

MRD6 Magnetically coupled rotary drive



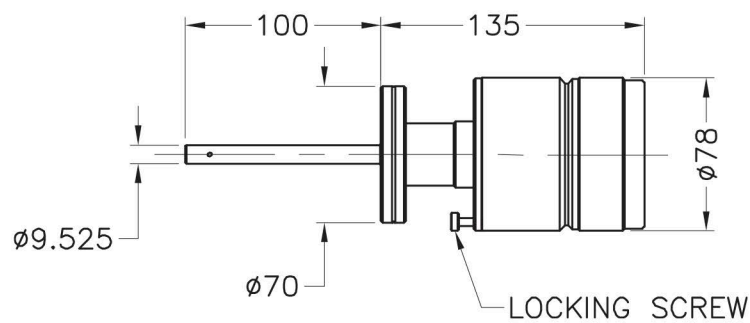
The MRD series magnetic rotary drive uses a high strength magnetic coupling to transfer rotational forces into the vacuum envelope. This is achieved without any dynamic seals or bellows making these devices exceptionally robust.



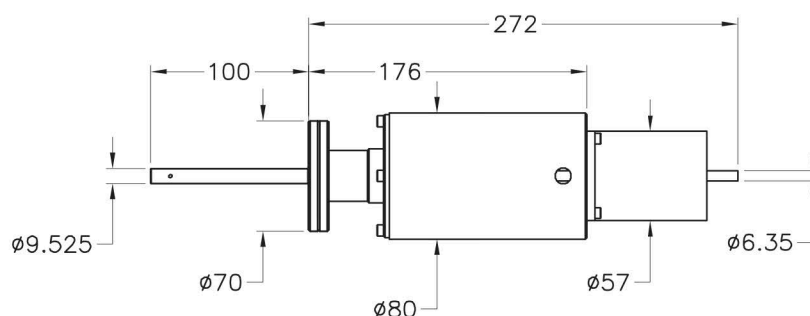
Product Overview

- Vacuum enclosure machined from single piece of 316 stainless steel
- No vacuum seals or bellows - no leaks to atmosphere
- Exceptional torsional rigidity
- Zero angular backlash under low load/acceleration
- Cannot be damaged by application of excessive torque
- Long service life
- Bakeable to 250 °C (standard UHV drive)
- Motor can be fitted/removed in minutes
- Manual drive has V-groove in drive knob for alternative motorisation

MRD6 Manual Rotary Drive



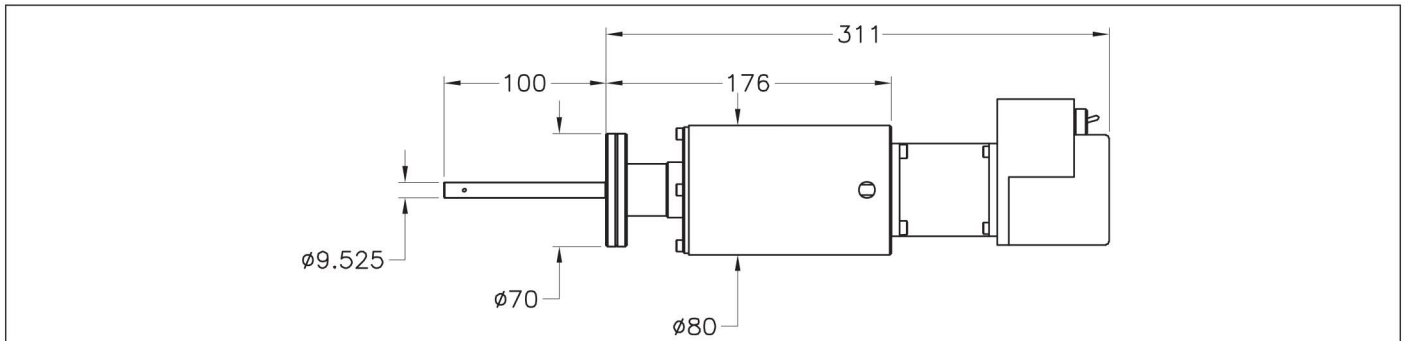
MRD6 Stepper Motor Drive



MRD6 Magnetically coupled rotary drive



MRD6 DC Motor Drive



MRD6 Magnetically-Coupled Rotary Drives

| DN Type | Flange OD mm | Type of Operation | Breakaway Torque Nm | Thrust N | Max Rotation RPM | Life | Shipping Weight | Order Code |
|---------|--------------|-------------------|---------------------|----------|------------------|----------|-----------------|------------|
| DN40 | 70 | Manual | 4 | 10 | 500 | Standard | 2 | ZMRD6 |
| DN40 | 70 | Stepper Motor | 4 | 1 | 500 | Standard | 2.3 | ZMDR6M |
| DN40 | 70 | DC Motor | 4 | 10 | 500 | Standard | 2.5 | ZMDR6D |
| DN40 | 70 | Encoded Stepper | 4 | 10 | 500 | Standard | 2.3 | ZMDR6DME |

Technical Data - ZMRD6

| | |
|-------------------|--|
| Leak Rate | $<1 \times 10^{-10}$ mbar l.s ⁻¹ |
| Pressure Range | 1×10^{-10} mbar – 2 bar absolute |
| Temperature Range | 250°C standard UHV drives (with motor / gearbox removed) 250°C extended UHV drives (with motor / gearbox removed) |
| Materials | Body - 316 stainless steel |
| | Mechanical parts - aluminium alloy - grade 6082 |
| | Bearings - stainless steel |
| | Magnets - sintered rare-earth |
| Lubrication | Dry film molybdenum disulphide (standard UHV drives) |
| | UHV compatible lubricant (extended life drives) |
| Actuation | Manual, Stepper Motor, Encoder, DC Motor |
| Options | Ceramic bearing options, special shaft length / diameters, available on request |