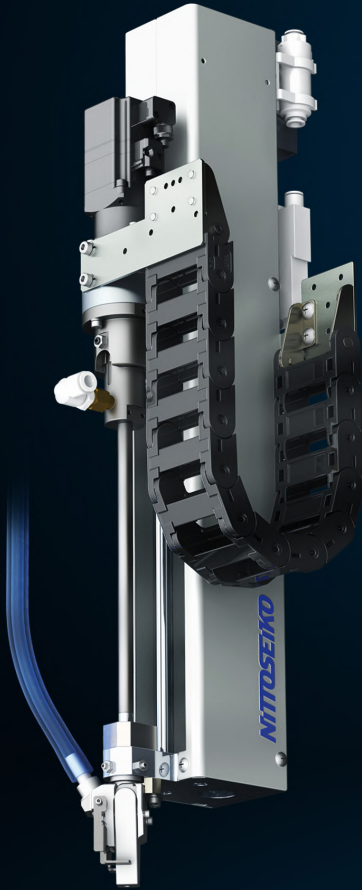


Minimize workpiece waste due to defects.

Single-axis automatic screw driving machines FM513VZR

FEEDMAT[®]

Ultra-low thrust model



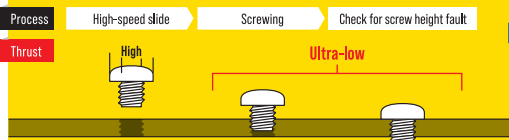
Mechanism Self-weight cancellation function

Calculate and offset the weight of the screwdriver bit lift mechanism



Ultra-low thrust

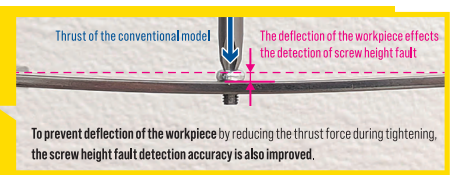
The thrust force during screw tightening
reduced by approx. **70%***
by self-weight cancellation function



* Compared to the conventional mode * Thrust is set at the tip of the bit.
* The maximum thrust is as same as that of the conventional model

Minimizing the load on the workpiece and
reducing screw-tightening defects

Reducing defects previously difficult to prevent



+ Easy thrust setting

Set thrust (N) directly, regardless of
the installed driver or tightening direction

Advanced thrust control

Max speed approx. **40%***
&
Control processing speed **UP**

* Compared to the conventional model

Shortening cycle time

Time of **Start** ▶ **Screwing** ▶ **Return**

Tightening stroke 100mm

Approx. 2.7s
Approx. 2.3s

Shortening by
approx. **0.4s***

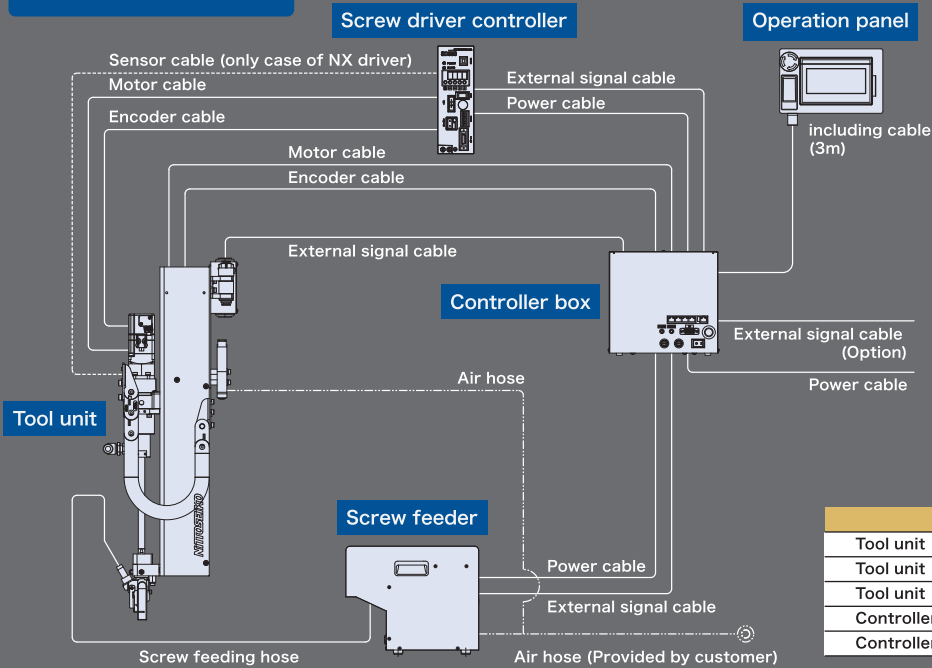
Tightening stroke 400mm

Approx. 3.7s
Approx. 3.0s

Shortening by
approx. **0.7s***

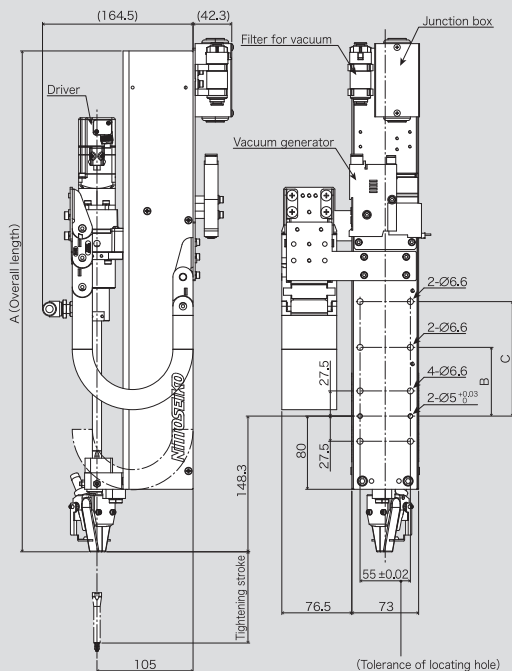
* Compared to the conventional model * Screw feed time is not included. * Cycle time depends on

Configurations



	Layout	Length
Tool unit	↔ Screw driver controller	4m
Tool unit	↔ Controller box	5m
Tool unit	↔ Screw feeder	3m
Controller box	↔ Screw driver controller	4m
Controller box	↔ Screw feeder	3m

Outside dimensions of screw tightening unit



Tightening stroke	A (Overall length)	B	C
50st	498	-	-
100st	548	-	-
150st	598	-	-
200st	648	150	-
250st	698	150	-
300st	748	150	250
350st	798	150	250
400st	848	150	250

Specifications

[]:Option

Model	FM513VZR
Screw holding system	Vacuum type screw guide
Slide drive type	Servo motor
Max speed	830mm/s
Thrust control setting range	13~150N
Tightening torque *1	0.15~3.8N·m
Driver	KX driver / NX driver
Tightening stroke	50, 100, 150 [200, 250, 300, 350, 400]mm
Applicable screws *2 *3	Category
	Nom dia.
	Head Dia.
	Length
Error detection	Torque failure (Thread stripping)
	Screw shortage in screw feeder
	Screw height fault (Z-axis encoder pulse) *4
Working air supply	0.4~0.5MPa
Power supply	Single phase 200-230VAC 50/60Hz
Tool unit weight *5	Approx. 6.5kg (Main unit: Approx. 5.9kg, Air equipment/relay box: Approx. 0.6kg)
Screw feeder	FF311DR / FF503H

*1: The type of driver varies depending on target torque.

*2: Products will be built up based on specificatio of screws, therefore it can be used for one kind of screw only.

*3: Application range of screws will be changed by type of screw head, or size. Please contact us to make sure for it.

*4: It can be detected more than 2mm the faulty screw height.

And also another high accuracy type of sensor is available to mount in option.

*5: It's a mass (weight) when the stroke is 100mm, and the weight of the feeder and controller is not included.

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Website : <https://global.nittoseiko.com/>



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