

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.

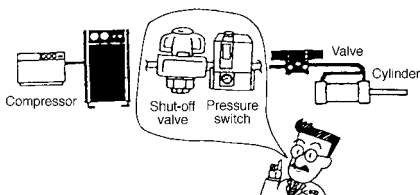
- 3 Fully understand characteristics of compressed air before designing the pneumatic circuit.**

- 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

Auxiliary valve



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

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

 CAUTION

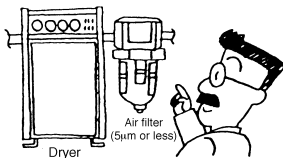
Installation & Adjustment

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

Sealing / close
contact conf.
SW

Pressure SW
for coolant

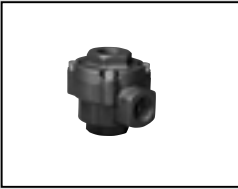
Flow sensor
for air

Total air
system

Water
cooling
refrigerator

Flow sensor
for water

Auxiliary valve



Discontinue

Shuttle valve

SHV Series

- Port size: Rc1/8 to Rc1
- JIS symbol

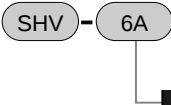


CAD DATA AVAILABLE.

Specifications

Descriptions	SHV-6A	SHV-8A	SHV-10	SHV-15	SHV-20	SHV-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	1/8	1/4	3/8	1/2	3/4	1
Product mass g	110		270		1100	1200
Effective sectional area mm ²	A → OUT	23	28	67	106	250
	B → OUT	23	28	79	128	305

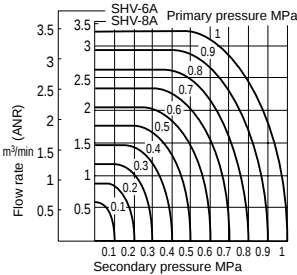
How to order



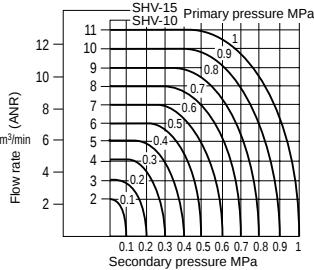
A Port size	
6A	Rc1/8
8A	Rc1/4
10	Rc3/8
15	Rc1/2
20	Rc3/4
25	Rc1

Flow characteristics (A → OUT)

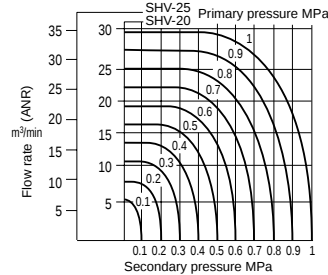
• SHV-6A / 8A



• SHV-10 / 15

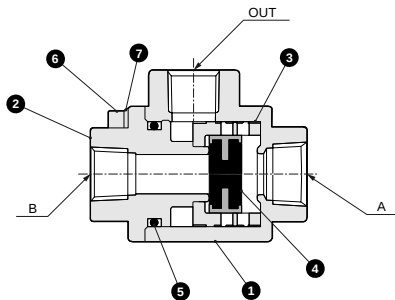


• SHV-20 / 25

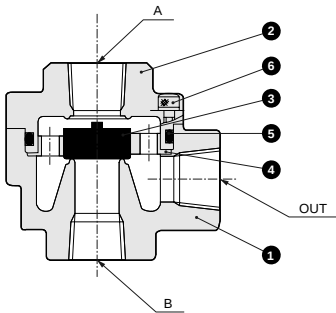


Internal structure and parts list

• SHV-6A / 8A



• SHV-10 to 25

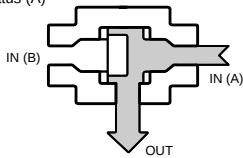


No.	Parts name	Material	No.	Parts name	Material
1	Main body	Aluminum die casting	5	O ring	Nitrile rubber
2	Plug	Aluminum die casting	6	Hexagon socket head cap screw	Steel
3	Guide ring	Brass	7	Spring washer	Steel
4	Valve	Nitrile rubber / brass			

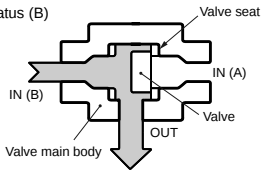
No.	Parts name	Material	No.	Parts name	Material
1	Main body	Aluminum die casting	4	Guide ring	Brass
2	Plug	Aluminum die casting	5	O ring	Nitrile rubber
3	Valve	Nitrile rubber	6	Hexagon socket head cap screw	Steel

Principle figure

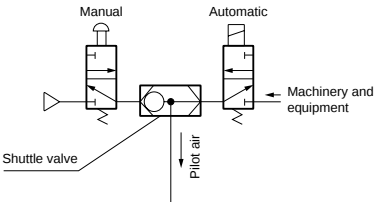
• Operational status (A)



• Operational status (B)



Applications



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

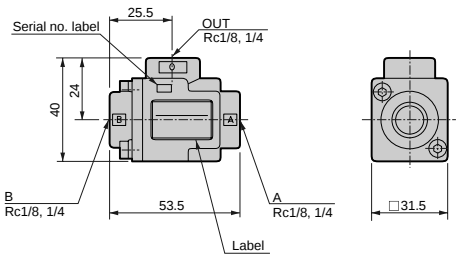
Water
cooling
refrigerator

Flow sensor
for water

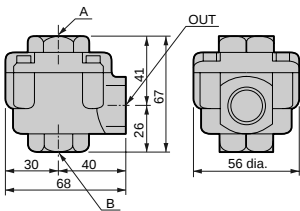
Auxiliary valve
Shuttle valve

Dimensions

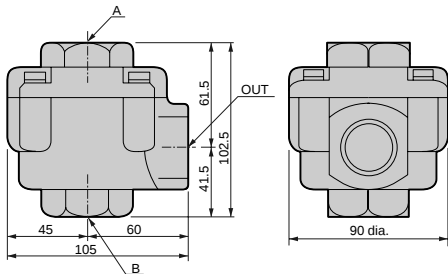
• SHV-6A / 8A  (File name: Page 671 or Ending 22)



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



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



Model no.	SHV-6A	SHV-8A	SHV-10	SHV-15	SHV-20	SHV-25
A / B / OUT	Rc1/8	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1