

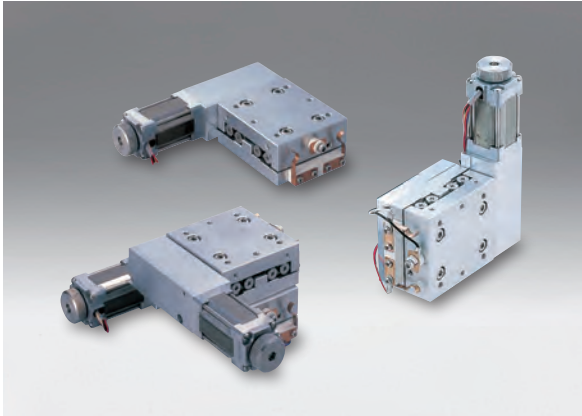
# Vacuum Compatible Miniature Motorized Stages

Stage Size 55 × 60 mm

VSGSP-60

RoHS

Compact motorized stages for use in high vacuum.  
Compact, slim body for minimal footprint.



## Guide

- ▶ Includes 1m teflon coated cables to connect the vacuum motor and vacuum limit switches to the chamber feedthrough connector.
- ▶ Please Contact our Sales Division for more information about vacuum applications miniature motorized stages which are CE certified.
- ▶ Various types of stages and holders which can be used in vacuum environments are also available. [Reference](#) D023

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Options

40 × 40 mm

60 × 60 mm

80 × 80 mm

85 × 85 mm

100 × 100 mm

120 × 120 mm

Others

## Specifications

Part Number		VSGSP-60(X)	VSGSP-60(XY)	VSGSP-60(Z)
Mechanical Specifications	Travel [mm]	20	20	20
	Stage Size [mm]	55×60	55×60	55×60
	Feed Screw	Precision ground screw $\phi$ 4mm, 0.5mm lead	Precision ground screw $\phi$ 4mm, 0.5mm lead	Precision ground screw $\phi$ 4mm, 0.5mm lead
	Positioning Slide	Crossed roller guide	Crossed roller guide	Crossed roller guide
	Stage Material	Aluminum	Aluminum	Aluminum
	Finish	None	None	None
	Weight [kg]	0.55	1.1	0.6
Accuracy Specifications	Resolution	(Full) [ $\mu$ m]	1	1
		(Half) [ $\mu$ m]	0.5	0.5
	MAX Speed [mm/sec]	5	5	—
	Positional Repeatability [ $\mu$ m]	6	6	6
	Load Capacity [N]	29.4 (3.0kgf)	19.6 (2.0kgf)	14.7 (1.5kgf)
Lost Motion [ $\mu$ m]	5	5	5	
Sensor	Type	Vacuum limit switch	Vacuum limit switch	Vacuum limit switch
	Limit Sensor	Contact type	Contact type	Contact type
	Origin Sensor	None	None	None
	Proximity Origin Sensor	None	None	None

## Motor / Sensor Specifications

Motor	Type	Vacuum compatible 5-phase stepping motor 0.75A/phase (Tamagawa Seiki Co., Ltd.)		
	Motor Part Number	TS3664N5 (□24mm)		
	Step Angle	0.72°		
Sensor	Control Output	Contact type	Contact type	Contact type
	Output Logic	NORMAL OPEN	NORMAL OPEN	NORMAL OPEN

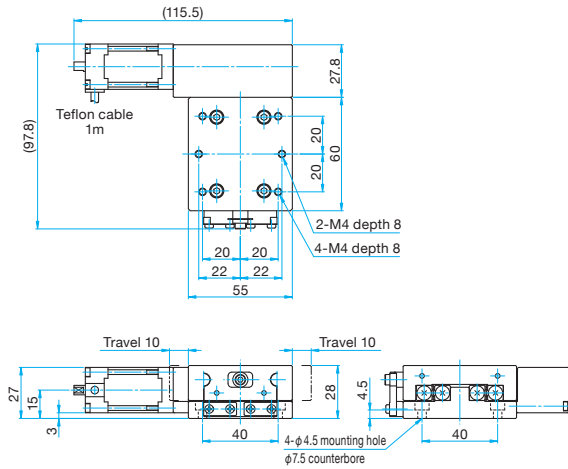
## Compatible Driver / Controller

Control System	Compatible Driver	SG-5M, MC-S0514ZU, SG-514MSC, MC-7514PCL
	Compatible Controller	SHOT-302GS, SHOT-304GS

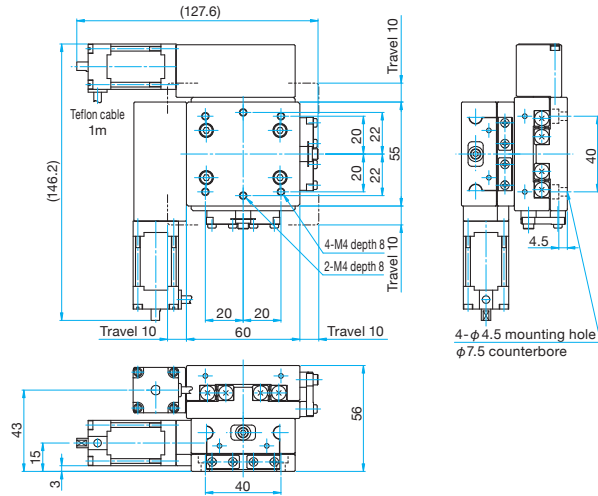


**Outline Drawing**

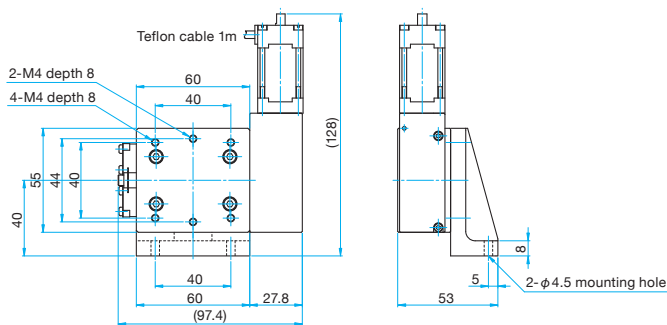
**VSGSP-60(X)** Hexagonal socket head cap screw M4×10...4 screws



**VSGSP-60(XY)** Hexagonal socket head cap screw M4×10...4 screws



**VSGSP-60(Z)** Hexagonal socket head cap screw M4×15...2 screws

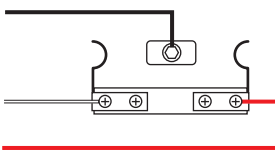


**Vacuum Limit Switch**

GND (0V) black lead

Motor side (+) limit switch  
LS (+) white lead

Opposite side (-) limit switch  
LS (-) red lead



\* Use the motor side and opposite side limit switches as normal open.

**Wiring of Vacuum Stages**

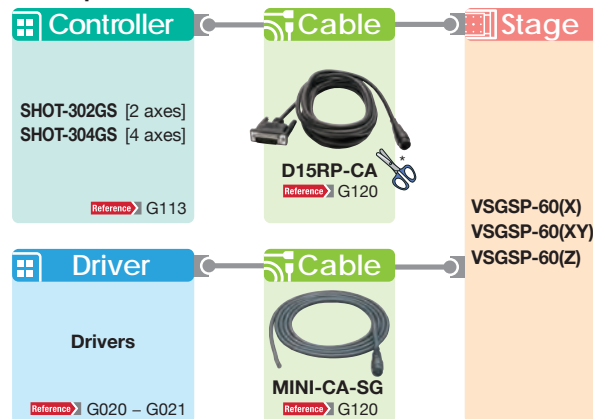
The vacuum compatible stepping motor TS3664N5 used for vacuum stages has five bare lead wires.

For wiring, they correspond to the motor lead colors shown in the wiring diagrams of driver or cable as follows.

(The motor leads shown in the connection diagrams of driver or cable indicate wiring of stepping motors used for normal stages.)

	Vacuum stage motor lead color	Motor lead color shown in driver or cable connection diagram
Corresponding connection	1 Blue	Blue
	2 Red	Red
	3 Red White	Orange
	4 Yellow	Green
	5 Black	Black
	Vacuum compatible stage motor connection diagram	5-phase stepping motor connection diagram

**Compatible Controllers / Drivers and Cables**



\* Make the cable into bare wire specification after purchase.

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