

**Yθ (Linear Motion + Swivel Movement)  
Screw Driving Robot**

**NITOMAN**

**SR565Yθ-Z  
SR566Yθ-Z**

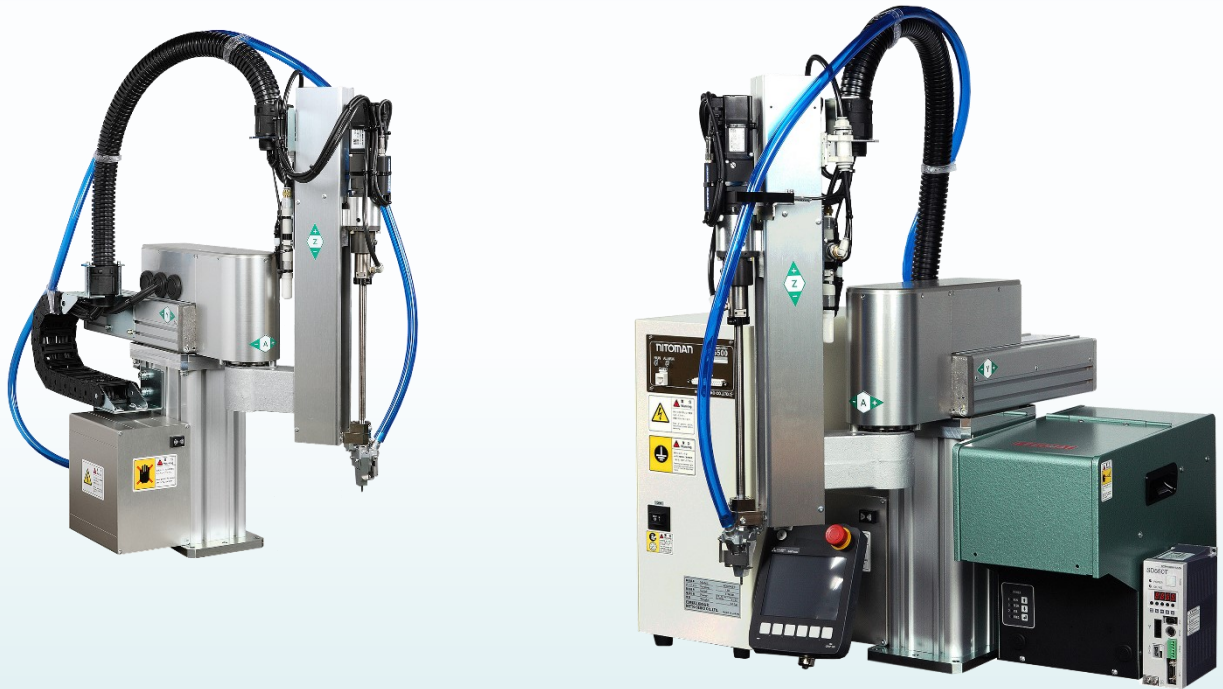
Applicable Screws  
Nom Dia.  
**2~5mm**

*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)*

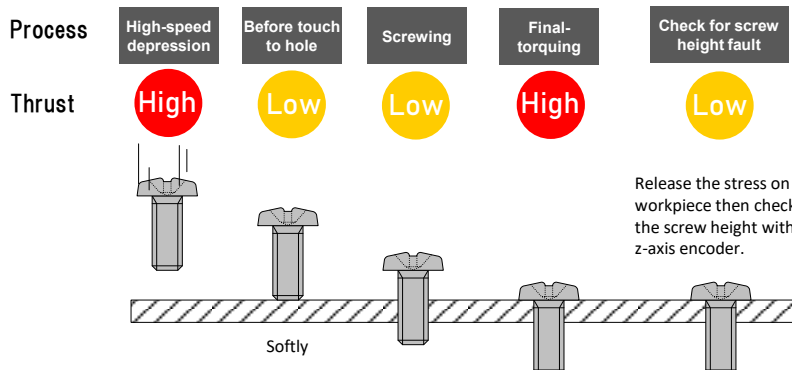
It is possible to install the interface for the CC-Link, DeviceNet™ or Ethernet as an optional extra.



SR565Yθ-Z  
Example of machine configuration.

## Thrust force control

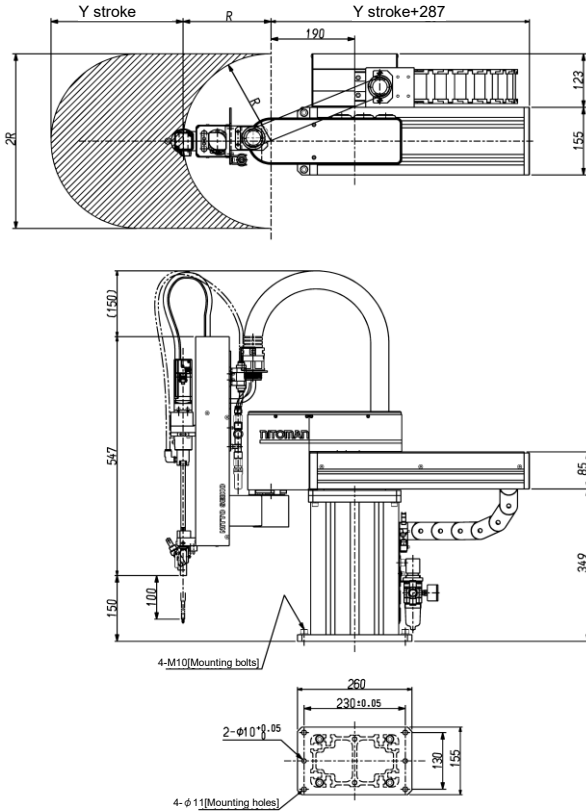
Optimum thrust control effectively prevents to damage to internal threads and cam-out.



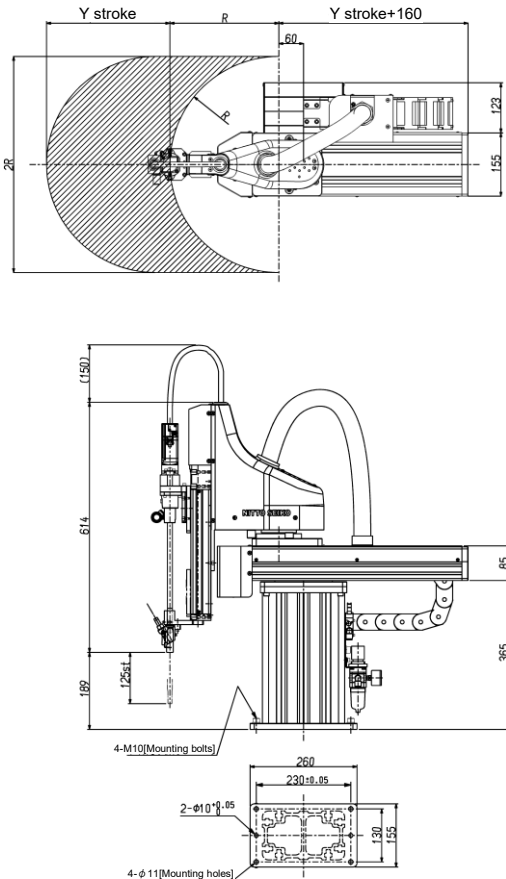
### Recommended use

- 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			
	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.

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