

SKF Flex Coupling Installation Instructions

The performance of the coupling depends largely upon how you install and maintain.

1. Thoroughly clean all components, paying particular attention to the removal of the protective coating in the bore of flanges.
2. Fit flanges to the shafts after placing the external clamp rings on the shafts.(Where Taper Lock flanges are used, see separate fitting instructions supplied with the Taper Lock Bushes).Locate flanges so that dimension M is obtained (see paragraph 3). Flanges with internal clamping rings should then have the clamping rings fitted, engaging only two or three of the threads of the screw at this time.
3. Bring shafts into line until dimension M is obtained (table 2). If shaft end float is to occur, locate the shafts at mid-position of end float when checking dimension M. Note that shaft ends may project beyond the faces of the flanges if required. In this event, allow sufficient space between shaft ends for end float and misalignment.
4. Check parallel alignment by laying a straight edge across the flanges at several positions around the circumference. Check angular alignment by measuring gap between flanges at several positions around the circumference. It is desirable to align the coupling as accurately as possible, particularly on high-speed applications
5. Open out type and fit over coupling flanges ensuring that the tyre beads seat properly on the flanges and/or clamping rings. To ensure proper seating, it may be necessary to strike the outside diameter of the tyre with a small mallet. When seated there should be a gap between the ends of the tyre as shown in table 1.

Table 1

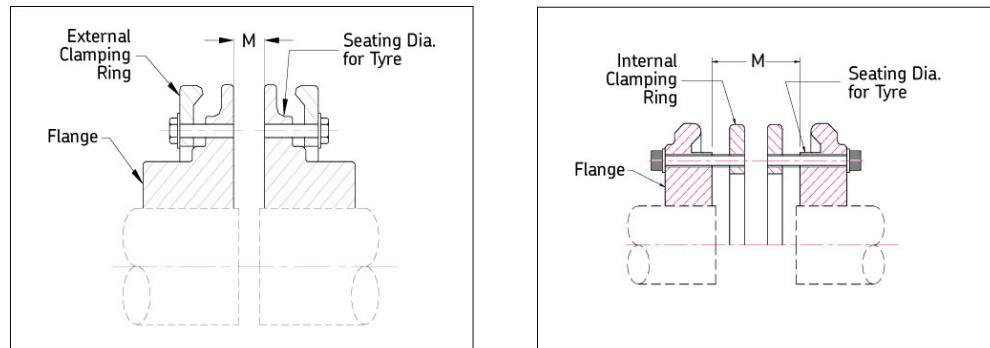
Coupling Size	F40 to F60	F70 to F120	F140 and F160	F180 to F250
Tyre Gap (mm)	2	3	5	6

6. Tighten clamping ring screws alternately and evenly (half turn at a time) working round each flange until the required screw torque is achieved (table 2).

Table 2

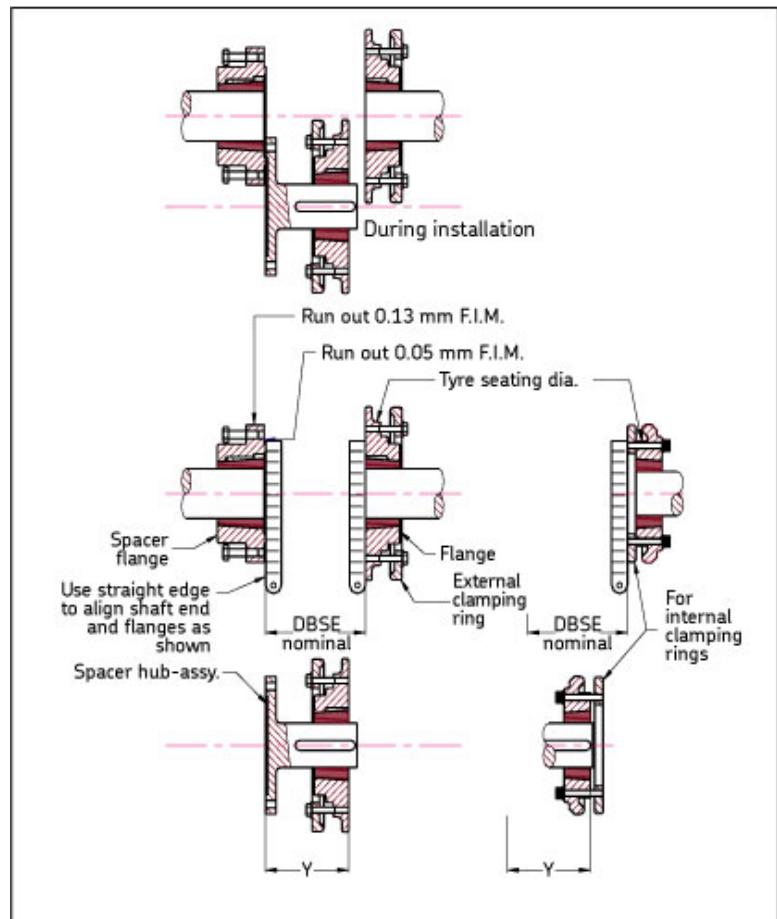
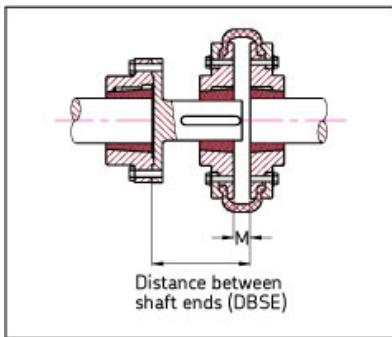
Coupling Size	M size	Screw size	Clamping screw Torque(Nm)
F40*	22	M6	15
F50*	25	M6	15
F60*	33	M6	15
F70	23	M8	24
F80	25	M8	24
F90	27	M10	40
F100	27	M10	40
F110	25	M10	40
F120	29	M12	50
F140	32	M12	55
F160	30	M16	80
F180	46	M16	105
F200	48	M16	120
F220	55	M20	165
F250	59	M20	165

*Hexagon Socket Caphead Clamping Screws on these sizes.



Note: Satisfactory performance depends on correct installation and maintenance.

SKF Flex Spacer Coupling Installation Instructions



1. Thoroughly clean all components paying particular attention to the removal of the protective coating in flange bores and on bushes.
2. Place each cleaned Taper Lock Bush in its respective flange and slide the flange onto its shaft. If keys are required, side fitting keys with top clearance should be used.
3. Using a straight edge line up the faces indicated with the shaft ends. Using a dial gauge check the runout of the spacer flange.
4. Position SKFFlex flange on spacer shaft to dimension "Y" shown in table 3 and secure with Taper Lock Bush. This ensures that the distance between the flanges 'M' is maintained on assembly

5. Locate spacer sub-assembly on to the spacer flange, engage spigot align holes and insert screws and tighten to torque value given in table 4.
6. Open out the tyre and fit over the coupling flanges ensuring that the tyre bead seats properly on the flanges. To ensure proper seating it may be necessary to strike the tyre with a small mallet. When seated there should be a gap in the tyre as shown in table 1 overleaf.
7. Tighten clamping ring screws alternately and evenly (half turn at a time), working around each flange until the required screw torque is achieved, see table 2 overleaf

To Dismantle

1. Support spacer sub-assembly.
2. Remove clamping ring screws progressively and evenly (half turn at a time) to prevent distortion of the clamping rings.
3. Remove tyre.

Table 3

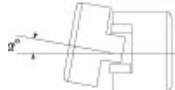
Size	"Y" for nominal D.B.S.E.		
	100	140	180
F40	83	123	
F50	82	122	
F60	75	115	155
F70	76	116	156
F80	74	114	154
F90		111	151
F100		111	151
F110		115	155
F120		111	151
F140		104	144

Table 4

Size	Screws	
	Size	Torque Nm
SM 12	M 8	15 *
SM 16	M 10	20 *
SM 25	M 12	25
SM 30	M 16	40
SM 35	M 16	90

Note: If necessary the D.B.S.E. may be extended. The maximum D.B.S.E. possible is achieved when the spacer shaft end and driven shaft end are flush with the face of their respective Taper Lock Bushes.

FRC and Jaw Coupling Installation Instructions

1. These couplings permit quick easy installation by means of a taper bush and offer quick alignment.
2. Check the angular misalignment by checking the assembled length in four positions at 90° around the coupling and check parallel misalignment using a straight edge across the coupling flange covers.
3. Allowable angular misalignment for all FRC couplings is 1°.
4. Allowable parallel misalignment for FRC couplings depends on size as follows;

Coupling Size	FRC70 to 110	FRC130 to 180	FRC230 to 280
p (mm)	0.3	0.3	0.4

For most consistent results, check across the shrouds at least 3 of the 6 points where the rubber element petals are visible between the flange drive dogs.

Gear Coupling Installation Instructions

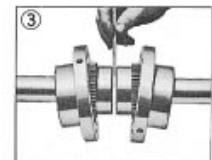
1. Mount Flanged Sleeves, Seals & Hubs

Clean all parts. Grease the crowned gear teeth and O-Ring, Put O-Ring onto the shafts. Place the flanged sleeves with seal rings on the shafts, and mount the hubs on their respective shafts. Seal keyways to prevent leakage. Insert setscrews and tighten. Position the equipment in approximate alignment with hub gap as in table 1.



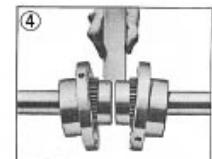
2. Gap & Angular Alignment

Use a spacer bar equal in thickness to gab specified in table 1. Insert bar to same depth at 90° intervals and measure clearance between bar and hub face with feelers.



3. Offset Alignment

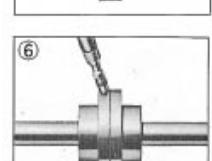
Align the shaft with a straight bar, checking every 90 degree, referring to the table 1. Check with the feelers. Make it sure with a dial gauge to not exceed the offset limit.



4. Assemble coupling

Insert gasket between the flanges and fasten the bolts, positioning the lube hole at 90°.

Tighten fasteners to the torque specified in table.1



5. Large Size (over size 70)

Install the coupling as above Remove all lube plugs and put recommended grease into the coupling until excess flows through an opened lube hole and then plug

Full the grease until overflowing at the opened opposite hole.

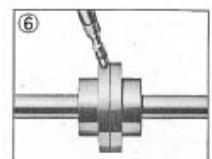


Table 1

Size	10	15	20	25	30	35	40	45	50	55	60	70	80	90	100
Angular	0.125	0.125	0.25	0.25	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
GAP	3	3	3	4.5	4.5	6	6	8	8	8	8	9.5	10	13	13
Flange Bolt Torque(kg.cm)	96	320	480	960	960	1650	1650	1650	2070	2070	2070	2980	2980	2980	2980

* The life of coupling is reduced by excess of the OFFSET limit

SKF Grid couplings Installation Instructions

The performance of the coupling depends largely upon how you install and maintain. The Grid couplings are designed to be operating in either horizontal or vertical position without modification.

1. Mount Seals and Hubs

Clean all metal parts using nonflammable solvent and check hubs, shafts and keyways for burrs. Lightly coat seals with grease and place on shafts, before mounting hubs. Mount hubs on their respective shafts so the hub face is flush with the end of its shafts unless otherwise indicated. Tighten screws when furnished.

2. Gap and Angular Alignment

Using a spacer bar equal in thickness to the gap specified in Table 1. Insert bar as shown in fig to same depth at 90° intervals and measure clearance between bar and hub face with feelers. The difference in minimum and maximum measurements must be not exceed the angular limits specified in Table 1

3. Offset Alignment

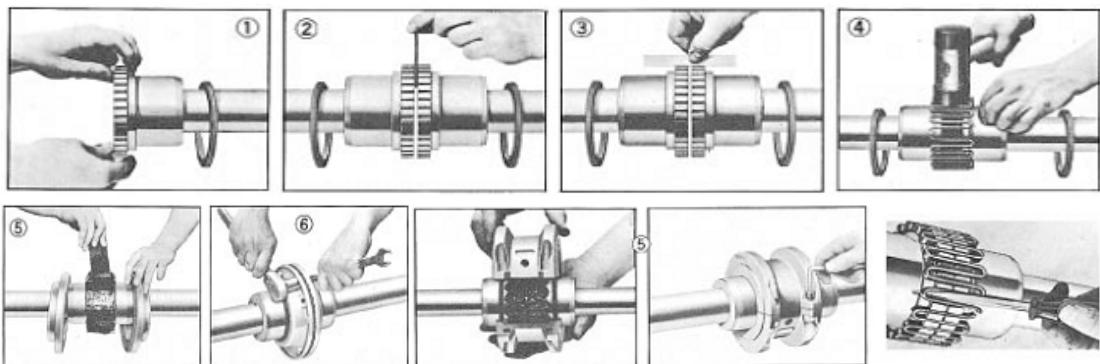
Align so that a straight edge rests squarely (or within the limits specified in Table 2) on both hubs and also at 90° intervals. The clearance must not exceed the Parallel Offset installations limits specified in Table 1. Tighten all foundation bolts and repeat Steps 2 and 3. Realign coupling if necessary.

4. Insert Grid

Pack gap and grooves with specified lubricant before inserting grid. Fix the Grid in the same direction; this will assure correct grid contact with non-rotating pin in cover halves. Spread the grid slightly to pass over the coupling teeth and seat with a soft mallet.

5. Pack with Grease and Assemble Covers

Pack the spaces between and around the grid with as much lubricant as possible and wipe off excess flush with top of grid. Position seals on hubs to line up with grooves in cover. Position gaskets on flange of lower cover half and assemble covers so that the match marks are on the same side. Push gaskets in until they stop against the seals and secure cover halves with fasteners, tighten to torque specified in Table. Make sure gaskets stay in position during tightening of fasteners.



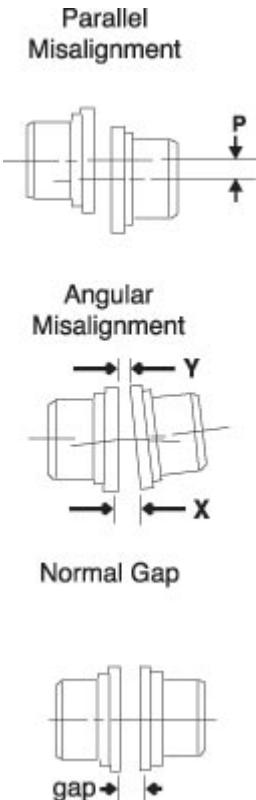
Coupling disassembly and grid removal

Whenever it is necessary to disconnect the coupling, remove the cover halves and grid. A round rod or screw driver can be a convenient tool to remove the grid.

Misalignment capacity (Table 1)

All Dimensions in mm

Size	Recommended installation		Operating Limits		Normal Gap ±10%	Cover Bolts Tightening Torque Nm
	Parallel Offset p	Angular(1/16 °) X - Y	Parallel Offset p	Angular(1/ 4 °) X - Y		
1020	0.15	0.06	0.3	0.24	3	11.3
1030	0.15	0.07	0.3	0.29	3	11.3
1040	0.15	0.08	0.3	0.32	3	11.3
1050	0.20	0.10	0.4	0.39	3	22.6
1060	0.20	0.11	0.4	0.45	3	22.6
1070	0.20	0.12	0.4	0.50	3	22.6
1080	0.20	0.15	0.4	0.61	3	22.6
1090	0.20	0.17	0.4	0.70	3	22.6
1100	0.25	0.20	0.5	0.82	4.5	35
1110	0.25	0.22	0.5	0.90	4.5	35
1120	0.28	0.25	0.56	1.01	6	73
1130	0.28	0.30	0.56	1.19	6	73
1140	0.28	0.33	0.56	1.34	6	73
1150	0.30	0.39	0.6	1.56	6	73.4
1160	0.30	0.44	0.6	1.77	6	73.4
1170	0.30	0.50	0.6	2.00	6	146.9
1180	0.38	0.56	0.76	2.26	6	146.9
1190	0.38	0.61	0.76	2.44	6	146.9
1200	0.38	0.68	0.76	2.72	6	259.9



Chain Coupling Installation Instructions

1. Remove dirt and grease from coupling bore, shaft and bushing and make sure there are no burrs on the shaft, bore, key, or keyway.
Place the oil seals for the cover on the sprocket halves.
2. Bring the sprocket faces close together and correct the angular and offset misalignment. The allowable angular and offset misalignment is 1 deg and 2% of the chain pitch and if the sprocket speed is 1/3 or more of the speed then it will be 0.5 deg & 1%.
3. Maintain the gap between sprocket faces and firmly fasten the set bolt.
4. Lubricate the chain with grease, then wrap the chain around both sprockets and fix with connecting pin.
5. Fill the required quantity of grease into both sides of case and fasten them firmly.
Use gaskets with out fail.