

UB

Lock Unit

ø8, ø16



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Proposing new ways to use light, slim lock units

Fixing mechanism that can operate lock/unlock of linear movement with air. Remote operation is possible with easy air control, enabling "fixing," "improved safety," and "fall prevention." Furthermore, "tracing conveyance" is possible precisely because it is light and compact. This is a proposal for new ways to use lock units.

Lightweight / Slim

Image of weight comparison with our brake unit



Conveyance by robot becomes faster



Manual release possible

Manual release is possible by inserting a flat-blade screwdriver into the manual release hole and sliding the piston. Manual release is possible during assembly or maintenance even without air. (Please be careful about the insertion position of the screwdriver.)

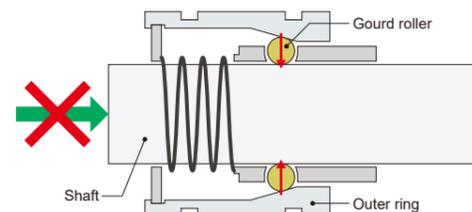
Energy Saving

No power such as electricity or air is required while locked.



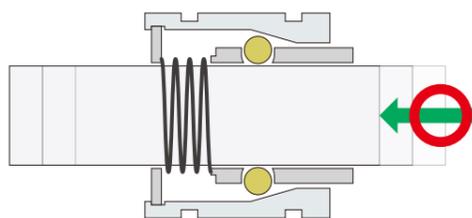
Lock Mechanism

Lock Direction



It locks when the guard roller rolls into the wedge-shaped space formed by the shaft and outer ring.

Free direction

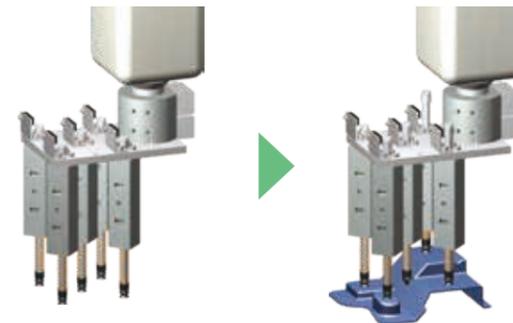


It does not lock in the opposite direction.

Application Example

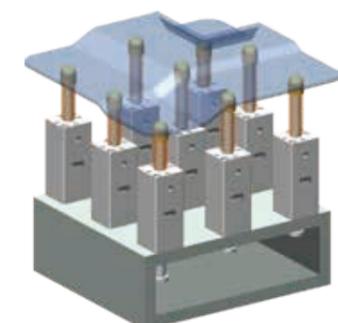
New ways to use lock units, possible precisely because they are lightweight and compact.

Robot hand



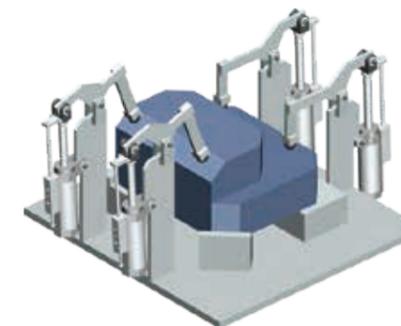
You can make the workpiece conform to its shape simply by pressing it against the shaft.

Bottom support tracing unit



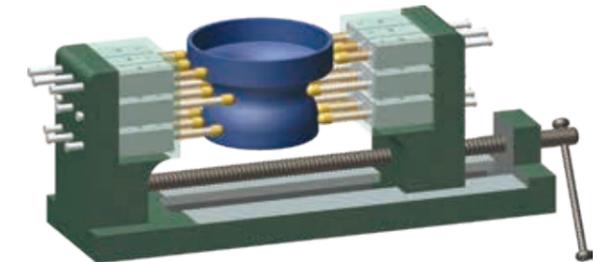
By placing the workpiece on the shaft, you can make it conform to the shape of the workpiece.

Fixed holding of clamp cylinder



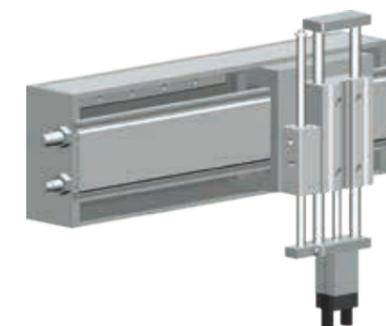
Since air is not required during locking, there is an energy saving effect. (However, clamping force is not generated on the workpiece)

Three-dimensional vise



By pressing the workpiece with shafts on both sides, it can be made to conform to the workpiece shape.

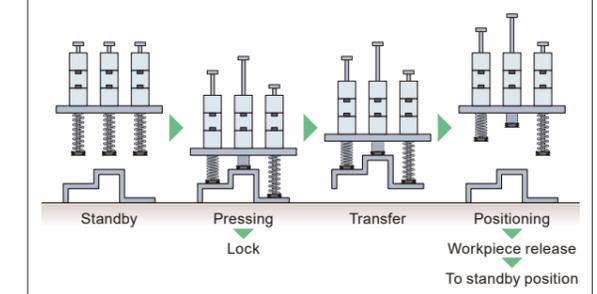
Fixed holding at stop of Pick & Place (Fail-safe)



Cylinder position can be maintained with an inexpensive mechanism, and fall prevention is possible in case of emergency. Protects workpieces from damage due to falling during power outages or air shortages.

Principle of tracing (copying)

The shaft is pressed against the workpiece, the shape of the workpiece is transferred to the shaft (tracing), and the adjusted posture is fixed by the lock unit.



Lock Unit UB Series Product System

Model Variations	Applicable Shaft Diameter	Lock Direction
UB-S	ø8	Uni-directional
	ø16	
UB-W	ø8	Bi-direction
	ø16	

Lock Unit

UB

JSB3

LMB

LML

Lock Unit

UB

JSB3

LMB

LML

Cylinder Switch

Ending

Cylinder Switch

Ending

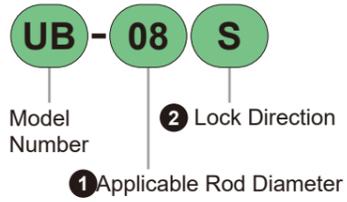


Lock Unit UB Series

●Applicable Rod Diameter : $\phi 8$, $\phi 16$



Model No. Notation



① Applicable Rod Diameter

Code	Content
08	$\phi 8$
16	$\phi 16$

② Lock Direction

Code	Content
S	Uni-directional
W	Bi-directional

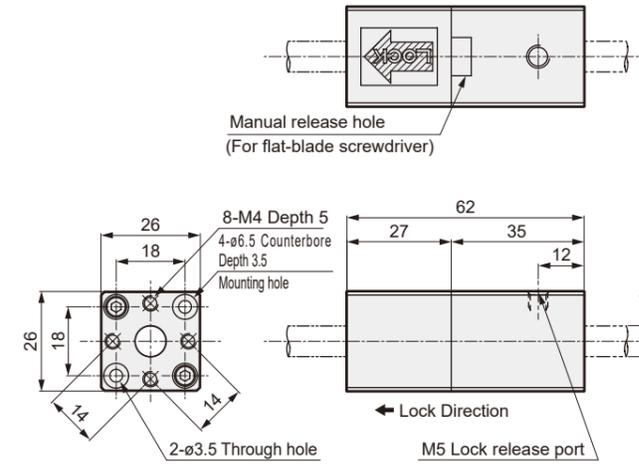
Specifications

Item	UB-08S	UB-16S	UB-08W	UB-16W
Operating Fluid	Compressed Air			
Max Operating Pressure	MPa 1.0			
Min Operating Pressure	MPa 0.3			
Proof Pressure	MPa 1.6			
Ambient Temperature	$^{\circ}\text{C}$ -5 to 60 (however, no freezing)			
Holding Force	N 180	N 450	N 180	N 450
Lubrication	Not required (When lubricating, use turbine oil type 1 ISO VG32)			
Lock Direction	Uni-directional		Bi-directional	
Applicable Rod Diameter and Dimensional Tolerance	mm $\phi 8 \pm 0.05$	mm $\phi 16 \pm 0.10$	mm $\phi 8 \pm 0.05$	mm $\phi 16 \pm 0.10$
Weight	g 99	g 367	g 160	g 578

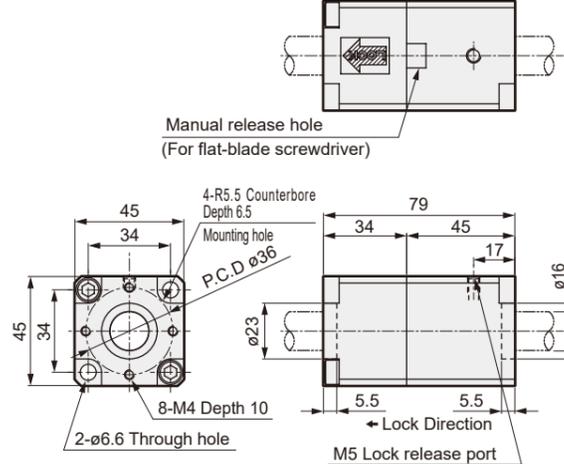
UB Series Dimensional Drawings

Dimensional Drawings

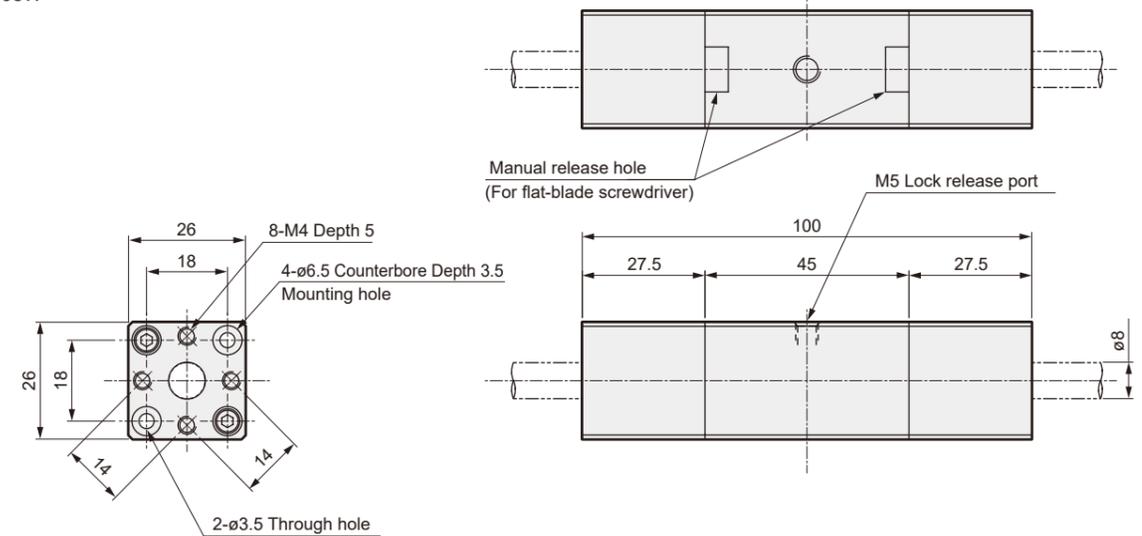
●UB-08S



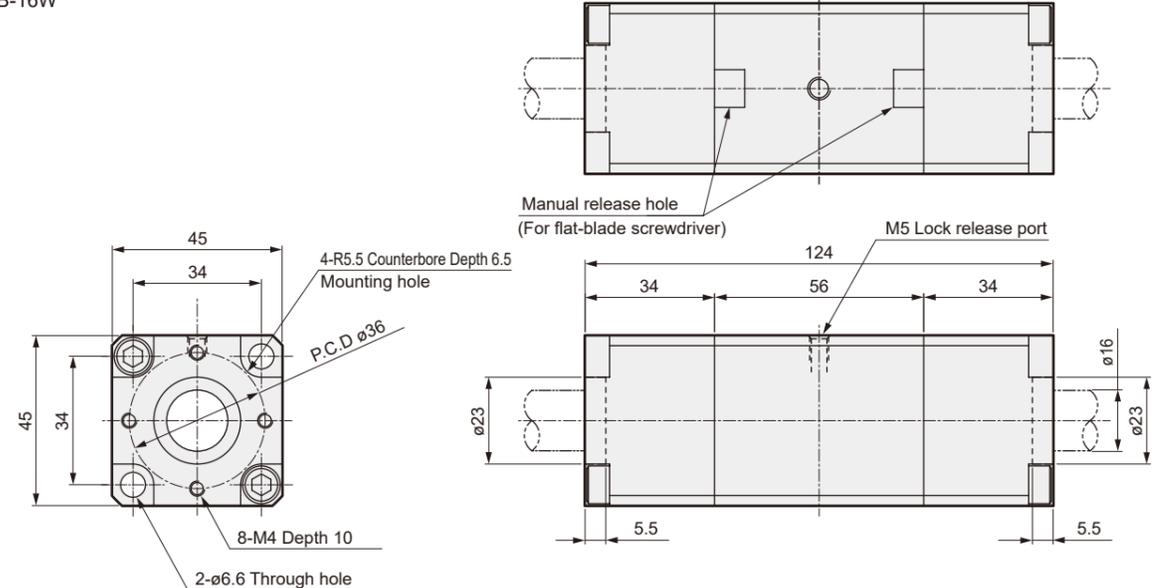
●UB-16S



●UB-08W

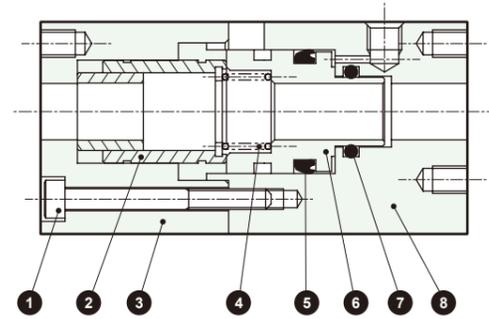


●UB-16W

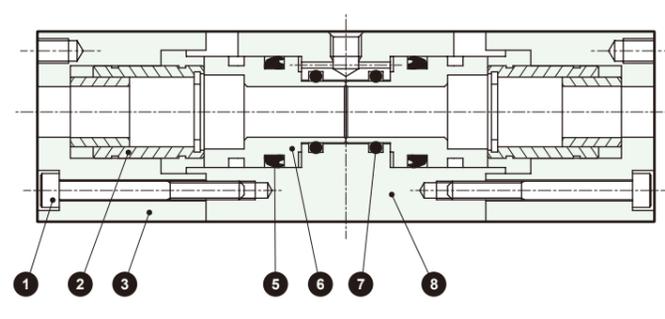


Internal Structure / Materials

●UB-08/16S



●UB-08/16W



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Hexagon Socket Head Cap Screw	Stainless Steel		5	Piston Packing	Nitrile Rubber	
2	Clamper	-		6	Piston	Aluminum Alloy	Alumite
3	Clamper Case	Aluminum Alloy	Hard Anodized	7	O-ring	Nitrile Rubber	
4	Spring	Steel	Electrodeposition Coating	8	Main unit	Aluminum Alloy	Hard Alumite



To Use This Product Safely

Be sure to read this before use. For general information on cylinders, please check Intro 41.

Individual Precautions: Position locking unit UB Series

Design / Selection

Warning

- The catalog shows static load. Cannot be used as an emergency stop or emergency stop brake.
- The rod may not lock when there is residual air pressure.

CAUTION

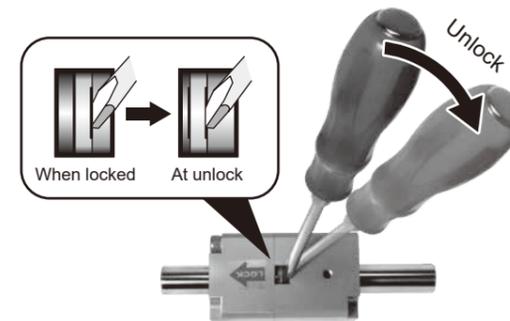
- Disassembly of the parts may lead to the ingress of debris or the deterioration of component assembly precision.
- Prevent the ingress of foreign matter, as contamination by foreign matter such as debris or cutting powder may lead to damage or functional deterioration of the rollers and other circulatory parts.
- In usage conditions where corrosive solvents, coolant, etc., may splash onto and enter the product, prevent adherence or entrance to the Lock Units body with the use of a bellows, cover, etc.
- The lock unit does not have a bearing function. Avoid using it with radial or moment loads applied.

During Use

CAUTION

■ Manual Release Method

Insert a flat-blade screwdriver into the manual release hole and slide the piston for manual release. Manual release is possible during assembly or maintenance even without air. (Please be careful about the insertion position of the screwdriver.)



■ Mounting Method

Be sure to lock it to centering the Lock Units and shaft.

Lock Unit

Lock Unit

UB

UB

JSB3

JSB3

LMB

LMB

LML

LML

Cylinder Switch

Cylinder Switch

Ending

Ending