



# WHO WE ARE.

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Motion delivers a world-class customer-first approach to everything we do. This has firmly established our business as the leader in the market, providing excellence and expertise in industrial products, solutions and services.

For more than 100 years we have been a feature in the Australian industrial landscape giving customers unmatched products and service through an integrated network of branches, workshops and service centres.

We have an ongoing commitment to invest in our people, facilities, IT and systems to ensure we can continue to offer a broad ranging and premium level of engineering design, servicing and turnkey projects to our customers across Australia.

We are committed and proud to keep our customers in motion, every day of the year.

“**WE KEEP  
THE WORLD  
MOVING**”

# CONTENTS

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## SECTION 01

|                                             |       |
|---------------------------------------------|-------|
| Introduction                                | 5     |
| Description                                 | 6     |
| Coupling Selection                          | 7     |
| Formula Selection                           | 8     |
| Service Factors (by Application & Industry) | 9-11  |
| Service Factors for Combustion Engines      | 12    |
| Gear Coupling Purpose & Types               | 13    |
| G20 Type (1010-1070)                        | 14    |
| G20 Type (1080-1220)                        | 15    |
| G32 Type                                    | 16    |
| G52 Type                                    | 17    |
| G52 Type (Rigid, Floating, Floating, Rigid) | 18    |
| G52 Type (Floating, Rigid, Rigid, Floating) | 19    |
| Installation                                | 20-21 |
| Annual Maintenance                          | 21    |
| Alignment Data                              | 22    |
| Puller Holes                                | 22    |

## SECTION 02

|                                                 |       |
|-------------------------------------------------|-------|
| Introduction                                    | 24    |
| Description                                     | 25    |
| Formula Selection                               | 26    |
| Service Factors (by Application & Industry)     | 27-29 |
| Service Factors for Combustion Engines          | 30    |
| T10 Type (Close Coupled - Split Cover)          | 31    |
| T10 Type (Close Coupled - Split cover - Large)  | 32    |
| T20 Type (Close coupled - Vertical Steel Cover) | 33    |
| T31 Type (Full Spacer)                          | 34    |
| T35 Type (Half Spacer)                          | 35    |
| T50 Type (Floating Shaft – Steel Cover)         | 36    |
| T63 Type (Disc Brake)                           | 37    |
| KBW Type (Drum Brake)                           | 38    |
| T10 / G82 Type (Floating Shaft)                 | 39    |
| Installation                                    | 40    |
| Vibration & Shock                               | 41    |
| Lubrication                                     | 41    |
| Alignment Data                                  | 42    |
| Misalignment Capacity                           | 43    |
| Puller Holes                                    | 43    |

All the items included are aftermarket products for the replacement of existing parts.  
Motion Australia is not an original equipment manufacturer of these products.

# GEAR COUPLINGS

## ENGINEERED FOR HIGH TORQUE PERFORMANCE

Fenner Gear Couplings are precision engineered to deliver maximum torque capacity, reliability and long service life in the most demanding industrial applications.



High Torque  
Capacity



Misalignment



Long Service Life



Precision  
Engineered

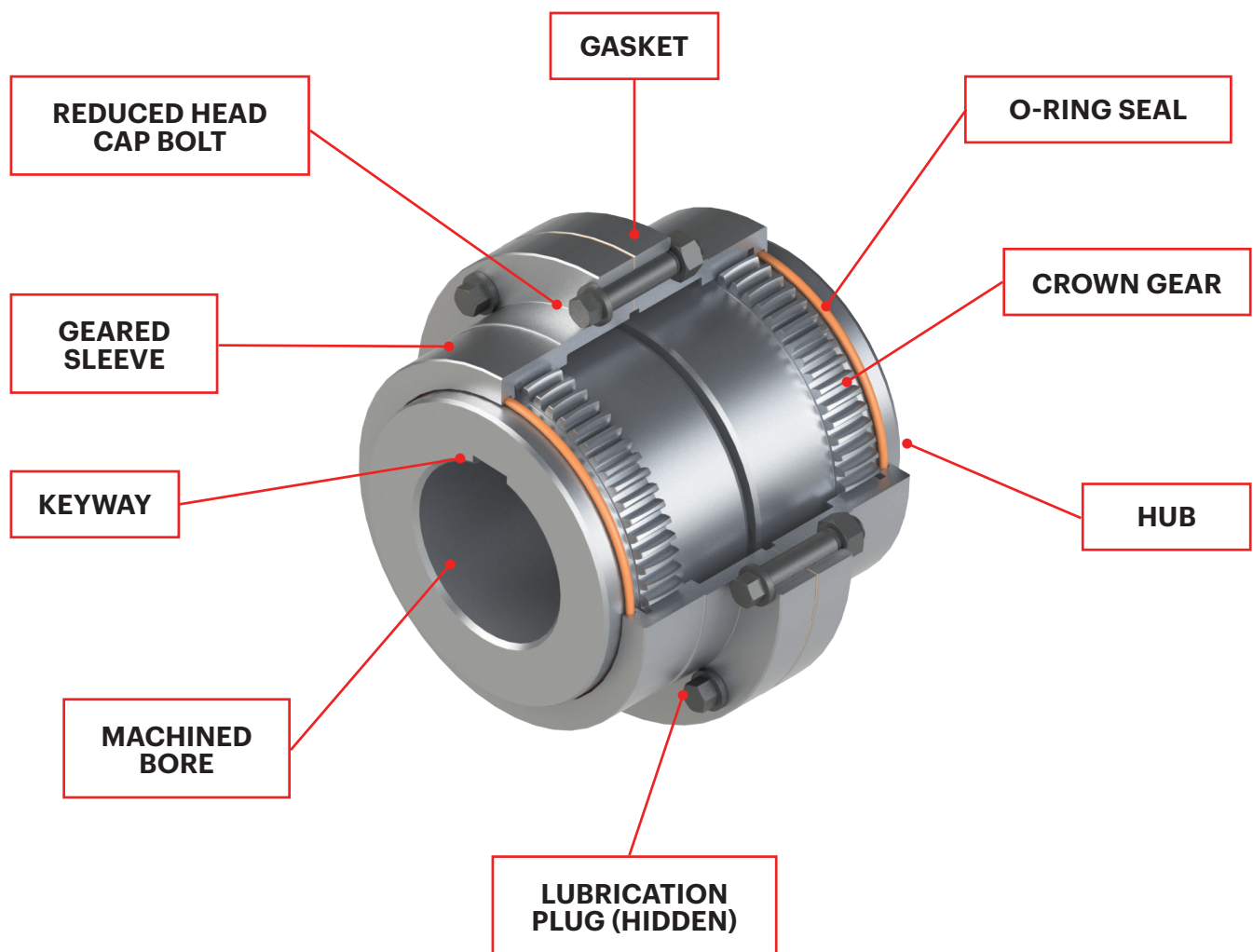


## INTRODUCTION

Fenner Curved Tooth Flexible Gear Couplings are the result of many years of experience in the field of Mechanical Power Transmission.

These Gear Couplings are distinguished by their mechanical flexibility and compensation of Angular, Parallel and Axial misalignments

of the connected shafts. They are made for extensive use in Metal Rolling Mills, Paper Machinery, Cranes, Dredgers, Rubber and Plastic Industries, Cement Plants, Conveyors, Elevators, Compressors, Fans and Blowers, Screens, and other general industries.



## DESCRIPTION

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Flexible Gear Couplings basically consist of two hubs, with crowned external teeth and two outer sleeves with internal spur teeth. Gear Hubs and the outer sleeves are manufactured from

carbon steel and are hardened to the required degree. They are machined to fine tolerances for proper meshing of the gears as well as for interchangeability.

**HUBS:** The teeth of Gear Hubs are crowned and are generated by an involute system. The amount of crowning and backlash values are so chosen as to ensure the best results in torque transmission, greater flexibility, and smooth operations.

**SLEEVES:** The internal teeth of the sleeves are generated to ensure correct profile. The coupling sleeves are joined together with high tensile steel bolts (class 8.8 IS: 1367) fitted using a gasket in between them.

**'O' RINGS:** The setting of special 'O' Rings at the ends of coupling hubs prevents leakage of lubricants and entry of dust. The 'O' rings can also withstand high degree of temperature up to 120 C.

**POWER RATINGS:** The normal power ratings are given in the Table. For selection of the correct size of couplings, proper service factor depending on the type of machines and the peak load should be considered.

**SERVICE FACTOR:** Generally, for medium duty use a service factor of 1.5. For heavy duty use a factor of 2 and for extra heavy duty a factor of 3 should be used. For special applications please contact Fenner with full details.

**LUBRICATION:** The coupling must be filled with grease or oil. It is recommended to use grease where the maximum temperature is within 80 C and for temperature above 80 C, oil should be used. When using grease, it is suggested to fill the coupling completely with Lithium based grease with EP additives (NLGI-No.1 consistency). When the coupling is to be filled with oil, fill half the coupling with EP Gear Oil.

**RECOMMENDATION FOR GREASE & OIL:**

Grease: Shell Gadus S3 High Speed Coupling Grease or Shell Gadus S2 V220 1  
Oil: Shell Omala S2 GX 680

## COUPLING SECTION - HOW TO SELECT

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The Standard Selection may be used for engine driven, motor, or turbine applications. The following information is required:

- Application or equipment type (motor to pump, reducer to conveyor, etc.)
- Shaft diameters (mm)
- Gaps between shafts (mm)
- Speed (rpm)
- Kilowatts (kW) or torque (Nm)

1. **Rating:** Determine system torque. Torque is calculated as follows:  
 $\text{Torque (Nm)} = \text{kW} \times 9550 / \text{rpm}$
2. **Service Factor:** Determine appropriate service factor from page 8-10.
3. **Minimum Coupling Rating:** Determine the required minimum coupling rating as follows: Minimum Coupling Rating = Service Factor x Torque (Nm)
4. **Select the appropriate coupling type.**
5. **Trace the Torque column** to find the value that is equal or greater than value from Step 3.
6. **Confirm:** Check speed (rpm), bore & gap dimensions and the envelope.



## FORMULA SELECTION

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The Standard Selection should be used for most coupling selections.

The Formula Selection procedure below should be used for:

- High Peak Loads.
- Brake Applications (Brake disc or brake wheel is an integral part of coupling)

Using the Formula Selection and providing system peak torque and frequency, duty cycle, and brake torque rating will allow for a more refined selection.

**1. High Peak Loads:** Use formula A or B for applications which involve motors with higher-than-normal torque characteristics. Applications should also be those with intermittent operations, including shock loading, inertia effects due to starting and stopping, system-induced repetitive high peak torques. System Peak Torque is the maximum torque that can exist in the system. Select a coupling with a Torque Rating equal or greater than the Selection Torque calculated below:

**A. Non-Reversing High Peak Torque:**

Selection torque (Nm) = System Peak Torque

or

System Torque (Nm) = System Peak kW x 9550 / rpm

**B. Reversing High Peak Torque:**

Selection Torque (Nm) = 2 x System Peak Torque

or

System Torque (Nm) = (2 x System Peak kW) x 9550 / rpm

**2. Brake Applications:** If the torque rating of the brake exceeds the motor torque, use brake rating as blow:

*Selection Torque (Nm) = Brake Torque Rating x Service Factor*

# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY APPLICATION)

|                                                         |            |
|---------------------------------------------------------|------------|
| <b>AERATOR</b>                                          | <b>2</b>   |
| <b>AGITATORS</b>                                        |            |
| Vertical and Horizontal Screw, Propeller, Paddle        | 1          |
| <b>BARGE HAUL PULLER</b>                                | <b>1.5</b> |
| <b>BLOWERS</b>                                          |            |
| Centrifugal                                             | 1          |
| Lobe or Vane                                            | 1.25       |
| <b>CAR DUMPERS</b>                                      | <b>2.5</b> |
| <b>CAR PULLERS</b>                                      | <b>1.5</b> |
| <b>CLARIFIER or CLASSIFIER</b>                          | <b>1</b>   |
| <b>COMPRESSORS</b>                                      |            |
| Centrifugal                                             | 1          |
| Rotary, Lobe or Vane                                    | 1.25       |
| Rotary, Screw                                           | 1          |
| Flywheel Compressor                                     |            |
| 1 Cylinder, single acting                               | 3          |
| 1 Cylinder, double acting                               | 3          |
| 2 Cylinders, single acting                              | 3          |
| 2 Cylinders, double acting                              | 3          |
| 3 Cylinders, single acting                              | 3          |
| 3 Cylinders, double acting                              | 2          |
| 4 or more cylinders, single acting                      | 1.75       |
| 4 or more cylinders, double acting                      | 1.75       |
| <b>CONVEYORS</b>                                        |            |
| Apron, Assembly, Belt, Chain, Flight, Screw             | 1          |
| Bucket                                                  | 1.25       |
| Live Roll, Shaker and Reciprocating                     | 3          |
| <b>CRANES and HOIST</b>                                 |            |
| Main Hoist                                              | 1.75       |
| Skip Hoist                                              | 1.75       |
| Slope                                                   | 1.5        |
| Bridge, Travel or Trolley                               | 1.75       |
| <b>DYNAMOMETER</b>                                      | <b>1</b>   |
| <b>ELEVATORS</b>                                        |            |
| Bucket, Centrifugal Discharge                           | 1.25       |
| Gravity Discharge                                       | 1.25       |
| <b>EXCITER, GENERATOR</b>                               | <b>1</b>   |
| <b>EXTRUDER, PLASTIC</b>                                | <b>1.5</b> |
| <b>FANS</b>                                             |            |
| Centrifugal                                             | 1          |
| Cooling Tower                                           | 2          |
| Forced Draft-Across the Line start                      | 1.5        |
| Forced Draft Motor driven thru fluid or electric clutch | 1          |
| Gas Recirculating                                       | 1.5        |
| Induced Draft with damper control or blade cleaner      | 1.25       |

|                                            |             |
|--------------------------------------------|-------------|
| Welder Load                                | 2           |
| <b>HAMMERMILL</b>                          | <b>1.75</b> |
| <b>LAUNDRY WASHER or TUMBLER</b>           | <b>2</b>    |
| <b>LINE SHAFTS</b>                         |             |
| Any Processing Machinery                   | 1.5         |
| <b>MACHINE TOOLS</b>                       |             |
| Auxiliary and Traverse Drive               | 1           |
| Bending Roll, Notching Press, Punch Press, | 1.75        |
| Planer, Plate Reversing                    | 1.5         |
| Main Drive                                 | 1.5         |
| <b>METAL FORMING MACHINES</b>              |             |
| Continuous Caster                          | 1.75        |
| Draw Bench Carriage and Main Drive         | 2           |
| Extruder                                   | 2           |
| Farming Machine and Forming Mills          | 2           |
| Slitters                                   | 1           |
| Wire Drawing or Flattening                 | 1.75        |
| Wire Winder                                | 1.5         |
| Coilers and Uncoilers                      | 1.5         |
| <b>MIXERS</b>                              |             |
| Concrete                                   | 1.75        |
| Muller                                     | 1.5         |
| <b>PRESS, PRINTING</b>                     | <b>1.5</b>  |
| <b>PUG MILL</b>                            | <b>1.75</b> |
| <b>PULVERIZERS</b>                         |             |
| Hammermill and Hog                         | 1.75        |
| Roller                                     | 1.5         |
| <b>PUMPS</b>                               |             |
| Boiler Feed                                | 1.5         |
| Centrifugal-Constant Speed                 | 1           |
| Frequent Speed Changes under Load          | 1.25        |
| Descaling with accumulators                | 1.25        |
| Gear, Rotary, or Vane                      | 1.25        |
| Reciprocating, Plunger Piston              |             |
| 1 Cylinder, single or double acting        | 3           |
| 2 Cylinders, single acting                 | 2           |
| 2 Cylinders, double acting                 | 1.75        |
| 3 or more cylinders                        | 1.5         |
| Screw Pump, Progressing Cavity             | 1.25        |
| Vacuum Pump                                | 1.25        |
| <b>SCREENS</b>                             |             |
| Air Washing                                | 1           |
| Grizzly                                    | 2           |
| Rotary Coal or Sand                        | 1.5         |
| Vibrating                                  | 2.5         |

|                                |     |
|--------------------------------|-----|
| Induced Draft without controls | 2   |
| <b>FEEDERS</b>                 |     |
| Apron, Belt, Disc, Screw       | 1   |
| Reciprocating                  | 2.5 |
| <b>GENERATORS</b>              |     |
| Even Load                      | 1   |
| Hoist or Railway Service       | 1.5 |
| Welder Load                    | 2   |
| Hoist or Railway Service       | 1.5 |

|                           |      |
|---------------------------|------|
| Water                     | 1    |
| STEERING GEAR             | 1    |
| STOKER                    | 1    |
| TIRE SHREDDER             | 1.5  |
| TUMBLING BARREL           | 1.75 |
| <b>WINCH, MANEUVERING</b> |      |
| Dredge, Marine            | 1.5  |
| WINDLASS                  | 1.5  |
| WOODWORKING MACHINERY     | 1    |

## Fenner Gear Coupling

# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY INDUSTRY)

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| <b>AGGREGATE PROCESSING, CEMENT, MINING KILNS, TUBE &amp; ROD MILLS</b>  |      |
| Direct or on L.S. shaft of Reducer, with final drive Machined Spur Gears | 2    |
| Single Helical or Herringbone Gears                                      | 1.75 |
| Crushers, Ore or Stone                                                   | 2.5  |
| Dryer, Rotary                                                            | 1.75 |
| Grizzly                                                                  | 2    |
| Hammermill or Hog                                                        | 1.75 |
| Tumbling Mill or Barrel                                                  | 1.75 |
| <b>BREWING and DISTILLING</b>                                            |      |
| Bottle and Can Filling Machines                                          | 1    |
| Brew Kettle                                                              | 1    |
| Cookers, Continuous Duty                                                 | 1.25 |
| Lauter Tub                                                               | 1.5  |
| Mash Tub                                                                 | 1.25 |
| Scale Hopper, Frequent Peaks                                             | 1.75 |
| <b>CLAY WORKING INDUSTRY</b>                                             |      |
| Brick Press, Briquette Machine, Clay Working Machine, Pug Mill           | 1.75 |
| <b>DREDGES</b>                                                           |      |
| Cable Reel                                                               | 1.75 |
| Conveyors                                                                | 1.25 |
| Cutter head, Jig Drive                                                   | 2    |
| Manoeuvring Winch                                                        | 1.5  |
| Pumps (Uniform load)                                                     | 1.5  |
| Screen Drive, Stacker                                                    | 1.75 |
| Utility Winch                                                            | 1.5  |
| <b>FOOD INDUSTRY</b>                                                     |      |
| Beet Slicer                                                              | 1.75 |
| Botting, Can Filling Machine                                             | 1    |
| Cereal Cooker                                                            | 1.25 |
| Dough Mixer, Meat Grinder                                                | 1    |
| <b>LUMBER</b>                                                            |      |
| Band Resaw                                                               | 1.5  |
| Circular Resaw, Cut-off                                                  | 1    |
| Edger, Head Rig, Hog                                                     | 2    |
| Log Haul                                                                 | 2    |
| Planer                                                                   | 1.75 |

|                                                   |      |
|---------------------------------------------------|------|
| Slitters, Steel Mill only                         | 1.75 |
| Lift                                              | 1    |
| Travel                                            | 2    |
| Straighteners                                     | 2    |
| Unscramblers (Billet Bundle Busters)              | 2    |
| Wire Drawing Machinery                            | 1.75 |
| <b>OIL INDUSTRY</b>                               |      |
| Chiller                                           | 1.25 |
| Oilwell Pumping (not over 150% peak torque)       | 2    |
| Paraffin Filter Press                             | 1.5  |
| Rotary Kiln                                       | 2    |
| <b>PAPER MILLS</b>                                |      |
| Barker Auxiliary, Hydraulic                       | 2    |
| Barker, Mechanical                                | 2    |
| <b>Barking Drum</b>                               |      |
| L.S. shaft of reducer with final drive-Helical or |      |
| Herringbone Gear                                  | 2    |
| Machined Spur Gear                                | 2.5  |
| Cast Tooth Spur Gear                              | 3    |
| Beater & Pulper                                   | 1.75 |
| Bleachers, Coaters                                | 1    |
| calendar & Super calendar                         | 1.75 |
| Chipper                                           | 2.5  |
| Converting Machine                                | 1.25 |
| Couch                                             | 1.75 |
| Cutter, Felt Whipper                              | 2    |
| Dryer                                             | 1.75 |
| Cylinder                                          | 1.75 |
| Felt Stretcher                                    | 1.25 |
| Fourdrinier                                       | 1.75 |
| Jordan                                            | 2    |
| Log Haul                                          | 2    |
| Line Shaft                                        | 1.5  |
| Press                                             | 1.75 |
| Pulp Grinder                                      | 1.75 |
| Reel, Rewinder, Winder                            | 1.5  |
| Stock Chest, Washer, Thickener                    | 1.5  |

# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY INDUSTRY)

|                                      |      |
|--------------------------------------|------|
| Rolls, non-reversing                 | 1    |
| Rolls, Reversing                     | 2    |
| Sawdust Conveyor                     | 1.25 |
| Slab Conveyor                        | 1.75 |
| Sorting Table                        | 1.5  |
| Trimmer                              | 1.75 |
| <b>METAL ROLLING MILLS</b>           |      |
| Coilers (Up or Down) Cold Mills only | 1.5  |
| Coilers (Up or Down) Hot Mills only  | 2    |
| Coke Plants                          |      |
| Pusher Ram Drive                     | 2.5  |
| Door Opener                          | 2    |
| Pusher or Larry Car Traction Drive   | 3    |
| Continuous Caster                    | 1.75 |
| Colling Beds                         | 1.5  |
| Drawbench                            | 2    |
| Feed Rolls-Blooming Mills            | 3    |
| Furnace Pushers                      | 2    |
| Hot and Cold Saws                    | 2    |
| Ingot Cars                           | 2    |
| Manipulators                         | 3    |
| Mill Tables                          |      |
| Roughing Breakdown Mills             | 3    |
| Hot Bed or Transfer, non-reversing   | 1    |
| Runout, reversing                    | 3    |
| Runout, non-reversing, non-plugging  | 2    |
| Reel Drives                          | 1.75 |
| Screw down                           | 2    |
| Seamless Tube Mills                  |      |
| Piercer                              | 3    |
| Thrust Block                         | 2    |
| Tube Conveyor Rolls                  | 2    |
| Reeler                               | 2    |
| Kick Out                             | 2    |
| Sideguards                           | 3    |

|                                                                                                 |      |
|-------------------------------------------------------------------------------------------------|------|
| Stock Pumps, Centrifugal                                                                        |      |
| Constant Speed                                                                                  | 1    |
| Frequent Speed Changes Under load                                                               | 1.25 |
| Suction Roll                                                                                    | 1.75 |
| Vacuum Pumps                                                                                    | 1.25 |
| <b>RUBBER INDUSTRY</b>                                                                          |      |
| calendar                                                                                        | 2    |
| Cracker, Plasticator                                                                            | 2.5  |
| Extruder                                                                                        | 1.75 |
| Intensive or Banbury Mixer                                                                      | 2.5  |
| Mixing Mill, Refiner or Sheeter                                                                 |      |
| One or two in line                                                                              | 2.5  |
| Three or four in line                                                                           | 2    |
| Five or more in line                                                                            | 1.75 |
| Tire Building Machine                                                                           | 2.5  |
| Tire & Tube Press Opener (Peak Torque)                                                          | 1    |
| Tuber, Strainer, Pelletizer                                                                     | 1.75 |
| Warming Mill - One or two Mills in line                                                         | 2    |
| Warming Mill - Three or more Mills in line                                                      | 1.75 |
| Washer                                                                                          | 2.5  |
| <b>SEWAGE DISPOSAL EQUIPMENT</b>                                                                |      |
| Bar Screen, Chemical feeders, Collectors,                                                       |      |
| Dewatering Screen, Grit Collector                                                               |      |
| <b>SUGAR INDUSTRY</b>                                                                           |      |
| Cane Carrier & Leveller                                                                         | 1.75 |
| Cane Knife & Crusher                                                                            | 2    |
| Mill Stands, Turbine Driver with all Helical or Herringbone, or Spur Gears with any Prime Mover | 1.75 |
| <b>TEXTILE INDUSTRY</b>                                                                         |      |
| Batcher                                                                                         | 1.25 |
| calendar, Card Machine                                                                          | 1.5  |
| Cloth Finishing Machine                                                                         | 1.5  |
| Dry Can, Loom                                                                                   | 1.5  |
| Dyeing Machinery                                                                                | 1.25 |
| Mangle, Napper, Soaper                                                                          | 1.25 |
| Spinner, Tenter Frame, Winder                                                                   | 1.5  |

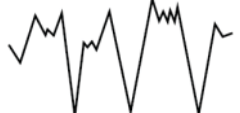
# SERVICE FACTORS FOR COMBUSTION ENGINES

Service Factors for engine drives are required for applications where good flywheel regulation prevents torque fluctuations greater than  $\pm 20\%$ . For drives where torque fluctuations are greater or where the operation is near a serious critical or torsional vibration, a mass elastic study is necessary.

| Number of Cylinders   | 4 of 5 |      |   |      |     | 6 or more |      |   |      |     |
|-----------------------|--------|------|---|------|-----|-----------|------|---|------|-----|
| Service of Factor     | 1.5    | 1.75 | 2 | 2.25 | 2.5 | 1.5       | 1.75 | 2 | 2.25 | 2.5 |
| Engine Service Factor | 2.5    | 2.75 | 3 | 3.35 | 3.5 | 2.5       | 2.75 | 3 | 3.25 | 3.5 |

To use Engine Drive Service Factors, first determine application Service Factor from page 8-10. When Service Factor is greater than 2.0, or where 1, 2 or 3 cylinder engines are involved, refer complete application details to Motion for engineering review.

Service Factors are a guide, based on experience, of the ratio between coupling catalogue rating and system characteristics. The system characteristics are best measured with a torque meter.

| Torque Demands Driven Machine                                                       | Typical applications for Driven Equipment                                                                                     | Typical Service Factor |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|
|  | Constant torque such as Centrifugal Pumps, Blowers and Compressors                                                            | 1                      |
|  | Continuous duty with some torque variations including Plastic Extruders, Forced Draft Fans                                    | 1.5                    |
|  | Light shock loads from Metal Extruders, Cooling Towers, Cane Knife, Log Haul                                                  | 2                      |
|  | Moderate shock loading as expected from a Car Dumper, Stone Crusher, Vibrating Screen                                         | 2.5                    |
|  | Heavy shock load with some negative torques from Roughing Mills, Reciprocating Pumps, Compressors, Reversing, Runout Tables   | 3                      |
|  | Applications like Reciprocating Compressors with frequent torque reversals, which do not necessarily cause reverse rotations. | Refer to Motion        |

## FENNER GEAR COUPLING PURPOSE

FENNER Gear Couplings serve as a mechanical device which connect the shafts of two distinct machines and can accommodate large axial moments as well as small amounts of shaft misalignment. Commercial Gear Couplings transmit more torque than other types of couplings of similar physical size. Because of this superior load transmitting capability, Gear Couplings have become widely used for higher speed applications, as well as for applications that require a combination of high torque capacity and a low inertia of the drive system.

Gear Couplings are torsionally rigid and couple two designs, one of which is completely flexible

and one of which is rigid. Gear Couplings consist of two shaft hubs with external teeth, which are then connected by means of a sleeve, usually two pieces, containing internal teeth. A flexible spline with the hubs and sleeves rotating together is the working action of a Gear

Coupling. The proper type of lubrication, applied frequently and adequately, is essential for the successful operation of this system. This coupling is made up of one flexible geared half and a rigid half. A flexible & rigid coupling such as this is primarily used for "floating shaft" applications. The coupling accommodates angular misalignment but does not accommodate parallel displacement of shafts.

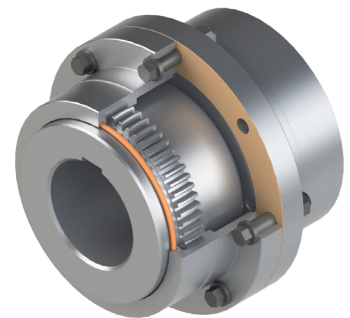
## FENNER GEAR COUPLING TYPES



**G20 - Double Engagement**



**G32 - Spacer**



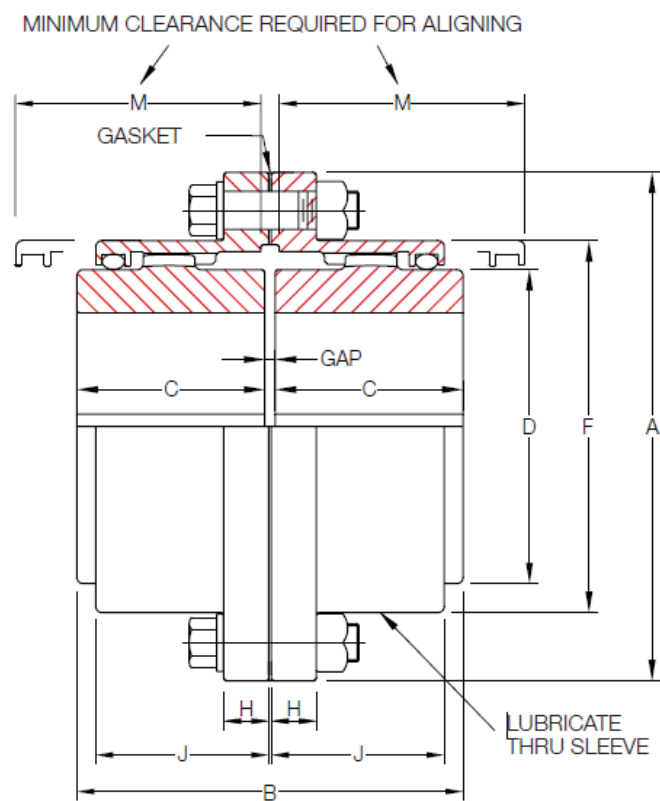
**G52 - Single Engagement**



**G52 - Floating Shaft Assembly (RFFR & FRRF)**

# G20 TYPE

## Standard Flanged Sleeve Double Engagement

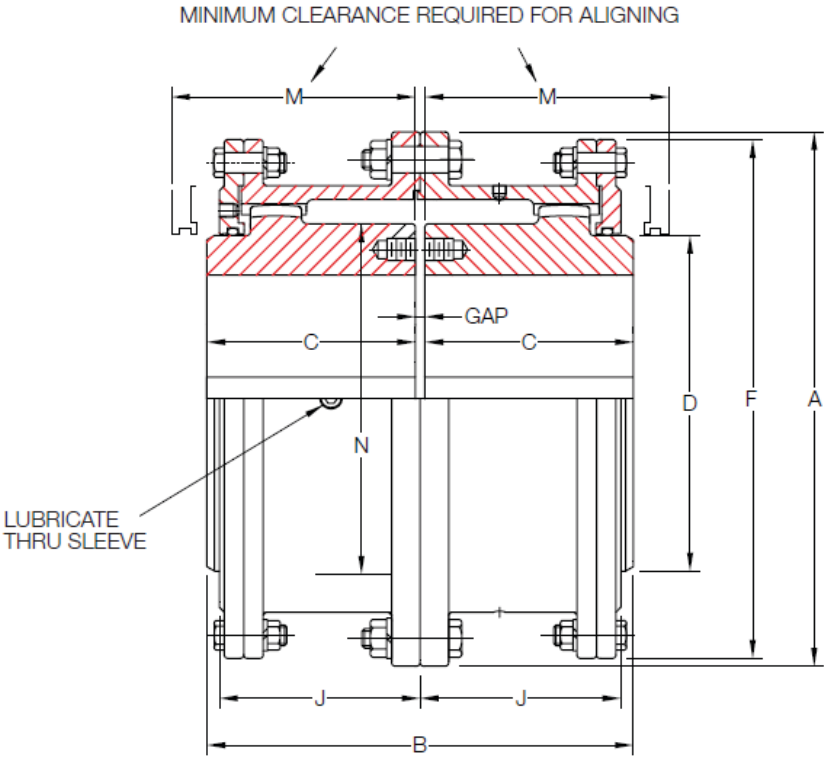


| Size  | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |       |      |       |     |     |
|-------|--------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|-------|-------|-------|-------|------|-------|-----|-----|
|       |                    |                 |               |               | G20              |                  | A                        | B     | C     | D     | F     | H    | J     | M   | GAP |
| 1010G | 1 140              | 8000            | 50            | 13            | 4,54             | 0,0408           | 115,9                    | 88,9  | 42,9  | 68,6  | 83,8  | 14,0 | 38,9  | 51  | 3   |
| 1015G | 2 350              | 6500            | 65            | 20            | 9,07             | 0,0726           | 152,4                    | 101,6 | 49,3  | 86,4  | 105,2 | 19,0 | 47,8  | 61  | 3   |
| 1020G | 4 270              | 5600            | 78            | 26            | 15,9             | 0,113            | 177,8                    | 127,0 | 62,0  | 105,2 | 126,5 | 19,0 | 59,4  | 77  | 3   |
| 1025G | 7 470              | 5000            | 98            | 32            | 29,5             | 0,2127           | 212,7                    | 158,9 | 77,0  | 130,6 | 154,9 | 21,8 | 71,6  | 92  | 5   |
| 1030G | 12 100             | 4400            | 111           | 39            | 43,1             | 0,363            | 239,7                    | 187,4 | 91,2  | 152,4 | 180,3 | 21,8 | 83,8  | 107 | 5   |
| 1035G | 18 500             | 3900            | 134           | 51            | 68,0             | 0,544            | 279,4                    | 218,9 | 106,4 | 177,8 | 211,3 | 28,4 | 97,5  | 130 | 6   |
| 1040G | 30 600             | 3600            | 160           | 64            | 97,5             | 0,907            | 317,5                    | 247,3 | 120,6 | 209,6 | 245,4 | 28,4 | 111,3 | 145 | 6   |
| 1045G | 42 000             | 3200            | 183           | 77            | 136              | 1,04             | 346,1                    | 277,7 | 134,9 | 235,0 | 274,1 | 28,4 | 122,9 | 166 | 8   |
| 1050G | 56 600             | 2900            | 200           | 89            | 191              | 1,77             | 388,9                    | 314,3 | 153,2 | 254,0 | 305,8 | 38,1 | 140,7 | 183 | 8   |
| 1055G | 74 000             | 2650            | 220           | 102           | 249              | 2,22             | 425,4                    | 344,3 | 168,1 | 279,4 | 334,3 | 38,1 | 158,0 | 204 | 8   |
| 1060G | 90 400             | 2450            | 244           | 115           | 306              | 3,18             | 457,2                    | 384,4 | 188,2 | 304,8 | 366,0 | 25,4 | 169,2 | 229 | 8   |
| 1070G | 135 000            | 2150            | 289           | 127           | 485              | 4,35             | 527,0                    | 451,5 | 220,7 | 355,6 | 424,9 | 28,4 | 195,6 | 267 | 10  |

Fenner Gear Coupling

# G20 LARGE TYPE

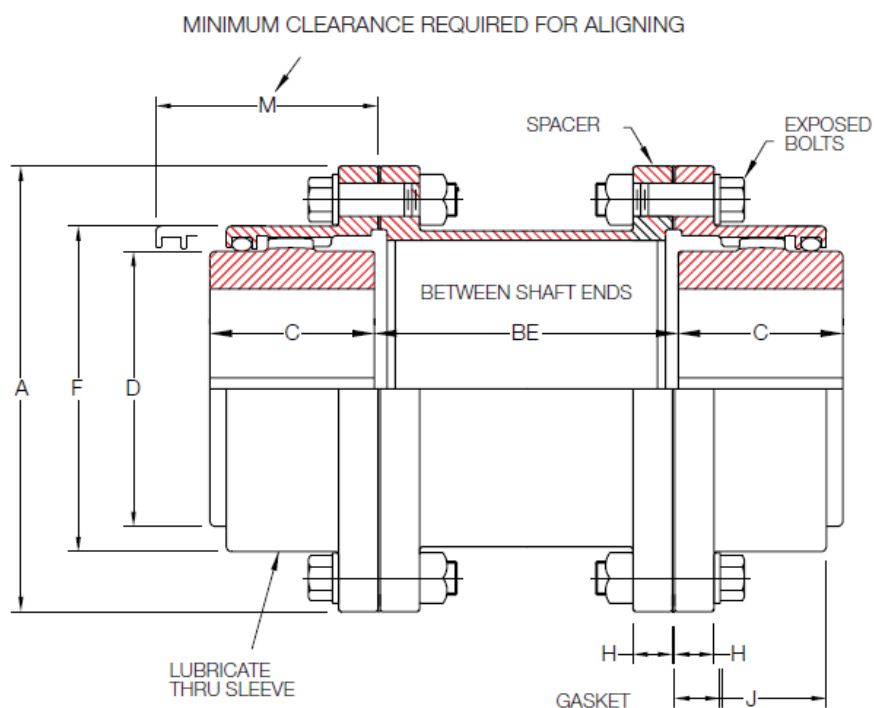
Large Flanged Sleeve Double Engagement



| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |         |       |       |         |       |       |         |     |
|------|--------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|---------|-------|-------|---------|-------|-------|---------|-----|
|      |                    |                 |               |               |                  |                  | A                        | B       | C     | D     | F       | J     | M     | N       | GAP |
| 1080 | 170,000            | 1,750           | 266           | 101.60        | 703              | 9.5              | 590.6                    | 508.5   | 249.2 | 355.6 | 571.5   | 242.8 | 300.0 | 368.3   | 10  |
| 1090 | 226,000            | 1,550           | 290           | 114.30        | 964              | 12.2             | 660.4                    | 565.4   | 276.4 | 393.7 | 641.4   | 265.2 | 327.2 | 419.1   | 13  |
| 1100 | 310,000            | 1,450           | 320           | 127.00        | 1,302            | 15               | 711.2                    | 622.3   | 304.8 | 444.5 | 698.5   | 293.6 | 355.6 | 469.9   | 13  |
| 1100 | 413,000            | 1,330           | 373           | 139.70        | 1,678            | 17.7             | 774.7                    | 679.2   | 333.2 | 495.3 | 479.3   | 322.3 | 380   | 520     | 13  |
| 1120 | 555,000            | 1,200           | 400           | 152.40        | 2,114            | 20.9             | 838.2                    | 717.8   | 352.6 | 546.1 | 825.5   | 341.4 | 403.4 | 571.5   | 13  |
| 1130 | 719,000            | 1,075           | 440           | 165.10        | 2,595            | 32.7             | 911.4                    | 761.7   | 371.3 | 584.2 | 886     | 362   | 434.8 | 609.6   | 19  |
| 1140 | 911,000            | 920             | 460           | 177.8         | 3,107            | 33.1             | 965.2                    | 806.4   | 393.2 | 635   | 939.8   | 378   | 457.2 | 660.4   | 19  |
| 1150 | 1,100,000          | 770             | 490           | 190.50        | 3,765            | 40.8             | 1,028.7                  | 857.2   | 419.1 | 685.8 | 1003.8  | 407.9 | 482.6 | 711.2   | 19  |
| 1160 | 1,310,000          | 650             | 525           | 254           | 4,708            | 43.1             | 1,111.2                  | 908     | 441.3 | 786.6 | 1,085.9 | 419.1 | 504.6 | 762     | 25  |
| 1180 | 1,660,000          | 480             | 600           | 287.75        | 6,260            | 49.9             | 1,121.9                  | 939.8   | 457.2 | 828.2 | 1,193.8 | 434.8 | 520.7 | 836.6   | 25  |
| 1200 | 2,140,000          | 370             | 660           | 317.50        | 8,582            | 68               | 1,358.9                  | 1,098.6 | 536.6 | 927.1 | 1,308.1 | 514.1 | 635   | 965.2   | 25  |
| 1220 | 2,720,000          | 290             | 725           | 349.25        | 11,685           | 107              | 1,511.3                  | 1,193.8 | 584.2 | 1,016 | 1,473.2 | 565.2 | 685.8 | 1,066.8 | 25  |

# G32 TYPE

## Standard Flanged Sleeve Spacer

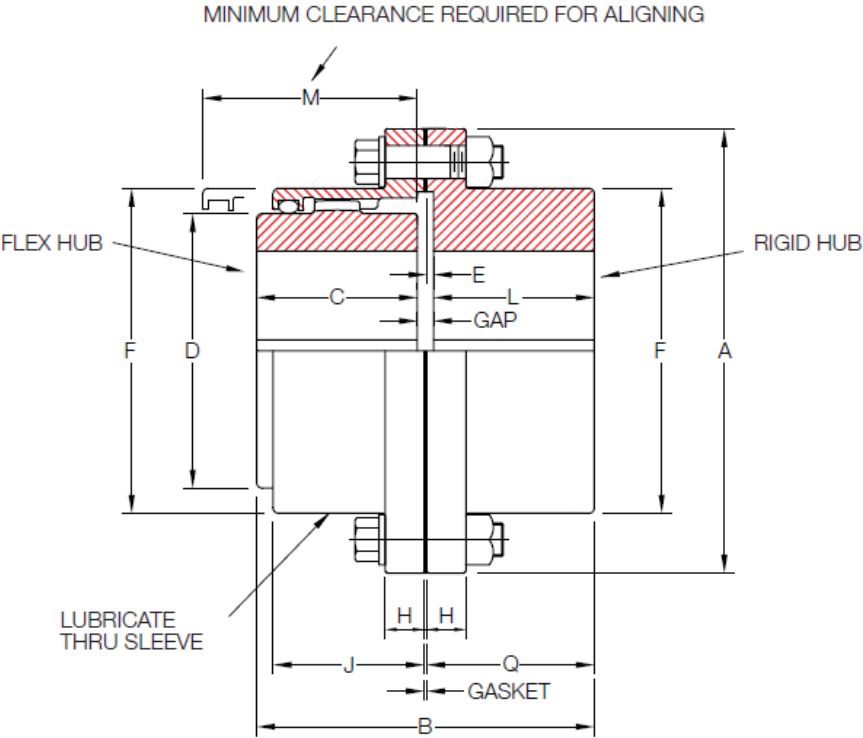


| Size  | Tor-<br>que<br>Rating<br>(Nm) | Allow<br>Speed<br>RPM | Max<br>Bore<br>(mm) | Min<br>Bore<br>(mm) | Cplg Weight (Kg)                            |                                              | Lube Weight (Kg)                 |                                       | Dimensions (Millimeters) |          |     |                 |       |       |       |      |       |     |
|-------|-------------------------------|-----------------------|---------------------|---------------------|---------------------------------------------|----------------------------------------------|----------------------------------|---------------------------------------|--------------------------|----------|-----|-----------------|-------|-------|-------|------|-------|-----|
|       |                               |                       |                     |                     |                                             |                                              |                                  |                                       | A                        | BE Min A |     | BE<br>Max       | C     | D     | F     | H    | J     | M   |
|       |                               |                       |                     |                     | Cplg<br>Wt With<br>No Bore<br>and Min<br>BE | Extra<br>Spacer<br>Wt per<br>mm of<br>Length | Min<br>Wt<br>Less<br>Spac-<br>er | Plus per<br>mm of<br>Spacer<br>Length |                          | G31      | G32 | G31<br>&<br>G32 |       |       |       |      |       |     |
| 1010G | 1 140                         | 7000                  | 50                  | 13                  | 6,80                                        | 0,0120                                       | 0,0408                           | ...                                   | 115,9                    | 82       | 82  | 311             | 42,9  | 68,6  | 83,8  | 14,0 | 38,9  | 48  |
| 1015G | 2 350                         | 5500                  | 65                  | 20                  | 13,6                                        | 0,0127                                       | 0,0726                           | ...                                   | 152,4                    | 82       | 82  | 311             | 49,3  | 86,4  | 105,2 | 19,0 | 47,8  | 56  |
| 1020G | 4 270                         | 4600                  | 78                  | 26                  | 20,4                                        | 0,0166                                       | 0,113                            | 0,000536                              | 177,8                    | 82       | 82  | 311             | 62,0  | 105,2 | 126,5 | 19,0 | 59,4  | 69  |
| 1025G | 7 470                         | 4000                  | 98                  | 32                  | 38,6                                        | 0,0205                                       | 0,227                            | 0,00107                               | 212,7                    | 108      | 95  | 311             | 77,0  | 130,6 | 154,9 | 21,8 | 71,6  | 81  |
| 1030G | 12 100                        | 3600                  | 111                 | 39                  | 54,4                                        | 0,0236                                       | 0,363                            | 0,00107                               | 239,7                    | 108      | 95  | 311             | 91,2  | 152,4 | 180,3 | 21,8 | 83,8  | 94  |
| 1035G | 18 500                        | 3100                  | 134                 | 51                  | 88,5                                        | 0,0359                                       | 0,544                            | 0,00214                               | 279,4                    | 130      | 120 | 311             | 106,4 | 177,8 | 211,3 | 28,4 | 97,5  | 107 |
| 1040G | 30 600                        | 2800                  | 160                 | 64                  | 122,5                                       | 0,0500                                       | 0,907                            | 0,00357                               | 317,5                    | 130      | 120 | 311             | 120,6 | 209,6 | 245,4 | 28,4 | 111,3 | 122 |
| 1045G | 42 000                        | 2600                  | 183                 | 77                  | 166                                         | 0,0736                                       | 1,04                             | 0,00357                               | 346,1                    | 130      | 120 | 311             | 134,9 | 235,0 | 274,1 | 28,4 | 122,9 | 135 |
| 1050G | 56 600                        | 2400                  | 200                 | 89                  | 238                                         | 0,0814                                       | 1,77                             | 0,00357                               | 388,9                    | 184      | 146 | 311             | 153,2 | 254,0 | 305,8 | 38,1 | 140,7 | 152 |
| 1055G | 74 000                        | 2200                  | 220                 | 102                 | 306                                         | 0,0895                                       | 2,22                             | 0,00357                               | 425,4                    | 184      | 146 | 311             | 168,1 | 279,4 | 334,3 | 38,1 | 158,0 | 173 |
| 1060G | 90 400                        | 2100                  | 244                 | 115                 | 358                                         | 0,117                                        | 3,18                             | 0,00357                               | 457,2                    | ...      | 146 | 311             | 188,2 | 304,8 | 366,0 | 25,4 | 169,2 | 183 |
| 1070G | 135 000                       | 1800                  | 289                 | 127                 | 562                                         | 0,141                                        | 4,35                             | 0,00357                               | 527,0                    | ...      | 146 | 311             | 220,7 | 355,6 | 424,9 | 28,4 | 195,6 | 208 |

Fenner Gear Coupling

# G52 TYPE

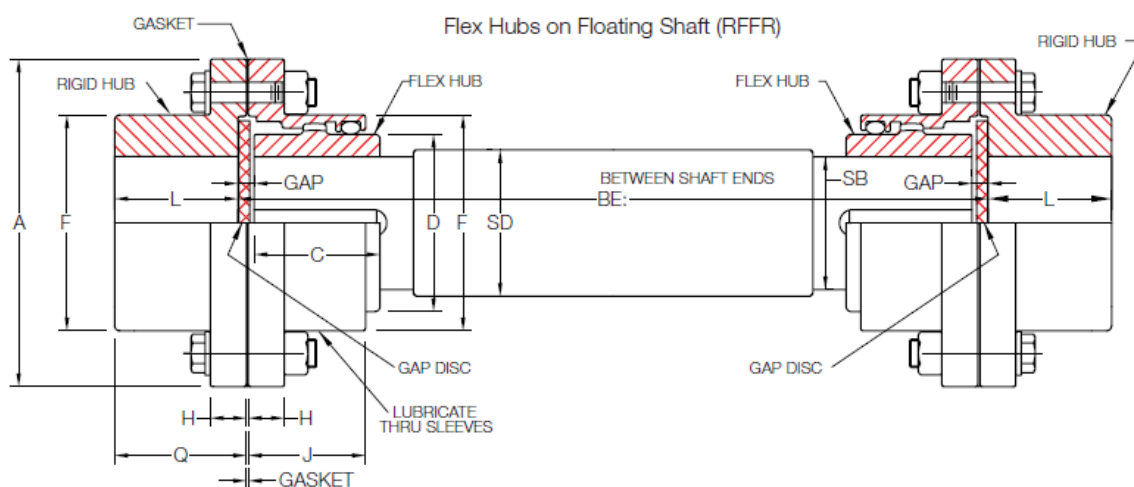
Standard Flanged Sleeve Single Engagement



| Size  | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) |           | Min Bore (mm) | Cplg Wei-<br>ght (Kg) |      | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |     |       |      |       |       |     |       |     |
|-------|--------------------|-----------------|---------------|-----------|---------------|-----------------------|------|------------------|--------------------------|-------|-------|-------|-----|-------|------|-------|-------|-----|-------|-----|
|       |                    |                 | Flex Hub      | Rigid Hub |               | G51                   | G52  |                  | A                        | B     | C     | D     | E   | F     | H    | J     | L     | M   | Q     | GAP |
| 1010G | 1 140              | 8000            | 50            | 65        | 13            | 4,08                  | 4,54 | 0,0227           | 115,9                    | 86,6  | 42,9  | 68,6  | 2,5 | 83,8  | 14,0 | 38,9  | 39,6  | 51  | 42,2  | 4   |
| 1015G | 2 350              | 6500            | 65            | 80        | 20            | 8,16                  | 9,07 | 0,0408           | 152,4                    | 99,6  | 49,3  | 86,4  | 2,5 | 105,2 | 19,0 | 47,8  | 46,2  | 61  | 48,8  | 4   |
| 1020G | 4 270              | 5600            | 78            | 98        | 26            | 13,6                  | 15,9 | 0,0680           | 177,8                    | 124,5 | 62,0  | 105,2 | 2,5 | 126,5 | 19,0 | 59,4  | 58,4  | 76  | 61,0  | 4   |
| 1025G | 7 470              | 5000            | 98            | 118       | 32            | 24,9                  | 27,2 | 0,118            | 212,7                    | 155,4 | 77,0  | 130,6 | 2,5 | 154,9 | 21,8 | 71,6  | 73,7  | 91  | 76,2  | 5   |
| 1030G | 12 100             | 4400            | 111           | 140       | 39            | 38,6                  | 43,1 | 0,181            | 239,7                    | 183,9 | 91,2  | 152,4 | 2,5 | 180,3 | 21,8 | 83,8  | 87,9  | 107 | 90,4  | 5   |
| 1035G | 18 500             | 3900            | 134           | 163       | 51            | 61,2                  | 68,0 | 0,272            | 279,4                    | 214,1 | 106,4 | 177,8 | 2,5 | 211,3 | 28,4 | 97,5  | 102,1 | 130 | 104,6 | 6   |
| 1040G | 30 600             | 3600            | 160           | 196       | 64            | 90,7                  | 99,8 | 0,467            | 317,5                    | 242,8 | 120,6 | 209,6 | 4,1 | 245,4 | 28,4 | 111,3 | 115,3 | 145 | 119,4 | 7   |
| 1045G | 42 000             | 3200            | 183           | 216       | 77            | 129,3                 | 136  | 0,557            | 346,1                    | 273,1 | 134,9 | 235,0 | 4,1 | 274,1 | 28,4 | 122,9 | 130,6 | 165 | 134,6 | 8   |
| 1050G | 56 600             | 2900            | 200           | 235       | 89            | 181,4                 | 195  | 0,907            | 388,9                    | 309,1 | 153,2 | 254,0 | 5,1 | 305,8 | 38,1 | 140,7 | 147,3 | 183 | 152,4 | 9   |
| 1055G | 74 000             | 2650            | 220           | 266       | 102           | 251,7                 | 263  | 1,13             | 425,4                    | 349,5 | 168,1 | 279,4 | 5,1 | 334,3 | 38,1 | 158,0 | 172,7 | 203 | 177,8 | 9   |
| 1060G | 90 400             | 2450            | 244           | 290       | 115           | ...                   | 324  | 1,70             | 457,2                    | 385,1 | 188,2 | 304,8 | 6,6 | 366,0 | 25,4 | 169,2 | 186,4 | 229 | 193,0 | 10  |
| 1070G | 135 000            | 2150            | 289           | 340       | 127           | ...                   | 508  | 2,27             | 527,0                    | 453,6 | 220,7 | 355,6 | 8,4 | 424,9 | 28,4 | 195,6 | 220,2 | 267 | 228,6 | 13  |

# G52 TYPE (RIGID, FLOATING, FLOATING, RIGID)

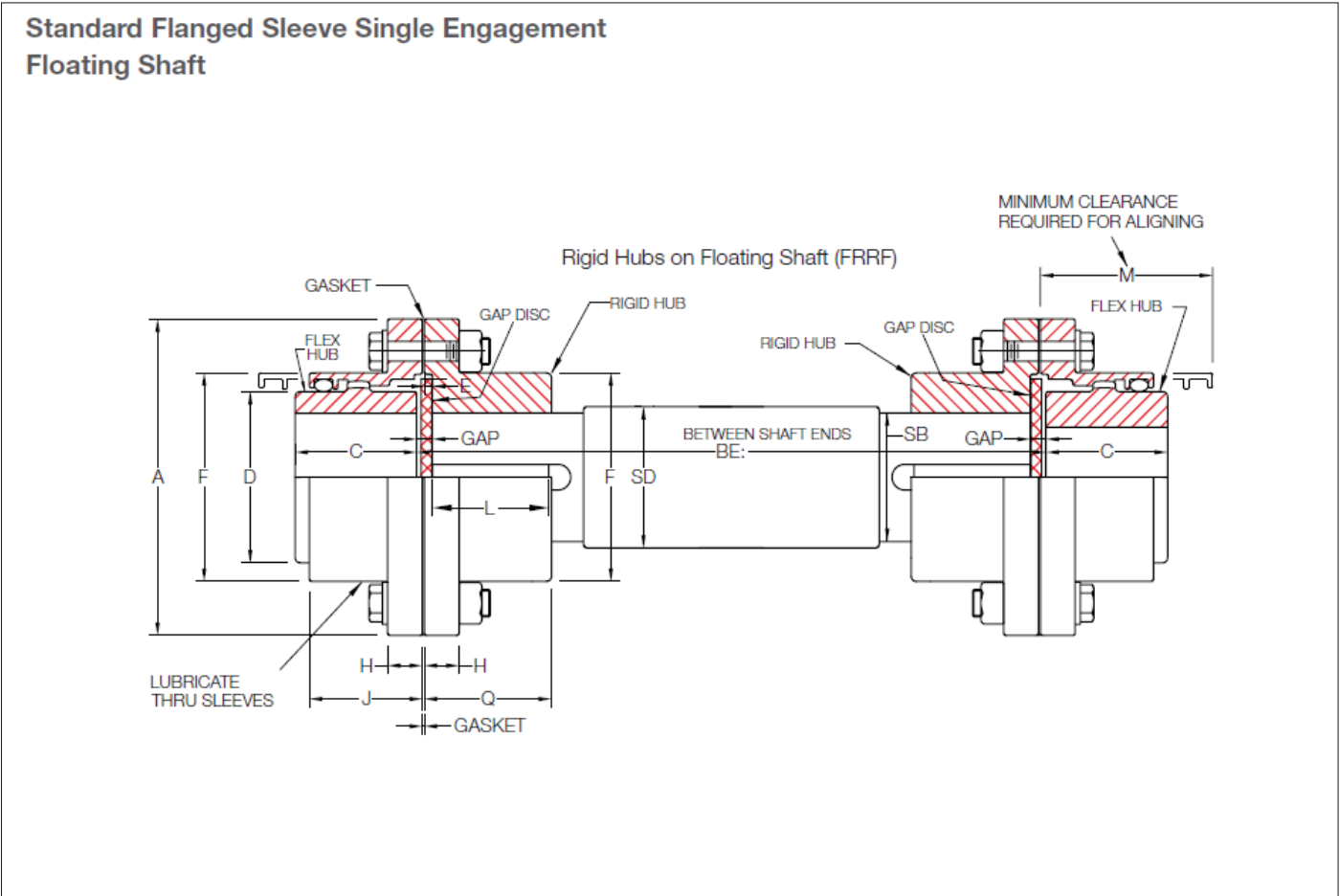
## Standard Flanged Sleeve Single Engagement Floating Shaft



| Size  | Max Bore (mm) |            | Min Bore (mm) | Cplg Weight (Kg) |          | Lube Weight (Kg) | Dimensions (Millimeters) |      |      |
|-------|---------------|------------|---------------|------------------|----------|------------------|--------------------------|------|------|
|       | Flex (mm)     | Rigid (mm) |               | G51 (kg)         | G52 (kg) |                  | A                        | B    |      |
|       |               |            |               |                  |          |                  |                          | RFFR | FRRF |
| 1010G | 50            | 65         | 13            | 4,08             | 4,54     | 0,0227           | 115,9                    | 133  | 92   |
| 1015G | 65            | 80         | 20            | 8,16             | 9,07     | 0,0408           | 152,4                    | 159  | 105  |
| 1020G | 78            | 98         | 26            | 13,6             | 15,9     | 0,0680           | 177,8                    | 197  | 129  |
| 1025G | 98            | 118        | 32            | 24,9             | 27,2     | 0,118            | 212,7                    | 241  | 162  |
| 1030G | 111           | 140        | 39            | 38,6             | 43,1     | 0,181            | 239,7                    | 279  | 189  |
| 1035G | 134           | 163        | 51            | 61,2             | 68,0     | 0,272            | 279,4                    | 324  | 219  |
| 1040G | 160           | 196        | 64            | 90,7             | 99,8     | 0,467            | 317,5                    | 419  | 248  |
| 1045G | 183           | 216        | 77            | 129,3            | 136      | 0,557            | 346,1                    | 508  | 281  |
| 1050G | 200           | 235        | 89            | 181,4            | 195      | 0,907            | 388,9                    | 533  | 316  |
| 1055G | 220           | 266        | 102           | 251,7            | 263      | 1,13             | 425,4                    | 572  | 367  |
| 1060G | 244           | 290        | 115           | ...              | 324      | 1,70             | 457,2                    | 597  | 397  |
| 1070G | 289           | 340        | 127           | ...              | 508      | 2,27             | 527,0                    | 673  | 470  |

All Dimensions found across pages 17 and 18.

G52 TYPE  
(FLOATING, RIGID, RIGID, FLOATING)



| Size | Dimensions (Millimeters) |       |     |       |      |       |       |     |       |     |
|------|--------------------------|-------|-----|-------|------|-------|-------|-----|-------|-----|
|      | C                        | D     | E   | F     | H    | J     | L     | M   | Q     | GAP |
| 1010 | 42,9                     | 68,6  | 2,5 | 83,8  | 14,0 | 38,9  | 39,6  | 48  | 42,2  | 4   |
| 1015 | 49,3                     | 86,4  | 2,5 | 105,2 | 19,0 | 47,8  | 46,2  | 56  | 48,8  | 4   |
| 1020 | 62,0                     | 105,2 | 2,5 | 126,5 | 19,0 | 59,4  | 58,4  | 69  | 61,0  | 4   |
| 1025 | 77,0                     | 130,6 | 2,5 | 154,9 | 21,8 | 71,6  | 73,7  | 81  | 76,2  | 5   |
| 1030 | 91,2                     | 152,4 | 2,5 | 108,3 | 21,8 | 83,8  | 87,9  | 94  | 90,4  | 5   |
| 1035 | 106,4                    | 177,8 | 2,5 | 211,3 | 28,4 | 97,5  | 102,1 | 107 | 104,6 | 6   |
| 1040 | 120,6                    | 209,6 | 4,1 | 245,4 | 28,4 | 111,3 | 115,3 | 122 | 119,4 | 7   |
| 1045 | 134,9                    | 235,0 | 4,1 | 274,1 | 28,4 | 122,9 | 130,8 | 135 | 134,6 | 8   |
| 1050 | 153,2                    | 254,0 | 5,1 | 305,8 | 38,1 | 140,7 | 147,3 | 152 | 152,4 | 9   |
| 1055 | 168,1                    | 279,4 | 5,1 | 334,3 | 38,1 | 158,0 | 172,7 | 173 | 177,8 | 9   |
| 1060 | 188,2                    | 304,8 | 6,6 | 366,0 | 25,4 | 169,2 | 186,4 | 183 | 193,0 | 10  |
| 1070 | 220,7                    | 355,6 | 8,4 | 424,9 | 28,4 | 195,6 | 220,2 | 208 | 228,6 | 13  |

All Dimensions found across pages 17 and 18.

# INSTALLATION

Fenner Gear Couplings are designed to provide a mechanical connection between the rotating shafts of mechanical equipment, using gear mesh to accommodate inherent misalignment while transmitting the power and torque between the connected shafts.

## 1) Mount Flanged Sleeves, Seals and Hub

assembly to insure there is no visible damage.  
 - Clean the hub bores and shafts using lint free cloth. Remove any nicks or burrs. - When assembled, the keys should have a close side to side fit in the keyways in the hub and shaft with a slight clearance over the top of the keys. - Place the flanged sleeves with O rings on shafts before mounting flex hubs.

## 2) Straight Bore with Clearance / Slip Fit

Install the keys in the shaft. - Check to be sure that the set screws in the hub do not protrude into the keyway or the bore. Remove or back out the set screw to provide clearance during assembly. - Slide the hub up the shaft to the desired axial position. - Assemble and tighten the set screws using a calibrated torque wrench.

## 3) Straight Bore with Interference Fit

Accurately measure the bore and shaft diameters to assure proper fit. - Install the keys in the shaft. - heat the hub (135 degrees C) in an oven until the bore is sufficiently larger than the shaft. When the hub is expanded, install it on the shaft to the desired axial position.

## 4) Taper Bore

Check for acceptable contact pattern between the hub and the shaft. - Put the hub on the shaft, keeping the keyways aligned. - Lightly tap the face of the hub with a soft mallet. The resultant position will provide a starting point for the hub axial draw up. - Use a depth micrometer to measure the distance from the shaft end to the hub face and record the dimension. - Mount a dial indicator to read axial hub advancement. Alternatively, the indicator can be positioned to contact the end of the hub. - Remove the hub and install the keys in the shaft. - Heat the hub (177 degrees C) in an oven until the bore is sufficiently

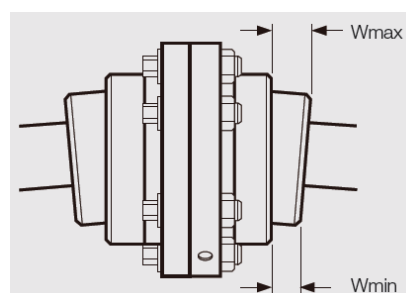
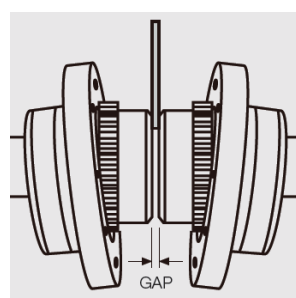
larger than the shaft. Do not exceed 260 degrees C. When the hub expanded, install it quickly on the shaft to the "zero" set point. Continue to advance the hub up the taper to the desired axial position.

## 5) Shaft Alignment

Use an inside micrometer or a spacer bar equal in thickness and at 90° intervals to measure the distance between hubs to gap. - The "Angular Misalignment" value is the maximum difference

## 6) Sleeve Installation

Insert gasket between flanges and gap disc into counter bore of each rigid hub for floating shaft assemblies, and bolt flanges together. - Check the alignment of the coupling. Determine "W" by measuring distances "W" max and "W" min between flex hub and sleeve using a depth micrometer or feeler gauges. The difference between "W" max and "W" min must not exceed the "W" value.



## ANNUAL MAINTENANCE

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1. Check alignment. If the maximum operating misalignment values are exceeded, realign the coupling.
2. Inspect O Ring and gasket to determine if replacement is required.
3. Re-lubricate coupling if using general purpose grease until an excess appears at an open hole.

Grease: Shell Gadus S3 High Speed Coupling Grease or Shell Gadus S2 V220 1

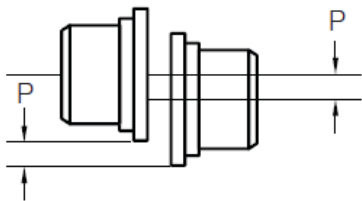
Oil: Shell Omala S2 GX 680

## ALIGNMENT DATA

To improve the service life of the coupling, shafts should be aligned to minimize deflection of the flexing elements. Shaft alignment is required in the axial, parallel, and angular directions, with each of these values not to exceed the recommended installation limits. Shaft alignment can be measured using various established methods, including Laser Alignment, Reverse Dial Indicator, and Rim and Face.

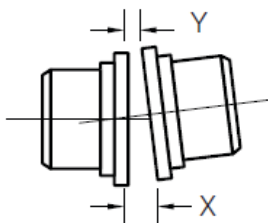
### Parallel Misalignment

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### Angular Misalignment

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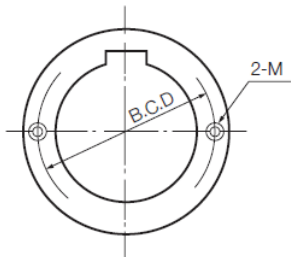
Fenner Gear Coupling

# MISALIGNMENT CAPACITY

| Size  | Recommended Installation   |                        | Operating                  |                          | Fastener Tightening Torque Rating (Nm) |
|-------|----------------------------|------------------------|----------------------------|--------------------------|----------------------------------------|
|       | Parallel Offset-P Max (mm) | Angular (X-Y) Max (mm) | Parallel Offset-P Max (mm) | Angular (X - Y) Max (mm) |                                        |
| 1010G | 0.05                       | 0.15                   | 0.66                       | 1.8                      | 12                                     |
| 1015G | 0.08                       | 0.18                   | 0.86                       | 2.26                     | 42                                     |
| 1020G | 0.08                       | 0.23                   | 1.02                       | 2.74                     | 102                                    |
| 1025G | 0.10                       | 0.28                   | 1.27                       | 3.43                     | 203                                    |
| 1030G | 0.13                       | 0.33                   | 1.52                       | 3.99                     | 203                                    |
| 1035G | 0.15                       | 0.38                   | 1.83                       | 4.65                     | 339                                    |
| 1040G | 0.18                       | 0.46                   | 2.13                       | 5.49                     | 339                                    |
| 1045G | 0.20                       | 0.51                   | 2.39                       | 6.15                     | 339                                    |
| 1050G | 0.23                       | 0.56                   | 2.72                       | 6.65                     | 339                                    |
| 1055G | 0.28                       | 0.61                   | 3.12                       | 7.32                     | 339                                    |
| 1060G | 0.28                       | 0.66                   | 3.35                       | 9.98                     | 339                                    |
| 1070G | 0.33                       | 0.79                   | 3.94                       | 9.32                     | 339                                    |
| 1080G | 0.41                       | 0.81                   | 2.46                       | 4.83                     | -                                      |
| 1090G | 0.43                       | 0.91                   | 2.64                       | 5.49                     | -                                      |
| 1100G | 0.48                       | 1.02                   | 2.97                       | 6.15                     | -                                      |
| 1110G | 0.56                       | 1.14                   | 3.30                       | 6.81                     | -                                      |
| 1120G | 0.58                       | 1.24                   | 3.51                       | 7.49                     | -                                      |
| 1130G | 0.61                       | 1.32                   | 3.61                       | 7.98                     | -                                      |
| 1140G | 0.64                       | 1.45                   | 3.81                       | 8.64                     | -                                      |
| 1150G | 0.69                       | 1.55                   | 4.17                       | 9.32                     | -                                      |
| 1160G | 0.71                       | 1.60                   | 4.37                       | 10.97                    | -                                      |
| 1180G | 0.74                       | 1.83                   | 4.22                       | 9.65                     | -                                      |
| 1200G | 0.89                       | 2.03                   | 5.28                       | 12.14                    | -                                      |
| 1220G | 0.99                       | 2.21                   | 5.87                       | 13.31                    | -                                      |

Fenner Gear Coupling

# PULLER HOLES



| Size | B.C.D (mm) | Bolt            |
|------|------------|-----------------|
| 1010 | 52.32      | M10 x 1.5 x 13  |
| 1015 | 69.85      | M10 x 1.5 x 13  |
| 1020 | 88.9       | M10 x 1.5 x 13  |
| 1025 | 112.78     | M10 x 1.5 x 13  |
| 1030 | 128.52     | M10 x 1.5 x 13  |
| 1035 | 152.4      | M12 x 1.75 x 16 |
| 1040 | 180.98     | M16 x 2.0 x 20  |
| 1045 | 200.03     | M16 x 2.0 x 20  |
| 1050 | 215.9      | M20 x 2.5 x 22  |
| 1055 | 238.13     | M20 x 2.5 x 22  |
| 1060 | 263.53     | M20 x 2.5 x 22  |
| 1070 | 311.15     | M24 x 3.50 x 30 |

# GRID COUPLINGS

## BUILT TO ABSORB SHOCK. DESIGNED TO PERFORM.

Fenner Grid Couplings effectively absorb shock loads and vibration, protecting equipment and maximising uptime in harsh operating environments.



### Shock & Vibration Absorption

Reduces equipment stress and extends service life.



### Accommodates Misalignment

Allows angular, parallel, and axial movement.



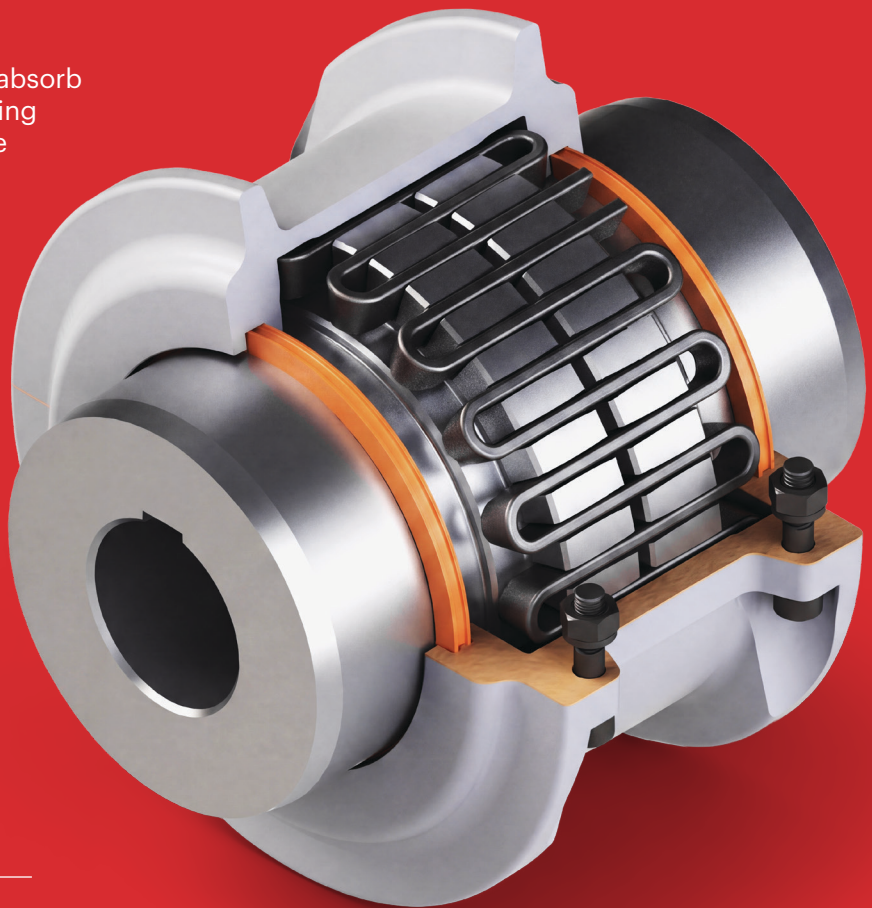
### Reliable & Maintenance Friendly

Simple design for easy inspection and replacement.



### Proven Performance

Trusted in critical applications worldwide.



## INTRODUCTION

Fenner® Grid Couplings are shaft-to-shaft couplings that are of compact size yet can handle torque capacity due to their high strength hardened alloy steel construction.

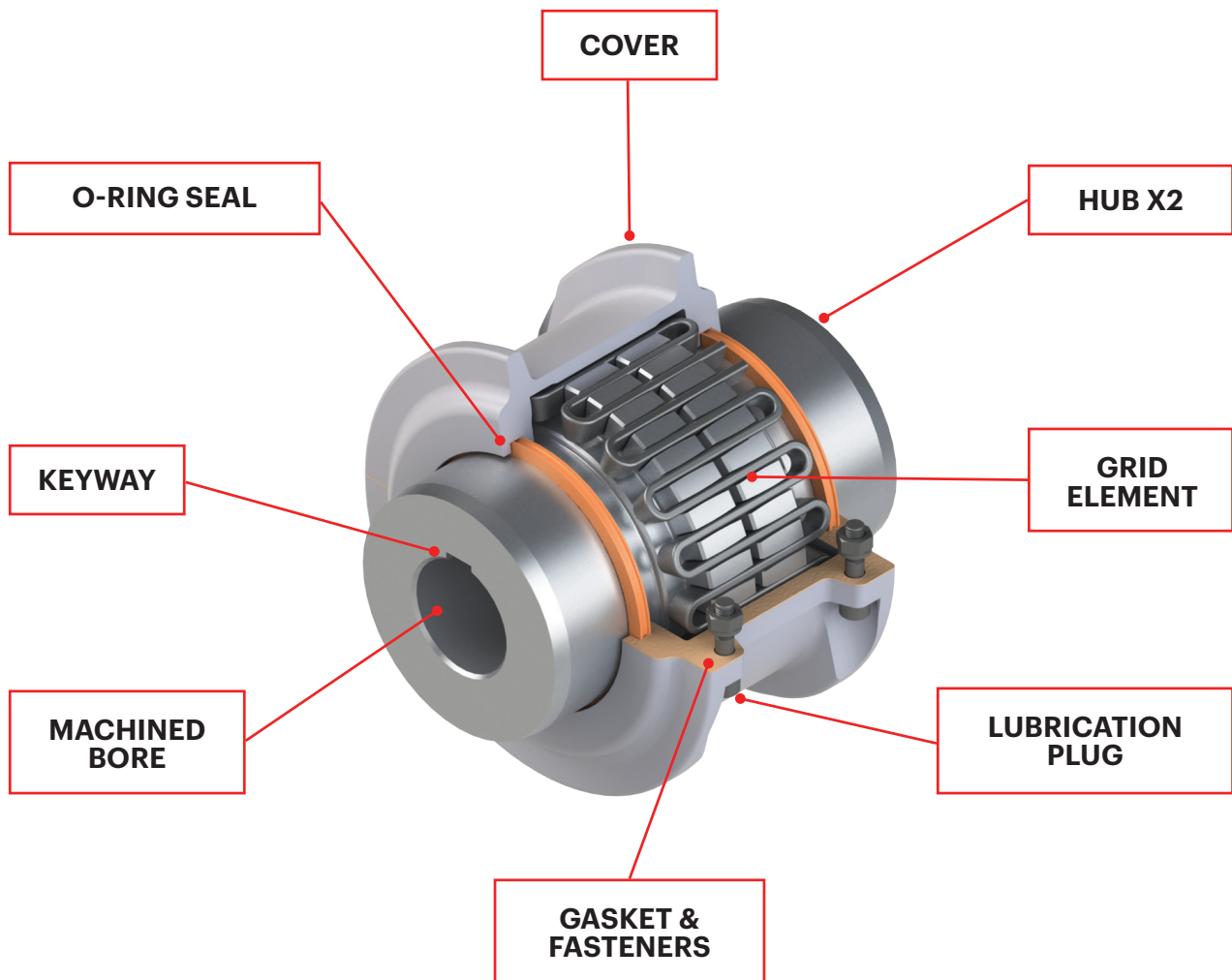
The tapered grids are designed with a trapezoidal cross section and are tempered for spring hardness. Through a high-precision operation called shot peening, the surface molecules are compressed by high-velocity steel micro beads.

The compression of the molecules results in dramatic increase in strength rating and provides

reserve strength for a longer part life.

The tapered grids are accessible through the unit's removable cover. It is extremely easy to fit the trapezoidal grids into the slots of the hub, compared to fitting rectangular grids. There is no need for the equipment to be moved (hence no downtime) so that couplings can be installed.

Due to their compact size, the tapered grids can simply be placed directly in the slots of the hub. The practical split cover can be placed using standard tools.



## DESCRIPTION

---

### PROTECTION AGAINST SHAFT MISALIGNMENT

The tapered grids are free to rock, pivot, and float within the hub teeth. This provides generous capacity for misalignment without producing the detrimental axial loads on the bearings that are often created when couplings are misaligned.

### PROTECTION AGAINST SHOCK & VIBRATORY LOADS

This coupling is able to deflect torsionally when subjected to normal shock or vibratory loads, so they are able to handle changing load conditions. The system truly is a shock absorber for rotary motion, relying on the predictable resilience of the grid for torsional flexibility. The tapered grids "tune" the drive system. Due to their spring hardness, the grids absorb impact by spreading the impact energy over time. The grids can also damp vibration and reduce the peak or shock loads experienced by the rest of the system.

### STANDARD COUPLING SELECTION

The Standard Selection may be used for engine driven, motor, or turbine applications. The information required are application or equipment type (motor to pump, reducer to conveyor, etc), shaft diameters (mm), gaps

**1. Rating.** Determine System Torque as calculated below:

$$\text{Torque (Nm)} = \frac{\text{kW} \times 9,550}{\text{rpm}}$$

$$\text{Torque (Kg.m)} = \frac{\text{kW} \times 974}{\text{rpm}}$$

**2. Service Factor:** Determine appropriate service factor.

**3. Minimum Coupling Rating:** Determine the required minimum coupling rating. (Minimum Coupling Rating = Service Factor x Torque (Nm)).

**4. Type:** Select the appropriate coupling type.

**5. Size:** Trace the Torque column to find the value that is equal or greater than value from Step 3.

**6. Check:** Check speed (rpm), bore, gap and dimensions.

## FORMULA SELECTION

The Standard Selection should be used for most coupling selections. The Formula Selection procedure below should be used for high peak loads and brake applications (brake disc or brake wheel is an integral part of coupling). Using the Formula Selection and providing system peak torque and frequency, duty cycle, and brake torque rating will allow for a more refined selection.

High Peak Loads: Use formula A or B for applications which involve motors with higher-than-normal torque characteristics. Applications should also be those with intermittent operations, including shock loading, inertia effects due to starting and stopping, system-induced repetitive high peak torques. System Peak Torque is the maximum torque that can exist in the system. Select a coupling with a Torque Rating equal or greater than the Selection.

### A. Non-Reversing High Peak Torque:

Selection torque (Nm) = System Peak Torque

or

System Torque (Nm) = System Peak kW x 9550 / rpm

### B. Reversing High Peak Torque:

Selection Torque (Nm) = 2 x System Peak Torque

or

System Torque (Nm) = (2 x System Peak kW) x 9550 / rpm

### 2. Brake Applications: If the torque rating of the brake exceeds the motor torque, use brake rating as blow:

Selection Torque (Nm) = Brake Torque Rating x Service Factor



# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY APPLICATION)

|                                                         |      |
|---------------------------------------------------------|------|
| AERATOR                                                 | 2    |
| AGITATORS                                               |      |
| Vertical and Horizontal Screw, Propeller, Paddle        | 1    |
| BARGE HAUL PULLER                                       | 1.5  |
| BLOWERS                                                 |      |
| Centrifugal                                             | 1    |
| Lobe or Vane                                            | 1.25 |
| CAR DUMPERS                                             | 2.5  |
| CAR PULLERS                                             | 1.5  |
| CLARIFIER or CLASSIFIER                                 | 1    |
| COMPRESSORS                                             |      |
| Centrifugal                                             | 1    |
| Rotary, Lobe or Vane                                    | 1.25 |
| Rotary, Screw                                           | 1    |
| Flywheel Compressor                                     |      |
| 1 Cylinder, single acting                               | 3    |
| 1 Cylinder, double acting                               | 3    |
| 2 Cylinders, single acting                              | 3    |
| 2 Cylinders, double acting                              | 3    |
| 3 Cylinders, single acting                              | 3    |
| 3 Cylinders, double acting                              | 2    |
| 4 or more cylinders, single acting                      | 1.75 |
| 4 or more cylinders, double acting                      | 1.75 |
| CONVEYORS                                               |      |
| Apron, Assembly, Belt, Chain, Flight, Screw             | 1    |
| Bucket                                                  | 1.25 |
| Live Roll, Shaker and Reciprocating                     | 3    |
| CRANES and HOIST                                        |      |
| Main Hoist                                              | 1.75 |
| Skip Hoist                                              | 1.75 |
| Slope                                                   | 1.5  |
| Bridge, Travel or Trolley                               | 1.75 |
| DYNAMOMETER                                             | 1    |
| ELEVATORS                                               |      |
| Bucket, Centrifugal Discharge                           | 1.25 |
| Gravity Discharge                                       | 1.25 |
| EXCITER, GENERATOR                                      | 1    |
| EXTRUDER, PLASTIC                                       | 1.5  |
| FANS                                                    |      |
| Centrifugal                                             | 1    |
| Cooling Tower                                           | 2    |
| Forced Draft-Across the Line start                      | 1.5  |
| Forced Draft Motor driven thru fluid or electric clutch | 1    |
| Gas Recirculating                                       | 1.5  |
| Induced Draft with damper control or blade cleaner      | 1.25 |
| Induced Draft without controls                          | 2    |
| FEEDERS                                                 |      |
| Apron, Belt, Disc, Screw                                | 1    |
| Reciprocating                                           | 2.5  |
| GENERATORS                                              |      |
| Even Load                                               | 1    |
| Hoist or Railway Service                                | 1.5  |
| Welder Load                                             | 2    |
| Hoist or Railway Service                                | 1.5  |

|                                            |      |
|--------------------------------------------|------|
| Welder Load                                | 2    |
| HAMMERMILL                                 | 1.75 |
| LAUNDRY WASHER or TUMBLER                  | 2    |
| LINE SHAFTS                                |      |
| Any Processing Machinery                   | 1.5  |
| MACHINE TOOLS                              |      |
| Auxiliary and Traverse Drive               | 1    |
| Bending Roll, Notching Press, Punch Press, | 1.75 |
| Planer, Plate Reversing                    | 1.5  |
| Main Drive                                 | 1.5  |
| METAL FORMING MACHINES                     |      |
| Continuous Caster                          | 1.75 |
| Draw Bench Carriage and Main Drive         | 2    |
| Extruder                                   | 2    |
| Farming Machine and Forming Mills          | 2    |
| Slitters                                   | 1    |
| Wire Drawing or Flattening                 | 1.75 |
| Wire Winder                                | 1.5  |
| Coilers and Uncoilers                      | 1.5  |
| MIXERS                                     |      |
| Concrete                                   | 1.75 |
| Muller                                     | 1.5  |
| PRESS, PRINTING                            | 1.5  |
| PUG MILL                                   | 1.75 |
| PULVERIZERS                                |      |
| Hammermill and Hog                         | 1.75 |
| Roller                                     | 1.5  |
| PUMPS                                      |      |
| Boiler Feed                                | 1.5  |
| Centrifugal-Constant Speed                 | 1    |
| Frequent Speed Changes under Load          | 1.25 |
| Descaling with accumulators                | 1.25 |
| Gear, Rotary, or Vane                      | 1.25 |
| Reciprocating, Plunger Piston              |      |
| 1 Cylinder, single or double acting        | 3    |
| 2 Cylinders, single acting                 | 2    |
| 2 Cylinders, double acting                 | 1.75 |
| 3 or more cylinders                        | 1.5  |
| Screw Pump, Progressing Cavity             | 1.25 |
| Vacuum Pump                                | 1.25 |
| SCREENS                                    |      |
| Air Washing                                | 1    |
| Grizzly                                    | 2    |
| Rotary Coal or Sand                        | 1.5  |
| Vibrating                                  | 2.5  |
| Water                                      | 1    |
| STEERING GEAR                              | 1    |
| STOKER                                     | 1    |
| TIRE SHREDDER                              | 1.5  |
| TUMBLING BARREL                            | 1.75 |
| WINCH, MANEUVERING                         |      |
| Dredge, Marine                             | 1.5  |
| WINDLASS                                   | 1.5  |
| WOODWORKING MACHINERY                      | 1    |

# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY INDUSTRY)

|                                                                          |      |                                                   |      |
|--------------------------------------------------------------------------|------|---------------------------------------------------|------|
| AGGREGATE PROCESSING, CEMENT, MINING KILNS, TUBE & ROD MILLS             | 2    | Drawbench                                         | 2    |
|                                                                          | 1.75 | Feed Rolls-Blooming Mills                         | 2    |
| Direct or on L.S. shaft of Reducer, with final drive Machined Spur Gears | 2.5  | Furnace Pushers                                   | 2    |
| Single Helical or Herringbone Gears                                      | 1.75 | Hot and Cold Saws                                 | 3    |
| Crushers, Ore or Stone                                                   | 2    | Ingot Cars                                        |      |
| Dryer, Rotary                                                            | 1.75 | Manipulators                                      | 3    |
| Grizzly                                                                  | 1.75 | Mill Tables                                       | 1    |
| Hammermill or Hog                                                        |      | Roughing Breakdown Mills                          | 3    |
| Tumbling Mill or Barrel                                                  | 1    | Hot Bed or Transfer, non-reversing                | 2    |
| BREWING and DISTILLING                                                   | 1    | Runout, reversing                                 | 1.75 |
| Bottle and Can Filling Machines                                          | 1.25 | Runout, non-reversing, non-plugging               | 2    |
| Brew Kettle                                                              | 1.5  | Reel Drives                                       |      |
| Cookers, Continuous Duty                                                 | 1.25 | Screw down                                        | 3    |
| Lauter Tub                                                               | 1.75 | Seamless Tube Mills                               | 2    |
| Mash Tub                                                                 |      | Piercer                                           | 2    |
| Scale Hopper, Frequent Peaks                                             | 1.75 | Thrust Block                                      | 2    |
| CLAY WORKING INDUSTRY                                                    |      | Tube Conveyor Rolls                               | 2    |
| Brick Press, Briquette Machine, Clay Working Machine, Pug Mill           | 1.75 | Reeler                                            | 3    |
| DREDGES                                                                  | 1.25 | Kick Out                                          |      |
| Cable Reel                                                               | 2    | Sideguards                                        |      |
| Conveyors                                                                | 1.5  | Slitters, Steel Mill only                         | 1.75 |
| Cutter head, Jig Drive                                                   | 1.5  | Lift                                              | 1    |
| Manoeuvring Winch                                                        | 1.75 | Travel                                            | 2    |
| Pumps (Uniform load)                                                     | 1.5  | Straighteners                                     | 2    |
| Screen Drive, Stacker                                                    |      | Unscramblers (Billet Bundle Busters)              | 2    |
| Utility Winch                                                            | 1.75 | Wire Drawing Machinery                            | 1.75 |
| FOOD INDUSTRY                                                            | 1    | OIL INDUSTRY                                      |      |
| Beet Slicer                                                              | 1.25 | Chiller                                           | 1.25 |
| Botting, Can Filling Machine                                             | 1    | Oilwell Pumping (not over 150% peak torque)       | 2    |
| Cereal Cooker                                                            |      | Paraffin Filter Press                             | 1.5  |
| Dough Mixer, Meat Grinder                                                | 1.5  | Rotary Kiln                                       | 2    |
| LUMBER                                                                   | 1    | PAPER MILLS                                       |      |
| Band Resaw                                                               | 2    | Barker Auxiliary, Hydraulic                       | 2    |
| Circular Resaw, Cut-off                                                  | 2    | Barker, Mechanical                                | 2    |
| Edger, Head Rig, Hog                                                     | 1.75 | Barking Drum                                      |      |
| Log Haul                                                                 | 1    | L.S. shaft of reducer with final drive-Helical or |      |
| Planer                                                                   | 2    | Herringbone Gear                                  | 2    |
| Rolls, non-reversing                                                     | 1.25 | Machined Spur Gear                                | 2.5  |
| Rolls, Reversing                                                         | 1.75 | Cast Tooth Spur Gear                              | 3    |
| Sawdust Conveyor                                                         | 1.5  | Beater & Pulper                                   | 1.75 |
| Slab Conveyor                                                            | 1.75 | Bleachers, Coaters                                | 1    |
| Sorting Table                                                            |      | Calendar & Super calendar                         | 1.75 |
| Trimmer                                                                  | 1.5  | Chipper                                           | 2.5  |
| METAL ROLLING MILLS                                                      | 2    | Converting Machine                                | 1.25 |
| Coilers (Up or Down) Cold Mills only                                     |      | Couch                                             | 1.75 |
| Coilers (Up or Down) Hot Mills only                                      | 2.5  | Cutter, Felt Whipper                              | 2    |
| Coke Plants                                                              | 2    | Dryer                                             | 1.75 |
| Pusher Ram Drive                                                         | 3    | Cylinder                                          | 1.75 |
| Door Opener                                                              | 1.75 | Felt Stretcher                                    | 1.25 |
| Pusher or Larry Car Traction Drive                                       | 1.5  | Fourdrinier                                       | 1.75 |
| Continuous Caster                                                        | 2    | Jordan                                            | 2    |
| Colling Beds                                                             | 3    | Log Haul                                          | 2    |
|                                                                          |      | Line Shaft                                        | 1.5  |
|                                                                          |      | Press                                             | 1.75 |
|                                                                          |      | Pulp Grinder                                      | 1.75 |
|                                                                          |      | Reel, Rewinder, Winder                            | 1.5  |
|                                                                          |      | Stock Chest, Washer, Thickener                    | 1.5  |

# SERVICE FACTORS FOR OPERATION OF DRIVE SYSTEM (BY INDUSTRY)

|                                                                                                 |      |
|-------------------------------------------------------------------------------------------------|------|
| <b>Stock Pumps, Centrifugal</b>                                                                 |      |
| Constant Speed                                                                                  | 1    |
| Frequent Speed Changes Under load                                                               | 1.25 |
| Suction Roll                                                                                    | 1.75 |
| Vacuum Pumps                                                                                    | 1.25 |
| <b>RUBBER INDUSTRY</b>                                                                          |      |
| Calendar and Super Calendar                                                                     | 2    |
| Cracker, Plasticator                                                                            | 2.5  |
| Extruder                                                                                        | 1.75 |
| Intensive or Banbury Mixer                                                                      | 2.5  |
| Mixing Mill, Refiner or Sheeter                                                                 |      |
| One or two in line                                                                              | 2.5  |
| Three or four in line                                                                           | 2    |
| Five or more in line                                                                            | 1.75 |
| Tire Building Machine                                                                           | 2.5  |
| Tire & Tube Press Opener (Peak Torque)                                                          | 1    |
| Tuber, Strainer, Pelletizer                                                                     | 1.75 |
| Warming Mill - One or two Mills in line                                                         | 2    |
| Warming Mill - Three or more Mills in line                                                      | 1.75 |
| Washer                                                                                          | 2.5  |
| <b>SEWAGE DISPOSAL EQUIPMENT</b>                                                                |      |
| Bar Screen, Chemical feeders, Collectors,                                                       |      |
| Dewatering Screen, Grit Collector                                                               |      |
| <b>SUGAR INDUSTRY</b>                                                                           |      |
| Cane Carrier & Leveller                                                                         | 1.75 |
| Cane Knife & Crusher                                                                            | 2    |
| Mill Stands, Turbine Driver with all Helical or Herringbone, or Spur Gears with any Prime Mover | 1.75 |
| <b>TEXTILE INDUSTRY</b>                                                                         |      |
| Batcher                                                                                         | 1.25 |
| Calendar, Card Machine                                                                          | 1.5  |
| Cloth Finishing Machine                                                                         | 1.5  |
| Dry Can, Loom                                                                                   | 1.5  |
| Dyeing Machinery                                                                                | 1.25 |
| Mangle, Napper, Soaper                                                                          | 1.25 |
| Spinner, Tenter Frame, Winder                                                                   | 1.5  |



# SERVICE FACTORS FOR COMBUSTION ENGINES

Service Factors for engine drives are required for applications where good flywheel regulation prevents torque fluctuations greater than  $\pm 20\%$ . For drives where torque fluctuations are greater or where the operation is near a serious critical or torsional vibration, a mass elastic study is necessary.

| Number of Cylinders   | 4 of 5 |      |   |      |     | 6 or more |      |   |      |     |
|-----------------------|--------|------|---|------|-----|-----------|------|---|------|-----|
| Service of Factor     | 1.5    | 1.75 | 2 | 2.25 | 2.5 | 1.5       | 1.75 | 2 | 2.25 | 2.5 |
| Engine Service Factor | 2.5    | 2.75 | 3 | 3.35 | 3.5 | 2.5       | 2.75 | 3 | 3.25 | 3.5 |

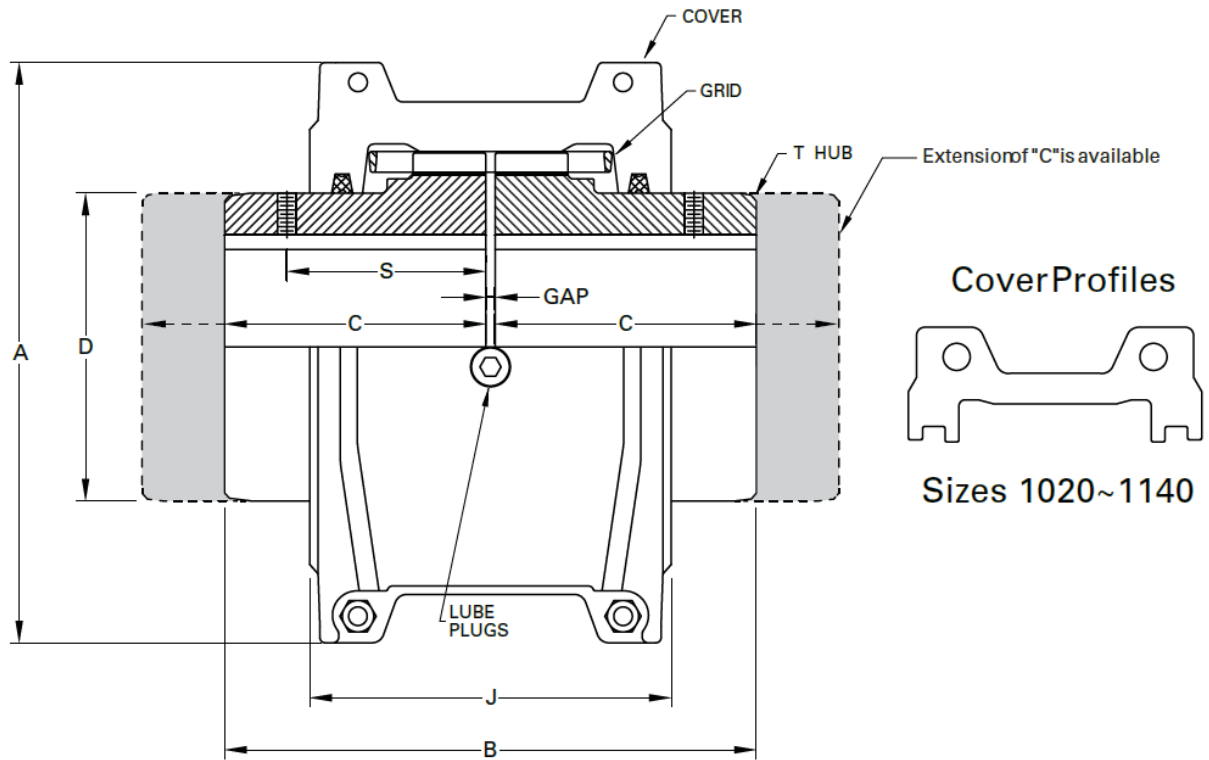
To use Engine Drive Service Factors, first determine application Service Factor from page 8-10. When Service Factor is greater than 2.0, or where 1, 2 or 3 cylinder engines are involved, refer complete application details to Motion for engineering review.

Service Factors are a guide, based on experience, of the ratio between coupling catalogue rating and system characteristics. The system characteristics are best measured with a torque meter.

| Torque Demands Driven Machine                                                       | Typical applications for Driven Equipment                                                                                     | Typical Service Factor |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|
|  | Constant torque such as Centrifugal Pumps, Blowers and Compressors                                                            | 1                      |
|  | Continuous duty with some torque variations including Plastic Extruders, Forced Draft Fans                                    | 1.5                    |
|  | Light shock loads from Metal Extruders, Cooling Towers, Cane Knife, Log Haul                                                  | 2                      |
|  | Moderate shock loading as expected from a Car Dumper, Stone Crusher, Vibrating Screen                                         | 2.5                    |
|  | Heavy shock load with some negative torques from Roughing Mills, Reciprocating Pumps, Compressors, Reversing, Runout Tables   | 3                      |
|  | Applications like Reciprocating Compressors with frequent torque reversals, which do not necessarily cause reverse rotations. | Refer to Motion        |

# T10 TYPE (CLOSE COUPLED – SPLIT COVER)

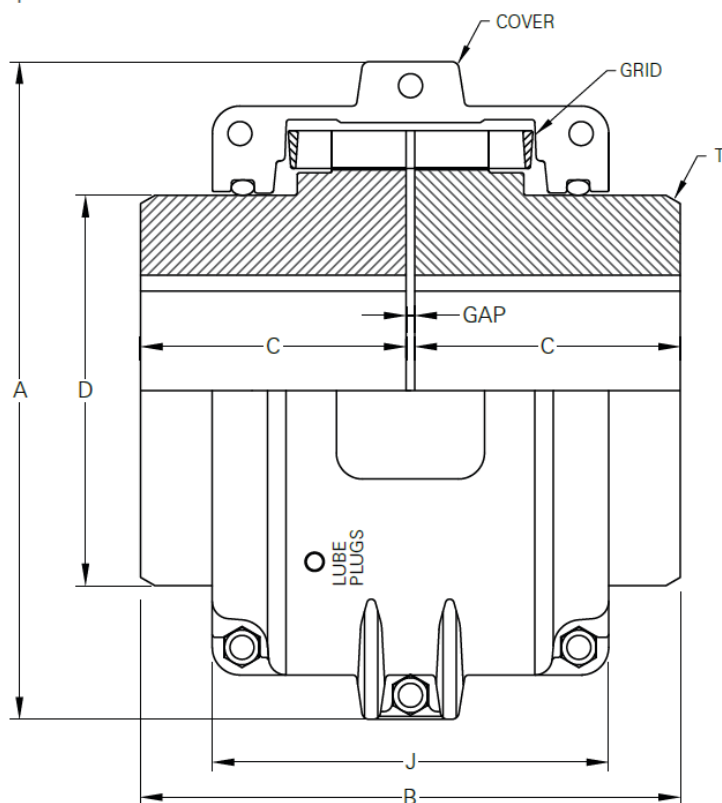
Close Coupled  
Horizontal Split Aluminium Cover



| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |       |      |     |
|------|--------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|-------|-------|-------|-------|------|-----|
|      |                    |                 |               |               |                  |                  | A                        | B     | C     | D     | J     | S    | GAP |
| 1020 | 52                 | 4,500           | 28            | 13            | 1.92             | 0.0272           | 101.0                    | 98.2  | 47.6  | 39.7  | 67.8  | 39.1 | 3   |
| 1030 | 149                | 4,500           | 35            | 13            | 2.58             | 0.0408           | 109.0                    | 98.2  | 47.6  | 49.2  | 71.9  | 39.1 | 3   |
| 1040 | 249                | 4,500           | 43            | 13            | 3.34             | 0.0544           | 116.0                    | 104.6 | 50.8  | 57.2  | 72.0  | 40.1 | 3   |
| 1050 | 435                | 4,500           | 50            | 13            | 5.44             | 0.0680           | 137.8                    | 123.6 | 60.3  | 66.7  | 81.6  | 44.7 | 3   |
| 1060 | 684                | 4,350           | 56            | 20            | 7.44             | 0.0862           | 147.0                    | 130.0 | 63.5  | 76.2  | 97.9  | 52.3 | 3   |
| 1070 | 994                | 4,125           | 67            | 20            | 10.40            | 0.113            | 162.2                    | 155.4 | 76.2  | 87.3  | 99.2  | 53.8 | 3   |
| 1080 | 2,050              | 3,600           | 80            | 27            | 17.90            | 0.172            | 193.0                    | 180.8 | 88.9  | 104.8 | 118.4 | 64.5 | 3   |
| 1090 | 3,730              | 3,600           | 95            | 27            | 25.60            | 0.254            | 212.0                    | 199.8 | 98.4  | 123.8 | 127.4 | 71.6 | 3   |
| 1100 | 6,280              | 2,440           | 110           | 42            | 42.00            | 0.426            | 250.7                    | 246.2 | 120.6 | 142.1 | 156.6 | -    | 5   |
| 1110 | 9,320              | 2,250           | 120           | 42            | 54.30            | 0.508            | 270.0                    | 259.0 | 127.0 | 160.3 | 162.6 | -    | 5   |
| 1120 | 13,700             | 2,025           | 140           | 61            | 81.20            | 0.735            | 306.4                    | 304.4 | 149.2 | 179.4 | 191.7 | -    | 6   |
| 1130 | 19,900             | 1,800           | 170           | 67            | 121.00           | 0.907            | 343.8                    | 329.8 | 161.9 | 217.5 | 195.5 | -    | 6   |
| 1140 | 28,600             | 1,650           | 200           | 67            | 178.00           | 1.130            | 383.8                    | 374.4 | 184.2 | 254.0 | 201.7 | -    | 6   |

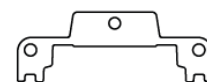
# T10 TYPE (SPLIT COVER - LARGE)

Close Coupled  
Horizontal Split Aluminium Cover

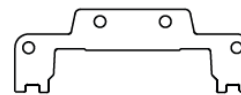


## Cover Profiles

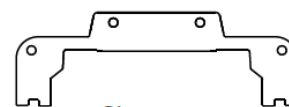
HUB



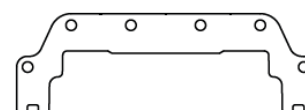
Size 1200



Sizes 1210~1230



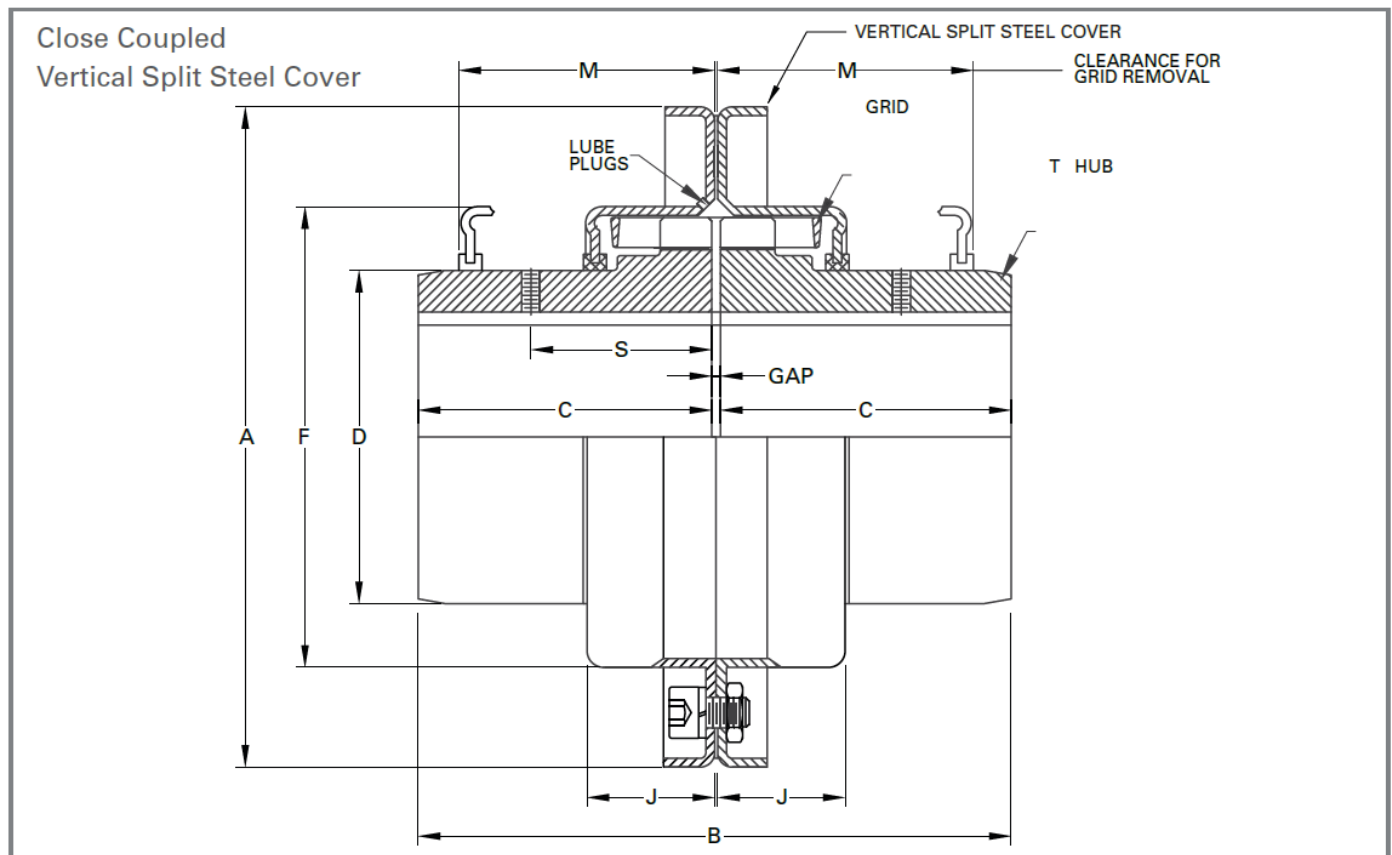
Size 1240



Sizes 1250~1260

| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |       |     |
|------|--------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|-------|-------|-------|-------|-----|
|      |                    |                 |               |               |                  |                  | A                        | B     | C     | D     | J     | GAP |
| 1150 | 39,800             | 1,500           | 215           | 108           | 234              | 1.95             | 453.1                    | 371.8 | 182.9 | 269.2 | 271.5 | 6   |
| 1160 | 55,900             | 1,350           | 240           | 121           | 317              | 2.81             | 501.9                    | 402.2 | 198.1 | 304.8 | 278.4 | 6   |
| 1170 | 74,600             | 1,225           | 280           | 134           | 448              | 3.49             | 566.9                    | 437.8 | 215.9 | 355.6 | 307.3 | 6   |
| 1180 | 103,000            | 1,100           | 300           | 153           | 619              | 3.76             | 629.9                    | 483.6 | 238.8 | 393.7 | 321.1 | 6   |
| 1190 | 137,000            | 1,050           | 335           | 153           | 776              | 4.40             | 675.6                    | 524.2 | 259.1 | 436.9 | 325.1 | 6   |
| 1200 | 186,000            | 900             | 360           | 178           | 1058             | 5.62             | 756.9                    | 564.8 | 279.4 | 497.8 | 355.6 | 6   |
| 1210 | 249,000            | 820             | 390           | 178           | 1424             | 10.50            | 844.6                    | 622.6 | 304.8 | 533.4 | 431.8 | 13  |
| 1220 | 336,000            | 730             | 420           | 203           | 1785             | 16.10            | 920.8                    | 663.2 | 325.1 | 571.5 | 490.2 | 13  |
| 1230 | 435,000            | 680             | 450           | 203           | 2267             | 24.00            | 1,003.3                  | 703.8 | 345.4 | 609.6 | 546.1 | 13  |
| 1240 | 559,000            | 630             | 480           | 254           | 2950             | 33.80            | 1,087.1                  | 749.6 | 368.3 | 647.7 | 647.7 | 13  |
| 1250 | 746,000            | 580             | -             | 254           | 3833             | 50.10            | 1,181.1                  | 815.6 | 401.3 | 711.2 | 698.5 | 13  |
| 1260 | 932,000            | 540             | -             | 254           | 4682             | 67.20            | 1,260.9                  | 876.6 | 431.8 | 762.0 | 762.0 | 13  |

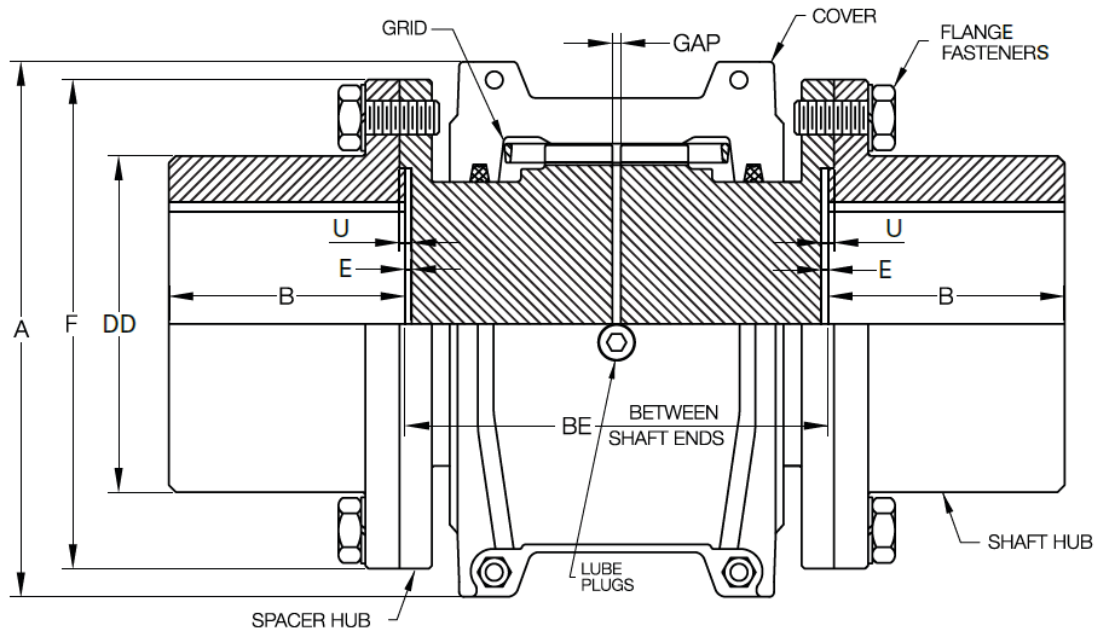
# T20 TYPE (CLOSE COUPLED - VERTICAL STEEL COVER)



| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |       |       |       |     |
|------|--------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|-------|-------|-------|-------|-------|-------|-----|
|      |                    |                 |               |               |                  |                  | A                        | B     | C     | D     | F     | J     | M     | GAP |
| 1020 | 52                 | 6,000           | 28            | 13            | 1.94             | 0.0272           | 112.3                    | 98.2  | 47.6  | 39.7  | 64.3  | 23.9  | 47.8  | 3   |
| 1030 | 149                | 6,000           | 35            | 13            | 2.58             | 0.0408           | 121.8                    | 98.2  | 47.6  | 49.2  | 73.8  | 24.9  | 47.8  | 3   |
| 1040 | 249                | 6,000           | 43            | 13            | 3.35             | 0.0544           | 129.8                    | 104.6 | 50.8  | 57.2  | 81.8  | 25.9  | 50.8  | 3   |
| 1050 | 435                | 6,000           | 50            | 13            | 5.32             | 0.0680           | 148.8                    | 123.6 | 60.3  | 66.7  | 97.6  | 30.5  | 60.5  | 3   |
| 1060 | 684                | 6,000           | 56            | 20            | 7.01             | 0.0862           | 163.1                    | 130.0 | 63.5  | 76.2  | 111.1 | 31.8  | 63.5  | 3   |
| 1070 | 994                | 5,500           | 67            | 20            | 10.20            | 0.1130           | 174.2                    | 155.4 | 76.2  | 87.3  | 122.3 | 33.5  | 66.5  | 3   |
| 1080 | 2,050              | 4,750           | 80            | 27            | 17.60            | 0.1720           | 201.2                    | 180.8 | 88.9  | 104.8 | 149.2 | 43.7  | 88.9  | 3   |
| 1090 | 3,730              | 4,000           | 95            | 27            | 25.40            | 0.2540           | 232.9                    | 199.8 | 98.4  | 123.8 | 168.3 | 47.0  | 95.2  | 3   |
| 1100 | 6,280              | 3,600           | 110           | 42            | 42.00            | 0.4260           | 267.9                    | 246.2 | 120.6 | 142.1 | 198.0 | 59.7  | 120.7 | 5   |
| 1110 | 9,320              | 3,000           | 120           | 42            | 54.40            | 0.5080           | 286.9                    | 259.0 | 127.0 | 160.3 | 216.3 | 62.7  | 124.0 | 5   |
| 1120 | 13,700             | 2,700           | 140           | 61            | 81.80            | 0.7350           | 320.2                    | 304.4 | 149.2 | 179.4 | 245.5 | 73.7  | 142.7 | 6   |
| 1130 | 19,900             | 2,400           | 170           | 67            | 122.00           | 0.9070           | 379.0                    | 329.8 | 161.9 | 217.5 | 283.8 | 74.9  | 146.0 | 6   |
| 1140 | 28,600             | 2,200           | 200           | 67            | 180.00           | 1.1300           | 417.1                    | 374.4 | 184.2 | 254.0 | 321.9 | 78.2  | 155.4 | 6   |
| 1150 | 39,800             | 2,000           | 215           | 108           | 230.00           | 1.9500           | 476.2                    | 371.8 | 182.9 | 269.2 | 374.4 | 107.3 | 203.2 | 6   |
| 1160 | 55,900             | 1,750           | 240           | 121           | 321.00           | 2.8100           | 533.4                    | 402.2 | 198.1 | 304.8 | 423.9 | 115.3 | 215.9 | 6   |
| 1170 | 74,600             | 1,600           | 280           | 134           | 448.00           | 3.4900           | 584.2                    | 437.8 | 215.9 | 355.6 | 474.7 | 120.1 | 226.1 | 6   |
| 1180 | 103,000            | 1,400           | 300           | 153           | 591.00           | 3.7600           | 630.0                    | 483.6 | 238.8 | 393.7 | 546.0 | 130.0 | -     | 6   |
| 1190 | 137,000            | 1,300           | 335           | 153           | 761.00           | 4.4000           | 685.0                    | 524.2 | 259.1 | 436.9 | 589.0 | 135.0 | -     | 6   |
| 1200 | 186,000            | 1,100           | 360           | 178           | 1021.00          | 5.6200           | 737.0                    | 564.8 | 279.4 | 497.8 | 652.0 | 145.0 | -     | 6   |

# T31 TYPE (FULL SPACER)

Full Spacer  
Horizontal Split Aluminium Cover

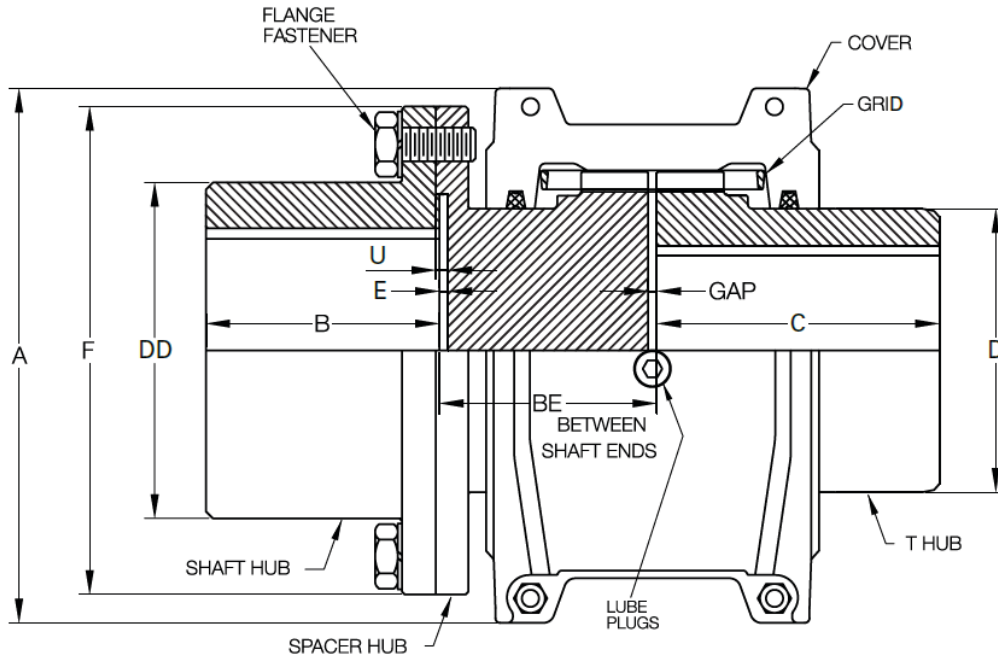


| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Add BE Weight (Kg) | Lube Wight (kg) | Dimensions (Millimeters) |       |       |       |       |     |       |     |     |                | Flange Fasteners |  |
|------|--------------------|-----------------|---------------|---------------|------------------|--------------------|-----------------|--------------------------|-------|-------|-------|-------|-----|-------|-----|-----|----------------|------------------|--|
|      |                    |                 |               |               |                  |                    |                 | A                        | B     | BE    |       | DD    | E   | F     | U   | GAP | No. per Flange | Dia (mm)         |  |
|      |                    |                 |               |               |                  |                    |                 |                          |       | Min   | Max   |       |     |       |     |     |                |                  |  |
| 1020 | 52                 | 4,500           | 35            | 13            | 3.85             | 0.010              | 0.0272          | 101.0                    | 34.9  | 88.9  | 203   | 52.4  | 0.8 | 85.7  | 1.8 | 5   | 4              | 6.3              |  |
| 1030 | 149                | 4,500           | 43            | 13            | 5.21             | 0.016              | 0.0408          | 109.0                    | 41.3  | 88.9  | 216   | 59.5  | 0.8 | 93.7  | 1.8 | 5   | 8              | 6.3              |  |
| 1040 | 249                | 4,500           | 56            | 13            | 8.43             | 0.021              | 0.0544          | 116.0                    | 54.0  | 88.9  | 216   | 78.6  | 0.8 | 112.7 | 1.8 | 5   | 8              | 6.3              |  |
| 1050 | 435                | 4,500           | 67            | 13            | 12.80            | 0.028              | 0.0680          | 137.8                    | 60.3  | 111.1 | 216   | 87.3  | 0.8 | 125.4 | 1.8 | 5   | 8              | 7.9              |  |
| 1060 | 684                | 4,350           | 80            | 20            | 20.50            | 0.037              | 0.0862          | 147.0                    | 73.0  | 122.2 | 330   | 103.2 | 1.8 | 144.5 | 2.8 | 5   | 8              | 9.5              |  |
| 1070 | 994                | 4,125           | 85            | 20            | 24.80            | 0.048              | 0.1130          | 162.2                    | 79.4  | 127.0 | 330   | 109.5 | 1.8 | 152.4 | 2.8 | 5   | 12             | 9.5              |  |
| 1080 | 2,050              | 3,600           | 95            | 27            | 40.00            | 0.069              | 0.1720          | 193.0                    | 88.9  | 155.5 | 406   | 122.2 | 1.8 | 177.8 | 2.8 | 5   | 12             | 12.7             |  |
| 1090 | 3,730              | 3,600           | 110           | 27            | 60.10            | 0.100              | 0.2540          | 212.0                    | 101.6 | 163.5 | 406   | 142.9 | 1.8 | 209.6 | 2.8 | 5   | 12             | 15.8             |  |
| 1100 | 6,280              | 2,440           | 130           | 39            | 90.20            | 0.120              | 0.4260          | 250.7                    | 90.4  | 203.2 | 406   | 171.4 | 1.6 | 250.8 | 3.2 | 6   | 12             | 19.0             |  |
| 1110 | 9,320              | 2,250           | 150           | 51            | 119.00           | 0.160              | 0.5080          | 270.0                    | 104.1 | 209.6 | 406   | 196.8 | 1.6 | 276.2 | 3.2 | 6   | 12             | 19.0             |  |
| 1120 | 13,700             | 2,025           | 170           | 64            | 178.00           | 0.200              | 0.7350          | 306.4                    | 119.4 | 246.1 | 406   | 225.4 | 1.6 | 319.1 | 4.0 | 10  | 12             | 22.2             |  |
| 1130 | 19,900             | 1,800           | 190           | 77            | 237.00           | 0.290              | 0.9070          | 343.8                    | 134.6 | 257.1 | 406   | 238.1 | 1.6 | 346.1 | 4.0 | 10  | 12             | 25.4             |  |
| 1140 | 28,600             | 1,650           | 210           | 89            | 327.00           | 0.400              | 1.1300          | 383.8                    | 152.4 | 266.7 | 406   | 266.7 | 1.6 | 385.8 | 4.0 | 10  | 12             | 28.5             |  |
| 1150 | 39,800             | 1,500           | 270           | 102           | 462.00           | 0.190              | 1.9500          | 453.1                    | 172.7 | 344.5 | 371.3 | 334.3 | 5.1 | 425.4 | -   | 10  | 14             | 22.2             |  |
| 1160 | 55,900             | 1,350           | 290           | 115           | 566.00           | 0.250              | 2.8100          | 501.4                    | 186.4 | 355.6 | 406.4 | 366.0 | 6.6 | 457.2 | -   | 10  | 14             | 22.2             |  |
| 1170 | 74,600             | 1,225           | 340           | 127           | 856.00           | 0.380              | 3.4900          | 566.4                    | 220.2 | 384.2 | 444.5 | 424.9 | 8.4 | 527.0 | -   | 10  | 16             | 25.4             |  |
| 1180 | 103,000            | 1,100           | 340           | 102           | 1,135.00         | 0.470              | 3.7600          | 629.9                    | 248.9 | 400.1 | 490.5 | 450.8 | 5.1 | 590.6 | 8.1 | 10  | 16             | 28.5             |  |
| 1190 | 137,000            | 1,050           | 380           | 115           | 1,525.00         | 0.600              | 4.4000          | 675.6                    | 275.8 | 411.2 | 530.4 | 508.0 | 5.1 | 660.4 | 8.1 | 10  | 18             | 31.7             |  |
| 1200 | 186,000            | 900             | 400           | 127           | 1,910.00         | 0.850              | 5.6200          | 756.9                    | 305.3 | 444.5 | 574.5 | 530.4 | 6.1 | 711.2 | 9.1 | 10  | 18             | 31.7             |  |

# T35 TYPE (HALF SPACER)

## Half Spacer

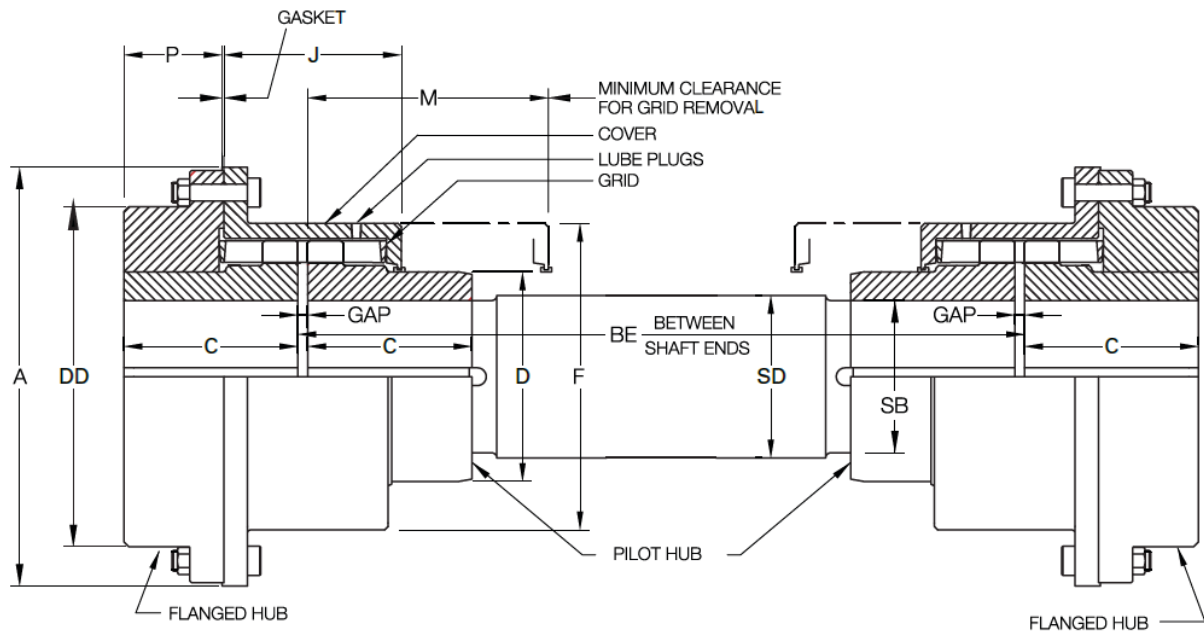
### Horizontal Split Aluminium Cover



| Size | Torque Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Add BE Weight (kg) | Lube Weight (Kg) | Dimensions (Millimeters) |       |       |       |       |     |       |     |     | Flange Fasteneres |          |
|------|--------------------|-----------------|---------------|---------------|------------------|--------------------|------------------|--------------------------|-------|-------|-------|-------|-----|-------|-----|-----|-------------------|----------|
|      |                    |                 |               |               |                  |                    |                  | A                        | B     | BE    |       | DD    | E   | F     | U   | GAP | No. per Flange    | Dia (mm) |
|      |                    |                 |               |               |                  |                    |                  |                          |       | Min   | Max   |       |     |       |     |     |                   |          |
| 1020 | 52                 | 4,500           | 35            | 13            | 3.85             | 0.010              | 0.0272           | 101.0                    | 34.9  | 88.9  | 203   | 52.4  | 0.8 | 85.7  | 1.8 | 5   | 4                 | 6.3      |
| 1030 | 149                | 4,500           | 43            | 13            | 5.21             | 0.016              | 0.0408           | 109.0                    | 41.3  | 88.9  | 216   | 59.5  | 0.8 | 93.7  | 1.8 | 5   | 8                 | 6.3      |
| 1040 | 249                | 4,500           | 56            | 13            | 8.43             | 0.021              | 0.0544           | 116.0                    | 54.0  | 88.9  | 216   | 78.6  | 0.8 | 112.7 | 1.8 | 5   | 8                 | 6.3      |
| 1050 | 435                | 4,500           | 67            | 13            | 12.80            | 0.028              | 0.0680           | 137.8                    | 60.3  | 111.1 | 216   | 87.3  | 0.8 | 125.4 | 1.8 | 5   | 8                 | 7.9      |
| 1060 | 684                | 4,350           | 80            | 20            | 20.50            | 0.037              | 0.0862           | 147.0                    | 73.0  | 122.2 | 330   | 103.2 | 1.8 | 144.5 | 2.8 | 5   | 8                 | 9.5      |
| 1070 | 994                | 4,125           | 85            | 20            | 24.80            | 0.048              | 0.1130           | 162.2                    | 79.4  | 127.0 | 330   | 109.5 | 1.8 | 152.4 | 2.8 | 5   | 12                | 9.5      |
| 1080 | 2,050              | 3,600           | 95            | 27            | 40.00            | 0.069              | 0.1720           | 193.0                    | 88.9  | 155.5 | 406   | 122.2 | 1.8 | 177.8 | 2.8 | 5   | 12                | 12.7     |
| 1090 | 3,730              | 3,600           | 110           | 27            | 60.10            | 0.100              | 0.2540           | 212.0                    | 101.6 | 163.5 | 406   | 142.9 | 1.8 | 209.6 | 2.8 | 5   | 12                | 15.8     |
| 1100 | 6,280              | 2,440           | 130           | 39            | 90.20            | 0.120              | 0.4260           | 250.7                    | 90.4  | 203.2 | 406   | 171.4 | 1.6 | 250.8 | 3.2 | 6   | 12                | 19.0     |
| 1110 | 9,320              | 2,250           | 150           | 51            | 119.00           | 0.160              | 0.5080           | 270.0                    | 104.1 | 209.6 | 406   | 196.8 | 1.6 | 276.2 | 3.2 | 6   | 12                | 19.0     |
| 1120 | 13,700             | 2,025           | 170           | 64            | 178.00           | 0.200              | 0.7350           | 306.4                    | 119.4 | 246.1 | 406   | 225.4 | 1.6 | 319.1 | 4.0 | 10  | 12                | 22.2     |
| 1130 | 19,900             | 1,800           | 190           | 77            | 237.00           | 0.290              | 0.9070           | 343.8                    | 134.6 | 257.1 | 406   | 238.1 | 1.6 | 346.1 | 4.0 | 10  | 12                | 25.4     |
| 1140 | 28,600             | 1,650           | 210           | 89            | 327.00           | 0.400              | 1.1300           | 383.8                    | 152.4 | 266.7 | 406   | 266.7 | 1.6 | 385.8 | 4.0 | 10  | 12                | 28.5     |
| 1150 | 39,800             | 1,500           | 270           | 102           | 462.00           | 0.190              | 1.9500           | 453.1                    | 172.7 | 344.5 | 371.3 | 334.3 | 5.1 | 425.4 | -   | 10  | 14                | 22.2     |
| 1160 | 55,900             | 1,350           | 290           | 115           | 566.00           | 0.250              | 2.8100           | 501.4                    | 186.4 | 355.6 | 406.4 | 366.0 | 6.6 | 457.2 | -   | 10  | 14                | 22.2     |
| 1170 | 74,600             | 1,225           | 340           | 127           | 856.00           | 0.380              | 3.4900           | 566.4                    | 220.2 | 384.2 | 444.5 | 424.9 | 8.4 | 527.0 | -   | 10  | 16                | 25.4     |
| 1180 | 103,000            | 1,100           | 340           | 102           | 1,135.00         | 0.470              | 3.7600           | 629.9                    | 248.9 | 400.1 | 490.5 | 450.8 | 5.1 | 590.6 | 8.1 | 10  | 16                | 28.5     |
| 1190 | 137,000            | 1,050           | 380           | 115           | 1,525.00         | 0.600              | 4.4000           | 675.6                    | 275.8 | 411.2 | 530.4 | 508.0 | 5.1 | 660.4 | 8.1 | 10  | 18                | 31.7     |
| 1200 | 186,000            | 900             | 400           | 127           | 1,910.00         | 0.850              | 5.6200           | 756.9                    | 305.3 | 444.5 | 574.5 | 530.4 | 6.1 | 711.2 | 9.1 | 10  | 18                | 31.7     |

# T50 TYPE (FLOATING SHAFT – STEEL COVER)

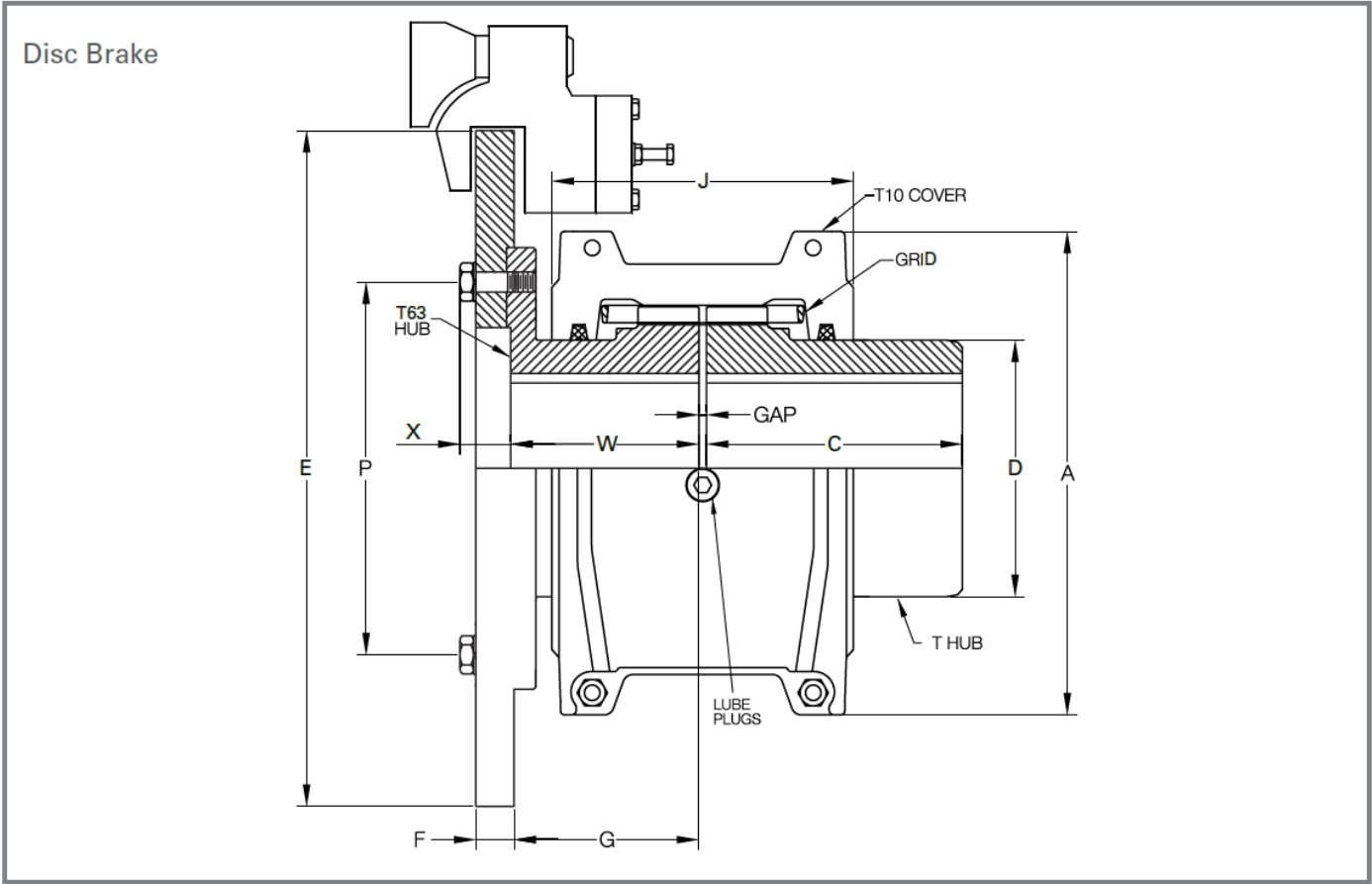
Floating Shaft  
Steel Cover



| Size | Torque Rating (Nm) | Max Bore (mm) |           | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (Kg) | Dimensions (Millimeters) |        |       |       |       |       |       |       |       |       |       |     |
|------|--------------------|---------------|-----------|---------------|------------------|------------------|--------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
|      |                    | Flanged Hub   | Pilot Hub |               |                  |                  | A                        | BE Min | C     | D     | DD    | F     | J     | M     | P     | SB    | SD    | GAP |
| 1030 | 149                | 35            | 27.0      | 13            | 3.90             | 0.0408           | 115.9                    | 162    | 47.6  | 49.2  | 83.7  | 80.8  | 50.3  | 77.7  | 26.8  | 27.0  | 28.6  | 3   |
| 1050 | 435                | 50            | 36.5      | 13            | 8.84             | 0.0680           | 157.5                    | 195    | 60.3  | 66.7  | 105.2 | 104.8 | 59.2  | 94.0  | 36.2  | 36.5  | 38.1  | 3   |
| 1070 | 994                | 67            | 49.2      | 20            | 15.60            | 0.1130           | 182.9                    | 213    | 76.2  | 87.3  | 126.5 | 129.0 | 65.9  | 103.1 | 49.8  | 49.2  | 50.8  | 3   |
| 1080 | 2,050              | 80            | 61.9      | 27            | 26.40            | 0.1720           | 218.4                    | 275    | 88.9  | 104.8 | 154.9 | 156.2 | 85.9  | 134.1 | 52.1  | 61.9  | 63.5  | 3   |
| 1090 | 3,730              | 95            | 74.6      | 27            | 37.20            | 0.2540           | 244.9                    | 294    | 98.4  | 123.8 | 180.3 | 175.8 | 92.2  | 143.8 | 58.5  | 74.6  | 76.2  | 3   |
| 1100 | 6,280              | 110           | 92.1      | 42            | 62.80            | 0.4260           | 286.0                    | 372    | 120.6 | 142.1 | 211.3 | 208.3 | 117.3 | 181.4 | 69.3  | 92.1  | 95.2  | 5   |
| 1110 | 9,320              | 120           | 101.6     | 42            | 83.60            | 0.5080           | 324.1                    | 391    | 127.0 | 160.3 | 245.4 | 228.6 | 122.2 | 190.5 | 73.9  | 101.6 | 104.8 | 5   |
| 1120 | 13,700             | 140           | 117.5     | 61            | 97.90            | 0.7350           | 327.2                    | 453    | 149.2 | 179.4 | 179.3 | 257.0 | 146.3 | 220.0 | 83.6  | 117.5 | 120.6 | 6   |
| 1130 | 19,900             | 170           | 133.4     | 67            | 140.00           | 0.9070           | 365.3                    | 463    | 161.9 | 217.5 | 217.4 | 295.1 | 149.5 | 225.0 | 94.8  | 133.4 | 136.5 | 6   |
| 1140 | 28,600             | 200           | 142.9     | 67            | 210.00           | 1.1300           | 419.1                    | 482    | 184.2 | 254.0 | 254.0 | 335.8 | 155.8 | 234.7 | 113.8 | 142.9 | 146.0 | 6   |
| 1150 | 39,800             | 215           | 161.9     | 108           | 277.00           | 1.9500           | 477.5                    | 549    | 182.9 | 271.4 | 269.2 | 391.2 | 177.4 | 268.2 | 101.7 | 161.9 | 165.1 | 6   |
| 1160 | 55,900             | 240           | 200.0     | 121           | 381.00           | 2.8100           | 548.6                    | 587    | 198.1 | 304.8 | 304.8 | 442.0 | 189.4 | 287.0 | 111.9 | 200.0 | 203.2 | 6   |
| 1170 | 74,600             | 280           | 200.0     | 134           | 519.00           | 3.4900           | 604.5                    | 622    | 215.9 | 355.6 | 355.6 | 494.3 | 201.0 | 304.8 | 124.6 | 200.0 | 203.2 | 6   |
| 1180 | 103,000            | 300           | 225.4     | 153           | 718.00           | 3.7600           | 665.5                    | 673    | 238.8 | 393.7 | 393.7 | 556.3 | 226.9 | 330.2 | 141.4 | 225.4 | 228.6 | 6   |
| 1190 | 137,000            | 335           | 250.8     | 153           | 898.00           | 4.4000           | 708.7                    | 711    | 259.1 | 436.9 | 436.9 | 599.4 | 241.7 | 349.5 | 157.6 | 250.8 | 254.0 | 6   |
| 1200 | 186,000            | 360           | 276.2     | 178           | 1,205.00         | 5.6200           | 782.3                    | 744    | 279.4 | 497.8 | 497.8 | 622.9 | 251.8 | 365.8 | 172.8 | 276.2 | 279.4 | 6   |

Fenner Grid Coupling

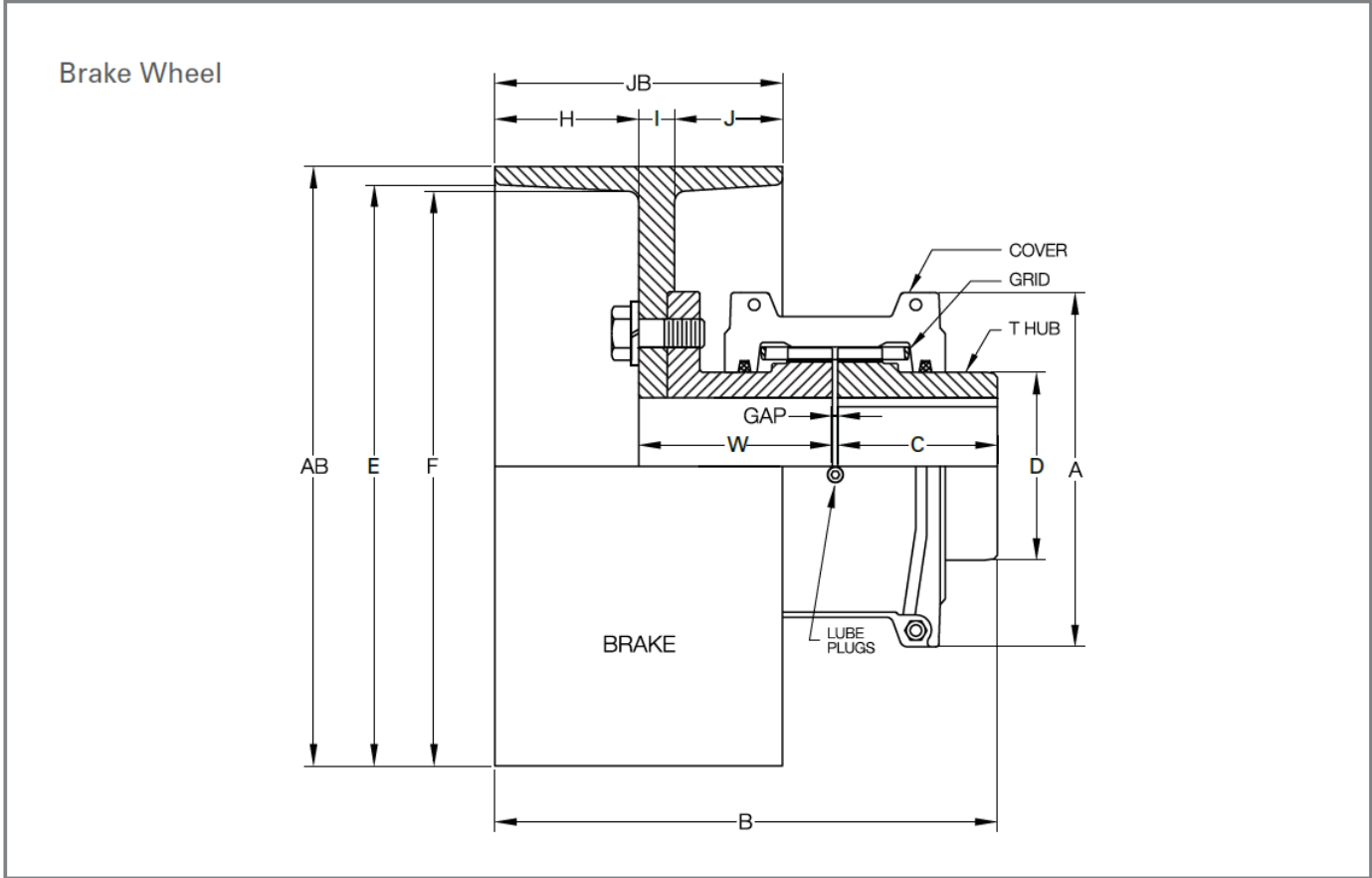
# T63 TYPE (DISC BRAKE)



| Size  | Brake Rating (Nm) | Allow Speed RPM | Max Bore (mm) | Min Bore (mm) | Cplg Weight (Kg) | Lube Weight (kg) | Dimensions (Millimeters) |       |       |       |       |       |       |      |     | Disc Brake Dia x Thickness (ExF) |
|-------|-------------------|-----------------|---------------|---------------|------------------|------------------|--------------------------|-------|-------|-------|-------|-------|-------|------|-----|----------------------------------|
|       |                   |                 |               |               |                  |                  | A                        | C     | D     | G     | J     | P     | W     | X    | GAP |                                  |
| 1020  | 11                | 4,500           | 28            | 13            | 2.55             | 0.0272           | 97.0                     | 47.6  | 39.7  | 59.9  | 67.8  | 71.4  | 60.5  | 11.7 | 3   |                                  |
| 1030  | 35                | 4,500           | 35            | 13            | 3.31             | 0.0408           | 105.7                    | 47.6  | 49.2  | 59.9  | 71.9  | 79.4  | 60.5  | 11.7 | 3   |                                  |
| 1040  | 65                | 4,500           | 43            | 13            | 4.26             | 0.0544           | 114.3                    | 50.8  | 57.2  | 59.9  | 72.0  | 98.4  | 60.5  | 11.7 | 3   |                                  |
| 1050  | 118               | 4,150           | 50            | 13            | 6.35             | 0.0680           | 135.1                    | 60.3  | 66.7  | 59.9  | 81.6  | 108.0 | 60.5  | 13.2 | 3   |                                  |
| 1060  | 209               | 3,800           | 56            | 20            | 9.57             | 0.0862           | 147.8                    | 63.5  | 76.2  | 88.6  | 97.9  | 125.4 | 88.1  | 15.2 | 3   |                                  |
| 1070  | 331               | 3,250           | 67            | 20            | 12.30            | 0.1130           | 158.8                    | 76.2  | 87.3  | 88.6  | 99.2  | 133.4 | 88.1  | 15.2 | 3   |                                  |
| 1080  | 637               | 2,850           | 80            | 27            | 19.80            | 0.1720           | 190.5                    | 88.9  | 104.8 | 88.6  | 118.4 | 152.4 | 88.1  | 18.0 | 3   |                                  |
| 1090  | 1,084             | 2,700           | 95            | 27            | 28.40            | 0.2540           | 211.1                    | 98.4  | 123.8 | 87.9  | 127.4 | 179.4 | 88.1  | 26.9 | 3   |                                  |
| 1100  | 1,897             | 2,400           | 110           | 42            | 47.70            | 0.4260           | 251.0                    | 120.6 | 142.1 | 119.1 | 156.6 | 215.9 | 119.1 | 29.5 | 5   |                                  |
| 1110  | 2,846             | 2,250           | 120           | 42            | 64.90            | 0.5080           | 269.7                    | 127.0 | 160.3 | 146.0 | 162.6 | 241.3 | 146.0 | 29.5 | 5   |                                  |
| 1120  | 4,336             | 2,025           | 140           | 61            | 92.10            | 0.7350           | 307.8                    | 149.2 | 179.4 | 150.1 | 191.7 | 276.2 | 149.4 | 33.0 | 6   |                                  |
| 1130  | 6,098             | 1,800           | 170           | 67            | 132.0            | 0.9070           | 345.9                    | 161.9 | 217.5 | 153.4 | 195.5 | 295.3 | 152.4 | 35.6 | 6   |                                  |
| 1140  | 8,808             | 1,650           | 200           | 67            | 185.0            | 1.1300           | 384.0                    | 184.2 | 254.0 | 159.8 | 201.7 | 330.2 | 158.8 | 38.1 | 6   |                                  |
| 1150  | 12,195            | 1,500           | 215           | 108           | 253.0            | 1.9500           | 453.1                    | 182.9 | 269.2 | 179.8 | 271.5 | 368.3 | 182.9 | 31.5 | 6   |                                  |
| 1160T | 16,938            | 1,350           | 240           | 121           | 336.0            | 2.8100           | 501.9                    | 198.1 | 304.8 | 195.1 | 278.4 | 400.0 | 198.1 | 31.5 | 6   |                                  |

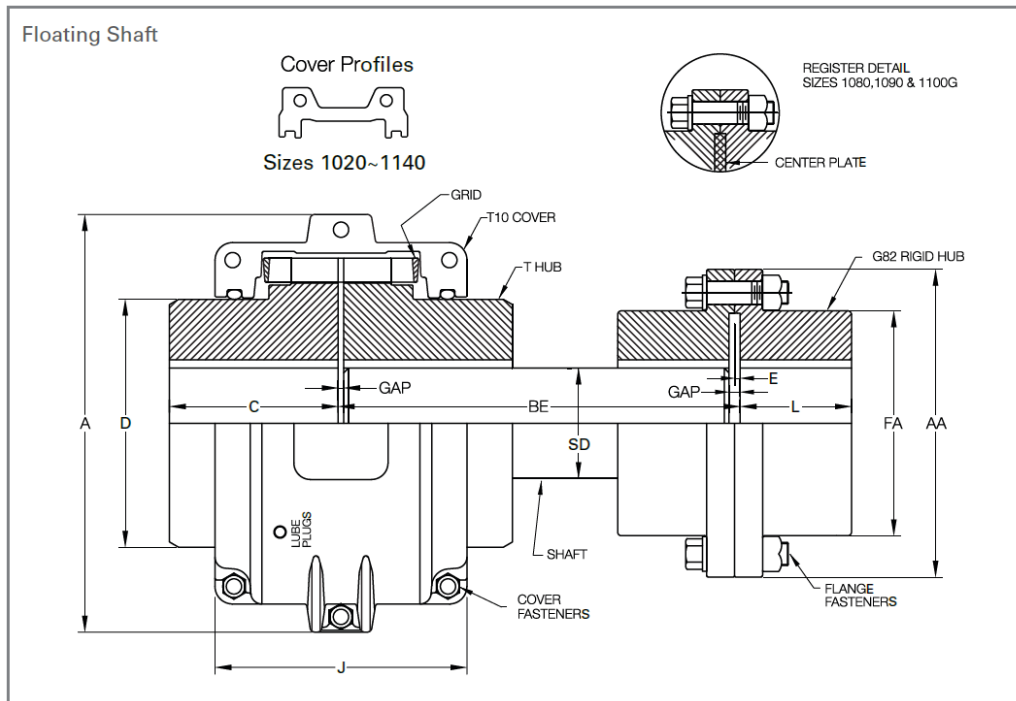
Fenner Grid Coupling

**KBW TYPE (DRUM BRAKE)**



| Size  | Brake Rating (Nm) | Max Bore (mm) | Min Bore (mm) | Lube Weight (kg) | Dimensions (Millimeters) |       |       |       |       |       |      |      |     | Brake Wheel Size |         |
|-------|-------------------|---------------|---------------|------------------|--------------------------|-------|-------|-------|-------|-------|------|------|-----|------------------|---------|
|       |                   |               |               |                  | A                        | C     | D     | E     | F     | H     | I    | J    | GAP | AB (mm)          | JB (mm) |
|       |                   |               |               |                  |                          |       |       |       |       |       |      |      |     |                  |         |
| 1020  | 10.78             | 30            | 12.7          | 0.03             | 101.0                    | 47.6  | 39.7  | -     | -     | -     | -    | -    | 3   | -                | -       |
| 1030  | 35.18             | 36            | 12.7          | 0.03             | 109.0                    | 47.6  | 49.2  | -     | -     | -     | -    | -    | 3   | -                | -       |
| 1040  | 64.97             | 44            | 12.7          | 0.05             | 116.0                    | 50.8  | 57.2  | 145.0 | 140.0 | 40.0  | 12.0 | 28.0 | 3   | 160              | 80      |
| 1050  | 117.80            | 50            | 12.7          | 0.05             | 137.8                    | 60.3  | 66.7  | 184.0 | 178.0 | 50.0  | 17.0 | 33.0 | 3   | 200              | 100     |
| 1060  | 208.64            | 57            | 19.1          | 0.09             | 147.0                    | 63.5  | 76.2  | 184.0 | 178.0 | 50.0  | 17.0 | 33.0 | 3   | 200              | 100     |
| 1070  | 330.55            | 68            | 19.1          | 0.11             | 162.2                    | 76.2  | 87.3  | 230.0 | 224.0 | 62.5  | 22.0 | 40.5 | 3   | 250              | 125     |
| 1080  | 636.71            | 82            | 27.0          | 0.17             | 193.0                    | 88.9  | 104.8 | 292.0 | 285.0 | 80.0  | 23.0 | 57.0 | 3   | 315              | 160     |
| 1090  | 1,083.88          | 95            | 27.0          | 0.25             | 212.0                    | 98.4  | 123.8 | 330.0 | 320.0 | 90.0  | 26.0 | 64.0 | 3   | 355              | 180     |
| 1100  | 1,896.79          | 107           | 41.3          | 0.43             | 250.7                    | 120.6 | 142.1 | 374.0 | 362.0 | 100.0 | 28.0 | 72.0 | 5   | 400              | 200     |
| 1110  | 2,845.14          | 117           | 41.3          | 0.51             | 270.0                    | 127.0 | 160.3 | 422.0 | 410.0 | 112.0 | 32.0 | 80.0 | 5   | 450              | 224     |
| 1120  | 4,335.52          | 136           | 60.3          | 0.73             | 306.4                    | 149.2 | 179.4 | 462.0 | 445.0 | 125.0 | 35.0 | 90.0 | 6   | 500              | 250     |
| 1130  | 6,488.78          | 165           | 66.7          | 0.91             | 343.8                    | 161.9 | 217.5 | 516.0 | 495.0 | 140.0 | 45.0 | 95.0 | 6   | 560              | 280     |
| 1140T | 8,806.48          | 184           | 66.7          | 1.13             | 383.8                    | 184.2 | 254.0 | 516.0 | 495.0 | 140.0 | 45.0 | 95.0 | 6   | 560              | 280     |

# T10 / G82 TYPE (FLOATING SHAFT)



| T10Cplg Size | G82 Cplg Size | Torque Rating (Nm) | Allow Spd RPM | Max Bore (mm) |              | Min Bore (mm) |              | Cplg Weight (Kg) | Add BE Weight (Kg) | Lube Weight (Kg) | Fasteners      |          |
|--------------|---------------|--------------------|---------------|---------------|--------------|---------------|--------------|------------------|--------------------|------------------|----------------|----------|
|              |               |                    |               | T10 Hub (mm)  | G82 Hub (mm) | T10 Hub (mm)  | G82 Hub (mm) |                  |                    |                  | No. per Flange | Dia (mm) |
| 1110         | 1035          | 9,320              | 2,250         | 120           | 164          | 42            | 51           | 125              | 0.0804             | 0.508            | 8              | 0.750    |
| 1120         | 1040          | 13,700             | 2,025         | 140           | 196          | 61            | 64           | 183              | 0.0992             | 0.735            | 8              | 0.750    |
| 1130         | 1045          | 19,900             | 1,800         | 170           | 216          | 67            | 76           | 261              | 0.1430             | 0.907            | 10             | 0.750    |
| 1140         | 1050          | 28,600             | 1,650         | 200           | 242          | 67            | 89           | 382              | 0.2090             | 1.130            | 8              | 0.875    |
| 1150         | 1055          | 39,800             | 1,500         | 215           | 267          | 108           | 102          | 508              | 0.2540             | 1.950            | 14             | 0.875    |
| 1160         | 1060          | 55,900             | 1,350         | 240           | 293          | 121           | 115          | 645              | 0.3220             | 2.810            | 14             | 0.875    |
| 1170         | 1070          | 74,600             | 1,225         | 280           | 341          | 134           | 127          | 983              | 0.3970             | 3.490            | 16             | 1.000    |
| 1180         | 1080          | 103,000            | 1,100         | 300           | 341          | 153           | 102          | 1313             | 0.4800             | 3.760            | 16             | 1.125    |
| 1190         | 1,090         | 137,000            | 1,050         | 335           | 380          | 153           | 115          | 1756             | 0.5720             | 4.400            | 18             | 1.250    |
| 1200         | 1100          | 186,000            | 900           | 360           | 405          | 178           | 127          | 2254             | 0.6710             | 5.620            | 18             | 1.250    |

| T10 Cplg Size | G82 Cplg Size | Dimensions (mm) |       |       |       |       |     |       |       |       |       |       | GAP   |         |
|---------------|---------------|-----------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|---------|
|               |               | A               | BE    |       | C     | D     | E   | J     | L     | AA    | FA    | SD    | T Hub | G82 Hub |
|               |               |                 | Min   | Max   |       |       |     |       |       |       |       |       |       |         |
| 1110          | 1035          | 269.7           | 239.0 | 304.8 | 127.0 | 160.3 | 2.5 | 161.5 | 102.1 | 279.4 | 211.3 | 114.3 | 5     | 5       |
| 1120          | 1040          | 307.8           | 279.1 | 355.6 | 149.2 | 179.4 | 4.1 | 191.5 | 115.3 | 317.5 | 245.4 | 127.0 | 6     | 8       |
| 1130          | 1045          | 345.9           | 307.1 | 381.0 | 161.9 | 217.5 | 4.1 | 195.1 | 130.6 | 345.9 | 274.1 | 152.4 | 6     | 8       |
| 1140          | 1050          | 384.0           | 348.0 | 406.4 | 184.2 | 254.0 | 5.1 | 201.2 | 147.3 | 388.9 | 305.8 | 184.2 | 6     | 10      |
| 1150          | 1055          | 453.1           | 372.1 | 406.4 | 182.9 | 269.2 | 5.1 | 271.5 | 172.7 | 425.4 | 334.3 | 203.2 | 6     | 10      |
| 1160          | 1060          | 501.9           | 404.1 | 457.2 | 198.1 | 304.8 | 6.6 | 278.4 | 186.4 | 457.2 | 366.0 | 228.6 | 6     | 13      |
| 1170          | 1070          | 566.9           | 459.2 | 508.0 | 215.9 | 355.6 | 8.4 | 307.3 | 220.2 | 527.0 | 424.9 | 254.0 | 6     | 17      |
| 1180          | 1080          | 629.9           | 510.3 | 660.4 | 238.8 | 393.7 | 8.1 | 321.1 | 248.9 | 590.6 | 450.8 | 279.4 | 6     | 16      |
| 1190          | 1090          | 675.6           | 557.5 | 711.2 | 259.1 | 436.9 | 8.1 | 325.1 | 275.8 | 660.4 | 508.0 | 304.8 | 6     | 16      |
| 1200          | 1100          | 756.9           | 609.3 | 762.0 | 279.4 | 497.8 | 9.1 | 355.6 | 305.3 | 711.2 | 530.4 | 330.2 | 6     | 18      |

# INSTALLATION

Requirements are wrenches, a straight edge and feeler gauges to install the couplings. Its size from 1020 to 1090 are furnished for a clearance fit with a setscrew over the keyway. Larger sizes (from 1100 and up) are furnished for an interference fit without a setscrew.

Clearance Fit Hubs: Clean all parts using a non-

flammable solvent. Check hubs, shafts and keyways for burrs. Install keys. Mount hubs with the flange face flush with shaft ends (or as otherwise specified). Tighten setscrews. Do not heat clearance fit hubs.

**Interference Fit Hubs:** Furnished without setscrews.

## 1) Mount Seals and Hubs

Lock out starting switch of prime mover. Clean metal parts using a non-flammable solvent. Lightly coat seals with grease and place on shafts before mounting hubs. Heat interference fit hubs. Seal keyways to prevent leakage. Mount hubs on their corresponding shafts so that the hub face is flush with the end of the shaft (unless otherwise indicated).

## 2) Gap and Alignment

Use a spacer bar which is equal in thickness to the gap between shafts. Insert bar and same depth at 90° intervals and measure clearance between bar and hub face with feelers. The difference in minimum and maximum measurements must not exceed the angular installation limits.

## 3) Offset Alignment

Align a straight edge so that it rests squarely on both hubs as shown in the diagram. Check with feelers. The clearance must not exceed the parallel offset installation limits. Tighten all foundation bolts and repeat Steps 2 and 3. Realign coupling if necessary.

## 4) Insert Grid

Pack the gap and grooves with specified lubricant before inserting grid. When grids are furnished in two or more segments, install them so that all cut ends extend in the same direction. This will assure correct contact between the grid and any nonrotating pins in each half of the covers.

Spread the grid just enough so that it passes over the coupling teeth. Seal with a soft mallet.

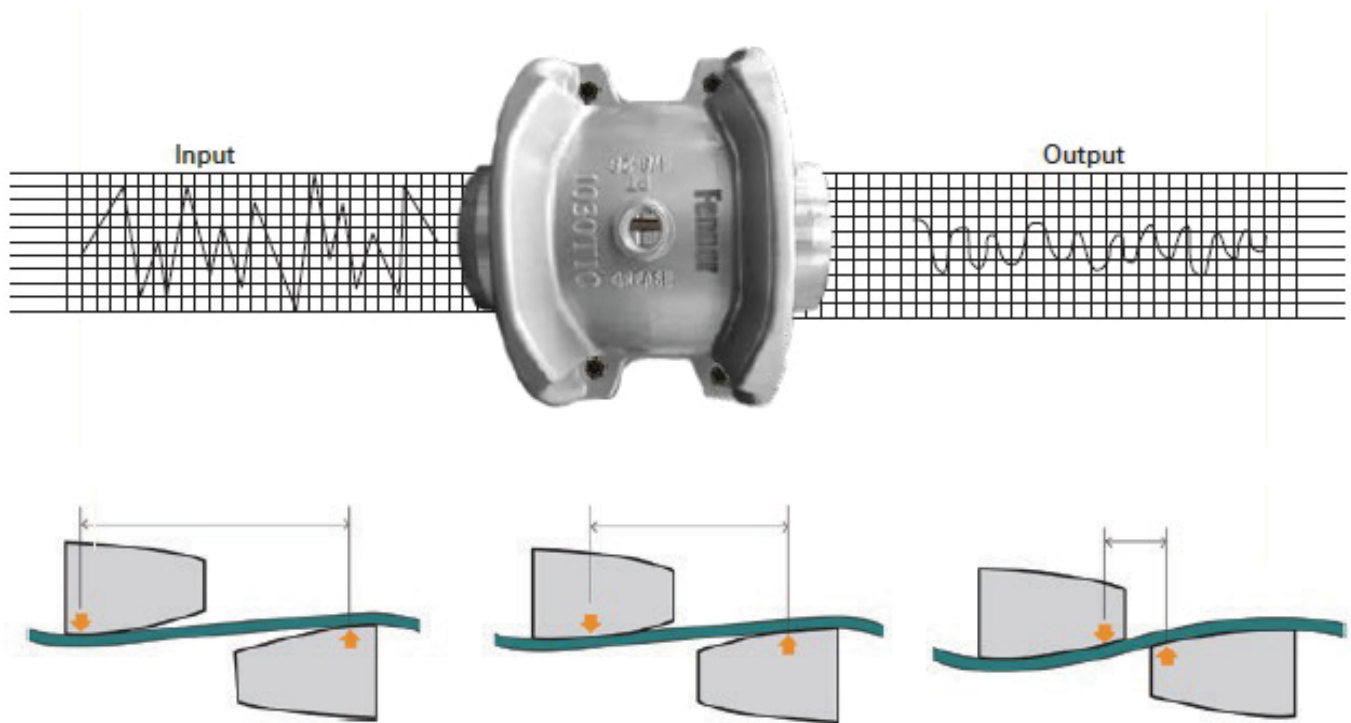
## 5) Pack

Pack any spaces between and around the grid with as much lubricant as possible. Wipe off any excess so that any remaining lubricant is flush with top of grid. Position hub seals to line up with the grooves in the cover. Position gaskets on lower cover half flange and assemble the two covers so that the match marks are on the same side. If shafts are not horizontally level, or if the coupling is to be used vertically, assemble cover halves with the lug so that the match marks are up or are on the high side. Push gaskets in against the seals as far as possible. Secure cover halves with fasteners and tighten to torque. Make sure gaskets stay in position while the fasteners are tightened.

## Annual Maintenance

- Check alignment. If the maximum operating misalignment limits exceeded, realign the coupling to the recommended installation limits.
- Check that all fasteners are tightened to torque.
- Inspect Oil Seal and Gasket to determine if replacement is required. Replace if the Seal and gasket are leaking grease.
- Disassemble the coupling and inspect for wear. Replace any worn parts. Clean grease from coupling and repack with new grease. Install coupling using a new gasket.

## VIBRATION & SHOCK



### NORMAL LOAD

As the load increases, the distance between the contact points on the hub teeth is shortened, but a free span still remains to cushion the load.

### LIGHT LOAD

The grid contacts near the outer edges of the hub teeth. A long span between the points of contact remains free to flex under load.

### SHOCK LOAD

The coupling is flexible within its rated capacity. Under extreme overloads, the grid bears fully on the hub teeth and transmits full load directly.

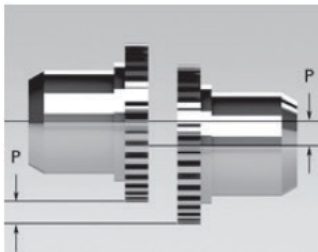
## LUBRICATION

- Grease the Grid & Hub teeth before assembling covers.
- Fill up grease through the lubricants plug of the assembled coupling.
- Select grease according to the ambient temperature range.
- Replenish grease every three months or 240-250 hours of operation.
- Replace deteriorated grease every three years or 4,000 operating hours.

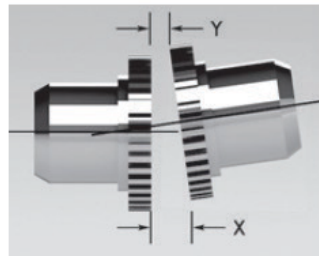
Grease: Shell Gadus S3 High Speed Coupling Grease or Shell Gadus S2 V220 1

## ALIGNMENT DATA

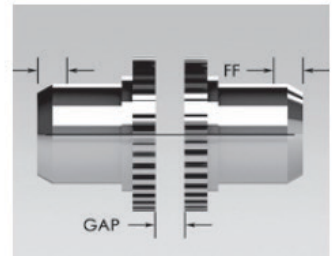
Accurate alignment results to maximum life and minimum maintenance for the coupling and the connected machinery. The amount of time for a coupling to reach its maximum operating limits is a function of load, operating speed, and lubrication. Maximum operating values listed in the table below are based on the allowable RPM listed on the catalogue. Values listed are based on the use of the specified gaps, use of standard coupling components, standard assemblies, and catalogue allowable speeds. Values may be combined for installation or operating condition. Parallel misalignment is the distance between the centres of each shaft. Angular misalignment is dimension X minus dimension Y as shown in the drawing below. End float is the axial movement of the hubs within the covers as measured from "O" gap. This measure assumes zero angular and zero parallel misalignment.



Parallel Misalign-



Angular Misalign-



End Float

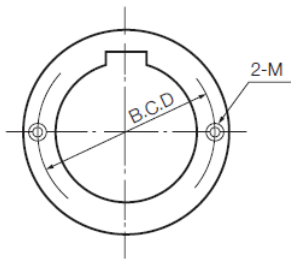
Fenner Grid Coupling

# MISALIGNMENT CAPACITY

| Size | Recommended Installation   |                        |                        | Operating                  |                          |                            | Fastener Tightening Torque Rating (Nm) |
|------|----------------------------|------------------------|------------------------|----------------------------|--------------------------|----------------------------|----------------------------------------|
|      | Parallel Offset-P Max (mm) | Angular (X-Y) Max (mm) | Hub Gap (10%) Max (mm) | Parallel Offset-P Max (mm) | Angular (X - Y) Max (mm) | End Float (2 x F) Max (mm) |                                        |
| 1020 | 0.15                       | 0.08                   | 3                      | 0.30                       | 0.25                     | 5.33                       | 11.30                                  |
| 1040 | 0.15                       | 0.08                   | 3                      | 0.30                       | 0.33                     | 5.36                       | 11.30                                  |
| 1060 | 0.20                       | 0.13                   | 3                      | 0.41                       | 0.46                     | 6.55                       | 22.60                                  |
| 1080 | 0.20                       | 0.15                   | 3                      | 0.41                       | 0.61                     | 7.32                       | 22.60                                  |
| 1100 | 0.25                       | 0.20                   | 3                      | 0.51                       | 0.84                     | 10.90                      | 35.00                                  |
| 1120 | 0.28                       | 0.25                   | 5                      | 0.56                       | 1.02                     | 14.12                      | 73.00                                  |
| 1140 | 0.28                       | 0.33                   | 6                      | 0.56                       | 1.35                     | 14.50                      | 73.00                                  |
| 1160 | 0.30                       | 0.46                   | 6                      | 0.60                       | 1.78                     | -                          | -                                      |
| 1180 | 0.38                       | 0.56                   | 6                      | 0.76                       | 2.26                     | -                          | -                                      |
| 1200 | 0.38                       | 0.69                   | 6                      | 0.76                       | 2.72                     | -                          | -                                      |
| 1220 | 0.46                       | 0.81                   | 13                     | 0.91                       | 3.28                     | -                          | -                                      |
| 1240 | 0.48                       | 0.97                   | 13                     | 0.97                       | 3.91                     | -                          | -                                      |
| 1260 | 0.51                       | 1.17                   | 13                     | 1.02                       | 4.65                     | -                          | -                                      |

Fenner Grid Coupling

# PULLER HOLES



| Size | B.C.D (mm) | Tap Size       | Size | B.C.D (mm) | Tap Size       |
|------|------------|----------------|------|------------|----------------|
| 1150 | 263        | M16 x 2.0 x 24 | 1210 | 497        | M36 x 4.0 x 45 |
| 1160 | 298        | M22 x 2.5 x 27 | 1220 | 541        | M36 x 4.0 x 45 |
| 1170 | 338        | M30 x 3.5 x 32 | 1230 | 586        | M36 x 4.0 x 45 |
| 1180 | 378        | M30 x 3.5 x 38 | 1240 | 633        | M36 x 4.0 x 45 |
| 1190 | 413        | M36 x 4.0 x 45 | 1250 | 690        | M36 x 4.0 x 45 |
| 1200 | 456        | M36 x 4.0 x 45 | 1260 | 749        | M36 x 4.0 x 45 |



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