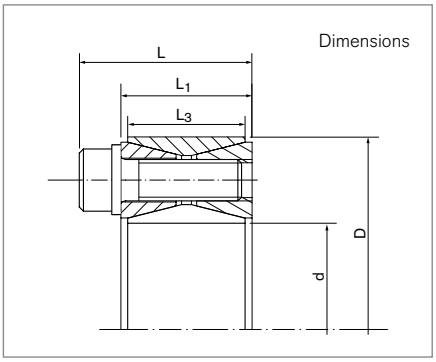
Locking Assemblies for Bending Loads

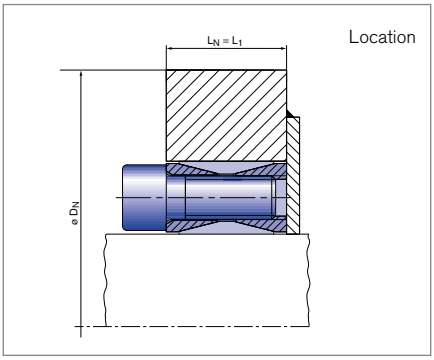
RINGFEDER® RfN 7012

Extreme loads in belt drums



self-centering | **without axial displacement** | with low surface pressure





Locking Assembly dimensions						Locking screws																	
d	x	D	L	L_1	L_3	n_{Sc}	D_G	T_{Ared}	T	F_{ax}	p_W	p_N	$M_b$max	p_{Wmax} at $M_b$max	p_{Nmax} at $M_b$max	p_{Wmin} at $M_b$max	p_{Nmin} at $M_b$max	T_{res} at $M_b$max	F_{ax} at $M_b$max	$D_{N\,min}$ at $R_{p0,2}$ 250 [N/mm²]	350 [N/mm²]	450 [N/mm²]	Gw
mm			mm					Nm	Nm	kN	N/mm²		Nm	N/mm²				Nm	kN	mm			kg
50	x	80	33,5	24	20	12	M8 x 22	35	1777	71	189	118	1750	314	196	64	40	309	12	231	152	129	0,6
55	x	85	33,5	24	20	14	M8 x 22	35	2267	82	199	129	1137	273	176	125	81	1961	71	206	149	130	0,63
60	x	90	33,5	24	20	14	M8 x 22	35	2460	82	181	121	1900	294	196	68	45	1563	52	260	171	145	0,69
65	x	95	33,5	24	20	16	M8 x 22	35	3030	93	190	130	1300	262	179	119	81	2737	84	235	168	146	0,73
70	x	110	39,5	28	24	14	M10 x 25	70	4581	131	207	132	3150	324	206	89	57	3326	95	356	217	181	1,26
75	x	115	39,5	28	24	14	M10 x 25	70	4887	130	192	125	3150	301	197	83	54	3736	100	334	218	185	1,33
80	x	120	39,5	28	24	14	M10 x 25	70	5192	130	179	120	4225	317	211	42	28	3018	75	415	242	201	1,4
85	x	125	39,5	28	24	16	M10 x 25	70	6281	148	192	131	2875	280	191	104	71	5584	131	341	231	197	1,49
90	x	130	39,5	28	24	16	M10 x 25	70	6627	147	182	125	3925	294	204	67	47	5340	119	409	254	213	1,53
95	x	135	39,5	28	24	18	M10 x 25	70	7843	165	192	135	2577	263	185	121	85	7408	156	350	244	210	1,62
100	x	145	47	33	26	14	M12 x 30	125	9591	192	196	135	7210	331	228	60	41	6325	126	---	317	255	2,01
110	x	155	47	33	26	14	M12 x 30	125	10488	191	177	126	7840	311	221	43	30	6966	127	---	326	266	2,15
120	x	165	47	33	26	16	M12 x 30	125	13004	217	184	134	8960	325	236	44	32	9425	157	---	375	296	2,35
130	x	180	52	38	34	20	M12 x 35	125	17522	270	162	117	11310	285	206	38	28	13383	206	---	355	296	3,51
140	x	190	52	38	34	22	M12 x 35	125	20661	295	164	121	10160	268	197	61	45	17991	257	---	360	305	3,85
150	x	200	52	38	34	24	M12 x 35	125	24046	321	167	125	9020	252	189	81	61	22290	297	---	367	314	4,07
160	x	210	52	38	34	26	M12 x 35	125	27674	346	169	129	7870	239	182	99	75	26532	332	---	374	323	4,3
170	x	225	60	44	38	22	M14 x 40	190	32486	382	157	119	21570	291	220	22	17	24292	286	---	473	385	5,78
180	x	235	60	44	38	24	M14 x 40	190	37391	415	161	123	18960	273	209	49	38	32227	358	---	469	390	6,05
190	x	250	68	52	46	28	M14 x 45	190	45890	483	147	111	24070	242	184	51	39	39071	411	---	449	387	8,25
200	x	260	68	52	46	30	M14 x 45	190	51590	516	149	114	21150	228	176	69	53	47056	471	623	453	394	8,65
220	x	285	74	56	50	26	M16 x 50	295	66374	603	146	112	32670	242	187	49	38	57777	525	---	518	444	11,22
240	x	305	74	56	50	30	M16 x 50	295	83094	692	153	120	20330	208	164	98	77	80569	671	669	508	448	12,2
260	x	325	74	56	50	34	M16 x 50	295	101512	781	159	127	16810	201	161	117	94	100111	770	700	536	474	13,2
280	x	355	86,5	66	60	32	M18 x 60	405	124233	887	140	111	38440	204	161	76	60	118136	844	764	585	517	19,2
300	x	375	86,5	66	60	36	M18 x 60	405	149101	994	146	117	24820	185	148	108	86	147020	980	742	590	529	20,5
320	x	405	100,5	78	72	36	M20 x 70	580	207104	1294	149	118	37220	188	148	110	87	203732	1273	803	638	571	29,6

To continue see next page

Locking Assemblies for Bending Loads RINGFEDER® RfN 7012

Locking Assembly dimensions						Locking screws																		
d	x	D	L	L_1	L_3	n_{Sc}	D_G	T_{Ared}	T	F_{ax}	p_W	p_N	$M_b$max	p_{Wmax} at $M_b$max	p_{Nmax} at $M_b$max	p_{Wmin} at $M_b$max	p_{Nmin} at $M_b$max	T_{res} at $M_b$max	F_{ax} at $M_b$max	$D_{N\,min}$ at $R_{p0,2}$ 250 [N/mm²]	350 [N/mm²]	450 [N/mm²]	Gw
mm			mm					Nm	Nm	kN	N/mm²		Nm	N/mm²				Nm	kN	mm			kg
340	x	425	100,5	78	72	36	M20 x 70	580	219216	1290	140	112	57920	196	157	83	66	211426	1244	891	690	613	31,1
360	x	455	116	90	84	36	M22 x 80	780	282418	1569	138	109	74630	189	150	86	68	272379	1513	910	720	644	42,2
380	x	475	116	90	84	36	M22 x 80	780	297102	1564	130	104	87000	187	150	73	58	284078	1495	949	751	672	44
400	x	495	116	90	84	36	M22 x 80	780	311738	1559	123	99	150460	217	175	29	23	273024	1365	1183	860	748	46
420	x	515	116	90	84	40	M22 x 80	780	362587	1727	130	106	93580	186	151	74	60	350303	1668	1039	819	732	50
440	x	545	130	102	96	40	M24 x 90	1000	442836	2013	126	102	113140	176	142	76	62	428139	1946	1041	840	757	64,6
460	x	565	130	102	96	40	M24 x 90	1000	461680	2007	121	98	177330	195	159	46	37	426266	1853	1200	924	819	67,4
480	x	585	130	102	96	42	M24 x 90	1000	504497	2102	121	99	168140	189	155	53	43	475653	1982	1209	943	839	71
500	x	605	130	102	96	44	M24 x 90	1000	549139	2197	121	100	158960	183	151	60	49	525629	2103	1221	962	859	72,6
520	x	630	130	102	96	45	M24 x 90	1000	582655	2241	119	98	194480	192	158	46	38	549239	2112	1330	1027	911	80
540	x	650	130	102	96	45	M24 x 90	1000	603639	2236	114	95	258670	207	172	21	18	545408	2020	1516	1115	974	82
560	x	670	130	102	96	48	M24 x 90	1000	666213	2379	117	98	212800	191	160	44	36	631313	2255	1429	1098	972	85
580	x	690	130	102	96	50	M24 x 90	1000	717182	2473	118	99	203610	186	156	50	42	687672	2371	1438	1117	992	88
600	x	710	130	102	96	50	M24 x 90	1000	740342	2468	114	96	267800	200	169	27	23	690210	2301	1619	1204	1055	91
620	x	730	130	102	96	52	M24 x 90	1000	793992	2561	114	97	258610	195	166	33	28	750696	2422	1622	1222	1075	93
640	x	750	130	102	96	54	M24 x 90	1000	849441	2655	115	98	249429	190	162	39	33	811994	2537	1628	1240	1095	96
660	x	770	130	102	96	56	M24 x 90	1000	906684	2748	115	99	240240	186	159	44	38	874277	2649	1635	1259	1115	99
680	x	790	130	102	96	56	M24 x 90	1000	932418	2742	111	96	304420	198	171	25	21	881324	2592	1821	1347	1179	102
700	x	810	130	102	96	60	M24 x 90	1000	1026541	2933	116	100	221870	177	153	54	47	1002277	2864	1654	1296	1156	104
720	x	830	130	102	96	60	M24 x 90	1000	1054013	2928	112	97	286050	189	164	35	31	1014455	2818	1827	1383	1218	107
740	x	850	130	102	96	62	M24 x 90	1000	1117486	3020	113	98	276870	185	161	40	35	1082644	2926	1833	1401	1238	110
760	x	870	130	102	96	64	M24 x 90	1000	1182737	3112	113	99	267680	182	159	45	39	1152048	3032	1840	1419	1258	113
780	x	890	130	102	96	65	M24 x 90	1000	1230829	3156	112	98	295180	185	162	38	34	1194909	3064	1931	1472	1300	116
800	x	910	130	102	96	66	M24 x 90	1000	1279783	3199	111	97	322680	189	166	32	28	1238436	3096	2026	1525	1341	118
820	x	930	130	102	96	68	M24 x 90	1000	1349444	3291	111	98	313500	185	163	37	32	1312524	3201	2030	1543	1361	121
840	x	950	130	102	96	70	M24 x 90	1000	1420874	3383	111	98	304310	182	161	41	36	1387904	3305	2037	1561	1381	124
860	x	970	130	102	96	72	M24 x 90	1000	1494068	3475	112	99	295130	178	158	45	40	1464629	3406	2044	1579	1401	127
880	x	990	130	102	96	74	M24 x 90	1000	1569025	3566	112	100	285940	175	156	49	43	1542750	3506	2053	1598	1421	129
900	x	1010	130	102	96	75	M24 x 90	1000	1624087	3609	111	99	313440	178	159	43	38	1593554	3541	2142	1650	1462	132
920	x	1030	130	102	96	76	M24 x 90	1000	1680004	3652	110	98	340940	182	162	38	34	1645045	3576	2233	1702	1503	135
940	x	1050	130	102	96	78	M24 x 90	1000	1759331	3743	110	99	331750	179	160	42	37	1727770	3676	2240	1720	1523	138
960	x	1070	130	102	96	80	M24 x 90	1000	1840411	3834	110	99	322570	176	158	45	40	1811922	3775	2247	1739	1543	140
980	x	1090	130	102	96	81	M24 x 90	1000	1899788	3877	109	98	350070	179	161	40	36	1867256	3811	2337	1791	1584	143
1000	x	1110	130	102	96	82	M24 x 90	1000	1960015	3920	108	98	377570	182	164	35	32	1923305	3847	2430	1844	1626	146

More sizes on request

To continue see next page

Locking Assemblies for Bending Loads RINGFEDER® RfN 7012

Explanations

d	= Inner diameter	**p_W**	= Surface pressure on shaft at given T_A	**T_{res} at $M_b$max**	= Remaining transmissible torque at indicated Mbmax and specified torque
D	= Outer diameter	**p_N**	= Surface pressure on hub at given T_A	**F_{ax} at $M_b$max**	= Transmissible axial force at max. bending moment
L	= Overall length	**$M_b$max**	= Max. bending moment under the specified T_A	**$D_{N\ min}$ at $Rp_{0,2}$**	= Min. hub outer diameter depending of the given hub yield point $Rp_{0,2}$ and part of bending moment
L_1	= Overall length (without screws)	**p_{Wmax} at $M_b$max**	= Max. surface pressure on shaft at max. bending moment	**Gw**	= Weight
L_3	= Width of ring	**p_{Nmax} at $M_b$max**	= Max. surface pressure on hub at max. bending moment		
n_{Sc}	= Quantity of screws	**p_{Wmin} at $M_b$max**	= Min. surface pressure on shaft at max. bending moment		
D_G	= Thread	**p_{Nmin} at $M_b$max**	= Min. surface pressure on hub at max. bending moment		
T_{Ared}	= Reduced tightened torque of the screws under bending load				
T	= Transmissible torque at given T_A				
F_{ax}	= Transmissible axial force				

Ordering example

Locking Assembly	d	D
RfN 7012	**160**	**210**

Further information on
RINGFEDER® RfN 7012
for Bending Loads
on **www.ringfeder.com**

Technical Information

- Surface finishes: Shaft and hub bores $R_a \leq 3{,}2$ µm
- Tolerances: Shaft: h9 · Hub: H9

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

The specified pressures at $M_b$max. 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.

Disclaimer of liability
All technical details and notes are non-binding and cannot be used as a basis for legal claims. The user is obligated to determine whether the represented products meet his requirements. We reserve the right carry out modifications at any time in the interests of technical progress.

RINGFEDER POWER TRANSMISSION