

Yθ (Linear Motion + Swivel Movement)
Screw Driving Robot

NITOMAN

SR565Yθ-Z
SR566Yθ-Z

Applicable Screws
Nom Dia.
2~5mm

Equipped with AC servo Z-axis to the thrust control.

Easy to adjust the thrust force

It is possible to set up the screw driving condition individually.

Provide more suitable screw driving combined with KX/NX driver which is standard equipment.

The CC-Link, DeviceNet™ or Ethernet as fieldbus network are available. (Option)

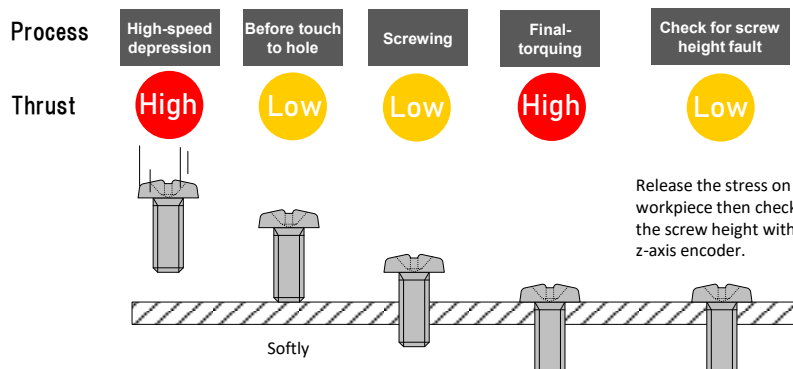
It is possible to install the interface for the CC-Link, DeviceNet™ or Ethernet as an optional extra.



SR565Yθ-Z
Example of machine configuration.

Thrust force control

Optimum thrust control effectively prevents to damage to internal threads and cam-out.

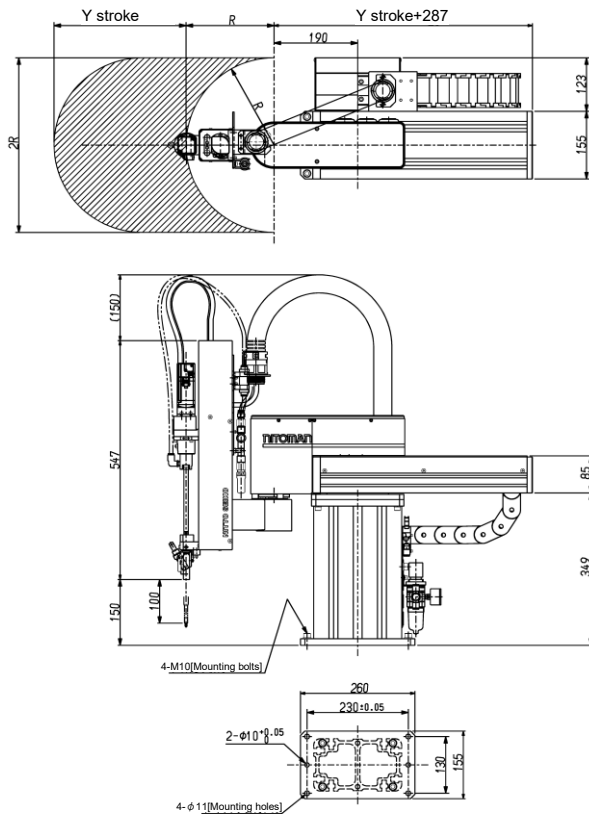


Recommended use

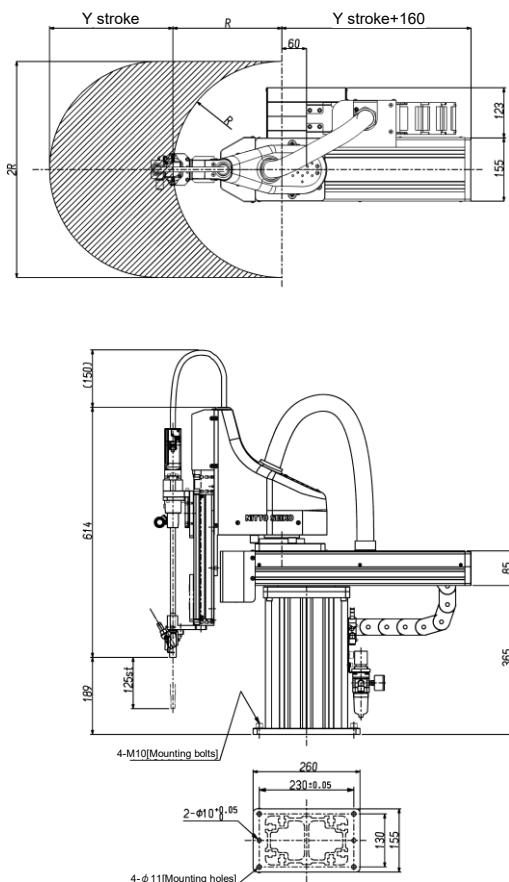
- Self tapping screw
- Prevention of bit camout
- Prevent thread breakage
- Reduction of impact

■ Outside dimensions (:mm)

【 SR565Y0-Z 】



【 SR566Y0-Z 】



■ Specifications of robot

Inside of [] is the option.

Type			SR565Y0	SR565Y0-Z	SR566Y0-Z
Screw driving unit	Number of axis to be controlled		Two axes, simultaneously		Three axes, simultaneously
	Fastening torque control function		—		○
	Applicable Screws *1 *2	Nom Dia.	Machine screw, Tapping screw 2~5mm (except M5 truss head screws)		
		Length	max. 18mm [25], min. Screw head Dia.×1.1mm		
	Tightening torque *3		0.3~3.0N·m		
	Method of supplying screw		Blow feed or Picking up		
	Driver		KX driver, [NX driver]		
	Tightening stroke		100, [150] mm		75, 125, [175] mm
	Screw holding system		Vacuum tube suction system		
	Fault detections		Faulty torque (faulty screw tightening)		
Low screw (in screw feeder)					
Faulty screw height (proximity sensor)			Faulty screw height (Z-axis encoder pulse)		
Robot	Work envelope	Y-axis	200, 300, 400, 500mm		
		Turning radius	200, 250, 300mm		265, 315mm
		θ-axis	180°		
	Maximum moving speed	Y-axis	1000mm/sec.		
		θ-axis	360°/sec.		
		Z-axis	—	720mm/sec.	
	Locating accuracy		±0.05mm		
Air pressure		0.4~0.5MPa			
Machine weight *4		Approximately 36Kg	Approximately 37Kg		
Screw feeder		FF503H			

*1 Products will be built up based on specification of screws, therefore it can be used for one kind of screws only.

*2 Application range of screws will be changed by type of screw head, or size.

Please contact us to make sure for it.

*3 The type of driver varies depending on target torque.

*4 Weight will be changed by stroke, or type of driver. Please contact us to make sure for it.

■ Specifications of robot controller

Inside of [] is the option.

Type	RC5500-S
Supply voltage	Single phase AC200~230V 50/60Hz
Number of axis to be controlled	Six axes, max
Robot movement	PTP control, Closed loop control
Position feedback	Absolute encoder system (Battery backup:approximately five years)
Serial port	RS-232C (for teaching pendant) Ethernet (100BASE-TX) RS-422 / RS-485
Memory	SRAM : (Battery backup:approximately five years)
External input *5 *6	Standard user port 16points [Additional 64 points outside ,max]
External output *5 *6	Standard user port 16points [Additional 64 points outside ,max]
Field network	[CC-Link, DeviceNet, Ethernet]
Teaching method	MDI, Remote teaching, Direct teaching
Point control	Work area : 40 points *7 ×100 types *7 Fixed area : 40 points
Programming language	Ladder diagram & Textual language (About 40k steps)
Robot program	Special motion language
Outside dimensions(W×H×D)	200(250 *7)×450×420mm (Not include a Rubber foot)
Weight	Approximately 20kg
Teaching pendant	Handy Type touch panel (with Key switch, Emergency switch and Dead-man's switch) Pendant can be used as manual control panel
PC software	[MPE720 Ver.7] *8

*5 External I/O might be used to system programming, which depend on some device specification.

*6 PNP type also available. (Need to specify at order timing. NPN or PNP.)

*7 It depends on the specification.

*8 MPE720 Ver.7 is a software provided by YASUKAWA ELECTRIC CO.

NITTOSEIKO CO.,LTD.

Assembly Machine Division / Shiroyama Plant
Global Sales Section

2, Shiroyama, Ayabe city, Kyoto 623-0003, Japan

TEL: +81-773-42-1290 FAX: +81-773-45-3680

URL: <https://www.nittoseiko.co.jp/en.html>

● Specifications and other matters are subject to modifications for performance improvements without notice.
● Unique nouns like the product name indicated in this brochure are registered or not registered trademark of each company.
● DeviceNet™ is a trademark of ODVA.