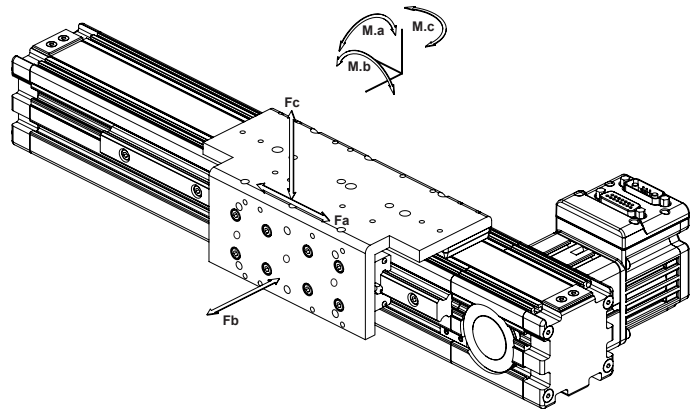


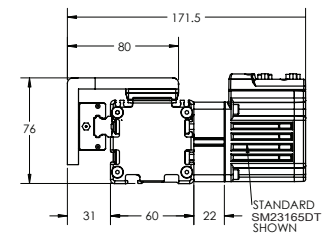
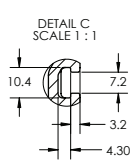
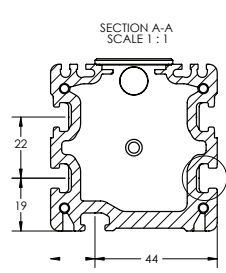
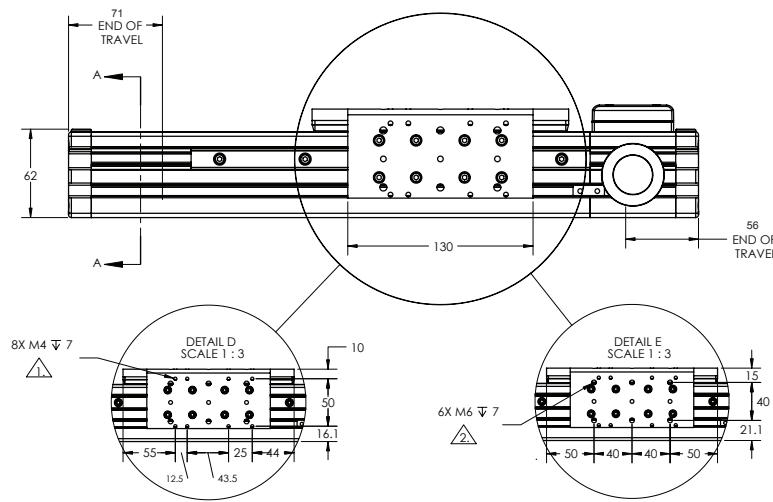
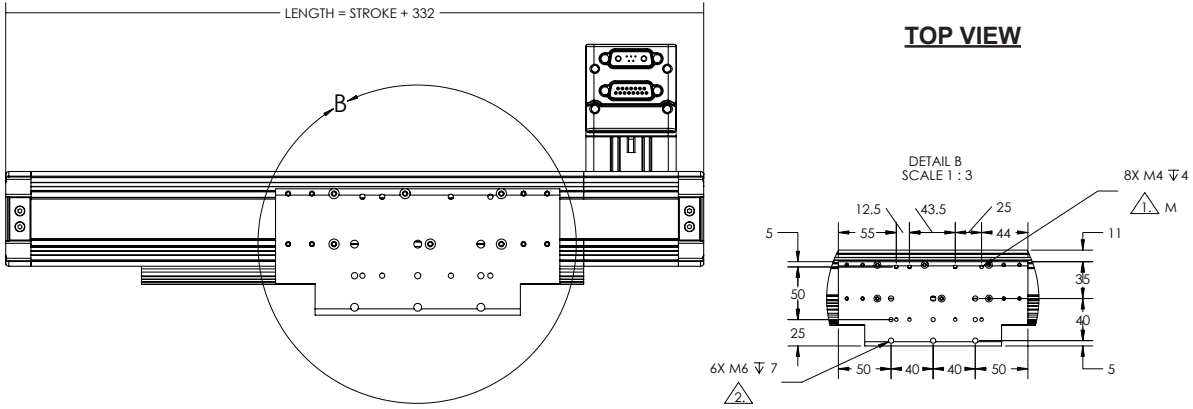
## HLD60 with External Rail Specifications

Parameter	Value				Units
<b>Configuration &amp; Physical Parameters</b>					
Motor	23 Frame SmartMotors, D and M series				-
Coupling	Flexible Jaw				-
Displacement/rev	2.5, 5, 10, 12.5				mm/rev
Position sensors	Optional Home & EOT limits				-
Stroke	100 – 600mm in 50mm steps 600 – 1000mm in 100mm steps 1000 – 2200mm in 200mm steps Custom lengths are available				mm
Overall length (L)	Stroke + 332				mm
Overtravel	25				mm
Unit mass	2.7 + 0.0044 x (stroke, mm) + (motor mass, kg)				kg
<b>Performance</b>					
Unidirectional repeatability	<20				µm
Bidirectional repeatability	60 – 180 (belt tension dependent)				µm
Linear Accuracy*	0.5/300				mm/mm
Displacement/rev	<b>2.5</b>	<b>5</b>	<b>10</b>	<b>12.5</b>	<b>mm/rev</b>
Max linear speed (no load)*	200	391	782	977	mm/s
Payload Mass**	45	42	18	13	kg
<b>Continuous Thrust (Fa)</b>					
SM23165D @ 48V @ 4500RPM	270	120	35	-	N
SM23165DT @ 48V @ 3800RPM	450	420	185	135	N
SM23375D @ 48V @ 4500RPM	175	70	10	-	N
SM23375DT @ 48V @ 3200 RPM	450	290	125	90	N
<b>Load Rating, Dynamic** (Static)</b>					
Fb	730 (1200)	580 (1200)	460 (1200)	430 (1200)	N
Fc	730 (1200)	580 (1200)	460 (1200)	430 (1200)	N
<b>Carriage moments, Dynamic** (Static)</b>					
M.a***	19 (24)	15 (24)	12 (24)	11 (24)	Nm
M.b***	72 (200)	57 (200)	45 (200)	42 (200)	Nm
M.c***	72 (150)	57 (150)	45 (150)	42 (150)	Nm

\*Based on using SM23165DT @ 48V @ 4200 RPM no load.  
 \*\*Based on a 15000HR service life @ 75/150/300 & 375mm/s (1800 RPM) average speed at given payload, subject to routine lubrication.  
 \*\*\*Moment capacities given about center of carriage mounting surface.



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



**SIMPLE END VIEW**

**MOTOR END VIEW**

- NOTES:**
- 1. M4 x 50 x 12.5 and M4 x 25 x 50 for mounting L70 actuator.
  - 2. M6 x 40 x 40 standard bolt pattern for optional mounting accessories.

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.**