

Characteristics

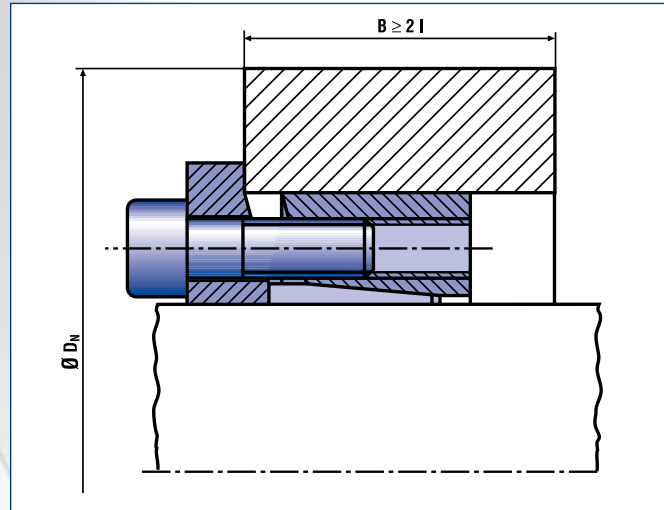
Excellent concentricity and very easy to remove – These Locking Assemblies provide particularly good concentricity between the clamped parts. The flange is reinforced at the critical point, preventing bending or lifting of the inner ring during assembly and thereby ensuring easy removal.

High rotation speed – The dimensional accuracy of the RfN 7013.1-IN Locking Assemblies allows their use in applications with higher rotational speeds.

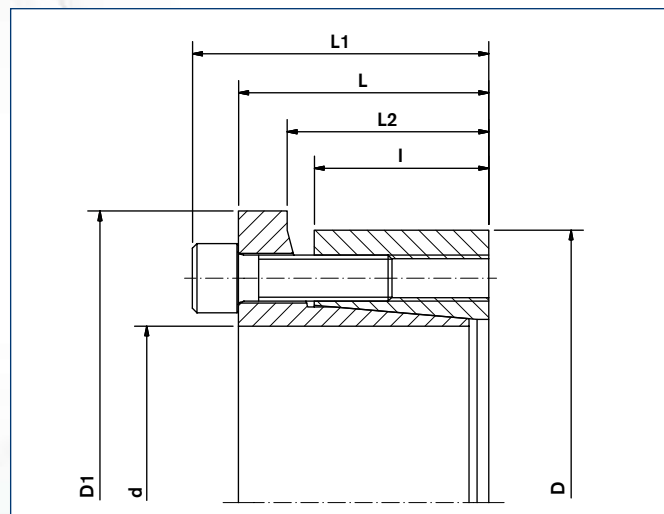
High radial loads – The material strength of the RfN 7013.1-IN-Locking Assemblies makes them especially suitable for applications with high radial loads.

Axial hub positioning – The increased outer diameter of the flange prevents the axial movement of the hub during assembly, and improves the run-out ability of the Locking Assembly.

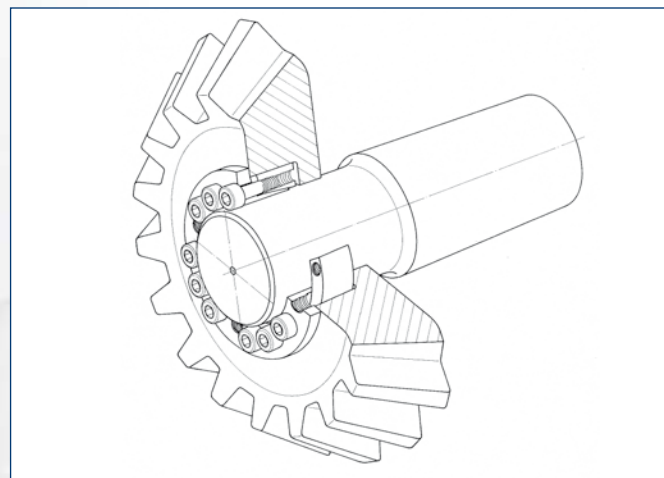
High torque – The increased number of clamping screws ensures the same transmission values as the RfN 7013.1-IN.



Locking Assembly RfN 7013.1-IN · Typical Installation



Locking Assembly RfN 7013.1-IN · Dimensions



Locking Assembly RfN 7013.1-IN · Bevel gear

Size	Locking Assembly dimensions									Transmissible torques or axial forces		Surface Pressure		Locking screws DIN EN ISO 4762-12.9				Weight	min. D _N *			
	d	C ₁	D	C ₂	L	I	L ₁	L ₂	D ₁	T	F _{ax}	P _W	P _N	n	d _G	s	T _A		W _T	Rp0,2[psi]		
	Inch				Inch					lb-ft	lbs	psi			mm		lb-ft	lbs	36000	45000	62000	
1	1.000	+0	1.969	-0	1.220	0.854	1.457	1.012	2.205	323	7752	40170	15070	7	M6x20	5	13	0.7	2.875	2.591	2.398	
1 3/16	1.1875	-0.0013	2.165		1.220	0.854	1.457	1.012	2.441	385	7781	33800	13650	7	M6x20	5	13	0.8	3.000	2.773	2.587	
1 1/4	1.250	+0	2.362		1.220	0.854	1.457	1.012	2.677	531	10195	38560	15070	9	M6x20	5	13	0.9	3.375	3.108	2.876	
1 3/8	1.375		2.362		1.220	0.854	1.457	1.012	2.677	585	10211	35055	15070	9	M6x20	5	13	0.9	3.375	3.108	2.876	
1 7/16	1.4375		2.559		1.220	0.854	1.457	1.012	2.874	620	10351	33495	13935	10	M6x20	5	13	1.0	3.625	3.296	3.069	
1 1/2	1.500		2.559		1.220	0.854	1.457	1.012	2.874	647	10352	32100	13935	10	M6x20	5	13	1.0	3.625	3.296	3.069	
1 5/8	1.625		-0.0016		2.953	1.496	0.996	1.811	1.193	3.268	1234	18225	43870	19055	9	M8x25	6	30	1.7	4.750	4.202	3.796
1 3/4	1.750		2.953		1.496	0.996	1.811	1.193	3.268	1329	18226	40740	19055	9	M8x25	6	30	1.7	4.750	4.202	3.796	
1 7/8	1.875		3.150		1.496	0.996	1.811	1.193	3.465	1426	18253	38070	17915	9	M8x25	6	30	1.8	4.875	4.381	3.986	
1 15/16	1.9375		3.150		1.496	0.996	1.811	1.193	3.465	1473	18246	36840	17915	9	M8x25	6	30	1.8	4.875	4.381	3.986	
2	2.000		3.150	1.496	0.996	1.811	1.193	3.465	1521	18252	35690	17915	9	M8x25	6	30	1.8	4.875	4.381	3.986		
2 1/8	2.125		3.346	1.496	0.996	1.811	1.193	3.740	1803	20363	39125	19625	10	M8x25	6	30	1.8	5.500	4.816	4.335		
2 3/16	2.1875	3.346	1.496	0.996	1.811	1.193	3.740	1856	20363	38005	19625	10	M8x25	6	30	1.8	5.500	4.816	4.335			
2 1/4	2.250	3.543	1.496	0.996	1.811	1.193	3.937	1908	20352	36875	18485	10	M8x25	6	30	1.9	5.500	4.984	4.518			
2 3/8	2.375	3.543	1.496	0.996	1.811	1.193	3.937	2014	20352	34935	18485	10	M8x25	6	30	1.9	5.500	4.984	4.518			
2 7/16	2.4375	3.740	1.496	0.996	1.811	1.193	4.134	2466	24281	38965	20050	12	M8x25	6	30	2.1	6.125	5.430	4.873			
2 1/2	2.500	-0.0018	3.740	1.496	0.996	1.811	1.193	4.134	2530	24288	37990	20050	12	M8x25	6	30	2.1	6.125	5.430	4.873		
2 9/16	2.5625	3.740	1.496	0.996	1.811	1.193	4.134	2593	24286	37065	20050	12	M8x25	6	30	2.1	6.125	5.430	4.873			
2 3/4	2.750	4.331	1.969	1.315	2.362	1.591	4.724	3680	32116	34770	18200	10	M10x35	8	61	4.6	6.750	6.058	5.502			
2 7/8	2.875	4.528	1.969	1.315	2.362	1.591	4.921	3845	32097	33300	16920	10	M10x35	8	61	4.9	6.875	6.176	5.653			
2 15/16	2.9375	4.528	1.969	1.315	2.362	1.591	4.921	3929	32101	32590	16920	10	M10x35	8	61	4.9	6.875	6.176	5.653			
3	3.000	4.528	1.969	1.315	2.362	1.591	4.921	4012	32096	31910	16920	10	M10x35	8	61	4.9	6.875	6.176	5.653			
3 3/8	3.375	4.921	1.969	1.315	2.362	1.591	5.315	5434	38642	32430	18345	12	M10x35	8	61	5.3	7.625	6.903	6.264			
3 7/16	3.4375	5.118	1.969	1.315	2.362	1.591	5.512	5543	38700	31810	17630	12	M10x35	8	61	5.7	7.875	7.079	6.451			
3 1/2	3.500	+0	5.118	-0	1.969	1.315	2.362	1.591	5.512	5644	38702	31240	17630	12	M10x35	8	61	5.7	7.875	7.079	6.451	
3 3/4	3.750	-0.0022	5.315		1.969	1.315	2.362	1.591	5.709	7180	45952	36450	21190	15	M10x35	8	61	6.0	9.000	7.899	7.036	
3 15/16	3.9375	5.709	2.283		1.606	2.677	1.882	6.102	7957	48500	27300	16210	15	M10x35	8	61	8.2	8.500	7.680	7.059		
4	4.000	5.709	2.283		1.606	2.677	1.882	6.102	8083	48498	26870	16210	15	M10x35	8	61	8.2	8.500	7.680	7.059		

* B ≥ 2 l necessary

More sizes on request

■ Mounting of Locking Assembly

The values for T, F_{ax}, p_W and p_N apply to Locking Assemblies installed in oiled condition.

■ Surface finishes

For shafts and hub bores

R_a = 63 RMS

■ Tolerances

We recommend the following mounting tolerances

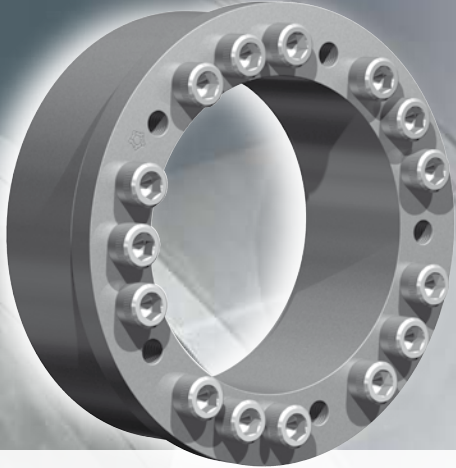
shaft: h8 · hub: H8 - see table above

■ Location of several Locking Assemblies RfN 7013.1-IN

Location only possible from 2 sides. If several Locking Assemblies are used to increase the transmission values the clamping systematization has to be considered.

■ Change of screw tightening torques

A change of the T_A values given in the above table is inadmissible.



Characteristics

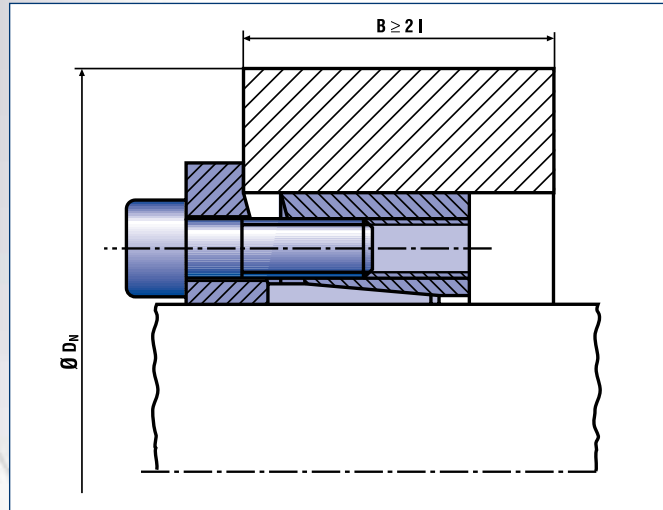
Excellent concentricity and very easy to remove – These Locking Assemblies provide particularly good concentricity between the clamped parts. The flange is reinforced at the critical point, preventing bending or lifting of the inner ring during assembly and thereby ensuring easy removal.

High rotation speed – The dimensional accuracy of the RfN 7013 Locking Assemblies allows their use in applications with higher rotational speeds.

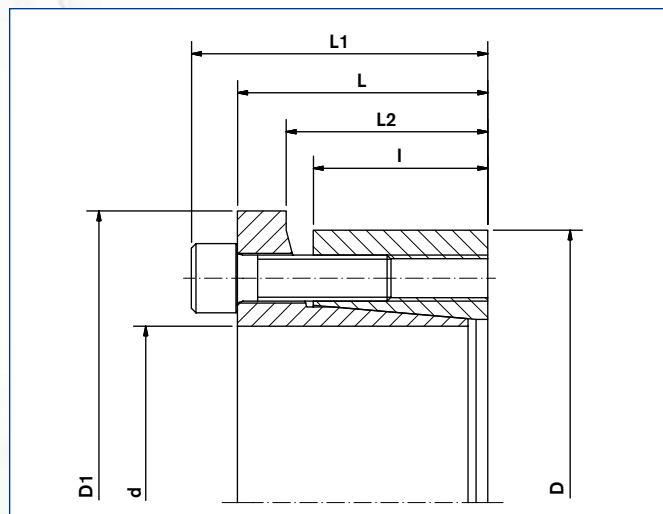
High radial loads – The material strength of the RfN 7013 Locking Assemblies makes them especially suitable for applications with high radial loads.

Axial hub positioning – The increased outer diameter of the flange prevents the axial movement of the hub during assembly, and improves the run-out ability of the Locking Assembly.

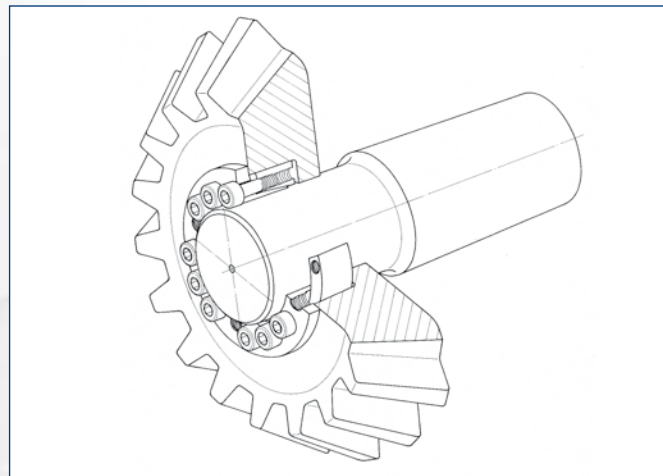
High torque – The increased number of clamping screws ensures the same transmission values as the RfN 7013.0.



Locking Assembly RfN 7013.1 · Typical Installation



Locking Assembly RfN 7013.1 · Dimensions



Locking Assembly RfN 7013.1 · Bevel gear

Size	Locking Assembly dimensions								D ₁	Transmissible torques or axial forces		Surface Pressure		Locking screws DIN EN ISO 4762-12.9			Weight W _T	min. D _N *			
	d	C ₁	D	C ₂	L	I	L ₁	L ₂		T	F _{ax}	P _W	P _N	n	d _G	T _A		R _{p0,2} [psi]			
	Inch	Inch								lb-ft	lbs	psi			mm	lb-ft		lbs	36000	45000	62000
19 x 47	0.748		1.850		1.220	0.854	1.457	1.012	2.087	210	6745	43513	13054	6	M 6 x 20	13	0.6	2.494	2.343	2.193	229
20 x 47	0.787		1.850	-0	1.220	0.854	1.457	1.012	2.087	221	6745	42063	13054	6	M 6 x 20	13	0.6	2.494	2.343	2.193	243
22 x 47	0.866		1.850	+0.0016	1.220	0.854	1.457	1.012	2.087	243	6745	37712	13054	6	M 6 x 20	13	0.6	2.494	2.343	2.193	266
24 x 50	0.945	+0	1.969		1.220	0.854	1.457	1.012	2.205	310	8993	43513	15955	7	M 6 x 20	13	0.7	2.852	2.636	2.426	339
25 x 50	0.984	-0.0013	1.969		1.220	0.854	1.457	1.012	2.205	325	8993	42063	15955	7	M 6 x 20	13	0.7	2.852	2.636	2.426	354
28 x 55	1.102		2.165		1.220	0.854	1.457	1.012	2.441	361	8993	37712	14504	7	M 6 x 20	13	0.8	3.024	2.819	2.616	391
30 x 55	1.181		2.165		1.220	0.854	1.457	1.012	2.441	391	8993	34811	14504	7	M 6 x 20	13	0.7	3.024	2.819	2.616	428
32 x 60	1.260		2.362		1.220	0.854	1.457	1.012	2.677	546	11241	39162	15955	9	M 6 x 20	13	0.9	3.422	3.162	2.911	597
35 x 60	1.378		2.362		1.220	0.854	1.457	1.012	2.677	597	11241	36261	15955	9	M 6 x 20	13	0.8	3.422	3.162	2.911	656
38 x 65	1.496		2.559	-0	1.220	0.854	1.457	1.012	2.874	656	11241	33360	14504	10	M 6 x 20	13	1.0	3.575	3.331	3.093	716
40 x 65	1.575	+0	2.559	+0.0018	1.220	0.854	1.457	1.012	2.874	693	11241	31910	14504	10	M 6 x 20	13	0.9	3.575	3.331	3.093	760
42 x 75	1.654	-0.0016	2.953		1.496	0.996	1.811	1.193	3.268	1276	17986	43513	18856	9	M 8 x 25	30	1.7	4.615	4.185	3.785	1402
45 x 75	1.772		2.953		1.496	0.996	1.811	1.193	3.268	1372	17986	40613	18856	9	M 8 x 25	30	1.5	4.615	4.185	3.785	1505
48 x 80	1.890		3.150		1.496	0.996	1.811	1.193	3.465	1461	17986	39162	18856	9	M 8 x 25	30	1.8	4.923	4.464	4.038	1601
50 x 80	1.969		3.150		1.496	0.996	1.811	1.193	3.465	1527	17986	37712	18856	9	M 8 x 25	30	1.7	4.923	4.464	4.038	1674
55 x 85	2.165		3.346		1.496	0.996	1.811	1.193	3.740	1874	20234	39162	20306	10	M 8 x 25	30	1.8	5.441	4.883	4.376	2058
60 x 90	2.362		3.543		1.496	0.996	1.811	1.193	3.937	2043	20234	36261	18856	10	M 8 x 25	30	1.9	5.537	5.021	4.541	2242
65 x 95	2.559	+0	3.740	-0	1.496	0.996	1.811	1.193	4.134	2641	24730	37712	20306	12	M 8 x 25	30	2.1	6.082	5.458	4.891	2899
70 x 110	2.756	-0.0018	4.331	+0.0022	1.969	1.315	2.362	1.591	4.724	3762	31475	34811	18856	10	M 10 x 35	61	4.6	6.769	6.138	5.552	4138
75 x 115	2.953		4.528		1.969	1.315	2.362	1.591	4.921	4027	31475	33360	17405	10	M 10 x 35	61	4.9	6.809	6.235	5.690	4426
80 x 120	3.150		4.724		1.969	1.315	2.362	1.591	5.118	4315	31475	30459	15955	10	M 10 x 35	61	5.1	6.844	6.324	5.821	4743
85 x 125	3.346		4.921		1.969	1.315	2.362	1.591	5.315	5495	40468	33360	18856	12	M 10 x 35	61	5.3	7.691	6.974	6.308	6041
90 x 130	3.543		5.118		1.969	1.315	2.362	1.591	5.512	5827	40468	31910	17405	12	M 10 x 35	61	5.7	7.697	7.047	6.432	6410
95 x 135	3.740	+0	5.315	-0	1.969	1.315	2.362	1.591	5.709	7303	47212	37712	21757	15	M 10 x 35	61	6.0	9.008	7.993	7.092	8033
100 x 145	3.937	-0.0022	5.709	+0.0025	2.283	1.606	2.677	1.882	6.102	8114	49460	27559	15955	15	M 10 x 35	61	8.2	8.270	7.642	7.035	8925
110 x 155	4.331		6.102		2.283	1.606	2.677	1.882	6.496	8925	49460	26108	15955	15	M 10 x 35	61	8.8	8.840	8.168	7.519	9818
120 x 165	4.724		6.496		2.283	1.606	2.677	1.882	6.890	11581	58453	27559	17405	18	M 10 x 35	61	9.5	9.769	8.945	8.163	12739
130 x 180	5.118		7.087		2.559	1.787	3.031	2.063	7.480	15269	71942	27559	17405	15	M 12 x 40	107	13	10.658	9.759	8.906	16796
140 x 190	5.512	+0	7.480	-0	2.559	1.787	3.031	2.063	7.874	16597	71942	26108	15955	15	M 12 x 40	107	14	10.836	10.013	9.217	18256
150 x 200	5.906	-0.0025	7.874	+0.0028	2.559	1.787	3.031	2.063	8.268	21023	85432	29009	18856	18	M 12 x 40	107	15	12.306	11.159	10.093	23125

* B ≥ 2 l necessary

More sizes on request

■ Mounting of Locking Assembly

The values for T, F_{ax}, p_W and p_N apply to Locking Assemblies installed in oiled condition.

■ Surface finishes

For shafts and hub bores

$$R_a = 63 \text{ RMS}$$

■ Tolerances

We recommend the following mounting tolerances

shaft: h8 · hub: H8 - see table above

■ Location of several Locking Assemblies RfN 7013.1

Location only possible from 2 sides. If several Locking Assemblies are used to increase the transmission values the clamping systematization has to be considered.

■ Change of screw tightening torques

A change of the T_A values given in the above table is inadmissible.

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)

C_1 = Shaft Tolerances

C_2 = Bore Tolerances

s = metric hex key size (across flats)



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