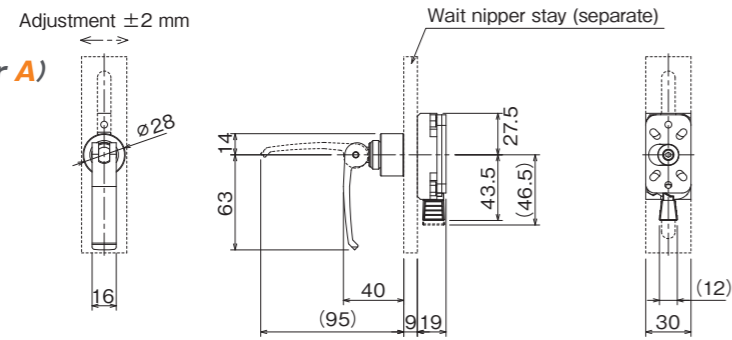
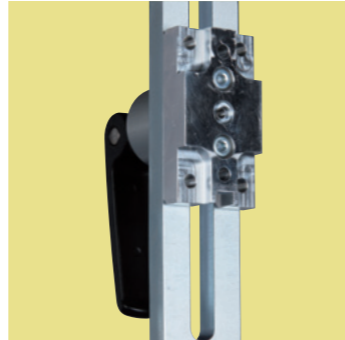
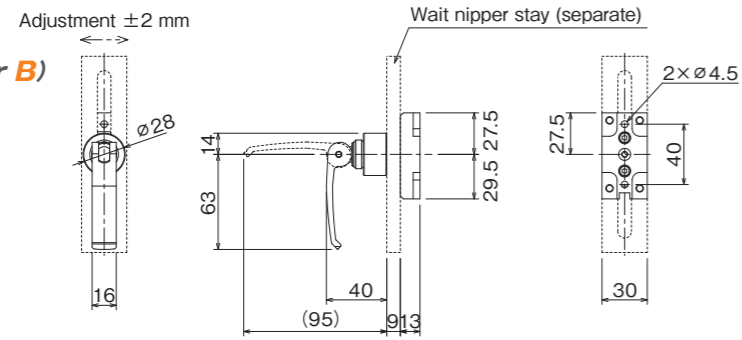


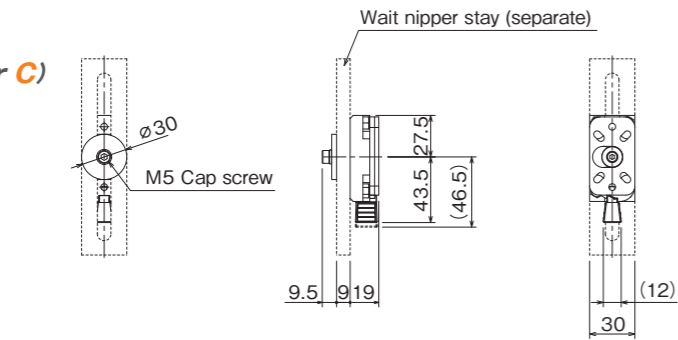
**Type A**  
(Nipper adjuster A)



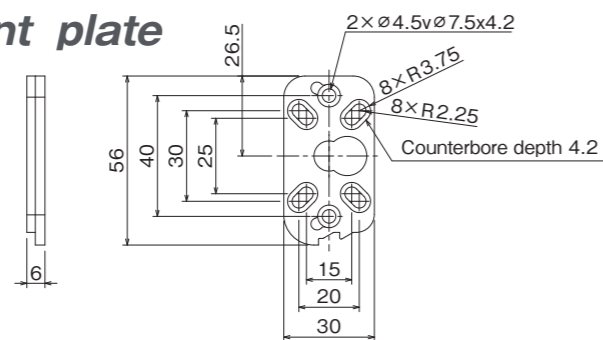
**Type B**  
(Nipper adjuster B)



**Type C**  
(Nipper adjuster C)

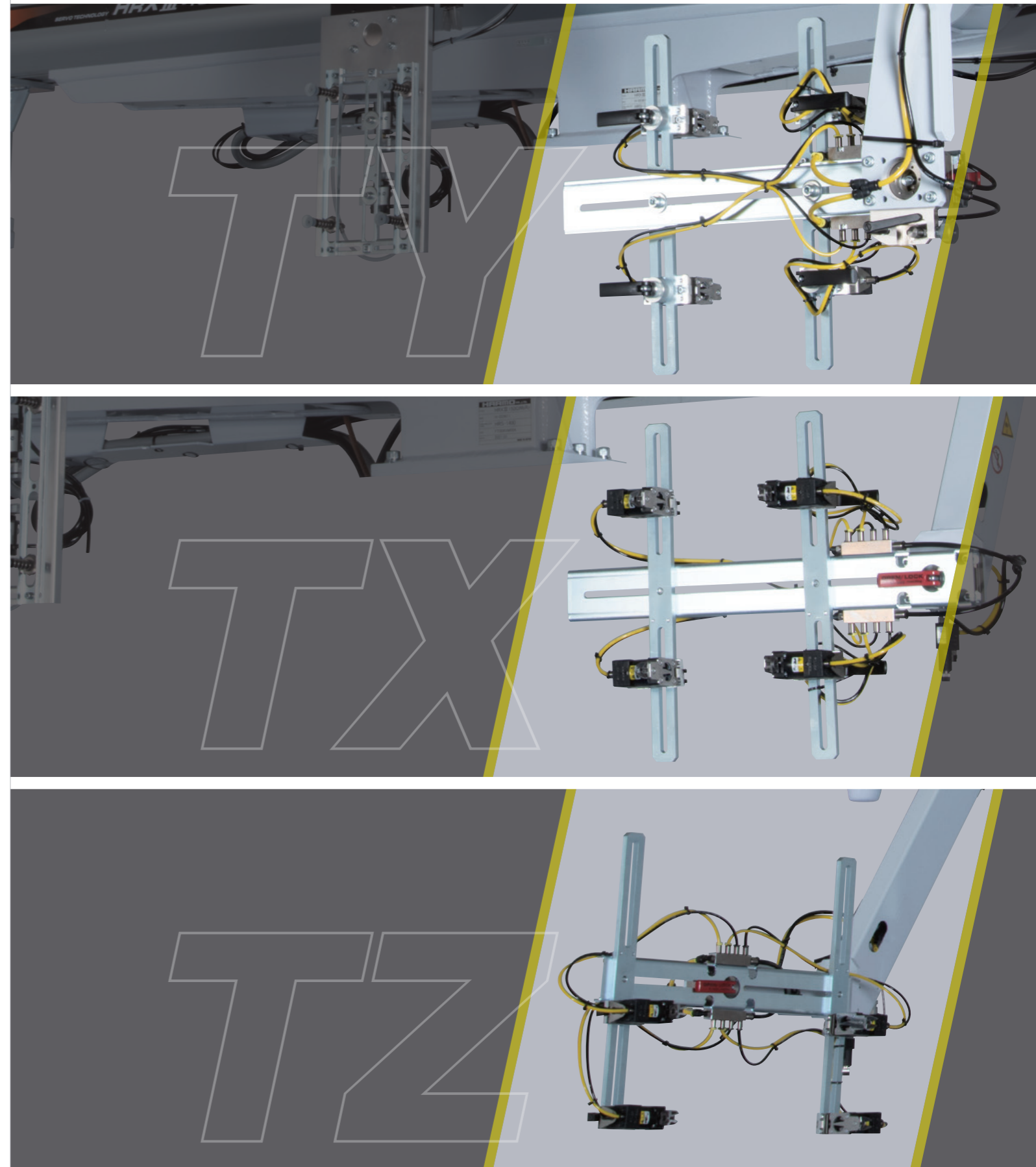


**Nipper attachment plate**



※For other nippers, please refer to the separate drawing.

One-Touch wait nipper **TY/TX/TZ** type  
Nipper adjuster tool



Manufacturer: **HARMO** CO.,LTD.

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# A Revolution to shorten set up time!

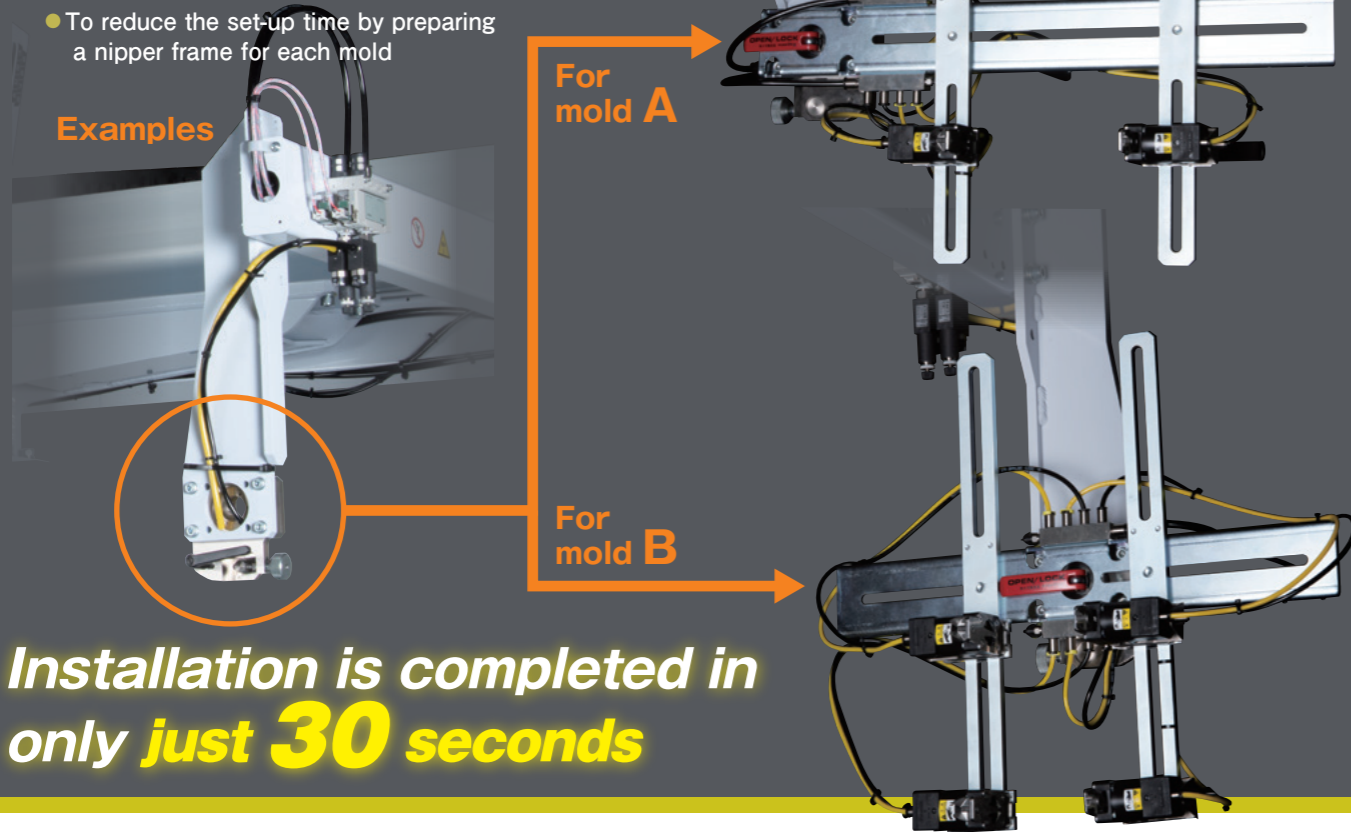
- **One-Touch Wait nipper**
- **Nipper adjuster tool**

# One-Touch Waiting Nipper

## ■ Adoption of "One-Touch mechanism" for the wait nipper frame

- To reduce the set-up time by preparing a nipper frame for each mold

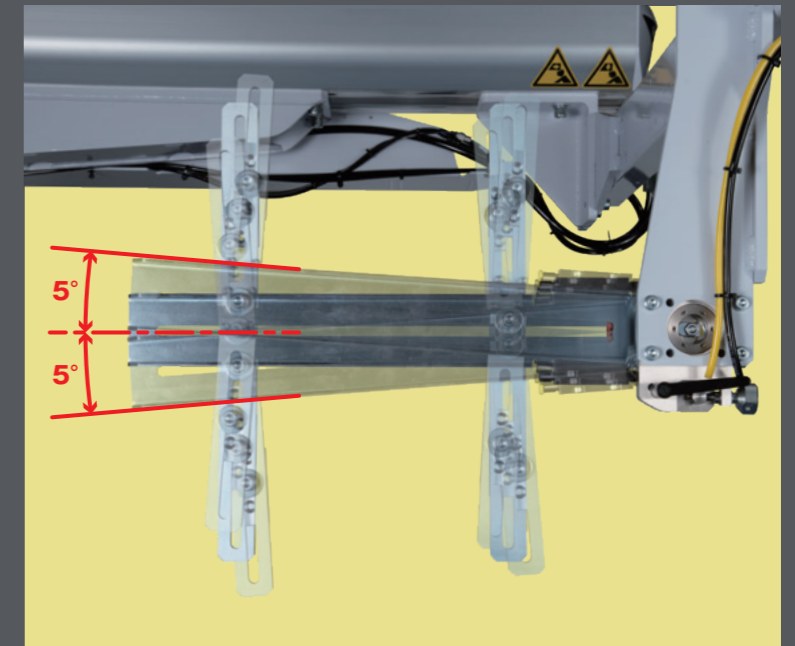
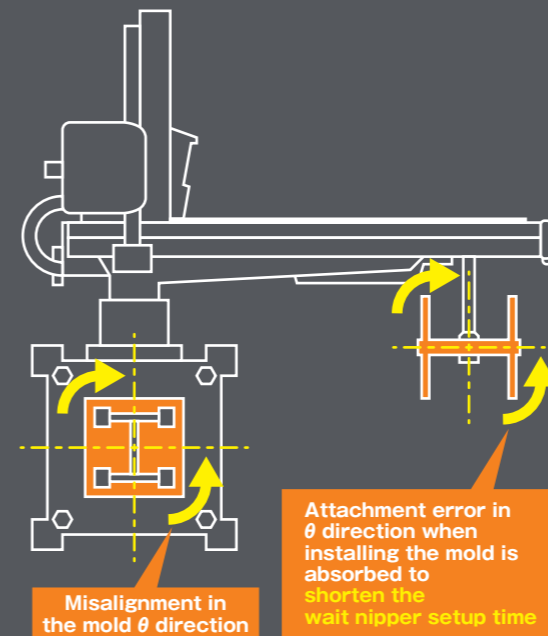
Examples



Installation is completed in only **just 30 seconds**

## ■ Adoption of "Angle Adjustment Mechanism" for nipper frame

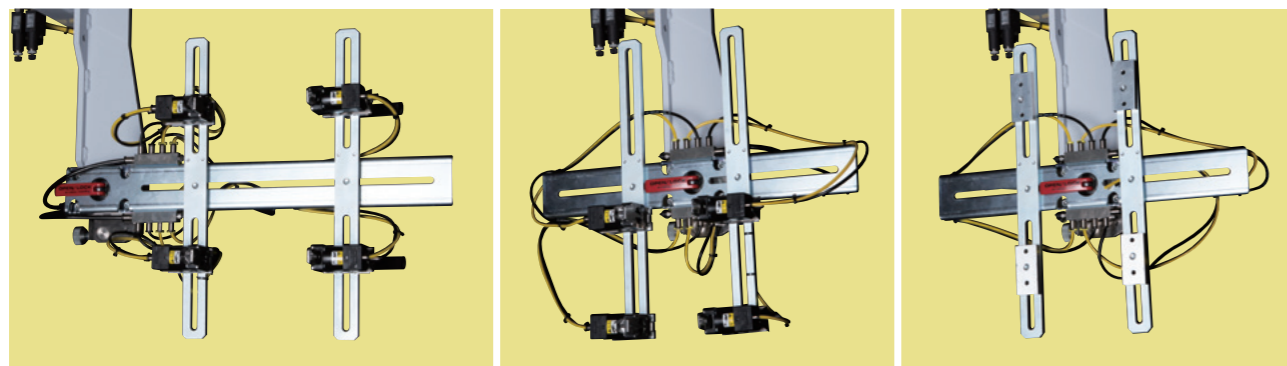
- The nipper frame can be used to adjust the angle of the "θ-direction misalignment" that occurs when the mold is installed.
- It is possible to adjust the angle within a range of up to ±5 degrees for "θ-direction misalignment"



## ■ Nipper frame variation and nipper layout

- Two types are available depending on the cavity pitch of the molded product to be nipper cut: "Nipper frame cantilever type" and "Nipper frame center support type"
- By changing the nipper frame, it is possible to arrange nippers according to a variety of cavity pitches

### Installation examples

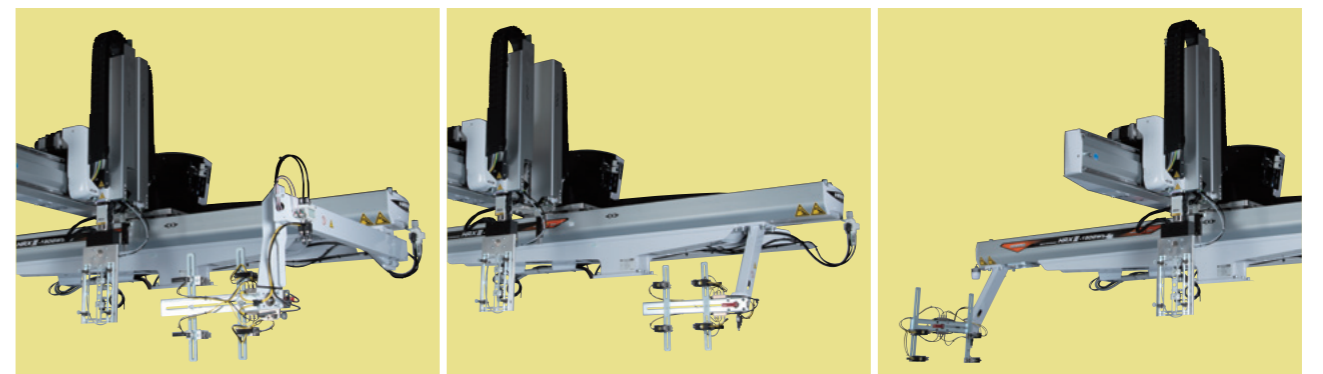


Cantilever nipper frame type (Type TY/TX)

Nipper frame center support type (Type TZ)

Nipper frame center support type (Type TZ)

## ■ Frame variation



### TY type

- Installed on the traverse frame on the moving mold
- Available for pneumatic wrist flip control robots

### TX type

- Installed on the traverse frame on the fixed mold
- Can be used with 2-axis wrist servo robots
- Easy adjustment work as it is not on the conveyor

### TZ type

- Installed at the traverse end
- Can be used with 2-axis wrist servo of Rx and Rz robots
- Easy adjustment work as it is less susceptible to vibration and is not on the conveyor

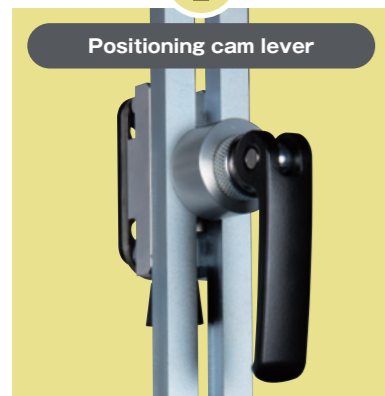
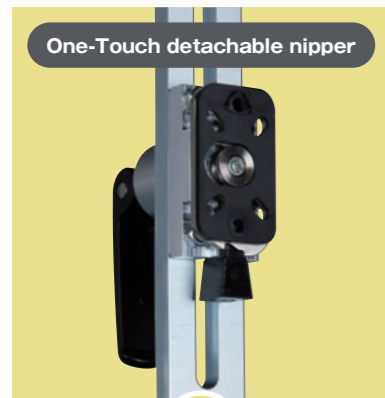
# Nipper adjuster tool

No screws or tools needed when adjusting the position of the nipper, reducing set-up time to **1/3!** (Our comparison)

## Nipper adjuster tool variation

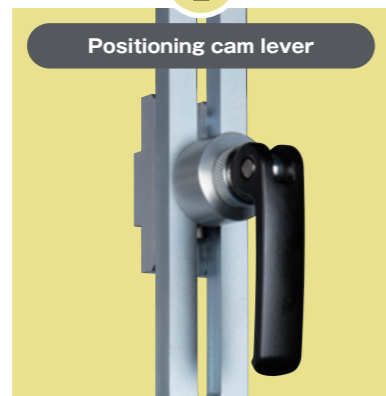
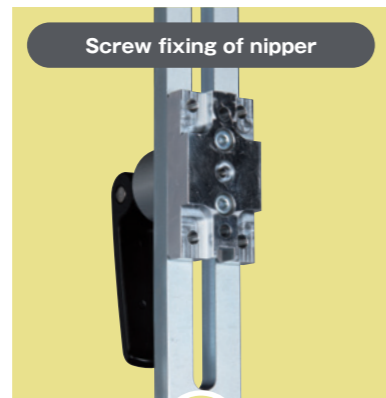
### Type A

Recommended for customers who have many nipper changes and position adjustments



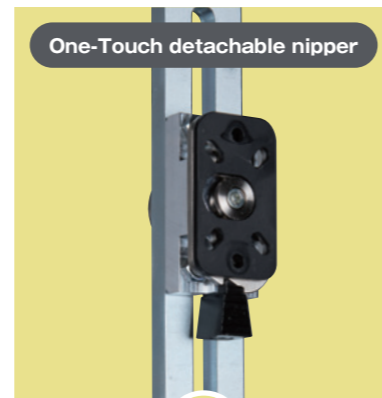
### Type B

Recommended for customers who do not change the nipper but often adjust the position



### Type C

Recommended for customers who do not have a nipper adjuster but want to change the nipper

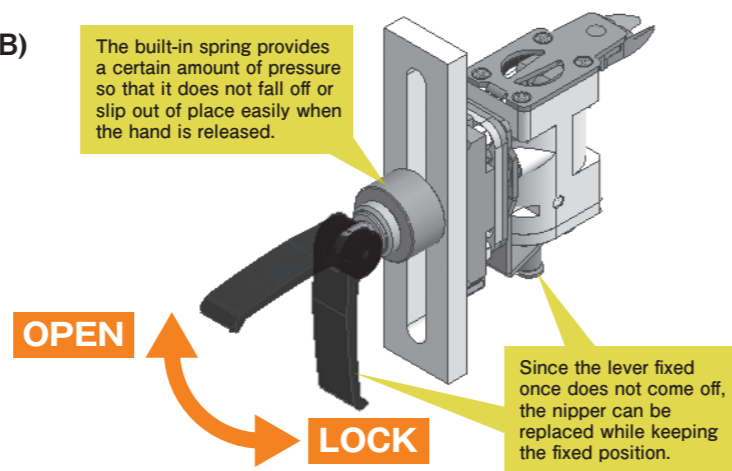


## Function of the nipper adjuster tool

### How to adjust nipper position (Type A/B)

- Adopting a Cam lever lock function to easily adjust the position of the nipper without using screws or tools.
- Structure that prevents misalignment because it is fixed when the lever is pushed down
- One action allows the lever to be fixed and released, greatly contributing to the reduction of set-up time

The built-in spring provides a certain amount of pressure so that it does not fall off or slip out of place easily when the hand is released.



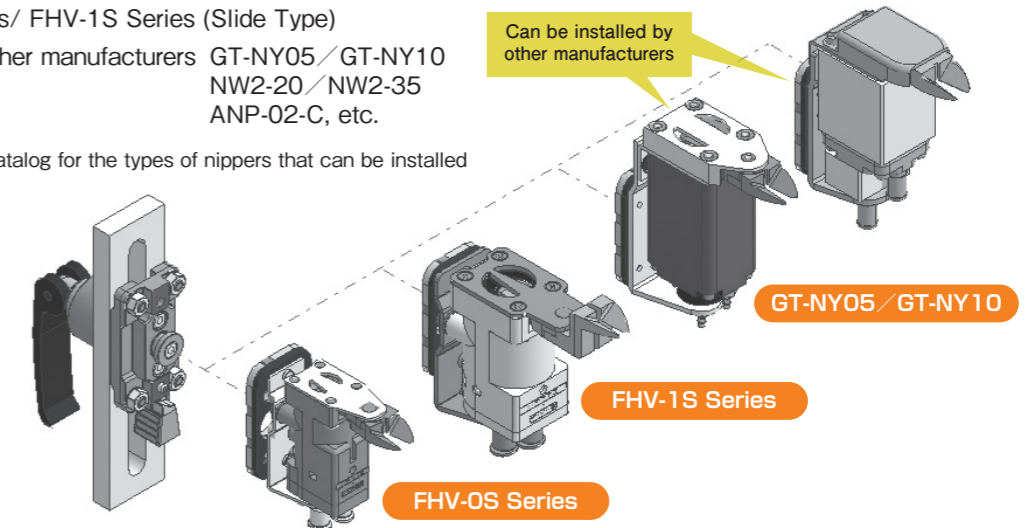
**!** When attaching or detaching the nipper, pay attention to the blade of the nipper so as not to cut your hand

## One-Touch replacement (No tool required)

Able to attach or detach any nipper with One-Touch  
Helps to reduce set-up time when nippers are frequently changed

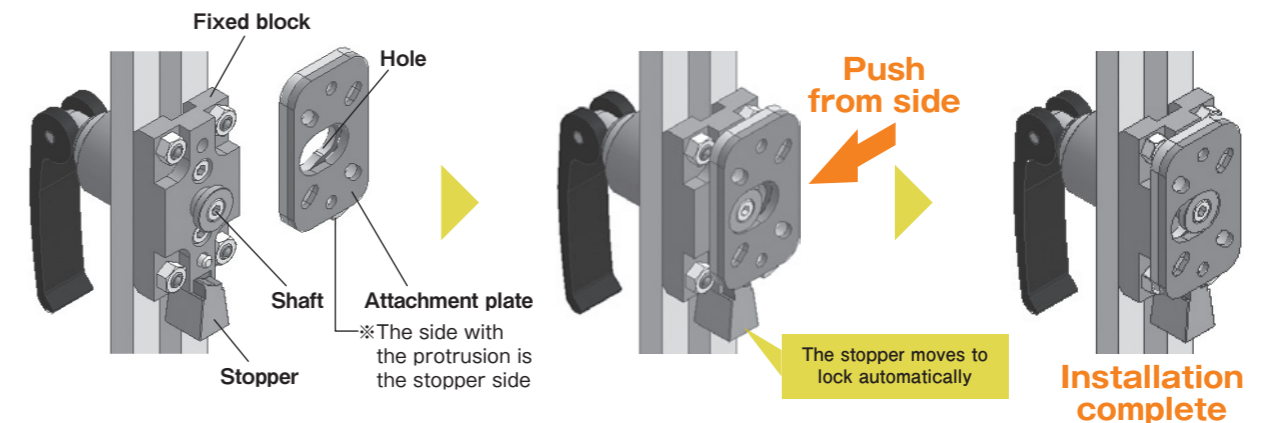
- Harmo: FHV-OS Series/ FHV-1S Series (Slide Type)
- Can be installed by other manufacturers GT-NY05/GT-NY10 NW2-20/NW2-35 ANP-02-C, etc.

※Refer to the chuck parts catalog for the types of nippers that can be installed  
※Nipper are sold separately

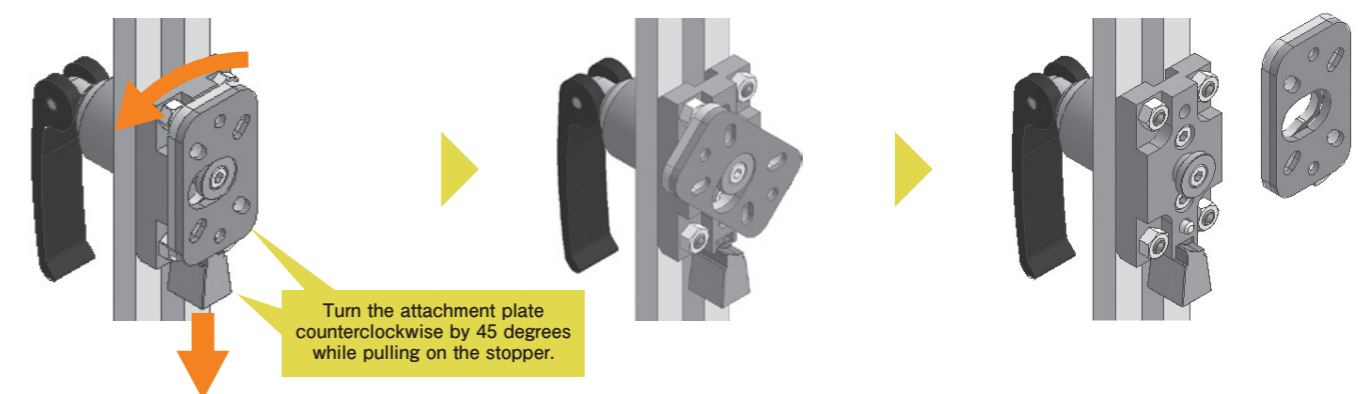


## How to attach and detach nippers

### How to install

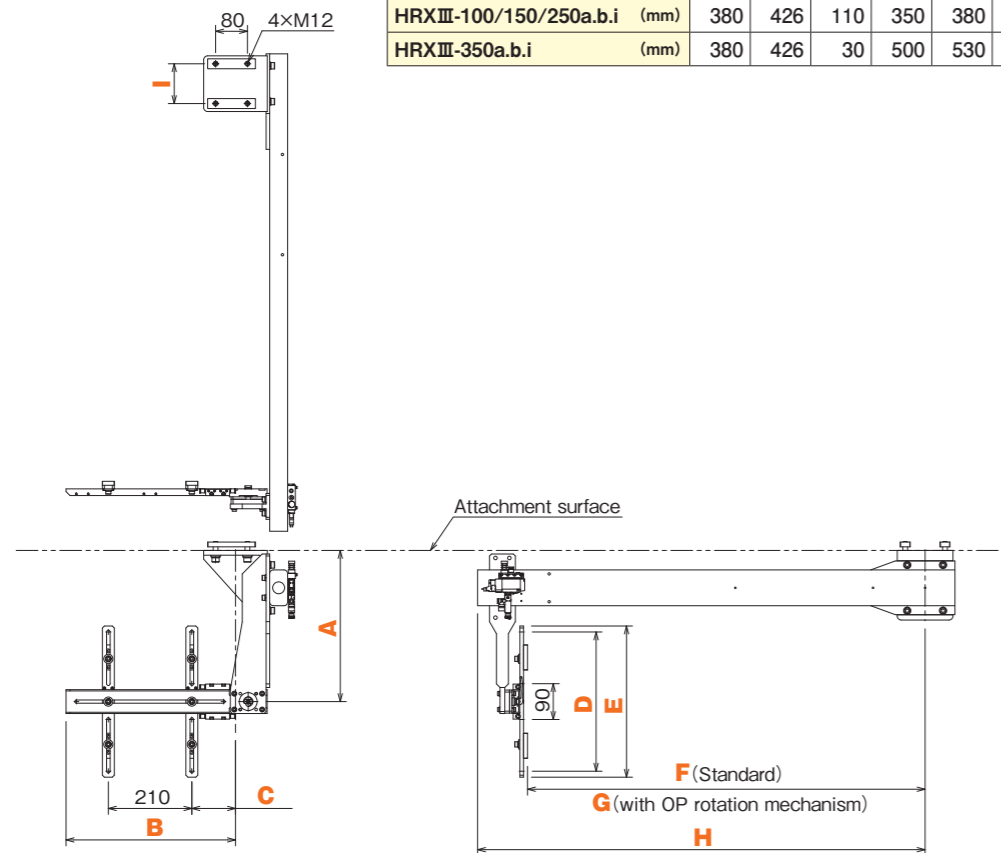


### How to remove



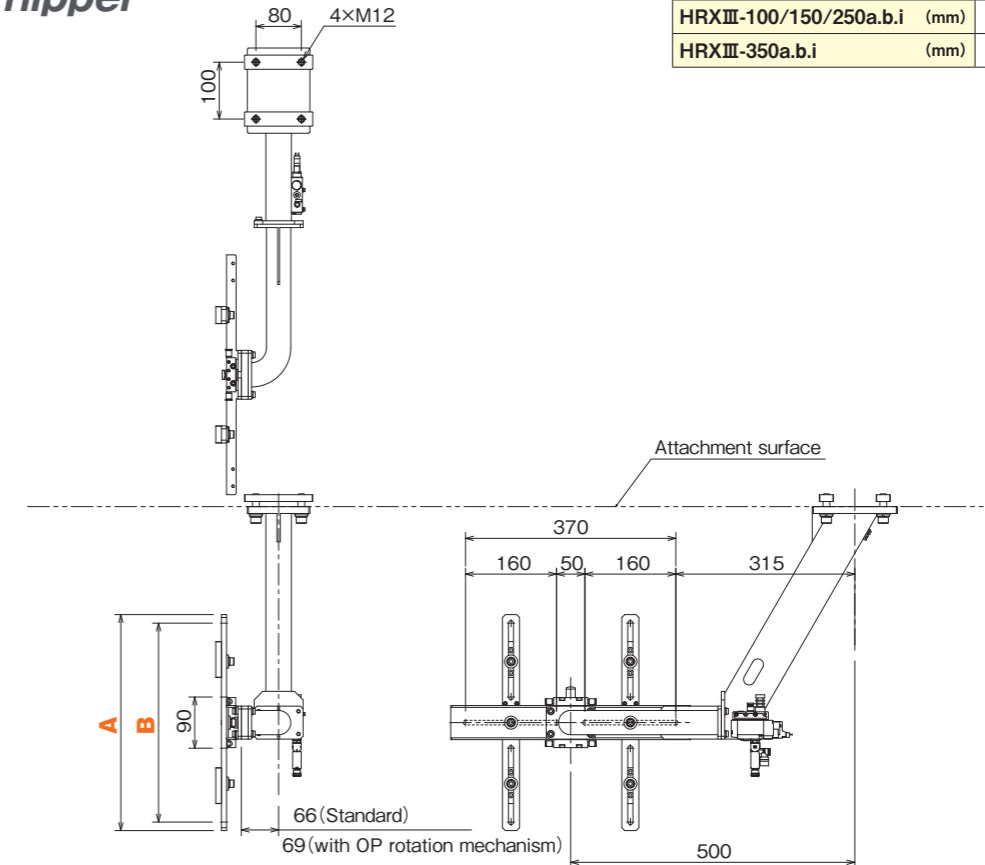
### TY wait nipper

TY wait nipper frame		A	B	C	D	E	F	G	H	I
HRXIII-30/80a.b	(mm)	379	425	29	350	380	670	665	795	82
HRXIII-100/150/250a.b.i	(mm)	380	426	110	350	380	1000	995	1125	100
HRXIII-350a.b.i	(mm)	380	426	30	500	530	1300	1295	1425	100



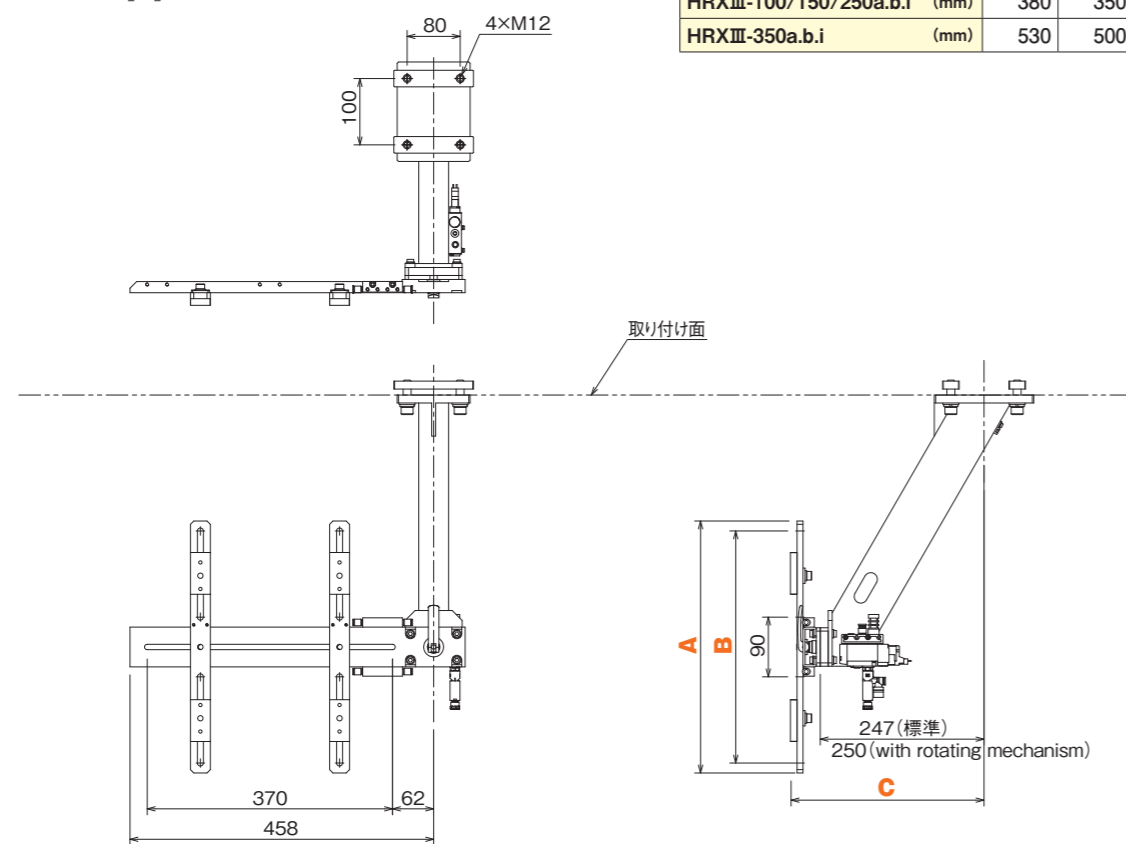
### TZ wait nipper

TZ wait nipper frame		A	B
HRXIII-100/150/250a.b.i	(mm)	380	350
HRXIII-350a.b.i	(mm)	530	500

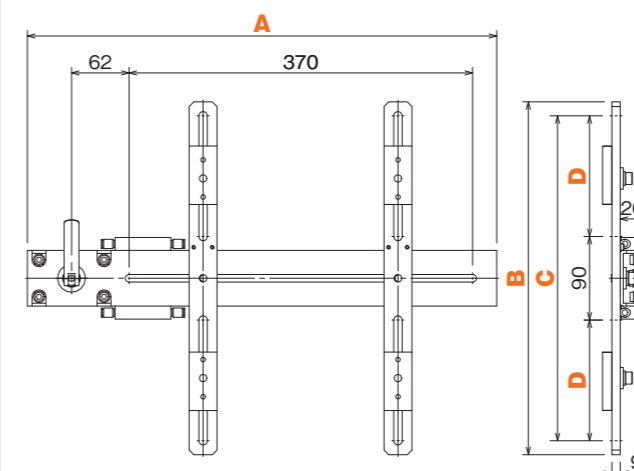


### TX wait nipper

TX wait nipper frame		A	B	C
HRXIII-100/150/250a.b.i	(mm)	380	350	291
HRXIII-350a.b.i	(mm)	530	500	292

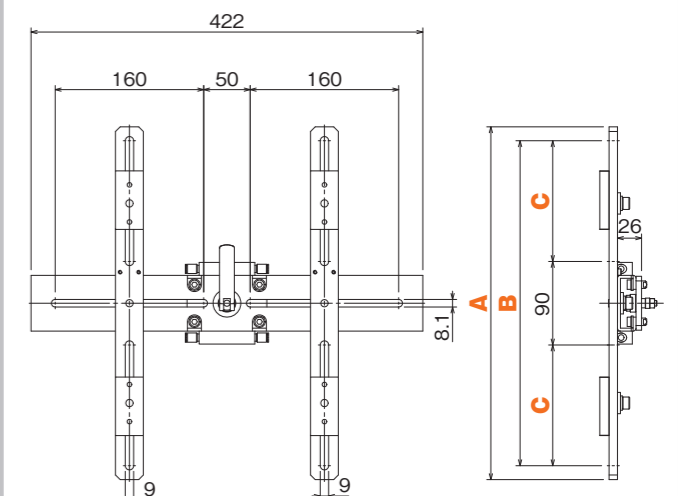


### Nipper frame type (cantilever type / center support type)



Cantilever nipper frame type (Type TY/TX)		A	B	C	D
HRXIII-30/80/100/150/250a.b.i	(mm)	505	380	350	130
HRXIII-350a.b.i	(mm)	505	530	500	205

※HRXIII-30/80 is for type-TY only



Nipper frame center support type (Type TZ)		A	B	C
HRXIII-100/150/250a.b.i	(mm)	380	350	130
HRXIII-350a.b.i	(mm)	530	500	205