Shrink Discs

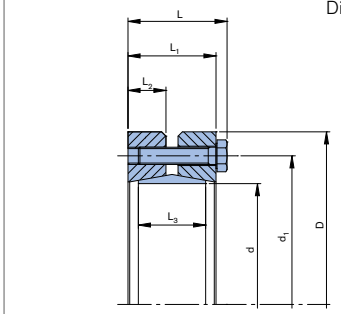
RINGFEDER® RfN 4073

Smallest Series with Minimum Moment of Inertia, Ideal for Lower Transmission Values

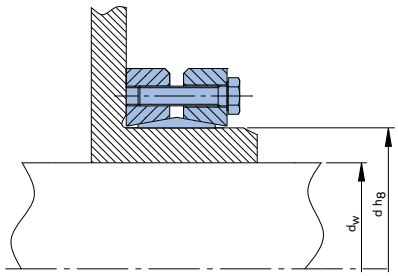


2-part | **3-part**

Dimensions



Location



Shrink Discs dimensions										Transmissible torques or axial forces				Locking screws ISO 4014/4017 - 10.9			
d	x	D	d_w	d_1	L	L_1	L_2	L_3	T_A	T	F_{ax}	P	σ_v	n_{Sc}	D_G	Gw	T_{max}
mm			mm	mm	mm	mm	mm	mm	Nm	Nm	kN	N/mm²	N/mm²		mm	kg	Nm
			9							9	2,5		389				18
14	x	34	10	24	14	12	5,0	9	2,4	14	3,5	222	372	3	M4*)	0,1	26
			11							20	4,6		361				35
			11							32	7,2		408				40
16	x	42	12	30	14,8	12	5,0	9	2,4	41	8,5	264	414	4	M4*)	0,1	51
			13							52	9,9		440				64
			14							41	7,3		310				51
20	x	47	15	34	17,5	14	6,0	10	3	51	8,4	193	311	4	M5	0,13	64
			16							62	9,6		320				78
			16							68	10,5		320				85
22	x	50	17	37	18,5	15	6,5	10	3	80	11,5	219	326	5	M5	0,16	100
			18							94	13,0		341				118
			18							185	26,0		503				231
24	x	50	19	39	18,5	15	6,5	10	5	205	28,0	274	543	5	M5	0,16	256
			20							235	30,0		581				293
			20							77	9,6		270				96
28	x	56	22	43	18,5	15	6,5	10	3	103	11,5	172	271	5	M5	0,18	129
			24							132	13,5		289				165
			24							110	11,0		244				138
31	x	60	25	46	18,5	15	6,5	10	3	123	12,0	156	246	5	M5	0,2	154
			27							154	14,0		264				193
			28							161	14,0		233				201
36	x	66	30	52	18,5	15	6,5	10	3	194	16,0	161	239	6	M5	0,24	243
			32							215	16,5		328				269

*) Different quality of screws. ISO 4014/4017 - 8.8

To continue see next page

Shrink Discs RINGFEDER® RfN 4073

Shrink Discs dimensions										Transmissible torques or axial forces				Locking screws ISO 4014/4017 - 10.9			
d	x	D	d_w	d_1	L	L_1	L_2	L_3	T_A	T	F_{ax}	P	σ_v	n_{Sc}	D_G	Gw	T_{max}
mm			mm	mm	mm	mm	mm	mm	Nm	Nm	kN	N/mm²	N/mm²		mm	kg	Nm
			33							265	20,0		325				331
40	x	68	34	55	18,5	15	6,5	10	4	290	21,0	194	329	6	M5	0,23	363
			35							320	22,5		336				396
			38							400	26,0		278				503
46	x	80	40	63	22,5	19	8,0	14	4	470	29,0	160	288	8	M5	0,44	589
			42							550	32,5		326				683
			42							440	26,0		249				550
51	x	86	44	68,5	22,5	19	8,0	14	4	510	28,5	144	255	8	M5	0,49	640
			45							550	30,0		261				680
			46							560	30,0		241				690
56	x	91	48	73	22,5	19	8,0	14	4	630	32,5	148	245	9	M5	0,52	790
			50							710	35,0		258				890
			52							710	34,0		285				890
61	x	96	54	77	22,5	19	8,0	14	4	810	37,0	151	291	10	M5	0,56	1010
			56							910	40,0		309				1130
			58	82						850	36,5		266				1070
66	x	100	60	82	22,5	19	8,0	14	4	950	39,5	140	276	10	M5	0,57	1190
			62	82						1060	42,5		308				1320
			62							1410	56,5		279				1770
70	x	110	64	90	27,5	24	10,0	18	6	1560	60,5	153	300	10	M5	0,93	1950
			65							1630	62,5		322				2040
			66							1480	55,0		256				1840
75	x	114	68	93	27,5	24	10,0	18	6	1620	59,0	142	268	10	M5	0,93	2020
			70							1770	63,0		301				2210
			71							2000	70,0		269				2500
80	x	120	73	101	27,5	24	10,0	18	6	2160	74,0	161	285	12	M5	1,04	2700
			75							2330	77,5		329				2920
			76							2370	77,5		246				2960
85	x	128	78	105	32	28	11,5	22	12	2560	82,0	137	266	8	M6	1,41	3200
			80							2760	86,0		316				3450
			82							2300	69,5		253				2870
94	x	140	85	119	32	28	11,5	22	12	2600	76,0	124	262	8	M6	1,66	3250
			88							2920	83,0		289				3660
			92							3000	81,0		239				3750
105	x	150	95	128	32	28	11,5	22	12	3330	87,0	125	246	9	M6	1,77	4160
			98							3680	93,5		266				4600
			100							3390	84,5		225				4240
112	x	158	104	135	32	28	11,5	22	12	3850	92,5	117	241	9	M6	1,91	3570
			106							4100	96,0		264				5120
			106							3900	91,5		208				4870
120	x	164	110	141	36	32	13,0	25	12	4400	100,0	107	217	10	M6	2,2	5500
			112							4670	104,0		230				5830
			115							4250	99,0		191				5320
130	x	172	120	151	36	32	13,0	25	12	4890	101,5	99	202	10	M6	2,21	6110
			122							5100	104,0		225				6380
			125							5690	135,0		208				7110
140	x	182	128	161	36	32	13,0	25	12	6140	119,5	110	213	12	M6	2,4	7670
			130							6450	124,0		220				8060

To continue see next page

Shrink Discs RINGFEDER® RfN 4073

Shrink Discs dimensions										Transmissible torques or axial forces				Locking screws ISO 4014/4017 - 10.9			
d	x	D	d_w	d_1	L	L_1	L_2	L_3	T_A	T	F_{ax}	P	σ_v	n_{Sc}	D_G	Gw	T_{max}
mm			mm	mm	mm	mm	mm	mm	Nm	Nm	kN	N/mm²	N/mm²		mm	kg	Nm
			135							6280	116,0		194				7840
150	x	194	138	171	36	32	13,0	25	12	6730	121,0	103	200	12	M6	2,7	8420
			140							7050	125,0		206				8810
			142							6360	111,0		179				7940
160	x	204	145	181	36	32	13,0	25	12	6800	117,0	96	182	12	M6	2,8	8500
			148							7260	122,0		187				9070

More sizes on request

To continue see next page

Shrink Discs RINGFEDER® RfN 4073

Explanation

d	= Inner diameter	**L_2**	= Thrust ring width	**P**	= Hub surface pressure
D	= Outer diameter	**L_3**	= Width of ring	**σ_v**	= Equivalent stress in the hub
d_w	= Solid shaft diameter	**L_B**	= Width of the half Shrink Disc	**n_{Sc}**	= Quantity of screws
d_1	= Pitch circle diameter	**T_A**	= Tightening torque of the clamping screws	**D_G**	= Thread
L	= Overall length	**T**	= Transmissible torque at given T_A	**Gw**	= Weight
L_1	= Overall length (without screws)	**F_{ax}**	= Transmissible axial force	**T_{max}**	= Max. transmissible torque

Ordering example

Series	d	D
RfN 4073	46	80

Table Clearance

d_w above	d_w up to	ISO	Max. clearance S mm
6	**10**		**0,011**
10	**18**	**H6/j6**	**0,014**
18	**30**		**0,017**
30	**50**	**H6/h6**	**0,032**
50	**80**	**H6/g6**	**0,048**
80	**120**		**0,069**
120	**180**		**0,079**
180	**250**		**0,090**
250	**315**	**H7/g6**	**0,101**
315	**400**		**0,111**
400	**500**		**0,123**
500	**630**		**0,136**
630	**800**		**0,154**

Clearances considered for the calculation of the function values

Technical information

- Surface finishes: For shaft $R_a \leq 3{,}2$ µm
- Tolerances: For shaft see table
- When using a hollow shaft instead of a solid shaft please contact our Engineering-Team.
- Additional loads, e.g. tension, thrust or bending have to be taken into consideration accordingly
- Function values: The functional characteristics are valid with the screw tightening torque listed in the tables and the following assumed conditions: The locking screws are lubricated using MoS_2 (μ_{tot}= 0,1). The tapered cones are lubricated using MoS_2 (μ = 0,05). The contact surfaces (d_w) are in lightly oiled condition with coefficient of friction μ = 0,12. The hub and shaft materials have a modulus of elasticity of 210,000 N/mm². (Lower values result in increased values for T and Fax with reduced tangential stress.) The maximum clearance S is being fully utilized. The shaft being used is solid, for hollow shaft applications the functional values will change. In cases where the assumed conditions do not apply then contact our Technical Department where we will be happy to assist you with your application.

Further information on
RINGFEDER® RfN 4073 on
www.ringfeder.com

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