LA85-SM
Focus linear stage

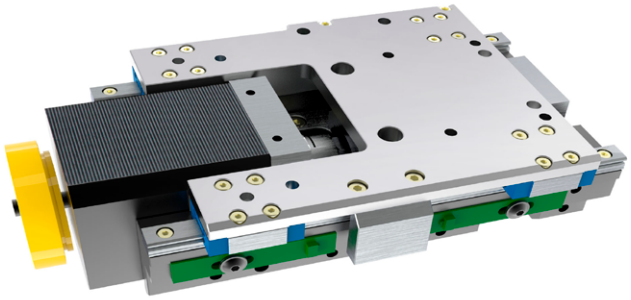
Steinmeyer Mechatronik

Easy to integrate for horizontal and vertical applications

This compact and robust linear axis is easy to integrate and is characterized by an optimum price-performance ratio together with precise operating parameters. For this reason, this linear axis is favored for large and small series.

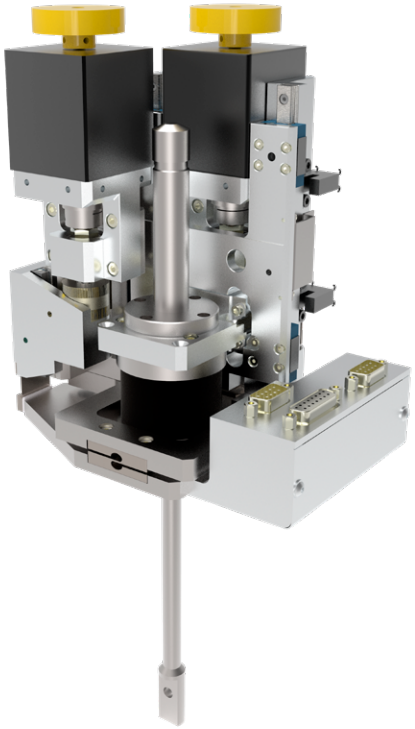
- Ideal for high precision focusing of sensors or optics
- Perfect flatness with up to ± 0.6 µm
- Load capacity up to 45 N

Options:
- Available with DC motor or stepper motor
- With linear scale for a highly accurate measurement of the actual position up to ± 0.3 µm
- Version for clean room and vacuum on request



Fields of application

Focusing of sensors or optics, setup of scanning applications, laboratory microscopy, handling systems, printing, multi-axis systems, 3D printing, research and development



Application solutions with LA85-SM

Sample manipulator for precise mass spectrometer
- Spectrometry, sample analysis under vacuum
- Reliable results due to absolutely rigid, stable and precise positioning at ± 2.5 µm
- Superior durability in demanding environments at over 1 million cycles

Specifications

LA85		-25-SM	-50-SM
Travel	[mm]	25	50
Repeatability unidirectional	[µm]	± 1.6	± 1.6
Repeatability bidirectional	[µm]	± 2.1	± 2.1
Accuracy	[µm]	± 4.2	± 5.6
Flatness	[µm]	± 0.6	± 1.3
Straightness	[µm]	± 0.5	± 1
Positioning speed	[mm/s]	30	30
Max. speed	[mm/s]	60	60
Max. acceleration	[m/s^2]	0.6	0.6
Max. load Fx	[N]	45	45
Max. load Fy	[N]	40	40
Max. load Fz	[N]	40	40
Max. torque Mx	[Nm]	1.4	1.4
Max. torque My	[Nm]	1.5	1.5
Max. torque Mz	[Nm]	1.4	1.4
Pitch	[µrad]	± 30	± 35
Yaw	[µrad]	± 15	± 20
Weight	[kg]	1.2	1.2
Length	[mm]	160	190
Width	[mm]	90	90
Height	[mm]	42	42
Motor		Stepper Motor	Stepper Motor
Feedback		Open Loop	Open Loop

The LA85-SM can also be equipped with a linear scale in the stepper motor version. This allows the actual position to be measured with a high accuracy of ± 0.3 µm and, for example, a measuring process to be triggered on-the-fly. Please contact us for the necessary trigger module. However, an actual closed-loop position control with stepper motor is only possible with our FMC 2xx controllers. For such cases, a DC or BLDC drive is usually more suitable.

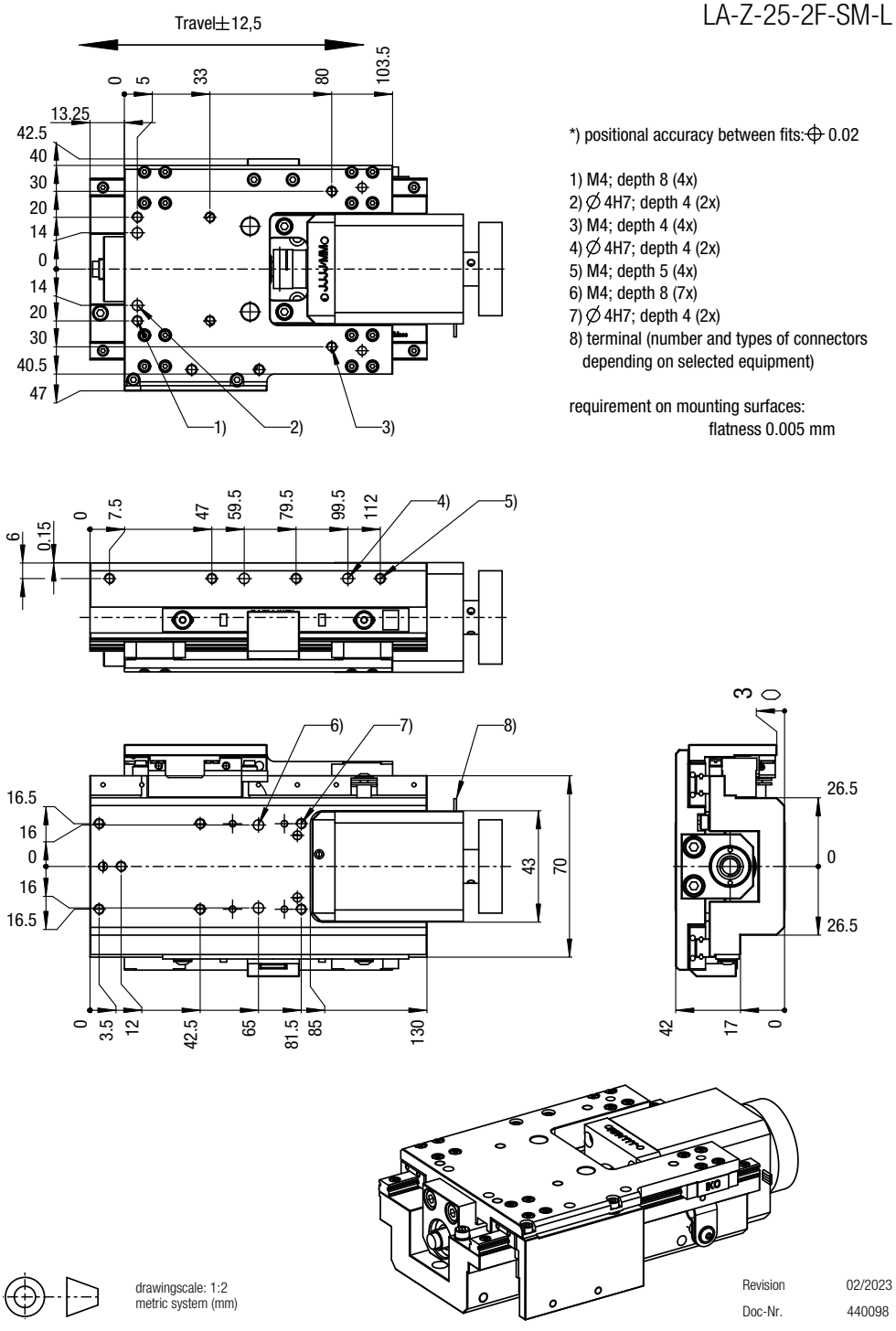
Specifications are subject to change. Values are for the single axis with our controller. Parameters shown here are typical values for a standard configuration. By customization and given in depth knowledge of your application significantly improved values can be achieved. Please contact us.

Recommended Motion Controllers

- FMC 220 (24 V)
- FMC 400/450 (48 V / 80 V Bahn)
- Integration into ACS architectures
- Integration into PLC architectures

Dimensions / Interface

LA-Z-25-2F-SM-L



*) positional accuracy between fits: ⌖ 0.02

1) M4; depth 8 (4x)
2) ∅ 4H7; depth 4 (2x)
3) M4; depth 4 (4x)
4) ∅ 4H7; depth 4 (2x)
5) M4; depth 5 (4x)
6) M4; depth 8 (7x)
7) ∅ 4H7; depth 4 (2x)
8) terminal (number and types of connectors depending on selected equipment)

requirement on mounting surfaces:
flatness 0.005 mm

drawingscale: 1:2
metric system (mm)

Revision	02/2023
Doc-Nr.	440098