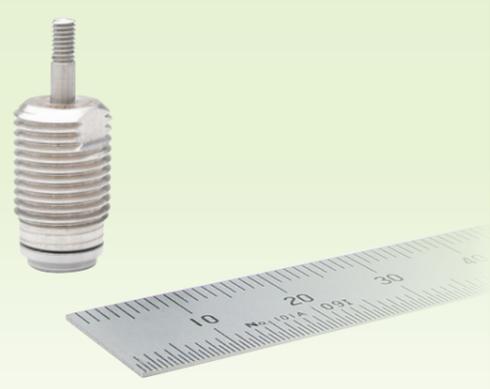


Auto Backup Pin

Model WDC

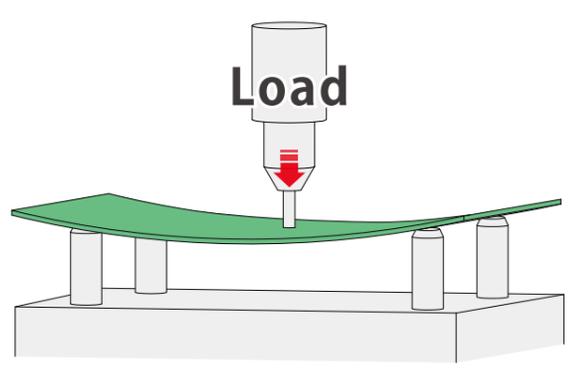


Prevents Chattering and Distortion Counter to the Load

Pin Touches Workpiece Softly and Stops to Provide Support

Before

With No Backup

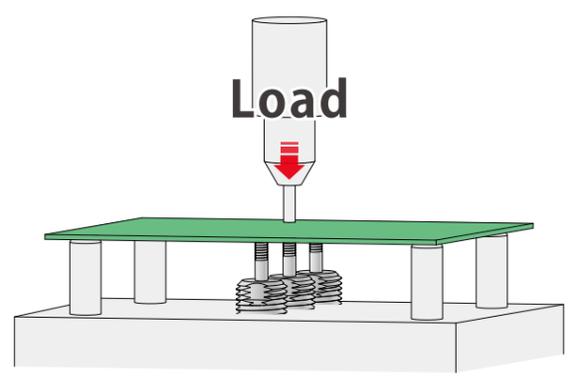


Chattering

Chattering on base plate, molding and workpiece due to the work load.

After

With Backup



Prevents Chattering

Prevention of chattering from the load enables high-quality implementation and processing. (The pin touches workpiece softly and holds it instantly.)

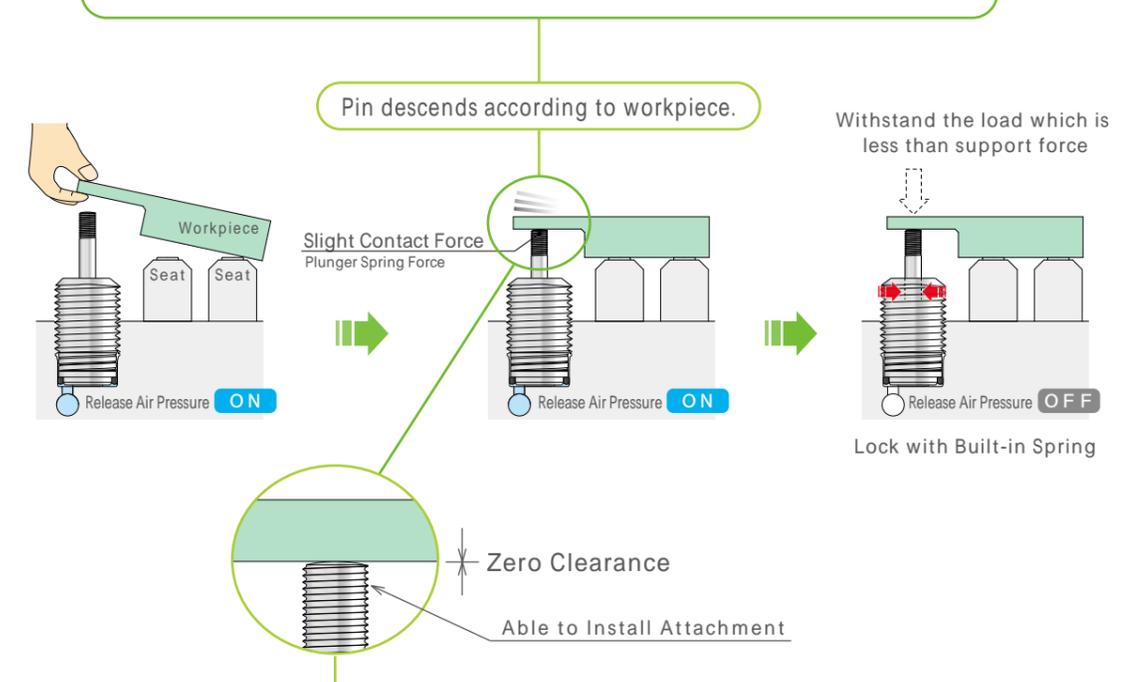
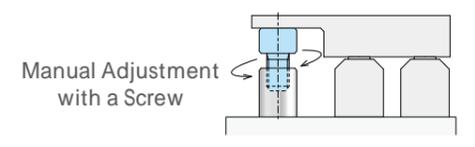
Productivity Improvement • Cost Reduction : From Manual to Automatic

After Automatic Following of the Height

The pin (plunger) descends and reaches the reference surface by the workpiece weight (slight force). Since the pin descends according to workpiece, it can absorb the height tolerance of workpiece and instantly complete the height adjustment. Time reduction in setup improves machine availability.

Before No Time Saving (Manual Type)

Minute adjustment in unreachable or non-visible places is difficult and takes time.



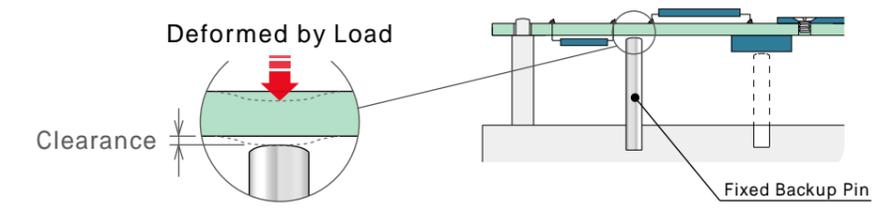
Quality Improvement • Yield Rate Reduction : Suitable for the Work Required of Accuracy

After Zero Clearance

It enables high-accuracy implementation and yield rate reduction, since there is no clearance regardless of the variation in height caused by workpiece distortion, the gap between seat surface and tip of the pin, or solid difference.

Before Chattering

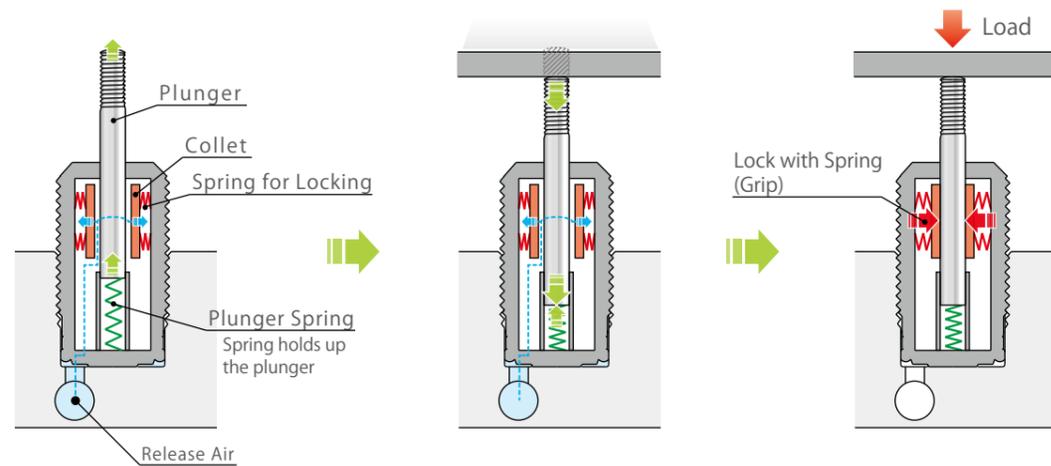
General fixed backup pin tends to have chattering due to the variation in height caused by workpiece distortion, the gap between seat surface and tip of the pin, or individual differences in pin height. Chattering causes low accuracy and assembling failure. Moreover, every time component changes, the backup pin has to be changed.



- Locating + Clamp
- Locating
- Clamp
- Support
- Valve • Coupler
- Cautions • Others
- Auto Backup Pin
 - WDC
- High-Power Pneumatic Work Support
 - WNC
- Rodless Hollow Pneumatic Work Support
 - WNA
- Manifold Block/Nut
 - DZ-R
 - DZ-C
 - LZ-S
 - WNZ-SQ

Action Description

※ The internal structure is a simplified figure. Actual components are different.



Before setting (When releasing)

Release Air Pressure **ON**

Supply release air pressure to unlock the plunger. The plunger lifts up to the stroke-end by plunger spring.

When setting workpiece

Release Air Pressure **ON**

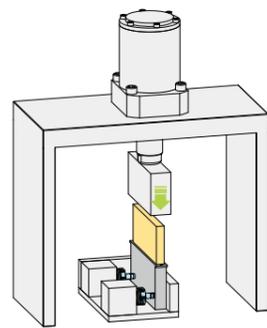
Set a workpiece. The plunger goes down due to the weight of the workpiece.
 ※ The plunger does not go down when plunger spring force is stronger than the workpiece weight.

When supporting

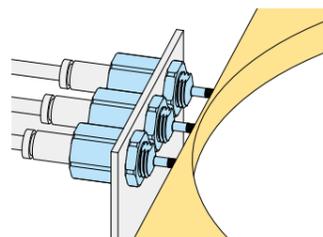
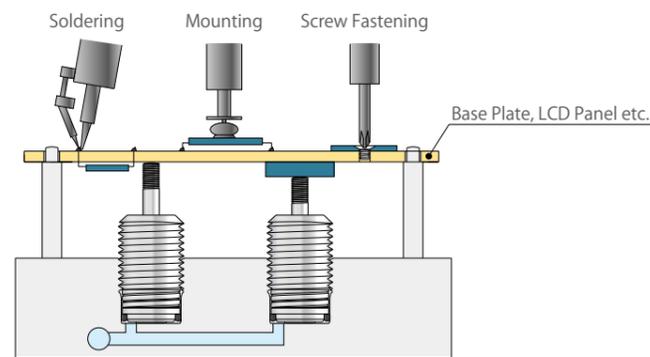
Release Air Pressure **OFF**

When release air pressure is OFF, the collet locks the plunger securely with the spring for locking. It withstands the load which is lower than support force.

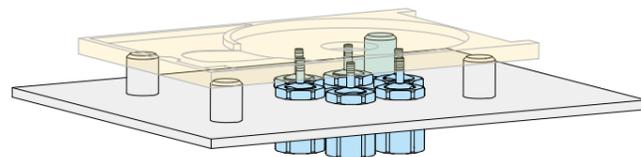
Application Examples



Press-Fit Machine



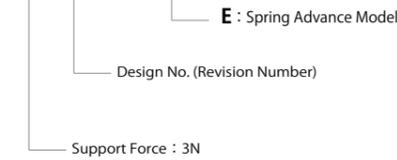
Thin-walled Section



HDD Installation - Press Fit

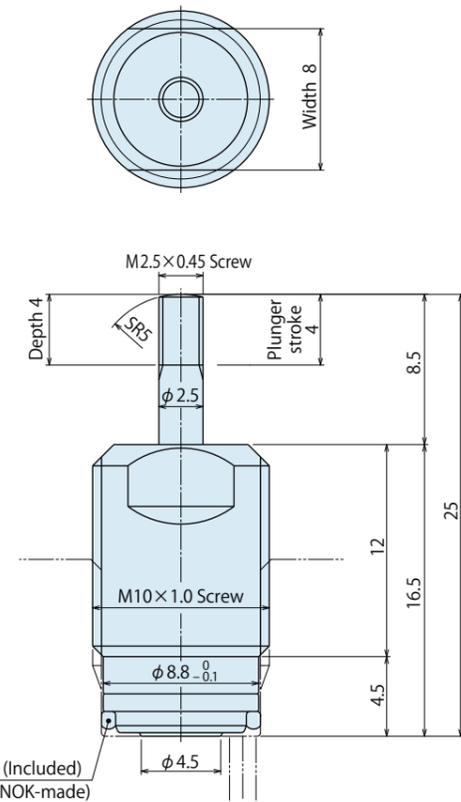
Model No. Indication

WDC00 3 0 - E

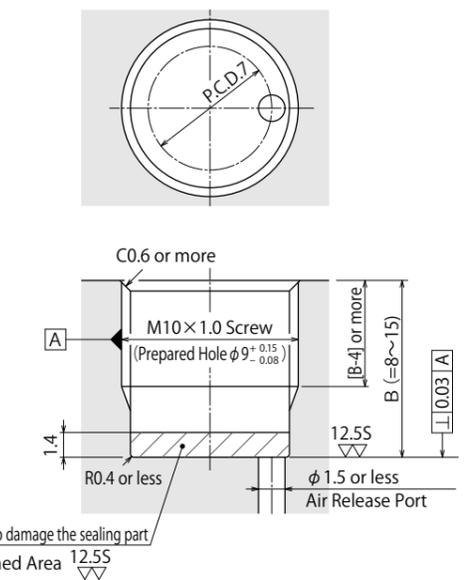


External Dimensions

※ The drawing shows the released condition of WDC0030-E.



Machining Dimension for Recommended Mounting Hole



Accessories : Manifold Block for Mounting

Please contact us for further information.



Cautions

- ※ 1. This product performs lock action with spring and release action with air pressure; therefore, support force is constant.
 - ※ 2. Prepare the stopper for the thin and light workpiece if necessary.
 - When using multiple backup pins, workpiece may be pushed up by plunger spring force.
1. When mounting an attachment on the tip of plunger, the load ratio to the plunger spring force has to be 30% or less. (Plunger direction either vertical or horizontal: the load ratio has to be 30% or less.)
 - Ex.) Plunger spring force=0.1-0.3N
 - Attachment maximum mass=0.1×0.3/0.009807=3g
 - However, the calculated value may differ due to the plunger sliding friction and spring specific etc., so the load ratio should be low as much as possible.

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Specifications

Model No.	WDC0030-E	
Support Force ※1	N	3
Plunger Stroke	mm	4
Cylinder Capacity	mm ³	19
Plunger Spring Force※2	N	0.1~0.3
Max. Operating Pressure	MPa	0.7
Min. Operating Pressure	MPa	0.35
Withstanding Pressure	MPa	1.0
Operating Temperature	°C	0~70
Usable Fluid	Dry Air	
Recommended Tightening Torque for Main Body	N·m	2
Mass	g	7

