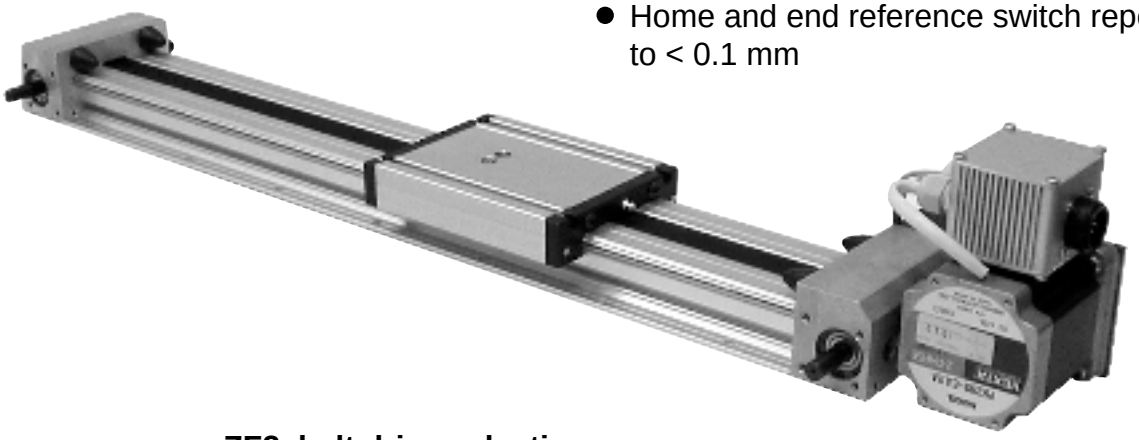
- Carriage rides on two Ø8 mm precision ground steel shafts that are supported along the entire length of travel to minimize deflection
- Lengths up to 3 meters
- Available with either a 600 N·cm stepper motor, 300W servomotor or no motor
- Maximum speed: 5 m/s
- Belt is 5 mm HTD, 25 mm wide. HTD belt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



ZF2, belt drive selection
Catalog Number

HL3102MP□□□□□

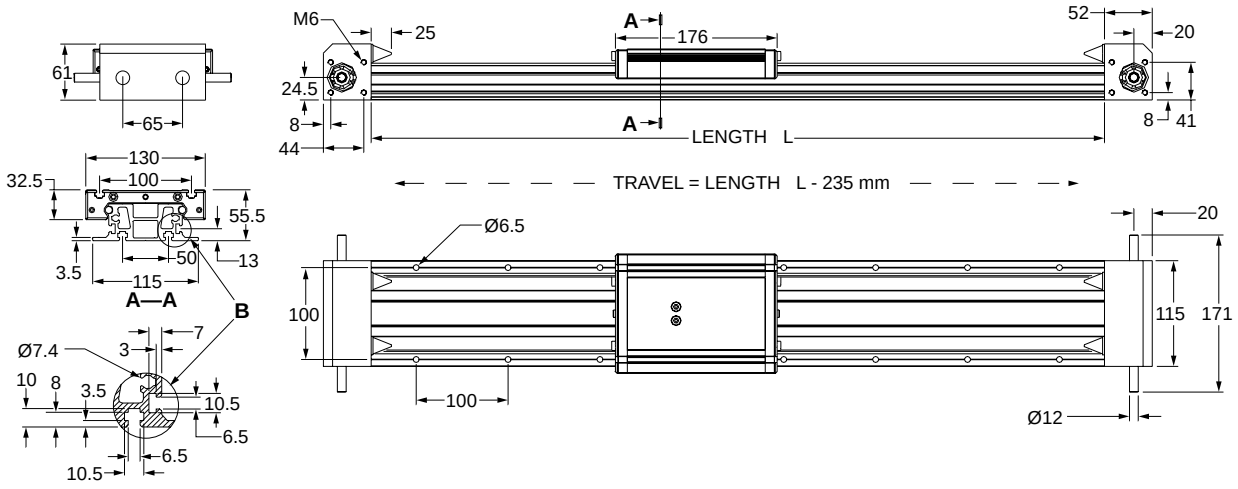
Carriage Type
- **0** Bearing Carriage, 2:1 Ratio
- **1** Roller Carriage, 2:1 Ratio

Motor Type
- **X** No motor
- **V** Servomotor
- **S** Stepper motor

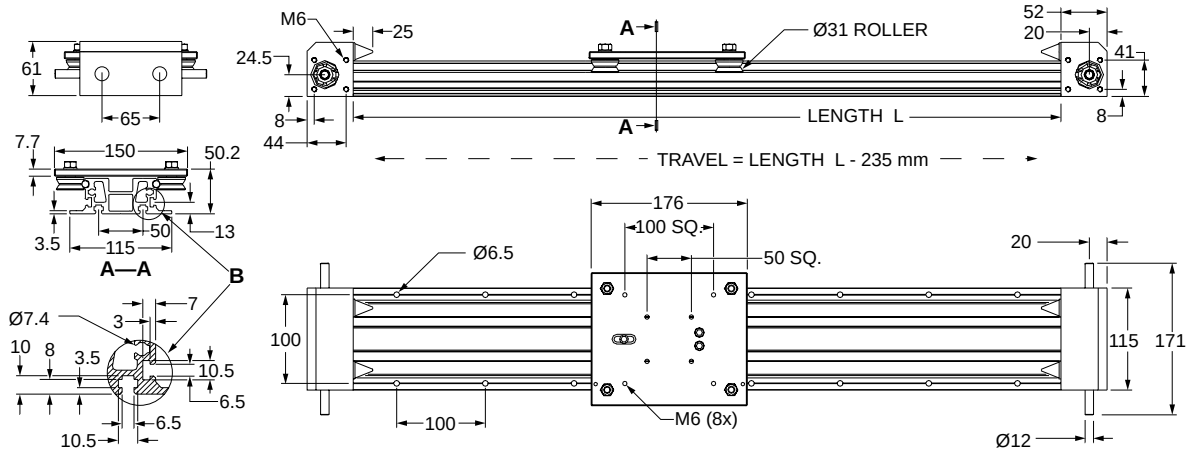
Code	**Length** (mm)	**Travel** (mm)
070	698	463
100	998	763
150	1498	1263
200	1998	1763
250	2498	2263
300	2998	2763

NOTE: All slides provided with a motor come with a 2:1 belt and pulley assembly.

Bearing Carriage



Roller Carriage



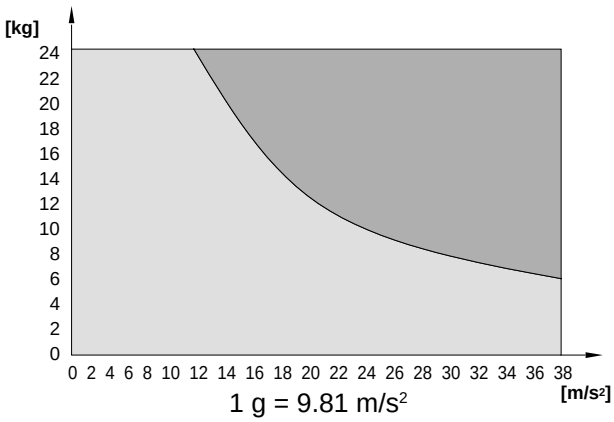
Technical Data

- Belt type: 5 mm HTD, 25 mm wide
- Mass of Bearing Carriage = 0.940 kg
- Mass of Roller Carriage = 2.03 kg
- Weight without motor module: ≈ 7.9 kg/1000 mm
- Specific mass of belt: 0.09 kg/m
- Diameter of pulley: 22.28 mm
- Pulley mass moment of inertia: 5.58 x 10^{-6} kg•m^2
- Effective circumference: 70 mm

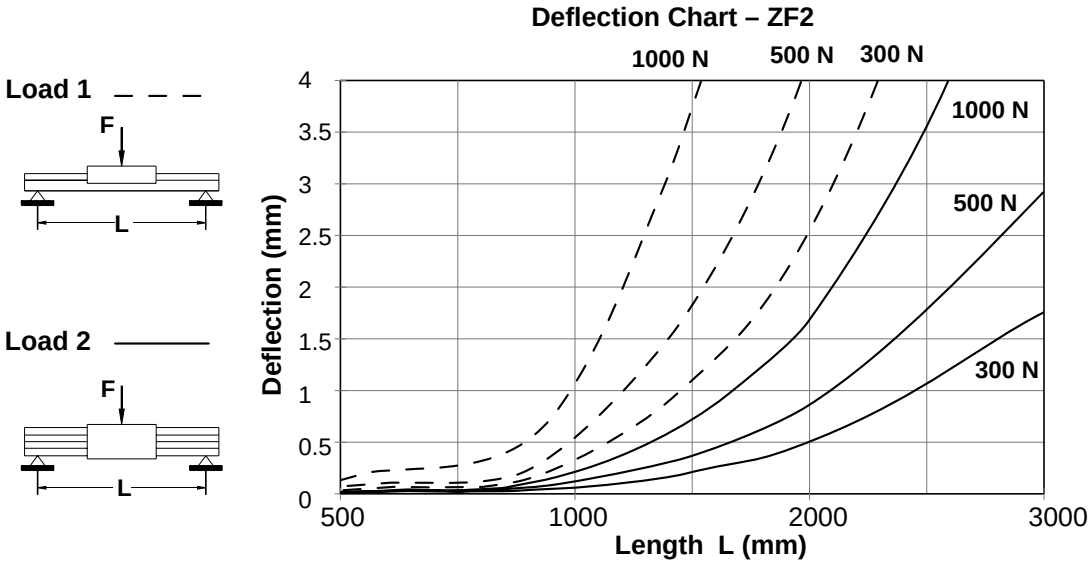
NOTE: Two revolutions of the motor shaft produce 70 mm of linear travel. This determines travel resolution.

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

Maximum Acceleration Based On Belt Specification ZF2

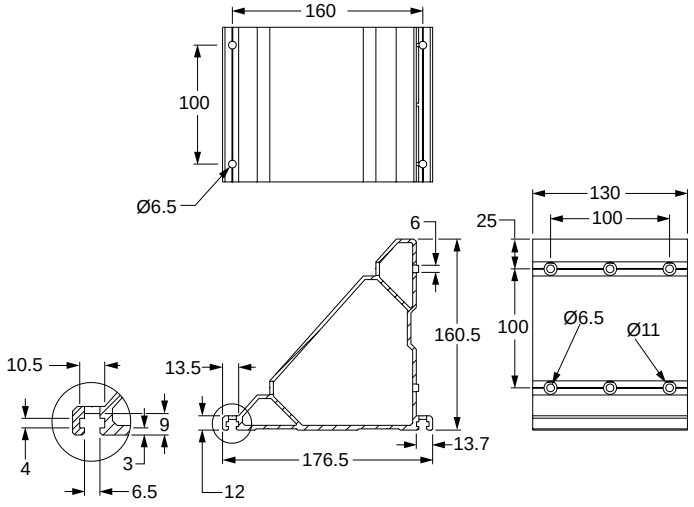


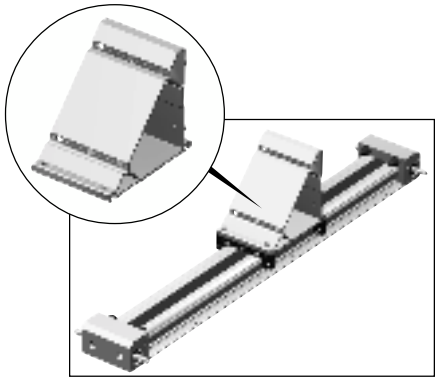
1 g = 9.81 m/s²



90° Carriage Mount

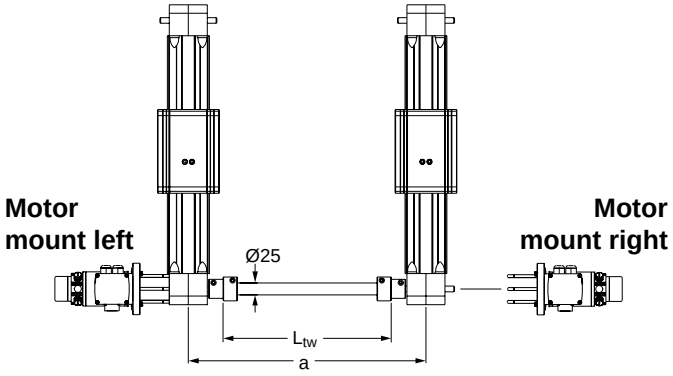
Catalog Number: HL4700M232200

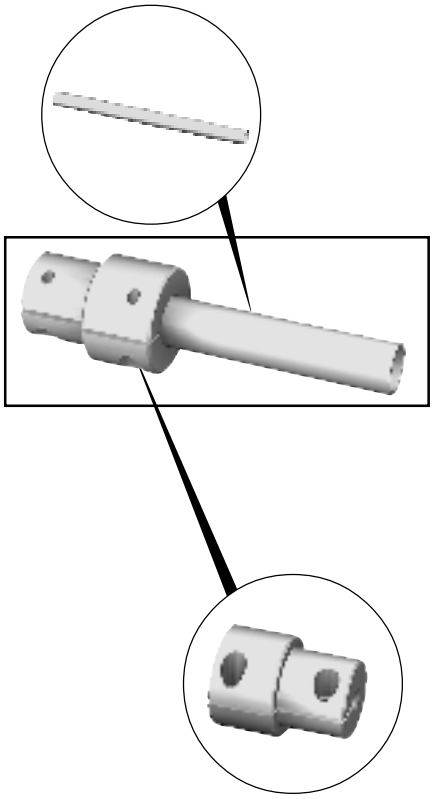




Transmission Bar

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





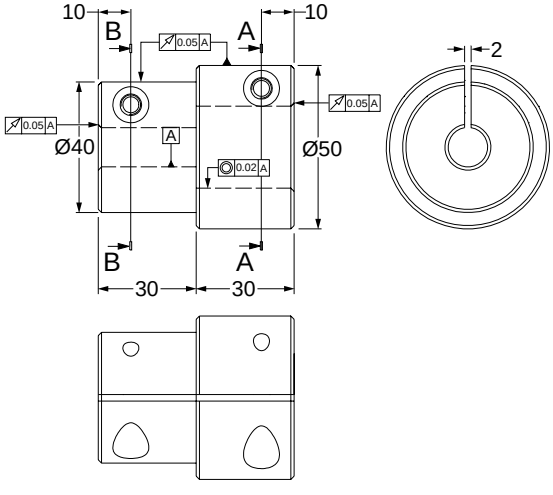
L_{tw} = a - 180 mm

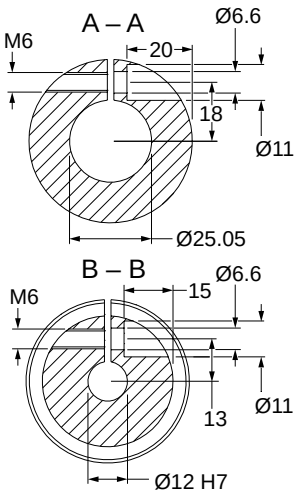
where:
a = Distance between axes
L_{tw} = Transmission bar length

Coupling for Transmission Bar

Catalog Number: **HL5500M218050**

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





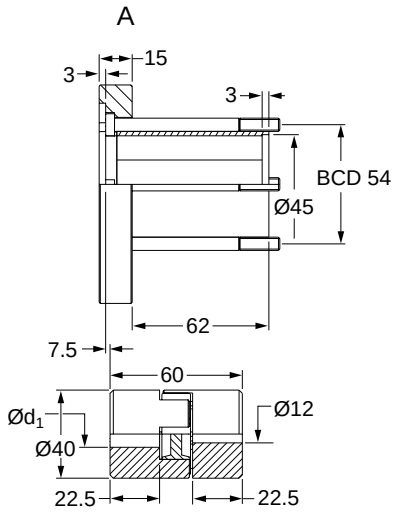
Moment of Inertia

For Coupling:
$J_K = 6.643 \cdot 10^{-5}$ kg • m²

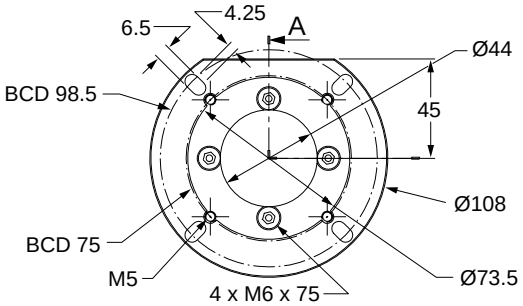
For Transmission Bar:
$J_{TRS} = 5.218 \cdot 10^{-6}$ kg • m²/100 mm

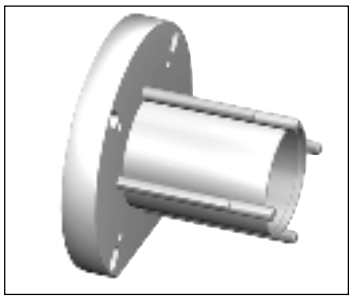
Motor Stand-Off

Catalog Number: HL5500M218100



40 x 60 Coupling

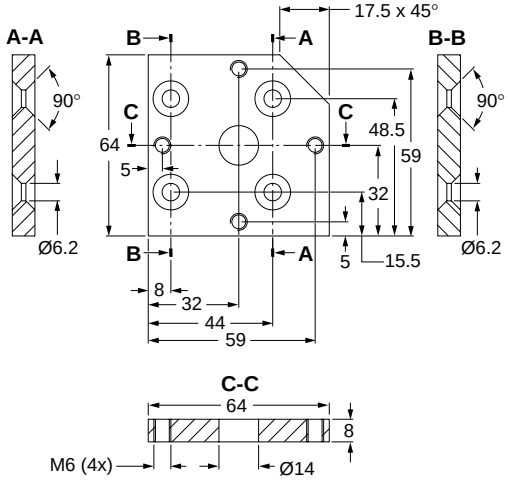


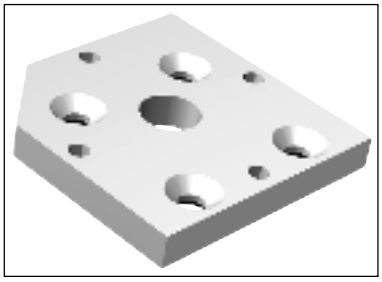


BCD: Bolt Circle Diameter

Motor Mount Plate

Catalog Number: HL4700M232204

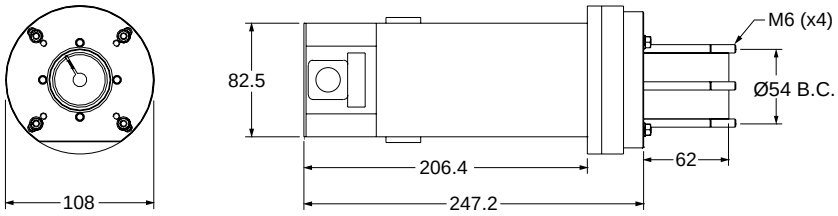


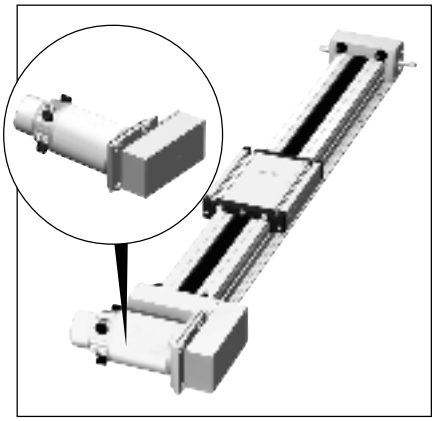


DC Servomotor

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