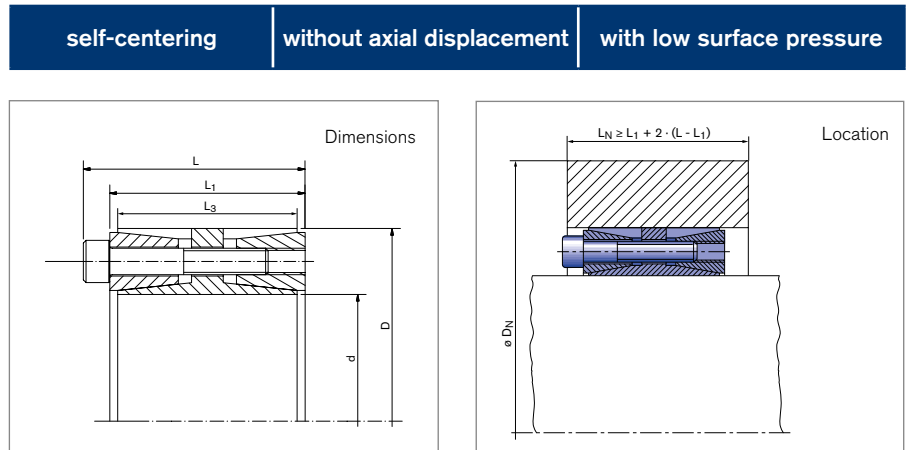


Locking Assemblies for Bending Loads

RINGFEDER® RfN 7015.1

Reduced surface pressures



Locking Assembly dimensions				Locking screws														D _{N min} at R _{p0,2}			G _w		
d	x	D	L	L ₁	L ₃	n _{Sc}	D _G	T _A	T	F _{ax}	P _W	P _N	M _{bmax}	P _{Wmax} at M _{bmax}	P _{Nmax} at M _{bmax}	P _{Wmin} at M _{bmax}	P _{Nmin} at M _{bmax}	T _{res} at M _{bmax}	F _{ax} at M _{bmax}	250		350	450
mm			mm					Nm	Nm	kN	N/mm ²		Nm	N/mm ²				Nm	kN	[N/mm ²]			kg
100	x	145	75	65	60	9	M10 x 55	83	6575	132	91	63	6540	125	86	57	39	681	14	192	179	172	4,1
110	x	155	75	65	60	10	M10 x 55	83	8037	146	92	65	7900	130	92	55	39	1475	27	210	194	186	4,4
120	x	165	75	65	60	12	M10 x 55	83	10521	175	101	74	10460	147	107	56	41	1128	19	238	215	205	4,8
130	x	180	84	74	68	15	M10 x 60	83	14247	219	101	73	14170	145	105	58	42	1476	23	258	234	223	6,5
140	x	190	84	74	68	15	M10 x 60	83	15343	219	94	69	15260	138	101	50	37	1589	23	269	245	234	7
150	x	200	84	74	68	16	M10 x 60	83	17534	234	94	70	17440	140	105	47	35	1816	24	288	261	248	7,4
160	x	210	84	74	68	18	M10 x 60	83	21041	263	99	75	20930	151	115	46	35	2160	27	317	282	267	7,8
170	x	225	93	81	75	15	M12 x 65	145	27352	322	105	80	27210	159	120	52	39	2788	33	348	307	289	10
180	x	235	93	81	75	16	M12 x 65	145	30892	343	106	81	30730	164	125	49	37	3161	35	374	326	306	10,6
190	x	250	106	94	88	18	M12 x 75	145	36684	386	96	73	36500	144	109	48	37	3674	39	371	333	315	14,3
200	x	260	106	94	88	20	M12 x 75	145	42906	429	101	78	42690	154	119	48	37	4298	43	406	357	336	15
220	x	285	116	104	98	21	M12 x 80	145	49556	451	89	69	49300	135	104	43	33	5033	46	416	375	356	19,8
240	x	305	116	104	98	24	M12 x 80	145	61784	515	93	73	61470	145	114	41	32	6225	52	470	415	391	21,4
260	x	325	116	104	98	27	M12 x 80	145	75300	579	97	77	74920	155	124	38	30	7552	58	531	458	428	23
280	x	355	140	126	120	28	M14 x 100	230	115034	822	106	84	114450	164	129	49	39	11574	83	605	513	476	35,2
300	x	375	140	126	120	28	M14 x 100	230	123250	822	99	80	122630	157	125	42	34	12351	82	623	534	498	37,4
320	x	405	158	142	135	28	M16 x 110	355	179962	1125	110	87	179050	171	135	49	39	18093	113	716	597	551	51,3
340	x	425	158	142	135	28	M16 x 110	355	191209	1125	103	83	190250	164	131	42	34	19131	113	733	618	573	54,1
360	x	455	183	165	158	24	M18 x 140	485	209622	1165	84	67	208570	130	103	38	30	20978	117	668	600	570	75,4
380	x	475	183	165	158	27	M18 x 140	485	248927	1310	90	72	247670	141	113	38	30	24980	131	736	648	611	79
400	x	495	183	165	158	32	M18 x 140	485	310552	1553	101	82	308990	162	131	40	32	31104	156	861	723	669	82,8
420	x	515	183	165	158	32	M18 x 140	485	326079	1553	96	78	324440	157	128	35	28	32655	155	879	744	691	86,5
440	x	545	200	180	172	27	M20 x 140	690	372775	1694	91	74	370900	147	119	35	28	37338	170	871	758	711	110
460	x	565	200	180	172	27	M20 x 140	690	389719	1694	87	71	387760	143	117	31	25	39026	170	891	779	732	114
480	x	585	200	180	172	30	M20 x 140	690	451848	1883	93	76	449500	155	127	30	25	46004	192	986	839	781	119
500	x	605	200	180	172	30	M20 x 140	690	470675	1883	89	74	468300	151	125	27	22	47224	189	1006	861	802	123

To continue see next page

Locking Assemblies for Bending Loads RINGFEDER® RfN 7015.1

Locking Assembly dimensions				Locking screws			T	F _{ax}	P _W	P _N	M _{bmax}	P _{Wmax} at M _{bmax}	P _{Nmax} at M _{bmax}	P _{Wmin} at M _{bmax}	P _{Nmin} at M _{bmax}	T _{res} at M _{bmax}	F _{ax} at M _{bmax}	D _{N min} at R _{p0,2}			G _w	
d	x D	L	L ₁	L ₃	n _{Sc}	D _G												T _A	250	350		450
mm				mm			Nm	kN	N/mm ²	Nm	N/mm ²				Nm	kN	mm			kg		
520	x 630	220	200	190	32	M20 x 150	690	522135	2008	80	66	519500	134	110	27	22	52395	202	961	851	804	148
540	x 650	220	200	190	32	M20 x 150	690	542218	2008	77	64	539400	131	109	24	20	55205	204	982	873	826	154
560	x 670	220	200	190	36	M20 x 150	690	632587	2259	84	70	629400	144	120	24	20	63421	227	1084	938	878	160
580	x 690	220	200	190	36	M20 x 150	690	655180	2259	81	68	651890	141	119	21	18	65573	226	1104	960	900	165
600	x 710	220	200	190	36	M20 x 150	690	677772	2259	78	66	674370	138	117	18	16	67823	226	1125	982	922	170
620	x 730	220	200	190	36	M20 x 150	690	700364	2259	76	64	696850	136	115	16	13	70074	226	1146	1004	944	175
640	x 750	220	200	190	36	M20 x 150	690	722957	2259	73	63	705037	132	113	15	13	159967	500	1160	1022	963	180
660	x 770	220	200	190	40	M20 x 150	690	828388	2510	79	68	783300	142	122	16	14	269570	817	1260	1085	1014	194
680	x 790	220	200	190	40	M20 x 150	690	853491	2510	77	66	783300	138	119	15	13	338951	997	1268	1101	1032	199
700	x 810	220	200	190	40	M20 x 150	690	878593	2510	75	64	783300	134	116	15	13	397954	1137	1277	1117	1049	205
720	x 830	220	200	190	40	M20 x 150	690	903696	2510	73	63	783300	131	113	15	13	450675	1252	1287	1133	1067	210
740	x 850	220	200	190	42	M20 x 150	690	975239	2636	74	65	822500	133	116	15	13	524008	1416	1341	1172	1101	216
760	x 870	220	200	190	42	M20 x 150	690	1001596	2636	72	63	822500	130	113	14	13	571567	1504	1351	1188	1119	221
780	x 890	220	200	190	42	M20 x 150	690	1027954	2636	70	62	822500	127	111	14	12	616590	1581	1362	1205	1137	227
800	x 910	220	200	190	42	M20 x 150	690	1054312	2636	69	60	822500	123	108	14	12	659597	1649	1374	1222	1155	232

More sizes on request

Explanations

d = Inner diameter	P_W = Surface pressure on shaft at given T _A	T_{res} at M_{bmax} = Remaining transmissible torque at indicated M _{bmax} and specified torque
D = Outer diameter	P_N = Surface pressure on hub at given T _A	F_{ax} at M_{bmax} = Transmissible axial force at max. bending moment
L = Overall length	M_{bmax} = Max. bending moment under the specified T _A	D_{N min} at R_{p0,2} = Min. hub outer diameter depending of the given hub yield point R _{p0,2} and part of bending moment
L₁ = Overall length (without screws)	P_{Wmax} at M_{bmax} = Max. surface pressure on shaft at max. bending moment	G_w = Weight
L₃ = Width of ring	P_{Nmax} at M_{bmax} = Max. surface pressure on hub at max. bending moment	
n_{Sc} = Quantity of screws	P_{Wmin} at M_{bmax} = Min. surface pressure on shaft at max. bending moment	
D_G = Thread	P_{Nmin} at M_{bmax} = Min. surface pressure on hub at max. bending moment	
T_A = Tightening torque of the clamping screws		
T = Transmissible torque at given T _A		
F_{ax} = Transmissible axial force		

Ordering example

Locking Assembly	d	D
RfN 7015.1	620	730

Technical Information

- Surface finishes: Shaft and hub bores R_a ≤ 3,2 μm
- Tolerances: Shaft: h8 · Hub: H8

Remark: The Values of the shaft- and hub pressures have been calculated with the screw tightening shown in the tables. Reduction of the screw tightening torque results in different calculation values!

The specified pressures at M_{bmax} are sometimes very low. An operation near these limit values may therefore lead to increased fretting corrosion! More options with reduced bending moments (M_b 20% - M_b 80%) are also available.

Further information on
RINGFEDER® RfN 7015.1
 for Bending Loads
 on www.ringfeder.com

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