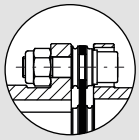
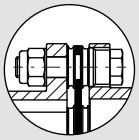
Steel Disc Couplings

RINGFEDER® TND XDX

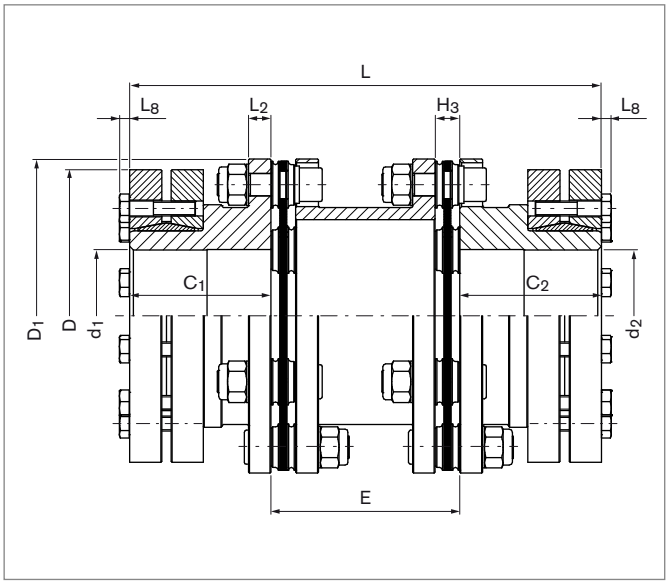
Hubs with RINGFEDER® Shrink Discs, Double-Jointed, with Spacer, Shaft-Hub Connection by Shrink Disc



Size 82-141
Hexagon Socket Screws



Size 169-254
Hexagon Head Screws



Size	$T_{KN}HD$ 1)	$T_{KN}HT$ 1)	n_{max} 2)	$d_1;d_2$ 3) min	$d_1;d_2$ 3) max	C_1 / C_2	E 5)	H_3	D_1	L_2	L	n_{Sc}	L_8
XDX	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	Quantity	mm
82	750	1050	3600	38	60	55	100 140 180	10,5	116	10	210 250 290	6	4
98	1350	1750	3600	50	70	60	100 140 180	12	140,5	11	220 260 300	6	5,3
118	2400	3000	3600	50	75	75	100 140 180	13	166,5	12	250 290 330	6	5,3
141	4000	5200	3400	65	95	90	140 180	15	198,5	14	320 360	6	7,5
169	6500	8500	3000	65	105	125	140 180 250	21	238	16	390 430 500	6	10
205	21000	26000	2500	95	145	160	200 250	28	295	22	520 570	8	10
254	36000	44000	2100	94	160	200	224 250 300	32,5	345	26	624 650 700	8	10

To continue see next page

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Size	E [5]	Gw_{sp}	$C_{Tdyn}HD$	$C_{Tdyn}HT$	Max. Permissible Misalignment [7] axial ΔK_aHD	axial ΔK_aHT	angular ΔK_wHD	angular ΔK_wHT	radial ΔK_rHD	radial ΔK_rHT
XDX	mm	kg	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
82	100	1,991	0,271	0,308	1,4	0,8	2	1,4	1,4	1,1
	140	2,289	0,246	0,277					2,1	1,5
	180	2,586	0,226	0,251					2,8	2,1
	Δ per 100 mm	*0,74*	*1,06*							
98	100	3,188	0,513	0,543	2	1,2	2	1,4	1,5	1
	140	3,627	0,469	0,494					2,1	1,5
	180	4,066	0,433	0,454					2,8	2
	Δ per 100 mm	*1,09*	*2,18*							
118	100	4,874	0,914	0,948	2,4	1,6	2	1,4	1,4	1
	140	5,574	0,855	0,884					2,1	1,5
	180	6,275	0,803	0,829					2,8	2
	Δ per 100 mm	*1,74*	*5,24*							
141	140	7,944	1,306	1,362	2,8	1,6	2	1,4	2	1,5
	180	8,718	1,229	1,279					2,7	2
	Δ per 100 mm	*1,92*	*8,3*							
169	140	14,179	2,467	3,035	3	2,4	2	1,4	2	1,4
	180	15,757	2,375	2,898					2,6	1,9
	250	18,520	2,231	2,686					3,8	2,7
	Δ per 100 mm	*3,92*	*25,36*							
205	200	32,689	8,995	9,142	2,2	1,2	1	0,8	1,4	1,2
	250	35,489	8,265	8,389					1,8	1,5
	Δ per 100 mm	*5,56*	*50,3*							
254	224	54,420	14,975	15,19	2,2	1,6	1	0,8	1,6	1,3
	250	56,404	14,302	14,497					1,8	1,5
	300	60,22	13,163	13,328						1,8
	Δ per 100 mm	*7,58*	*81,63*							

1) When selecting the coupling size, it is essential to observe the instructions on coupling dimensioning in the document "Product Paper & Tech Paper RINGFEDER® Steel Disc Couplings". Short-term peak torque T_{kmax} is limited to 1.75 multiples of T_{KN} or by the transmissible torque T of the shrink disc.

2) For longer spacers, check bending critical rotational speed.

3) Bore tolerance H6 up to diameter 80 mm; Bore tolerance H7 from diameter 80 mm.

5) Longer spacers on request. The figures given at "Δ per 100 mm" for Gw_{sp}, $C_{Tdyn}HD$ and $C_{Tdyn}HT$ are approximate values.

7) The maximum misalignment values must not apply simultaneously. The instructions on coupling dimensioning in the document "Product Paper & Tech Paper RINGFEDER® Steel Disc Couplings" are to be observed.

To continue see next page

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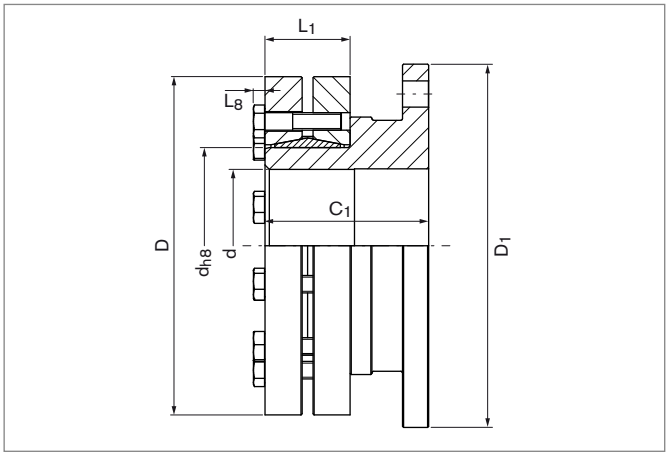
Shaft-Hub Connection by Shrink Discs RINGFEDER® RfN 4061



Shrink Discs RINGFEDER® RfN 4061							Sizing RINGFEDER® TND XDX						
d_{h8}	x	D	L_1	L_8	d	T	Size	D_1	C_1 / C_2	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max}	Gw_{hs}
mm			mm	mm	mm	Nm	XDX	mm	mm	Nm	Nm	1/min	kg
50	x	90	27,5	4	38 40 42	1350 1500 1700	82	116	55	750	1050	3600	2,3
55	x	100	30,5	4	42 45 48	1300 1550 1800	82	116	55	750	1050	3600	2,4
68	x	115	30,5	4	48 55 60	1700 2250 2850	82 98 118	116 140,5 166,5	55 60 75	750 1350 2400	1050 1750 3000	3600 3600 3600	2,8 3,6 5,8
75	x	138	32,5	5,3	55 60 65	2650 3300 4050	98 118	140,5 166,5	60 75	1350 2400	1750 3000	3600 3600	4,4 6,5
80	x	145	32,5	5,3	60 65 70	3200 3900 4600	98	140,5	60	1350	1750	3600	4,6
90	x	155	39	5,5	65 70 75	4800 6050 7300	118 141 169	166,5 198,5 238	75 90 125	2400 4000 6500	3000 5200 8500	3600 3400 3000	7,2 10,5 19
115	x	185	56	6,4	75 90 95	9100 12100 14050	141 169	198,5 238	90 125	4000 6500	5200 8500	3400 3000	12,6 20
140	x	230	60,5	7,5	95 100 105	15100 17550 20000	169 205 254	238 295 345	125 160 200	6500 21000 36000	8500 26000 44000	3000 2500 2100	24,4 40 60
165	x	290	71	10	105 120 125	25000 35500 39400	205 254	295 345	160 200	21000 36000	26000 44000	2500 2100	48,8 69
185	x	330	86,4	10	125 140 145	43500 57350 62400	205 254	295 345	160 200	21000 36000	26000 44000	2500 2100	60,4 80
200	x	350	86	10	145 155 160	69000 81000 87200	254	345	200	36000	44000	2100	77,7

The transmissible torque of the coupling is dependent on the selected disc pack as well as the type of the shaft-hub connection.
The lower torque limits the transmissibility and must be taken as a basis for the selection of the coupling.

To continue see next page

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Explanations

$T_{KN}HD$ = Nom. transmissible torque with disc pack HD

$T_{KN}HT$ = Nom. transmissible torque with disc pack HT

n_{max} = Max. rotational speed

d_{1min} = Min. bore diameter d_1

d_{2min} = Min. bore diameter d_2

d_{1max} = Max. bore diameter d_1

d_{2max} = Max. bore diameter d_2

C_1 = Guided length in hub bore

C_2 = Guided length in hub bore

E = Distance between hubs

H_3 = Width of the disc pack

D_1 = Max. outer diameter

L_2 = Hub flange thickness

L = Total length

n_{Sc} = Quantity of screws

L_8 = Overhang length

Gw_{sp} = Weight of spacer

Gw_{hs} = Weight of hub including shrink disc

$C_{Tdyn}HD$ = Dynamic torsional stiffness with disc pack HD

$C_{Tdyn}HT$ = Dynamic torsional stiffness with disc pack HT

ΔK_aHD = Max. permissible axial misalignment with disc pack HD

ΔK_aHT = Max. permissible axial misalignment with disc pack HT

ΔK_wHD = Max. permissible angular misalignment with disc pack HD

ΔK_wHT = Max. permissible angular misalignment with disc pack HT

ΔK_rHD = Max. permissible radial misalignment with disc pack HD

ΔK_rHT = Max. permissible radial misalignment with disc pack HT

Shrink Disc Selection

d_{h8} = Inner diameter

D = Outer diameter

L_1 = Min. installation length (without screws)

L_8 = Overhang length

d = Solid shaft diameter

T = Transmissible torque

Ordering example

Type	Size	Disc pack	Distance between hubs E	Bore diameter d_1	Shrink Disc RfN 4061 for bore diameter d_1	Bore diameter d_2	Shrink Disc RfN 4061 for bore diameter d_2
TND XDX	98	HD	100	50	68 x 115	60	68 x 115

Further information on
RINGFEDER® TND XDX
on **www.ringfeder.com**

Technical Information

- The specified values for transmissible torques are valid as follows: Shaft tolerance h6 for shaft diameters up to 50 mm; Shaft tolerance g6 for shaft diameters from 50 mm; Surface quality $R_a \leq 3.2$ µm.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs and the spacer are balanced without screwed-on disc packs.

RINGFEDER POWER TRANSMISSION