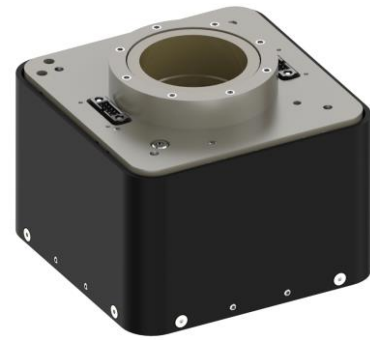


Key Features

- Compact Design
- Stroke 18 mm
- Position Accuracy << 100 nm
- Dynamic Movement via Voice Coil
- Permanent Magnetic Weight Compensation
- For Optics up to 300 g



Focus Axis EZ-5504

Concept and Design

With the EZ-5504 focus axis, EITZENBERGER has implemented a completely new and innovative axis concept. The external features are compact dimensions of 99 x 99 x 80 mm (L x W x H) and a central, continuous opening of approx. 35 mm for optical components.

The slip-stick-free air bearing enables maximum precision over the entire stroke range of 18 mm and repeatability in the nanometer range. In addition to the extremely low position error, the low tilt error of the axis is particularly noteworthy.

The focus axis is permanently magnetically weight compensated and designed for a payload of 250 g. The weight compensation is adjustable for masses from 50 to 300 g.

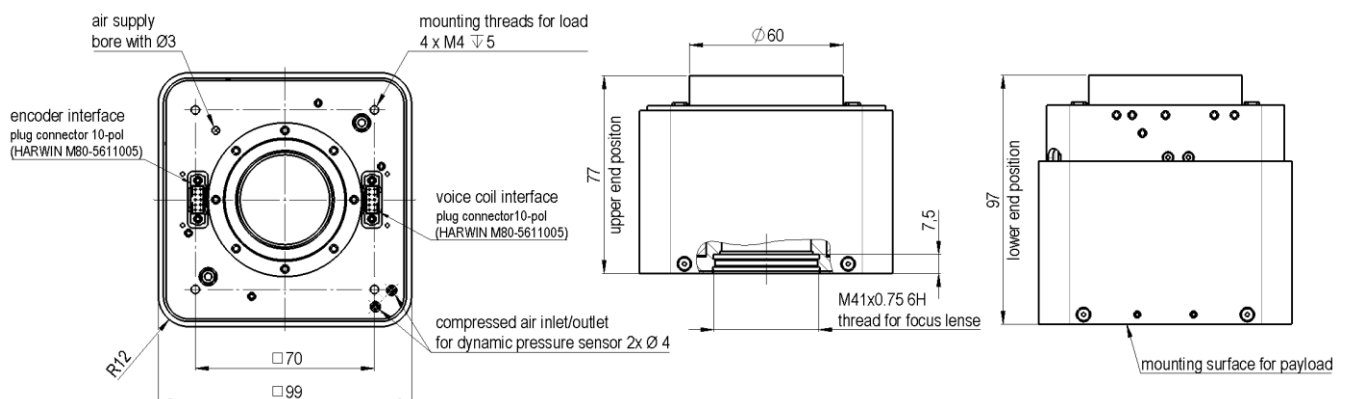
The focus axis can be moved dynamically via a voice coil motor. A Renishaw measuring head with a resolution of 1 nm and a BiSS-C interface is used as the measuring system.

Applications

The focus axis is suitable for high-precision applications in the fields of lithography, mask exposure, scanning applications or generally for positioning optics and sensors. Due to the compact dimensions and the low system weight, the axis can be easily integrated into many applications. The air bearing and the materials used predestine the focus axis for clean room applications.

Control System

We offer the focus axis with drive controllers from ACS and Triamec.



Specifications

Type	Unit	Value
Stroke	mm	18
Position Accuracy	nm	<< 100
Axial Tilt of the Axis over entire travel	µrad	< 20
Axial Tilt of the Axis over 0.2 mm travel	µrad	<< 2
Mechanical Data	Unit	Value
Mounting Position		vertical
Dimensions L x B x H	mm	99 x 99 x 80
Diameter Opening	mm	35
Mounting Thread for focus lens		M41 x 0.75
Max. Permissible Load	g	50 - 300
Moving Mass (housing)	g	900
Total Mass	g	1,800
Weight Compensation		permanent magnetic
Material Housing		aluminium anodized
Material Stator		aluminium hardcoated
Encoder	Unit	Value
Type		absolute
Resolution	nm	1
Output Signal		BiSS C
Drive	Unit	Value
Type		voice coil
Max. Intermediate Circuit Voltage	V _{DC}	24
Continuous Force @ Pv 16 W	N	4
Peak Force @ ED 10%	N	12
Environment and Interfaces	Unit	Value
Supply Pressure	bar	5
Air Consumption	Sl/min	approx. 12
Clean-Room Suitability		applicable
Drive Control		Value
Standard		Technosoft
High End		ACS / Triamec

Subject to technical modifications and typographical errors.