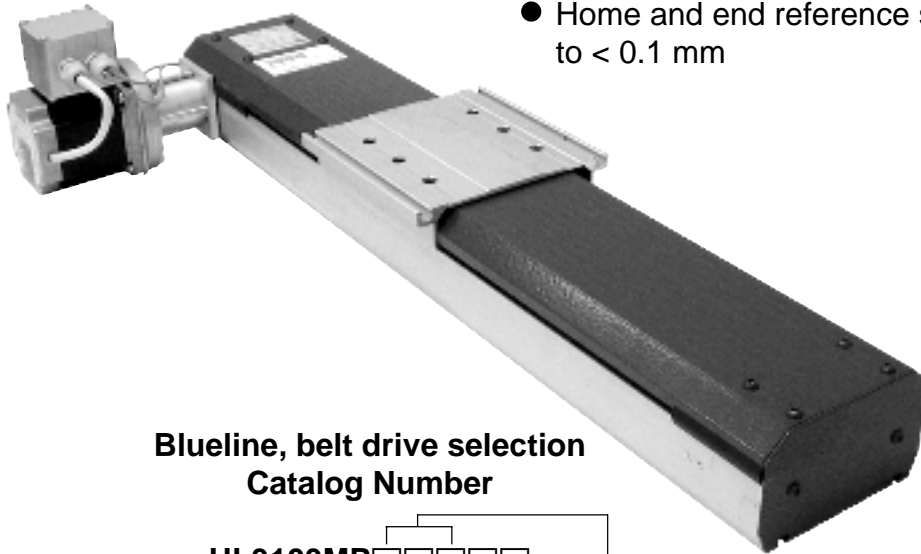


- Carriage rides on two Ø8 mm precision ground steel shafts that are supported along the entire length of travel to minimize deflection
- Available with either a 600 N·cm stepper motor, 300W servomotor or no motor
- Lengths up to 3 meters
- Maximum speed: 5 m/s
- Belt is 5 mm HTD, 25 mm wide. HTD belt profile helps reduce backlash
- Home and end reference switch repeatable to < 0.1 mm



Blueline, belt drive selection
Catalog Number

HL3103MP

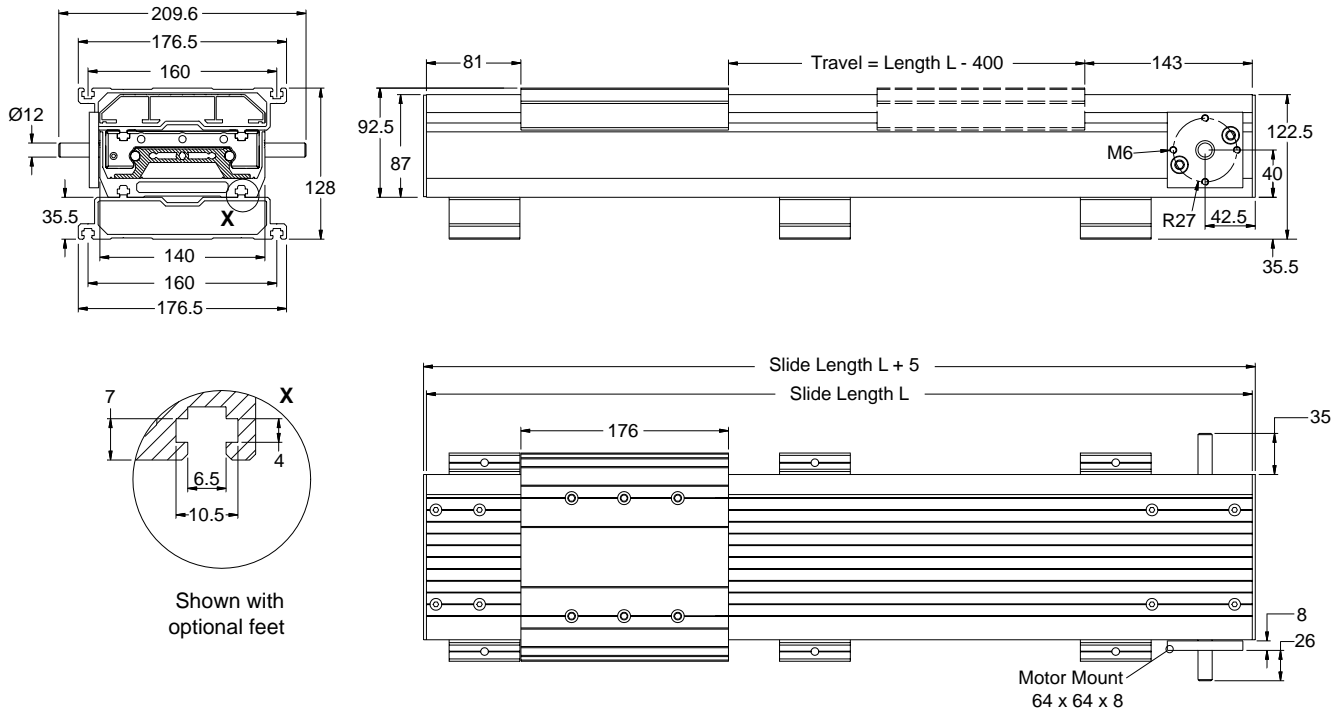
Motor Type

- X No motor
- V Servomotor
- S Stepper motor

Motor Mounting

- 0 Right-hand side
- 1 Left-hand side

Code	Length (mm)	Travel (mm)
080	800	400
110	1100	700
120	1200	800
160	1600	1200
210	2100	1700
260	2600	2200
290	2900	2500
300	3000	2600

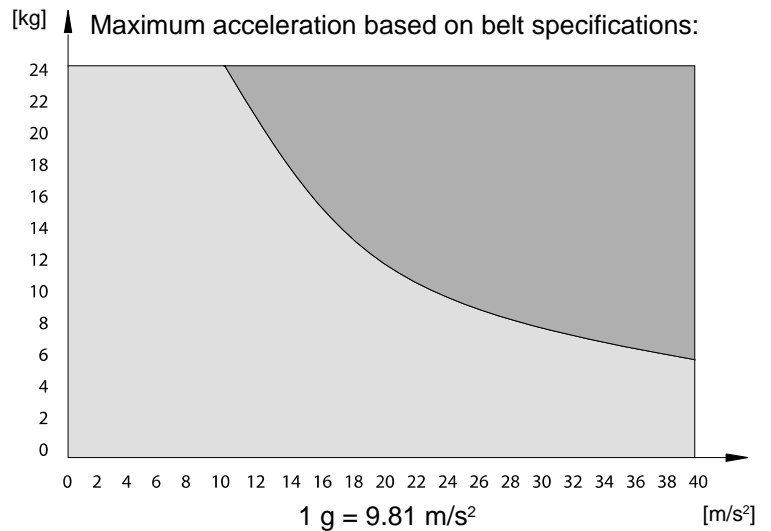


Technical Data

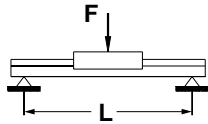
- Belt type: 5 mm HTD, 25 mm wide
- Mass of carriage: 1.530 kg
- Weight without motor module: ≈ 12 kg/1000 mm
- Specific mass of belt: 0.09 kg/m
- Diameter of pulley: 22.28 mm
- Pulley mass moment of inertia: 8.542×10^{-5} kg·m²
- Effective circumference: 70 mm

NOTE: One revolution of motor shaft produces 70 mm of linear travel. This determines travel resolution.

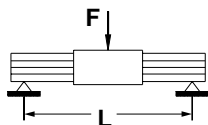
No load speed (rpm)	No load torque (N·m)
500	0.16
1500	0.24
3000	0.36



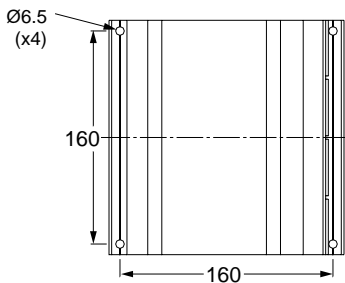
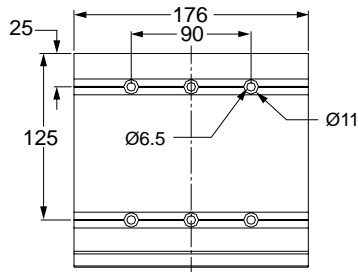
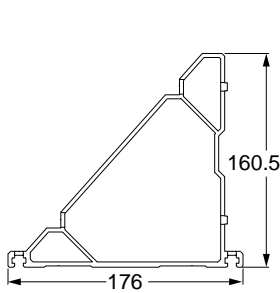
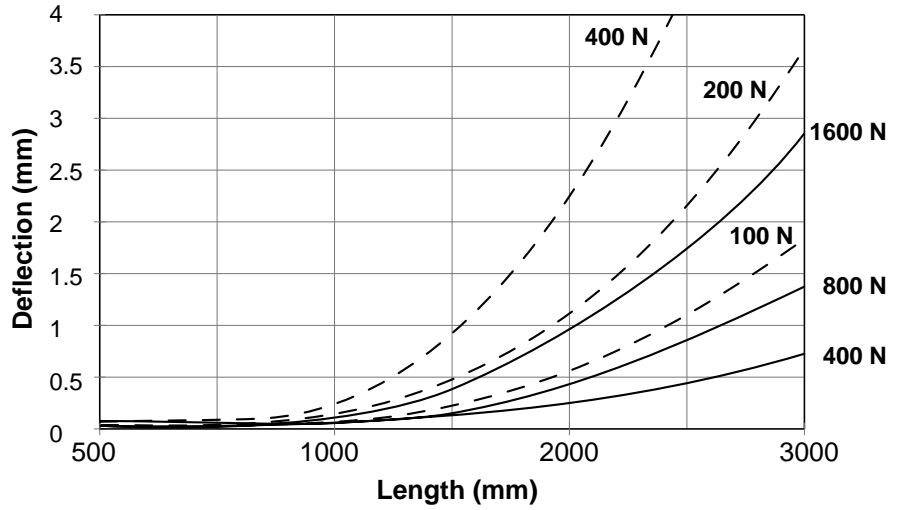
Load 1 - - - -



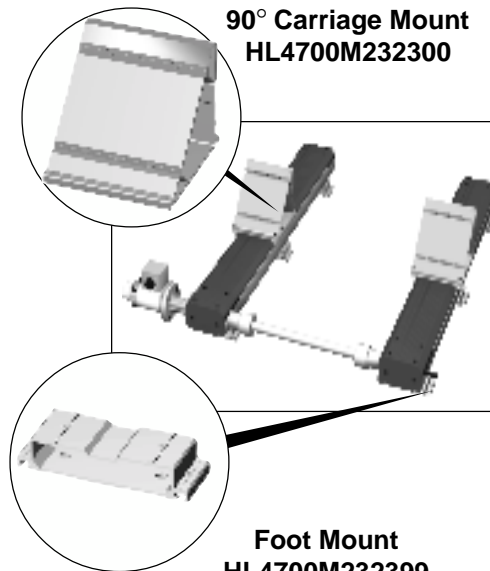
Load 2 ————



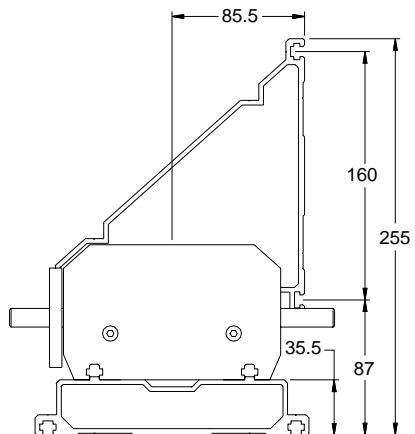
Deflection Chart – Blueline 3



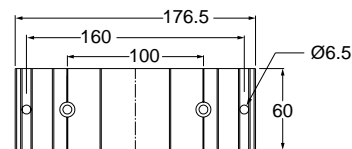
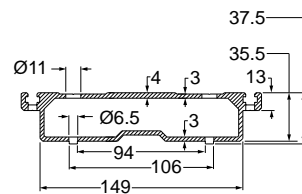
90° Carriage Mount



Foot Mount
HL4700M232399



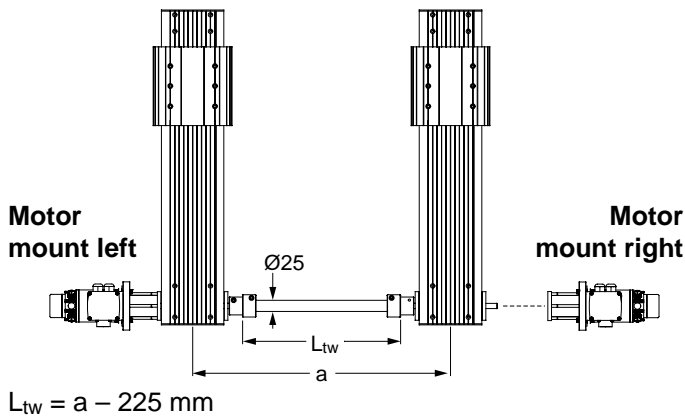
Assembly End View



Foot Mount

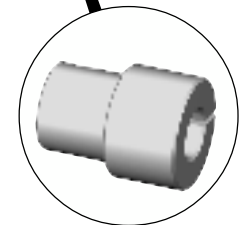
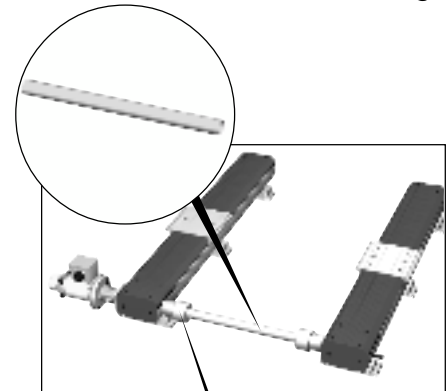
Transmission Bar

Catalog Number: HL5500M219001-1 – 1 meter long
HL5500M219001-2 – 2 meters long



where:

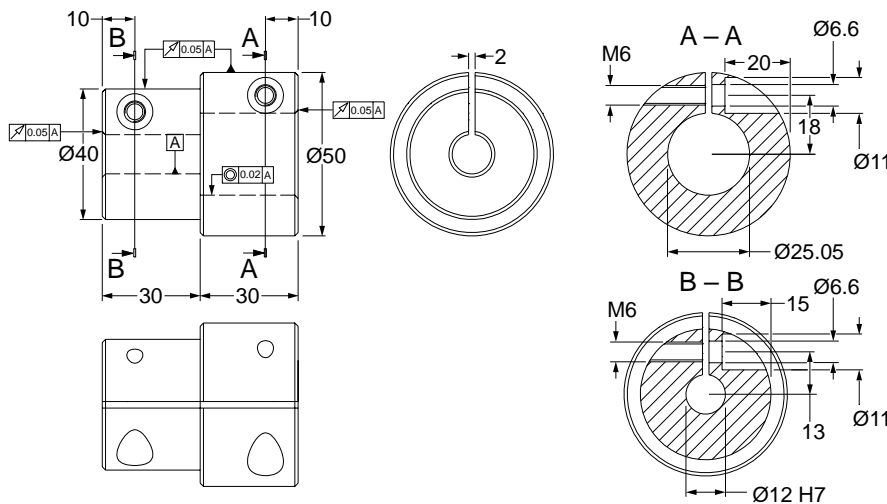
- a = Distance between axes
- L_{tw} = Transmission bar length



Coupling for Transmission Bar

Catalog Number: HL5500M218050

Coupling for Ø25 mm Transmission Bar
(two are included per set)



Moment of Inertia

For Coupling:

$$J_K = 6.643 \cdot 10^{-5} \text{ kg} \cdot \text{m}^2$$

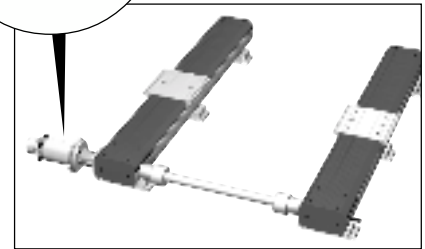
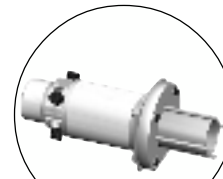
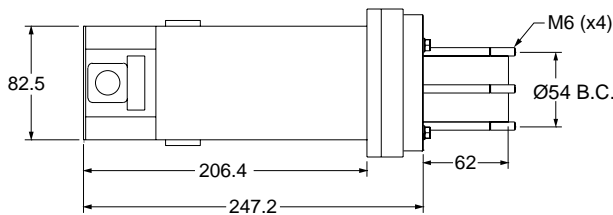
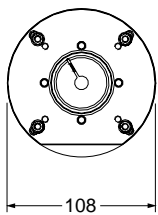
For Transmission Bar:

$$J_{TRS} = 5.218 \cdot 10^{-6} \text{ kg} \cdot \text{m}^2 / 100 \text{ mm}$$

DC Servomotor

Catalog Number: HZ2600M396085293

Specifications			
Power	300W	Maximum Terminal Voltage	90V
Maximum Operating Speed	5000 rpm	Peak Stall Torque	825 oz.in
Continuous Stall Torque	165 oz.in	Maximum Pulse Current	38A
Maximum Continuous Current	6.4A	Operating Temperature	0°C to 40°C



Stepper Motor

Catalog Number: HL2600M396085193 (Right Mount)
HL2600M396085020 (Left Mount)

Specifications			
Holding Torque (bipolar)	600 N.cm	Resistance	0.66 Ω
Steps Full	1.8°	Inductance	2.5 mH
Half	0.9°	Current (bipolar)	5.9A
Voltage (bipolar)	2.8V		

