DRIVE SHAFT COUPLINGS
TYPE RDT/RDS

SELECTION DATA & APPLICATION GUIDELINES

Power Source	F_P
Electric Motor	1
Gasoline Engine	1.25
Diesel Engine	1.5

	Drive Shaft RPM	Max. Operating Angle	Drive Shaft RPM	Max. Operating Angle
OPERATING ANGLES For Two Joints Shafts With Equal or Intersecting Angles	5000	3° 15'	3000	5° 50'
	4500	3° 40'	2500	7° 0'
	4000	4° 15'	2000	8° 40'
	3500	5° 0'	1500	11° 30'

Selection of DRIVE SHAFT is different from other type of couplings

1) Select the appropriate **SERVICE FACTOR** from the table and graphs

- **a) Power Source : F_P**
- **b) Operating Angle : F_A**
- **c) Life : F_L**

2) Calculate **Application (Operating)** Torque : T Nm

$$T = \frac{\text{Power kW} \times 1.34 \times 7123}{\text{RPM}} \text{ Nm}$$

3) Calculate Design Torque = $T \times F_P \times F_A \times F_L$ Nm

4) Refer **short duration torque** from Technical data. Select the drive shaft size based on **Short Duration Torque = / > Design Torque**

5) Select required **Mounting Options** : SAE Plate or Hubs.

6) Check for **bore** sizes.

While ordering, place order for individual part as RDT/RDS, RDH/RDJ, RDP.

Figure 1. ANGLE FACTOR (F_A)

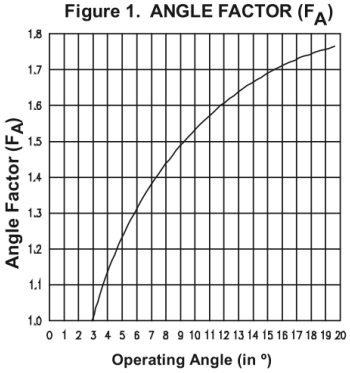
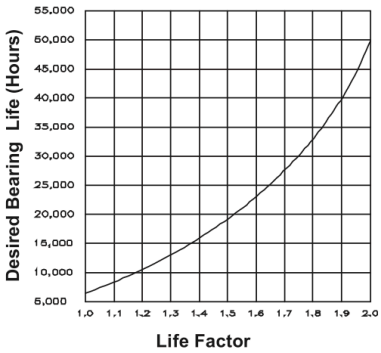


Figure 2. LIFE FACTOR (F_L)



SIZE	SHORT DURATION TORQUE Nm	* MAX. RPM	TUBE DIA MM (INCH)	# TUBE LENGTH C-C INSTALLED @ MAX. RPM MM (INCH)
1130	550	2500	63.5 (2.5)	1778 (70)
1310	1085	6000	63.5 (2.5)	1092 (43)
1410	2034	5000	76.2 (3)	1295 (51)
1480	2712	5000	76.2 (3)	1295 (51)
1550	3255	5000	76.2 (3)	1295 (51)
1550	3255	5000	88.9 (3.5)	1397 (55)
1610	4950	4500	88.9 (3.5)	1473 (58)
1710	6511	4500	103.80 (4.08)	1505 (59)
1720	6511	4500	103.80 (4.08)	1505 (59)

* Rating applies to universal joint

Lengths shown are based on 0.66 of the calculated critical speed at max. rate RPM (as applied to industrial applications)

*** Model RDT:- Rathi Drive Shaft Assembly (Tube), Variable length can be supplied as per order.**
*** Model RDS:- Rathi Drive Shaft Short Coupled, fixed length.**

- All Dimensions in mm unless specified.
- ■ Rectangle flange.
- Drive shaft balanced to Gr. G-16 as per ISO 1940 at 1500 rpm.
- Fully compressed length of drive shafts to be specified by customer.

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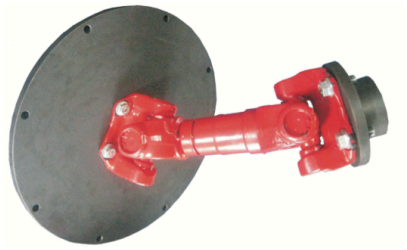
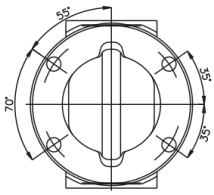


FEATURES:

- High torsional strength
- Polyamide coated spline shafts for longer life
- Ground fillet radii to avoid stress concentration
- Vibration free performance
- Low Maintenance

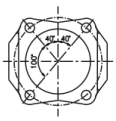
APPLICATIONS :-

Steel Plants & Rolling Mills, Textile, Paper & Printing Machinery, Cranes & Fire Fighting Pump drive, Vibrating screens, Cement Industries, Earth Moving Equipments, etc.

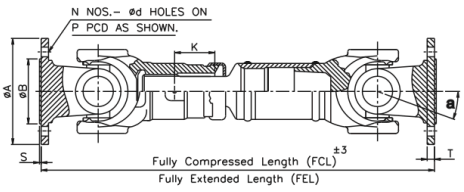


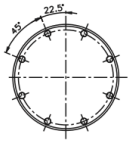
Model 1720 Flange

4-Hole Flange



4-Hole RECT Flange





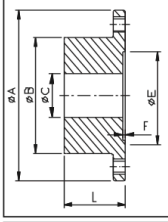
8-Hole Flange

TECHNICAL DATA

Drive Shaft Series	Short Duration Torque Nm	Flange Dia ØA	Spigot Dia. ØB	Spigot Height S	Flange THK T±0.5	No. of Flange Holes N	Bolt Hole Dia. ØD (+0.2, 0)	Flange PCD P	Angle A° Max.	* Model - RDT		* Model - RDS	
										Slip Move-ment K	Length FCL-FEL	Slip Move-ment K	Length FCL-FEL
1130	550	87.3	+0.050 0 57.1	2.60	5.20	4	8.20	69.95/69.80	17	42.8	315-358	23.5	208-232
												41	258-299
1310 ■	1085	Rect Flange	+0.050 0 60.27	1.52	7.10	4	10.50	79.45/79.30	25	50.8	335-385	25	250-275
												49.2	281-330
1410 ■	2034	Rect Flange	+0.050 0 69.8	1.50	7.25	4	12.50	95.35/95.20	20	58	471-529	30	250-280
												40	264-304
												52	290-342
1480 ■	2712	Rect Flange	+0.050 0 95.2	1.80	10.30	4	12.85	120.75/120.60	20	63.5	418-481	50	270-320
1550 ■	3255	Rect Flange		1.60	10.30	4	12.75	120.75/120.60	20	63.5	445-508	25	248-273
												33	308-341
1610	4950	174.5	+0.050 0 168.2	1.59	8.00	8	10.50	155.60/155.45	20	70	500-570	40	340-380
												45	377-422
1710	6511	203.0	+0.050 0 196.77	2.00	7.60	8	10.50	184.10/184.22	20	133	638-771	98	485-583
1720	6511	150	+0.1 146	3	11.00	4	13.00	130.00/130.2	15	133	650-783	98	480-578
												104	618-722

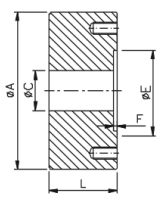
■ Rectangular Flange

RATHI DRIVE SHAFT HUB (RDH)#



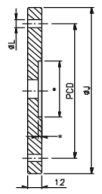
RDH Size	ØA	ØB	Max. Bore ØC	ØE	F	L
1130	86	51	32	57.2	2.8	40
1310	102	57	40	60.4	1.7	45
1410	128	72	48	69.9	1.7	45
1480	146	94	65	95.3	2	60
1550	146	94	65	95.3	1.8	60
1610	176	115	80	168.3	1.8	70
1710	210	142	90	196.9	2.2	90
1720	150	100	66	146.1	3.0	90

RATHI DRIVE SHAFT JUMBO HUB (RDJ)#



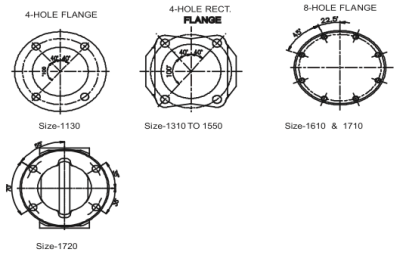
RDJ Size	ØA	Max. Bore ØC	ØE	F	L
1130	86	50	57.2	2.8	40
1310	102	58	60.4	1.7	45
1410	128	68	69.9	1.7	45
1480	146	92	95.3	2	60
1550	146	92	95.3	1.8	60
1610	176	115	168.3	1.8	70
1710	210	135	196.9	2.2	90
1720	150	100	146.1	3.0	90

RATHI DRIVE SHAFT SAE PLATE (RDP)#



RDP Size	ØJ	No. of Holes	ØL	PCD
6 1/2"	8 1/2"	6	21/64"	7 7/8"
7 1/2"	9 1/2"	8	21/64"	8 3/4"
8"	10 3/8"	6	13/32"	9 5/8"
10"	12 3/8"	8	13/32"	11 5/8"
11 1/2"	13 7/8"	8	13/32"	13 1/8"
14"	18 3/8"	8	17/32"	17 1/4"

*** Dimensions to suit respective Drive Shaft**



Special high tensile ***self locking*** bolts will be supplied with Hub & SAE Plate.

• All Dimensions are in mm otherwise specified