**MISALIGNMENT:**

The crowning of the teeth allows the coupling to withstand parallel misalignment up to a maximum of 10.25 mm and angular misalignment up to a maximum of 1.5° per gear mesh. The coupling can also absorb axial displacement of the shafts up to a maximum of 3 mm.

**SELECTION OF THE COUPLINGS:**

The following details are required for selection of the coupling:

1. Type of driven machine.
2. Power absorbed by the driven machine and Peak load.
3. Speed and Diameter of the connecting shafts and space available for accommodating the coupling.
4. Maximum misalignment to be compensated.
5. Surrounding temperature.
6. Any other special feature of the drive.

**Example:** A gear coupling is required to transmit 250 KW from an Electric Motor running at 730 rev/min to a Pulper Machine. Considering the peak load as 180% of full load, the Motor shaft as 100 mm and the Pulper shaft as 110 mm, select a suitable gear coupling.

- **a)** Service factor : 2 (for heavy duty application)
- **b)** Peak load : 180% of full load.
- **c)** Design power : 250 x 180/100 x 2 = 900 KW
- **d)** Power to be transmitted at 100 rev/min : 900 x 100 / 730 = 123.3 KW
- **e)** Coupling size : By referring to the Table, coupling size FGC 5, has got a rating of 150 KW at 100 rev/min which exceeds the required power of 123.3KW. The bore range is 60 mm to 110 mm. Hence, size FGC 5 is selected for the application.
**Fenner Gear Couplings**

**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

**SEAL CARRIERS:** Seal carriers have been provided for sizes from FGC 11 to FGC 19 facilitate inspection and replacement of O’ rings without disturbing the alignment.

**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.

**Fenner Gear Couplings**

**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:** Indian Oil - Senovorm EP 1 or equivalent.
- **Oil:** Indian Oil - Senovorm SP 680 or equivalent.