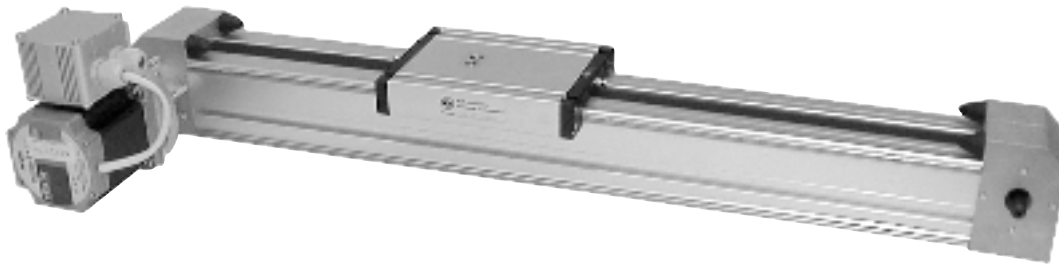


Ci5 Belt Drive Slide

FEATURES

- ◆ 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
- ◆ Resolution is 0.375 mm/step in half-step mode and 0.0375 mm/pulse with standard servo motor.
- ◆ Available with either a 600 N·cm stepper motor, 300W servo motor or no motor
- ◆ Maximum speed: 5 m/s
- ◆ Belt is 5 mm HTD, 25 mm wide. The HTD belt profile helps reduce backlash
- ◆ Home and end reference switch repeatable to < 0.1 mm



CATALOG NUMBER

KO5328PS

Motor Mounting

- 2 Right-hand side
- 3 Left-hand side

Motor Type

- A No motor
- Y Servo motor
- V Stepper motor

Carriage Type

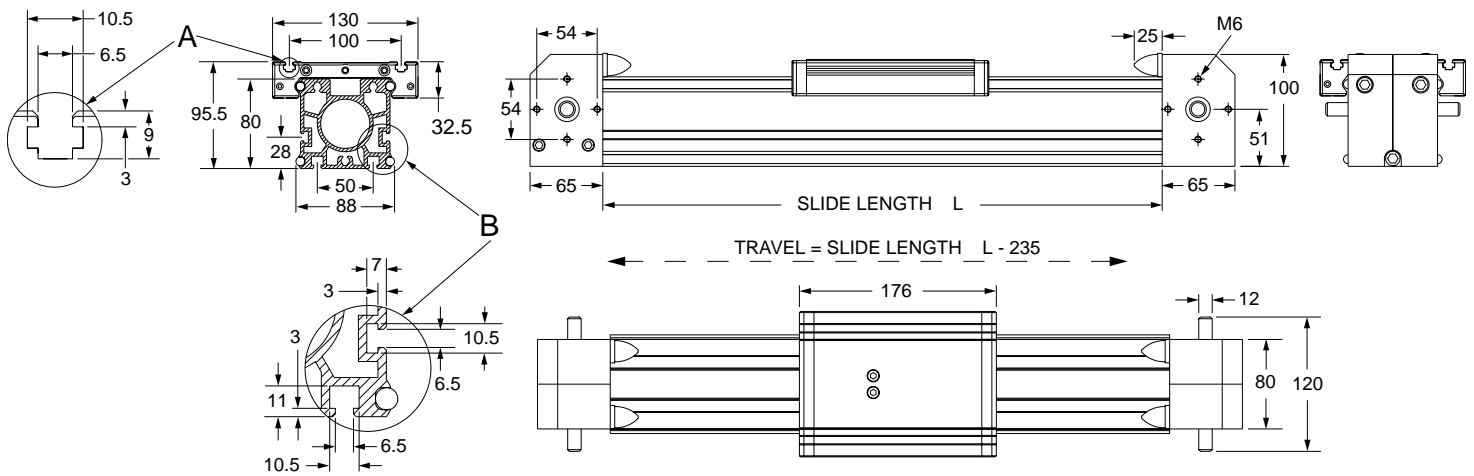
- 2 Bearing Carriage

CI5 BELT DRIVE SELECTION

Code	Length (mm)	Travel (mm)
292	698	458
322	998	758
372	1498	1258
422	1998	1758
470	2498	2258
522	2998	2758

Ci5 Belt Drive Slide

Bearing Carriage



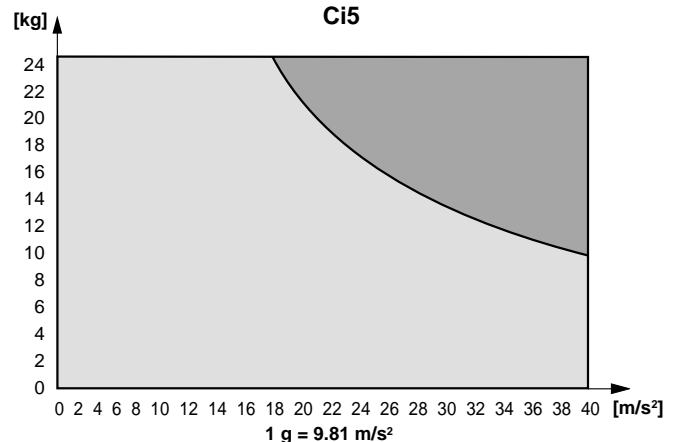
Technical Data

- 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: ≈ 10.5 kg/1000 mm
- Specific mass of belt: 0.09 kg/m
- Diameter of pulley: 47.75 mm
- Pulley mass moment of inertia: 1.796×10^{-4} kg \cdot m²
- Effective circumference: 150 mm

NOTE: One revolution of motor shaft produces 150 mm of linear travel. This determines travel resolution.

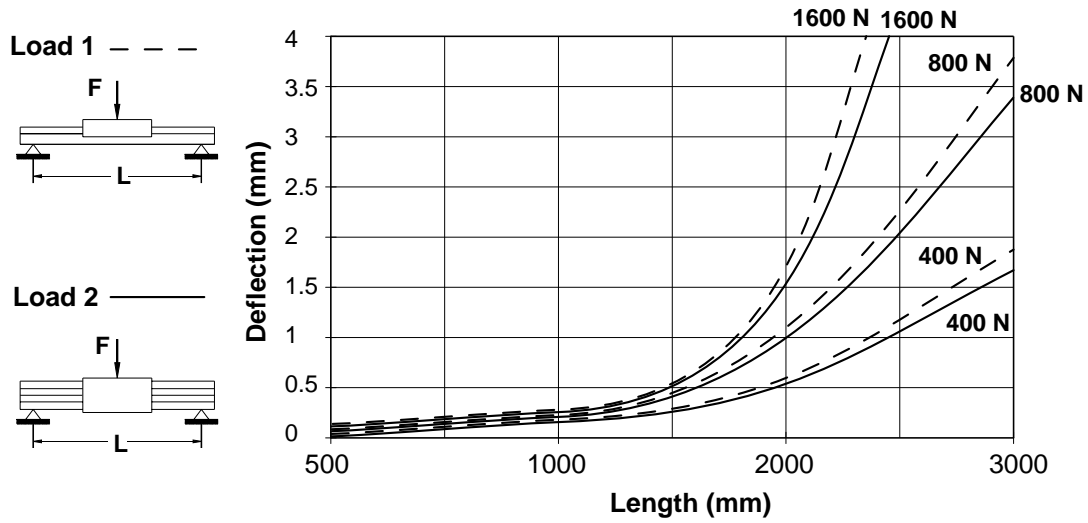
No load speed (rpm)	No load torque (N·m)
500	0.60
1500	0.70
3000	0.80

Maximum Acceleration Based On Belt Specification Ci5



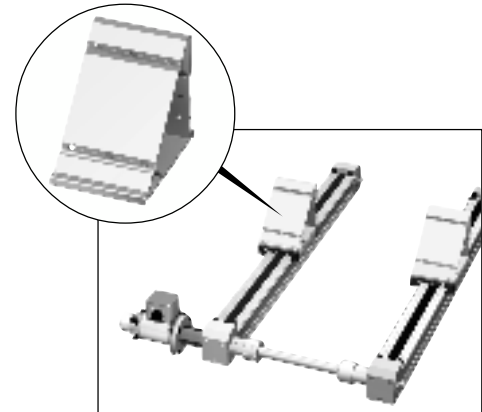
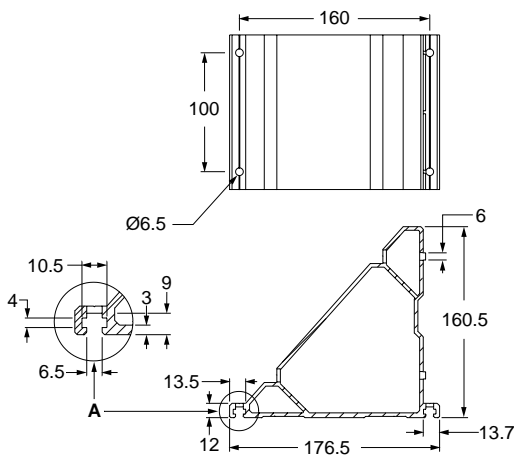
Ci5 90° Carriage Mount & Motor Stand-Off

Deflection Chart – Ci5



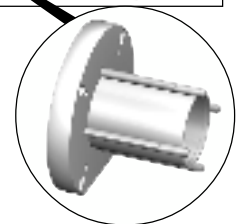
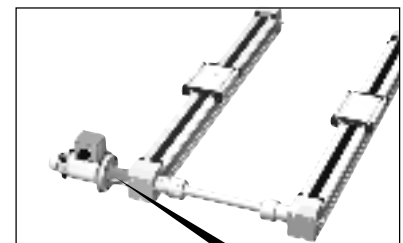
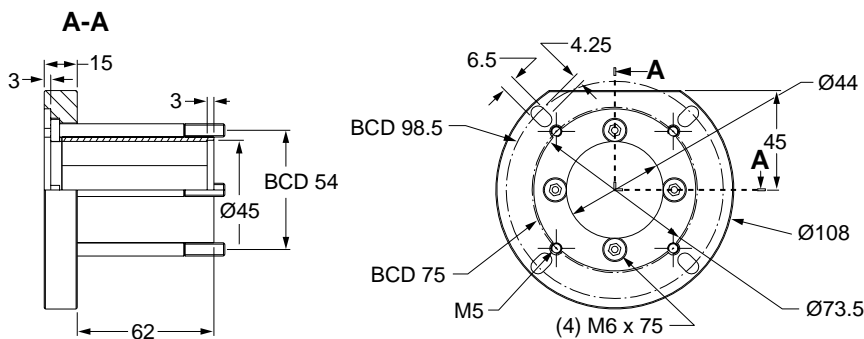
90° Carriage Mount

CATALOG NUMBER: KO6922P454822



Motor Stand-Off

CATALOG NUMBER: KO7722P430322



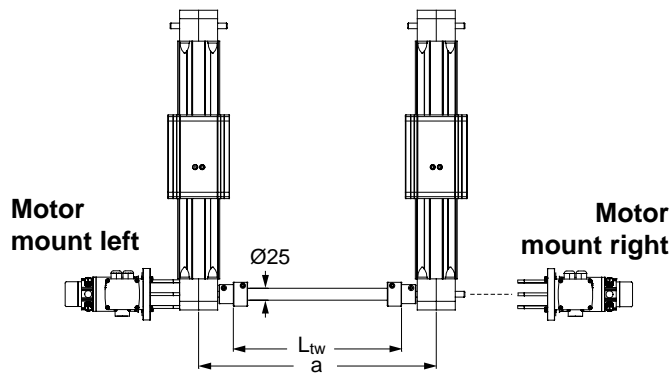
BCD: Bolt Circle Diameter

(Does not include coupling)

CI5 Transmission Bar & Coupling

Transmission Bar

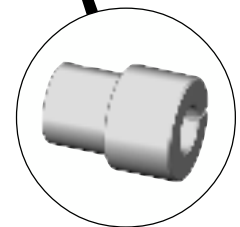
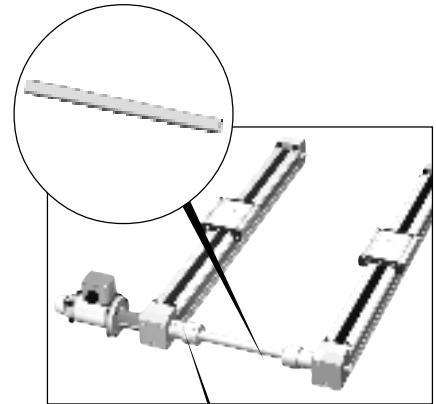
CATALOG NUMBER: KO7722P431223-3 – 1 meter long
KO7722P431223-3 – 2 meters long



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

where:

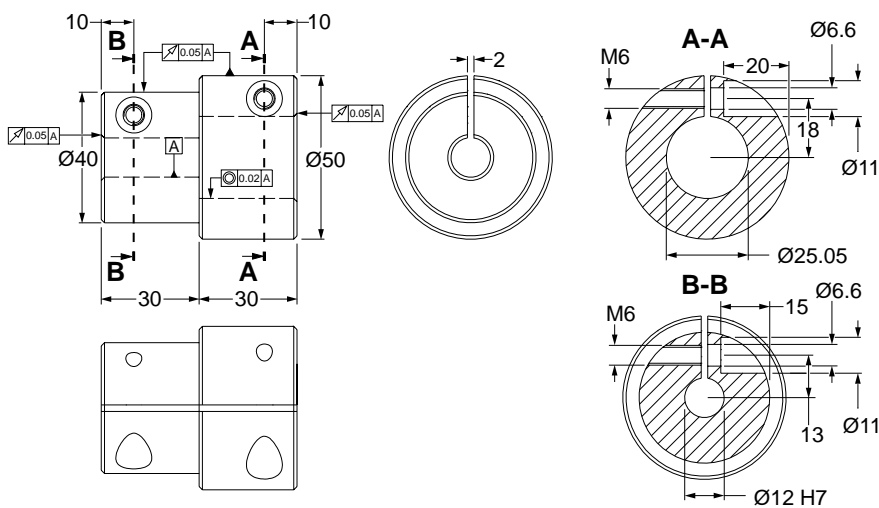
a = Distance between axes
 L_{tw} = Transmission bar length



Coupling for Transmission Bar

CATALOG NUMBER: KO7722P430272

Coupling for $\varnothing 25$ mm Transmission Bar
(two are included per set)



Moment of Inertia

For Coupling:

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

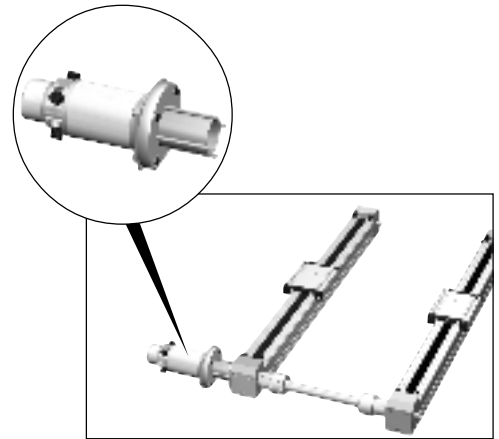
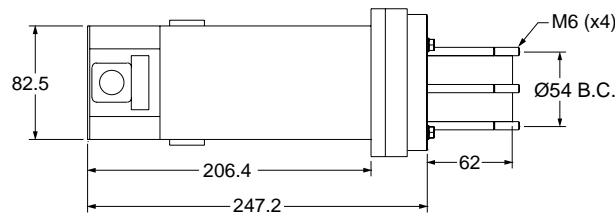
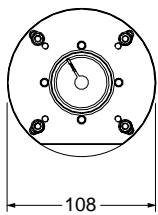
For Transmission Bar:

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

DC Servo Motor

CATALOG NUMBER: KC4822P518207415

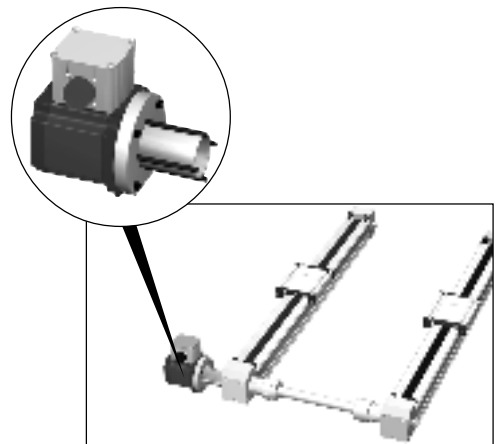
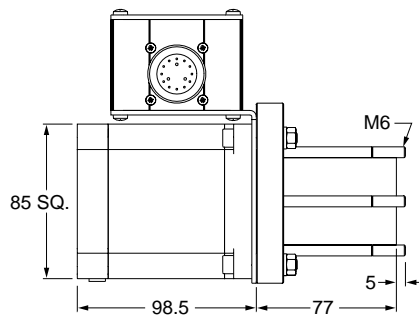
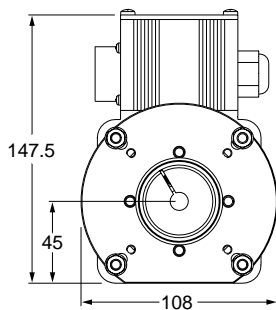
Specifications	
Power	300W
Maximum Operating Speed	5000 rpm
Continuous Stall Torque	165 oz · in
Maximum Continuous Current	6.4A
Maximum Terminal Voltage	90V
Peak Stall Torque	825 oz · in
Maximum Pulse Current	38A
Operating Temperature	0°C to 40°C



Stepper Motor

CATALOG NUMBER: KO4822P518207315 (Right Mount)
KO4822P518207242 (Left Mount)

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



Belt Slide Actuator Specifications

Load and Moment Data (reference diagram below)

Model	EO3	EO5	Ci3 bearing carriage		Ci4 bearing carriage		Ci5 bearing carriage		QS4 slide
Co [N]	3061.5	4701.7	3061.5		4701.7		4701.7		1270.0
C [N]	1598.1	2127.7	1598.1		2127.7		2127.7		750.0
F1 stat [N]	2648.0	4060.0	2648.0		4060.0		4060.0		1270.0
F1 dyn [N]	1382.7	1840.3	1382.7		1840.3		1840.3		750.0
F2 stat [N]	3061.5	4701.7	3061.5		4701.7		4701.7		1270.0
F2 dyn [N]	1598.1	2127.7	1598.1		2127.7		2127.7		750.0
Mx stat [Nm]	37.2	175.0	37.2		175.0		175.0		22.0
My stat [Nm]	98.8	151.8	98.8		151.8		151.8		12.6
Mz stat [Nm]	114.3	175.5	114.3		175.5		175.5		12.6
Mx dyn [Nm]	19.4	79.2	19.4		79.2		79.2		13.5
My dyn [Nm]	51.6	68.7	51.6		68.7		68.7		7.5
Mz dyn [Nm]	59.7	79.4	59.7		79.4		79.4		7.5

