

FluoroSeal



FMO-C GEAR OPERATOR

**ISO5211/IP65
DECLUTCHABLE OVERRIDE
GEAR OPERATOR**



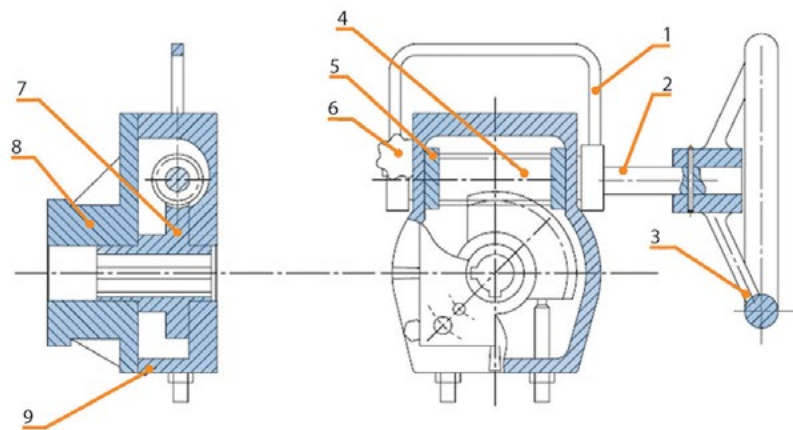
The FMO-C series declutchable override gear box were specially designed to be used with butterfly valve, ball valve and plug valve jointly with pneumatic actuators.

This device allows for manual operation during installation, system testing and in the event of air supply failure.

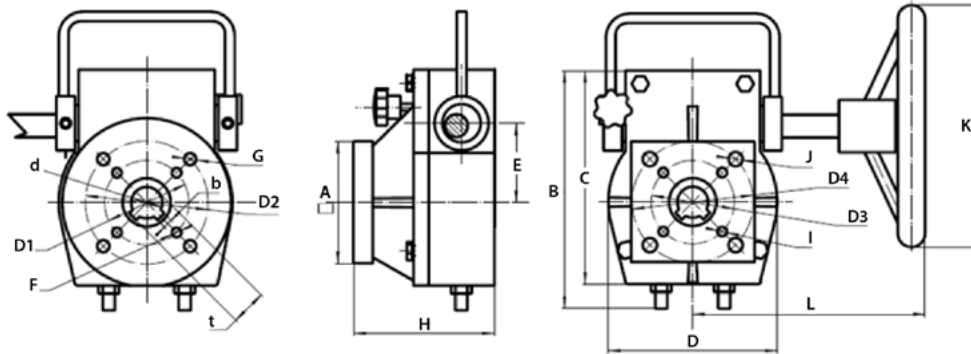
MAIN FEATURES

- Simple, compact & light weight design
- Manufactured with cast iron housing
- ISO 5211 direct mounting patterns
- Easily selectable gear operator relative to valve, with two keyways 90° apart in the worm gear.
- Quick release mechanism from pneumatic to manual operation and back.
- Filled with special lubricant before leaving the factory
- Weatherproof: IP65
- Output torque ranges from 300Nm to 22100Nm

PARTS AND MATERIALS



| Item | Description | Material |
|------|--------------------------------|---|
| 1 | Handle | Carbon steel |
| 2 | Worm Shaft | AISI 1045 |
| 3 | Hand Wheel | Cast Iron HT200 |
| 4 | Worm | AISI 1045 |
| 5 | Eccentric Bushing Sub-assembly | Carbon steel |
| 6 | Stop Screw | Carbon steel |
| 7 | Worm Gear | Ductile Iron QT500-7 |
| 8 | Bracket Cap | Cast Iron HT200 |
| 9 | Body | Die-Cast Aluminium (for 26:1, 38:1, 54:1) or Cast Iron HT200 (for 80:1, 78:1, 98:1, 100:1, 118:1) |

DIMENSIONS

**FMO-C DECLUTCHABLE
OVERRIDE GEAR OPERATOR**

| Model | d | b | t | D1 | F | D2 | G | A | H | E | D3 | I | D4 | J | K | L | B | C | D |
|------------|-----|----|-------|-----|-----|-----|-----|------|-----|------|-----|-----|-----|-----|-------|-----|------|-----|-----|
| | mm | mm | mm | mm | | mm | | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| FMO-C26:1 | 22 | 6 | 24.8 | - | - | 70 | M8 | 70 | 99 | 50.5 | - | - | 70 | Φ9 | Φ200 | 155 | 160 | 145 | 110 |
| FMO-C38:1 | 26 | 8 | 29.3 | 70 | M8 | 102 | M10 | 100 | 117 | 65 | 70 | Φ9 | 102 | Φ12 | Φ200 | 195 | 195 | 175 | 140 |
| | 38 | 10 | 41.3 | 70 | M8 | 102 | - | 110 | 117 | 65 | 70 | Φ9 | 102 | Φ12 | Φ200 | 195 | 195 | 175 | 140 |
| FMO-C54:1 | 38 | 10 | 41.3 | 125 | M12 | - | M16 | 130 | 118 | 85 | 125 | Φ14 | - | - | Φ300 | 205 | 235 | 215 | 180 |
| | 48 | 14 | 51.8 | - | - | 140 | - | 130 | 118 | 85 | - | - | 140 | Φ18 | Φ300 | 205 | 235 | 215 | 180 |
| FMO-C80:1 | 48 | 14 | 51.8 | 140 | M16 | - | M20 | 156 | 148 | 124 | 140 | Φ18 | - | - | Φ400 | 245 | 320 | 298 | 250 |
| | 60 | 18 | 64.4 | 165 | M20 | 165 | M20 | 156 | 148 | 124 | - | Φ22 | 165 | Φ22 | Φ400 | 245 | 320 | 298 | 250 |
| FMO-C78:1 | 60 | 18 | 64.4 | 165 | M20 | - | - | 220 | 150 | 142 | 165 | Φ22 | 165 | Φ22 | Φ600 | 245 | 320 | 298 | 250 |
| | 80 | 22 | 85.6 | - | - | - | - | 220 | 150 | 142 | - | - | - | - | Φ800 | 265 | 320 | 340 | 285 |
| FMO-C98:1 | 80 | 22 | 85.6 | 165 | M20 | - | - | 230 | 195 | 229 | 165 | Φ22 | - | - | Φ800 | 410 | 360 | 530 | 460 |
| FMO-C100:1 | 100 | 28 | 106.6 | 254 | M16 | - | - | 300 | 195 | 258 | 254 | Φ18 | - | - | Φ800 | 430 | 550 | 585 | 520 |
| FMO-C118:1 | 120 | 32 | 129.3 | 356 | M30 | - | - | Φ445 | 250 | 391 | 356 | Φ32 | - | - | Φ1000 | 550 | 900 | 870 | 800 |
| | 180 | 45 | 196 | 483 | M36 | - | - | Φ600 | 275 | 390 | 483 | Φ39 | - | - | Φ600 | 600 | 1050 | 900 | 850 |

GEAR OPERATOR TORQUES & WEIGHT

| Model | Gear Ratio | Input Torque | | Output Torque | | Weight | |
|----------|------------|--------------|-----|---------------|-------|--------|------|
| | | In-lbs | Nm | In-lbs | Nm | lbs | Kg |
| FMO-C26 | 26:1 | 620 | 70 | 2655 | 300 | 16 | 7.3 |
| FMO-C38 | 38:1 | 531 | 60 | 4868 | 550 | 26 | 11.8 |
| FMO-C54 | 54:1 | 1062 | 120 | 10621 | 1200 | 38 | 17.3 |
| FMO-C80 | 80:1 | 1239 | 140 | 17701 | 2000 | 77 | 35 |
| FMO-C78A | 78:1 | 1770 | 200 | 31863 | 3600 | 106 | 48.2 |
| FMO-C98 | 98:1 | 2655 | 300 | 79657 | 9000 | 344 | 156 |
| FMO-C100 | 100:1 | 3540 | 400 | 115060 | 13000 | 419 | 190 |
| FMO-C118 | 118:1 | 7966 | 900 | 195601 | 22100 | 1191 | 540 |

NOTES:

1. For all technical parameters of the product please refer to this catalog, additional information can be obtained from your local FluoroSeal sales office or authorized representative.
2. Customization for specific applications is available upon request.

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