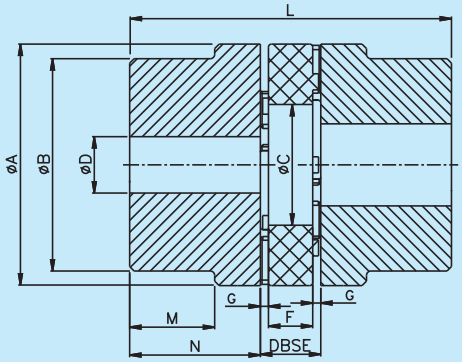
CURVE-*Flex* COUPLINGS

TYPE RRJ

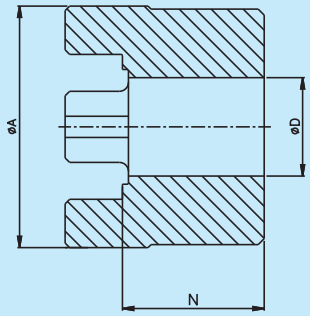
- Allover machining - Inherently balanced
- No Lubrication, Maintenance free - Long life
- Compact design, High power to weight ratio
- Fail safe - Will perform even if spider fails
- Vibrations Damping, torsionally flexible
- Axial plug-in, easy to assemble

RRJ Coupling

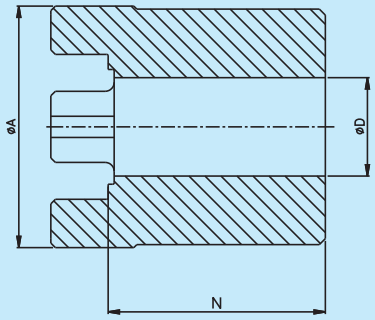
HUB TYPE I



HUB TYPE II



HUB TYPE III



TECHNICAL DATA

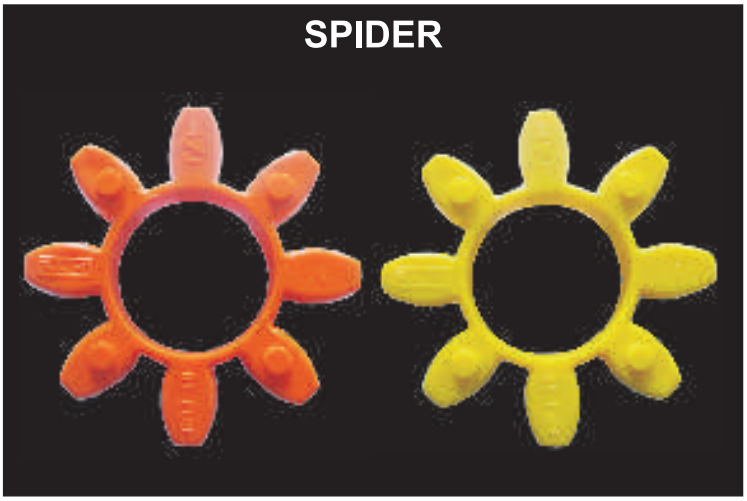
RRJ - Aluminium (AL) *

Coupling Size	Coupling Type	KW @ 100 rpm		Max. Speed rpm	Finish Bore - D		A	B	C	DBSE min.	F	G	L	M	N	Assembly #	
		Red	Yellow		Min.	Max.										Weight (Kg.)	M.I. ($Kg.m^2$)
19	I	0.17	0.10	14000	6	19	41	32	18	16	12	2	66	20	25	0.11	2.3×10^{-5}
	II				19	24		41								0.14	4.3×10^{-5}
24	I	0.60	0.35	10600	9	24	56	40	27	18	14	2	78	24	30	0.24	9×10^{-5}
	II				22	28		56								0.34	19×10^{-5}
28	I	1.60	0.95	8500	10	28	66	48	30	20	15	2.5	90	28	35	0.39	20×10^{-5}
	II				28	38		66								0.54	42×10^{-5}
				RRJ - Cast Iron (CI) *													
38	I	3.25	1.90	7100	12	40	80	66	38	24	18	3	114	37	45	2.0	1.85×10^{-3}
	II				38	48		78								2.4	2.45×10^{-3}
	III				12	48							164	62	70	3.6	3.72×10^{-3}
42	I	4.50	2.65	6000	14	45	95	75	46	26	20	3	126	40	50	3.2	4.1×10^{-3}
	II				42	55		94								3.8	5.90×10^{-3}
	III				14	55							176	65	75	5.5	8.54×10^{-3}
48	I	5.25	3.10	5600	15	52	105	85	51	28	21	3.5	140	45	56	4.4	6.2×10^{-3}
	II				48	62		104								5.2	9.6×10^{-3}
	III				15	62							188	69	80	4.2	13.4×10^{-3}
55	I	6.85	4.10	4750	20	60	120	98	60	30	22	4	160	52	65	6.6	12.3×10^{-3}
	II				55	74		118								7.5	17.3×10^{-3}
	III				20	74							210	77	90	10.2	23.7×10^{-3}
65	I	9.40	6.25	4250	22	70	135	115	68	35	26	4.5	185	61	75	10.1	24.5×10^{-3}
	II				65	80		133								11.5	27.8×10^{-3}
	III				22	80							235	86	100	15.0	36.3×10^{-3}
75	I	19.20	12.80	3550	30	80	160	135	80	40	30	5	210	69	85	16.0	54×10^{-3}
	II				75	95		158								18.2	61.4×10^{-3}
	III				30	95							260	84	110	21.2	71.5×10^{-3}
90	I	36	24	2800	40	97	200	160	100	45	34	5.5	245	81	100	27.5	138×10^{-3}
	II				90	110		198								36.3	182×10^{-3}
	III				40	110							295	106	125	44.8	225×10^{-3}

Weight & Moment of Inertia (M.I.) of coupling assembly refer to maximum finish bore without keyway.

* Alternative hub material available on request - Steel (Sizes 19 to 90) , S. G. Iron (Sizes 38 to 90).

SPIDER



TECHNICAL DATA - Polyurethane Spiders

Spider Size	Red (Std.)		Yellow	
	T_{nom} (Nm)	T_{max} (Nm)	T_{nom} (Nm)	T_{max} (Nm)
19	17	34	10	20
24	60	120	35	70
28	160	320	95	190
38	325	650	190	380
42	450	900	265	530
48	525	1050	310	620
55	685	1370	410	820
65	940	1880	625	1250
75	1920	3840	1280	2560
90	3600	7200	2400	4800
Hardness	95 Shore A		92 Shore A	
Temperature	- 40°C to 90°C			

Selection Procedure:

1. Determine Application Nominal Torque (Nm)
   Tnom (Nm) = (kw x 9550/rpm)

2. Calculate application service factor using following charts - Total service factor (SF) will be
   SF = SF1 x SF2 x SF3

3. Calculate Application Maximum Torque (Tmax)
   Tmax = Tnom X SF (Nm)

4. Select the proper spider showing Tnom greater than application nominal torque. Then select spider showing Tmax greater than application maximum torque. Select the higher of two.

5. Ensure that application rpm and max. bore requirements are less than or equal to selected coupling max. rpm and max. bore size otherwise select next size coupling.

For SF1, SF2, SF3 refer chart.

SF1 - Application Service Factor

Driven Machine / Example	Electric Motors	Prime Motor	
		4 Cylinder or more	Less than 4 Cylinder
a. Uniform operation, no shocks.	1.5	2.0	2.5
b. Irregular operation, light shocks.	2.0	2.5	3.0
C. Irregular operation, medium shocks.	2.5	3.0	3.5
D. Irregular operation, heavy shocks.	3.0	3.5	4.0

SF2 - Application Service Factor for Temperature

Temperature Range °C	< 30°C	30°C - 70°C	> 70°C
SF2	1.0	1.5	2.0

SF3 - Application Service Factor for starting frequency

Starting frequency cycles / hour	< 100	100 - 500	> 500
SF3	1.0	1.5	2.0

MISALIGNMENT DATA

Size	19	24	28	38	42	48	55	65	75	90
Maximum axial displacement (mm)	1.6	1.8	2.0	2.2	2.3	3.0	3.0	3.5	3.5	4.5
Maximum radial misalignment (mm)	0.15	0.20	0.20	0.25	0.30	0.35	0.35	0.40	0.45	0.50
Maximum angular misalignment (Deg.)	0.80	0.80	0.80	0.90	0.90	1.0	1.0	1.0	1.1	1.1

ORDER SEQUENCE	Coupling Size	Hub Type (Driver / Driven)	Finish Bore (Driver / Driven)	Spider Type	Hub Material
Example	RRJ-55	I / II	40 / 60	Red	CI

- Coupling with std. Spider is supplied if not specified.

- All dimensions are in mm unless otherwise specified.
- For vertical installation contact RATHI.

ISO 9001 BUREAU VERITAS Certification

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