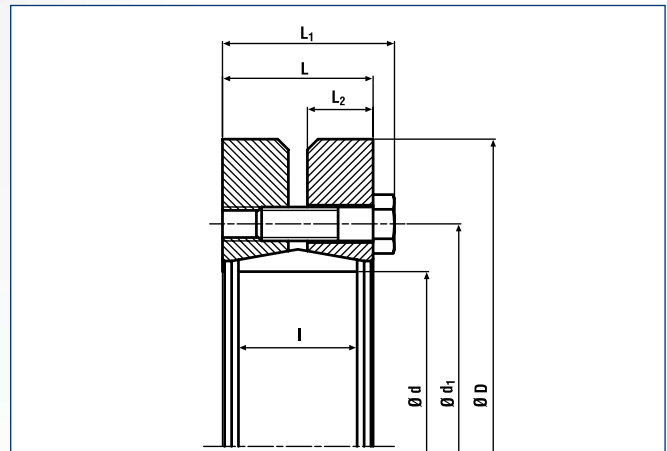
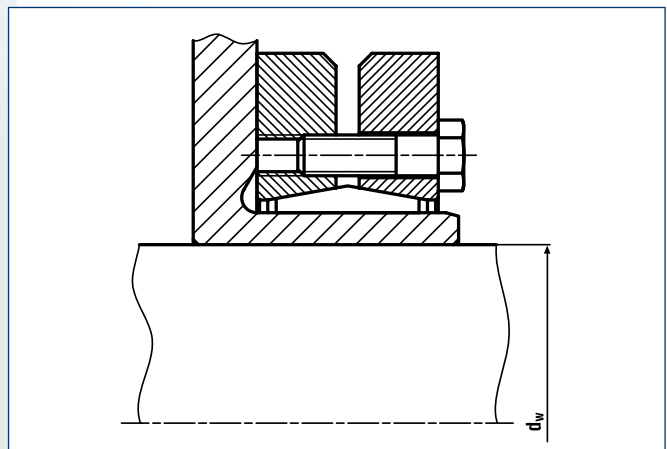


Shrink Disc® RINGFEDER® RfN 4061 · Location



Shrink Disc® RINGFEDER® RfN 4061 · Dimensions



Axial bearing disc

Size	Shrink Disc® dimensions										T _A	Transmissible torques or axial forces				Locking screws DIN EN ISO 4014-10.9		Weight	
	d _w	C _w	d	Ch	D	L ₁	L	d ₁	L ₂	l		T	F _{ax}	P	σ _v	Quantity	Thread	lbs	T _{max}
	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	lb-ft		lb-ft	lbs	psi	psi	n		lbs	lb-ft
14	0.394	0.0007	0.551		1.457	0.591	0.472	0.945	0.197	0.354	1.5	13	1191	56105	99470	3	M5x12	0.2	17
	26											1798	119805		32				
	33											2383	100940		41				
16	0.472	0.0007			1.614	0.728	0.591	1.063	0.246	0.472	3	59	3192	61250	154840	3	M5x16	0.2	74
	63											3619	113680		78				
18	0.551	0.0007	0.709	+0 -0.0013	1.732	0.728	0.591	1.142	0.246	0.472	3	96	4518	72765	185465	4	M5x16	0.2	120
	81											4271	114415		102				
20	0.591	0.0007	0.787		1.811	0.807	0.669	1.260	0.276	0.472	3	112	5170	81585	152635	5	M5x16	0.3	140
	162											7194	120540		199				
24	0.669	0.0007	0.945		1.969	0.906	0.748	1.417	0.315	0.591	3.7	236	8318	81830	165130	6	M5x18	0.4	295
	280											8542	101185		347				
30	0.748	0.0007	1.181		2.047	0.984	0.846	1.654	0.354	0.669	3.7	347	9666	65905	124950	7	M5x20	0.7	435
	278											10790	94325		354				
36	1.024	0.0013	1.417		2.835	1.083	0.925	2.047	0.394	0.709	9	420	13038	75215	109270	5	M6x20	0.9	524
	479											13488	92365		605				
38	1.142	0.0013	1.496		2.835	1.181	1.024	2.165	0.433	0.827	9	553	14387	72030	115885	6	M6x25	1.1	686
	465											13263	98000		583				
40	1.181	0.0013	1.575	+0 -0.0015	2.953	1.122	0.965	2.244	0.413	0.748	9	538	14162	76930	113925	6	M6x25	1.2	671
	546											14162	104860		679				
44	1.220	0.0013	1.732		3.150	1.181	1.024	2.402	0.433	0.787	9	752	17085	76195	111965	7	M6x25	1.3	937
	538											13713	86730		671				
48	1.417	0.0013	1.890		3.150	1.181	1.024	2.677	0.433	0.866	9	819	16410	61005	89425	7	M6x25	1.2	1018
	774											20007	103635		966				
50	1.417	0.0013	1.969		3.543	1.260	1.102	2.756	0.472	0.866	9	1136	23154	78400	115395	9	M6x25	1.8	1416
	856											17759	84280		1069				
55	1.654	0.0013	2.165	+0 -0.0018	3.937	1.358	1.201	2.953	0.512	0.906	9	1387	21806	61740	101920	8	M6x25	2.4	1733
	1637											28100	99470		2043				
62	1.890	0.0013	2.441		4.331	1.378	1.220	3.386	0.512	0.906	9	2132	30348	80850	117845	12	M6x30	2.9	2663
	2132											30348	117845		2663				

To continue see next page

Characteristics

Reduced dimensions with lower transmission values – especially for applications with restricted space.

Simplified manufacture – only plain shaft and bore diameters with easily achieved surface finish and tolerances are required.

Easy adjustability – No stops, steps, keyways, splines etc. are required, therefore hubs can be located and locked at any point or angle on the shaft.

Easy mounting – RINGFEDER® Shrink Discs® use standard screws and tightened using standard tools. No additional machining or fitting work is required.

Easy removal – after loosening the locking screws, the RINGFEDER® Shrink Disc® will self release and the hub will move freely on the shaft.

Low susceptibility to contamination – when the locking screws are tightened the contact (functional) surfaces are pressed firmly together and prevent contamination by dirt and moisture.

Highest reliability – due to the materials chosen and manufacturing processes used, RINGFEDER® Shrink Discs® can be tightened and released as often as required. If locking screws need replacing, they are standard items and thus easily available.

Size	Shrink Disc® dimensions										T _A	Transmissible torques or axial forces				Locking screws DIN EN ISO 4014-10.9		Weight	
	d _w	C _w	d	Ch	D	L ₁	L	d ₁	L ₂	l		T	F _{ax}	P	σ _v	Quantity	Thread	WT	T _{max}
	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	lb-ft		lb-ft	lbs	psi	psi	n		lbs	lb-ft
68	1.969	0.0019	2.677	+0 -0.0018	4.528	1.378	1.220	3.386	0.512	0.906	9	1475	21356	61250	77910	10	M6x30	3.1	1844
	2323											26976	101675						2899
75	2.165	0.0019	2.953	+0 -0.0018	5.433	1.496	1.280	3.937	0.551	0.984	22	1844	26751	66885	100940	7	M8x30	3.7	2305
	2913											34844	84525						3642
80	2.559	0.0019	3.150	+0 -0.0018	5.709	1.496	1.280	3.937	0.551	0.984	22	2360	27875	62720	95060	7	M8x30	4.2	2950
	2362											27875	84525						2950
85	2.756	0.0019	3.346	+0 -0.0021	6.102	1.890	1.614	4.488	0.669	1.181	22	3393	35518	71050	91630	10	M8x35	7.7	4241
	2362											37991	96040						3961
90	2.756	0.0019	3.543	+0 -0.0021	6.102	1.752	1.535	4.488	0.669	1.181	22	4861	47658	66395	84525	10	M8x35	7.3	6070
	2559											38216	84525						4380
95	2.953	0.0027	3.740	+0 -0.0021	6.693	2.087	1.850	4.882	0.748	1.339	22	5347	47208	68600	90160	12	M8x40	10	6685
	2559											43836	85505						4956
100	2.953	0.0027	3.937	+0 -0.0025	6.693	1.949	1.732	4.882	0.748	1.339	22	6048	53952	63210	86975	12	M8x35	10	7560
	2756											43836	79135						6361
110	3.150	0.0031	4.331	+0 -0.0028	7.283	2.244	1.969	5.354	0.866	1.535	44	6638	53952	59780	81830	9	M10x40	13	8298
	2953											51479	73990						6638
115	3.346	0.0027	4.528	+0 -0.0025	7.283	2.402	2.165	5.591	0.906	1.654	44	7966	58898	61005	84035	10	M10x45	13	9957
	3150											60696	73990						8482
125	3.740	0.0027	5.512	+0 -0.0025	9.055	2.697	2.382	6.890	1.024	1.811	74	6786	60696	64680	84035	10	M12x45	22	8482
	3346											74184	86485						13829
140	3.740	0.0027	6.102	+0 -0.0025	10.433	2.854	2.539	7.559	1.102	1.969	74	8113	66541	64680	84525	10	M12x45	22	10141
	3740											79130	84770						13829
155	4.134	0.0031	6.496	+0 -0.0028	11.417	3.189	2.795	8.268	1.220	2.205	184	11137	82502	64680	81095	10	M12x45	22	13921
	4134											14825	95540						18531
165	4.528	0.0031	7.283	+0 -0.0028	12.992	3.780	3.386	9.291	1.496	2.795	184	16226	100486	64435	78400	12	M12x65	33	20283
	4528											20652	114423						25815
175	4.921	0.0031	7.677	+0 -0.0028	13.780	3.780	3.386	9.685	1.496	2.795	184	22864	133756	67865	80360	8	M16x55	49	28580
	4921											28765	147244						35956
185	5.315	0.0031	7.874	+0 -0.0028	13.780	3.780	3.386	9.685	1.496	2.795	184	26552	136004	63945	81830	8	M16x90	49	33190
	5315											151740	79380						41488
195	5.709	0.0031	7.874	+0 -0.0028	13.780	3.780	3.386	9.685	1.496	2.795	184	38353	174894	59780	74235	10	M16x65	82	47941
	5709											45729	193553						57161
200	5.906	0.0031	7.874	+0 -0.0028	13.780	3.780	3.386	9.685	1.496	2.795	184	47941	209738	67865	80115	12	M16x65	90	59927
	6102											60111	240761						75139
200	6.299	0.0031	7.874	+0 -0.0028	13.780	3.780	3.386	9.685	1.496	2.795	184	54579	222552	66150	78890	12	M16x65	90	68224
	6299											63430	242784						79288

Explanations to tables

d, D, L, l, L₁, L₂, d₁ = Basic dimensions

d_w = solid shaft diameter (provided by the customer)

T = transmissible torque

F_{ax} = transmissible axial force

p = approx. surface pressure on the hub extension (diameter d)

T_A = required tightening torque per screw (Screws greased with molykote or equivalent!)

n = quantity of screws

T_{max} = maximum theoretical transmissible torque

C_w = shaft clearances

C_n = hub tolerances

C_d = shaft tolerances

|l₁ = Inner ring centering shoulder length

d₂ = clamped component bore

x = clamped component thickness

B = width dimension, relaxed condition

R₁ = hub max. radius (split Shrink Disc®)

s_v = calculated combined stress in the hub extension (d/dw) under consideration of the tangential, radial and torsional stresses following the equation:

$$\sigma_v = \sqrt{1/2 [(\sigma_x - \sigma_y)^2 + (\sigma_y - \sigma_z)^2 + (\sigma_z - \sigma_x)^2] + 3\tau^2}$$

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 MoS₂ (μ_{tot} = 0.1).

The tapered cones are lubricated using MoS₂ (μ = 0.05).

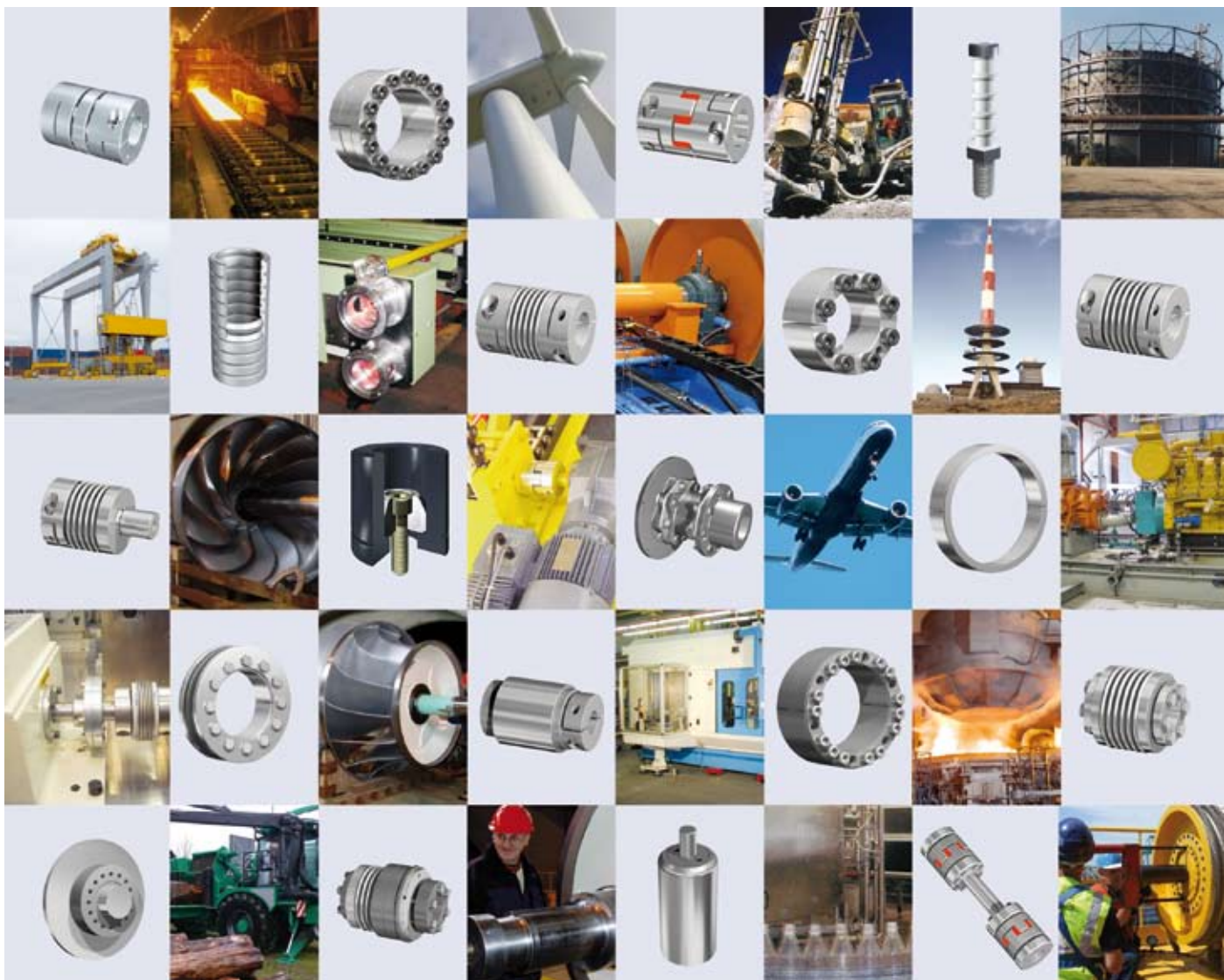
The contact surfaces (d_w) are in lightly oiled condition with coefficient of friction μ = 0.12.

The hub and shaft materials have a modulus of elasticity of 30 x 10⁶ PSI. (Lower values result in increased values for T and Fax with reduced tangential stress.)

The maximum clearance 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.



Check out the respective catalogue for further technical details

All technical details and information is 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 at all times to carry out modifications in the interests of technical progress. Upon the issue of this catalogue all previous brochures and questionnaires on the products displayed are no longer valid.

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