Pulse Blow Unit

New

RoHS

*Intermittent pulse blow improves removal efficiency by 35% compared with continuous blow.*1

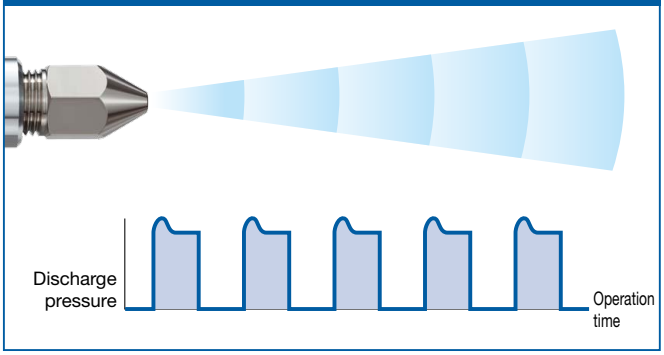
(*1 Based on the test by SMC.)

CO_2 emissions (Air consumption)

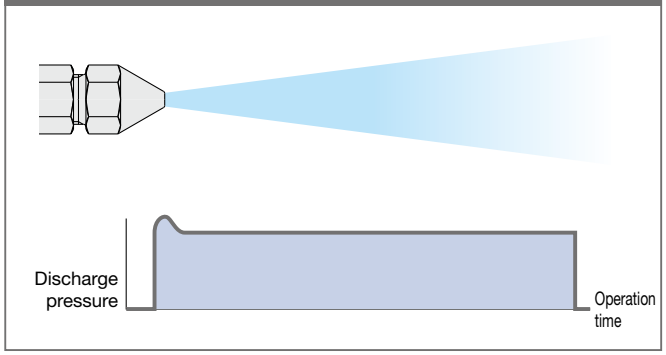
50% reduction

* Depending on pulse conditions (operating frequency)

Pulse blow



Continuous blow



Possible to adjust operating frequency

Frequency characteristics in relation to the number of needle rotations p. 1

Push-lock type
Frequency adjustment knob (8 rotations)

Frequency (Operating frequency): Low

Frequency (Operating frequency): High

External power supply is unnecessary.

A pulse blow is possible by the air supply.

Low pressure loss is achieved.

A large effective area (10.3 mm^2) helps reduce the air consumption.

Possible to use it with its bracket mounted

Combined use with a blow gun

Refer to the **Web Catalog** for details on the **KN series** nozzles for blowing and the **VMG series** blow gun.

Compact, Lightweight

Weight: Max. **97%** reduction

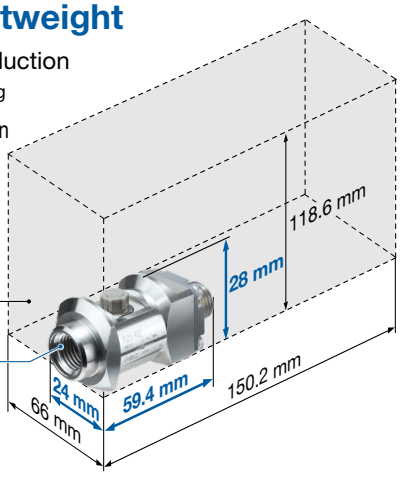
PU: **47 g** ← AXTS040: 1400 g

Volume: Max. **86%** reduction

1400 g

Pulse blow valve **AXTS040**

47 g PU



PU Series

SMC

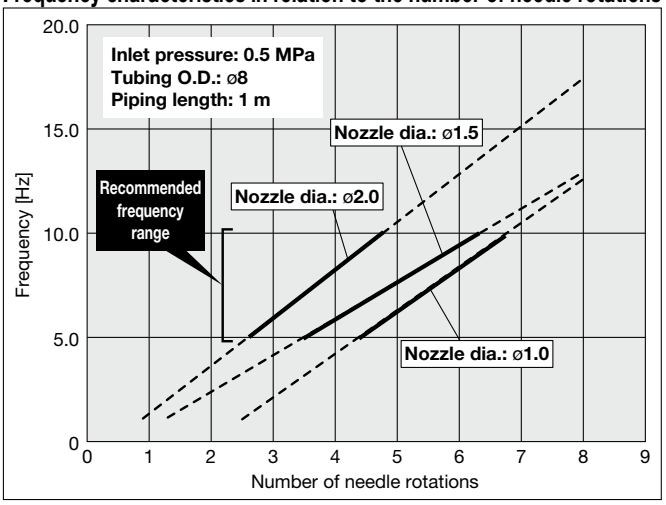
Pulse Blow Unit
PU Series

RoHS

Specifications

Fluid	Air
Operating pressure range	0.3 to 0.7 MPa
Proof pressure	1.05 MPa
Ambient and operating fluid temperatures	–5 to 60°C (No freezing)
Frequency adjustment range	5 to 10 Hz
Port size	IN side port: R1/4 (male thread)
	OUT side port: Rc1/4 (female thread)
Weight	47 g
Body material	Aluminum
Recommended mounting nozzle dia. [mm]	ø2.0 or less
Effective area [mm²]	10.3

Frequency characteristics in relation to the number of needle rotations



How to Order

PU20 – R02 – B

Option

Nil	None
B	With bracket

Connection thread (IN side)

R02	R1/4

Bracket Part Number (To Be Ordered Separately)

PU20P-B (Material: Resin)

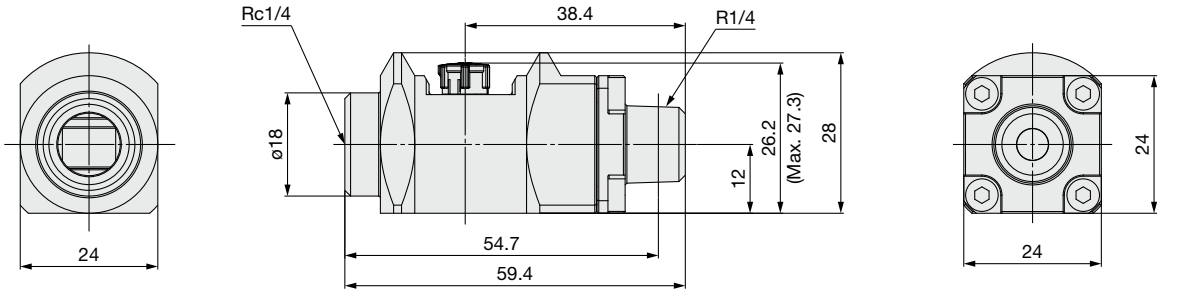
Set Part Number for Pulse Blow Unit and Blow Gun

VMG standard model number – P

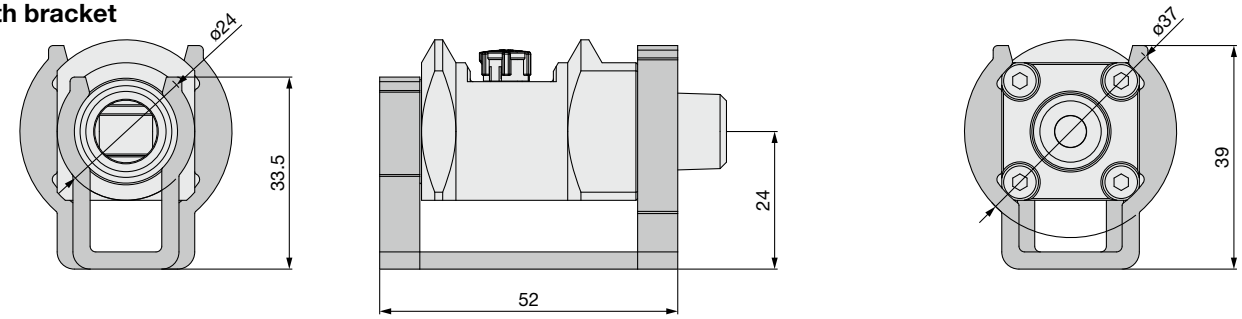
With pulse blow unit

* The applicable nozzle effective area is ø2 or less. The extension nozzle is not mountable. Refer to the **VMG series** blow gun catalog for details.

Dimensions



With bracket



SMC

PU Series
Specific Product Precautions

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For fittings and tubing precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

Caution on Design

⚠Warning

1. Confirm the specifications.

Products represented in this catalog are designed only for use in compressed air systems. Do not operate at pressures, temperatures, etc., beyond the range of specifications, as this can cause damage or malfunction.

2. Do not disassemble the product or make any modifications, including additional machining.

Doing so may cause human injury and/or an accident.

3. The product's frequency characteristics are representative values.

Be careful that the frequency varies according to individual differences.

4. Be careful of the operating pressure range.

This product's operating pressure range is from 0.3 to 0.7 MPa. Check the operating environment prior to use.

⚠Caution

1. The recommended mounting nozzle diameter for the product is ø2 or less.

The recommended pipe tube inner diameter on the supply side is 5 mm or more and the recommended pipe tube length is 5 m or less. When using tubes with an inner tube diameter of less than 5 mm, use nozzles with a nozzle diameter of 1 mm or less. Normal pulse operation may not be possible when using piping conditions other than those recommended.

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution," "Warning"** or **"Danger."** They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Danger : **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

*1) ISO 4414: Pneumatic fluid power - General rules and safety requirements for systems and their components
ISO 4413: Hydraulic fluid power - General rules and safety requirements for systems and their components
IEC 60204-1: Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1:Robots
etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. SMC products cannot be used beyond their specifications. They are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not allowed.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, combustion equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogs and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

⚠ Caution

SMC develops, designs, and manufactures products to be used for automatic control equipment, and provides them for peaceful use in manufacturing industries.
Use in non-manufacturing industries is not allowed.
Products SMC manufactures and sells cannot be used for the purpose of transactions or certification specified in the Measurement Act of each country.
The new Measurement Act prohibits use of any unit other than SI units in Japan.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
   Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
   This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Suction cups (Vacuum pads) are excluded from this 1 year warranty.**
A suction cup (vacuum pad) is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the suction cup (vacuum pad) or failure due to the deterioration of rubber material are not allowed by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Safety Instructions	Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.