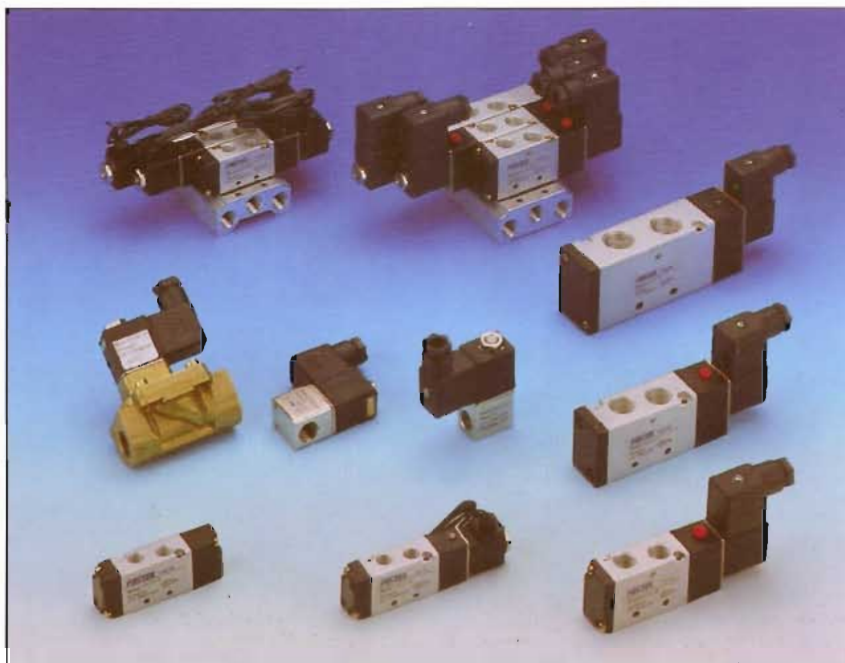
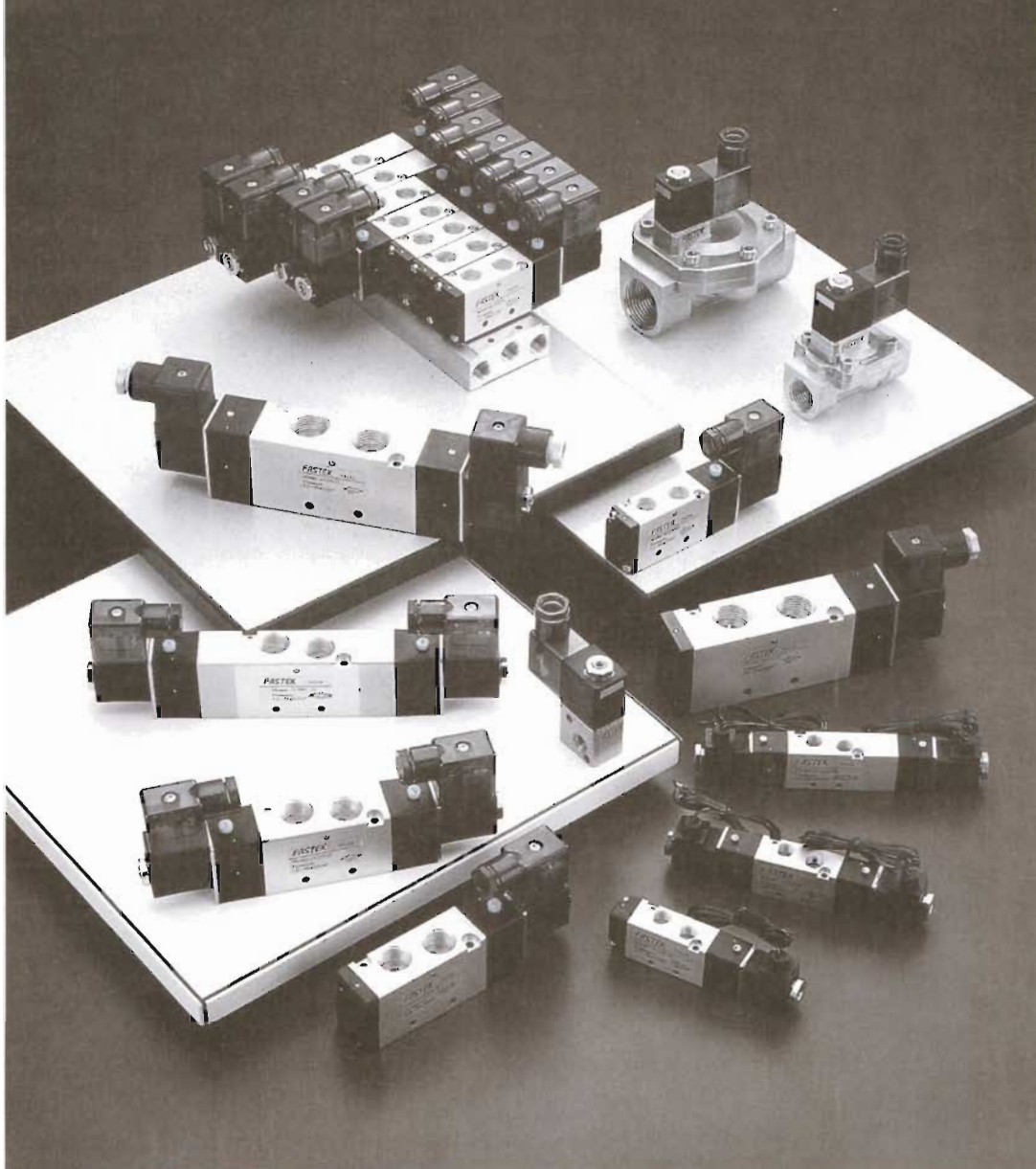


FASTEK

AIR PILOT VALVE SOLENOID VALVE





INDEX

100 SERIES VALVES	2
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SOLENOID VALVE 100 SERIES

SOLENOID VALVE ORDERING CODE 100 series

N4V	1	10	—	06	—	AC110V	—	L				
• N4V: 4 way solenoid valve • N4A: 4 way air pilot valve	100 series			size of port				<table border="1"> <tr> <td>BLANK</td> <td>WITH FLYING LEADS</td> </tr> <tr> <td>L</td> <td>WITH LED & CONNECTOR</td> </tr> </table>	BLANK	WITH FLYING LEADS	L	WITH LED & CONNECTOR
BLANK	WITH FLYING LEADS											
L	WITH LED & CONNECTOR											
Number of solenoid and position						Standard of Voltage						
10	Single solenoid two position					DC12V						
20	Double solenoid two position					DC24V						
30C	Closed center					AC110V 50/60 Hz						
30E	Exhaust center					AC220V 50/60 Hz						
30P	Pressure center					other voltage consult factory						

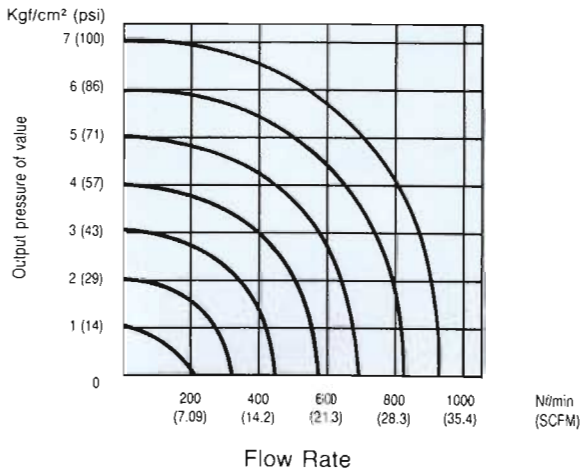
SPECIFICATIONS

Item	Solenoid Model		
	Single solenoid	Double solenoid	Double solenoid closed center
	N4V110-06	N4V120-06	N4V130C-06
Symbol			
Media	Air (Min. 40μ filtration)		
Operating method	Internally piloted		
Number of positions and ports	2 positions 5 ports		3 positions 5 ports
Effective sectional area mm ² (CV)	12 mm ² (0.67)		9 mm ² (0.5)
Pipe joint size	IN. OUT. EXH: NPT 1/8		
Lubrication	Not required		
Service pressure range kgf/cm ² (psi)	1.7 ~ 7 (24 ~ 100)		
Pressure resistance kgs/cm ² (psi)	10.5 (150)		
Service temperature range (atmosphere of fluid used)	5 ~ 50°C (41 ~ 122°F)		
Voltage change	± 10%		
Power consumption	AC: 1.3VA DC: 1.2W		
Insulation	F class		
Max cycle (cycle/sec)	5		
Min excitation time required for operation sec	0.05		
Weight (g)	120	175	200

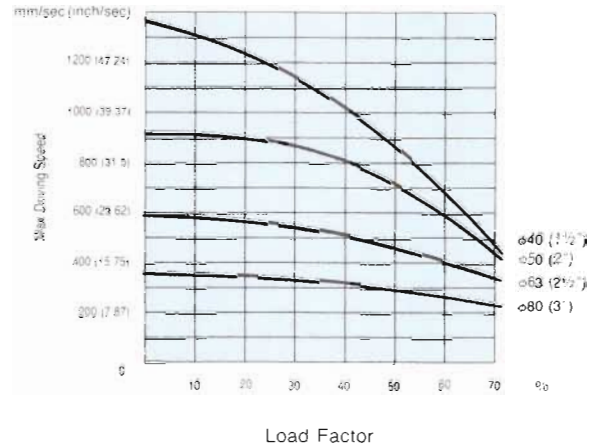
PISTON SPEED & FLOW RATE

N4V110-06

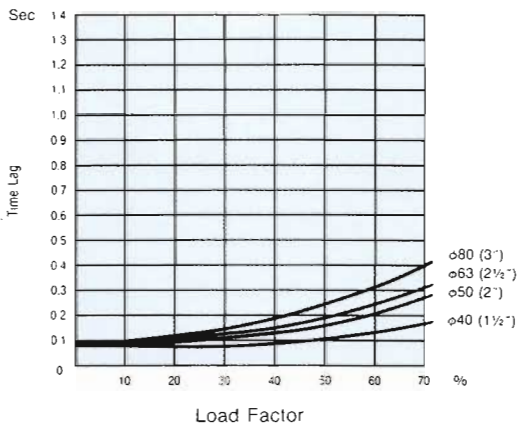
Flow Rate



Max. speed



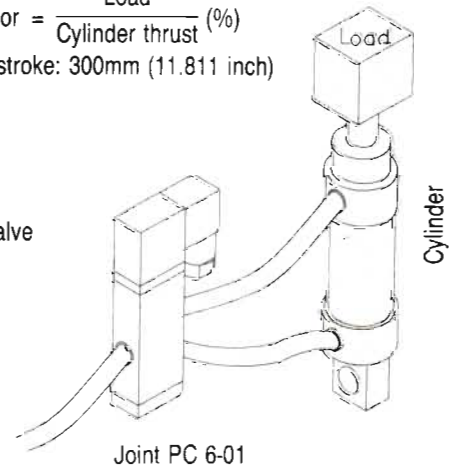
Time Lag



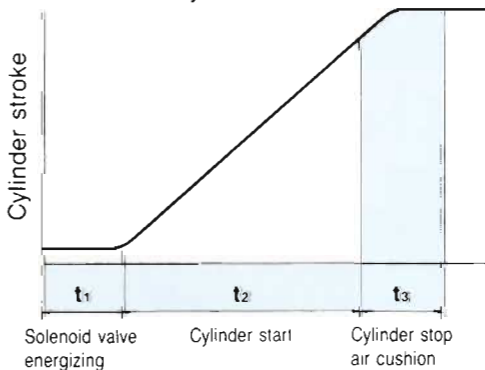
Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: $\phi 7.5 \times 1000$ mm ($\phi 0.295 \times 39.37$) inch
- Joing: Quick joint PC 6-01
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}}$ (%)
- Cylinder stroke: 300mm (11.811 inch)

Solenoid Valve
N4V110-06

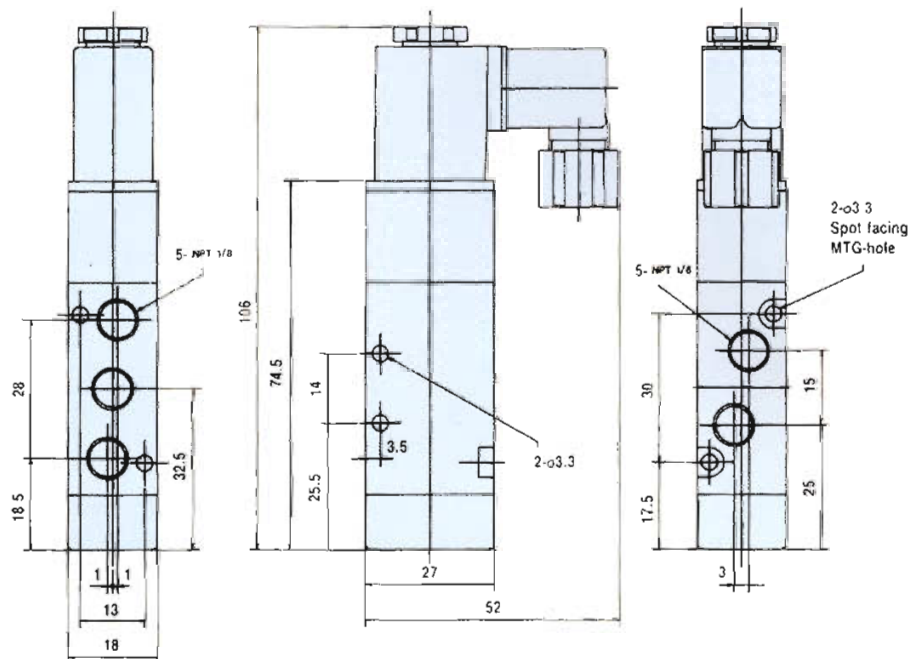


How to obtain cylinder stroke time

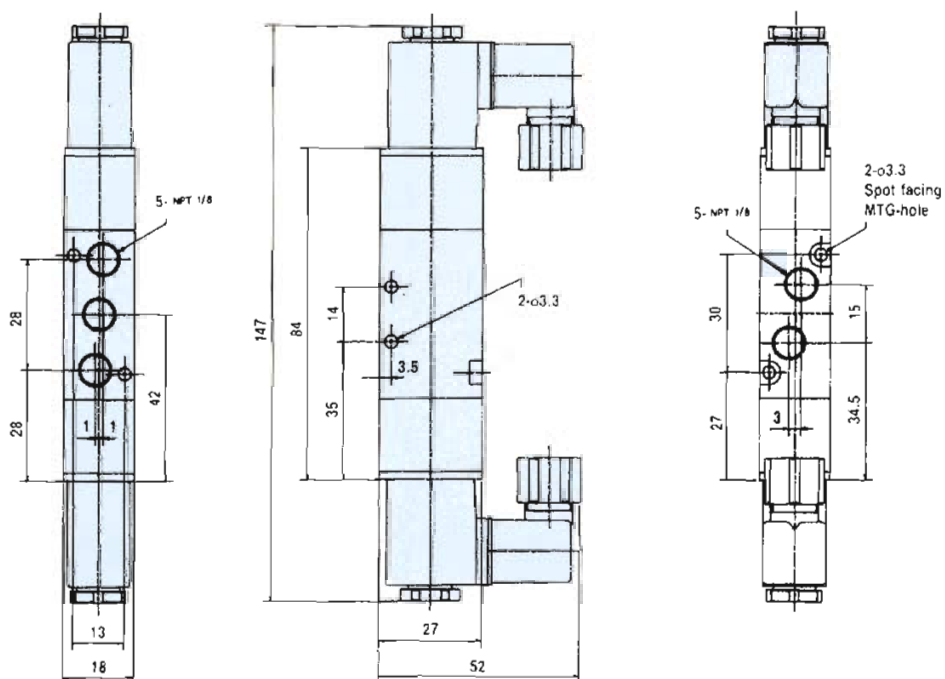
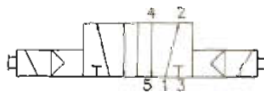


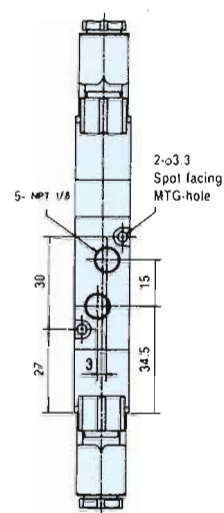
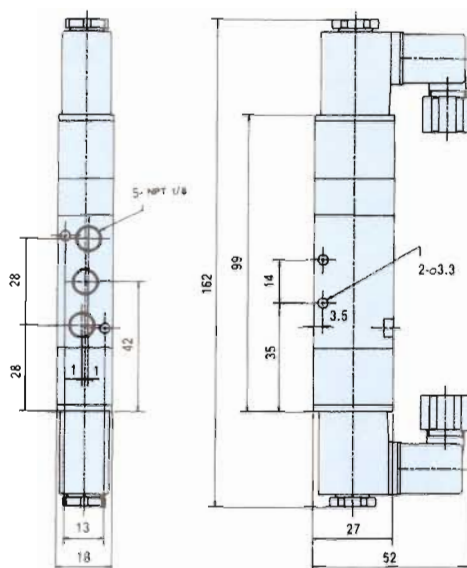
To obtain the time required for one cylinder stroke, add a cylinder time lag " t_1 " (time lag after energizing of the solenoid valve until start of the cylinder) to maximum speed time " t_2 ". For a cylinder with air cushion, add also on air cushion time " t_3 ". Generally, a low 0.2 second for " t_3 ".

• N4V110

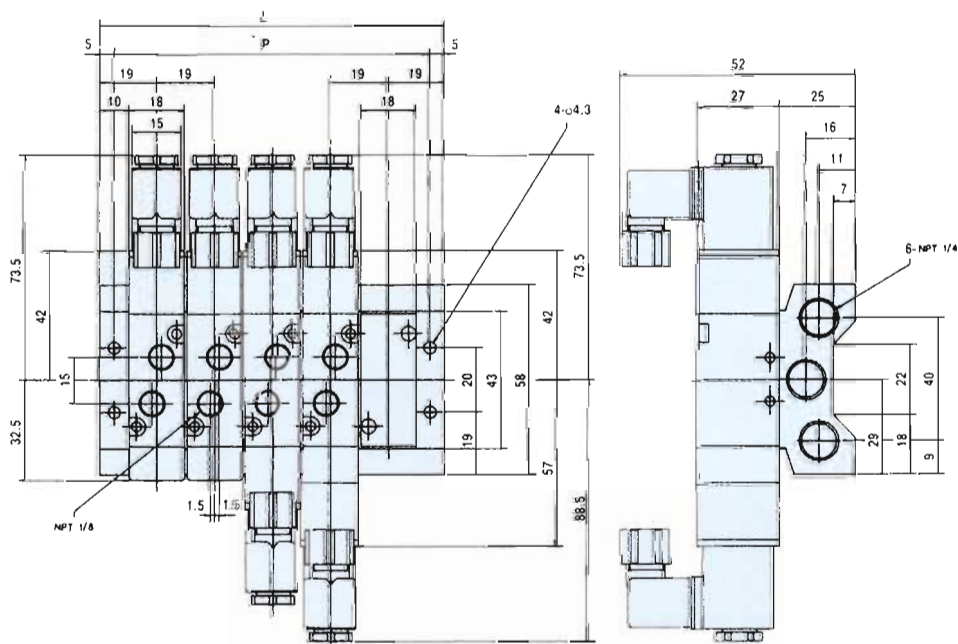


• N4V120

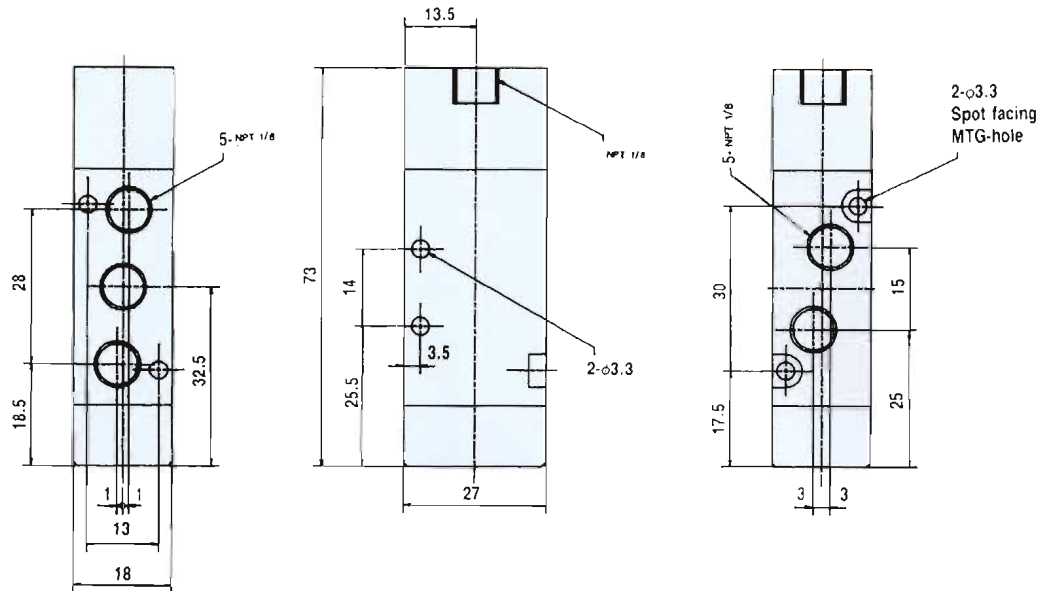
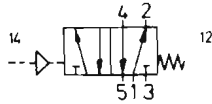




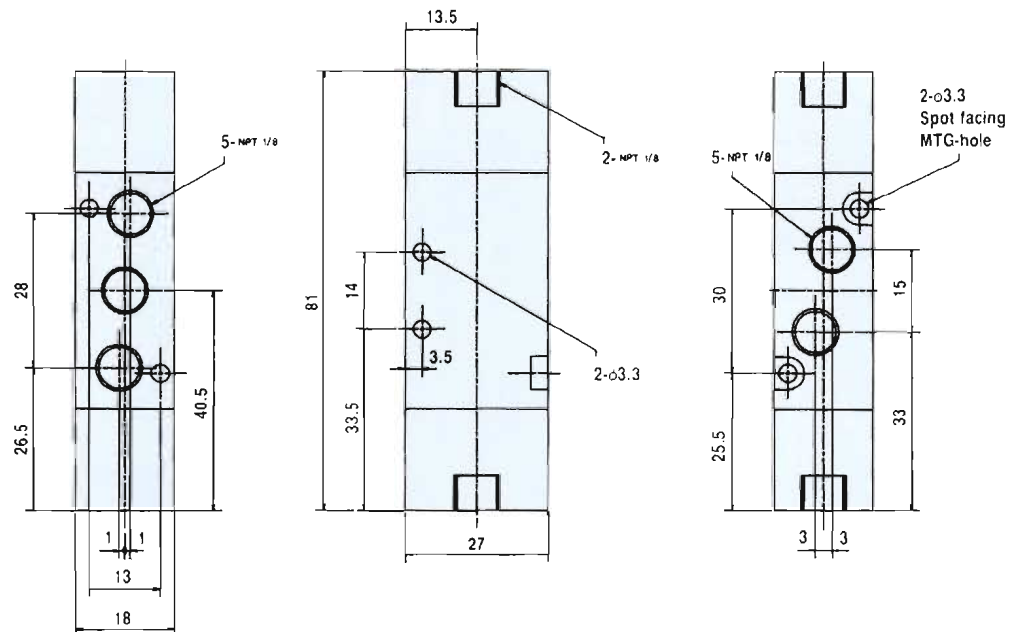
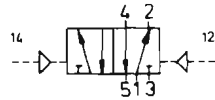
Model	L	P
100M2F	57	47
100M3F	76	66
100M4F	95	85
100M5F	114	104
100M6F	133	123
100M7F	152	142
100M8F	171	161
100M9F	190	180
100M10F	209	199
100M11F	228	218
100M12F	247	237



• N4A110



• N4A120

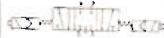


SOLENOID VALVE 200 SERIES

SOLENOID VALVE ORDERING CODE 200 series

N4V	2	10	06	AC110V	L														
• N4V: 4 way solenoid valve • N4A: 4 way air pilot valve	200 series				<table border="1"> <tr> <td>BLANK</td> <td>WITHOUT LED</td> </tr> <tr> <td>L</td> <td>WITH LED</td> </tr> </table>	BLANK	WITHOUT LED	L	WITH LED										
BLANK	WITHOUT LED																		
L	WITH LED																		
Number of solenoid and position <table border="1"> <tr> <td>10</td> <td>Single solenoid two position</td> </tr> <tr> <td>20</td> <td>Double solenoid two position</td> </tr> <tr> <td>30C</td> <td>Closed center</td> </tr> <tr> <td>30E</td> <td>Exhaust center</td> </tr> <tr> <td>30P</td> <td>Pressure center</td> </tr> </table>			10	Single solenoid two position	20	Double solenoid two position	30C	Closed center	30E	Exhaust center	30P	Pressure center	size of port <table border="1"> <tr> <td>06</td> <td>NPT 1/8</td> </tr> <tr> <td>08</td> <td>NPT 1/4</td> </tr> </table>		06	NPT 1/8	08	NPT 1/4	Standard of Voltage DC12V DC24V AC110V 50/60 Hz AC220V 50/60 Hz other voltage consult factory
10	Single solenoid two position																		
20	Double solenoid two position																		
30C	Closed center																		
30E	Exhaust center																		
30P	Pressure center																		
06	NPT 1/8																		
08	NPT 1/4																		

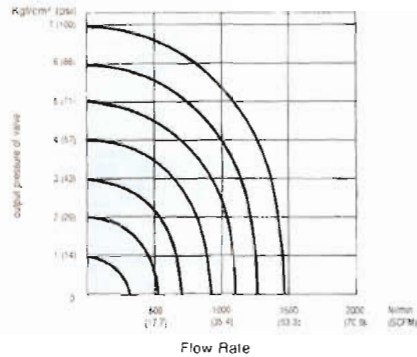
SPECIFICATIONS

Solenoid Model	Single solenoid	Double solenoid	Double solenoid closed center	Single solenoid	Double solenoid	Double solenoid closed center
Item	N4V210-06	N4V220-06	N4V230C-06	N4V210-08	N4V220-08	N4V230C-08
Symbol						
Media	Air (Min. 40 μ filtration)					
Operating method	Internally piloted					
Number of positions and ports	2 positions 5 ports		3 positions 5 ports	2 positions 5 ports		3 positions 5 ports
Effective sectional area mm ² (CV)	14mm ² (0.78)		12mm ² (0.67)	16 mm ² (0.89)		12mm ² (0.67)
Pipe joint size	IN. OUT, EXH: NPT 1/8			IN. OUT: NPT 1/4 EXH: NPT 1/8		
Lubrication	Not required					
Service pressure range kgf/cm ² (psi)	1.7~7 (24~100)					
Pressure resistance kgf/cm ² (psi)	10.5 (150)					
Service temperature range (atmosphere or fluid used)	5~50°C (41~122°F)					
Voltage change	± 10%					
Power consumption	AC: 4.5VA DC: 3W					
Insulation	F class					
Max. cycle (cycle/sec)	5					
Min excitation time required for operation sec.	0.05					
Weight (g)	220	320	400	220	320	400

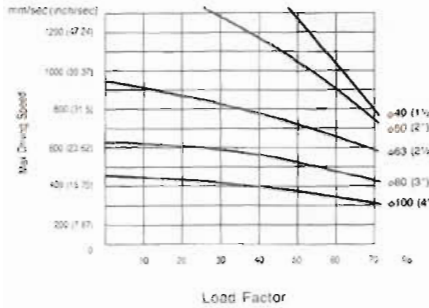
PISTON SPEED & FLOW RATE

N4V210-08

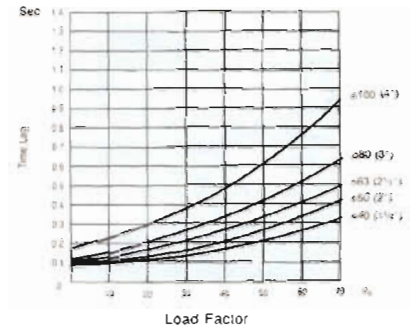
Flow Rate



Max Speed

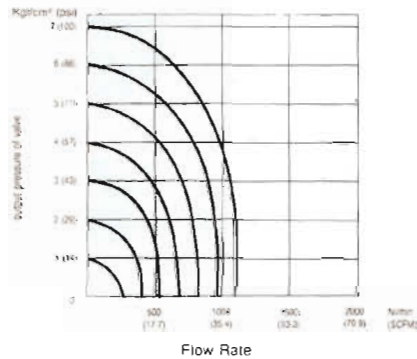


Time Lag

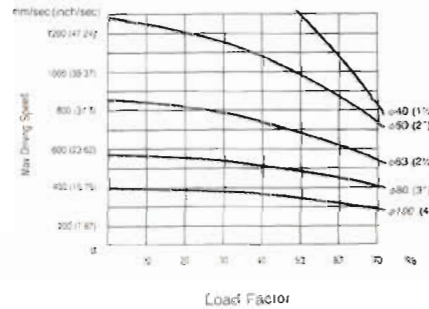


N4V210-06

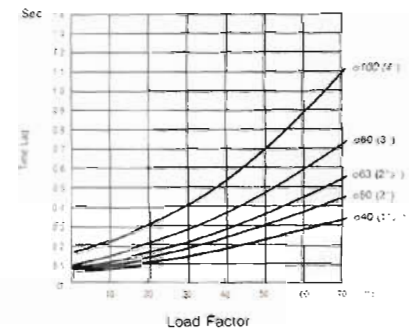
Flow Rate



Max Speed

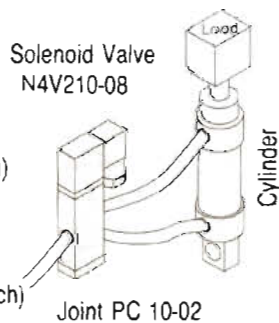


Time Lag



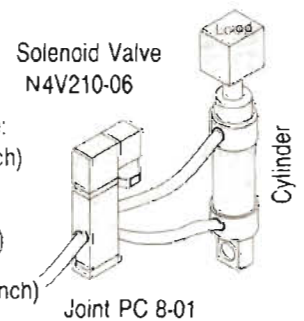
Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: $\phi 6.5 \times 1000\text{mm}$ ($\phi 0.256 \times 39.370$ inch)
- Joing: Quick joint PC 10-02
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}}$ (%)
- Cylinder stroke: 300mm (11.811 inch)

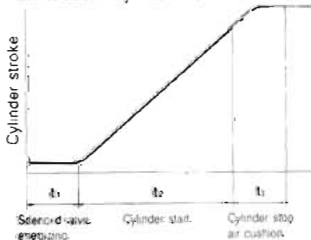


Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: $\phi 6 \times 1000\text{mm}$ ($\phi 0.236 \times 39.370$ inch)
- Joing: Quick joint PC 8-01
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}}$ (%)
- Cylinder stroke: 300mm (11.811 inch)

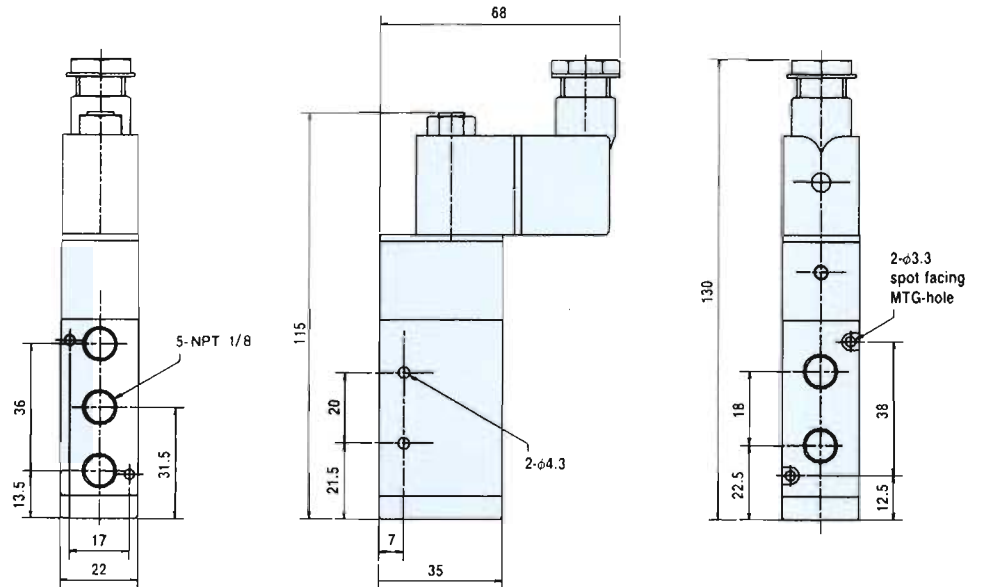
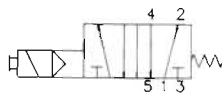


How to obtain cylinder stroke time

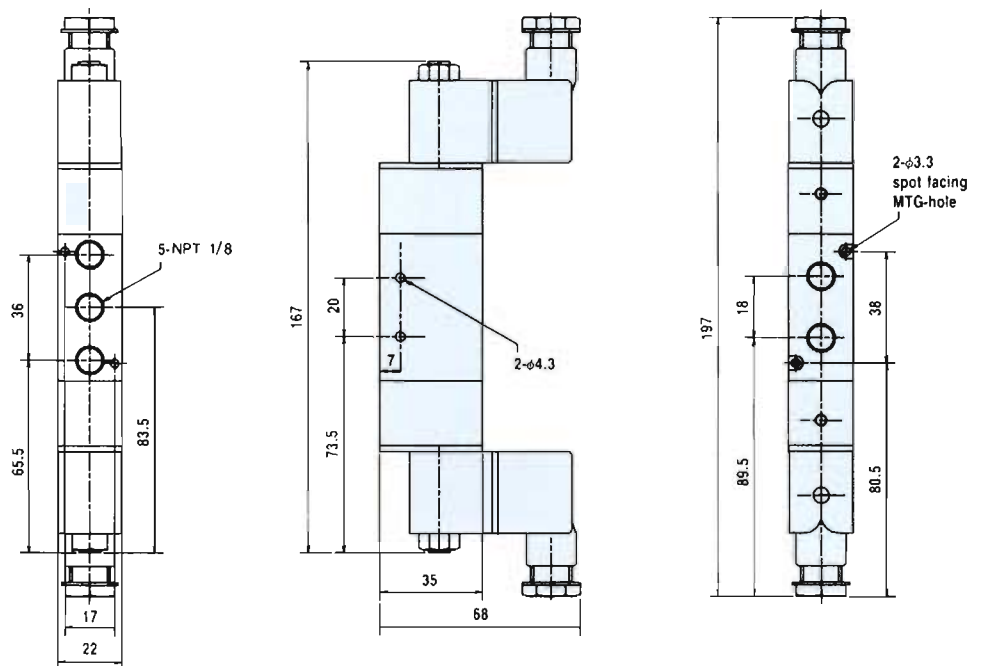
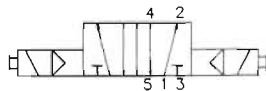


To obtain the time required for one cylinder stroke, add a cylinder time lag " t_1 " (time lag after energizing of the solenoid valve until start of the cylinder) to maximum speed time " t_2 ". For a cylinder with air cushion, add also an air cushion time " t_3 ". Generally, a low 0.2 second for " t_3 ".

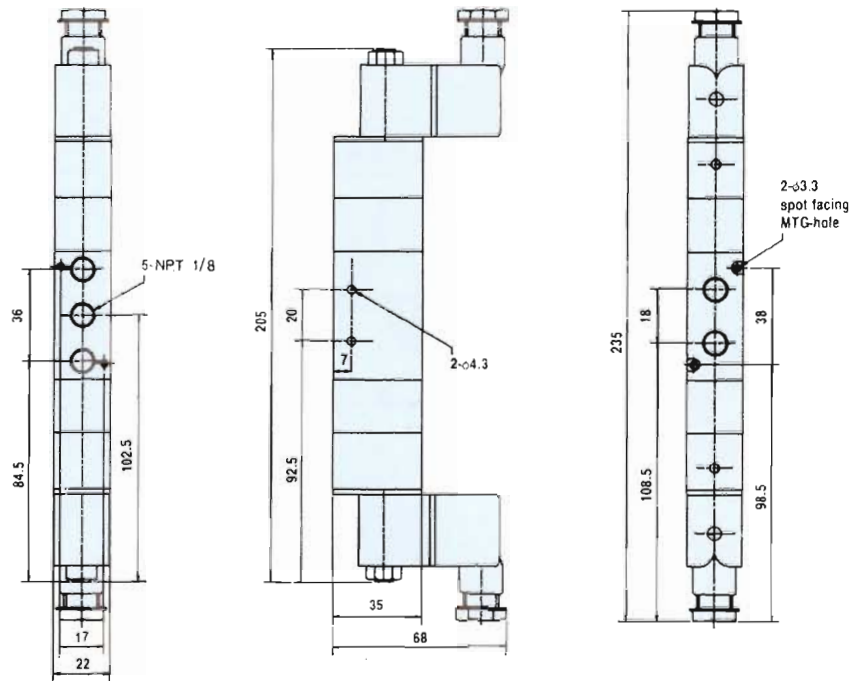
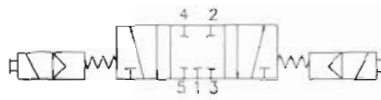
• N4V210-06



• N4V220-06

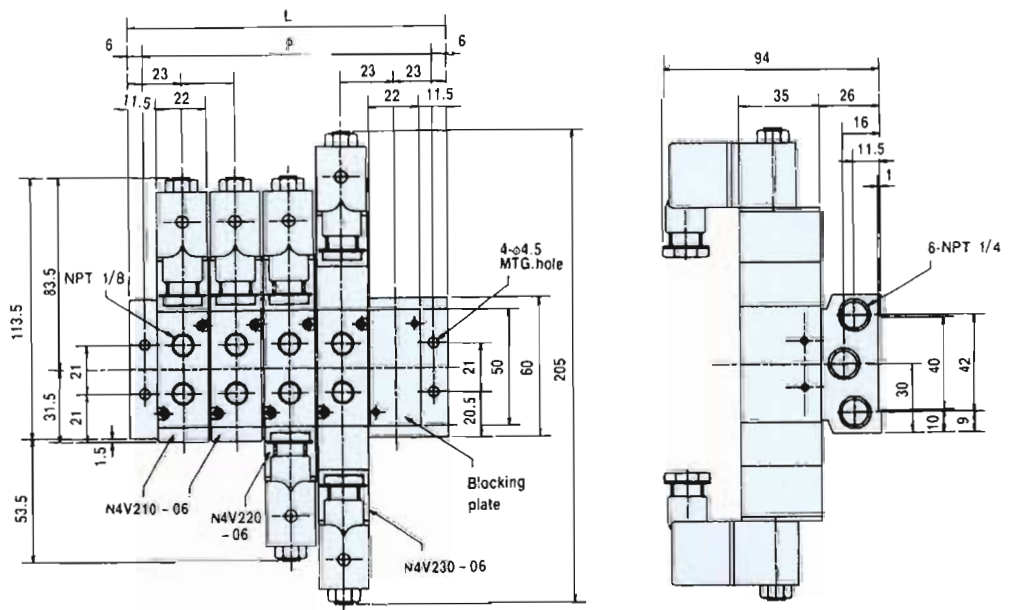


• N4V230-06

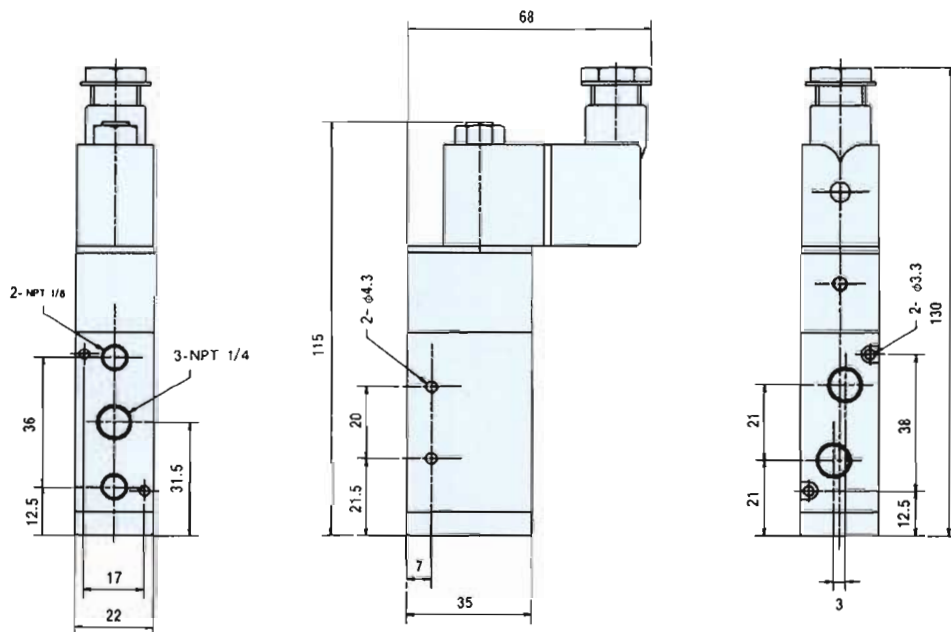
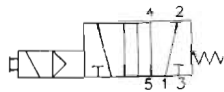


• 200M□F

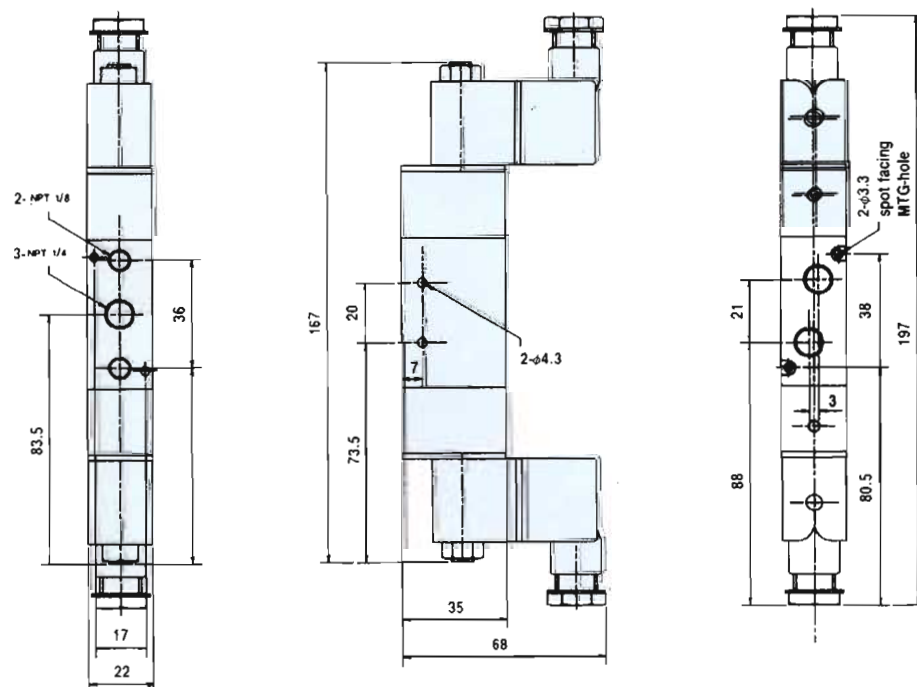
Model	L	P
200M2F	69	57
200M3F	92	80
200M4F	115	103
200M5F	138	126
200M6F	161	149
200M7F	184	172
200M8F	207	195
200M9F	230	218
200M10F	253	241



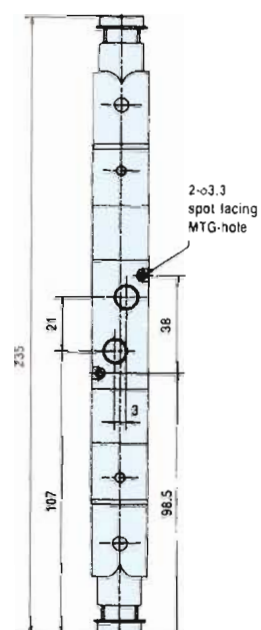
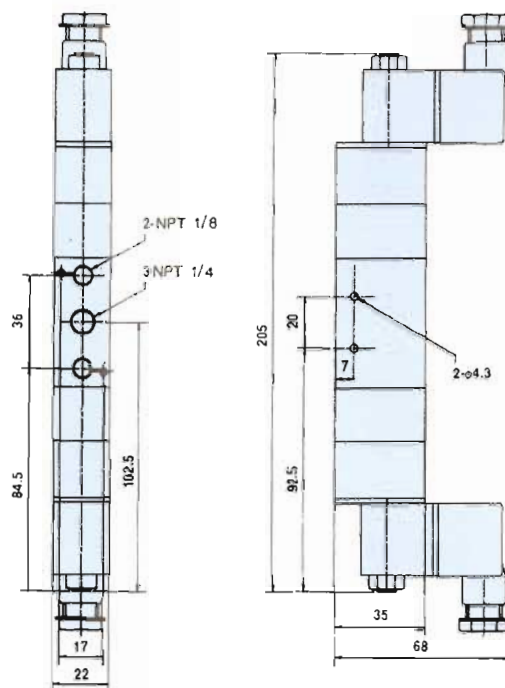
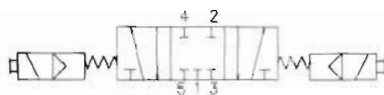
• N4V210-08



• N4V220-08

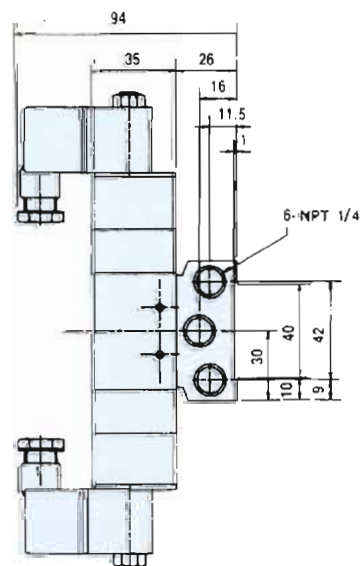
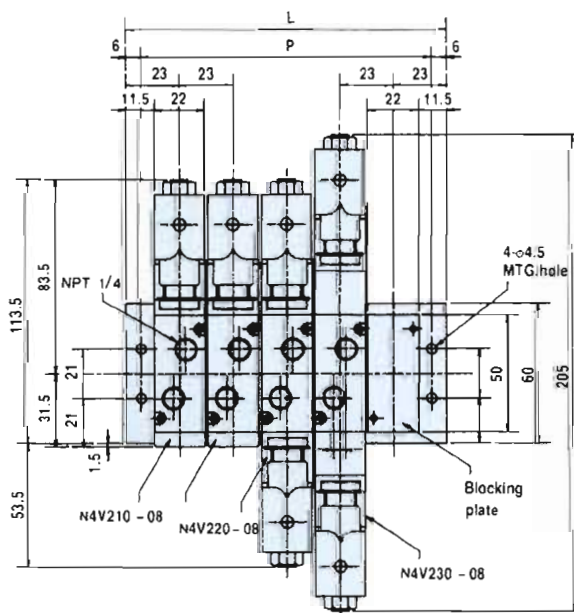


• **N4V230-08**

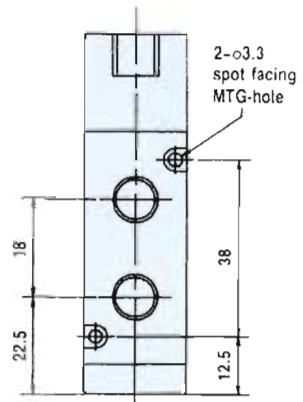
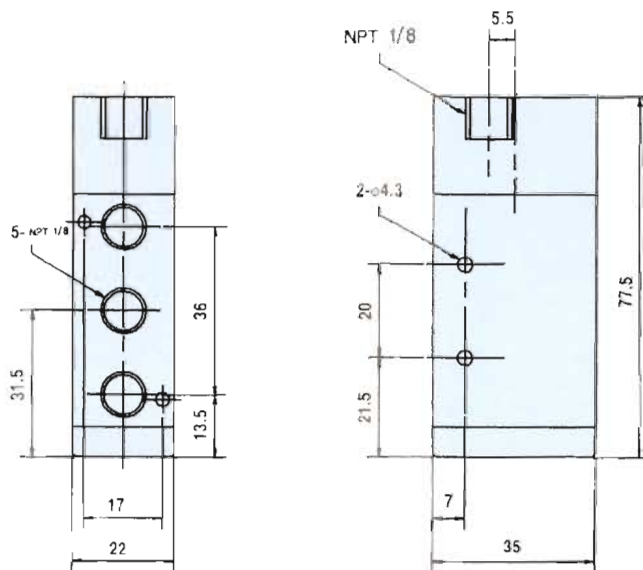
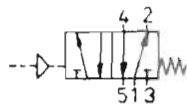


• **200M□F**

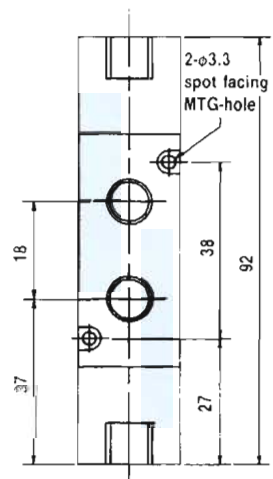
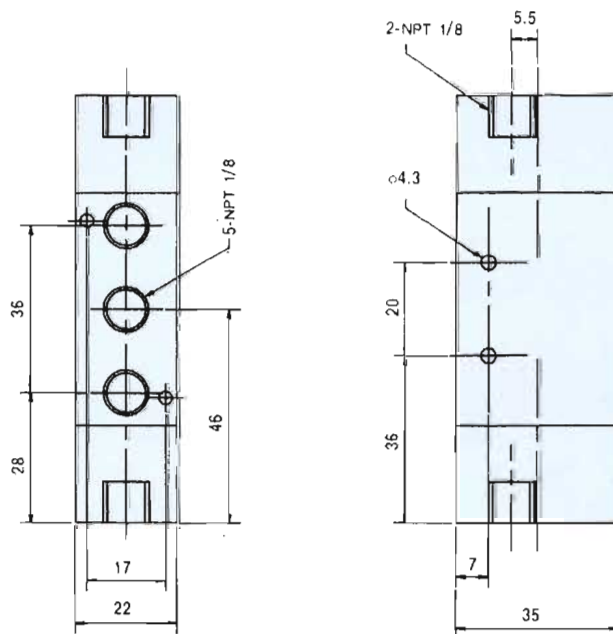
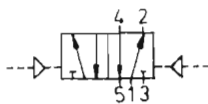
Model	L	P
200M2F	69	57
200M3F	92	80
200M4F	115	103
200M5F	138	126
200M6F	161	149
200M7F	184	172
200M8F	207	195
200M9F	230	218
200M10F	253	241



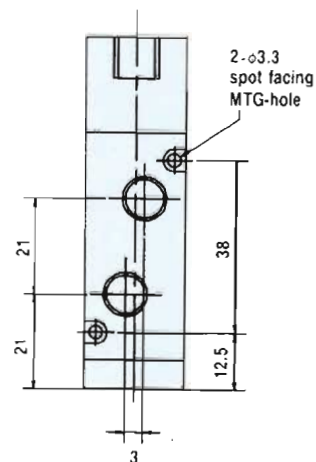
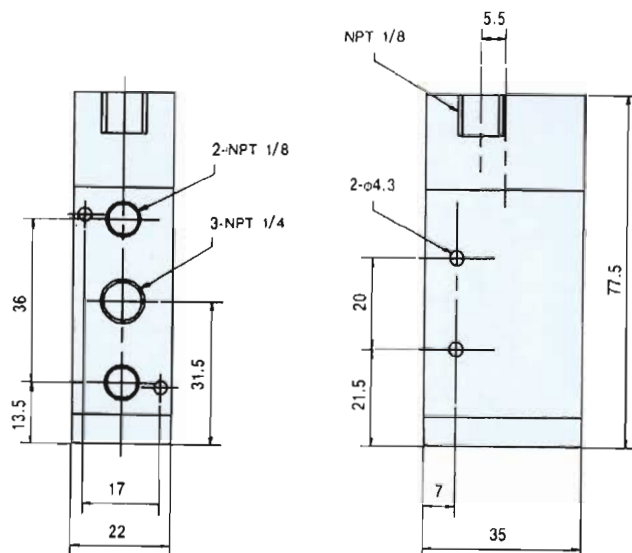
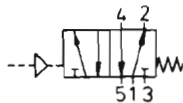
• N4A210-06



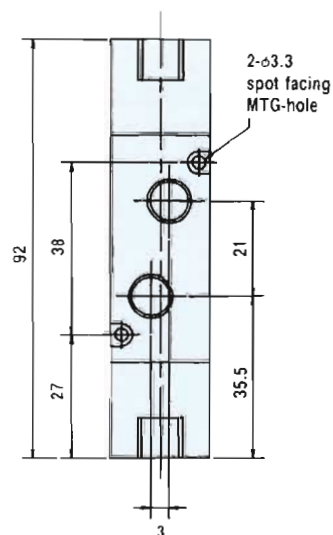
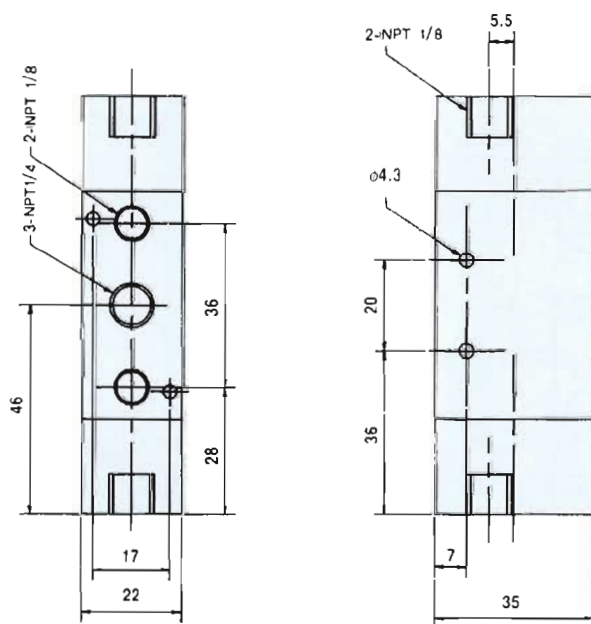
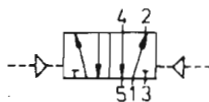
• N4A220-06



• N4A210-08



• N4A220-08

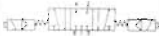


SOLENOID VALVE 300 SERIES

SOLENOID VALVE ORDERING CODE 300 series

N4V	3	10	08	AC110V	L				
•N4V: 4 way solenoid valve •N4A: 4 way air pilot valve	300 series		size of port		<table border="1"> <tr> <td>BLANK</td> <td>WITHOUT LED</td> </tr> <tr> <td>L</td> <td>WITH LED</td> </tr> </table>	BLANK	WITHOUT LED	L	WITH LED
BLANK	WITHOUT LED								
L	WITH LED								
Number of solenoid and position			Standard of Voltage						
10	Single solenoid two position		08	NPT 1/4"	DC12V				
20	Double solenoid two position		10	NPT 3/8"	DC24V				
30C	Closed center				AC110V 50/60 Hz				
30E	Exhaust center				AC220V 50/60 Hz				
30P	Pressure center				other voltage consult factory				

SPECIFICATIONS

Solenoid Model	Single solenoid	Double solenoid	Double solenoid closed center	Single solenoid	Double solenoid	Double solenoid closed center
Item	N4V310-08	N4V320-08	N4V330C-08	N4V310-10	N4V320-10	N4V330C-10
Symbol						
Media	Air (Min. 40μ filtration)					
Operating method	Internally piloted					
Number of positions and ports	2 positions 5 ports		3 positions 5 ports	2 positions 5 ports		3 positions 5 ports
Effective sectional area mm ² (CV)	25mm ² (1.4)		18mm ² (1)	30 mm ² (1.68)		18mm ² (1)
Pipe joint size	IN. OUT, EXH: NPT 1/4			IN. OUT: NPT 3/8 EXH: NPT 1/4		
Lubrication	Not required					
Service pressure range kgf/cm ² (psi)	1.7~7 (24~100)					
Pressure resistance kgf/cm ² (psi)	10.5 (150)					
Service temperature range (atmosphere or fluid used)	5~50°C (41~122°F)					
Voltage change	± 10%					
Power consumption	AC: 4.5VA DC: 3W					
Insulation	F class					
Max. cycle (cycle/sec)	4					
Min excitation time required for operation sec.	0.05					
Weight (g)	310	400	540	310	400	540

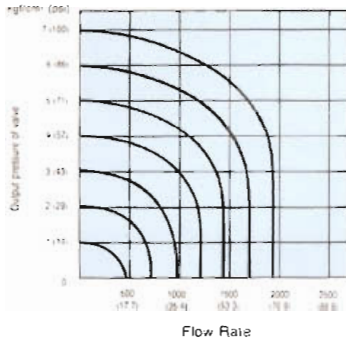
300

SERIES

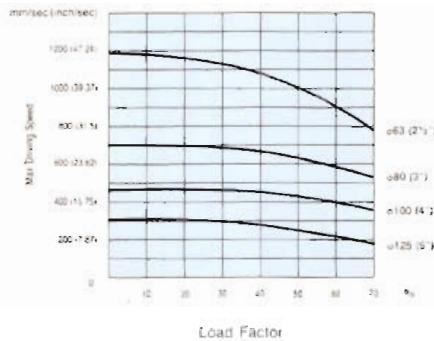
PISTON SPEED & FLOW RATE

N4V310-08

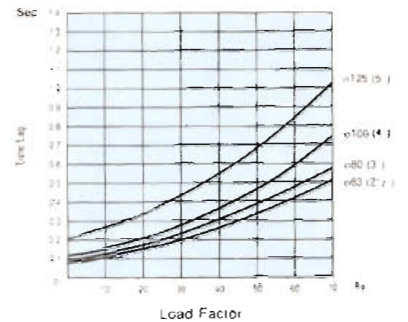
Flow Rate



Max. speed

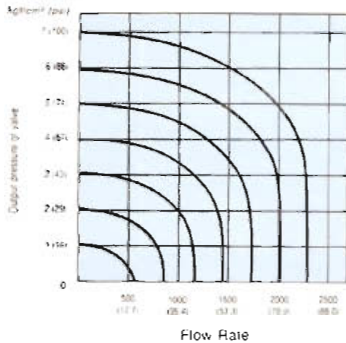


Time Lag

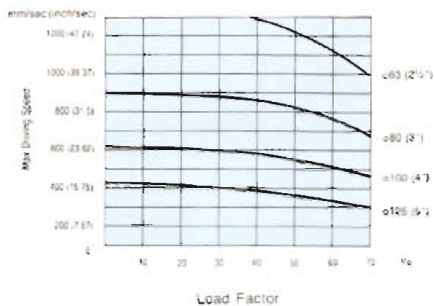


N4V310-10

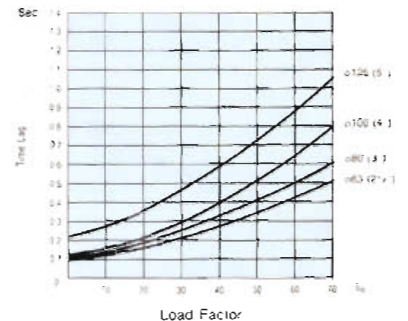
Flow Rate



Max. speed

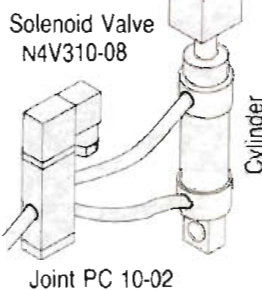


Time Lag



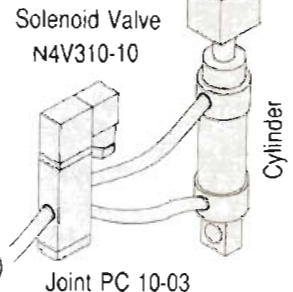
Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: ø7.5*1000mm (ø0.295*39.370 inch)
- Joing: Quick joint PC10-02
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}}$ (%)
- Cylinder stroke: 300mm (11.811 inch)

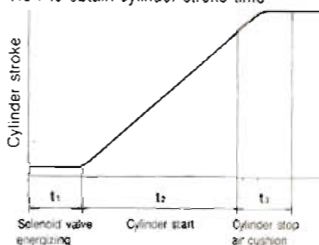


Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: ø7.5*1000mm (ø0.295*39.370 inch)
- Joing: Joint PC10-03
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}}$ (%)
- Cylinder stroke: 300mm (11.811 inch)

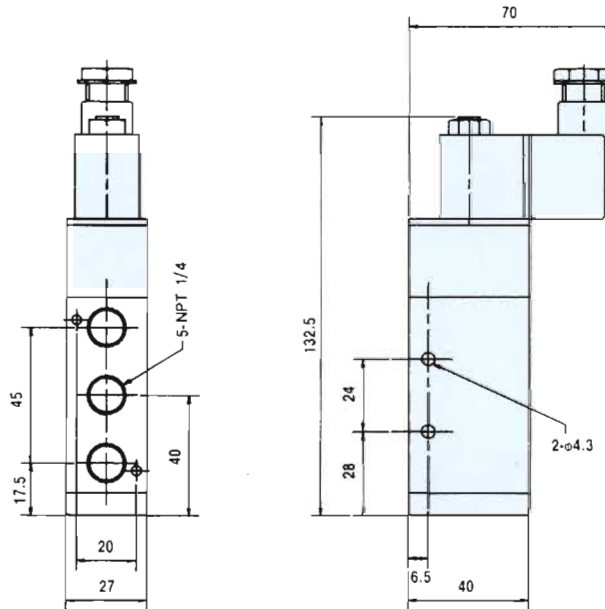
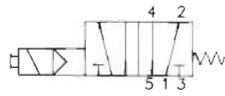


How to obtain cylinder stroke time

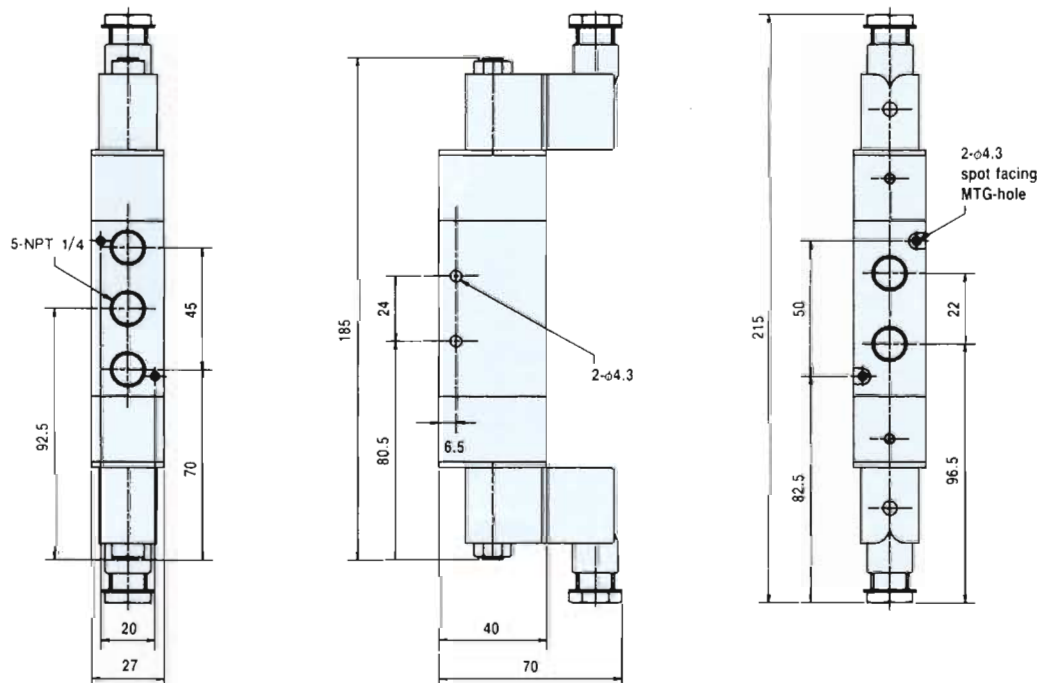
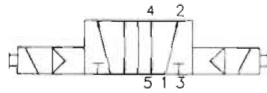


To obtain the time required for one cylinder stroke, add a cylinder time lag "t₁" (time lag after energizing of the solenoid valve until start of the cylinder) to maximum speed time "t₂". For a cylinder with air cushion, add also on air cushion time "t₃". Generally, a low 0.2 second for "t₃".

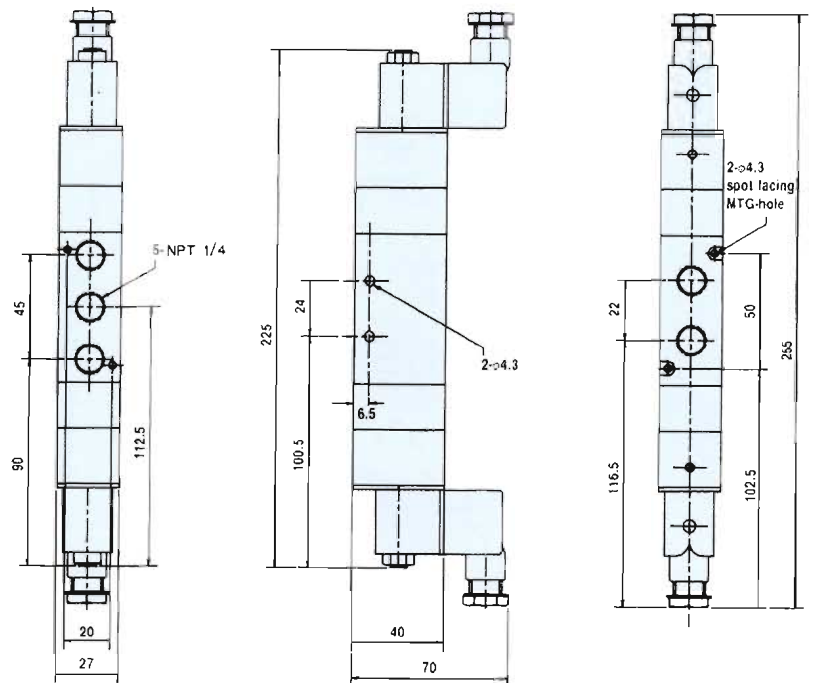
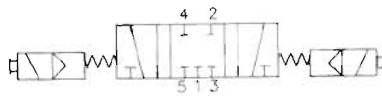
• N4V310-08



• N4V320-08

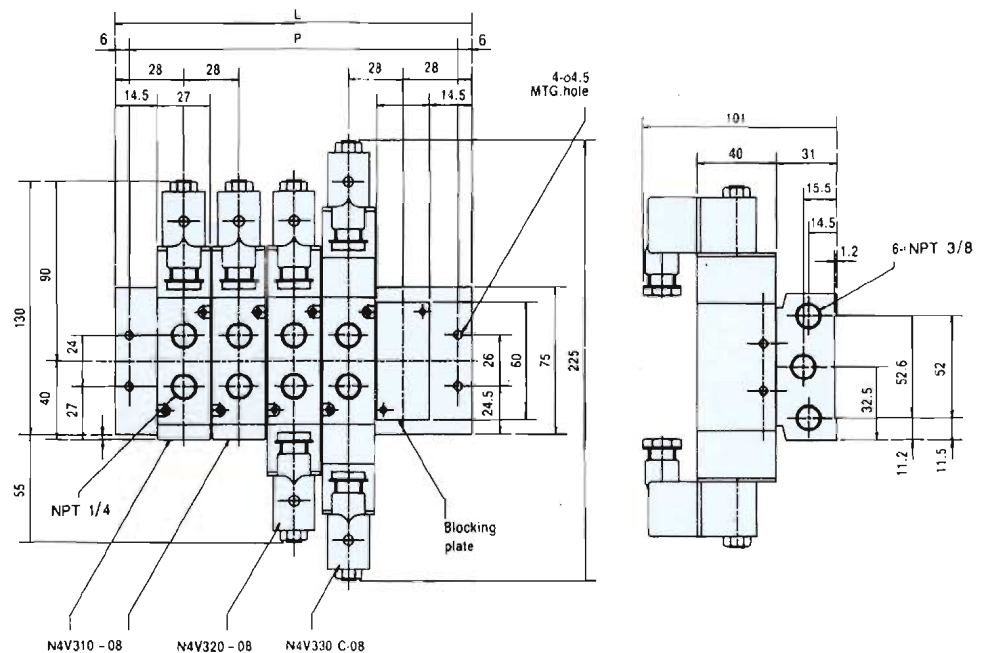


• **N4V330-08**

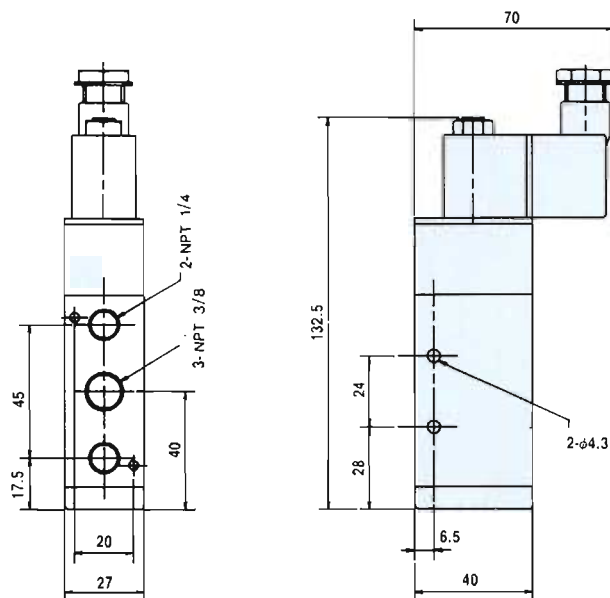
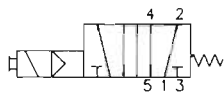


• **300M□F**

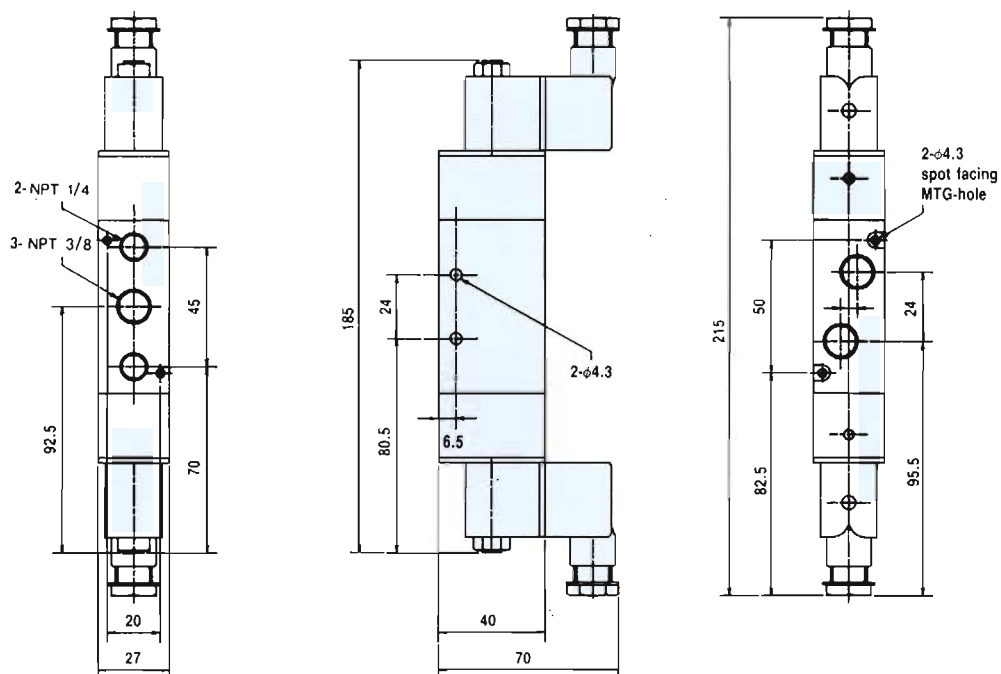
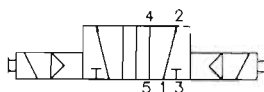
Model	L	P
300M2F	82	70
300M3F	110	98
300M4F	138	126
300m5F	166	154
300M6F	194	182
300M7F	222	210
300M8F	250	238
300M9F	278	266
300M10F	306	294



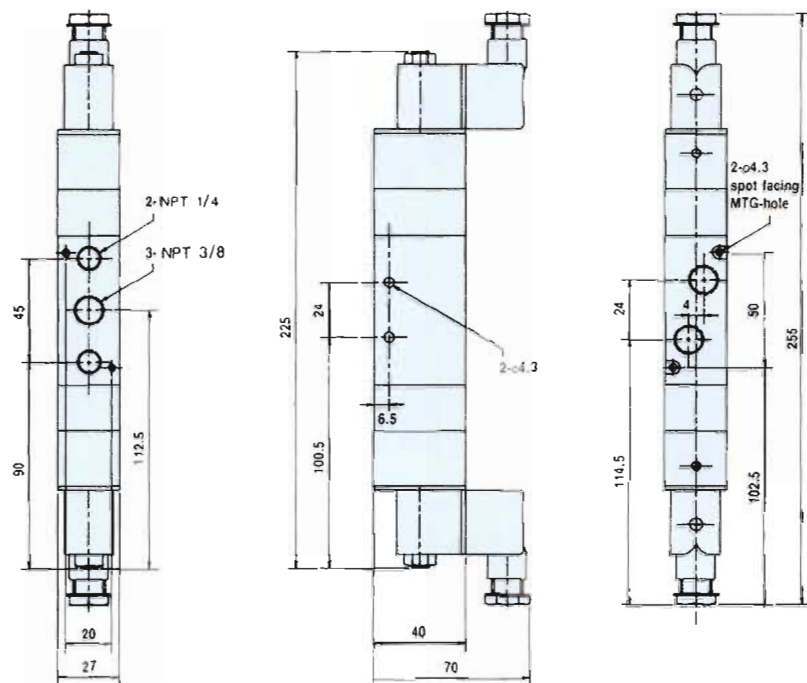
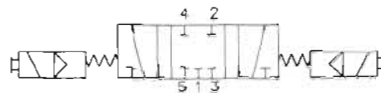
• N4V310-10



• N4V320-10

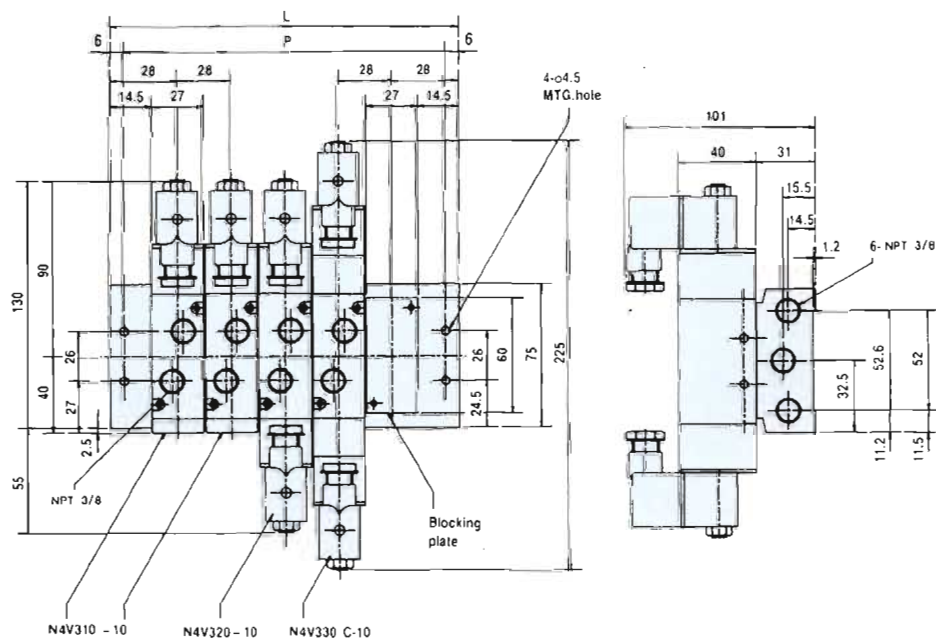


• N4V330-10

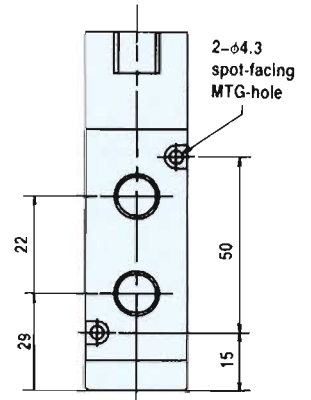
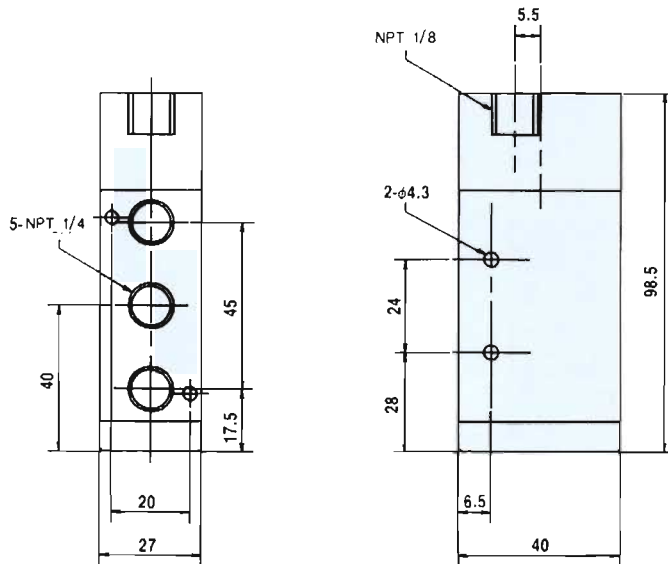
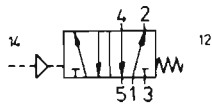


• 300M □ F

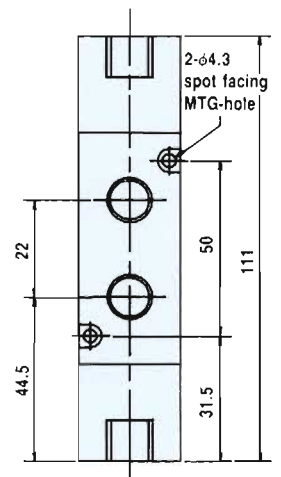
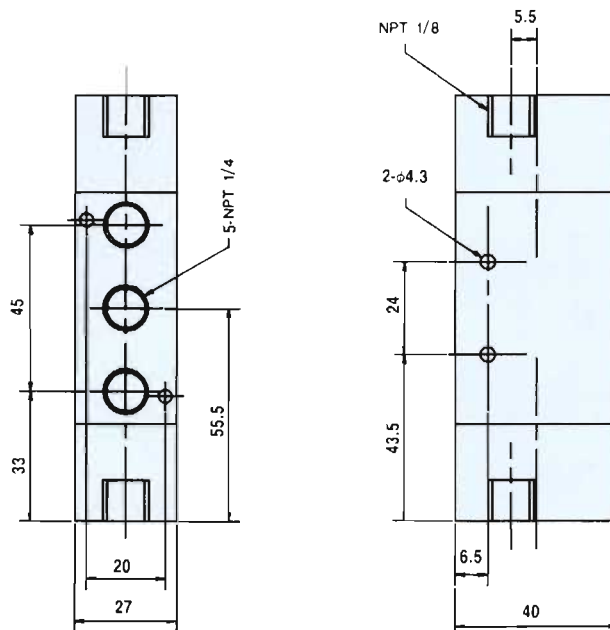
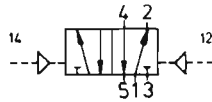
Model	L	P
300M2F	82	70
300M3F	110	98
300M4F	138	126
300m5F	166	154
300M6F	194	182
300M7F	222	210
300M8F	250	238
300M9F	278	266
300M10F	306	294



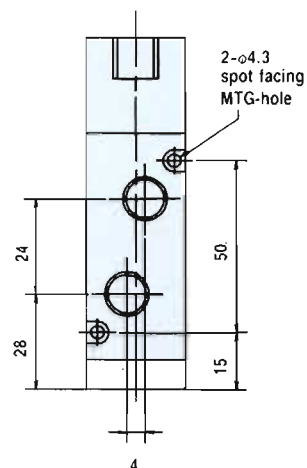
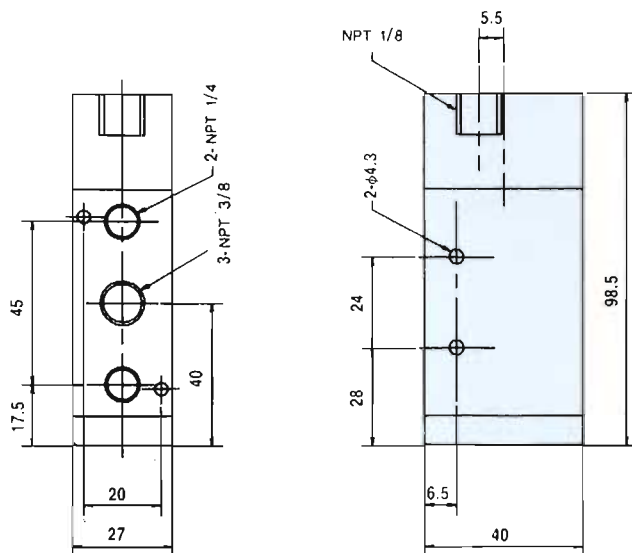
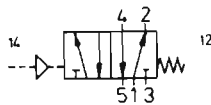
• N4A310-08



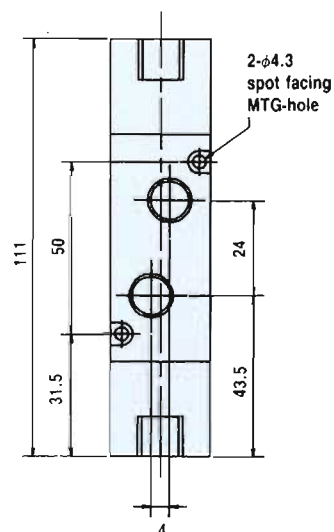
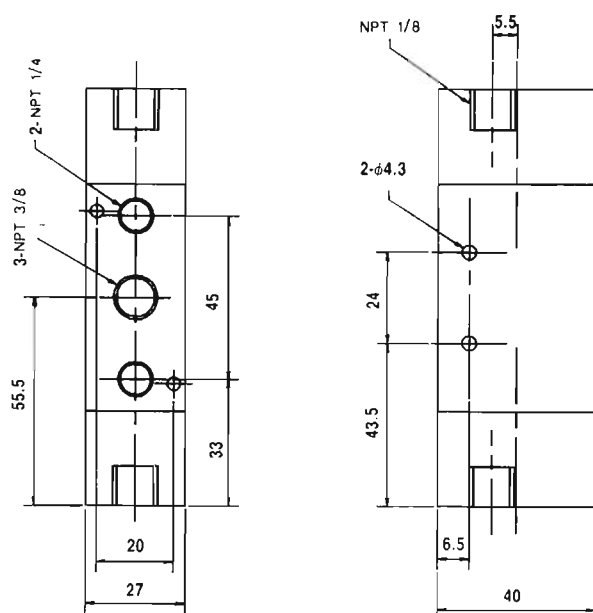
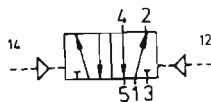
• N4A320-08



• N4A310-10



• N4A320-10



SOLENOID VALVE 400 SERIES

SOLENOID VALVE ORDERING CODE 400 series

N4V	4	10	15	AC110V	L				
• N4V: 4 way solenoid valve • N4A: 4 way air pilot valve	400 series		size of port		<table border="1"> <tr> <td>BLANK</td> <td>WITHOUT LED</td> </tr> <tr> <td>L</td> <td>WITH LED</td> </tr> </table>	BLANK	WITHOUT LED	L	WITH LED
BLANK	WITHOUT LED								
L	WITH LED								
Number of solenoid and position					Standard of Voltage				
10 Single solenoid two position					DC12V				
20 Double solenoid two position					DC24V				
30C Closed center					AC110V 50/60 Hz				
30E Exhaust center					AC220V 50/60 Hz				
30P Pressure center					other voltage consult factory				
			15 NPT1/2"						

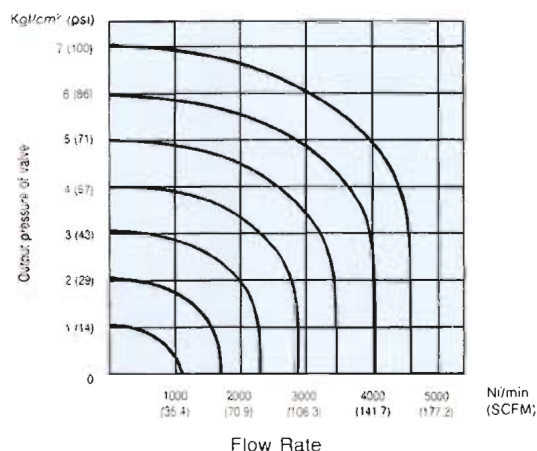
SPECIFICATIONS

Item	Solenoid Model	Single solenoid	Double solenoid	Double solenoid closed center
		N4V410-15	N4V420-15	N4V430C-15
Symbol				
Media		Air (Min. 40μ filtration)		
Operating method		Internally piloted		
Number of positions and ports		2 positions 5 ports		3 positions 5 ports
Effective sectional area mm ² (CV)		50mm ² (2.79)		30 mm ² (1.68)
Pipe joint size		IN. OUT. EXH: NPT 1/2		
Lubrication		Not required		
Service pressure range kgf/cm ² (psi)		1.7 ~ 7 (24 ~ 100)		
Pressure resistance kgf/cm ² (psi)		10.5 (150)		
Service temperature range (atmosphere of fluid used)		5 ~ 50°C (41 ~ 122°F)		
Voltage change		± 10%		
Power consumption		AC: 3.9VA DC: 2.1W		
Insulation		F class		
Max cycle (cycle/sec)		3		
Min excitation time required for operation sec		0.05		
Weight (g)		590	770	770

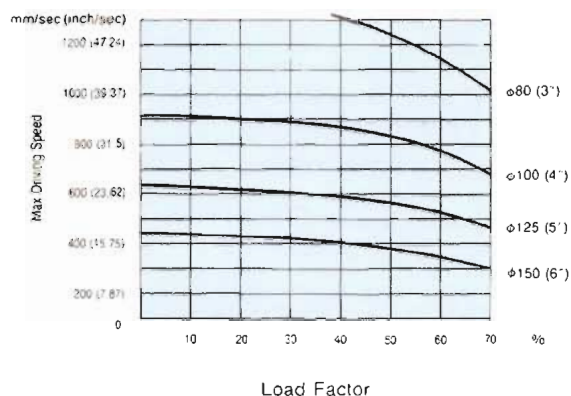
PISTON SPEED & FLOW RATE

N4V410-15

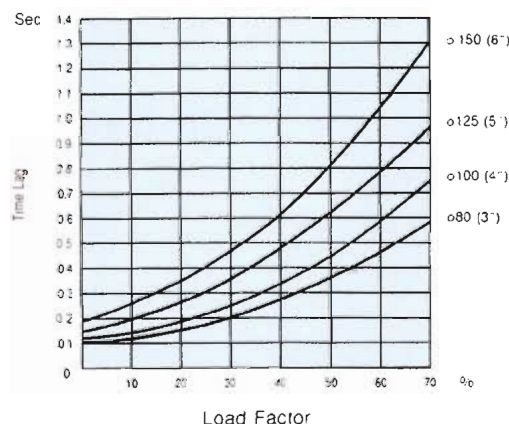
Flow Rate



Max. speed



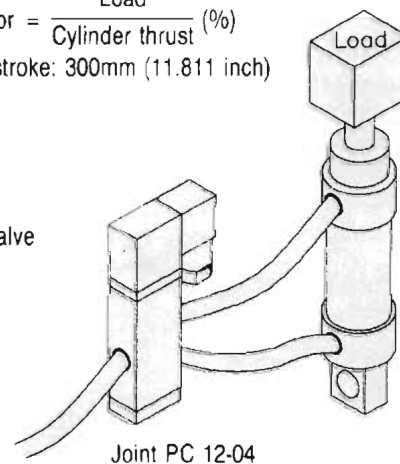
Time Lag



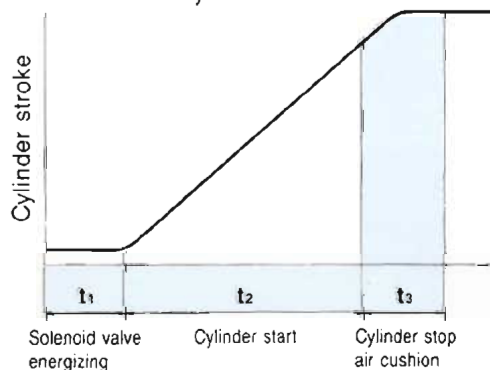
Measuring Conditions

- Air pressure: 5kg/cm² (71 psi)
- Inner diameter and length of pipe: $\phi 8 \times 1000\text{mm}$ ($\phi 0.318 \times 39.370$ inch)
- Joing: Joint PC 12-04
- Load factor = $\frac{\text{Load}}{\text{Cylinder thrust}} (\%)$
- Cylinder stroke: 300mm (11.811 inch)

Solenoid Valve N4V410-15

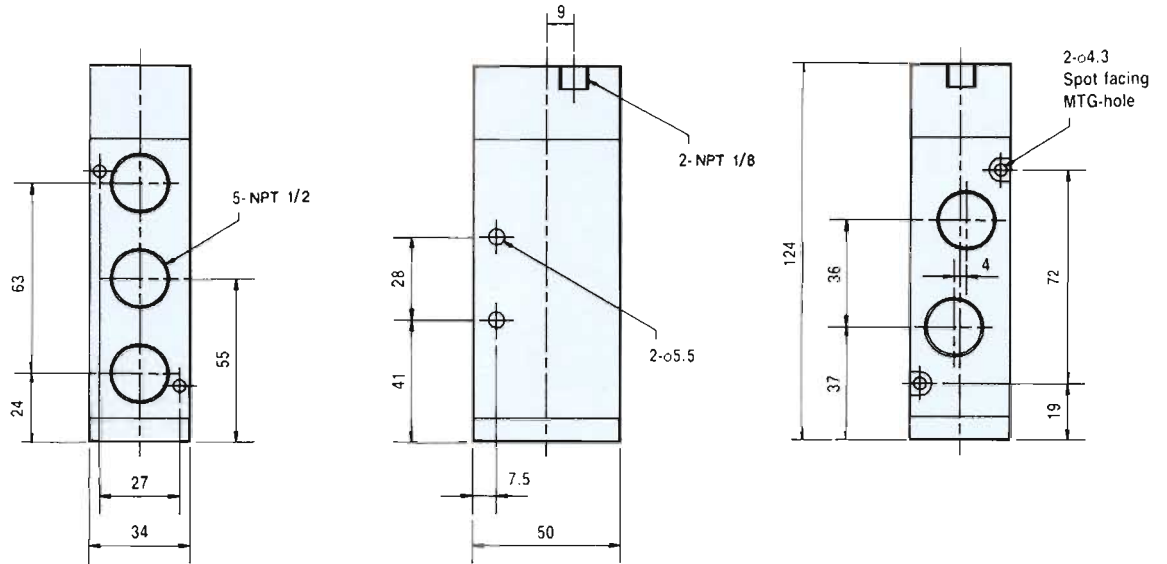


How to obtain cylinder stroke time

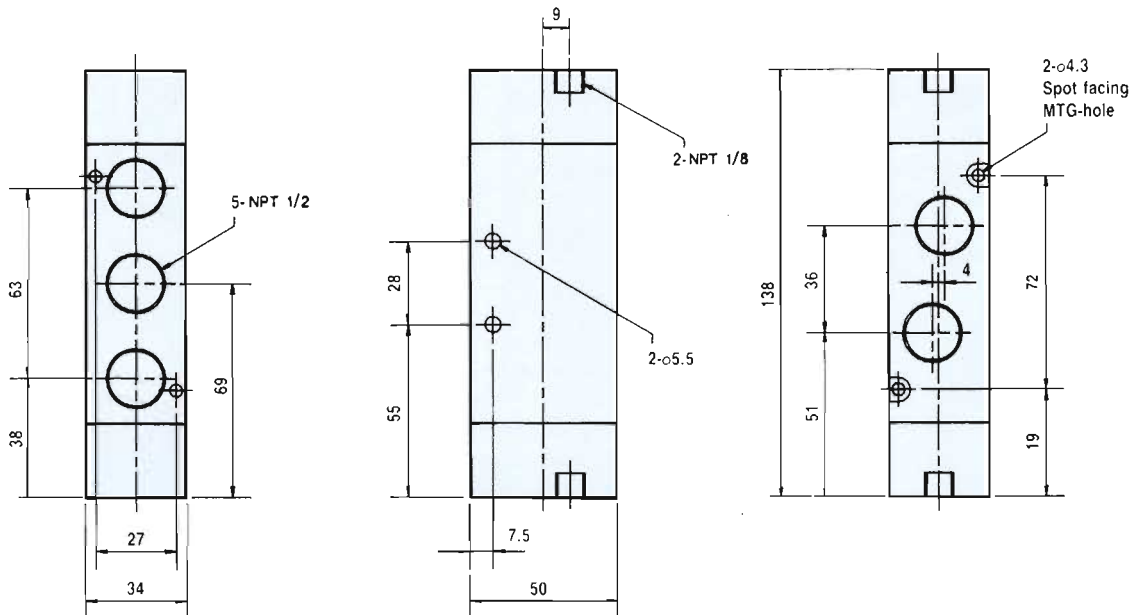
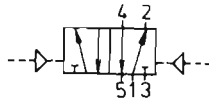


To obtain the time required for one cylinder stroke, add a cylinder time lag " t_1 " (time lag after energizing of the solenoid valve until start of the cylinder) to maximum speed time " t_2 ". For a cylinder with air cushion, add also on air cushion time " t_3 ". Generally, a low 0.2 second for " t_3 ".

• N4A410-15

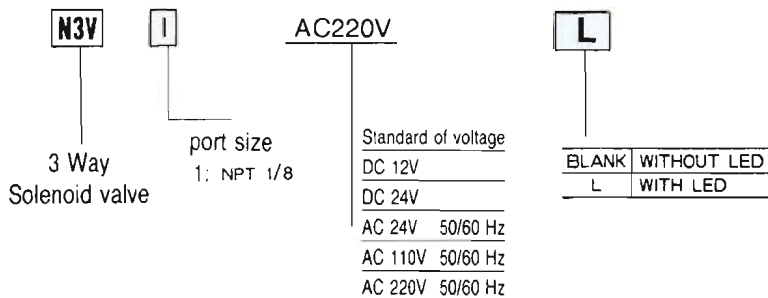


• N4A420-15



3- WAY SOLENOID VALVE N3 VI SERIES

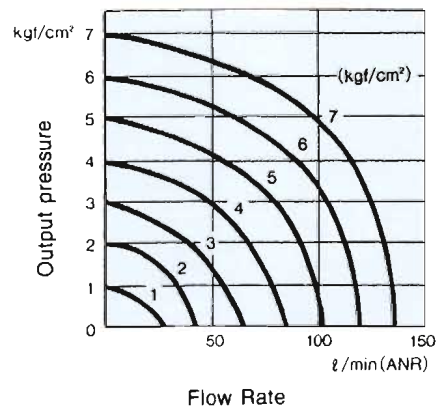
Solenoid Valve Ordering Code



SPECIFICATIONS

System:	direct acting valve
Port size:	NPT 1/8"
Temp. ambient:	- 10°C to + 70°C
Temp. of fluid:	5°C to + 50°C
Lubrication:	not required
Body material:	Aluminum
Min. pressure:	0.1kgf/cm ²
Max. pressure:	10kgf/cm ²
Orifice:	1.2mm
Power consumption:	AC: 4.5VA DC: 3W
Max. cycles:	10 cycle/sec
Duty factor:	100%
Class:	acc. DIN 40050 IP 65 (with plug)
Connection:	Plug acc. DIN
Insulation:	F class
Voltage change:	± 10%

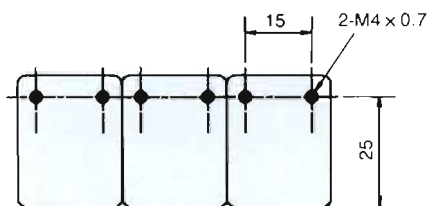
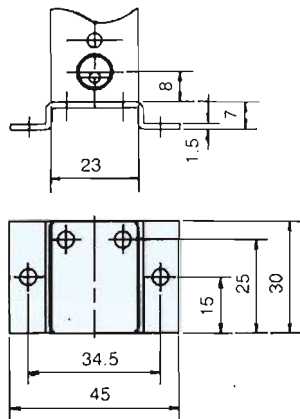
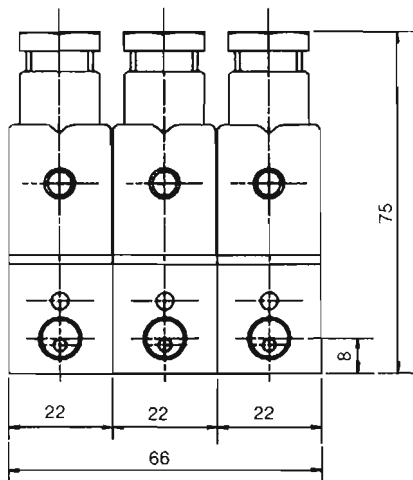
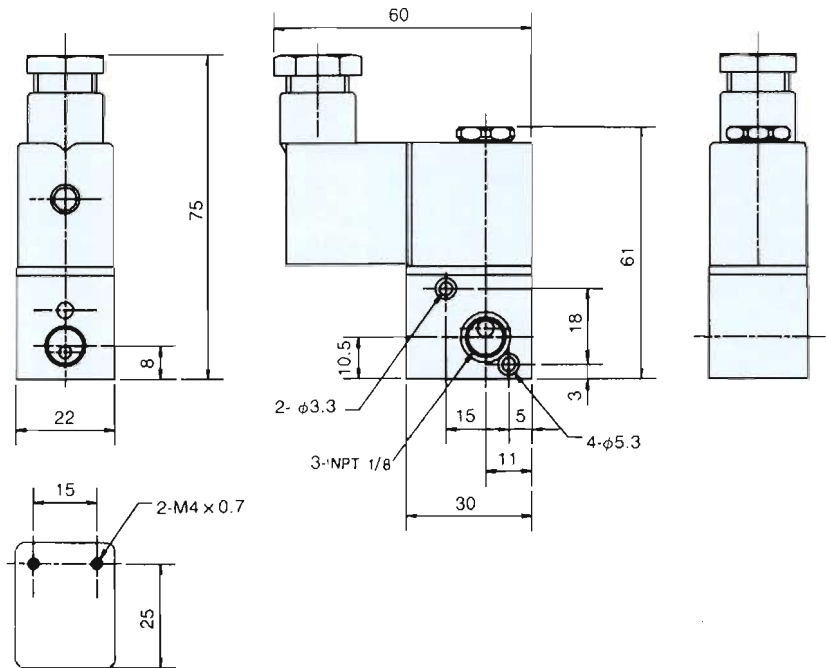
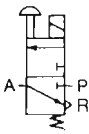
N3VI Flow Rate



N3VI can be used for single or manifold.

The screw for manifold: **screw 301** for the first station.
screw 302 for the second and others.

DIMENSION FOR N3V1



2- WAY SOLENOID VALVE

Material of Diaphragm (seal)

NBR

Standard compound for service in petroleum oils, air water, mild acids, alcohols, acetylene, kerosenes, lime solutions, liquefied petroleum gases and turpentine. Not recommended for high aromatic gasolines or acids. Temperature range: -40°C to 100°C .

VITON

Excellent resistance to many petroleum oils, gasoline, drycleaning fluids and jet fuels. Not good for ketones, halogenated hydrocarbons and freons. Temperature range: -45°C to $+200^{\circ}\text{C}$.

EPDM

Features similar to butyl (i.e. excellent for phosphate ester type fluids and poor on petroleum base types) **except** ethylene propylene has a somewhat higher temperature range. Useful as 'O'-ring gaskets on steam valves due to low compression set. Temperature range: -50°C to $+200^{\circ}\text{C}$.

2-WAY SOLENOID VALVES O SERIES

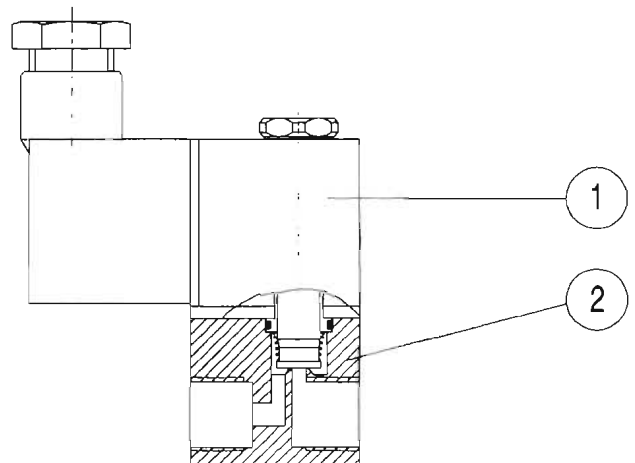
Solenoid Valve Ordering Code

N2V	025	08	AC110V	Standard of Voltage	L
2-WAY Solenoid valve	Orifice 2.5mm	Size of port		DC12V	
		06 NPT 1/8		DC24V	
		08 NPT 1/4		AC24V 50/60 Hz	
				AC110V 50/60 Hz	
				AC220V 50/60 Hz	
				other voltage consult factory	
					BLANK WITHOUT LED
					L WITH LED

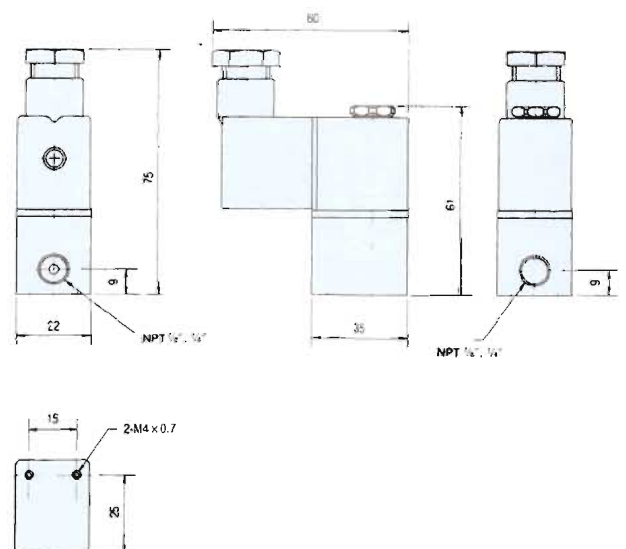
Specifications

Symbol	
Media	Air, Water, Oil inert gases
Operating method	Direct acting
Function	N.C.
Effective sectional area mm ² (CV)	4.9 (0.27)
Pipe joint size	NPT 1/8 (06), NPT 1/4 (08)
Viscosity	21c ST
Service pressure range kgf/cm ² (psi)	0-12 (0 ~ 172)
Pressure resistance kgf/cm ² (psi)	16 (229)
Service temperature range (atmosphere or fluid used)	-10 ~ 60°C
Voltage change	± 10%
Power consumption	AC: 4.5VA DC: 3W
Insulation	F class
Rating	100%
Protection	IP00/IP65
Electrical connection①	Plug acc. DIN
Body Material②	Brass
Seal Material	Viton
Weight (g)	210

INTERNAL STRUCTURE

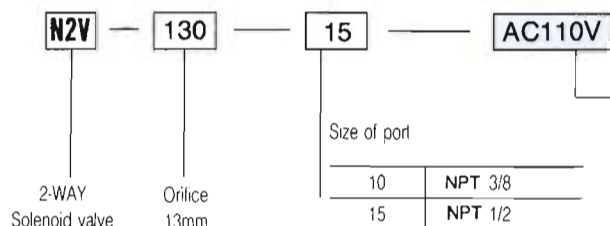


DIMENSIONS



2-WAY SOLENOID VALVES 1 SERIES

Solenoid Valve Ordering Code



Standard of Voltage

DC12V

DC24V

AC24V 50/60 Hz

AC110V 50/60 Hz

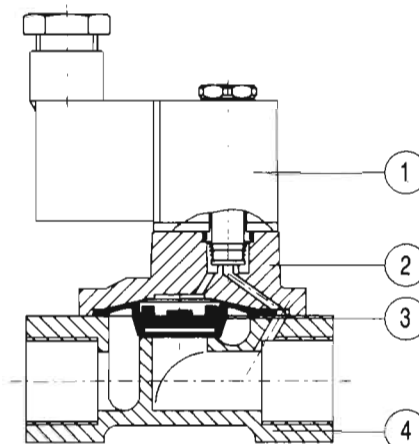
AC220V 50/60 hz

other voltage consult factory

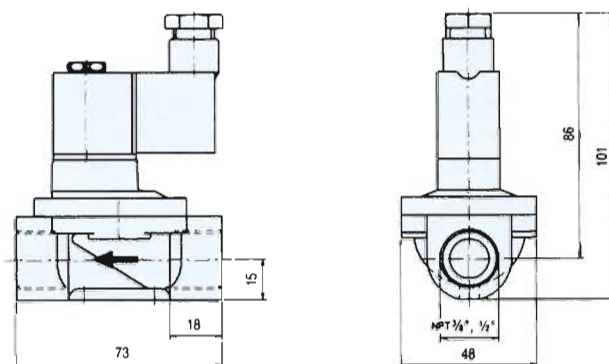
Specifications

Symbol	
Media	Air, Water, Oil inert gases
Operating method	Pilot
Function	N.C.
Effective sectional area mm ² (CV)	132 (7.3)
Pipe joint size	NPT 3/8" (10), NPT 1/2" (15)
Viscosity	21c ST
Service pressure range kgf/cm ² (psi)	0.8 ~ 10 (11.4 ~ 143)
Pressure resistance kgf/cm ² (psi)	12 (171)
Service temperature range (atmosphere or fluid used)	- 10 ~ 60°C
Voltage change	± 10%
Power consumption	AC: 4.5VA DC: 3W
Insulation	F class
Rating	100%
Protection	IP00/IP65
Electrical connection①	Plug acc. DIN
Body Material② ④	Brass
Seal Material③	Viton or NBR
Weight (g)	580

INTERNAL STRUCTURE



DIMENSIONS



2-WAY SOLENOID VALVES 2 SERIES

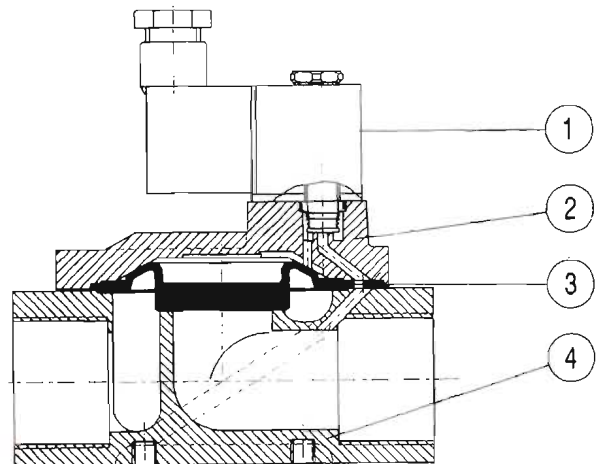
Solenoid Valve Ordering Code

N2V	250	25	AC110V	L
2-WAY Solenoid valve	Orifice 25mm	Size of port	Standard of Voltage	
		20 NPT 3/4"	DC12V	
		25 NPT 1"	DC24V	
			AC24V 50/60 Hz	
			AC110V 50/60 Hz	
			AC220V 50/60 Hz	
			other voltage consult factory	
				BLANK WITHOUT LED
				L WITH LED

Specifications

Symbol	
Media	Air, Water, Oil inert gases
Operating method	Pilot
Function	N.C.
Effective sectional area mm ² (CV)	490 (27)
Pipe joint size	NPT 3/4" (20), NPT 1" (25)
Viscosity	21c ST
Service pressure range kgf/cm ² (psi)	0.8 ~ 10 (11.4 ~ 143)
Pressure resistance kgf/cm ² (psi)	12 (171)
Service temperature range (atmosphere or fluid used)	-10 ~ 60°C
Voltage change	± 10%
Power consumption	AC: 4.5VA DC: 3W
Insulation	F class
Rating	100%
Protection	IP00/IP65
Electrical connection①	Plug acc. DIN
Body Material② ④	Brass
Seal Material③	Viton or NBR
Weight (g)	1200

INTERNAL STRUCTURE



DIMENSIONS

