

Precision Motorized Stages - 5 Phase Stepping Motor

Stage Size 165 × 165 mm / 165 × 220 mm

HST-XYZ

RoHS

High precision XYZ axis stages fitted with precision ball screws and precision crossed roller.



- The combination of HST Series and 3 axis Stage Controllers HSC-103 can perform low-noise and low-vibration operation, compared with conventional products.
- Steel body offers excellent stiffness and high load capacity.

Guide

► Contact our sales team for more information regarding customization.

[Reference](#) G123 [WEB Reference](#) [Catalog Code](#) W9500

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

Controllers/Drivers

Softwares

Stepping Motor

AC Servo Motor

Cables

Piezo

X Translation

Theta Rotation

Goniometer

Vacuum

Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

Specifications

Part Number			HST-50XYZ	HST-100XYZ
Mechanical Specifications	Travel [mm]		50	100
	Stage Size [mm]		165×165	165×220
	Feed Screw		Ball screw diameter ϕ 8mm, 2mm lead	Ball screw diameter ϕ 8mm, 2mm lead
	Positioning Slide		Crossed roller	Crossed roller
	Stage Material		Steel	Steel
	Finish		Black anodized	Black anodized
	Weight [kg]		30.4	36.1
Accuracy Specifications	Resolution	(Full) [μ m/pulse]	4	4
		(Half) [μ m/pulse]	2	2
	MAX Speed [mm/sec]		10	10
	Positional Repeatability [μ m]		2	2
	Load Capacity [N]		39.2 (4.0kgf)	39.2 (4.0kgf)
	Lost Motion [μ m]		1	1
	Backlash [μ m]		1	1
	Orthogonality of Motion [μ m]		5	5
	Straightness of Motion [μ m]		10	15
Sensor	Sensor Part Number		Micro photo sensor : GP1S092HCP1F (Sharp Corporation)	
	Limit Sensor		Equipped (NORMAL CLOSE)	
	Origin Sensor		Equipped (NORMAL OPEN)	
	Proximity Origin Sensor		Equipped (NORMAL OPEN)	

Motor / Sensor Specifications

Motor	Type	5-phase stepping motor 1.4A/phase (Oriental Motor Co., Ltd.)
	Motor Part Number	PK544N18B (□42mm)
	Step Angle	0.72°
Sensor	Power Voltage	DC5 – 24V $\pm$ 10%
	Current Consumption	240mA or lower (80mA or lower a per axis 20mA or lower per a sensor)
	Control Output	NPN open collector output DC30V or lower, 50mA or lower
	Output Logic	When shaded: Output transistor OFF (no conduction) : Limit Sensor When shaded: Output transistor ON (conduction): Origin sensor, Proximity Origin Sensor

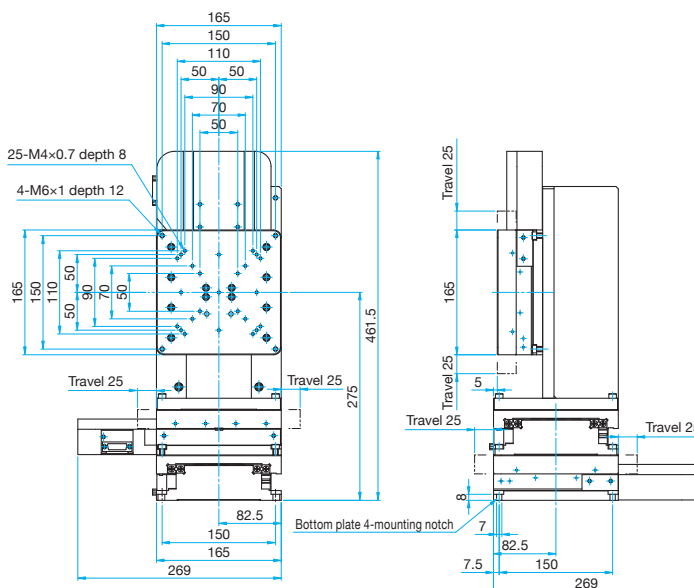
Compatible Driver / Controller

Control System	Compatible Driver	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL
	Compatible Controller	HSC-103, SHOT-304GS, HIT-M, HIT-SH, PGC-04-U

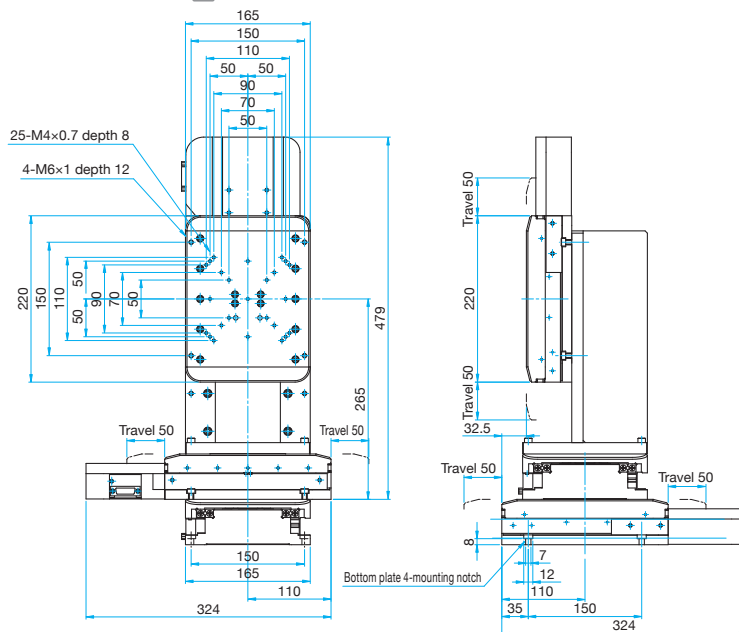


Outline Drawing

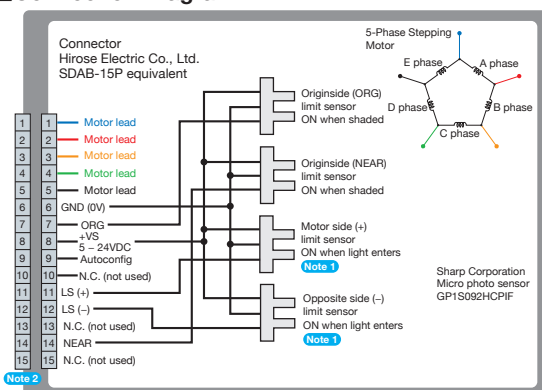
HST-50XYZ Hexagon socket head cap screw M6×15...4 screws



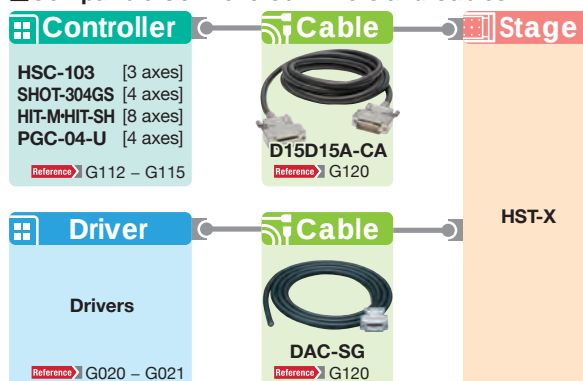
HST-100XYZ Hexagon socket head cap screw M6×15...4 screws



Connection Diagram



Compatible Controllers / Drivers and Cables



Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Controllers/Drivers

Softwares

Stepping Motor

AC Servo Motor

Cables

Piezo

X Translation

Theta Rotation

Goniometer

Vacuum

Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others