TYRE - FLEX COUPLINGS
TYPE - T/TO

SELECTION PROCEDURE

(a) Service Factor

Determine the required service factor from table 1 below.

(b) Design Power

Multiply the normal running power by the service factor. This gives **Design Power** which is used as a basis for selecting the coupling.

(c) Coupling Size

Refer table 2 and from the appropriate speed read across until a power greater than that required is found. The size of Tyre-flex coupling required is given in that column..

(d) Bore Size

Check from table 3 that selected coupling can accommodate required bores.

TABLE 1 : SERVICE FACTORS

SPECIAL CLASSES For applications where substantial shock, vibration and torque fluctuations occur and for reciprocating machines e.g. internal combustion engines, piston pumps and compressors, refer to Rathi Transpower Pvt. Ltd. with full application details for analysis.	**Type of Driving Unit**					
	Electric Motors Steam Turbines			**Internal Combustion Engines Steam Engines Water Engines**		
	Hours per day duty			**Hours per day duty**		
Type of Driven Machine	upto 10	over 10 to 16 incl.	Over 16	upto 10	over 10 to16 incl.	Over 16
CLASS 1 Agitators, Brewing mahinery, Centrifugal compressors and pumps, Belt Conveyors, Dynamometers, Lineshafts, Fans upto 7.5 kW, Blower and exhausters (except positive displacement) & Generators.	0.8	0.9	1.0	1.3	1.4	1.5
CLASS 2 Clay working machinery, General machine tools, Paper mill beaters and winders, Rotary pumps, Rubber extruders, Rotary Screens, Textile Machinery, Marine Propellers & Fans over 7.5 kW.	1.3	1.4	1.5	1.8	1.9	2.0
CLASS 3 Bucket elevators, Cooling tower fans, Piston compressors & pumps, Foundry machinery, Metal presses, Paper mills, Calenders, Hammer mills, Presses and pulp grinders, Rubber Calenders, Pulverisers & Positive displacement blowers.	1.8	1.9	2.0	2.3	2.4	2.5
CLASS 4 Reciprocating conveyors, Gyratory crushers, Mills (ball, pebble and rod). Rubber Machinery (Banbury Mixers and Mills) & Vibratory screens.	2.3	2.4	2.5	2.8	2.9	3.0

TABLE 2: POWER RATING (kW)

Speed rpm	**Size T / TO**														
	4	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**14**	**16**	**18**	**20**	**22**	**25**
750	1.87	5.17	9.97	19.65	29.47	39.30	53.02	68.70	104.25	182.25	296.25	492.75	732	907.5	1155
1000	2.50	6.90	13.30	26.20	39.30	52.40	70.70	91.60	139.0	243.0	395.0	657.0	976	1215	1537
1500	3.75	10.35	19.95	39.30	58.95	78.60	106.05	137.40	208.50	364.50	592.50*	986.5*	-	-	-
1800	4.50	12.42	23.94	47.16	70.74	94.32	127.26	164.88	250.20	437.40*	-	-	-	-	-
3000	7.50	20.70	39.90	78.60	117.90*	157.20*	-	-	-	-	-	-	-	-	-
3600	9.00	24.84	47.98	94.32	-	-	-	-	-	-	-	-	-	-	-

All these power ratings are calculated at constant torque.
For speeds below 100 RPM and intermediate speeds use normal torque ratings.
* Dynamic balancing preferred at these speeds.

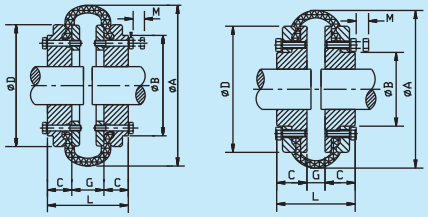
Poles	2	4	6	8
rpm	3000	1500	1000	750

TECHNICAL DATA : FLEXIBLE TYRES

Size	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**14**	**16**	**18**	**20**	**22**	**25**
Torsional Stiffness Nm/deg	5	13	26	41	63	91	126	178	296	470	778	1371	1959	2760	3562
Parallel Misalignment mm	1.1	1.3	1.6	1.9	2.1	2.4	2.6	2.9	3.2	3.7	4.2	4.8	5.3	5.8	6.6
End Float mm	1.3	1.7	2.0	2.3	2.6	3.0	3.3	3.7	4.0	4.6	5.3	6.0	6.6	7.3	8.2
Rated Torque Nm	24	66	127	250	375	500	675	875	1330	2325	3730	6270	9325	11600	14675
Max. Torque Nm	64	160	318	487	759	1096	1517	2137	3547	5642	9339	16455	23508	33125	42750

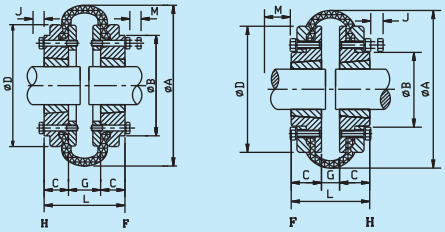
TYRE - FLEX COUPLINGS
TYPE - T/TO

T-4 to T-12 | TO-14 to TO-25



TYPE B

T-4 to T-6 | TO-14 to TO-22



TYPE F/H

TABLE 3 : DIMENSIONAL DATA : TYRE-FLEX HUB TYPES B, F & H

Size	Kw at 100 RPM	MAX. SPEED rpm	Type	# Bush Size	# Bore PB	# Bore Max. Metric	# Bore Max. Inch	Type F/H L	Type F/H C	Type F/H J	Type B L	Type B C	ØA	ØD	ØB	M	G	Wt. per Coupling Kg	MI (WR^2) PER COUPLING kgm^2
T-4	0.25	4500	B	-	10	32	1 1/4	-	-	-	68	22	104	82	-	17	24	1.9	0.00161
			F/H	1008	-	25	1	68	22	29	-	-						1.7	0.00148
T-5	0.69	4500	B	-	10	38	1 1/2	-	-	-	93	32	133	100	79	17	29	3.5	0.00358
			F/H	1210	-	32	1 1/4	79	25	38	-	-				19		2.7	0.00349
T-6	1.33	4000	B	-	15	45	1 3/4	-	-	-	111	38	165	125	73	8	35	5	0.0105
			F/H	1610	-	42	1 5/8	85	25	38	-	-			103	19		3.6	0.0103
T-7	2.62	3600	B	-	19	50	2	-	-	-	133	45	197	144	82	-	43	7.8	0.0198
T-8	3.93	3100	B	-	25	63	2 1/2	-	-	-	149.5	51	210	167	96	-	47.5	10.9	0.042
T-9	5.24	3000	B	-	30	75	3	-	-	-	165	57	235	188	110	-	51	15	0.0681
T-10	7.07	2600	B	-	32	80	3 1/8	-	-	-	178	60	254	216	125	-	58	21.5	0.1303
T-11	9.16	2300	B	-	32	90	3 1/2	-	-	-	183	65	279	233	140	-	53	28.8	0.1622
T-12	13.9	2050	B	-	38	100	4	-	-	-	209.5	76	314	264	152	-	57.5	43.1	0.365
TO-14	24.3	1800	B	-	58	127	5	-	-	-	201	89	359	311	195	26	23	60.6	0.6045
			F/H	3525	-	*100	4	153	65	67	-	-				-		42.6	0.4922
TO-16	39.5	1600	B	-	65	140	5 1/2	-	-	-	212	102	395	345	216	-	8	86.4	1.2755
			F/H	4030	-	*115	4 1/2	162	77	80	-	-						72.6	1.1134
TO-18	65.7	1500	B	-	70	150	6	-	-	-	254	116	470	398	220	-	22	133.3	2.1525
			F/H	4535	-	*125	5	200	89	89	-	-						123.0	1.9514
TO-20	97.6	1300	B	-	70	150	6	-	-	-	258	114	508	429	220	-	30	144.6	3.1765
			F/H	4535	-	*125	5	208	89	89	-	-						158.3	3.0129
TO-22	121	1100	B	-	75	160	6 1/2	-	-	-	281	127	562	470	240	-	27	181.63	4.7861
			F/H	5040	-	125	5	231	102	92	-	-						195.1	4.8954
TO-25	154	1000	B	-	85	190	7 1/2	-	-	-	294	132	628	532	275	-	30	281.1	8.129

- All dimensions are in mm. Unless otherwise specified.
- M is the amount by which clamping screws need to be withdrawn to release the tyre.
- J is the wrench clearance to allow for tightening and loosening the bush on the shaft.
- Shaft ends, although normally located G apart, can project beyond the flanges as shown. In this event allow sufficient space between shaft ends for end float and misalignment.
- Maximum torque figures should be regarded as short duration overload rating for direct on line starting. Angular misalignment capacity up to 4^0.
- Weights & Moment of Inertia specified are at without bores.
- F/H construction for size 7 to 12 available in TO7 to TO12.

\# For detailed information about Taper Bush bore, please refer Taper Bush catalogue.

* Standard Bore of 90 mm, 100 mm, 115 mm and max. bore with shallow key 100 mm, 115 mm and 125 mm for bush nos. 3525, 4030 & 4535 resply.

In view of our constant endeavour to improve quality of our products, we reserve the right to alter or change specifications without prior notice.

ISO 9001 BUREAU VERITAS Certification

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