



Solenoid valve(3/2, 5/2, 5/3 way)

Product series

Solenoid valve: 3V1Series 18	Solenoid valve: 3V100 Series 20	Solenoid valve: 3V200 Series 22
		
Solenoid valve: 3V300 Series 24	Solenoid valve: 4V100 Series 26	Solenoid valve: 4V200 Series 28
		
Solenoid valve: 4V300 Series 30	Solenoid valve: 4V400 Series 32	Solenoid valve: 4M(NAMUR) Series 34
		
Manifold 36	Solenoid valve(ISO standard): ESV Series 38	Solenoid valve: 7V, 7MV Series 49
		



Installation and Application

1. Before installing, be sure the valve hasn't been damaged via transportation.
2. It's suggested to use the medium lubricated by 40 μ m filter element. Be aware of the flow direction and port size.
3. Please notice whether the installation condition accords with technical requirements (such as "voltage", "actuation frequency", "working pressure" and "scope of application temperature"), then the equipment can be installed and used.
4. Notice the flow direction of air during installation, P is the air intake, A (B) is the work port and R (S) is the exhaust outlet.
5. Take measure to avoid vibration and frozen.
6. Before using the fittings and tubes make sure they are clean. When connecting to fittings, be sure the PTFE Thread Seal Tape is used correctly.
7. To keep the dust away, please use the silencer for the exhaust ports. Never forget to install dirt-proof boot in air intake and outlet during dismounting.
8. After installing, please use the manual override to test valve first.



Solenoid valve(3/2 way)

AIRTAC

3V1 Series



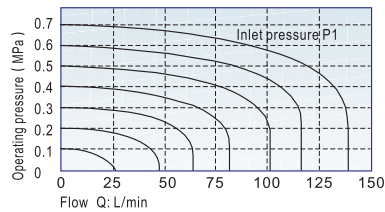
Symbol



Product feature

1. Direct acting type and normally closed mode, flexible in direction change.
2. No need to add oil for lubrication.
3. Several valves can be installed integrately to save installation space.
4. Affiliated manual devices are equipped to facilitate installation and debugging.
5. Several standard voltage grades are optional.

Flow chart



Ordering code

3V1 06 A □ P □			
Model	3V: Solenoid valve (3/2 way)	Valve's code	Blank: Use for series D: Use for single
Code	1: 1 Series	Thread type	Port size Thread type 1/8" P: PT T: NPT G: G M5 Not this code
Port size	M5: M6 06: 1/8"	Electrical entry	Blank: Terminal I: Grommet
Voltage	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V		

Specification

Model	3V1-M5	3V1-06
Fluid	Air(to be filtered by 40 μm filter element)	
Acting	Direct acting	
Port size ①	M5	1/8"
Valve type	3 port 2 position	
Lubrication	Not required	
Operating pressure	0~0.8MPa(0~114psi)	
Proof pressure	1.5MPa(215psi)	
Temperature °C	-20~70	
Orifice size	Φ1.2mm	
Material of body	Aluminum alloy	

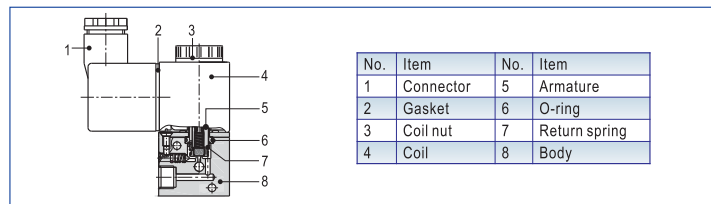
① PT thread, NPT thread and G thread are available.

Coil specification

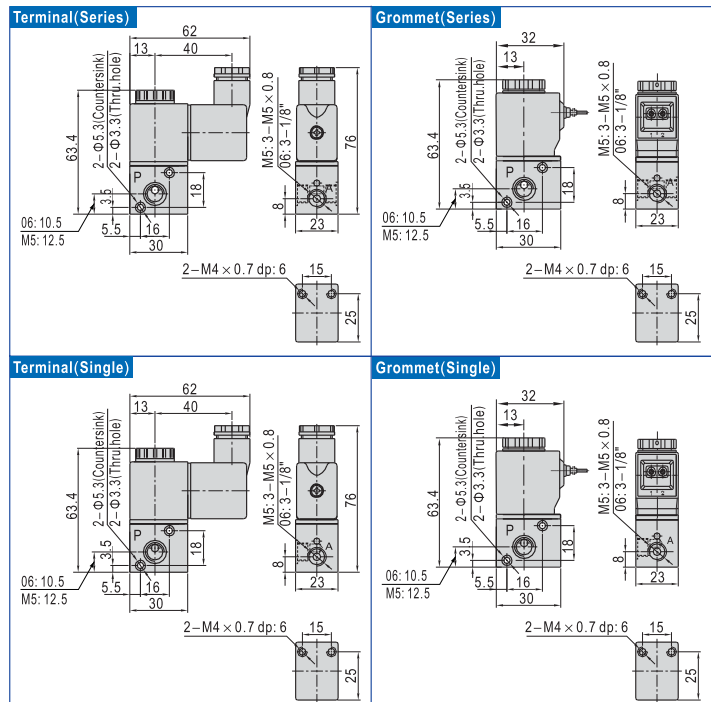
Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ±15% DC: ±10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below
Max. frequency ①	10 cycle/sec

① The maximum actuation frequency is in the no-load state.

Inner structure



Dimensions



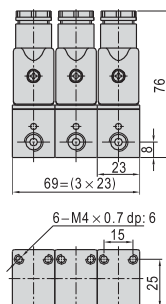
Solenoid valve(3/2 way)

AIRTAC

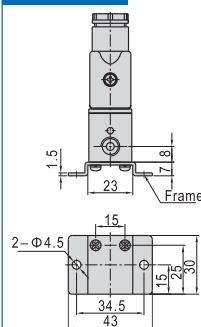
3V1 Series

Series connection

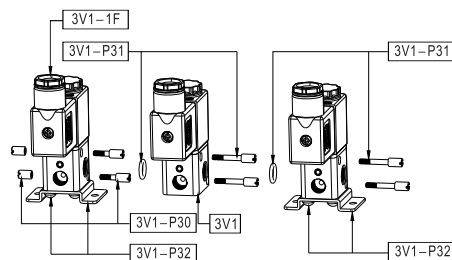
Dimensions(3F)



Dimensions(1F)



How to joint



Product structure

Connection Amount\Q.TY	3V1	3V1-P30	3V1-P31	3V1-P32
3V1-□-□-1F	1	0	0	1
3V1-□-□-2F	2	1	1	1
.....	1
3V1-□-□- nF	n	1	n-1	2

Note: n is the number of junction valve, and $n \geq 3$

Ordering code for series

3V1 06 A □ 3F P

Model

3V: Solenoid valve(3/2 way)

Port size

M5: M6
06: 1/8"

Voltage

A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

Electrical entry

Blank: Terminal
I: Grommet

Thread type

Port size	Thread type
1/8"	P: PT T: NPT G: G
M5	Not this code

Number of stations

1F: 1 Station
2F: 2 Station
3F: 3 Station
.....
20F: 20 Station

The above codes have included the series accessories, so it is unnecessary to order the accessories specially. But if you like, you could order as follows.

Code of accessories	Accessory name	Part code	Part name	Quantity
3V1-P30	Coupling screw assembly	F-3V1002N	Coupling screw(S)	2
		F-3V1003N	Coupling screw(M)	2
3V1-P31	Coupling screw assembly	GOR20008N75	O-Ring	1
		F-3V1004N	Coupling screw(L)	2
3V1-P32	Bracket assembly	F-3V1001N	Fixed mounting	1
		GSDA04008WA	Cross round head screw	2

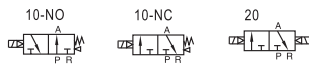
Solenoid valve(3/2 way)

AIRTAC

3V100 Series



Symbol

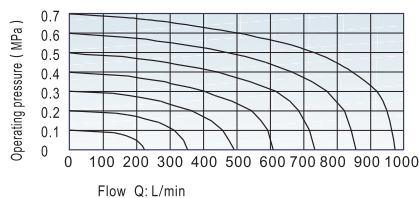


Product feature

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

Flow chart

Model: 3V110-06-NO



Specification

Model	3V110-M5	3V120-M5	3V110-06	3V120-06
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Piloted			
Port size ①	M5		1/8"	
Orifice size	5.5mm ² (Cv=0.31)		12.0mm ² (Cv=0.67)	
Valve type	3 port 2 position			
Lubrication ②	Not required			
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

Coil specification

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

① The maximum actuation frequency is in the no-load state.

Ordering code

3V 1 10 06 NO A □ P	
Model	3V: Solenoid valve(3/2 way)
Code	1: 100 Series
Valve type	10: Single solenoid 20: Double solenoid
Port size	M5: M6 06: 1/8"
Acting type	Valve type Acting type 10 NC: Normally closed NO: Normally opened 20 Not code
Thread type	Port size Thread type P: PT T: NPT G: G M5 Not this code
Electrical entry	Blank: Terminal I: Grommet
Voltage	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V

Please refer to 36 for manifold specification and the order way.

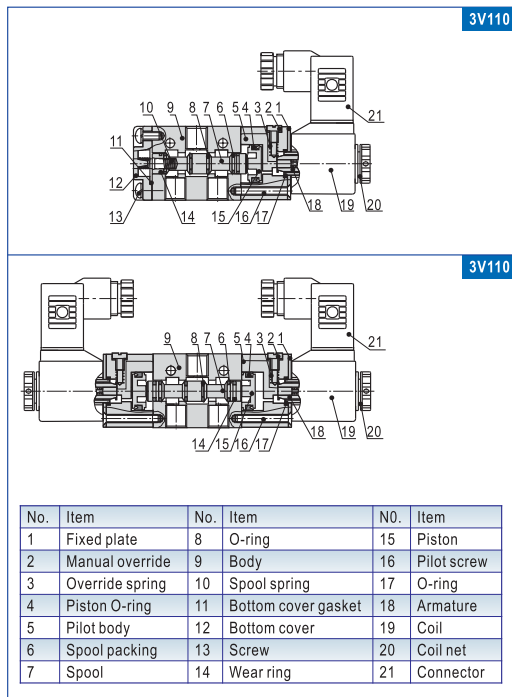


Solenoid valve(3/2 way)

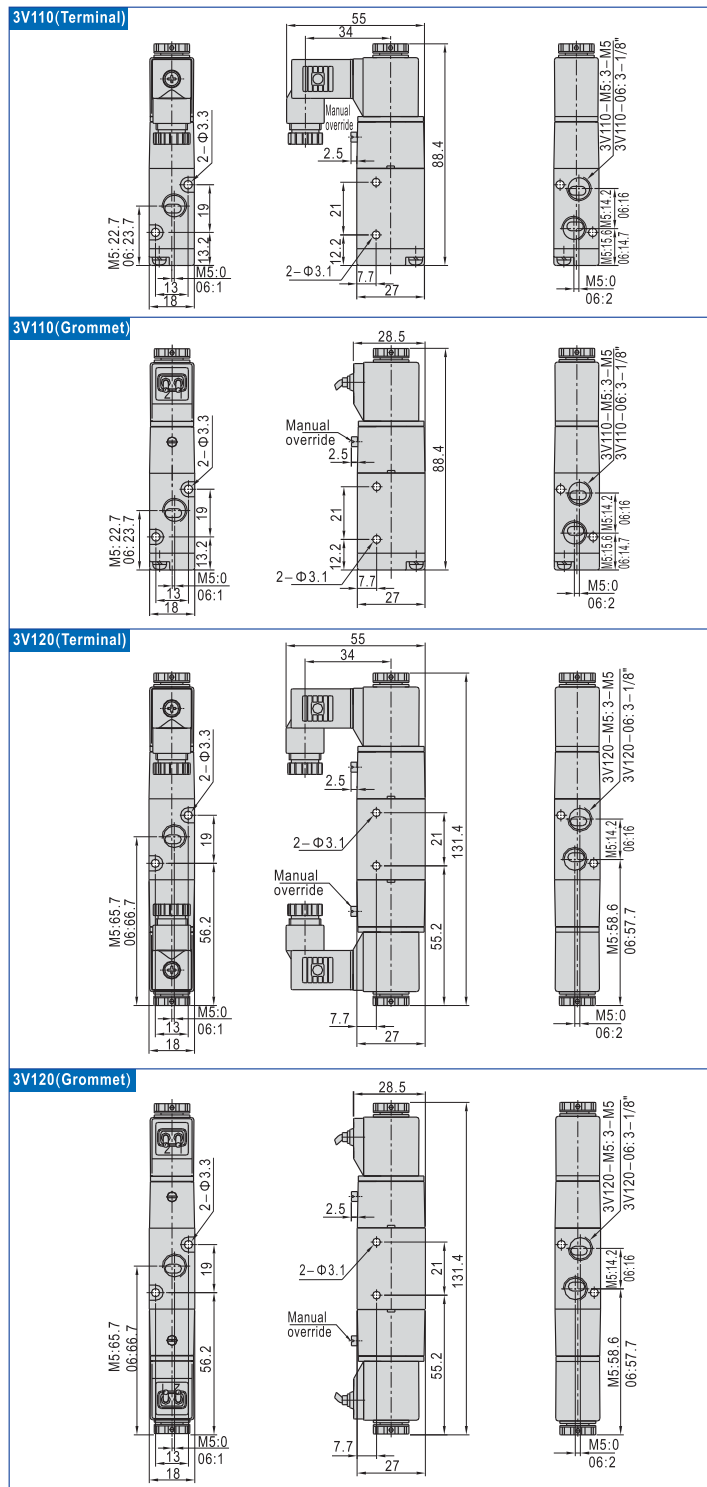
3V100 Series

AIRTAC

Inner structure



Dimensions



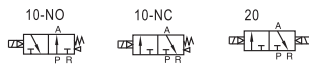
Solenoid valve(3/2 way)

AIRTAC

3V200 Series



Symbol

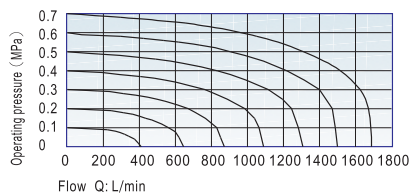


Product feature

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

Flow chart

Model: 3V210-08-NO



Specification

Model	3V210-06	3V220-06	3V210-08	3V220-08
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Piloted			
Port size ①	In=Out=1/8"		In=Out=1/4"	
Orifice size	14.0mm ² (Cv=0.78)		16.0mm ² (Cv=0.89)	
Valve type	3 port 2 position			
Lubrication ②	Not required			
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature ℃	-20~70			
Material of body	Aluminum alloy			

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below
Max. frequency ①	5 cycle/sec

① The maximum actuation frequency is in the no-load state.

Ordering code

3V 2 10 08 NO A □ P			
Model	Code	Valve type	Port size
3V: Solenoid valve(3/2 way)	2: 200 Series	10: Single solenoid 20: Double solenoid	06: 1/8" 08: 1/4"
Thread type	Electrical entry	Voltage	Acting type
P: PT T: NPT G: G	Blank: Terminal I: Grommet	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V	NC: Normally closed NO: Normally opened Not code

Please refer to 36 for manifold specification and the order way.

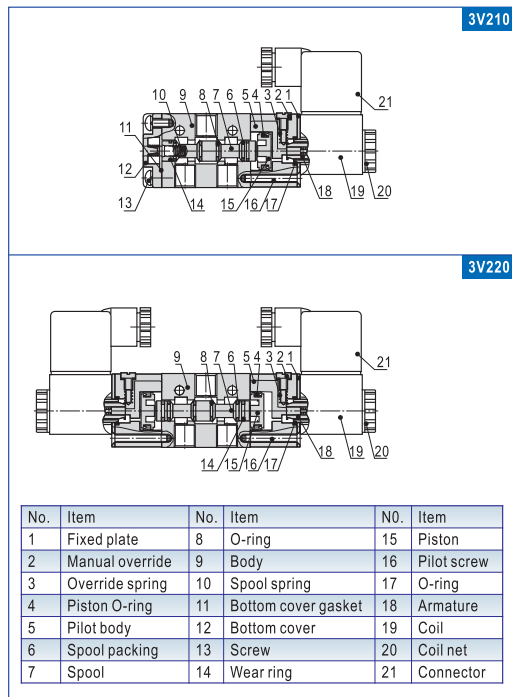


Solenoid valve(3/2 way)

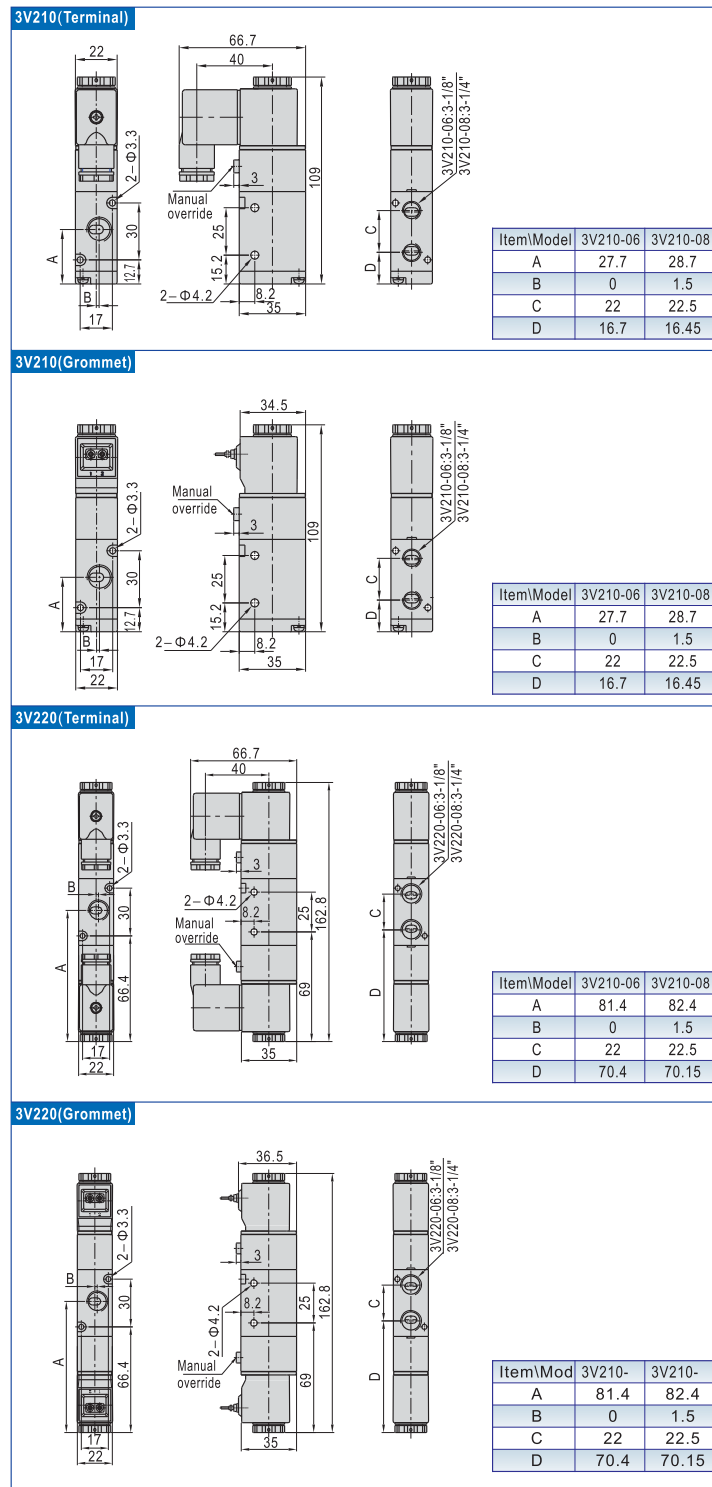
3V200 Series

AIRTAC

Inner structure



Dimensions



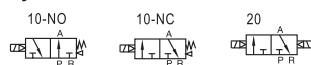
Solenoid valve(3/2 way)

AIRTAC

3V300 Series



Symbol

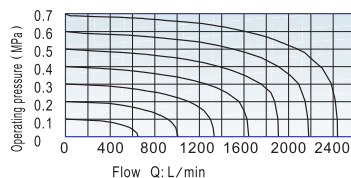


Product feature

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

Flow chart

Model: 3V310-10-NO



Specification

Model	3V310-08	3V320-08	3V310-10	3V320-10
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Piloted			
Port size ①	In=Out=1/4"		In=Out=3/8"	
Orifice size	25.0mm ² (Cv=1.39)		30.0mm ² (Cv=1.67)	
Valve type	3 port 2 position			
Lubrication ②	Not required			
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature ℃	-20~70			
Material of body	Aluminum alloy			

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below
Max. frequency ①	5 cycle/sec

① The maximum actuation frequency is in the no-load state.

Ordering code

3V 3 10 10 NO A □ P			
Model	Code	Valve type	Thread type
3V: Solenoid valve(3/2 way)	3: 300 Series	10: Single solenoid 20: Double solenoid	P: PT T: NPT G: G
		Port size	Electrical entry
		08: 1/4" 10: 3/8"	Blank: Terminal I: Grommet
		Acting type	Voltage
		Valve type Acting type	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V
		10 NC: Normally closed NO: Normally opened	
		20 Not code	

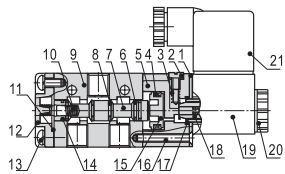
Please refer to 36 for manifold specification and the order way.



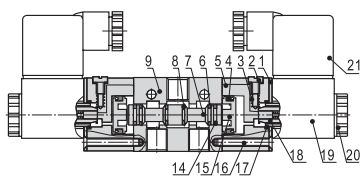
3V300 Series

AirTAC

3V310

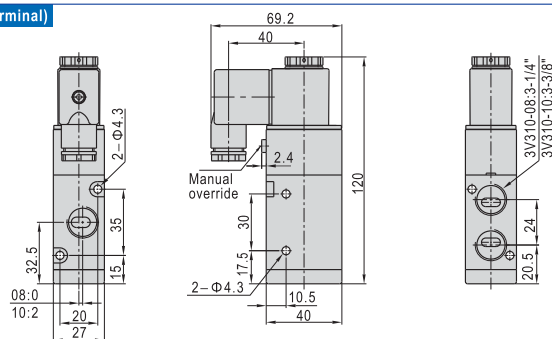


3V320

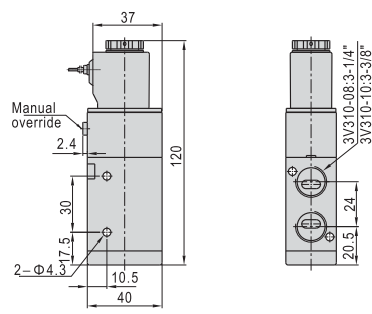


No.	Item	No.	Item	No.	Item
1	Fixed plate	8	O-ring	15	Piston
2	Manual override	9	Body	16	Pilot screw
3	Override spring	10	Spool spring	17	O-ring
4	Piston O-ring	11	Bottom cover gasket	18	Armature
5	Pilot body	12	Bottom cover	19	Coil
6	Spool packing	13	Screw	20	Coil net
7	Spool	14	Wear ring	21	Connector

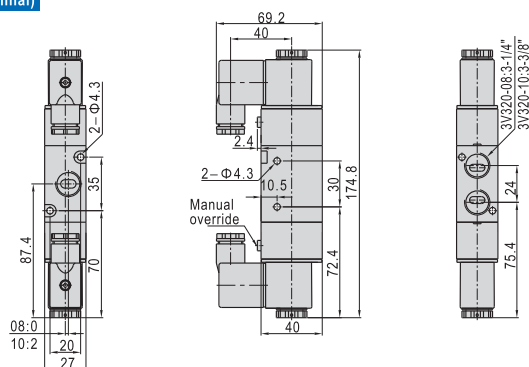
3V310(Terminal)



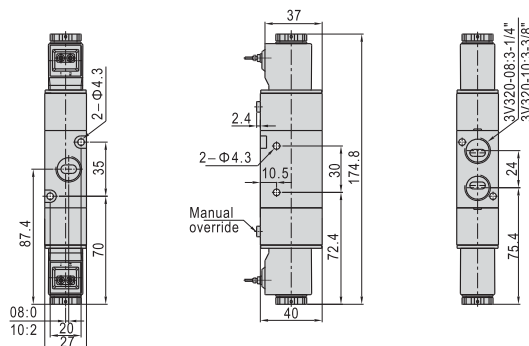
3V310(Grommet)



3V320(Terminal)



3V320(Grommet)



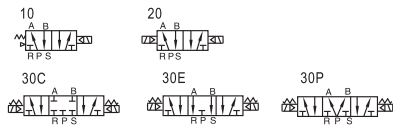
Solenoid valve(5/2 , 5/3 way)

AIRTAC

4V100 Series



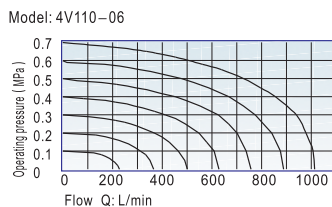
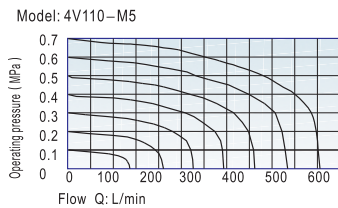
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

Model	4V110-M5 4V120-M5	4V130C-M5 4V130E-M5 4V130P-M5	4V110-06 4V120-06	4V130C-06 4V130E-06 4V130P-06
Fluid	Air(to be filtered by 40 μm filter element)			
Acting	Pilot			
Port size ①	In=Out=M5		In=Out=1/8"	
Orifice size	5.5mm ² (Cv=0.31)	5.0mm ² (Cv=0.28)	12.0mm ² (Cv=0.67)	9.0mm ² (Cv=0.50)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	5 cycle/sec	3 cycle/sec	5 cycle/sec	3 cycle/sec
Weight	4V110-M5:120g 4V120-M5:175g	200g	4V110-06:120g 4V120-06:175g	200g

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:2.5VA DC:2.5W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code

4V 1 10 06 A □ P			
Model	4V: Solenoid valve(5/2, 5/3 way)	Code	1: 100 Series
Valve type	10: Single solenoid 5/2 way 20: Double solenoid 5/2 way 30C: Double solenoid 5/3 way closed center 30E: Double solenoid 5/3 way exhaust center 30P: Double solenoid 5/3 way pressure center	Thread type	Port size Thread type 1/8" P: PT T: NPT G: G M5 Not this code
Port size	M5: M6 06: 1/8"	Electrical entry	Blank: Terminal I: Grommet
Voltage	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V		

Please refer to 37 for manifold specification and the order way.

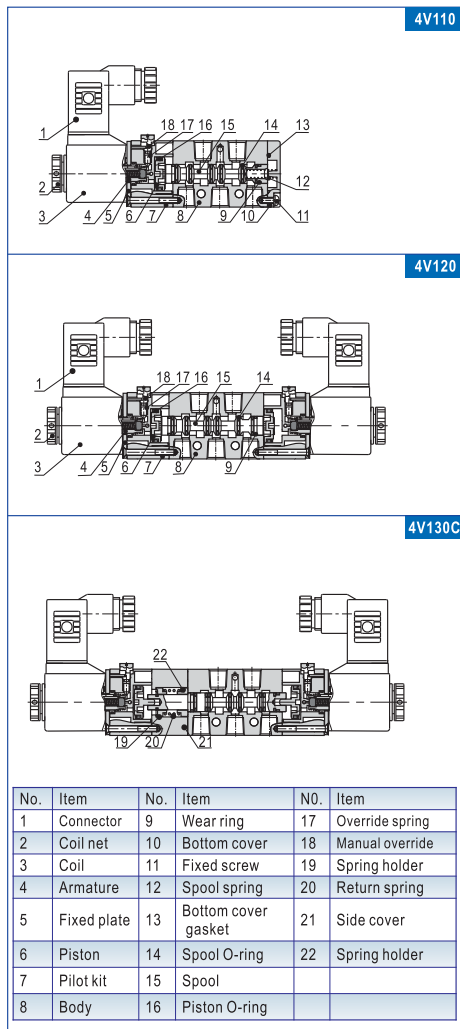


Solenoid valve(5/2 , 5/3 way)

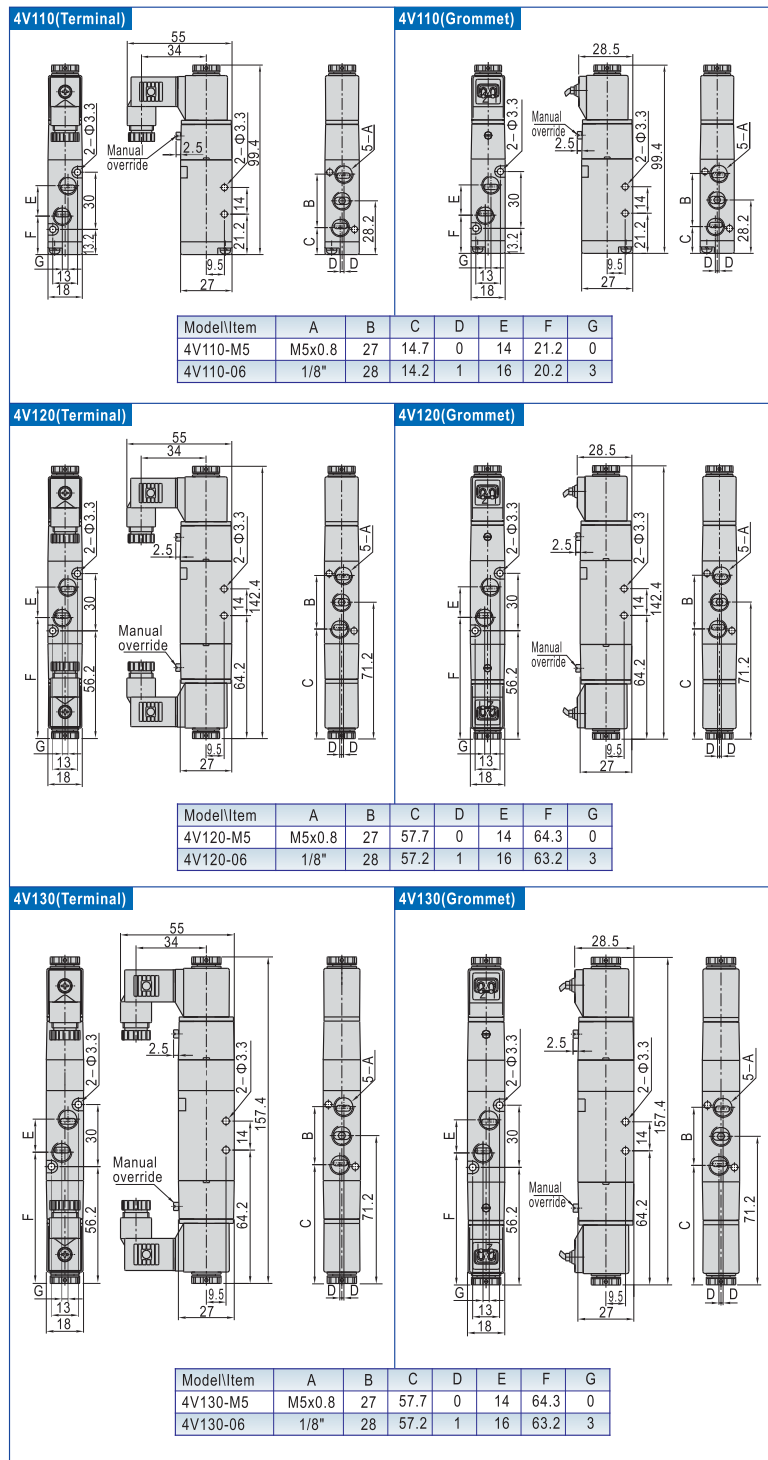
AIRTAC

4V100 Series

Inner structure



Dimensions



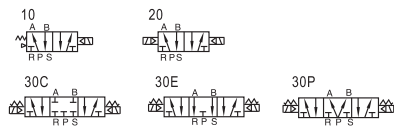
Solenoid valve(5/2 , 5/3 way)

AIRTAC

4V200 Series



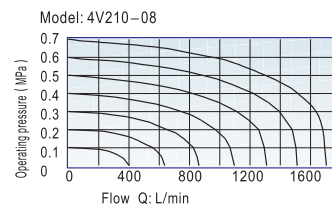
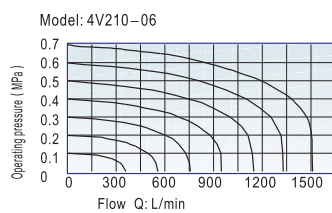
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

Model	4V210-06 4V220-06	4V230C-06 4V230E-06 4V230P-06	4V210-08 4V220-08	4V230C-08 4V230E-08 4V230P-08
Fluid	Air(to be filtered by 40 μm filter element)			
Acting	Piloted			
Port size ①	In=Out=Exhaust=1/8"		In=Out=1/4" Exhaust=1/8"	
Orifice size	14.0mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	5 cycle/sec	3 cycle/sec	5 cycle/sec	3 cycle/sec
Weight	4V210-06:220g 4V220-06:320g	360g	4V210-08:220g 4V220-08:320g	360g

① PT thread, NPT thread and G thread are available.

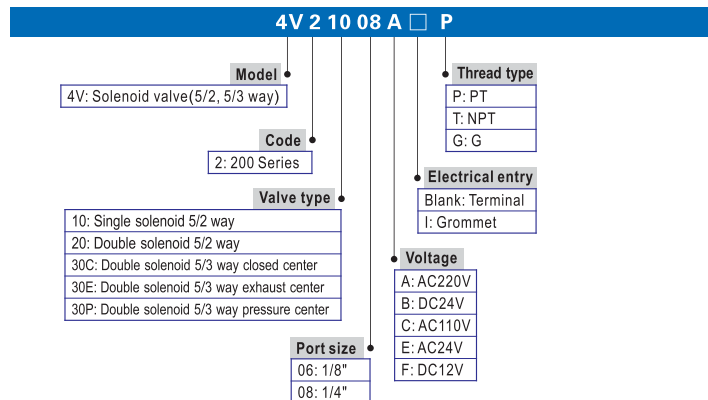
② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code



Please refer to 37 for manifold specification and the order way.



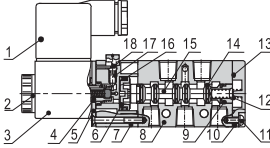
Solenoid valve(5/2 , 5/3 way)

AIRTAC

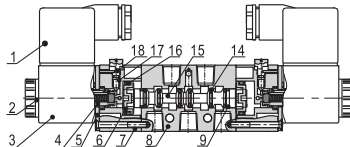
4V200 Series

Inner structure

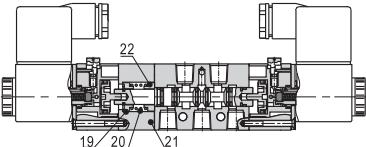
4V210



4V220



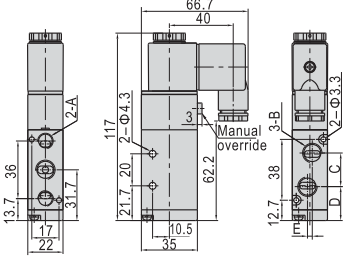
4V230C



No.	Item	No.	Item	N0.	Item
1	Connector	9	Wear ring	17	Override spring
2	Coil net	10	Bottom cover	18	Manual override
3	Coil	11	Fixed screw	19	Spring holder
4	Armature	12	Spool spring	20	Return spring
5	Fixed plate	13	Bottom cover gasket	21	Side cover
6	Piston	14	Spool O-ring	22	Spring holder
7	Pilot kit	15	Spool		
8	Body	16	Piston O-ring		

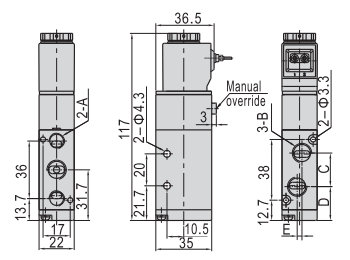
Dimensions

4V210(Terminal)



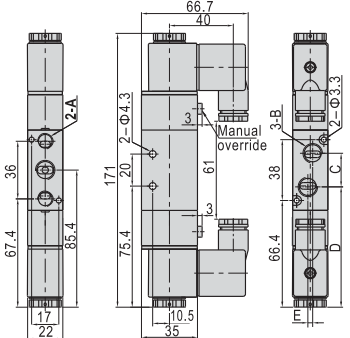
Model\Item	A	B	C	D	E
4V210-06	1/8"	1/8"	18	22.7	0
4V210-08	1/8"	1/4"	21	21.2	3

4V210(Grommet)



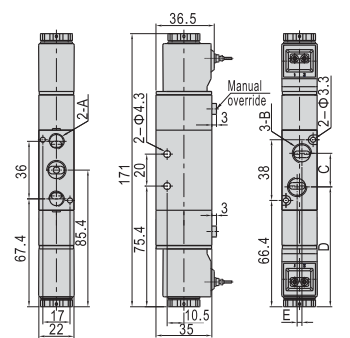
Model\Item	A	B	C	D	E
4V210-06	1/8"	1/8"	18	22.7	0
4V210-08	1/8"	1/4"	21	21.2	3

4V220(Terminal)



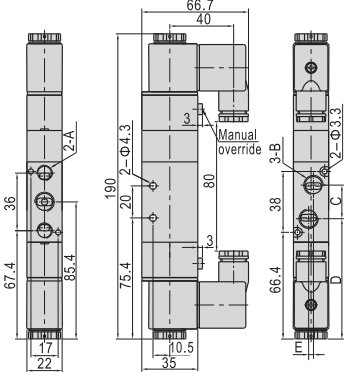
Model\Item	A	B	C	D	E
4V220-06	1/8"	1/8"	18	76.4	0
4V220-08	1/8"	1/4"	21	74.9	3

4V220(Grommet)



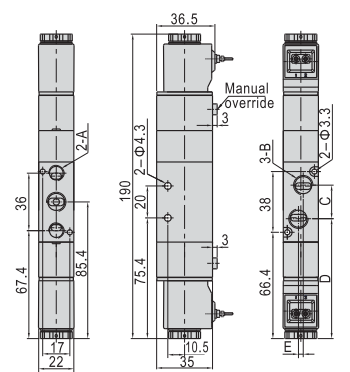
Model\Item	A	B	C	D	E
4V220-06	1/8"	1/8"	18	76.4	0
4V220-08	1/8"	1/4"	21	74.9	3

4V230(Terminal)



Model\Item	A	B	C	D	E
4V230-06	1/8"	1/8"	18	76.4	0
4V230-08	1/8"	1/4"	21	74.9	3

4V230(Grommet)



Model\Item	A	B	C	D	E
4V230-06	1/8"	1/8"	18	76.4	0
4V230-08	1/8"	1/4"	21	74.9	3



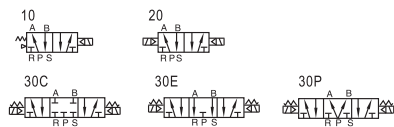
Solenoid valve(5/2 , 5/3 way)

AIRTAC

4V300 Series



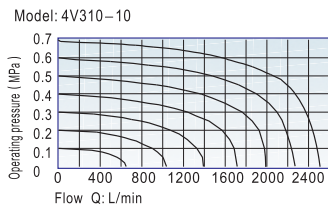
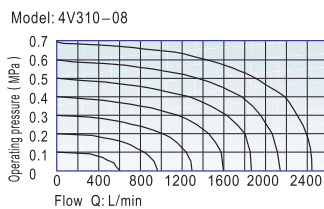
Symbol



Product feature

1. Pilot-oriented mode: optional for internal or external.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Three position solenoid valves have three kinds of central function for your choice.
4. Double control solenoid valves have memory function.
5. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
6. No need to add oil for lubrication.
7. It is available to form integrated valve group with the base to save installation space.
8. Affiliated manual devices are equipped to facilitate installation and debugging.
9. Several standard voltage grades are optional.

Flow chart



Specification

Model	4V310-08 4V320-08	4V330C-08 4V330E-08 4V330P-08	4V310-10 4V320-10	4V330C-10 4V330E-10 4V330P-10
Fluid	Air(to be filtered by 40 μ m filter element)			
Acting	Pilot			
Port size ①	In=Out=Exhaust=1/4"		In=Out=3/8" Exhaust=1/4"	
Orifice size	25.0mm ² (Cv=1.40)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.68)	18.0mm ² (Cv=1.00)
Valve type	5 port 3 position	5 port 2 position	5 port 3 position	5 port 2 position
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.5MPa(215psi)			
Temperature °C	-20~70			
Material of body	Aluminum alloy			
Lubrication ②	Not required			
Max. frequency ③	4 cycle/sec	3 cycle/sec	4 cycle/sec	3 cycle/sec
Weight	4V310-08:310g 4V320-08:400g	450g	4V310-10:310g 4V320-10:400g	450g

① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

Coil specification

Item	Specification
Standard voltage	AC220V, AC110V, AC24V, DC24V, DC12V
Scope of voltage	AC: ± 15% DC: ± 10%
Power consumption	AC:3.5VA DC:3.0W
Protection	IP65(DIN40050)
Temperature classification	B Class
Electrical entry	Terminal, Grommet
Activating time	0.05 sec and below

Ordering code

4V 3 10 10 A □ P			
Model	Code	Valve type	Thread type
4V: Solenoid valve(5/2, 5/3 way)	3: 300 Series	10: Single solenoid 5/2 way 20: Double solenoid 5/2 way 30C: Double solenoid 5/3 way closed center 30E: Double solenoid 5/3 way exhaust center 30P: Double solenoid 5/3 way pressure center	P: PT T: NPT G: G
			Electrical entry
			Blank: Terminal I: Grommet
			Voltage
			A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V
		Port size	
		08: 1/4"	
		10: 3/8"	

Please refer to 37 for manifold specification and the order way.

AirTAC

Inner structure

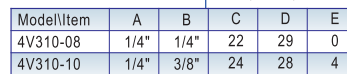


■ Dimensions

4V310(Terminal)



4V310(Grommet)



4V320(Terminal)



4V320(Grommet)



4V330(Terminal)



4V330(Grommet)

