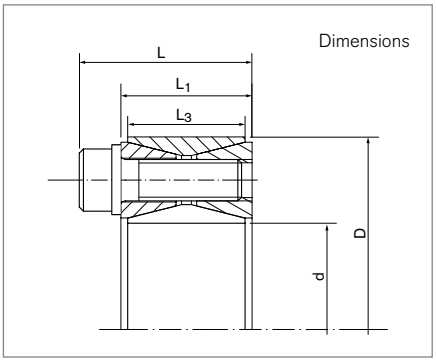
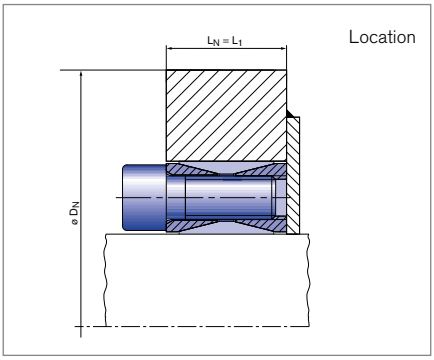
Locking Assemblies for Bending Loads

RINGFEDER® RfN 7012 M_b 20%

Extreme loads in belt drums

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





Locking Assembly dimensions			Clamping screws ISO 4762-12.9 Thread			T without	p_W without	p_N without	M_b20%	T_{res} at	p_{Wmax} at	p_{Nmax} at	p_{Wmin} at	p_{Nmin} at	F_{ax} at	$D_{N\,min}$ at $R_{P0,2}$ 250	350	450	Gw
d	x	D	n_{Sc}	D_G	$T_{Ared.}$	M_b	M_b	M_b		M_b20%	M_b20%	M_b20%	M_b20%	M_b20%	M_b20%	[N/mm²]			
mm				mm	Nm	Nm	N/mm²		Nm		N/mm²				kN	mm			kg
50	x	80	12	8 x 22	35	1777	189	118	350	1742	214	133	164	102	70	146	121	110	0,6
55	x	85	14	8 x 22	35	2267	199	129	227	2256	214	138	184	119	82	159	130	117	0,63
60	x	90	14	8 x 22	35	2460	181	121	380	2430	204	136	159	106	81	166	136	123	0,69
65	x	95	16	8 x 22	35	3030	190	130	260	3019	205	140	176	120	93	179	146	132	0,73
70	x	110	14	10 x 25	70	4581	207	132	630	4537	230	146	183	117	130	215	172	155	1,26
75	x	115	14	10 x 25	70	4887	192	125	630	4846	214	140	140	111	129	217	176	159	1,33
80	x	120	14	10 x 25	70	5192	179	120	845	5123	207	138	152	101	128	224	183	165	1,4
85	x	125	16	10 x 25	70	6281	192	131	575	6255	210	143	175	119	147	240	193	174	1,49
90	x	130	16	10 x 25	70	6627	182	125	785	6580	204	141	158	109	146	247	200	180	1,53
95	x	135	18	10 x 25	70	7843	192	135	515	7826	206	145	178	125	165	262	210	189	1,62
100	x	145	14	12 x 30	125	9591	196	135	1442	9482	223	154	169	116	190	298	233	208	2,01
110	x	155	14	12 x 30	125	10488	177	126	1568	10370	204	145	150	106	189	301	241	217	2,15
120	x	165	16	12 x 30	125	13004	184	134	1792	12880	212	154	156	114	215	340	266	237	2,35
130	x	180	20	12 x 35	125	17522	162	117	2262	17376	186	135	137	99	267	330	271	246	3,51
140	x	190	22	12 x 35	125	20661	164	121	2032	20561	185	136	144	106	294	351	288	261	3,85
150	x	200	24	12 x 35	125	24046	167	125	1804	23978	184	138	150	112	320	373	304	275	4,07
160	x	210	26	12 x 35	125	27674	169	129	1574	27629	183	139	155	118	345	394	321	290	4,3
170	x	225	22	14 x 40	190	32486	157	119	4314	32199	184	139	130	98	379	422	343	311	5,78
180	x	235	24	14 x 40	190	37391	161	123	3792	37198	183	141	139	106	413	445	361	326	6,05
190	x	250	28	14 x 45	190	45890	147	111	4814	45637	166	126	128	97	480	436	365	334	8,25
200	x	260	30	14 x 45	190	51590	149	114	4230	51417	165	127	133	102	514	455	381	348	8,65
220	x	285	26	16 x 50	295	66374	146	112	6534	66051	165	127	126	97	600	501	418	382	11,22
240	x	305	30	16 x 50	295	83094	153	120	4066	82995	164	129	142	112	692	541	450	411	12,2
260	x	325	34	16 x 50	295	101512	159	127	3362	101457	168	134	151	121	780	593	488	443	13,2
280	x	355	32	18 x 60	405	124233	140	111	7688	123995	153	121	127	100	886	602	509	468	19,2

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Locking Assembly dimensions			Clamping screws ISO 4762-12.9			T	p_W	p_N	M_b20%	T_{res}	p_{Wmax}	p_{Nmax}	p_{Wmin}	p_{Nmin}	F_{ax}	$D_{N\ min}$ at $R_{P0,2}$			
			Thread			without	without	without		at	at	at	at	at	at	250	350	450	
d	x	D	n_{Sc}	D_G	$T_{Ared.}$	M_b	M_b	M_b		M_b20%	M_b20%	M_b20%	M_b20%	M_b20%	M_b20%	[N/mm²]			Gw
mm				mm	Nm	Nm	N/mm²		Nm		N/mm²				kN	mm			kg
300	x	375	36	18 x 60	405	149101	146	117	4964	149018	154	123	139	111	993	645	543	498	20,5
320	x	405	36	20 x 70	580	207104	149	118	7444	206970	157	124	141	112	1294	698	587	538	29,6
340	x	425	36	20 x 70	580	219216	140	112	11584	218909	151	121	128	103	1288	721	610	561	31,1
360	x	455	36	22 x 80	780	282418	138	109	14926	282023	148	117	127	101	1567	757	645	595	42,2
380	x	475	36	22 x 80	780	297102	130	104	17400	296592	141	113	118	95	1561	775	665	615	44
400	x	495	36	22 x 80	780	311738	123	99	30092	310282	142	115	104	84	1551	813	696	643	46
420	x	515	40	22 x 80	780	362587	130	106	18716	362103	141	115	119	97	1724	848	725	670	50
440	x	545	40	24 x 90	1000	442836	126	102	22628	442257	136	110	116	94	2010	875	756	701	64,6
460	x	565	40	24 x 90	1000	461680	121	98	35466	460316	136	110	106	86	2001	909	784	727	67,4
480	x	585	42	24 x 90	1000	504497	121	99	33628	503375	135	110	107	88	2097	941	812	753	71
500	x	605	44	24 x 90	1000	549139	121	100	31792	548218	134	111	109	90	2193	974	840	778	72,6
520	x	630	45	24 x 90	1000	582655	119	98	38896	581355	134	110	105	86	2236	1013	874	810	80
540	x	650	45	24 x 90	1000	603639	114	95	51734	601418	133	110	96	80	2227	1046	902	836	82
560	x	670	48	24 x 90	1000	666213	117	98	42560	664852	132	110	103	86	2374	1078	930	862	85
580	x	690	50	24 x 90	1000	717182	118	99	40722	716025	131	110	104	88	2469	1110	958	888	88
600	x	710	50	24 x 90	1000	740342	114	96	53559	738402	131	111	96	81	2461	1143	986	914	91
620	x	730	52	24 x 90	1000	793992	114	97	51722	792306	130	111	98	83	2556	1176	1014	939	93
640	x	750	54	24 x 90	1000	849441	115	98	49885	847975	130	111	99	85	2650	1208	1042	965	96
660	x	770	56	24 x 90	1000	906684	115	99	48048	905410	129	111	101	86	2744	1240	1069	991	99
680	x	790	56	24 x 90	1000	932418	111	96	60884	930428	129	111	94	81	2737	1273	1098	1017	102
700	x	810	60	24 x 90	1000	1026541	116	100	44374	1025581	128	111	103	89	2930	1304	1125	1042	104
720	x	830	60	24 x 90	1000	1054013	112	97	57210	1052459	128	111	97	84	2923	1338	1153	1068	107
740	x	850	62	24 x 90	1000	1117486	113	98	55374	1116113	127	111	98	86	3017	1370	1181	1094	110
760	x	870	64	24 x 90	1000	1182737	113	99	53536	1181525	127	111	99	87	3109	1402	1209	1120	113
780	x	890	65	24 x 90	1000	1230829	112	98	59036	1229412	126	111	97	85	3152	1434	1236	1146	116
800	x	910	66	24 x 90	1000	1279783	111	97	64536	1278155	126	111	95	83	3195	1467	1264	1171	118
820	x	930	68	24 x 90	1000	1349444	111	98	62700	1347987	126	111	96	85	3288	1499	1292	1197	121
840	x	950	70	24 x 90	1000	1420874	111	98	60862	1419570	125	111	97	86	3380	1531	1320	1223	124
860	x	970	72	24 x 90	1000	1494068	112	99	59026	1492902	125	111	98	87	3472	1563	1347	1248	127
880	x	990	74	24 x 90	1000	1569025	112	100	57188	1567982	125	111	99	88	3564	1594	1375	1274	129
900	x	1010	75	24 x 90	1000	1624087	111	99	62688	1622876	124	111	97	87	3606	1627	1403	1300	132
920	x	1030	76	24 x 90	1000	1680004	110	98	68188	1678619	124	111	95	85	3649	1659	1431	1325	135
940	x	1050	78	24 x 90	1000	1759331	110	99	66350	1758079	124	111	96	86	3741	1691	1458	1351	138
960	x	1070	80	24 x 90	1000	1840411	110	99	64514	1839280	123	111	97	87	3832	1723	1486	1377	140
980	x	1090	81	24 x 90	1000	1899788	109	98	70014	1898497	123	111	95	86	3874	1755	1514	1402	143
1000	x	1110	82	24 x 90	1000	1960015	108	98	75514	1958560	123	111	94	84	3917	1788	1542	1428	146

More sizes on request

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Explanations

Basic dimensions when screws are not tightened

d = Inner diameter
D = Outer diameter
n_{Sc} = Quantity of screws
D_G = Thread
$T_{Ared.}$ = Redused tightened torque of the screws under bending load
T ohne M_b = Transmissible torque at given T_A
p_W ohne M_b = Surface pressure on shaft at given T_A
p_N ohne M_b = Surface pressure on hub at given T_A
M_b20% = 20% of max. bending moment
$T_{res.}$ bei M_b20% = Remaining transmissible torque at indicated Mb20% and specified torque
$p_{Wmax.}$ bei M_b20% = Max. surface pressure on shaft at 20% bending moment
$p_{Nmax.}$ bei M_b20% = Max. surface pressure on hub at 20% bending moment
$p_{Wmin.}$ bei M_b20% = Min. surface pressure on shaft at 20% bending moment
$p_{Nmin.}$ bei M_b20% = Min. surface pressure on hub at 20% bending moment
F_{ax} bei M_b20% = Transmissible axial force at 20% bending moment
DN min bei Rp0,2
250 N/mm² +M_b20% = Min. hub outer diameter depending of the given hub yield point Rp0,2 and part of bending moment
350 N/mm² +M_b20% = Min. hub outer diameter depending of the given hub yield point Rp0,2 and part of bending moment
450 N/mm² +M_b20% = Min. hub outer diameter depending of the given hub yield point Rp0,2 and part of bending moment
Gw = Weight

Ordering example

Type	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 Ra ≤ 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!