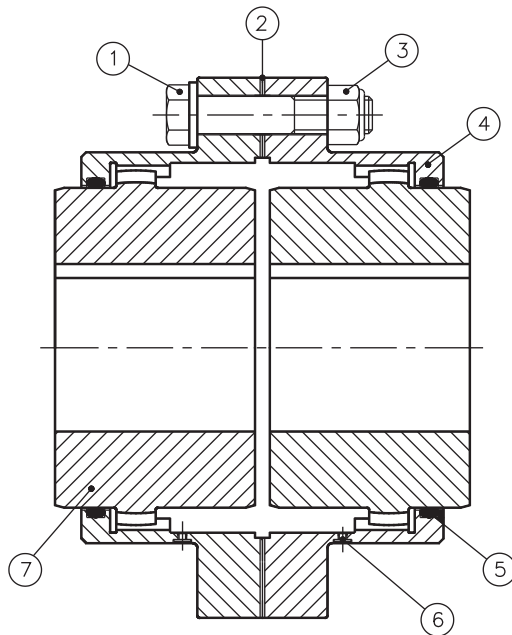


### ***FEATURES***

- High Torque Ratings
- Large Bore Capacity
- Interchangeability
- Better Fastener Design
- High Misalignment Capacity
- Improved Lubrication System

**CONFORMS  
TO  
AGMA  
STANDARD**



- |           |             |
|-----------|-------------|
| 1) BOLT   | 5) O-RING   |
| 2) GASKET | 6) OIL PLUG |
| 3) NUT    | 7) HUB      |
| 4) SLEEVE |             |

### High Torque Ratings

Rathi RGD & RGS Series Gear coupling; torque capacity exceeds the competition, and it allows smaller coupling size of increased service factor.

### Large Bore Capacity

Rathi RGD & RGS Series Gear couplings can accommodate large shaft diameters for given particular size of coupling compared to the competition, in most instances. That mean you can buy a smaller less expensive coupling and still get the proper rating for the equipment.

### Interchangeability

Complete half coupling assemblies are interchangeable with any other half gear coupling with exposed bolt flange manufactured to AGMA standard. Rathi replacement half couplings provide additional hub strength and lower gear mesh loads.

### High Misalignment Capacity

Rathi RGD & RGS Gear couplings are designed to accommodate a static misalignment of  $1\frac{1}{2}^{\circ}$  per gear mesh. The recommended operating misalignment is limited to  $3/4^{\circ}$  per gear mesh. Axial moment of connected shafts is also accommodated in these couplings.

### Lubrication System

Rathi Special Grease (RSG) properties are designed/developed to resist separation of Base oil & thickner due to centrifugal forces encountered in Gear coupling. This benefits for the application -

- Significantly extended relubrication intervals
- Reduced maintenance cost
- Superior lubrication
- Increased coupling life

The location & size lubrication holes in the sleeve ensures that adequate grease is available at the gear mesh, where it is needed must fully moulded seals positively lubricant and seal interior against foreign matter

## TECHNICAL DATA

| Size        | 10    | 15    | 20    | 25    | 30    | 35    | 40    | 45    | 50    | 55    | 60    | 70    |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Outer Dia.  | 115.8 | 152.4 | 177.8 | 212.9 | 239.8 | 279.4 | 317.5 | 345.9 | 388.9 | 425.5 | 457.2 | 527.1 |
| PCD         | 95.2  | 122.2 | 149.2 | 181   | 206.4 | 241.3 | 279.4 | 304.8 | 342.9 | 368.3 | 400.1 | 463.6 |
| No of Holes | 6     | 8     | 6     | 6     | 8     | 8     | 8     | 10    | 8     | 14    | 14    | 16    |
| Hole Dia    | 1/4"  | 3/8"  | 1/2"  | 5/8"  | 5/8"  | 3/4"  | 3/4"  | 3/4"  | 7/8"  | 7/8"  | 7/8"  | 1"    |

## SERVICE FACTOR - S. F.

| Torque Variation   | Electric motor<br>gas or steam<br>turbine | Steam engine<br>or Water<br>turbine | Gas or oil<br>Recip.<br>Engine |
|--|---|-------------------------------------|--------------------------------|
| <b>Consultant Torque</b><br>e.g. centrifugal pumps and compressors,<br>light fans and light duty agitators         | 1.0                                       | 1.25                                | 3.0                            |
| <b>Slight Fluctuations</b><br>e.g. screw compressors & pumps, liquid<br>ring compressors, medium duty mixer & fans | 1.5                                       | 2.0                                 | 3.0                            |
| <b>Substantial Fluctuations</b><br>e.g. reciprocating pumps, heavy duty<br>mixer & fans                            | 2.0                                       | 2.5                                 | 4.0                            |

## SELECTION :

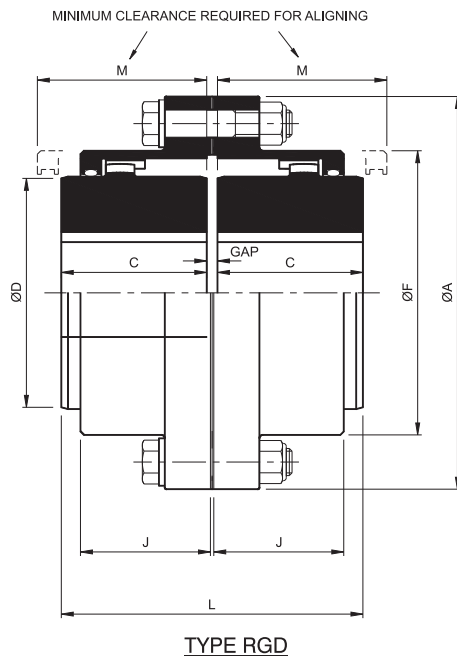
1. Select appropriate service factor S.F.
2. Calculate coupling Torque T (kNm)

$$T = \frac{9.55 \times P \times S.F.}{N}$$

Where P = Drive rated power (kW)

N = Speed (rev./min)

3. Select coupling with the same or higher Torque.
4. Check hub bore capacity.
5. Check allowable speed.



### Double Engagement Couplings : TYPE - RGD

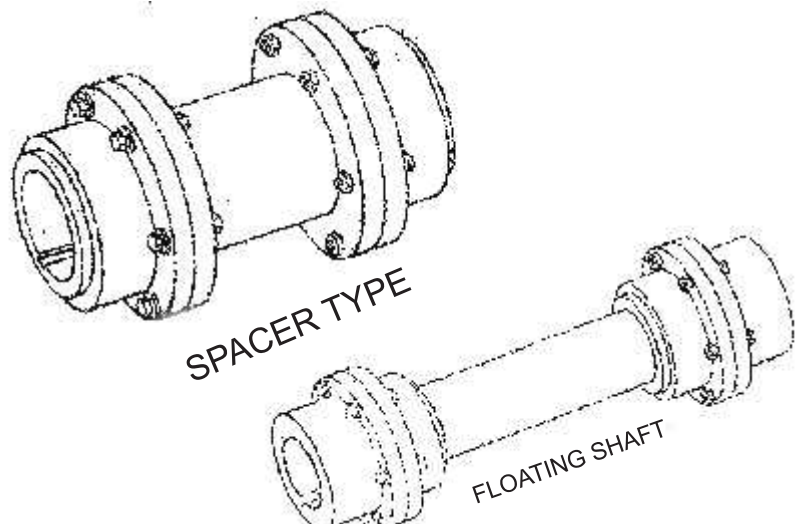
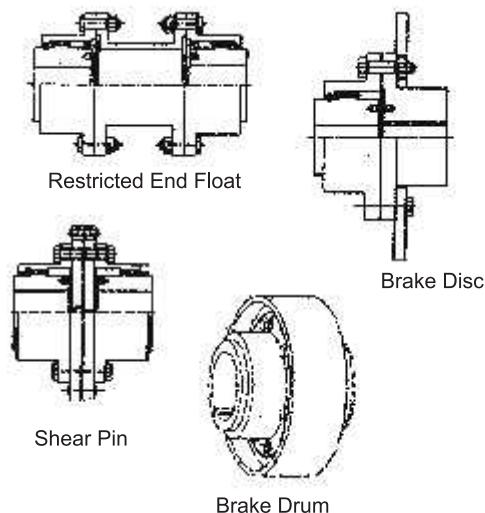
Standard Double engagement couplings accommodate both angular and parallel misalignment or combination of both, as well as end float without imposing appreciable axial loads on adjacent bearings.

The exposed bolt design allows use of the either open end or socket wrenches, which makes it the preferred design for most industrial applications.

Ideal for all standard applications including fans, overhead cranes, conveyors, steel and paper mill equipments.

Special requirements like limited end float, electrical insulation, Mill motor, Slide, Spacer, Brake drum, Shear pin, Shrouded bolt designs are possible. Many designs can be created for "Unique" applications as well, contact **RATHI**.

| Size | Coupling Rating |                   | Maximum Speed rpm | Bore Dia mm |           | Dimensions mm |     |     |     |     |     |     |     | Solid Hub |  |
|------|-----------------|-------------------|-------------------|-------------|-----------|---------------|-----|-----|-----|-----|-----|-----|-----|-----------|--|
|      | kW at 100 rpm   | Rated Torque kNm. |                   | Min. Bore   | Max. Bore | ØA            | L   | C   | ØD  | ØF  | J   | M   | Gap | Mass kg   | MR <sup>2</sup> Intertia kg m <sup>2</sup> |
| 10   | 12.5            | 1.2               | 8000              | 14          | 52        | 116           | 89  | 43  | 69  | 84  | 39  | 51  | 3   | 4.4       | 0.0052                                     |
| 15   | 26.1            | 2.5               | 6500              | 22          | 65        | 152           | 103 | 50  | 86  | 105 | 48  | 61  | 3   | 9         | 0.0192                                     |
| 20   | 52.1            | 5                 | 5600              | 27          | 80        | 178           | 127 | 62  | 105 | 127 | 60  | 76  | 3   | 15        | 0.041                                      |
| 25   | 90.7            | 8.7               | 5000              | 32          | 98        | 213           | 159 | 77  | 131 | 155 | 72  | 92  | 5   | 27        | 0.105                                      |
| 30   | 134.4           | 12.9              | 4400              | 42          | 115       | 240           | 187 | 91  | 152 | 181 | 84  | 106 | 5   | 40        | 0.195                                      |
| 35   | 202.2           | 19.4              | 3900              | 47          | 135       | 279           | 220 | 107 | 178 | 211 | 98  | 130 | 6   | 65        | 0.454                                      |
| 40   | 317.9           | 30.5              | 3600              | 47          | 160       | 318           | 248 | 121 | 210 | 250 | 111 | 145 | 6   | 96        | 0.86                                       |
| 45   | 435.6           | 41.8              | 3200              | 52          | 180       | 346           | 278 | 135 | 235 | 274 | 123 | 165 | 8   | 131       | 1.39                                       |
| 50   | 594             | 57                | 2900              | 72          | 195       | 389           | 314 | 153 | 254 | 306 | 141 | 183 | 8   | 186       | 2.53                                       |
| 55   | 844.1           | 81                | 2650              | 72          | 215       | 425           | 344 | 168 | 279 | 334 | 158 | 203 | 8   | 247       | 3.83                                       |
| 60   | 990             | 95                | 2450              | 77          | 235       | 457           | 384 | 188 | 305 | 366 | 169 | 228 | 8   | 299       | 5.21                                       |
| 70   | 1531            | 147               | 2150              | 92          | 280       | 527           | 451 | 221 | 356 | 425 | 196 | 266 | 9   | 473       | 11   |

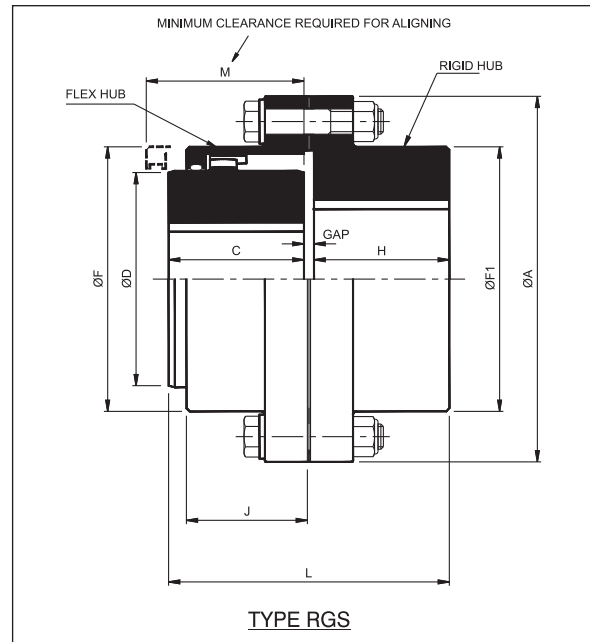


### Single Engagement Couplings : TYPE - RGS

Standard Single engagement couplings accommodate angular misalignment and end float without imposing appreciable axial loads on adjacent bearings.

Exposed bolt design allows the use of either open end or socket wrenches which makes it the preferred design for most industrial applications.

Used primarily with floating shaft assemblies to cover longer distance between shaft ends. Consult **RATHI** for vertical applications.



| Size | Coupling Rating |                   | Max. Speed rpm | Min Bore Dia mm |           | Max Bore Dia mm |           | Dimensions mm |     |     |     |     |     |     |     |     |     | Solid Hub |  |
|------|-----------------|-------------------|----------------|-----------------|-----------|-----------------|-----------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|--|
|      | kW at 100 rpm   | Rated Torque kNm. |                | Flex Hub        | Rigid Hub | Flex Hub        | Rigid Hub | ØA            | L   | C   | ØD  | ØF  | ØF1 | J   | H   | M   | Gap | Mass kg   | WR <sup>2</sup> Intertia kg m <sup>2</sup> |
| 10   | 12.5            | 1.2               | 8000           | 14              | 18        | 52              | 60        | 116           | 87  | 43  | 69  | 84  | 84  | 39  | 40  | 51  | 4   | 4.5       | 0.0055                                     |
| 15   | 26.1            | 2.5               | 6500           | 22              | 26        | 65              | 80        | 152           | 101 | 50  | 86  | 105 | 107 | 48  | 47  | 61  | 4   | 9.5       | 0.0204                                     |
| 20   | 52.1            | 5                 | 5600           | 27              | 30        | 80              | 90        | 178           | 125 | 62  | 105 | 127 | 130 | 60  | 59  | 76  | 4   | 15.5      | 0.0436                                     |
| 25   | 90.7            | 8.7               | 5000           | 32              | 37        | 98              | 110       | 213           | 156 | 77  | 131 | 155 | 157 | 72  | 74  | 92  | 5   | 27.5      | 0.111                                      |
| 30   | 134.4           | 12.9              | 4400           | 42              | 44        | 115             | 130       | 240           | 184 | 91  | 152 | 181 | 182 | 84  | 88  | 106 | 5   | 41.5      | 0.21                                       |
| 35   | 202.2           | 19.4              | 3900           | 47              | 52        | 135             | 150       | 279           | 215 | 107 | 178 | 211 | 212 | 98  | 102 | 130 | 6   | 67        | 0.477                                      |
| 40   | 317.9           | 30.5              | 3600           | 47              | 52        | 160             | 180       | 318           | 245 | 121 | 210 | 246 | 250 | 111 | 116 | 145 | 8   | 100       | 0.92                                       |
| 45   | 435.6           | 41.8              | 3200           | 52              | 57        | 180             | 200       | 346           | 274 | 135 | 235 | 274 | 276 | 123 | 131 | 165 | 8   | 135       | 1.468                                      |
| 50   | 594             | 57                | 2900           | 72              | 77        | 195             | 220       | 389           | 310 | 153 | 254 | 306 | 309 | 141 | 148 | 183 | 9   | 195       | 2.73                                       |
| 55   | 844.1           | 81                | 2650           | 72              | 77        | 215             | 240       | 425           | 350 | 168 | 279 | 334 | 334 | 158 | 173 | 203 | 9   | 261       | 4.2  |
| 60   | 990             | 95                | 2450           | 77              | 82        | 235             | 260       | 457           | 385 | 188 | 305 | 366 | 366 | 169 | 187 | 228 | 9.5 | 316       | 5.7  |
| 70   | 1531            | 147               | 2150           | 92              | 102       | 280             | 300       | 527           | 452 | 221 | 356 | 425 | 425 | 196 | 220 | 266 | 11  | 500       | 12.05                                      |

- The outer dimensions of flanges are rounded up to nearest figure in above tables.
- Contact RATHI for couplings operating at higher torques upto 8100 kNm and higher speeds than specified.
- To attend the max. Speed specified above Dynamic balancing is required please Consultant RATHI.
- Max. bores specified above are for uniformly loaded drives only.
- Max. bore for coupling with or equivalent to DIN 6885 keys.
- Min. bore is nothing but a rough stock bore, to which the couplings are manufactured.
- Higher sizes & Spacer type couplings are available (Max. Bore 535 mm & Max. Rating 13400 kW @ 100 RPM), Contact to RATHI.

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