



Reference chart for choosing valve:

Item	Pipe size	Operating Pressure	Fluid Temp.	Steam	Water	Air	Oil	Gas	Vacuum
2W025	1/8", 1/4"	0 ~ 7	-5 ~ 80°C		◎	◎	○	○	○
2W040	3/8"	0 ~ 10	-5 ~ 80°C		◎	◎	◎	○	○
2WH012	1/8", 1/4"	0 ~ 20	-5 ~ 80°C		◎	◎	○	○	○
2WH020	3/8"	0 ~ 20	-5 ~ 80°C		◎	◎	○	○	○
2W160	3/8", 1/2"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2W200	3/4"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2W250	1"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2W350	1 1/4"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2W400	1 1/2"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2W500	2"	0 ~ 5	-5 ~ 80°C		◎	○	○		
2V025	1/8", 1/4"	0 ~ 7	-5 ~ 80°C		◎	◎	○	○	○
2V130	3/8", 1/2"	0 ~ 7	-5 ~ 80°C		○	◎	○		
2V250	3/4", 1"	0 ~ 7	-5 ~ 80°C		○	◎	○		
2S025	1/8", 1/4"	0 ~ 7	-5 ~ 185°C	◎	◎	○	○		
2S040	3/8"	0 ~ 10	-5 ~ 185°C	◎	◎	○	○		
2S150	1/2"	0.5 ~ 10	-5 ~ 185°C	◎	◎	○	◎		
2S200	3/4"	0.5 ~ 10	-5 ~ 185°C	◎	◎	○	◎		
2L170	1/2", 3/4"	1 ~ 15	-5 ~ 185°C	◎	○	○			
2L200	1"	1 ~ 15	-5 ~ 185°C	◎	○	○			
2L300	1 1/4"	1 ~ 15	-5 ~ 185°C	◎	○	○			
2L500	2"	1 ~ 15	-5 ~ 185°C	◎	○	○			
2P160	3/8", 1/2"	0.1 ~ 8	-5 ~ 80°C		◎	◎	○		
2P200	3/4"	0.1 ~ 8	-5 ~ 80°C		◎	◎	○		
2P250	1"	0.1 ~ 8	-5 ~ 80°C		◎	◎	○		

Note. ◎ for the best, ○ for good.

2W Series — Small size and Hi-Pressure model	P. 2
2W Series — Large size model	P. 5
2V Series — Normal type & Explosive proof type	P. 8
2S Series — Stainless steel model	P.11
2L Series — Large size for Steam flow	P.14
2P Series — Normal opened model	P.17

2/2 WAY SOLENOID VALVE

2W Series — Direct acting type (Small size & High pressure)

Ordering code :

2W — **025** — **06** — **AC110V** — **E**

Orifice size :
012 — 1.2mm (2WH)
020 — 2mm (2WH)
025 — 2.5mm (2W)
040 — 4mm (2W)

Port size :
06 : 1/8"
08 : 1/4"
10 : 3/8"

Standard voltage * :
AC110V AC220V
DC24V

Blank : NBR (Standard)

E : EPDM (Vapor used)

V : VITON (Hi-Temp., gas,
vacuum used)

2W : 2/2 Way solenoid valve

2WH : 2/2 Way solenoid valve (High-pressure model)

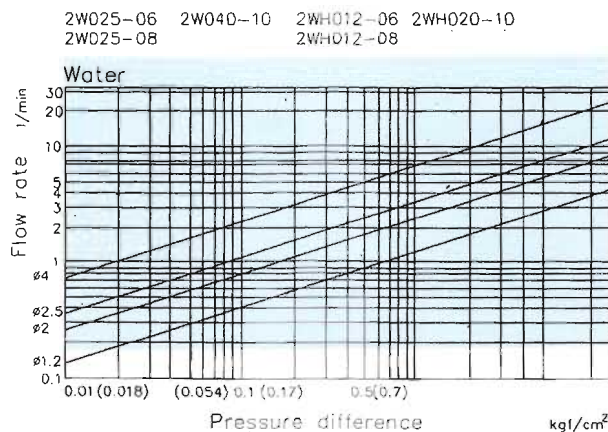
Note. * Please consult factory for other voltages.

Specification

Item	2W025-06	2W025-08	2W040-10	2WH012-06	2WH012-08	2WH020-10
Symbol						
Media	Air, Water, Oil, Gas, Vacuum					
Operating method	Direct acting					
Function	Normally Closed					
Orifice size	2.5		4	1.2		2
CV value	0.23		0.60	0.18		0.45
Port size	1/8"	1/4"	3/8"	1/8"	1/4"	3/8"
Viscosity limit	Below 50 CST					
Operating pressure kg/cm ²	Water, Air, Oil, Gas **: 0 ~ 7			Water, Air, Oil, Gas **: 0 ~ 20		
Pressure resistance kg/cm ²	10			30		
Service temperature ℃	-5 ~ 80					
Voltage range	±10%					
Body material	Brass					
Seal material	NBR, EPDM, or VITON					

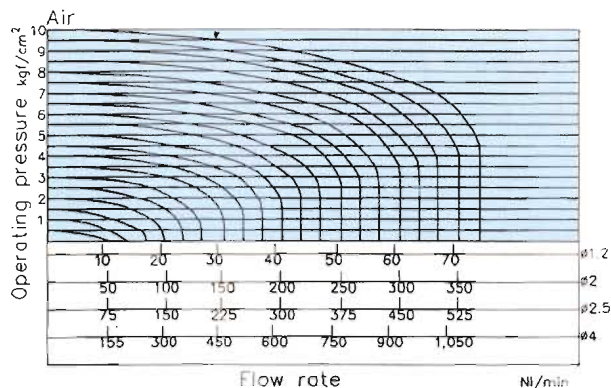
Note. ** 0 ~ 10⁻⁵ Torr for vacuum use.

2W Series flow characteristics:

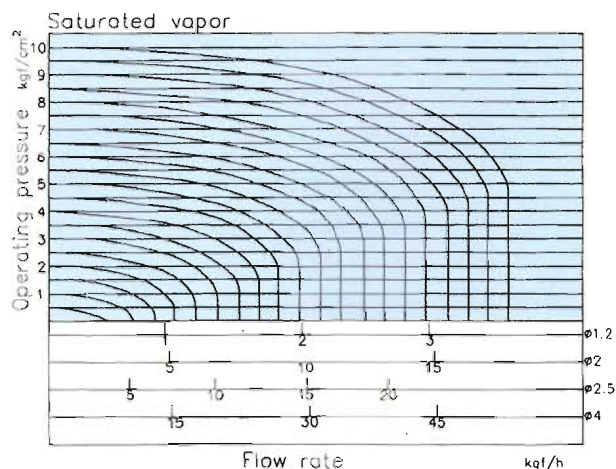


2W Series Flow characteristics

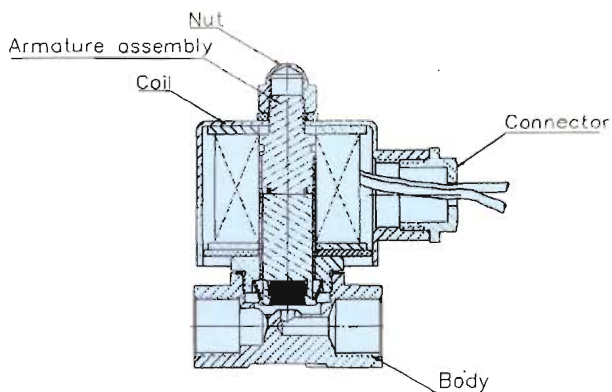
2W025-06 2W040-10 2WH012-06 2WH020-10
2W025-08 2WH012-08



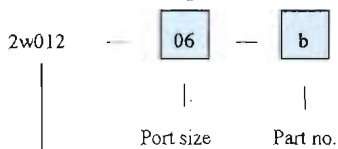
2W025-06 2W040-10 2WH012-06 2WH020-10
2W025-08 2WH012-08



Inner Construction and Major parts



How to order parts



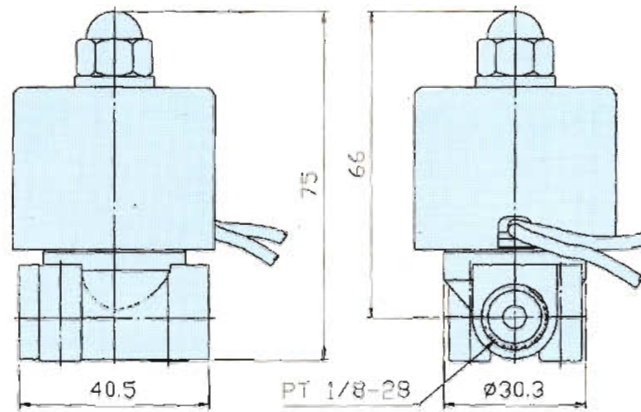
2wh012 : 2WH012 series part
2wh020 : 2WH020 series part
2w025 : 2W025 series part
2w040 : 2W040 series part

Material of major parts

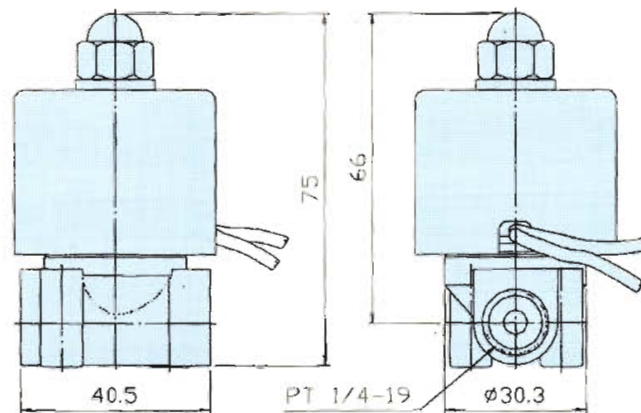
Item	Part no.	2WH012	2WH020	2W025	2W040
Body	b	Brass			
Connector	s	PM			
Plunger	aa	Stainless steel			
Diaphragm	d	VITON, EPDM, or NBR			
Nut	n	Iron (zinc plated)			
Coil	c	Copper wire			
Coil cover	cc	Iron			

Dimensions of 2W Series:

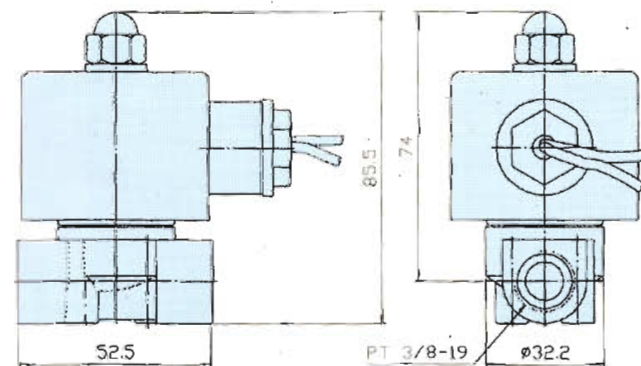
2WH012-06 & 2W025-06



2WH012-08 & 2W025-08



2WH020-10 & 2W040-10



2/2 WAY SOLENOID VALVE

2W Series — Direct acting type (Large size)

Ordering code :

2W — **160** — **15** — **AC110V** — **V**

Orifice size :

160 - 16mm

200 - 20mm

250 - 25mm

350 - 35mm

400 - 40mm

500 - 50mm

Port size :

10 : 3/8"

15 : 1/2"

20 : 3/4"

25 : 1"

35 : 1 1/4"

40 : 1 1/2"

50 : 2"

Standard voltage * :

AC110V AC220V

DC24V

Blank : NBR

V : VITON (Hi-Temp used)

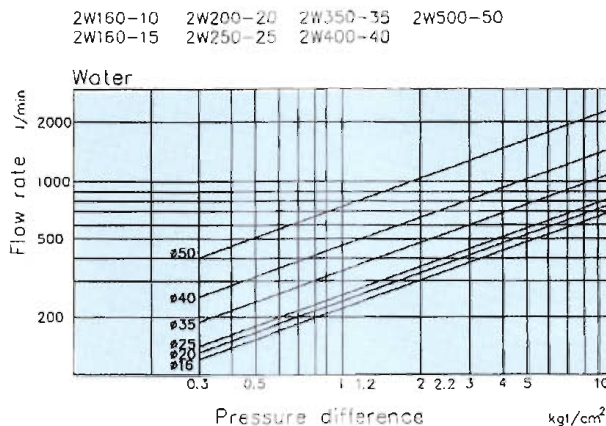
2W : 2/2 Way solenoid valve

Note. * Please consult factory for other voltages.

Specification

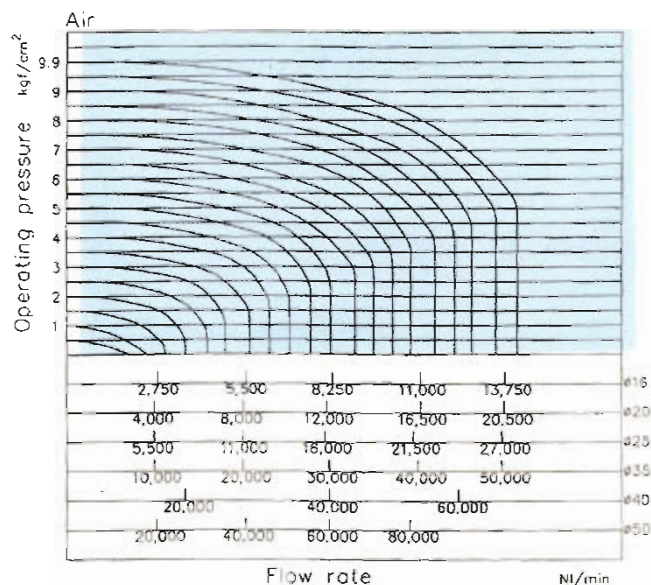
Item	2W160-10	2W160-15	2W200-20	2W250-25	2W350-35	2W400-40	2W500-50
Symbol							
Media	Air, Water, Oil						
Operating method	Direct acting						
Function	Normally Closed						
Orifice size	16		20	25	35	40	50
CV value	4.8		7.6	12	24	29	48
Port size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Viscosity limit	Below 50 CST						
Operating pressure kg/cm ²	Water: 0 ~ 5 Air: 0 ~ 7 Oil: 0 ~ 5						
Pressure resistance kg/cm ²	10						
Service temperature °C	-5 ~ 80						
Voltage range	±10%						
Body material	Brass						
Seal material	NBR or VITON						

2W Series flow characteristics:

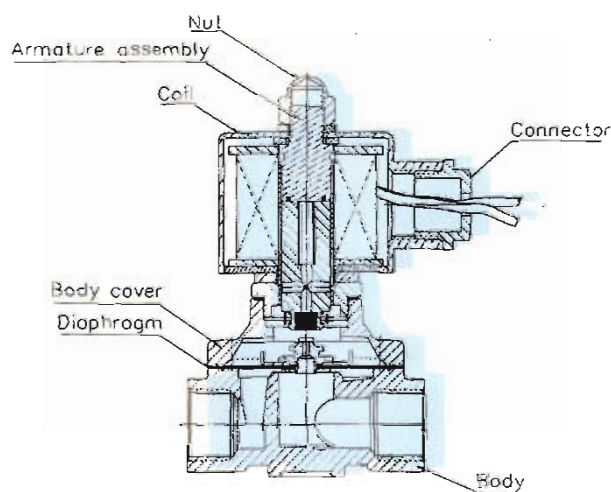


2W Series Flow Characteristics

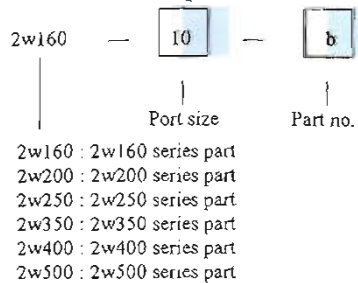
2W160-10 2W200-20 2W350-35 2W500-50
2W160-15 2W250-25 2W400-40



Inner Construction and Major parts



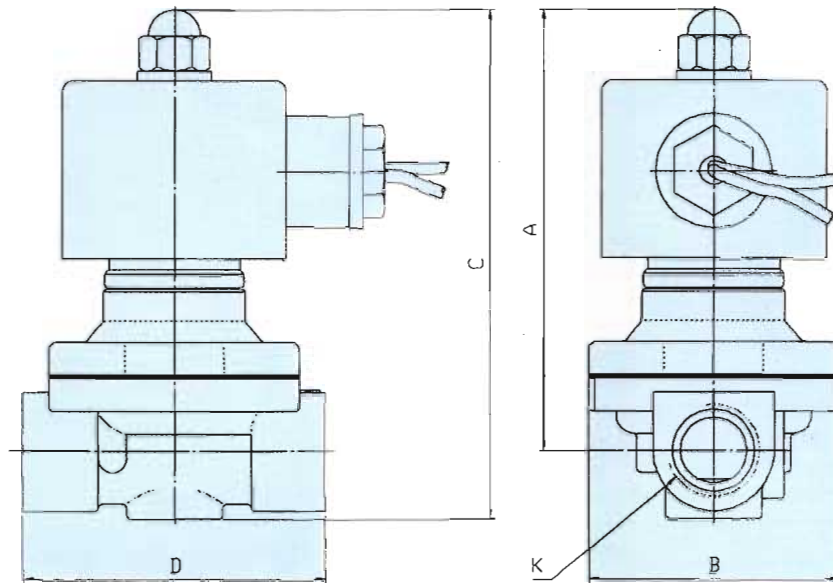
How to order parts



Material of major parts

Item	Part no.	2W160	2W200	2W250	2W350	2W400	2W500
Body	b	Brass					
Body cover	bc	Brass					
Wire block	s	PC					
Armature assembly	aa	Stainless steel					
Diaphragm	d	VITON or NBR					
Nut	n	Iron with zinc plated					
Coil	c	Copper wire					
Coil cover	cc	Iron					

Dimensions of 2W Series:



Symbol	A	B	C	D	K
2W160-10	101.5	57	117	69	PT 3/8"
2W160-15	101.5	57	117	69	PT 1/2"
2W200-20	107	57	123.5	73	PT 3/4"
2W250-25	111.5	73.5	134.5	99	PT 1"
2W350-35	142	95	172	123	PT 1 1/4"
2W400-40	142	95	172	123	PT 1 1/2"
2W500-50	172	123	209	168	PT 2"

2/2 WAY SOLENOID VALVE

2V Series - Direct/Pilot acting type with explosive-proof option

Ordering code

2V — 025 — 06 — AC110V — V

Orifice size :	Size of port :	Standard voltage* :
025 - 2.5mm	06 : 1/8"	DC12V DC24V
130 - 13mm	08 : 1/4"	AC110V AC220V
250 - 25mm	10 : 3/8"	DC12V-E DC24V-E
	15 : 1/2"	AC110V-E AC220V-E**
	20 : 3/4"	
	25 : 1"	

2V : 2 Way solenoid valve

- Direct acting type and Pilot acting type

Blank : NBR

V : VITON (Hi-Temp used)

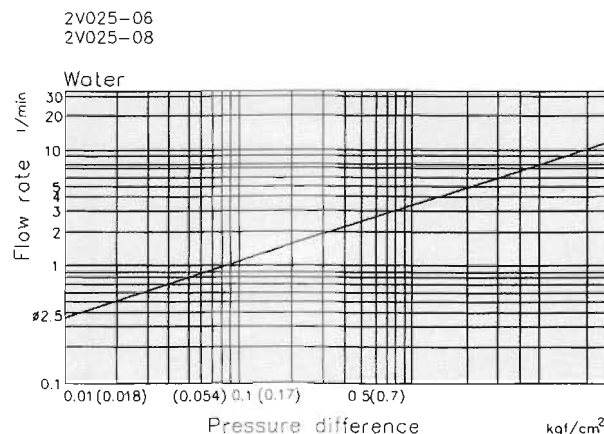
Note. * Please consult factory for other voltage.

** "-E" added to the voltage for explosive-proof type.

Specification

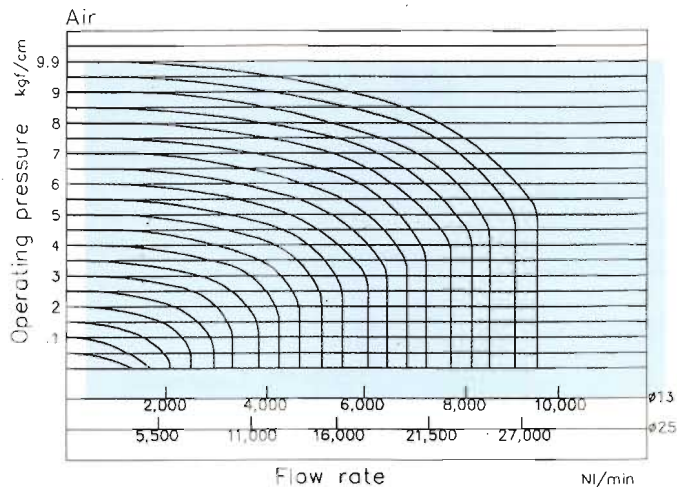
Item	2V025-06	2V025-08	2V130-10	2V130-15	2V250-20	2V250-25
Symbol						
Media	Air, Water, Oil, Gases					
Operating method	Direct acting		Internally piloted			
Function	Normally closed					
Orifice size mm	2.5		13		25	
CV Value	0.25		7.0		25	
Port size	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Viscosity limit	Below 20 CST					
Service pressure range kg/cm ²	0 ~ 12		0 ~ 7			
Pressure resistance kg/cm ²	16		10			
Service temperature range ℃	-10 ~ 60					
Voltage change	±10%					
Protection	IP00 / IP65					
Power consumption	AC : 4.5VA DC : 3W					
Insulation	F Class					
Body material	Brass with zinc plated		Brass			
Seal material	—		Viton or NBR			
Min. activating time sec	0.05					

2V Series flow characteristics:

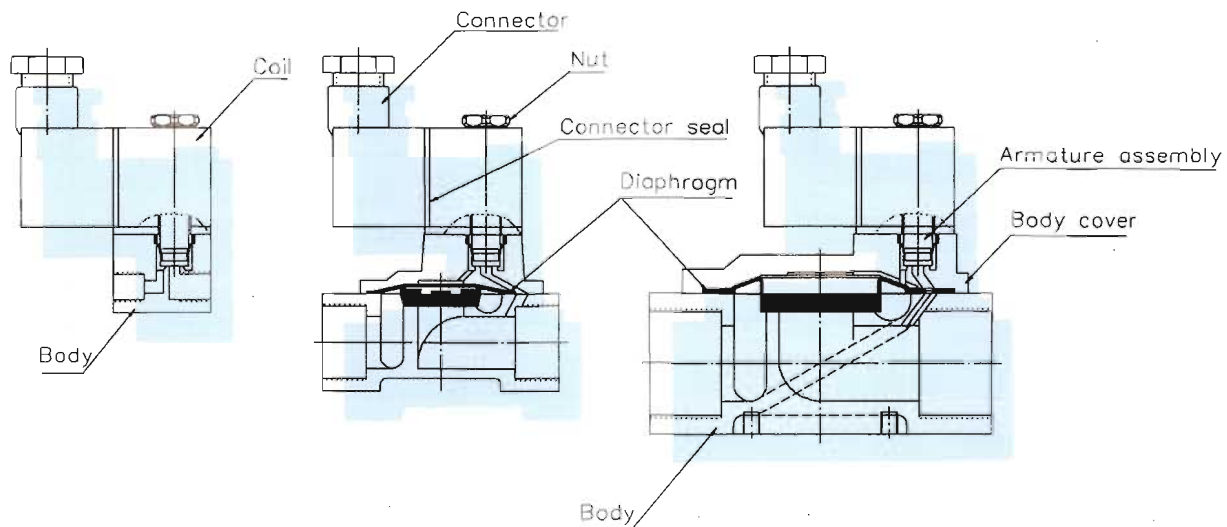


2V Series Flow Characteristics

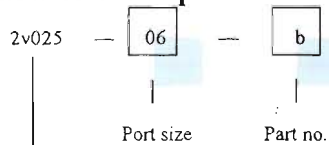
2V130-10 2V250-20
2V130-15 2V250-25



Inner Construction and Major parts



How to order parts



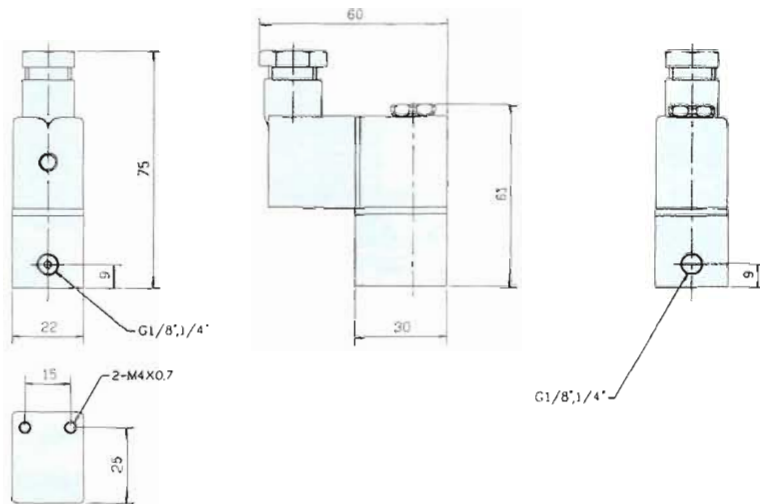
2v025 : 2V025 series part
2v130: 2V130 series part
2v250: 2V250 series part

Material of major parts

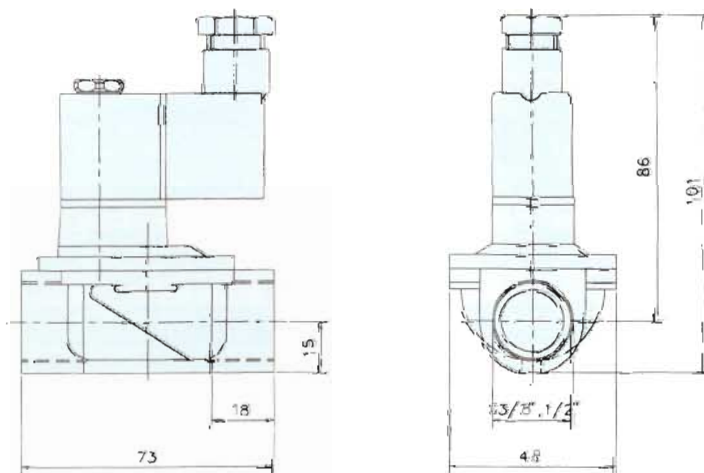
Item	Part no.	2V025	2V130	2V250
Body	b	Brass		
Body cover	bc	Brass		
Connector	c	PM		
Connector gasket	cg	NBR		
Armature assembly	aa	FR430 with copper tube		
Diaphragm	d	Viton	Viton or NBR	
Nut	n	Brass with zinc plated		
Coil	co	Copper wire with resin covered		

Dimensions of 2V Series

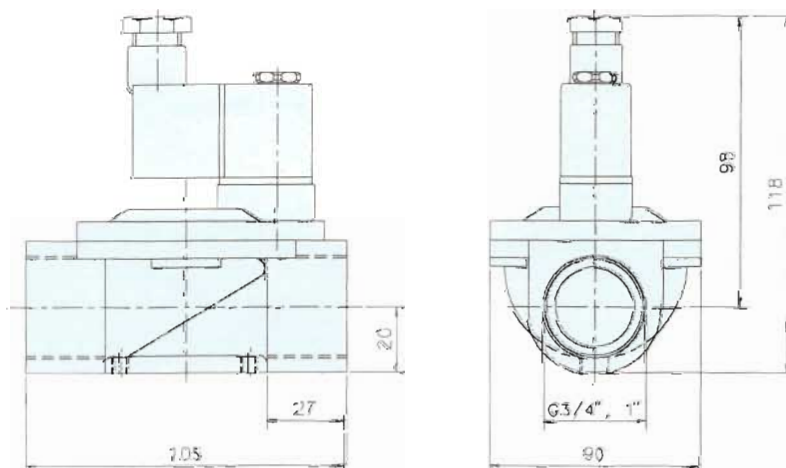
2V025-06 & 2V025-08



2V130-10 & 2V130-15



2V250-20 & 2V250-25



2/2 WAY SOLENOID VALVE

2S Series — Direct acting type (Stainless-Steel Model)

Ordering code :

2S — 025 — 06 — AC110V — E

Orifice size :

025 - 2.5mm

040 - 4mm

150 - 15mm

200 - 20mm

Port size :

06 : 1/8"

08 : 1/4"

10 : 3/8"

15 : 1/2"

20 : 3/4"

Standard voltage* :

AC110V AC220V

DC24V

Blank : NBR

E : EPDM (Vapor use)

V : VITON (High-temp. use)

2S : 2 Way solenoid valve - Stainless-steel type

Note. * Please consult factory for other voltages.

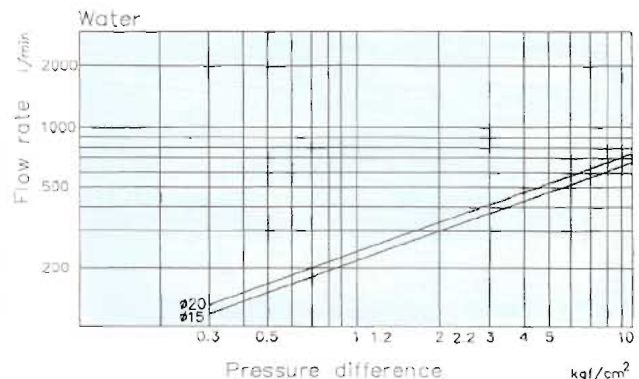
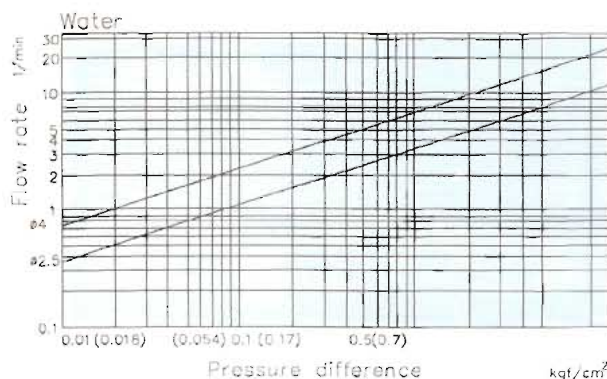
Specification

Item	2S025-06	2S025-08	2S040-10	2S150-15	2S200-20
Symbol					
Media	Air, Water, Oil, Acid, Steam				
Operating method	Direct acting			Internally piloted	
Function	Normally Closed				
Orifice size	2.5		4	20	
CV value	0.23		0.60	9.6	
Port size	1/8"	1/4"	3/8"	1/2"	3/4"
Viscosity limit	Below 20 CST				
Operating pressure	kg/cm ²	Water, Air, Oil: 0 ~ 7			Water, Air, Oil: 0.5 ~ 10
Pressure resistance	kg/cm ²	10			15
Service temperature	°C	-5 ~ 80			
Voltage range	± 10%				
Body material	Stainless steel				
Seal material	NBR, EPDM, or VITON				

2S Series flow characteristics:

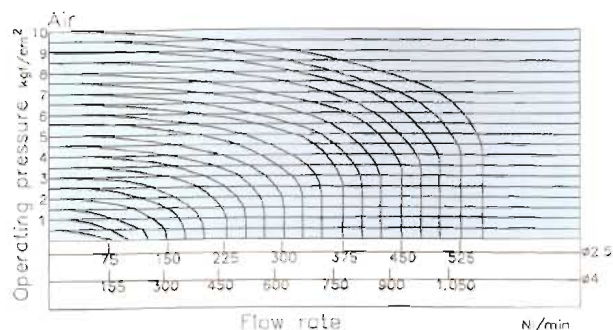
2S025-06 2S040-10
2S025-08

2S150-15 2S200-20

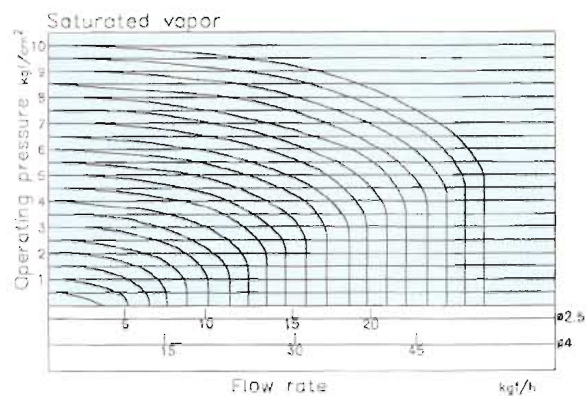


2S Series Flow Characteristics

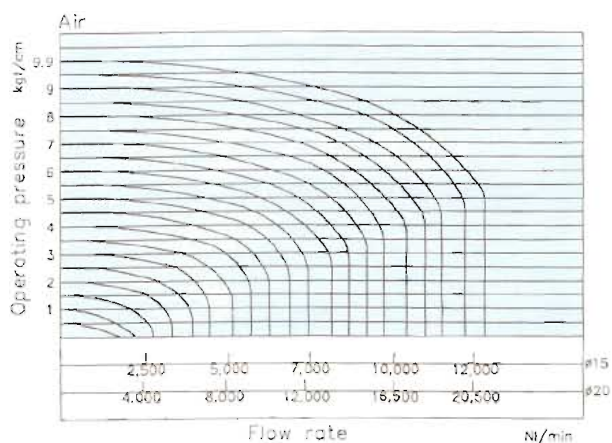
2S025-06 2S040-10
2S025-08



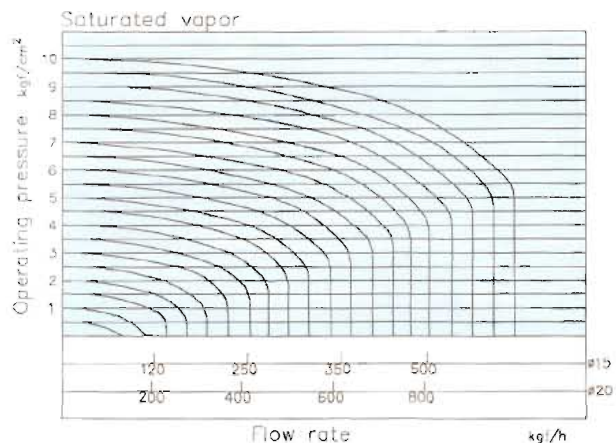
2S025-06 2S040-10
2S025-08



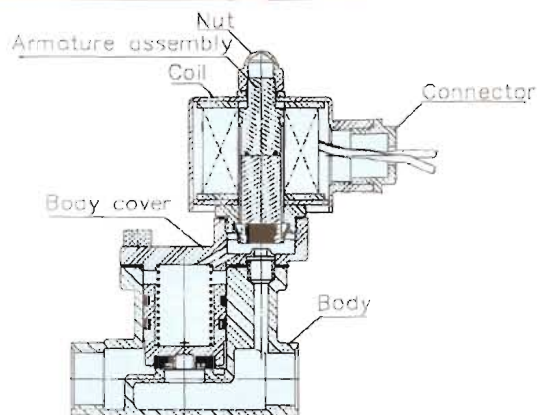
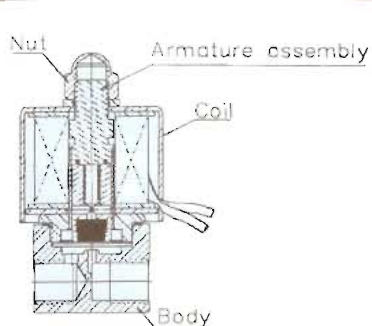
2S150-15 2S200-20



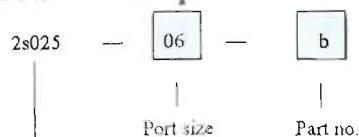
2S150-15 2S200-20



Inner Construction and Major parts



How to order parts



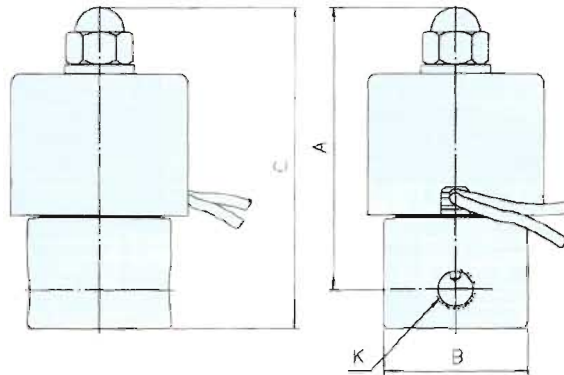
2s025 : 2S025 series part
2s040 : 2S040 series part
2s150 : 2S150 series part
2s200 : 2S200 series part
2s250 : 2S250 series part

Material of major parts

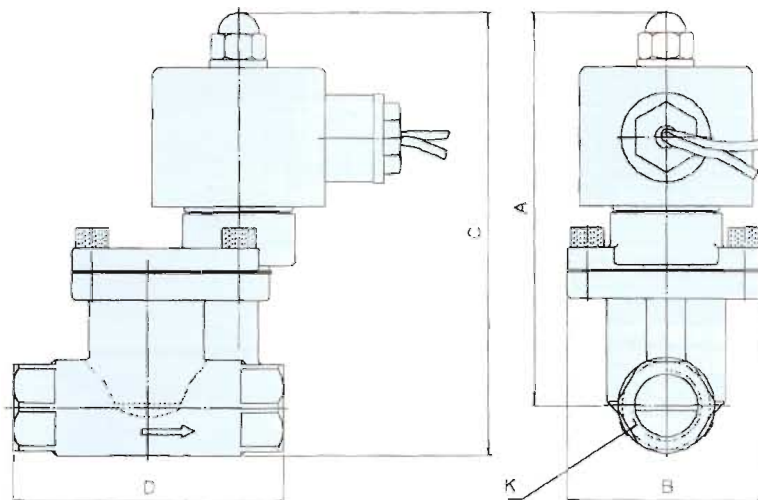
Item	Part no.	2S025	2S040	2S150	2S200	2S250
Body	b	Stainless-steel				
Body cover	bc	Stainless-steel				
Connector	c	PC				
Connector gasket	cg	NBR				
Armature assembly	aa	Stainless-steel				
Diaphragm	d	VITON or NBR				
Nut	n	Brass with zinc plated				
Coil	co	Copper				
Coil cover	cc	Iron				

Dimensions of 2S Series:

2S025-06 2S040-10 2S025-08



2S150-15 & 2S200-20



Symbol	A	B	C	D	K
2S025-06	69	35	79	—	PT 1/8"
2S025-08	69	35	79	—	PT 1/4"
2S040-10	84	38	95.6	—	PT 3/8"
2S150-15	116	58.6	132	80	PT 1/2"
2S200-20	116	58.6	135	81.5	PT 3/4"

2/2 WAY SOLENOID VALVE

2L Series — Pilot acting type (Large size for Steam flow)

Ordering code :

2L —	170	—	15	—	AC110V
	Orifice size:		Port size :		
	170 - 17mm		15 : 1/2"		
	200 - 22mm		20 : 3/4"		Standard voltage * :
	300 - 30mm		25 : 1"		AC110V AC220V
	500 - 50mm		35 : 1 1/4"		DC24V
			40 : 1 1/2"		
			50 : 2"		

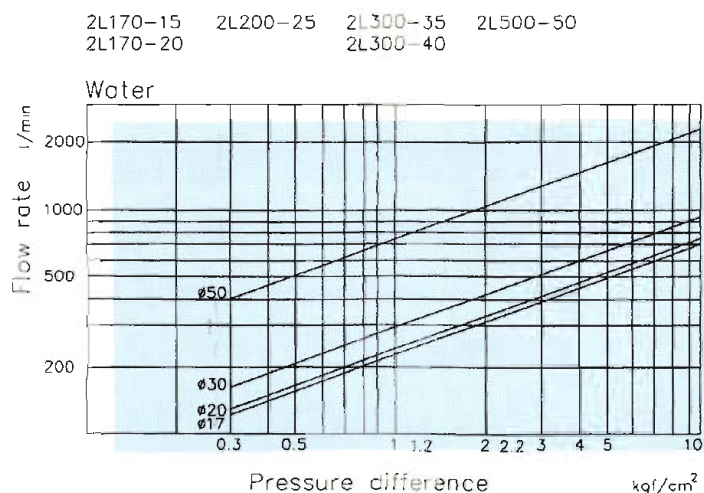
2L : 2/2 Way solenoid valve - For steam used

Note. * Please consult factory for other voltages.

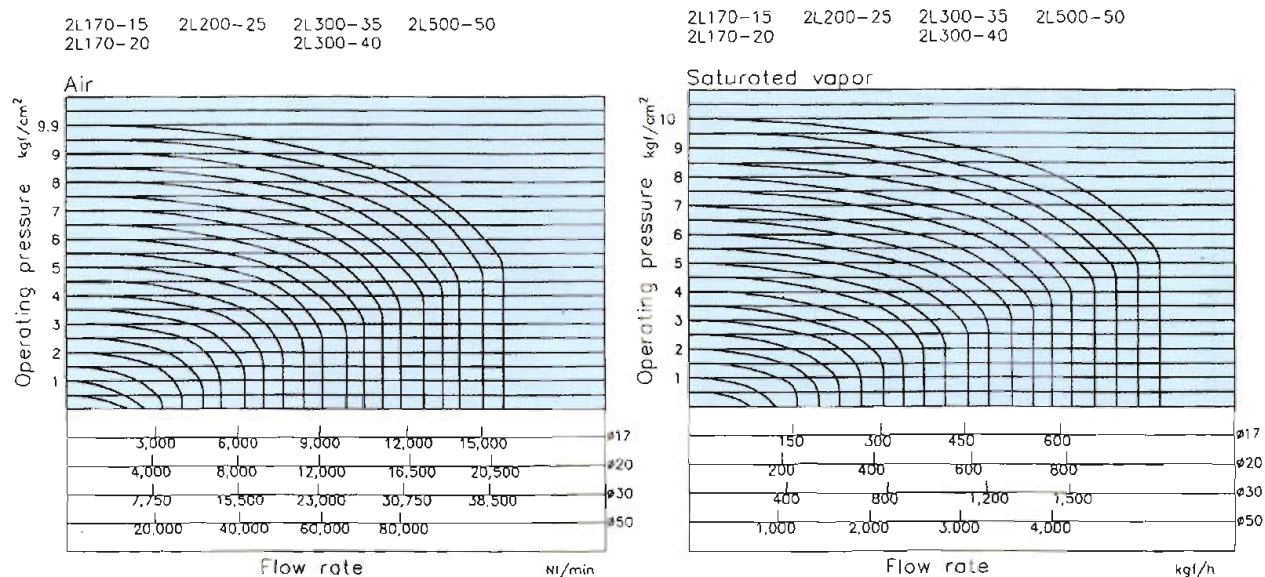
Specification

Item	2L170-15	2L170-20	2L200-25	2L300-35	2L300-40	2L500-50
Symbol						
Media	Air, Water, Steam					
Operating method	Internally piloted					
Function	Normally closed					
Orifice size	17		22	30		50
CV value	4.8		12	20		48
Port size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Viscosity limit	Below 20 CST					
Operating pressure kg/cm ²	Water, Steam, Air: 0.5 ~ 15			Water, Steam, Air: 1 ~ 15		
Pressure resistance kg/cm ²	10					
Service temperature °C	-5 ~ 180					
Voltage range	± 10%					
Body material	Brass					
Seal material	EPDM					

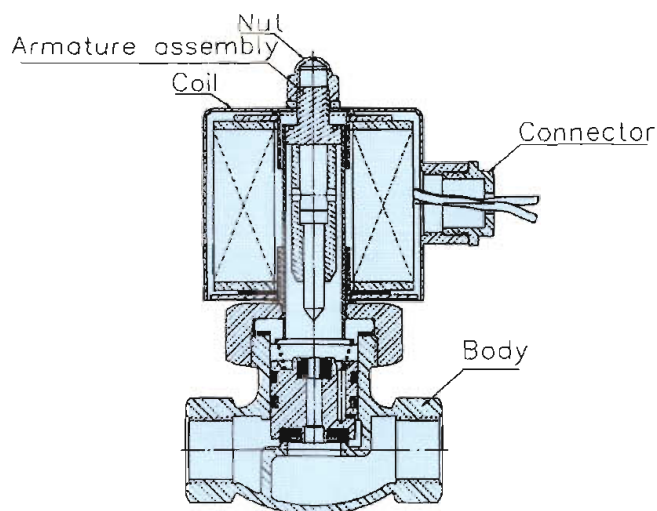
2L Series flow characteristics:



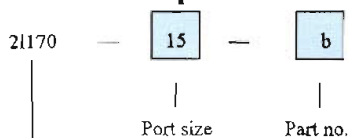
2L Series Flow Characteristics:



Inner Construction and Major parts



How to order parts

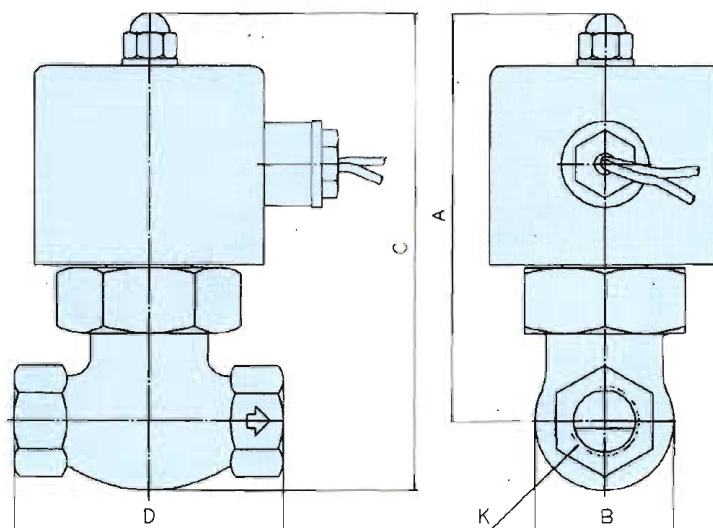


2L170 : 2L170 series part
2L200 : 2L200 series part
2L300 : 2L300 series part
2L500 : 2L500 series part

Material of major parts

Item	Part no.	2L170	2L200	2L300	2L500
Body	b	Brass			
Body cover	s	Brass			
Wire block	aa	PC			
Armature assembly	d	Stainless steel			
Diaphragm	n	EPDM or NBR			
Nut		Iron with zinc plated			
Coil	c	Copper wire			
Coil cover	cc	Iron			

Dimensions of 2L Series:



Symbol	A	B	C	D	K
2L170-15	125	42	146	82	PT 1/2"
2L170-20	125	42	146	82	PT 3/4"
2L200-25	136	52	162	90.5	PT 1"
2L300-35	148	74	185	111	PT 1 1/4"
2L300-40	147	74	183	111	PT 1 1/2"
2L500-50	176	94.5	223	163	PT 2"

2/2 WAY SOLENOID VALVE

2P Series — Normal opened model

Ordering code :

2P	—	160	—	15	—	AC110V	—	V
		Orifice size :		Port size :		Standard voltage *:		
		160 - 16mm		10 : 3/8"				
		200 - 20mm		15 : 1/2"		AC110V AC220V		
		250 - 25mm		20 : 3/4"		DC24V		
				25 : 1"				
						Blank : NBR		
						V : VITON (Hi-Temp, gas,		
						and vacuum used)		

2P : Normal opened 2/2 Way solenoid valve

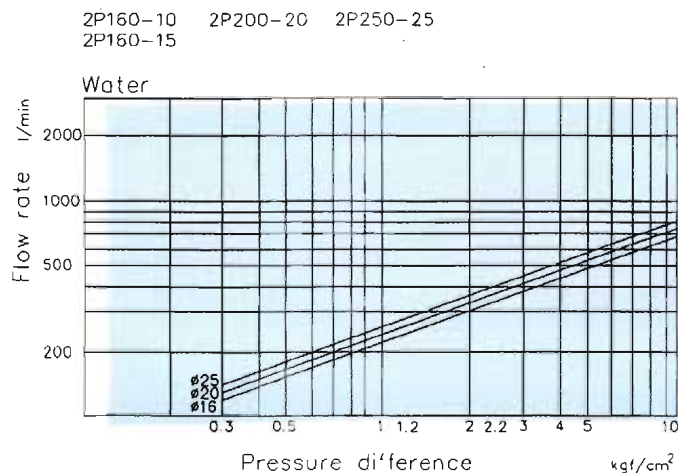
Note. * Please consult factory for other voltages.

Specification

Item	2P160-10	2P160-15	2P200-20	2P250-25
Symbol				
Media	Air, Water, Oil, Gas			
Operating method	Pilot acting			
Function	Normally opened			
Orifice size	16		20	25
CV value	4.8		7.6	12
Port size	3/8"	1/2"	3/4"	1"
Viscosity limit	Below 20 CST			
Operating pressure	kg/cm ²	Water, Air, Gas **: 0.1 ~ 8 Oil: 0.1 ~ 5		
Pressure resistance	kg/cm ²	10		
Service temperature	°C	-5 ~ 80		
Voltage range	±10%			
Body material	Brass			
Seal material	NBR or VITON			

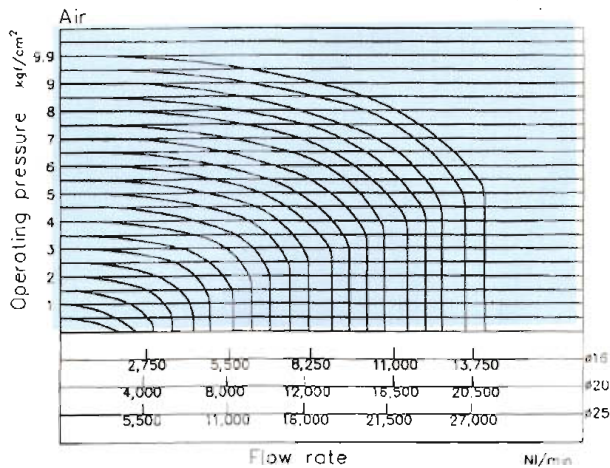
Note. ** 0 ~ 10⁻³ Torr for vacuum used.

2P Series flow characteristics:

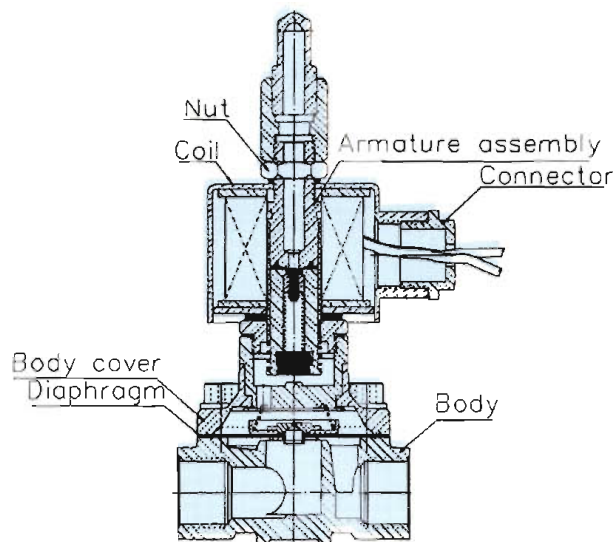


2P Series Flow characteristics

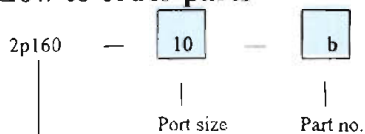
2P160-10 2P200-20 2P250-25
2P160-15



Inner Construction and Major parts



How to order parts

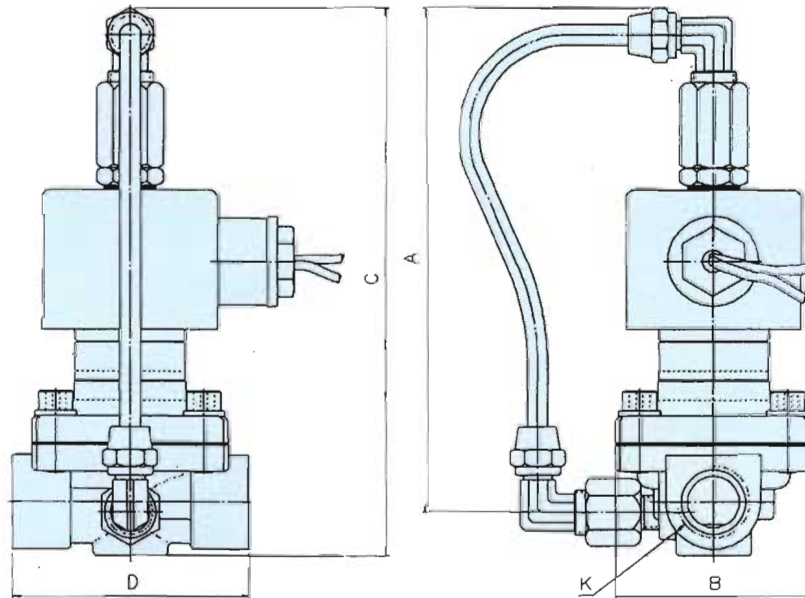


2p160 : 2P160 series part
2p200 : 2P200 series part
2p250 : 2P250 series part

Material of major parts

Item	Part no.	2P160	2P200	2P250
Body	b	Brass		
Body cover	bc	Brass		
Wire block	s	PC		
Armature assembly	aa	Stainless steel		
Diaphragm	d	VITON or NBR		
Nut	n	Iron with zinc plated		
Coil	c	Copper wire		
Coil cover	cc	Iron		

Dimensions of 2P Series:



Symbol	A	B	C	D	K
2P160-10	147	57	160	69	PT 3/8"
2P160-15	147	57	160	69	PT 1/2"
2P200-20	166.5	57	157	73	PT 3/4"
2P250-25	175.5	77.5	160	99	PT 1"