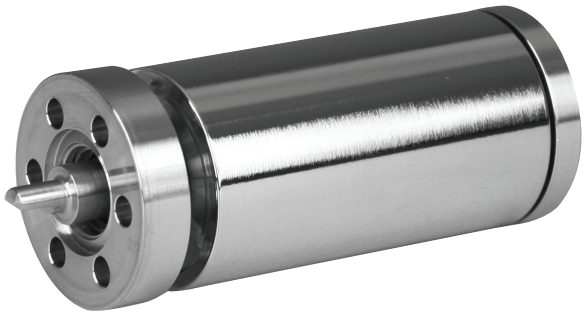
Solid MagiDrive Series

MD10 Series

(CF10, 1" OD)



This miniature drive is made possible through the use of the CF10 micro flange, which has an outside diameter of just 25.4mm. The body diameter is no bigger than the flange 1" OD, which makes the MD10 ideal for rotating small instrumentation loads, in applications where space is at a premium.

MD10 KEY ADVANTAGES

- » Magnetically-coupled fail-safe design
- » Smallest UHV drive on market
- » High torque / size ratio
- » No bellows or dynamic seals
- » Bakeable to 250°C
- » Zero backlash under low load
- » True UHV performance

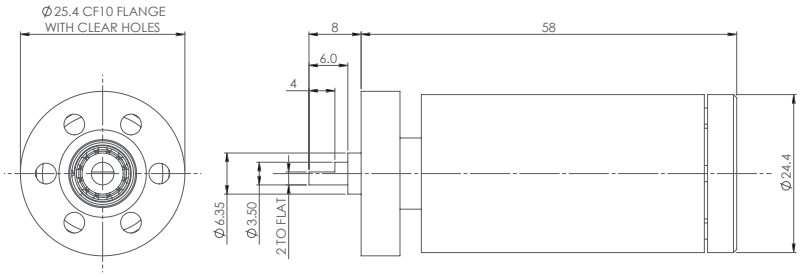
The production-proven MagiDrive range of rotary feedthroughs enable rotation to be transferred into a vacuum system using a stiff high flux magnetic coupling. With no bellows, fluids or dynamic seals, the MagiDrive range offers reliable and totally leak-tight UHV operation.

The MD10 series is the smallest of the MagiDrive range with CF10 flange and an outside diameter of just 25.4mm. Despite the compact size the MD10 offers great torque perfomance for its size.

Motor and pneumatic actuation options are available.

Example Dimensions (mm)

For comprehensive 2D drawings & 3D models please contact us.



MD10 Technical Data

SPECIFICATION	VALUE
System mounting flange size	FC10 (1") with clear holes
Rear Flange option	N/A
Drive clear bore	N/A
Magnetic breakaway torque	0.18Nm
Magnetic coupling stiffness	0.01 Nm/degree
Bakeout temperature	250 °C with motor/pneumatic cylinder removed
Shaft options	stub shaft with flat
Shaft radial runout at shaft attachment	0.01mm
Maximum radial load	180N
Maximum axial load	9N
Magnet Field 50mm from drive	Axial <40 mGaus and radial <20 mGaus
Calibrated thimble option - resolution	1 degree
Pulley option - type and PCD	HTD profile 28 teeth 3mm pitch and 26.74 PCD
Pneumatic option - cylinder sweep	adjustable 30 to 170 degrees
Pneumatic option - cylinder bore	10 mm
Pneumatic option - cylinder fitting	4mm tube push fit
Pneumatic option - cylinder switch	5-24V 2 wire reed switch
Pneumatic option - max rotation speed	0.2 seconds per 90 degrees (dependant on load)
Stepper motor option	11 frame 4 wires 1.4A / phase
Standard stepper option - motor wiring	Flying leads
Upgrade stepper motor - motor wiring	lemo socket to diagram WD-M-003
Upgrade stepper motor option - switches	Omron slotted opto 24V PNP type with flying leads
Stepper motor maximum speed option 1, gear ratio, output torque and resolution per 1/2 step	200 rpm, 1:1 ratio, 0.07Nm and 0.9 degrees
Stepper motor maximum speed option 2, gear ratio, output torque and resolution per 1/2 step	23 rpm, 64:1 ratio, 0.18Nm and 0.0141 degrees
Stepper motor maximum speed option 3, gear ratio, output torque and resolution per 1/2 step	16 rpm, 64:1 ratio, 0.18Nm and 0.0141 degrees
Stepper motor maximum speed option 4, gear ratio, output torque and resolution per 1/2 step	8 rpm, 64:1 ratio, 0.18Nm and 0.0141 degrees
DC motor option	24V dc brushed geared motor
DC motor option - motor wiring	2 pin generic plug to diagram WD-010
DC motor speed option 1, gear ratio and output torque	230 rpm, 18:1 ratio and 0.18Nm
DC motor speed option 2, gear ratio and output torque	135 rpm, 30:1 ratio and 0.18Nm
DC motor speed option 3, gear ratio and output torque	70 rpm, 60:1 ratio and 0.18Nm
DC motor speed option 4, gear ratio and output torque	42 rpm, 100:1 ratio and 0.18Nm
DC motor speed option 5, gear ratio and output torque	21 rpm, 200:1 ratio and 0.18Nm
DC motor speed option 6, gear ratio and output torque	8 rpm, 500:1 ration and 0.18Nm

For more information:

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