 710	23.622	-0.0041	27.953	+0.0041	7.874	7.480	8.661	516344	521583	10153	8703	36	M20 x 150	509	375	34.001	32.671	31.290	594460
620 x 730	24.409		28.740		7.874	7.480	8.661	531097	521583	10153	8703	36	M20 x 150	509	386	34.958	33.591	32.171	614302
640 x 750	25.197		29.528		7.874	7.480	8.661	549538	521583	10153	8703	36	M20 x 150	509	397	35.917	34.512	33.053	634145

\* 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

$$R_a \leq 125 \text{ RMS}$$

### ■ Tolerances

We recommend the following mounting tolerances

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

### ■ Location of several Locking Assemblies RfN 7015.1

Two RfN 7015.1 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 50% 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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