

STÜWE®

FLANGE COUPLING TYPE FKH, FKHA & FKD – MECHANICAL



FLANGE COUPLING TYPE FKH, FKHA & FKD – GENERAL INFORMATION

Application Description

Flange couplings are used for the connection of shafts with the aid of a flange. The type FKH flange coupling consists of two flanged halves and thus forms a rigid connection between two shafts. If only one flanged half is needed, STÜWE® offers the type FKHA and FKD flange coupling. The FKD flange coupling is characterized by the tapered design of its flange which enables the saving of fitting tolerance and a reduction in cost and weight thanks to the elimination of one component. All flange couplings provide the possibility for the compensation of length tolerances in the system due to free positioning. Extremely high static and dynamic loads can also be safely transmitted.

Areas of Use



Driveline
technology



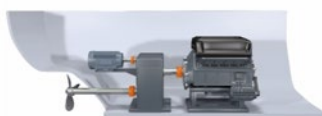
Steel- &
rolling mill equipment



Crushing
equipment



Conveying
equipment



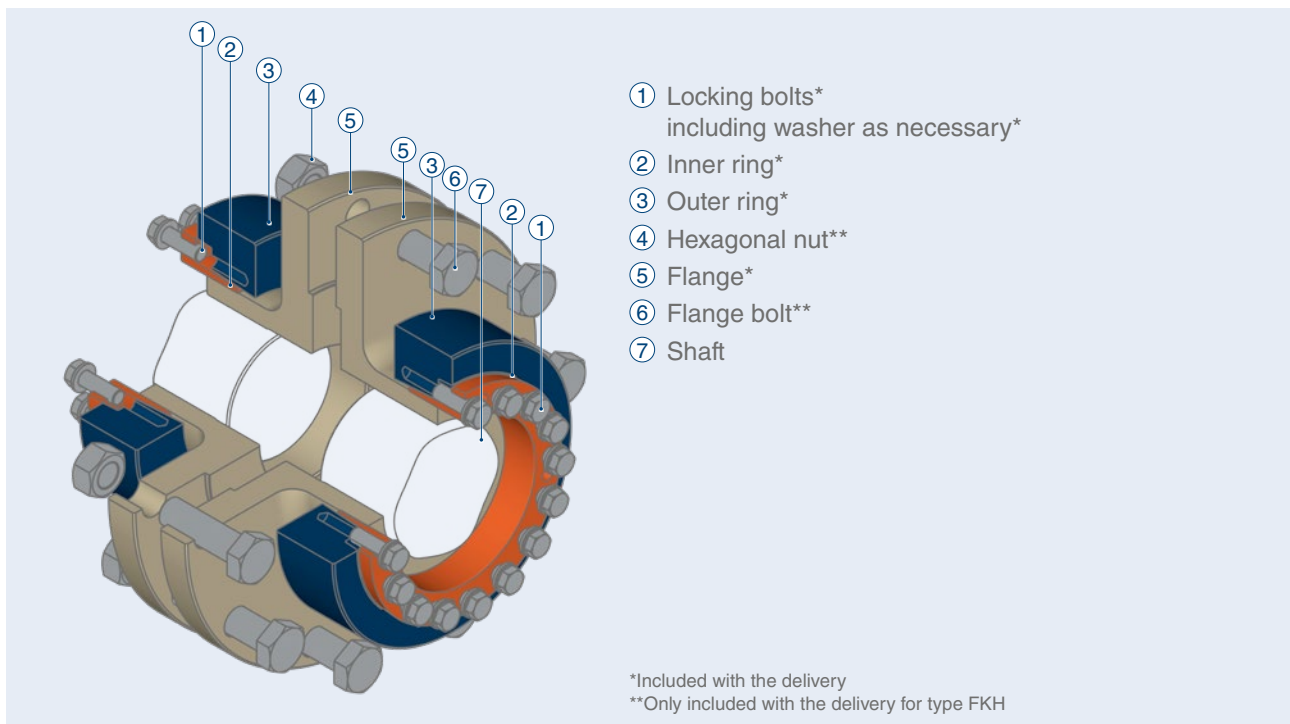
Shipbuilding



Wind turbines

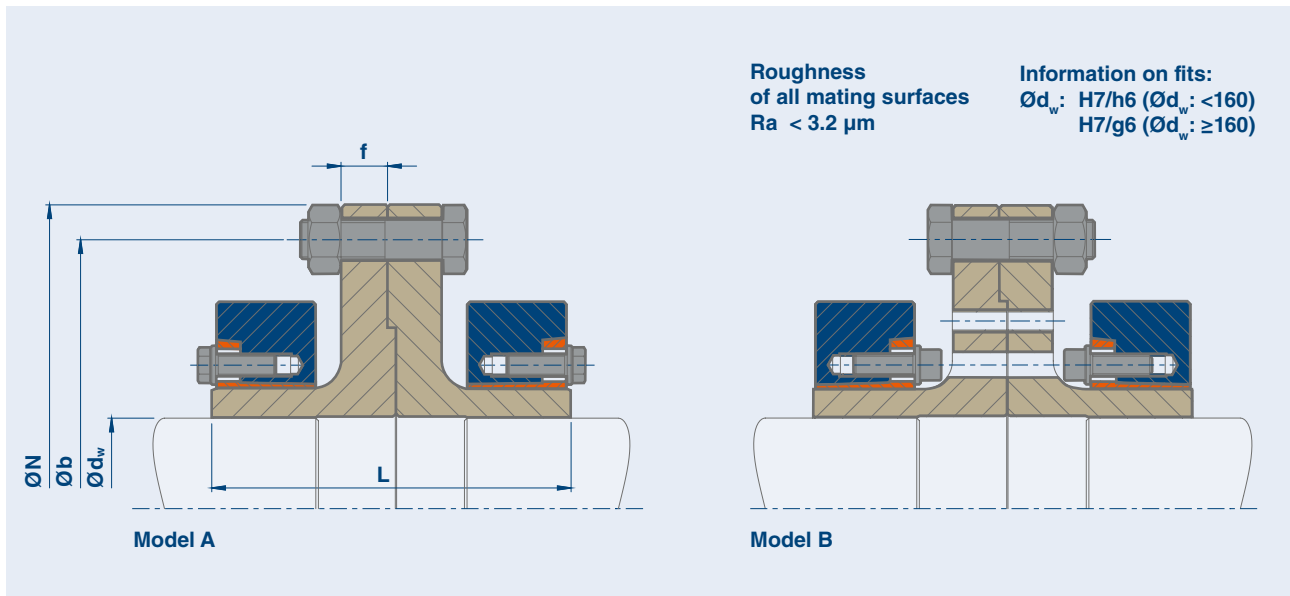
FLANGE COUPLING TYPE FKH, FKHA & FKD – SERIES

Description	Shaft diameter	Transmissible torque	Features
FKH	70 - 350 mm	6 - 911 kNm	Complete flange coupling
FKHA	95 - 320 mm	17 - 853 kNm	Flange coupling half
FKD 4	90 - 350 mm	20 - 729 kNm	Flange coupling half, high torques and speed and extremely high bending moments
FKD 6	90 - 350 mm	22 - 911 kNm	Flange coupling half, extremely high torques and speed and high bending moments



All types may be protected against environmental influences by zinc and nickel coating or by a paint which has an appropriate corrosion protection class. We are able to achieve both desired colours which conform with the RAL colour range and products with lubricants in accordance with NSF H1. More detailed information on this may be found in this catalogue on page 151.

STÜWE® Flange Coupling Type FKH



Code

- M_t Maximum transmissible torque of a flange coupling for $P_{ax} = 0$
 M_a Maximum tightening torque of the locking bolts (see also "Installation and Removal Instructions")
 $M_{a,FL}$ Tightening torque of the flange connecting bolts

Flange Coupling Type FKH

Type	d_w^{**} mm	M_t kNm	Shrink Disc	M_a Nm	B^{***}	N mm	b mm	L mm	f mm	Flange bolts*	$M_{a,FL}$ Nm	kg
FKH 240 - 80	70	6	HSD 100 - 22	58	M10	240	206	136	18	6 x M16	210	27
	75	7										
	84	10										
FKH 300 - 90	85	12	HSD 125 - 22	100	M12	300	260	160	20	6 x M20	420	47
	95	16										
	100	19										
FKH 340 - 100	95	17	HSD 140 - 22	160	M14	340	280	190	24	5 x M24	720	61
	100	20										
	115	28										
FKH 370 - 110	115	30	HSD 155 - 22	160	M14	370	310	210	24	8 x M24	720	78
	120	33										
	125	36										
FKH 400 - 120	120	37	HSD 165 - 22	240	M16	400	350	228	28	8 x M24	720	110
	125	41										
	135	50										
FKH 400 - 130	130	45	HSD 175 - 22	240	M16	400	350	228	28	8 x M24	720	112
	135	49										
	145	58										
FKH 470 - 140	140	64	HSD 185 - 22	240	M16	470	416	278	36	10 x M30	1450	173
	145	70										
	150	76										
FKH 470 - 150	150	80	HSD 200 - 22	240	M16	470	416	278	36	10 x M30	1450	182
	155	87										
	160	93										

*Grade 10.9 **Hole diameter can be freely chosen within given limitations.

***Locking bolts for Model A: DIN EN ISO 4014/4017 Grade 10.9, Model B: DIN EN ISO 4762 Grade 10.9

When ordering please state: (Type x $\text{Ø}d_w$ x model), e.g. FKH 340 - 100 x 100 x B

Flange Coupling Type FKH

Type	d _w ** mm	M _t kNm	Shrink Disc	M _a Nm	B***	N mm	b mm	L mm	f mm	Flange bolts*	M _a FL Nm	kg
FKH 520 - 160	160	103	HSD 220 - 22	470	M20	520	456	300	36	12 x M30	1450	245
	165	112										
	170	119										
FKH 560 - 180	170	122	HSD 240 - 22	470	M20	560	496	322	36	16x M30	1450	302
	180	140										
	190	159										
FKH 560 - 200	190	163	HSD 260 - 22	470	M20	560	496	350	36	16 x M30	1450	334
	200	184										
	210	207										
FKH 590 - 220	210	215	HSD 280 - 22	470	M20	590	526	392	40	18 x M30	1450	420
	220	240										
	230	267										
FKH 630 - 240	220	271	HSD 300 - 22	820	M24	630	570	408	40	18 x M30	1450	494
	230	300										
	240	331										
FKH 630 - 250	240	301	HSD 320 - 22	820	M24	630	570	408	40	18 x M30	1450	534
	250	332										
	260	364										
FKH 710 - 260	250	390	HSD 340 - 22	820	M24	710	656	450	40	24 x M30	1450	717
	260	427										
	270	466										
FKH 710 - 280	270	496	HSD 360 - 22	820	M24	710	656	450	40	24 x M30	1450	754
	280	539										
	290	584										
FKH 800 - 300	290	640	HSD 390 - 22	1210	M27	800	736	500	50	28 x M30	1450	1006
	300	691										
	320	800										
FKH 800 - 330	320	742	HSD 420 - 22	1210	M27	800	736	540	50	28 x M30	1450	1158
	330	797										
	350	911										

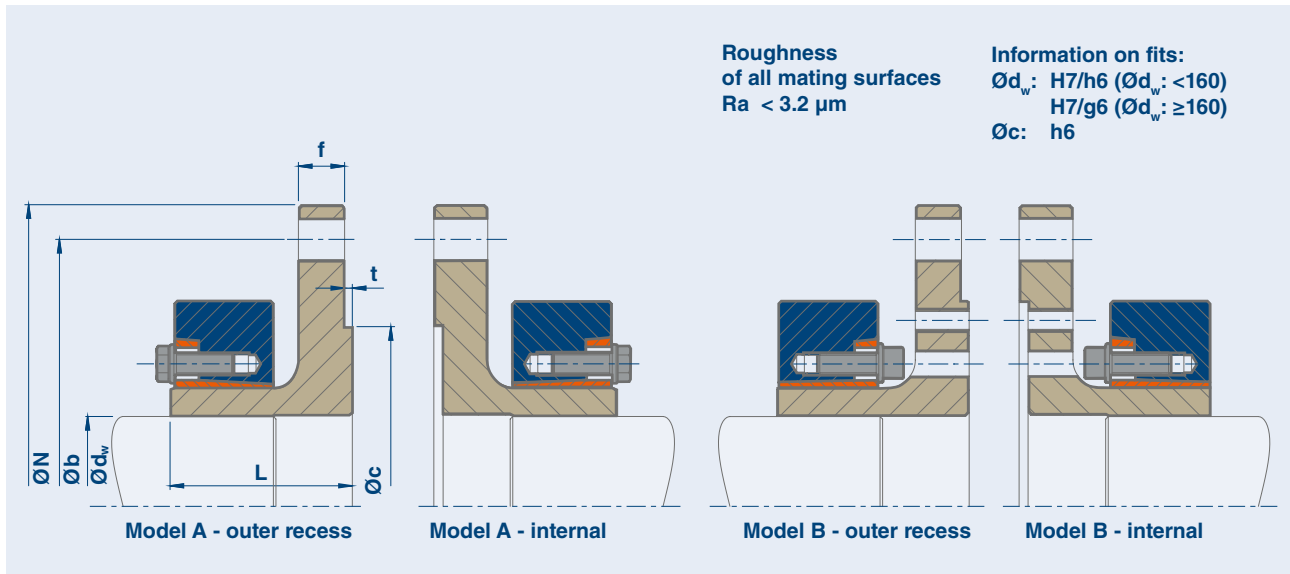
Further sizes on request, subject to technical changes.

*Grade 10.9 **Hole diameter can be freely chosen within given limitations.

***Locking bolts for Model A: DIN EN ISO 4014/4017 Grade 10.9, Model B: DIN EN ISO 4762 Grade 10.9

When ordering please state: (Type x Ød_w x Model), e.g. FKH 630 - 250 x 240 x A

STÜWE® Flange Coupling Type FKHA



Code

- M_t Maximum transmissible torque of a flange coupling for $P_{ax} = 0$
- M_a Maximum tightening torque of the locking bolts (see also "Installation and Removal Instructions")
- M_aFL Tightening torque of the flange connecting bolts

Dimensions N, b, c, t plus quantity and size of flange bolts depend on the counterflange and can be changed if necessary. Please state the desired dimensions where they vary from the value in the table.

Flange Coupling FKHA

Type	d_w^{**} mm	M_t kNm	Shrink Disc	M_a Nm	B ^{***}	N mm	b mm	c mm	L mm	f mm	t mm	Flange bolts*	M_aFL Nm	kg
FKHA 340 - 100	95	17	HSD 140 - 22	160	M14	340	280	200	98	24	6	5 x M24	720	28
	100	19												
	110	24												
FKHA 370 - 120	115	30	HSD 155 - 22	160	M14	370	310	220	114	30	6	8 x M24	720	40
	120	33												
	125	36												
FKHA 400 - 120	120	37	HSD 165 - 22	240	M16	400	350	250	114	30	6	8 x M24	720	50
	125	41												
	130	45												
FKHA 400 - 130	130	45	HSD 175 - 22	240	M16	400	350	250	114	30	6	8 x M24	720	51
	135	49												
	145	58												
FKHA 470 - 140	140	64	HSD 185 - 22	240	M16	470	416	280	142	36	6	10 x M30	1450	80
	145	70												
	150	76												
FKHA 470 - 150	150	80	HSD 200 - 22	240	M16	470	416	280	142	36	6	10 x M30	1450	84
	155	87												
	160	93												

*Grade 10.9 **Hole diameter can be freely chosen within given limitations

***Locking bolts for Model A: DIN EN ISO 4014/4017 Grade 10.9, Model B: DIN EN ISO 4762 Grade 10.9

When ordering please state: (Type x $\text{Ø}d_w$ x model), such as FKHA 400 - 130 x 135 x B, possible dimensions of N, b, c, t, quantity & size of the flange bolts

Flange Coupling Type FKHA

Type	d _w ** mm	M _t kNm	Shrink Disc	M _a B*** Nm	N mm	b mm	c mm	L mm	f mm	t mm	Flange bolts*	M _a FL Nm	kg
FKHA 520 - 160	160	103	HSD 220 - 22	470 M20	520	456	320	154	36	8	12 x M30	1450	112
	165	112											
	170	119											
FKHA 560 - 180	170	122	HSD 240 - 22	470 M20	560	496	360	165	36	8	16 x M30	1450	137
	180	140											
	190	159											
FKHA 560 - 200	190	163	HSD 260 - 22	470 M20	560	496	360	179	36	8	16 x M30	1450	152
	200	184											
	210	207											
FKHA 590 - 220	210	215	HSD 280 - 22	470 M20	590	526	380	200	40	8	18 x M30	1450	184
	220	240											
	230	267											
FKHA 630 - 250	230	272	HSD 320 - 22	820 M24	630	570	430	208	40	8	18 x M30	1450	239
	250	332											
	260	364											
FKHA 710 - 280	260	455	HSD 360 - 22	820 M24	710	656	480	229	40	8	24 x M30	1450	338
	280	539											
	290	584											
FKHA 800 - 300	290	640	HSD 390 - 22	1210 M27	800	736	520	254	50	8	28 x M30	1450	451
	300	691											
	320	800											
FKHA 800 - 330	320	742	HSD 420 - 22	1210 M27	800	736	550	274	50	8	28 x M30	1450	513
	330	797											
	340	853											

Further sizes on request, subject to technical changes.

*Grade 10.9 **Hole diameter can be freely chosen within given limitations.

***Locking bolts for Model A: DIN EN ISO 4014/4017 Grade 10.9, Model B: DIN EN ISO 4762 Grade 10.9

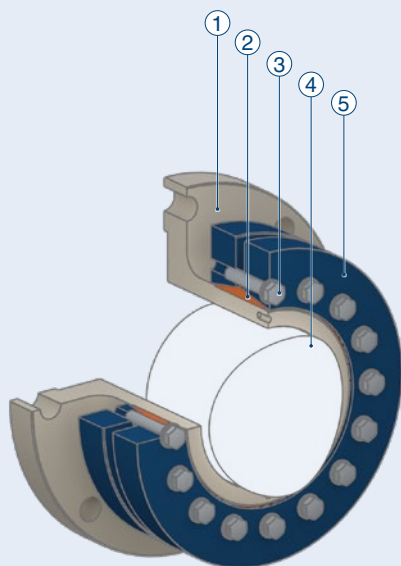
When ordering please state: (Type x Ød_w x model), such as FKHA 590 - 220 x 225 x A, possible dimensions of N, b, c, t, quantity & size of the flange bolts

**You have not found what you are looking for in our comprehensive range of standard-products?
We will be happy to promptly prepare any form of custom-made product and development innovation
even using special materials such as 1.3974. Please feel free to contact us.**

FLANGE COUPLING TYPE FKH, FKHA & FKD – SPECIAL SOLUTIONS

STÜWE® Flange Coupling FK with SD

Connection element with three-part shrink disc for compact installation spaces

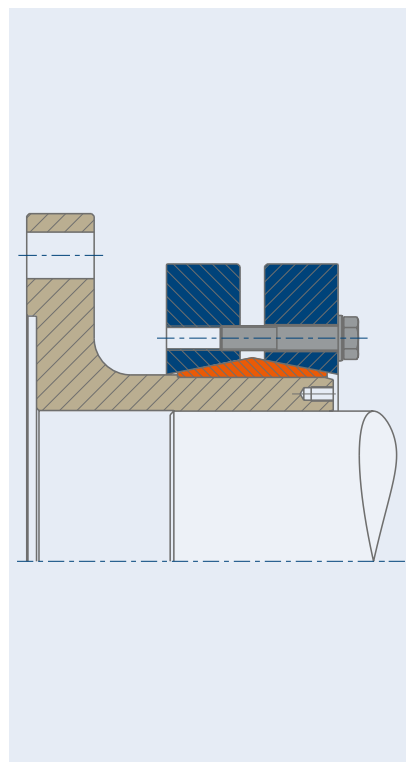


Benefits

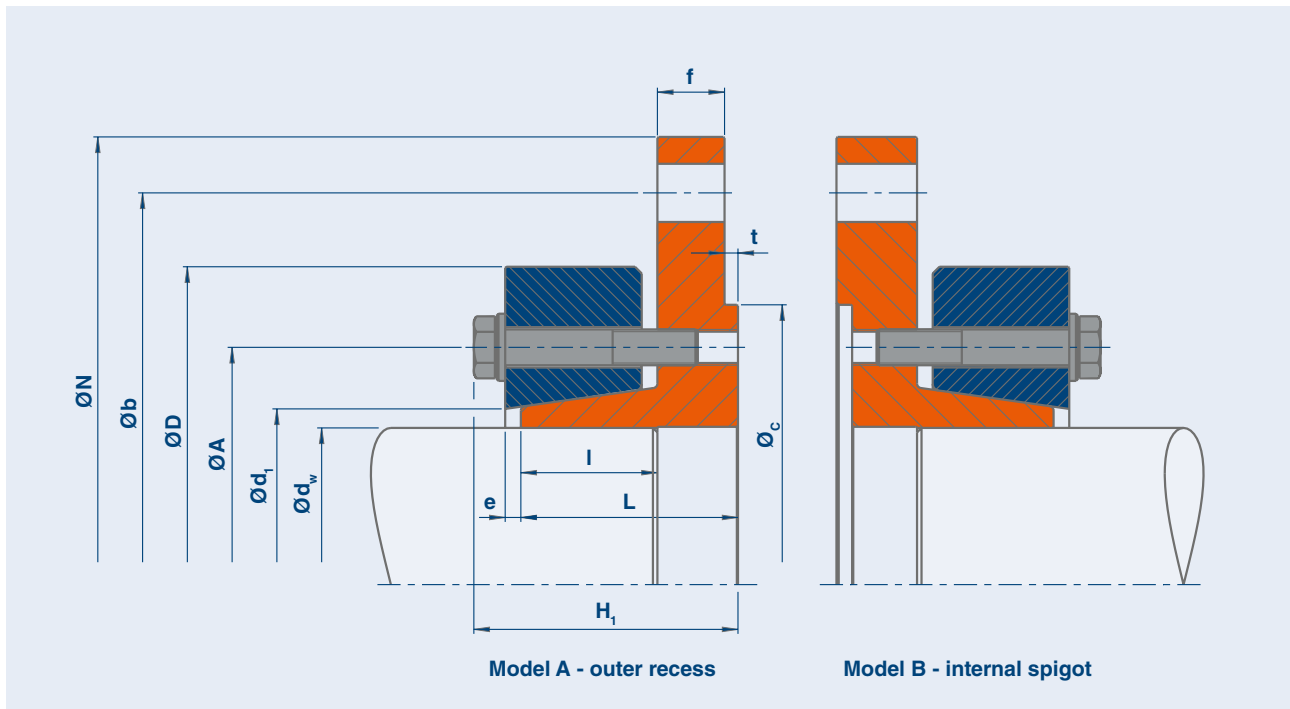
- Low space requirement
- Free positioning
- Compensation of length tolerance variations possible

- ① Flange*
- ② Inner ring*
- ③ Locking bolts* including washer as necessary*
- ④ Shaft
- ⑤ Outer ring*

*Included with the delivery



STÜWE® Flange Coupling Type FKD Series 4



Flange Coupling Type FKD – Series 4

Type	d_w^{**} mm	Mt Nm	B ^{***}	M_a Nm	D mm	l mm	H_1 mm	A mm	d_1 mm	e mm
FKD 4 - 340 - 90	90	20103	8 x M14	193	217	52	92	168	123	5.5
	100	26093								
	110	30800								
FKD 4 - 370 - 110	110	40511	10 x M14	193	248	61	107	184	137	7
	115	45015								
	120	49777								
FKD 4 - 400 - 120	120	51080	9 x M16	295	280	61	113	202	150	6.5
	125	55641								
	130	61041								
FKD 4 - 400 - 130	130	57456	9 x M16	295	284	61	113	212	157	7
	135	61600								
	140	61600								
FKD 4 - 470 - 140	140	85814	10 x M16	295	297	82	140	227	172	10
	145	93185								
	150	100885								

Further sizes on request, subject to technical changes.

*Grade 10.9

**The hole diameter can be freely chosen within given limitations.

***Model A locking bolts: DIN EN ISO 4014/4017 grade 12.9, model B: DIN EN ISO 4762 Grade 12.9

****Continuous bending moment

When ordering please state for the recess shape of the outer recess: m

the following applies: $t_f = t + 1$

When ordering please state for the recess shape of the inner recess: f

the following applies: $t_m = t$

When ordering please state: (Type x $\varnothing d_w$ x model - recess shape), e.g. FKD4-400-130x135xA-m

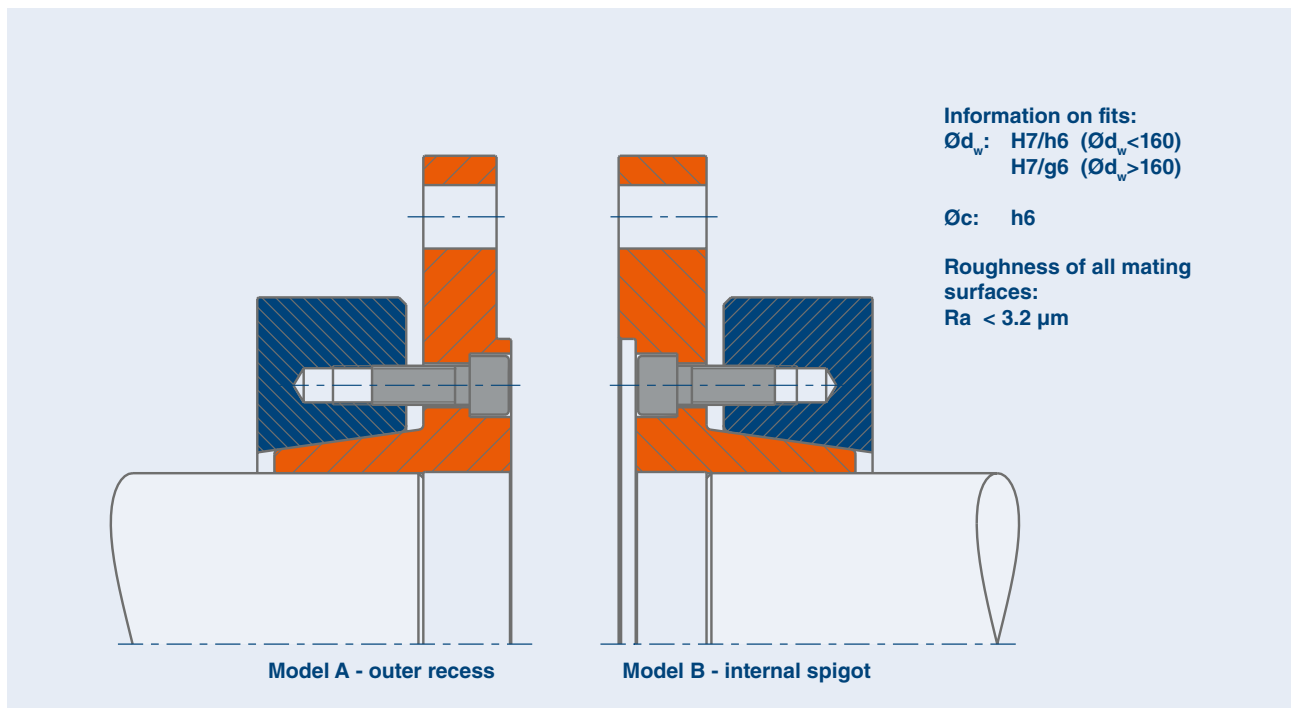
Code

M_t Maximum transmissible torque of a shaft coupling for $P_{ax} = 0$

P_{ax} Maximum transmissible axial load of a shaft coupling for $M_t = 0$

M_a Maximum tightening torque of the locking bolts (see also "Installation and Removal Instructions")

The dimensions H_1 and e apply to units in a non-tensioned condition.



N	b	c	L	f	t	Flange-bolts*	M_a	Mass	M_b , con****	nmax
mm	mm	mm	mm	mm	mm		Nm	kg	Nm	1/min
340	280	200	82	24	6	5 x M24	720	29	2700	8500
								29	3900	
								27	5500	
370	310	220	97	30	6	8 x M24	720	43	5800	7800
								42	6700	
								41	7700	
400	350	250	97	30	6	8 x M24	720	53	7900	6700
								52	9000	
								51	10000	
400	350	250	97	30	6	8 x M24	720	52	9700	6500
								51	11000	
								50	12000	
470	416	280	124	36	6	10 x M30	1450	81	11000	6400
								80	13000	
								79	14000	

Flange Coupling Type FKD – Series 4

Type	d_w^{**} mm	Mt Nm	B ^{***}	M_a Nm	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm
FKD 4 - 470 - 150	150	103053	9 x M20	570	332	83	143	249	183	8
	155	111179								
	160	119638								
FKD 4 - 520 - 160	160	133380	9 x M20	570	327	104	166	261	194	11
	165	143284								
	170	153572								
FKD 4 - 560 - 170	170	160288	10 x M20	570	372	110	172	293	223	12.5
	180	180830								
	190	205052								
FKD 4 - 560 - 190	190	219540	10 x M24	900	406	118	183	320	239	12.5
	200	247024								
	210	276254								
FKD 4 - 590 - 210	210	273476	12 x M24	900	454	114	183	349	262	11
	220	303773								
	230	335167								
FKD 4 - 630 - 220	220	303042	10 x M27	1310	454	125	196	362	268	11.5
	230	335257								
	240	363204								
FKD 4 - 630 - 240	240	353650	10 x M27	1310	472	125	196	381	286	14
	250	363204								
	260	363204								
FKD 4 - 710 - 250	250	482284	10 x M30	1800	535	140	213	408	306	15.5
	260	526671								
	270	557338								
FKD 4 - 710 - 270	270	524565	10 x M30	1800	540	140	213	429	322	15
	280	557338								
	290	557338								
FKD 4 - 800 - 290	290	682955	10 x M30	1800	597	146	229	455	349	21.5
	300	729523								
	310	729523								
FKD 4 - 800 - 310	310	729523	10 x M30	1800	618	146	229	478	368	22.5
	320	729523								
	330	729523								
FKD 4 - 800 - 330	330	729523	10 x M30	1800	610	152	235	496	383	23.5
	340	729523								
	350	729523								

Further sizes on request, subject to technical changes.

*Grade 10.9

**The hole diameter can be freely chosen within given limitations.

***Model A locking bolts: DIN EN ISO 4014/4017 grade 12.9, model B: DIN EN ISO 4762 Grade 12.9

****Continuous bending moment

When ordering please state for the recess shape of the outer recess: m

the following applies: $t_f = t + 1$

When ordering please state for the recess shape of the inner recess: f

the following applies: $t_m = t$

When ordering please state: (Type x $\varnothing d_w$ x model - recess shape), e.g. FKD4-400-130x135xA-m

N mm	b mm	c mm	L mm	f mm	t mm	Flange- bolts*	M _a Nm	Mass kg	M _{b, con****} Nm	n _{max} 1/min
470	416	280	125	36	6	10 x M30	1450	91	14000	5600
								89	16000	
								88	18000	
520	456	320	148	36	8	12 x M30	1450	110	16000	5700
								108	18000	
								107	19000	
560	496	360	154	36	8	16 x M30	1450	142	19000	5200
								139	23000	
								135	28000	
560	496	360	162	36	8	16 x M30	1450	159	28000	4600
								155	33000	
								151	39000	
590	526	380	162	40	8	18 x M30	1450	193	40000	4200
								189	46000	
								184	53000	
630	570	430	173	40	8	18 x M30	1450	213	42000	4200
								209	49000	
								204	56000	
630	570	430	173	40	8	18 x M30	1450	216	54000	3900
								211	61000	
								206	69000	
710	656	480	188	40	8	24 x M30	1450	309	68000	3500
								303	77000	
								297	87000	
710	656	480	188	40	8	24 x M30	1450	302	80000	3400
								295	90000	
								289	101000	
800	736	520	204	50	8	28 x M30	1450	424	107000	3200
								417	120000	
								409	133000	
800	736	520	204	50	8	28 x M30	1450	432	128000	3100
								424	142000	
								416	157000	
800	736	520	210	50	8	28 x M30	1450	417	138000	3300
								408	153000	
								399	168000	

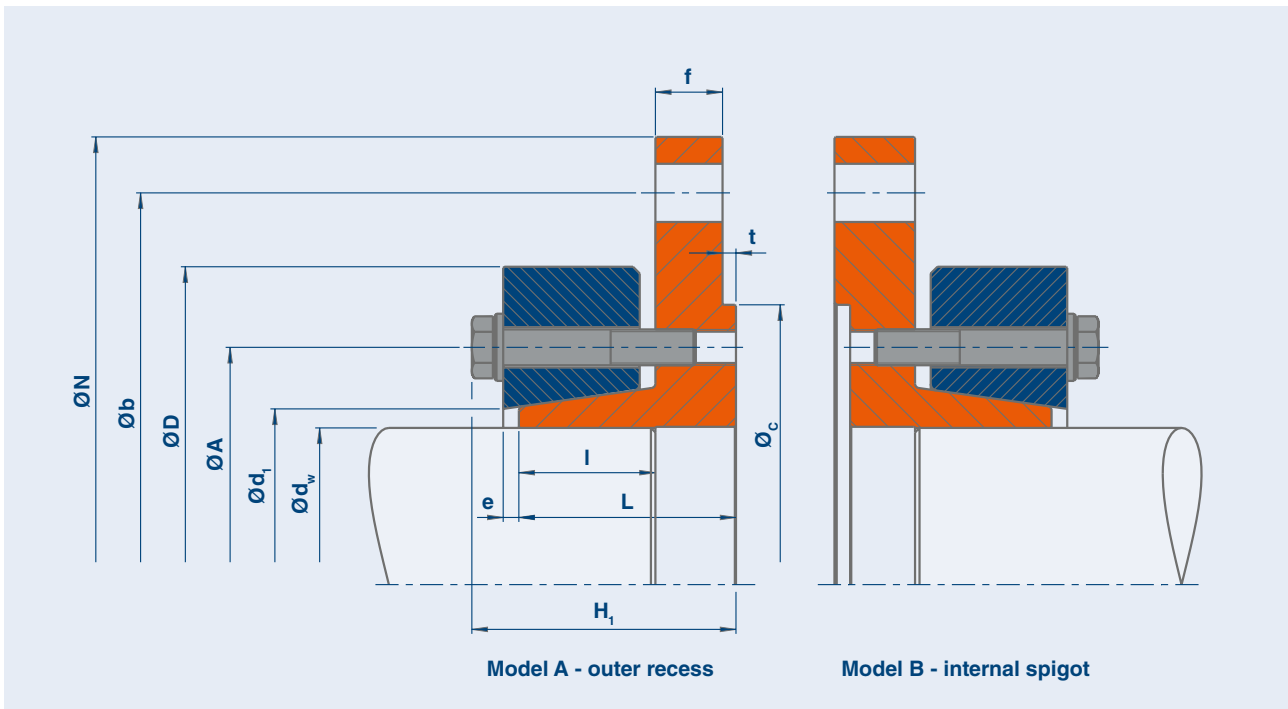
Please note when selecting flange couplings that the transmission values given in the table are reference values for orientation.

Attention:

An overlapping of speed, bending moment and torque leads to a reduction in the transmissible torque.

Should several loads of the size of those limits given in the table be applied at the same time on the shrink disc in your case, please feel free to contact our Design department at engineering@stuewe.de.

STÜWE® Flange Coupling Type FKD Series 6



Flange Coupling Type FKD – Series 6

Type	d_w^{**} mm	Mt Nm	B ^{***}	M_a Nm	D mm	l mm	H_1 mm	A mm	d_1 mm	e mm
FKD 6 - 340 - 90	90	22352	9 x M14	193	198	72	112	169	123	6.5
	100	29356								
	110	36960								
FKD 6 - 370 - 110	110	44686	10 x M14	193	229	77	123	185	138	8.5
	115	49767								
	120	55146								
FKD 6 - 400 - 120	120	57410	9 x M16	295	253	82	134	201	149	8
	125	62601								
	130	68869								
FKD 6 - 400 - 130	130	68736	9 x M16	295	267	82	134	212	158	9
	135	75267								
	140	77000								
FKD 6 - 470 - 140	140	93661	10 x M16	295	270	105	163	227	171	12
	145	101926								
	150	110571								

Further sizes on request, subject to technical changes.

*Grade 10.9

**The hole diameter can be freely chosen within given limitations.

***Model A locking bolts: DIN EN ISO 4014/4017 grade 12.9, model B: DIN EN ISO 4762 Grade 12.9

****Continuous bending moment

When ordering please state for the recess shape of the outer recess: m

the following applies: $t_f = t + 1$

When ordering please state for the recess shape of the inner recess: f

the following applies: $t_m = t$

When ordering please state: (Type x $\text{Ø}d_w$ x model - recess shape), e.g. FKD6-400-130x135xA-m

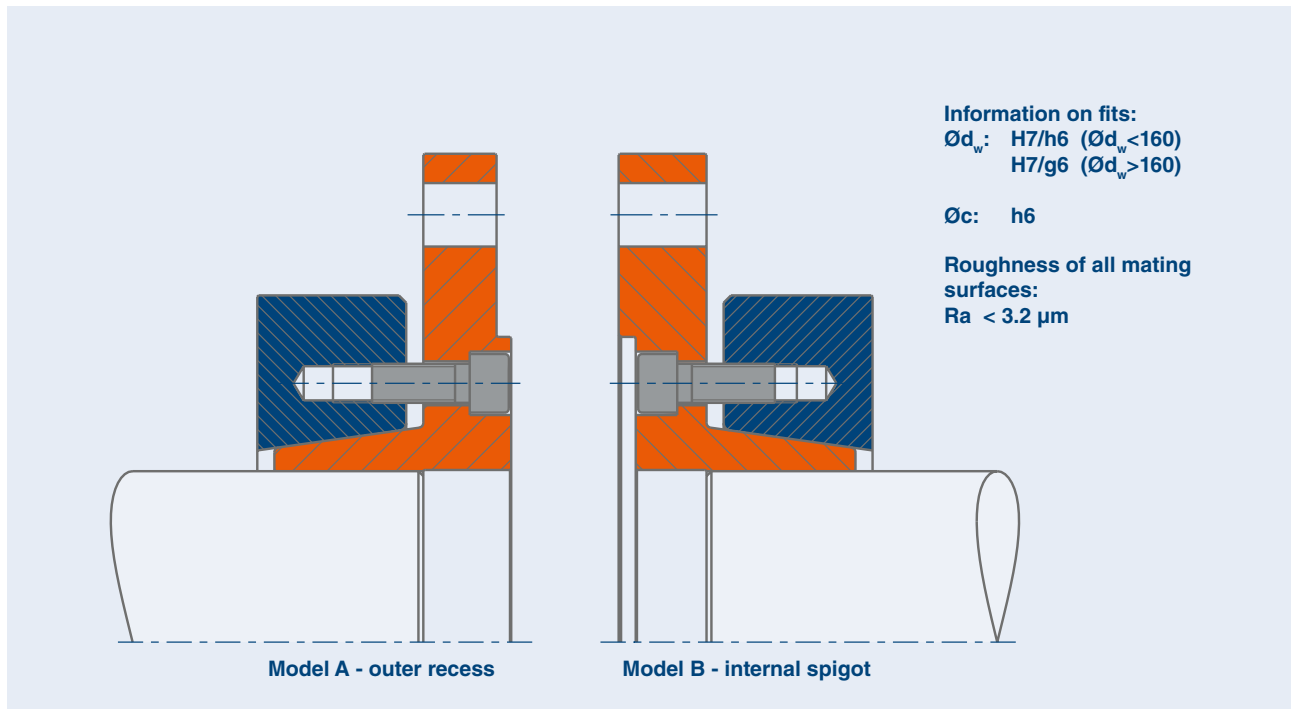
Code

M_t Maximum transmissible torque of a shaft coupling for $P_{ax} = 0$

P_{ax} Maximum transmissible axial load of a shaft coupling for $M_t = 0$

M_a Maximum tightening torque of the locking bolts (see also "Installation and Removal Instructions")

The dimensions H_1 and e apply to units in a non-tensioned condition.



N	b	c	L	f	t	Flange-bolts*	M_a	Mass	M_b , con****	nmax
mm	mm	mm	mm	mm	mm		Nm	kg	Nm	1/min
340	280	200	102	24	6	6 x M24	720	31	2200	9000
								30	3200	
								28	3000	
370	310	220	113	30	6	9 x M24	720	43	5000	8300
								43	5900	
								42	6800	
400	350	250	118	30	6	10 x M24	720	54	6600	7600
								53	7500	
								52	8600	
400	350	250	118	30	6	10 x M24	720	55	8600	7100
								54	9800	
								53	11000	
470	416	280	147	36	6	8 x M30	1450	81	9900	7000
								80	11000	
								78	12000	

Flange Coupling Type FKD – Series 6

Type	d_w^{**} mm	Mt Nm	B ^{***}	M _a Nm	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm
FKD 6 - 470 - 150	150	112829	9 x M20	570	304	105	165	248	181	9
	155	121931								
	160	131416								
FKD 6 - 520 - 160	160	144336	10 x M20	570	304	132	194	263	193	10.5
	165	155321								
	170	166743								
FKD 6 - 560 - 170	170	173284	10 x M20	570	329	141	203	285	215	15
	180	196117								
	190	223227								
FKD 6 - 560 - 190	190	235336	10 x M24	900	377	144	209	319	238	15
	200	265371								
	210	297359								
FKD 6 - 590 - 210	210	304458	10 x M24	900	424	140	209	346	262	16.5
	220	338624								
	230	372408								
FKD 6 - 630 - 220	220	349594	10 x M27	1310	441	150	221	364	271	15
	230	386915								
	240	426273								
FKD 6 - 630 - 240	240	421405	10 x M27	1310	472	150	221	387	293	18
	250	459585								
	260	502686								
FKD 6 - 710 - 250	250	525703	10 x M30	1800	492	176	249	408	306	18.5
	260	574927								
	270	626522								
FKD 6 - 710 - 270	270	587217	10 x M30	1800	520	168	241	430	325	19
	280	637623								
	290	673450								
FKD 6 - 800 - 290	290	772582	10 x M30	1800	572	177	260	458	351	24
	300	833182								
	310	833741								
FKD 6 - 800 - 310	310	833741	10 x M30	1800	595	177	260	478	368	25
	320	833741								
	330	833741								
FKD 6 - 800 - 330	330	911904	10 x M30	1800	606	177	260	500	387	26
	340	911904								
	350	911904								

Further sizes on request, subject to technical changes.

*Grade 10.9

**The hole diameter can be freely chosen within given limitations.

***Model A locking bolts: DIN EN ISO 4014/4017 grade 12.9, model B: DIN EN ISO 4762 Grade 12.9

****Continuous bending moment

When ordering please state for the recess shape of the outer recess: m

the following applies: $t_f = t + 1$

When ordering please state for the recess shape of the inner recess: f

the following applies: $t_m = t$

When ordering please state: (Type x \varnothing_{d_w} x model - recess shape), e.g. FKD6-400-130x135xA-m

N mm	b mm	c mm	L mm	f mm	t mm	Flange- bolts*	M _a Nm	Mass kg	M _{b, con****} Nm	n _{max} 1/min
470	416	280	147	36	6	9 x M30	1450	91	12000	6400
								90	14000	
								88	15000	
520	456	320	176	36	8	12 x M30	1450	112	13000	6400
								110	15000	
								109	17000	
560	496	360	185	36	8	16 x M30	1450	137	16000	5900
								133	19000	
								128	23000	
560	496	360	188	36	8	18 x M30	1450	160	24000	5000
								155	29000	
								150	34000	
590	526	380	188	40	8	20 x M30	1450	196	36000	4600
								191	42000	
								186	48000	
630	570	430	198	40	8	22 x M30	1450	227	40000	4300
								221	47000	
								216	54000	
630	570	430	198	40	8	25 x M30	1450	242	53000	4000
								236	60000	
								230	69000	
710	656	480	224	40	8	27 x M30	1450	311	59000	3900
								304	67000	
								297	76000	
710	656	480	216	40	8	29 x M30	1450	317	75000	3700
								310	84000	
								303	94000	
800	736	520	235	50	8	32 x M30	1450	444	100000	3400
								436	112000	
								427	124000	
800	736	520	235	50	8	32 x M30	1450	456	122000	3300
								447	135000	
								438	149000	
800	736	520	235	50	8	35 x M30	1450	452	138000	3200
								442	153000	
								432	168000	

Please note when selecting flange couplings that the transmission values given in the table are reference values for orientation.

Attention:

An overlapping of speed, bending moment and torque leads to a reduction in the transmissible torque.

Should several loads of the size of those limits given in the table be applied at the same time on the shrink disc in your case, please feel free to contact our Design department at engineering@stuewe.de.