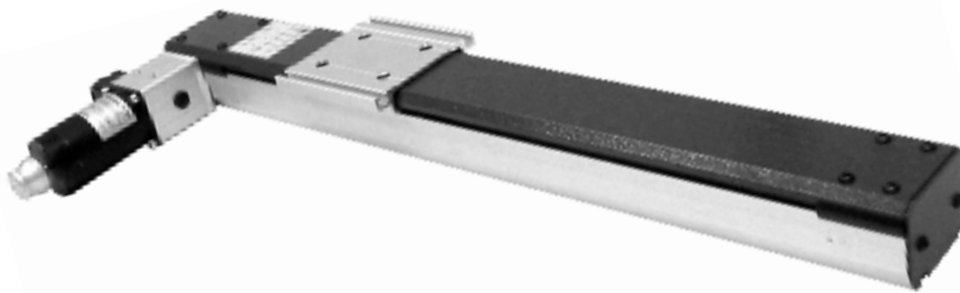


- Carriage rides on two Ø8 mm precision ground steel shafts that are supported along the entire length of travel to minimize deflection
- Lengths up to 2 meters
- Available with either a 160 N·cm stepper motor, 120W servomotor or no motor
- Maximum speed: 2.4 m/s
- Belt is 3 mm HTD, 15 mm wide. HTD belt profile helps reduce backlash
- Home and end reference switch repeatable to < 0.1 mm



Blueline, belt drive selection Catalog Number

HL3101MP

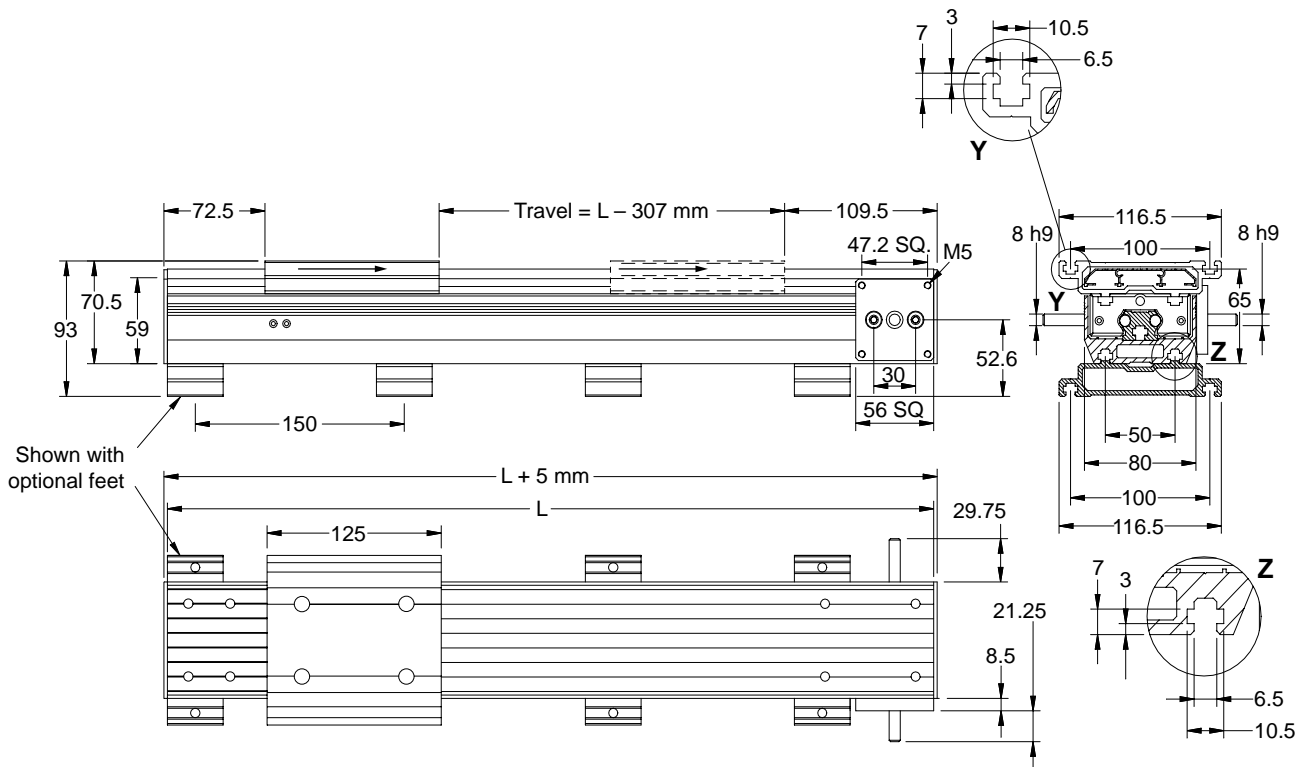
Motor Type

- X No motor
- V Servomotor
- S Stepper motor

Motor Mounting

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

Code	Length (mm)	Travel (mm)
045	450	143
055	550	243
065	650	343
075	750	443
085	850	543
095	950	643
105	1050	743
115	1150	843
125	1250	943
135	1350	1043
145	1450	1143
155	1550	1243
165	1650	1343
175	1750	1443
185	1850	1543
195	1950	1643
205	2050	1743



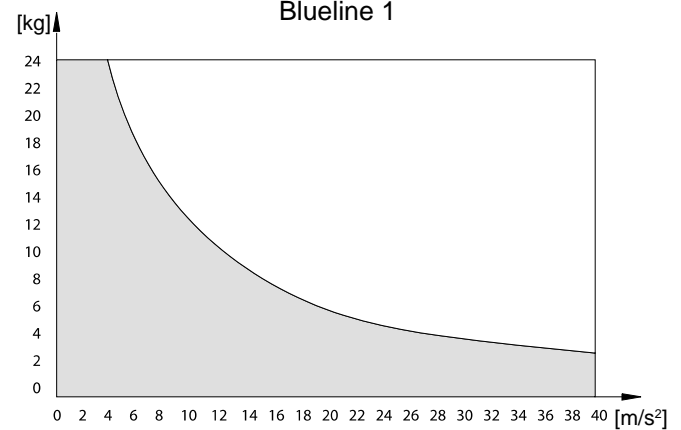
Technical Data

- Belt type: 3 mm HTD, 15 mm wide
- Mass of carriage: 0.730 kg
- Weight without motor module: ≈ 6.25 kg/1000 mm
- Specific mass of belt: 0.0375 kg/1000 mm
- Diameter of pulley: 15.28 mm
- Pulley mass moment of inertia: 1.461×10^{-6} kg·m²
- Effective circumference: 48 mm

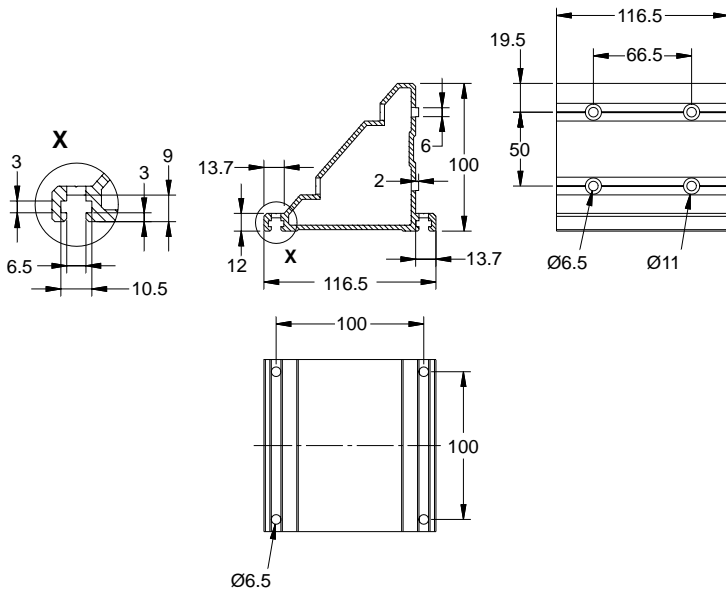
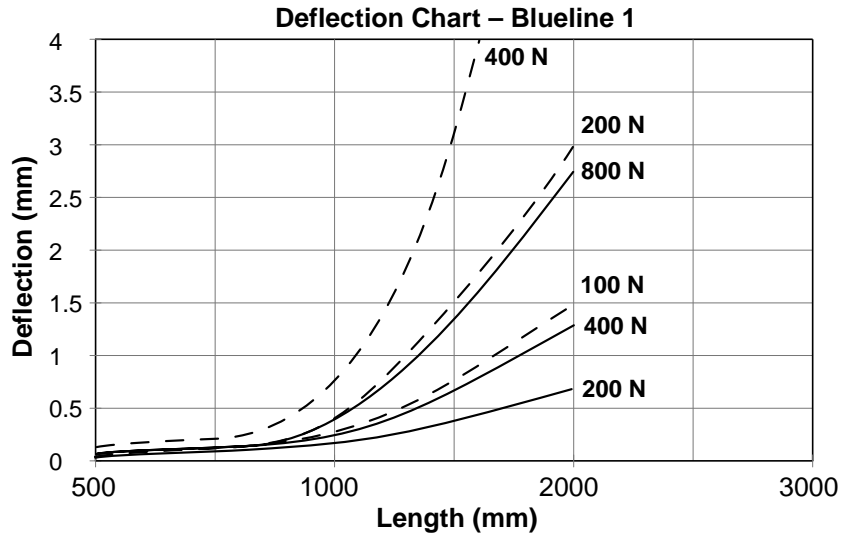
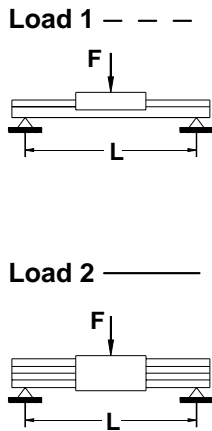
NOTE: One revolution of motor shaft produces 48 mm of linear travel. This determines travel resolution.

No load speed (rpm)	No load torque (N·m)
500	0.06
1500	0.09
3000	0.13

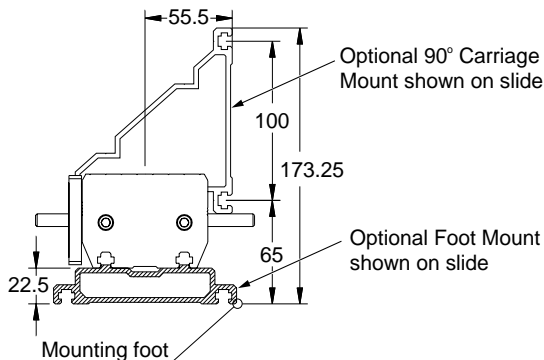
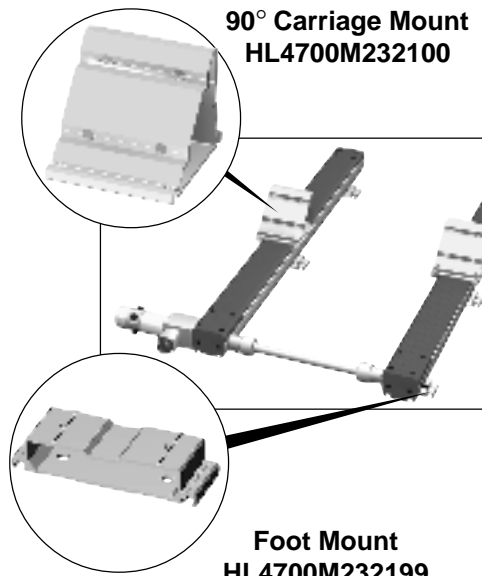
Maximum acceleration based on belt specifications:
Blueline 1



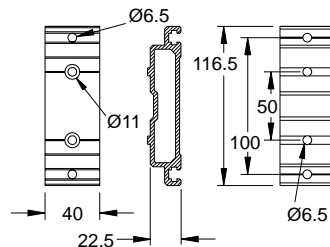
1 g = 9.81 m/s²



90° Carriage Mount

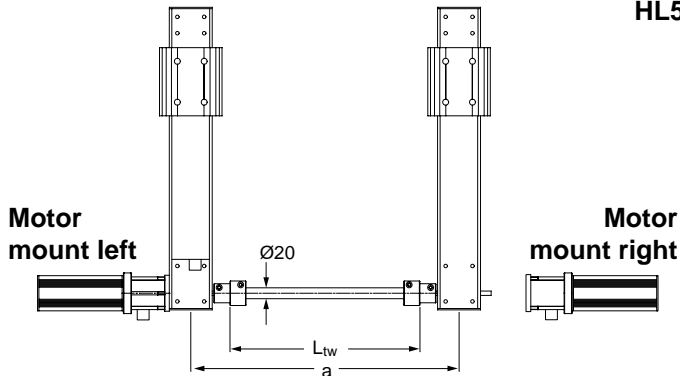


Assembly End View



Foot Mount

Transmission Bar



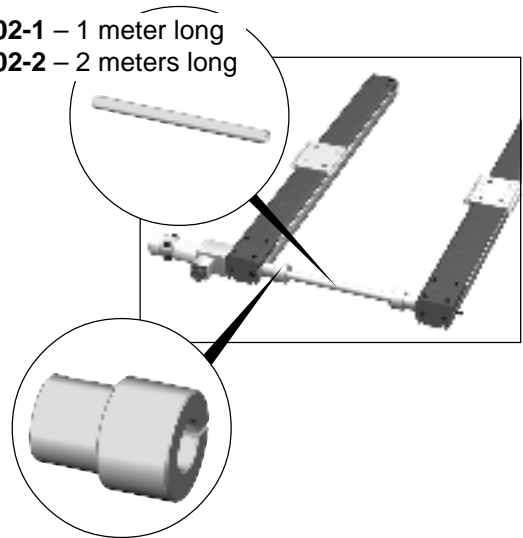
$$L_{tw} = a - 145 \text{ mm}$$

where:

a = Distance between axes

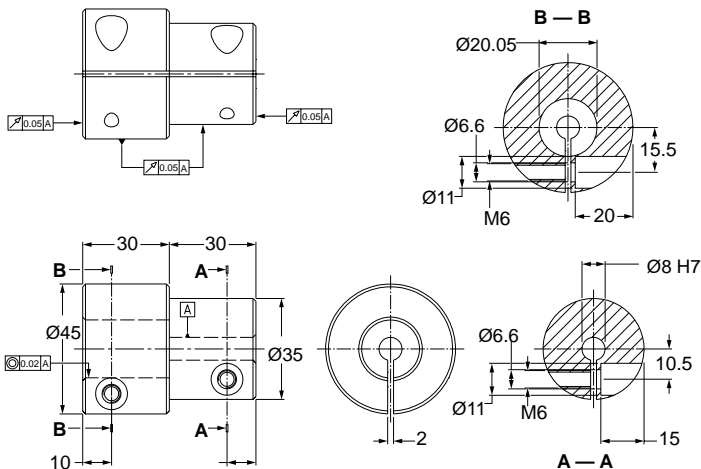
L_{tw} = Transmission bar length

HL5500M219002-1 – 1 meter long
HL5500M219002-2 – 2 meters long



HL5500M218051 – Coupling for $\varnothing 20$ mm Transmission Bar
(two are included per set)

Coupling for Transmission Bar



Moment of Inertia

For Coupling:

$$J_K = 4.258 \cdot 10^{-5} \text{ Kg} \cdot \text{m}^2$$

For Transmission Bar:

$$J_{TRS} = 2.513 \cdot 10^{-6} \text{ Kg} \cdot \text{m}^2 / 100 \text{ mm}$$

Carriage Plate

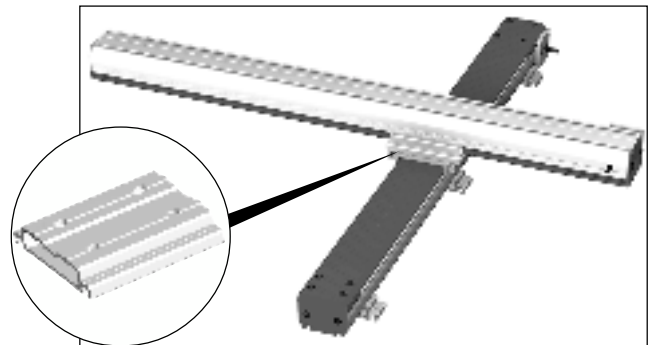
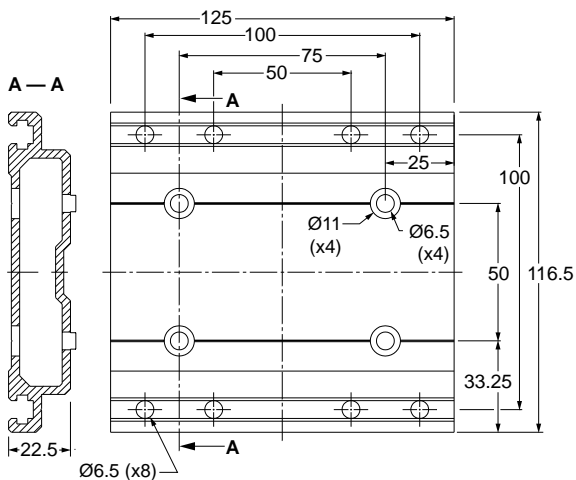
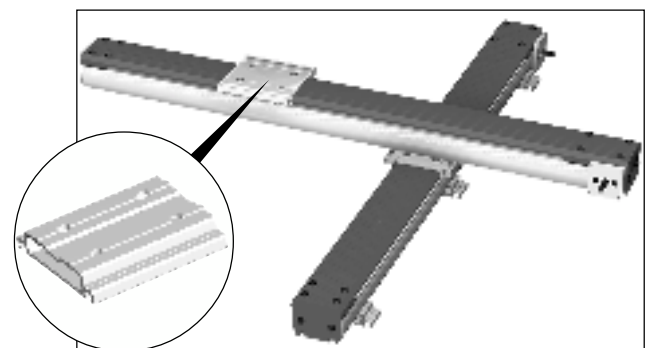


Plate stationary, slide moves

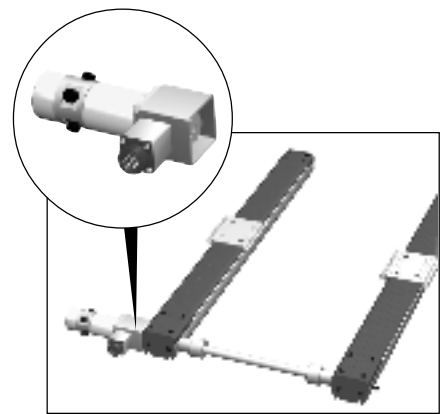
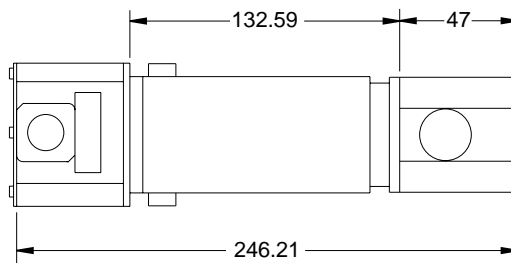
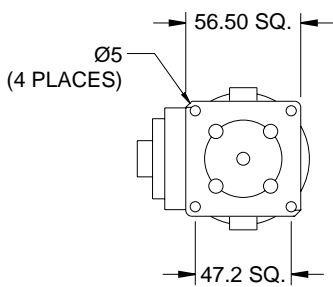


Slide stationary, plate moves

DC Servomotor

Catalog Number: HZ2600M0242601

Specifications			
Power	120W	Maximum Terminal Voltage	60V
Maximum Operating Speed	6000 rpm	Peak Stall Torque	350 oz.in
Continuous Stall Torque	50 oz.in	Maximum Pulse Current	31A
Maximum Continuous Current	4.2A	Operating Temperature	0°C to 40°C



Stepper Motor

Catalog Number: HL2600M210022

Specifications			
Holding Torque (bipolar)	160 N.cm	Resistance	1.2 Ω
Steps Full	1.8°	Inductance	2.2 mH
Half	0.9°	Current (bipolar)	4.1A
Voltage (bipolar)	1.7V		

