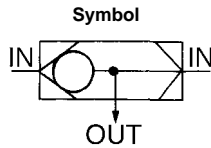


Related Products *VR1210/1220*

Shuttle Valve

3 ported check valve with one output and 2 pneumatic signal input ports. Output always supplied by high pressure inlet.



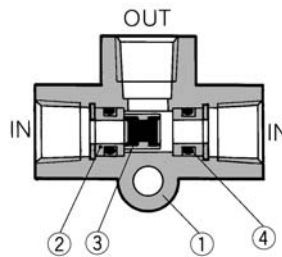
Model/Specifications

	EVR1210-01	EVR1220-02
Max. operating pressure	1.0MPa	
Min. operating pressure	0.05MPa	
Min. pressure differential	0.05MPa	
Ambient and fluid temperature	-5 to 60°C (No freezing)	
Effective area(Nl/min)	7mm ² (338.77)	15mm ² (722.12)
Port size	1/8	1/4
Weight	48g	95g

Construction

When right port has higher pressure

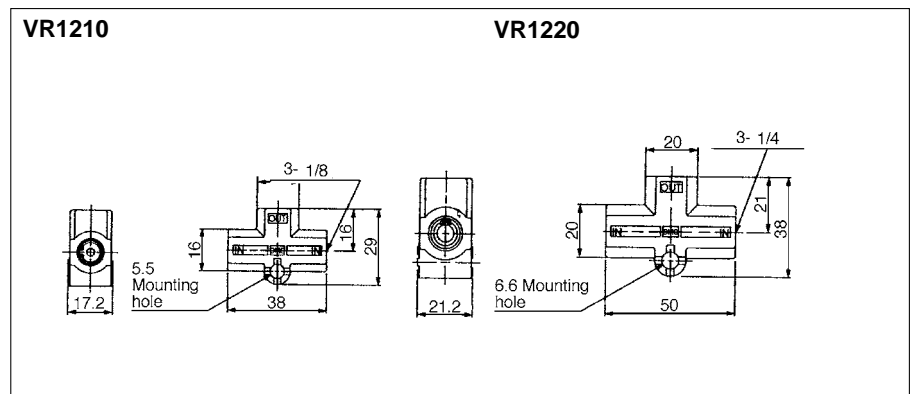
When left port has higher pressure



Component Parts

No.	Description	Material	Notes	No.	Description	Material	Notes
①	Body	Aluminum alloy	Metallic alloy	③	Valve	Brass, NBR	
②	Valve seat	Brass		④	O ring	NBR	

Dimensions



S□A

V□A

S□A

V□A

VM/VR

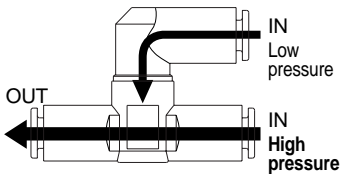
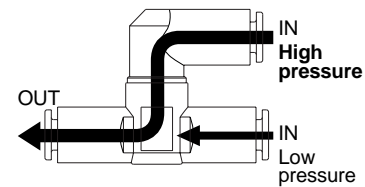
VH

Shuttle Valve with One-Touch Fittings Series VR1210F, VR1220F

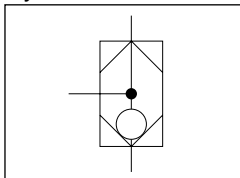


Shuttle valve/VR12□0F

The high pressure air is always output to the OUT side.



Symbol



Models

Model	Applicable tubing outside diameter									
	Metric size					Inch size				
	3.2	4	6	8	10	1/8"	5/32"	1/4"	5/16"	3/8"
VR1210F	●	●	●	●		●	●	●	●	
VR1220F			●	●	●			●	●	●

Specifications

Proof pressure	1.5MPa
Maximum operating pressure	1MPa
Minimum operating pressure	0.05MPa
Ambient and fluid temperature	-5 to 60°C (with no freezing)
Applicable tubing material ^{Note 1)}	Nylon, Soft nylon, Polyurethane

Note 1) Use caution regarding the maximum operating pressure with soft nylon and polyurethane.

Note 2) On standard products all brass parts are electroless nickel plated.
(Suitable for copper free applications.)

Flow Rate and Effective Area

Model		VR1210F				VR1220F		
Applicable tubing O.D.	Metric size	ø3.2	ø4	ø6	ø8	ø6	ø8	ø10
	Inch size	ø1/8"	ø5/32"	ø1/4"	ø5/16"	ø1/4"	ø5/16"	ø3/8"
IN→OUT	Flow rate Nl/min	150	210	420	480	440	680	1000
	Effective area mm ²	2.3	3.2	6.4	7.3	6.7	10.4	15.2

Note 1) Flow rate values are at a pressure of 0.5MPa and temperature of 20°C.

How to Order

VR 12 1 0 F — 06

Body size

1	1/8 standard
2	1/4 standard

Applicable tubing outside diameter

Metric sizes		Inch sizes	
23	ø3.2 *	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	07	ø1/4"
08	ø8	09	ø5/16"
10	ø10	11	ø3/8"

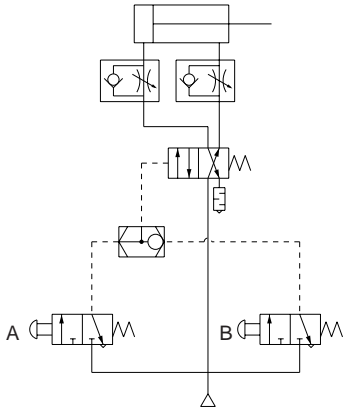
* Use ø1/8" tubing for ø3.2.

With One-touch fitting

Application Circuit Examples

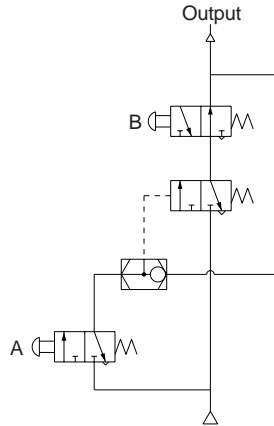
OR circuit

- The cylinder operates if either "A" or "B" is ON.



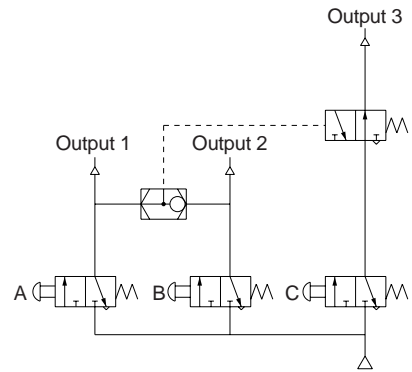
Self holding circuit

- When "A" is turned ON, output goes ON.
- The output ON state is maintained even if "A" is turned OFF.
- The output goes OFF when "B" is turned ON in condition 2.

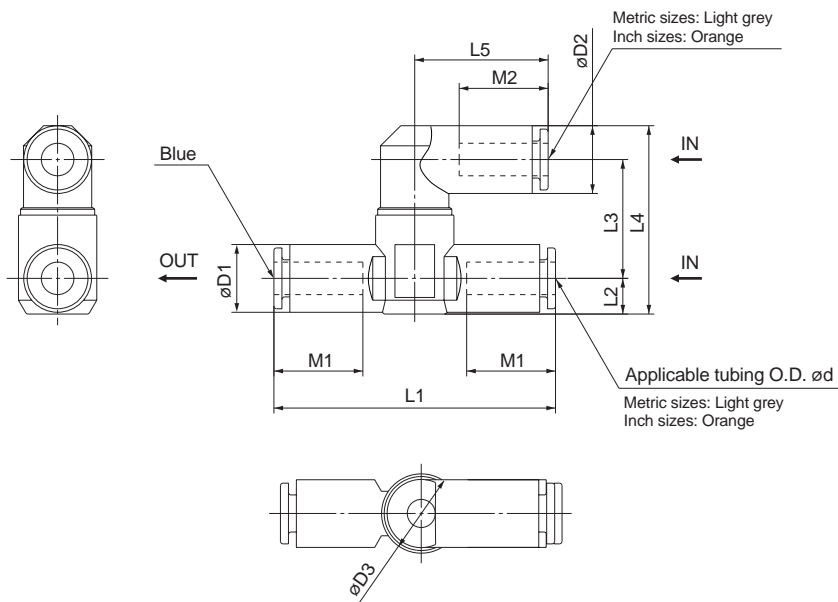


Interlock circuit

- When either "A" or "B" are ON, output 3 does not go ON even if "C" is turned ON.
- Output 3 goes ON if "C" is turned ON, only when both "A" and "B" are OFF.



Dimensions



Metric sizes

Model	d	D1	D2	D3	L1	L2	L3	L4	L5	M1	M2	Weight g
VR1210F-23	3.2	11.4	8.4	14.8	52	6.2	19.4	29.8	17.5	12.7	12.9	21.4
VR1210F-04	4	12.8	10.4		56	6.8	20.3	32.2	21.9	15.7	15.8	25.2
VR1210F-06	6	12.8	12.8		53.2	22.5	35.6	25.2	16.8	16.8	23.0	
VR1210F-08	8	15.2	15.2		60.4		8.1	38.2	28.2	18.7	18.7	24.0
VR1220F-06	6	12.8	12.8	19.8	59	7.4	23.9	37.7	25.2	16.8	16.8	27.2
VR1220F-08	8	15.2	15.2		65	8.2		39.7	28.2	18.7	18.7	31.9
VR1220F-10	10	18.5	18.5		71.6	9.8	25.8	44.8	31	20.8	20.8	43.2

Inch sizes

Model	d	D1	D2	D3	L1	L2	L3	L4	L5	M1	M2	Weight g
VR1210F-01	1/8"	11.4	8.4	14.8	52	6.2	19.4	29.8	17.5	12.7	12.9	21.4
VR1210F-03	5/32"	12.8	10.4		56	6.8	20.3	32.2	21.9	15.7	15.8	25.2
VR1210F-07	1/4"	13.2	13.2		54.4	7.1	22.5	36.2	25.6	16.8	16.8	23.5
VR1210F-09	5/16"	15.2	15.2		60.4	8.1		38.2	28.2	18.7	18.7	24.0
VR1220F-07	1/4"	13.2	13.2	19.8	59	7.4	23.9	37.9	25.6	16.8	16.8	31.4
VR1220F-09	5/16"	15.2	15.2		65	8.2		39.7	28.2	18.7	18.7	31.9
VR1220F-11	3/8"	17.9	18.5		69.8	9.5	25.8	44.5	31	20.8	20.8	53.0

S□A

V□A

S□A

V□A

VM/VR

VH

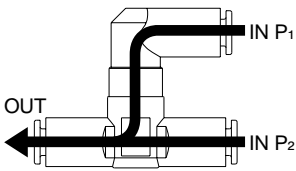
AND Valve with One-Touch Fittings Series VR1211F



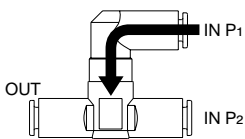
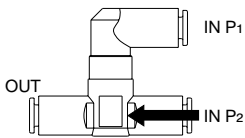
AND valve/VR1211F

There is output to the OUT side only when air is supplied to both P₁ and P₂.

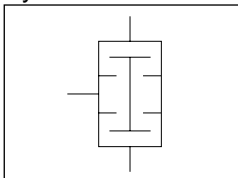
In case of different pressures, the lower pressure is output to the OUT side.



There is no output to the OUT side if air is supplied to only one of P₁ and P₂.



Symbol



Models

Model	Applicable tubing outside diameter					
	Metric size			Inch size		
	3.2	4	6	1/8"	5/32"	1/4"
VR1211F	●	●	●	●	●	●

Specifications

Proof pressure	1.5MPa
Maximum operating pressure	1MPa
Minimum operating pressure	0.05MPa
Ambient and fluid temperature	-5 to 60°C (with no freezing)
Applicable tubing material ^{Note 1)}	Nylon, Soft nylon, Polyurethane

Note 1) Use caution regarding the maximum operating pressure with soft nylon and polyurethane.

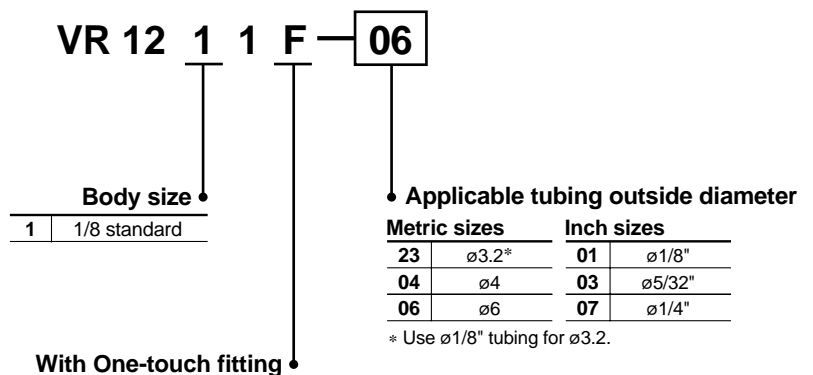
Note 2) On standard products all brass parts are electroless nickel plated.
(Suitable for copper free applications.)

Flow Rate and Effective Area

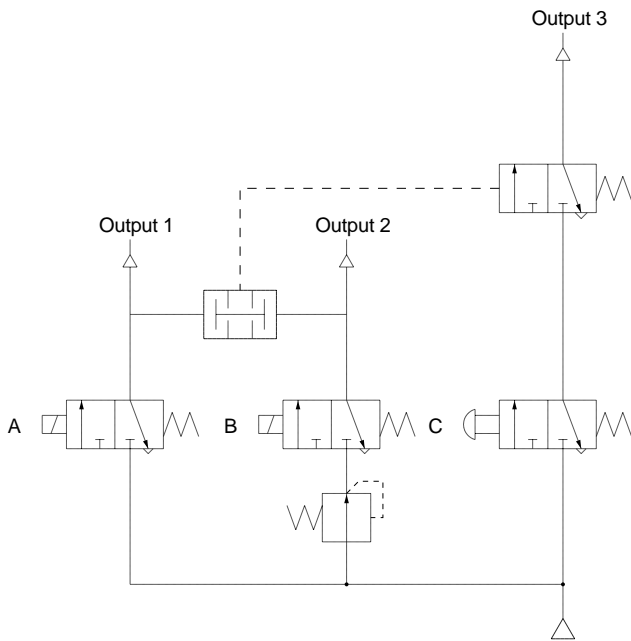
Model	VR1211F				
	Metric size	ø3.2	ø4	ø6	—
Applicable tubing O.D.	Inch size	ø1/8"	ø5/32"	—	ø1/4"
IN→OUT	Flow rate Nl/min	100	120	150	170
	Effective area mm ²	1.5	1.8	2.3	2.6

Note 1) Flow rate values are at a pressure of 0.5MPa and temperature of 20°C.

How to Order



Application Circuit Example



- When "A" and "B" having different pressure conditions are turned ON, output 1 and output 2 go ON.
- Output 3 goes ON if "C" is turned ON, only when output 1 and output 2 are in an ON state.
- If either "A" or "B" is OFF, output 3 does not go ON even if "C" is turned ON.

S□A

V□A

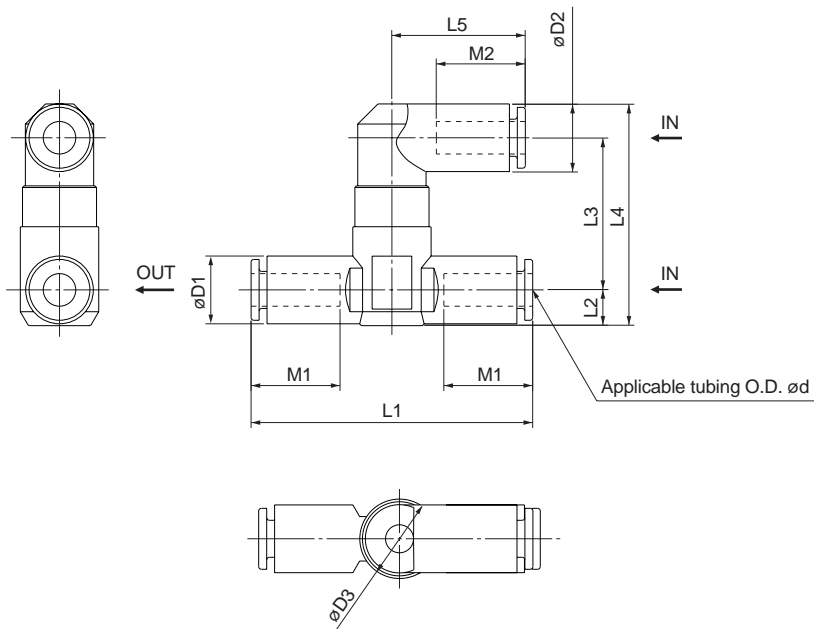
S□A

V□A

VMVR

VH

Dimensions



Metric sizes

Model	d	D1	D2	D3	L1	L2	L3	L4	L5	M1	M2	Weight g
VR1211F-23	3.2	11.4	8.4	14.8	52	6.2	25.7	36.1	17.5	12.7	12.9	26.4
VR1211F-04	4	12.8	10.4		56	6.8	26.6	38.5	21.9	15.7	15.8	30.4
VR1211F-06	6	12.8	12.8		53.2		28.8	41.9	25.2	16.8	16.8	25.0

Inch sizes

Model	d	D1	D2	D3	L1	L2	L3	L4	L5	M1	M2	Weight g
VR1211F-01	1/8"	11.4	8.4	14.8	52	6.2	25.7	36.1	17.5	12.7	12.9	26.4
VR1211F-03	5/32"	12.8	10.4		56	6.8	26.6	38.5	21.9	15.7	15.8	30.4
VR1211F-07	1/4"	13.2	13.2		54.4	7.1	28.8	42.5	25.6	16.8	16.8	27.0

Related Products

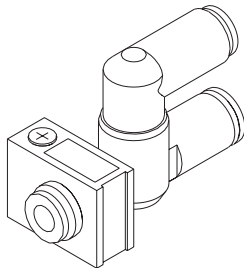
Holder Series TMH

This holder is used to secure the AND valve and shuttle valve with One-touch fittings.

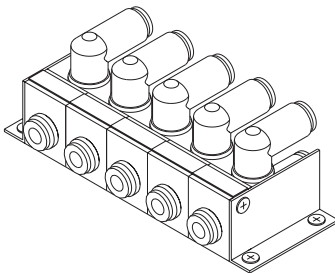
Allows highly flexible mounting.



Single unit secured using holder

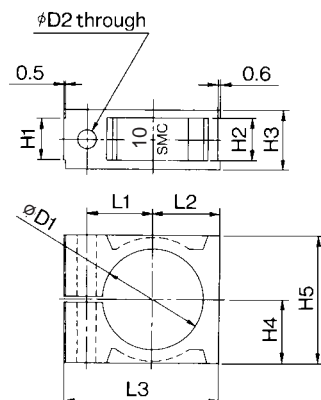


Manifolding is possible



Note) Mounting brackets are not available. This is an application example only.

Dimensions



Specifications

Ambient temperature	-20 to 60°C
Material	Polypropylene
Color	White

Accessories/Round head Phillips mounting screw (black zinc chromated)

Model		Size (nominal size x length)	Qty.
Metric size	Inch size		
—	TMH-05	M3 x 20	1
TMH-06	TMH-07	M4 x 25	
TMH-08	TMH-09		
TMH-10	TMH-11	M4 x 35	

Shuttle Valve/AND Valve and Holder Compatibility

Metric sizes

Model		Applicable tubing outside diameter				
Shuttle valve	AND valve	ø3.2	ø4	ø6	ø8	ø10
VR1210F	VR1211F	TMH-05	TMH-06	TMH-06	TMH-08	—
VR1220F	—	—	—			TMH-10

Inch sizes

Model		Applicable tubing outside diameter				
Shuttle valve	AND valve	ø1/8"	ø5/32"	ø1/4"	ø5/16"	ø3/8"
VR1210F	VR1211F	TMH-05	TMH-06	TMH-07	—	—
VR1220F	—	—	—		TMH-09	TMH-11