

SKF Disc Couplings

The SKF disc coupling is the ideal solution in medium to high torque applications that require torsional rigidity, offer some allowance for misalignment, and do not require lubrication. These applications typically have a capacity range up to 178 kNm in a range of configurations including single disc, double disc, and spacer for both horizontal and vertical mounting. Standard shaft capacities are up to 289 mm.

The SKF disc coupling consists of two hubs and a laminated stainless steel disc pack secured by a series of fitted bolts retained by nylon insert lock nut nuts.

For spacer units, the spacer length is held between two disc pack sets.

Single disc units can accommodate angular (α) offset only. Double disc pack units, with a spacer, will allow for angular (α), parallel (δ), or combined offset. Both configurations will also allow for some axial (δ) movement.

The disc pack, or spacer may be removed and re-installed radially, meaning the prime mover and driven machine need not be moved at all.

The all-steel machined components allow for high speed applications to be handled with ease. With two-plane dynamic balancing, higher speeds are often permissible.

Hubs are carried with pilot bores so that boring to requirements is easy. In addition, where zero backlash is required, the use of the SKF FX Keyless Bushing is a simple and economical solution.

The SKF Disc Coupling offers the following benefits:

- Medium to high torque capability
- Cost effective (v torque and size)
- No lubrication required
- No frictional or energy losses
- Quiet operation (no meshing)
- Zero backlash
- Angular misalignment (α°)
- Parallel offset (β) with spacer / double disc pack configuration only
- High speed capability (may require dynamic balancing over 50 m/s)
- Limited end-float / axial movement (δ)

- Temperature-tolerant (generally up to 250 °C)
- Low inertia / mass MK^2 (when compared with other metallic-type couplings)
- Various hub designs, including short or inverted hub
- Standard spacer lengths to ANSI and ISO standards generally available
- Available with longer tubular spacers (steel or composite in some instances)
- Ease of mounting / alignment and maintenance

Coupling types

The SKF Disc Coupling is available in 2 basic configurations:

- Single disc
- Double disc
 - Short spacer
 - Standard spacer
 - Custom spacer
 - Floating horizontal
 - Floating vertical

Selection

Standard selection method

This selection method can be used for most motor, turbine or engine-driven applications, with appropriate service and duty factors.

The following information is required to select an appropriate SKF Disc Coupling:

- Power (kW)
- Speed (r/min)
- Torque (Nm)
- Type of driven equipment
- Application and duty cycle
- Shaft diameters (or at least the maximum bore)
- Shaft gap (DBSE)
- Space limitations (if any)
- Other ambient conditions, such as
 - temperature
 - adverse environment

Where applications involve reversing or braking torque, please contact your local SKF technical expert for assessment.

- 1 Determine the torque of the system, using Formulae 1.1

$$M_T = \frac{\text{kW} \times 9\,550}{\text{r/min}}$$

where

M_T Torque (moment) [Nm]

kW Motor or demand power (kW)

r/min Revolutions per minute [min^{-1}]

- 2 From the service factor tables (\rightarrow page 89), select a suitable service factor (F_S) for the application.
- 3 Determine the minimum torque requirement (M_C) for the coupling by multiplying the torque determined in (1), by the service factor selected in (2):

$$M_C = M_T \times F_S$$

The coupling must have a torque capacity equal to or greater than this resultant M_C figure.

- 4 Check the bore size capacity for both shafts. If the bore size is too small, a larger coupling may be required to accommodate the shafts.
- 5 Check to make sure other parameters such as maximum permissible speed and any dimensional limitations are all met.

Standard selection example

Select a coupling to connect a 30 kW, 1 440 r/min electric motor to a cooling tower fan (force draft). The motor shaft is 48 mm, and the pump shaft 55 mm. A spacer type is required of approx. 4" (101,6 mm) for ease of maintenance. Maximum temperature is 60 degrees, with other

space limitations. Operation is 10–12 hours a day.

- 1 Determine the torque of the system:

$$M_T = \frac{30 \times 9\,550}{1\,440} = 199 \text{ Nm}$$

- 2 Determine the service factor from **page 89**.
For the type of application the F_S is 2.
- 3 The minimum required coupling capacity rating (M_C) is $2,0 \times 199 = 398 \text{ Nm}$.
The coupling capacity must be equal to or greater than this figure.
- 4 From the tables on **page 52**, a type PHE W4D-030 is selected.
Torque capacity 774 Nm
Max. shaft Dia 58 mm
Spacer (standard) 102 mm
Maximum r/min 7 300 r/min
- 5 Selection summary:
Type PHE W4D-030X102MMX48X55
Complete with 102 mm spacer (standard) and hubs bored to 48 mm (H7) and 55 mm (H7) respectively.

Note: If no tolerances are given, the standard SKF bore diameter tolerances given in **table 4** (→ **page 85**) will be used.

Unless stated otherwise, all bores come with standard (ISO Metric, or BS INCH) keyways. In some instances a shallow key may be necessary (Metric DIN 6885/3).

Table 1

Disc coupling series designation				
Type	Description	4 Bolt	6 Bolt	8 Bolt
Single disc	Standard	W4	–	–
Double	Short spacer	W4SD	–	–
	Standard spacer Custom spacer	W4D W4F	W6D W6F	W8D W8F
Floating	Horizontal	W4FH	W6FH	W8FH
	Vertical	W4FVD	W6FVD	W8FVD

Engineering data

For additional useful information on disc couplings, such as characteristics and applications of disc couplings. Please, refer to the following tables.

Order data

A disc coupling exists at least of 2 hubs and 1 disc pack and bolt kit. The number of required disc pack and bolt kits depend on coupling type. Vertical kits and vertical spacer kits might also be needed. For details refer to **table 4**.

Table 2

Maximum shaft diameter and projection distance (S in fig. 1, page 52) for all series

Size		00	01	02	03	04	05	10	15	20	25	30	35	40	45	50	55	60	65
–		mm																	
W4	Element bore	–	–	–	–	–	25	30	32	40	45	51	69	76	89	101	108	–	–
	G	–	–	–	–	–	5,8	7,1	8,4	11	11,2	12,5	16	17	22,8	24	26	–	–
	S	–	–	–	–	–	2	2	2	3	3	3	4	4	5	5	6	–	–
W6	Element bore	60	69	78	83	98	142	142	163	184	200	216	231	253	280	307	322	338	354
	G	10,3	11,0	12,0	14,0	17,0	17,5	19,0	19,0	22,5	28,0	31,0	31,0	34,0	35,5	37,0	37,5	37,5	37,5
	S	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5	5
W8	Element bore	–	124	–	143	–	155	155	178	201	218	235	252	275	304	343	350	368	384
	G	–	12,2	–	13,7	–	17,5	19,0	19,0	21,5	24,0	29,5	29,5	31,0	32,0	32,5	34,0	34,5	35,5
	S	–	2	–	2	–	4	4	4	4	4	6	6	6	6	6	6	3	6

Table 3

Recommended total indicator readout (TIR) reading for all series

Size		00	01	02	03	04	05	10	15	20	25	30	35	40	45	50	55	60	65
–		mm																	
W4	Gauge reading (TIR)	–	–	–	–	–	0,12	0,15	0,16	0,2	0,22	0,25	0,29	0,34	0,37	0,43	0,48	–	–
	W6	0,21	0,24	0,28	0,32	0,37	0,48	0,48	0,53	0,6	0,65	0,71	0,77	0,81	0,88	0,96	1,02	1,09	1,13
W8	–	0,37	–	0,43	–	0,48	0,48	0,53	0,6	0,65	0,71	0,77	0,81	0,88	0,96	1,02	1,09	1,13	–

Table 4

Order data

Coupling type	Hubs			Disc pack		Bolt kit	Vertical kit		Spacer / Vertical kit (VKIT)			
	Solid bore	Qty	Bored to size ¹⁾	Qty	Qty	Qty	Qty	Qty	Qty (... = DBSE dimension)	Qty		
Single-flex (W4)	PHE W4-15HUBRSB	2 or	PHE W4-15HUB...MM	2	PHE W4-15DPACK	1	PHE W4-15KIT	1	–	–		
Double-flex (W4), with spacer	PHE W4-15HUBRSB	2 or	PHE W4-15HUB...MM	2	PHE W4-15DPACK	2	PHE W4-15KIT	2	–	PHE W4-15X...MM	1	
Double-flex floating	PHE W6-35HUBRSB	2 or	PHE W6-35HUB...MM	2	PHE W6-35DPACK	2	PHE W6-35KIT	2	–	PHE W6-35FSX...MM	1	
Double-flex semi-floating	PHE W6-35HUBRSB	2 or	PHE W6-35HUB...MM	2	PHE W6-35DPACK	1	PHE W6-35KIT	1	–	PHE W6-35SFSPX...MM	1	
Single-flex (vertical)	PHE W4-15HUBRSB	2 or	PHE W4-15HUB...MM	2	PHE W4-15DPACK	1	PHE W4-15KIT	1	PHE W4-15VKIT	1	–	
Double-flex (vertical) with spacer	PHE W6-35HUBRSB	2 or	PHE W6-35HUB...MM	2	PHE W6-35DPACK	2	PHE W6-35KIT	2	PHE W6-35VKIT	1	PHE W6-35X...MM	1
Double-flex floating (vertical)	PHE W6-35HUBRSB	2 or	PHE W6-35HUB...MM	2	PHE W6-35DPACK	2	PHE W6-35KIT	2	PHE W6-35VKIT	1	PHE W6-35FSX...MM	1

The complete coupling designation consists of the series, size and bore details. If bore is not specified, solid bore (RSB) is supplied, for example: PHE W6D-35x50MMx50MM or PHE W6D-45x350MMx50x50MM, where 350 mm is the required DBSE.

Unless specified, bore tolerance will be H7.

Option of taper bushing in the hub (mounting type F) is available on request. Note that coupling capacity may be reduced due to the taper bushing capacity. FX Keyless bushings are also an option in some cases. Please, refer to SKF for details on both options.

¹⁾ For bored to size designations, add bore size. For example: PHE W4D-45X50MMX45MM.

Disc laminate swagging

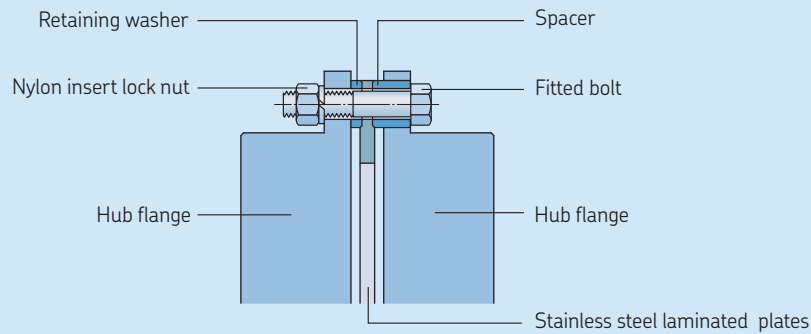


Table 6

Standard disc configuration

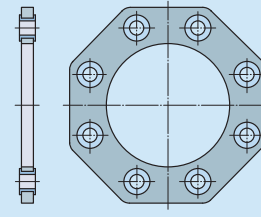
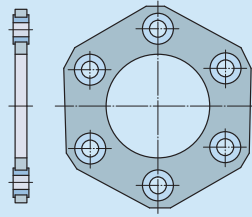
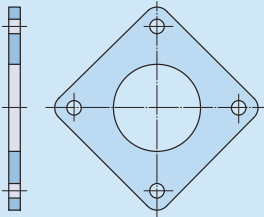
Type

W4 Series – 4 Bolt

W6 Series – 6 Bolt

W8 Series – 8 Bolt

Style



Characteristics

- Zero backlash
- Laminated stainless steel (grade 304; DIN X5CrNi189)
- Flat laminates, with washers
- Fitted bolts with nylon insert lock nut nuts
- Alternate (axial) bolt mountings for ease of installation and balance
- Maximum angular misalignment (α): 1°
- Maximum torque: 6 370 Nm
- Lowest reaction forces

Typical applications

- General industrial applications
- Maximum angular misalignment
- Servo motor and stepper drives
- Positioning / indexing
- Constant loads
- Lower torque applications, with uniform or smooth characteristics load characteristics
- Compact design

- Zero backlash
- Laminated stainless steel (grade 304; DIN X5CrNi189)
- Double joint (disc) design
- Fitted bolts with nylon insert lock nut nuts
- Alternate (axial) bolt mountings for ease of installation and balance
- Swagged laminate holes
- Maximum angular misalignment (α): $0,7^\circ$
- Maximum torque: 128 kNm

- General industrial applications
- Maximum angular misalignment
- Reversing and reciprocating loads
- Medium shock
- Medium torque applications
- Higher speeds with two-plane (dynamic) balancing
- More compact option offered for similar loadings, than the W4 (subject to shaft capacity)
- Lower alignment capability than W4 series

- Zero backlash
- Laminated stainless steel (grade 304; DIN X5CrNi189)
- Double joint (disc) design
- Fitted bolts with nylon insert lock nut nuts
- Alternate (axial) bolt mountings for ease of installation and balance
- Swagged laminate holes
- Maximum angular misalignment (α): $0,5^\circ$
- Maximum torque: 178 kNm

- High torque, lower speed applications
- Heavier shock loadings
- Engine drive applications
- Heaving reversing loads
- Lowest misalignment capacity compared with W4 and W6

Installation

1 Clean all metal components. Remove burrs from flange bores and ensure keyways are clean.

2 Shaft projection length

When the distance between the ends of the shaft is less than "G", adjust the flange placement on the shaft to recommended dimension "G". This can be done by projecting the shaft (→ **fig. 1**).

If shaft projection into the element zone is required, please refer to **table 2** on **page 47** for maximum diameter for each size element.

The maximum projection for shafts larger than the stated allowance is listed in **table 2** on **page 47**, dimension "S". The projections ensure that the shaft does not interfere with the disc element.

3 Alignment

Using the dial gauge, check the coupling installation alignment for accuracy, both angular (α) and parallel offset (Δ).

A Checking for angular misalignment. (→ **fig. 2**).

To conduct an angular misalignment check, fix the dial gauge on one hub and rotate the hub to find the minimum reading. Then set the gauge to zero.

Take extra care to measure the deflection away from the through holes, as they may be slightly distorted from machine work. Check deflection at the smoothest unbroken area. Refer to **table 3** for deflection of 0,1 degree.

B Checking for parallel misalignment.

Check parallel alignment by using a dial gauge (→ **fig. 3**).

An accuracy reading should be taken as the shaft is rotated. Any parallel misalignment will produce an equivalent angle in floating shaft couplings, or where there is a large distance between shafts.

Note: Misalignment of 2 mm parallel per 1 000 mm distance between flanges results in 1 degree angular misalignment.

4 Coupling assembly

As shown in the exploded view diagram (→ **fig. 4**), the coupling is assembled completely from supplied parts. It is important to take extra care when fitting the bolts, as forcing them through may damage the thick washer and result in protrusion.

Fasten all the nylon insert lock nut nuts to the required torque, as shown in the relevant disc coupling ratings tables.

The correct torque will ensure that the coupling operates smoothly. Alternate the projection of bolt heads and nuts for the best possible transmission and balance.

5 Running of the couplings

To ensure longest possible service life, the coupling should be rechecked for both angular (α) and parallel (Δ) misalignment, one to two hours after initial start-up.

At the same time, it is also necessary to check and re-tighten the bolts to the tightening torque shown in the relevant dimension tables. The nylon insert lock nut nuts can be re-fastened up to 10 times, after which, replacement is recommended.

The bolts supplied with the coupling are special machined fitted bolts, with tolerances to ensure the best possible fit.

Note: Do not replace with standard commercial bolts, as looseness and imbalance may occur.

Any damage to the stainless disc element pack requires immediate replacement.

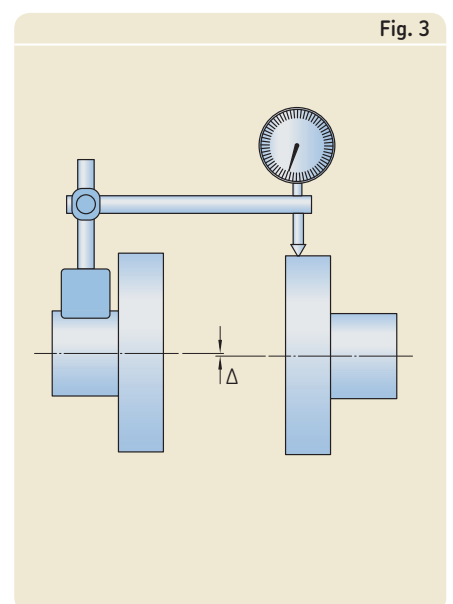
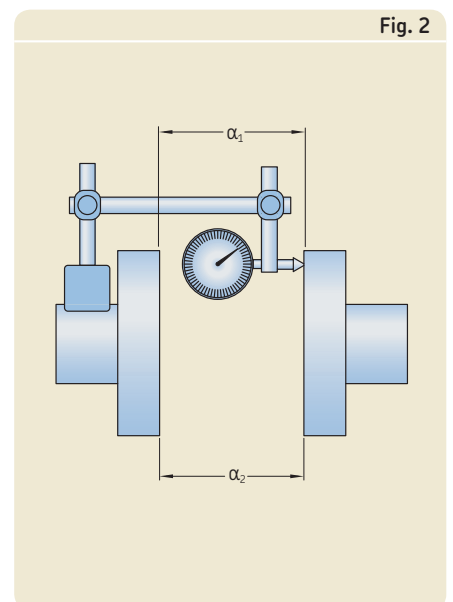
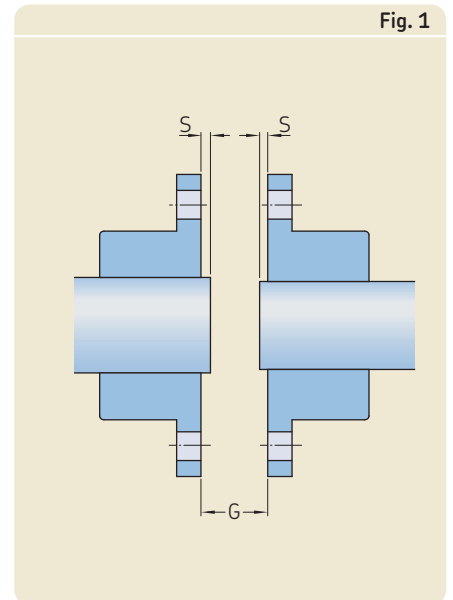


Fig. 4a

Diagram of components (exploded view) – 4 bolt couplings

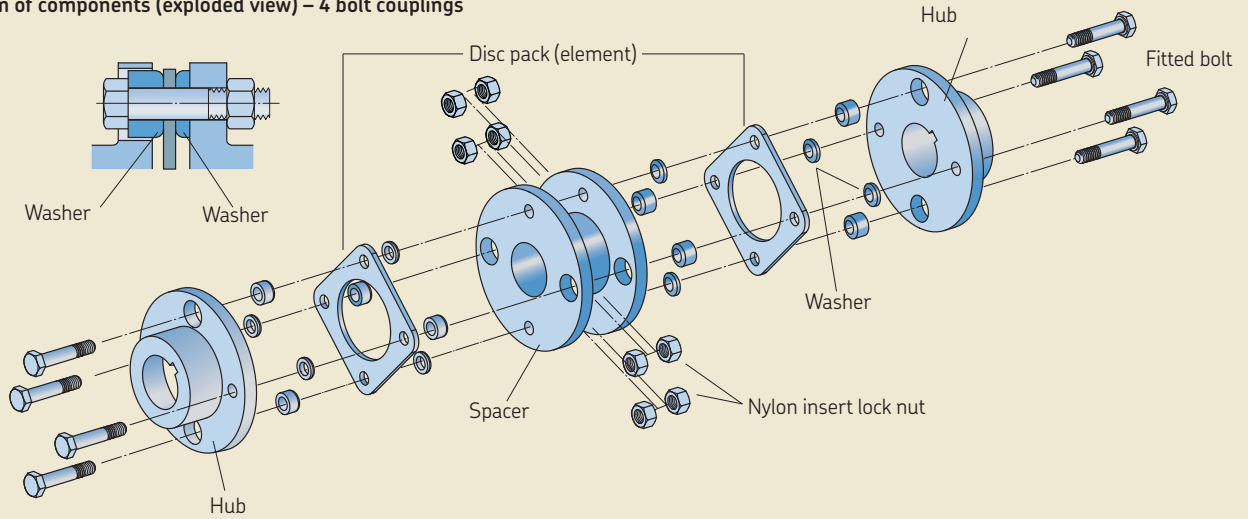
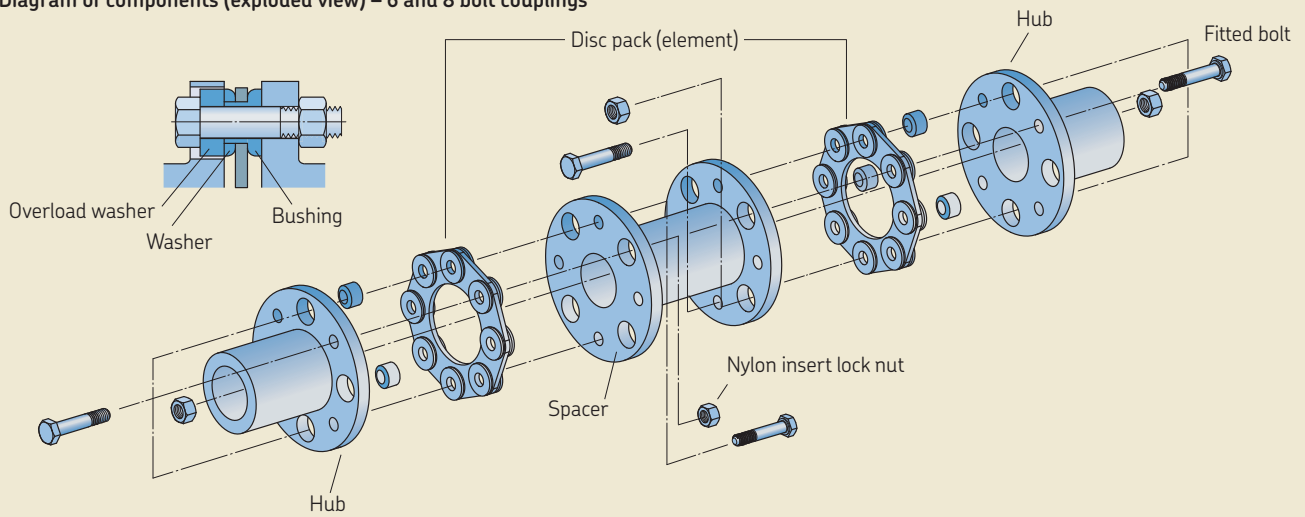
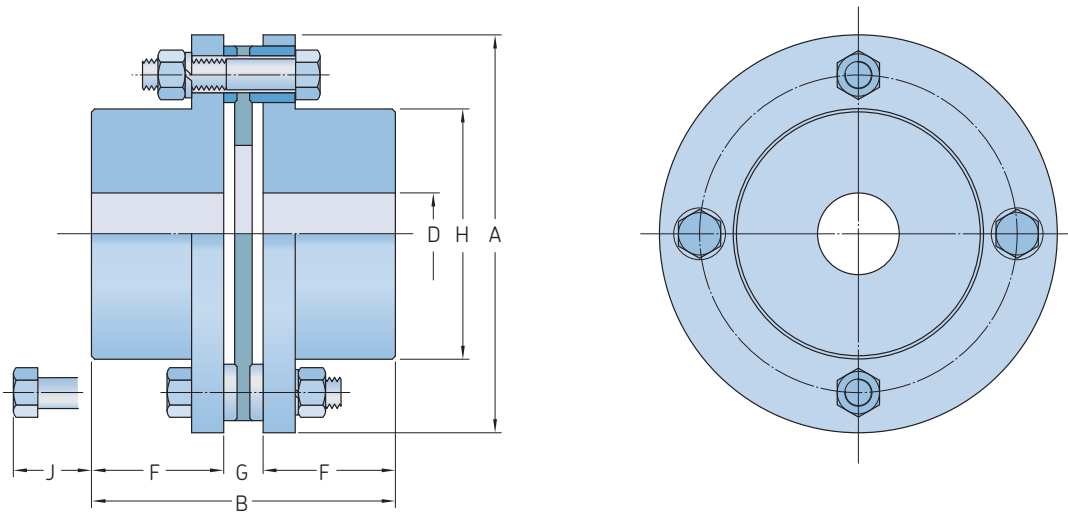


Fig. 4b

Diagram of components (exploded view) – 6 and 8 bolt couplings



W4 – 4 Bolt single



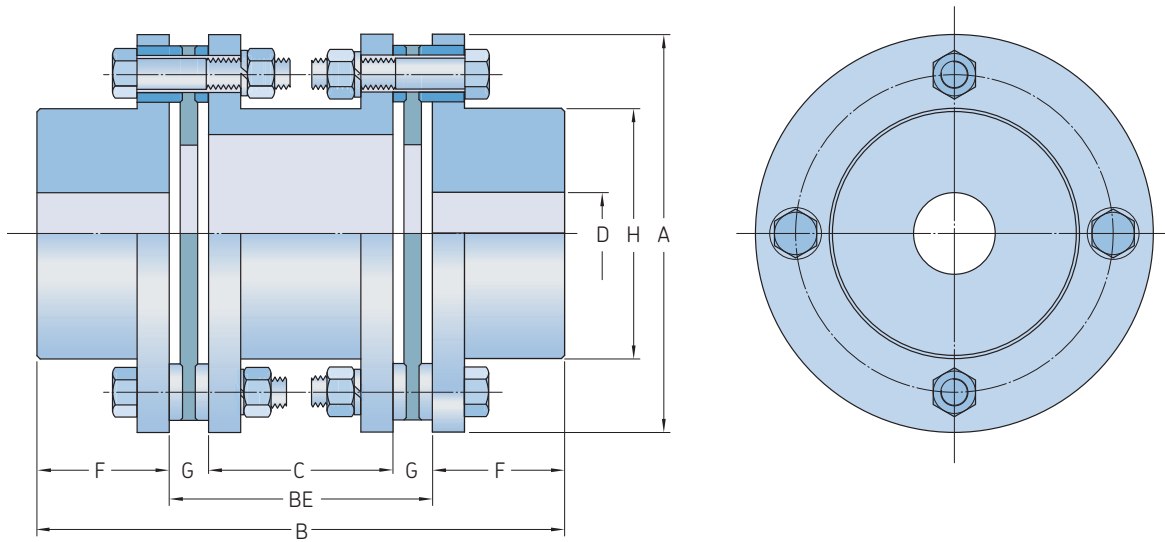
Size	Rated torque	Speed ¹⁾ Max.	Bore diameter		Dimensions						Tightening torque	Coupling weight without bore and min. DBSE
			D Min.	Max.	A	B	F	G	H	J		
–	Nm	r/min	mm		–						Nm	kg
05 S	34,3	10 000	8	23	67	55,8	25	5,8	33	16	9	0,6
10 S	90	10 000	10	32	81	57,1	25	7,1	46	16	9	1,1
15 S	176	10 000	10	35	93	66,4	29	8,4	51	24	22	1,7
20 S	245	10 000	10	42	104	79	34	11	61	30	22	2,5
25 S	421	8 300	16	50	126	93,2	41	11,2	71	27	41	4,3
30 S	774	7 300	16	58	143	108,5	48	12,5	84	28	72	6,9
35 S	1 274	6 200	25	74	168	130	57	16	106	26	72	11,3
40 S	2 058	5 400	25	83	194	145	64	17	118	30	160	16,7
45 S	3 332	4 900	45	95	214	174,8	76	22,8	137	34	160	22,7
50 S	4 900	4 200	50	109	246	202	89	24	156	26	220	35,4
55 S	6 370	3 800	50	118	276	230	102	26	169	42	570	52

¹⁾ If higher speed required, contact SKF

²⁾ For dimension C in type 4F, this varies depending on spacer length

³⁾ For coupling weight in type 4F, this varies depending on spacer length

W4 – 4 Bolt double



Size	Rated torque	Speed ¹⁾	Bore diameter		Dimensions							Tightening torque	Coupling weight without bore and min. DBSE	
			D Min.	Max.	A	B	BE ⁴⁾ Min.	Max.	C ²⁾	F	G			H
–	Nm	r/min	mm		–							Nm	kg	
05 D	33,3	10 000	8	23	67	86	36	24	25	5,8	33	16	9	1,1
	33,3	10 000	8	23	67	138,9	88,9	77	25	5,8	33	16	9	1,2
10 D	90,2	10 000	10	32	81	89	39	25	25	7,1	46	16	9	1,7
	90,2	10 000	10	32	81	138,9	88,9	75	25	7,1	46	16	9	1,9
15 D	176	10 000	10	35	93	105	47	30	29	8,4	51	24	22	2,7
	176	10 000	10	35	93	159,6	101,6	85	29	8,4	51	24	22	2,9
20 D	245	10 000	10	42	104	121	53	31	34	11	61	30	22	6,6
	245	10 000	10	42	104	195	127,0	105	34	11	61	30	22	4,1
25 D	421	8 300	16	50	126	144	62	40	41	11,2	71	27	41	6,6
	421	8 300	16	50	126	209	127,0	105	41	11,2	71	27	41	7,1
30 D	774	7 300	16	58	143	165	69	44	48	12,5	84	28	72	10,3
	774	7 300	16	58	143	223	127,0	102	48	12,5	84	28	72	10,8
35 D	1 274	6 200	25	74	168	192	78	46	57	16	106	26	72	15,6
	1 274	6 200	25	74	168	241	127,0	95	57	16	106	26	72	16,3
40 D	2 058	5 400	25	83	194	217	89	55	64	17	118	30	160	24
	2 058	5 400	25	83	194	267,7	139,7	106	64	17	118	30	160	24,7
45 D	3 332	4 900	45	90	214	249	97	51	76	22,8	137	34	160	31,5
	3 332	4 900	45	90	214	304,4	152,4	107	76	22,8	137	34	160	32,5
50 D	4 900	4 200	50	109	246	287	109	61	89	24	156	26	220	48,4
	4 900	4 200	50	109	246	355,8	177,8	130	89	24	156	26	220	50
55 D	5 880	3 800	50	118	276	338	134	82	102	26	169	42	570	73,9
	5 880	3 800	50	118	276	381,8	177,8	126	102	26	169	42	570	75

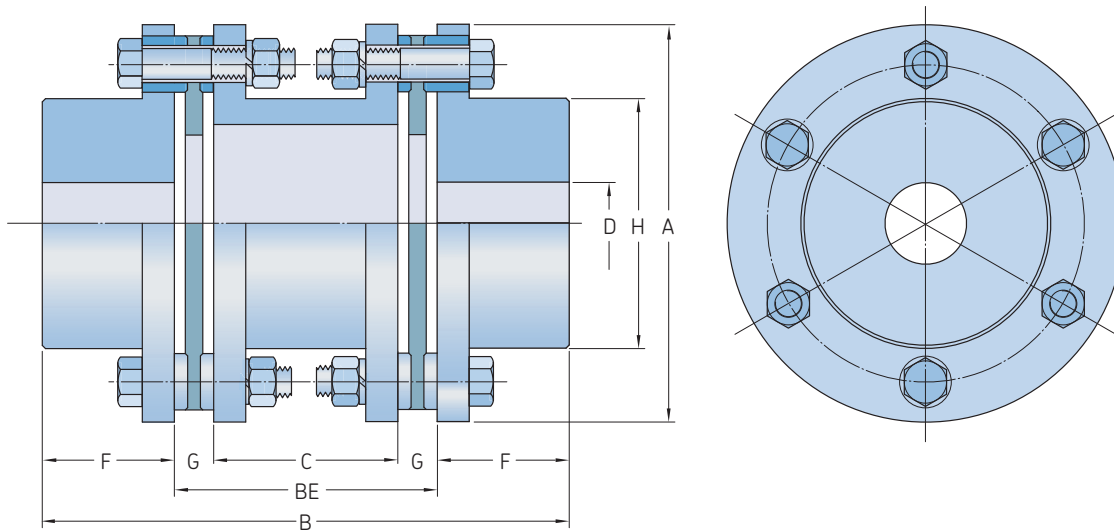
¹⁾ If higher speed required, contact SKF

²⁾ For dimension C in type 4F, this varies depending on spacer length

³⁾ For coupling weight in type 4F, this varies depending on spacer length

⁴⁾ Preferred standard spacer lengths to both ISO and ANSI standards are available.

W6 – 6 Bolt double



Size	Rated torque Nm	Speed ¹⁾ r/min	Bore diameter		Dimensions							Tightening torque Nm	Coupling weight without bore and min. DBSE kg
			D Min.	Max.	A	B	BE ⁴⁾ Min.	Max.	C ²⁾	F	G		
–	–	–	mm		–							–	–
00 D	569	26 000	8	51	119	168	60	39.4	54	10.3	74	22	6
01 D	922	23 000	8	55	137	198	72	50	63	11.0	81	41	9,1
02 D	1 710	19 000	8	67	161	238	90	66	74	12,0	97	72	16,9
03 D	3 340	17 000	8	72	180	269	109	81	80	14,0	104	160	21,6
04 D	6 210	15 000	8	85	212	308	118	84	95	17,0	124	220	35,1
05 D	6 080	11 600	8	111	276	377	153	118	112	17,5	161	220	65,1
10 D	8 240	11 600	10	111	276	377	153	115	112	19,0	161	220	66,1
15 D	10 700	10 300	10	133	308	440	172	134	134	19,0	193	440	107,8
20 D	17 800	9 200	10	152	346	497	191	146	153	22,5	218	570	156,8
25 D	26 400	8 500	16	165	375	553	223	167	165	28,0	240	1 100	211,8
30 D	33 400	7 800	16	178	410	610	254	192	178	31,0	258	1 500	274,8
35 D	39 900	7 200	25	187	445	646	270	208	188	31,0	272	1 700	333
40 D	46 300	6 800	25	205	470	686	274	206	206	34,0	297	1 700	400
45 D	59 800	6 200	45	231	511	749	287	216	231	35,5	334	1 700	525
50 D	74 700	5 700	50	254	556	800	292	218	254	37,0	364	3 000	676
55 D	92 600	5 400	50	263	587	839	311	236	364	37,5	382	3 500	803
60 D	107 000	5 000	50	275	629	895	343	268	276	37,5	399	3 700	654
65 D	128 000	4 800	50	289	654	934	356	281	289	37,5	419	4 000	1 095

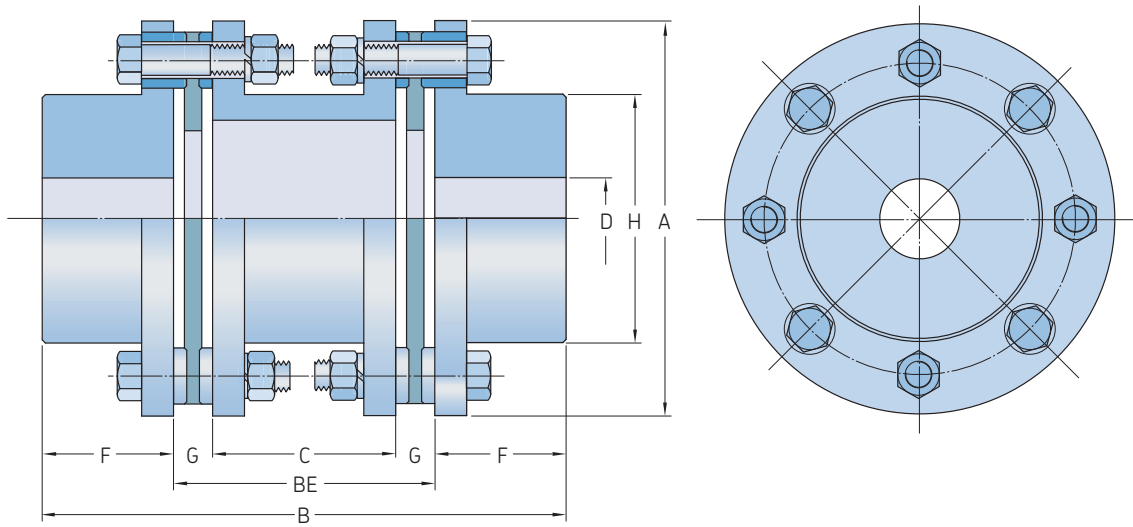
¹⁾ If higher speed required, contact SKF

²⁾ For dimensions B, C in type 6F, this varies depending on spacer length

³⁾ For coupling weight in type 4F, this varies depending on spacer length

⁴⁾ Preferred standard spacer lengths to both ISO and ANSI standards are available.

W8 – 8 Bolt double



Size	Rated torque Nm	Speed ¹⁾ r/min	Bore diameter		Dimensions							Tightening torque Nm	Coupling weight without bore and min. DBSE ³⁾ kg	
			D Min.	Max.	A	B ²⁾	BE ⁴⁾⁵⁾	C ²⁾	F	G	H			
–	–	–	mm	–	–	–	–	–	–	–	–	–	–	–
01 D	3 840	15 000	8	95	214	333	117	92,6	108	12,2	137	72	38	
03 D	7 120	13 000	8	108	246	369	127	99,6	121	13,7	156	160	56	
05 D	8 970	11 600	8	111	276	421	153	118	134	17,5	161	220	73	
10 D	11 800	11 600	10	111	276	421	153	115	134	19,0	161	220	74	
15 D	15 400	10 300	10	133	308	492	172	134	160	19,0	193	440	120	
20 D	25 600	9 200	10	152	346	557	191	148	183	21,5	218	570	175	
25 D	37 800	8 500	16	165	375	619	223	175	198	24,0	240	1 100	234	
30 D	47 800	7 800	16	178	410	682	254	195	214	29,5	258	1 500	305	
35 D	57 100	7 200	25	187	445	720	270	211	225	29,5	272	1 700	368	
40 D	64 400	6 800	25	205	470	768	274	212	247	31,0	297	1 700	448	
45 D	83 700	6 200	45	231	511	843	287	223	278	32,0	334	1 700	592	
50 D	103 000	5 700	50	254	556	902	292	227	305	32,5	364	3 000	762	
55 D	128 000	5 400	50	263	587	945	311	243	317	34,0	382	3 500	902	
60 D	149 000	5 000	50	275	629	1005	343	274	331	34,5	399	3 700	1 068	
65 D	178 000	4 800	50	289	654	1050	356	285	347	35,5	419	4 000	1 231	

¹⁾ If higher speed required, contact SKF

²⁾ For dimension B, C in type 6F, this varies depending on spacer length

³⁾ For coupling weight in type 4F, this varies depending on spacer length

⁴⁾ Maximum permissible Be will be determined and limited by operating speed.

⁵⁾ Preferred standard spacer lengths to both ISO and ANSI standards are available.

Floating shaft disc couplings

SKF Floating shaft disc couplings transmit power between widely separated machine shafts, or where large parallel misalignment exists.

Allowable rotational speeds are determined, and limited, by the span and the balance condition of the coupling system. Balancing is necessary for high speeds and long shafts as indicated in the following tables **1** to **3**.

Disc floating shaft couplings are also available for vertical applications with the addition of a vertical floating shaft kit .

- 1 Do not use floating shaft couplings with long, overhanging shafts.
- 2 Consult SKF for spans greater than 6 000 mm, or for speeds in excess of those indicated in the tables.

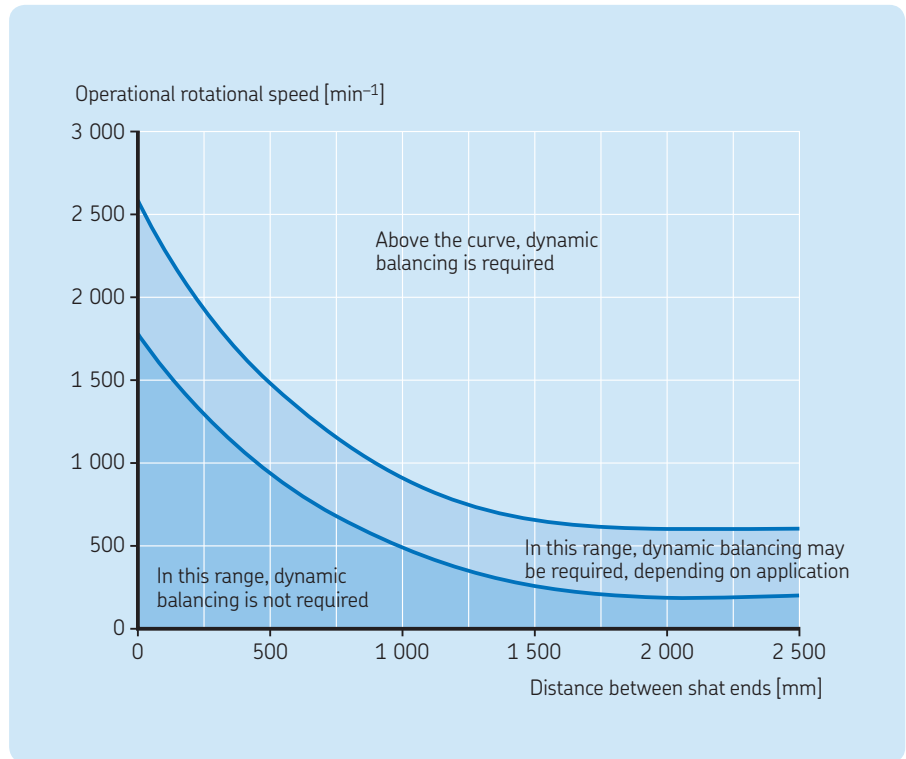


Table 1

W4F Speed

Size	Bore Max.	Maximum distance between shaft ends (BE max) for various speeds								
		1 800	1 500	1 200	1 000	900	750	720	600	500
		r/min	r/min							
010	32	1 610	1 760	1 970	2 160	2 280	2 500	2 550	2 790	3 060
015	35	1 690	1 850	2 070	2 270	2 390	2 620	2 670	2 930	3 210
020	42	1 880	2 050	2 300	2 520	2 650	2 910	2 970	3 250	3 560
025	50	2 010	2 210	2 470	2 700	2 850	3 120	3 190	3 490	3 830
030	58	2 220	2 430	2 720	2 980	3 140	3 440	3 510	3 850	4 210
035	74	2 500	2 740	3 060	3 350	3 540	3 870	3 950	4 330	4 750
040	83	2 690	2 950	3 300	3 610	3 800	4 180	4 250	4 660	5 120
045	95	2 890	3 170	3 540	3 880	4 090	4 490	4 570	5 010	5 500
050	109	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
055	118	3 230	3 540	3 960	4 330	4 560	5 010	5 100	5 590	–

For BE dimensions over 6 000 mm, please contact SKF
Floating shaft couplings should not be used with long overhang shafts

Table 2

W6F Speed

Size	Bore Max.	Maximum distance between shaft ends (BE max) for various speeds								
		1 800	1 500	1 200	1 000	900	750	720	600	500
–	r/min	r/min								
000	51	2 010	2 210	2 470	2 700	2 850	3 120	3 190	3 490	3 830
001	55	2 220	2 430	2 720	2 980	3 140	3 440	3 510	3 850	4 210
002	67	2 500	2 740	3 060	3 350	3 540	3 870	3 950	4 330	4 750
003	72	2 890	3 170	3 540	3 880	4 090	4 490	4 570	5 010	5 500
004	85	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
005	111	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
010	111	3 100	3 540	3 800	4 160	4 390	4 820	4 910	5 370	5 900
015	133	3 230	3 540	3 960	4 330	4 560	5 010	5 100	5 590	–
020	152	3 720	4 070	4 560	4 990	5 250	5 770	5 880	–	–
025	165	3 720	4 070	4 560	4 990	5 250	5 770	5 880	–	–
030	178	3 860	4 030	4 510	4 940	5 200	5 710	5 810	–	–
035	187	4 140	4 540	5 070	5 560	5 850	–	–	–	–
040	205	4 140	4 540	5 070	5 560	5 850	–	–	–	–
045	231	4 530	4 960	5 540	–	–	–	–	–	–
050	254	4 790	5 240	5 860	–	–	–	–	–	–
055	263	4 790	5 240	5 860	–	–	–	–	–	–
060	275	4 790	5 240	5 860	–	–	–	–	–	–
065	289	5 120	5 600	–	–	–	–	–	–	–

For BE dimensions over 6 000 mm, please contact SKF
Floating shaft couplings should not be used with long overhang shafts

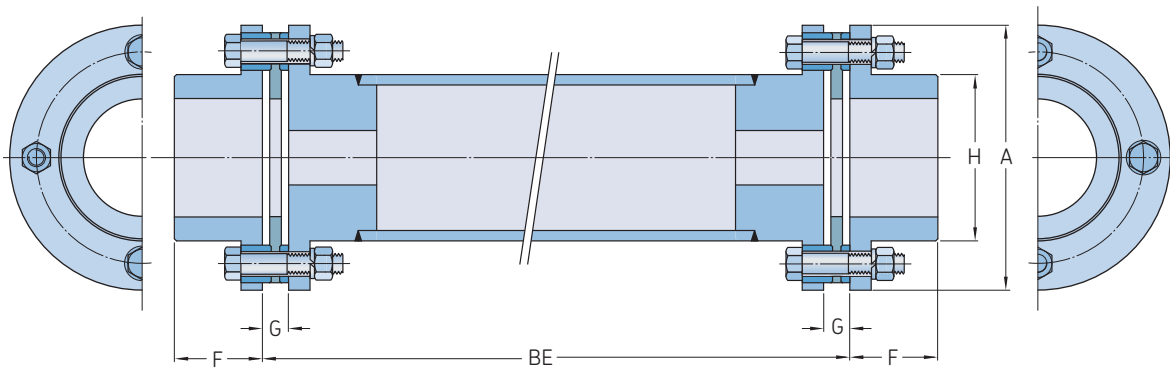
Table 3

W8F Speed

Size	Bore Max.	Maximum distance between shaft ends (BE max) for various speeds								
		1 800	1 500	1 200	1 000	900	750	720	600	500
–	r/min	r/min								
001	95	2 890	3 170	3 540	3 880	4 090	4 490	4 570	5 010	5 500
003	108	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
005	111	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
010	111	3 100	3 400	3 800	4 160	4 390	4 820	4 910	5 370	5 900
015	133	3 230	3 450	3 960	4 330	4 560	5 010	5 100	5 590	–
020	152	3 720	4 070	4 560	4 990	5 250	5 770	5 880	–	–
025	165	3 680	4 030	4 510	4 940	5 200	5 710	5 810	–	–
030	178	3 680	4 030	4 510	4 940	5 200	5 710	5 810	–	–
035	187	4 100	4 490	5 020	5 500	5 790	–	–	–	–
040	205	4 100	4 490	5 020	5 500	5 790	–	–	–	–
045	231	4 480	4 900	5 480	6 010	–	–	–	–	–
050	254	4 730	5 180	5 800	–	–	–	–	–	–
055	263	4 730	5 180	5 800	–	–	–	–	–	–
060	275	4 730	5 180	5 800	–	–	–	–	–	–
065	289	5 060	5 540	–	–	–	–	–	–	–

For BE dimensions over 6 000 mm, please contact SKF
Floating shaft couplings should not be used with long overhang shafts

W4 FH – Floating shaft



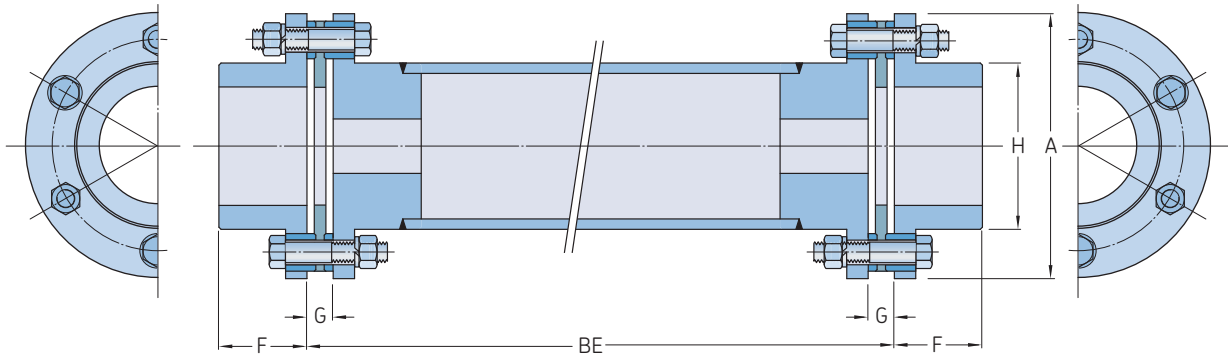
Size	Rated torque ²⁾	Speed ¹⁾ Max.	Bore diameter		Dimensions							Tightening torque	Coupling weight without bore and min. DBSE
			D Min.	Max.	A	BE ³⁾ Min.	F	G	H	J	C		
–	Nm	r/min	mm		–							Nm	kg
10 FH	90,2	10 000	10	32	81	72	25	7,1	46	16	Dimension varies on BE required	9	Weight varies on length of spacer C
15 FH	176	10 000	10	35	93	76	29	8,4	51	24		22	
20 FH	245	10 000	10	42	104	88	34	11	61	30		22	
25 FH	421	8 300	16	50	126	99	41	11,2	71	27	41		
30 FH	774	7 300	16	58	143	111	48	12,5	84	28	72		
35 FH	1 274	6 200	25	74	168	142	57	16	106	26	72		
40 FH	2 058	5 400	25	83	194	154	64	17	118	30	160		
45 FH	3 332	4 900	45	90	214	183	76	22,8	137	34	160		
50 FH	4 900	4 200	50	109	246	211	89	24	156	26	220		
55 FH	5 880	3 800	50	118	276	234	102	26	169	42	570		

¹⁾ Maximum rotational speed (r/min) is based on parallel misalignment no more than 2/1 000

²⁾ Rated torque is a maximum figure

³⁾ For BE dimensions over 6 000 mm, please contact SKF

W6 FH – Floating shaft

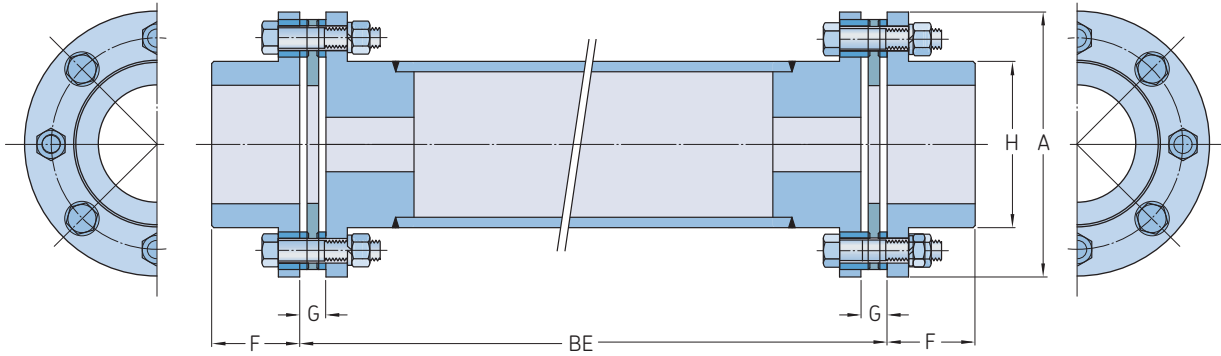


Size	Rated torque ²⁾	Speed ¹⁾ Max.	Bore diameter		Dimensions					Tightening torque	Coupling weight without bore and min. DBSE
			D Min.	Max.	A	BE	F	G	H		
–	Nm	r/min	mm		–					Nm	kg
00 FH	569	26 000	8	51	119	60	54	10,3	74	22	6
01 FH	922	23 000	8	55	137	72	63	11,0	81	41	9,1
02 FH	1 710	19 000	8	67	161	90	74	12,0	97	72	16,9
03 FH	3 340	17 000	8	72	180	109	80	14,0	104	160	21,6
04 FH	6 210	15 000	8	85	212	118	95	17,0	124	220	35,1
05 FH	6 080	11 600	8	111	276	153	112	17,5	161	220	65,1
10 FH	8 240	11 600	10	111	276	153	112	19,0	161	220	66,1
15 FH	10 700	10 300	10	133	308	172	134	19,0	193	440	107,8
20 FH	17 800	9 200	10	152	346	191	153	22,5	218	570	156,1
25 FH	26 400	8 500	16	165	375	223	165	28,0	240	1 100	211,8
30 FH	33 400	7 800	16	178	410	254	178	31,0	258	1 500	274,5
35 FH	39 900	7 200	25	187	445	270	188	31,0	272	1 700	333,3
40 FH	46 300	6 800	25	205	470	274	206	34,0	297	1 700	399,2
45 FH	59 800	6 200	45	231	511	287	231	35,5	334	1 700	525,3
50 FH	74 700	5 700	50	254	556	292	254	37,0	364	3 000	676,3
55 FH	92 600	5 400	50	263	587	311	263	37,5	382	3 500	803,4
60 FH	107 000	5 000	50	275	629	343	231	37,5	399	3 700	954,1
65 FH	128 000	4 800	50	289	654	356	254	37,5	419	4 000	1 095,3

¹⁾ Maximum rotational speed (r/min) is based on parallel misalignment no more than 2/1 000

²⁾ Rated torque is a maximum figure

W8 FH – Floating shaft



Size	Rated torque ²⁾	Speed ¹⁾	Bore diameter		Dimensions					Tightening torque	Coupling weight without bore and min. DBSE
		Max.	D Min.	Max.	A	BE ⁴⁾ Min.	F	G	H		
–	Nm	r/min	mm		–					Nm	kg
01 FH	3 840	15 000	8	51	119	240	54	10,3	74	22	6
03 FH	7 120	13 000	8	55	137	269	63	11,0	81	41	9,1
05 FH	8 970	11 600	8	67	161	255	74	12,0	97	72	16,9
10 FH	11 800	11 600	8	72	180	258	80	14,0	104	160	21,6
15 FH	15 400	10 300	8	85	212	278	95	17,0	124	220	35,1
20 FH	25 600	9 200	10	111	276	283	112	17,5	161	220	65,1
25 FH	37 800	8 500	16	111	276	308	112	19,0	161	220	66,1
30 FH	47 800	7 800	16	133	308	319	134	19,0	193	440	107,8
35 FH	57 100	7 200	25	152	346	339	153	22,5	218	570	156,1
40 FH	64 400	6 800	25	165	375	342	165	28,0	240	1 100	211,8
45 FH	83 700	6 200	45	178	410	364	178	31,0	258	1 500	274,5
50 FH	103 000	5 700	50	187	445	365	188	31,0	272	1 700	333,3
55 FH	128 000	5 400	50	205	470	408	206	34,0	297	1 700	399,2
60 FH	149 000	5 000	50	231	511	– ³⁾	231	35,5	334	1 700	525,3
65 FH	178 000	4 800	50	254	556	– ³⁾	254	37,0	364	3 000	676,3

¹⁾ Maximum rotational speed (r/min) is based on parallel misalignment no more than 2/1 000

²⁾ Rated torque is a maximum figure

³⁾ The actual BE value will be determined by the customer

⁴⁾ For BE dimensions over 6 000 mm, please contact SKF

Floating shaft couplings should not be used with long overhang shafts