

Elastic Couplings



POWER
TRANSMISSION
INNOVATION



Rathi B-FLEX couplings consist of a set of resilient BARREL shaped bushes with pins & nuts and two flanged hubs of graded cast iron.

These special BARREL shaped bushes permit the MISALIGNMENT IN ALL DIRECTIONS and give extra torsional flexibility as compared to plain bushes. These couplings are suitable for general engineering application requiring reliable power transmission even under conditions of shaft misalignments which are often unavoidable.



FEATURES

SIMPLICITY OF CONSTRUCTION

Easy to assemble & disassemble. Suitable for independent running of the drive.

VARYING STIFFNESS CHARACTERISTICS

Special barrel shaped bushes provide progressively increasing stiffness characteristics, hence ensure effective shocks & vibration absorption.

NO LUBRICATION

B-FLEX couplings never require lubrication of any kind.

SIMPLE / EASY MAINTENANCE

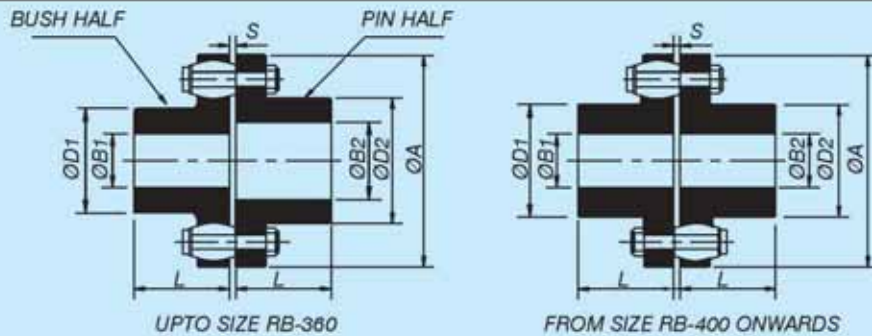
No complicated mechanism to demand adjustment or maintenance. Inspection and replacement of bushes is easy and bushes can be quickly fitted without dismantling or moving either of coupled shafts.

LOW OPERATIONAL COST

Only wearing part is low cost bushes which make coupling economical in long run.

SMOOTH & QUIET OPERATION

Reduces vibration & noise arising from severe torque fluctuations.



TECHNICAL DATA

Coupling Size	kW at 100 RPM	Torque Nm	Max. Speed rpm	Min. Bore	Max. Bore		ØA	ØD1	ØD2	L	S	Wt. in kg.	M.I.(WR) in kgm ²	Max. Misalignment (±)		
					ØB1	ØB2								Axial (mm)	Radial (mm)	Angular (°)
RB-105-3	1.0	95	7200	11	30	32	105	48	50	45	2-6	2	0.0030	2	0.3	1°
RB-116-4	1.5	146	6100	12	39	42	116	60	68	45	2-6	2.6	0.0050	2	0.3	1°
RB-125-4	1.7	166	5500	14	45	50	125	68	78	50	2-6	3.1	0.0070	2	0.4	1°
RB-144-6	3.3	318	4900	18	50	60	144	82	91	55	2-6	4.3	0.012	2	0.4	1°
RB-162-6	5.5	525	4500	22	60	65	162	89	100	60	2-6	7.5	0.030	2	0.4	1°
RB-178-6	6.7	643	3800	24	70	75	178	105	115	70	2-6	10	0.040	2	0.5	1°
RB-198-10	13	1248	3400	28	80	90	198	124	135	80	2-6	13	0.062	2	0.5	1°
RB-228-11	21	2050	3000	28	90	100	228	133	146	90	4-10	18	0.100	3	0.6	1°
RB-252-12	32	3069	2700	38	105	115	252	156	167	100	4-10	24	0.17	3	0.6	1°
RB-285-11	48	4552	2400	48	115	125	285	170	186	110	4-10	35	0.31	3	0.7	1°
RB-320-12	64	6099	2100	55	125	135	320	196	212	125	4-10	51	0.53	3	0.7	1°
RB-360-11	93	8900	1900	65	135	150	360	212	232	140	4-12	73	1.02	4	0.9	1°
RB-400-10	126	12051	1700	75	160	160	410	230	230	160	4-12	101	1.70	4	1.1	1°
RB-450-12	195	18602	1500	85	180	180	450	260	260	180	4-12	137	2.90	4	1.1	0.5°
RB-500-14	270	25802	1350	95	200	200	500	290	290	200	4-12	180	4.70	4	1.1	0.4°
RB-560-10	325	31003	1200	95	225	225	560	320	320	220	4-8	278	10.70	2	1.5	0.3°
RB-630-12	440	41998	1050	100	250	250	630	355	355	240	4-8	365	17.4	2	1.5	0.3°
RB-710-12	785	75000	950	100	260	260	710	385	385	260	5-9	516	33	2	1.8	0.3°
RB-800-14	1047	100000	850	100	280	280	800	420	420	290	5-9	691	53	2	1.8	0.3°
RB-900-16	1623	154998	750	100	305	305	900	465	465	320	5-9	927	86	2	1.8	0.3°
RB-1000-18	2042	194997	680	125	320	320	1000	515	515	350	5-10	1224	142.8	2	2	0.1°
RB1120-18	2827	269997	600	135	350	350	1120	560	560	380	6-11	1584	231	2	2.2	0.1°
RB-1250-20	3613	344997	550	150	380	380	1250	610	610	420	6-11	2070	367.5	2	2.4	0.1°
RB-1400-20	5550	529999	490	175	440	440	1400	700	700	480	6-12	3060	693	2	2.7	0.1°
RB-1600-24	7854	749995	430	200	480	480	1600	770	770	540	6-12	3960	1155	2	3	0.1°
RB-1800-22	10210	974996	380	225	540	540	1800	870	870	600	8-16	5760	2205	2	3.4	0.1°
RB-2000-26	13614	1299997	340	250	600	600	2000	960	960	660	8-16	7020	3255	2	3.8	0.1°

● PH = Pin Half (Drive) upto size 360

● BH = Bush Half (Driven) upto size 360

SPARE PARTS

Coupling SIZE	Pin Half Part No.	Bush Half Part No.	Pin + Washer Part No.	Bush Part No.	No. Of Pin-Bush Assy./Coupling	Nut Size
RB-105-3	RB-105-3/1	RB-105-3/2	RB/P-2	RB/B-2	3	M8
RB-116-4	RB-116-4/1	RB-116-4/2	RB/P-2	RB/B-2	4	M8
RB-125-4	RB-125-4/1	RB-125-4/2	RB/P-2	RB/B-2	4	M8
RB-144-6	RB-144-6/1	RB-144-6/2	RB/P-2	RB/B-2	6	M8
RB-162-6	RB-162-6/1	RB-162-6/2	RB/P-3	RB/B-3	6	M10
RB-178-6	RB-178-6/1	RB-178-6/2	RB/P-3	RB/B-3	6	M10
RB-198-10	RB-198-10/1	RB-198-10/2	RB/P-3	RB/B-3	10	M10
RB-228-11	RB-228-11/1	RB-228-11/2	RB/P-4	RB/B-4	11	M14
RB-252-12	RB-252-12/1	RB-252-12/2	RB/P-4	RB/B-4	12	M14
RB-285-11	RB-285-11/1	RB-285-11/2	RB/P-5	RB/B-5	11	M16
RB-320-12	RB-320-12/1	RB-320-12/2	RB/P-5	RB/B-5	12	M16
RB-360-11	RB-360-11/1	RB-360-11/2	RB/P-6	RB/B-6	11	M20
RB-400-10	RB-400-10		RB/P-7	RB/B-7	10	M20
RB-450-12	RB-450-12		RB/P-7	RB/B-7	12	M20
RB-500-14	RB-500-14		RB/P-7	RB/B-7	14	M20
RB-560-10	RB-560-10		RB/P-8	RB/B-8	10	M36
RB-630-12	RB-630-12		RB/P-8	RB/B-8	12	M36
RB-710-12	RB-710-12		RB/P-9	RB/B-9	12	M42
RB-800-14	RB-800-14		RB/P-9	RB/B-9	14	M42
RB-900-16	RB-900-16		RB/P-9	RB/B-9	16	M42

NOTES - * All dimensions are in mm, Unless otherwise specified.

* Weight & inertia figures are at maximum bores.

* Each coupling is capable of withstanding maximum torque of 3 times of nominal torque for short durations such as during start up.

* For vertical installation contact RATHI.

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Rathi N-Flex couplings consists of graded cast iron hubs and a set of 'H' shaped highly resilient blocks which accommodates parallel, angular and axial misalignments & absorbs torsional vibrations. Rathi N-Flex spacer couplings (Type - RNS) are suitable for 'Back Pullout Pumps' in which the impeller can be disassembled without disturbing motor and pump from the base frame.

**RN (B)****RN (A)****RNS(H)**

FEATURES

SIMPLICITY OF CONSTRUCTION

Easy to assemble & disassemble. Suitable for reversing operation.

VARYING STIFFNESS CHARACTERISTICS

Special H shaped inserts provide progressively increasing stiffness characteristics, hence ensure effective shocks & vibration absorption. Special elastomer can be supplied to suit specific application needs.

NO LUBRICATION

RN/RNS couplings do not require lubrication of any kind.

SIMPLE / EASY MAINTENANCE

No complicated mechanism to demand adjustment or maintenance. Inspection and replacement of inserts is easy.

LOW OPERATIONAL COST

Only wear part is low cost inserts which make coupling economical in long run.

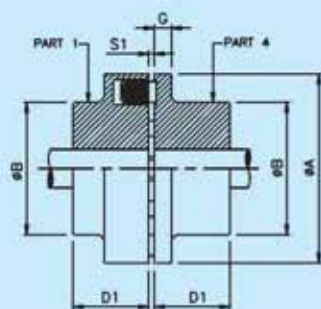
SMOOTH & QUIET OPERATION

Reduces vibration & noise arising from severe torque fluctuations. Operating temp. is -30°C to +100°C.

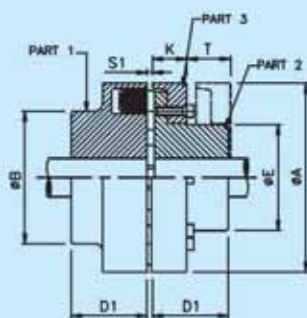
Application :

Mainly for pump applications such as :

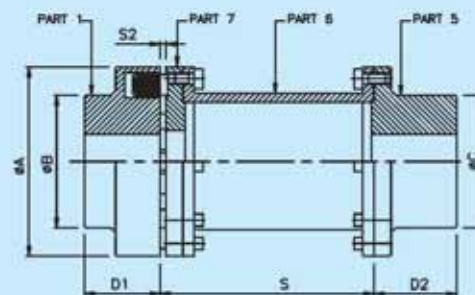
Water Pumps, Slurry Pumps, Sewage Pumps, Back Pull out Pumps, Multistage Pumps, Split Case Pumps, API Pumps, Chemical Process Pumps, Metering/Dosing Pumps, Gear Pumps, Paper Stock Pumps, Screw Pumps, Vacuum Pumps, Fire Pumps, High Pressure Pumps.



RN(B)
SIZES 68 to 250



RN(A)
SIZES 110 to 250



RNS(H)
SIZES 80 to 250

Coupling Size	Rated Torque N-m	Kw at 100 RPM	Max. Speed RPM	Max. Bore (mm) Part No			Dimensions (mm)										Weight (Kg)			M.I (WR ²) Kg-m ²		
				1, 5	4	2	ØA	ØB	ØC	ØE	D1	D2	G	K	T	S	RN(B)	RN(A)	RNS(H)	RN(B)	RN(A)	RNS(H)
68 B	34	0.36	5000	24	28	-	68	46	-	-	20	-	8	-	-	-	0.63	-	-	0.0003	-	-
80 B,H	60	0.63	5000	30 *	38	-	80	68	55	-	30	45	10	-	-	100 140	1.51	-	2.8 2.9	0.0012	-	0.0014 0.0015
95 B,H	100	1.1	5000	42	42	-	95	76	70	-	35	45	12	-	-	100 140	2.6	-	3.9 4.2	0.0027	-	0.0028 0.0031
A,B,H 110	160	1.7	5000	48	48	38	110	86	80	62	40	50	14	20	33	100 140 180	3.9	3.5	5.8 6.2 6.6	0.0055	0.0047	0.006 0.0064
A,B,H 125	240	2.5	5000	55	55	45	125	100	90	75	50	50	18	23	38	100 140 180	6.2	5.6	8.2 8.7 9.2	0.0107	0.0095	0.0099 0.010 0.011
A,B,H 140	360	3.8	4900	60	60	50	140	100	100	82	55	65	20	28	43	140 180	6.9	7	11.8 12.3	0.014	0.015	0.019 0.020
A,B,H 160	560	5.9	4250	65	65	58	160	108	108	95	60	70	20	28	47	140 180	9.4	9.8	15.2 16.0	0.025	0.028	0.032 0.034
A,B,H 180	880	9.2	3800	75	75	65	180	125	125	108	70	80	20	30	50	140 180	14	14.2	21.0 21.9	0.045	0.049	0.054 0.058
A,B,H 200	1340	14	3400	85	85	75	200	140	140	122	80	90	24	32	53	180 200 250	20	19.8	30.3 30.9 32.1	0.08	0.085	0.100 0.105 0.110
A,B,H 225	2000	21	3000	90	90	85	225	150	150	138	90	100	18	38	61	180 200 250	24.5	27	39 39.7 41.5	0.135	0.15	0.160 0.170 0.180
A,B,H 250	2800	29	2750	100	100	95	250	165	165	155	100	110	18	42	69	200 250	34	37	54.7 56.5	0.23	0.25	0.280 0.300

- All dimensions are in mm.
- * = Bore 32 mm for part 5.
- S1 = 2-4mm for sizes 68 to 140, 2-6 mm for sizes 160 to 225 & 3-8 mm for size 250.
- S2 = 5 mm for sizes 80 to 140, 6 mm for sizes 160 to 225 & 8 mm for size 250.
- Part No. 5 is available with different length through Bores D2.
- Max. bore for coupling with or equivalent to DIN 6885 keys.
- For vertical installation contact RATHI.

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Sleeve-Flex Elastomeric Couplings



Design Features

Need No Lubrication

No Maintenance

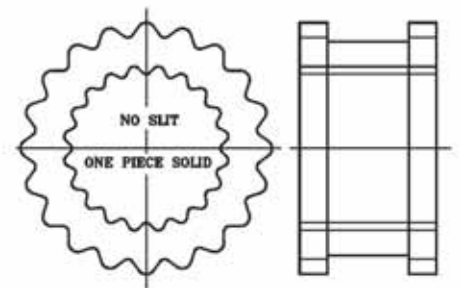
Quick & Easy Installation

Clean & quiet Performance

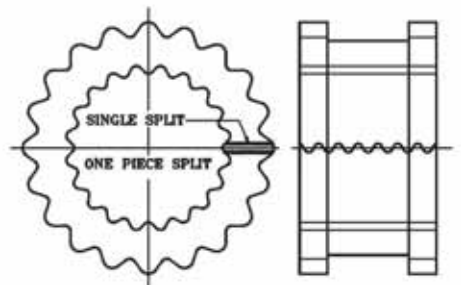
Sleeve-Flex can be installed quickly and easily, because there are no bolts, gaskets, covers or seals. Alignment can be checked with a straight edge placed across the outside of the precision machined flanges. No special tools are needed for installation, alignment or removal.

The teeth of sleeve lock into the teeth of the flanges without clamps or screws, tightening under torque to provide smooth transmission of power. There is no rubbing action of metal against rubber to cause wear. Couplings are not affected by abrasives, dirt or moisture.

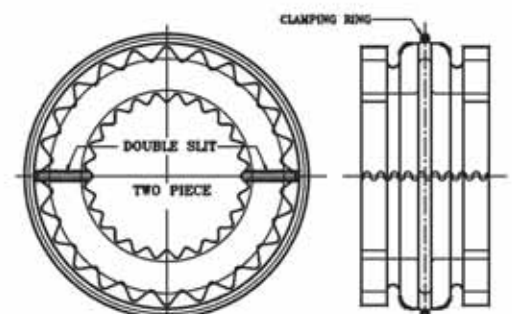
This eliminates the need for lubrication or maintenance, provides clean, dependable, quiet performance.



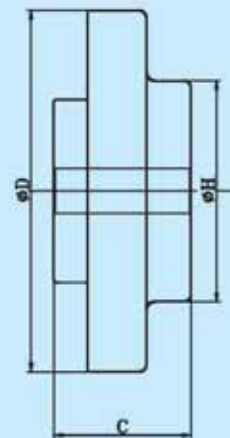
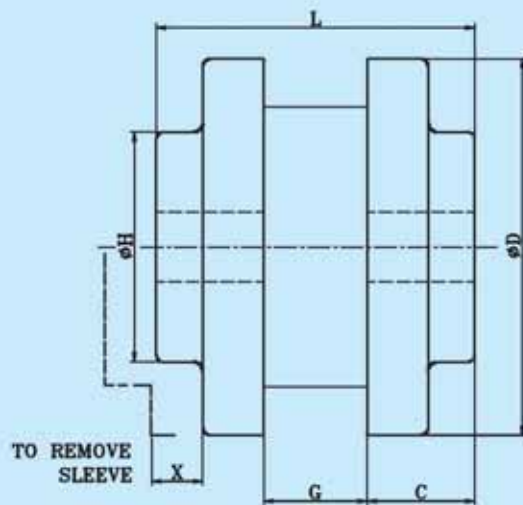
JE SLEEVES (FOR SIZE 3 TO 10)



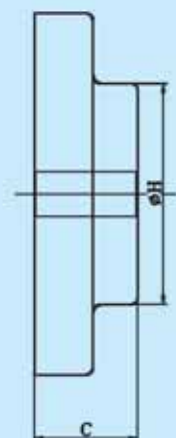
JES SLEEVES (FOR SIZE 3 TO 10).



E SLEEVES (FOR SIZE 11 TO 13).



FLANGE
TYPE 'S'



FLANGE
TYPE 'J'

TECHNICAL DATA

Coupling Size	Flange Type	Sleeve Type	kW @ 100 rpm	Rated Torque	Max. Speed	Bore (mm)		Dimensions (mm)						Weight Kg
				N-m	rpm	P.B.	MAX.	C	D	G	H	L	X	
3	J	JE, JES	0.08	7.64	9200	10	22	20	52	9	38	49	16	0.3
4	J		0.15	14.32	7600	13	25	22	63	16	41	60	16	0.5
5	J		0.30	28.65	7600	13	29	26	83	18	48	70	23	1.1
	S							34		19		71	30	
6	J		0.52	49.66	6000	16	35	33	102	22	63	88	28	2
	S							44		21		88	36	
7	S		0.90	85.94	5250	16	48	47	118	25	71	100	34	2.8
8	S		1.34	127.96	4500	19	54	53	138	28	98	112	38	4.8
9	S	E	2.16	206.26	3750	22	64	61	161	36	98	128	45	7.2
10	S		3.43	327.54	3600	29	73	69	191	41	111	144	51	11.2
11	S		5.37	512.80	3600	32	87	87	219	48	133	180	61	18
12	S		8.50	811.69	2800	38	98	104	254	60	146	210	68	28
13	S		13.43	1282.47	2400	51	100	111	299	68	171	235	78	48

- 3 & 4 Flanges are available in Aluminium.
- 5 to 13 Flanges are available in Cast Iron.
- The Weight is approximate with solid Flanges.

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

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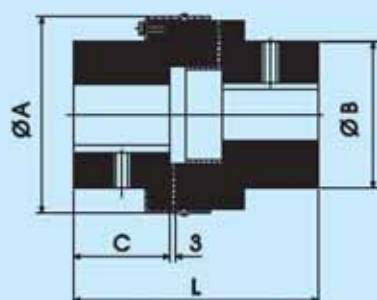


Special Features

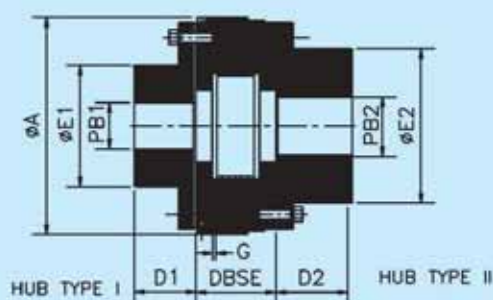
Individual freefloating load cushions held in place by outside steel collar.
 Completely machined castings.
 Easy to assemble & disassemble.
 Cushions easily inspected at all times.
 Material of construction -
 C.I. for Size 307 to 367
 S.G. Iron Size 407 to 1117

Applications

For pumps in chemical industry, ideal for reciprocating pumps, diesel or gas engines, multiple generator sets and such heavy duty applications.



TYPE H



TYPE HR

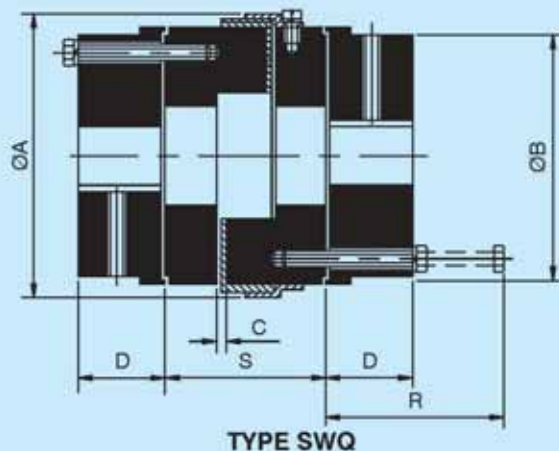
'H' TECHNICAL DATA

Size	Rated Torque Nm	kW at 100 rpm (Synthetic Rubber)	Bore		Outside Dia. ØA	Hub Dia. ØB	Length thru' Bore C	Overall Length L	Approx. weight in kg	
			Min.	Max.					Min. Bore	Max. Bore
H-307	5307	56	60	105	262	180	121	295	58	55
H-357	7124	75	60	115	288	197	127	314	73	67
H-367	9903	104	70	130	313	222	143	353	105	99

'HR' TECHNICAL DATA

Size	KW at 100 rpm			DBSE	Min. Bore		Max. Bore		Outside Dia.	Hub Diameter		Length thru' Bore	
	Synthetic Rubber	PU	HYTREL		Hub Type I	Hub Type II	Hub Type I	Hub Type II		Hub Type I	Hub Type II	Hub Type I	Hub Type II
HR-307	56	84	140	100	30	60	80	105	266	131	170	68	85
HR-357	75	112	187	110	35	60	85	115	292	138	180	76	95
HR-367	104	156	260	117	40	70	100	130	317	162	210	84	105
HR-407	-	223	372	126	50	85	120	155	349	195	248	95	120
HR-457	-	302	502	134	60	85	140	185	400	220	294	100	130
HR-509	-	358	597	133	70	90	145	190	412	230	305	110	140
HR-609	-	527	877	142	85	100	170	225	461	275	360	130	170
HR-709	-	738	1230	162	90	100	190	265	524	300	425	140	195
HR-809	-	-	1530	196	100	120	215	295	600	345	470	155	210
HR-911	-	-	1770	216	110	170	265	340	667	420	545	190	240
HR-1013	-	-	2644	218	195	-	360	-	805	540	-	340	-
HR-1015	-	-	3665	235	215	-	420	-	910	630	-	340	-
HR-1115	-	-	4450	245	240	-	500	-	960	750	-	375	-
HR-1117	-	-	6807	276	290	-	600	-	1170	900	-	400	-

- Maintain Gap 'G' = 3 mm for size HR - 457 & 6 mm for higher sizes at the time of assembly.
- Please specify hub type required.
- Non std. DBSE spacer available on request.
- For vertical installation contact RATHI.



SWQ TECHNICAL DATA

Coupling size	kW at 100 RPM (Synthetic)	DBSE S	Bore		Outside Diameter OA	Length Thru Bore D	Adapter Diameter OB	Minimum Bolt Clearance R
			Min.	Max.				
SWQ 095	0.22	100, 140 180	10	28	65	25	54	45
SWQ 100	0.49		10	38	78	30	65	50
SWQ 110	0.93		15	42	96	35	76	60
SWQ 150	1.49		15	48	111	40	90	70
SWQ 190	2.01		20	55	129	45	102	75
SWQ 225	2.76		20	65	142	50	115	90
SWQ 226	3.40	140, 180	25	70	153	50	134	92
SWQ 276	5.60		25	80	173	60	130	107
SWQ 280	8.20		30	80	208	60	130	70
SWQ 295	13.40		30	105	253	70	160	75
SWQ 2955	22.30		30	105	253	75	160	85
SWQ 300	31.90		30	115	272	80	180	95
SWQ 350	45.10		30	125	323	90	200	85

- Maintain gap C at the time of assembly where C = 2 mm. for SWQ - 095 to 100
= 3 mm. SWQ - 110 to SWQ - 350
- Pilot bores other than specified are available on request.
- Non std. spacer length available on request.
- For vertical installation contact RATHI.

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RATHI COUPLINGS: FEATURES & APPLICATIONS

COUPLING CATEGORY			FEATURES				APPLICATIONS				
TYPE	Non-Spacer	With Spacer	GENERAL	API	ATEX	Non-spark	Slide vane rotary vacuum pumps	Root Vacuum pumps	Stationary Screw Compressors	Piston compressors / turbo compressors	Centrifugal pumps
JAW FLEX (STRAIGHT JAW)	L/SW 	RRS/SWS 	Fully machined Hubs. Inherence Balanced Eyeball alignment - Single Ease of Inspection & rubber part replacement in 5 min. No down time Low initial, operation & replacement cost No lubrication - Long life Spiders available in synthetic rubber, PU & Hytrel L/SW/RRS parts are same Low Inventory - Economical Available with Taper Bush								
JAW FLEX	RN 	RNS(H) 	Simple to install & easy maintenance Low weight and low moment of inertia No Lubrication - Long life Flexible elements available in synthetic rubber & PU Varying stiffness characteristics High internal damping capacity Available with Taper Bush								
JAW FLEX (CURVED JAW)	RFC 	Refer Note	Simplicity of construction - Both hubs are same Simple / easy assly. & maintenance Provides torsional vibration isolation & damping Low cost No lubrication Long life Available with Taper Bush								
CURVE FLEX (CURVED JAW)	RRJ 	Refer Note	Axial Plug in, backlash free Machined all over - Inherently balanced Electrically insulated Spiders available in 2 hardness Blind assembly Varying stiffness suitable for damping vibrations No Lubrication - Long life								
B-FLEX (PIN BUSH)	RB 	RBS 	Compact - Close coupled Independent Running of prime cover Special barrel shaped bushes provide varying stiffness - Available in Rubber, PU Simple in construction, easy to install No lubrication - Long life - Economical Inspection and replacement of bushes without disturbing original alignment								
CONE-FLEX (FLEX RING)	RC 	RCS 	High Torque capacity, compact size, low weight Independent running of prime cover Easy to assemble & Maintain - No lubrication - Long life - Economical Reduces vibrations & noise arising from severe torque fluctuations Cone rings available in rubber & PU Inspection & replacement of cone rings without disturbing original alignment Available with Taper Bush								

RATHI COUPLINGS: FEATURES & APPLICATIONS

COUPLING CATEGORY			FEATURES				APPLICATIONS				
TYPE	Non-Spacer	With Spacer	GENERAL	API	ATEX	Non-spark	Slide vane rotary vacuum pumps	Root Vacuum pumps	Stationary Screw Compressors	Piston compressors / turbo compressors	Centrifugal pumps
SLEEVE-FLEX	RBW 	Refer Note	Torsionally soft couplings Double engagement coupling Dampen vibrations & absorb shocks No lubrication - Long Life No Maintenance Most suitable for safety of equipment								
TYRE-FLEX	T/TO 	RST 	Torsionally soft couplings Absorbs vibrations & impact loads Max. Angular misalignment than any other type No lubrication Long life Available with Taper Bush								
GEAR-FLEX	RGD/RGS 	RGDS/RGSS 	High power to weight ratio Conforms to AGMA Standard Half coupling can be replaced with any AGMA Brand Compact Assembly Temperature resistance upto 120° - Require lubrication Large bore capacity to suit rating Teeth - Triple Crowned Economical								
DISC-O-FLEX	LMK 	LM 	High power-to-weight ratio - light weight No lubrication - long life High speed & high temperature Long spacer lengths available 2 hub designs to accommodate large shafts								
	Refer Note	EM 	Plug in Design - Easy Installation Incorporates Anti-flail design feature Floating shaft coupling Backlash free High power to weight ratio High speed - high temperature 4 hub designs to accommodate large shafts	610 & 671							
	Refer Note	EMT/ EMD 	High Speed / High power coupling Incorporates anti-flail backlash free High speed - high temperature	610 & 671							
	Refer Note	RSK 	Plug in Design - Easy Installation Incorporates Anti-flail design feature Floating shaft coupling Backlash free High power to weight ratio High speed - high temperature 4 hub designs to accommodate large shafts Interchangeable with other brands	610 & 671							

Note: Couplings are not regularly used in these versions. For specific requirement if any, Consult Rathi Transpower Pvt. Ltd.



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