

COMBINED ROTATION & LIFT

MAGILIFT

(CF40, 2.75" OD)



Magnetically-coupled rotation and axial motion in a single, compact device. An example application would be the rotation of a substrate cradle with the lift and lower motion used to facilitate sample transfer. Hollow drive technology allows services to be passed through to a substrate heating module.

MAGILIFT KEY ADVANTAGES

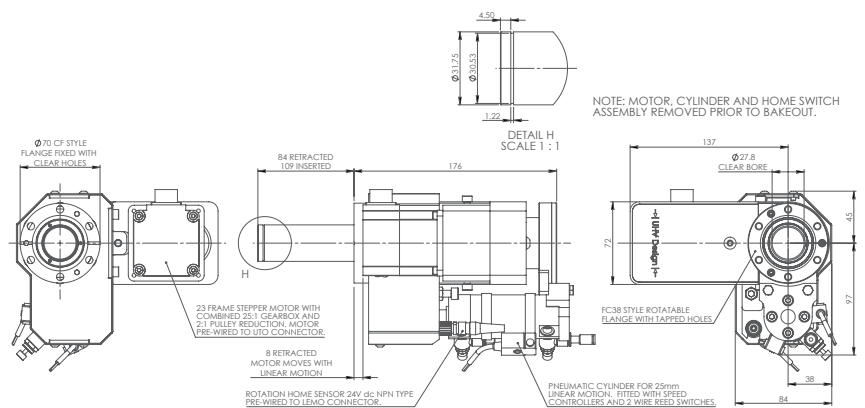
- » Magnetically-coupled fail-safe design
- » Rotation up to 60 rpm and 25mm axial motion in a single, compact device
- » 27.8mm bore to allow services to be passed through
- » True UHV performance

The MagiLift is a magnetically-coupled combined hollow rotary and linear motion device, which enables a central hollow shaft to be rotated in UHV at up to 60 rpm and moved axially by up to 25mm. As such this manipulator is ideal for applications where, for example, a substrate may need to be rotated in front of a source or heater to achieve uniformity whilst being able to move the substrate axially to facilitate sample hand off.

The MagiLift is magnetically-coupled (i.e. free from bellows, sliding seals, Ferro seals etc) ensuring trouble-free operation and eliminating the risk of leaks in service. The very high torque and axial thrust provided by our highly optimised magnetic couplings ensure precision and surety of motion.

Example Dimensions (mm)

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



MAGILIFT Technical Data

SPECIFICATION	VALUE
System mounting flange size	FC38 (2-3/4") metric clear holes straddled
Rear flange size	FC38 (2-3/4") metric tapped rotatable
Clear bore	27.8mm
Lift motion range	0-25mm
Rotation speed range	60 rpm maximum
Bakeout temperature	250 °C with motor/pneumatic cylinder/ home sensor removed
Magnetic coupling Linear and Rotary	140N (31.3 lbf) Linear and 9 Nm (6.6 lbf ft) Rotary
Manual Lift - Leadscrew pitch	2.54mm (0.1")
Pneumatic Lift - cylinder bore	32mm
Pneumatic Lift - cylinder fitting	6mm tube push fit
Pneumatic Lift - cylinder switch	5-24V 2 wire reed switch
Pneumatic Lift - max linear speed	25mm / second
Rotation - Stepper motor	23HT18C130 with UTO connector 3A / phase
Rotation - Resolution per 1/2 step	0.018
Rotation - DC motor option	24V dc brushed motor
Rotation - DC motor option - motor wiring	2 pin generic plug to diagram WD-010
Rotation - SMART motor option	SMART motor type SM2315D
Rotation - Motor gearbox type and ratio	spur and 25:1
Rotation - Motor gearbox backlash	1 degree
Rotation - Pulley reduction	2:1
Rotation home sensor	Sony PK15 24V NPN type
Rotation home sensor wiring	Bakeable Lemo to drawing WD-S-003

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'.