

Series variation



Discontinue Auxiliary valve

• Quick exhaust, and circuit switchover valves, etc. are available

Model	Product appearance	Model no.	Port size (Rc)										Page			
			M5	4 dia.	6 dia.	1/8	1/4	3/8	1/2	3/4	1	1 1/4		1 1/2		
Quick exhaust valve		QEV-6A				●										650
		QEV-8A					●									
		QEV-10						●								
		QEV-15							●							
		QEV-20									●					
		QEV-25											●			
Shuttle valve		SHV-6A				●									654	
		SHV-8A					●									
		SHV-10						●								
		SHV-15							●							
		SHV-20									●					
		SHV-25											●			
Small check valve with push in port		CHL-M54	●											658		
		CHL-H44		●												
		CHL-H66			●											
Check valve		CHV-6				●								660		
		CHV-8-J					●									
		CHV-8					●									
		CHV-10-J						●								
		CHV-10						●								
		CHV-15							●							
		CHV-20								●						
		CHV-25									●					
		CHV-32										●				
		CHV-40											●			



Discontinue

Pneumatic components (auxiliary valve)

Safety Precautions

Read this before starting use.

Please refer to Intro 43 for general details on the pneumatic components, and to "▲Safety Precautions" in this section for detailed cautions pertaining to each series.

CAUTION

Design & Selection

1 Use this product within the proper specified range.
Contact CKD when using the product outside specifications or for special applications.

- If used outside specifications, product functions may not be attained and safety cannot be guaranteed.
- There are cases when this product cannot be used for special applications or in special environments. These include special applications requiring safety including nuclear energy, railroad, aviation, vehicle, and medical devices or applications coming into contact with beverages or food, amusement equipment, emergency shutoff circuits, press machines, brake circuits, and safety devices.

2 Check that the product can withstand the working environment.

- This product cannot be used in an environment where functional obstacles could occur. This includes high temperatures, a chemical atmosphere, or where chemicals, vibration, moisture, water drip or gas are present, or an environment where ozone is generated.
- Do not use this product where cutting oil, coolant, or spatter could contact.

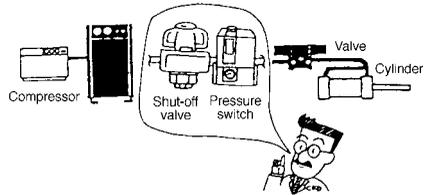
3 Fully understand characteristics of compressed air before designing the pneumatic circuit.

- If instantaneous stopping and holding are required during an emergency stop, functions equivalent to mechanical, hydraulic or electrical methods cannot be anticipated.
- Pop out, ejection, and leaks are caused by air compressibility and expansion.

4 This product cannot be used as a stop valve with zero leakage. Slight leakage is allowed in product specifications.

5 Install a "pressure switch" and "shut-off valve" on the device's compressed air supply side.

- The pressure switch is used to disable operation if set pressure cannot be reached. The shut-off valve exhausts compressed air in the pneumatic circuit, and prevents accidents caused by operation of the pneumatic devices by residual pressure.



6 Indicate the maintenance conditions in the device's instruction manual.

- The product's function can drop markedly with working status, working environment, and maintenance, and can prevent safety functions can be used to the fullest.

7 Rubber parts deteriorate and life is shortened if very dry air is used.

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Automatic drain other
- F.R.L (Module)
- F.R.L (Separate)
- Small F.R.
- Precise R.
- Electro pneumatic R.
- Auxiliary
- Flow control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum F.
- Vacuum R.
- Vacuum generator
- Vacuum auxiliary / pad
- Mechanical pressure SW
- Electronic pressure SW
- Electronic dif. pres. SW
- Sealing / close contact conf. SW
- Pressure SW for coolant
- Flow sensor for air
- Total air system
- Water cooling refrigerator
- Flow sensor for water



Safety Precautions

Read this before starting use.

Please refer to Intro 43 for general details on the pneumatic components, and to "▲Safety Precautions" in this section for detailed cautions pertaining to each series.



CAUTION

Installation & Adjustment

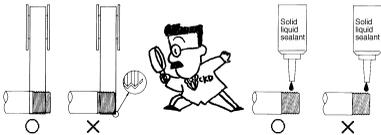
Piping

1 Do not remove the package or seal cap on the piping port until just before piping the product.

• If the piping port cap seal is removed before piping work is started, foreign matter could enter the pneumatic component and result in failure or malfunction.

2 When connecting pipes, wrap sealing tape in the opposite direction from threads starting 2 mm inside from the end of piping threads.

• If sealing tape protrudes from pipe threads, it could be cut when screwed in. This could cause the tape to enter the solenoid valve and lead to faults.



3 Handling push in piping joints and tubes

• Refer to WARNINGS and CAUTIONS for the joint and tube (pages 675 to 677) for details on handling push in piping joints and tubes.

4 Always flush just before piping pneumatic component.

• Any foreign matter that has entered during piping must be removed so it does not enter the pneumatic component.

5 When supplying compressed air for the first time after connecting pipes, do not apply high pressure suddenly.

• Piping connection could be dislocated or the piping tube fly off, leading to accidents.

6 When supplying compressed air for the first time after connecting pipes, confirm that no air is leaking from any pipe connections.

• Apply a leakage detection agent on pipe connections with a brush, and check for air leaks.

7 Tighten pipes with the appropriate torque.

• Pipes must be connected with the appropriate torque to prevent air leakages and screw damage.

• First tighten the screw by hand to prevent damage to screw threads, then use a tool.

• Do not retighten while pressure is applied.



[Recommended tightening torque]

Set screw	Tightening torque N·m
M5	1.0 to 1.5
Rc1/8	3 to 5
Rc1/4	6 to 8
Rc3/8	13 to 15
Rc1/2	16 to 18
Rc3/4	19 to 40
Rc1	41 to 70

Discontinue



CAUTION

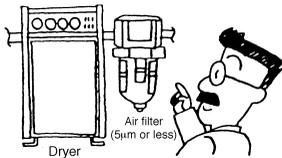
Installation & Adjustment

8 Pipe so that piping connection does not deviate by the device's movement, vibration, tension, etc.

- Control of actuator speed will be disabled if piping on the exhaust side of the pneumatic circuit is disengaged.
- When using the chuck holding mechanism, the chuck will be released creating a hazardous state.

9 Secure sufficient space around pneumatic components for installation, removal, and piping work.

10 Install an air filter just before the circuit using the pneumatic components.



WARNING

During use & Maintenance

1 Stop air and confirm that there is no residual pressure before replacing the tube.

Refrigerating type dryer

Desiccant type dryer

High polymer membrane dryer

Air filter

Automatic drain other

F.R.L (Module)

F.R.L (Separate)

Small F.R.

Precise R.

Electro pneumatic R.

Auxiliary

Flow control valve

Silencer

Check valve / others

Joint / tube

Vacuum F.

Vacuum R.

Vacuum generator

Vacuum auxiliary / pad

Mechanical pressure SW

Electronic pressure SW

Electronic dif. pres. SW

Steering / close contact conf. SW

Pressure SW for coolant

Flow sensor for air

Total air system

Water cooling refrigerator

Flow sensor for water

Auxiliary valve

Discontinue

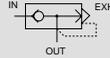
Quick exhaust valve

QEV Series

Increased speed of exhaust from cylinder, etc. High efficient air circuit will be realized.

- Port size: Rc1/8 to Rc1

JIS symbol



CAD DATA AVAILABLE.



Specifications

Descriptions	QEV-6A	QEV-8A	QEV-10	QEV-15	QEV-20	QEV-25	
Working fluid	Compressed air						
Max. working pressure MPa	1.0						
Min. working pressure MPa	0.03						
Withstanding pressure MPa	1.5						
Cracking pressure MPa	0.03						
Ambient temperature °C	5 to 60						
Port size Rc	IN / OUT	1/8	1/4	3/8	1/2	3/4	1
	EXH	1/4	1/4	1/2	1/2	1	1
Product mass g	80		230		1000		
Effective sectional area mm ²	IN → OUT	23	29	67	275		
	OUT → EXH	28	33	79	330		

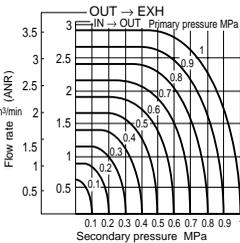
How to order

QEV — 6A

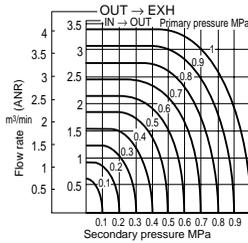
A Port size	
6A	Rc1/8
8A	Rc1/4
10	Rc3/8
15	Rc1/2
20	Rc3/4
25	Rc1

Flow characteristics

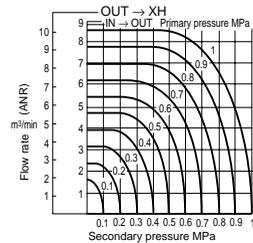
• QEV-6A



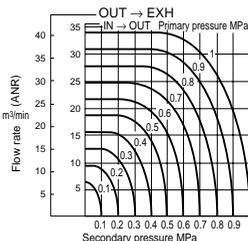
• QEV-8A



• QEV-10 / 15



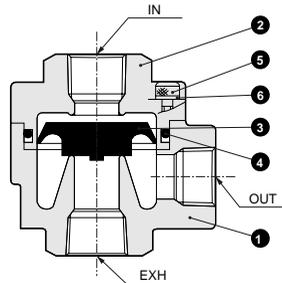
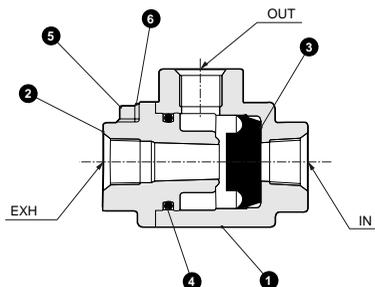
• QEV-20 / 25



Internal structure and parts list

• QEV-6A / 8A

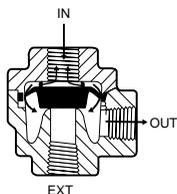
• QEV-10 to 25



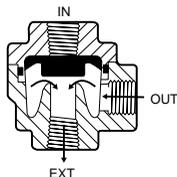
No.	Parts name	Material	No.	Parts name	Material
1	Main body	Aluminum die casting	4	O ring	Nitrile rubber
2	Plug	Aluminum die casting	5	Hexagon socket head cap screw	Steel
3	Valve	Nitrile rubber	6	Spring washer	Steel

No.	Parts name	Material	No.	Parts name	Material
1	Main body	Aluminum die casting	4	O ring	Nitrile rubber
2	Plug	Aluminum die casting	5	Hexagon socket head cap screw	Steel
3	Packing seal	Nitrile rubber	6	Spring washer	Steel

Operational explanation



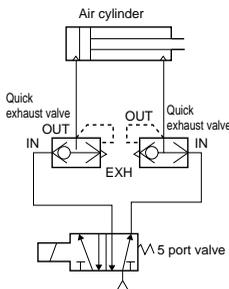
• IN → OUT
The valve closes EXH (exhaust port) by compressed air entered from IN, and the air flows to OUT passing through around the packing seal.



• OUT → EXH
If pressure of IN side is dropped, the valve closes IN port, while opens EXH (exhaust port) to exhaust air from OUT side.

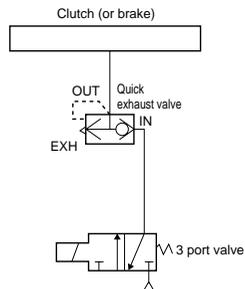
Applications

(1) Usage to increase exhaust speed of air cylinder.



Exhaust

(2) Usage to increase exhaust speed of clutch (or brake).



⚠ Precautions

• The installation attitude is free, however in the range where differential pressure is small (0.03MPa or less), the action may slow. So, care should be taken.

Refrigerating type dryer

Desiccant type dryer

High polymer membrane dryer

Air filter

Automatic drain

other

F.R.L (Module)

F.R.L (Separate)

Small F.R.

Precise R.

Electro pneumatic R.

Auxiliary

Flow control valve

Silencer

Check valve

others

Joint / tube

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Pressure SW for coolant

Flow sensor for air

Total air system

Water cooling refrigerator

Flow sensor for water

Auxiliary valve

Quick exhaust valve

Water cooling refrigerator

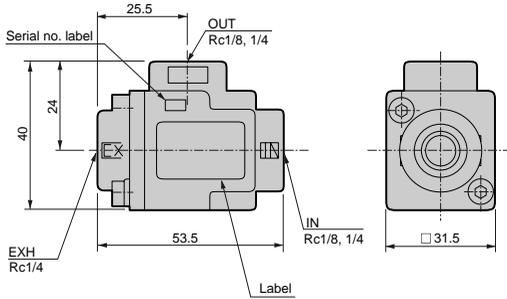
Flow sensor for water

Auxiliary valve

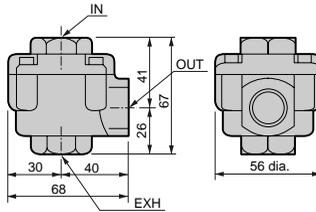
Quick exhaust valve

Dimensions

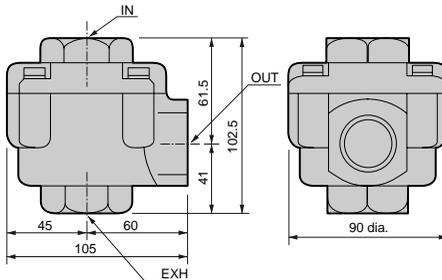
- QEV-6A / 8A  (File name: Page 671 or Ending 22)



- QEV-10 / 15  (File name: Page 671 or Ending 22)



- QEV-20 / 25  (File name: Page 671 or Ending 22)



Model no.	QEV-6A	QEV-8A	QEV-10	QEV-15	QEV-20	QEV-25
IN / OUT	Rc1/8	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1
EXH	Rc1/4		Rc1/2		Rc1	