

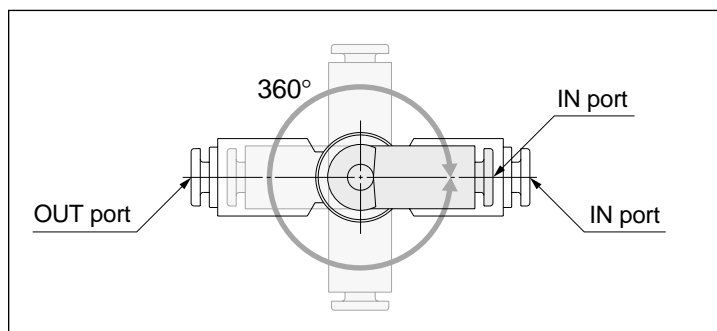
## Shuttle Valve/AND Valve with One-Touch Fittings Series VR12□□F



### Interrupters for control of air pressure signal system lines

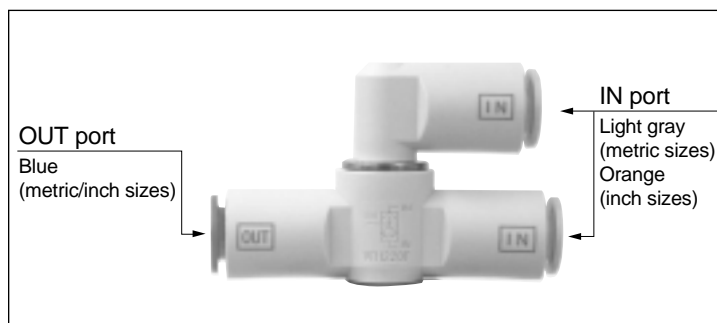
#### IN port can be rotated 360°

Piping is possible in any position. In addition, One-touch fittings make piping connections easy.



#### IN and OUT ports can be easily distinguished

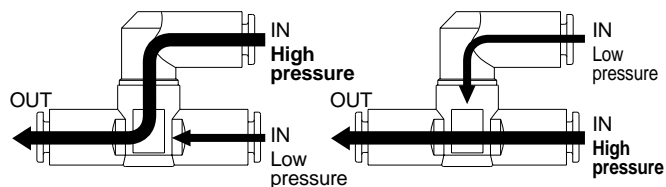
Since the One-touch fitting colors are different, IN and OUT can be confirmed at a glance to prevent mispiping.



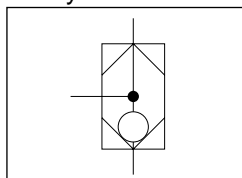
#### Metric and inch sizes standardized

#### Shuttle valve/VR12□□F

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



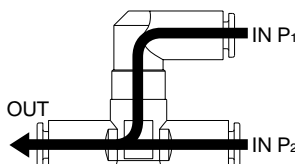
JIS symbol



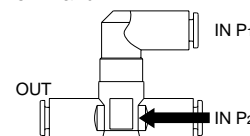
#### AND valve/VR1211F

There is output to the OUT side only when air is supplied to both P<sub>1</sub> and P<sub>2</sub>.

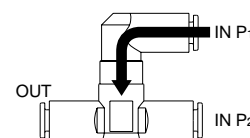
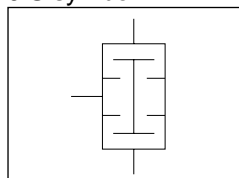
In case of different pressures, the lower pressure is output to the OUT side.



There is no output to the OUT side if air is supplied to only one of P<sub>1</sub> and P<sub>2</sub>.



JIS symbol



# Shuttle Valve with One-Touch Fittings Series VR1210F, VR1220F



## 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 <sup>Note 1)</sup>	Nylon, Soft nylon, Polyurethane

Note 1) Use caution regarding the maximum operating pressure with soft nylon and polyurethane. (Refer to "Air Fittings and Tubing" CAT.E501-B.)

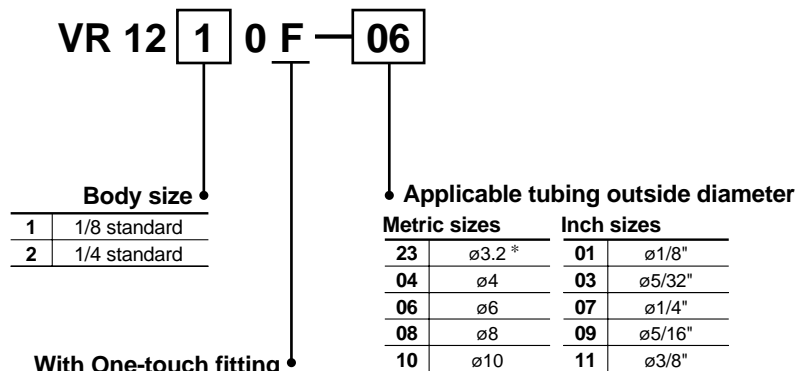
Note 2) On standard products all brass parts are electroless nickel plated. (Suitable for copper free applications.)

## 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 ℓ/min (ANR)	150	210	420	480	440	680	1000
	Effective area mm <sup>2</sup>	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

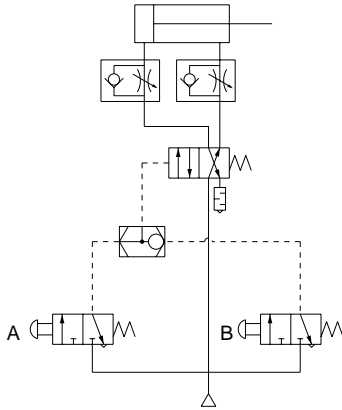


\* Use ø1/8" tubing for ø3.2.

## Application Circuit Examples

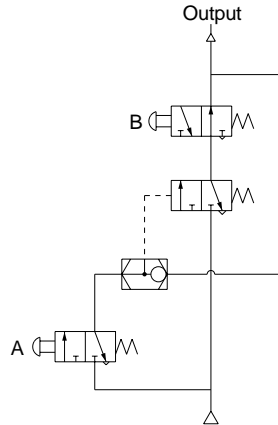
### OR circuit

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



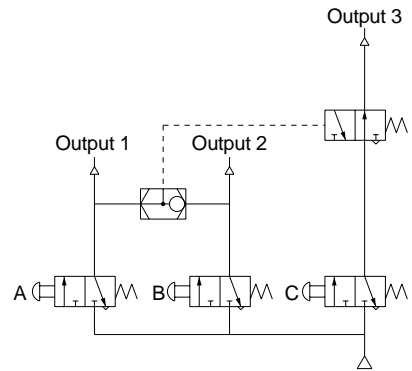
### Self holding circuit

- 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.

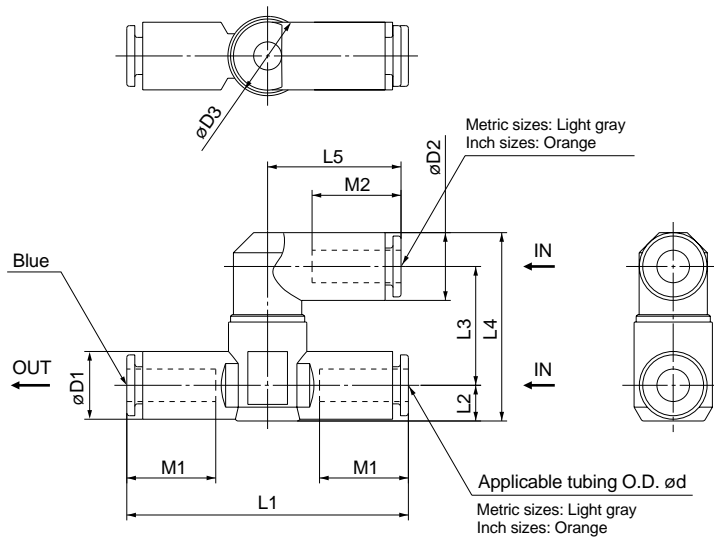


### Interlock circuit

- 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



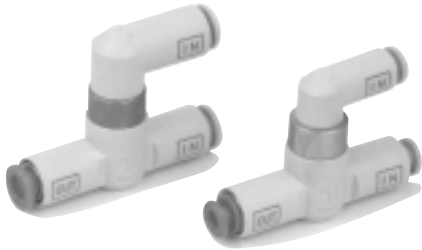
### Metric sizes

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

# AND Valve with One-Touch Fittings Series VR1211F



## 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 <sup>Note 1)</sup>	Nylon, Soft nylon, Polyurethane

Note 1) Use caution regarding the maximum operating pressure with soft nylon and polyurethane.  
(Refer to "Air Fittings and Tubing" CAT.E501-B.)

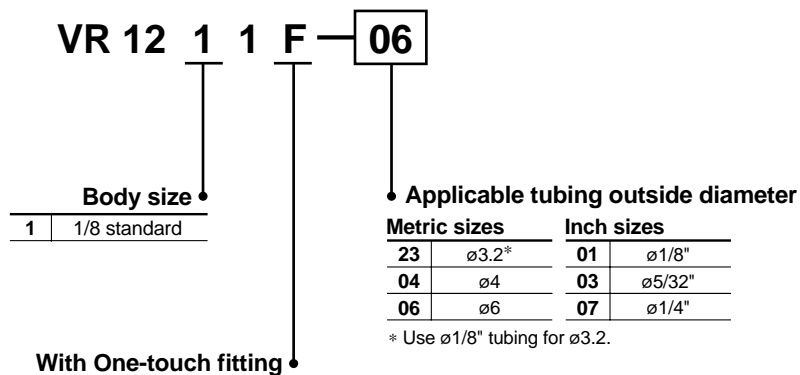
Note 2) On standard products all brass parts are electroless nickel plated.  
(Suitable for copper free applications.)

## Flow Rate and Effective Area

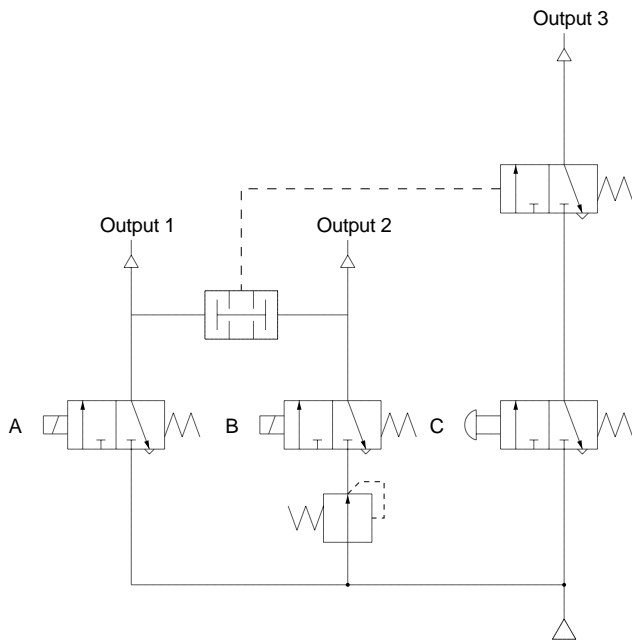
Model		VR1211F			
Applicable tubing O.D.	Metric size	ø3.2	ø4	ø6	-
	Inch size	ø1/8"	ø5/32"	-	ø1/4"
IN→OUT	Flow rate ℓ/min (ANR)	100	120	150	170
	Effective area mm <sup>2</sup>	1.5	1.8	2.3	2.6

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

## How to Order

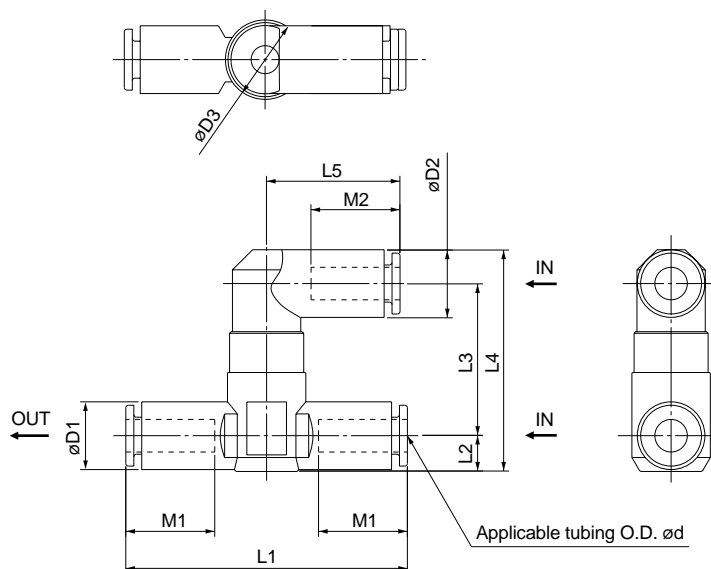


## Application Circuit Example



- 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.

## 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

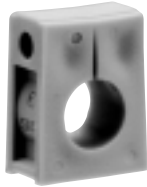
Model	d	D1	D2	D3	L1	L2	L3	L4	L5	M1	M2	Weight g
VR1211F-01	1/8"	11.4	8.4	14.8	52	6.2	25.7	36.1	17.5	12.7	12.9	26.4
VR1211F-03	5/32"	12.8	10.4		56	6.8	26.6	38.5	21.9	15.7	15.8	30.4
VR1211F-07	1/4"	13.2	13.2		54.4	7.1	28.8	42.5	25.6	16.8	16.8	27.0

# Related Products

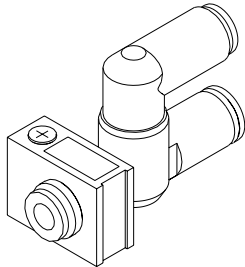
## Holder Series TMH

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

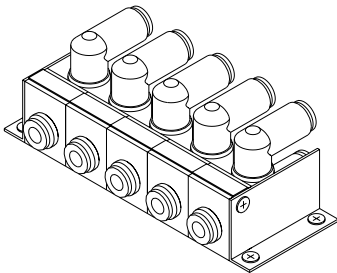
Allows highly flexible mounting.



Single unit secured using holder

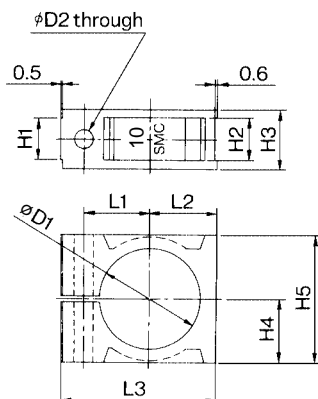


Manifolding is possible



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

Model		D1	D2	H1	H2	H3	H4	H5	L1	L2	L3
Metric size	Inch size										
—	TMH-05	11.7	3.3	6.3	6.4	9.3	7.7	15.4	8.5	8.3	21
TMH-06	—	13.1	4.3	7.1	7.2	11	10	20	11	10.6	26.5
—	TMH-07	13.5									
—	TMH-09	15.5									
TMH-08	—	18.5	4.3	9.5	9.6	14	14	28	14.2	14.6	34
—	TMH-11	18.8									



