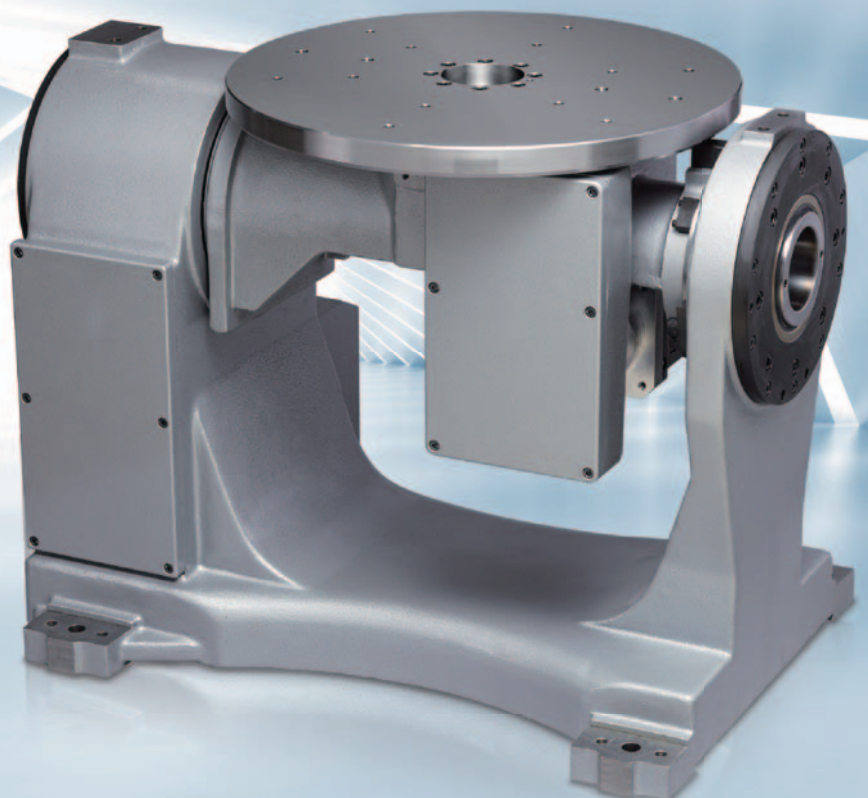


Double supported 2-axis welding positioner

RollerDrive[®]

SP060DS

Max. payload 600kg



Double supported 2-axis welding positioner

RollerDrive® SP060DS

SP060DS gives you high efficiency and quality of welding.



Features

- ▶ High speed and high accuracy with excellent settling performance for **reduced cycle time**.
- ▶ Large-diameter hollow bore for simplified **wiring and piping and easy maintenance**.
- ▶ Has a **Max. payload 600kg**, thanks to the combination of a compact body and high rigidity.
- ▶ **Durability** that can withstand impact loads such as emergency stops.
- ▶ Wears much less than other units because of our unique rolling transmission mechanism which helps **maintain stable accuracy for a long time**.

Model code

Option
SP060DS-A Z-R L C

①
②
③
④
⑤
⑥

① Model	② Attachment code*1	③ Servo motor installation		Option					
				④ Rotary joint*2		⑤ Limit switch		⑥ Current collector brush*3	
SP060DS	A	W	Installed by Sankyo	R	Installed	L	Installed	C	Installed
	B	Z	Installed by the customer	Blank	None	Blank	None	Blank	None
	C								
	D								
	E								

*1 Please refer to the "Attachment code list" on page 3.

*2 The rotary joint has 2 pneumatic ports and 6 analog signal contacts.

*3 If the product's power consumption exceeds 300A, please contact us.



Specifications/Dimensions

Specifications

Model		SP060DS	
		Rotary axis	Tilting axis
Allowable payload	kg	600	—
Output table diameter	mm	500	—
Output hollow diameter	mm	70	120
Gear ratio		100	200
Maximum rotating speed	min ⁻¹	30(180°/sec)	15(90°/sec)
Operating range	deg	±360°	±135° (within φ500 mm range)
Repeatability	mm	±0.03(R=250mm)	±0.03(R=250mm)
Start / Stop limit torque*1	N·m	1,120	1,910
Allowable load moment*1	N·m	400	1,350
Allowable moment of inertia*1,2	kg·m ²	38.1 (max. 59.4)	56.9(max. 200.1)
Internal moment of inertia at the input shaft*3	kg·m ²	4.9×10 ⁻⁴	5.5×10 ⁻⁴
Recommended motor capacity*4	kW	1.5	1.5
Net weight	kg	320	

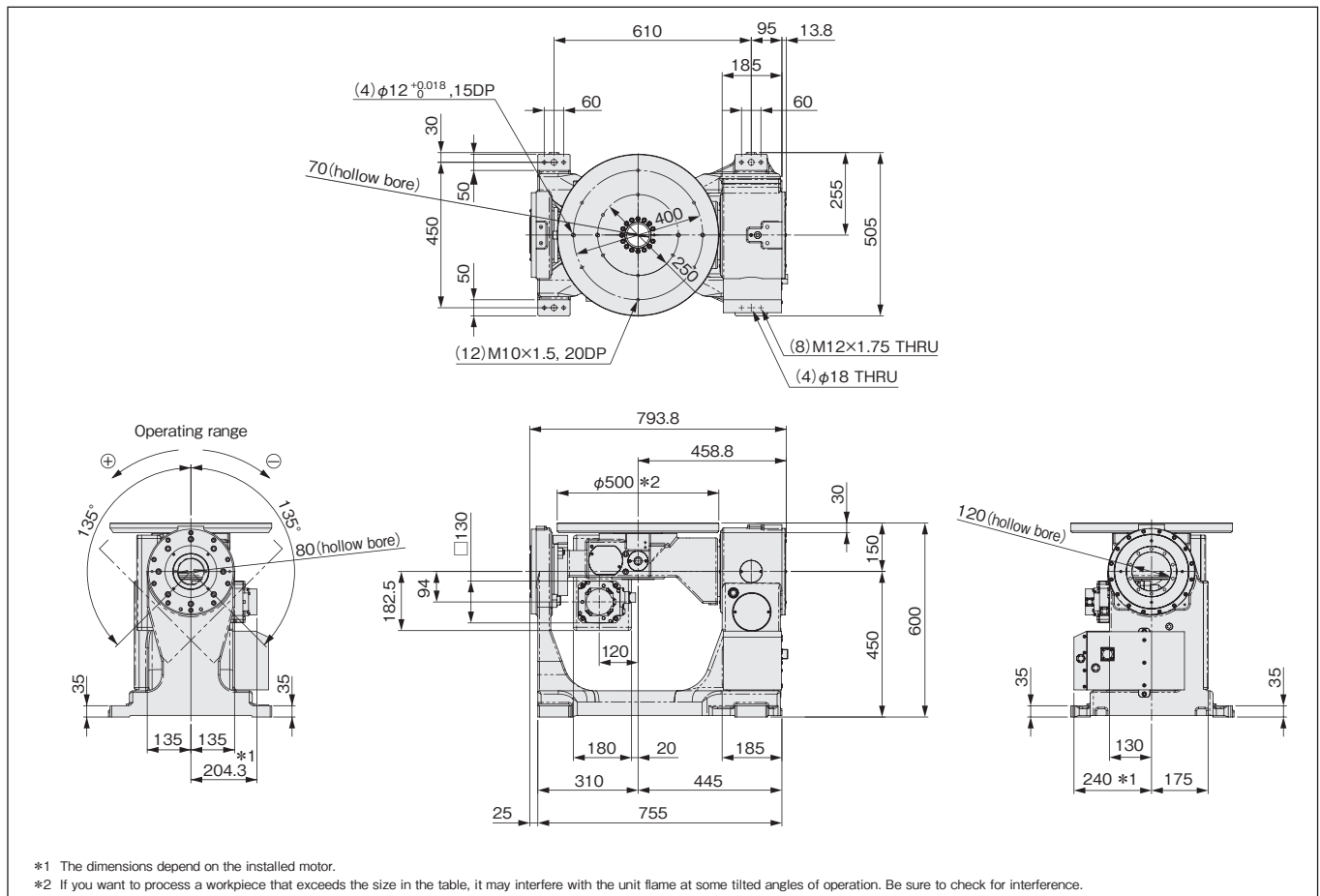
*1 These values may vary, depending on the servo motor used and the operating conditions.

*2 The allowable moment of inertia is the maximum value when a load corresponding to the maximum load moment is applied.

*3 Internal moment of inertia at the input shaft depends on the attachment code. For details, please refer to the attachment code selection table on page 3.

*4 The recommended motor capacity is only a guide. It will vary, depending on the manufacturer of the servo motor used.

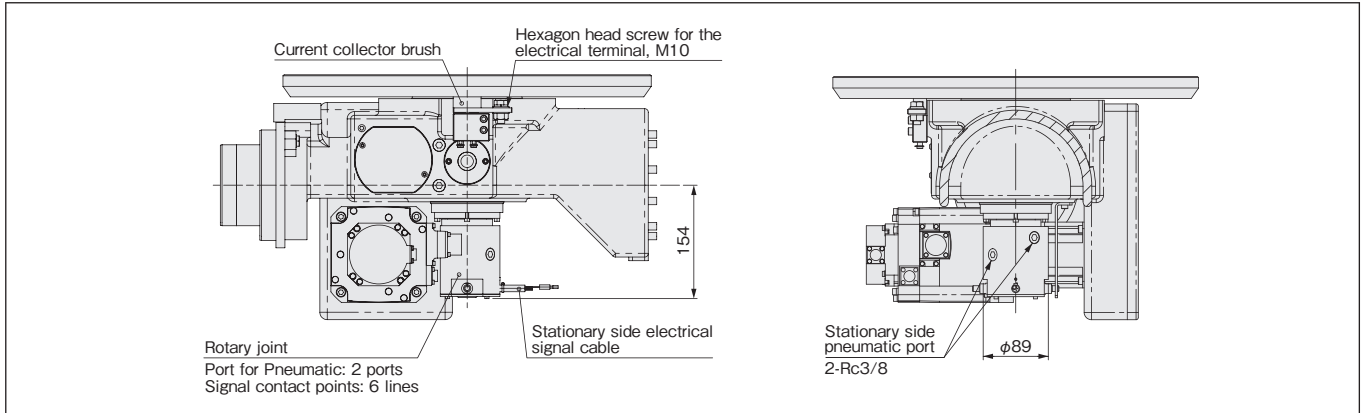
Dimensions



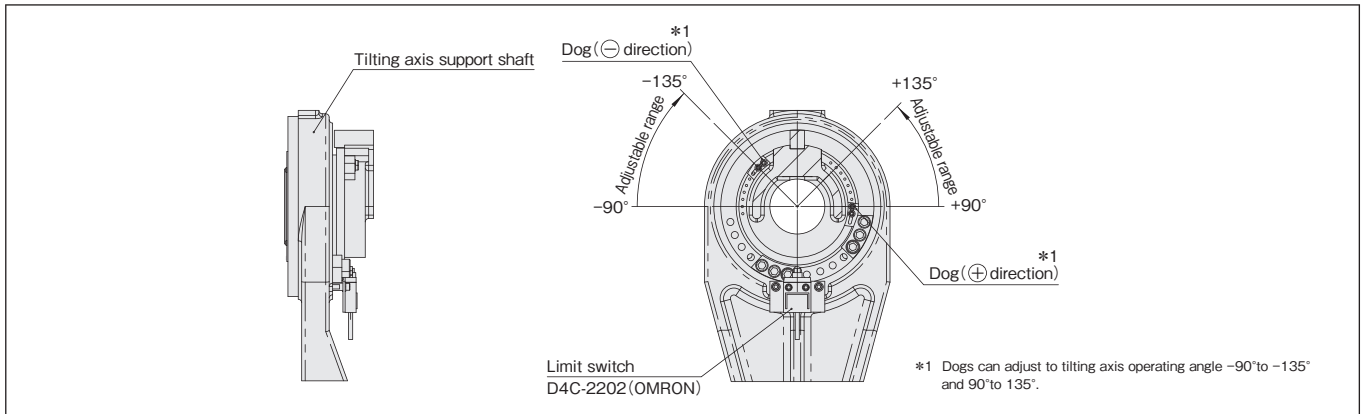
Option/Attachment code

Option

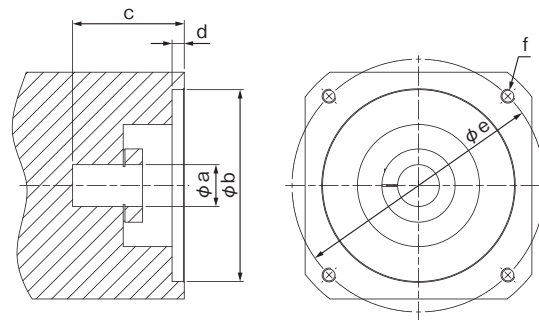
Rotary joint, current collector brush



Limit switch



Attachment code



Attachment code		φ a		φ b		c	d	φ e	f	J (Internal moment of inertia at the input shaft) [kg·m ²]
A	Rotary axis	22H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	42~64	7	145	(4)M8x1.25, 20DP	4.857×10^{-4}
	Tilting axis	28H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	114.3H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	45~84	6.5	160	(4)M10x1.5, 25DP	7.619×10^{-3}
B	Rotary axis	22H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	42~64	7	145	(4)M8x1.25, 20DP	4.857×10^{-4}
	Tilting axis	22H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	40~63	7	145	(4)M8x1.25, 20DP	5.519×10^{-4}
C	Rotary axis	17H7	$\begin{smallmatrix} +0.018 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	36~58.5	7	145	(4)M8x1.25, 20DP	4.917×10^{-4}
	Tilting axis	17H7	$\begin{smallmatrix} +0.018 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	36~59	7	145	(4)M8x1.25, 20DP	5.519×10^{-4}
D	Rotary axis	22H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	42~64	7	145	(4)M8x1.25, 20DP	4.857×10^{-4}
	Tilting axis	22H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	40~63	7	145	(4)M8x1.25, 20DP	5.519×10^{-4}
E	Rotary axis	24H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	42~64	7	145	(4)M8x1.25, 20DP	4.887×10^{-4}
	Tilting axis	24H7	$\begin{smallmatrix} +0.021 \\ 0 \end{smallmatrix}$	110H7	$\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$	40~63	7	145	(4)M8x1.25, 20DP	5.519×10^{-4}

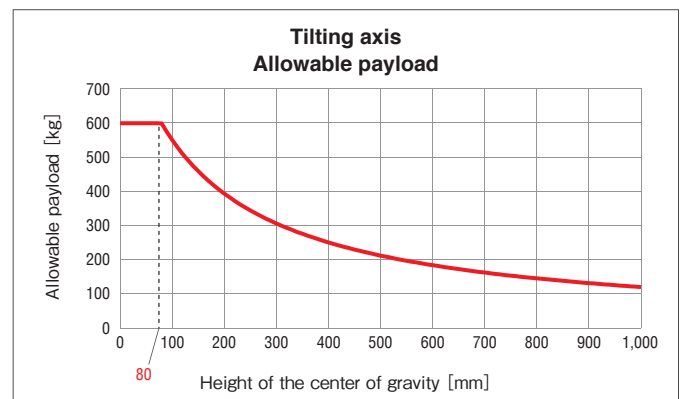
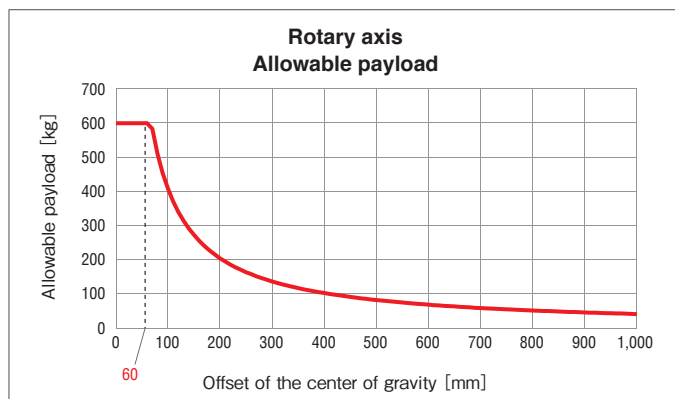
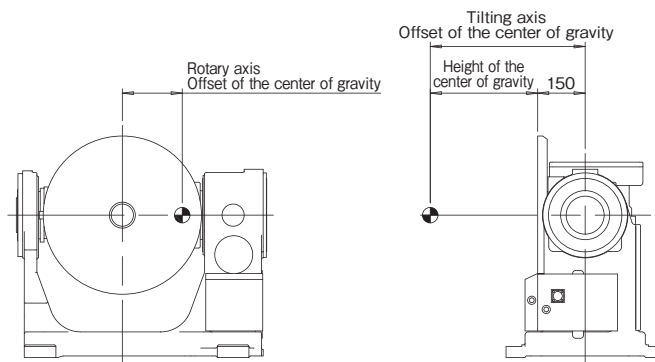


Technical data

Allowable moment load

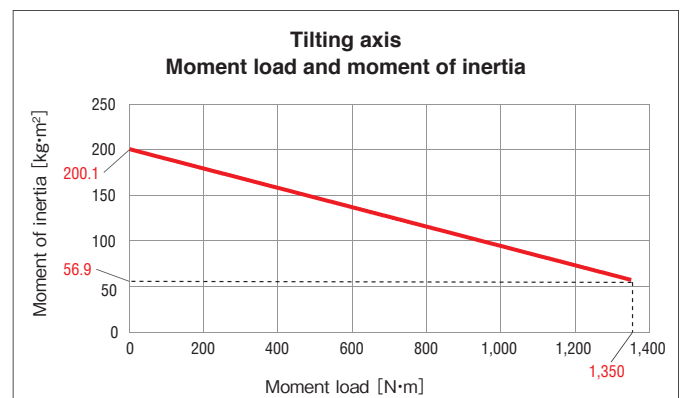
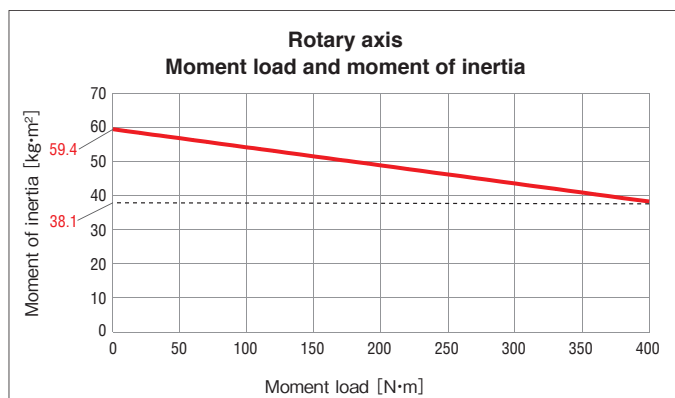
The allowable load is limited by the position of the center of gravity of the workpiece load. Operating with a load that has more mass than the allowable load will significantly reduce the product operation life and lead to the product damage. Please use this diagram after you have determined the mass of the load mass and the position of its center of gravity. In addition, the load capacities may differ, depending on the servo motor used. Please contact us for more details.

Allowable payload	moment load		Moment of inertia	
	Rotary axis	Tilting axis	Rotary axis	Tilting axis
600kg	400N·m	1,350N·m	38.1kg·m ²	56.9kg·m ²



Moment load and moment of inertia

The relationship between the moment load and the moment of inertia is shown below. Operating with a load that has more mass than the allowable load will significantly reduce the product operation life and lead to the product damage. Please use the diagram after accurately determining the mass of the load, the position of the center of gravity and the moment of inertia. If you want to use the product with over the allowable moment of inertia, please contact us. In addition, the load capacities may differ, depending on the servo motor used. Please contact us for more details.



Welding positioner lineup

Welding positioner, standard model **SP series**



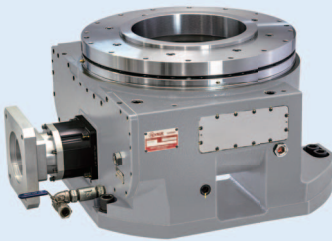
〈Features〉

- ▶ Excellent settling performance for **reduced tact time**
- ▶ Large hollow bore output and wiring space for **simplified wiring and piping**
- ▶ Thin design of the body for **keeping systems compact**

〈Size〉

- ▶ Payload: 300, 600, 1,200, 2,400, 3,600 (kg)

Horizontal models **SH series**



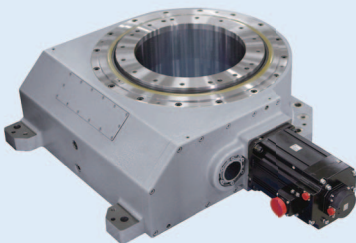
〈Features〉

- ▶ Large hollow bore output and wiring space for **simplified wiring and piping**
- ▶ Proprietary rolling reducer mechanism for **high-efficiency driving**
- ▶ Orthogonal axis with **no need to remove the jig** when replacing the motor

〈Size〉

- ▶ Payload: 5,000 (kg)

High-speed rotary welding positioner **RW series**



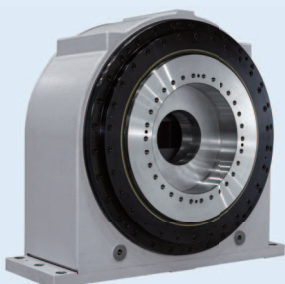
〈Features〉

- ▶ High speed and high accuracy with excellent setting performance for **reduced tact time**
- ▶ Large hollow bore output and wiring space for **simplified wiring and piping**
- ▶ **Reduces downtime** with a durability that can withstand the impact of an emergency stop

〈Size〉

- ▶ Payload: 2,000, 5,000, 9,000 (kg)

Vertical heavy load welding positioner, **SP10TV**



〈Features〉

- ▶ Enables **positioning a large-heavy workpiece** by using a heavy-load bearing
- ▶ Enables **stable positioning** by using a roller drive as driving init
- ▶ **Easy maintenance** with a simple design

〈Size〉

- ▶ Payload: 10,000 (kg)



Handling

▶ Installation site

The product should be installed in a place satisfying the following conditions:

- Environment temperature from 0 to 40°C
- Non vacuum or extreme pressure
- No existence of explosive gas, other hazardous gas, or radio active materials
- Excessive shock or force does not act
- Minimum electro magnetic noise (be cautious on welding machines)
- Humidity under 85% (no condensation)
- No exposure to water, oil, chemicals, dusts, etc.
- No direct sunlight
- Where there is little electromagnetic noise
- Where welding current will not flow inside the main body (If necessary, connect a separate, secondary welding current ground.)

▶ About the operating conditions

■ Depending on the operating pattern, the surface temperature of the product may rise due to heat generated inside the servo motor or product.

Pay attention so that the surface does not exceed 60°C.

■ Repeated operation within a small turning angle range (10° or less) may cause poor lubrication and significantly reduce product life.

Please contact us when you routinely use an output rotation angle range of 10° or less.

⚠ Limitations on the use of this product

This product cannot be used in applications where operation of the product has a direct impact in human life, or can cause bodily harm to people. The scope of these use limitations includes the following applications:

- i. Medical equipment
- ii. Nuclear power related equipment
- iii. Aerospace equipment
- iv. Equipment for handling explosive, corrosive or toxic substances etc.

■ Please consult with our company if you are considering use in one of the above applications.

■ If there is a possibility that this product will be used in a final use location outside Japan, in weapons or equipment for weapon manufacture, then it may be subject to regulation due to the Foreign Exchange and Foreign Trade Control Law. Please take extra care with regard to the application and region of use, and properly submit applications and follow procedures if necessary.

⚠ Notes on information

Specifications, dimensions and other information relating to this product provided in this catalog are subject to change without prior notice.

■ The information in this catalog is current as of November 2021.

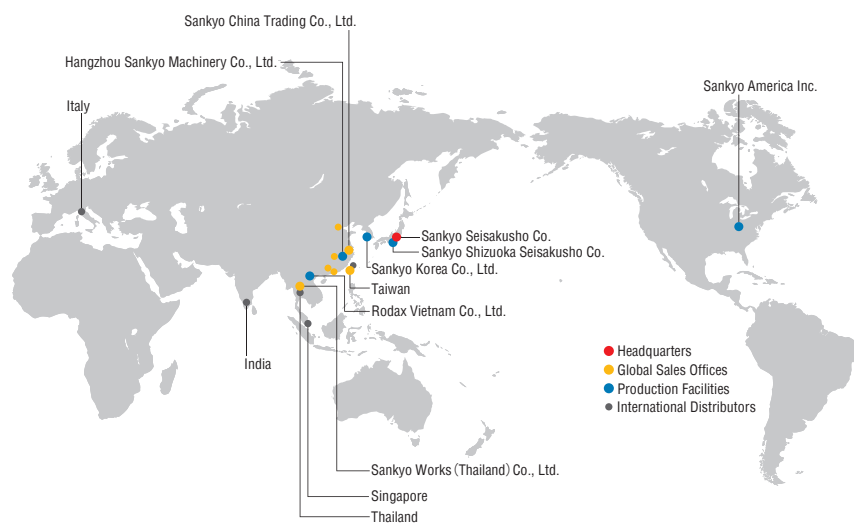
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For other safety information and detailed product handling methods, please refer to the instruction manual.



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Global network



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