

High accuracy, Compact, Excellent

Providing powerful support for your automation design such as precision positioning or workpiece transportation.

Single Axis Actuator

SX

High accuracy

High grade accuracies applied as standard.
(for all standard grade products)

Guarantee repeatability positioning accuracy $\pm 5\mu\text{m}$. (Advance)
Selectable high accuracy. ($\pm 3\mu\text{m}$)



Compact

Low-profile achieved by the integral structure of blocks.

Block integral structure.
Selectable high accuracy. ($\pm 3\mu\text{m}$)

Excellent Cost vs. Performance

High grade specifications are offered at reasonable standard grade prices.
High grade accuracy at standard grade prices.

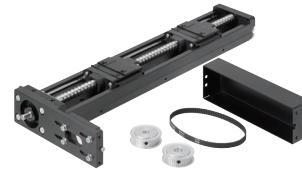
Cost VS. Performance

Single axis robot, actuators

Single axis robot,
actuators



Product Name	Single Axis actuator	SX15 • 20 • 26 • 30 • 45	Standard/Uncovered, non-bracket, Lubrication units MX type
Page	A-019 • 021 • 025 • 029 • 033		



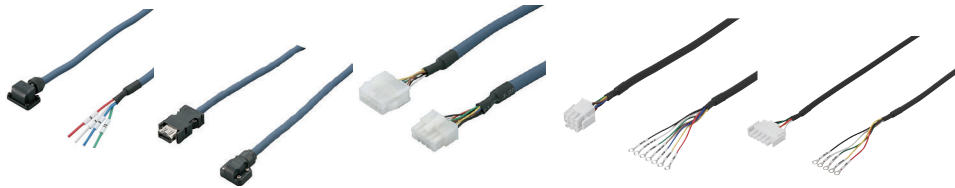
Attachment tools for single axis actuator SX	Single actuator SX30 motor wrap type
A-023 • 027 • 031 • 035	A-037



Single actuator SX45 motor wrap type	Coupling
A-039	A-042



Single actuator SX20 • 26 • 30 • 45 with motor Standard/covered type
A-043~052



Cable for single actuator SX with motor
A-056

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SURUGA SEIKI CO., LTD. Sales Div

Operation Hours(Japan time)Monday to Friday

Structures and features

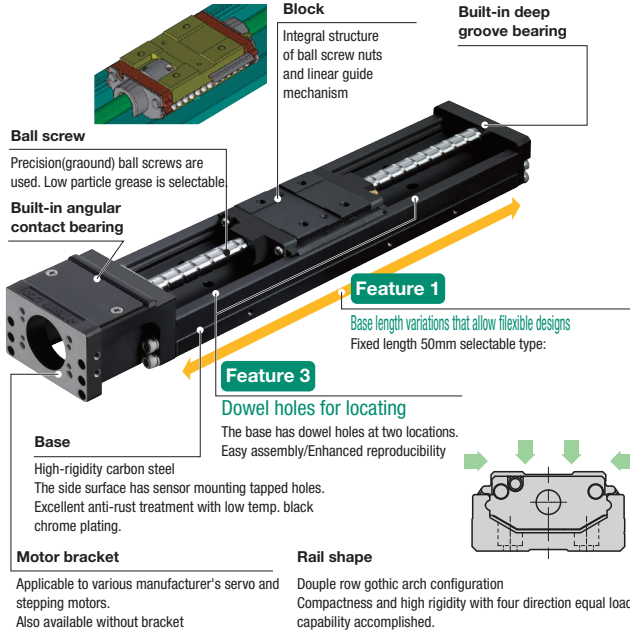
Feature 1 Base length variations that allow flexible designs

Feature 2 Space saving low-profile stage

Feature 3 Locating dowel holes on the base

Feature 4 Locating dowel holes on blocks (Cover type)

Standard type

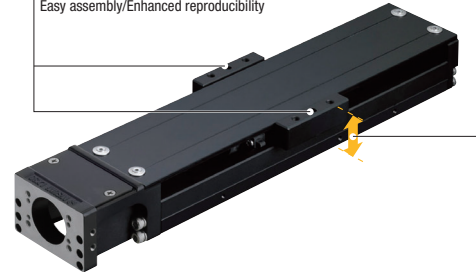


Covered type

Feature 4

Locating dowel holes on blocks (Cover type)

Cover block has dowel holes at two locations. Easy assembly/Enhanced reproducibility



Feature 2

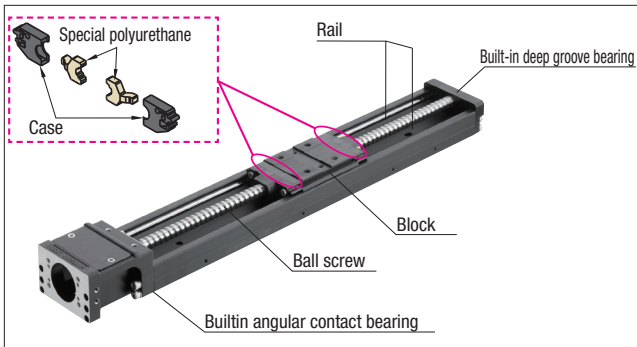
Low-profile stage

Block integral structure
Cover type blocks also achieve low-profile

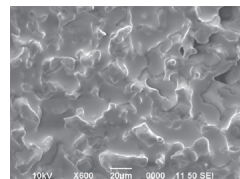
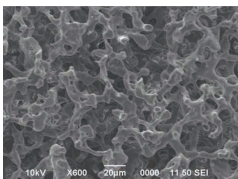
Cover type height	SX15	21mm
	SX20	27mm
	SX26	33mm
	SX30	40mm
	SX45	57mm

LINEAR AXIS ACTUATOR LUBRICATION UNITS SERIES

Structure of lubrication unit MX



Enlarged photos of special polyurethane pores

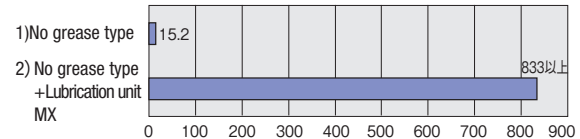


Grease impregnated special polyurethane provides appropriate supply of grease on the ball screw and rail.

Features

- Long term maintenance-free condition
 - Lubrication unit MX is a self-lubrication unit constructed of grease-impregnated special polyurethane.
 - Oil film is always formed on the ball screw and rail, provides maintenance free for long period of time.
- Cost advantages
 - MX unit-equipped products significantly reduce lubrication frequency. To sharply reduce the load of a user required in maintenance and cost.

Endurance test results



MX unit-equipped products showed no damages and kept good lubrication conditions even after exceeding 800hrs, while part seizure was observed with completely degreased samples within 20hrs.

*These are not guaranteed values but reference values.

Test conditions

(1) Part number	SX2605-B1-300
(2) Installation orientation	Vertical test
(3) Load condition	15kgf load
(4) Test stroke	200mm
(5) Travel speed	136mm/s

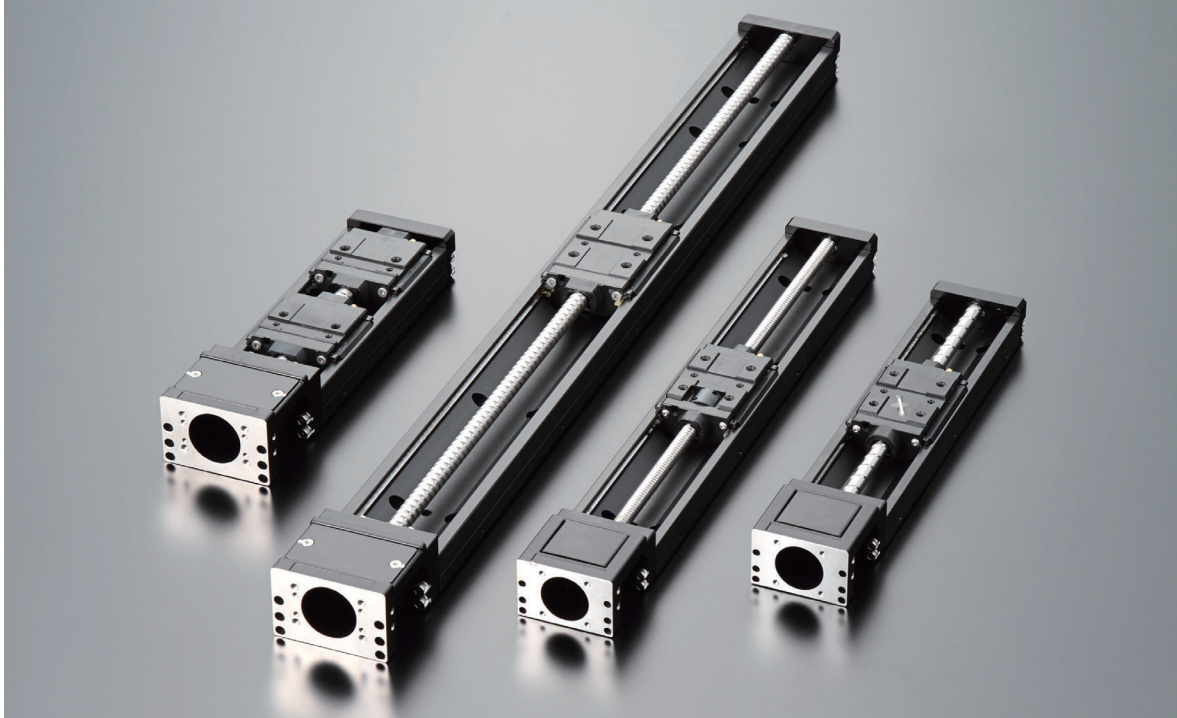
Application Example of SX

Providing powerful support for your automation design such as precision positioning or workpiece transportation.

SX integrated with ball screw nuts and linear guide is a necessity for high-precision manufacturing process.

Applicable to high precision and high load. We can provide various types of screw lead

Providing powerful support for your automation design



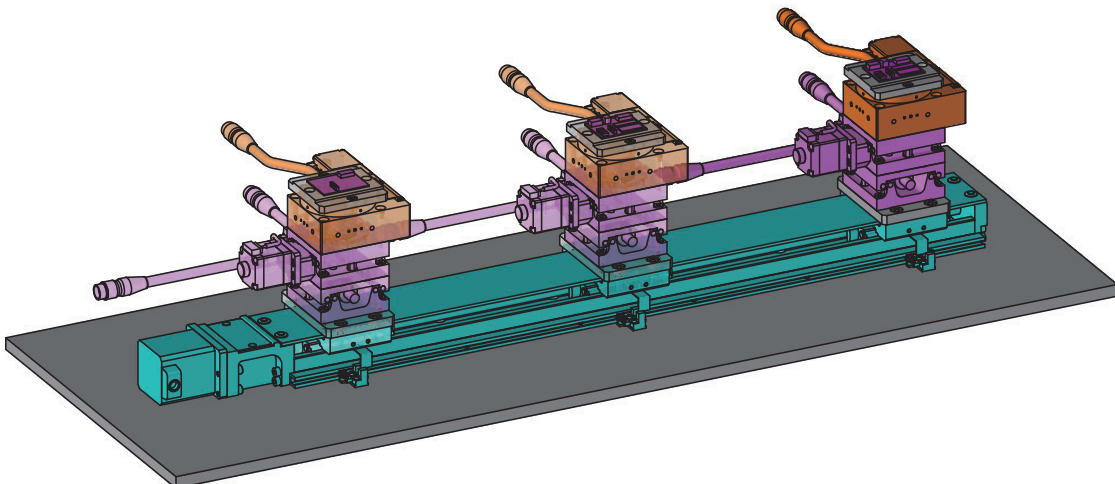
Application example

Components example

Outline

Using SX for components

Achieving reduction of machine element with using a long stroke system.

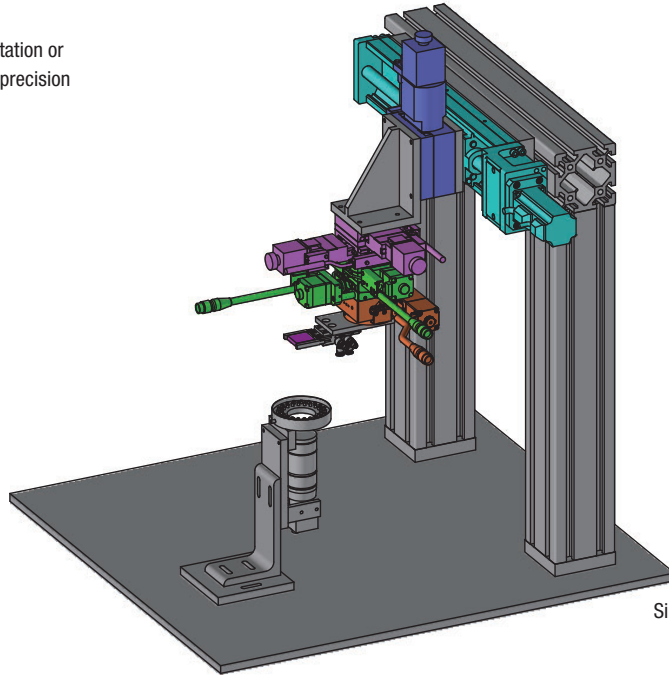


Single axis actuator : SXM3005C-3-R-600
XY : KYG06020-C
 θ : KRB06011

■ Chip assembly device

Outline

Using SX for chip assembly
System for workpiece transportation or
assembly combined with high-precision
stages.

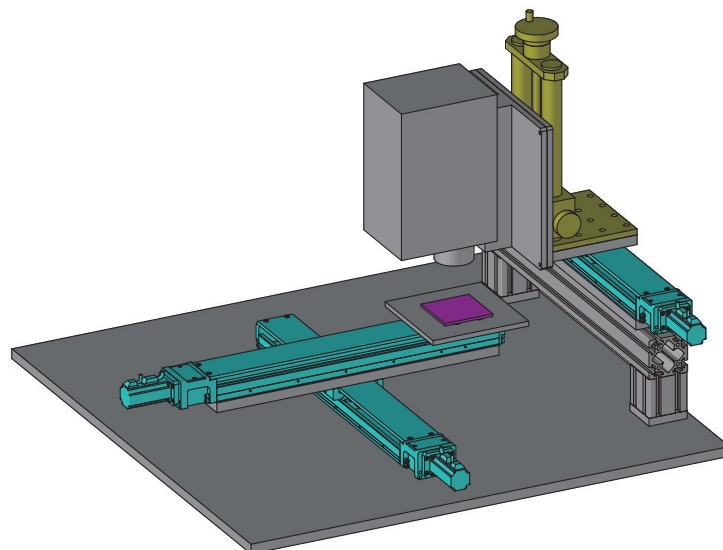


Single axis actuator : SX4510-B1-A4540-340
Z : KS102-100-5
XY : PMG615-L24AL-5
TxTy : KAW06050-L
 θ : KRB06011

■ LCD luminance inspection device

Outline

Using SX for object focusing
Change the inspection smoothly.



Single axis actuator : SX4520C-B1-A4540-590(3 pcs.)
Z : B34

Application Example of SX

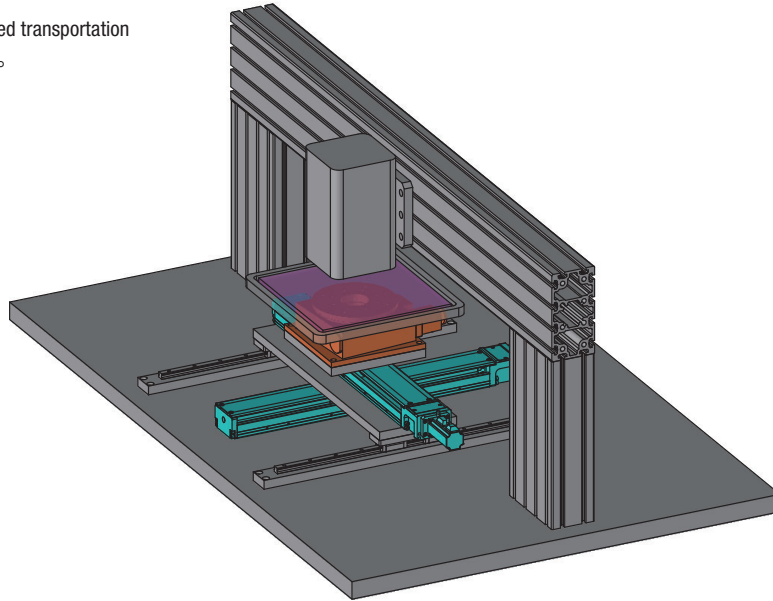
Application example

■ Laser processing machine

Outline

Using SX for laser radiation position adjustment

Workpiece handling, high-speed transportation or alignment to be carried out.



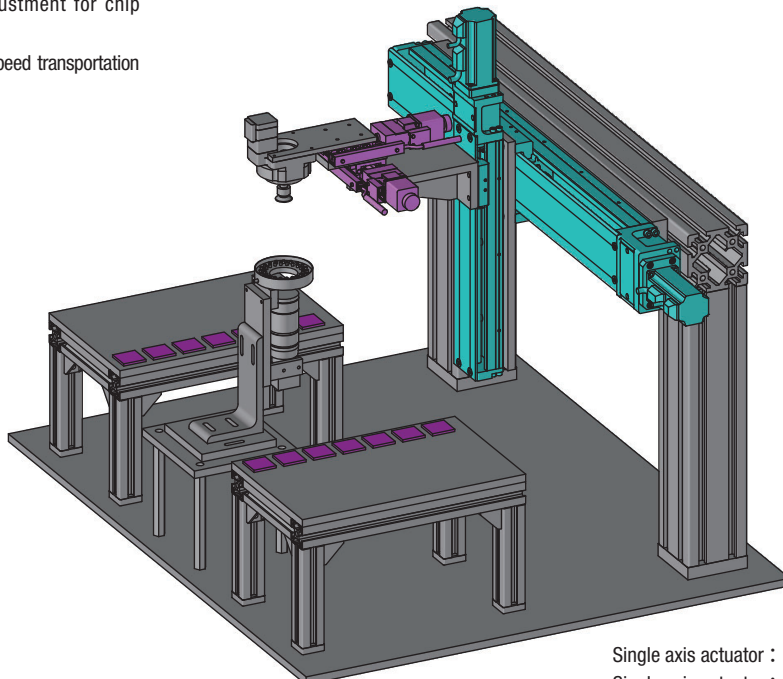
Single axis actuator : SX4520C-B1-A4540-590(2 pcs.)
θ : KS402-180-5

■ Chip transportation machine

Outline

SX is used in position adjustment for chip transportation.

Workpiece handling or high-speed transportation to be carried out.

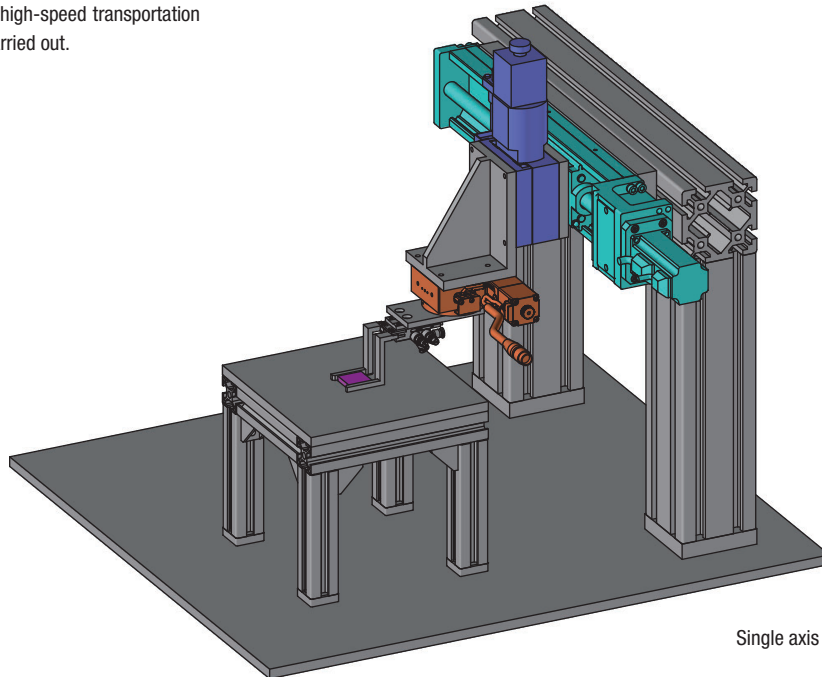


Single axis actuator : SX3005C-B1-A3040-300
Single axis actuator : SX4520C-B1-A4540-590
XY : PMG615-R24AR-5

Fuel cells component assembly device

Outline

Using SX for fuel cells assembly of vehicle
Workpiece handling, high-speed transportation
or alignment to be carried out.

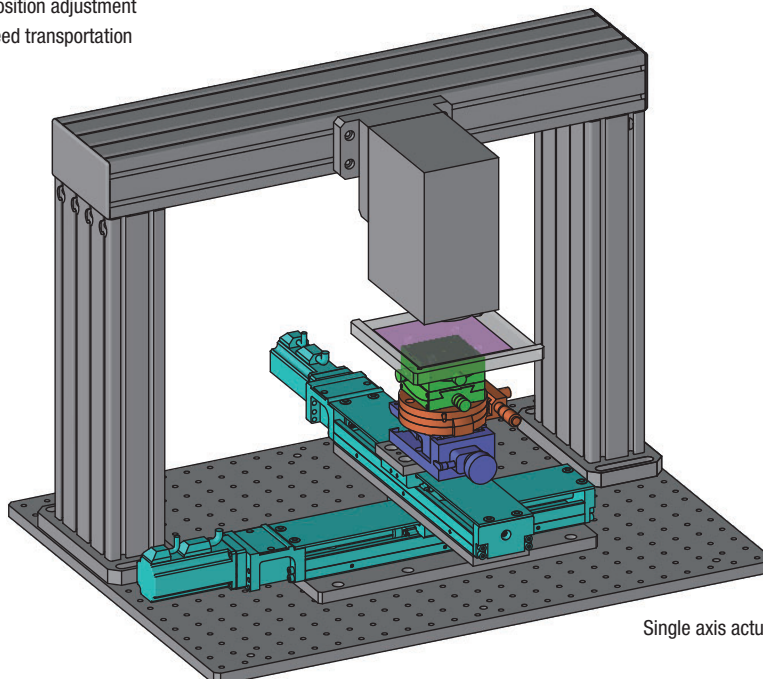


Single axis actuator : SX4510-B1-A4540-340
 θ : KRB06011

Layer thickness measurement system

Outline

Using SX for laser radiation position adjustment
Workpiece handling, high-speed transportation
or alignment
to be carried out.



Single axis actuator : SX3005C-B1-A3040-300
Z : —
 θ : B43-85N
TxTy : B55-60NR

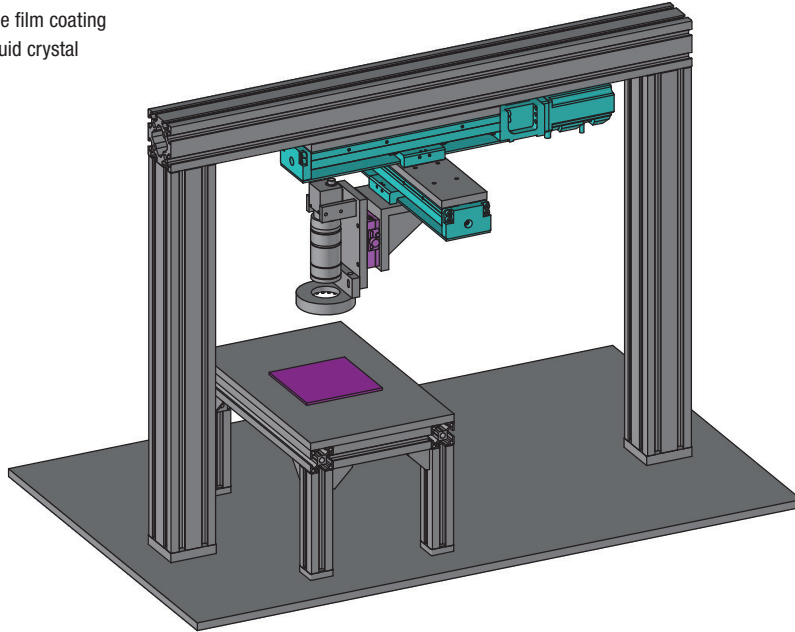
Application Example of SX

Application example

Film coating alignment machine

Outline

Using SX for workpiece transportation or focusing the initial position in the film coating alignment that is located the liquid crystal molecules to the one direction.

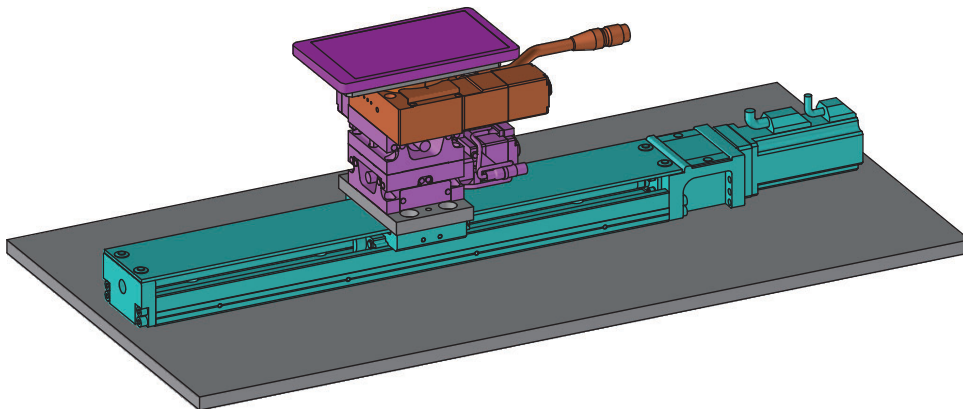


Single Axis actuator : SX3005C-B1-A3040-250(2 pcs.)
Z : BSS16-60CZR

Device for sticking display panel

Outline

Using SX for smart phone panels assembly
Panel transportation or positioning to be carried out.

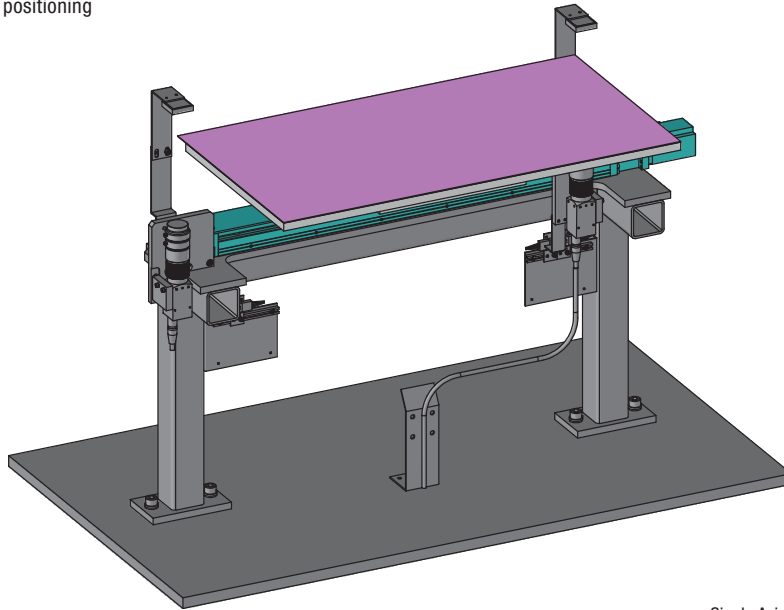


Single Axis actuator : SX3010C-B1-A3040-400
X : KXG06020-C
Y : KXG06020-C

■ Positioning adjustment, recognition

Outline

Using SX for workpiece positioning or adjustment after positioning
It is suitable for a precision positioning

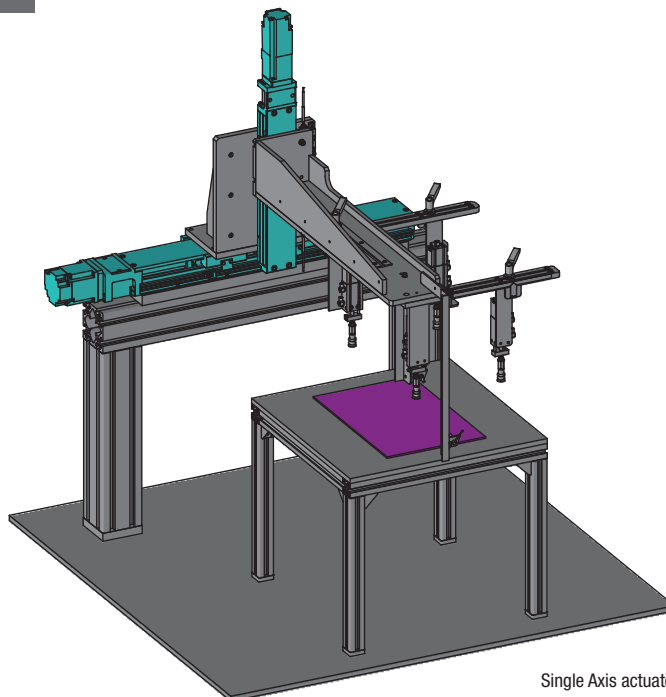


Single Axis actuator : SX3005C-B1-A3040-600

■ Panel transportation machine

Outline

Using SX for panel transportation
Achieving a high-speed transportation
with SX that attached X-axis and Y-axis.



Single Axis actuator : SX3005C-S2-A3040-300
Single Axis actuator : SX4520C-B2-A4560-540-EP3

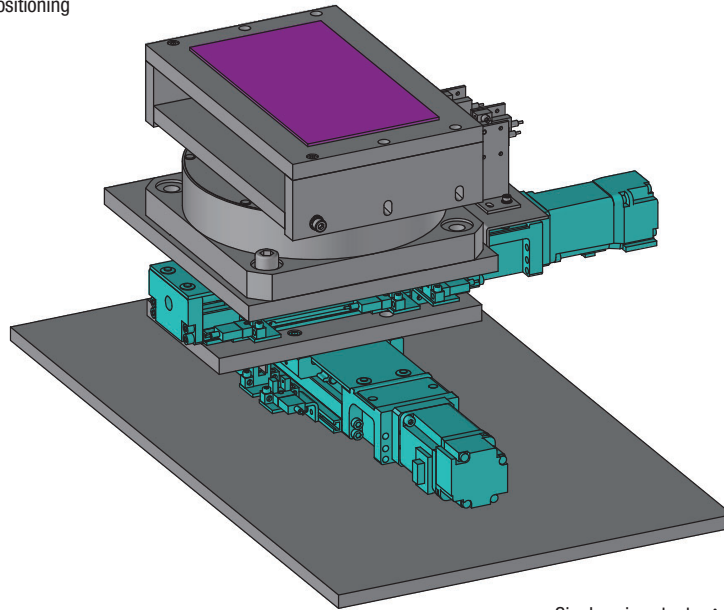
Application Example of SX

Application example

XYθ-Table

Outline

Two of SX and rotation stage application example
Providing a variety of the motion for positioning

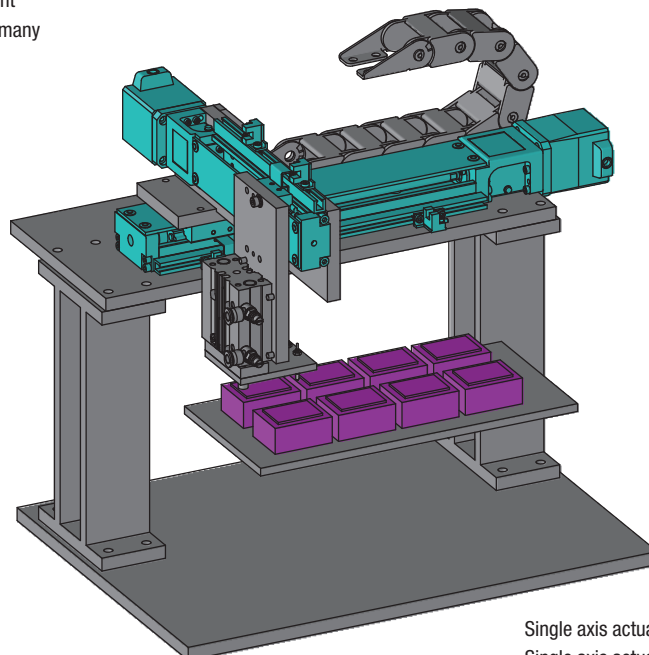


Single axis actuator : SX3010C-S2-A3040-200(2 pcs.)

XYZ-direction movable continuity test mechanism

Outline

Using SX for XYZ three-direction adjustment
It is suitable for a precision positioning of many workpiece in a short time.

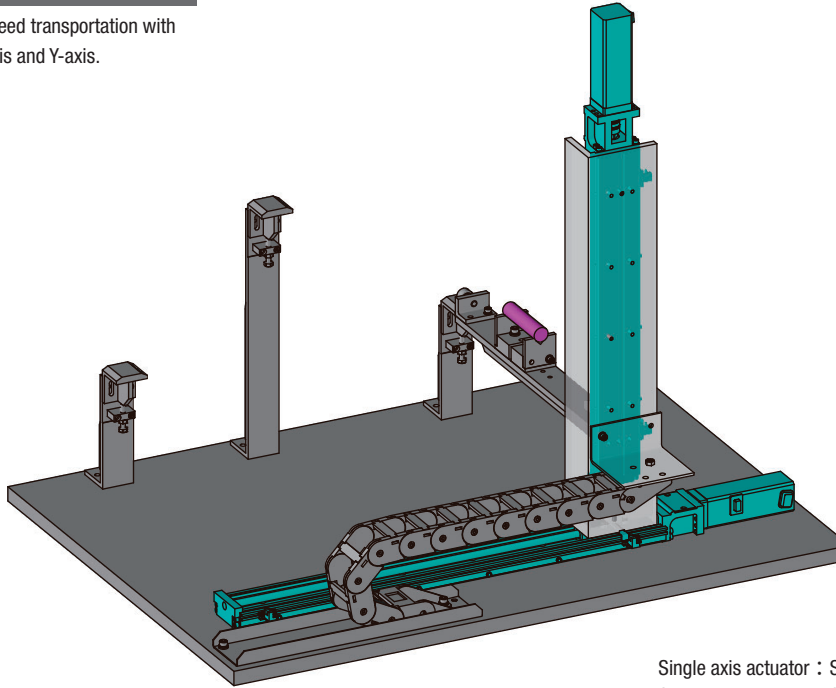


Single axis actuator : SXM2001C-T4-D4-3-2-L-150
Single axis actuator : SXM2602C-T4-D4-3-2-L-250

XZ-stage

Outline

Achieving a high — speed transportation with SX that attached X-axis and Y-axis.

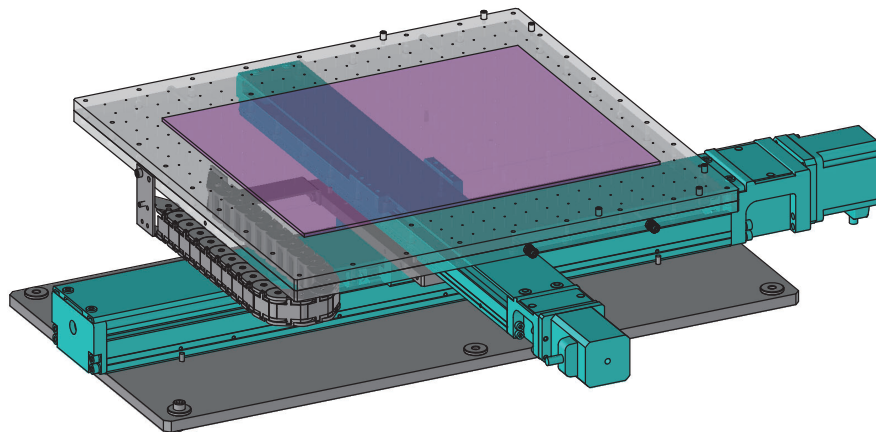


Single axis actuator : SXM3010-A2B-AM10-3-2-R-450
Single axis actuator : SXM3010-A2B-AM10-3-2-L-600

XY-stage

Outline

Long stroke SX are combined.
Efficiently move a big workpiece



Single axis actuator : SX4510C-B1-T4560-590
Single axis actuator : SX3005C-B1-T3042-500

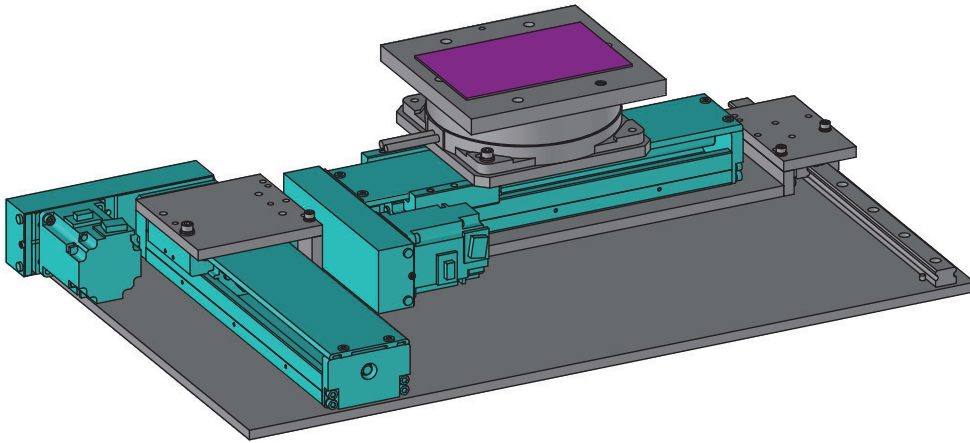
Application Example of SX

Application example

■ XYθ-Table

Outline

Using the wrap type SX
Can be set at an optimal location even with a limited height.

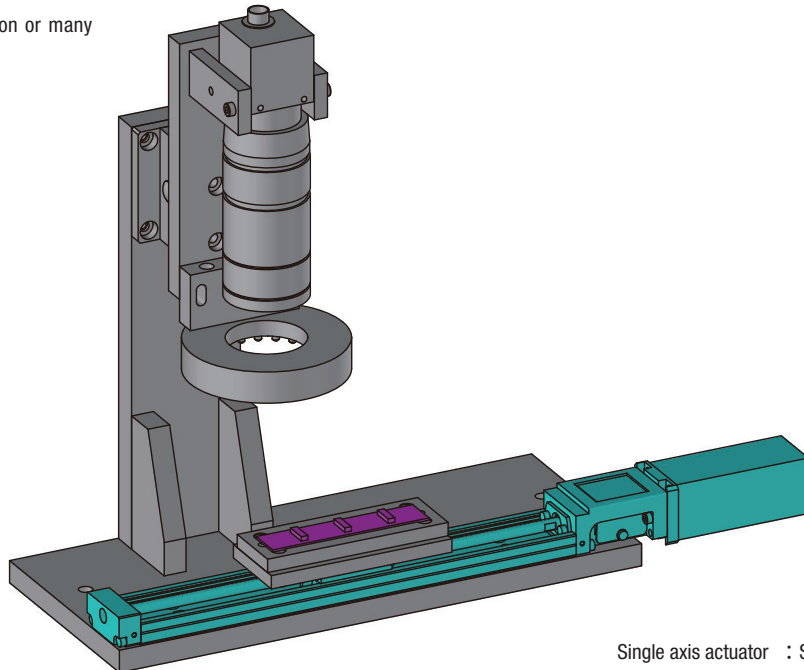


Single axis actuator : SXR4510C-B1-RA4560-340(2 pcs.)

■ Multi-point continuous inspection mechanism

Outline

Using multi-block type SX
Applicable multi — point inspection or many workpiece

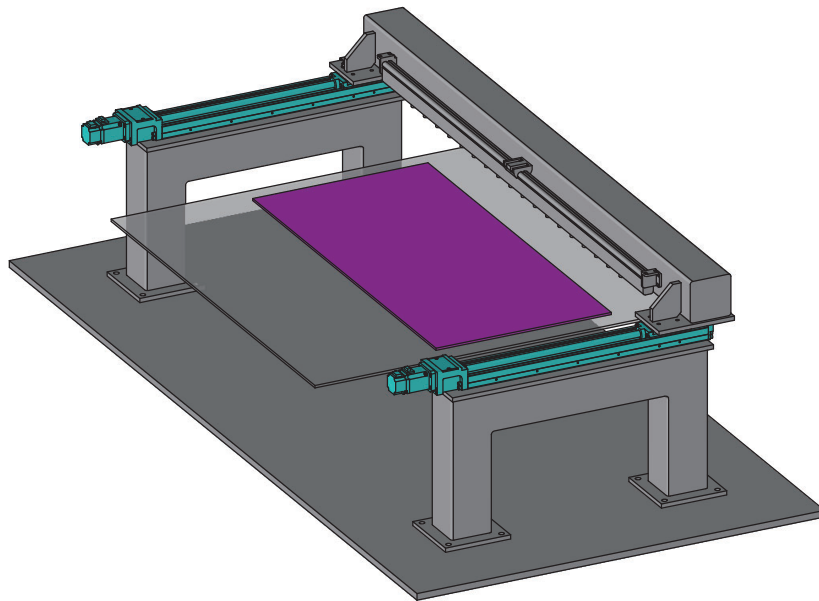


Single axis actuator : SX1502-B1-A1525-200

Using SX for the static electricity remover

Outline

Long stroke SX is suitable for a big workpiece.
SX has a very fascinating large variety of strokes.

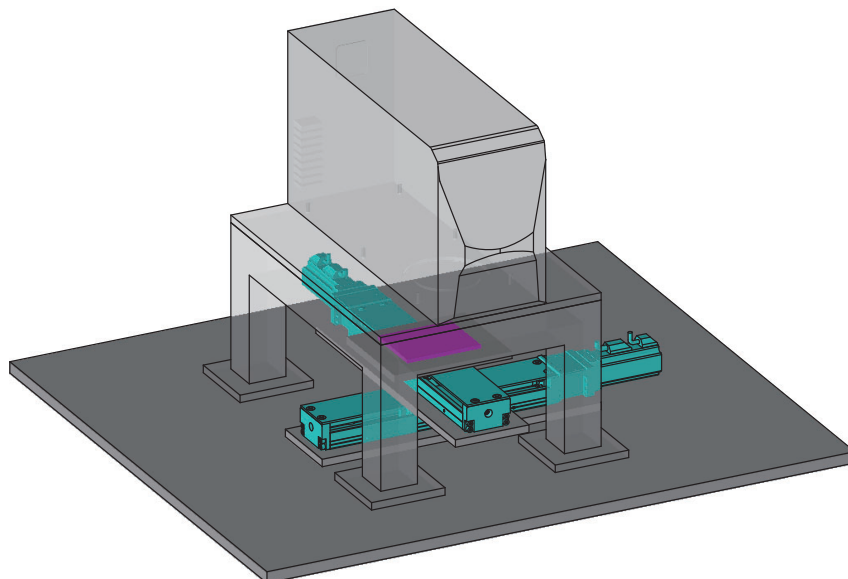


Single axis actuator : SX4510-B1-A4540-590(2 pcs.)

Printing system

Outline

The workpiece is moved by using 2-axis SX
Applicable precision adjustment such as printing with SX



Single axis actuator : SX3005C-B1-A3040-300(2 pcs.)