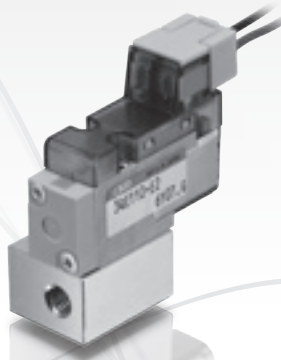


Direct acting 3-port valve 3Q Series: compact, low exoergic, with large flow rate.

- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
MN4E
- W4GA/B2
- W4GB4
- MN3S0
MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
GMF
- PV5
GMF
- PV5S-0
- 3Q**
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
HSV
- 2QV
3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

3QE/Z Series

Long service life 200 million operations	Low exoergic 5 °C or less	Low wattage 0.1 W	Continuous energizing OK	RoHS Compatible
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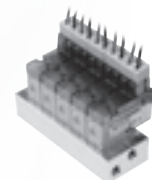
Grommet lead



E-connector single manual unit



E-connector manifold

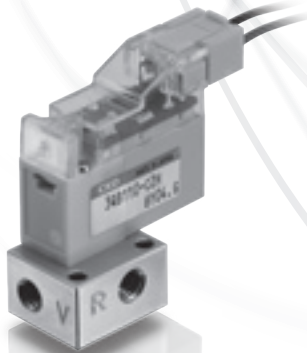


3QE	
Sonic conductance	Flow path 1 → 2: 0.04 dm ³ /(s·bar), flow path 2 → 3: 0.06 dm ³ /(s·bar)
Response time	6 ms/3 ms (ON/OFF) Note
Power consumption	0.35 W (0.1 W option)
Supported voltage	3 VDC, 5 VDC, 12 VDC, 24 VDC, 100 VAC

Note) According to JIS B 8419:2010 Dynamic performance testing.

3QB Series

Lightweight 12.5g	Long service life 100 million operations	High-speed response 5 ms or less	Low vacuum option	RoHS Compatible
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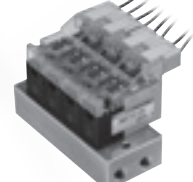
Positive pressure dedicated



Low vacuum dedicated



Positive pressure dedicated manifold

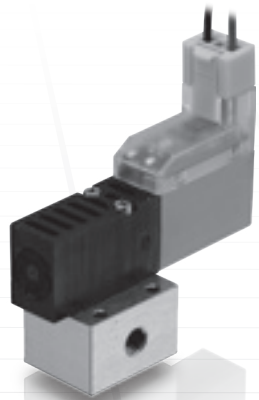


	H (low vacuum/positive pressure)	HP (positive pressure)	HV (low vacuum)
Sonic conductance	0.11 dm ³ /(s·bar)	0.11 dm ³ /(s·bar)	0.18 dm ³ /(s·bar)
Response time	5 ms or less Note		
Power consumption	Start: 2.2 W, hold: 0.6 W		
Supported voltage	12 VDC, 24 VDC		

Note) According to JIS B 8419:2010 Dynamic performance testing.

3QRA/B Series

Large flow rate C = 0.4	Long service life 100 million operations	High-speed (ON/OFF) 4 ± 1 ms / 1.5 ± 1 ms	Proprietary universal piping	Low vacuum Standard	RoHS Compatible
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Body piping



Sub-plate piping self-hold



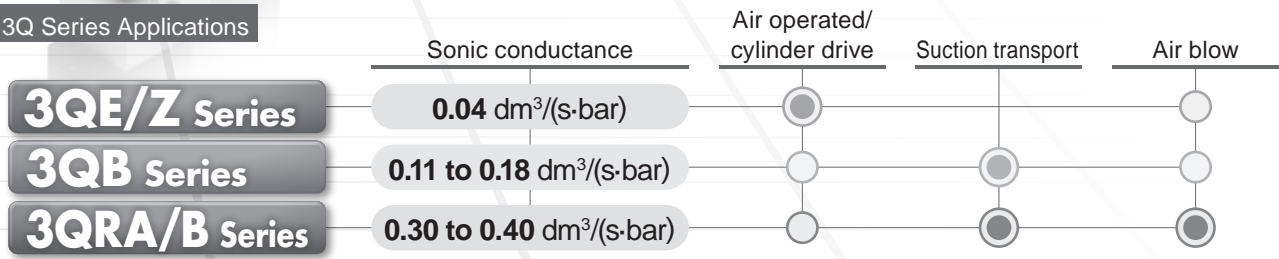
Sub-plate piping manifold with sensor



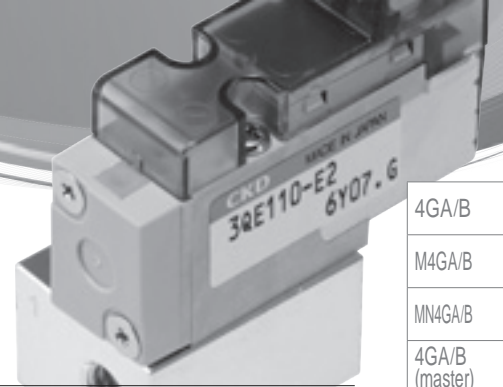
	3QRA	3QRB
Sonic conductance	0.30 to 0.38 dm ³ /(s·bar)	0.30 to 0.40 dm ³ /(s·bar)
Response time	4 ms/1.5 ms (ON/OFF) Note	
Power consumption	Standard: 2 W, large flow rate: 2.4 W	
Supported voltage	12 VDC, 24 VDC	

Note) According to JIS B 8419:2010 Dynamic performance testing.

3Q Series Applications



3QE/Z Series



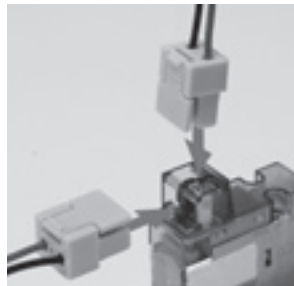
Easy to use

Upward/lateral common wiring connector used

The specification can be changed simply by changing the insertion direction.

No polarity.

Choose any option without fear of operation faults.



High maintainability

A manual override can be selected in accordance with equipment maintenance.

Non-locking

Locking (patent pending)

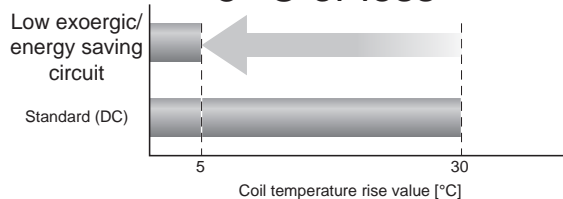


Environmental

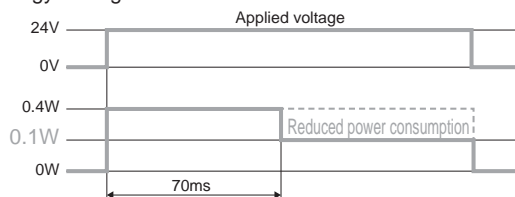
Low power realized

Low power, low exoergic realized.

Suppresses temperature rise **5 °C or less**



Energy saving waveform



Reliable

Long service life realized

Durability: DC: **200** million cycles, AC: **100** million cycles

* In accordance with in-house test conditions.

Prevents malfunction

[Uses PWM control circuit]

It prevents malfunction due to impact and vibration.

[Improved responsivity after shutdown]

The adoption of low-adhesion rubber enables stable response time even after being out of use for long periods.

[Port P filter as standard]

It prevents snagging due to foreign matter, enabling stable operation.

Enables continuous energization (option)

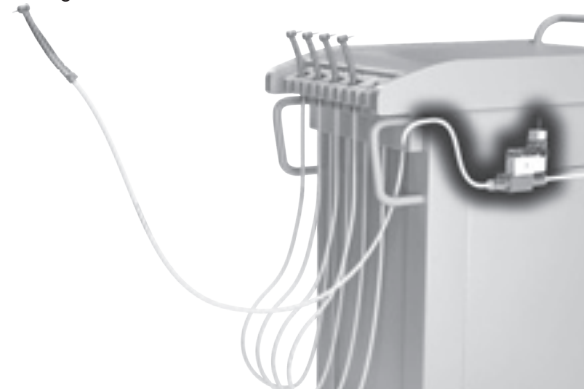
Uses a new coil actuator. The low exoergic/energy type is capable of continuous energization.

Applications

For controlling air operated valves



For controlling compact actuators such as single acting cylinders and air grinders



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending

3QB Series



High performance

Compact and lightweight

Valve width: **10 mm**

Weight: **12.5 g**

Large flow rate

The spring load and coil vacuum force have been optimized to maximize the flow rate.

HV **0.18** dm³/(s·bar)

HP **0.11** dm³/(s·bar)

Long service life

Durability: **100 million cycles**

* In accordance with in-house test conditions.

High response

Low-adhesion rubber is used. Stable response can be achieved.

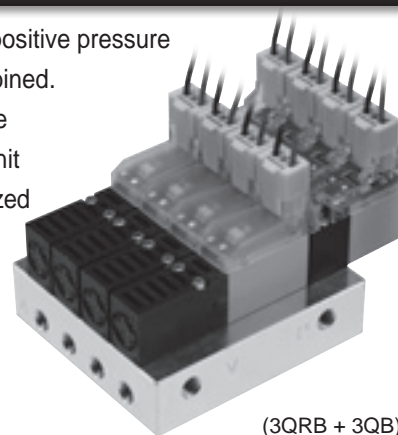
5 ms or less

According to JIS B 8419:2010 Dynamic performance testing.

Low vacuum/positive pressure switching

Low vacuum and positive pressure can be freely combined.

The product can be used as a single unit as well as customized according to your needs. (Made to order product)



(3QRB + 3QB)

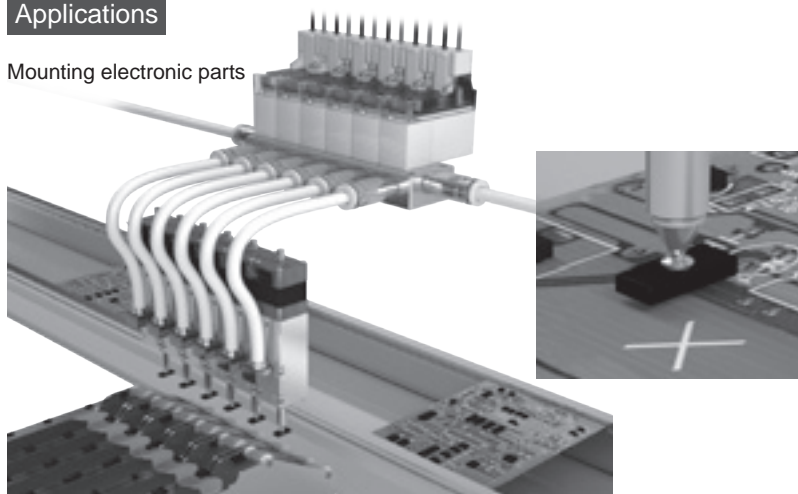
Specifications

Select the ideal model according to the application.

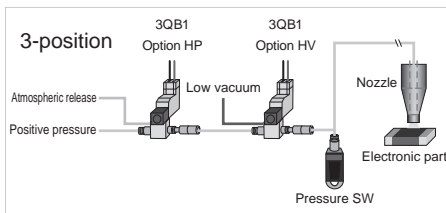
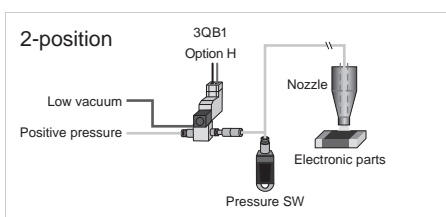
Applications	Pressure specification	Max. working pressure MPa	Min. working pressure MPa	C dm ³ /(s·bar)
For low vacuum/positive pressure	H	0.30	-0.1	0.11
For positive pressure	HP	0.65	0.1	0.11
For low vacuum	HV	0	-0.1	0.18

Applications

Mounting electronic parts



Low vacuum/positive pressure switching applications



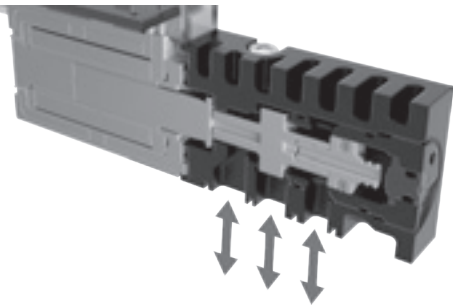
- 4GA/B
- M4GA/B
- MN4GA/B
- 4GA/B (master)
- 4GB With sensor
- 4GD/E
- M4GD/E
- MN4GD/E
- 4GA4/B4
- MN3E
- MN4E
- W4GA/B2
- W4GB4
- MN3S0
- MN4S0
- 4SA/B0
- 4KA/B
- 4KA/B (master)
- 4F
- 4F (master)
- PV5G
- GMF
- PV5
- GMF
- PV5S-0
- 3Q**
- MV3QR
- 3MA/B0
- 3PA/B
- P/M/B
- NP/NAP
- NVP
- 4G*0EJ
- 4F*0EX
- 4F*0E
- HMV
- HSV
- 2QV
- 3QV
- SKH
- Silencer
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Ending

3QRA/B Series

Proprietary universal structure

Universal structure

Pressurization is possible from any port.
Proprietary balance poppet structure that achieves a large flow rate.

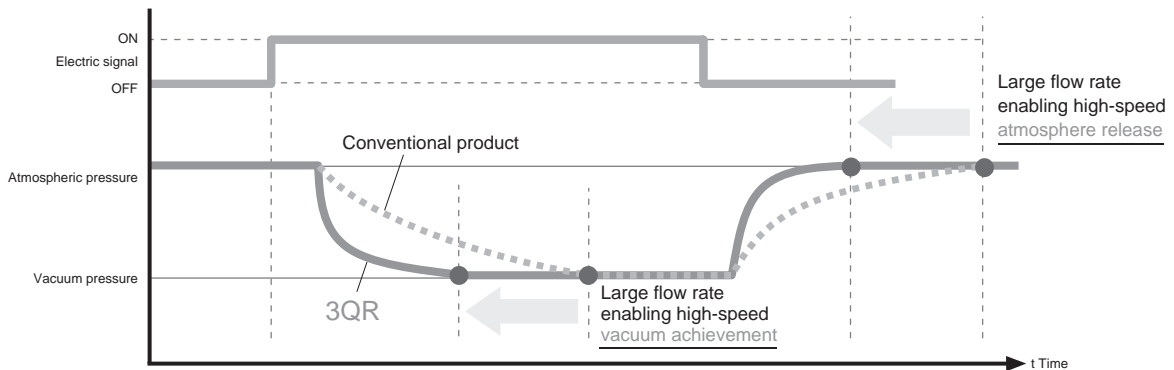


Large flow rate

Large flow rate **0.4** dm³/(s-bar)
Standard **0.3** dm³/(s-bar)

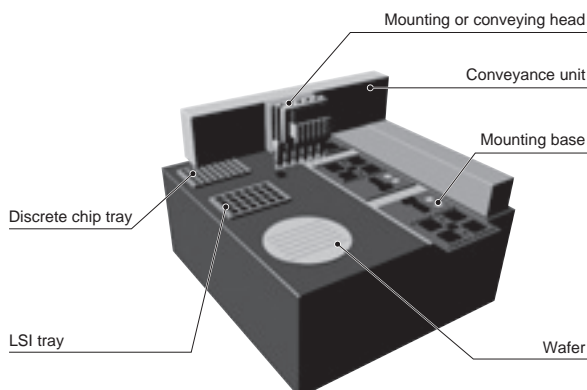
High-speed tact

Ensures high-speed tact of vacuum burst without positive pressure. Increased vacuum flow rate means suction time can also be reduced.

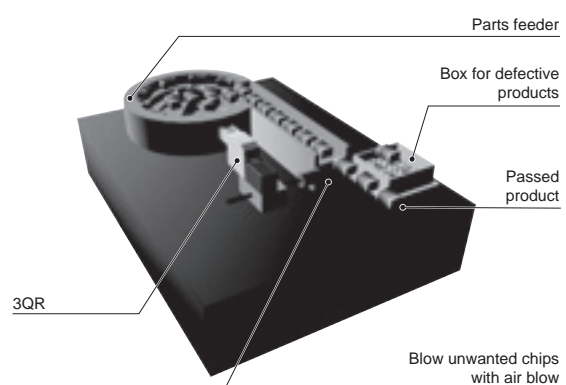


Applications

Suction/transport of electronic parts



ON/OFF control of air blow



High response

4 ±1 ms/
1.5 ±1 ms (ON/OFF)

According to JIS B 8419:2010 Dynamic performance testing.

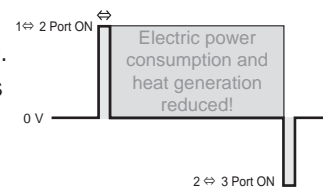
Long service life

Durability: **100 million cycles**

* In accordance with in-house test conditions.

Self-hold (option)

Capable of status retention in case of power failure (at vacuum). Does not require continuous energization, which reduces electric power consumption and heat generation.



4GA/B
M4GA/B
MN4GA/B
4GA/B (master)
4GB With sensor
4GD/E
M4GD/E
MN4GD/E
4GA4/B4
MN3E MN4E
W4GA/B2
W4GB4
MN3S0 MN4S0
4SA/B0
4KA/B
4KA/B (master)
4F
4F (master)
PV5G GMF
PV5 GMF
PV5S-0
3Q
MV3QR
3MA/B0
3PA/B
P/M/B
NP/NAP NVP
4G*0EJ
4F*0EX
4F*0E
HMV HSV
2QV 3QV
SKH
Silencer
TotAirSys (Total Air)
TotAirSys (Gamma)
Ending