

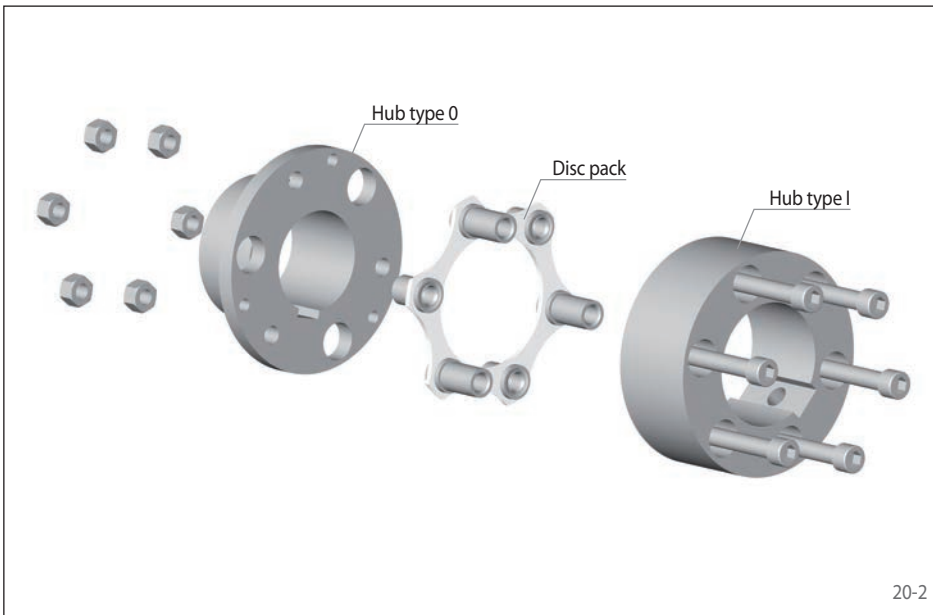
torsionally rigid  
single disc pack



20-1

## Features

- Nominal torques up to 13 300 Nm
- Combines high torque capacity with low weight
- Backlash free
- Compensation of axial and angular misalignments
- High torsional rigidity with low axial rigidity
- Temperature range -20 °C to +280 °C
- Maintenance free and long life with proper alignment
- Typical application: Pumps, fans, packaging machines, paper machines, printing machines, conveyor systems, dynamometers, gantry systems



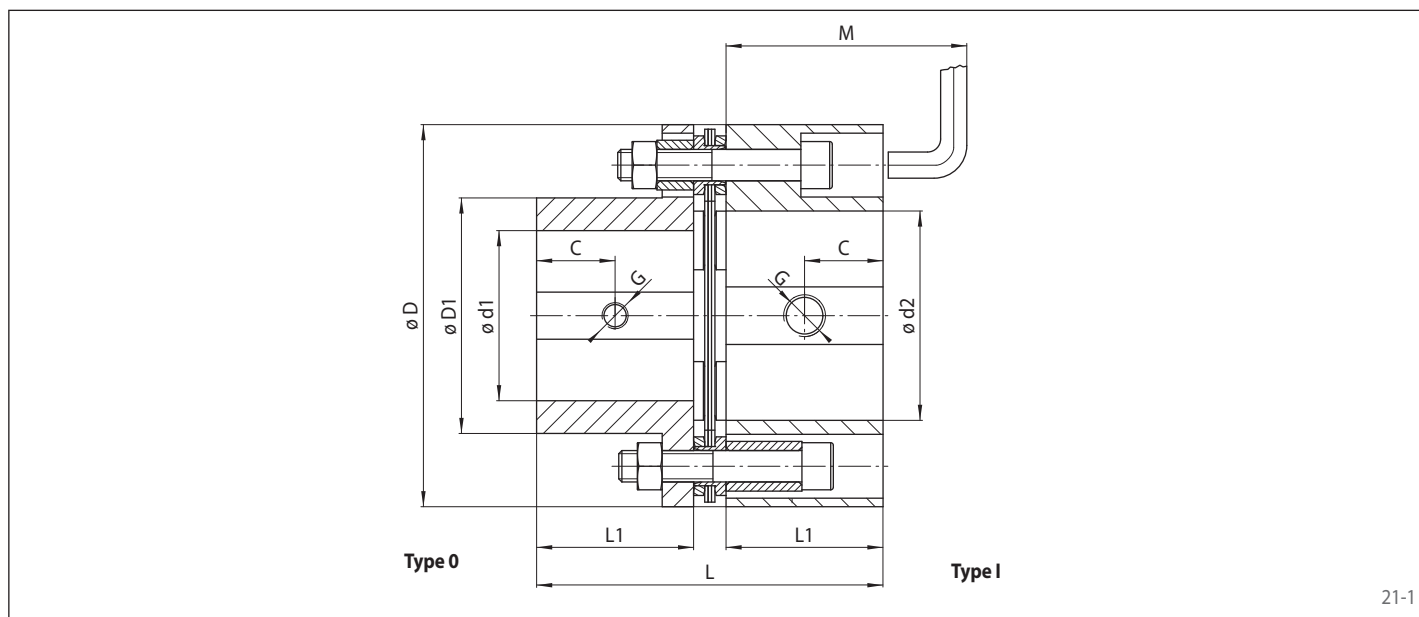
20-2

## Order example

Order example	Code
Coupling design	RDL
Coupling size	0038
Type	DSO
Material of the hub: • Steel	STA
Hub 1, type: • 0, standard • I, increased max. bore	0 1
Hub 1, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d1	025
Hub 2, type: • 0, standard • I, increased max. bore	0 1
Hub 2, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d2	030

RDL 0038 DSO-STA-0FB025-1FB030

torsionally rigid  
single disc pack



21-1

Coupling size	Nominal torque $T_{KN}$ Nm	Nominal power at $100 \text{ min}^{-1}$ $P_{K100}$ kW	Max. speed $n_{max}$ $\text{min}^{-1}$	Torsional stiffness $C_T$ MNm/rad	Moment of inertia $J_K$ kgm <sup>2</sup>	Permissible misalignments		
						Axial mm	Radial mm	Angular °
0024	64	0,67	7500	0,043	0,0003	±1	Due to design, no radial misalignments are permissible.	0,75
0038	159	1,67	7000	0,062	0,0008			
0048	510	5,40	6000	0,118	0,0026			
0065	850	9,00	5200	0,260	0,0087			
0075	1330	14	4800	0,492	0,0170			
0100	2380	25	4400	1,228	0,0450			
0110	3340	35	4200	1,926	0,0890			
0125	5000	53	4000	3,613	0,1600			
0140	7100	75	3800	on demand	0,2700			
0150	10000	105	3700		0,4400			
0160	13300	140	3600		0,6700	±2		

Torsional stiffness and moment of inertia refer to a combination of hub type 0 and hub type I with max. possible bore diameter respectively.

Coupling size	Min. bore $d1 / d2$ mm	Max. bore $d1 / d2$ mm		D mm	D1 mm	C mm	L mm	L1 mm	M* mm	Gap O mm	Weight kg
		Hub type 0	Hub type I								
0024	10	24	25	63	35	15,0	66,5	30	75	6,5	0,87
0038	12	30	38	82	45	20,0	86,5	40	85	6,5	1,80
0048	17	40	50	102	57	22,5	98,0	45	95	8,0	3,20
0065	17	52	70	128	77	27,5	119,5	55	110	9,5	5,83
0075	22	65	80	146	94	30,0	132,0	60	120	12,0	8,40
0100	27	80	100	176	115	35,0	153,0	70	140	13,0	14,10
0110	32	90	115	197	132	45,0	194,4	90	175	14,4	22,10
0125	42	105	130	225	147	47,5	206,2	95	185	16,2	30,70
0140	47	115	140	250	162	52,5	229,5	105	195	19,5	42,80
0150	52	120	155	275	178	57,5	251,5	115	215	21,5	57,60
0160	62	135	165	300	190	65,0	283,5	130	235	23,5	76,20

For finish bores, please specify diameter d1 and d2. Tolerance of finish bores H7. Keyways in accordance with DIN 6885, sheet 1.

The weight refers to a combination of hub type 0 and hub type I with max. possible bore diameter respectively.

In deviation from figure 21-1, the combination of the hub type 0 / 0 and type I / I is possible.

Upon request, also available with taper bushes.

Upon request, couplings larger than frame size 0160 also available.

For vertical installation, please contact RINGSPANN.

\* Distance M is required to remove the screws for hub type I.

# Disc Couplings RDL ... DSZ

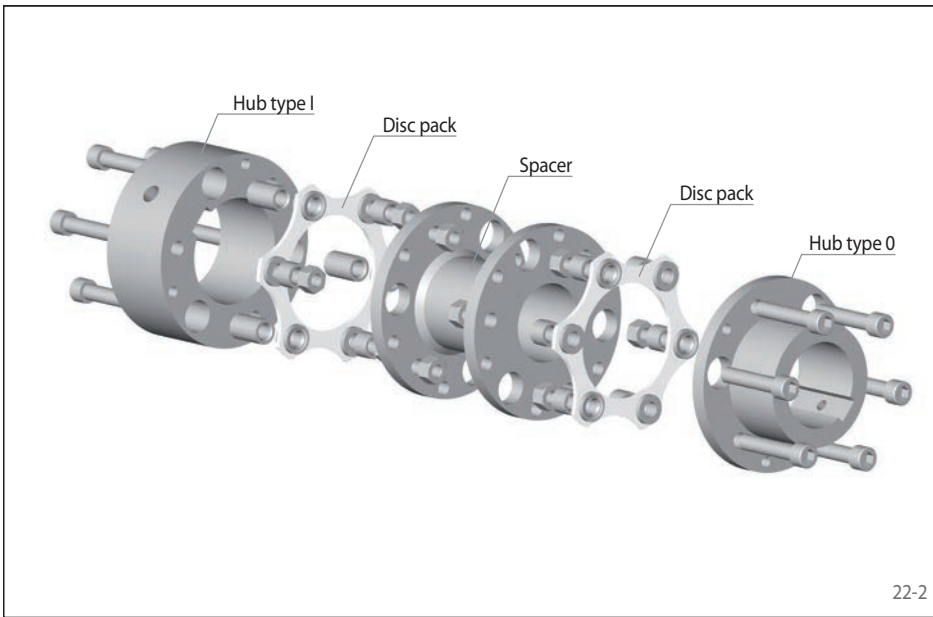
torsionally rigid  
double disc packs with spacer



22-1

## Features

- Nominal torques up to 13 300 Nm
- Combines high torque capacity with low weight
- Backlash free
- Compensation of axial, radial and angular misalignments
- Double disc pack allows smooth torque transmission
- High torsional rigidity with low axial rigidity
- Temperature range -20 °C to +280 °C
- Maintenance free and long life with proper alignment
- Typical application: Pumps, fans, packaging machines, paper machines, printing machines, mixers, dynamometers



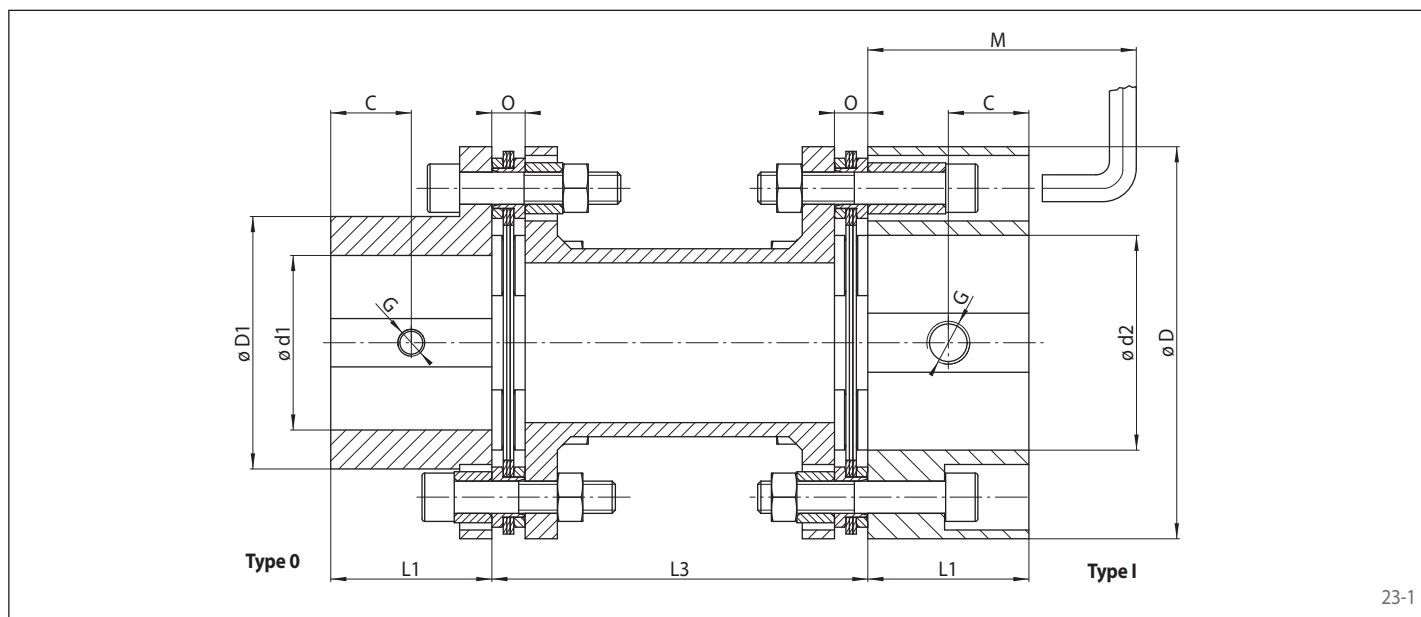
22-2

## Order example

Order example	Code
Coupling design	RDL
Coupling size	0024
Type	DSZ
Material of the hub: • Steel	STA
Hub 1, type: • 0, standard • I, increased max. bore	0 1
Hub 1, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d1	020
Hub 2, type: • 0, standard • I, increased max. bore	0 1
Hub 2, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d2	022
DBSE (L3)	0100

RDL 0024 DSZ-STA-0FB020-1FB022-0000-0100

torsionally rigid  
double disc packs with spacer



23-1

Coupling size	Nominal torque $T_{KN}$ Nm	Nominal power at $100 \text{ min}^{-1}$ $P_{K100}$ kW	Max. speed $n_{max}$ $\text{min}^{-1}$	Torsional stiffness $C_T$ MNm/rad	Moment of inertia $J_K$ with DBSE (L3)		Permissible misalignments		
					with shortest standard kgm <sup>2</sup>	per additional meter to the standard kgm <sup>2</sup>	Axial mm	Radial mm	Angular °
0024	64	0,67	7500	0,031	0,0007	0,0004	±1	0,013	0,75
0038	159	1,67	7000	0,025	0,0021	0,0011			
0048	510	5,40	6000	0,040	0,0060	0,0011			
0065	850	9,00	5200	0,099	0,0180	0,0047			
0075	1330	14	4800	0,176	0,0360	0,0088			
0100	2380	25	4400	0,305	0,0900	0,0210			
0110	3340	35	4200	0,432	0,1700	0,0560			
0125	5000	53	4000	0,600	0,3200	0,0560			
0140	7100	75	3800	0,800	0,5500	0,0670			
0150	10000	105	3700	1,500	0,8800	0,1670			
0160	13300	140	3600	1,400	1,3800	0,1670	±2		

Torsional stiffness and moment of inertia refer to a combination of hub type 0 and hub type I with max. possible bore diameter respectively and shortest standard DBSE L3.

Coupling size	Min. bore $d1 / d2$ mm	Max. bore $d1 / d2$		D mm	D1 mm	C mm	L1 mm	DBSE L3		M* mm	Gap O mm	Weight with DBSE L3	
		Hub type 0 mm	Hub type I mm					shortest possible mm	Standard mm			with shortest standard kg	per additional meter to the standard kg
0024	10	22	25	63	35	15,0	30	55	100 140	75	6,5	1,30	2,3
0038	12	30	38	82	45	20,0	40	57	100 140	85	6,5	2,47	3,2
0048	17	40	50	102	57	22,5	45	82		95	8,0	4,60	3,2
0065	17	52	70	128	77	27,5	55	89	180	110	9,5	8,10	7,0
0075	22	65	80	146	94	30,0	60	108	140	120	12,0	12,10	8,4
0100	27	80	100	176	115	35,0	70	114	180	140	13,0	20,00	13,1
0110	32	90	115	197	132	45,0	90	126	180	175	14,4	30,50	21,7
0125	42	105	130	225	147	47,5	95	143	250	185	16,2	43,40	21,7
0140	47	115	140	250	162	52,5	105	168	180	195	19,5	61,60	27,1
0150	52	120	155	275	178	57,5	115	180	250	215	21,5	82,00	42,8
0160	62	135	165	300	190	65,0	130	180	300	235	23,5	107,10	42,8

For finish bores, please specify diameter d1 and d2. Tolerance of finish bores H7. Keyways in accordance with DIN 6885, sheet 1.

The weight refers to the shortest standard DBSE (L3).

Upon request: Varying DBSEs L3; Designs with taper bushes; Couplings larger than frame size 0160

In deviation from figure 23-1, a combination of the hubs of type 0 / 0 and type I / I is possible.

For vertical installation, please contact RINGSPANN.

\* Distance M is required to remove the screws for hub type I.

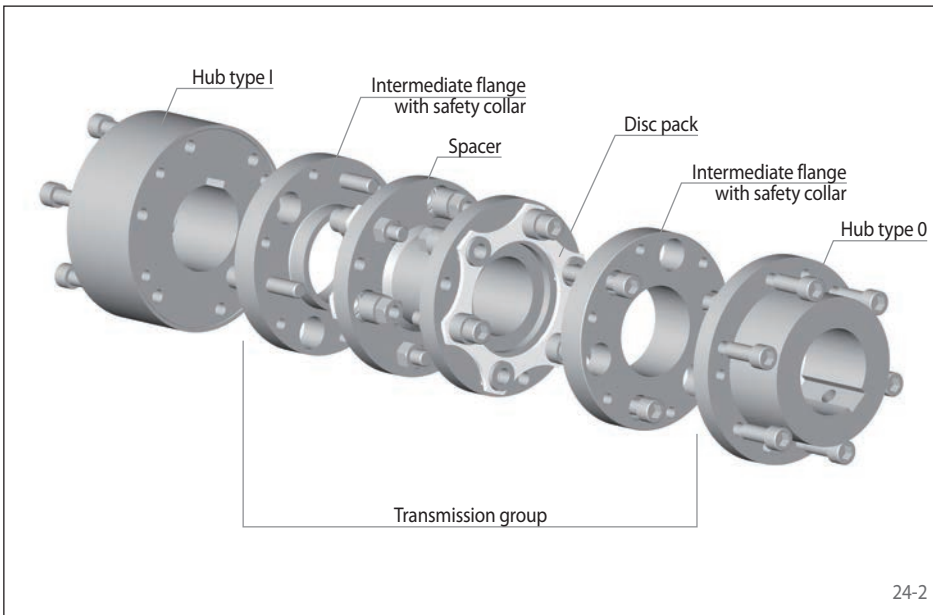
**torsionally rigid**  
**double disc packs, design according to API 610**



24-1

## Features

- Nominal torques up to 13 300 Nm
- Combines high torque capacity with low weight
- Backlash free
- Compensation of axial, radial and angular misalignments
- Double disc pack allows smooth torque transmission
- High torsional rigidity with low axial rigidity
- Temperature range -20 °C to +280 °C
- Typical application: Centrifugal pumps, screw pumps, turbo compressors, rotary piston fans



24-2

## Additional features

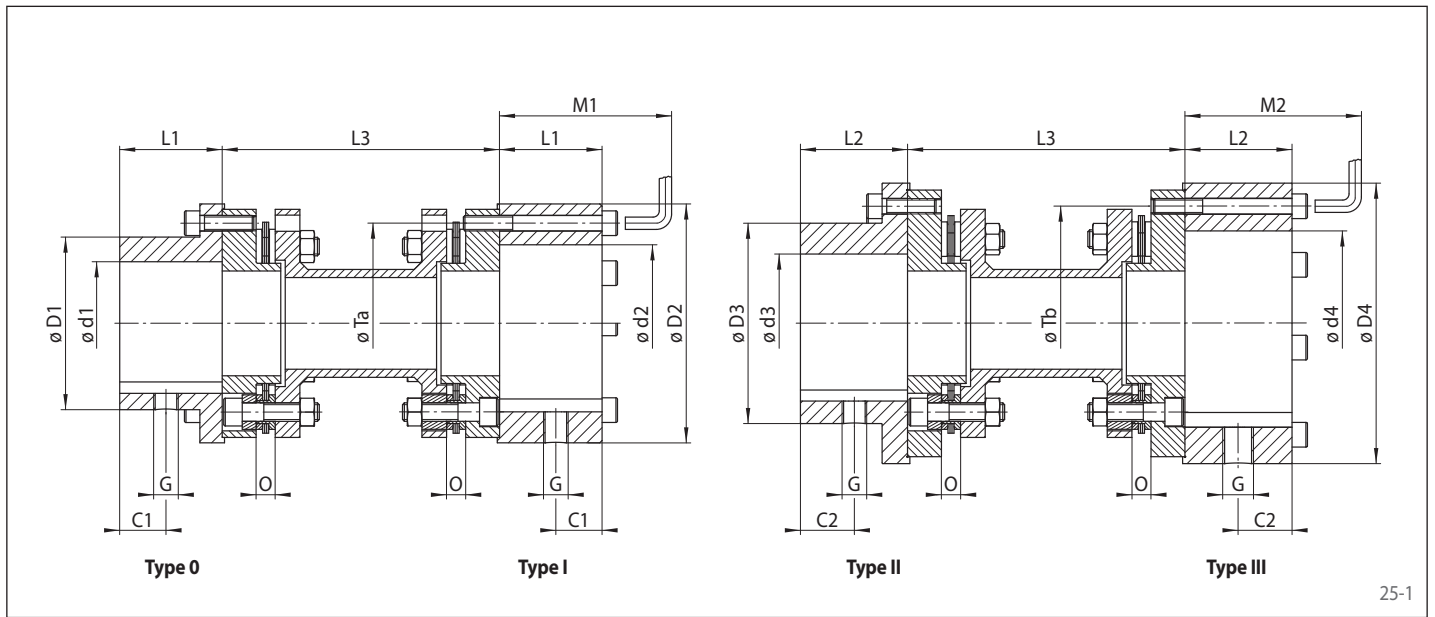
- No wear with optimal alignment, no lubrication necessary
- Corresponds to the provisions in accordance with API 610 and optionally, upon request, with the requirements in accordance with API 671

## Order example

	Code
Coupling design	RDL
Coupling size	0048
Type	DSA
Material of the hub:	STA
• Steel	
Hub 1, type:	
• 0, standard	0
• I, increased max. bore; pitch diameter Ta	1
• II, extended	2
• III, extended, increased max. bore; pitch diameter Tb	3
Hub 1, design:	
• finish bored with keyway	FB
• roughbored	VA
Bore diameter for hub 1	045
Hub 2, type:	
• 0, standard	0
• I, increased max. bore; pitch diameter Ta	1
• II, extended	2
• III, extended, increased max. bore; pitch diameter Tb	3
Hub 2, design:	
• finish bored with keyway	FB
• roughbored	VA
Bore diameter for hub 2	060
DBSE (L3)	0180

RDL 0048 DSA-STA-0FB045-1FB060-0000-0180

torsionally rigid  
double disc packs, design according to API 610



25-1

Coupling size	Nominal torque $T_{KN}$ Nm	Nominal power at $100 \text{ min}^{-1}$ $P_{K100}$ kW	Max. speed $n_{max}$ $\text{min}^{-1}$	Torsional stiffness $C_T$ MNm/rad	Moment of inertia $J_k$ with DBSE (L3)		Permissible misalignments		
					with shortest standard kgm <sup>2</sup>	per additional meter to the standard kgm <sup>2</sup>	Axial mm	Radial mm	Angular °
0024	64	0,67	7500	0,030	0,0010	0,00020	±1	0,013	0,75
0038	159	1,67	7000	0,025	0,0038	0,00047			
0048	510	5,40	6000	0,040	0,0090	0,00090			
0065	850	9,00	5200	0,095	0,0300	0,00047			
0075	1330	14	4800	0,170	0,0600	0,00880			
0100	2380	25	4400	0,300	0,1300	0,02130			
0110	3340	35	4200	0,430	0,2335	0,03600			
0125	5000	53	4000	0,600	0,4181	0,05300			
0140	7100	75	3800	0,800	0,7000	0,06700			
0150	10000	105	3700	1,100	1,1340	0,14000			
0160	13300	140	3600	1,500	1,7000	0,16000	±2		

Torsional stiffness and moment of inertia refer to a combination of hub type 0 and hub type I with max. possible bore diameter respectively and shortest standard DBSE L3.

Coupling size	Min. bore d1 / d2 mm	Max. bore				D1	D2	D3	D4	C1	C2	L1	L2	DBSE L3		M1*	M2*	Gap O	Weight with DBSE L3	
		Hub type 0 d1 mm	Hub type I d2 mm	Hub type II d3 mm	Hub type III d4 mm									shortest possible	Standard				with shortest standard	per additional meter to the standard
0024	8	24	42	38	48	40	69	55	90	15,0	20,0	30	40	65	80	90	7,5	2,00	1,30	
0038	10	38	48	48	72	55	90	70	108	20,0	22,5	40	45	71	100 140 180	90	105	7,5	3,76	2,41
0048	15	48	72	65	92	70	108	86	135	22,5	27,5	45	55	95	105	120	8,5	6,00	2,70	
0065	20	65	92	80	102	86	135	108	152	27,5	30,0	55	60	107	120 140 180	125	125	9,2	11,10	7,00
0075	25	80	102	90	120	108	152	130	182	30,0	35,0	60	70	129	125	135	12,4	17,00	8,40	
0100	30	90	120	108	140	130	182	158	197	35,0	45,0	70	90	142	135	155	10,6	28,40	13,10	
0110	45	108	140	127	155	158	197	181	225	45,0	47,5	90	95	153	155	160	13,9	38,30	12,82	
0125	55	127	155	140	178	181	225	206	250	47,5	52,5	95	105	156	160 180 250	170	14,5	53,18	19,21	
0140	65	140	178	155	192	206	250	223	275	52,5	57,5	105	115	169	170	190	15,9	74,40	27,10	
0150	70	155	192	170	212	223	275	248	300	57,5	65,0	115	130	188	190 250	215	17,4	98,63	34,60	
0160	75	170	212	190	255	248	300	280	375	65,0	72,5	130	145	202	215	245	18,3	128,10	42,80	

For finish bores, please specify diameter d1 and d2. Tolerance of finish bores H7. Keyways in accordance with DIN 6885, sheet 1.

The weight refers to a combination of hub type 0 and hub type I with max. possible bore diameter respectively and shortest standard DBSE (L3).

When ordering please specify hub type. Possible hub combinations: Type 0 / 0; 0 / I; I / I; II / II; II / III or III / III; Pitch diameter Ta and Tb are not identical

Upon request: Varying DBSEs (L3); Design in accordance with ATEX 2014/34/EU; Min. bore d3 and d4; Designs with taper bushes; Couplings larger than frame size 0160

For vertical installation, please contact RINGSPANN.

\* Distance M1 and M2 is required to remove the screws for hub type I and type III.

# Disc Couplings RDL ... ASA

torsionally rigid

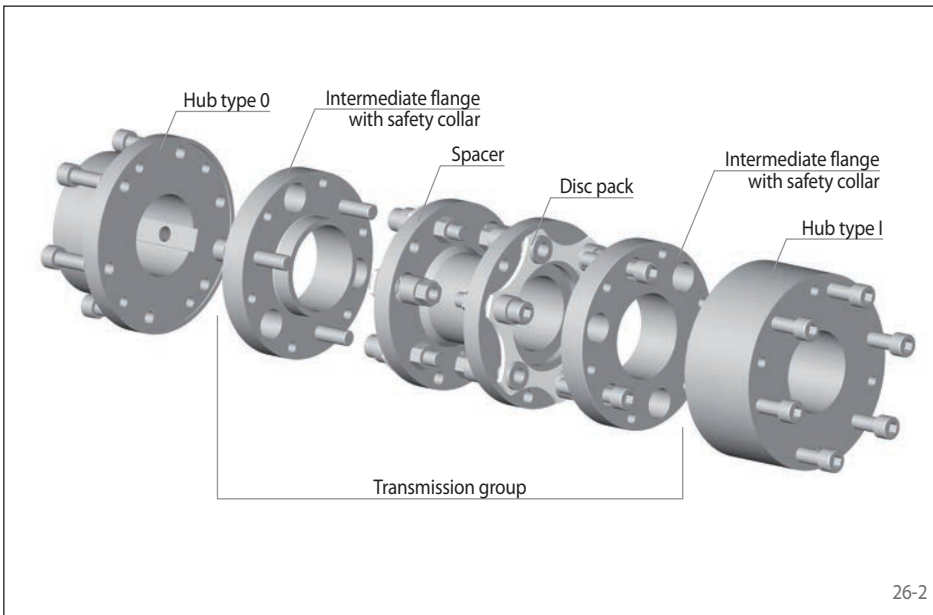
double disc packs, design according to API 610 – for high speeds



26-1

## Features

- Nominal torques up to 13 300 Nm
- Combines high torque capacity with low weight
- Backlash free
- Compensation of axial, radial and angular misalignments
- Double disc pack allows smooth torque transmission
- High torsional rigidity with low axial rigidity
- Temperature range -20 °C to +280 °C
- Typical application: Centrifugal pumps, screw pumps, turbo compressors, rotary piston fans



26-2

## Additional features

- No wear with optimal alignment, no lubrication necessary
- Corresponds to the provisions in accordance with API 610 and optionally, upon request, with the requirements in accordance with API 671

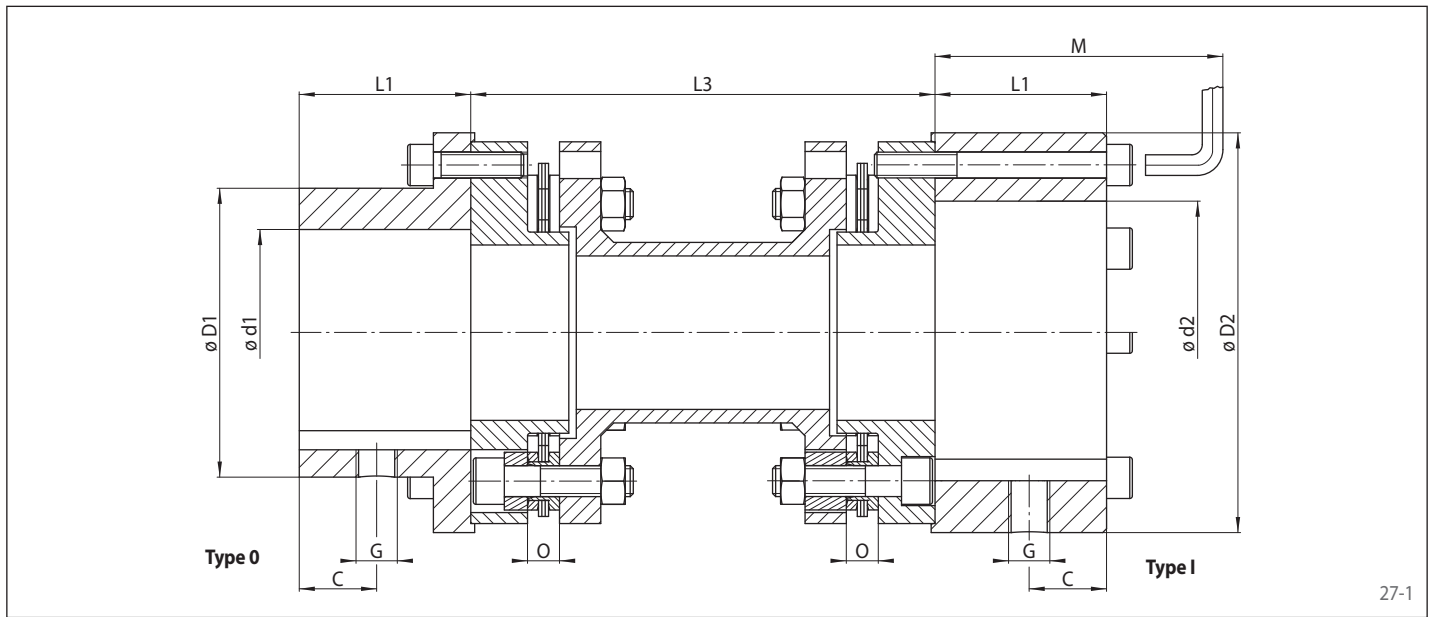
## Order example

Order example	Code
Coupling design	RDL
Coupling size	0048
Type	ASA
Material of the hub: • Steel	STA
Hub 1, type: • 0, standard • I, increased max. bore	0 1
Hub 1, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d1	045
Hub 2, type: • 0, standard • I, increased max. bore	0 1
Hub 2, design: • finish bored with keyway • roughbored	FB VA
Bore diameter d2	045
DBSE (L3)	0180

RDL 0048 ASA-STA-0FB045-1FB045-0000-0180

torsionally rigid

double disc packs, design according to API 610 – for high speeds



27-1

Coupling size	Nominal torque $T_{KN}$ Nm	Max. torque $T_{Kmax}$ Nm	Nominal power at $100 \text{ min}^{-1}$ $P_{K100}$ kW	Max. speed $n_{max}$ $\text{min}^{-1}$	Torsional stiffness with shortest standard DBSE (L3) and max. bore		Moment of inertia with shortest standard DBSE (L3) max. bore		Permissible misalignments			
					$C_T$	$J_K$	Axial	resulting restoring force* kN	Radial**	resulting restoring torque Nm		
					Hub type 0 / 1 MNm/rad	Hub type 0 / 0 MNm/rad	Hub type 0 / 1 kgm <sup>2</sup>	Hub type 0 / 0 kgm <sup>2</sup>	(±) mm		mm	
0038	124	310	1,3	25 500	0,047	-	0,003	-	1,00	210	0,30	4,1
0048	315	790	3,3	20 000	0,083	-	0,009	-	1,25	280	0,36	6,1
0065	710	1 790	7,5	16 500	0,209	-	0,027	-	1,50	360	0,45	8,8
0075	1 280	3 220	13,5	14 400	0,427	-	0,060	-	2,00	560	0,55	11,8
0090	2 190	5 400	23,0	12 000	0,844	-	0,129	-	2,50	740	0,60	14,7
0100	3 340	8 300	35,0	10 500	-	1,02	-	0,208	2,75	780	0,64	34,3
0125	4 770	11 900	50,0	9 500	-	1,62	-	0,342	3,25	1 080	0,65	40,7
0140	7 000	17 600	74,0	8 000	-	2,63	-	0,593	3,75	1 270	0,68	47,6
0150	8 800	22 200	93,0	7 000	-	4,01	-	1,020	4,25	1 470	0,72	53,9
0160	13 300	33 400	140,0	6 000	-	5,25	-	1,890	5,00	2 700	0,83	61,3

\* Fulfills the NEMA specifications for the necessary axial play.

\*\* Values refer to an angular misalignment of 0,5° for each hub and the shortest DBSEs (L3). Larger misalignments are permissible with larger DBSEs.

Coupling size	Max. bore		D1 mm	D2 mm	C mm	L1 mm	DBSE L3		M* mm	Weight transmission group		Weight pilot bored hub	
	Hub type 0 d1 mm	Hub type I d2 mm					Min. mm	Standard mm		Standard L3 kg	per additional meter to the standard L3 kg	Hub type 0 kg	Hub type I kg
0038	36	51	54	86	20,0	40	75	100 140 180	90	1,5	3,1	1,0	1,9
0048	46	70	69	105	22,5	45	90		105	3,0	5,0	1,4	3,1
0065	65	90	90	130	27,5	55	107	140	120	5,6	6,5	3,6	5,8
0075	80	102	112	152	31,0	62	127	180 250	127	9,3	10,5	5,9	8,7
0090	90	121	131	179	35,0	70	133		135	14,0	13,0	9,0	14,0
0100	115	-	163	197	45,0	90	139		-	18,7	22,0	16,4	-
0125	127	-	181	222	47,5	95	141	180 250	-	25,6	22,0	21,0	-
0140	140	-	206	247	53,5	107	143		-	34,2	27,5	30,0	-
0150	155	-	223	272	57,5	115	155		-	44,0	40,0	38,0	-
0160	172	-	248	297	65,0	130	175		-	54,0	40,0	52,1	-

For finish bores, please specify diameter d1 and d2. Tolerance of finish bores H7. Keyways in accordance with DIN 6885, sheet 1.

Please specify the hub type in the order. Possible combinations:

- Coupling size 0038 to 0090 type 0 / 0, type 0 / I, type I / I
- Coupling size 0100 to 0160; type 0 / 0

Upon request: Varying DBSEs (L3); Designs for explosive areas

For vertical installation, please contact RINGSPANN.

\* Distance M is required to remove the screws for hub type I.