

SKF Flex couplings

SKF Flex couplings are designed to accommodate misalignment and shock loads and dampen vibration levels. These easy to install, maintenance-free couplings are available with either a machined-to-size or tapered bore.

Couplings with a tapered bore can be Face (F) mounted or Hub (H) mounted. The more versatile Reversible (R) design can be either face or hub mounted depending on the application. These couplings are also available with a tapered bushing.

SKF Flex couplings consist of 2 flanges and 1 tyre. The flanges are phosphate coated for improved corrosion resistance. The addition of a standard sized spacer flange can be used to accommodate applications where it is advantageous to move either shaft axially without disturbing driving or driven machines.

SKF Flex tyres are available in natural rubber compounds for applications ranging from -50 to +50 °C. Chloroprene rubber compounds should be used in applications where exposure to greases and oils are likely. These compounds can accommodate temperatures ranging from -15 to +70 °C. The chloroprene tyres should be used where fire-resistance and anti-static (F.R.A.S.) properties are required.

Assembled coupling characteristics

Coupling size	Maximum speed	Mass tyre	Inertia	Torsional stiffness	Misalignment			Nominal torque	Max torque	Screw size	Clamping screw torque
					Angular	Parallel	Axial				
–	r/min	kg	kg/m ²	Nm/°	°	mm		Nm	–	Nm	
40	4 500	0,1	0,00074	5	4	1,1	1,3	24	64	M6	15
50	4 500	0,3	0,00115	13	4	1,3	1,7	66	160	M6	15
60	4 000	0,5	0,0052	26	4	1,6	2,0	127	318	M6	15
70	3 600	0,7	0,009	41	4	1,9	2,3	250	487	M8	24
80	3 100	1,0	0,017	63	4	2,1	2,6	375	759	M8	24
90	3 000	1,1	0,031	91	4	2,4	3,0	500	1 096	M10	40
100	2 600	1,1	0,054	126	4	2,6	3,3	675	1 517	M10	40
110	2 300	1,4	0,078	178	4	2,9	3,7	875	2 137	M10	40
120	2 050	2,3	0,13	296	4	3,2	4,0	1 330	3 547	M12	50
140	1 800	2,6	0,255	470	4	3,7	4,6	2 325	5 642	M12	55
160	1 600	3,4	0,38	778	4	4,2	5,3	3 770	9 339	M16	80
180	1 500	7,7	0,847	1 371	4	4,8	6,0	6 270	16 455	M16	105
200	1 300	8,0	1,281	1 959	4	5,3	6,6	9 325	23 508	M16	120
220	1 100	10,0	2,104	2 760	4	5,8	7,3	11 600	33 125	M20	165
250	1 000	15,0	3,505	3 562	4	6,6	8,2	14 675	42 740	M20	165

Order data

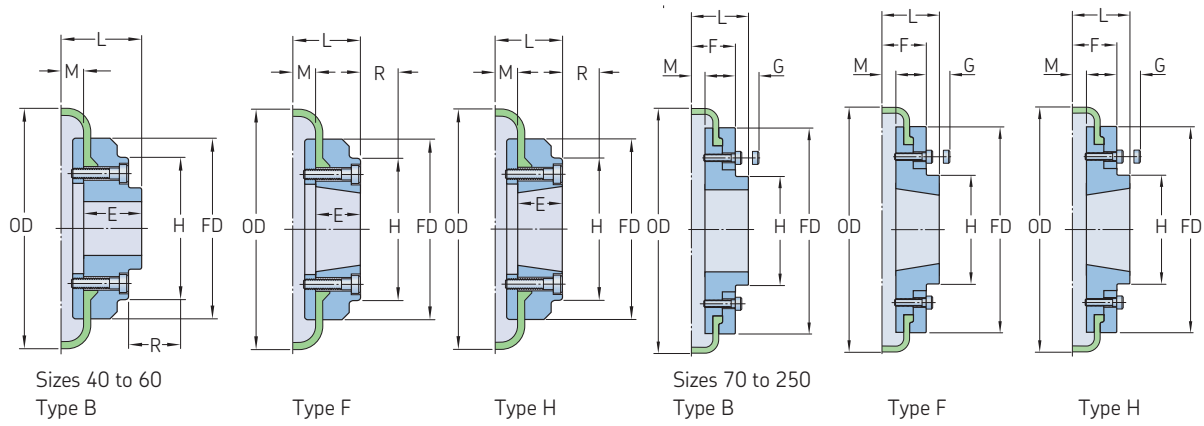
Coupling type	Flanges	Qty	Element	Qty	Coupling bushing number	Qty	Spacer flange and shaft*	Qty	Spacer bushing number	Qty
RSB both sides	PHE F70RSBFLG	2	PHE F70NRTYRE or	1	–	–	–	–	–	–
	–	–	PHE F70FRTYRE	–	–	–	–	–	–	–
RSB/F combination	PHE F70RSBFLG	1	PHE F70NRTYRE or	1	–	–	–	–	–	–
	PHE F70FTBFLG	1	PHE F70FRTYRE	–	PHF TB2012X...MM	1	PHE SM25-...DBSE	1	PHF 2517X...MM	1
RSB/H combination	PHE F70RSBFLG	1	PHE F70NRTYRE or	1	–	–	–	–	–	–
	PHE F70HTBFLG	1	PHE F70FRTYRE	–	PHF TB1610X...MM	1	PHE SM25-...DBSE	1	PHF 2517X...MM	1
F/F combination	PHE F70FTBFLG	1	PHE F70NRTYRE or	1	PHF TB2012X...MM	1	PHE SM25-...DBSE	1	PHF 2517X...MM	1
	PHE F70FTBFLG	1	PHE F70FRTYRE	–	PHF TB2012X...MM	1	–	–	–	–
H/H combination	PHE F70HTBFLG	1	PHE F70NRTYRE or	1	PHF TB1610X...MM	1	PHE SM25-...DBSE	1	PHF 2517X...MM	1
	PHE F70HTBFLG	1	PHE F70FRTYRE	–	PHF TB1610X...MM	1	–	–	–	–
F/H combination	PHE F70FTBFLG	1	PHE F70NRTYRE or	1	PHF TB1610X...MM	1	PHE SM25-...DBSE	1	PHF 2517X...MM	1
	PHE F70TBFLG	1	PHE F70FRTYRE	–	PHF TB2012X...MM	1	–	–	–	–
Reversible	PHE F70RTBFLG	2	PHE F70NRTYRE	1	PHF TB1610X...MM	2	–	–	–	–

* To complete designation, add distance between shaft ends. PHE SM25-100DBSE.

An SKF Flex coupling consists of 2 flanges and 1 tyre. An SKF Flex spacer coupling consists of 2 flanges, 1 tyre and 1 spacer (spacer part number consists of spacer shaft and rigid flange).

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SKF Flex flanges types B, F and H



Size	Type	Bushing number	Bore		Dimensions Types F & H		Type B		Key screw	OD	FD	H	F	R ¹⁾	G ²⁾	M	Mass	Inertia	Designation	Tyre designation	
			Min.	Max.	L	E	L	E												Natural	F.R.A.S
mm	-	-	mm													kg	kg/m ²	-			
40	B	-	11	30	-	-	33,0	22	M5	104	82,0	-	-	29	-	11,0	0,8	0,000074	PHE F40RSBFLG	PHE F40NRITYRE	PHE F40FRITYRE
40	F	1008	9	25	33,0	22	-	-	-	104	82,0	-	-	29	-	11,0	0,8	0,000074	PHE F40FTBFLG	PHE F40NRITYRE	PHE F40FRITYRE
40	H	1008	9	25	33,0	22	-	-	-	104	82,0	-	-	29	-	11,0	0,8	0,000074	PHE F40HTBFLG	PHE F40NRITYRE	PHE F40FRITYRE
50	B	-	16	38	-	-	45,0	32	M5	133	100,0	79	-	38	-	12,5	1,2	0,000115	PHE F50RSBFLG	PHE F50NRITYRE	PHE F50FRITYRE
50	F	1210	11	32	37,5	25	-	-	-	133	100,0	79	-	38	-	12,5	1,2	0,000115	PHE F50FTBFLG	PHE F50NRITYRE	PHE F50FRITYRE
50	H	1210	11	32	37,5	25	-	-	-	133	100,0	79	-	38	-	12,5	1,2	0,000115	PHE F50HTBFLG	PHE F50NRITYRE	PHE F50FRITYRE
60	B	-	16	45	-	-	55,0	38	M6	165	125,0	70	-	38	-	16,5	2,0	0,000520	PHE F60RSBFLG	PHE F60NRITYRE	PHE F60FRITYRE
60	F	1610	14	42	41,5	25	-	-	-	165	125,0	103	-	38	-	16,5	2,0	0,000520	PHE F60FTBFLG	PHE F60NRITYRE	PHE F60FRITYRE
60	H	1610	14	42	41,5	25	-	-	-	165	125,0	103	-	38	-	16,5	2,0	0,000520	PHE F60HTBFLG	PHE F60NRITYRE	PHE F60FRITYRE
70	B	-	17	60	-	-	47,0	35	M10	187	142,0	80	50	-	13	11,5	3,1	0,000900	PHE F70RSBFLG	PHE F70NRITYRE	PHE F70FRITYRE
70	F	2012	14	50	43,5	32	-	-	-	187	142,0	80	50	42	13	11,5	3,1	0,000900	PHE F70FTBFLG	PHE F70NRITYRE	PHE F70FRITYRE
70	H	1610	14	42	36,5	25	-	-	-	187	142,0	80	50	38	13	11,5	3,0	0,000900	PHE F70HTBFLG	PHE F70NRITYRE	PHE F70FRITYRE
80	B	-	23	63	-	-	55,0	42	M10	211	165,0	98	54	-	16	12,5	4,9	0,018000	PHE F80RSBFLG	PHE F80NRITYRE	PHE F80FRITYRE
80	F	2517	16	60	57,5	45	-	-	-	211	165,0	97	54	48	16	12,5	4,9	0,018000	PHE F80FTBFLG	PHE F80NRITYRE	PHE F80FRITYRE
80	H	2012	14	50	44,5	32	-	-	-	211	165,0	98	54	32	16	12,5	4,6	0,017000	PHE F80HTBFLG	PHE F80NRITYRE	PHE F80FRITYRE
90	B	-	30	75	-	-	62,5	49	M12	235	187,0	112	60	-	16	13,5	7,1	0,032000	PHE F90RSBFLG	PHE F90NRITYRE	PHE F90FRITYRE
90	F	2517	16	60	58,5	45	-	-	-	235	187,0	108	60	48	16	13,5	7,0	0,031000	PHE F90FTBFLG	PHE F90NRITYRE	PHE F90FRITYRE
90	H	2517	16	60	58,5	45	-	-	-	235	187,0	108	60	48	16	13,5	7,0	0,031000	PHE F90HTBFLG	PHE F90NRITYRE	PHE F90FRITYRE
100	B	-	30	80	-	-	69,5	56	M12	254	214,0	125	62	-	16	13,5	9,9	0,055000	PHE F100RSBFLG	PHE F100NRITYRE	PHE F100FRITYRE
100	F	3020	25	75	64,5	51	-	-	-	254	214,0	120	62	55	16	13,5	9,9	0,055000	PHE F100FTBFLG	PHE F100NRITYRE	PHE F100FRITYRE
100	H	2517	16	60	58,5	45	-	-	-	254	214,0	113	62	48	16	13,5	9,4	0,054000	PHE F100HTBFLG	PHE F100NRITYRE	PHE F100FRITYRE
110	B	-	30	90	-	-	75,5	63	M12	279	232,0	128	62	-	16	12,5	12,5	0,081000	PHE F110RSBFLG	PHE F110NRITYRE	PHE F110FRITYRE
110	F	3020	25	75	63,5	51	-	-	-	279	232,0	134	62	55	16	12,5	11,7	0,078000	PHE F110FTBFLG	PHE F110NRITYRE	PHE F110FRITYRE
110	H	3020	25	75	63,5	51	-	-	-	279	232,0	134	62	55	16	12,5	11,7	0,078000	PHE F110HTBFLG	PHE F110NRITYRE	PHE F110FRITYRE
120	B	-	36	100	-	-	84,5	70	M16	314	262,0	143	67	-	16	14,5	16,9	0,137000	PHE F120RSBFLG	PHE F120NRITYRE	PHE F120FRITYRE
120	F	3525	35	100	79,5	65	-	-	-	314	262,0	140	67	67	16	14,5	16,5	0,137000	PHE F120FTBFLG	PHE F120NRITYRE	PHE F120FRITYRE
120	H	3020	25	75	65,5	51	-	-	-	314	262,0	140	67	55	16	14,5	15,9	0,130000	PHE F120HTBFLG	PHE F120NRITYRE	PHE F120FRITYRE
140	B	-	60	125	-	-	110,5	94	M20	359	312,5	180	73	-	17	16,0	22,2	0,254000	PHE F140RSBFLG	PHE F140NRITYRE	PHE F140FRITYRE
140	F	3525	35	100	81,0	65	-	-	-	359	312,5	180	73	67	17	16,0	22,3	0,255000	PHE F140FTBFLG	PHE F140NRITYRE	PHE F140FRITYRE
140	H	3525	35	100	81,0	65	-	-	-	359	312,5	180	73	67	17	16,0	22,3	0,255000	PHE F140HTBFLG	PHE F140NRITYRE	PHE F140FRITYRE
160	B	-	65	140	-	-	117,0	102	M20	402	348,0	197	78	-	19	15,0	35,8	0,469000	PHE F160RSBFLG	PHE F160NRITYRE	PHE F160FRITYRE
160	F	4030	40	115	91,0	76	-	-	-	402	348,0	197	78	80	19	15,0	32,5	0,380000	PHE F160FTBFLG	PHE F160NRITYRE	PHE F160FRITYRE
160	H	4030	40	115	91,0	76	-	-	-	402	348,0	197	78	80	19	15,0	32,5	0,380000	PHE F160HTBFLG	PHE F160NRITYRE	PHE F160FRITYRE
180	B	-	70	150	-	-	137,0	114	M20	470	396,0	205	94	-	19	23,0	49,1	0,871000	PHE F180RSBFLG	PHE F180NRITYRE	PHE F180FRITYRE
180	F	4535	55	125	112,0	89	-	-	-	470	396,0	205	94	89	19	23,0	42,2	0,847000	PHE F180FTBFLG	PHE F180NRITYRE	PHE F180FRITYRE
180	H	4535	55	125	112,0	89	-	-	-	470	396,0	205	94	89	19	23,0	42,2	0,847000	PHE F180HTBFLG	PHE F180NRITYRE	PHE F180FRITYRE
200	B	-	75	150	-	-	138,0	114	M20	508	432,0	205	103	-	19	24,0	58,2	1,301000	PHE F200RSBFLG	PHE F200NRITYRE	PHE F200FRITYRE
200	F	4535	55	125	113,0	89	-	-	-	508	432,0	205	103	89	19	24,0	53,6	1,281000	PHE F200FTBFLG	PHE F200NRITYRE	PHE F200FRITYRE
200	H	4535	55	125	113,0	89	-	-	-	508	432,0	205	103	89	19	24,0	53,6	1,281000	PHE F200HTBFLG	PHE F200NRITYRE	PHE F200FRITYRE
220	B	-	80	160	-	-	154,5	127	M20	562	472,0	224	118	-	20	27,5	79,6	2,142000	PHE F220RSBFLG	PHE F220NRITYRE	PHE F220FRITYRE
220	F	5040	70	125	129,5	102	-	-	-	562	472,0	224	118	92	20	27,5	72,0	2,104000	PHE F220FTBFLG	PHE F220NRITYRE	PHE F220FRITYRE
220	H	5040	70	125	129,5	102	-	-	-	562	472,0	224	118	92	20	27,5	72,0	2,104000	PHE F220HTBFLG	PHE F220NRITYRE	PHE F220FRITYRE
250	B	-	90	190	-	-	161,5	132	M20	628	532,0	254	125	-	25	29,5	104,0	3,505000	PHE F250RSBFLG	PHE F250NRITYRE	PHE F250FRITYRE

¹⁾ The clearance required to allow tightening of the clamping screws and the taper bushing. Use of a shortened wrench will reduce this dimension.

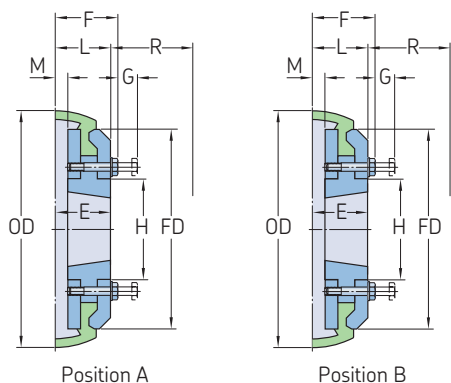
²⁾ The amount by which the clamping screws need to be withdrawn to release the tyre.

For coupling sizes 70, 80, 100 and 120, "F" flanges require a larger bushing than "H" flanges.

Mass and inertia figures are for a single flange with midrange bore and include clamping ring, screws, washers and half tyre.

SKF Flex couplings

SKF Flex flanges type R



Size	Bushing number	Bore		Dimensions							Mass	Inertia	Designation				
		Min.	Max.	L	E	R ¹⁾	Key screw	OD	FD	H				F	G ²⁾	M	
		mm													kg	kg/m ²	-
70	1610	14	42	37,0	25	42	M8	187	142	80	44,25	13	11,5	3,0	9,000	PHE F70RTBFLG	
80	2012	14	50	45,5	32	48	M8	211	165	98	52,75	16	12,5	4,6	0,017	PHE F80RTBFLG	
90	2517	16	60	58,5	45	48	M10	235	187	112	67,86	16	13,5	7,0	0,031	PHE F90RTBFLG	
100	2517	16	60	59,5	45	55	M10	254	214	125	68,86	16	13,5	9,4	0,054	PHE F100RTBFLG	
110	3020	25	75	64,5	51	55	M10	279	232	134	73,68	16	12,5	11,7	0,078	PHE F110RTBFLG	
120	3020	25	75	66,5	51	67	M12	314	262	140	77,18	16	14,5	15,9	0,130	PHE F120RTBFLG	

¹⁾ Is the clearance required to allow tightening of the clamping screws and the tapered bushing. Use of a shortened wrench will reduce this dimension.

²⁾ The distance that the clamping screws need to be withdrawn to release the tyre.

For coupling sizes 70, 80, 100 and 120 "F" flanges require a larger bushing than "H" flanges.

Mass and inertia figures are for a single flange with midrange bore and include clamping rings, screws, washers and a half tyre.