



## MRD91 Magnetically coupled rotary drive

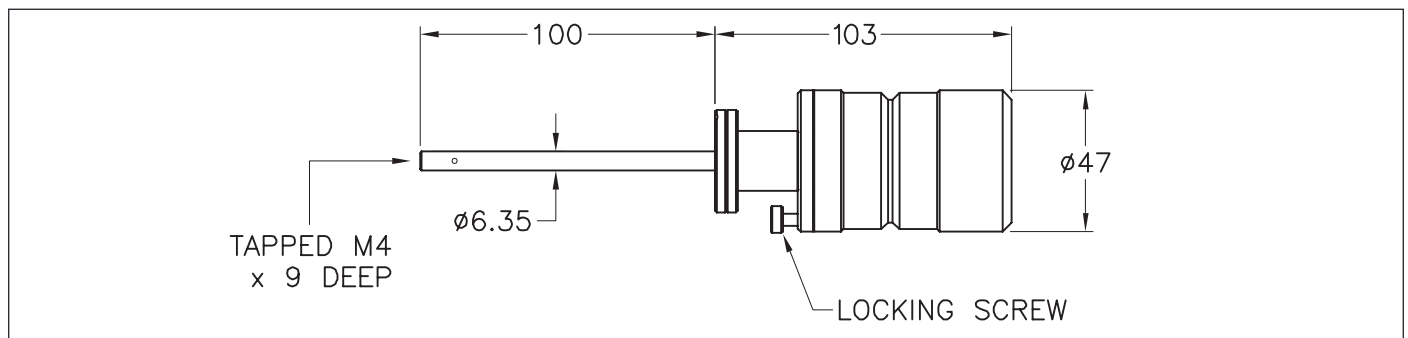
The MRD series magnetic rotary drive uses a high strength magnetic coupling to transfer rotational forces into the vacuum envelope. This is achieved without any dynamic seals or bellows making these devices exceptionally robust.



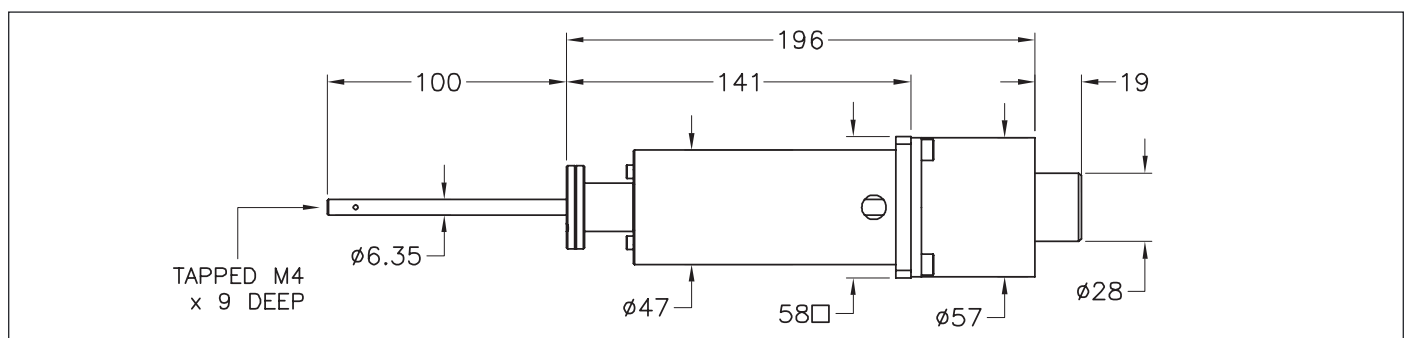
### Product Overview

- 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

### MRD91 Manual Rotary Drive



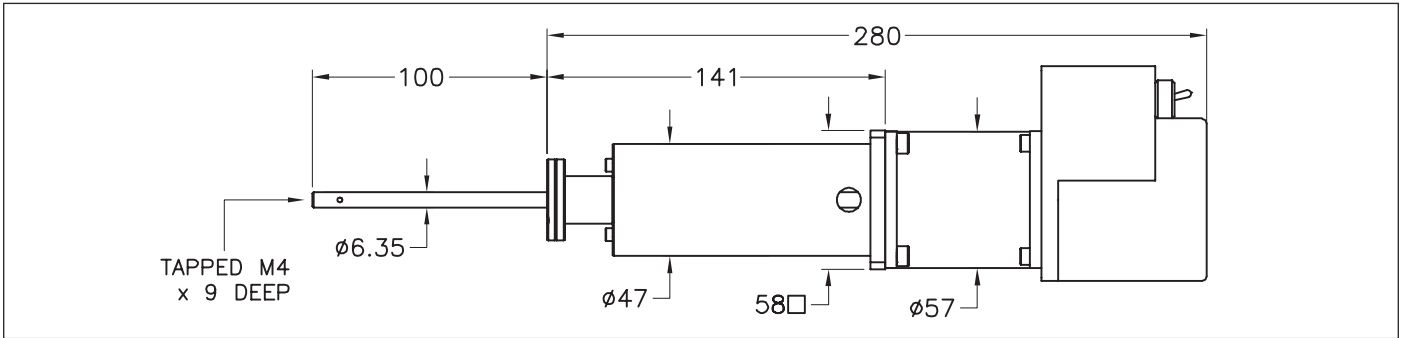
### MRD91 Stepper Motor Option





## MRD91 Magnetically coupled rotary drive

### MRD91 DC Motor Option



### MRD91 Magnetically-Coupled Rotary Drives

DN Type	Flange OD mm	Type of Operation	Breakaway Torque Nm	Thrust N	Max Rotation RPM	Life	Shipping weight kg	Order Code
DN19	34	Manual	0.5	10	1000	Standard	0.7	ZMRD91
DN19	34	Manual	0.5	10	1000	Extended	0.7	ZMRD91L
DN19	34	Stepper Motor1	0.5	10	1000	Standard	1	ZMRD91M
DN19	34	Stepper Motor1	0.5	10	1000	Extended	1	ZMRD91ML
DN19	34	DC Motor2	0.5	10	1000	Standard	1	ZMRD91D
DN19	34	DC Motor2	0.5	10	1000	Extended	1	ZMRD91DL
DN19	34	Encoded Stepper1	0.5	10	1000	Standard	1	ZMRD91ME
DN19	34	Encoded Stepper1	0.5	10	1000	Extended	1	ZMRD91LE

### Technical Data:ZMRD91

Leak Rate	$<1 \times 10^{-10}$ mbar l.s <sup>-1</sup>
Pressure Range	$1 \times 10^{-10}$ mbar – 2 bar absolute
Temperature Range	250 °C standard UHV drives (with motor/gearbox removed) 200 °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.