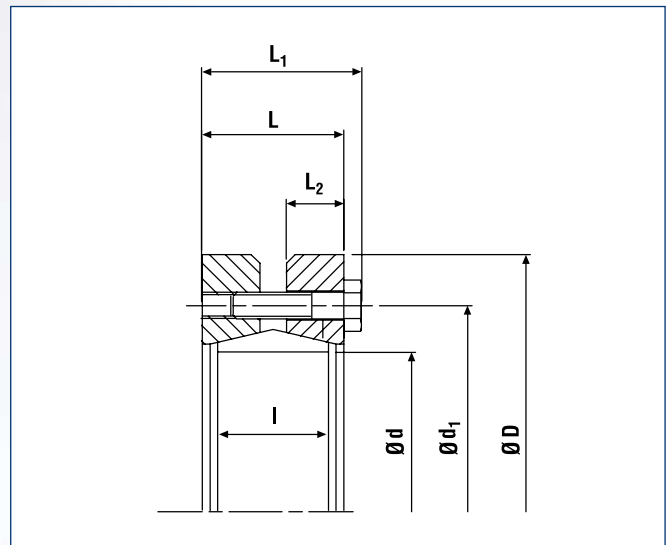
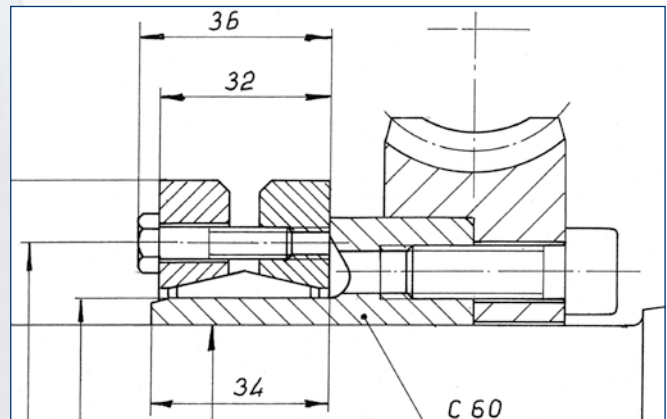


Shrink Disc® RINGFEDER® RfN 4073 · Location



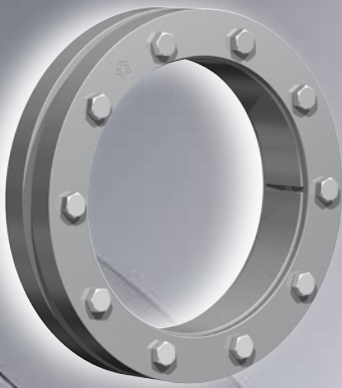
Shrink Disc® RINGFEDER® · Dimensions



Worm gear (metric example)

Size	Shrink Disc® dimensions											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 _A	T	F _{ax}	P	σ _v	Quantity	Thread	WT	T _{max}
	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	lb-ft	lb-ft	lbs	psi		n		lbs	lb-ft
14	0.354	0.0007	0.551		1.339	0.551	0.472	0.945	0.197	0.354	1.8	6.6	562	28130	56405	3	M4x10	0.2	13
	15											1034	26						
	24											1619	30						
16	0.433	0.630			1.654	0.583	0.472	1.181	0.197	0.354	1.8	38	2226	38280	63800	4	M4x10	0.2	47
	512											1641	4950						38
20	0.512	0.787			1.850	0.689	0.551	1.339	0.236	0.394	2.2	30	1641	27985	46400	4	M5x12	0.3	38
	551											2158	46400						46
22	0.630	0.866	+0 -0.0013		1.969	0.728	0.591	1.457	0.256	0.394	2.2	50	2360	31755	46400	5	M5x12	0.4	63
	630											2922	49445						69
	709											2473	42630						60
24	0.709	0.945			2.047	0.728	0.591	1.535	0.256	0.394	2.2	60	2473	29145	48430	5	M 5x12	0.4	74
	709											2922	39150						77
	787											2158	24940						57
28	0.787	1.102			2.205	0.728	0.591	1.693	0.256	0.394	2.2	97	3035	41905	35380	5	M 5x12	0.4	122
	787											2473	22620						81
31	0.945	1.220			2.362	0.728	0.591	1.811	0.256	0.394	2.2	81	2473	22620	38280	5	M 5x12	0.4	102
	945											3147	33785						114
	1.063											3147	47560						119
36	1.102	1.417			2.598	0.728	0.591	2.047	0.256	0.394	2.2	159	3709	23345	47125	6	M 5x12	0.5	198
	1.260											4496	47560						159
	1.299											4496	47125						195
40	1.299	1.575	+0 -0.0015		2.677	0.728	0.591	2.165	0.256	0.394	3.0	195	4496	28130	48720	6	M 5x12	0.5	244
	1.378											5058	40310						236
	1.496											5845	23200						295
46	1.496	1.811			3.150	0.886	0.748	2.480	0.315	0.551	3.0	406	7306	20880	47270	8	M 5x16	1.0	504
	1.654											5845	36105						325
	1.654											6744	36105						406
51	1.654	2.008			3.386	0.886	0.748	2.697	0.315	0.551	3.0	325	5845	20880	37845	8	M 5x16	1.1	406
	1.772											6744	34945						406
	1.811											6744	21460						413
56	1.811	2.205			3.583	0.886	0.748	2.874	0.315	0.551	3.0	524	7868	21460	37410	9	M 5x16	1.1	656
	1.969											7643	41325						524
	2.047											8992	38570						524
61	2.047	2.402			3.780	0.886	0.748	3.031	0.315	0.551	3.0	671	8992	21895	44805	10	M 5x16	1.2	833
	2.205											8205	38570						627
	2.283											9554	40455						627
66	2.283	2.598	+0 -0.0018		3.937	0.886	0.748	3.228	0.315	0.551	3	782	9554	20300	44660	10	M 5x16	1.3	974
	2.441											12701	40455						1040
	2.441											14050	40455						1040
70	2.441	2.756			4.331	1.083	0.945	3.543	0.394	0.709	4.4	1202	14050	22185	46690	10	M5x20	2.1	1505
	2.559											12364	37120						1092
	2.598											14162	37120						1092
75	2.598	2.953			4.488	1.083	0.945	3.661	0.394	0.709	4.4	1305	14162	20590	43645	10	M5x20	2.1	1630
	2.756											15736	39005						1475
	2.795											17422	39005						1475
80	2.795	0.0019	3.150		4.724	1.083	0.945	3.976	0.394	0.709	4.4	1719	17422	23345	47705	12	M5x20	2.3	2154
	2.953											17422	35670						1748
	2.992											19333	35670						1748
85	2.992	3.346			5.039	1.260	1.102	4.134	0.453	0.866	9	2036	19333	19865	45820	8	M6x25	3.1	2545
	3.150											15624	36685						1696
	3.228											1696	36685						1696
94	3.228	3.701	+0 -0.0021		5.512	1.260	1.102	4.685	0.453	0.866	9	1696	15624	17980	41905	8	M6x25	3.7	2117
	3.465											2154	41905						2154
	3.622											2213	34655						2213
105	3.622	4.134			5.906	1.260	1.102	5.039	0.453	0.866	9	2213	18209	18125	38570	9	M6x25	3.9	2766
	3.858											2714	21019						2714

To continue see next page



Characteristics

Ultra Light Duty Series – this range is a very compact design with low inertia values. It is ideally suited for mechanical seal and small gearbox applications.

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.

Size	Shrink Disc® dimensions										Transmissible torques or axial forces			Locking screws DIN EN ISO 4014-10.9		Weight			
	d _w	C _w	d	Ch	D	L ₁	L	d1	L ₂	l	T _A	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		n		lbs	lb-ft
112	3.937	0.0019	4.409	+0	6.220	1.260	1.102	5.315	0.453	0.866	9	2500	18996	16965	32625	9	M6x25	4.2	3127
	-0.0021			3024								21581	38280		3776				
120	4.173	4.724	5.118	+0	6.457	1.417	1.260	5.551	0.512	0.984	9	2876	20569	15515	30160	10	M6x25	4.9	3592
	-0.0021											3444	23379		33350				4300
130	4.173	5.118	5.512	+0	6.772	1.417	1.260	5.945	0.512	0.984	9	3135	22255	14355	27695	10	M6x25	4.9	3924
	-0.0021											3762	23379		32625				4706
140	4.921	5.512	5.906	+0	7.165	1.417	1.260	6.339	0.512	0.984	9	4197	30348	15950	30160	12	M 6x25	5.3	5244
	-0.0025											4757	27875		31900				5945
150	5.315	5.906	6.299	+0	7.638	1.417	1.260	6.732	0.512	0.984	9	4632	26077	14935	28130	12	M6x25	6.0	5782
	-0.0025											5200	28100		29870				6498
160	5.591	6.299	6.299	+0	8.031	1.417	1.260	7.126	0.512	0.984	9	4691	24953	13920	25955	12	M6x25	6.2	5856
	-0.0025											5355	27426		27115				6690

More sizes on request

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 ($\mu_{tot} = 0.1$).

The tapered cones are lubricated using MoS₂ ($\mu = 0.05$).

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

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.



Weitere technische Hinweise befinden sich im jeweiligen Katalog.

Alle technischen Daten und Hinweise sind unverbindlich. Rechtsansprüche können daraus nicht abgeleitet werden. Der Anwender ist grundsätzlich verpflichtet zu prüfen, ob die dargestellten Produkte seinen Anforderungen genügen. Änderungen, die dem technischen Fortschritt dienen, behalten wir uns jederzeit vor. Mit Erscheinen dieses Kataloges werden alle älteren Prospekte und Fragebögen zu den gezeigten Produkten ungültig.

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.

RINGFEDER POWER TRANSMISSION GMBH

Werner-Heisenberg-Straße 18, D-64823 Groß-Umstadt, Germany · Phone: +49 (0) 6078 9385-0 · Fax: +49 (0) 6078 9385-100
E-mail: sales.international@ringfeder.com · E-mail: sales.international@gerwah.com

RINGFEDER POWER TRANSMISSION USA CORPORATION

165 Carver Avenue, P.O. Box 691 Westwood, NJ 07675, USA · Toll Free: +1 888 746-4333 · Phone: +1 201 666 3320
Fax: +1 201 664 6053 · E-mail: sales.usa@ringfeder.com · E-mail: sales.usa@gerwah.com

RINGFEDER POWER TRANSMISSION INDIA PRIVATE LIMITED

Plot No. 4, Door No. 220, Mount - Poonamallee Road, Kattupakkam, Chennai – 600 056, India
Phone: +91 (0) 44-2679-1411 · Fax: +91 (0) 44-2679-1422 · E-mail: sales.india@ringfeder.com · E-mail: sales.india@gerwah.com

KUNSHAN RINGFEDER POWER TRANSMISSION COMPANY LIMITED

German Industry Park, No. 508 Hengguanjiang Road, Zhangpu Town 215321, Kunshan City, P.R. China
Phone: +86 (0) 512-5745-3960 · Fax: +86 (0) 512-5745-3961 · E-mail sales.china@ringfeder.com