

Tyre Couplings



The extreme elastic design of GB (GB) Tyre couplings are interchangeable with leading European and American brands. The flexible tyre possesses tremendous vibration and shock absorbing qualities and allows compensation for significant parallel and angular misalignment. GB Tyre couplings have shock and vibration dampening characteristics creating significant load reduction on machinery and bearings thereby reducing costs and prolonging life. When used in conjunction with a GB series Spacer (see page 1-15) a GB Tyre coupling easily accommodates standard 100, 140, and 180mm spacers. TaperFit bushes, Spacer coupling, and a generous allowance for misalignment ensures GB Tyre couplings are extremely easy to install.

Selection Procedure

1. From Table 1 Service factors, page 1-2 of GBC couplings, determine the Service Factor.
2. Calculate the Design Power by multiplying the Absorbed Power of the driven machine by the Service Factor.
3. Determine the size GB Tyre coupling by matching the Design Power to a Power Rating, (table below) that matches or exceeds the Design Power.
4. Confirm the dimensions of the selected coupling fit your design requirements and, accommodate, shaft sizes.

NOTE:

B Flanges accommodate larger shaft sizes than F or H Flanges.
H Flanges require end wrench clearance while F and B Flanges do not,

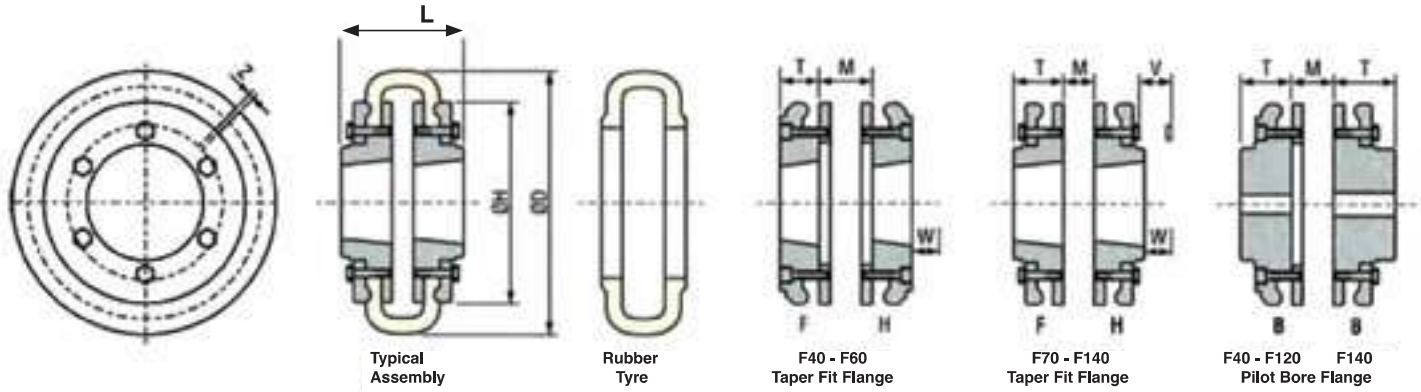
Couplings



Power Ratings

RATINGS	F40	F50	F60	F70	F80	F90	F100	F110	F120	F140	F160	F180
Power kW per 100 rpm	0.251	0.691	1.33	2.62	3.93	5.24	7.07	9.16	13.9	24.3	39.5	65.7
Power kW @ 720 rpm	1.81	4.98	9.57	18.8	28.3	37.7	50.9	66.0	100	175	284	473
Power kW @ 960 rpm	2.41	6.63	12.8	25.1	37.7	50.3	67.9	88.0	134	234	379	630
Power kW @ 1440 rpm	3.62	9.95	19.1	37.7	56.5	75.4	102	132	201	351	568	945
Power kW @ 2880 rpm	7.24	19.9	38.3	75.4	113	151	-	-	-	-	-	-
Speed Maximum (rpm)	4,500	4,500	4,000	3,600	3,100	3,000	2,600	2,300	2,050	1,800	1600	1500
Torque Nominal (Nm)	24	66	127	250	375	500	675	875	1,330	2,325	3770	6270
Torque Maximum (Nm)	64	160	318	487	759	1,096	1,517	2,137	3,547	5,642	9339	16455

Tyre Couplings



DIMENSIONS

Bore	F40	F50	F60	F70	F80	F90	F100	F110	F120	F140	F160	F180
GB Bush Size: F Range	1008	1210	1610	2012	2517	2517	3020	3020	3525	3525	4030	4535
GB Bush Size: H Flange	1008	1210	1610	1610	2012	2517	2517	3020	3020	3525	4030	4535
Maximum Bore: F Flange	25	32	42	50	60	60	75	75	100	100	115	125
Maximum Bore: H Flange	25	32	42	42	50	60	60	75	75	100	115	125
Maximum Bore: B Flange	32	38	45	50	60	75	80	90	100	130	140	150

Dimensions	F40	F50	F60	F70	F80	F90	F100	F110	F120	F140	F160	F180
OD - Outside Diameter	104	133	165	187	211	235	254	279	314	359	402	470
OH - Hub Diameter	82	100	125	144	167	188	216	233	264	311	345	398
L- Length: FF	66	76	84	88	116	119	131	127	159	163	184	224
L- Length: HH	66	76	84	84	90	119	119	127	131	163	184	224
L- Length: FH	66	76	84	86	103	119	125	127	145	163	184	224
L - Length: BB	67	89	110	129	144	160	168	175	202	221	234	274
L- Length: FB	66.5	82.5	97	108.5	130	139.5	149.5	151	180.5	192	209	249
L- Length: HB	66.5	82.5	97	106.5	117	139.5	143.5	151	166.5	192	209	249
M-Gap:FFHHFH	22	25	33	23	25	27	27	25	29	32	30	46
M - Gap: BB	22	25	33	40	43	46	48	44	49	32	30	46
M - Gap: FB HB	22	25	33	31.5	34	36.5	37.5	34.5	39	32	30	46
T- Length Through Bore: F Flange	22	25	25	32	45	45	51	51	65	65	77	93
T- Length Through Bore: H Flange	22	25	25	25	32	45	45	51	51	65	77	93
T - Length Through Bore: B Range	22	32	38	44	51	57	60	65	76	94	102	118
V - Clamping Screw Installation*	-	-	-	13	16	16	16	16	16	17	17	17
W - Wrench Clearance (H Range only)*	29	38	38	42	48	48	55	55	67	67	76	89
Z - Tyre End Gap	2	2	2	3	3	3	3	3	3	5	5	5
Tyre Screw Tightening Torque (Nm)	15	15	15	24	24	40	40	40	50	55	55	55

Alignment	F40	F50	F60	F70	F80	F90	F100	F110	F120	F140	F160	F180
Max Parallel	1.1	1.3	1.6	1.9	2.1	2.4	2.6	2.9	3.2	3.7	4.2	4.8
Max Axial	±1.3	±1.7	±2.0	±2.3	±2.6	±3.0	±3.3	±3.7	±4.0	±4.6	±5.3	±6.0
Max Angular f)	4	4	4	4	4	4	4	4	4	4	4	4

Mass	F40	F50	F60	F70	F80	F90	F100	F110	F120	F140	F160	F180
F Flange (kg)	0.8	1.1	1.8	2.4	3.5	5.8	7.0	9.0	12.0	26.5	32.5	42.2
H Flange (kg)	0.8	1.1	1.8	2.6	3.8	5.8	7.0	9.0	13.0	26.5	32.5	42.2
B Flange (kg)	1.0	1.7	2.7	3.4	5.2	7.4	10.7	13.7	17.2	22.2	35.8	49.1
Tyre (kg)	0.1	0.3	0.5	0.7	0.8	1.0	1.1	1.5	2.0	2.9	3.5	4.2

All values are in mm unless otherwise stated.

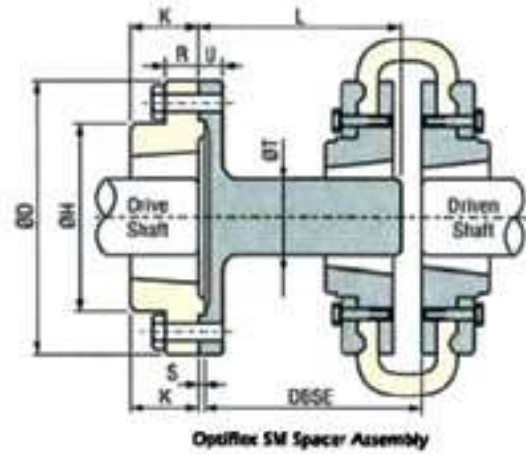
Tyre Spacer

GB SM series Spacers combined with an GB Tyre coupling (refer to page 1-15) to provide a Spacer design where maintenance is more efficient by being able to move the driving or driven shafts without disturbing the mounting of the driving or driven machine.

Standard Distance Between Shaft Ends [DBSE] lengths of 100, 140 and 180mm are available.

Selection Procedure

1. Select a suitable size of GB Tyre coupling using the selection procedure found on page 1-13.
2. Select a suitable size SM Spacer taking into consideration the required shaft spacing.



Dimensions	SM16	SM25	SM30	SM35
Use with GB Tyre Coupling	F50-F60	F70 F80 F90	F100 F110	F120 F140
GB Bush Size (Spacer Flange)	1615	2517	3030	3535
GB Taper Fit Bush Max. Bore	42	65	75	90
0D - Outside Diameter	127	178	216	248
0H - Hub Diameter	80	123	146	178
K*	38	46	76	89
L - Length: 100mm DBSE*	94	94	-	-
L - Length: 140mm DBSE*	134	134	134	134
L - Length: 180mm DBSE*	-	174	174	174
R	18	22	51	63
S	6	6	6	6
0T	32	48	60	80
U	15	16	20	20
Mass	SM16	SM25	SM30	SM35
100mm DBSE (kg)	3.55	8.05	-	-
140mm DBSE (kg)	3.8	8.65	16.4	25.4
180mm DBSE (kg)	-	9.25	17.3	26.9

*NOTE: All values are in mm unless otherwise stated

ORDERING INSTRUCTIONS

- SM Spacers are specified by the size end DBSE (eg. A SM35 spacer with a 140mm DBSE length is specified as a SM35-140)
- SM Spacers require a Taper Fit bush which must be ordered as a separate item (specifying bush size and required bore).
- To order a complete Spacer coupling list the individual components of the coupling and spacer including required Taper Fit bushes.