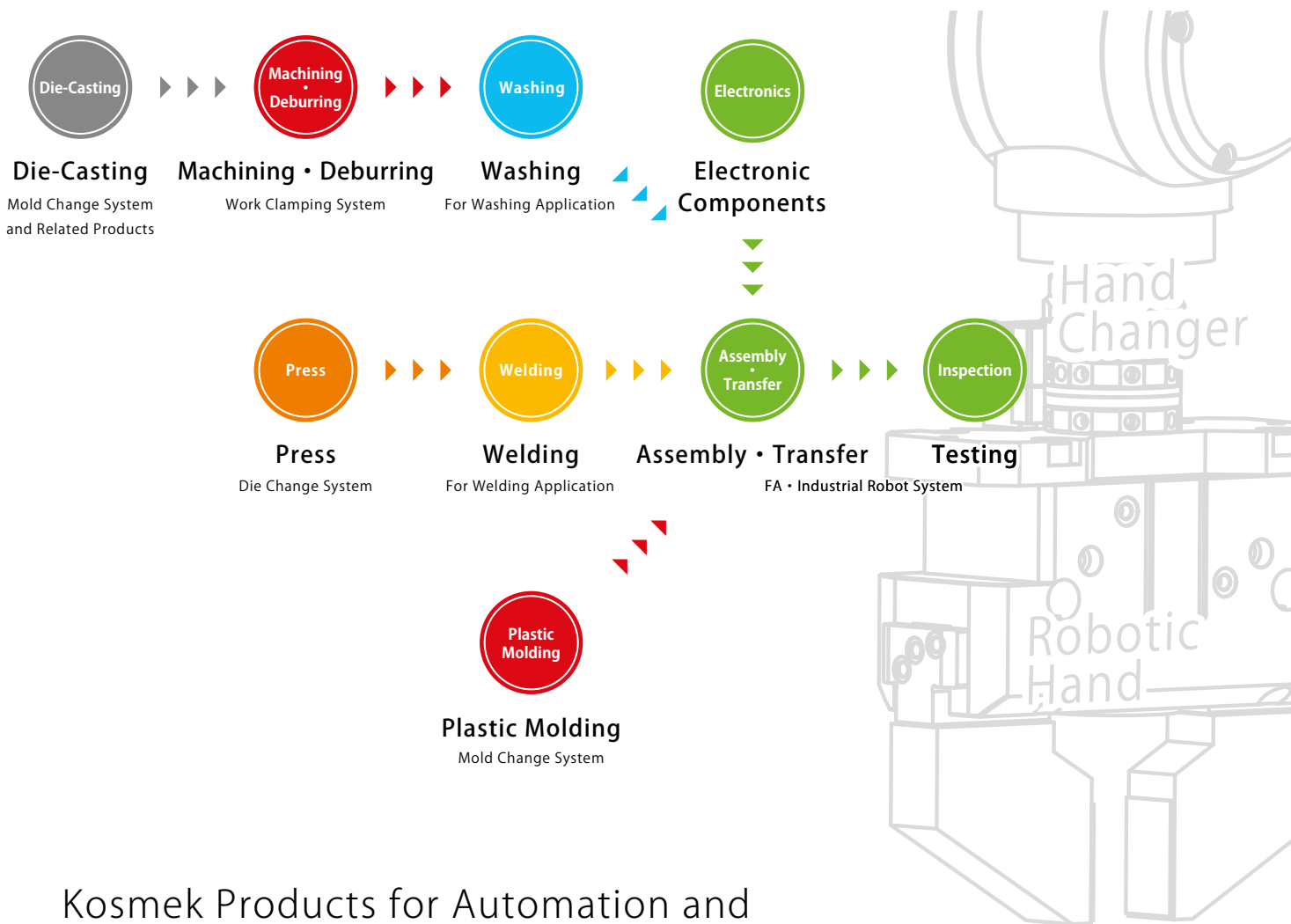




# Product Lineup – FA Series –

– 2025 –

Introducing Kosmek FA • Industrial Robot Related Products  
& Products by Application

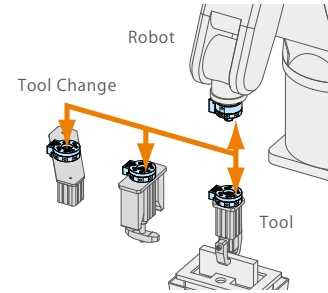


Kosmek Products for Automation and  
Setup Improvement in Every Process

# Introducing Kosmek Products & Products by Application

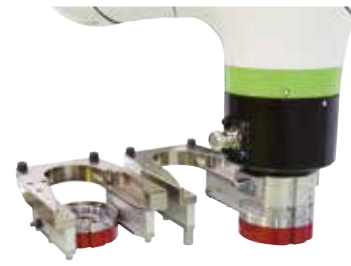
## Tool Changing

For Robot Standardization



**Robotic Hand Changer  
(Large Model)**

model SWL  
► P.7



**Hand Change with  
Robot's Power**

model SMR  
► P.8

NEW



**Robotic Hand Changer  
Accessories for SWR**

model SWR / SWRZ / SWRA  
► P.6,7&9



**Manual Robotic  
Hand Changer**

model SXR  
► P.8

NEW

## Smart Series



**Location Clamp**

model KSL  
► P.10-11



**Hole Clamp**

model KSH  
► P.10-11



**Ball Lock Cylinder**

model KSA  
► P.10-11



**Swing Clamp**

model KSS  
► P.12



**Two-Jaw Chuck**

model KSC  
► P.13



**Reach Clamp**

model KSR  
► P.13

## Transferring • Clamping



**Hole Gripper**

model WKK  
► P.18



**FA Pneumatic  
Hole Clamp**

model WKH  
► P.19



**High-Power Pneumatic  
Hole Clamp**

model SWE  
► P.19



**Pallet Gripper**

model WVB  
► P.40-41

NEW

## External Chucking Series



**Pneumatic Robotic Hands**

model WPA / WPE / WPF / WPH / WPJ / WPP / WPQ / WPS / WPB  
► P.20



**Parallel Robotic Hand  
Gripper with Auto Change**

model WPW  
► P.21



**Expansion  
Locating Pin**

model VRA/VRC  
► P.28



**Ball Lock  
Cylinder**

model WKA  
► P.29



**High-Power  
Pull Stud Clamp**

model WPT  
► P.29



**Pneumatic  
Swing Clamp**

model WHC  
► P.14-15



**Pneumatic  
Link Clamp**

model WCC/WFC  
► P.16-17



**Pneumatic  
Centering Vise**

model FWD  
► P.42



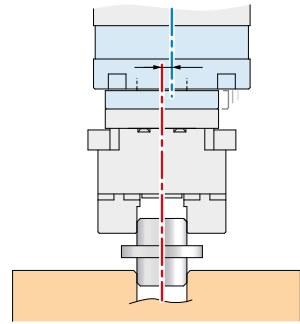
**High-Power  
Pneumatic Clamp**

model WHE/WCE/WFE  
► P.44-45

NEW

## Correcting

For Misalignment Correction

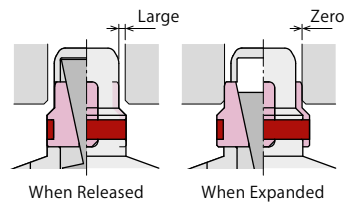


### Compliance Module

model WRC  
► P.9

## Locating

For both Locating Accuracy and Smooth Loading



### Large Expansion Locating Pin

model VWH  
► P.26



### Expansion Locating Pin

model VWK  
► P.27

## Safety • Connecting • Air Pressure Maintaining



### Air Safety Valve

model BWS  
► P.35



### Auto Coupler

model JVA0100/JVB0100  
► P.32-33



### Leakless Coupler

model JWC/JWD  
► P.34



### Air Non-Leak Coupler

model BWA/BWB  
► P.36-37



### Air Non-Leak Valve

model BWQ  
► P.38-39

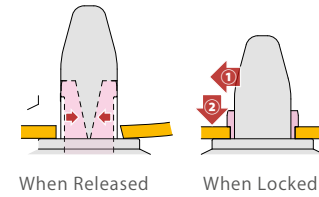


### Pneumatic Sensor Pin

model WWA  
► P.51

## Welding

For both Locating and Clamping of Workpiece



### Locating Pin Clamp

model SWP  
► P.30-31

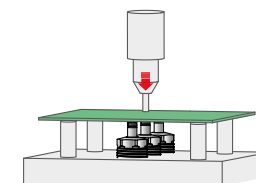


### Spatter-Resistant Link

model WCG/WHG  
► P.43

## Supporting

For Chattering and Distortion Prevention



### High-Power Pneumatic Work Support

model WNC  
► P.48-49

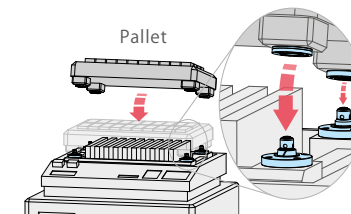


### Pneumatic Work Support [Rodless Hollow]

model WNA  
► P.50

## Setup Changing

For High-Accuracy Locating and Clamping of Pallet



### High-Power Automation Pallet Clamp

model WVG/WVGT  
► P.22



### Pneumatic Location Clamp

model SWQ/SWT  
► P.23



### High-Power Pneumatic Pallet Clamp

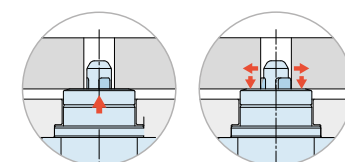
model WVS  
► P.24-25



### Screw Locator

model VXF  
► P.23

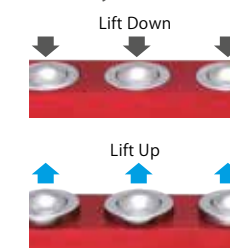
For Locating and Clamping of Conveyor Transfer Pallet



### Lifting Hole Clamp

model SWJ  
► P.46

For Transferring Heavy Materials



### Pneumatic Free Roller Lifter

model RQC  
► P.47



## Robotic Hand Changer

Model **SWR**

Robotic Hand Changer enables standardization of robots.

Even more flexible to use with the new options:

Ethernet Electrode, Ground Electrode and Servo Electrode.



**HIGH  
Accuracy**

Repeatability  
**0.003mm**

**HIGH  
Durability**

Durability Test more than  
**2 Million Cycles**

**QUICK  
Delivery**

With Completed Product Inventory  
**Immediately Delivered**

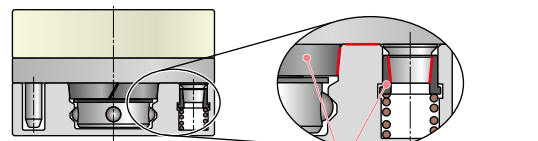
**LARGE** Selection of Lineup

Payload from **0.5kg** up to **360kg**

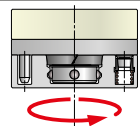
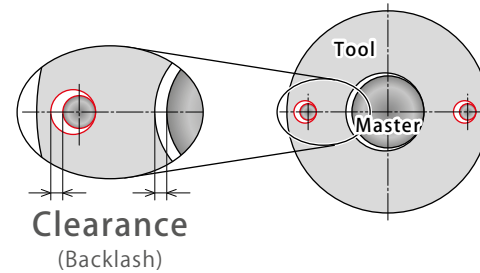
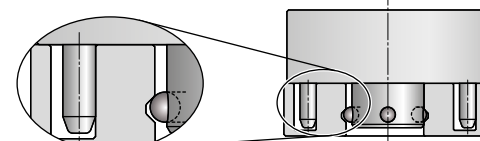
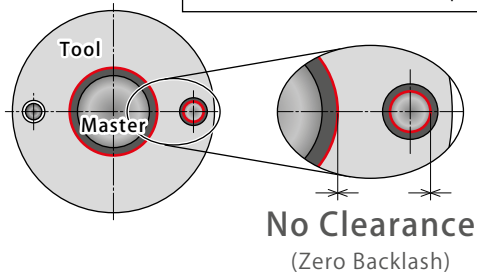
**The World's Only  
Exclusive Mechanism**

Kosmek  
Robotic Hand Changer

General Robotic Hand Changer

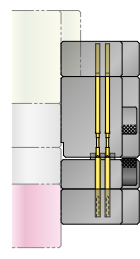
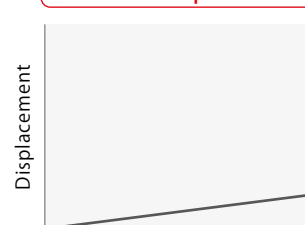


Dual Contact with Movable Taper Sleeve

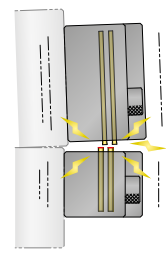
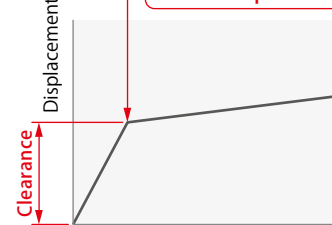


**When torque acts in twisting direction**

**No Initial Displacement**



**Initial Displacement**



## Super-Thin

Clamped state dimension

SWL0800 : 53mm SWL1200 : 62mm SWL1800 : 70mm SWL3000 : 83mm

## Direct Mounting on Robots

Applicable to ISO Mounting Pattern.

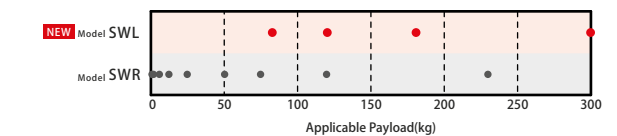
## Fall Prevention

Mechanically holds connection even when air pressure is at 0MPa.

model **SWL**



• **Payload | High** | Max. Applicable Payload : 300kg.



• **Number of Electrodes that can be Mounted | Many** |

Able to mount electrodes on 2 ~ 3 surfaces.  
2 Surfaces : 80kg / 120kg Payload 3 Surfaces : 180kg / 300kg Payload

• **Applicable to ISO Mounting Pattern**

Directly mounted on a robot whose mounting dimensions of the flange based on ISO mounting Pattern.

• **Fall Prevention | Safety** |

Two-step mechanical lock mechanism is built-in.  
It enables powerful holding even when air pressure is at 0MPa, and securely prevents a tool fall.

• **No Backlash**

Movable taper sleeve is used on locating part. It enables no clearance when connected.

## A Variety of Electrode and Air Joint Options

- For connecting signal lines
- For noncontact connecting
- For using in a washing device
- For using under mist
- For connecting AC power
- For adding extra air ports



## New Accessory for Quick Connect of Robot and Hand Changer

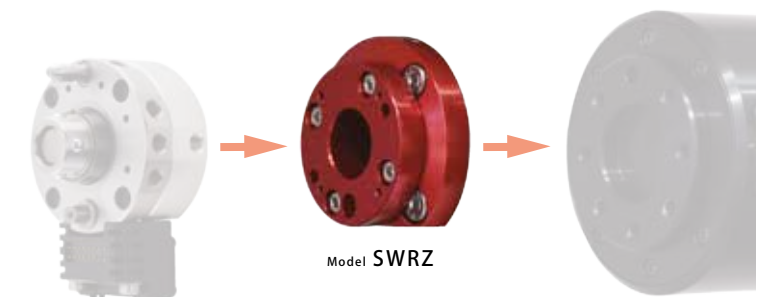
### Adapter Plate

model **SWRZ**

Designing or making an adapter plate is not required.

Additional lineup: SWRZ-MF4 enables quick installation of the adapter plate to a robot flange with mounting pattern 4 which is adapted to many collaborative robots.

Applicable to ISO Mounting Pattern.





## Manual Robotic Hand Changer

Model **SXR**



Enables manual quick change of the end of arm tooling, it is best suitable to collaborative robots (cobots).  
Line-up of Payload : 0.5~1 kg Model, 3~5kg Model, and Additional 7~10 kg Model.

# "No Power Source Required" Hand Change with Robot's Power

**High Accuracy**

Locating Repeatability:  
0.003mm

**NEW**



model **SMR**



## New Accessory for Prevention of a Tool Fall



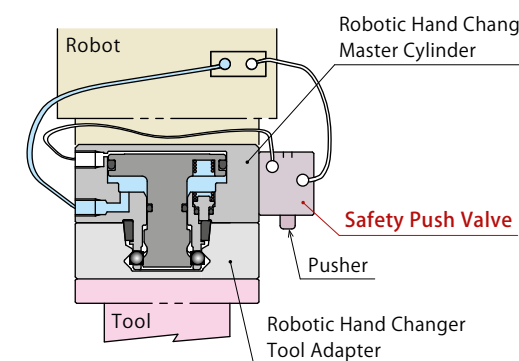
## Safety Push Valve

Fall Prevention Valve

Model **SWRA**

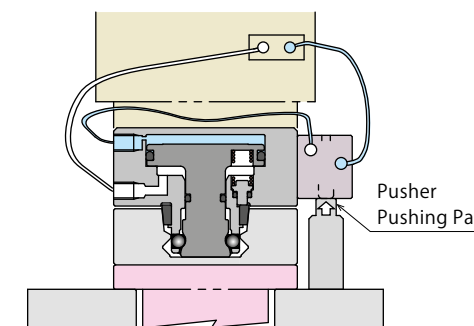
Prevents a tool fall caused by operational error of a valve during robot teaching. Enables to limit SWR to release only at a designated position (stocker).

## Prevent a Tool Fall caused by Operational Error



Locked State

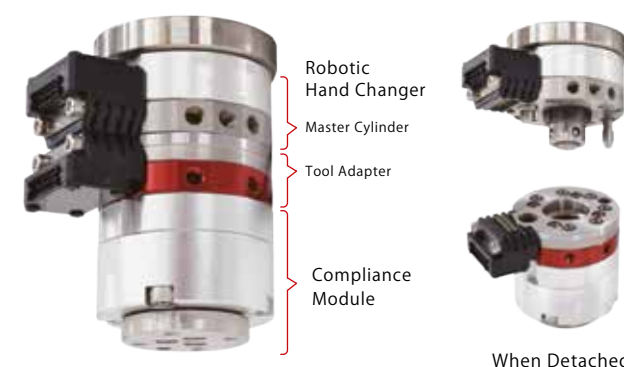
During transfer, it will not be released even when the valve is switched.



Release Enabled State

Release operation is possible only at the tool stocker.

## Accessory for Correcting misaligned Workpiece

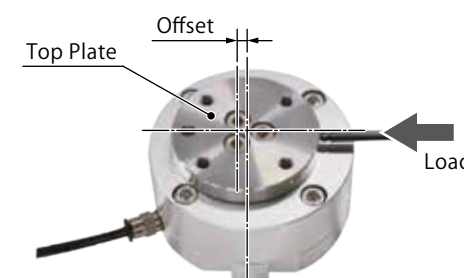


When Detached

## Compliance Module

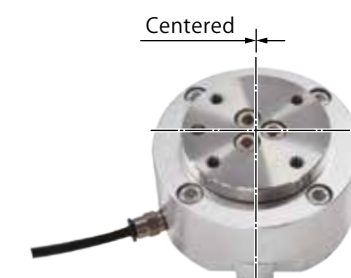
Model **WRC**

The floating top plate corrects misalignment of workpiece. Directly mounted to Kosmek Robotic Hand Changer model SWR.



Floating State Air **OFF**

The top plate can be floated when not supplying lock air pressure. When not receiving a load, the top plate returns to the center with the magnet.



Center Locking State Air **ON**

The top plate is centered and locked by supplying lock air pressure.

# Smart Series

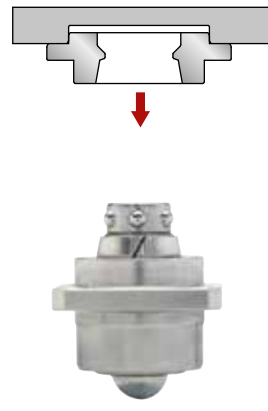
Line-up of 6 models Many more to come

NEW



model **KSS**

Workpiece Clamping



model **KSL**

Pallet Change



model **KSH**

Workpiece Holding

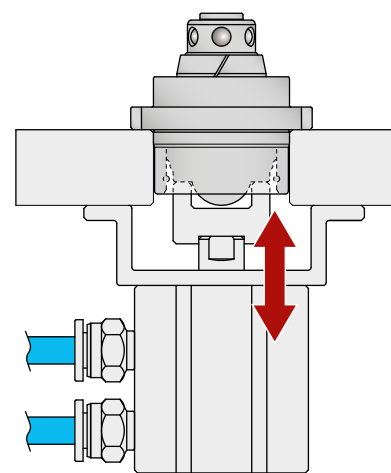


model **KSA**

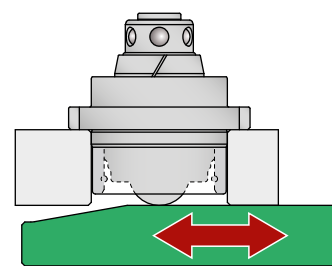
Falling Prevention

## Powered by Any Power Source

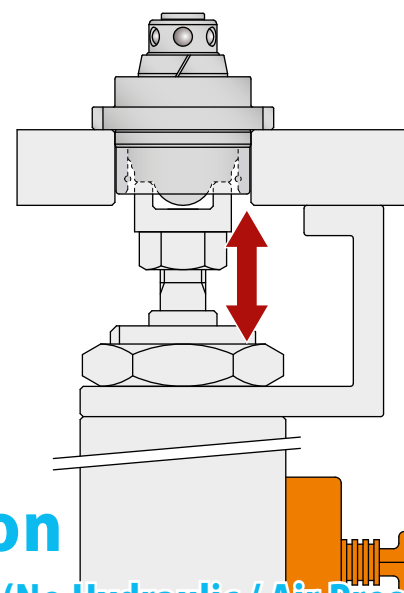
Air Cylinder



Mechanical



Electrical Cylinder

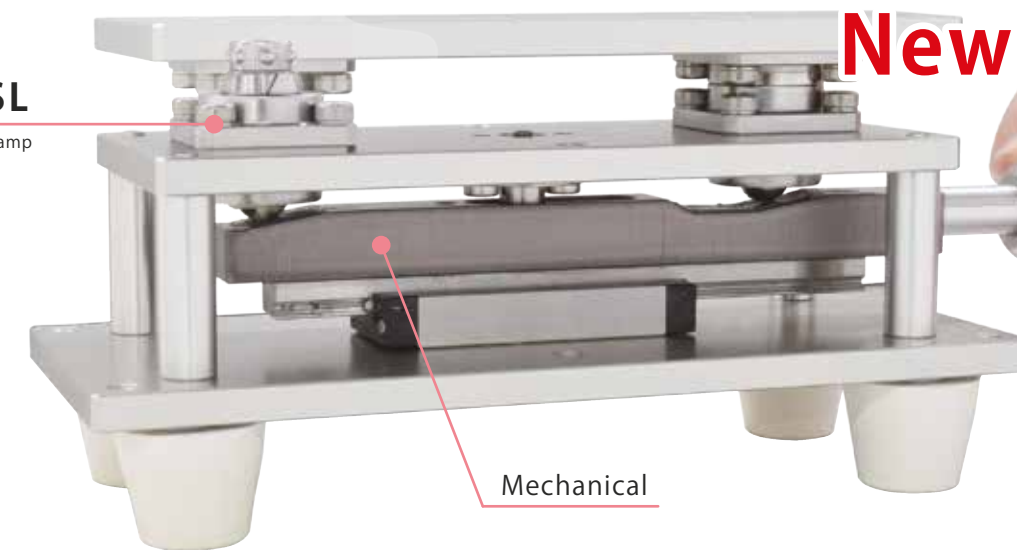


## Smart Fit on Any Application

Solution for various issues such as Energy Saving (No Hydraulic-/Air Pressure, No Driving Source), All Electric System, Carbon Neutrality, SDGs, etc.



model **KSL**  
Location Clamp



Mechanical

KOSMEK's  
New Idea

Location Clamp

model **KSL** Spring Lock / External Force Release

Enables easier pallet change and setup.

Locating Repeatability : 0.01mm

Hole Clamp

model **KSH** Spring Lock / External Force Release

Gripper expands and clamps in the workpiece hole.

Workpiece Hole Diameter  $\pm 0.3$  :

$\phi 6, \phi 6.5, \phi 7, \phi 7.5, \phi 8, \phi 8.5, \phi 9, \phi 9.5$  and  $\phi 10$

Ball Lock Cylinder

model **KSA** Spring Lock / External Force Release

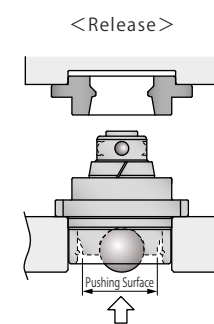
Securely transfers pallets and plates.

Prevents pallet/plate drops with the steel balls (Ball Lock).

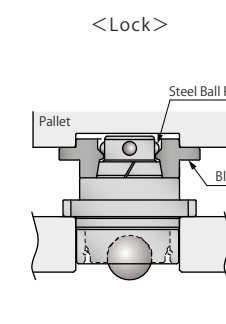
Pulling Capacity (Holding Force) : 50N



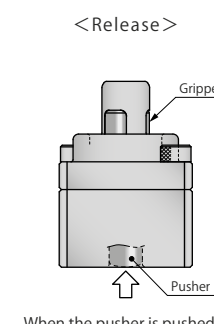
### Action Description



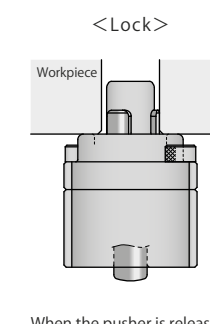
<Release>  
When the pushing surface is pushed in, the steel ball retracts.



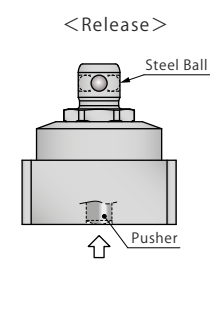
<Lock>  
When the pushing surface is released, the steel ball expands with the built-in spring. It pulls in the block, and completes the clamping / locating.



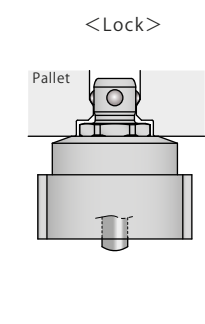
<Release>  
When the pusher is pushed in, the gripper retracts.



<Lock>  
When the pusher is released, the gripper expands with the built-in spring and grips a workpiece.



<Release>  
When the pusher is pushed in, the gripper retracts.



<Lock>  
When the pusher is released, the gripper expands with the built-in spring and grips a workpiece.

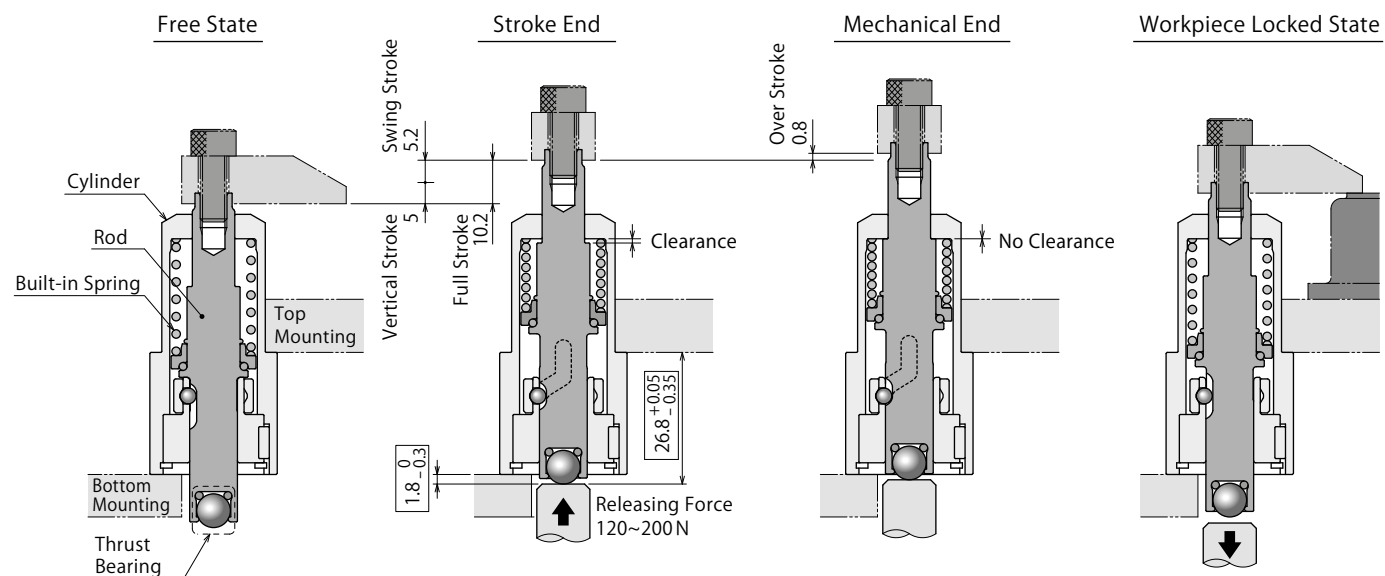
## Swing Clamp

Smart Series  
Swing Clamp

Model KSS

High Rigidity, Long Operational Life and  
High Accuracy with Powerful Swing MechanismSwing Angle Position Repeatability  $\pm 1^\circ$ 

## Action Description



• When releasing force is applied to the thrust bearing on the bottom, the built-in spring is compressed and the clamp is released.  
 • The stroke end is shown in ☐ in the drawing.

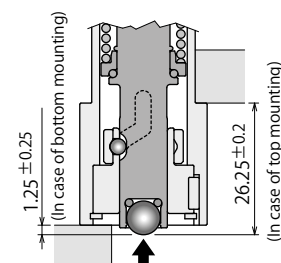
• When released 0.8mm further from the stroke end (over stroke), the rod cannot be stroked any further. (Mechanical End)

• When releasing force is released, the rod swings and descends with the built-in spring to clamp a workpiece.

## Recommended Releasing Point

Applying a thrust force exceeding 200N at the mechanical end position may damage the inside of the clamp.

Especially in case of a driving device using as shown on P.4 "Application Examples", set the clamp to a position where it stops within the over stroke range before the mechanical end when released to avoid overloading.



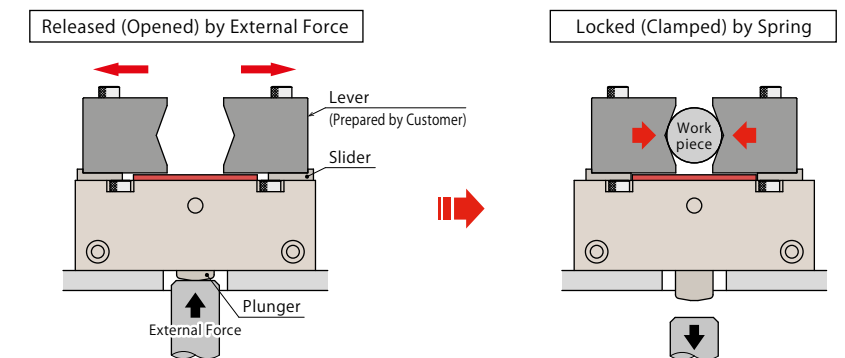
## Two-Jaw Chuck

Model KSC



## Holds and Centers Workpiece

※ Exclusively designed for closing side only. Not capable of clamping the opening side by external force.



Push the plunger to release.

Workpiece is clamped by spring force. Plunger is at a free state.

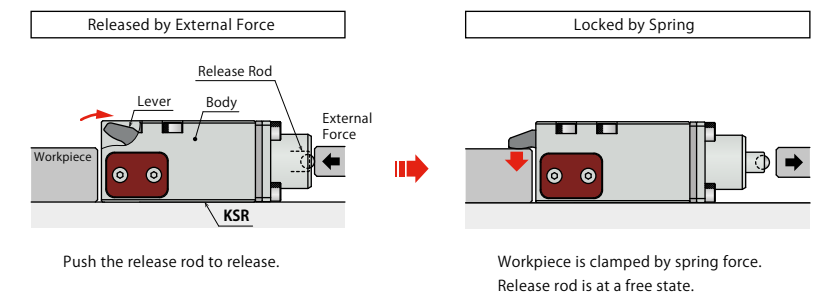
## • High Accuracy

Enables high repeatability and is suitable for high-accuracy application.

Repeatability (Slider Direction):  $\pm 0.01$  mm

## • Easy to Machine the Mounting Surface of Lever

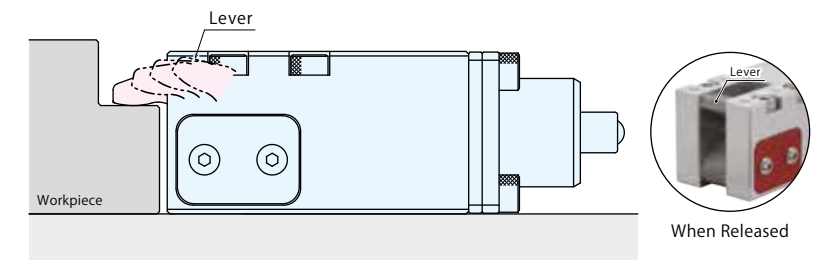
Only slot for locating pin and bolt hole need to be machined for mounting the lever. Complicated serration machining is not required.



Push the release rod to release.

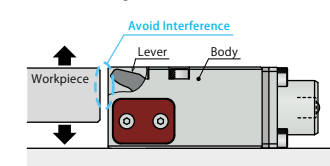
Workpiece is clamped by spring force. Release rod is at a free state.

## Lever Completely Retracted when Released



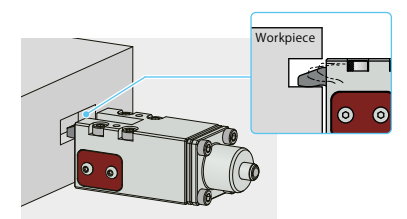
## • Avoid interference with a workpiece

The lever is retracted inside the body when released to avoid interference with a workpiece when loading and unloading.



## • Enables to clamp difficult clamping points

The compact lever-operating range enables to clamp difficult clamping points.







## Pneumatic Swing Clamp

Model **WHC**

High-durability, high-speed and high-accuracy compact pneumatic swing clamp. This clamp is coolant resistant, and can be used in various applications with the use of auto switch.

High Rigidity, Long Operational Life and  
High Accuracy with Powerful Swing Mechanism

High Speed • High Rigidity •  $\pm 0.5^\circ$  Swing Angle Position Repeatability

### Coolant Resistant

**One of the World's Smallest  
Compact Body**

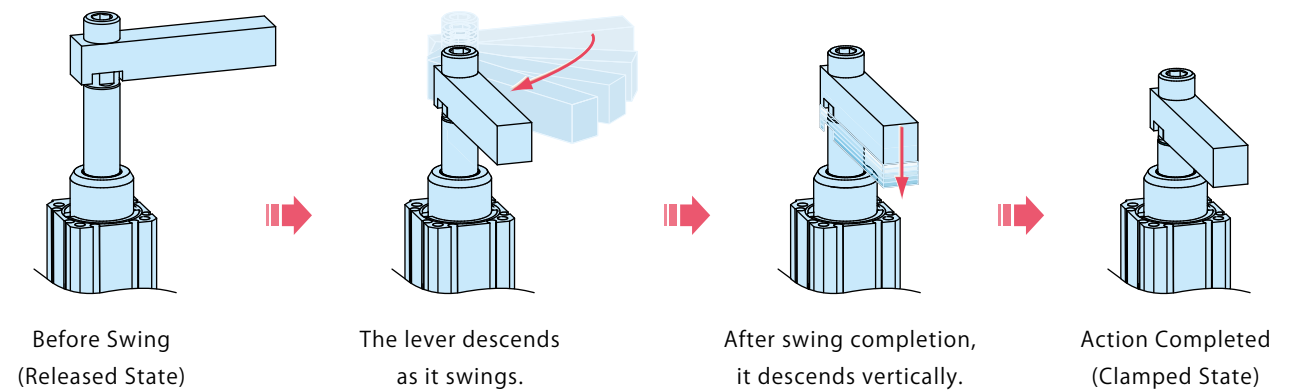
※According to our research.

### High Accuracy • Long Operational Life

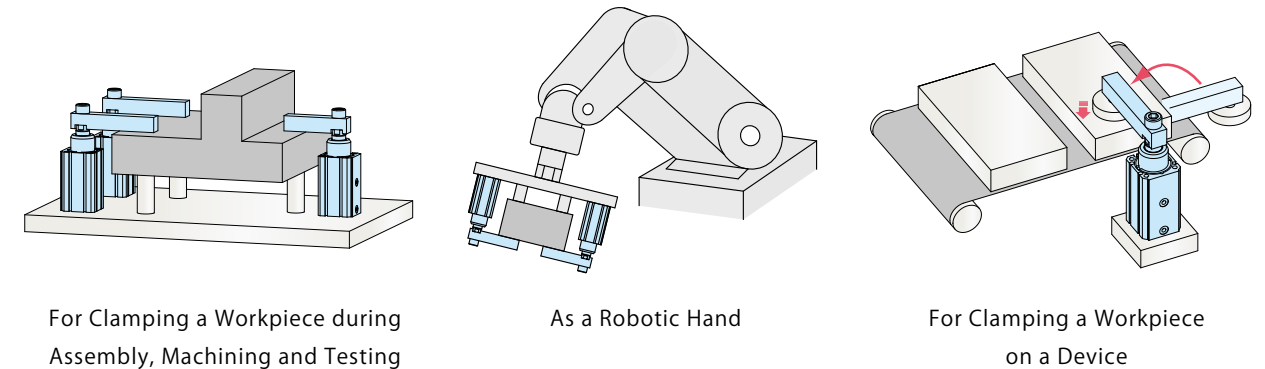
Strong swing mechanism with **3 steel ball** tracking.  
Allows for high-speed and long operational life.  
(Conducted in-house operation test 2 million times.)  
For creating high-lifespan, environmentally friendly facilities.  
Swing Complete Position Repeatability :  $\pm 0.5^\circ$   
Swing Angle Accuracy :  $90 \pm 3^\circ$



### Action Description

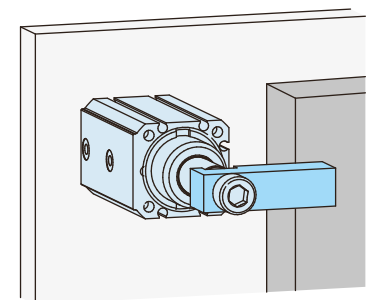
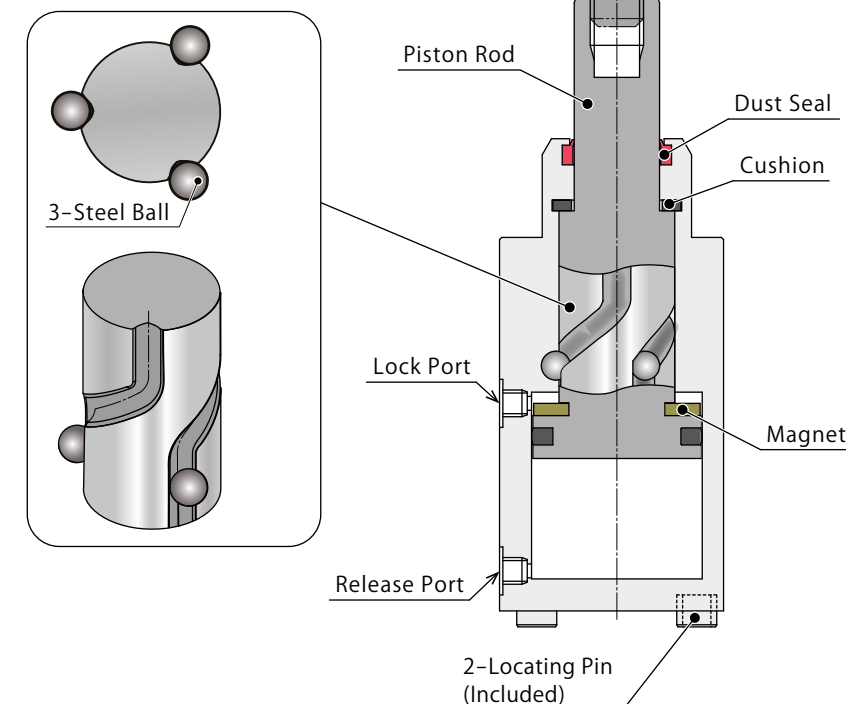


### Application Examples



### Cross Section

#### Strong Body with Triple Guide



Wall mounting is also available.

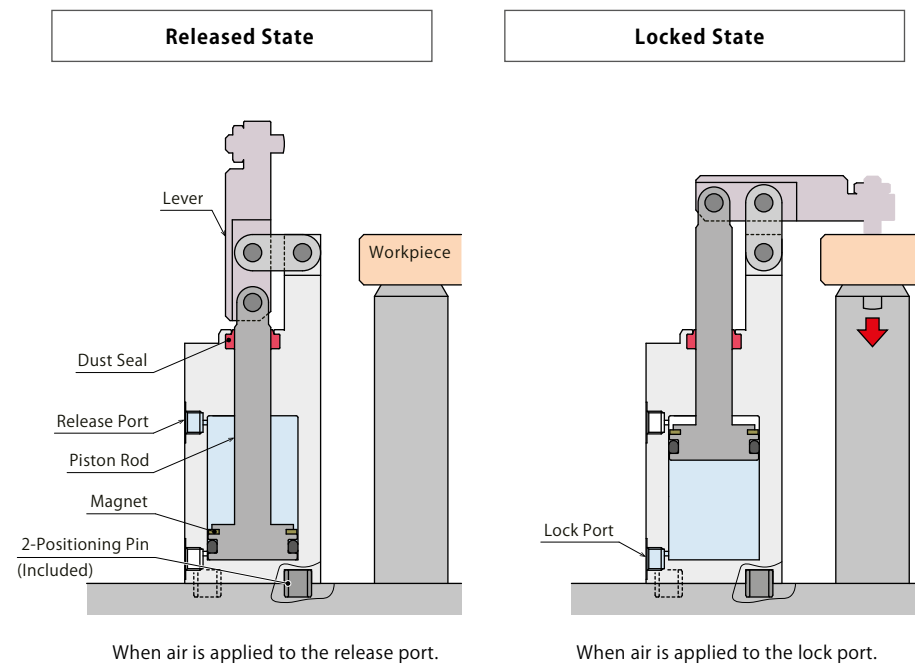
※ Please make sure to check "Notes for  
Lever Design" on the product catalog.

# Pneumatic Link Clamp

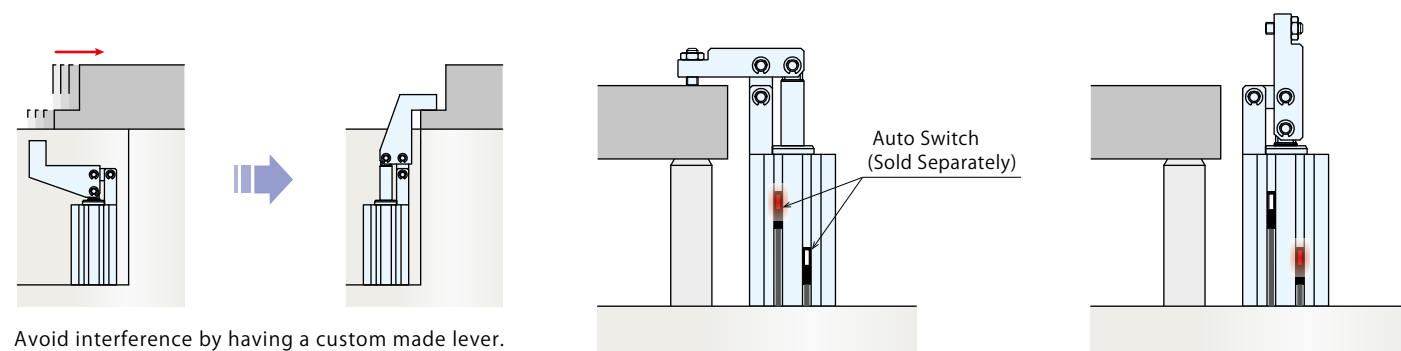
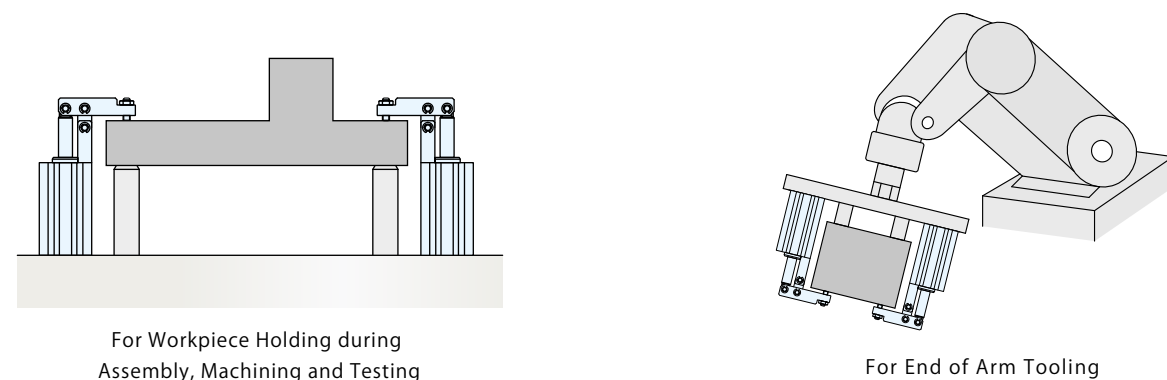
Model WCC



NEW



## Application Example



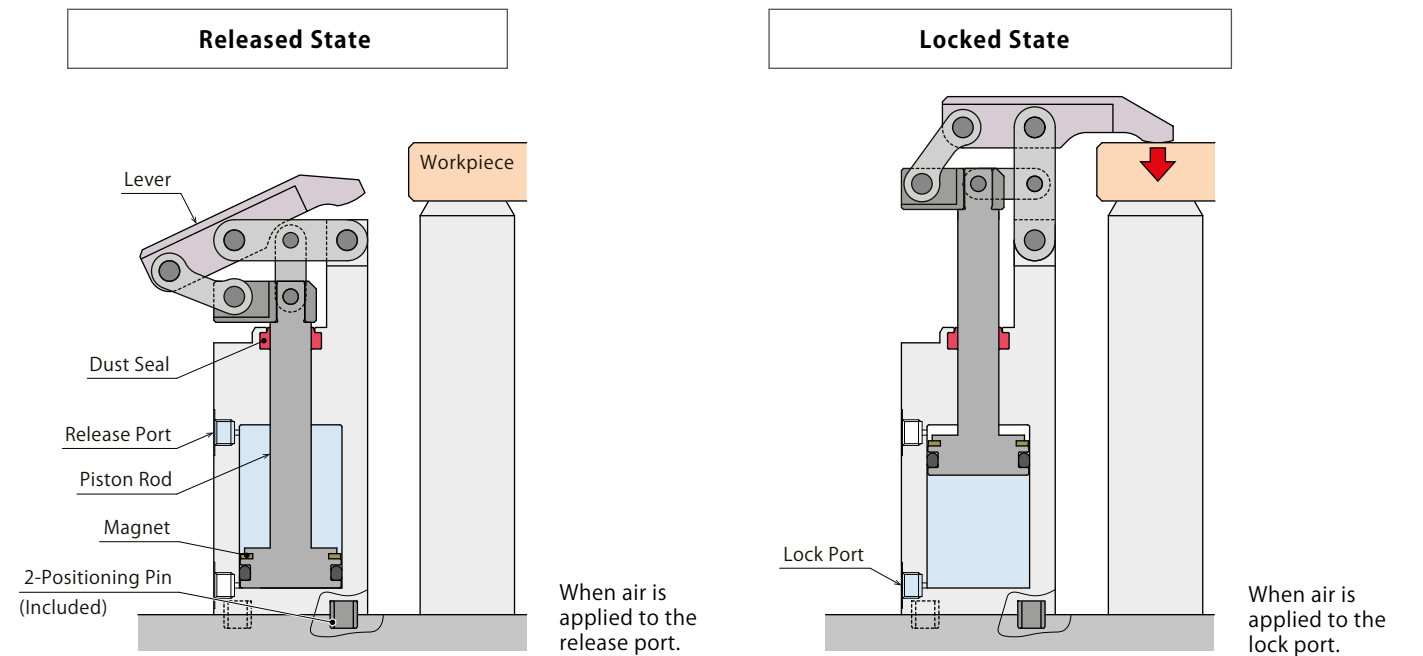
# Pneumatic Link Clamp Retracting Model

Model WFC

Lever Retracted to Avoid Interference during Workpiece Loading/Unloading

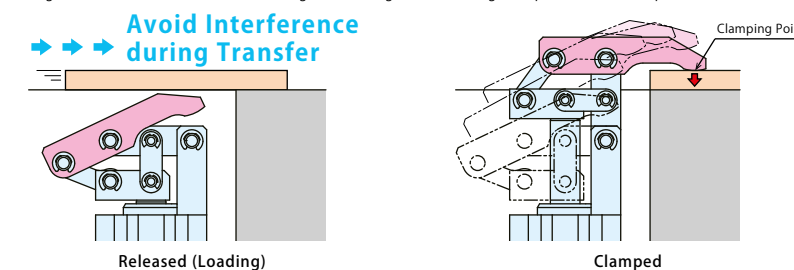


NEW



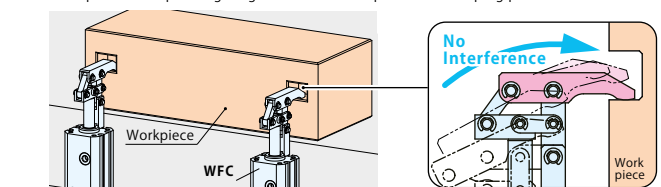
## Lever Retracted Lower than the Clamping Point

Large lever retraction allows for wide angle of loading and unloading workpieces between operations.



## Enables to Clamp Difficult Clamping Points

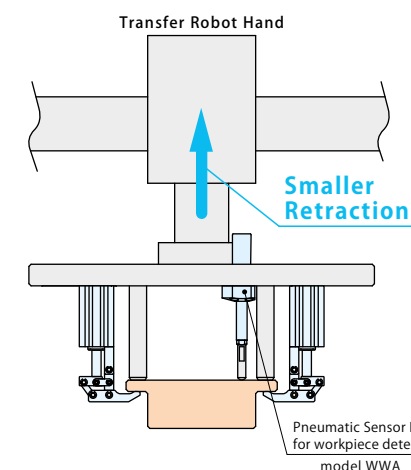
The compact lever-operating range enables to clamp difficult clamping points.



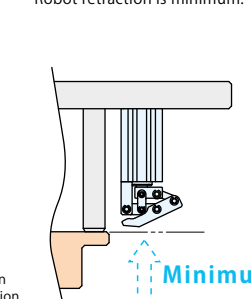
## Application Example

### For End of Arm Tooling

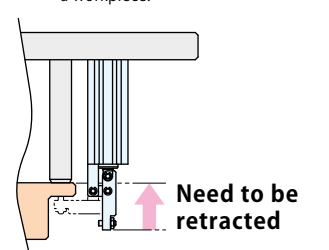
The largely retracted lever minimizes tooling clearance.



**Retracting Model**  
Robot retraction is minimum.



**Standard Model**  
The lever must be retracted to avoid interference with a workpiece.





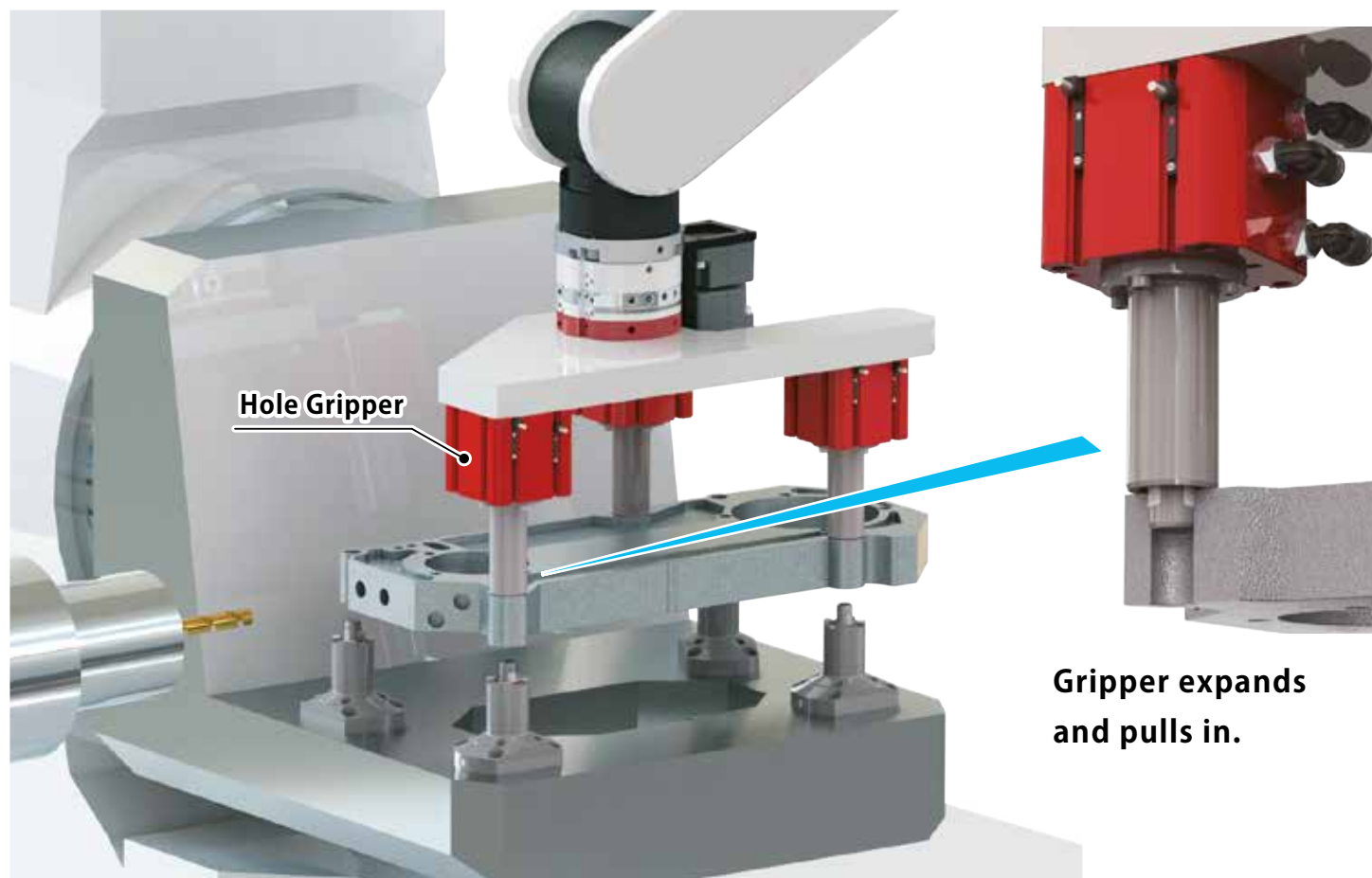
## Hole Gripper

Model **WKK**

Transfers workpieces with I.D. gripping. Air blow function prevents cutting chips and coolant, allowing for transferring workpieces to and from various machining and die casting processes.

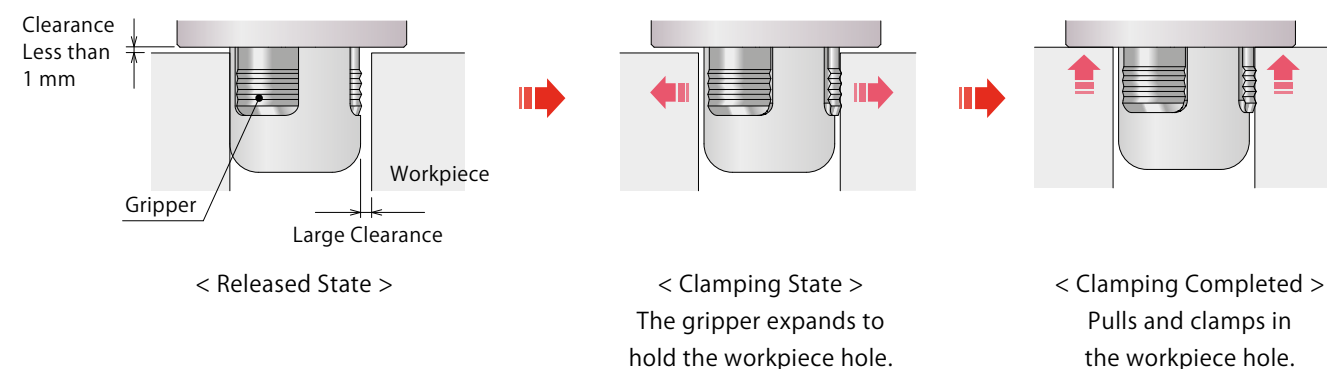
Action confirmation is available by using an auto switch.

- For transferring workpieces to and from various machining processes.



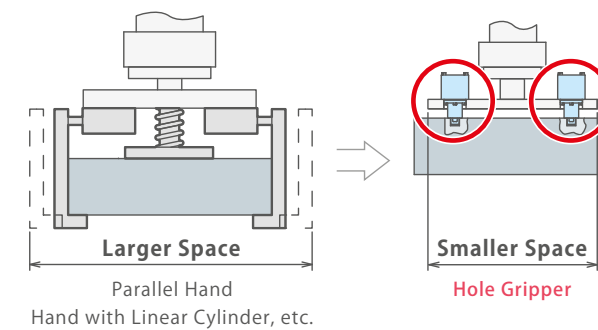
**Gripper expands and pulls in.**

### Action Description



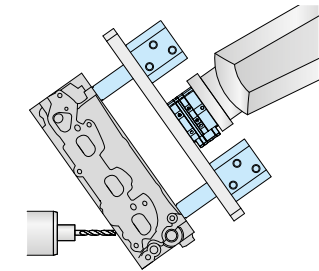
- Light Weight • Smaller Footprint

WKK makes a robotic hand compact so that the transfer hands can be lighter and more compact.



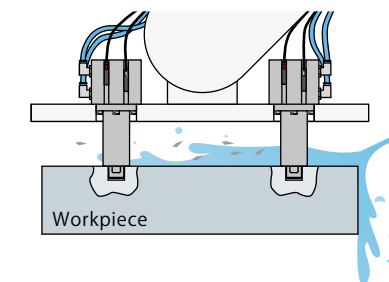
- Using Transfer Hand as Fixture

5 faces of a workpiece are accessible with no tooling interference. A robot can hold a workpiece and continue to the next processes such as deburring, washing, etc.



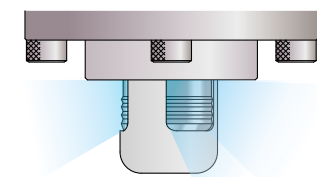
- Wide Range of Seating Surface Heights

The available seating height options allows auto switches and air piping to be protected from coolant and cutting fluid by adjusting the seating height accordingly.



- Air Blow Function Ensures Longevity Even in Machining Environments

By air purging from the inside, it prevents coolant from entering inside the hole gripper even with a little air flow.



### Robotic Hand I.D. Chucking Series

A Wide Variety of Kosmek's I.D. Chucking Series.

Gripping a workpiece hole enables more compact and lighter robotic hands.

5 faces are accessible with no tooling interference. Able to integrate processes.

#### FA Pneumatic Hole Clamp

Clamps a workpiece by holding its hole.

Applicable Workpiece Hole Diameter :  
 $\phi 6 \sim \phi 14$  in 0.5mm increments  
 Locating Repeatability : 30  $\mu$ m



model **WKH**

#### High-Power Pneumatic Hole Clamp

Available for use inside the machine.  
 Clamps a workpiece by holding its hole.

Applicable Workpiece Hole Diameter :  
 $\phi 6 \sim \phi 13$  in 0.5mm increments  
 Locating Repeatability : None



model **SWE**

#### Locating Pin Clamp

Clamps and locates a hole of a thin workpiece from above.

Applicable Workpiece Hole Diameter :  
 $\phi 8 \sim \phi 20$  (11 sizes)  
 Locating Repeatability : 50  $\mu$ m



model **SWP**



# Pneumatic Robotic Hands

A variety of robotic hands are newly added to the lineup.

## Compact Parallel Robotic Hand Gripper with Dust Cover

Model WPB

Robotic hand with a cover to prevent from contamination.  
The dust cover is available in 3 different materials  
(Polychloroprene, Silicone Rubber and Fluor Rubber).



Available in 3 Different Materials  
| Polychloroprene | Silicone Rubber | Fluor Rubber |

### External Chucking Series

#### High-Power Parallel Gripper

2 Size  
Close : 94 ~ 133 N  
Holding Force : 287 ~ 400 N



Model WPS

#### Compact Parallel Gripper

4 Size  
Close : 29 ~ 133 N  
Open : 39 ~ 158 N



Model WPA

#### Wide Angular Gripper

6 Size  
Close : 21 ~ 814 N



Model WPE

#### Parallel Gripper

5 Size  
Close : 28 ~ 302 N



Model WPF

#### Compact Parallel Gripper

3 Size  
Close : 33 ~ 135 N



Model WPH

#### Angular Gripper

6 Size  
Close : 17 ~ 216 N



Model WPJ

#### Three-Jaw Chuck

7 Size  
Close : 187 ~ 3619 N  
Open : 211 ~ 3707 N



Model WPP

#### Two-Jaw Chuck

8 Size  
Close : 84 ~ 1589 N  
Open : 93 ~ 1746 N



Model WPQ

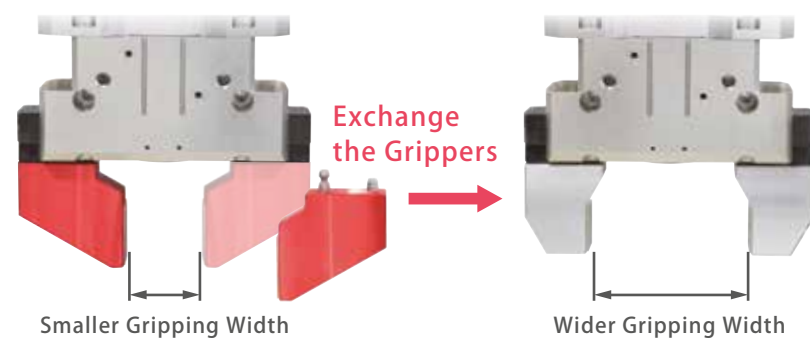
#### Parallel Hand with Auto-Grip Changer

Setup change by exchanging grippers (levers) to handle a wider variety of workpieces.

2 Size  
Close : 829 ~ 1219 N



Model WPW



## Pneumatic Robotic Hand

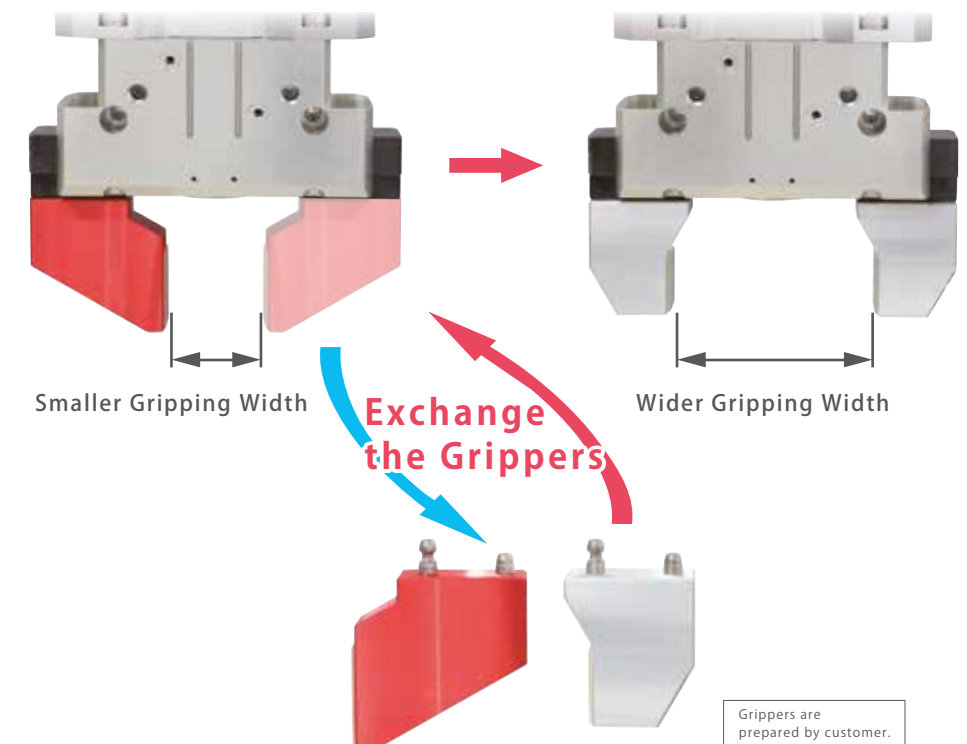
# Parallel Gripper with Auto-Grip Changer

Closing Side Only

Model WPW-C

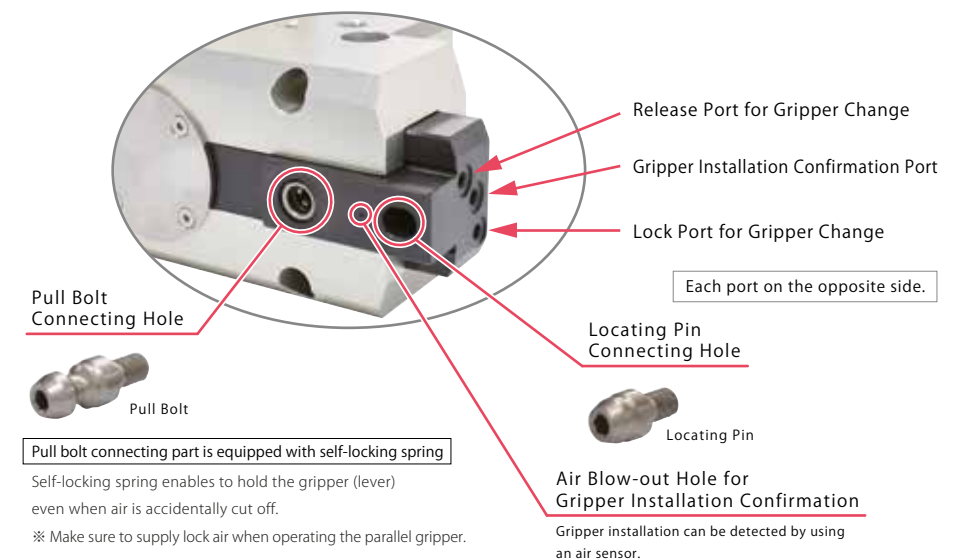


- Gripper Change allows for multi-size workpieces.



- Grippers can be changed in sequence by air control of each port.

Locating Repeatability of Gripper :  $\pm 0.05\text{mm}$



## High-Power Automation Pallet Clamp

Model **WVG**

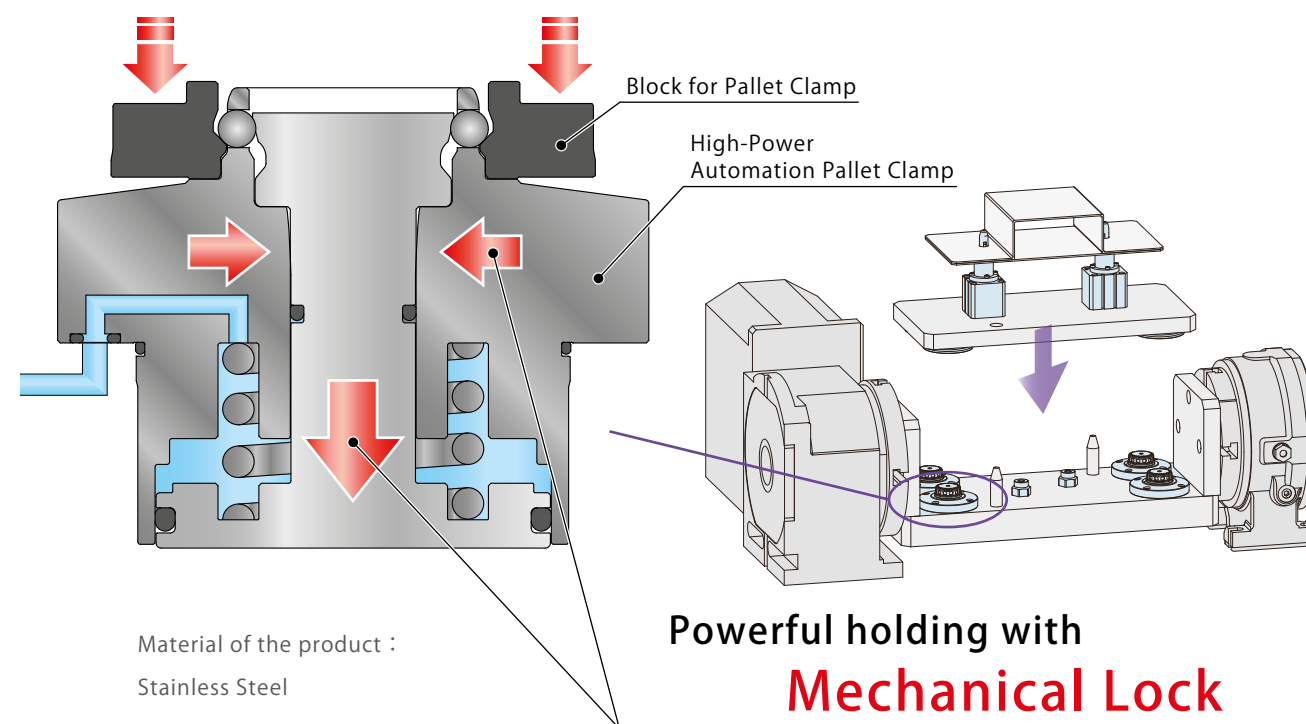


Locates and clamps simultaneously.

Suitable for pallet transfer and fixture changeover with excellent loadability and safety function of powerful clamping force.

Available in three body sizes.

Clamping force is **4 kN / 6 kN / 10 kN**



※ Clamping force varies depending on operating pressure.

※ This is a simplified drawing. Actual components are different.



### Sensor Attachment

Model **WVGT**

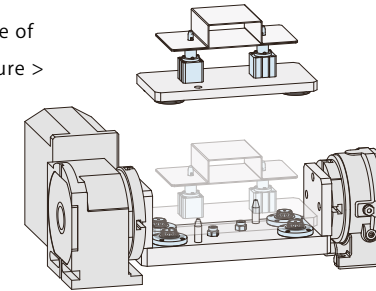
Detects the lock action and the release action of the clamp with the use of an auto switch (prepared by customer).

## Setup Improvement Enhances Productivity

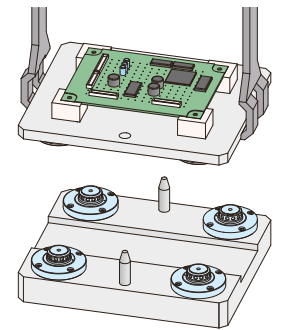
High-Power Automation Pallet Clamp locates and clamps simultaneously.

Fixture changeover becomes faster and easier, and equal clamping force and locating accuracy are ensured.

< Setup Change of  
Welding Fixture >

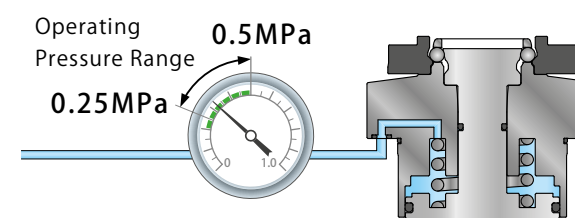


< Fixture Setup Change  
and Pallet Transfer of  
Automation Device >

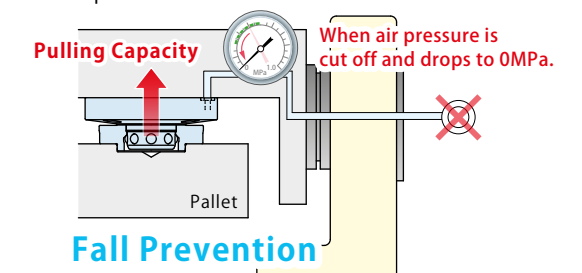


### • High Clamping Force (High Power) • High Safety : Fall Prevention

Powerful clamping force with  
KOSMEK exclusive mechanical locking.

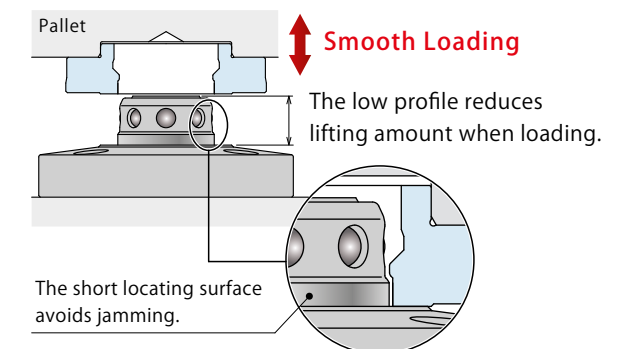


Mechanical locking is built in some steel ball parts.  
This enables powerful holding even when air pressure  
is at 0MPa. Powerful pulling capacity (holding force)  
prevents a pallet fall.



### • Smooth Loading

The low profile of the clamping part reduces lifting  
amount when loading. Also, the short locating surface  
avoids jamming and enables smooth loading.



### • 100% Stainless Steel

### Location Clamp

Enables simultaneous locating and clamping. Locating Repeatability : 3  $\mu$ m

Compact  
Air Location Clamp

Suitable for setup change of  
compact pallets and light fixtures.



model **SWQ**

Air Location Clamp

Equipped with contamination  
preventing function.



model **SWT**

High-Power  
Pneumatic Pallet Clamp

High-power model to exert the force  
that is equal to our hydraulic model.



model **WVS**

Screw Locator

Bolt-Tightening  
Manual Model



model **VXF**

# High-Power Pneumatic Pallet Clamp

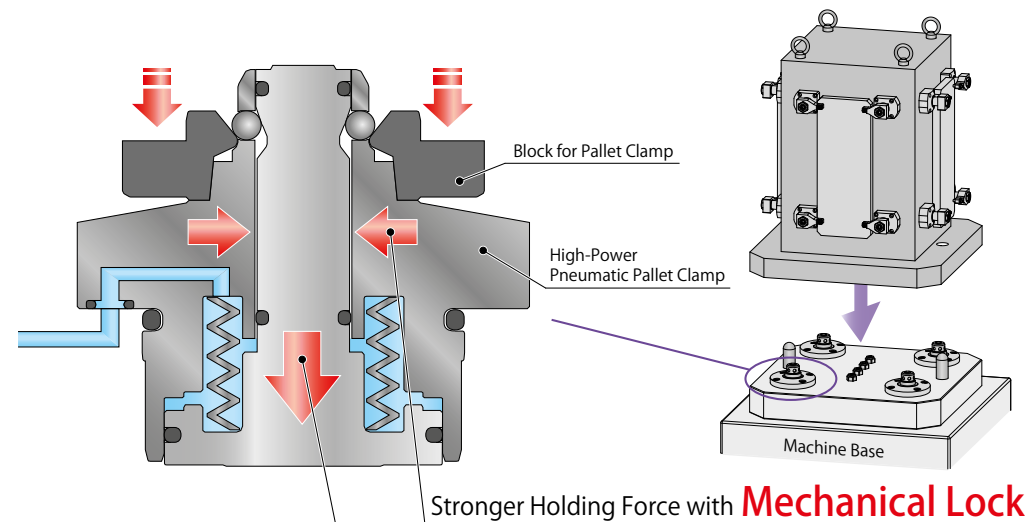
Model WVS

Locates and clamps simultaneously. Suitable for pallet transfer and fixture changeover with excellent loadability and safety function of powerful clamping force.



Available in four body sizes cylinder output force is

**4kN / 6kN / 10kN / 16kN**



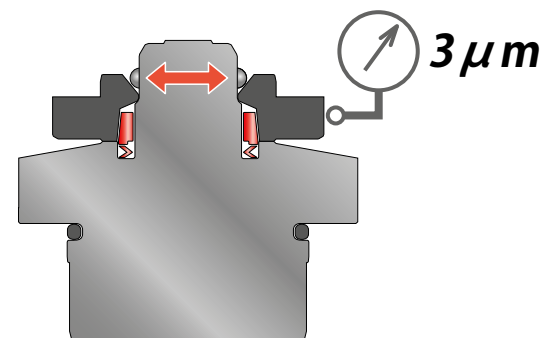
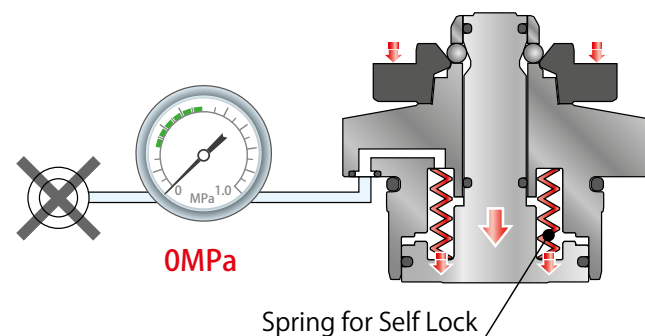
**With Mechanical Lock Function**

Clamping force which replaces hydraulic clamp

※ Clamping force varies depending on the operating pressure.

*It will stay locked with internal mechanical lock.*

Repetitive Locating with High Accuracy



## Without Hydraulics

The hydraulic power pack and clamping systems can be eliminated by using pneumatic systems.

## High Rigidity

Clamping force is suppressed to necessary minimum by the powerful holding force beyond clamping force.

## Compact

WVS has the same body size as a hydraulic clamp (model VS), yet exerts equivalent clamping force. It withstands high cutting load.

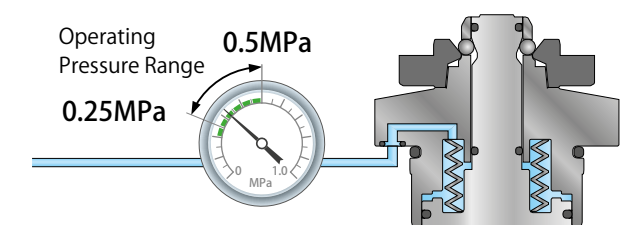
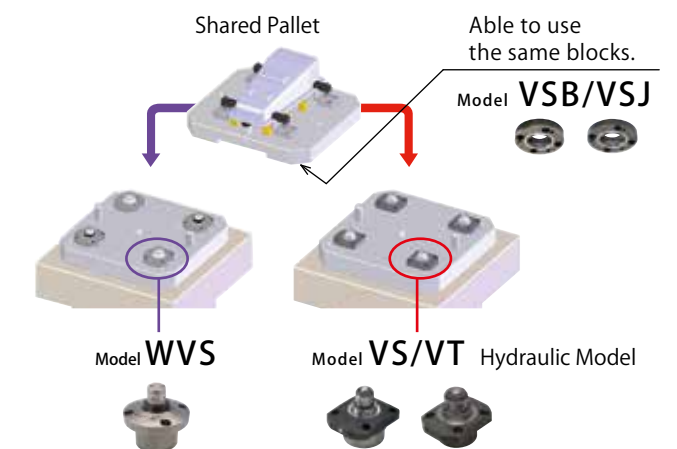
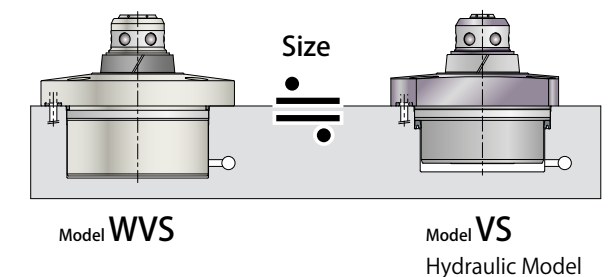
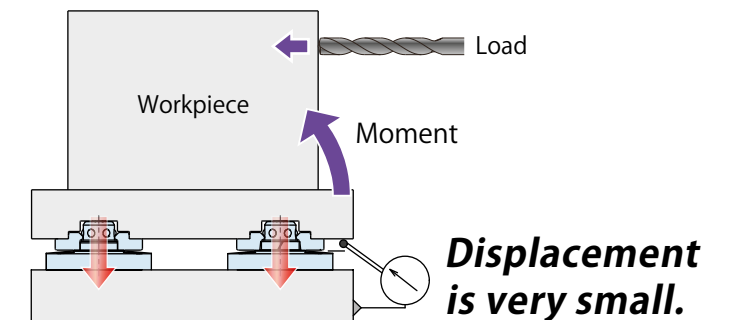
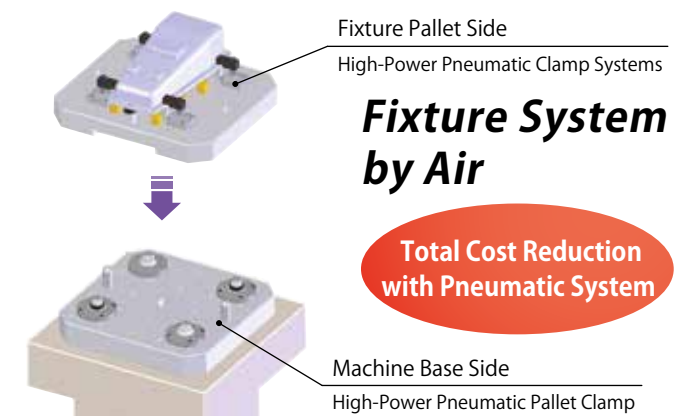
※ Please contact us for transverse load data.

## Shared Pallets

The blocks attached to the pallet side can be used for both pneumatic pallet clamp (WVS) and hydraulic pallet clamp (VS/VT).

## Energy Saving

Exerts higher clamping force even with low operating pressure. No need to use air booster.







High-accuracy model  
(locating repeatability :  $3\mu\text{m}$ )  
is also available.



## Large Expansion Locating Pin

### Model VWH

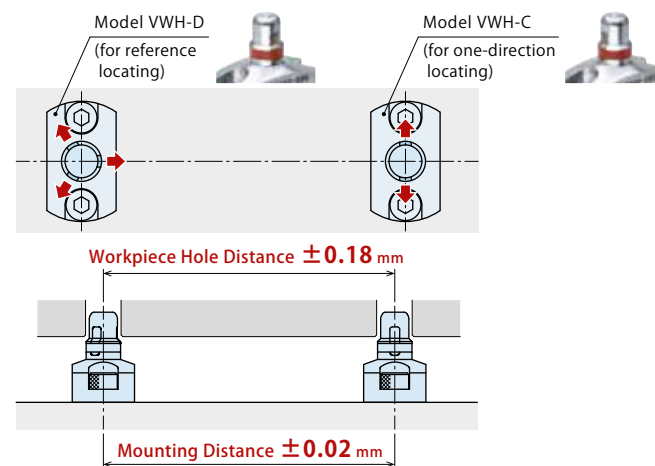
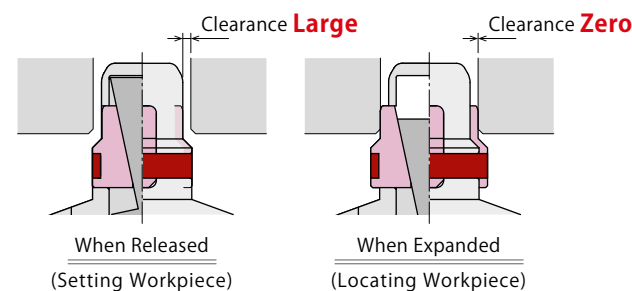
With expansion stroke 1mm longer than conventional models,  
the high accuracy expansion locating pin enables to automate  
loading/unloading process with robot.

Workpiece Hole Diameter :  $\phi 9 \sim \phi 15$ , Locating Repeatability :  $10\mu\text{m}$

## Expansion Locating Pin enables High-Accuracy Locating.

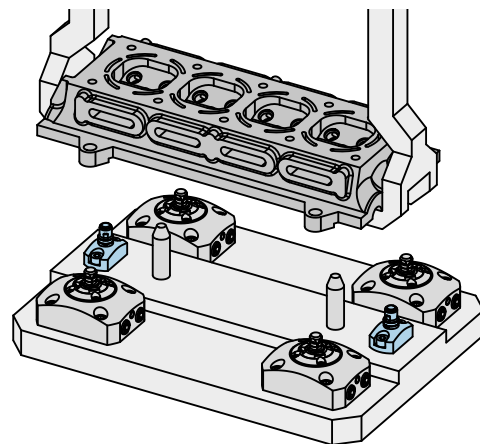
Enables both smooth loading and high-accuracy locating.  
KOSMEK expansion locating pin absorbs variations in  
machining reference holes and reference hole distance.  
This enables high-accuracy locating and stable automation.

### Expansion Stroke : 1.1mm



## Suitable for Automation including Robot Transfer

The large expansion model has a large clearance  
when released, capable of automation such as  
robot transfer, etc.

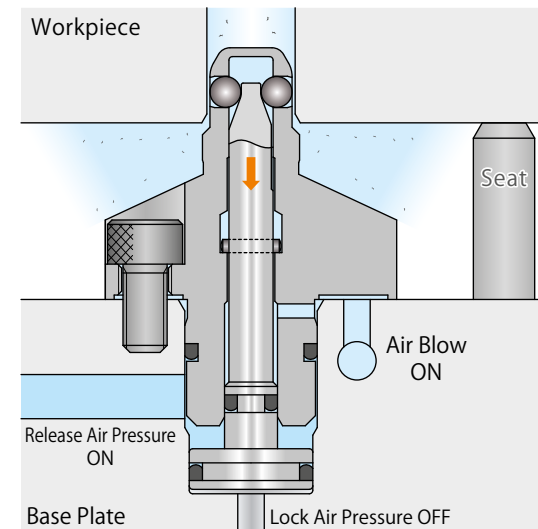


## Expansion Locating Pin

### Model VWK

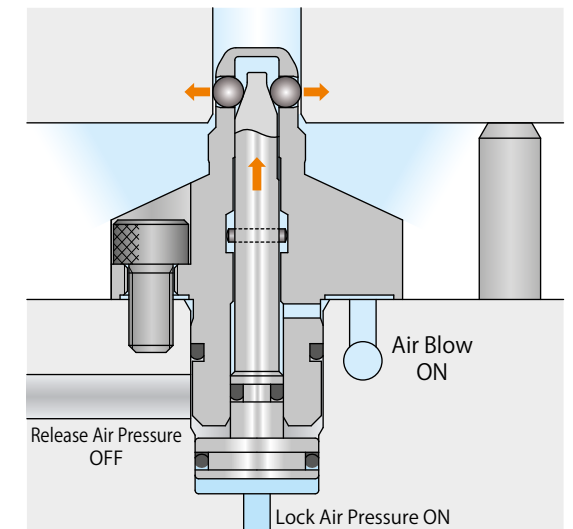
Pneumatic • Double Action  
Locating Repeatability :  $10\mu\text{m}$

Workpiece Hole Diameter:  $\phi 5,7-16,2\text{ mm}$



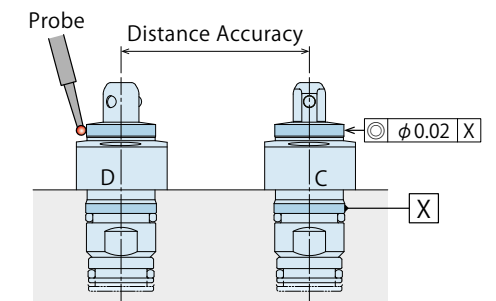
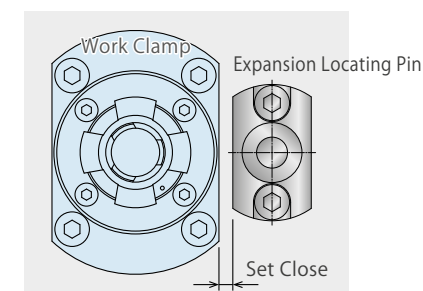
#### When Loading/Unloading Workpiece (Releasing)

- When lock air pressure is OFF and release air pressure is ON, the piston rod descends and steel balls are free to move.
  - Air blow prevents debris contamination.
- ※It is not a malfunction when the steel balls are expanded with air blow pressure.

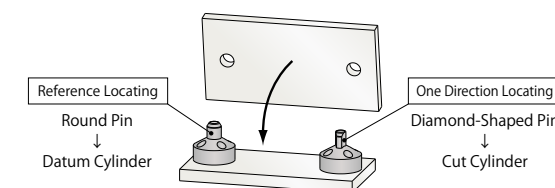


#### When Locating (Locking)

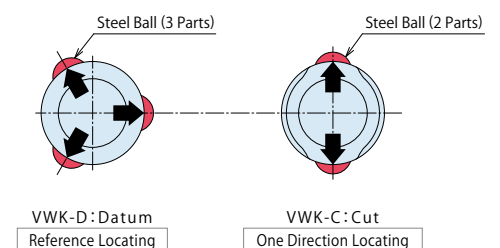
- When release air pressure is OFF and lock air pressure is ON, the piston/rod descend and the steel balls are expanded to locate the workpiece (Seating is required for standard and release confirmation models.)



Two types of locating pins (Cylindrical and Diamond shaped pins).  
Expansion Locating Pin consisting of Datum -D and Cut -C cylinder.



#### About Reference Locating and Orientation



# Expansion Locating Pin

Model VRA

Model VRC



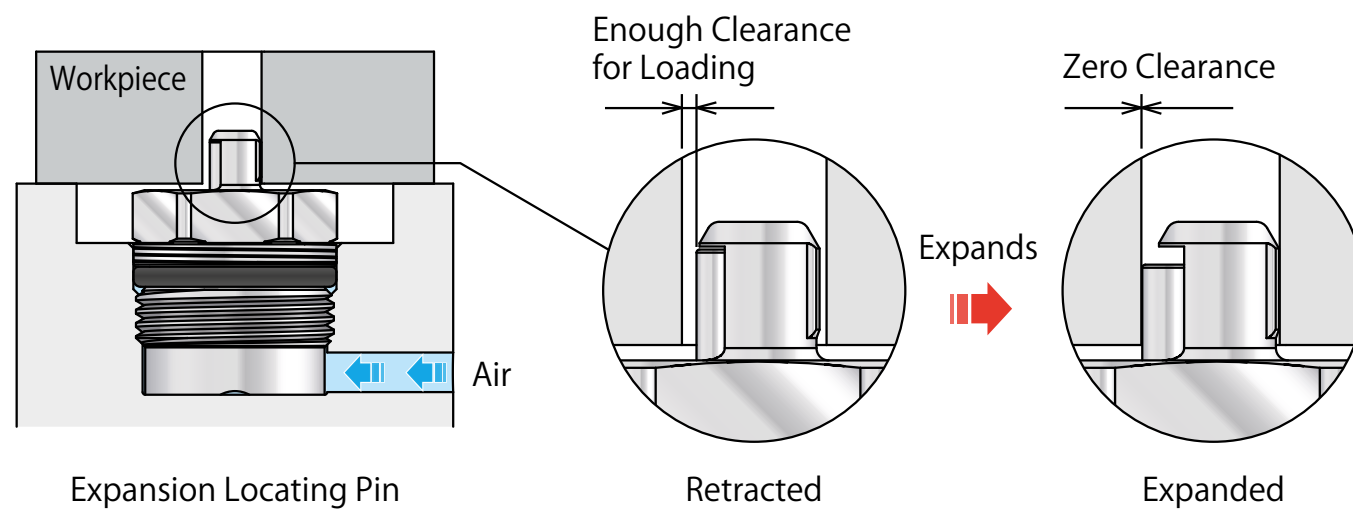
## Zero Clearance between the Pin and Reference Hole

Locating Repeatability : Within  $3\mu\text{m}$  !

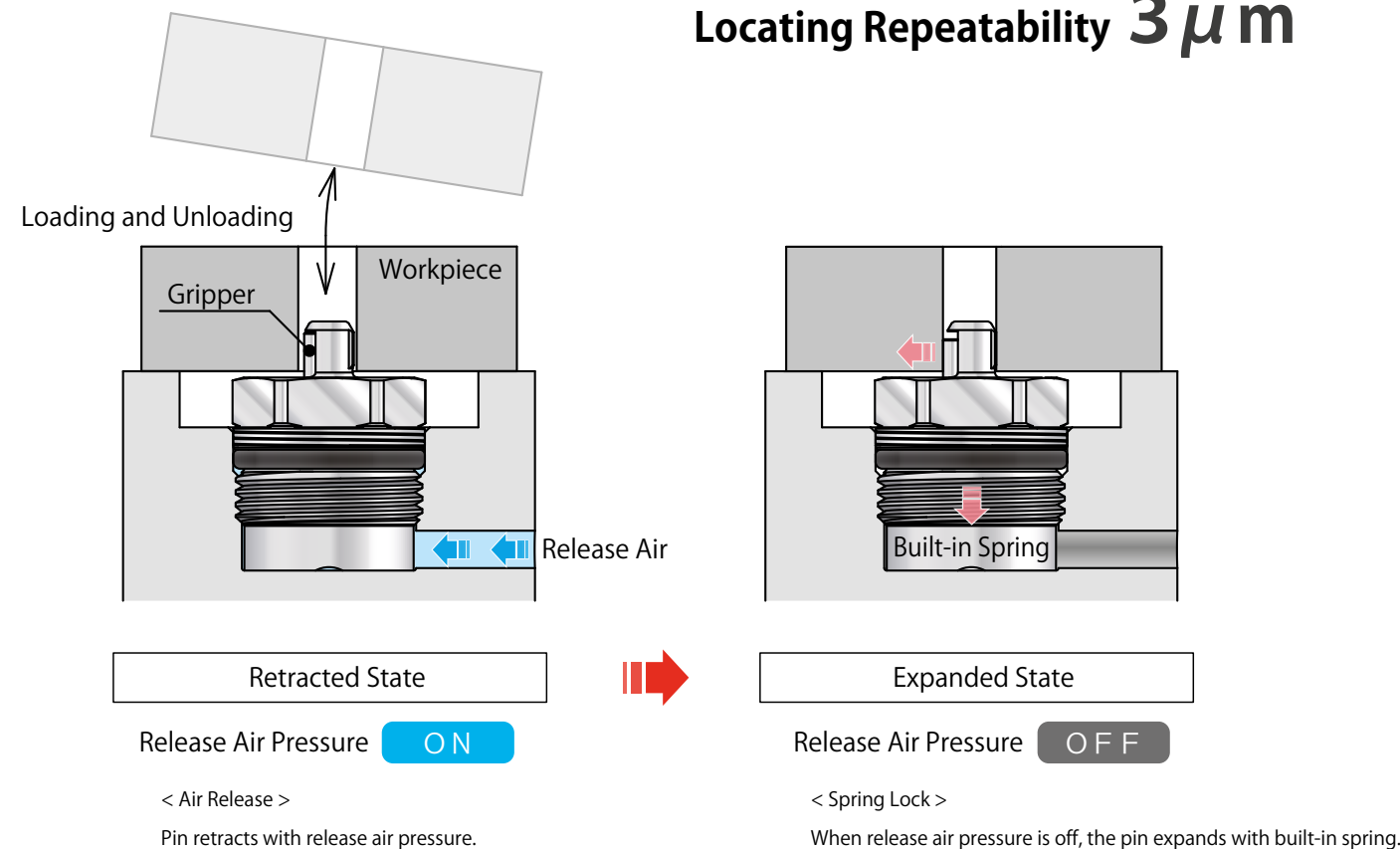
Durability of Ten Million Cycles ! ※ When Using VRA

PAT.

## High-Accurate Locating Pin with Pin Expansion and Retraction



## Locating Repeatability $3\mu\text{m}$

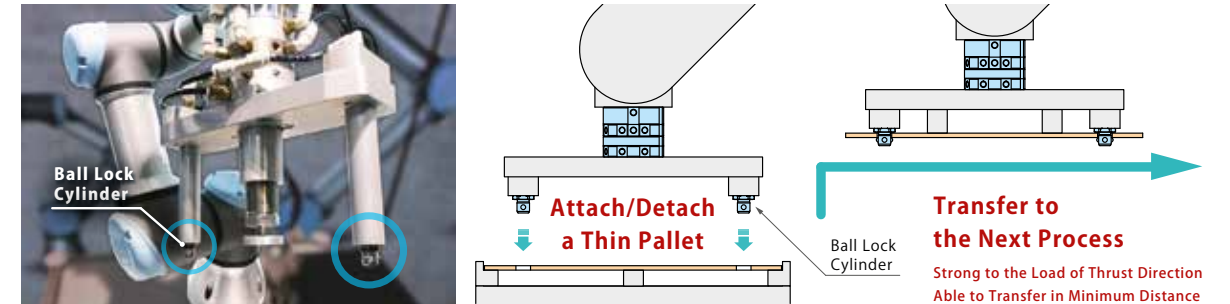


# Ball Lock Cylinder

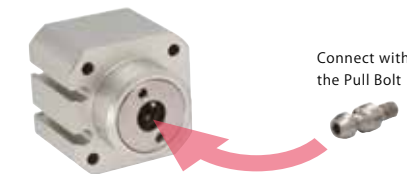
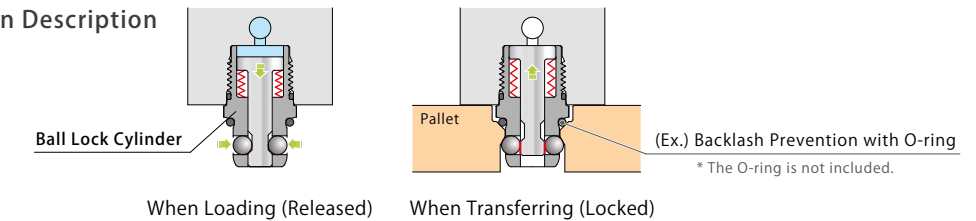
Model WKA

The ball lock cylinder is used for transfer pallets, plates, temporary tool stocker, etc.

2 larger sizes have been added to the lineup.

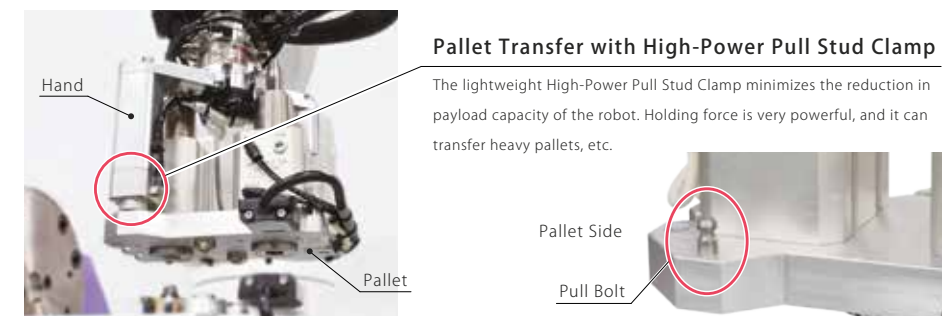


## Action Description



## High-Power Pull Stud Clamp

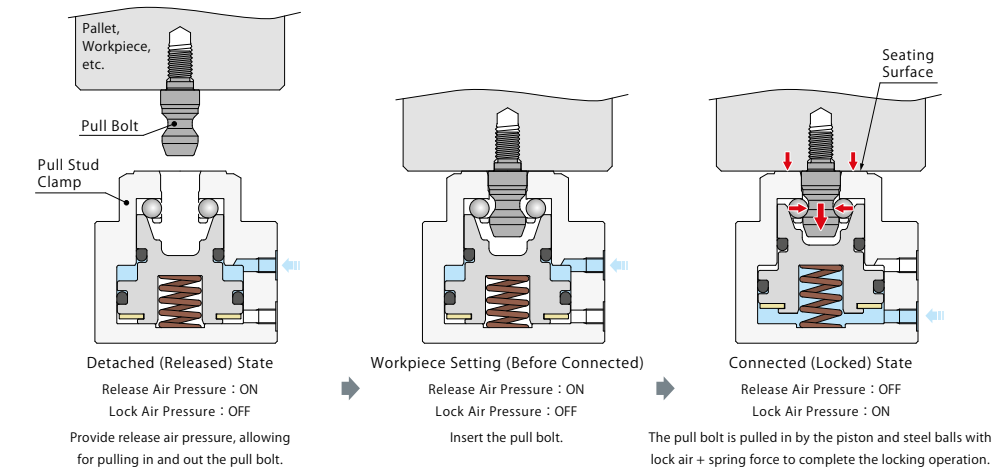
model WPT

Clamps by pulling the pull bolt. It can be used for many applications such as transferring and tool clamping.  
2 larger sizes have been added to the lineup.

## Pallet Transfer with High-Power Pull Stud Clamp

The lightweight High-Power Pull Stud Clamp minimizes the reduction in payload capacity of the robot. Holding force is very powerful, and it can transfer heavy pallets, etc.

## Action Description





## Locating Pin Clamp

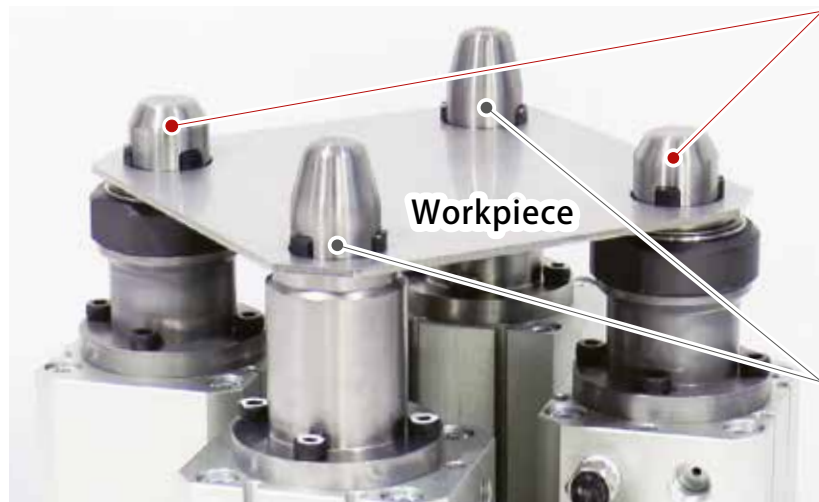
### Model SWP

Allows for high-accuracy locating and clamping of thin workpieces. Suitable for automation of clamping of spot welding workpieces. Equipped with air blow function to prevent contamination. Action confirmation with auto switch is possible.

## Excellent for Automation, Prevents Machine Stops

### Additional Lineup : Floating Model

- In case of locating with locating model and requiring clamping force.  
The floating model enables additional clamping force without interfering the locating model.

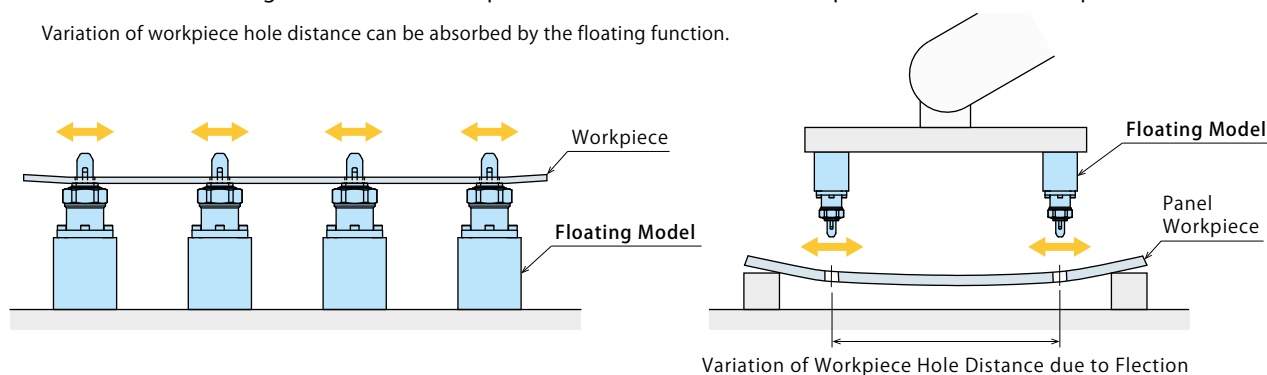


**Locating Pin Clamp Floating Model**  
Pin Head Floating Amount  
SWP0501 :  $\pm 0.6\text{mm}$   
SWP1001 :  $\pm 0.8\text{mm}$

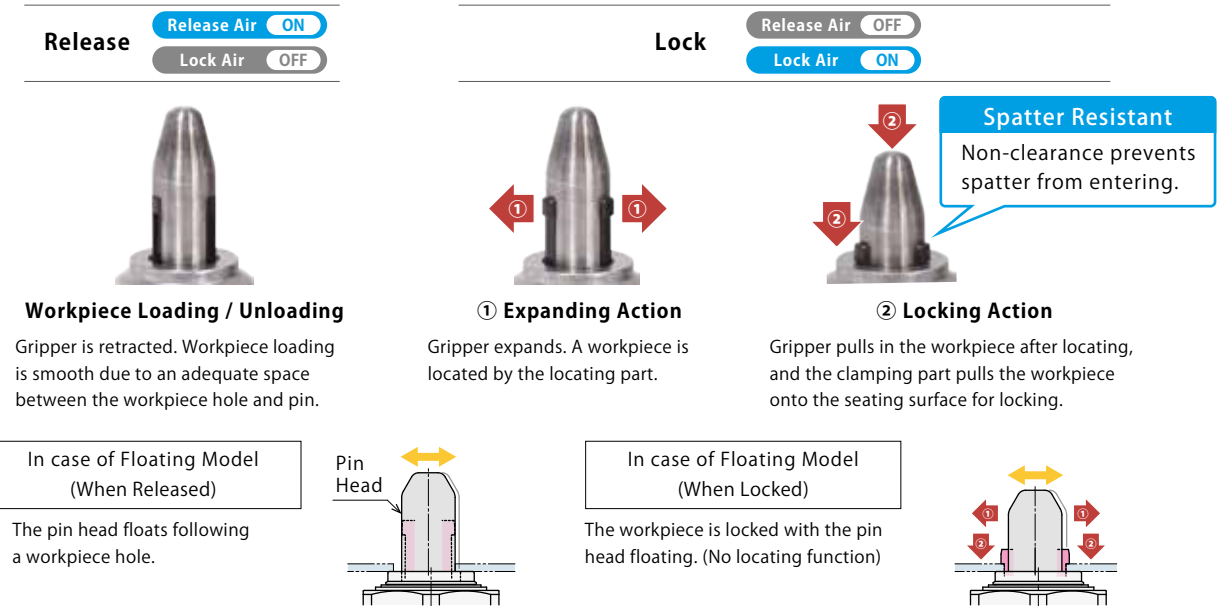
**Locating Pin Clamp Locating Model**  
Locating Repeatability :  
0.05mm

### Application Example of Floating Model

- In case there is a large variation in workpiece hole distance due to warp or flection of a workpiece  
Variation of workpiece hole distance can be absorbed by the floating function.

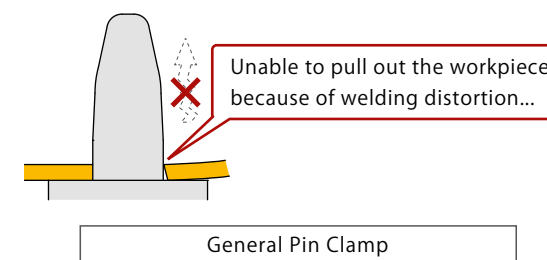


### Action Description

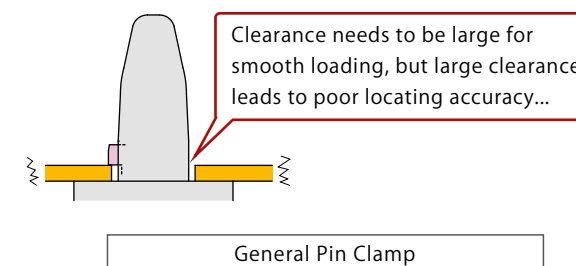


### Features

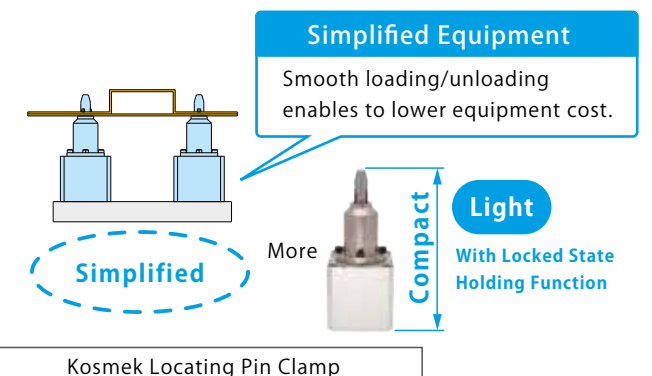
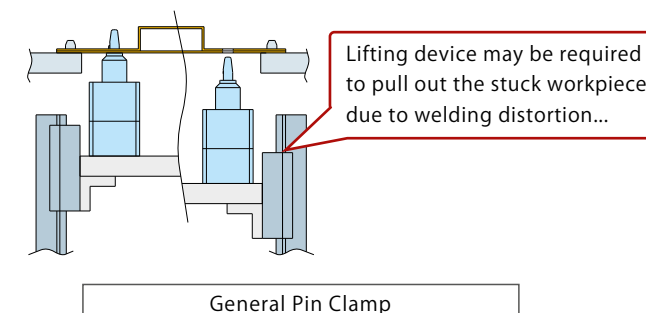
#### Work Efficiency



#### Stable Clamping



#### Lower Fixture Cost





Auto Coupler

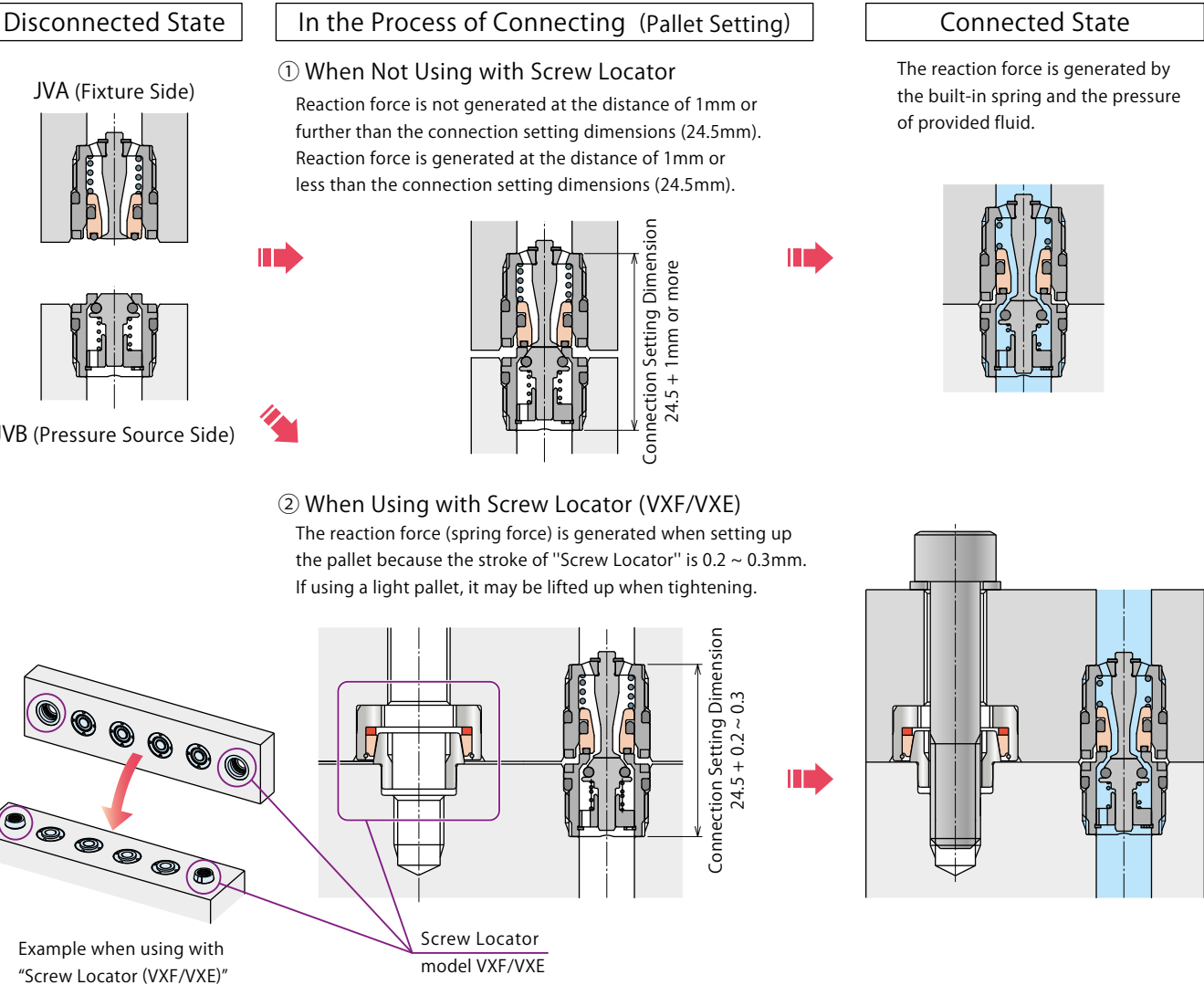
Model JVA0100/JVB0100



※ This is a full-scale photo.

The new auto coupler is designed to be as compact as possible, and maximizes passage area. Applicable to air (positive pressure) and vacuum (negative pressure). The body is made of 100% stainless steel, and the seals are made of fluorine rubber. Connection stroke is 1mm, and it is easily used with Screw Locator (model VXE/VXF) for quick change.

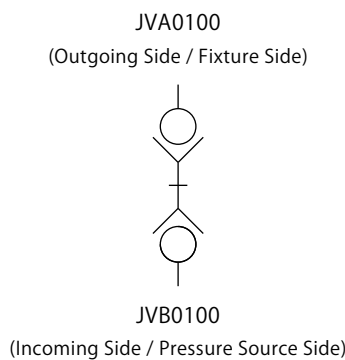
Action Description



Specifications ※ Refer to the catalog for detailed specifications.

Model No.	Fixture Side		JVA0100-H
	Pressure Source Side		JVB0100-H
Max. Operating Pressure	MPa		1.0
Min. Passage Area	mm <sup>2</sup>		8
Offset Distance (Tolerance)	mm		±0.5
Angular Deviation (Tolerance)	DEG.		0.3
Operating Temperature	°C		0 ~ 120
Usable Fluid			Air or Vacuum
Reaction Force	kN	Operating Pressure	at 0.5 MPa
			at P MPa
Weight	g	JVA0100	0.045
		JVB0100	0.050 × P + 0.02
		JVA0100	8
		JVB0100	6

Circuit Symbol



Notes for Usage (JVA0100/JVB0100)

- Do not connect or disconnect the auto coupler under pressure.
- Do not connect the coupler when contaminants are adhered on each connecting surface.  
When there are cutting chips or coolant, install a cover, or remove all contaminants with air blow.
- Exceeding allowable offset leads to damage on internal parts. It is recommended to install a guide pin, etc.
- When pressing up to the connection limit, the force should be higher than the reaction force and lower than 0.25 kN.
- A mounting jig is required to mount and remove the coupler. (Refer to the product catalog for further information.)

Model No.	Pressure Range	Usable Fluid	Comparison of Auto Coupler Connected Dimensions	
Model JVA0100/JVB0100	1MPa or less	Vacuum   Air	Min. Passage Area : 8 mm <sup>2</sup>	
			Base JVB0100	Pallet JVA0100
			Secured Passage Area Equal to Air Hose I.D. φ3.2	
			In case of the min. depth of the mounting hole.	
Conventional Model JTA / JTB	1MPa or less	Air	Min. Passage Area : 5 mm <sup>2</sup>	
			Base JTB0100-H	Pallet JTA0100-H
			Minimum Size Moreover, soft seal is provided for the pressure source side. Air Leak Prevention & Energy Saving	
			Largest Mounting Hole Depth (Base and Pallet are touching.)	

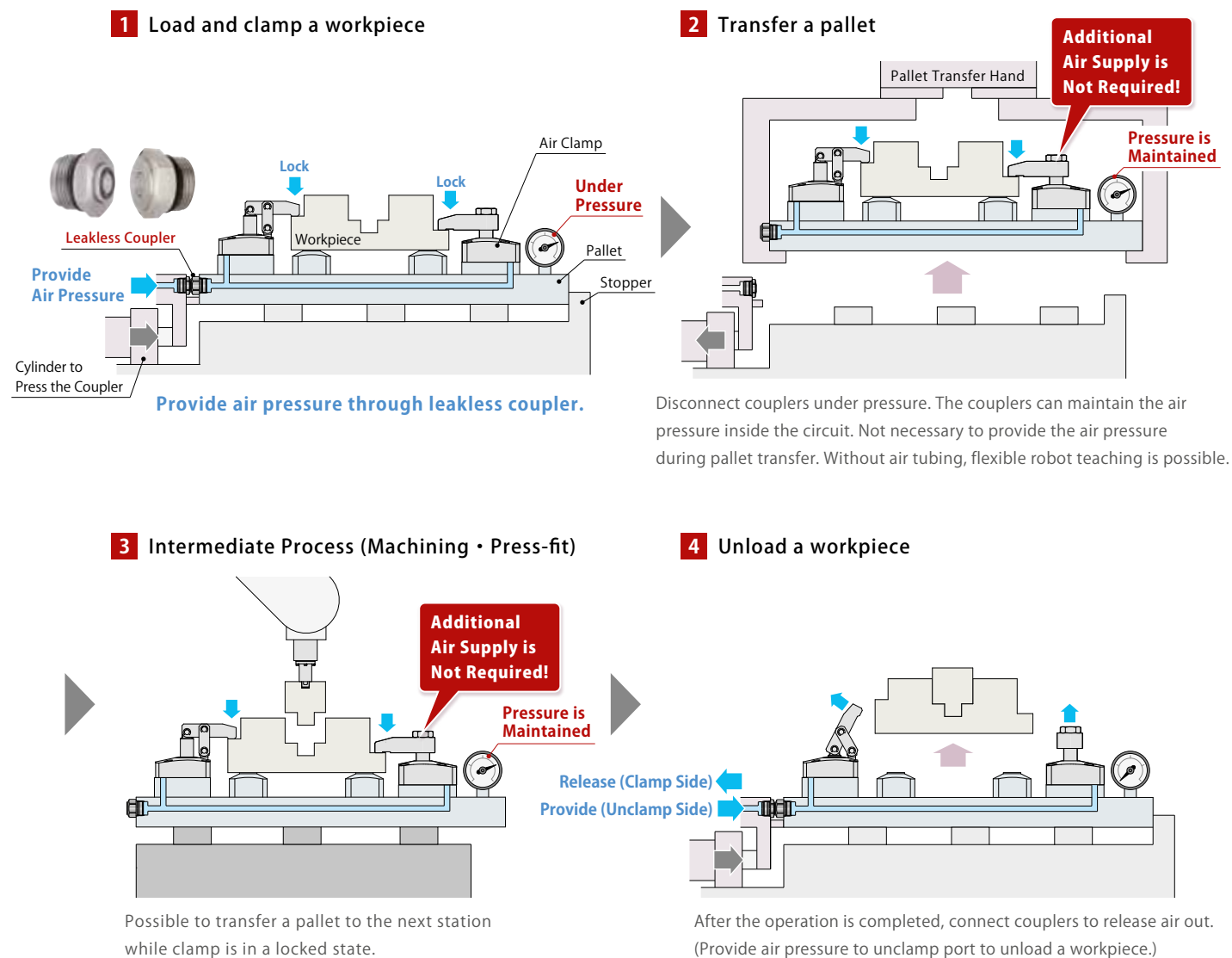
## Leakless Coupler

Model JWC/JWD

Leakless Coupler enables to maintain clamping force since it keeps the air pressure even if a coupler is disconnected. During pallet transfer, etc. between processes, it enables to remain a workpiece locked and transfer the workpiece to the next station.

### Leakless Coupler To Solve Pallet Transfer Problems

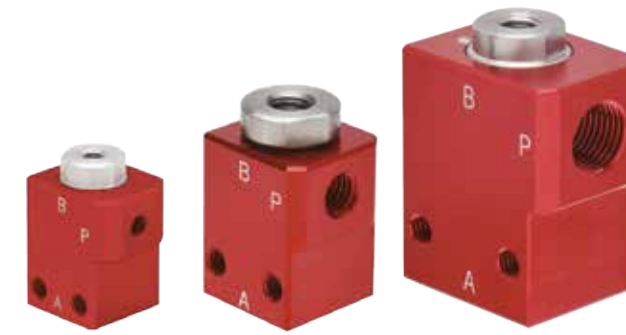
No need to provide air pressure when disconnected from air source. Leakless coupler can be disconnected while pressure is provided. Enables to remain air clamps in a locked state and transfer a workpiece to the next station.



## Air Safety Valve

Model BWS

Ultra-Compact and -Light Air Pilot Check Valve for Safety.  
 Prevents a workpiece fall during robot transfer.  
 Rc1/8 thread model (BWS0101) is newly added to the lineup.



### Weight

M3 Thread Model

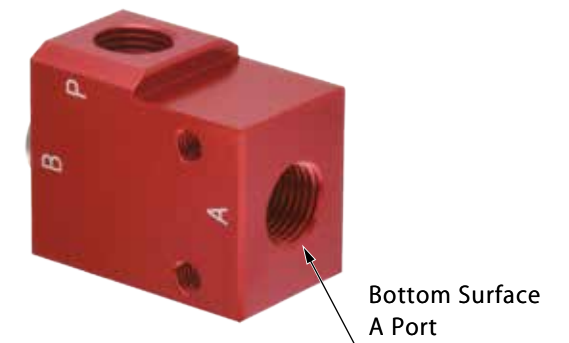
9 grams

M5 Thread Model

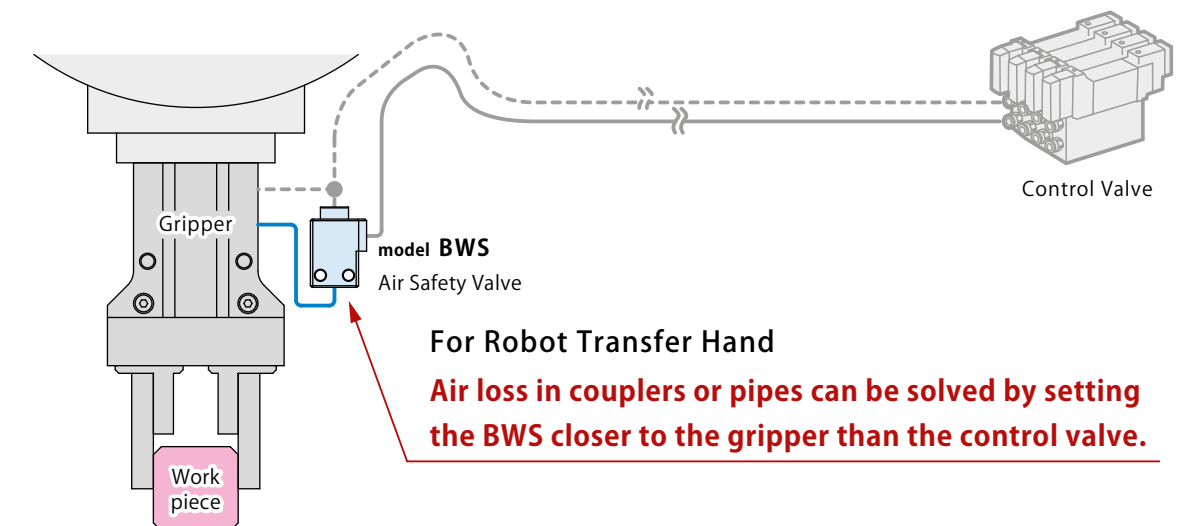
14 grams

Rc1/8 Thread Model

37 grams



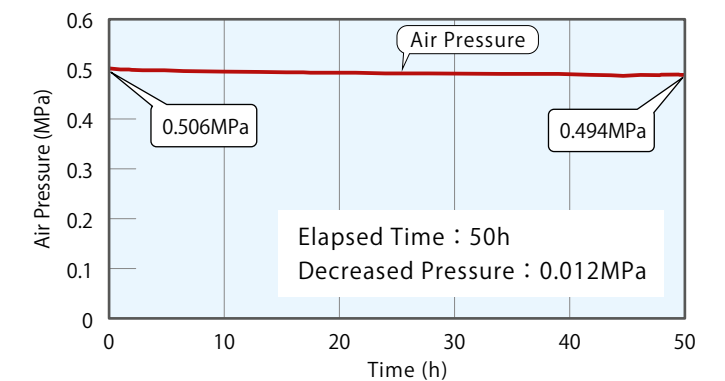
### Application Example



### High Reliability with Soft Seal

Testing data of measuring elapsed time and pressure change when maintaining air pressure in A port. Sealing part is equipped with Soft Seal. It enables great pressure maintaining ability.

※ Testing data of single product with stable surrounding temperature.



# Air Non-Leak Coupler

Model **BWA/BWB**

NEW



By connecting and disconnecting under pressure, the BWA port (outgoing lock air) maintains air pressure after disconnected (Air Non-Leak\* Function).

※ "Air Non-Leak" means that the BWA outgoing side has pressure maintaining ability for more than 24 hours (under constant temperature).

**World's First**

※According to our research.

Non-leak, which could only be achieved with hydraulics, is now possible with air.

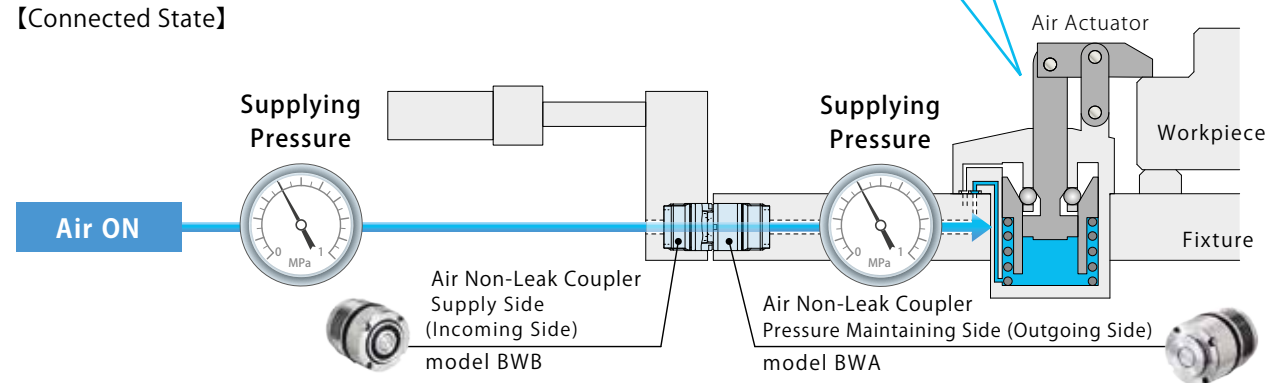
New release of **the valve** model **BWA/BWB** that achieves **Air Non-Leak**※



**Best for the Use with High-Power Pneumatic Clamp !**

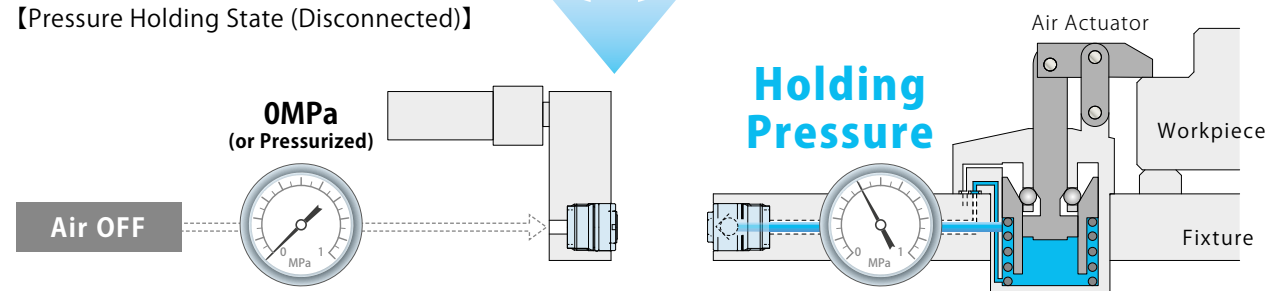
**Equal machining force as hydraulic fixture.**

【Connected State】



**Non-Leak Coupler is disconnected under pressure.**

【Pressure Holding State (Disconnected)】



## • Setup Outside the Machine Improves Machine Up Time

Air non-leak function allows to disconnect a fixture from an air source and to prepare the fixture outside machine. This reduces machine down time and set up time.

## • Reduce the Number of Circuits in the Machine

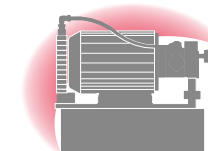
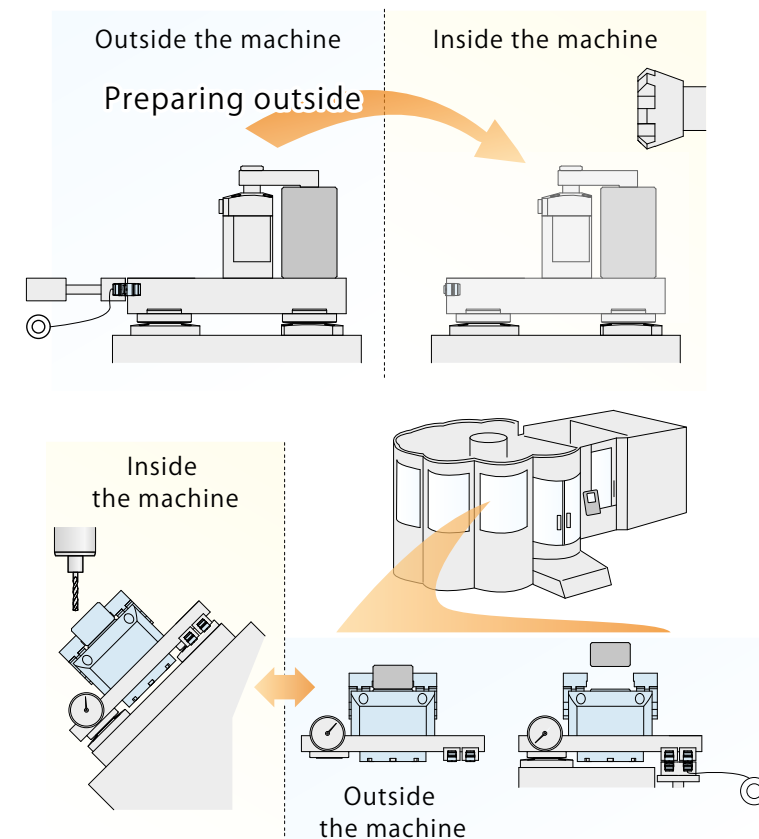
By holding the air pressure, the number of circuits for fixture inside the machine can be minimized.

## • Outside Setup by Disconnecting Air of APC, Pallet Pooling, etc.

Because it is able to disconnect the fixture from the air source, it is suitable for pallet pooling. It allows to move pallets freely without concerns on handling of hoses, and it is also suitable for transferring with robot.

## • Energy-Saving with No Hydraulic Use

The non-leak function which could only be achieved with hydraulics is now possible with air. Also, the same level of machining as a hydraulic fixture is possible by using with high-power pneumatic clamp.

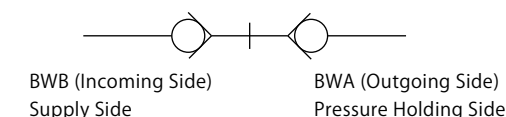


**No Hydraulic Use**

## • Specifications ※ Refer to the catalog for detailed specifications.

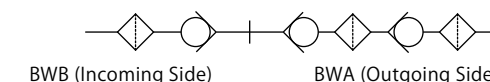
Model No.	Pressure Holding Side	
	Supply Side	
		<b>BWA0100</b> <b>BWB0100</b>
Max. Operating Pressure	MPa	1.0
Min. Passage Area	mm <sup>2</sup>	9.6
Offset Distance (Tolerance)	mm	±0.5
Angular Deviation (Tolerance)	DEG.	0.3
Operating Temperature	℃	0 ~ 70
Usable Fluid		Air
Reaction Force kN	Operating Pressure at 1 MPa	0.23
	at 0.5 MPa	0.15
	at P MPa	0.154 × P + 0.07
Weight g	BWA	42
	BWB	35

## Circuit Symbol



※ Filter is built inside.

Detailed Symbol  
(All check valves and filters are written.)



## • Notes for Usage (BWA/BWB)

- "Air Non-Leak" means that a single BWA unit has pressure maintaining ability for more than 24 hours (under constant temperature). This cannot be used in equipment that requires the leakage amount level that is confirmed by tracer gas leak testing using helium and hydrogen.
- After installing parts of pressure maintaining circuit, confirm pressure maintaining by testing leakage at each connecting part using leak checker, etc. (Please install a pressure gauge in the circuit.)
- When maintaining pressure with BWA after disconnecting under pressurization, make sure it has a method and condition that it can connect with greater force than reaction force. (Even when using with Pallet Clamp, it is required to press with greater force than reaction force before locking action.)
- Since the check valve of the supply side BWB is a metal seal, there may be a slight air leak when pressurized under disconnected state.
- Do not connect the coupler when contaminants are adhered on each end surface. (install a cover, or remove all contaminants with air blow before connection.)
- Exceeding allowable offset leads to damage on internal parts. It is recommended to install a guide pin. This may also cause an air leak when disconnected under pressurization.
- Even though this product is equipped with filter, please note that inadequate flushing may result in poor flow performance or malfunction due to clogging of the built-in filter.
- When pressing to the connection limit, the force should be higher than reaction force and lower than 2.0kN.



# Air Non-Leak Valve

Air Double-Acting

Model **BWQ**

Pilot Check Valve with Air Non-Leak\* Function

A2 port (outgoing lock air) maintains air pressure even after disconnected from the air source unless air is provided to B1 port (release port).

※ "Air Non-Leak" means that the outgoing A2 port has pressure maintaining ability for more than 24 hours (under constant temperature).

**World's First**

※According to our research.

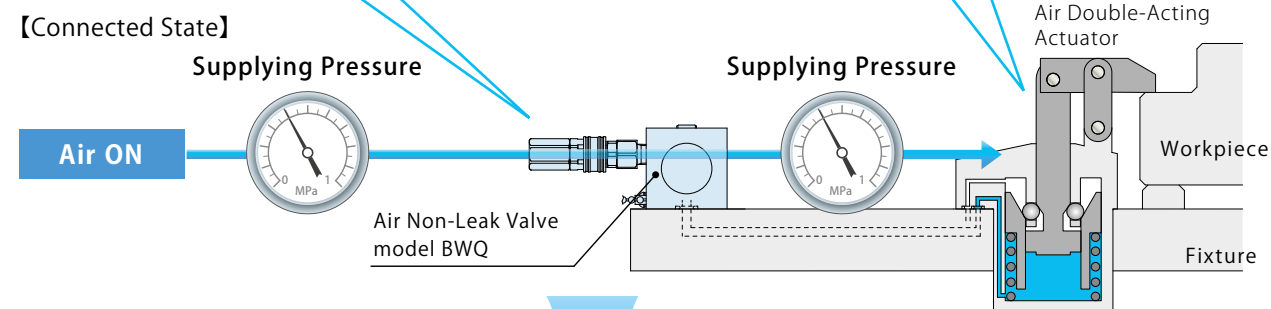
Non-leak, which could only be achieved with hydraulics, is now possible with air.

New release of the valve model BWQ  
 that achieves **Air Non-Leak**※

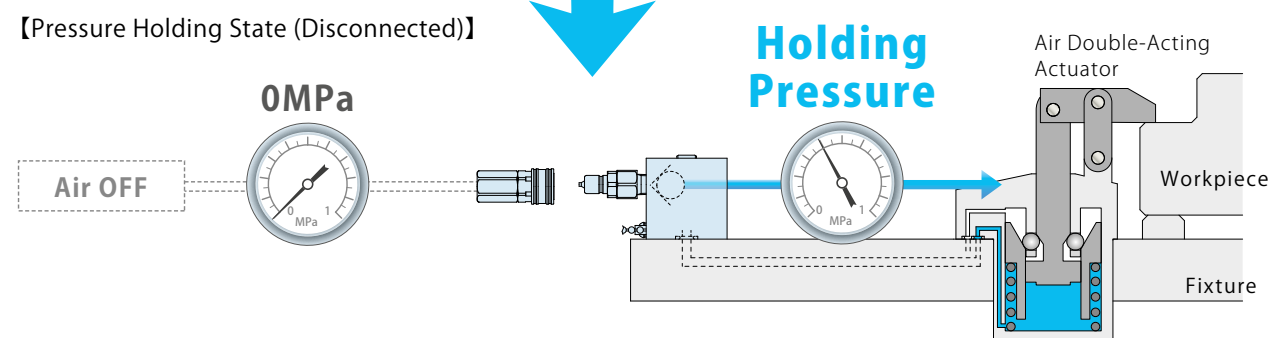
**Easy to Connect**


**Best for the Use with High-Power Pneumatic Clamp !**

**Equal machining force as hydraulic fixture.**

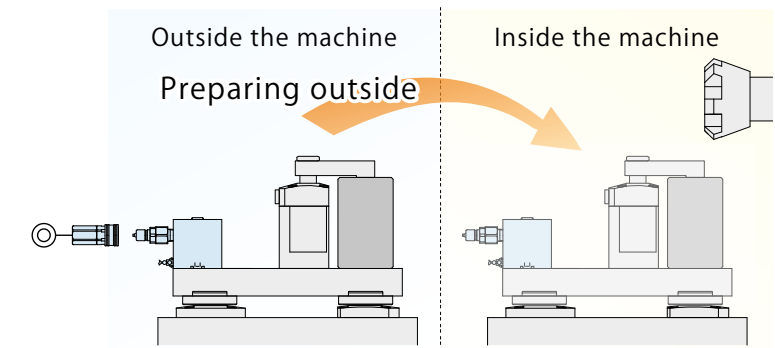


**Holds the pressure even after the coupler is disconnected.** (Refer to Notes for Usage: 3.)



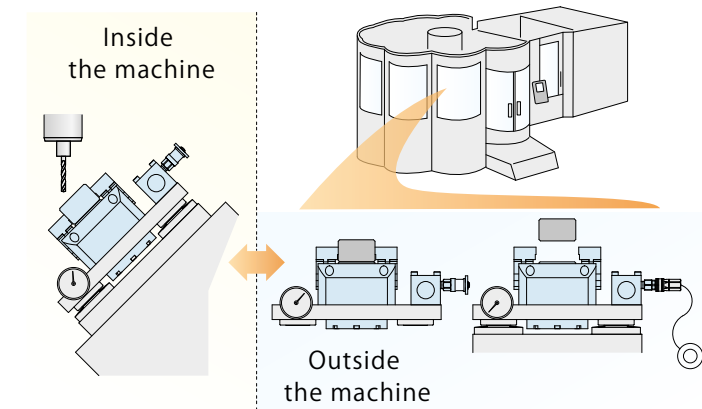
## • Setup Outside the Machine Improves Machine Up Time

Air non-leak function allows to disconnect a fixture from an air source and to prepare the fixture outside machine. This reduces machine down time and set up time.



## • Reduce the Number of Circuits in the Machine

By holding the air pressure, the number of circuits for fixture inside the machine can be minimized.



## • Outside Setup by Disconnecting Air of APC, Pallet Pooling, etc.

Because it is able to disconnect the fixture from the air source, it is suitable for pallet pooling. It allows to move pallets freely without concerns on handling of hoses, and it is also suitable for transferring with robot.

## • Energy-Saving with No Hydraulic Use

The non-leak function which could only be achieved with hydraulics is now possible with air. Also, the same level of machining as a hydraulic fixture is possible by using with high-power pneumatic clamp.

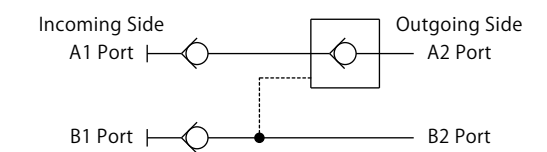


## • Specifications ※ Refer to the catalog for detailed specifications.

Model No.	<b>BWQ0100-□</b>
Operating Pressure Range MPa	0.2 ~ 1.0
Withstanding Pressure MPa	1.5
Cracking Pressure MPa	0.04
Pilot Pressure MPa	Holding Pressure × 0.45 + 0.1 or more
Min. Passage Area mm <sup>2</sup>	8.8 (Coupler Part)
Operating Temperature °C	0 ~ 70
Usable Fluid	Air
Applicable Coupler / Socket Model ※1 kg	C0-1SF-SUS-FKM
Weight	0.5

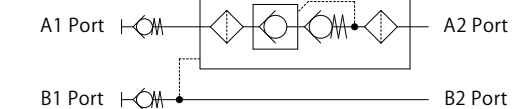
Note : ※1. It shows the socket model number of compact coupler manufactured by NITTO KOHKI.

## Circuit Symbol



※ Filter is built in the A1 and A2 ports.

## Detailed Symbol



## • Notes for Usage (BWQ)

- "Air Non-Leak" means that a single BWQ unit (A2 port) has pressure maintaining ability for more than 24 hours (under constant temperature). This cannot be used in equipment that requires the leakage amount level that is confirmed by tracer gas leak testing using helium and hydrogen.
- After installing parts of pressure maintaining circuit, confirm pressure maintaining by testing leakage at each connecting part using leak checker, etc. (Please install a pressure gauge in the circuit.)
- When disconnecting the socket of the coupler, make the socket on the both circuits to pressure zero and in an opened state in order to maintain pressure with the check valve built in the body. (Control Valve Example: 5-port 3-position exhaust center)
- Before disconnecting/connecting the coupler, remove cutting chips and coolant with air blow, etc. Also, install the coupler cover except during disconnecting/connecting operation.
- Even though this product is equipped with filter, please note that inadequate flushing may result in poor flow performance or malfunction due to clogging of the built-in filter.



Master Cylinder

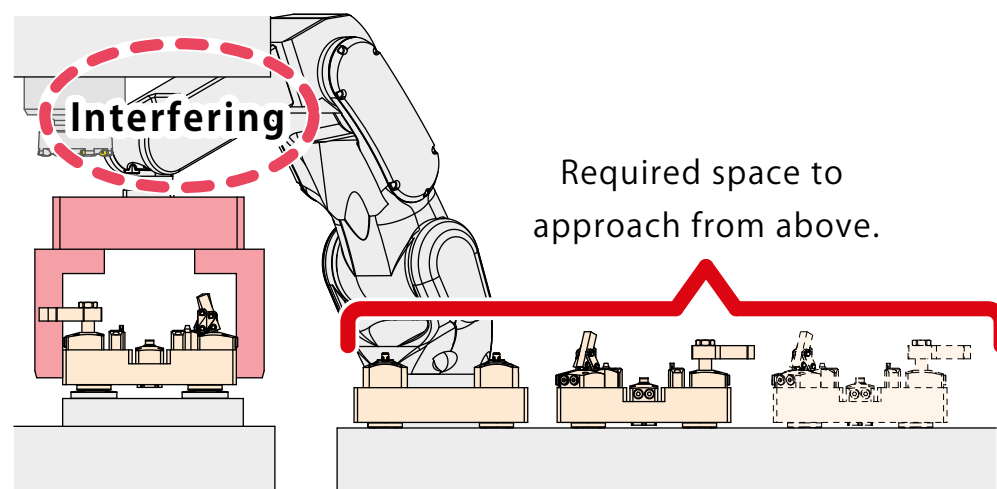
Tool Adapter

## Pallet Gripper

Model **WVB****NEW**

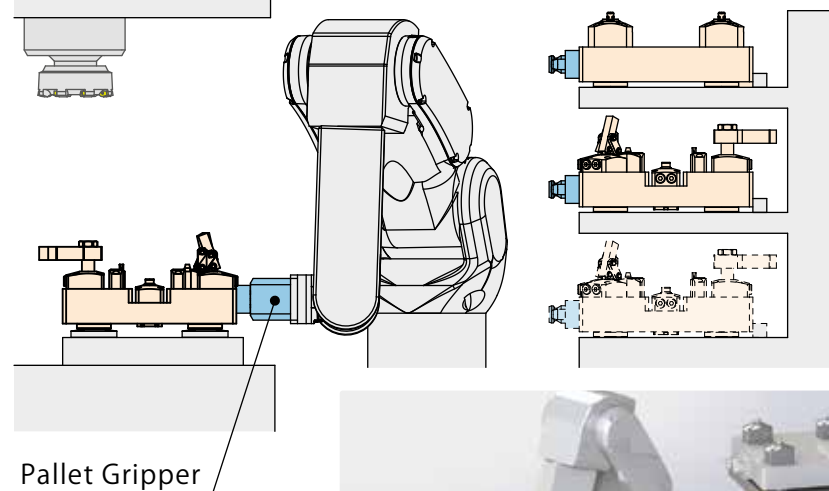
Moment-Resistible Pallet Gripper is suitable for pallet transfer.  
 Side approaching enables to save space for fixture stock.

### Previous Method



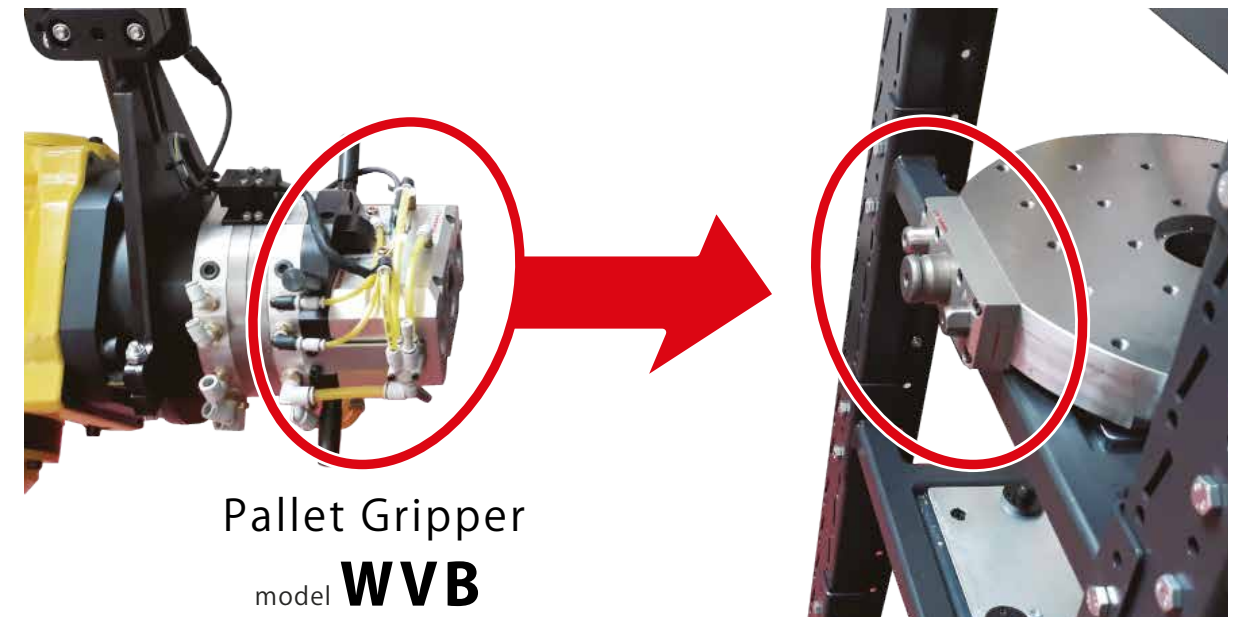
### Pallet Gripper

**Saves Space for Fixture Stock**



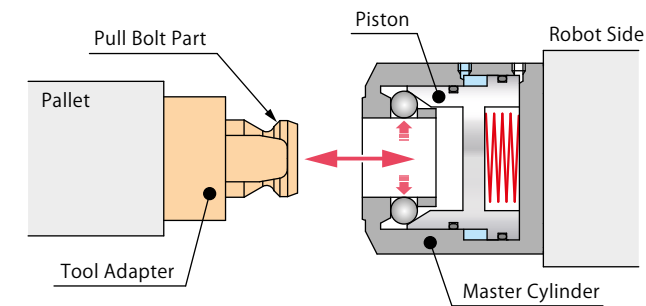
## Simplify Fixture Setup with Robot

### Side-Approaching Pallet Gripper



Pallet Gripper  
 model **WVB**

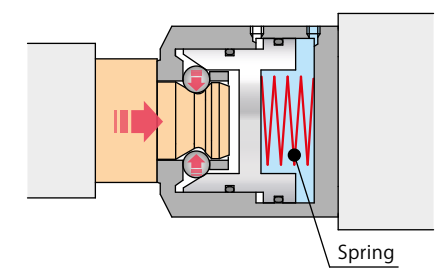
● **Action Description** ※ This is a simplified drawing. The actual part components may be different.



#### When Loading/Unloading (Released)

Release Air Pressure **ON**  
 Lock Air Pressure **OFF**

Release action : The piston moves backward and the steel balls are set inside so that the tool adapter can be attached/detached.



#### When Transferring (Locked)

Release Air Pressure **OFF**  
 Lock Air Pressure **ON**

Lock action : The piston moves forward with lock air pressure and built-in spring, and pulls in the pull bolt of the tool adapter via the steel balls.

Self-locking function with spring prevents a workpiece fall even when air pressure drops to 0MPa in case of a power failure.  
 ※ Usually it should be connected with spring force and lock air pressure.



## Pneumatic Centering Vise

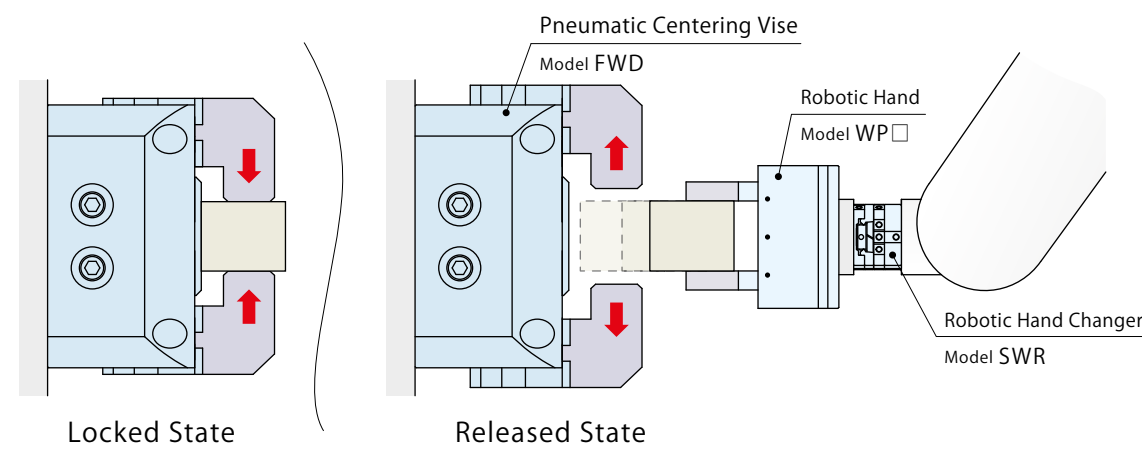
### Built-in Check Valve

Model **FWD**

High Repeatability + High Cylinder Force + Safety Function to Maintain Locked State. Best for automation with powerful holding of workpiece by air pressure, and equipped with release action confirmation.

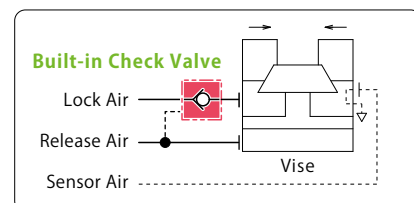
## High-Accuracy • High-Power Pneumatic Vise

### Best for Automation with Safety Function and Action Confirmation



- **Maintains the locked state even when air pressure is cut off.**

The built-in check valve maintains internal locking air pressure until air is supplied to the release port. This maintains the locked state even when locking air pressure is temporarily cut off, ensuring safety.



- **Speed Control Valve Port (model BZW)**



- **Simple Lever Machining**

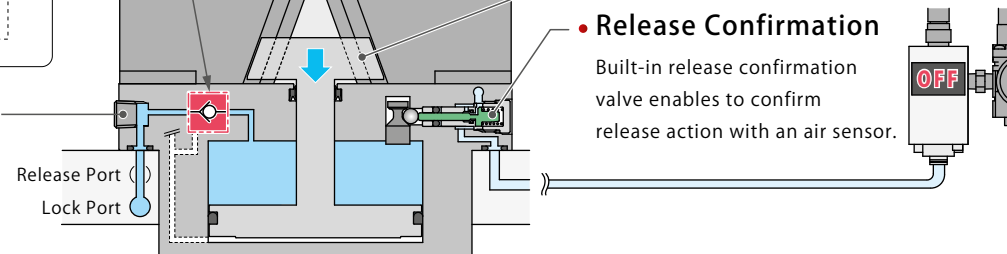
Machining of the clamp lever mounting part is simple. Complicated serration machining is not required.

- **High Accuracy**

The slide block design enables high repeatability and improves machining quality.

- **Release Confirmation**

Built-in release confirmation valve enables to confirm release action with an air sensor.



## Spatter-Resistant Link (Swing) Clamp

High-Power Welding Link Clamp / Swing Clamp



model WCG/WHG

Welding Link Clamp with high durability designed for spatter prevention.

(Welding Swing Clamp is also available.)

Suitable when it is difficult to control spatter scattering position or to install a protection cover such as arc welding of a whole workpiece.

It can also have an auto switch installed for action confirmation.

### Features

- Triple protective structure prevents contaminants from entering the cylinder.

#### Special Rod Surface Finishing

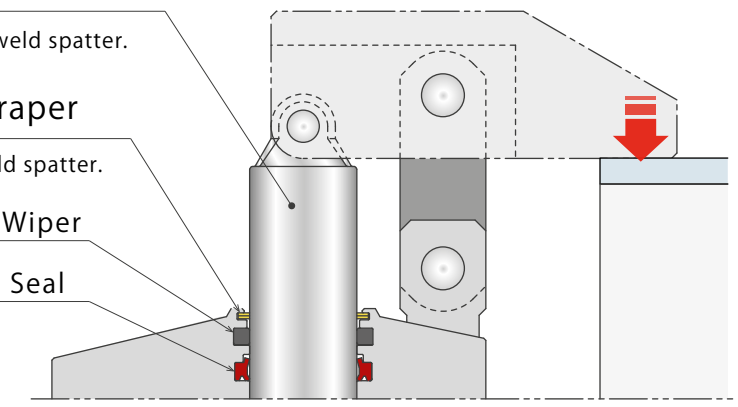
Protects body surface from weld spatter.

#### Coil Scraper

Removes weld spatter.

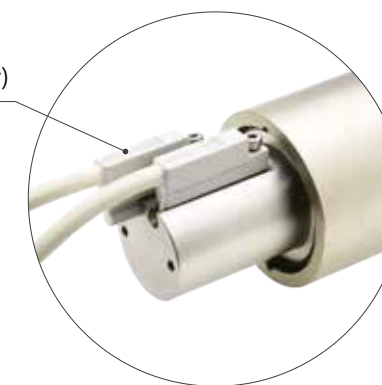
#### Soft Wiper

#### Dust Seal



#### Auto Switch

(Prepared by customer)



Auto switch enables to confirm lock action and release action.





## High-Power Pneumatic Swing / Link Clamp

Model WHE/WCE

Exerts high clamping force powered by pneumatic and the most powerful holding force with mechanical lock among our products.  
Compact models are newly added to the lineup.

High-Power Pneumatic Series

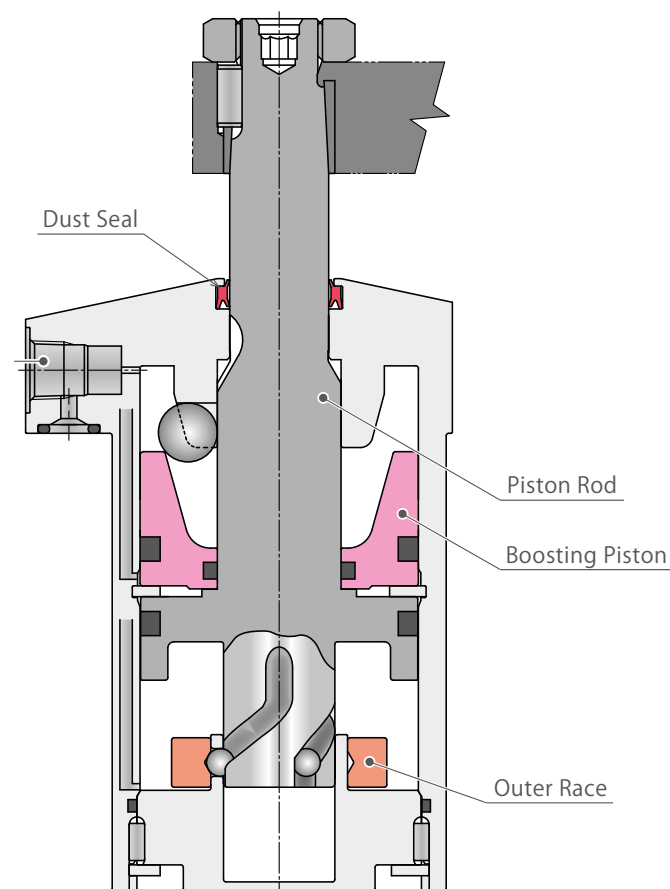
**100,000** units of pneumatic fixture systems have been sold.

Thanks to many requests, we have added long-awaited **compact models** to the lineup!

Enables **Smaller Footprint** • **High Quality** • **Light Weight**

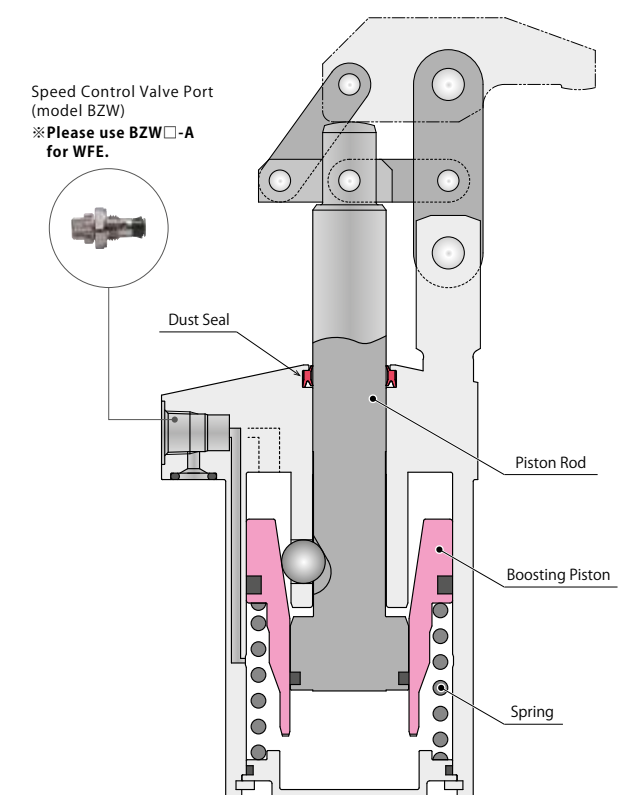


model **WHE0450**



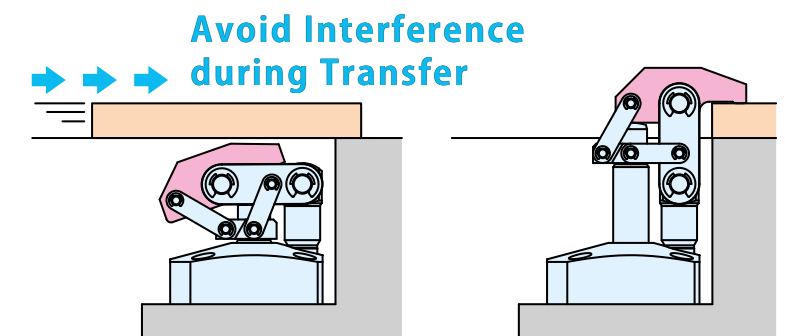
## High-Power Pneumatic Link Clamp Retracting Model

Model WFE



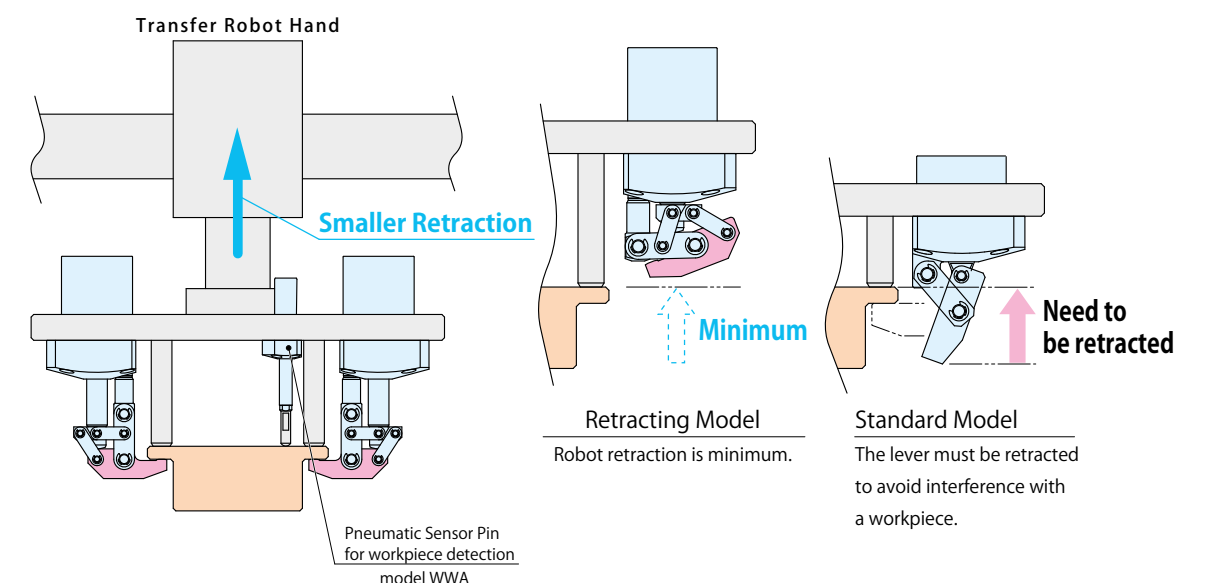
- **Avoid interference with a workpiece when loading and unloading**

Large lever retraction allows for wide angle of loading and unloading workpieces between operations.



Released  
(Loading)

Clamped



Retracting Model  
Robot retraction is minimum.

Standard Model  
The lever must be retracted to avoid interference with a workpiece.



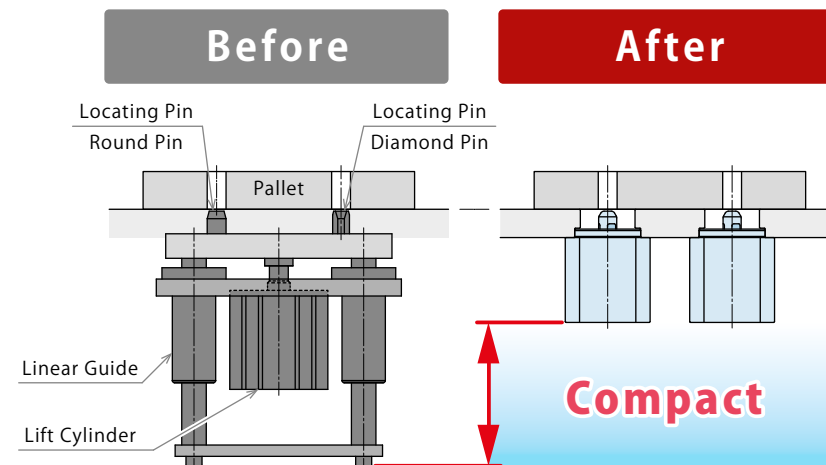
## Lifting Hole Clamp

Model **SWJ**

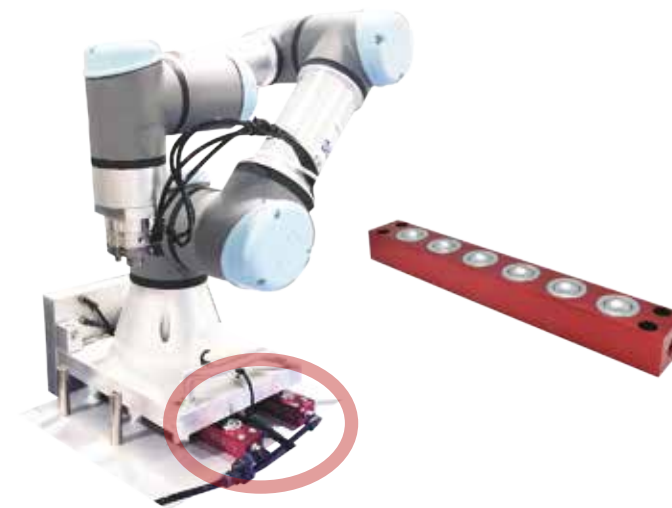
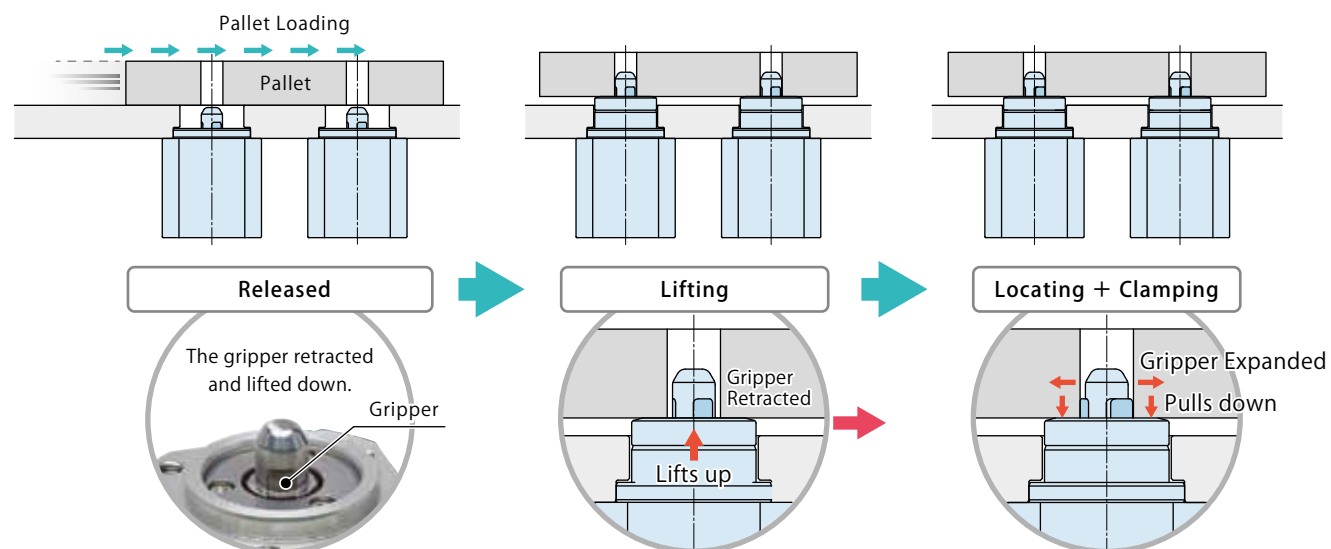
3 Functions in 1 Cylinder :

Lift Cylinder, Locating Pin and Hole Clamp

For locating of transfer equipment and saving space for lifting.



### ● Action Description



## Pneumatic Free Roller Lifter

Model **RQC**

Makes transfer and locating of heavy materials easy.

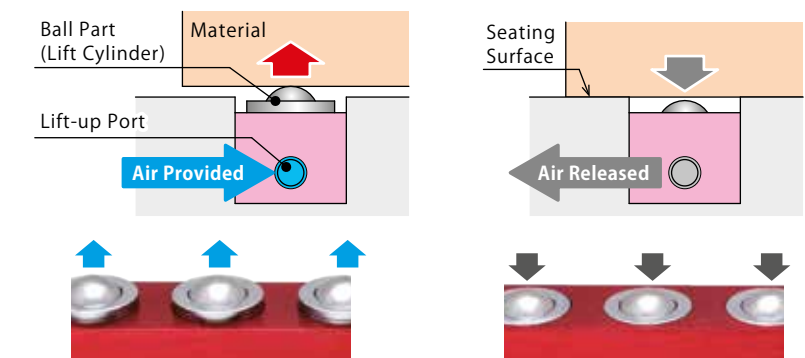
The balls lift up with air pressure.

**LIFT UP** AIR : ON

The ball part lifts up by providing air pressure to the lift-up port.

**LIFT DOWN** AIR : OFF

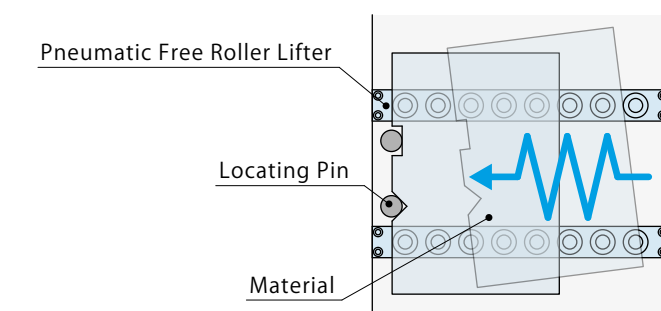
The ball part lifts down with the material weight by releasing air pressure of the lift-up port.



## Pneumatic Force to Lift and Move a Material with Light Force

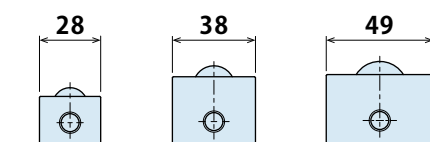
## The Balls Move 360° Flexibly

Able to move a heavy material easily to the locating point.



(Application Example) Moving a material to the locating point.

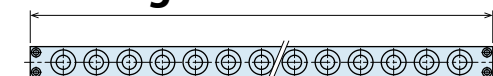
## Slot Width : 3 Options



## 82 Options Available for Various Usage

Can be used for various methods such as transferring a workpiece, pallet, robot and others.

## Total Length : 150 ~ 1200mm





## High-Power Pneumatic Work Support

model **WNC**

Air sensing option : model WNC-M is added to the lineup.

Auto Backup Pin :  
Even more compact  
than Work Support.



Model WDC

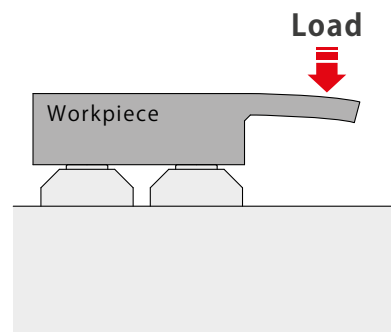
Work Support  
Rodless Hollow Model



Model WNA

### Before

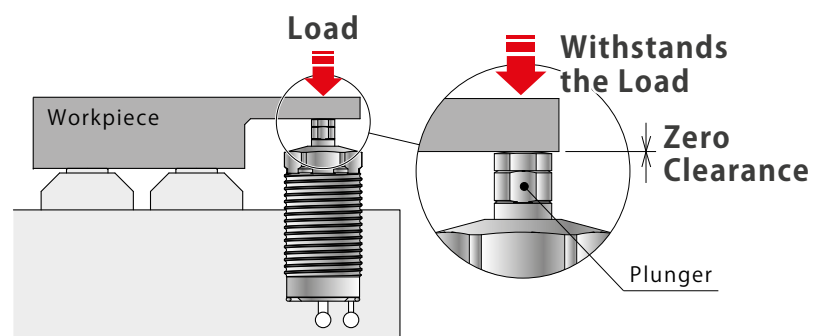
Without Work Support



**Chattering • Deformation**

### After

With Work Support



**Prevents Chattering • Deformation**

The plunger contacts with slight spring force.  
Wedge function locks the plunger  
firmly and holds it.

## The World's Smallest • Compact

Line-up of 7 Body Sizes (External Thread Part):

M16, M22, M26, M30, M36, M45, M60

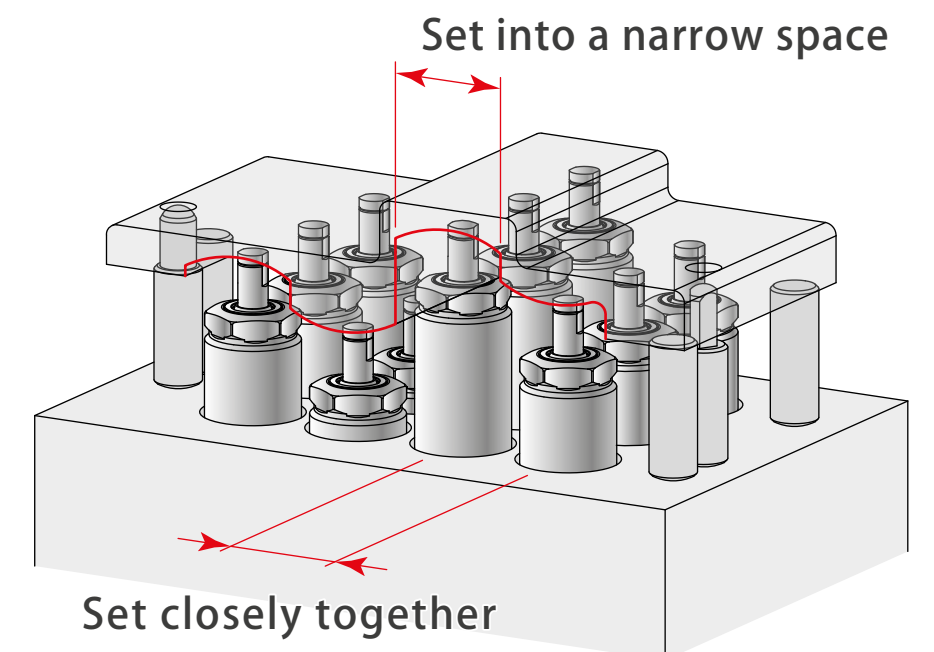
One of the world's smallest M16 size has been newly  
added to the lineup. For more compact equipment.



**M16**

**New: The World's Smallest M16 Size**

**Excellent Machining Quality  
with Multiple Work Supports**





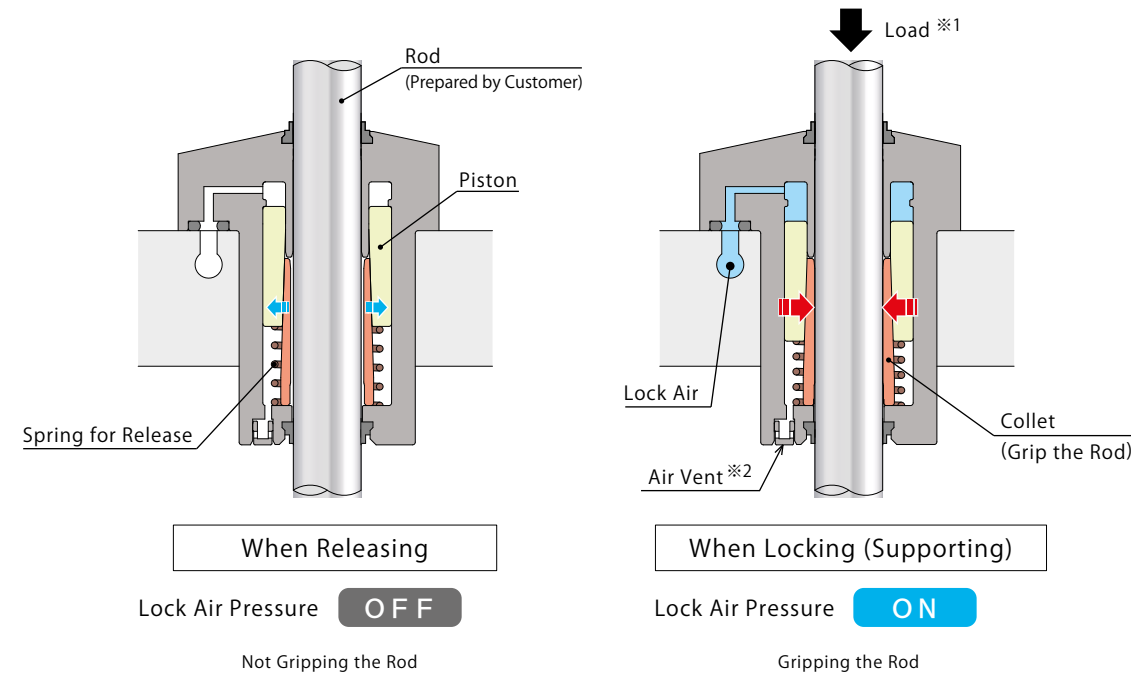
# Pneumatic Work Support

## Rodless Hollow

Model WNA



■ Action Description ※ This is a simplified drawing. Actual components are different.



Notes: ※1. The load acts towards the arrow direction (↓) as shown in the drawing.  
(If used in a reversed position the internal parts are likely to be damaged.)

### Before

Requires powerful cylinder to withstand the load.

Excessive thrust is applied to the workpiece.

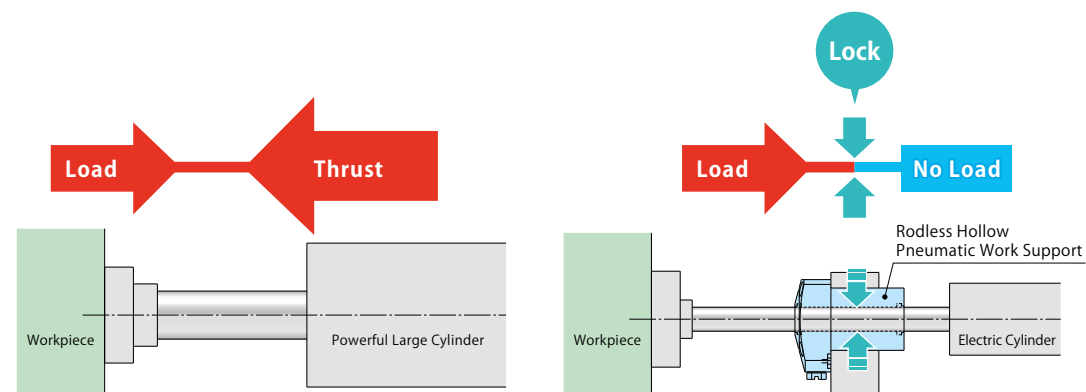
Overload can be applied to the cylinder.

### After

Work support grips and holds the rod so that the cylinder does not receive the load. Compact and low power cylinder can be selected.

Able to use the cylinder with minimal thrust.

Does not transmit the load to the cylinder and prevents the overload.



# Pneumatic Sensor Pin

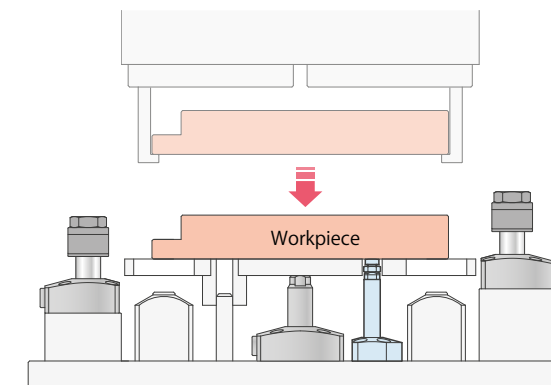
Model WWA



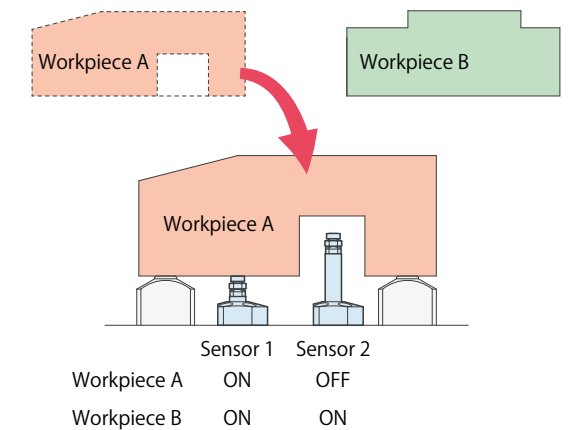
## Detects the Workpiece with Long Stroke Range • Single Air Circuit

Pneumatic sensor pin automatically distinguishes different workpieces.

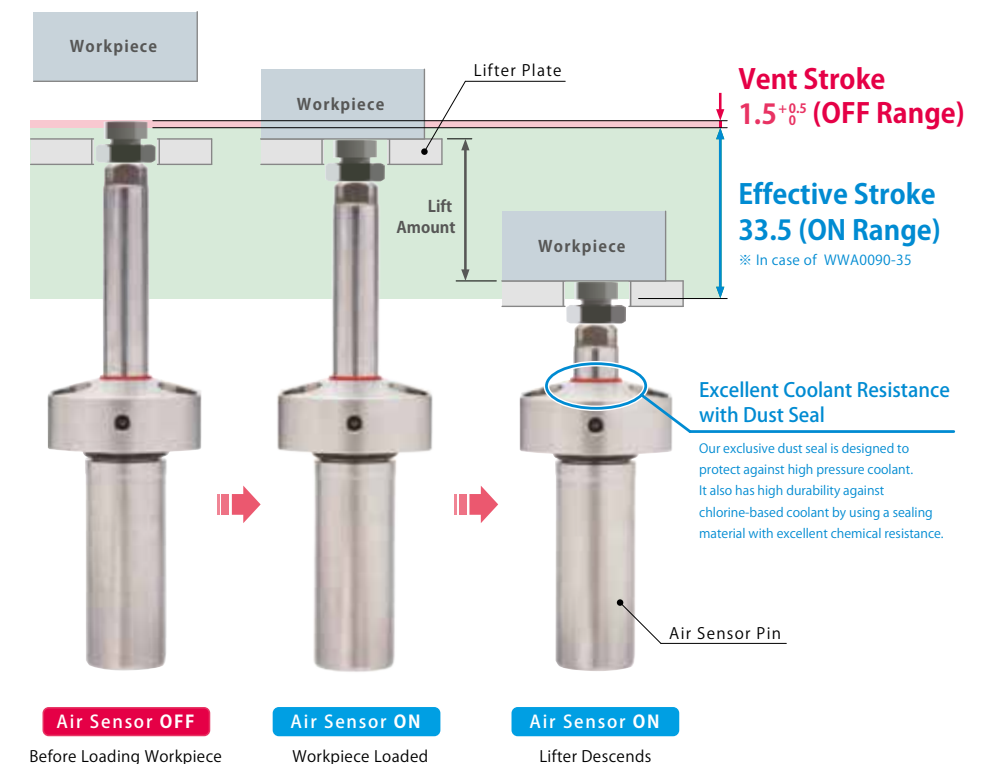
### Application Examples



Detects Workpiece on Automatic Transfer Equipment



Automatically Distinguish Different Workpieces (Two Air Sensors)





### Online Exhibition



### Catalog Request



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► <http://www.kosmek.com/>

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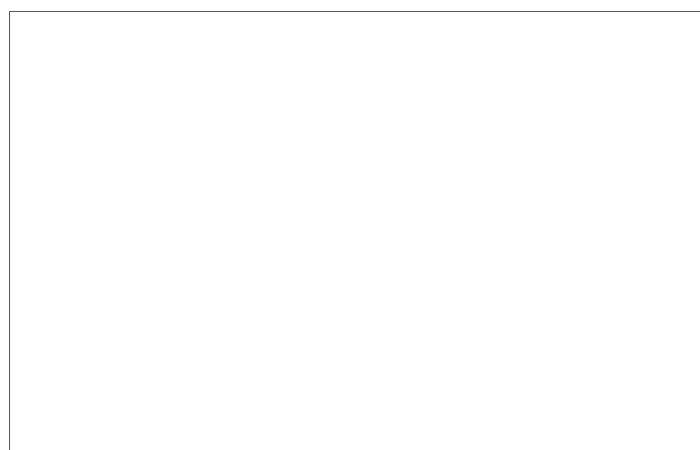
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CAT.NO. SBR-IREX2023-02-G1B



- For Further Information on Unlisted Specifications and Sizes, Please call us.
- Specifications in this Leaflet are Subject to Change without Notice.

