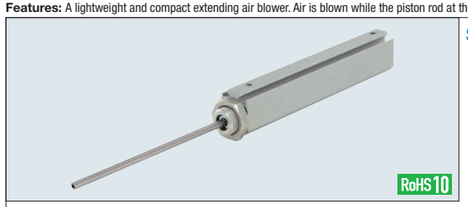
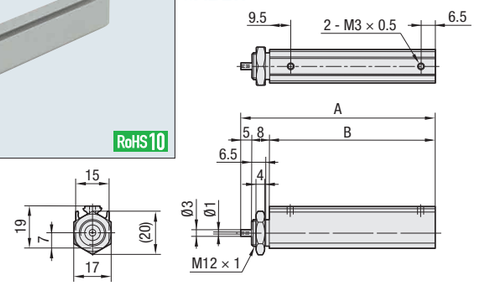
Extending Air Blower
Point Type

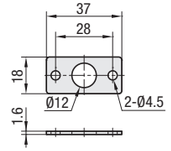
Features: A lightweight and compact extending air blower. Air is blown while the piston rod at the tip extends.



SABLW



Bracket Included



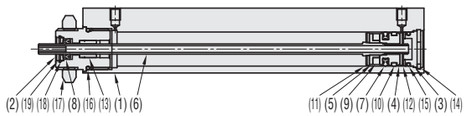
Accessory: Bracket
Material: Low Carbon Steel

Part Number			Stroke	A	B
Type	Piston Rod Outer Dia.	Orifice			
SABLW	3	1	50	88	75
			75	113	100

Extending Air Blower Mounting Method

Use the included lock nut for panel mounting or use the included bracket.

Structure Diagram



Part Details

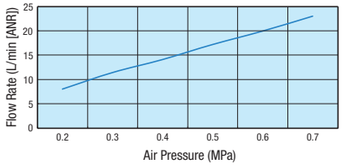
No.	Part Name	Materials
(1)	Main Body	6061 Aluminum Alloy
(2)	Rod Cover	6061 Aluminum Alloy
(3)	End Cover	6061 Aluminum Alloy
(4)	Piston	6061 Aluminum Alloy
(5)	Piston #2	6061 Aluminum Alloy
(6)	Piston Rod	303 Stainless Steel
(7)	Piston Gasket	NBR Nitrile Rubber
(8)	Rod Gasket	NBR Nitrile Rubber
(9)	Magnet	Nd-Fe-B
(10)	Wear Contact	PTFE

No.	Part Name	Materials
(11)	Rod Cushion	NBR Nitrile Rubber
(12)	End Cushion	NBR Nitrile Rubber
(13)	Rod Bushing	C36000 Brass
(14)	Retaining Ring	Spring Steel
(15)	End Gasket	NBR Nitrile Rubber
(16)	Body Gasket	NBR Nitrile Rubber
(17)	Lock Nut	1018 Carbon Steel or Equivalent
(18)	Gasket Holder	6061 Aluminum Alloy
(19)	Retaining Ring	Spring Steel

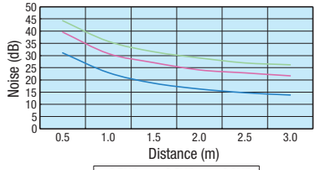
Basic Specifications

Tube Inner Dia.	10 mm	
Stroke	50 mm	75 mm
Orifice	1 mm	
Operating Type	Double acting	
Applicable Fluid	Air	
Operating Pressure	0.2 to 0.7 MPa	
Pressure Resistance	1.0MPa	
Ambient Temperature	5 to 60°C	
Lubrication	Lubrication-free	
Product Mass	45g	55g

Air Flow Rate Property Table

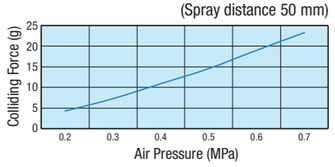


Noise Level Property Table



Air Colliding Force Property Table

From the Piston Rod tip
(Spray distance 50 mm)



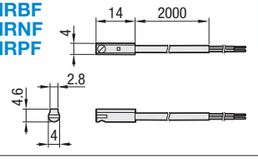
Values on the graph are actual measurement reference values and are not guaranteed.

Precautions for Use

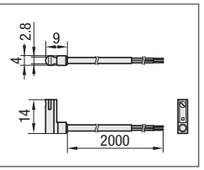
- The fluid used should be clean compressed air.
- Use at pressures between 0.2 and 0.7 Mpa.
- The ambient temperature should be between 5°C and 60°C.
- Do not apply load to the rod.
- Do not disassemble or modify this product.
- When performing maintenance and inspection, release pressure from within the unit and pipes.

Extending Air Blower Dedicated Sensor

MRBF
MRNF
MRPF



MRBFV
MRNFV
MRPFV



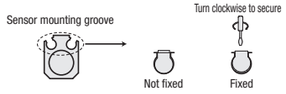
Part Number	Load Voltage	Load Current	Indicator Lamp	Sensor Type	Number of Wires	Lead Wire Length (m)	Lead Wire Out
MRBF	10 to 28 V DC	4 to 20 mA	LED	Non-contact	2	2	Rear
MRNF	4.5 to 28 V DC	50mA		Non-contact (NPN)	3		
MRPF				Non-contact (PNP)	3		
MRBFV	10 to 28 V DC	4 to 20 mA		Non-contact	2		Top
MRNFV	4.5 to 28 V DC	50mA		Non-contact (NPN)	3		
MRPFV				Non-contact (PNP)	3		

Basic Specifications for Extending Air Blower Dedicated Sensor

Part Number (Provisional)	MRBF/MRBFV	MRNF/MRNFV	MRPF/MRPFV
Contact Type	Non-contact	Non-contact (NPN)	Non-contact (PNP)
Contact Structure	Normally Open		
Operating Voltage	10 to 28 V DC	4.5 to 28 V DC	
Operating Current	4 to 20 mA	MAX.50mA	
Power Consumption	MAX.0.6W	MAX.1.5W	
Ambient Temperature	5 to 70°C		
Lead Wire	2 m wire × 2	2 m wire × 3	
Indicator Lamp	Lights when ON (red)		
Protection Grade	IP67		
Product Mass	24g		

Sensor Mounting Method

The sensor can be installed along the groove of the Extending Air Blower.
Mount as close to the center of the motion range as possible and secure firmly.
The sensor can be secured by turning the screw clockwise.



Precautions for Use

- Check specifications carefully before use.
- Mount in a location that takes the space required for maintenance into account.
- Make the wiring as short as possible.
- Do not drop or subject to shock.
- Set the sensor up in an appropriate location after checking that it functions properly
- Be sure to connect additional devices such as relays before use. Damage may result if the sensor is switched ON with no load.
- Be aware of the polarity of when wiring.
- When sensing in the middle of a stroke, if the piston speed is too fast, the sensor may fail to respond due to the short sensing time.

Part Number Example

Extending Air Blower

Part Number				
Type	Piston Rod Outer Dia.	Orifice	-	Stroke
SABLW	3	1	-	50

Sensor for Blower

Part Number
MRBF

Extending Air Blower Overview
Point Type

Overview

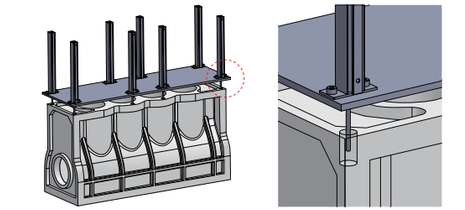
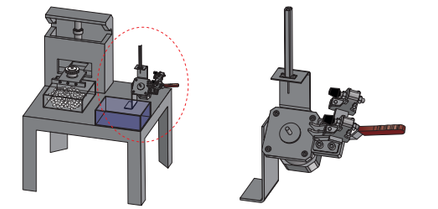
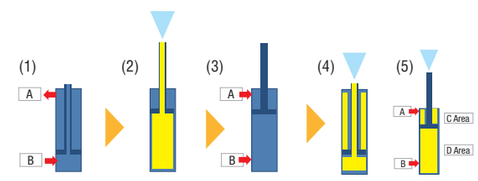
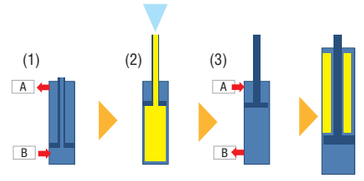
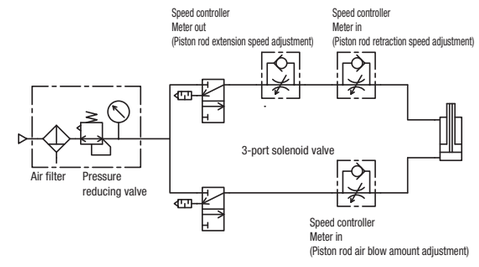
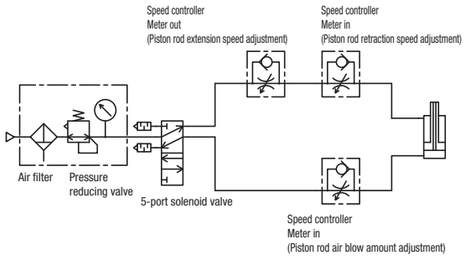
The Extending Air Blower can blow air with pin-point accuracy at a short range.
The piston rod extends and retracts to allow more precise air blowing onto the moving workpiece at close range. Allows greater blow accuracy than is possible with conventional air blowing.
It also allows automation of formerly manual air blowing (using air blow guns) while saving space.

Features

· Two types of stroke can be selected. (50 mm or 75 mm)
· Two types of blow operating configurations are possible
(1) Controlled using a 3-port valve (using two units). Blows air when the piston rod is retracted.
(2) Controlled using a 5-port valve. Does not blow air when the piston rod is retracted.

Applications

Dust removal, blowing

	Air is blown when piston rod is retracted	Air is not blown when piston rod is retracted
Application Example	 **Cleaning of Machinery Internals and Automotive Parts** An Extending Air Blower can be installed inside of a system to blow deep into holes and tapped holes in workpieces. Air blowing during retraction has the additional advantage of being able to remove iron powder from the backs of screws in places such as tapped holes.	 **Gate Cutting Machines for External Machine Parts and Automotive Parts / Reamer Jigs** Used for reamer jigs. Automobile parts made of resin can be pressed with a gate cutting machine and reamed with a reaming jig. The Extending Air Blower is used to remove resin dust that adheres to the reamer. Interference with other parts (toggle clamps) occurs, so air blowing is performed at a short distance when there is no longer any interference.
Reference Operating Principle	 (1) The piston rod extends as air is supplied to the B port and expelled from the A port. (2) Because the piston rod is perforated, air is blown from the piston rod at the same time as it extends. (3) Supplying air to the A port and B port causes the piston rod to retract. (4) Because the piston rod is perforated, air is blown from the piston rod at the same time as it retracts. (5) If an equal amount of air is supplied to the A port and B port, the piston rod will retract while blowing air because the force in area D will be weaker than the force in area C due to the piston rod being perforated.	 (1) The piston rod extends as air is supplied to the B port and expelled from the A port. (2) Because the piston rod is perforated, air is blown from the piston rod at the same time as it extends. (3) Supplying air to the A port causes the piston rod to retract.
Circuit Diagram		

- When installing the speed controller, it is recommended that the meter out type (throttle on the exhaust side) and the meter in type (throttle on the intake side) be connected in series on the rod side, and that the meter in type be connected on the head side.
- It is possible to control with one 5-port valve, but it is recommended that two 3-port valves are used as in the above recommended circuit.
- Always install an air filter (filtration rate of 5 µm or less) on the air supply side of the Extending Air Blower to remove any condensation or debris.
- This product can be used without lubrication, but a lubricator can also be installed. However, use type I turbine oil "ISO VG32." Lubricating with spindle oil, machine oil, etc. may cause the gasket to expand, resulting in operation failure. In this case, keep in mind that oil may mix with the exhaust air from the piston rod outlet.