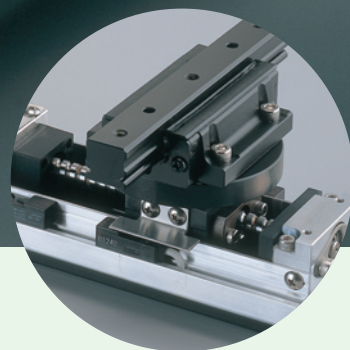
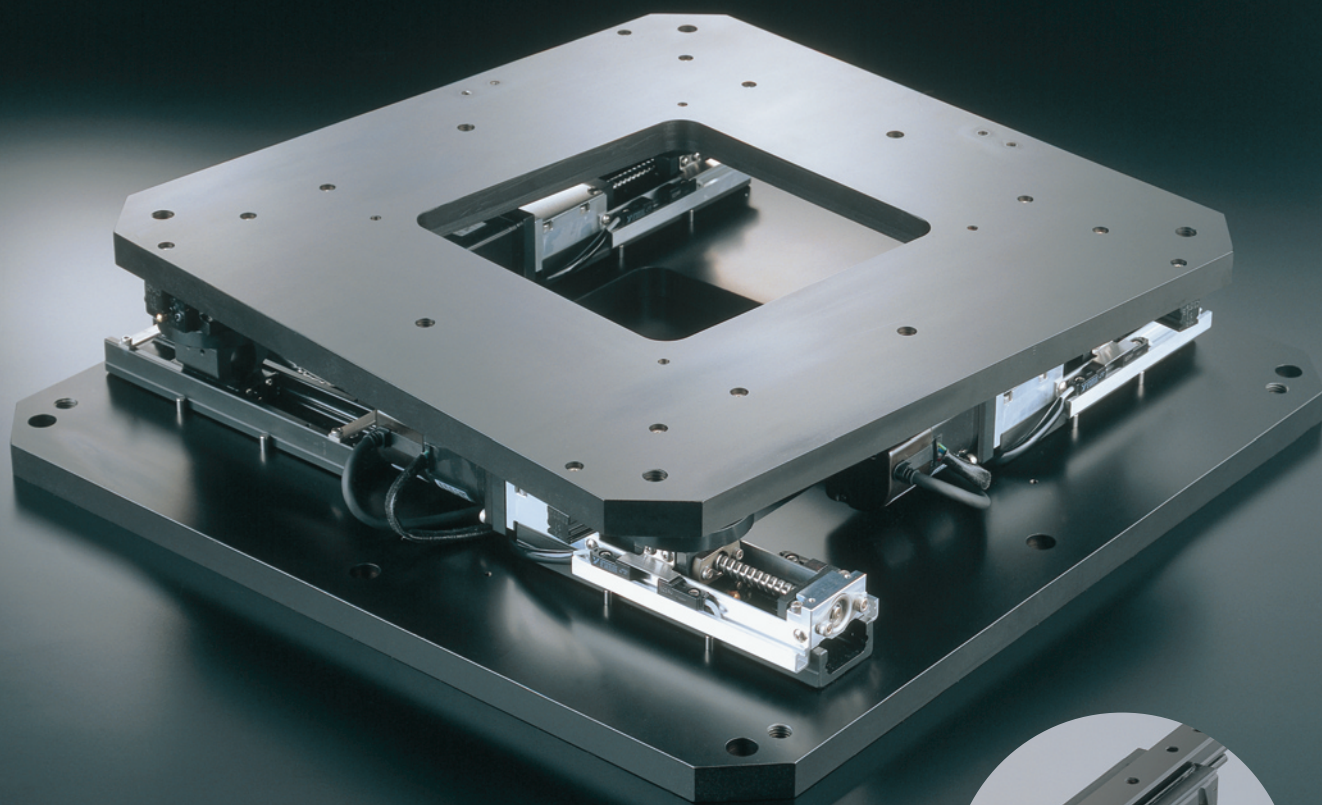




Alignment Stage Module Type

SA...M

*The module type large-sized XYθ stage has been released.*

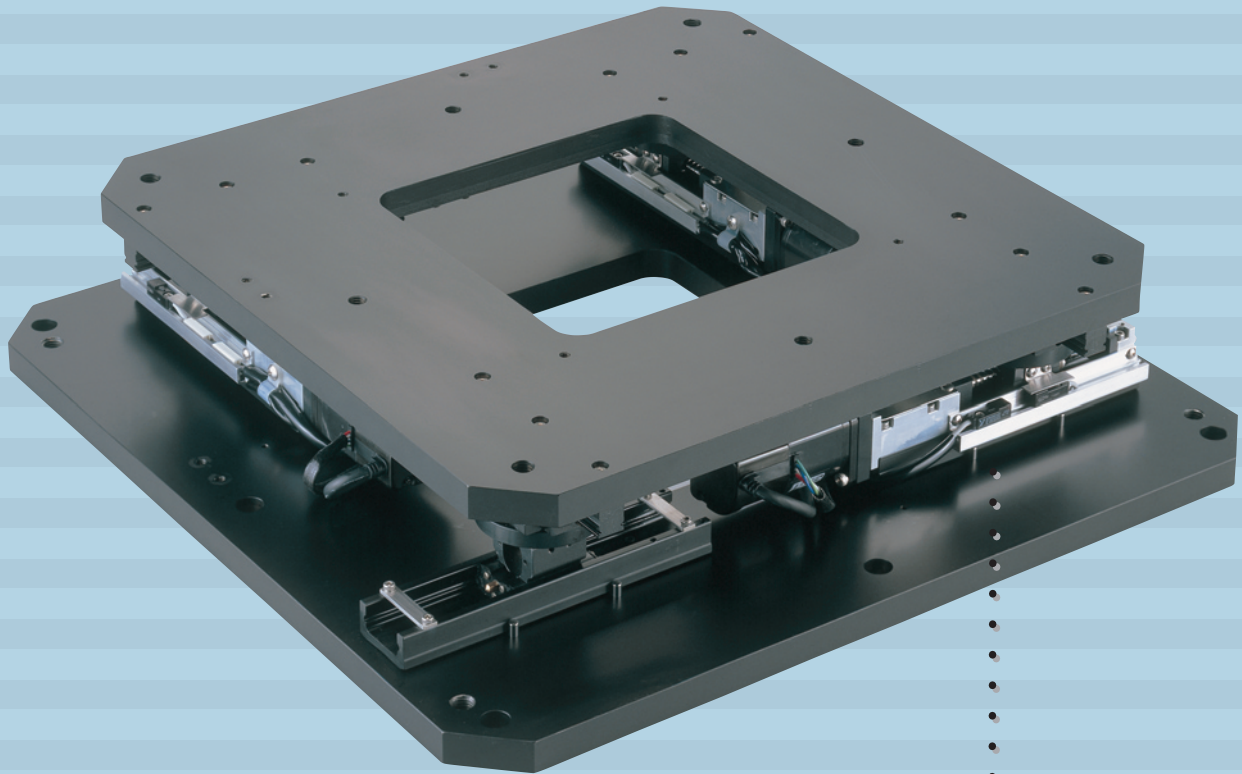


CAT-57135



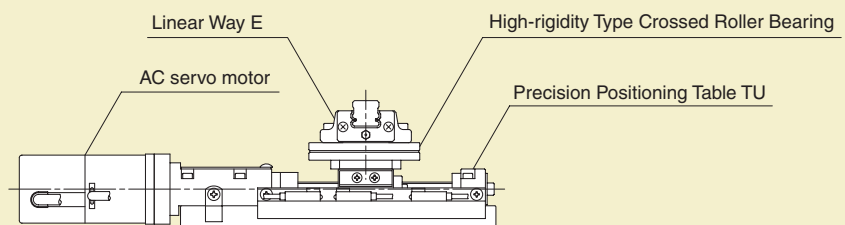
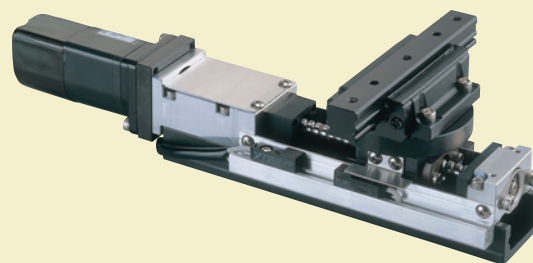
# IKO Alignment Stage Module Type SA...M

IKO Alignment Stage Module Type SA...M is a low-section and large-sized precision positioning stage in which Alignment Module AM having an angle adjustment mechanism is arranged on the same plane, and can perform  $XY\theta$  motion.



## Alignment Module AM

Alignment Module AM is a positioning module developed for Alignment Stage, in which Precision Positioning Table TU, High-Rigidity Crossed Roller Bearing, and Linear Way E are combined.



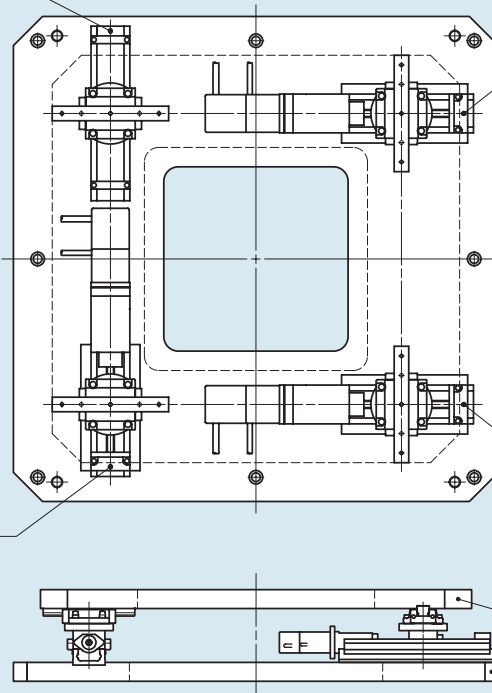
Structure

Alignment Module  
(Following axis)

Alignment Module  
(X1 axis)

Alignment Module  
(Y axis)

Alignment Module  
(X2 axis)



## Structure

## Features

### Achievement of diversified operations

Not only linear motion in the XY direction but also swing motion can be performed. In the case of swing motion, especially, an optional desired position can be set as the center of swing. This can achieve diversified operations.

### Optimally applicable to large equipment

A combination of Alignment Module AM with an aluminum alloy stage and base can configure a large stage. Alignment Module AM can be easily applicable to a larger stage than the dimensions described in the catalog. Consult **IKO** about it if necessary.

### High accuracy, high rigidity, and high reliability

Alignment Module AM is designed on a basis of **IKO** Precision Positioning Table TU, High-rigidity Crossed Roller Bearing, and Linear Way E to obtain high accuracy, high rigidity, and high reliability.

### Hollow structure

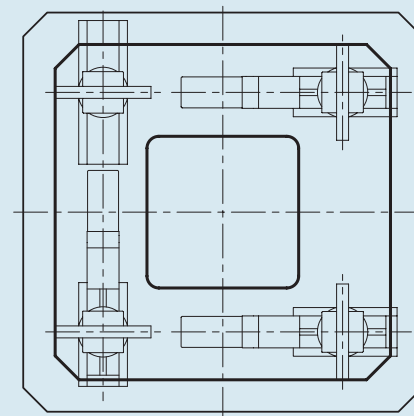
The stage and base have a hollow structure with a large diameter. This is useful for the measurement of transmitted light from the bottom side, cord wiring of machines and equipment, etc.

## Operating Principle

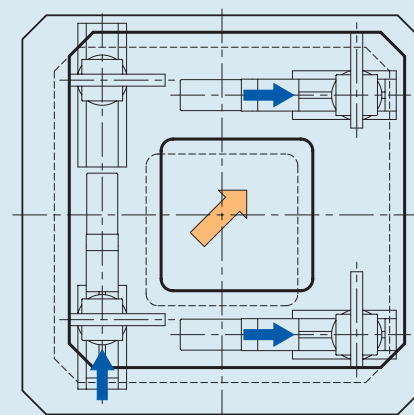
### *Achievement of diversified movements*

To achieve XY motion and  $\theta$  motion (swing motion) at the same moment, a combination of XY positioning table and  $\theta$  stage is normally required.

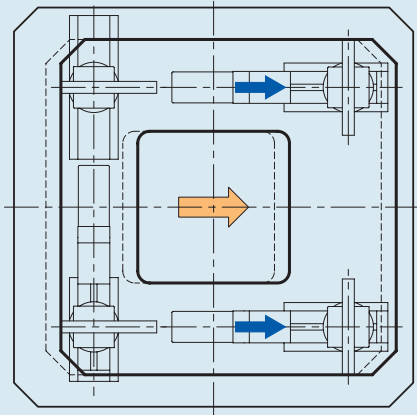
However, IKO Alignment Stage Module Type SA...M adopting Alignment Module AM enables these movements with a low profile single stage.



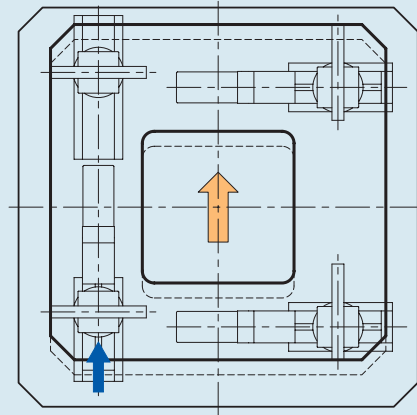
*Reference position*



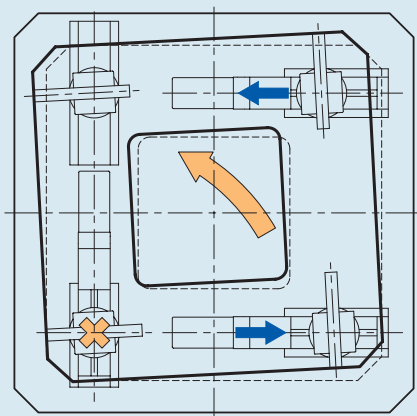
*XY motion*



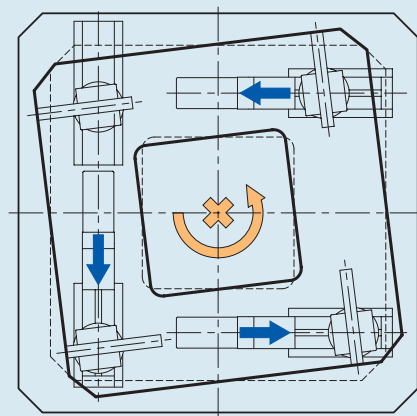
***X motion***



***Y motion***



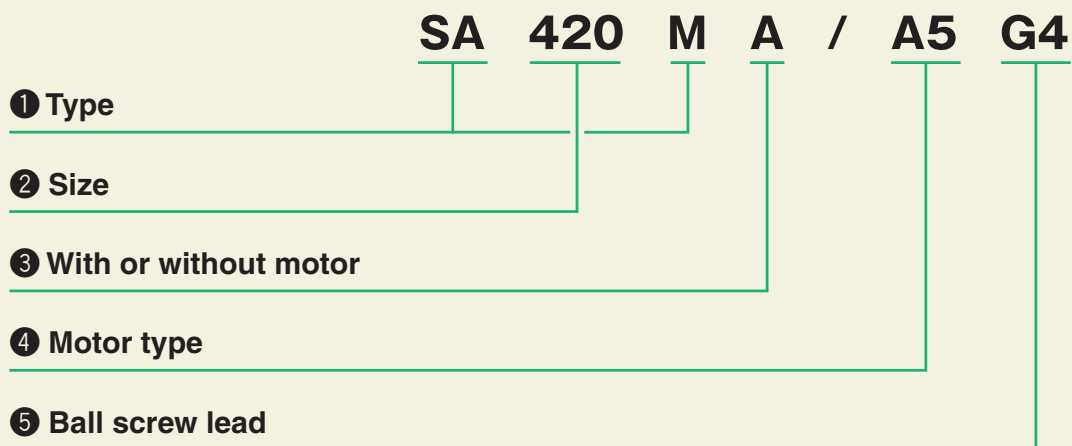
***Swing motion at an optional position***



***Swing motion in the center***

# Specifications of Alignment Stage Module Type SA...M

## Example of Identification Number



### ① Type

SA...M : Alignment Stage Module Type

### ② Size

420 : External dimensions of stage 420mm × 420mm

800 : External dimensions of stage 800mm × 800mm

### ③ With or without motor

A : With motor

### ④ Motor type

A5 : AC servo motor [SGM-A5B512 Yaskawa Electric Corporation] (applicable to SA420M)

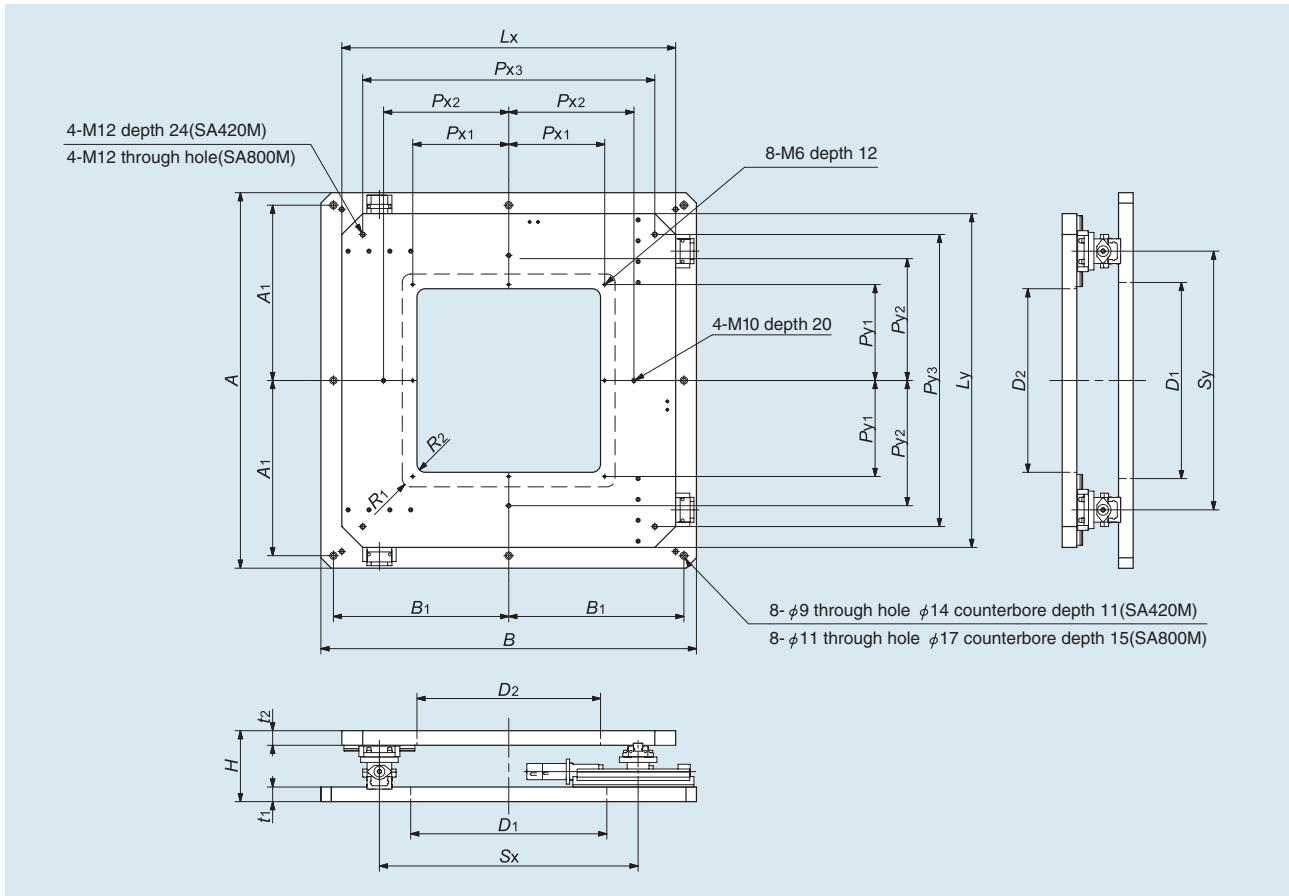
A1 : AC servo motor [SGM-01B512 Yaskawa Electric Corporation] (applicable to SA800M)

### ⑤ Ball screw lead

G4 : Lead 4 mm (applicable to SA420M)

G5 : Lead 5 mm (applicable to SA800M)

## Dimensions



### Main dimensions

Model number	Mass (Reference) kg	Main dimensions mm												
		A	B	$L_x$	$L_y$	H	$t_1$	$t_2$	$D_1$	$D_2$	$R_1$	$R_2$	$S_x$	$S_y$
<b>SA420M</b>	31	500	500	420	420	120	25	25	230	190	15	15	300	300
<b>SA800M</b>	105	900	900	800	800	170	35	35	490	400	20	20	580	580

### Mounting dimensions

Model number	Mounting dimensions mm							
	$A_1$	$B_1$	$P_{x1}$	$P_{y1}$	$P_{x2}$	$P_{y2}$	$P_{x3}$	$P_{y3}$
<b>SA420M</b>	225	225	105	105	160	160	360	360
<b>SA800M</b>	420	420	220	220	300	300	700	700

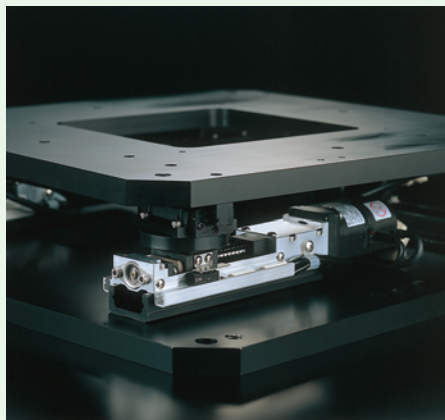
## Characteristics

### Characteristics

Model number \ Item	Maximum stroke mm	Maximum swing angle degree	Repeatability		Parallelism in motion B <sup>(1)</sup>
			XY motion $\mu\text{m}$	Swing motion sec.	XY motion $\mu\text{m}$
<b>SA420M</b>	$\pm 15$	$\pm 5$	$\pm 2$	$\pm 3$	8
<b>SA800M</b>	$\pm 45$	$\pm 8$		$\pm 1.5$	

Note (1) : This value is applicable to a single Alignment Module.





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