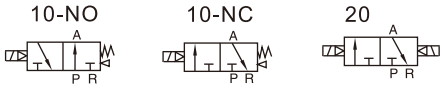
3V100 Series



Ordering code

3V	1	10	06	NO	A	□	T
1	2	3	4	5	6	7	8

①Model
3V: Solenoid valve (3/2 way)

②Code
1: 100 Series

③Valve type
10: Single solenoid
20: Double solenoid

④Port size
M5: M5
06: 1/8"

⑤Acting type
NC: Normally closed
NO: Normally opened

⑥Standard voltage
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

⑦Electrical entry
Blank: Terminal
I: Flying leads[Note]

[Note]: The wire length is 0.5m.

⑧Thread type
T: NPT

Please refer to 48 for manifold specification and the order way.

Specification

Model	3V110-M5	3V120-M5	3V110-06	3V120-06
Fluid	Air(to be filtered by 40μm filter element)			
Acting	Internal pilot			
Port size [Note1]	M5		1/8"	
Orifice size [Note3]	3V110-06,3V120-06:10.2mm^2(Cv=0.6)			
Valve type	3 port 2 position			
Lubrication [Note2]	Not required			
Operating pressure	21~114psi(0.15~0.8MPa)			
Proof pressure	175psi(1.2MPa)			
Temperature	-20~70℃			
Material of body	Aluminum alloy			

[Note 1] NPT thread is available.
[Note 2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
[Note 3] Equivalent orifice S and Cv are all calculated from the flow rate data.

Product feature

1. Structure in sliding column mode: good tightness and sensitive reaction.
2. Double control solenoid valves have memory function.
3. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
4. No need to add oil for lubrication.
5. Affiliated manual devices are equipped to facilitate installation and debugging.
6. Several standard voltage grades are optional.
7. Integrate with the manifold to save installation space.

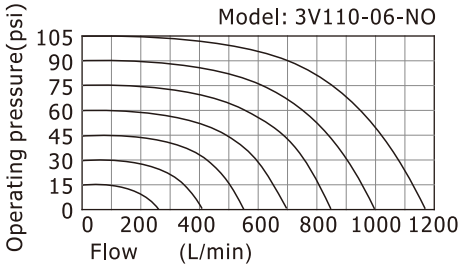
3V100 Series

Coil specification

Item	Specification				
Standard voltage	AC220V	AC110V	AC24V	DC24V	DC12V
Scope of voltage	AC: ±15% DC: ±10%				
Power consumption	3.5VA	3.5VA	4.0VA	2.5W	2.5W
Protection	IP65(DIN40050)				
Temperature classification	B Class				
Electrical entry	Terminal, Flying leads				
Activating time	0.05 sec and below				
Max. frequency [Note 1]	5 cycle/sec				

[Note1] The maximum actuation frequency is in the no-load state.

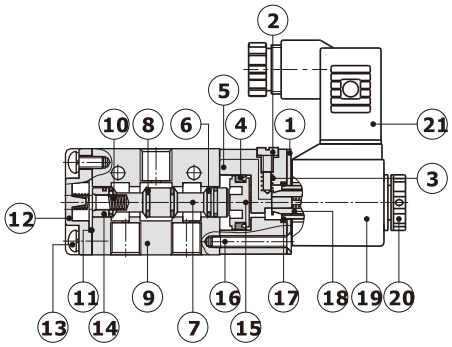
Flow chart



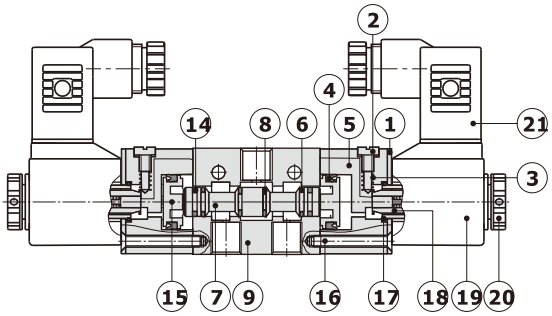
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

3V110



3V120

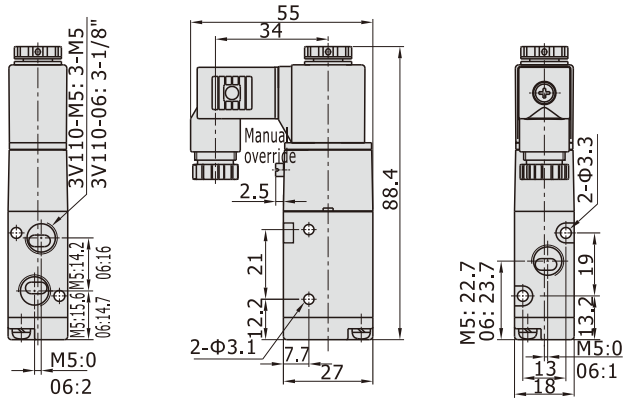


No.	Item	No.	Item	No.	Item
1	Fixed plate	8	O-ring	15	Piston
2	Manual override	9	Body	16	Pilot screw
3	Override spring	10	Spool spring	17	O-ring
4	Piston O-ring	11	Bottom cover gasket	18	Armature
5	Pilot body	12	Bottom cover	19	Coil
6	Spool packing	13	Screw	20	Coil net
7	Spool	14	Wear ring	21	Connector

3V100 Series

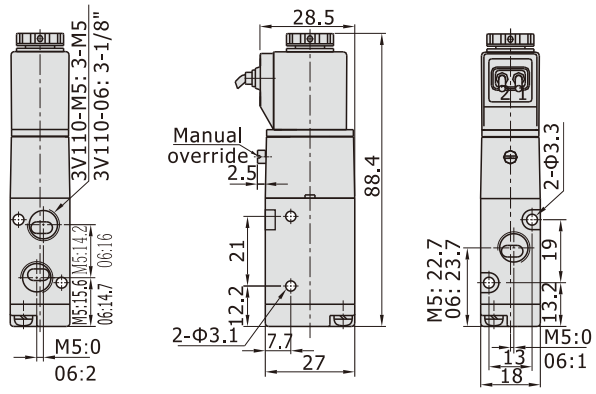
Dimensions

3V110(Terminal)

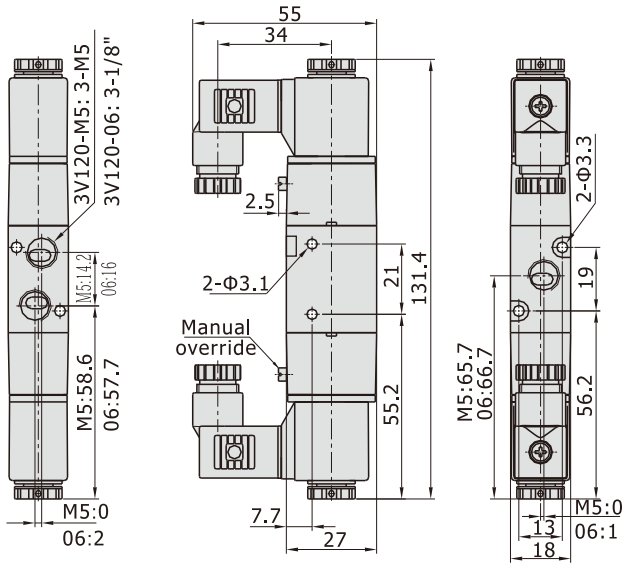


3V110(Flying leads)

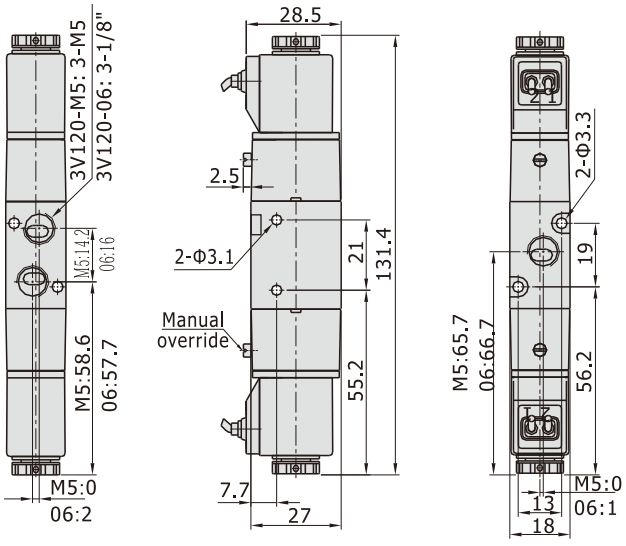
[Unit: mm]



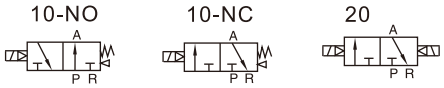
3V120(Terminal)



3V120(Flying leads)



3V200 Series



Ordering code

3V	2	10	08	NO	A	□	T
1	2	3	4	5	6	7	8

①Model
3V: Solenoid valve (3/2 way)

②Code
2: 200 Series

③Valve type
10: Single solenoid
20: Double solenoid

④Port size
06: 1/8"
08: 1/4"

⑤Acting type
NC: Normally closed
NO: Normally opened

⑥Standard voltage
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

⑦Electrical entry
Blank: Terminal
I: Flying leads[Note]

[Note]: The wire length is 0.5m.

⑧Thread type
T: NPT

Please refer to 48 for manifold specification and the order way.

Specification

Model	3V210-06	3V220-06	3V210-08	3V220-08
Fluid	Air(to be filtered by 40μm filter element)			
Acting	Internal pilot			
Port size [Note1]	In=Out=1/8"		In=Out=1/4"	
Orifice size [Note3]	3V210-08,3V220-08:17.0mm^2(Cv=1.0)			
Valve type	3 port 2 position			
Lubrication [Note2]	Not required			
Operating pressure	21~114psi(0.15~0.8MPa)			
Proof pressure	175psi(1.2MPa)			
Temperature	-20~70℃			
Material of body	Aluminum alloy			

[Note 1] NPT thread is available.
[Note 2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
[Note 3] Equivalent orifice S and Cv are all calculated from the flow rate data.

Product feature

1. Structure in sliding column mode: good tightness and sensitive reaction.
2. Double control solenoid valves have memory function.
3. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
4. No need to add oil for lubrication.
5. Affiliated manual devices are equipped to facilitate installation and debugging.
6. Several standard voltage grades are optional.
7. Integrate with the manifold to save installation space.

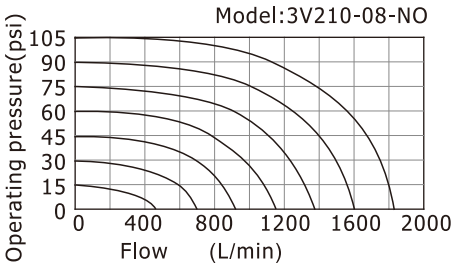
3V200 Series

Coil specification

Item	Specification				
Standard voltage	AC220V	AC110V	AC24V	DC24V	DC12V
Scope of voltage	AC: ±15% DC: ±10%				
Power consumption	4.5VA	4.5VA	5.0VA	3.0W	3.0W
Protection	IP65(DIN40050)				
Temperature classification	B Class				
Electrical entry	Terminal, Flying leads				
Activating time	0.05 sec and below				
Max. frequency [Note 1]	5 cycle/sec				

[Note1] The maximum actuation frequency is in the no-load state.

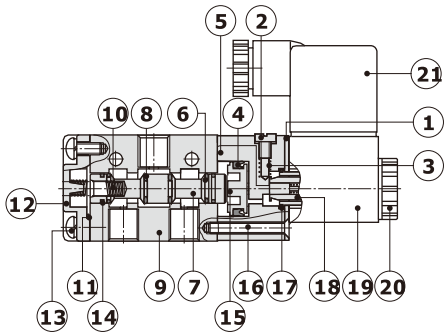
Flow chart



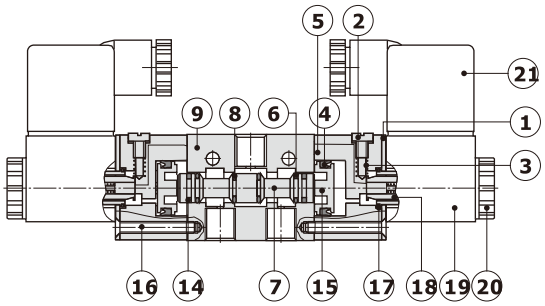
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

3V210



3V220



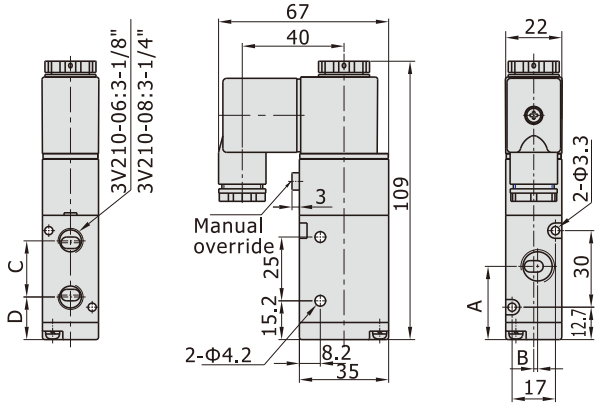
No.	Item	No.	Item	No.	Item
1	Fixed plate	8	O-ring	15	Piston
2	Manual override	9	Body	16	Pilot screw
3	Override spring	10	Spool spring	17	O-ring
4	Piston O-ring	11	Bottom cover gasket	18	Armature
5	Pilot body	12	Bottom cover	19	Coil
6	Spool packing	13	Screw	20	Coil net
7	Spool	14	Wear ring	21	Connector

3V200 Series

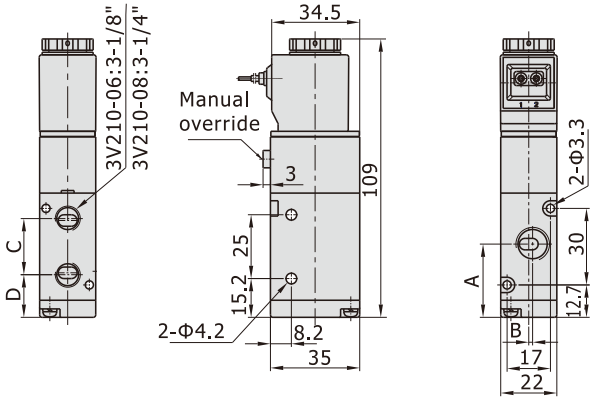
Dimensions

[Unit: mm]

3V210(Terminal)

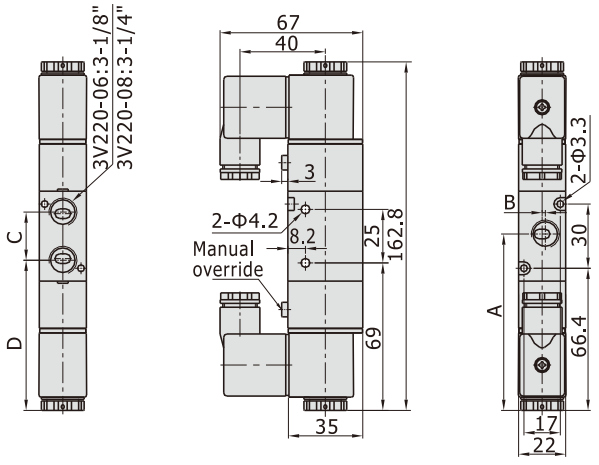


3V210(Flying leads)

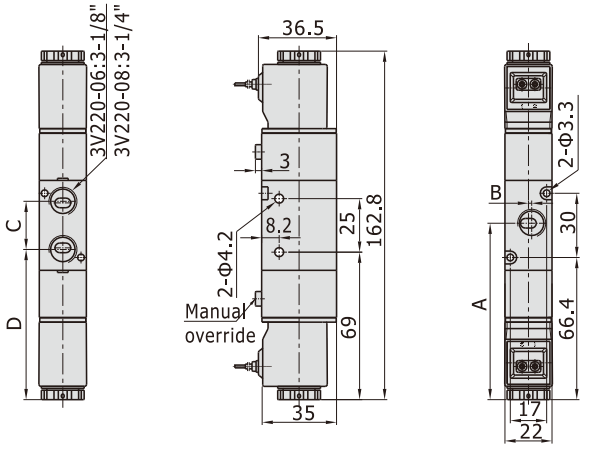


Model\Item	A	B	C	D
3V210-06	27.7	0	22	16.7
3V210-08	28.7	1.5	22.5	16.5

3V220(Terminal)

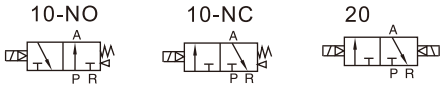


3V220(Flying leads)



Model\Item	A	B	C	D
3V220-06	81.4	0	22	70.4
3V220-08	82.4	1.5	22.5	70.2

3V300 Series



Ordering code

3V	3	10	10	NO	A	□	T
1	2	3	4	5	6	7	8

①Model
3V: Solenoid valve (3/2 way)

②Code
3: 300 Series

③Valve type
10: Single solenoid
20: Double solenoid

④Port size
08: 1/4"
10: 3/8"

⑤Acting type
NC: Normally closed
NO: Normally opened

⑥Standard voltage
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

⑦Electrical entry
Blank: Terminal
I: Flying leads[Note]

[Note]: The wire length is 0.5m.

⑧Thread type
T: NPT

Please refer to 48 for manifold specification and the order way.

Specification

Model	3V310-08	3V320-08	3V310-10	3V320-10
Fluid	Air(to be filtered by 40μm filter element)			
Acting	Internal pilot			
Port size [Note1]	In=Out=1/4"		In=Out=3/8"	
Orifice size [Note3]	3V310-10,3V320-10:28.0mm^2(Cv=1.65)			
Valve type	3 port 2 position			
Lubrication [Note2]	Not required			
Operating pressure	21~114psi(0.15~0.8MPa)			
Proof pressure	175psi(1.2MPa)			
Temperature	-20~70℃			
Material of body	Aluminum alloy			

[Note 1] NPT thread is available.
[Note 2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.
[Note 3] Equivalent orifice S and Cv are all calculated from the flow rate data.

Product feature

1. Structure in sliding column mode: good tightness and sensitive reaction.
2. Double control solenoid valves have memory function.
3. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
4. No need to add oil for lubrication.
5. Affiliated manual devices are equipped to facilitate installation and debugging.
6. Several standard voltage grades are optional.
7. Integrate with the manifold to save installation space.

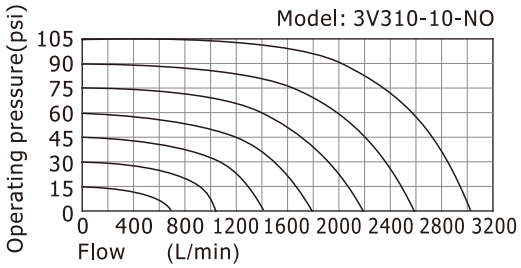
3V300 Series

Coil specification

Item	Specification				
Standard voltage	AC220V	AC110V	AC24V	DC24V	DC12V
Scope of voltage	AC: ±15% DC: ±10%				
Power consumption	4.5VA	4.5VA	5.0VA	3.0W	3.0W
Protection	IP65(DIN40050)				
Temperature classification	B Class				
Electrical entry	Terminal, Flying leads				
Activating time	0.05 sec and below				
Max. frequency [Note 1]	5 cycle/sec				

[Note1] The maximum actuation frequency is in the no-load state.

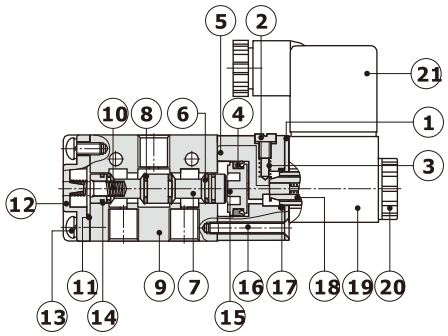
Flow chart



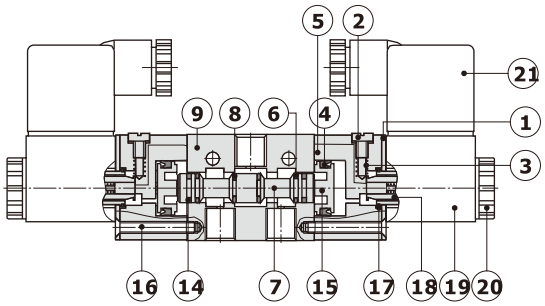
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

3V310



3V320



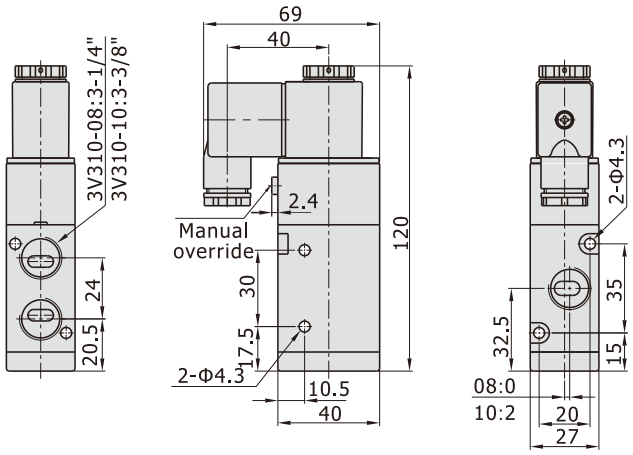
No.	Item	No.	Item	No.	Item
1	Fixed plate	8	O-ring	15	Piston
2	Manual override	9	Body	16	Pilot screw
3	Override spring	10	Spool spring	17	O-ring
4	Piston O-ring	11	Bottom cover gasket	18	Armature
5	Pilot body	12	Bottom cover	19	Coil
6	Spool packing	13	Screw	20	Coil net
7	Spool	14	Wear ring	21	Connector

3V300 Series

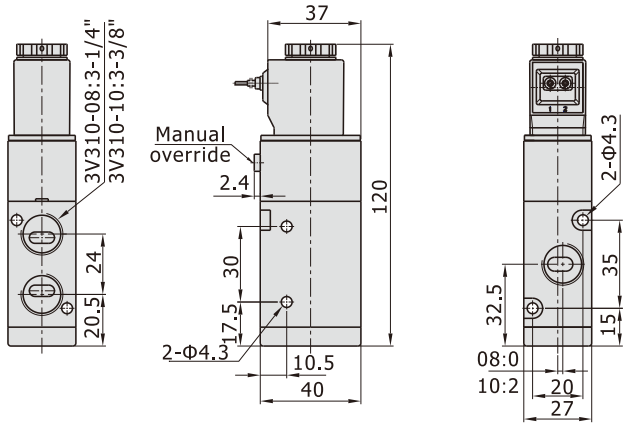
Dimensions

[Unit: mm]

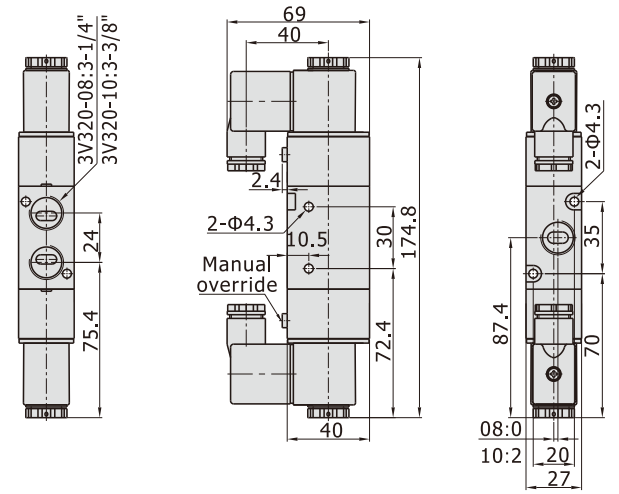
3V310(Terminal)



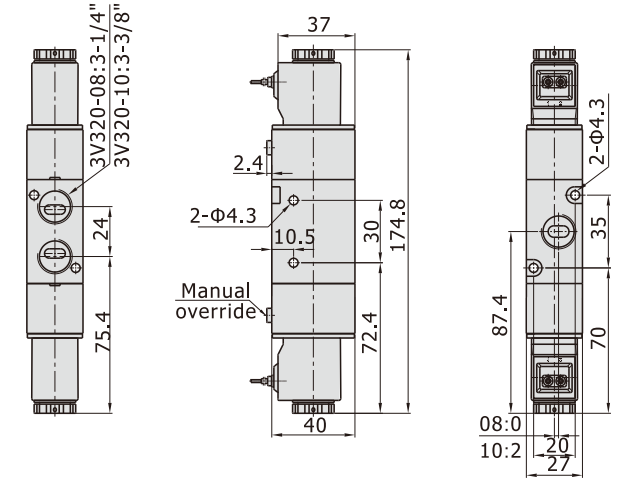
3V310(Flying leads)



3V320(Terminal)



3V320(Flying leads)



Manifold

Ordering code

Ordering code for manifold

3V100M 5F T

1 2 3

①Model	②Number of stations [Note1]	③Thread type
3V100M: 100 Series manifold 3V200M: 200 Series manifold 3V300M: 300 Series manifold	1F: 1 station 2F: 2 station 3F: 3 station ..... 16F: 16 station	T: NPT

Ordering code for blank plate

P-3V100M-R2

1 2 3

①Kits	②Model	③Code
P: Kits	3V100M: 100 Series manifold 3V200M: 200 Series manifold 3V300M: 300 Series manifold	R2: Blank plate for manifold

[Note] 1.Ordering code contains the two parts of the manifold's and the blank plate's.
2. Manifold kits contains manifold, seal and screw.
3. Blank plate kits contains blank plate, and screw.

Specification

Item\Manifold Model	100M	200M	300M
Fluid	Air(to be filtered by 40μm filter element)		
Temperature	-20~70℃		
Adoptable valve's series	3V100 Series	3V200 Series	3V300 Series

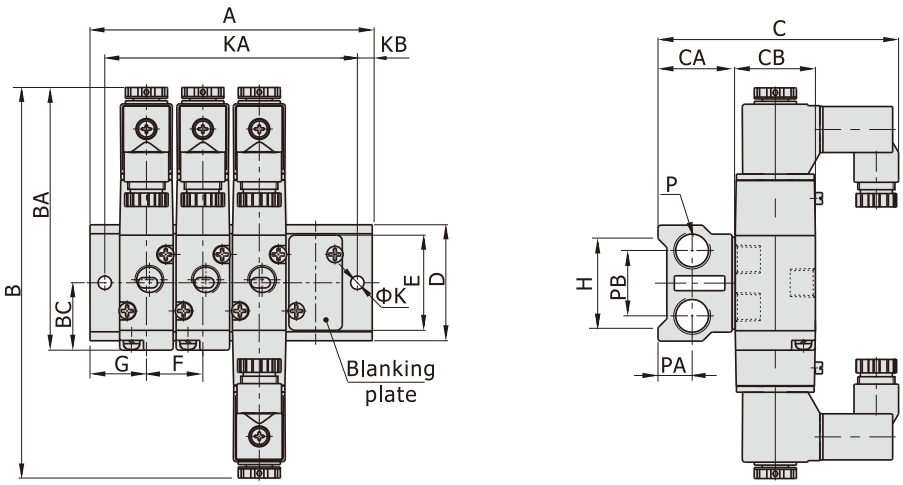
Product feature

1. It is available to integrate the direction control valves of the same series to form valve group to save space and cost;
2. It is easy to examine when there are faults owning to the unified air intake and exhaust and unified wiring;
3. Flexible combination and strong expansion capability can make any combination or expansion of the numbers of direction control valves that are connected.

Manifold

Dimensions

With 3V solenoid valve



[Unit: mm]

Model\Item	B	BA	BC	C	CA	CB	D	E	F	G	H	K	KB	P	PA	PB
3V100M	131.5	88.5	22.7	81	26	27	39	32	19	19	30	4.5	5	1/4"	11.5	22
3V200M	162.5	109	27.7	92.5	26	35	45	40	23	23	35	4.5	6	1/4"	11.5	25
3V300M	175	120	32.5	99	30	40	52	47	28	27	42	4.5	6	3/8"	13.5	28

Model\Item	A															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
3V100M	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
3V200M	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
3V300M	54	82	110	138	166	194	222	250	278	306	334	362	390	418	446	474

Model\Item	KA															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
3V100M	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313
3V200M	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379
3V300M	42	70	98	126	154	182	210	238	266	294	322	350	378	406	434	462