

Blow Gun

RoHS

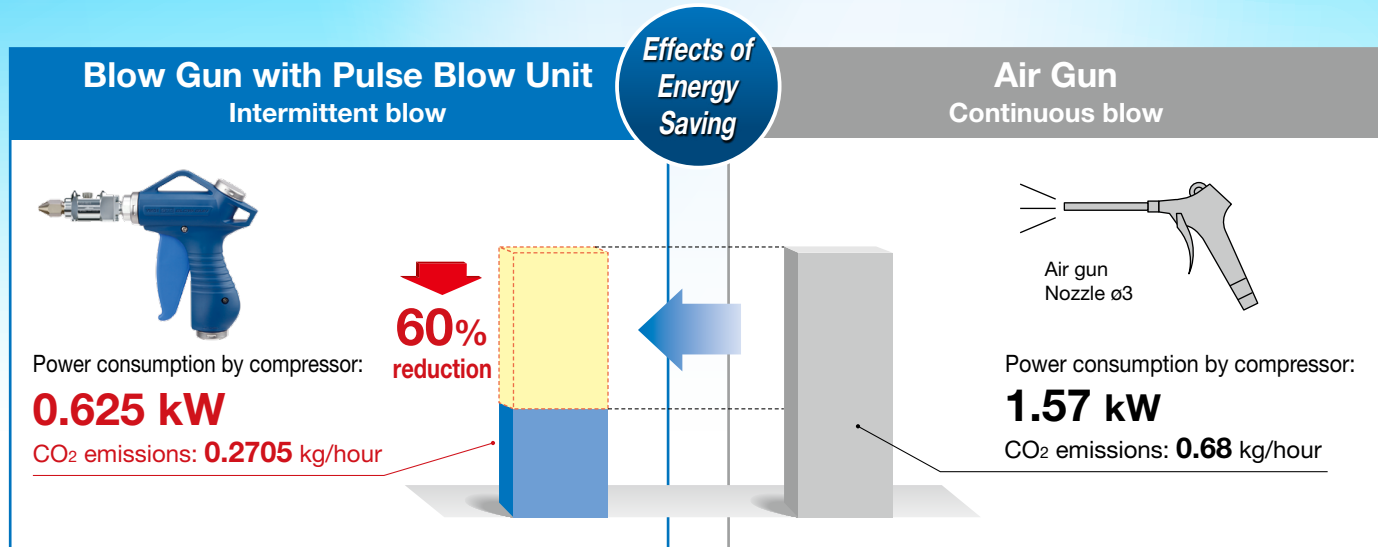
Blow gun + S coupler + Coil tube + Pulse blow unit

Max. 60% reduction in CO₂ emissions when combined

- * Depends on the piping conditions and pulse conditions (operating frequency)
- * 10% reduction with the "Blow gun (VMG)" only

New With Pulse Blow Unit

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



For details, refer to page 1.

VMG Series


CAT.ES50-20G

Example of air blow energy-saving improvements

Method: Changing the air blow device

Improvement 1 Reduce pressure loss

Changing to a combination of an SMC **blow gun**, **S coupler**, and **coil tube** allows for a larger effective area.

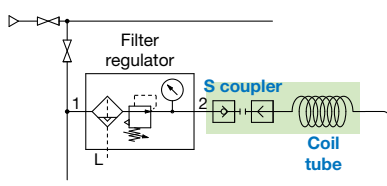
Improvement 2 Reduce air consumption

In addition, the **PU series pulse blow unit** allows for intermittent air blow.

After improvement

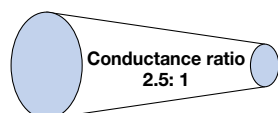
Improvement 2: Reduce air consumption

- S coupler/KK
- Coil tube/TCU1065-1-20-X6 (S0)
- Blow gun/VMG (S1)
- Pulse blow unit/PU20-R02 (S1")
- Nozzle/KN (S2)



S0 to S1"

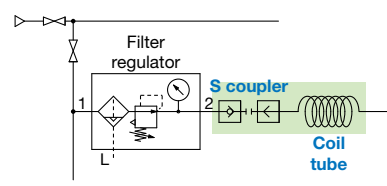
S2



Ensure sufficient nozzle conductance when using with the pulse blow unit.

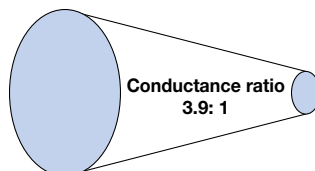
Improvement 1: Reduce pressure loss

- S coupler/KK
- Coil tube/TCU1065-1-20-X6 (S0)
- Blow gun/VMG (S1)
- Nozzle/KN (S2)

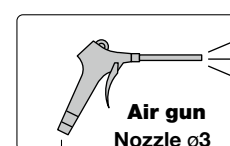
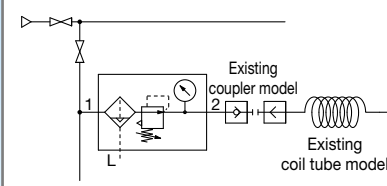


S0 to S1

S2

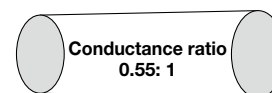


Before improvement



S0 to S1

S2



	Improvement 2	Improvement 1	Before improvement
Nozzle size	ø2	ø2	ø3
Coupler, Piping (S0)	13.45 mm ²	13.45 mm ²	5.1 mm ²
Blow gun (S1)	30 mm ²	30 mm ²	6 mm ²
Pulse blow unit (S1")	10.30 mm ²	—	—
Composite conductance (S0 to S1)	7.89 mm ²	12.27 mm ²	3.89 mm ²
Nozzle (S2)	3.14 mm ²	3.14 mm ²	7.07 mm ²
Conductance ratio (S0 to S1:S2)	2.51:1	3.91:1	0.55:1
Impact pressure (at a distance of 50 mm)	0.04 MPa	0.04 MPa	0.04 MPa
Regulator pressure	0.4 MPa	0.4 MPa	0.5 MPa
Pressure inside nozzle	0.385 MPa	0.385 MPa	0.279 MPa
Compressor pressure	0.5 MPa	0.5 MPa	0.6 MPa
Air consumption	128.55 dm ³ /min (ANR)	257.1 dm ³ /min (ANR)	289.3 dm ³ /min (ANR)
Compressor output consumption*1	0.625 kW	1.25 kW	1.57 kW
CO ₂ emissions	0.2705 kg-CO ₂ e	0.541 kg-CO ₂ e	0.68 kg-CO ₂ e
Air consumption reduction rate (Compared with before improvement)	56%	11%	
Power consumption reduction rate (Compared with before improvement)	60%	20%	

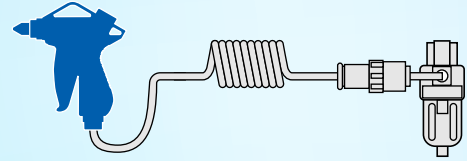
* Applicable software: Pneumatic System Energy Saving Program (Version 4.1.10) / CO₂ Emissions Calculation Software (Version 1.2.01)

*1 Calculated as efficiency $\eta = 0.80$

Blow Gun, Coil Tube and S Coupler Selection

Recommended system in accordance with the distance

Energy saving effects are enhanced through the appropriate blow gun model selection in accordance with the distance from the target object.



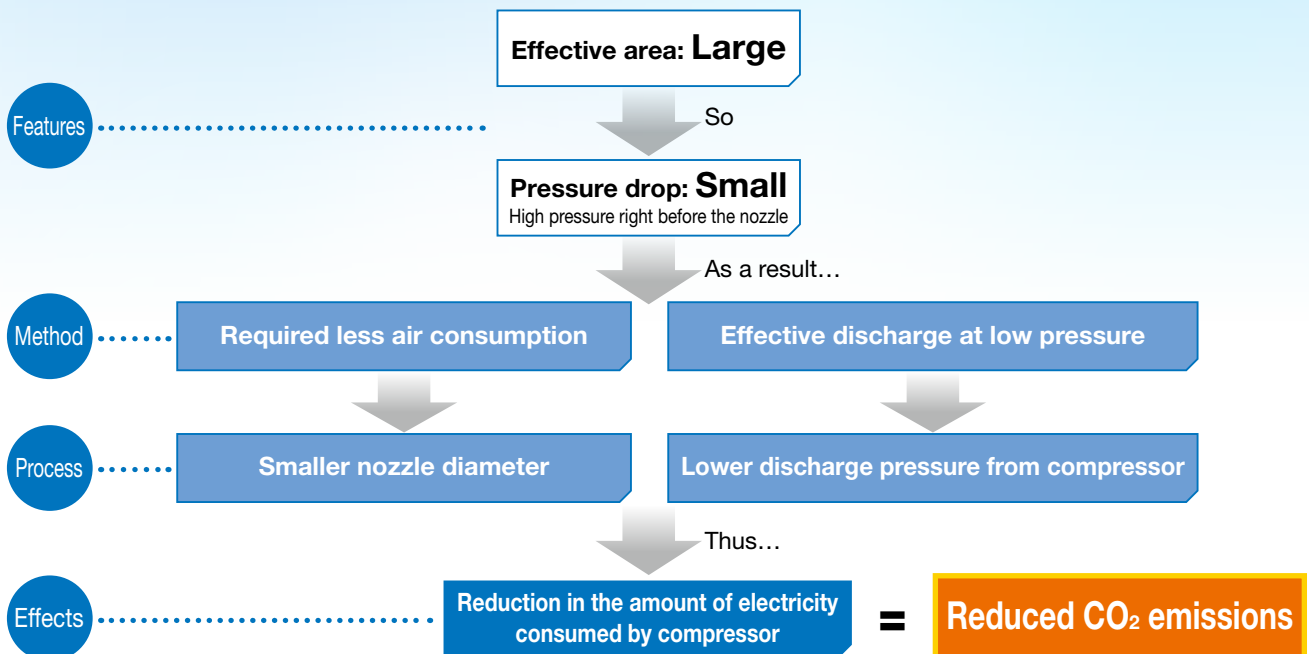
Distance	Recommended system					
	Blow gun	Nozzle size	Fitting	Coil tube*	S coupler	
Up to 20 mm	VMG1□□-H06-01	ø1	KQ2H06-02AS	TCU0604□-1-20-X6	KK4P-06H	KK4S-06H
Up to 40 mm	VMG1□□-H06-02	ø1.5	KQ2H06-02AS	TCU0604□-1-20-X6	KK4P-06H	KK4S-06H
Up to 60 mm	VMG1□□-H08-03	ø2	KQ2H08-02AS	TCU0805□-1-20-X6	KK4P-08H	KK4S-08H
60 mm or more	VMG1□□-H10-04	ø2.5	KQ2H10-02AS	TCU1065□-1-20-X6	KK4P-10H	KK4P-10H

* □: B (Black), W (White), R (Red), BU (Blue), Y (Yellow), G (Green), C (Clear), YR (Orange)

* When using the pulse blow unit, we recommend using a coil tube with an I.D. of ø5 or more.

Energy Saving Flow

Air guns with an effective area around 6 mm² are most commonly used. But the SMC blow gun achieves a 30 mm² effective area.



Related Product

For pressure loss improvement **S coupler: KK Series**

Improved fitting's restrictor and leakage

•Special method of connection and fixation

With a structure that employs no steel balls, the coupler achieves a slim body without narrowing of the channel, allowing coverage of a wide effective area.

•Smooth channel with minimal unevenness

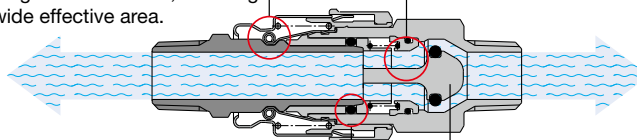
By not blocking the channel with the valve spring, the loss of effective area can be minimized.

•Seal structure with minimal leakage

The surface-to-surface design allows super-tight sealing.

•Conical structure of check valve tip

This structure achieves smooth flow through the channel.



Scan or click here for details.

Variations

Nozzle type

Male thread nozzle
Nozzle size: $\phi 1$, $\phi 1.5$, $\phi 2$, $\phi 2.5$, $\phi 3$, $\phi 3.5$, $\phi 4$



* Powerful and economical

Copper extension nozzle
Nozzle length: 100 mm, 150 mm, 300 mm, 600 mm



* Keeps power even at a greater distance from a workpiece.

Low noise nozzle
Mono-porous nozzle ($\phi 2$) 90 to 100 dB
 $\phi 1 \times 4$ low noise nozzles 80 dB or less
* Supply pressure: 0.5 MPa, Measured at a 45 degree angle according to JIS B 8379



* Achieving lower noise by dividing the air blow slit

High efficiency nozzle
This nozzle prevents any pressure buildup when the outlet is blocked for safety.
(Compliant with OSHA Standards: Operating pressure at 0.5 MPa or less.)



* Makes use of the Bernoulli effect to amplify the air blow flow rate

Nozzle with flow rate adjustment function
Nozzle size: $\phi 2.6$



* Nozzle with male thread - Flow rate can be adjusted to $\phi 2.0$ equivalent or less.
Easy operation: tool-free with scale display

With cover

Cover for male thread nozzle



Cover for copper extension nozzle (Outside diameter $\phi 6$ only)





Bottom
<Dark blue>



One-touch fitting type
Top
<White>

S coupler plug type

Connection type

Screw-in type	Port size	Rc, NPT, G 1/4
		Rc, NPT, G 3/8
S coupler plug type	Plug part no.	KK4P-02MS
		KK130P-02MS
One-touch fitting type	Applicable tube O.D.	Metric size: $\phi 6$, $\phi 8$, $\phi 10$
		Inch size: $\phi 1/4$ ", $\phi 5/16$ ", $\phi 3/8$ "

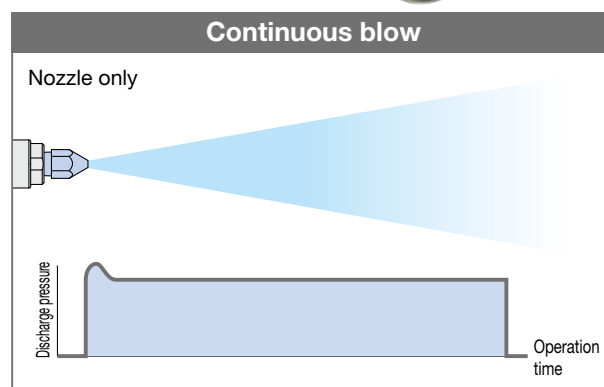
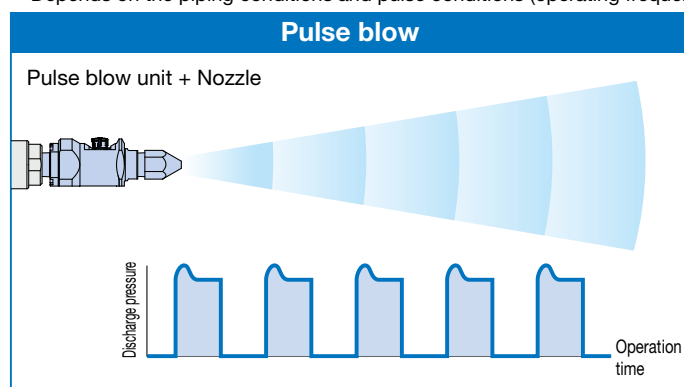
With Pulse Blow Unit/VMG1-P (VMG + PU)

Intermittent pulse blow improves removal efficiency

by **35%** compared with continuous blow.*1 (*1 Based on the test by SMC.)

CO₂ emissions (Air consumption) **Max. 60% reduction**

* Depends on the piping conditions and pulse conditions (operating frequency)



Pulse blow unit
PU Series

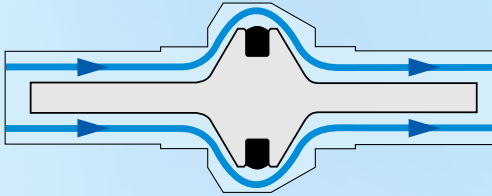


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Operability, Safety, Environment

Not affected by supply pressure, assured operability

When using this product even at a high pressure, the same gripping force is required as for a lower pressure due to the unique balance-poppet construction.



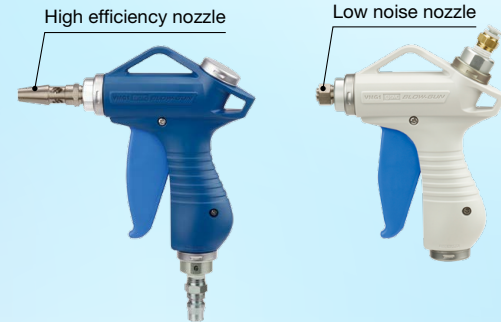
Components are separable. Environmentally friendly

Resin parts are inscribed with the name of the material. Additionally, all parts can be separated by material.

Use of shock-resistant resin

Shock-resistant resin is used in the main body. No cracks, breaks or other damage occurred in a drop test from a 2-meter height or in a human stomp test.

Compliant with OSHA Standards **p. 12**



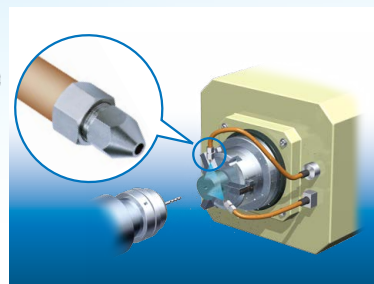
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Related Products/Equipment for Blowing

Nozzle KN Series



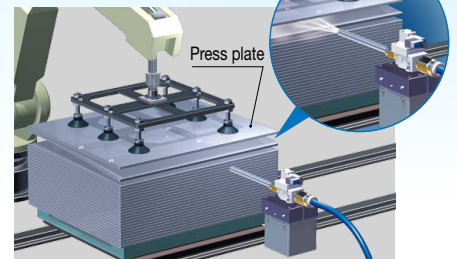
Cooling during machining



Air Saving Impact Blow Valve IBV Series



For the separation of workpieces stuck together with oil, etc.



Air Saving Impact Blow Gun IBG Series



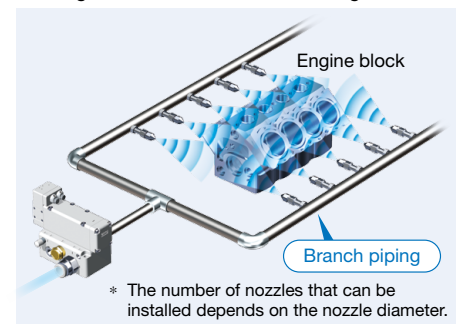
For the quick removal of machining chips coated with oil



Pulse Blow Valve AXTS040



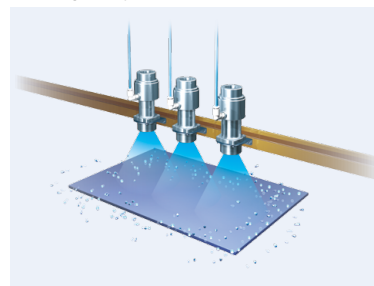
Blowing debris and coolant off the engine block



Vacuum Flow ZHV Series



Blowing away water droplets



Blow Gun VMG Series

RoHS



How to Order

VMG 1 1 W - 02 - 32 - C

Piping entry

1	Bottom
2	Top

Body color

W	White
BU	Dark blue

Connection size

Symbol	Piping connection method	Size and model no.	
02	Threaded	Thread size	Rc1/4
03			Rc3/8
N02			NPT1/4
N03			NPT3/8
F02			G1/4
F03			G3/8
11	S coupler plug*1	Model no. of coupler used	KK4P-02MS
12			KK130P-02MS
H06	Metric size One-touch fitting*2	Model no. of fitting used	KQ2H06-02AS
H08			KQ2H08-02AS
H10			KQ2H10-02AS
H07	Inch size One-touch fitting*3	Model no. of fitting used	KQ2H07-35AS
H09			KQ2H09-35AS
H11			KQ2H11-35AS

*1 Port size is Rc1/4 if using the S coupler plug.

*2 The blow gun port size is Rc1/4 if using the metric size One-touch fitting.

*3 The blow gun port size is NPT1/4 if using the inch size One-touch fitting.

* S coupler and fitting are included in the same package.

With nozzle cover (Only for male thread nozzle, ø6 extension nozzle)

Nil	None
C	With nozzle cover/HNBR
CF	With nozzle cover/Fluororubber

Nozzle

Symbol	Type	Nozzle size	Nozzle part no.
Nil	Without nozzle		
01	Male thread nozzle	ø1	KN-R02-100
02		ø1.5	KN-R02-150
03		ø2	KN-R02-200
04		ø2.5	KN-R02-250
05		ø3	VMG1-R02-300
06		ø3.5	VMG1-R02-350
07		ø4	VMG1-R02-400
11	High efficiency nozzle*1, *2	ø1	KNH-R02-100
12		ø1.5	KNH-R02-150
13		ø2	KNH-R02-200
21	Low noise nozzle with male thread*2	ø0.75 x 4	KNS-R02-075-4
22		ø0.9 x 8	KNS-R02-090-8
23		ø1 x 4	KNS-R02-100-4
24		ø1.1 x 8	KNS-R02-110-8
25	Nozzle with flow rate adjustment function	—	KNC-R02-200

*1 Compliant with OSHA 1910.242B when the operating pressure is 72.5 psi (0.5 MPa) or less

Even when a nozzle other than the high-efficiency nozzle is used, OSHA 1910.242B compliance is possible so long as the operating pressure is limited to 30 psi (0.2 MPa) or less. However, be aware that the impact effect may change due to the limited pressure. (Refer to page 12.)

*2 Compliant with OSHA 1910.95 (Excludes the high-efficiency nozzle size ø2) (Refer to page 12.)



Made to Order (⇒p. 7)

Symbol	Specifications
-X54	With flow rate adjustment function

Specifications

Fluid	Air	
Operating pressure range	0 to 1.0 MPa	
Proof pressure	1.5 MPa	
Ambient and fluid temperatures	-5 to 60°C (No freezing)	
Flow rate characteristics (With nozzle removed)	C (dm³/s·bar): 6.0, b: 0.25 (Effective area: 30 mm²)	
Port size	Rc, NPT, G 1/4, 3/8	
Piping entry	Bottom	Top
Nozzle port size	Rc1/4	
Weight (Main unit only)	165 g	
Operational force (when the valve is fully open)	7 N	

Extension nozzle*3

Symbol	Type	Nozzle length	Nozzle size	Nozzle part no.
31	ø6 copper extension nozzle	300 mm	ø1.5	VMG1-06-150-300
32			ø2	VMG1-06-200-300
33		600 mm	ø1.5	VMG1-06-150-600
34			ø2	VMG1-06-200-600
35		100 mm	ø1.5	VMG1-06-150-100
36			ø2	VMG1-06-200-100
37	ø8 copper extension nozzle	150 mm	ø1.5	VMG1-06-150-150
38			ø2	VMG1-06-200-150
41		100 mm	ø2.5	VMG1-08-250-100
42			ø3	VMG1-08-300-100
43			ø3.5	VMG1-08-350-100
44		150 mm	ø2.5	VMG1-08-250-150
45			ø3	VMG1-08-300-150
46			ø3.5	VMG1-08-350-150
47		300 mm	ø2.5	VMG1-08-250-300
48			ø3	VMG1-08-300-300
49			ø3.5	VMG1-08-350-300
50		600 mm	ø2.5	VMG1-08-250-600
51			ø3	VMG1-08-300-600
52			ø3.5	VMG1-08-350-600

*3 Part number for set of extension nozzle and fitting. Extension nozzle and fitting are included in the same package.

Refer to "How to attach extension nozzle" in the operation manual for assembly procedures.

Blow Gun VMG Series

RoHS



How to Order

With pulse blow unit

VMG 1 1 W - 02 - 01 - C - P

Piping entry

1	Bottom
2	Top

Body color

W	White
BU	Dark blue

With pulse blow unit
(PU20-R02)

With nozzle cover (Only for male thread nozzle)

Nil	None
C	With nozzle cover/HNBR
CF	With nozzle cover/Fluororubber

Connection size

Symbol	Piping connection method	Size and model no.	
02	Threaded	Thread size	Rc1/4
03			Rc3/8
N02			NPT1/4
N03			NPT3/8
F02			G1/4
F03			G3/8
11	S coupler plug*1	Model no. of coupler used	KK4P-02MS
12			KK130P-02MS
H06	Metric size One-touch fitting*2	Model no. of fitting used	KQ2H06-02AS
H08			KQ2H08-02AS
H10			KQ2H10-02AS
H07	Inch size One-touch fitting*3	Model no. of fitting used	KQ2H07-35AS
H09			KQ2H09-35AS
H11			KQ2H11-35AS

- *1 Port size is Rc1/4 if using the S coupler plug.
 *2 The blow gun port size is Rc1/4 if using the metric size One-touch fitting.
 *3 The blow gun port size is NPT1/4 if using the inch size One-touch fitting.
 * S coupler and fitting are included in the same package.

Nozzle*1

Symbol	Type	Nozzle size	Nozzle part no.
01	Male thread nozzle	ø1	KN-R02-100
02		ø1.5	KN-R02-150
03		ø2	KN-R02-200
11	High efficiency nozzle *2, *3	ø1	KNH-R02-100
12		ø1.5	KNH-R02-150
13		ø2	KNH-R02-200
21	Low noise nozzle with male thread*3	ø0.75 x 4	KNS-R02-075-4
23		ø1 x 4	KNS-R02-100-4
25	Nozzle with flow rate adjustment function	Equivalent to ø2 or less	KNC-R02-200

*1 The pulse blow unit and nozzle are shipped together with the product (unassembled).

For assembly instructions, refer to the operating manual.

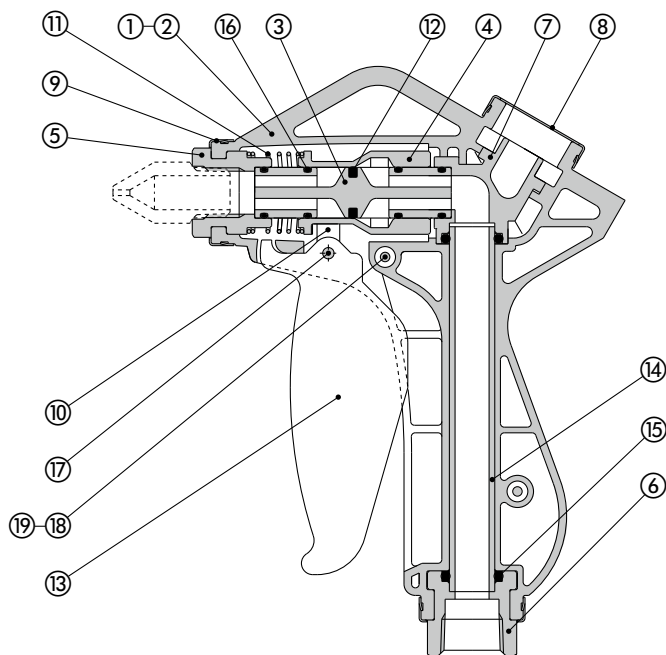
*2 Compliant with OSHA 1910.242B when the operating pressure is 72.5 psi (0.5 MPa) or less
 Even when a nozzle other than the high-efficiency nozzle is used, OSHA 1910.242B compliance is possible so long as the operating pressure is limited to 30 psi (0.21 MPa) or less. However, be aware that the impact effect may change due to the limited pressure. (Refer to page 12.)

*3 Compliant with OSHA 1910.95 (Excludes the high-efficiency nozzle size ø2) (Refer to page 12.)

Specifications

Fluid	Air	
Operating pressure range	0.3 to 0.7 MPa	
Proof pressure	1.05 MPa	
Ambient and fluid temperatures	-5 to 60°C (No freezing)	
Flow rate characteristics (When the nozzle and pulse blow unit are removed)	C (dm³/s·bar): 6.0, b: 0.25 (Effective area: 30 mm²)	
Frequency adjustment range	5 to 10 Hz	
Port size	Rc, NPT, G 1/4, 3/8	
Piping entry	Bottom	Top
Nozzle port size	Rc1/4	
Weight (VMG + PU)	212 g	
Operational force (when the valve is fully open)	7 N	

Construction



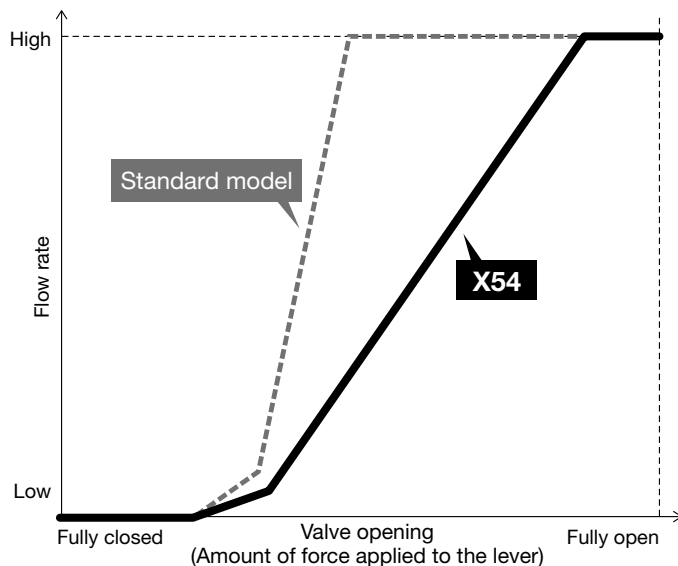
Component Parts

No.	Description	Material	Note
1	Body L	PBT	
2	Body R	PBT	
3	Main valve	PBT	
4	Valve guide	POM	
5	Nozzle holder	Aluminium alloy	Anodized
6	Port	Aluminium alloy	Anodized
7	Elbow	PBT	Only for the VMG12□
8	Cover	Stainless steel	
9	Ring	Stainless steel	
10	Arm	PBT	
11	Spring	Stainless steel	
12	Main valve seal	HNBR	
13	Lever	PBT	
14	Piping (bottom)	POM	Only for the VMG11□ Combined with the elbow ⑦.
15	O-ring	NBR	
16	O-ring	NBR	
17	Parallel pin	Stainless steel	
18	Cross recessed round head screw	Stainless steel	
19	Hexagon nut	Stainless steel	

* Grease is used on rubber and sliding sections.

Made to Order: With Flow Rate Adjustment Function -X54

The flow rate can be easily adjusted according to the amount of force applied to the lever.



How to Order

VMG11 □ - □ - □ - C - X54

Refer to page 5 for the "How to Order". Nozzles with flow rate adjustment function and the pulse blow unit are excluded.

With flow rate adjustment function

With nozzle cover (Only for male thread nozzle, ø6 extension nozzle)

Nil	None
C	With nozzle cover/HNBR
CF	With nozzle cover/Fluororubber

Specifications

Flow rate characteristics (With nozzle removed)	C (dm ³ /s·bar): 3.3 *1 (Effective area: 16.5 mm ²)
Piping entry	Bottom
Operational force (when the valve is fully open)	9 N *2

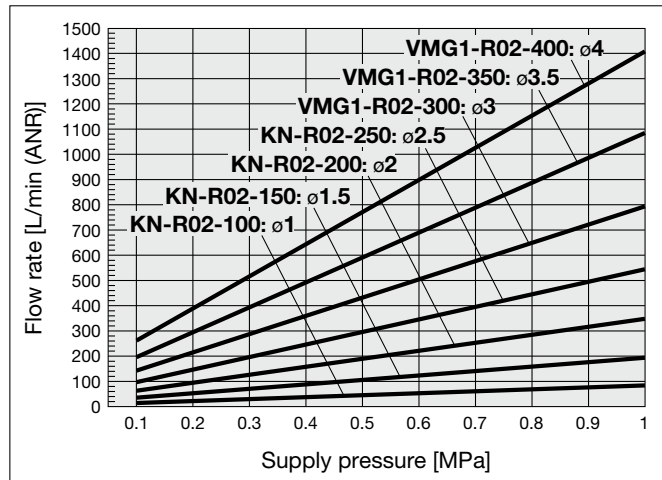
*1 Though the value is smaller than that of the standard model, the flow rate characteristics when a nozzle is mounted are the same as those of the standard model.

*2 The operational force is higher than that of the standard model for ease of flow adjustment with the lever.

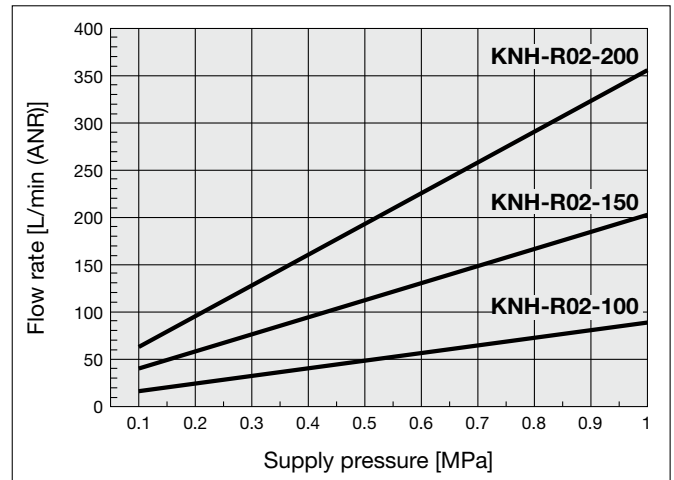
Flow Rate Characteristics

* Values when the main valve is fully open

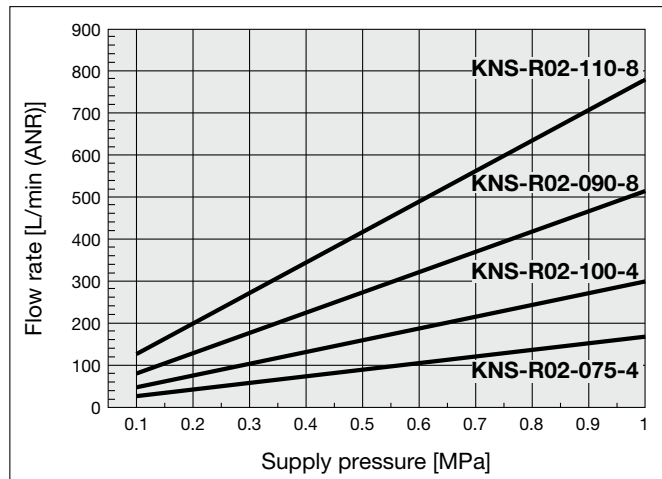
Male thread nozzle



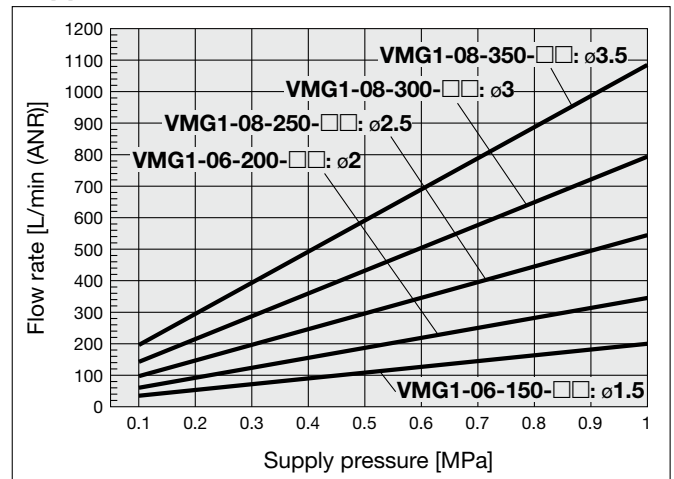
High efficiency nozzle



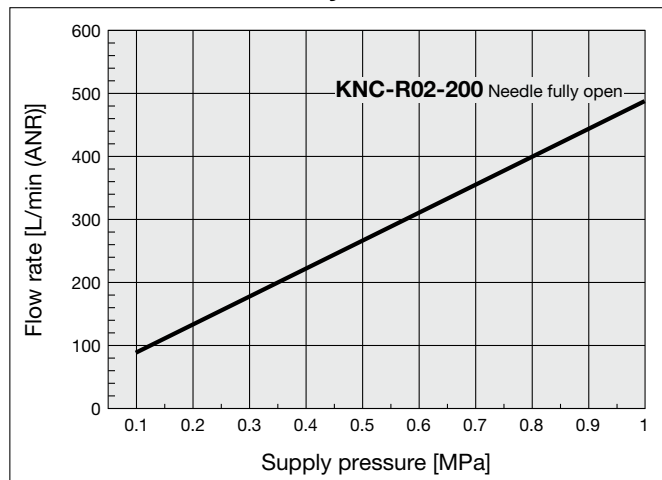
Low noise nozzle with male thread



Copper extension nozzle



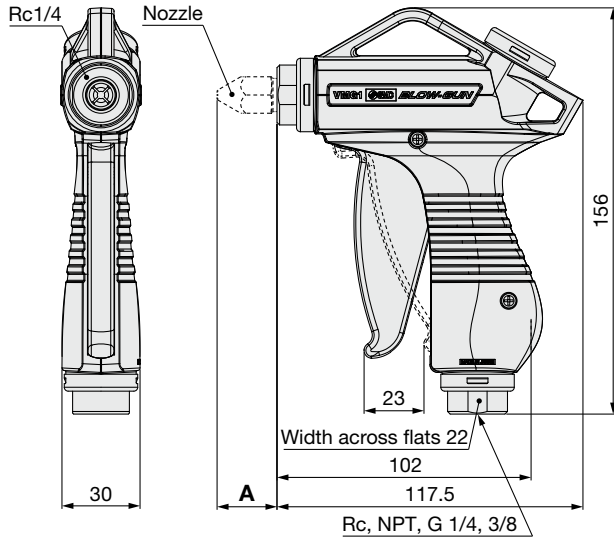
Nozzle with flow rate adjustment function



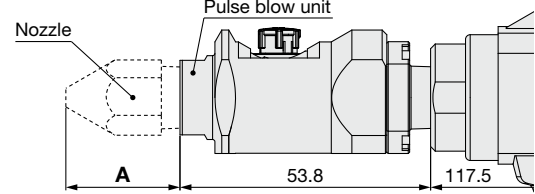
VMG Series

Dimensions

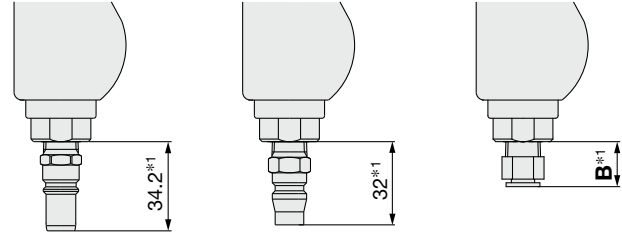
VMG11/Piping entry: Bottom



VMG1□-P/With pulse blow unit



* The pulse blow unit dimensions are reference dimensions after installation.
Refer to page 6 for applicable nozzles.

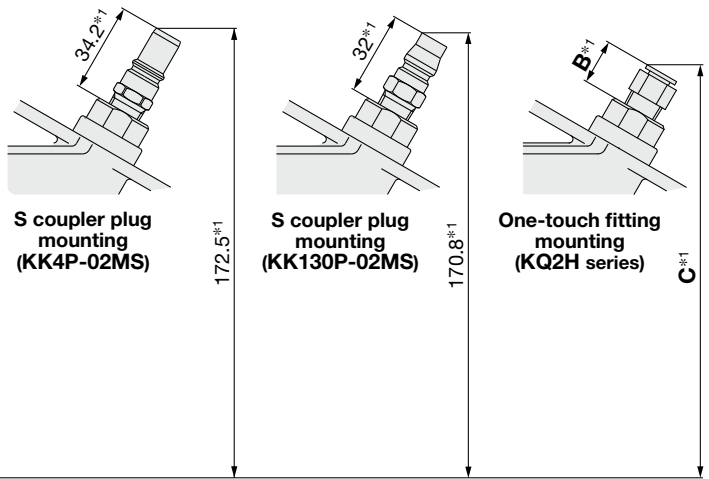
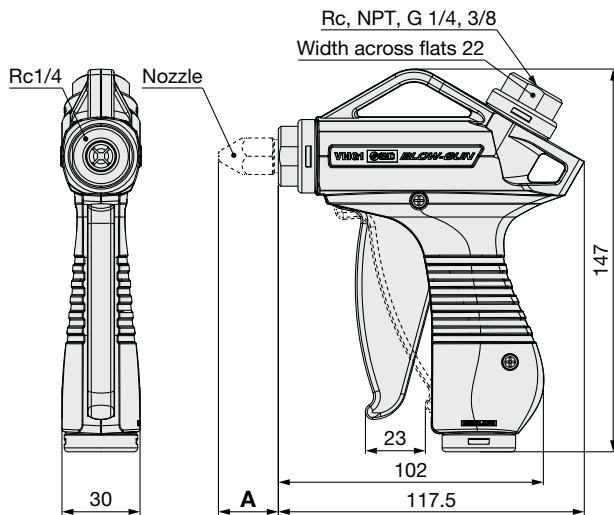


S coupler plug
mounting
(KK4P-02MS)

S coupler plug
mounting
(KK130P-02MS)

One-touch fitting
mounting
(KQ2H series)

VMG12/Piping entry: Top



S coupler plug
mounting
(KK4P-02MS)

S coupler plug
mounting
(KK130P-02MS)

One-touch fitting
mounting
(KQ2H series)

*1 Reference dimensions after installation

					[mm]
Symbol	Type		Nozzle part no.	Nozzle size	A*2
01	Male thread nozzle		KN-R02-100	ø1	23.4
02			KN-R02-150	ø1.5	23
03			KN-R02-200	ø2	22.5
04			KN-R02-250	ø2.5	22.1
05			VMG1-R02-300	ø3	22
06			VMG1-R02-350	ø3.5	21.5
07			VMG1-R02-400	ø4	
11	High efficiency nozzle		KNH-R02-100	ø1	44
12			KNH-R02-150	ø1.5	
13			KNH-R02-200	ø2	
21	Low noise nozzle with male thread		KNS-R02-075-4	ø0.75 x 4	12
22			KNS-R02-090-8	ø0.9 x 8	
23			KNS-R02-100-4	ø1 x 4	
24			KNS-R02-110-8	ø1.1 x 8	
25	Nozzle with flow rate adjustment function		KNC-R02-200	—	
31	ø6 copper extension nozzle*2	Nozzle length: 300 mm	VMG1-06-150-300	ø1.5	298
32			VMG1-06-200-300	ø2	
33		Nozzle length: 600 mm	VMG1-06-150-600	ø1.5	598
34			VMG1-06-200-600	ø2	
35		Nozzle length: 100 mm	VMG1-06-150-100	ø1.5	98
36			VMG1-06-200-100	ø2	
37		Nozzle length: 150 mm	VMG1-06-150-150	ø1.5	148
38		VMG1-06-200-150	ø2		

*2 Reference dimensions after installation

Symbol	Type	Nozzle part no.	Nozzle size	A*2
41	Nozzle length: 100 mm	VMG1-08-250-100	ø2.5	98
42		VMG1-08-300-100	ø3	
43		VMG1-08-350-100	ø3.5	
44	Nozzle length: 150 mm	VMG1-08-250-150	ø2.5	148
45		VMG1-08-300-150	ø3	
46		VMG1-08-350-150	ø3.5	
47	Nozzle length: 300 mm	VMG1-08-250-300	ø2.5	298
48		VMG1-08-300-300	ø3	
49		VMG1-08-350-300	ø3.5	
50	Nozzle length: 600 mm	VMG1-08-250-600	ø2.5	598
51		VMG1-08-300-600	ø3	
52		VMG1-08-350-600	ø3.5	

Type	One-touch fitting model	B*3	C*3
Metric size One-touch fitting	KQ2H06-02AS	12	153.2
	KQ2H08-02AS	17.3	158.6
	KQ2H10-02AS	22.6	163.8
Inch size One-touch fitting	KQ2H07-35AS	12.3	153.2
	KQ2H09-35AS	17.7	158.9
	KQ2H11-35AS	20.7	162

*3 Reference dimensions after installation

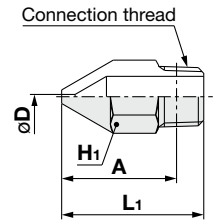
Dimensions: Nozzles

Male thread nozzle: KN

[mm]



Part no.	Nozzle size D	Connection thread	Width across flats H₁	L₁	A*₁
KN-R02-100	ø1	R1/4	14	31.4	25.4
KN-R02-150	ø1.5			31	25
KN-R02-200	ø2			30.5	24.5
KN-R02-250	ø2.5			30.1	24.1
VMG1-R02-300	ø3			30	24
VMG1-R02-350	ø3.5			29.5	23.5
VMG1-R02-400	ø4			29.5	23.5



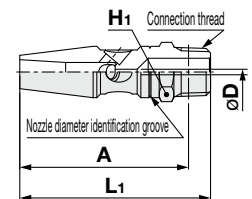
*1 Reference dimensions after R thread installation

High efficiency nozzle: KNH (Compliant with OSHA Standards: Operating pressure at 0.5 MPa or less.)

[mm]



Part no.	Nozzle size D	Connection thread	Width across flats H₁	L₁	A*₂	Nozzle diameter identification groove
KNH-R02-100	ø1	R1/4	14	52	46	—
KNH-R02-150	ø1.5					1 pc.
KNH-R02-200	ø2					2 pcs.



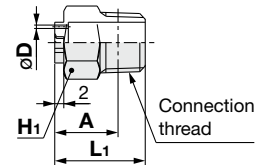
*2 Reference dimensions after R thread installation

Low noise nozzle with male thread: KNS

[mm]



Part no.	Nozzle size D	Connection thread	Width across flats H₁	L₁	A*₃
KNS-R02-075-4	ø0.75 x 4	R1/4	14	20	14
KNS-R02-090-8	ø0.9 x 8				
KNS-R02-100-4	ø1 x 4				
KNS-R02-110-8	ø1.1 x 8				



*3 Reference dimensions after R thread installation

Copper extension nozzle set

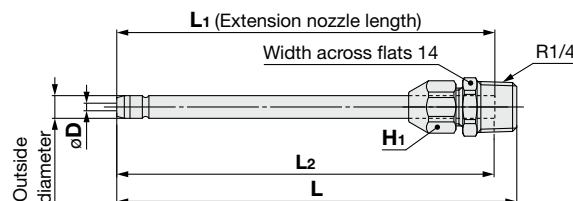
[mm]



Part no.	Nozzle size D	Outside diameter	L₁	L₂*₄	L*₄	Width across flats H₁
VMG1-06-150-100	ø1.5	ø6	100	100	106	12
VMG1-06-200-100	ø2		150	150	156	
VMG1-06-150-150	ø1.5		300	300	306	
VMG1-06-200-150	ø2		600	600	606	
VMG1-06-150-300	ø1.5		100	100	106	
VMG1-06-200-300	ø2		150	150	156	
VMG1-06-150-600	ø1.5	ø8	300	300	306	14
VMG1-06-200-600	ø2		600	600	606	
VMG1-08-250-100	ø2.5		100	100	106	
VMG1-08-300-100	ø3		150	150	156	
VMG1-08-350-100	ø3.5		300	300	306	
VMG1-08-250-150	ø2.5		600	600	606	
VMG1-08-300-150	ø3		100	100	106	
VMG1-08-350-150	ø3.5		150	150	156	
VMG1-08-250-300	ø2.5	ø3	300	300	306	14
VMG1-08-300-300	ø3		600	600	606	
VMG1-08-350-300	ø3.5		100	100	106	
VMG1-08-250-600	ø2.5		150	150	156	
VMG1-08-300-600	ø3	ø3.5	300	300	306	14
VMG1-08-350-600	ø3.5		600	600	606	

*4 Reference dimensions after installation

* Copper extension nozzle and self-align fitting are included in the same package, (but unassembled). Refer to "How to attach extension nozzle" in the operation manual for assembly procedures.



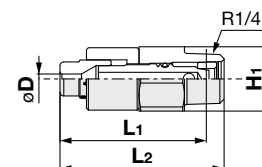
Dimensions

Nozzle with flow rate adjustment function/KNC

[mm]



Model	Nozzle dia. øD	Width across flats H ₁	L ₁	L ₂	Weight [g]
KNC-R02-200	ø2.6	17	38.7 (Max. 41.2)	43.4 (Max. 45.9)	42.4



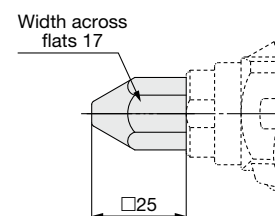
* Please refer to the operation manual for the specific product precautions.

Cover for male thread nozzle

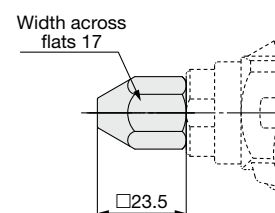
[mm]



Nozzle cover part no.	Material	Applicable blow gun model	
		Model	Nozzle type
P5670129-01	HNBR	VMG1□□-□-01 to 04	Male thread nozzle ø1 to ø2.5
P5670129-01F	Fluororubber		
P5670129-02	HNBR	VMG1□□-□-05 to 07	Male thread nozzle ø3 to ø4
P5670129-02F	Fluororubber		



VMG1□□-□-1 to 04



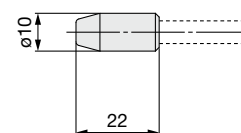
VMG1□□-□-05 to 07

Cover for copper extension nozzle

[mm]



Nozzle cover part no.	Material	Applicable blow gun model	
		Model	Nozzle type
P5670129-11	HNBR	VMG1□□-□-31 to 38	ø6 copper extension nozzle
P5670129-11F	Fluororubber		



VMG1□□-□-31 to 38

Compliant with OSHA Standards

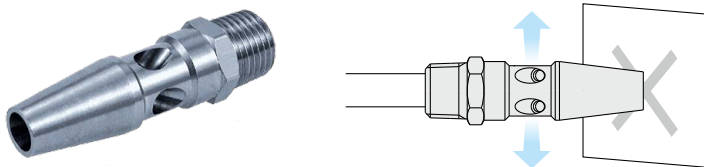
1910.242B

Safety standard when using compressed air for cleaning

For OSHA 1910.242B compliance, the operating pressure must not exceed 72.5 psi (0.5 MPa).

The structure prevents closing of the discharge port. This is a safety design that limits the pressure to 30 psi even when an operator is touching the nozzle. (Operating pressure: 0.5 MPa or less)

High efficiency nozzle KNH Series



Even when a nozzle other than a KNH series nozzle is used, compliance is possible so long as the operating pressure is limited to 30 psi (0.21 MPa) or less.

However, be sure to take into consideration that the blow impact/blow pattern may change due to the limited operating pressure.

1910.95

For the hearing protection of operators, there is a set daily permissible exposure limit for noise (based on working hours).

The limit only applies when the noise level exceeds 90 dB (A).

For OSHA 1910.95 compliance, the operating pressure must not exceed 72.5 psi (0.5 MPa).

For further details on the permissible exposure limit, refer to OSHA standard 1910.95.

For the noise level of each nozzle, refer to the nozzles for blowing catalog.

Blow nozzle
KN Series



Scan or click
here for
details.

Low noise nozzle KNS Series



ø1 x 4 low noise nozzles 80 dB or less
Operating pressure: 0.5 MPa, Measured at a 45
degree angle according to JIS B 8379

High efficiency nozzle KNH Series



Excludes nozzle size ø2



VMG Series

Specific Product Precautions

Be sure to read this before handling the products.

Selection

⚠ Warning

1. Check the specifications.

The products in this catalog are designed to be used in compressed air systems only. If the products are used in an environment where pressure or temperature is out of the specified range, damage and/or malfunction may result. Do not use under such conditions.

2. Be aware of the operating pressure range of the pulse blow unit.

The operating pressure range of the pulse blow unit is 0.3 to 0.7 MPa.

Be sure to check the operating environment before use.

⚠ Caution

1. When using the pulse blow unit, we recommend using a nozzle that is size $\phi 2$ 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 a tube with an I.D. of less than 5 mm, use a nozzle with a nozzle diameter of 1 mm or less or a nozzle with a flow rate adjustment function (KNC-R02-200).** Normal pulse operation may not be possible when using piping conditions other than those recommended.

Handling

⚠ Warning

1. To prevent lurching of the nozzle due to air pressure, confirm that the nozzle is not loosened or rattling by pulling it by hand before operation.
2. Make sure to wear safety goggles to protect yourself from splashed substances.
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.

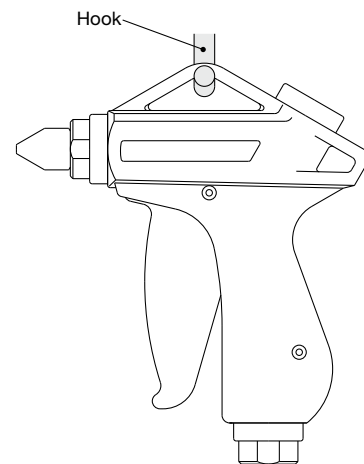
Handling

⚠ Warning

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.
10. When attaching a nozzle cover, align the hex parts of the nozzle and nozzle cover before covering. When attaching an extension nozzle cover, confirm that the nozzle tip is completely inserted into the extension nozzle cover.
11. Do not use a nozzle cover or extension nozzle cover if it is cracked or does not fit securely, and replace with a new cover.



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.

Revision History

Edition B * KK/KKH series S couplers (related product) have been changed as a model change.
* Data for the high-efficiency nozzle has been added.

Edition C * Excerpted page 1889 to 1899 from Best Pneumatics No. 1 (Ver. 1)

Edition D * KK130 series S couplers and One-touch fittings have been added.
* The number of pages has been decreased from 16 to 12.

Edition E * Not available

Edition F * Size ø3, ø3.5, and ø4 male thread nozzles have been added.
* A type with a nozzle cover has been added for male thread nozzles and extension nozzles.
* A ø8 copper extension nozzle has been added.
* 100 mm and 150 mm copper extension nozzles have been added.
* The number of pages has been increased from 12 to 16.

Edition G * A pulse blow unit has been added.

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