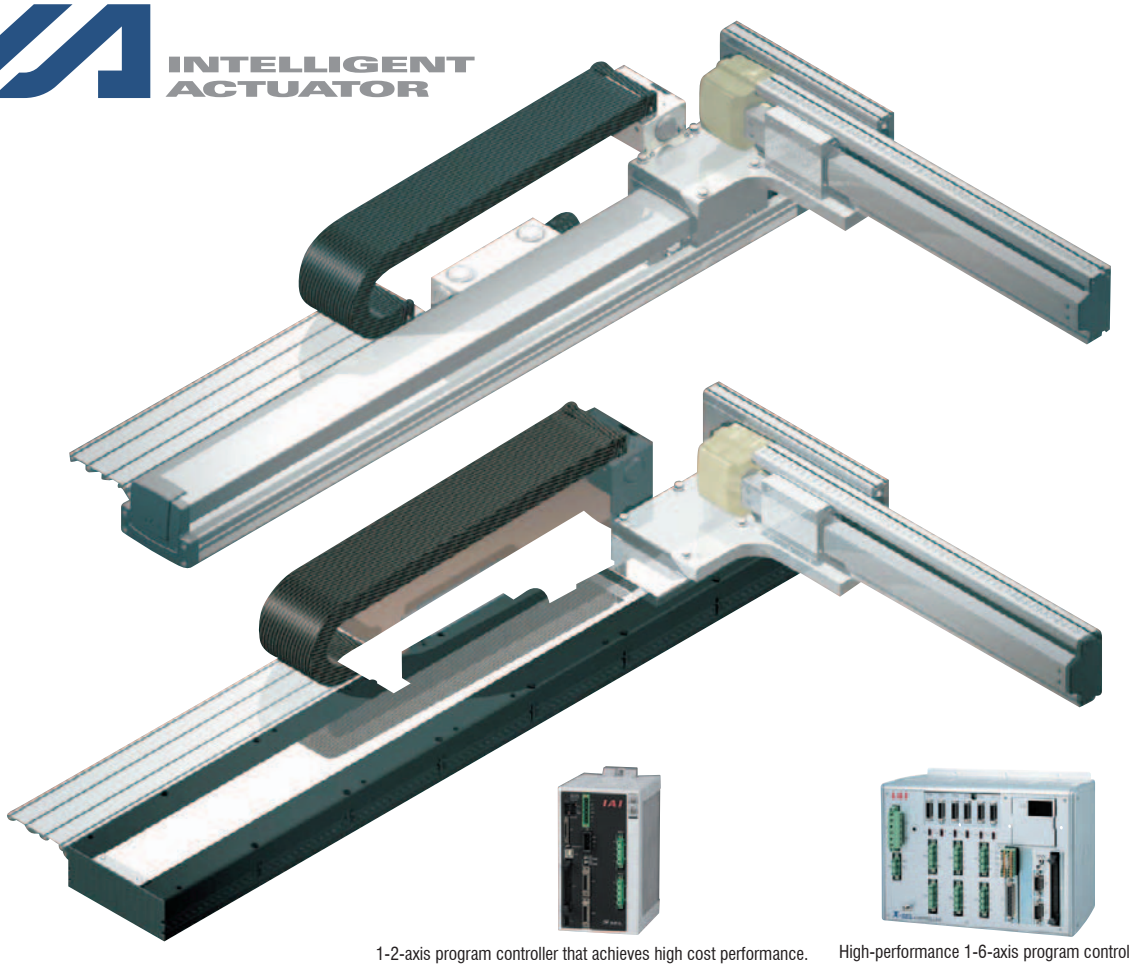
IAI
Quality and Innovation

Product Overview

GB

NS or LSA plus ISPA Cartesian System

INTELLIGENT ACTUATOR



1-2-axis program controller that achieves high cost performance.

S SEL

High-performance 1-6-axis program controller.

X-SEL

NS X-Axis + ISPA Axes Combined

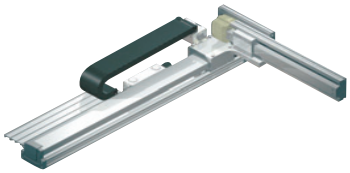
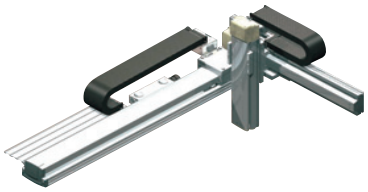
- **2-Axis Rotating Nut Motor System ICSPA2-BN**
  x: NS-LXMS y: ICSPA-MYM
- **3-Axis Rotating Nut Motor System ICSPA3-BN**
  x: NS-LXMS/XS y: ISPA-MYM z: ISPA-MXM/ZM
- **4-Axis Rotating Nut Motor System ICSPA4-BN**
  x: NS-LXMM y1: ISPA-MYM y2: ISPA-MZM/YM
- **6-Axis Rotating Nut Motor System ICSPA6-BN**
  x: NS-LXMM y1,y2: ISPA-MYM z1,z2: ISPA-MXM/ZM

LSA X-Axis + ISPA Axes Combined

- **2-Axis Linear Motor System ICSPA2-BL**
  x: LSA-W21SS y: ISPA-MYM
- **3-Axis Linear Motor System ICSPA3-BL**
  x: LSA-W21SS y: ISPA-MYM z: ISPA-MXM
- **4-Axis Linear Motor System ICSPA4-BL**
  x: LSA-W21SM y1: ISPA-MYM y2: ISPA-MZM/YM
- **6-Axis Linear Motor System ICSPA6-BL**
  x: LSA-W21SM y1,y2: ISPA-MYM z1,z2: ISPA-MXM/ZM

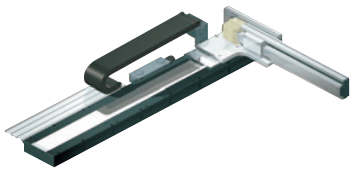
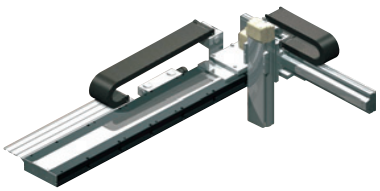
Cartesian Robots Using Rotating Nut Actuators / Large Linear Motors - Supporting Long Strokes, High-speed Moves and Multiple Sliders

NS (Nut Rotation Actuator) + ISA

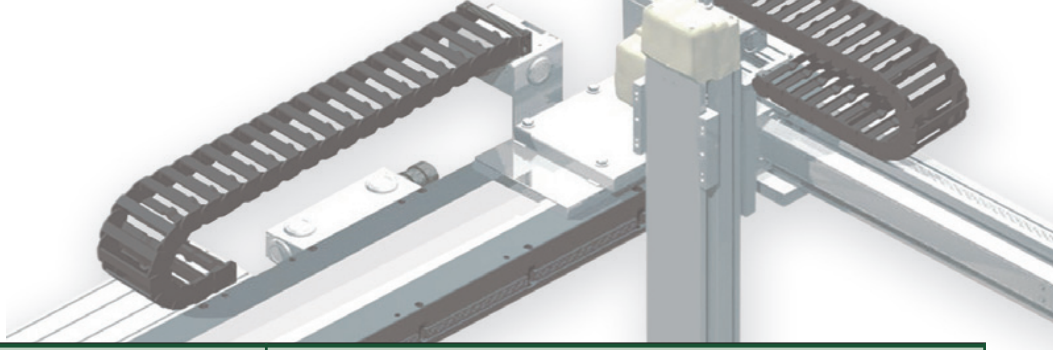
Number of combined axes		2 axes				3 axes							
Z-axis installation method		—				Z-axis base mount							
Series		ICSPA2				ICSPA3							
Type		B1N□H	B1N□M	B2N□H	B2N□M	B1N□HB3H	B1N□HB3M	B1N□MB3H	B1N□MB3M	B2N□HB3H	B2N□HB3M	B2N□MB3H	B2N□MB3M
Exterior View													
Stroke (mm)	X-axis	500~2200		2250~3000		500~2200				2250~3000			
	Y-axis	200~700				200~700							
	Z-axis	—				100~500							
Speed (mm/s)	X-axis	2400	1300	2400	1300	2400		1300		2400		1300	
	Y-axis	1200	1200	1200	1200	1200		1200		1200		1200	
	Z-axis	—	—	—	—	1200	600	1200	600	1200	600	1200	600
Maximum Load Capacity (kg) *1		21.2	40.0	21.2	40.0	9.0	11.2	9.0	19.0	9.0	11.2	9.0	19.0
Page		P.5	P.7	P.9	P.11	P.13		P.15		P.17		P.19	

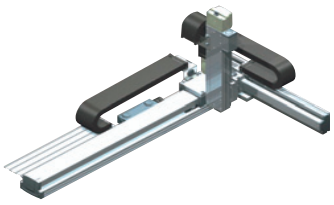
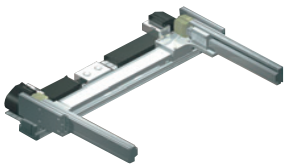
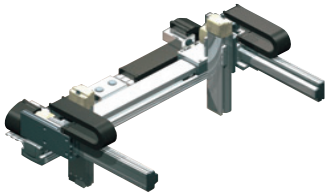
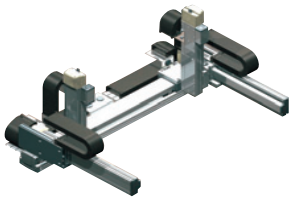
*1: The load capacity changes according to the Y-axis stroke and Z-axis stroke. For details, check the page describing the type you are interested in.

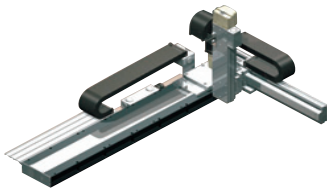
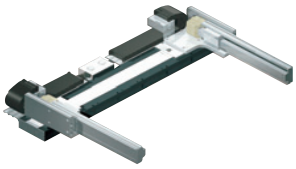
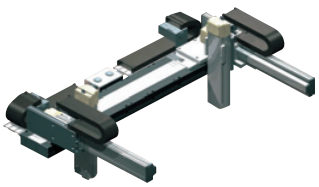
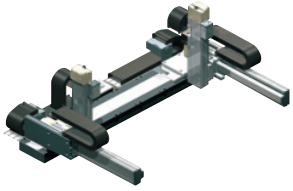
LSA (Large Linear Servo Actuator) + ISA

Number of combined axes		2 axes	3 axes	
Z-axis installation method		—	Z-axis base mount	
Series		ICSPA2	ICSPA3	
Type		B1L□H	B1L□HB3H	B1L□HB3M
Exterior View				
Stroke (mm)	X-axis	1050~4155	1050~4155	
	Y-axis	200~400	200~400	
	Z-axis	—	100~400	
Speed (mm/s)	X-axis	2500	2500	
	Y-axis	1200	1200	
	Z-axis	—	1200	600
Maximum Load Capacity (kg) *1		21.2	9.0	11.2
Page		P.41	P.43	

*1: The load capacity changes according to the Y-axis stroke and Z-axis stroke. For details, check the page describing the type you are interested in.



3 axes				4 axes (2 axes + 2 axes)		6 axes (3 axes + 3 axes)					
Z-axis slider mount				—		Z-axis base mount				Z-axis slider mount	
ICSPA3				ICSPA4		ICSPA6					
B1N□HS3M	B1N□MS3M	B2N□HS3M	B2N□MS3M	B3N1H	B3N1M	B3N1HB3H	B3N1HB3M	B3N1MB3H	B3N1MB3M	B3N1HS3M	B3N1MS3M
											
500~2200		2250~3000		250~2250		250~2250					
200~700				200~700		200~700					
100~400				—		100~500				100~400	
2400	1300	2400	1300	2400	1300	2400		1300		2400	1300
1200	1200	1200	1200	1200	1200	1200		1200		1200	1200
600	600	600	600	—	—	1200	600	1200	600	600	600
11.5	13.0	11.5	13.0	21.2	40.0	9.0	11.2	9.0	19.0	11.5	13.0
P.21	P.23	P.25	P.27	P.29	P.31	P.33		P.35		P.37	P.39

3 axes	4 axes (2 axes + 2 axes)	6 axes (3 axes + 3 axes)	
Z-axis slider mount	—	Z-axis base mount	Z-axis slider mount
ICSPA3	ICSPA4	ICSPA6	
B1L□HS3M	B2L1H	B2L1HB3H	B2L1HB3M	B2L1HS3M
			
1050~4155	730~3835	730~3835	
200~400	200~400	200~400	
100~300	—	100~400	100~300
2500	2500	2500	
1200	1200	1200	
600	—	1200	600
11.5	21.2	9.0	11.2	11.5
P.45	P.47	P.49	P.51

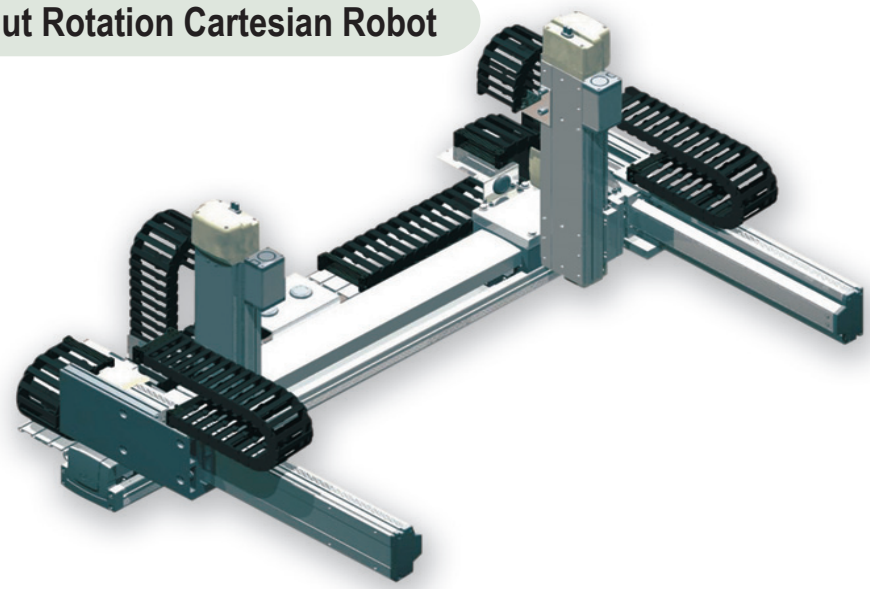
Introducing Two Multi-slider Type Cartesian Robots

A multi-slider robot consists of two sliders installed in one axis, where both sliders can be operated independently.

Combined actuator units of nut rotation type offering excellent transfer capability

- The built-in servo motor in the slider turns the nut to move the actuator. Accordingly, heavy loads can be operated at high speed even at a long stroke.
- A desired combination can be selected from 2-axis, 3-axis, 4-axis (2 axes + 2 axes) and 6-axis (3 axes + 3 axes) configurations.

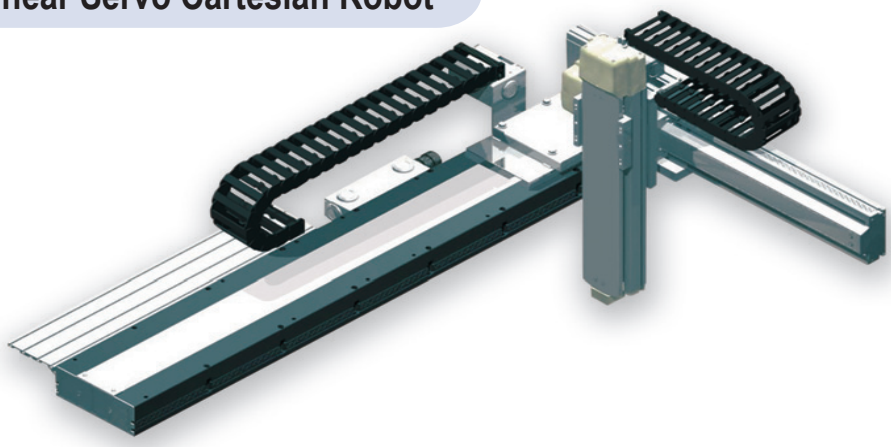
X-axis Nut Rotation Cartesian Robot



Combined actuator units of linear servo type offering excelent acceleration/deceleration performance

- High-thrust linear servo actuators enable operations requiring a long stroke (up to 4155 mm) and hgh acceleration/deceleration (rating: 1 G).
- A desired combination can be selected from 2-axis, 3-axis, 4-axis (2 axes + 2 axes) and 6-axis (3 axes + 3 axes) configurations.

X-axis Linear Servo Cartesian Robot



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