L3591

Material
Black anodised aluminium body (6061). Hardened linear guideways, stainless steel Acme lead screw (with internally lubricated anti-backlash nut).

Technical Notes
Easy plug and play system. Integrated limit switches are provided as standard. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but many pre-existing software packages (such as Labview) can be used. Applications - research, semi-conductors, fibre optics, automation etc.

Tips
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/ phase, 1.8°/step. Option with 1000 line rotary encoder. Limit switches are wired normally closed.

Important Notes
Motor resolution 0,03µ, encoder resolution 0,4µ. Minimum step size 0,5µ.

Order No.	Travel	Accuracy ±	Uni-directional repeatability ±	Load kg max.	Speed mm/s max.	Lead screw pitch	Motor type	Weight kg
L3591.025-STA	25	10µ	1µ	7.0	10	1.5875	Stepper	2.5
L3591.025-STB	25	10µ	1µ	7.0	10	1.5875	Stepper & enc.	2.5

Factors affecting stage selection

- Size and weight of load (including any moment loads)
- Accuracy (positioning, repeatability and resolution)
- Speed of rotation required
- Means of control

Parameters	High precision
Table diameters (mm)	50-200
Maximum loads (Kg) **Horizontal** **Vertical**	125 125
Maximum speed º/sec **Stepper motor** **Servo motor**	25-50 180-360
Accuracy (arc-secs) **Positioning** **Repeatability** **Resolution**	70" 5" <0,7"
Control options	Stepper, servo or intelligent motor Motion controllers available

*Dependent on stage selected

Factors affecting stage performance

Run-out

The displacement of a measure sensor placed on the surface of the rotary table.

Applied loads

These cause small deformations in the stage bearings and are dependent on the stiffness of the stage, the bearings and the stability and flatness of the mounting surface.

Hysteresis errors

The difference between the control and instructed position.

Backlash errors

Errors caused by the reversal of the direction of travel affected by clearance in the drive chain.
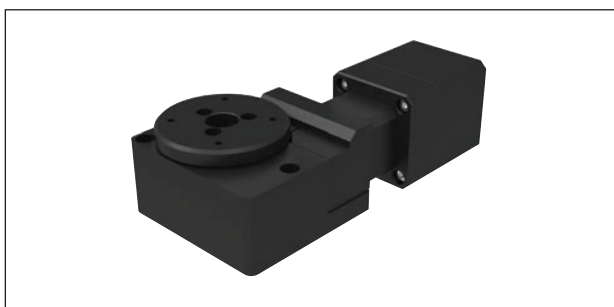
Encoder errors

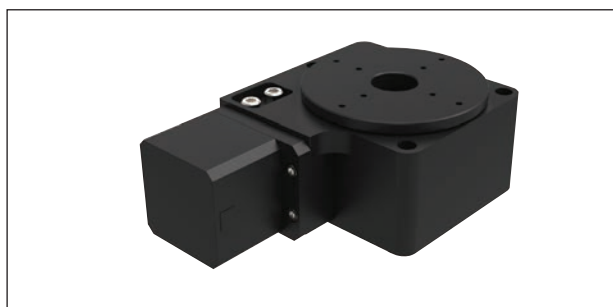Imperfections in the operations of the encoder (if present).

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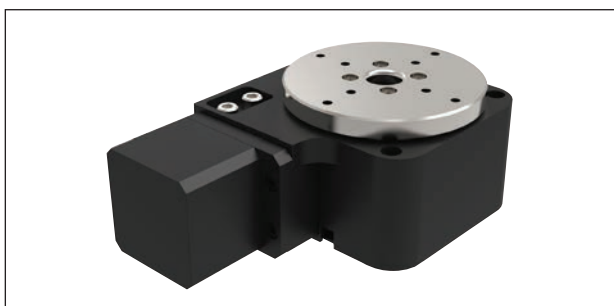
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L3550 Ø50 Rotary stage

- Motorised.
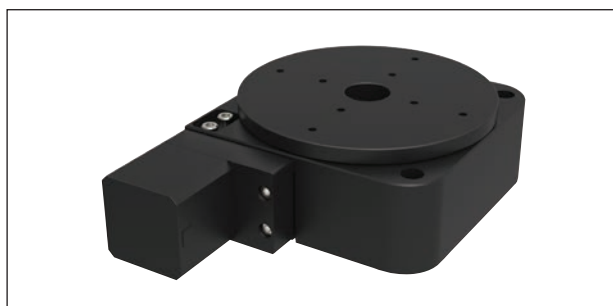- Accurate to 70 arc-secs, repeatedly to 3 arc/sec.
- Loads up to 4.5kg.

L3552 Ø75 Rotary stage

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
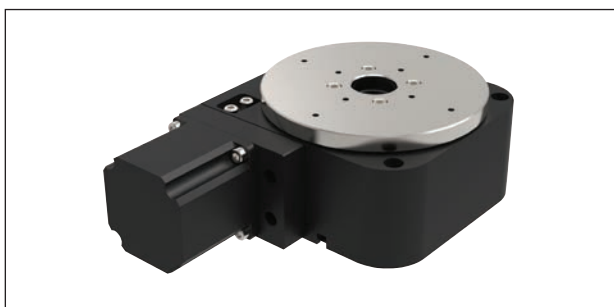- Loads up to 11kg.

L3554 Ø75 Rotary stage, heavy duty

- Heavy duty.
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 3 arc-secs.
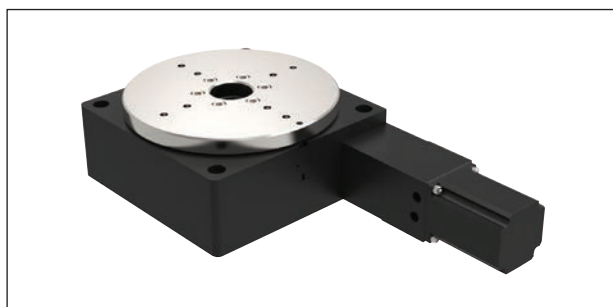- Loads up to 20kg.

L3556 Ø125 Rotary stage, medium duty

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 25kg.

L3558 Ø125 Rotary stage, heavy duty

- Heavy duty.
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 3 arc-secs.
- Loads up to 45kg.

L3662 Ø200 Rotary stage

- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 125kg.

Positioning Stages from Automotion Components

Part no.	Stepper	MDrive	Servo
L3550	✔	✔	✘
L3552	✔	✔	✘
L3554	✔	✔	✔
L3556	✔	✔	✘
L3558	✔	✔	✘
L3562	✔	✔	✔

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