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Fix Stages

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Manual Stages

Motorized Stages

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Recommend products

Precision Stage Series

Fix Stages

NEW

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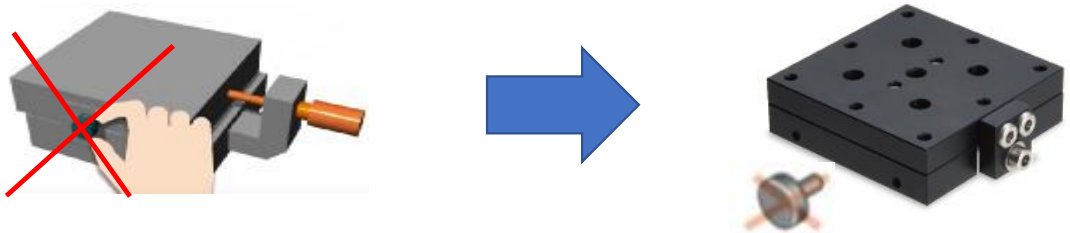
What's the Fix Stage ??

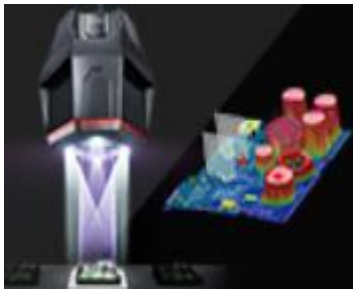
- Position adjustment stage with small stroke.

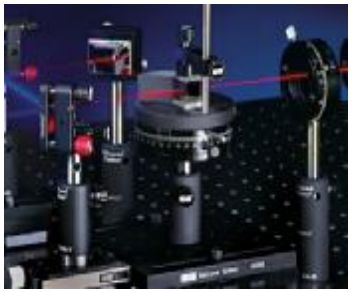
Travel direction	X-axis,Y-axis	Rotary	Goniometer
Maximum stroke	±5.5mm	±10°	±3°

- Can be fixed and positioned without a clamp mechanism.



- Ideal for small adjustments such as inspection and assembly.





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Having trouble manual stage?

■ After adjusting the position ,
the stage ends up moving when the clamp is used.

➡ Reduced position adjustment times

■ The stage ends up moving because of forgetting to use the clamp.

➡Preventing mistakes

■The stage ends up moving because the clamp comes loose .

➡Long-term maintenance of position accuracy

Increased productivity and quality improvement

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How to use the Fix Stage

STEP 1 : Use Allen key to move.
Put the wrench in the screw cap and turn it .

STEP 2 : Turn the wrench left and right and stop at any position.

STEP 3 : Remove the wrench from the screw cap.
Position adjustment is completed and it stops moving.

Easy to adjust without clamp

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Having trouble manual stage?

■Does not move even if there is external force or vibration.

■Fixed stage has no backlash .
The Fix stage can be positioned accurately.

After the position has been adjusted, no movement can be seen on the indicator scale even when the face of the stage is grabbed and forcefully shaken.

This product is only THK CHUO in the world !!

Application examples

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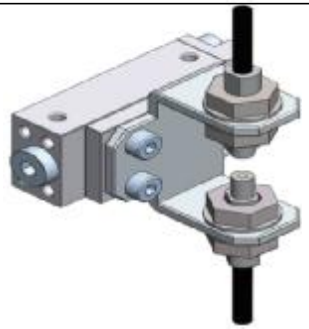
Application examples

positioning CCTV lenses

Adjusting camera AF positions

Micro zoom lens Positioning

Fiber sensor positioning



Positioning dispensers

Adjusting laser focal points

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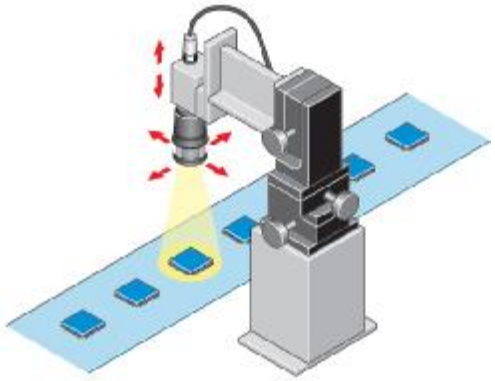
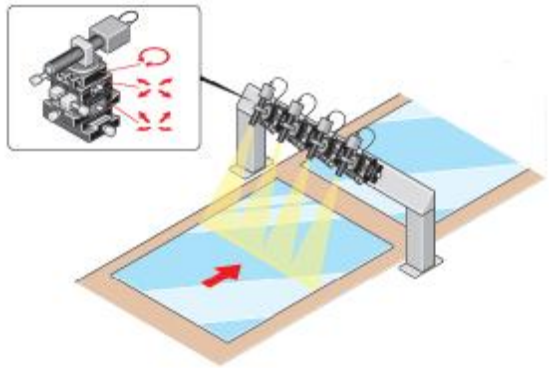
Application examples

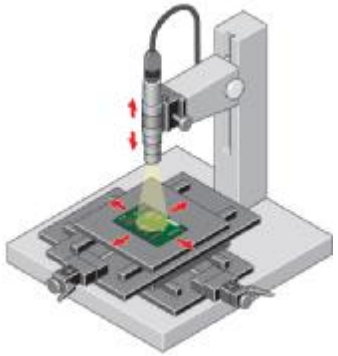
XYZ camera adjustment



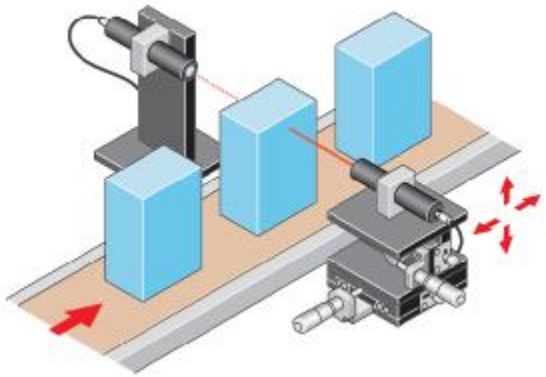
XYZ rotary goniometer adjustment



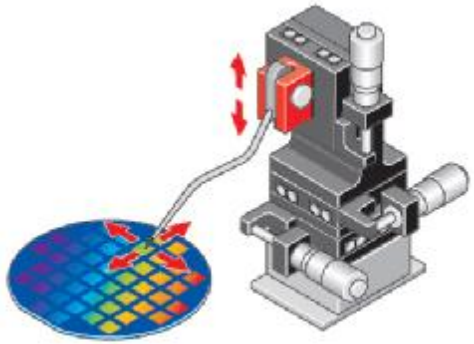
Automation stage adjustment



Laser alignment XY stage



XYZ stage for wafer inspection



Merit of introducing to existing equipment

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Improvement example

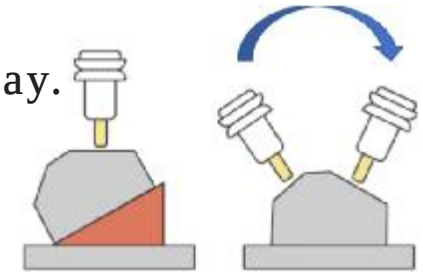
■Merit of adopting manual stage

Case

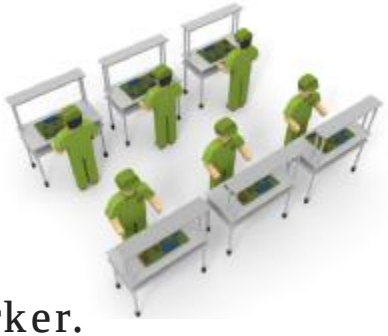
・Dispensing head position adjustment

Problem

・Dispensing setup change for each product 20 times a day.
➡ Fine adjustment is difficult and time consuming.



・Replace the jig 20 times according to the dispenser.



・There were variations in the adjustment position of the syringe for each worker.

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Improvement example

Before

◆ Dispenser Setup change frequency.
➡ 20 times / day.

◆ Jig setup change.
➡ 20 times / day.

◆ Dispenser set up time .
➡ 10 minute at a time.
10 minute × 20 times = 200minute.

◆ Product NG frequency .
(Adjustment error)
➡ 3 times / day.

After

◆ Jig set up change.
➡ 0 times .

◆ Dispenser set up time.
➡ 2 minute at a time.
2 minute × 20 times = 40minute

◆ Product NG frequency
(adjustment error)
➡ 0 times.

1/5

- Stable quality
- Labor saving
- Increase production efficiency

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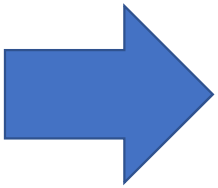
Benefits of replacing the dovetail stage with a fix stage

Dovetail stage



Fix stage

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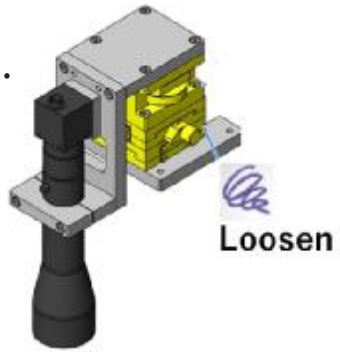
Improvement example

■Merit of adopting Fix stage

Case

・A total of 5 dovetail stages are used for camera adjustment and workbench adjustment.



Problem

・The dovetail stage clamp became loose over time and needed to be readjusted.

・The clamp is loosened due to the vibration of the device and the position shifts.

・The position is slightly displaced during clamping, and it takes time to adjust.

・There was work damage and measurement error due to forgetting to clamp.

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Improvement example

Before

◆Clamp loosening frequency.

➡ 5 or 6 times / month.

◆Clamp adjustment time.

➡ 5 minutes / 1 unit ➡ 5 × 5 =25minutes

◆Work damage and measurement error.

➡ 3 / month.

After

◆Clamp loosening frequency.

➡:0 times (No loose clamp)

◆Clamp adjustment time.

➡ 0minutes (No adjustment of clamp)

◆Ensure safety by eliminating work mistakes.

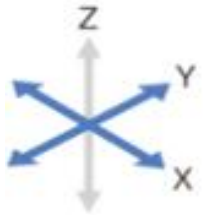
- Reduction of working hours.
- Increase production efficiency.
- Ensure safety by eliminating work mistakes.

Selection procedure

Selection procedure

■Three elements of selection for fix stage

Travel direction



Load capacity

Travel amount

Model number can be determined.

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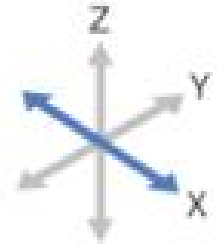
Selection procedure

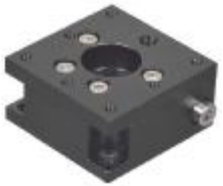
No.1 Selection of travel direction

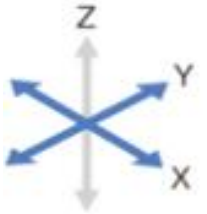
6 Types



X-axis

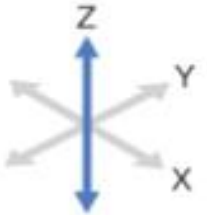
Rotary





XY-axis

Tilt



Z-axis

Tilt double

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Selection procedure

No.2　Check load capacity and travel amount

Travel direction	X-axis , XY-axis			Thin type X-axis , XY axis	
Stage surface	25□	40□	60□	40□	60□
Travel amount 【mm】	±3	±3.5	±5.5	±3.5	±5.5
Load capacity 【kg】	0.5	4	6	2.5	2.5

X axis			XY axis		
25□	40□	60□	25□	40□	60□

(Thickness 8mm)

X axis		XY axis	
40□	60□	40□	60□

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Selection procedure

No.2　Check load capacity and travel amount

Travel direction	Rotary			Goniometer 2-axis goniometer			Z lift		
Stage surface	25□	40□	60□	25□	40□	60□	25□	40□	60□
Travel amount 【mm】	±5°	±10°	±10°	±2°	±3°	±3°	0to1	0to1	0to1
Load capacity 【kg】	0.5	2.5	2.5	0.5	2.5	2.5	0.5	2.5	2.5

Rotary		
25□	40□	60□

Goniometer 2-axis goniometer		
25□	40□	60□

Z lift axis		
25□	40□	60□

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Selection procedure

No.2　Check load capacity and travel amount

Travel direction	Permeation type X axis		Permeation type XY axis	
Stage surface	40□	60□	40□	60□
Travel amount 【mm】	±3.5	±5.5	±3.5	±5.5
Load capacity 【kg】	2.5	2.5	2.5	2.5

X axis		XY axis	
40□	60□	40□	60□

About model number

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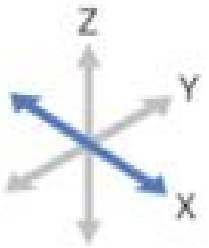
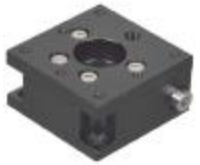
Type of mean

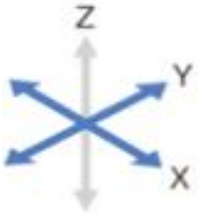
TLS→Single



TRS→Rotary

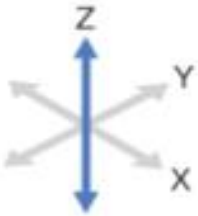


TLD→Double



TTS→Tilt

TLV→Vertical



TTD→Tilt Doubl

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Type of mean

T	L	S	-	T	40	52	FX
THK CHUO	Travel direction	Stage type		Stage type	Stage surface	Design symbol	Fix Stage
	L・・・Linear	S・・・Single		T・・・Thin type	25・・・□25	51・・・ Select Linear type Select Rotary type Select Permeation type Select Goniometer type Center of rotation 60mm	
	R・・・Rotary	D・・・Double		P・・・Permeation type	40・・・□40	52・・・ Select Thin type Select Goniometer type Center of rotation 40mm	
	T・・・Tilt	V・・・Z lift		No Symbol・・・Normal type	60・・・□60		

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Differentiate from competitors

Fix stage

Competitor

Product	Fix stage	Competitor
Clamp	No need clamp	Need for clamp
Accurate position adjustment	Easy	Difficult
Clamp time	No clamp time	Take time to clamp
Loose clamp	Don't loosen	Loosens over time

Position shifts when clamped

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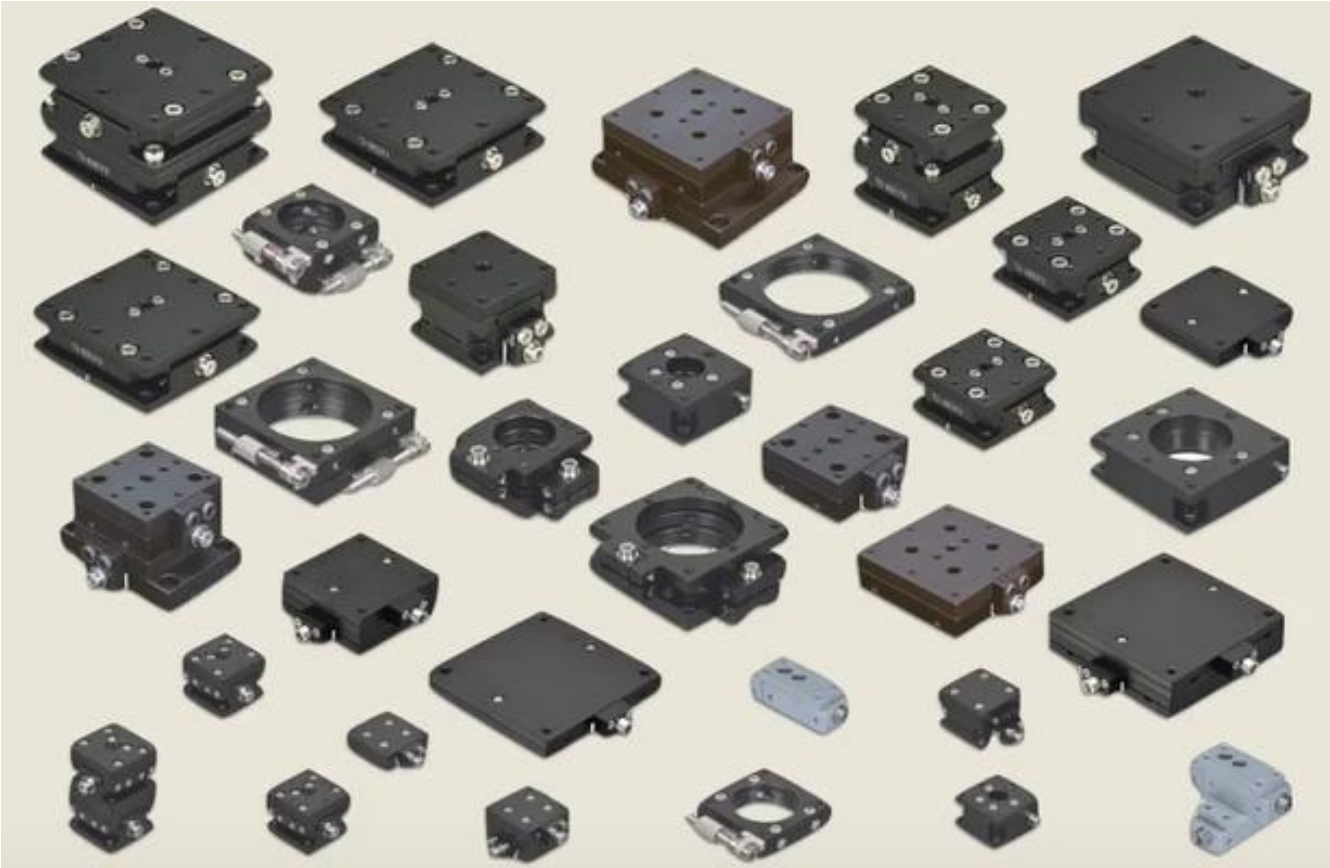
Fix Stage line up

■Abundant lineup available



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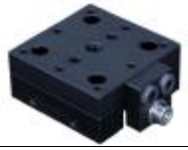
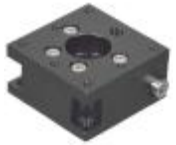
Manual stages line up

Fix stages

X	XY	Thin type X	Thin type XY	Z lift	Θ	Goniometer	2-axis goniometer
							

High grade stage (Aluminum alloy)

X	XY	XYZ	Z	Z lift	Θ
					

High grade stage (Stainless steel)

X	XY	Z	Z lift
			

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Positioning of the manual stage

Accuracy

High

High grade stage (Stainless steel)

Straightness :0.001 mm
Parallelism :0.015 mm

High grade stage (Aluminum ally)

Straightness :0.002 mm
Parallelism :0.03 mm

Fix stages

Load capacity

Low

High

6kg 8kg 25kg

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Motorized stages line up

High grade stage

X	XY	Z	Θ
			

Travel accuracy straightness : 0.002mm

Repeatability : 0.0005mm

Moment rigidity

: Yawing : 0.1 s/N・cm
: Pitching : 0.1 s/N・cm
: Rolling : 0.1 s/N・cm

30mm×30mm(Φ30mm) compact stage

X	XY	Z	Z lift	Θ
				

X-Long stroke


XY-Long stroke


High-Precision/High-Rigidity Stage

X	XY	Z
		

Travel accuracy straightness : 0.0007mm

Repeatability : 0.0005mm

Moment rigidity

Yawing : 0.01 s/N・cm
Pitching : 0.01 s/N・cm
Rolling : 0.01 s/N・cm

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Recommend products

Precision Stage Series

NEW

Super compact motorized stage
Table size 30mm ×30mm

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30mm×30mm compact series

■Specification sheet for 5 types of lineup

Travel direction	X-axis	XY-axis	Z-axis	Z-lift	Rotary
Stage surface	30□	30□	30□	30□	30Φ
Travel amount 【mm】	±7.5	±7.5	±7.5	0to5	360°
Load capacity 【kg】	2	1.5	1	1	2

It is possible to combine

■Specification sheet for long stroke type

Travel direction	X-axis Long stroke type	XY-axis Long stroke type
Stage surface	30□	30□
Travel amount 【mm】	±25	±25
Load capacity 【kg】	2	1.5

Long stroke type based on KR.

□ 30 Motorized stage has only THK CHUO.

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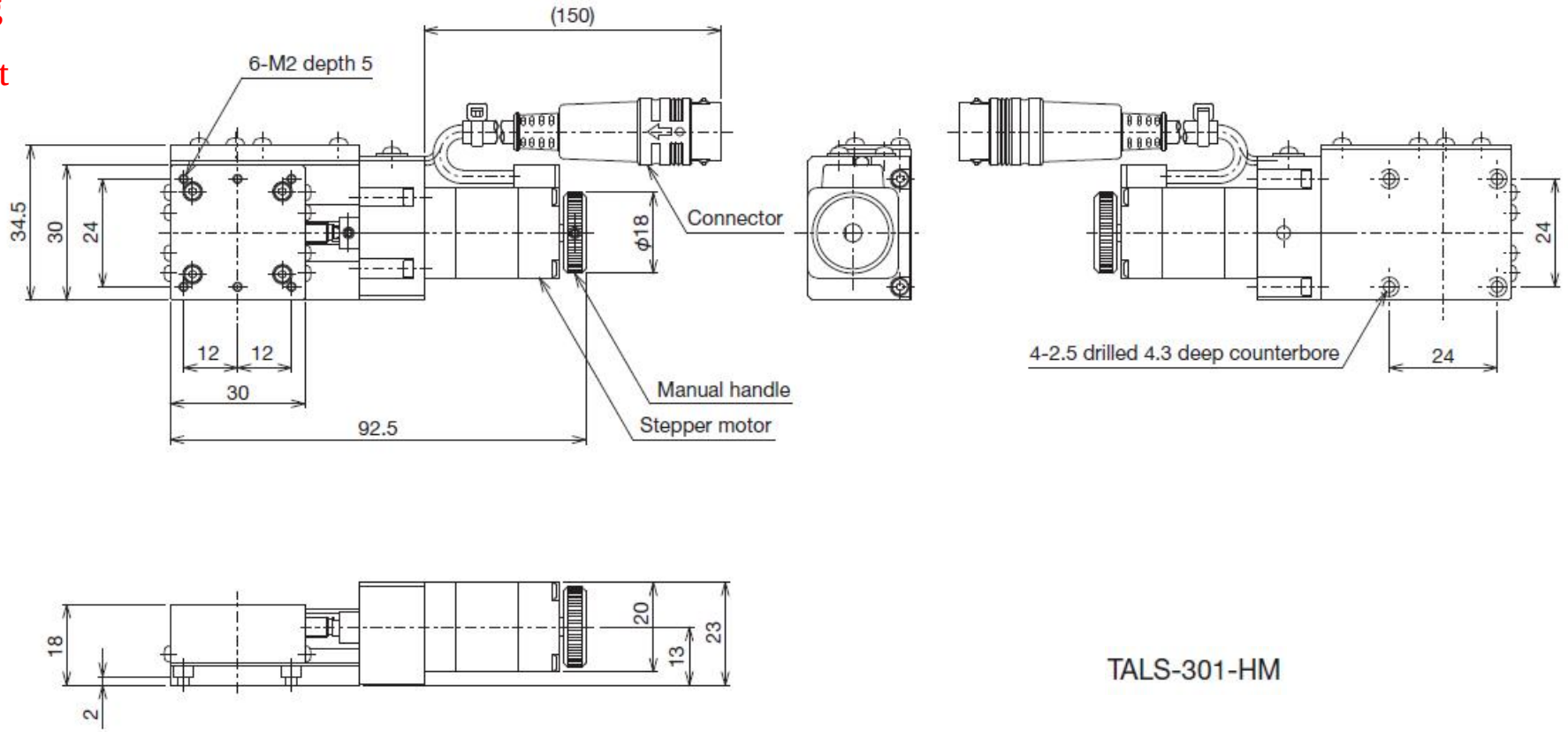
30mm×30mm compact series

- Compact
- Downsizing
- Lightweight



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