

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 °/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

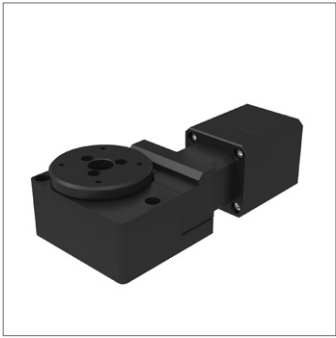
The difference between the control and instructed position.

Backlash errors

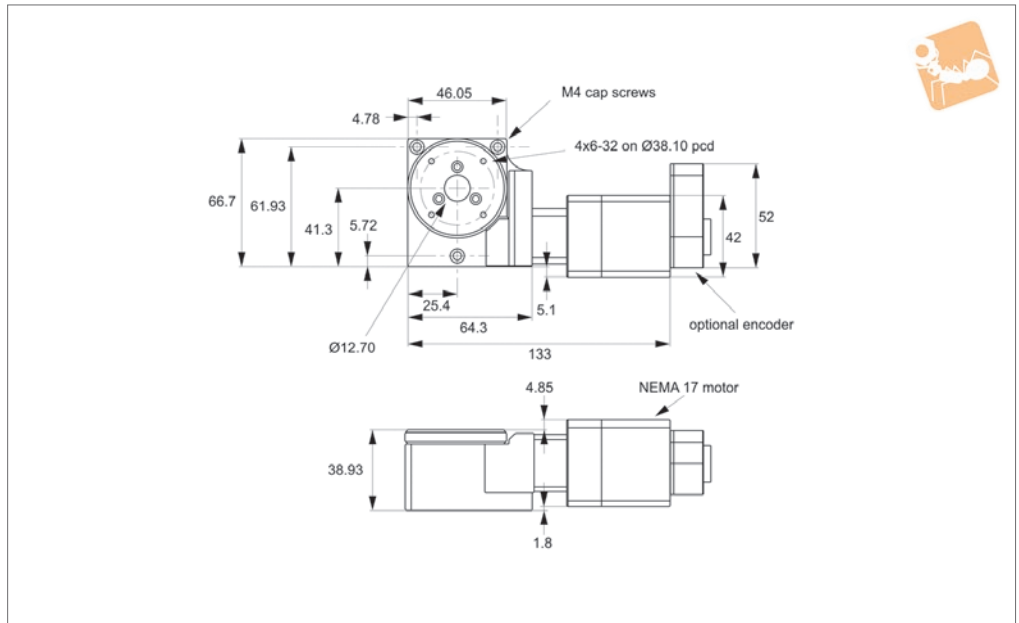
Errors caused by the reversal of the direction of travel affected by clearance in the drive chain.

Encoder errors

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



L3550



Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 0,45 Kg.

Technical Notes

The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.

Integrated stepper motor has a motion controller built into it.
The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train. The travel is 360° continuous. Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi-axis applications.

Tips

Requires external home switch (if required).

Motor options:

Stepper - Nema 17, high torque, brushless.

0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with 1000 line rotary encoder.

Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Optionally with 512 line rotary encoder. Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Weight kg
L3550.050-STA	Stepper	30°	4.5	0.3	1.7	0.45
L3550.050-IMA	Int. stepper & enc.	30°	4.5	0.3	1.7	0.45
L3550.050-STB	Stepper	50°	4.5	0.3	1.7	0.45
L3550.050-STC	Stepper & enc.	30°	4.5	0.3	1.7	0.45
L3550.050-STD	Stepper & enc.	50°	4.5	0.3	1.7	0.45
L3550.050-IMB	Int. stepper & enc.	50°	4.5	0.3	1.7	0.45

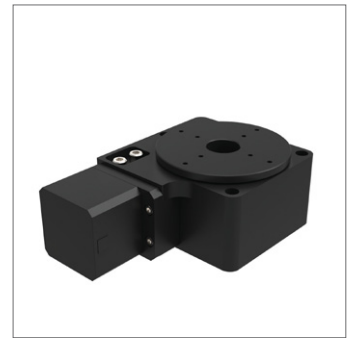
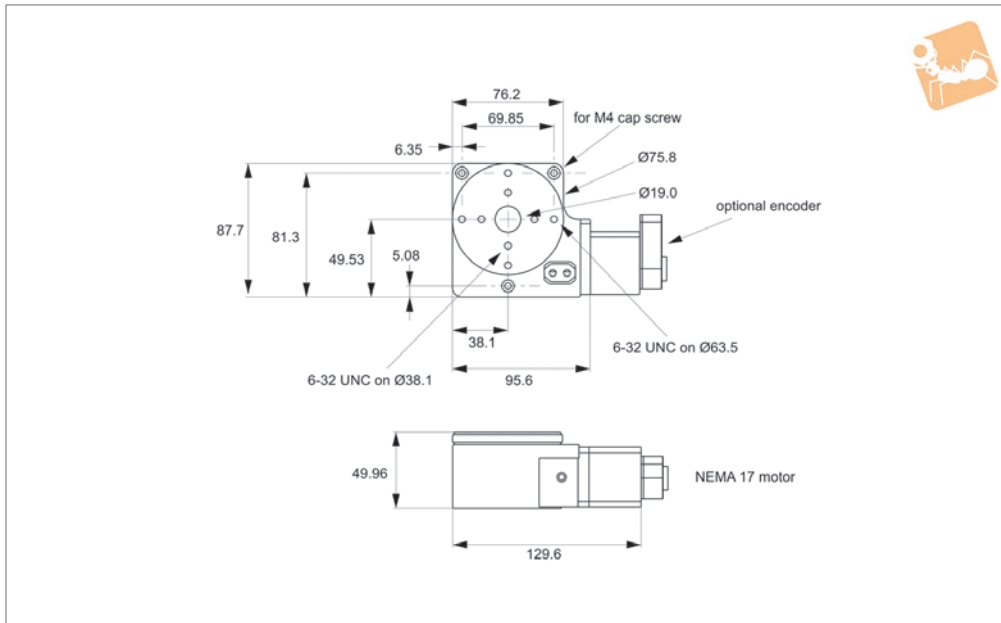
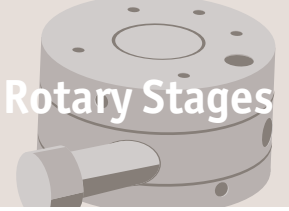
Order No.	Accuracy ± arc-secs	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Gear ratio	Resolution ± arc-secs
L3550.050-STA	70"	5"	45"	80:1	0,3"
L3550.050-IMA	70"	5"	45"	80:1	0,3"
L3550.050-STB	70"	5"	45"	40:1	0,6"
L3550.050-STC	70"	5"	45"	80:1	0,3"
L3550.050-STD	70"	5"	45"	40:1	0,6"
L3550.050-IMB	70"	5"	45"	40:1	0,6"



Motorised Rotary Stages Ø75

high precision, medium duty

Rotary Stages



L3552

ROTARY STAGES

Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 1,6 Kg.

Technical Notes

The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see L3254 and L3258 - L3262.

Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with them such as Labview etc.

Integrated stepper motor has a motion controller built into it.

The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train. The travel is 360° continuous.

Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.

Tips

Requires external home switch (if required).

Motor options:

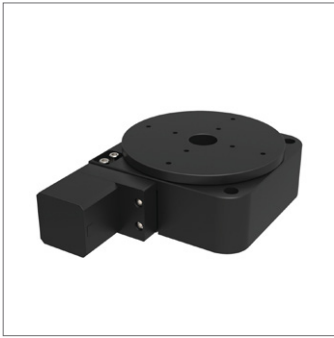
Stepper - Nema 17, high torque, brushless. 0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home

switch and/or 1000 line rotary encoder.

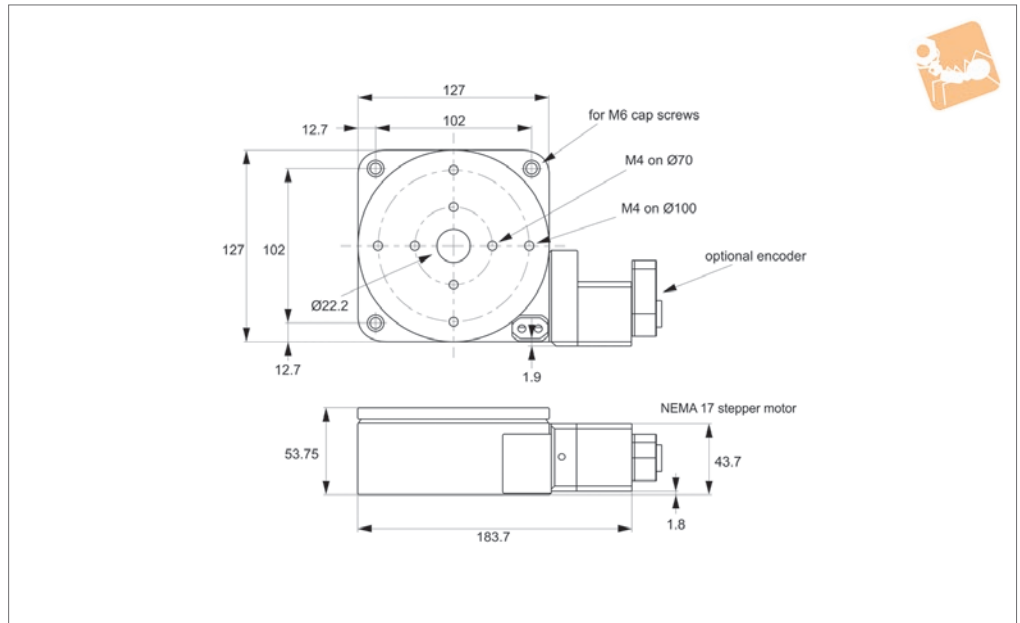
Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. Optionally with home switch and/or 512 line rotary encoder. RS422/485 communications. Input voltage +24VDC. Drawings show stepper motor configuration. See special pages for further motor options.

Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Weight kg
L3552.075-STA	Stepper	30°	11.3	0.75	1.59
L3552.075-IMA	Int. stepper & enc.	30°	11.3	0.75	1.59
L3552.075-STB	Stepper & enc.	30°	11.3	0.75	1.59

Order No.	Moment load Nm max.	Accuracy ± arc-secs	Uni-directional repeatability ±	Bi-directional repeatability ±	Gear ratio	Resolution ± arc-secs
L3552.075-STA	5.1	70"	5"	45"	90:1	0,29"
L3552.075-IMA	5.1	70"	5"	45"	90:1	0,29"
L3552.075-STB	5.1	70"	5"	45"	90:1	0,29"



L3556



Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 2,3 Kg.

Technical Notes

The design utilises a thrust bearing system for the table movement. This offers excellent stability at low cost, but as a result, is not really suitable for use in a vertical application. For vertical applications see L3254 and L3258 - L3262.

Easy plug and play system. Controllable from PC or PLC when used in conjunction with a motion controller. Controllers come with their own software but you can also use your own pre-existing software with

them such as Labview etc.

Integrated stepper motor has a motion controller built into it.

The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train. The travel is 360° continuous. Easy to use plug and play system when used with a motion controller. Can be used in conjunction with motorised linear stages for multi axis applications.

Tips

Requires external home switch (if required).

Motor options:

Stepper - Nema 17, high torque, brushless.

0.95 Amp/phase, 5.0 Ohm/phase, 3.1 mH/phase, 1.8°/step. Optionally with home switch and 1000 line rotary encoder.

Intelligent stepper - Nema 17 with a fully programmable motion controller inbuilt (i.e. no need for an external motion controller). Two +5 to +24VDC I/O lines. One 10 bit analogue input selectable 0 to +10VDC, 0 to +5VDC. RS422/485 communications. Input voltage +24VDC. Optionally with home switch and 512 line rotary encoder.

Drawings show stepper motor configuration. See special pages for further motor options.

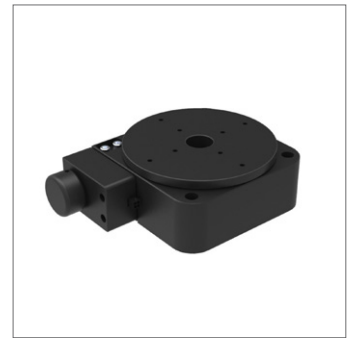
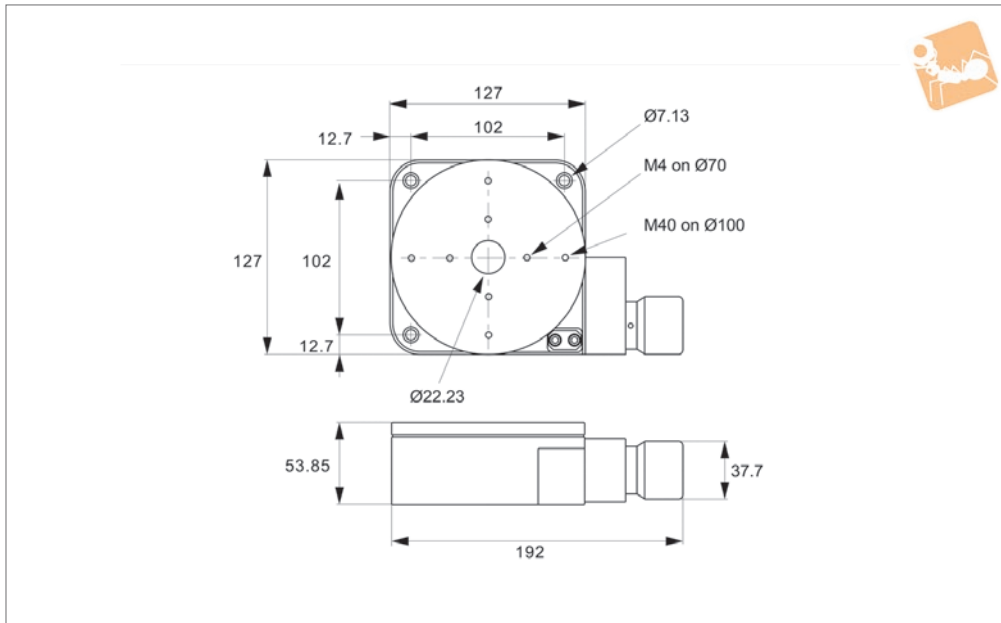
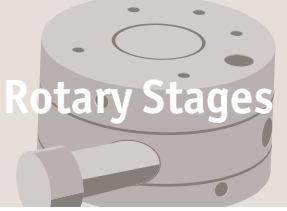
Order No.	Motor	Speed °/s max.	Horizontal load kg max.	Vertical load kg max.	Weight kg
L3556.125-STA	Stepper	25°	25	1.67	2.27
L3556.125-IMA	Int. stepper	25°	25	1.67	2.27
L3556.125-STB	Stepper & home	25°	25	1.67	2.27
L3556.125-STC	Stepper, home, enc.	25°	25	1.67	2.27
L3556.125-IMB	Int. stepper & home	25°	25	1.67	2.27
L3556.125-IMC	Int. stepper, home, enc.	25°	25	1.67	2.27

Order No.	Moment load Nm max.	Accuracy ± arc-secs	Uni-directional repeatability ± arc-secs	Bi-directional repeatability ± arc-secs	Gear ratio	Resolution ± arc-secs
L3556.125-STA	10.8	70"	5"	45"	72:1	0,36"
L3556.125-IMA	10.8	70"	5"	45"	72:1	0,36"
L3556.125-STB	10.8	70"	5"	45"	72:1	0,36"
L3556.125-STC	10.8	70"	5"	45"	72:1	0,36"
L3556.125-IMB	10.8	70"	5"	45"	72:1	0,36"
L3556.125-IMC	10.8	70"	5"	45"	72:1	0,36"



Manual Rotary Stage Ø125 with digital read out

Rotary Stages



L3559

ROTARY STAGES

Material

Aluminium alloy body (light, stiff and stable), black anodised.
Weight 3,6 Kg.

Technical Notes

The design utilises a single preloaded crossed roller bearing system for the table movement. This eliminates the use of dual

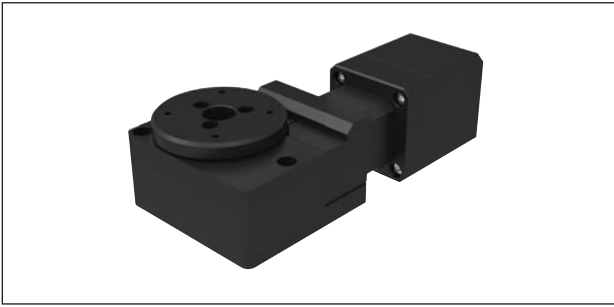
bearing configuration, thus improving axial runout and wobble. The stages are offered with different gear ratio options. A proprietary preload system ensures zero backlash in the gear train. The travel is 360° continuous. Resolution 0.00225°.

Tips

A precision rotary encoder provide positional information to a small digital readout (DRO) unit. Positive and negative measurements. Includes 12V power adapter. Seven 12mm high numeric digits with blue

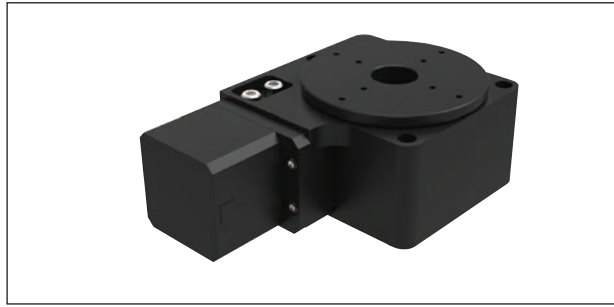
Order No.	Type	Travel	Horizontal load kg max.	Vertical load kg max.	Moment load Nm max.	Repeatability ± arc-secs	Accuracy ± arc-secs	Gear ratio	Resolution ± arc-secs	Weight kg
L3559.125	Manual stage	360°	45.0	45.0	29.3	5"	70"	72:1	0,36"	3.6
L3559.DRO	Digital readout	-	-	-	-	-	-	-	-	-





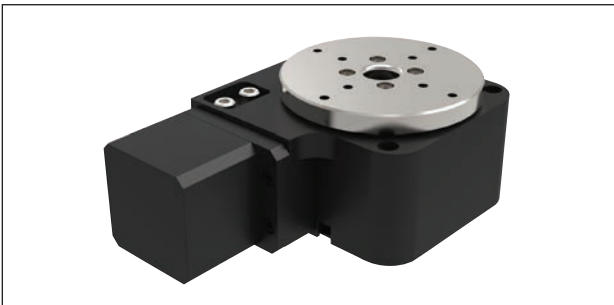
L3550 Ø50 Rotary stage

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



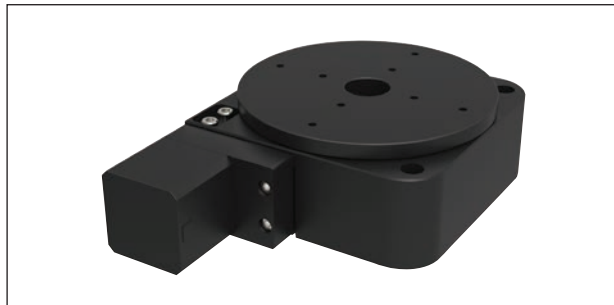
L3552 Ø75 Rotary stage

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



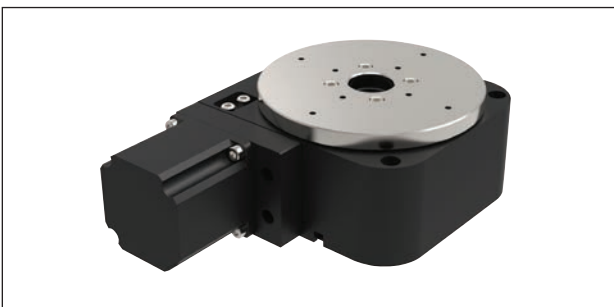
L3554 Ø75 Rotary stage, heavy duty

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



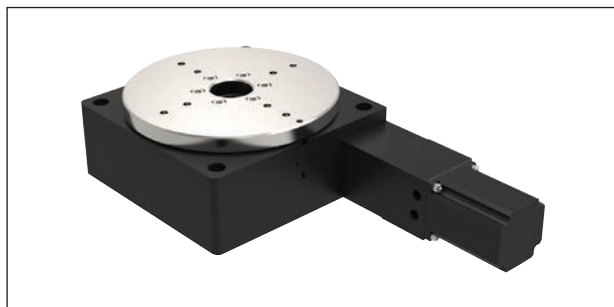
L3556 Ø125 Rotary stage, medium duty

- 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

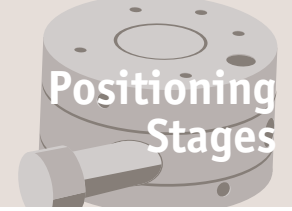
- Motorised.
- Accurate to 70 arc-secs, repeatedly to 5 arc-secs.
- Loads up to 125kg.



Rotary Stages

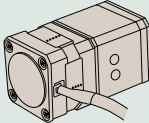
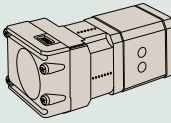
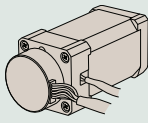
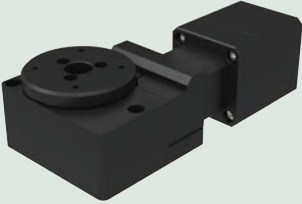



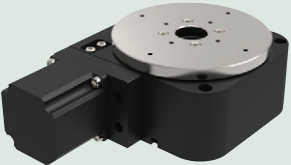
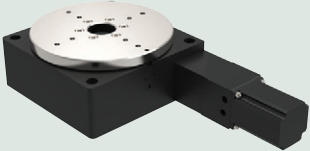
Motor options

Positioning Stages



ROTARY STAGES

Positioning Stages from Automotion Components

Part no.	Stepper 	MDrive 	Servo 
L3550 	✓	✓	✗
L3552 	✓	✓	✗
L3554 	✓	✓	✓
L3556 	✓	✓	✗
L3558 	✓	✓	✗
L3562 	✓	✓	✓