

Vacuum Linear Stage Basic

- Simple and cost effective design
- Low profile
- Optional position feed-back with resolver
- FV and HV environment



VLSB is the entry level micro positioning stage for vacuum, suitable for many simple positioning tasks where the highest accuracy comes even on a budget. In spite of its minimalist design it still delivers an excellent compromise of load capacity, stroke and positioning resolution. The low profile of the stainless steel mono-rail with recirculating ball bearings makes VLSB stages the ideal choice as base positioners; thanks to the high stiffness you can pile-up over the carrier with no problem. These HV stages are actuated by a precision preloaded lead screw and a Phytron VSS motor with optional resolver.

Homing is possible on one micro-switch in PEEK integrated in the motor flange.

It is also possible to stack these stages in multi-axes set-ups. VLSB stages are suitable down to HV 10^{-7} mbar.

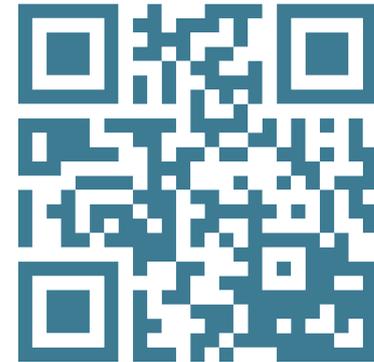
VLSB typical Specifications*

Motor	VSS43.200.1,2 200 step / revolution	+ resolver option with 1024 point / revolution
Lead/ screw pitch	0,5 mm	
Resolution	2,5 μ m full step	0,5 μ m per count
Minimum incremental motion	0,25 μ m (microstep / open-loop)	
Epeatability	<1 μ m	<1 μ m
Travel range	50 - 250 mm	
Max speed	3mm/s recommended: limited by duty cycle in vacuum	
Axial force	100 N	
Load capacity	150 N with single carrier	
Moment	Please contact us for a proper calculation	
*Note	100% of the stages are singularly tested and measured with the interferometer and documented with actual data.	

Ordering Information

Part Number	Travel range	Vacuum preparation	Temperature sensors	Measurement system	Cable length
VLSB	50	FV (fine vacuum)	K type	RS (resolver)	1000
	100	HV (high vacuum)	PT100		custom
	150				
	200				
	250				

e.g. VLSB-200-HV-PT100--RS = 200mm travel range, HV 10^{-7} mbar, Motor with integrated PT100 and resolver, 500mm vacuum leads



- Select travel range, vacuum environment and the optional sensor in the table above to define the code number.
- Be aware of the duty cycle limitations of motors in vacuum especially with dry lubrication, please check this data-sheet:
ftp://ftp.phytron.de/datasheets/stepper_motors/vacuum-en.pdf
- For multi-axe assembly, overall system specifications, duty-cycle analysis or any special requirements please fill in the form at this link:
www.vacuumfab.it/questionario/VLSB_questionnaire.pdf
 or at the QR code on the right and contact us.
 - We can deliver a turn-key solution from the vacuum stage through the electrical connection in vacuum and air to the control electronics, let us know your requirements.