

Hollow MagiDrive Series

MD40H Series

[CF35, 2.75" OD Flange]



MD40H is a high torque, medium stiffness rotary drive. Configured with a hollow body, the MD40H has a fixed rear flange enabling a component to pass through the centre, such as a heater module, a feedthrough, a second MagiDrive rotary feedthrough or a cold lance.

MD40H KEY ADVANTAGES

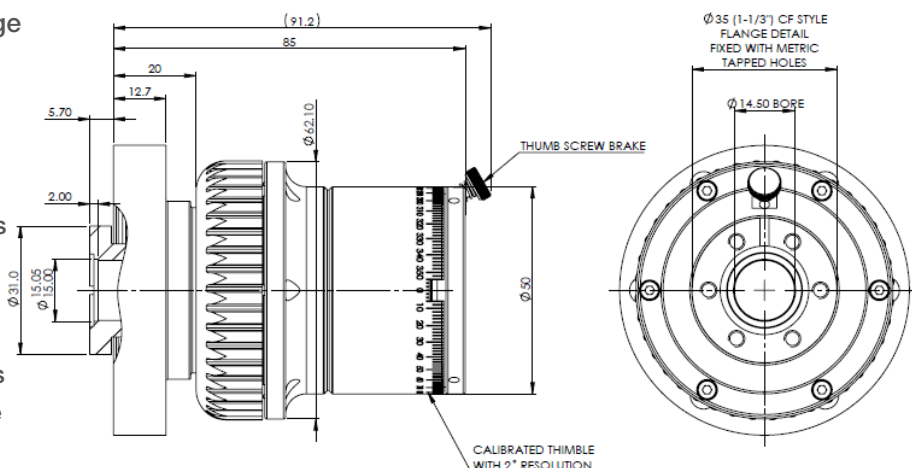
- » 14.5mm clear bore
- » Magnetically-coupled fail-safe design
- » High torque - 9Nm
- » No bellows or dynamic seals
- » Bakeable to 250°C
- » Zero backlash under low load
- » True UHV performance

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 four largest MagiDrives are available in a hollow configuration, terminating with a non-rotating CF flange at the rear. This allows services to be passed through the drive or alternatively, an additional MagiDrive to be mounted to the rear, providing a secondary axes of rotation. Up to four independent axes of rotation can be provided by combining the MD16, MD40H, MD64H and MD100H MagiDrives. This stacking capability is typically used to provide simple solutions to sophisticated manipulation requirements.

Example Dimensions (mm)

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



MD40H Technical Data

SPECIFICATION	VALUE
System mounting flange size	FC38 (2 3/4") with clear holes
Rear Flange	FC16 (1 1/3") with clear holes
Drive clear bore	14.5mm (rear flange option)
Magnetic breakaway torque	9Nm
Magnetic coupling stiffness	1.31 Nm/degree
Bakeout temperature	250°C with motor/pneumatic cylinder removed
Shaft options	spigot flange
Shaft radial runout at shaft attachment	0.01mm
Maximum radial load	2000N
Maximum axial load	142.5N
Calibrated thimble option - resolution	1 degree
Pulley option - type and PCD	HTD profile 40 teeth 5mm pitch and 63.66 PCD
Pneumatic option - cylinder sweep	adjustable 30 to 170 degrees
Pneumatic option - cylinder bore	30 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 (load dependant)
In line Stepper motor option	23 frame 8 wires 2.8A / phase
Side mounted Stepper motor option	23 frame 8 wires 2.8A / phase (Option 1) and 17 frame 1.8A / phase (Option 2-4)
Standard stepper option - motor wiring	M12 5 pin connector
Upgrade stepper motor option - switches	Omron slotted opto 24V PNP type. Wired to WD-S-004
In-line Stepper motor max speed option 1, gear ratio, output torque & resolution per 1/2 step	460 rpm, 5:1, 0.7Nm and 0.9 degrees
In-line Stepper motor max speed option 2, gear ratio, output torque & resolution per 1/2 step	230 rpm, 10:1, 3.2Nm and 0.18 degrees
In-line Stepper motor max speed option 3, gear ratio, output torque & resolution per 1/2 step	92 rpm, 25:1, 6.4Nm and 0.09 degrees
In-line Stepper motor max speed option 4, gear ratio, output torque & resolution per 1/2 step	46 rpm, 50:1, 9Nm and 0.036 degrees
Side mounted Stepper motor max speed option 1, output torque & resolution per 1/2 step	500 rpm, 1.4, 1Nm and 0.45 degrees
Side mounted Stepper motor max speed option 2, output torque & resolution per 1/2 step	188 rpm, 8:1, 1.9Nm and 0.113 degrees
Side mounted Stepper motor max speed option 3, output torque & resolution per 1/2 step	54 rpm, 28:1, 5.8Nm and 0.032 degrees
Side mounted Stepper motor max speed option 4, output torque & resolution per 1/2 step	31 rpm, 48:1, 9Nm and 0.019 degrees
DC motor option	24V dc brushed geared motor
DC motor option - motor wiring	2 pin generic plug to diagram WD-010
In line and side mounted DC motor speed option 1	460 rpm, 0.5Nm and 230 rpm, 1.1Nm
In line and side mounted DC motor speed option 2	230 rpm, 1.1Nm and 115 rpm, 2.2Nm
In line and side mounted DC motor speed option 3	92 rpm, 2.5Nm and 46 rpm, 5Nm
In line and side mounted DC motor speed option 4	46 rpm, 5Nm and 23 rpm, 9Nm

For more information:

UHV Design Ltd

Judges House, Lewes Road,
Laughton, East Sussex, BN8 6BN, UK
T: +44(0)1323 811188
E:sales@uhvdesign.com
www.uhvdesign.com

To find your nearest UHV Design
representative please visit www.uhvdesign.com
and click 'Contact'.