

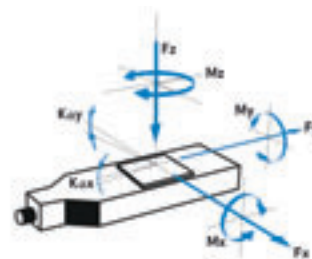
FACTS

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	50	80	100	30	60	33	50	40
HV	50	80	100	30	60	33	50	40
UHV	50	80	100	30	60	33	50	40



KEY FEATURES

- Vacuum up to 10⁻⁹ hPa
- Travel range up to 508 mm (20")
- Uni-directional repeatability down to 0.05 μm
- Maximum speed 15 mm/sec
- Load capacity up to 10 kg
- Integrated mechanical limit switches
- Option: linear scale (center mounted)



The LS-110 Vacuum linear stage series is especially suited for industrial laser treatment. Linear guides with re-circulating linear ball bearings guarantee very high guiding stiffness. Driven by a re-circulating ball screw with 2 mm pitch, the LS-110 Vacuum can be mounted in any orientation. For demanding positioning tasks, the LS-110 Vacuum linear stages can be supplied with a linear scale which is centrally installed between the guides. The LS-110 Vacuum is equipped with a special 2-phase vacuum stepper motor and is equipped with limit switches.

TECHNICAL DATA

Travel range (mm)	26	52	77	102	155	190	255	305	508
Straightness / Flatness (μm)	± 1	± 1.5	± 2	± 2.5	± 3	± 3.5	± 4	± 5	± 6
Pitch (μrad)	± 30	± 40	± 50	± 60	± 70	± 80	± 90	± 100	± 110
Yaw (μrad)	± 40	± 40	± 40	± 40	± 40	± 40	± 40	± 40	± 40
Weight (kg)	2.6	2.7	2.8	2.9	3.1	3.1	3.5	3.7	4

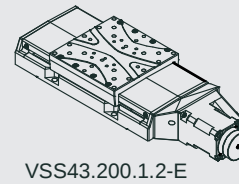
Vacuum type	FV	HV	UHV		
Linear scale				FV	UHV
Speed max. (mm/sec)	15	5	5		
Resolution calculated (μm)	10 (FS)	10 (FS)	10 (FS)	0.05	0.05
Resolution typical (μm)	0.2	0.2	0.2	0.05	0.05
Bi-directional Repeatability (μm)	± 1	± 1	± 1	± 0.1	± 0.1
Uni-directional Repeatability (μm)	0.2	0.2	0.2		0.05
Nominal Current (A)	1.5	1.2	1.2		

Accuracy	on request
Velocity range (mm/sec)	0.001 ... 15
Material	Aluminum or Stainless steel, suitable for vacuum

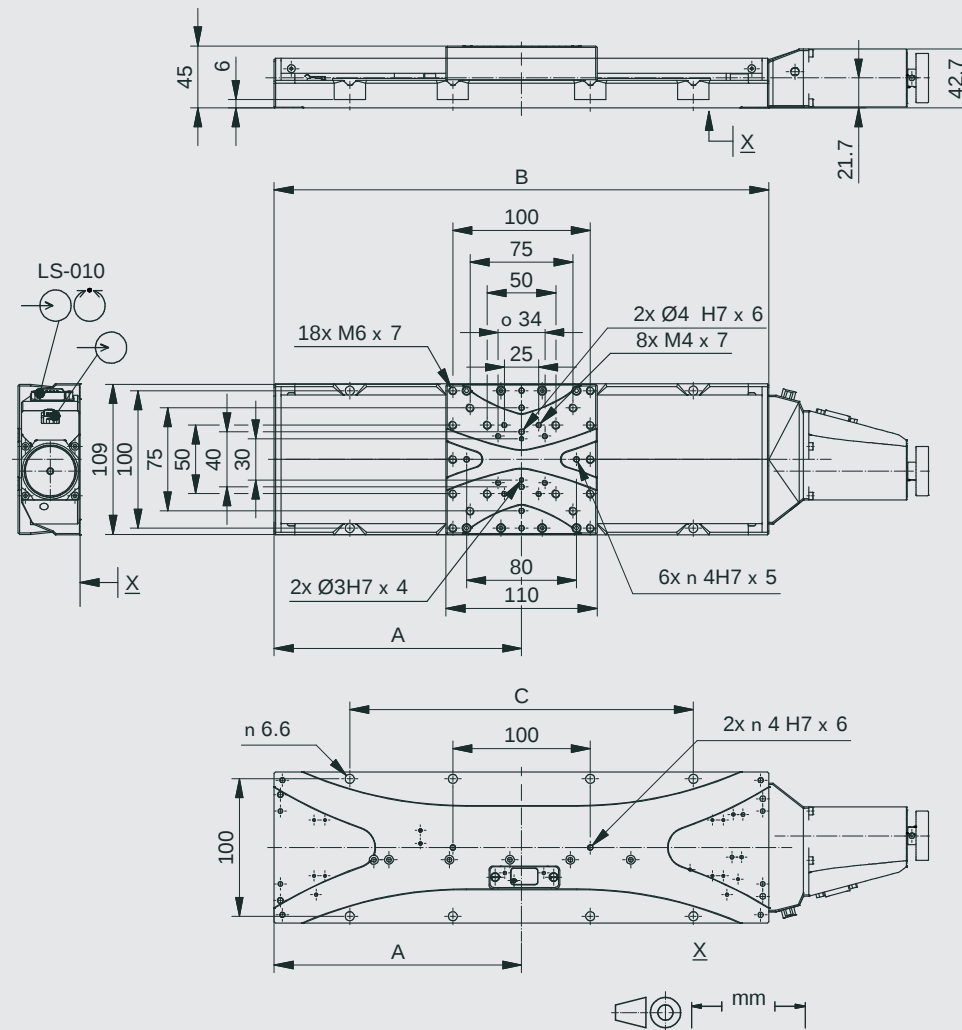
Vacuum Note: FS = full step, RE = rotary encoder
More info: Detailed information concerning motors and encoders, see appendix.

Travel (mm)	26	52	77	102	155	190	255	305	508
A	112,5	125	137,5	150	180	180	215	240	340
B	225	250	275	300	360	360	430	480	680
C	-	-	-	-	250	250	300	350	500

Order No.	6236-V-				0	0
FV	1					
HV	2					
UHV	3					
26 mm (1")	1					
52 mm (2")	2					
77 mm (3")	3					
102 mm (4")	4					
155 mm (6")	5					
190 mm	6					
255 mm (10")	7					
305 mm (12")	8					
508 mm (20")	9					
open loop	0					
closed loop (max 155 mm)	1					



drawings for the corresponding vacuum class must be requested separately.
The installed motor types are:
PK245 für FV
VSS 42.200.1.2-E für HV & UHV



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