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Your Flexible Friend

Complete Solution Of Power Transmission Products.

Selection (Standard Electric Motors BS:3979 and IS : 1231)

1.Read across the table 3 from the appropr iate motor frame size and find the applicable nominal motor speed column.

2.Read the appropriate coupling selection for either Taper-Lock® 'H' or 'F'

TABLE 3 - SERVICE FACTORS NOT LESS THAN 1.6

Motor Frame Size	Shaft Dia. mm.	3000 rev/min		1500 rev/min		1000 rev/min		750 rev/min	
		Motor Power kW	Coupling Size	Motor Power kW	Coupling Size	Motor Power kW	Coupling Size	Motor Power kW	Couping Size
90 S	24	1.5	70	1.1	70	0.75	70	-	-
90L	24	2.2	70	1.5	70	1.1	70	-	-
112 M	28	4	90	4	90	2.2	90	-	-
132 S	38	5.5 7.5	110 A 110 A	5.5	110 A	3	110 A	2.2	110 A
132 M	38			7.5	110 A	4 5.5	110 A 110 A	3	110 A
160 M	42	11 15	110 A 110 A	11	110 A	7.5	110 A	4 5.5	110 A 110 A
160 L	42	18.5	110 A	15	110 A	11	130	7.5	110 A
180 M	48	22	150	18.5	150				
180 L	48			22	150	15	150	11	150
200 L	55	30	180						
37	180			22	180				
225 S	60			37	180			18.5	180
225 M	55 * 60	45	180	45	180	30	180	22	180
250 M	60 * 65	55	180	55	230	37	230	30	230
280 S	75			75	230	45	230	37	230
280 M	75			90	230	55	230	37	230
315 S	80			110	280	75	280	55	280
315 M	80			132	280	90	280	75	280

* 3000 rev/min only.

®Registered Trade Mark

a. Service Factor

Determine the required service factor from Table 1.

b. Design Power

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

c. Coupling Size

Refer to Table 4 (page 5) and from the appropriate speed in the speed column, read across until a power equal to or greater than the design power required is found.

d. Bore Size

From the dimension Table 2 check that the chosen flanges can accommodate the required bores.

Example : A shaft coupling is required to transmit 70kW between a 1440 rev/min electric motor and a hoist running over 16 hours/day. The motor shaft is 70 mm. and the hoist shaft is 75 mm.

a.Service Factor
From Table 1, the Service Factor is 2.

b.Design Power
Design Power : 70 x 2: 140 kW

c.Coupling Size
By reading across from 1440 rev/min in the speed column of Table 4 (Power Rating Table) 143 kW is the first power to exceed the required 140 kW (design power). The size of coupling at the head of this column is 180.

d.Bore Size
By referring to the Dimension table 2 it can be seen that for HRC - 180B type both shaft diameters fall within the bore range available. However in case the coupling selection is required in F&H type then select HRC-230 F&H type.

TABLE 4 - POWER RA TINGS (kW)

Speed Rev/Min.	COUPLING SIZE							
	70	90	110/110A	130	150	180	230	280
100	0.33	0.84	1.68	3.30	6.28	9.95	20.90	33.00
200	0.66	1.68	3.35	6.60	12.60	19.90	41.90	66.00
400	1.32	3.35	6.70	13.20	25.10	39.80	83.80	132.00
600	1.98	5.03	10.10	19.80	37.70	59.70	126.00	198.00
720	2.37	6.03	12.10	23.80	45.20	71.60	151.00	238.00
800	2.64	6.70	13.40	26.40	50.30	79.60	168.00	264.00
960	3.17	8.40	16.10	31.70	60.30	95.50	201.00	317.00
1200	3.96	10.10	20.10	39.60	75.40	119.00	251.00	396.00
1440	4.75	12.10	24.10	47.50	90.50	143.00	302.00	475.00
1600	5.28	13.40	26.80	52.80	101.00	159.00	335.00	528.00
1800	5.94	15.10	30.20	59.40	113.00	179.00	377.00	594.00
2000	6.60	16.80	33.50	66.00	126.00	199.00	419.00	660.00
2200	7.26	18.40	36.90	72.60	138.00	219.00	461.00	
2400	7.92	20.10	40.20	79.20	151.00	239.00	503.00	
2600	8.58	21.80	43.60	85.80	163.00	259.00	545.00	
2880	9.50	24.10	48.30	95.00	181.00	286.00		
3000	9.90	25.10	50.30	99.00	188.00	298.00		
3600	11.90	30.10	60.30	118.00	226.00			

TABLE 5 - PHYSICAL CHARA CTERISTICS

Characteristic	COUPLING SIZE							
	70	90	110/110A	130	150	180	230	280
Maximum Speed* rev/min	8300	6740	5110	4400	3800	3180	2540	2080
Nominal Torque (Nm)	31.5	80	160	315	600	950	2000	3150
Maximum Parallel Misalignment (mm)	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5
Maximum axial Misalignment (mm)	0.2	0.5	0.6	0.8	0.9	1.1	1.3	1.7

*Maximum coupling speeds are calculated using an allowable peripheral speed for the hub material. For selection of small sizes above 3600 rev/min - consult Fenner.

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HRC Couplings are essentially general purpose couplings with a fle xible element which can accommodate higher degree of misalignment.

- Parallel misalignment upto 0.5 mm
- Axial misalignment upto 1.7 mm

Because of their superior design HRC Couplings can accommodate larger shafts which make them a more economical propositon.

SALIENT FEATURES

ECONOMY
The design of the HRC coupling has been optimised so that power capacities are balanced to the appropriate shaft diameters utilising Taper-Lock® Bush fixing.

RESILIENCE
Transient peak loads are reduced by a flexible component, deflection of which is a prime design consideration.

INSTALLATION
Quick and easy without special tools, only an allen key is required.

MISALIGNMENT
Incidental parallel, angular and axial displacement of the connected shafts can be accommodated.

MAINTENANCE
Virtually eliminated and no lubricant is required.

ENVIRONMENT
The elastomeric component makes HRC coupling suitable for use in most conditions within a temperature range of -40°C to + 100°C.

POSITIVE
In the unlikely event of the flexible component being destroyed, the drive will be maintained by the interaction of dogs which are integral with the flanges.

TABLE 1 - SERVICE FACTORS

SPECIAL CASES	TYPES OF DRIVING UNIT					
For applications where substantial shock, vibration and torque fluctuation occur and for reciprocating machines, e.g. internal combustion engines, piston type pumps and compressors, refer to Fenner with full machine details for torsional analysis.	Electric Motors Steam Turbines			Internal Combustion Engines Steam Engines Water Turbines		
	OPERATIONAL HOURS PER DAY					
DRIVEN MACHINE CLASS	8 and under	Over 8 to 16 inclusive	Over 16	8 and under	Over 8 to 16 inclusive	Over 16
UNIFORM Agitators, Brewing Machinery, Centrifugal Blower and Compressors, Conveyors, Centrifugal Fans and Pumps, Generators, Sewage Disposal Equipment.	1.00	1.12	1.25	1.25	1.40	1.60
MODERATE SHOCK* Clay working machinery, Cranes Hoist, Laundry machinery, Wood working machinery, Machinery Tools, Rotary Mills, Paper Mill machinery, Textile machinery.	1.60	1.80	2.00	2.00	2.24	2.50
HEAVY SHOCK* Reciprocating conveyors, Crushers, Shakers, Metal Mills, Rubber machinery, (Banbury Mixers and Mills), Reciprocating compressors.	2.50	2.80	3.12	3.12	3.55	4.00

* It is recommended that keys (with top clearance if in Taper Lock Bushes) are fitted for applications where load fluctuation is expected.

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

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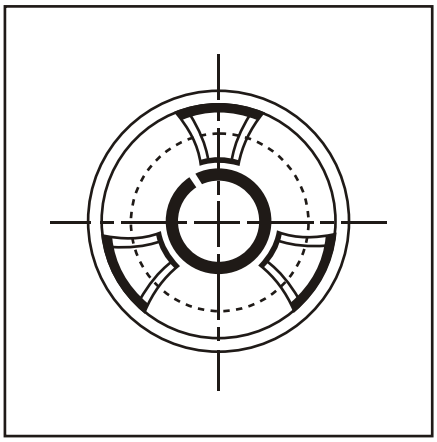
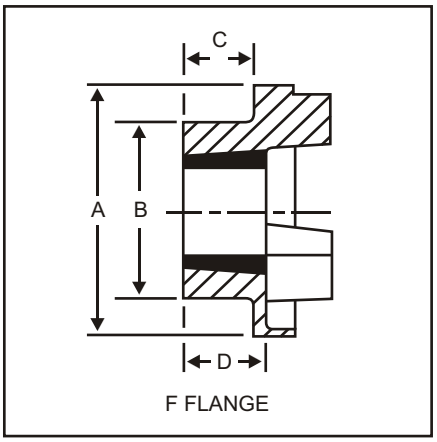
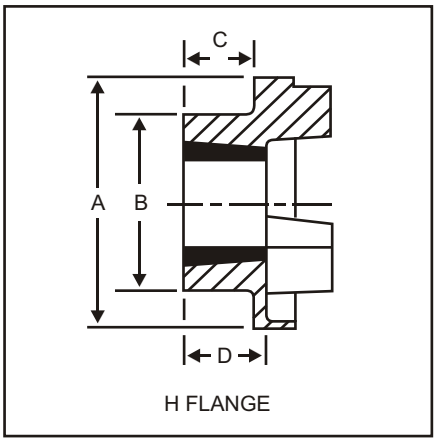
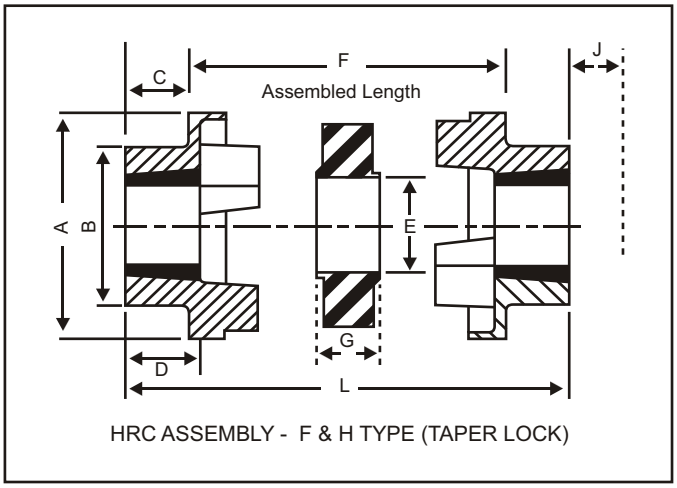




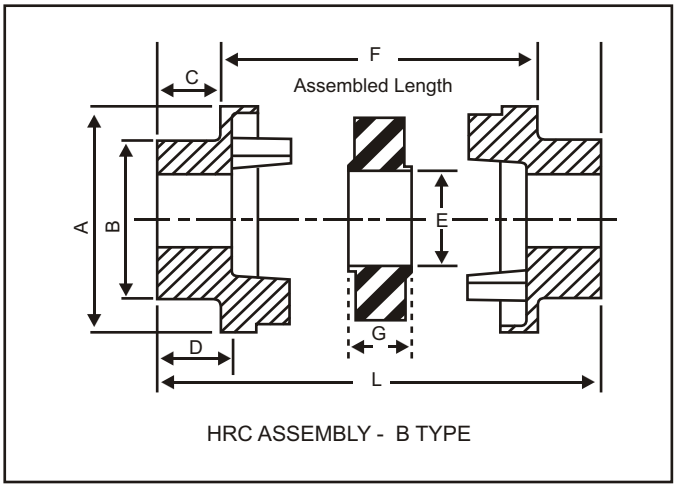
F FLANGE



H FLANGE



HRC ASSEMBLY - F & H TYPE (TAPER LOCK)



HRC ASSEMBLY - B TYPE

TABLE 2 - DIMENSIONS

Size	Power at 100 rpm kW	Type F & H								Type B						A	B	E	G
		TLB Size	Min. Bore	Max. Bore	C	D	F	L	J*	Min. Bore	Max. Bore	C	D	F	L				
70	0.33	1008	09	25	20.0	24	26.0	66.0	29	10	32	20	24	26.0	66.0	69	60	31	18.0
90	0.84	1108	09	28	19.5	24	31.5	70.5	29	10	35	26	30	30.5	82.5	85	70	32	22.5
110	1.68	1210	11	32	18.5	27	46.0	83.0	38	10	55	37	45	45.0	119.0	112	100	45	29.0
110A	1.68	1610	14	42	18.5	27	46.0	83.0	38	-	-	-	-	-	-	112	100	45	29.0
130	3.30	1610	14	42	18.0	27	54.0	90.0	38	14	60	47	56	54.0	148.0	130	105	50	36.0
150	6.28	2012	14	50	23.5	34	61.0	108.0	44	19	70	50	60	60.0	160.0	150	115	62	40.0
180	9.95	2517	16	60	34.5	47	74.0	143.0	48	35	80	58	70	73.0	189.0	180	125	77	49.0
230	20.90	3020	25	75	39.5	53	86.5	165.5	55	38	100	77	90	85.5	239.5	225	155	99	59.5
280	33.00	3525	35	90	51.0	67	106.5	208.5	67	48	115	90	105	104.5	284.5	275	206	119	74.5

* **J -** Wrench clearance to allow for tightening and loosening the bush on the shaft.