

4.112 Elevation Stage ES-100 Vacuum



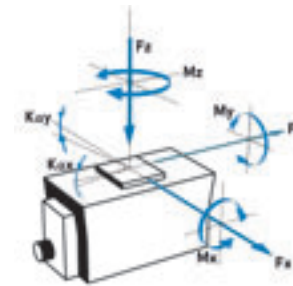
FACTS

Load characteristics	$F_x(N)$	$F_y(N)$	$F_z(N)$	$M_x(Nm)$	$M_y(Nm)$	$M_z(Nm)$	$k_{ax}(\mu rad/Nm)$	$k_{ay}(\mu rad/Nm)$
FV	100	50	30	40	80	80	60	60
10-6	100	50	30	40	80	80	60	60



KEY FEATURES

- Vacuum up to 10-6 hPa
- Travel range up to 26 mm (1")
- Uni-directional repeatability down to 0.05 μm
- Maximum speed 6 mm/sec
- Load capacity up to 5.5 kg
- Integrated limit switches
- Option: linear scale (center mounted)



The ES-100 Vacuum elevation stage matches the LS-110 and PRS-110 stage families. The elevation stage is driven by a precision ground re-circulating ball screw with a 1 mm pitch.

Cross-roller bearings guarantee a maximum rigidity and guiding quality. The ES-100 Vacuum is motorized with a 2-phase stepper vacuum motor and is equipped with two limit switches. The travel ranges are 13 mm or 26 mm.

For demanding positioning tasks, the ES-100 Vacuum elevation stages can be supplied with a cost-effective linear scale.

TECHNICAL DATA

Travel range (mm)	13	26
Straightness / Flatness (μm)	± 2	± 3
Pitch (μrad)	± 100	± 150
Yaw (μrad)	± 100	± 150
Weight (kg)	2.4	2.5

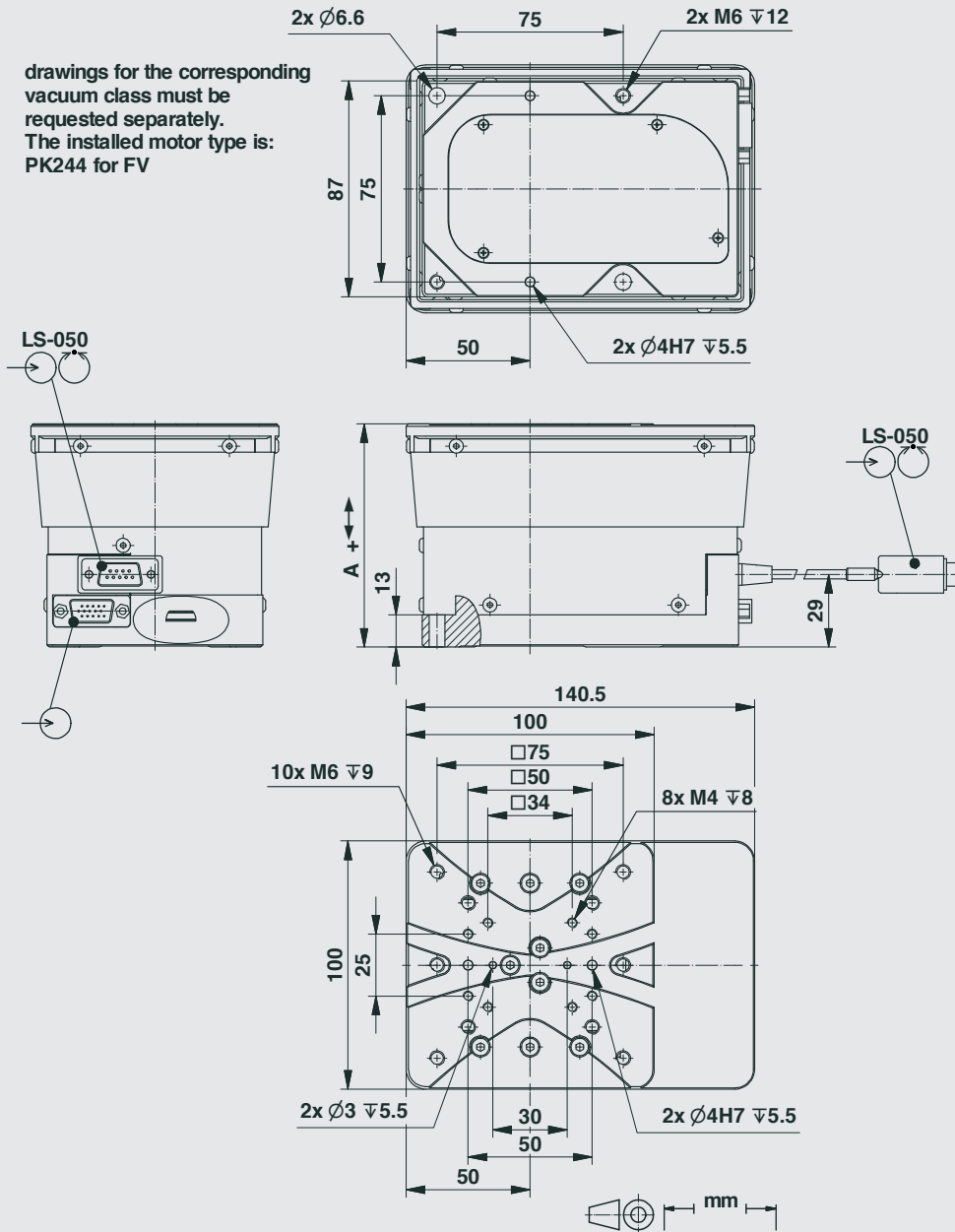
Vacuum type	FV	10-6	UHV
Linear scale			UHV
Speed max. (mm/sec)	5	1.8	
Resolution calculated (μm)	5 (FS)	5 (FS)	0.05
Resolution typical (μm)	0.2	0.2	0.05
Bi-directional Repeatability (μm)	± 1.5	± 1.5	± 0.1
Uni-directional Repeatability (μm)	0.2	0.2	0.05
Nominal Current (A)	1.2	1.2	

Accuracy	on request
Velocity range (mm/sec)	0.001 ... 6
Material	Aluminum or Stainless steel, suitable for vacuum

Vacuum Note: FS = full step, RE = rotary encoder
More info: Detailed information concerning motors and encoders, see appendix.

Travel (mm)	13	26
A	90	105

drawings for the corresponding vacuum class must be requested separately.
The installed motor type is: PK244 for FV



APPLICATIONS
CONTROLLERS
ROBOTICS

LINEAR STAGES

ROTATION STAGES

PIEZO STAGES

ACCESSORIES

APPENDIX

- UPM-160
- HPS-170
- LS-270
- LS-180
- LS-120
- LS-110
- PLS-85
- LS-65
- MTS-65
- MTS-70
- VT-80
- LS-40
- MCS
- NPE-200
- UPL-120
- ES-100**
- ES-82
- MA-35
- MP-20
- MP-20 B
- MP-15

Order No.	6611-V-				0	0
FV		1				
10-6			6			
13 mm (1/2")				1		
26 mm (1")					2	
open loop						0
closed loop						1