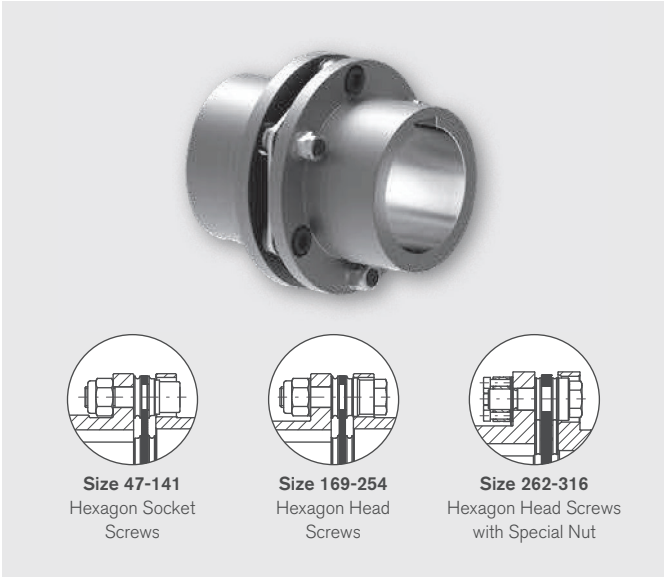
Steel Disc Couplings

RINGFEDER® TND HSH

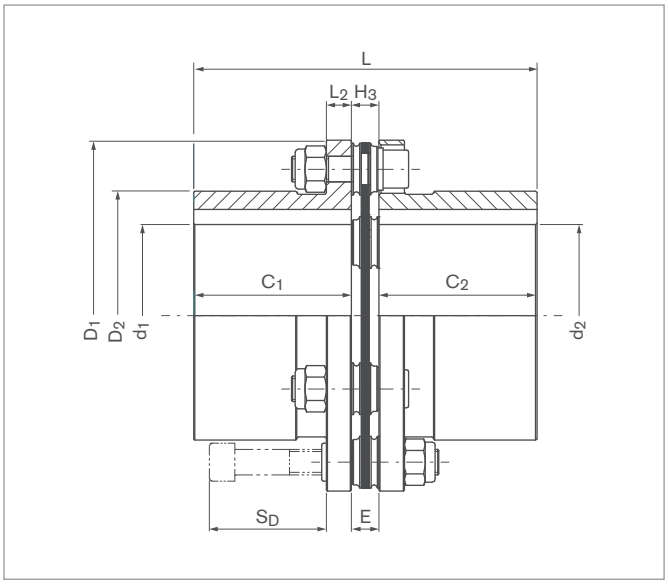
Standard Hubs, Single-Jointed, without Spacer, Shaft-Hub Connection by Keyway



Size 47-141
Hexagon Socket Screws

Size 169-254
Hexagon Head Screws

Size 262-316
Hexagon Head Screws with Special Nut



Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max}	d_{pre} [3]	$d_{1k};d_{2k}$ max [4]	C_1 / C_2	E	H_3	D_1	D_2	L_2	L	S_D	n_{Sc}
HSH	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
47	170	230	8400	10	32	39,5	7,5	7,5	70,5	47	5	86,5	24	6
63	320	420	6800	14	42	45	9	9	88	62,5	8	99	32	6
82	750	1050	5400	15	55	55	10,5	10,5	116	82	10	120,5	40	6
98	1350	1750	4600	19	65	60	12	12	140,5	98	11	132	47	6
118	2400	3000	3800	25	85	75	13	13	166,5	118	12	163	55	6
141	4000	5200	3400	30	95	90	15	15	198,5	141	14	195	64	6
169	6500	8500	3000	39	115	125	21	21	238	169	16	271	81	6
205	21000	26000	2500	59	140	160	28	28	295	205	22	348	112	8
254	36000	44000	2100	79	175	200	32,5	32,5	345	254	26	432,5	133	8
262	74000	---	1800	90	180	210	34	34	420	262	32	454	137	8
316	130000	---	1500	100	215	240	47	47	510	316	38	527	172	8

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Steel Disc Couplings RINGFEDER® TND HSH

Size	Gw_{SB} [6]	J_{SB} [6]	C_{TdynHD}	C_{TdynHT}	Max. Permissible Misalignment [7] axial ΔK_aHD	axial ΔK_aHT	angular ΔK_wHD	angular ΔK_wHT	radial ΔK_rHD	radial ΔK_rHT
HSH	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
47	1,3	0,5	0,173	0,184	0,5	0,3	1	0,7	---	---
63	2,6	1,6	0,281	0,312	0,5	0,4	1	0,7	---	---
82	5,6	5,9	0,637	0,743	0,7	0,4	1	0,7	---	---
98	8,8	14	1,173	1,251	1	0,6	1	0,7	---	---
118	15,4	35	2	2,082	1,2	0,8	1	0,7	---	---
141	25,9	84	2,992	3,142	1,4	0,8	1	0,7	---	---
169	50	230	5,269	6,586	1,5	1,2	1	0,7	---	---
205	97,8	700	21,848	22,285	1,1	0,6	0,5	0,4	---	---
254	171,2	1750	37,204	37,868	1,1	0,8	0,5	0,4	---	---
262	223,2	3260	46,192	---	1,6	---	0,5	---	---	---
316	384,4	8650	87,706	---	1,8	---	0,5	---	---	---

1) When selecting the 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}.

3) Pre-bore has free tolerance.

4) Maximum finished bore with keyways according to DIN 6885-1.

6) Weight and mass moments of inertia for pre-bored hubs.

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.

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_{pre} = Diamater pre-bore

d_{1kmax} = Max. bore diameter d_1 with keyway acc. to DIN 6885-1

d_{2kmax} = Max. bore diameter d_2 with keyway acc. to DIN 6885-1

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

D_2 = Outer diameter hub

L_2 = Hub flange thickness

L = Total length

S_D = Disassembly space

n_{Sc} = Quantity of screws

Gw_{SB} = Weight at smallest bore diameter

J_{SB} = Moment of inertia at smallest bore diameter.

C_{TdynHD} = Dynamic torsional stiffness with disc pack HD

C_{TdynHT} = 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

Ordering example

Type	Size	Disc pack	Bore diameter d_1	Bore diameter d_2
TND HSH	118	HD	60	80

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

Technical Information

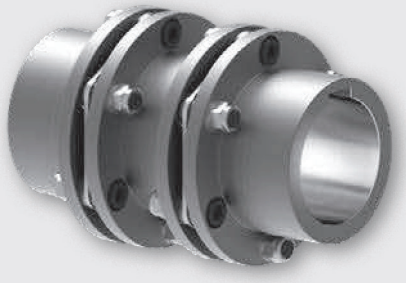
- Without further specifications, we deliver as standard: Bore tolerance H7; Keyway acc. to DIN 6885-1; Keyway width tolerance P9; Set screw per hub.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs are balanced half key (before grooving).

RINGFEDER POWER TRANSMISSION

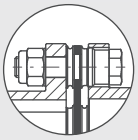
Steel Disc Couplings

RINGFEDER® TND HDH

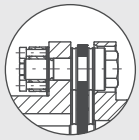
Standard Hubs, Double-Jointed, with Spacer, Shaft-Hub Connection by Keyway



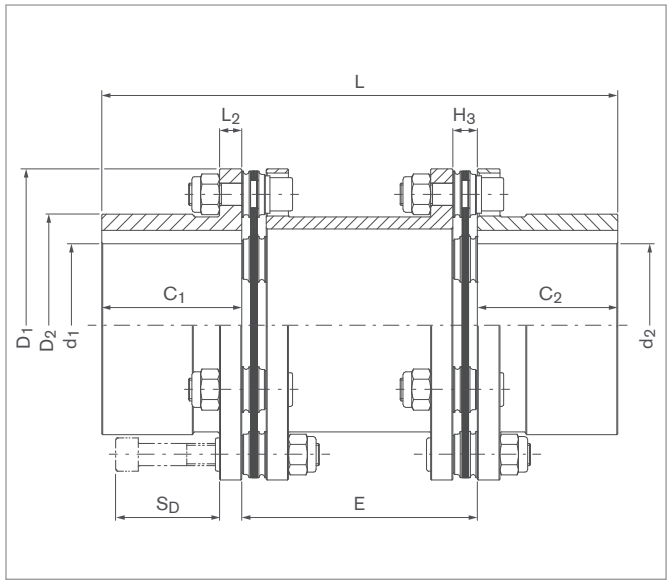
Size 47-141
Hexagon Socket Screws



Size 169-254
Hexagon Head Screws



Size 262-316
Hexagon Head Screws with Special Nut



Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max} [2]	d_{pre} [3]	$d_{1k};d_{2k}$ max [4]	C_1 / C_2	E [5]	H_3	D_1	D_2	L_2	L	S_D	n_{Sc}
HDH	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
47	170	230	8400	10	32	39,5	60 100 140	7,5	70,5	47	5	139 179 219	24	6
63	320	420	6800	14	42	45	70 80 100 140	9	88	62,5	8	160 170 190 230	32	6
82	750	1050	5400	15	55	55	100 140 180	10,5	116	82	10	210 250 290	40	6
98	1350	1750	4600	19	65	60	100 140 180	12	140,5	98	11	220 260 300	47	6
118	2400	3000	3800	25	85	75	100 140 180	13	166,5	118	12	250 290 330	55	6
141	4000	5200	3400	30	95	90	140 180	15	198,5	141	14	320 360	64	6
169	6500	8500	3000	39	115	125	140 180 250	21	238	169	16	390 430 500	81	6

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Steel Disc Couplings RINGFEDER® TND HDH

Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max} [2]	d_{pre} [3]	$d_{1k};d_{2k}$ max [4]	C_1 / C_2	E [5]	H_3	D_1	D_2	L_2	L	S_D	n_{Sc}
HDH	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
205	21000	26000	2500	59	140	160	200 250	28	295	205	22	520 570	112	8
254	36000	44000	2100	79	175	200	224 250 300	32,2	345	254	26	624 650 700	133	8
262	74000	---	1800	90	180	210	280	34	420	262	32	700	137	8
316	130000	---	1500	100	215	240	350	47	510	316	38	830	172	8

						Max. Permissible Misalignment [7]					
						axial		angular		radial	
Size	E [5]	Gw_{SB} [6]	J_{SB} [6]	$C_{Tdyn}HD$	$C_{Tdyn}HT$	ΔK_aHD	ΔK_aHT	ΔK_wHD	ΔK_wHT	ΔK_rHD	ΔK_rHT
HDH	mm	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
47	60	1,7	0,76	0,071	0,075	1,0	0,6	2	1,4	0,8	0,6
	100	1,8	0,76	0,059	0,062					1,5	1,1
	140	1,9	0,76	0,071	0,075					2,2	1,5
	Δ per 100 mm	*0,31*	*0,14*	*0,14*							
63	70	3,3	2,5	0,126	0,139	1,0	0,8	2	1,4	1	0,7
	80	3,3	2,6	0,123	0,134					1,1	0,8
	100	3,5	2,7	0,116	0,127					1,5	1,1
	140	3,7	2,8	0,105	0,114					2,1	1,6
	Δ per 100 mm	*0,55*	*0,44*	*0,44*							
82	100	7,1	9,1	0,271	0,308	1,4	0,8	2	1,4	1,4	1,1
	140	7,4	9,5	0,246	0,277					2,1	1,5
	180	7,7	9,9	0,226	0,251					2,8	2,1
	Δ per 100 mm	*0,74*	*0,10*	*1,06*							
98	100	11,1	21	0,513	0,543	2,0	1,2	2	1,4	1,5	1
	140	11,5	22	0,469	0,494					2,1	1,5
	180	12	23	0,433	0,454					2,8	2
	Δ per 100 mm	*1,09*	*1,04*	*2,18*							
118	100	18,9	52	0,914	0,948	2,4	1,6	2	1,4	1,4	1
	140	19,6	54	0,855	0,884					2,1	1,5
	180	20,3	56	0,803	0,829					2,8	2
	Δ per 100 mm	*1,74*	*5,14*	*5,24*							
141	140	31,7	120	1,306	1,362	2,8	1,6	2	1,4	2	1,5
	180	32,5	130	1,229	1,279					2,7	2
	Δ per 100 mm	*1,92*	*8,14*	*8,3*							
169	140	60,2	340	2,467	3,035	3	2,4	2	1,4	2	1,4
	180	61,8	350	2,375	2,898					2,6	1,9
	250	64,5	360	2,231	2,686					3,8	2,7
	Δ per 100 mm	*3,92*	*24,88*	*25,36*							
205	200	119,6	1070	8,995	9,142	2,2	1,2	1	0,8	1,4	1,2
	250	122,4	1100	8,265	8,389					1,8	1,5
	Δ per 100 mm	*5,56*	*49,36*	*50,3*							

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Steel Disc Couplings RINGFEDER® TND HDH

Size	E [5]	Gw_{SB} [6]	J_{SB} [6]	C_{TdynHD}	C_{TdynHT}	Max. Permissible Misalignment [7] axial ΔK_aHD	axial ΔK_aHT	angular ΔK_wHD	angular ΔK_wHT	radial ΔK_rHD	radial ΔK_rHT
HDH	mm	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
	224	207,5	2620	14,975	15,19					1,6	1,3
254	250	209,5	2640	14,302	14,497	2,2	1,6	1	0,8	1,8	1,5
	300	213,3	2680	13,163	13,328					2,2	1,8
	Δ per 100 mm	*7,58*	*80,10*	*81,63*							
262	280	261,9	5350	18,116	---	3,2	---	1	---	2,5	---
	Δ per 100 mm	*8,75*	*121,28*	*122,81*							
316	350	450,1	14430	36,134	---	3,8	---	1	---	3	---
	Δ per 100 mm	*11,05*	*221,59*	*224,4*							

1) When selecting the 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}.

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

3) Pre-bore has free tolerance.

4) Maximum finished bore with keyways according to DIN 6885-1.

5) Longer spacers on request. The figures given at "Δ per 100 mm" for Gw_{SB}, J_{SB}, C_{TdynHD} and C_{TdynHT} are approximate values.

6) Weight and mass moments of inertia for pre-bored hubs.

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.

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_{pre} = Diamater pre-bore

d_{1kmax} = Max. bore diameter d_1 with keyway acc. to DIN 6885-1

d_{2kmax} = Max. bore diameter d_2 with keyway acc. to DIN 6885-1

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

D_2 = Outer diameter hub

L_2 = Hub flange thickness

L = Total length

S_D = Disassembly space

n_{Sc} = Quantity of screws

Gw_{SB} = Weight at smallest bore diameter

J_{SB} = Moment of inertia at smallest bore diameter.

C_{TdynHD} = Dynamic torsional stiffness with disc pack HD

C_{TdynHT} = 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

Ordering example

Type	Size	Disc pack	Distance between hubs E	Bore diameter d_1	Bore diameter d_2
TND HDH	118	HT	140	60	80

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

Technical Information

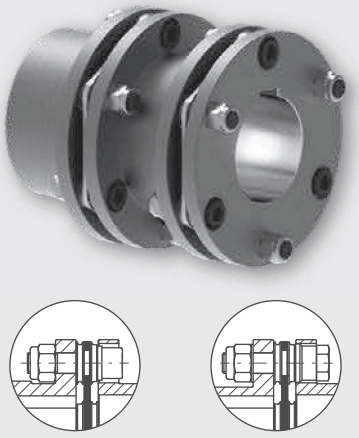
- Without further specifications, we deliver as standard: Bore tolerance H7; Keyway acc. to DIN 6885-1; Keyway width tolerance P9; Set screw per hub.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs are balanced half key (before grooving), the spacer without screwed-on disc packs.

RINGFEDER POWER TRANSMISSION

Steel Disc Couplings

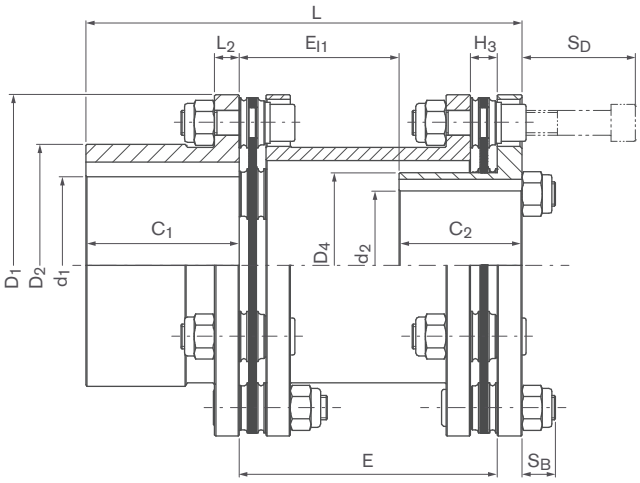
RINGFEDER® TND HDV

Combination of Standard Hub and Inverted Hub, Double-Jointed, with Spacer, Shaft-Hub Connection by Keyway



Size 47-141
Hexagon Socket Screws

Size 169-254
Hexagon Head Screws



Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max} [2]	d_{pre} [3]	d_{1kmax} [4]	d_{2kmax} [4]	C_1/C_2	E_{I1}	E [5]	H_3	D_1	D_2	D_4	L_2	L	S_B	S_D	n_{Sc}
HDV	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
47	170	230	8400	10	32	25	39,5	25,5 65,5 105,5	60 100 140	7,5	70,5	47	37	5	105 145 185	11	24	6
63	320	420	6800	14	42	32	45	33 43 63 103	70 80 100 140	9	88	62,5	48	8	123 133 153 193	14	32	6
82	750	1050	5400	15	55	44	55	55 95 135	100 140 180	10,5	116	82	64	10	165 205 245	16	40	6
98	1350	1750	4600	19	65	50	60	51 91 131	100 140 180	12	140,5	98	77	11	171 211 251	19	47	6
118	2400	3000	3800	25	85	60	75	37 77 117	100 140 180	13	166,5	118	90,5	12	187 227 267	21	55	6
141	4000	5200	3400	30	95	75	90	64 104	140 180	15	198,5	141	114	14	244 284	23	64	6
169	6500	8500	3000	39	115	90	125	31 71 141	140 180 250	21	238	169	135	16	281 321 391	29	81	6

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Steel Disc Couplings RINGFEDER® TND HDV

Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max} [2]	d_{pre} [3]	d_{1kmax} [4]	d_{2kmax} [4]	C_1/C_2	E_{l1}	E [5]	H_3	D_1	D_2	D_4	L_2	L	S_B	S_D	n_{Sc}
HDV	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
205	21000	26000	2500	59	140	115	160	62 112	200 250	28	295	205	170	22	382 432	32	112	8
254	36000	44000	2100	79	175	120	200	50 76 126	224 250 300	32,5	345	254	180	26	450 476 526	40	133	8

						Max. Permissible Misalignment [7]					
						axial		angular		radial	
Size	E [5]	Gw_{SB} [6]	J_{SB} [6]	$C_{Tdyn}HD$	$C_{Tdyn}HT$	ΔK_aHD	ΔK_aHT	ΔK_wHD	ΔK_wHT	ΔK_rHD	ΔK_rHT
HDV	mm	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
47	60	1,4	0,69	0,071	0,075	1,0	0,6	2	1,4	0,8	0,6
	100	1,6	0,75	0,059	0,062					1,5	1,1
	140	1,7	0,8	0,051	0,053					2,2	1,5
63	70	2,9	2,33	0,123	0,134	1,0	0,8	2	1,4	1	0,7
	80	2,9	2,37	0,123	0,134					1,1	0,8
	100	3	2,46	0,116	0,127					1,5	1,1
	140	3,2	2,63	0,105	0,114					2,1	1,6
82	100	5,4	8,83	0,271	0,308	1,4	0,8	2	1,4	1,4	1,1
	140	6,7	9,23	0,246	0,277					2,1	1,5
	180	7	9,65	0,226	0,251					2,8	2,1
98	100	9,9	20,35	0,513	0,543	2,0	1,2	2	1,4	1,5	1
	140	10,4	21,21	0,469	0,494					2,1	1,5
	180	10,8	22,07	0,433	0,454					2,8	2
118	100	16	46,28	0,914	0,948	2,4	1,6	2	1,4	1,4	1
	140	16,7	48,34	0,855	0,884					2,1	1,5
	180	17,3	50,39	0,803	0,829					2,8	2
141	140	26,4	98,01	1,306	1,362	2,8	1,6	2	1,4	2	1,5
	180	28,5	105,33	1,229	1,279					2,7	2
169	140	50,7	289,79	2,467	3,035	3	2,4	2	1,4	2	1,4
	180	52,3	299,74	2,375	2,898					2,6	1,9
	250	55	317,15	2,231	2,686					3,8	2,7
205	200	105	951,03	8,995	9,142	2,2	1,2	1	0,8	1,4	1,2
	250	107,8	975,71	8,265	8,389					1,8	1,5
254	224	169,2	2131,73	14,975	15,19	2,2	1,6	1	0,8	1,6	1,3
	250	171,2	2152,56	14,302	14,497					1,8	1,5
	300	175	2192,61	13,163	13,328					2,2	1,8

1) When selecting the 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}.

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

3) Pre-bore has free tolerance.

4) Maximum finished bore with keyways according to DIN 6885-1.

5) Longer spacers on request.

6) Weight and mass moments of inertia for pre-bored hubs.

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

Steel Disc Couplings RINGFEDER® TND HDV

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_{pre} = Diamater pre-bore

d_{1kmax} = Max. bore diameter d_1 with keyway acc. to DIN 6885-1

d_{2kmax} = Max. bore diameter d_2 with keyway acc. to DIN 6885-1

C_1 = Guided length in hub bore

C_2 = Guided length in hub bore

E_{l1} = Distance between hubs

E = Distance between hubs

H_3 = Width of the disc pack

D_1 = Max. outer diameter

D_2 = Outer diameter hub

D_4 = Outer diameter of the inverted hub

L_2 = Hub flange thickness

L = Total length

S_B = Protruding of the screw

S_D = Disassembly space

n_{Sc} = Quantity of screws

Gw_{SB} = Weight at smallest bore diameter

J_{SB} = Moment of inertia at smallest bore diameter

$C_{Tdyn}HD$ = 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

Ordering example

Type	Size	Disc pack	Distance between hubs E	Bore diameter d_1	Bore diameter d_2
TND HDV	118	HD	140	85	60

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

Technical Information

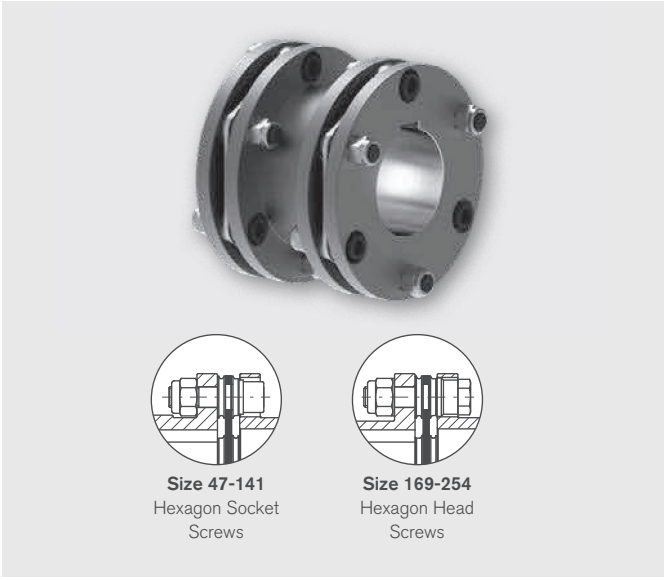
- Without further specifications, we deliver as standard: Bore tolerance H7; Keyway acc. to DIN 6885-1; Keyway width tolerance P9; Set screw per hub.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs are balanced half key (before grooving), the spacer without screwed-on disc packs.

RINGFEDER POWER TRANSMISSION

Steel Disc Couplings

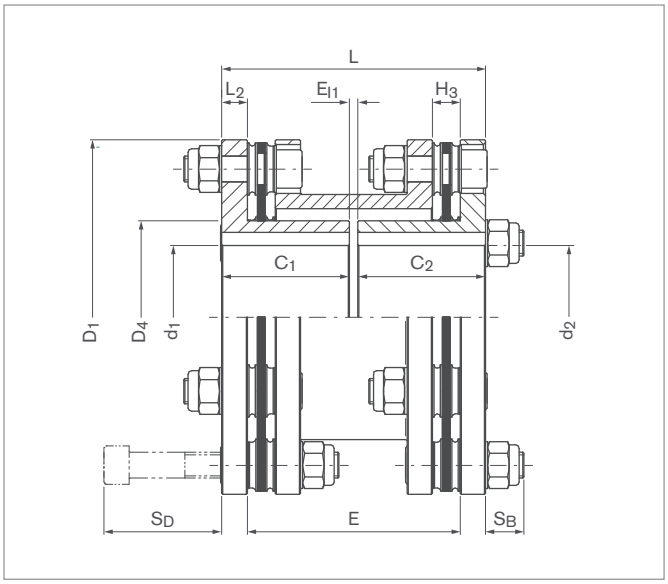
RINGFEDER® TND VDV

Inverted Hubs, Double-Jointed, with Spacer, Shaft-Hub Connection by Keyway



Size 47-141
Hexagon Socket Screws

Size 169-254
Hexagon Head Screws



Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max} [2]	d_{pre} [3]	$d_{1k};d_{2k}$ max [4]	C_1 / C_2	E_{l1}	E [5]	H_3	D_1	D_4	L_2	L	S_B	S_D	n_{Sc}
VDV	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
47	170	230	8400	10	25	33 39,5	4 31	60 100	7,5	70,5	37	5	70 110	11	24	6
63	320	420	6800	14	32	41 45	4 6	70 80	9	88	48	8	86 96	14	32	6
82	750	1050	5400	15	44	55 55	10 50	100 140	10,5	116	64	10	120 160	16	40	6
98	1350	1750	4600	19	50	59 60	4 42	100 140	12	140,5	77	11	122 162	19	47	6
118	2400	3000	3800	25	60	60 75	4 14	100 140	13	166,5	90,5	12	124 164	21	55	6
141	4000	5200	3400	30	75	81 90	6 28	140 180	15	198,5	114	14	168 208	23	64	6
169	6500	8500	3000	39	90	103 125	6 32	180 250	21	238	135	16	212 282	29	81	6
205	21000	26000	2500	59	115	142	10	250	28	295	170	22	294	32	112	8
254	36000	44000	2100	79	120	146 171	10 10	250 300	32,5	345	180	26	302 352	40	133	8

To continue see next page

Steel Disc Couplings RINGFEDER® TND VDV

Size	E [5]	Gw_{SB} [6]	J_{SB} [6]	C_{TdynHD}	C_{TdynHT}	Max. Permissible Misalignment [7]					
						axial		angular		radial	
						ΔK_aHD	ΔK_aHT	ΔK_wHD	ΔK_wHT	ΔK_rHD	ΔK_rHT
VDV	mm	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
47	60	1,2	0,6	0,071	0,075	1	0,6	2	1,4	0,8	0,6
	100	1,4	0,66	0,059	0,062					1,5	1,1
63	70	2,4	2,04	0,126	0,139	1	0,8	2	1,4	1	0,7
	80	2,5	2,08	0,126	0,139					1,1	0,8
82	100	5,7	7,90	0,271	0,308	1,4	0,8	2	1,4	1,4	1,1
	140	6	8,32	0,246	0,277					2,1	1,5
98	100	8,8	18,36	0,513	0,543	2	1,2	2	1,4	1,5	1
	140	9,2	19,22	0,469	0,494					2,1	1,5
118	100	13,1	39,38	0,914	0,948	2,4	1,6	2	1,4	1,4	1
	140	13,8	41,44	0,855	0,884					2,1	1,5
141	140	22,6	100,41	1,306	1,362	2,8	1,6	2	1,4	2	1,5
	180	24,7	105,33	1,229	1,279					2,7	2
169	180	43,5	256,20	2,375	2,898	3	2,4	2	1,4	2,6	1,9
	250	46,2	273,61	2,231	2,686					3,8	2,7
205	250	93,4	862,77	8,265	8,389	2,2	1,2	1	0,8	1,8	1,5
254	250	132,8	1734,93	14,302	14,497	2,2	1,6	1	0,8	1,8	1,5
	300	136,6	1774,98	13,163	13,328					2,2	1,8

1) When selecting the 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}.

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

3) Pre-bore has free tolerance.

4) Maximum finished bore with keyways according to DIN 6885-1.

5) Longer spacers on request.

6) Weight and mass moments of inertia for pre-bored hubs.

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

Steel Disc Couplings RINGFEDER® TND VDV

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_{pre} = Diamater pre-bore

d_{1kmax} = Max. bore diameter d_1 with keyway acc. to DIN 6885-1

d_{2kmax} = Max. bore diameter d_2 with keyway acc. to DIN 6885-1

C_1 = Guided length in hub bore

C_2 = Guided length in hub bore

E_{l1} = Distance between hubs

E = Distance between hubs

H_3 = Width of the disc pack

D_1 = Max. outer diameter

D_4 = Outer diameter of the inverted hub

L_2 = Hub flange thickness

L = Total length

S_B = Protruding of the screw

S_D = Disassembly space

n_{Sc} = Quantity of screws

Gw_{SB} = Weight at smallest bore diameter

J_{SB} = Moment of inertia at smallest bore diameter

C_{TdynHD} = Dynamic torsional stiffness with disc pack HD

C_{TdynHT} = 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

Ordering example

Type	Size	Disc pack	Distance between hubs E	Bore diameter d_1	Bore diameter d_2
TND VDV	118	HD	140	60	60

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

Technical Information

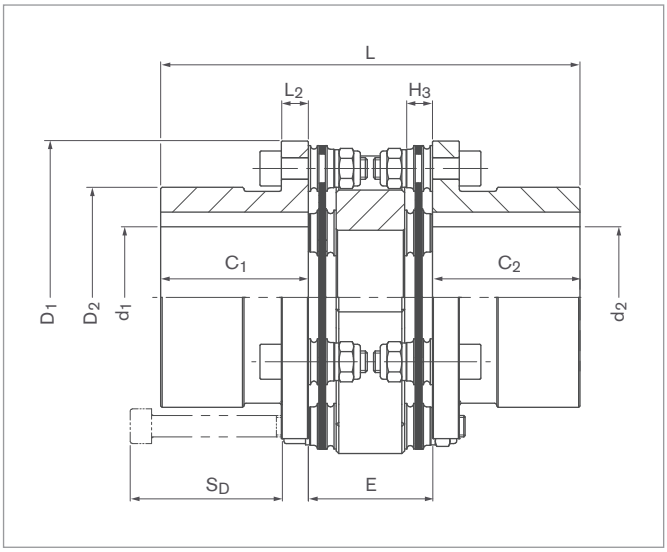
- Without further specifications, we deliver as standard: Bore tolerance H7; Keyway acc. to DIN 6885-1; Keyway width tolerance P9; Set screw per hub.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs are balanced half key (before grooving), the spacer without screwed-on disc packs.

RINGFEDER POWER TRANSMISSION

Steel Disc Couplings

RINGFEDER® TND OCO

Standard Hubs with Open Flange, Double-Jointed, with Compact-Spacer, Shaft-Hub Connection by Keyway



Size	$T_{KN}HD$ [1]	$T_{KN}HT$ [1]	n_{max}	d_{pre} [3]	$d_{1k};d_{2k}$ max [4]	C_1 / C_2	E	H_3	D_1	D_2	L_2	L	S_D	n_{Sc}
OCO	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
47	170	230	8400	10	32	39,5	31,2	7,5	70,5	47	5	110	24	6
63	320	420	6800	14	42	45	38	9	88	62,5	8	128	32	6
82	750	1050	5400	15	55	55	46,5	10,5	116	82	10	156,5	40	6
98	1350	1750	4600	19	65	60	55	12	140,5	98	11	175	47	6

					Max. Permissible Misalignment [7]					
					axial		angular		radial	
Size	Gw_{SB} [6]	J_{SB} [6]	$C_{Tdyn}HD$	$C_{TdyN}HT$	ΔK_aHD	ΔK_aHT	ΔK_wHD	ΔK_wHT	ΔK_rHD	ΔK_rHT
OCO	kg	$10^{-3}kgm^2$	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
47	1,6	0,71	0,084	0,089	0,9	0,5	2	1,4	0,3	0,2
63	3,1	2,2	0,136	0,151	0,8	0,7	2	1,4	0,4	0,3
82	6,7	8	0,309	0,360	1,4	0,6	2	1,4	0,5	0,4
98	10,3	18	0,569	0,607	2	1	2	1,4	0,7	0,5

1) When selecting the 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}.

3) Pre-bore has free tolerance.

4) Maximum finished bore with keyways according to DIN 6885-1.

6) Weight and mass moments of inertia for pre-bored hubs.

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

Steel Disc Couplings RINGFEDER® TND OCO

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_{pre} = Diamater pre-bore

d_{1kmax} = Max. bore diameter d_1 with keyway acc. to DIN 6885-1

d_{2kmax} = Max. bore diameter d_2 with keyway acc. to DIN 6885-1

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

D_2 = Outer diameter hub

L_2 = Hub flange thickness

L = Total length

S_D = Disassembly space

n_{Sc} = Quantity of screws

Gw_{SB} = Weight at smallest bore diameter

J_{SB} = Moment of inertia at smallest bore diameter.

C_{TdynHD} = Dynamic torsional stiffness with disc pack HD

C_{TdynHT} = 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

Ordering example

Type	Size	Disc pack	Bore diameter d_1	Bore diameter d_2
TND OCO	98	HD	50	60

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

Technical Information

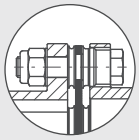
- Without further specifications, we deliver as standard: Bore tolerance H7; Keyway acc. to DIN 6885-1; Keyway width tolerance P9; Set screw per hub.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is recommended.
- Without further instructions on balancing, the coupling parts are balanced individually according to DIN 21940-11 in quality G 6,3 at 1,500 1/min. The hubs are balanced half key (before grooving), the spacer without screwed-on disc packs.

Steel Disc Couplings

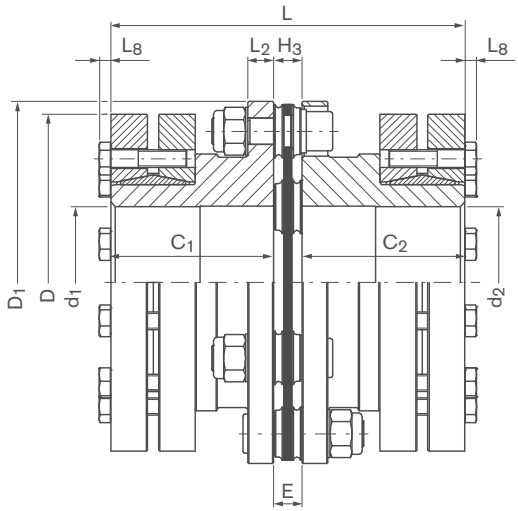
RINGFEDER® TND XSX

Hubs with RINGFEDER® Shrink Discs, Single-Jointed, without 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}	$d_1;d_2$ [3] min	$d_1;d_2$ [3] max	C_1 / C_2	E	H_3	D_1	L_2	L	n_{Sc}
XSX	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	Quantity
82	750	1050	3600	38	60	55	10,5	10,5	116	10	120,5	6
98	1350	1750	3600	50	70	60	12	12	140,5	11	132	6
118	2400	3000	3600	50	75	75	13	13	166,5	12	163	6
141	4000	5200	3400	65	95	90	15	15	198,5	14	195	6
169	6500	8500	3000	65	105	125	21	21	238	16	271	6
205	21000	26000	2500	95	145	160	28	28	295	22	348	8
254	36000	44000	2100	95	160	200	32,5	32,5	345	26	432,5	8

Size	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
XSX	kg	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
82	0,5	0,637	0,743	0,7	0,4	1	0,7	---	---
98	0,85	1,173	1,251	1	0,6	1	0,7	---	---
118	1,36	2	2,082	1,2	0,8	1	0,7	---	---
141	2,096	2,992	3,142	1,4	0,8	1	0,7	---	---
169	4,032	5,269	6,586	1,5	1,2	1	0,7	---	---
205	10,903	21,848	22,285	1,1	0,6	0,5	0,4	---	---
254	18,135	37,204	37,868	1,1	0,8	0,5	0,4	---	---

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.

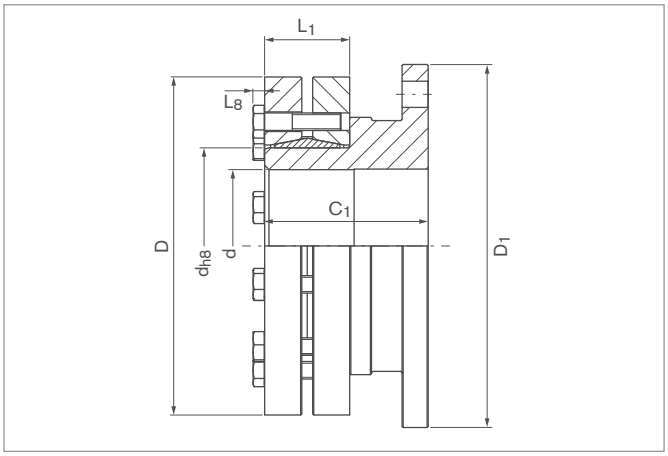
3) Bore tolerance H6 up to diameter 80 mm; Bore tolerance H7 from diameter 80 mm.

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

Steel Disc Couplings RINGFEDER® TND XSX

Shaft-Hub Connection by Shrink Discs RINGFEDER® RfN 4061



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

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

Steel Disc Couplings RINGFEDER® TND XSX

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

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

$\Delta K_a HD$ = Max. permissible axial misalignment with disc pack HD

$\Delta K_a HT$ = Max. permissible axial misalignment with disc pack HT

$\Delta K_w HD$ = Max. permissible angular misalignment with disc pack HD

$\Delta K_w HT$ = Max. permissible angular misalignment with disc pack HT

$\Delta K_r HD$ = Max. permissible radial misalignment with disc pack HD

$\Delta K_r HT$ = 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	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 XSX	98	HD	50	68 x 115	60	68 x 115

Further information on
RINGFEDER® TND XSX
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 are balanced without screwed-on disc pack.

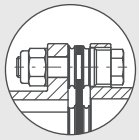
RINGFEDER POWER TRANSMISSION

Steel Disc Couplings

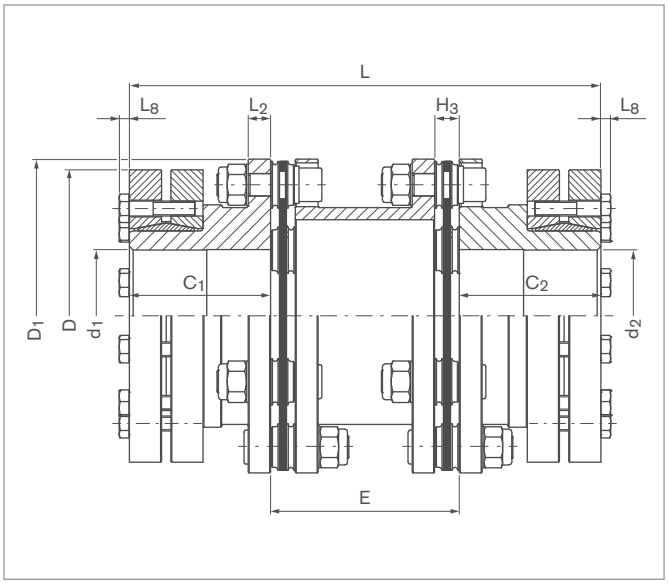
RINGFEDER® TND XDX

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

Steel Disc Couplings RINGFEDER® TND XDX

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.

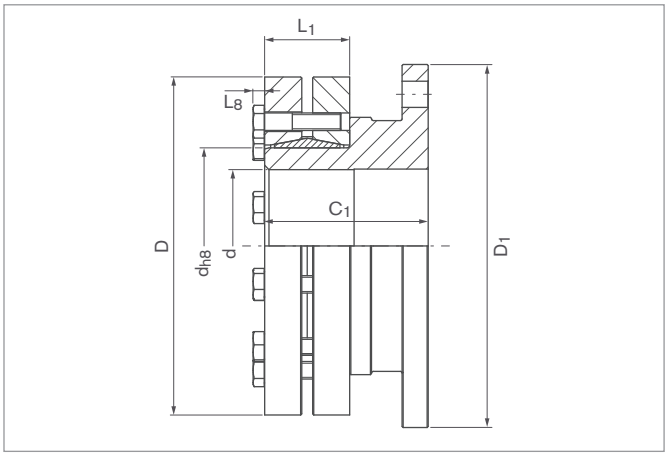
5) Longer spacers on request. The figures given at "Δ per 100 mm" for Gw_{sp}, $C_{Tdyn}HD$ and $C_{Tdyn}HT$ are approximate values.

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

Steel Disc Couplings RINGFEDER® TND XDX

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	1350							
					40	1500	82	116	55	750	1050	3600	2,3
					42	1700							
55	x	100	30,5	4	42	1300							
					45	1550	82	116	55	750	1050	3600	2,4
					48	1800							
68	x	115	30,5	4	48	1700	82	116	55	750	1050	3600	2,8
					55	2250	98	140,5	60	1350	1750	3600	3,6
					60	2850	118	166,5	75	2400	3000	3600	5,8
75	x	138	32,5	5,3	55	2650	98	140,5	60	1350	1750	3600	4,4
					60	3300	118	166,5	75	2400	3000	3600	6,5
					65	4050							
80	x	145	32,5	5,3	60	3200							
					65	3900	98	140,5	60	1350	1750	3600	4,6
					70	4600							
90	x	155	39	5,5	65	4800	118	166,5	75	2400	3000	3600	7,2
					70	6050	141	198,5	90	4000	5200	3400	10,5
					75	7300	169	238	125	6500	8500	3000	19
115	x	185	56	6,4	75	9100	141	198,5	90	4000	5200	3400	12,6
					90	12100	169	238	125	6500	8500	3000	20
					95	14050							
140	x	230	60,5	7,5	95	15100	169	238	125	6500	8500	3000	24,4
					100	17550	205	295	160	21000	26000	2500	40
					105	20000	254	345	200	36000	44000	2100	60
165	x	290	71	10	105	25000	205	295	160	21000	26000	2500	48,8
					120	35500	254	345	200	36000	44000	2100	69
					125	39400							
185	x	330	86,4	10	125	43500	205	295	160	21000	26000	2500	60,4
					140	57350	254	345	200	36000	44000	2100	80
					145	62400							
200	x	350	86	10	145	69000							
					155	81000	254	345	200	36000	44000	2100	77,7
					160	87200							

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

Steel Disc Couplings RINGFEDER® TND XDX

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

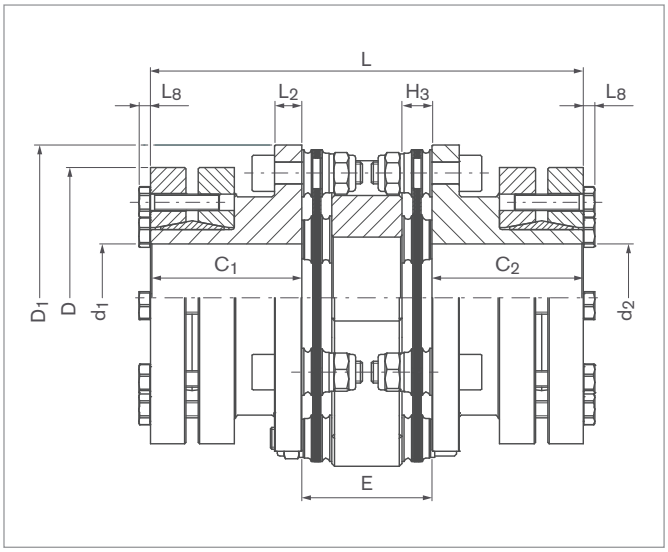
- The specified values for transmissible torques are valid as follows: Shaft tolerance h6 for shaft diameters up to 50 mm; Shaft tolerance g6 for shaft diameters from 50 mm; Surface quality $R_a \leq 3.2$ µm.
- From a peripheral speed of 30 m/s, separate balancing of the individual coupling parts is 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

Steel Disc Couplings

RINGFEDER® TND QCQ

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



Size	$T_{KN}HD$ 1)	$T_{KN}HT$ 1)	n_{max}	$d_1;d_2$ 3) min	$d_1;d_2$ 3) max	C_1 / C_2	E	H_3	D_1	L_2	L	n_{Sc}	L_8
QCQ	Nm	Nm	1/min	mm	mm	mm	mm	mm	mm	mm	mm	Quantity	mm
82	750	1050	3600	38	65	55	46,5	10,5	116	10	156,5	6	5,3
98	1350	1750	3600	50	70	60	55	12	140,5	11	175	6	5,3

Size	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
QCQ	kg	10^6 Nm/rad	10^6 Nm/rad	mm	mm	Degrees	Degrees	mm	mm
82	1,8	0,309	0,360	1,4	0,6	2	1,4	0,5	0,4
98	2,9	0,569	0,607	2	1	2	1,4	0,7	0,5

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.

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

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.

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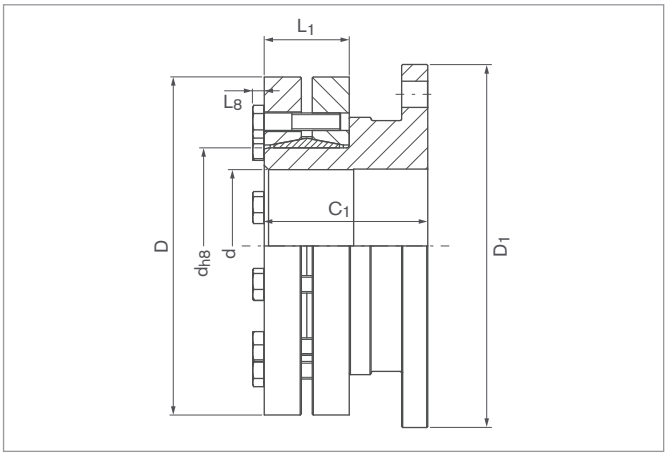
Steel Disc Couplings RINGFEDER® TND QCQ

Shaft-Hub Connection by Shrink Discs RINGFEDER® RfN 4061



Shrink Discs RINGFEDER® RfN 4061							Sizing RINGFEDER® TND QCQ						
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	QCQ	mm	mm	Nm	Nm	1/min	kg
50	x	90	27,5	4	38	1350	82	116	55	750	1050	3600	2,2
					40	1500							
					42	1700							
55	x	100	30,5	4	42	1300	82	116	55	750	1050	3600	2,3
					45	1550							
					48	1800							
68	x	115	30,5	4	48	1700	82	116	55	750	1050	3600	2,7
					55	2250	98	140,5	60	1350	1750	3600	3,4
					60	2850							
75	x	138	32,5	5,3	55	2650	98	140,5	60	1350	1750	3600	4,2
					60	3300							
					65	4050							
80	x	145	32,5	5,3	60	3200	98	140,5	60	1350	1750	3600	4,4
					65	3900							
					70	4600							

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

Steel Disc Couplings RINGFEDER® TND QCQ

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	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 QCQ	98	HD	50	68 x 115	60	68 x 115

Further information on
RINGFEDER® TND QCQ
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