

## VL-ST60 Product Specifications

Parameter	Value	Units
<b>Configuration &amp; Physical Parameters</b>		
Motor	23 Frame SmartMotors, D and M series	-
Coupling	Beam	-
Displacement/rev	6, 12	mm/rev
Position Sensors	consult factory	-
Stroke Lengths	50 – 600mm in 50mm steps	mm
Overall Length	Stroke + 222 + motor	mm
Overtravel	10	mm
Unit Mass	1.3349 + 0.0039 x (stroke,mm) + (motor mass, kg)	kg
<b>Performance</b>		
Unidirectional Repeatability	20	µm
Bidirectional Repeatability	40	µm
Linear Accuracy	0.21/300	mm/mm
Max Velocity	up to 1000 (stroke dependent)	mm/s
Max Acceleration	0.3	G
Displacement/rev	<b>6</b> <b>12</b>	<b>mm/rev</b>
Payload Mass	13      10	kg
Rated Velocity	200      400	mm/s
Lifetime*	15000	hr
<b>Load Rating, Dynamic* (Static)</b>		
Displacement/rev	<b>6</b> <b>12</b>	<b>mm/rev</b>
Max Continuous Thrust	490      250	N
Max Peak Thrust	768      394	N
<b>Carriage moments, Dynamic** (Static)</b>		
M.a, Carriage Moment***	11.47 (58)      9 (58)	N*m
M.b, Carriage Moment***	3.57 (25)      2.75 (25)	N*m
M.c, Carriage Moment***	3.57 (25)      2.75 (25)	N*m

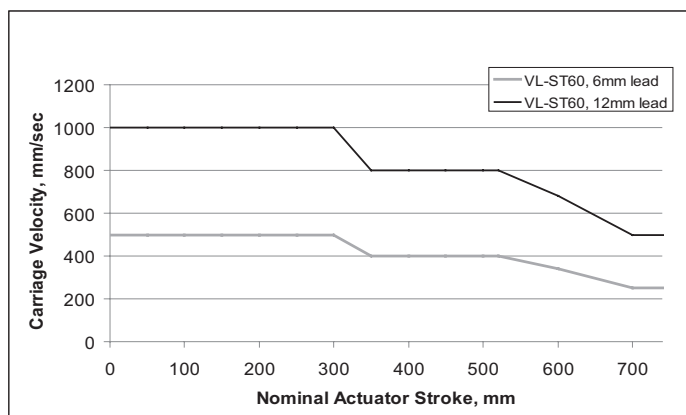
\*Based on 15000 hr service life @ 200 mm/s and 400 mm/s (2000 RPM) average speed at the given payload, subject to routine lubrication.

\*\*Based on using SM23165DT @ 48V @ 2000 RPM. Refer to corresponding thrust curves for details.

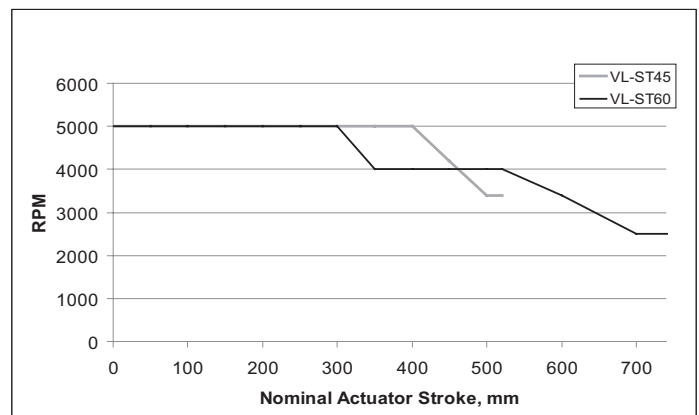
Consult the factory if your application exceeds these values.

\*\*\*Moment capacities given about center of carriage mounting surface.

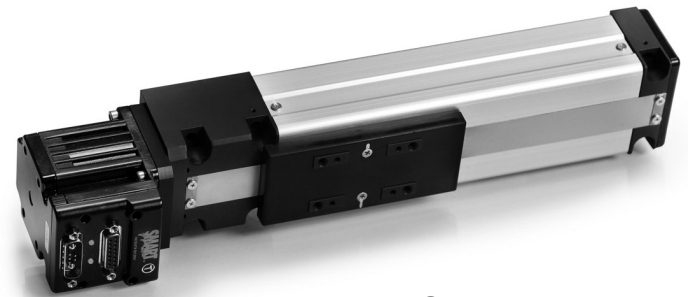
### VL-ST60 - Maximum Permissible Carriage Velocity



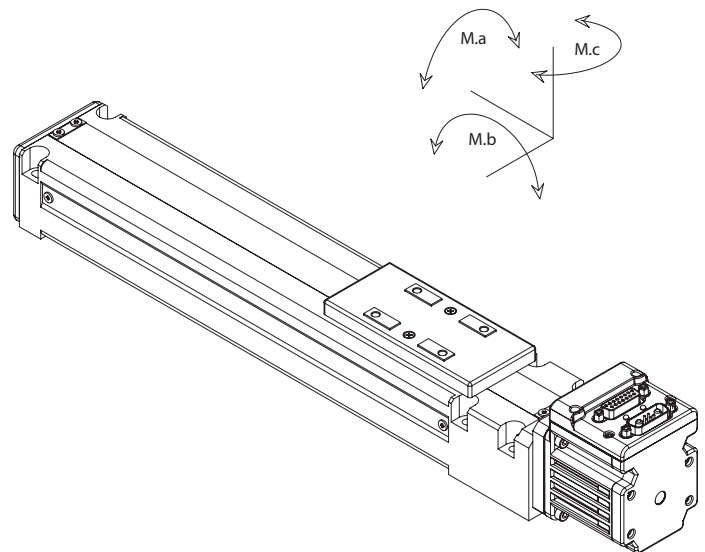
### VL-ST series - Maximum Permissible Screw Speed



**WARNING: Exceeding thrust, speed, or moment loading specifications could result in immediate damage to the actuators. Doing so will void the warranty.**

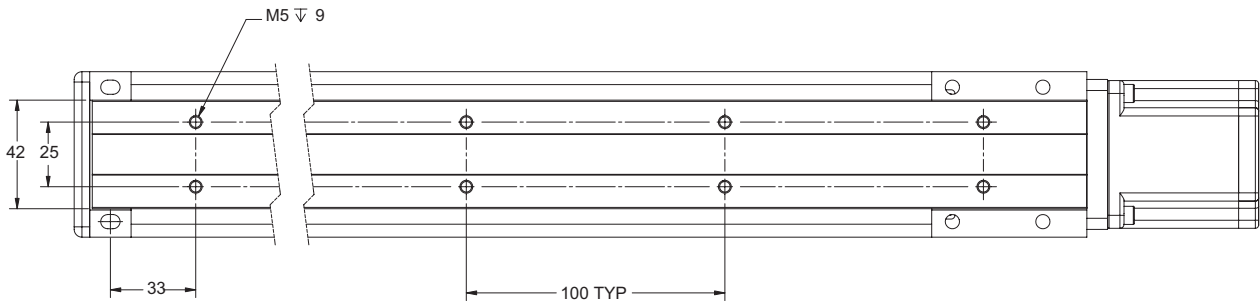
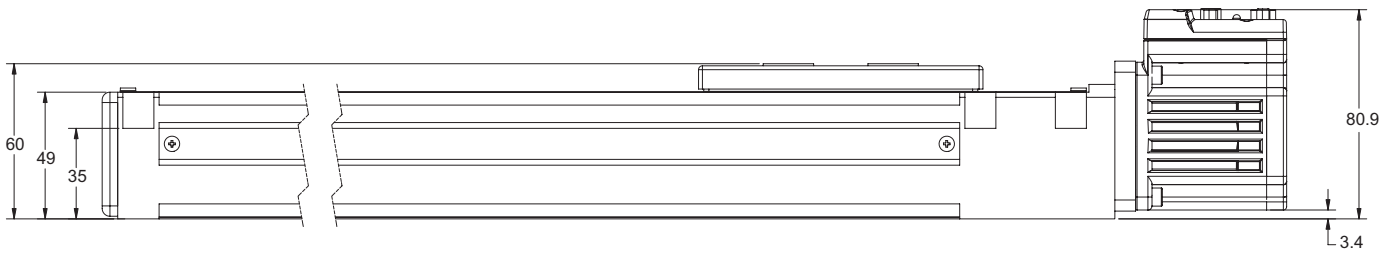
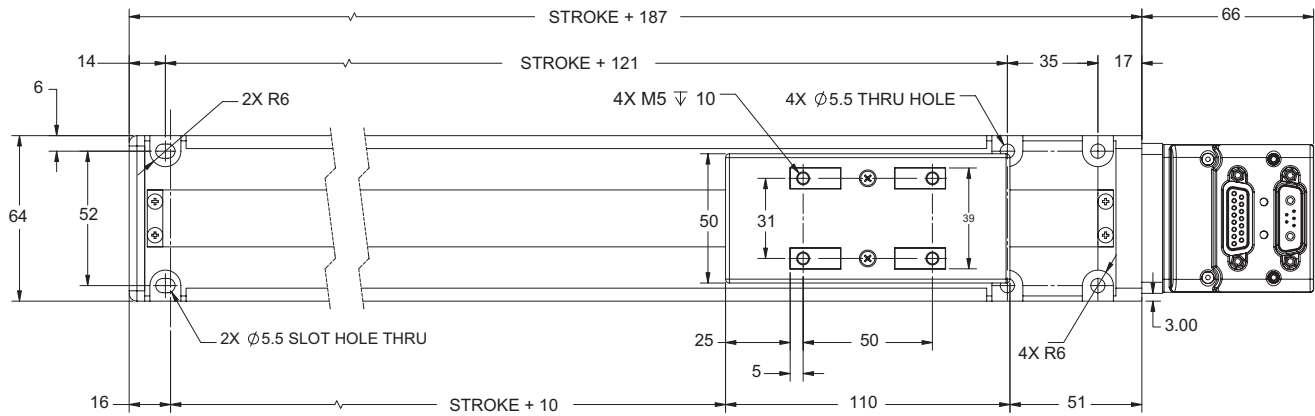


**VL-ST60**



**WARNING: Do not exceed these limits**

OVERVIEW  
SOFTWARE  
D-STYLE MOTORS  
D-STYLE CONNECTIVITY  
PERIPHERALS  
M-STYLE MOTORS  
M-STYLE CONNECTIVITY  
LINEAR SYSTEMS  
POWER SUPPLIES & SHUNTS  
GEAR HEADS  
APPENDIX



Dimensions in millimeters

**NOTE:** For part numbers please refer to our website at [www.animatics.com](http://www.animatics.com)

**For Thrust Curve performance data, see pages 158–173.**