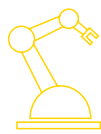


F4C-C 25



Fine Cyclo F4C-C 25
Hollow Bore Gearbox



F4C–C 25 – hollow shaft precision unit with strenghtend bearings

The new gearbox in the C Series was developed specifically for applications requiring particularly high moment ratings and moment stiffness together with high levels of positioning accuracy. The integrated angular ball bearing allow higher output side loads, such as those required in machine tools, positioners and in robotic applications.

The new F4C-C 25 has a 49 mm hollow shaft through hole which allows to pass shafts and other media through.

The gearbox has an outer diameter of 185 millimetres and is thus particularly compact and can replace the previous type F2C-C 25 without any problem if the application demands it. The precision gearbox makes use of the proven Cyclo principle.

The single-stage reducer is completely sealed and maintenance-free.

The high degree of overlap between the cycloid disc lobes and the outer pins and the smooth distribution of forces within the

gear unit enable this compact unit to achieve a nominal torque of up to 447 Nm and an acceleration /deceleration torque of up to 1030 Nm.

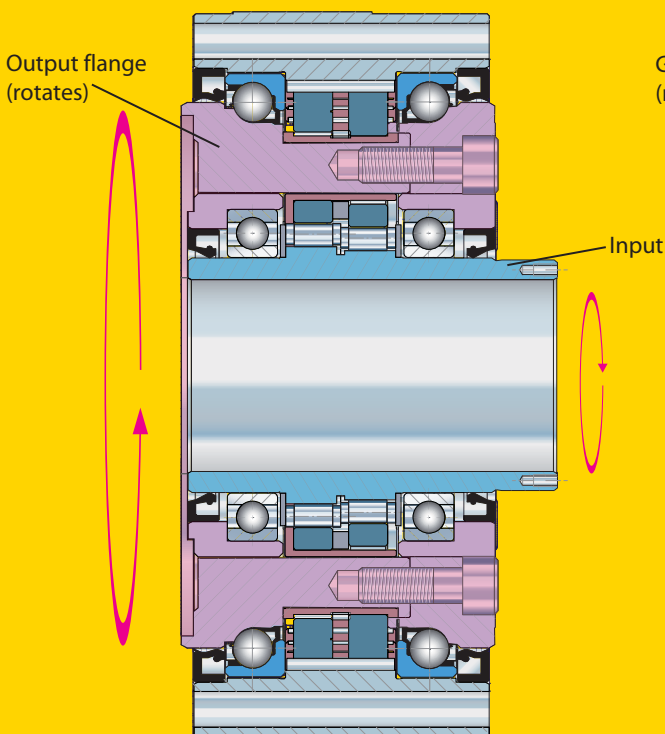
In case of an emergency stop, these precision gear units can safely withstand a load of up to 2060 Nm.

The integrated angular ball bearings allow for tilt moments of up to 1850 Nm on the output side while retaining a tilt resistance of 1150 Nm/arcmin.

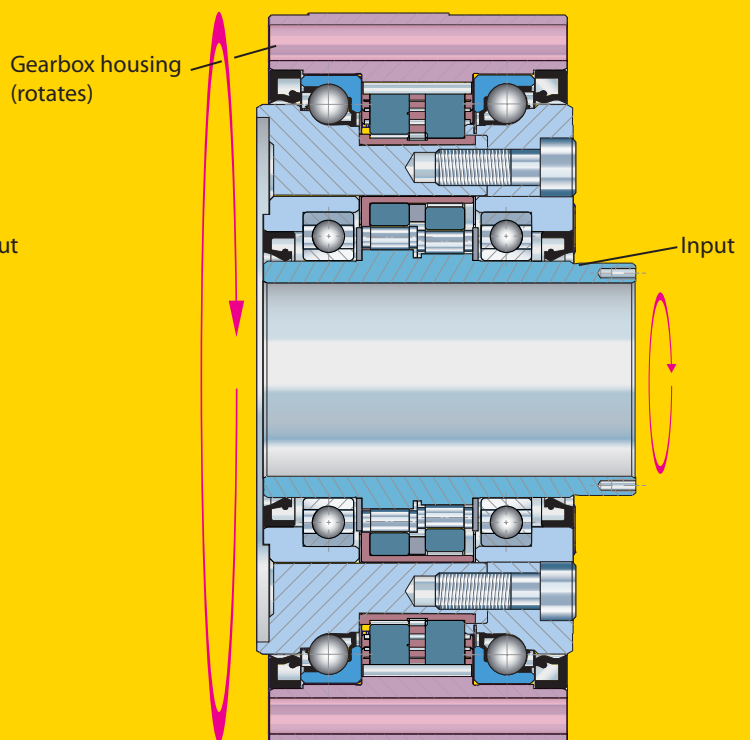
The new C 25 model is the smallest size within the C-series, currently comprising five different sizes with differend bearing arrangements.

Application examples

Output flange rotates (standard design)

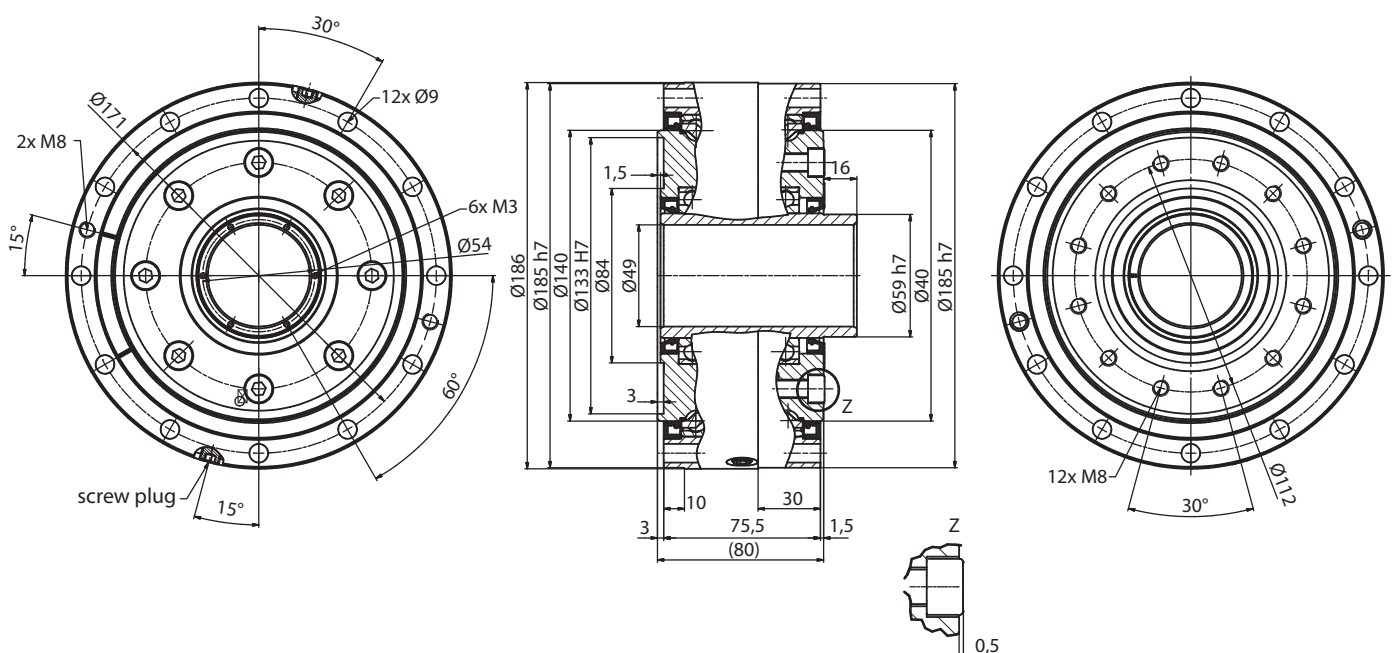


Gearbox housing rotates (standard design)



Technical data F4C-C 25

| Technical data type F4C-C 25 | Description | Unit | Value |
|---|----------------------|-----------------------|-----------|
| Reduction ratio Cyclo stage | i_{Cyclo} | | 59/89/119 |
| Total reduction ratios standard/output flange rotates | i_{ges} | | 59/89/119 |
| Total reduction ratios standard/gearbox housing rotates | i_{ges} | | 60/90/120 |
| Hollow through bore | | [mm] | 49 |
| Rated output torque T_{2N} at $n_2 = 15 \text{ min}^{-1}$ | $T_{2N,15}$ | [Nm] | 447 |
| Acceleration torque | T_{2A} | [Nm] | 1,030 |
| Emergency stop torque (1,000 x during lifetime) | $T_{2\text{max}}$ | [Nm] | 2,060 |
| Moment rating | T_k | [Nm] | 1,850 |
| Allowable axial load pull | $F_{A2 \text{ Zug}}$ | [N] | 7,848 |
| Lost Motion | LM_{φ} | [arcmin] | <1 |
| Torsional stiffness at 50 - 100% T_{2N} | Θ | [Nm/arcmin] | 180 |
| Moment stiffness (main bearing) | Θ_1 | [Nm/arcmin] | 1,150 |
| Internal bearing distance | mm | L1 | 162 |
| Distance | mm | a | 43.2 |
| Maximum allowable input speed (short time) | $n_{1\text{max}}$ | [min^{-1}] | 3,500 |
| Maximum allowable input speed 50% ED | $n_{1\text{max}}$ | [min^{-1}] | 2,900 |
| Maximum allowable input speed 100% ED (10 min) | $n_{1\text{max}}$ | [min^{-1}] | 1,450 |
| Maximum outer diameter of gear unit | d | [mm] | 185 |
| Weight | m | [kg] | 12.5 |
| Lifetime lubrication | | | grease |
| Mounting position | | | Universal |



Sumitomo Drive Technologies

Sumitomo (SHI) Cyclo Drive Germany GmbH

European Headquarters

Cyclostraße 92
85229 Markt Indersdorf

Tel. +49 8136 66-0
Fax +49 8136 5771

www.sumitomodriveeurope.com



New facility in Markt Indersdorf