Doc. No IBG****-OMY0020-B (NN31259002)



Operation Manual

PRODUCT NAME IMPACT BLOW GUN

MODEL / Series / Product Number

SMC Corporation

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2. How to Order

IBG1 0 - 02

Туре Without adjuster With adjuster

Adjuster

Supply port

Screw-in type

Symbol	Size	
Nil	Rc3/8	
N	NPT3/8	
F	G3/8	
		_

With S coupler/One-touch fitting

Symbol

0

1

	Symbol	Applicable tubing O.D.	Part no.	Appearance
S coupler	11	÷	KK4P-03MS	
	12	÷	KK130P-03MS	
-	H06	Ø6	KQ2H06-03AS	
itin	H08	08	KQ2H08-03AS	11 1-11
One-touch fitting	H10	ø10	KQ2H10-03AS	
	H07	ø1/4"	KQ2H07-36AS	
	H09	ø5/16"	KQ2H09-36AS	一章
0	H11	ø3/8"	KQ2H11-36AS	1.0.0

Ine S coupler or titting is shipped together with the product.
 For the S coupler or metric size One-touch fitting (H06, H08, H10), the port size on the impact blow gun side is Rc3/8.
 For the inch size One-touch fitting (H07, H09, H11), the port size on the impact blow gun side is NPT3/8.

	IBG2)	-0	2
	Adjuster			
Symbol	Туре			
0	Without adjuster]		
1	With adjuster			

Supply port

	Screw-In type
Symbol	Size
Nil	Rc1/4
N	NPT1/4
F	G1/4

With S coupler/One-touch fitting

_	that o bouplehone tought hang				
	Symbol	Applicable tubing O.D.	Part no.	Appearance	
pler	11	_	KK4P-02MS		
S coupler	12	_	KK130P-02MS		
Ð	H06	ø6	KQ2H06-02AS		
littin	H08	ø8	KQ2H08-02AS		
One-touch fitting	H10	ø10	KQ2H10-02AS		
	H07	ø1/4"	KQ2H07-35AS		
a u	H09	ø5/16"	KQ2H09-35AS	甲	
0	H11	ø3/8"	KQ2H11-35AS		

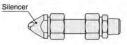
The S coupler or fitting is shipped together with the product.

The S coupler or initing is snipped together with the product.
 For the S coupler or metric size One-touch fitting (H06, H08, H10), the port size on the impact blow gun side is Rc1/4.
 For the inch size One-touch fitting (H07, H09, H11), the port size on the impact blow gun side is NPT1/4.

• Nozzle (Refer to page 8 for details.)

Symbol	Туре	Nozzle length	Nozzle part no.*2
Nil	Without nozzle		
01		50 mm	IBG1-12-10-50
02	Long nozzle ^{⊛1}	100 mm	IBG1-12-10-100
03		150 mm	IBG1-12-10-150
04		300 mm	IBG1-12-10-300
05		600 mm	IBG1-12-10-600-X1
06		1000 mm	IBG1-12-10-1000-X1
11		50 mm	IBG1-12-10-50S
12		100 mm	IBG1-12-10-100S
13	Long nozzle with a	150 mm	IBG1-12-10-150S
14	silencer ^{*1, *3}	300 mm	IBG1-12-10-300S
15		600 mm	IBG1-12-10-600S-X1
16		1000 mm	IBG1-12-10-1000S-X1

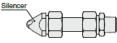
*1 A long nozzle and a silencer are included in a package but do not come mounted. Refer to page 8 for assembly procedures.
*2 This is the part number for the long nozzle and fitting set.
*3 The silencer and long nozzle can be used together. Part number for ordering a silencer alone is IBG1-12S.



Nozzle (Refer to page 8 for details.)

Symbol	Туре	Nozzle length	Nozzle part no.*2
Nil	Without nozzle	_	_
01		50 mm	IBG1-12-10-50
02		100 mm	IBG1-12-10-100
03	Long nozzle*1	150 mm	IBG1-12-10-150
04	Long hozzie	300 mm	IBG1-12-10-300
05		600 mm	IBG1-12-10-600-X1
06		1000 mm	IBG1-12-10-1000-X1
11		50 mm	IBG1-12-10-50S
12		100 mm	IBG1-12-10-100S
13	Long nozzle with a	150 mm	IBG1-12-10-150S
14	silencer*1, *3	300 mm	IBG1-12-10-300S
15		600 mm	IBG1-12-10-600S-X1
16		1000 mm	IBG1-12-10-1000S-X1

1 A long nozzle and a silencer are included in a package but do not come mounted. Refer to page 8 for assembly procedures.
2 This is the part number for the long nozzle and fitting set.
3 The silencer and long nozzle can be used together. Part number for ordering a silencer alone is IBG1-12S.





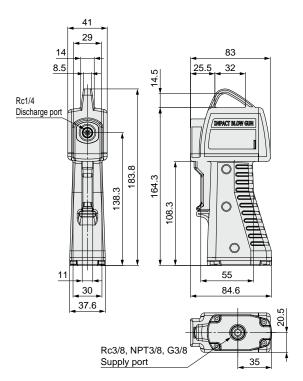
3. Specifications

Model	IBG10	IBG11	IBG20	IBG21	
Model	(Without adjuster)	(With adjuster)	(Without adjuster)	(With adjuster)	
Fluid		Air			
Max.operating pressure	0.7MPa				
Proof pressure	1.05MPa				
Fluid and ambient temperature range	+5 to +60℃				
Operational force	10N or less				
Weight *1	380g	400g	300g	320g	

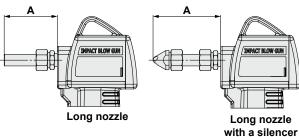
*1 For the screw-in type

4.External dimensions

IBG10/Without adjuster



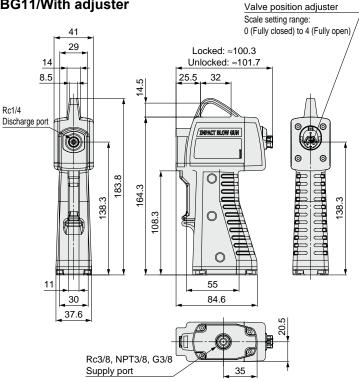
IBG10_11/With nozzle



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Symbol	Туре	Nozzle length [mm]	Nozzle part no.	A [mm]	Weight [g]
01		50	IBG1-12-10-50	57	35
02		100	IBG1-12-10-100	107	40
03	Long nozzle	150	IBG1-12-10-150	157	45
04		300	IBG1-12-10-300	307	59
05		600	IBG1-12-10-600-X1	607	88
06		1000	IBG1-12-10-1000-X1	1007	126
11		50	IBG1-12-10-50S	72	57
12	Long nozzle	100	IBG1-12-10-100S	122	62
13	with a silencer	150	IBG1-12-10-150S	172	67
14		300	IBG1-12-10-300S	322	81
15		600	IBG1-12-10-600S-X1	622	110
16		1000	IBG1-12-10-1000S-X1	1022	148

IBG11/With adjuster



IBG10_11/With fitting







With S coupler plug mounted KK4P-03MS

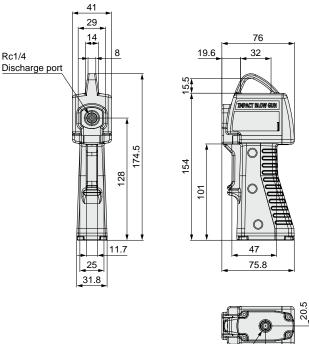
With S coupler plug mounted KK130P-03MS

With One-touch fitting mounted KQ2H□-□AS

Symbol	Туре	Applicable tubing O.D.	Part no.	B [mm]
11	S coupler	—	KK4P-03MS	35.7
12	3 couplei		KK130P-03MS	32.5
H06	Metric size	ø6	KQ2H06-03AS	13
H08	One-touch	ø8	KQ2H08-03AS	13
H10	fitting	ø10	KQ2H10-03AS	18.4
H07	Inch size	ø1/4"	KQ2H07-36AS	13.4
H09	One-touch	ø5/16"	KQ2H09-36AS	13.4
H11	fitting	ø3/8"	KQ2H11-36AS	18

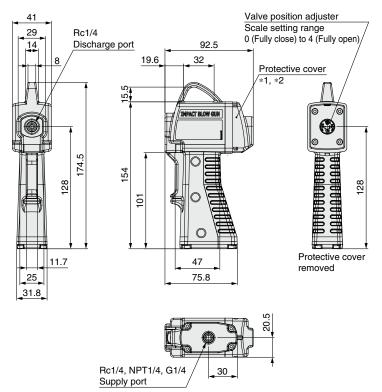
4.External dimensions

IBG20/Without adjuster



Rc1/4, NPT1/4, G1/4 Supply port

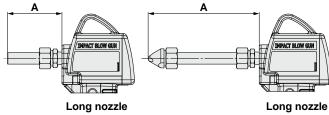
IBG21/With adjuster



*1 Protective cover material: Polycarbonate (transparent)

*2 Refer to the operation manual for protective cover mounting and removal.

IBG20_21/With nozzle



Long nozzle with a silencer

30

Symbol	Туре	Nozzle length [mm]	Nozzle part no.	A [mm]	Weight [g]
01		50	IBG1-12-10-50	57	35
02		100	IBG1-12-10-100	107	40
03		150	IBG1-12-10-150	157	45
04	Long nozzle	300	IBG1-12-10-300	307	59
05		600	IBG1-12-10-600-X1	607	88
06		1000	IBG1-12-10-1000-X1	1007	126
11		50	IBG1-12-10-50S	72	57
12	Long nozzle	100	IBG1-12-10-100S	122	62
13	with a silencer	150	IBG1-12-10-150S	172	67
14		300	IBG1-12-10-300S	322	81
15		600	IBG1-12-10-600S-X1	622	110
16		1000	IBG1-12-10-1000S-X1	1022	148

IBG20_21/With fitting







With S couplerWplug mountedpKK4P-02MSK

With S coupler plug mounted KK130P-02MS

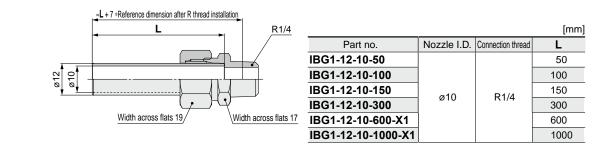
With One-touch fitting mounted KQ2H□-□AS

Symbol	Туре	Applicable tubing O.D.	Part no.	B [mm]
11	S coupler	—	KK4P-02MS	34.2
12	S couplei	—	KK130P-02MS	32
H06	Metric size	ø6	KQ2H06-02AS	12
H08	One-touch	ø8	KQ2H08-02AS	17.3
H10	fitting	ø10	KQ2H10-02AS	22.6
H07	Inch size	ø1/4"	KQ2H07-35AS	12.3
H09	One-touch	ø5/16"	KQ2H09-35AS	17.7
H11	fitting	ø3/8"	KQ2H11-35AS	20.7

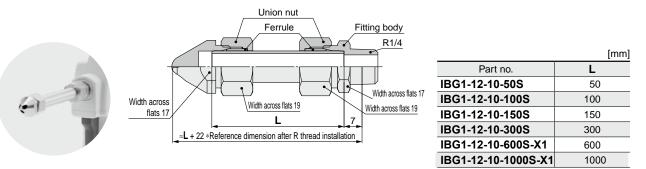
-4-

4.External dimensions

Long nozzle(Option)

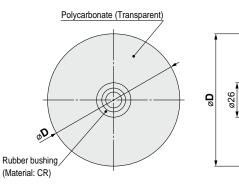


Long nozzle with a silencer (Option)



Chip guard (Please order separately.)





	[mm
Part no.	[mm

The rubber bushing is shipped together with the product.
It is possible to use the guard with a silencer, but in that

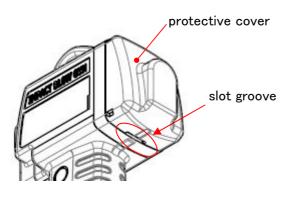
case, mount the guard before mounting the silencer.

11

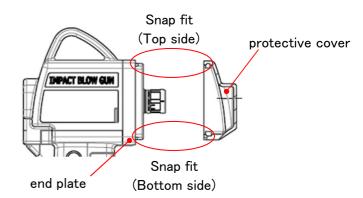
2

5. Protective Cover Mounting/Dismounting Method

< Dismounting>



<Mounting>



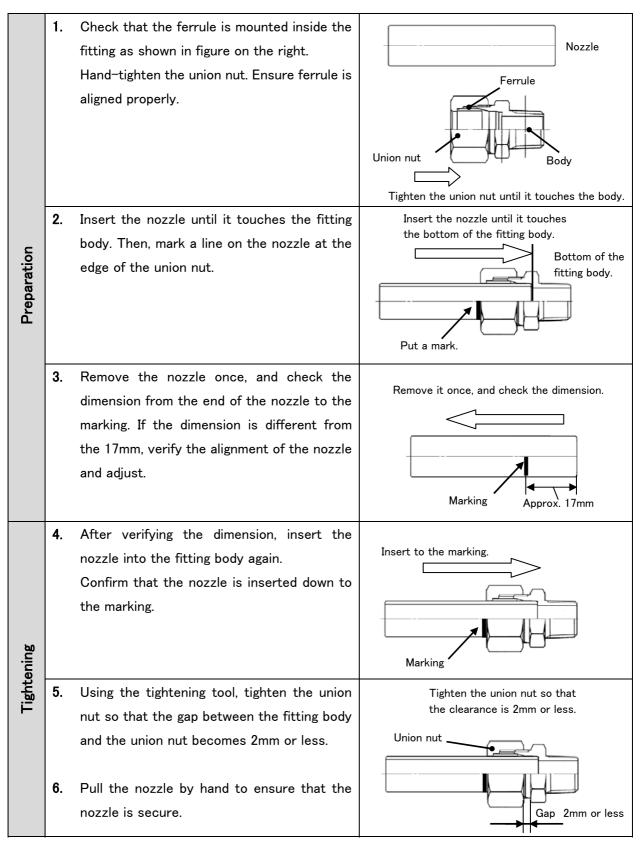
By inserting a coin, flat blade screwdriver, or the like to the slot groove of the protective cover and twisting the inserted object, it is possible to dismount the protective cover.

Attach the protective cover to the end plate using the snap fits provided at the top and bottom. The installation can be facilitated by first fitting the snap fits at the top and then fitting the snap fits at the bottom.

To prevent the adjuster from being broken, use the product with the protective cover installed.

6.How to mount a nozzle

How to mount a nozzle to the Impact-Blowgun (Series IBG)



6.How to mount a nozzle

How to mount a silent nozzle to the Impact-Blowgun (Series IBG)

	1.	Check that the ferrule and element is mounted inside the silent nozzle as shown in figure on the right. Hand-tighten the union nut. Ensure ferrule is aligned properly.	Element Ferrule Nozzle: IBG1-12-10-* WRefer to the attachment "Impact-Blowgun (Series IBG) nozzle mounting method" for mounting method. Tighten the union nut until it touches the silent nozzle
Preparation	2.	Insert the silent nozzle until it touches the nozzle. Then, mark a line on the nozzle at the edge of the union nut.	Insert the silent nozzle until it touches the tip of the nozzle.
	3.	Remove the silent nozzle once, and check the dimension from the end of the nozzle to the marking. If the dimension is different from the 17mm, verify the alignment of the nozzle and adjust.	Remove the silent nozzle once, and check the dimension.
ening	4.	After verifying the dimension, insert the silent nozzle into the nozzle again. Confirm that the nozzle is inserted down to the marking.	Insert to the marking.
Tightening	5.	Using the tightening tool, tighten the union nut so that the gap between the silent nozzle and the union nut becomes 2mm or less. Pull the nozzle by hand to ensure that the nozzle is secure.	Tighten the union nut so that the clearance is 2mm or less. Union nut Gap 2mm or less.

Impact blow gun 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)^{*}, and other safety regulations.

*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

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

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

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



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. Our products cannot be used beyond their specifications. Our products are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not covered.
 - 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, fuel 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.



Impact blow gun Safety Instructions

ACaution

We develop, design, and manufacture our products to be used for automatic control equipment, and provide them for peaceful use in manufacturing industries.

Use in non-manufacturing industries is not covered.

Products we manufacture and sell cannot be used for the purpose of transactions or certification specified in the Measurement Act.

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) Vacuum pads are excluded from this 1 year warranty.

A 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 vacuum pad or failure due to the deterioration of rubber material are not covered 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.



IBG Series **Specific Product Precautions**

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

Prior to Use

Warning

As the pressure of the air blow is quite powerful, do not aim the product at another person during operation. It may cause danger to personnel.

Additionally, the following precautions should be taken before use.

- 1. Before use, make sure that the blow pressure, or blow, will not cause surrounding objects to scatter and injure others or damage workpieces, equipment, etc., in the vicinity.
- 2. Wear protective eyewear when operating the product to protect your eyes from scattering debris.
- 3. This product is not a toy. Do not play with the product or use it as an air gun for fun.
- 4. Air pressure may cause the nozzle to fly off during operation if it is not properly tightened. To prevent this, be sure to check the nozzle for loosening by pulling on it with your hands before use.
- 5. The grip may become hot due to repeated operation; however, this is not abnormal.

Selection

MWarning

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.

∕!\Caution

1. Do not apply the blow gun to flammable, explosive, or toxic substances such as gas, fuel gas, or refrigerant. Such substances may exude from inside the blow gun.

Mounting

MWarning

1. Install a stop valve on the supply pressure side of the blow gun.

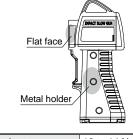
It will be emergency shut off in case of unexpected leakage or damage.

2. When installing a nozzle on the blow gun, wind sealant tape around the threads of the nozzle.

Mounting

Warning

3. Screw-in the nozzle to the torque below by holding the flat faces on the discharge side or metal holder. As a guideline, it is equivalent to 2 to 3 additional turns with a tool after hand-tightening.



Nozzle tightening torque range 12 to 14 N·m

Insufficient tightening may cause loosening of the nozzle.

Piping

∧Caution

1. Check the model, type, and size before installation.

Also, confirm that there are no scratches, gouges, or cracks on the product.

2. Preparation before piping

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil, and other debris from inside the pipe.

3. Winding of sealant tape

When connecting pipes, fittings, etc., be sure that chips from the pipe threads and sealing material do not enter the blow gun. Furthermore, when sealant tape is used, leave 1.5 to 2 thread ridges exposed at the end of the threads.



4. When tightening the threads, tighten with torque specified in the table below. As a guideline, it is equivalent to 2 to 3 additional turns with a tool after hand-tightening.

Be careful that tightening with torque beyond the range in the table below may cause damage to the body.

Γ	Male thread	Tightening torque [N·m]
Ī	R1/4	12 to 14
	R3/8	22 to 24

- 5. Allow extra length when connecting a tube to accommodate changes in tube length due to pressure.
- 6. Confirm that no twisting, turning, or tensile force or moment load is applied to the port or tube. This may cause fittings to fracture or tubes to be crushed, burst, or come loose.
- 7. Do not abrade, entangle, or scratch the tube. This may cause the tube to be crushed, burst, or come loose.



IBG Series Specific Product Precautions

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

Lubrication

▲Warning

1. Do not lubricate the product.

It may contaminate or damage the target object.

Air Supply

∆Warning

1. Use clean air.

Do not use compressed air that contains chemicals, synthetic oils that include organic solvents, salt, corrosive gases, etc., as it can cause damage or malfunction.

∆Caution

1. Install an air filter.

Install an air filter upstream near the blow gun. Select an air filter with a filtration size of 5 μm or smaller.

2. Take measures to ensure air quality, such as by installing an aftercooler, air dryer, or water separator. Compressed air that contains a large amount of drainage can

compressed air that contains a large amount of drainage can cause the malfunction of the blow gun and contaminate or damage the target object. Therefore, take appropriate measures to ensure air quality, such as by providing an aftercooler, air dryer, or water separator.

Operating Environment

AWarning

- 1. Do not use in an atmosphere where corrosive gases, chemicals, sea water, water, or water steam are present. Do not use in cases where there is direct contact with any of the above.
- 2. Do not expose the product to direct sunlight for an extended period of time.
- 3. Do not use in locations where radiated heat will be received from nearby heat sources.
- 4. Do not use in an environment where static electricity is a problem. It may result in system failure or malfunction. Please contact SMC for use in such an environment.
- 5. Do not use in an environment where spatters are generated. Spattering may result in a fire hazard. Please contact SMC for use in such an environment.
- 6. Do not use in an environment where the product is exposed to cutting oil, lubricating oil, or coolant oil. Please contact SMC for use in such an environment.

Maintenance

ACaution

- 1. In periodical inspections, check the following items and replace the parts if necessary.
 - a) Scratches, gouges, abrasion, corrosion

b) Air leakage

Maintenance

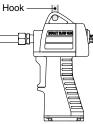
▲Caution

- c) Twisting, crushing, and turning of connected tubes
- d) Hardening, deterioration, and softening of connected tubes e) Loosening of nozzles
- 2. When removing the product, first stop the pressure supply, exhaust compressed air in the piping, and check the condition of atmospheric release.
- 3. Do not disassemble or remodel the body of the product.
- 4. As contact with solvents such as ethanol may cause the protective cover to become cloudy or cracked, be careful when cleaning.

Handling

A Warning

- Air pressure may cause the nozzle to fly off during operation if it is not properly tightened. To prevent this, be sure to check the nozzle for loosening by pulling on it with your hands before use.
- 2. Be sure to wear protective eyewear when operating the product to protect your eyes from scattering debris.
- 3. Do not direct the tip of the nozzle at the face or other parts of a human body. It may cause danger to personnel.
- 4. Do not use the product to clean or remove toxic substances or chemicals.
- 5. Do not drop, step on, or hit the product. It may cause damage to the product.
- 6. Do not use the product to disturb public order or public hygiene.
- 7. This product is not a toy.
- 8. After blowing, make sure to hang the product on a hook, etc. If leaving the product in a dusty place, particles will enter the product and may result in a malfunction.



9. When the blow gun is used or stored, confirm that no twisting, turning, or tensile force or moment load is applied to the port or tube. This may cause fittings to fracture or tubes to be crushed, burst, or come loose.

▲Caution

- 1. Pressurizing the air blow discharge port may result in the breakage of the product.
- 2. The blow adjusting range 4 provides the maximum blow. Rotating the adjuster exceeding 4 may result in the breakage of the product.

Revision history

A : Add model B : Add model

SMC Corporation

Tel: + 81 3 5207 8249 Fax: +81 3 5298 5362 URL <u>https://www.smcworld.com</u>

Note: Specifications are subject to change without prior notice and any obligation on the part of the manufacturer. © SMC Corporation All Rights Reserved