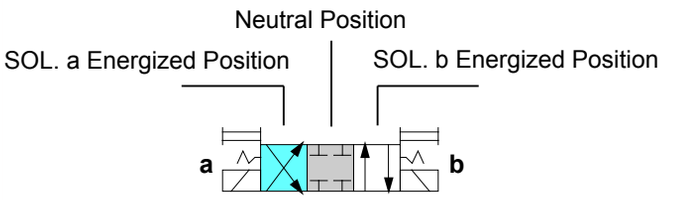
A

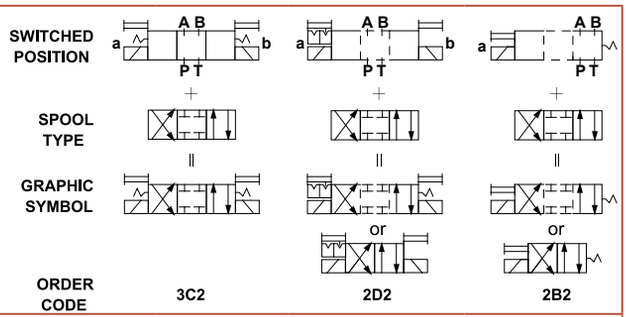
DIRECTIONAL CONTROLS

SOLTECH

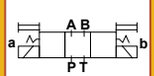
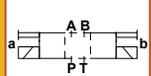
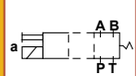
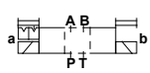
【GRAPHICAL SYMBOLS】

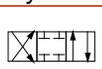
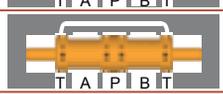
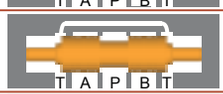
(Example)In Case Of Spool Type "3C2"





1) Example: Three switched position, spring centred(3C) with spool type "2", ordering code "3C2".
2) Example: Two switched positon, no spring with detent(2D) with spool type "2" , ordering code "2D2".
3) Example: Two switched position, spring offset(2B) with spool type "2" (reverse assembled), ordering code "2B2(L)".
4) The dotted line of graphical symbol(2B, 2D, 2N) represent the momentary switched position.

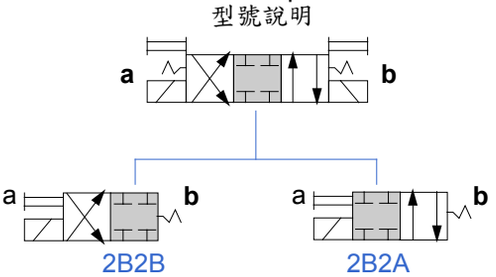
Three Switched Position	Graphical Symbol	Two Switched Position	Graphical Symbol	Two Switched Position	Graphical Symbol	Two Switched Position	Graphical Symbol
Spring Centred Model No: "3C"+ Spool Type		No Spring Model No: "2N"+ Spool Type		Spring Offset Model No: "2B"+ Spool Type		No Spring-With Detent Model No: "2D"+ Spool Type	

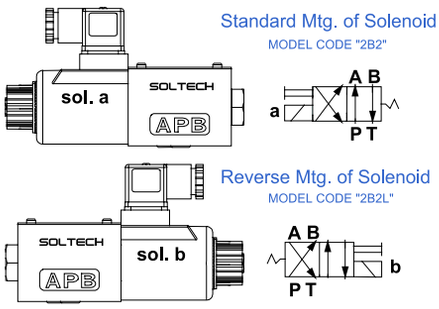
Spool Type	Graphical Symbol	Physical Relationship (Neutral Position)	Spool SWG-02	Spool SWG-03	Remark
"2"					
"3"					
"4"					
"40"					
"5"					
"60"					In the momentary switched position, ABPT are all opened.
"7"					
"8"					
"85"					
"9"					
"10"					
"11"					
"12"					

A

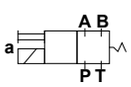
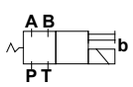
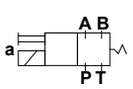
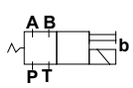
【GRAPHICAL SYMBOLS】

Model No. Explanation
型號說明





1) Example: Two switched position, spring offset(2B) with spool type "2B" , ordering code "2B2B".
2) Example: Two switched position, spring offset(2B) with spool type "2B" and reverse assembled, ordering code "2B2BL".
3) Valves Only Using Neutral Position and Side Position (Two Position Valve, No Intermediate or Momentary Swithched Position)

Two Switched Position Spring Offset Model No: "2B"+ Spool Type	Graphical Symbol		3D Pictures	Three Switched Position Spring Offset Model No: "2B"+ Spool Type	Graphical Symbol		3D Pictures
	Standard Assembled	Reverse Assembled Model No: Spool Type + "L"			Standard Assembled	Reverse Assembled Model No: Spool Type + "L"	
							

Spool Type	Graphical Symbols		3D Pictures		Spool Type	Graphical Symbols		3D Pictures	
			SWG-02	SWG-03				SWG-02	SWG-03
2A					2B			As The Same As Spool Type "2"~"12".	
3A					3B				
4A					4B				
40A					40B				
5A					5B				
60A					60B				
7A					7B				
8A					8B				
9A					9B				
10A					10B				
11A					11B				
12A					12B				

【MODEL DESIGNATION】

SWG	-	(H)	-	02	-	2B	2	(L)	-	A25	-	(N)	-	(90)
Ⅰ		Ⅱ		Ⅲ		Ⅳ	Ⅴ	Ⅵ		Ⅶ		Ⅷ		Ⅸ

※ The item with "()" may be omitted.

Ⅰ) Series No.

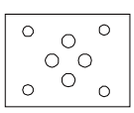
Ⅱ) Omit: 31.5 MPa
315 kg/cm²(Bar)
4570 psi

H: 35 MPa
350 kg/cm²(Bar)
5070 psi

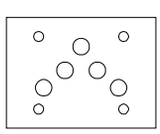
S: Shockless Type

Ⅲ) Valve Size

02: 1/4"
ISO4401-03-02-0-94
NFPA-D03
CETOP 3
DIN 24340 NG6

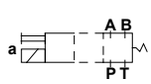


03: 3/8"
ISO 4401-AC-05-4-A
NFPA-D05(FORMERLY D02)
CETOP 5
DIN 24340 NG10

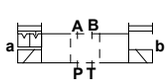


Ⅳ) 2B: Two Switched Position With Intermediate Or Momentary Switched Position

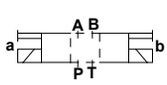
2B: Spring Offset



2D: With Detent

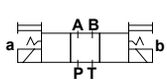


2N: No Spring



3C: Three Switched Position

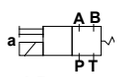
3C: Spring Centred



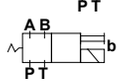
Ⅴ) Spool Type
(Referring to Graphical Symbols)

Ⅵ) Assembled Direction

Omit: Standard Assembled

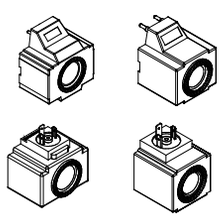


L: Reverse Assembled

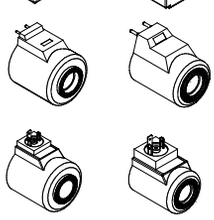


Ⅶ) Voltage

A15: AC 110V/50HZ
A16: AC 110V/60HZ
A24: AC 240V/50HZ
A25: AC 220V/50HZ
A26: AC 220V/60HZ
A38: AC 380V/50HZ

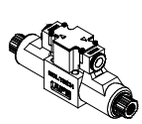


D1: DC 12V
D2: DC 24V
R1: RF 110V/50HZ
(Rectified)
R2: RF 220V/50HZ
(Rectified)

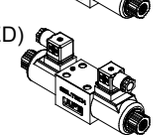


Ⅷ) Connector Type

Omit: Terminal Box



N: Plug-In Connector (With LED)
DIN 43650
ISO 4400



N1: Plug-In Connector (Without LED)

L: Lead Wire
SWP Connector
DT04-2P Connector

Ⅸ) Mounting Bolts Standard

Omit: DIN 912 Bolts
90: UNC Bolts(North America)

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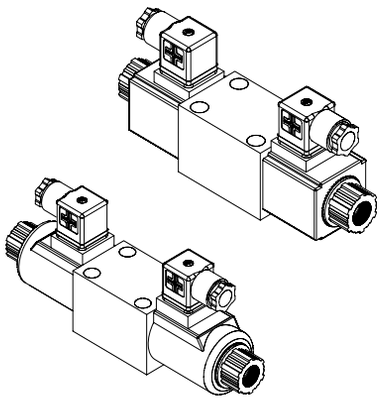
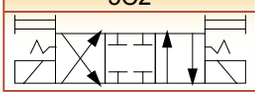
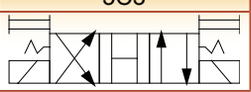
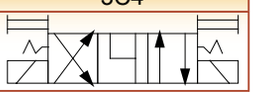
【SWG-VH】

※SPECIFICATION

MODEL	MAX. OPER. PRES. (Kgf/cm²)/(MPa)	ALLOWABLE BACK PRES. (Kgf/cm²)/(MPa)	RATED FLOW (ℓ/min)	WEIGHT (Kg)
SWG-VH-AC	720(72)	70(7)	8	2.1
SWG-VH-DC	720(72)	70(7)	8	2.4



※GRAPHIC SYMBOL

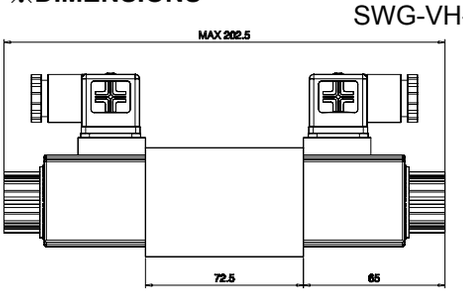
3C2	3C3	3C4
		

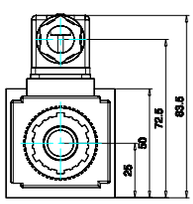
※MODEL NUMBER DESIGNATION

SWG	VH	3C2	D2	(N)	(90)
SERIES NO.	HIGH PRES. 72 MPa	SPOOL TYPE REFER TO "SWG" SERIES SPOOL TYPE	VOLTAGE A15: AC 110V/50HZ A16: AC 110V/60HZ A24: AC 240V/50HZ A25: AC 220V/50HZ A26: AC 220V/60HZ A38: AC 380V/50HZ D1: DC 12V D2: DC 24V	CONNECTOR TYPE OMIT: TERMINAL BOX N: PLUG-IN CONNECTOR DIN 43650 ISO 4400	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

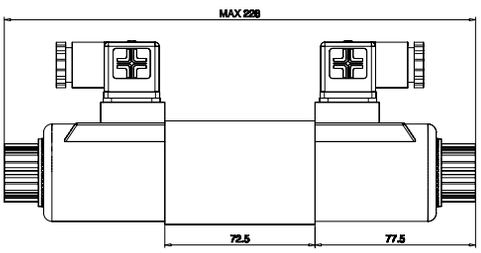
※DIMENSIONS

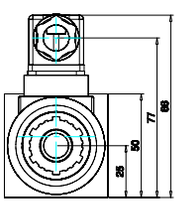
SWG-VH-AC-(※)

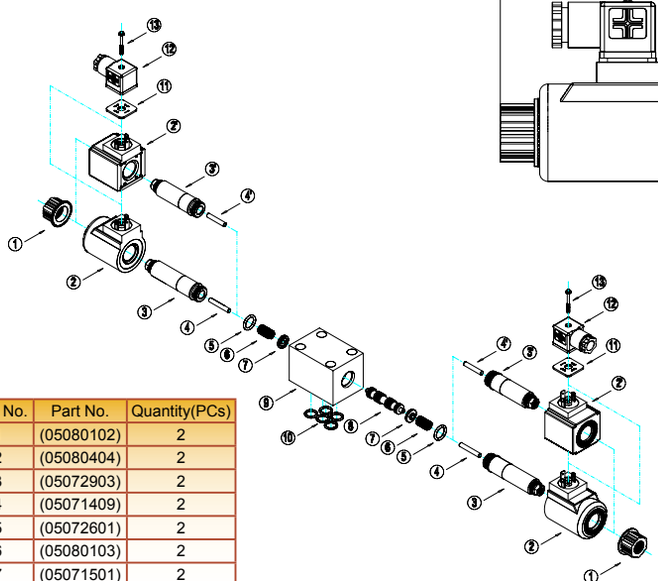


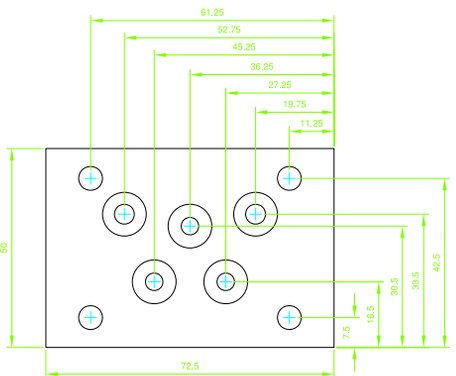


SWG-VH-DC-(※)









Item No.	Part No.	Quantity(PCs)
1	(05080102)	2
2	(05080404)	2
3	(05072903)	2
4	(05071409)	2
5	(05072601)	2
6	(05080103)	2
7	(05071501)	2
8	(05010701)	1
9	(06071001)	1
10	(05072603)	5
11	(05080402)	2
12	(05080402)	2
13	(05080402)	2

Item No.	Part No.	Quantity(PCs)
14	(05100501)	2
2'	(05081107)	2
3'	(05072901)	2
4'	(06011701)	2
13'	(05080402)	2

UNIT: M.M.

【SWG-02】

"ISO4401-03-02-0-94、NFPA-D03、CETOP 3、DIN 24340 NG6"

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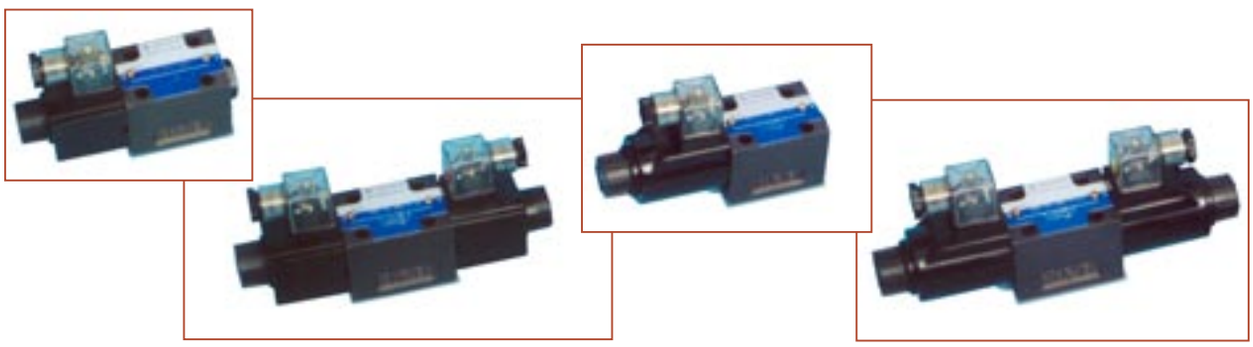


WITHIN CE MARKING REQUIREMENT

The apparatus meets the requirements of the following standards and hence fulfills the requirements of EMC Directive 89/336/EEC as amended by Directives 92/31/EEC and 93/68/EEC within CE marking requirement.

EN61000-6-3 : 2001+A11 : 2004 : CISPR 22 : 1997+A1:2000+A2 : 2002 Class B,
IEC61000-3-2 : 2000, modified
EN61000-3-3 :1994+A1:2001
EN61000-6-1 : 2001 : IEC61000-4-2 :1995+A1:1998+A2: 2000
IEC61000-4-3 : 2002, IEC61000-4-4 :2004
IEC61000-4-5 : 1995+A1:2000 IEC61000-4-6 :1996+A1:2000
IEC61000-4-8 : 1993+A1:2000 IEC61000-4-11:1994+A1:2000.

STABLE OPERATION

With a strong magnet and spring force, the valves are tough against contamination and thus ensure a stable operation. Under standard operation, the durability to 10 million spool shifts.(Average)

HIGH QUALITY & COMPETITIVE PRICE

All products are 100% tested by professional testing machinery. The material of tube is imported from Japan, and all parts are processed by professional specific automatic machinery. But the price is less 30% than leading brands.

EASY MAINTENANCE

Plug-in solenoid, all spools and bodies are interchangeable, the head of tube is design to hexnut to simplifying maintenance and reduce damage when assembl.

HIGH PERFORMANCE【SWGH SERIES】

High pressure(up to 35MPa), high flow rating, provides low pressure drop, with maximum performance. If need more details please consult our distributors.

CUSTOMIZATION

According to the requirement of customer to customize the product, and 100% satisfy their need.

※MOUNTING BOLTS：

Descriptions	Soc.Hd.Cap Screw(4 pcs.)	Tightening Torque
Taiwan Design Standard European Design Standard	02：M5 × 45 Lg 02	0.5 - 0.7Kgf m(43 - 60 in. lbs)
N.America Design Standard	No.10 - 24 UNC × 1 - 3/4 Lg.	

★Four socket head cap screws in the table below are included

※SPECIFICATION：

Max. Pressure (kgf/cm²)	Rated Flow (l/min.)	Max. T-Line Back Pressure (kg/cm²)	Max.Frequence of Operation (cycle/min.)	Filtration (Micron.)	Ambient Temperature Rrange(℃)	Weight (kgs)
315 (31.5 Mpa) (4570 psi)	65 (17.1gpm)	160 (16 MPa) (2320 psi)	240	25 ß25 ≥ 75	-5 ~ 60	3C、2D、2N AC:2 DC:2.3 2B AC:1.7 DC:1.8

★Spool type "5", "6", "60" Max. Pressure : 250 kgf/cm²(25MPa, 3630psi)

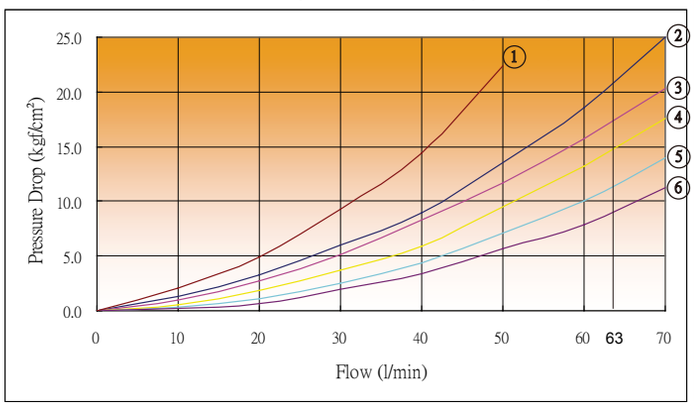
※SOLENOID RATING：

Power	Voltage (V)	Frequence (HZ)	Current At Rated Voltage		
			In-Rush Current(A)	Holding Current(A)	Power (W)
AC	A110	50	1.6	0.46	
		60	1.4	0.32	
			1.5	0.39	
	A120	50	1.3	0.38	
		60	1.2	0.27	
	A220	50	0.80	0.23	
		60	0.70	0.16	
			0.75	0.19	
	A240	50	0.67	0.19	
		60	0.59	0.13	
DC	D12			2.2	26
	D24			1.1	

★Solenoid Isulation Class: Class H

※PERFORMANCE CURVES：

Test fluid viscosity:35 cst(175ssu)
Test temperature: 50℃(122˚F)

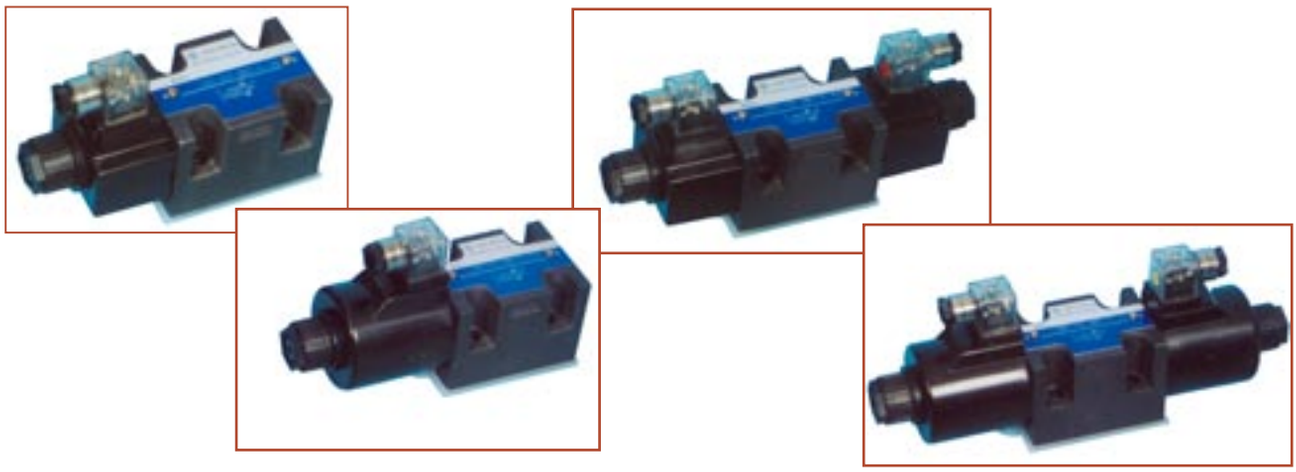


Spool Type	P→A	B→T	P→B	A→T	P→T
3C2	5	5	5	5	-
3C3	6	6	6	6	4
3C4	5	6	5	6	-
3C40	5	5	5	5	-
3C5	1	1	1	1	4
3C6	1	1	1	1	4
3C60	1	1	1	1	4
3C7	6	5	6	5	-
3C8	5	5	5	6	-
3C9	6	5	6	5	-
3C10	5	6	5	5	-
3C11	6	5	5	5	-
3C12	5	5	5	6	-
2D2	5	2	5	2	-
2D3	6	3	5	3	-
2B2	2	2	5	5	-
2B3	3	3	5	5	-

A

【SWG-03】

"ISO4401-AC-05-4-A、NFPA-D05、CETOP 5、DIN 24340 NG10"



WITHIN CE MARKING REQUIREMENT

The apparatus meets the requirements of the following standards and hence fulfills the requirements of EMC Directive 89/336/EEC as amended by Directives 92/31/EEC and 93/68/EEC within CE marking requirement.

EN61000-6-3 : 2001+A11 : 2004 : CISPR 22 : 1997+A1:2000+A2 : 2002 Class B,
IEC61000-3-2 : 2000, modified
EN61000-3-3 :1994+A1:2001
EN61000-6-1 : 2001 : IEC61000-4-2 :1995+A1:1998+A2: 2000
IEC61000-4-3 : 2002, IEC61000-4-4 :2004
IEC61000-4-5 : 1995+A1:2000 IEC61000-4-6 :1996+A1:2000
IEC61000-4-8 : 1993+A1:2000 IEC61000-4-11:1994+A1:2000.

STABLE OPERATION

With a strong magnet and spring force, the valves are tough against contamination and thus ensure a stable operation. Under standard operation, the durability to 10 million spool shifts.(Average)

HIGH QUALITY & COMPETITIVE PRICE

All products are 100% tested by professional testing machinery. The material of tube is imported from Japan, and all parts are processed by professional specific automatic machinery. But the price is less 30% than leading brands.

EASY MAINTENANCE

Plug-in solenoid, all spools and bodies are interchangeable, the head of tube is design to hexnut to simplifying maintenance and reduce damage when assembl.

HIGH PERFORMANCE【SWGH SERIES】

High pressure(up to 35MPa), high flow rating, provides low pressure drop, with maximum performance. If need more details please consult our distributors.

CUSTOMIZATION

According to the requirement of customer to customize the product, and 100% satisfy their need.

※MOUNTING BOLTS：

Descriptions	Soc.Hd.Cap Screw(4 pcs.)	Tightening Torque
Taiwan Design Standard European Design Standard	03：M6 × 35 Lg 03	0.5 - 0.7Kgf m(43 - 60 in. lbs)
N.America Design Standard	No.10 - 24 UNC × 1-3/4 Lg.	

★Four socket head cap screws in the table below are included

※SPECIFICATION：

Max. Pressure (kgf/cm²)	Rated Flow (l/min.)	Max. T-Line Back Pressure (kg/cm²)	Max.Frequence of Operation (cycle/min.)	Filtration (Micron.)	Ambient Temperature Rrange(℃)	Weight (kgs)
315 (31.5MPa) (4570 psi)	100 (26.3gpm)	160 (16 MPa) (2320 psi)	240	25 ß25 ≥ 75	-5 ~ 60	3C、2D、2N - AC:4.6 DC:5.8 2B - AC:3.8 DC:4.4

★Spool type "5", "6", "60" Max. Pressure : 250 kgf/cm²(25MPa, 3630psi)

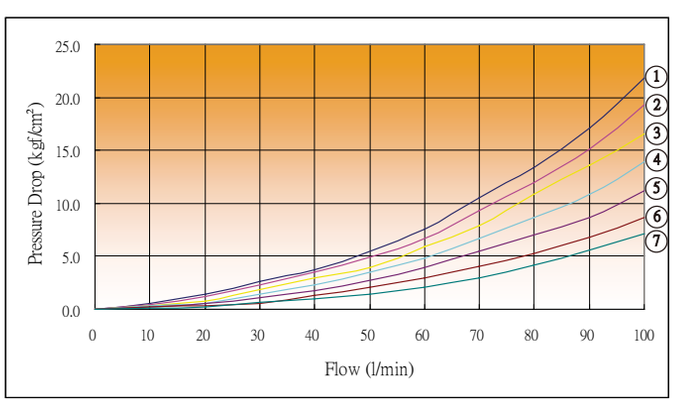
※SOLENOID RATING：

Power	Voltage (V)	Frequence (HZ)	Current At Rated Voltage		
			In-Rush Current(A)	Holding Current(A)	Power (W)
AC	A110	50	3.20	0.80	
		60	2.90	0.65	
			3.10	0.70	
	A120	50	2.50	0.84	
		60	2.97	0.64	
	A220	50	1.72	0.42	
		60	1.47	0.32	
			1.63	0.35	
	A240	50	1.73	0.42	
		60	1.47	0.32	
DC	D12			3.1	38
	D24			1.6	

★Solenoid Isulation Class: Class H

※PERFORMANCE CURVES：

Test fluid viscosity:35 cst(175ssu)
Test temperature: 50℃(122℉)



Spool Type	P→A	B→T	P→B	A→T	P→T
3C2	4	5	4	5	-
3C3	6	6	6	6	6
3C4	4	7	4	7	-
3C40	4	5	4	5	-
3C5	6	5	4	6	2
3C6	5	5	5	5	1
3C60	5	5	5	5	1
3C7	6	5	6	5	-
3C8	4	5	4	7	-
3C9	6	5	4	5	-
3C10	5	6	4	5	-
3C11	6	5	4	5	-
3C12	4	5	4	7	-
2D2	3	3	4	5	-
2D3	3	3	5	5	-
2B2	2	2	4	5	-
2B3	2	2	5	6	-

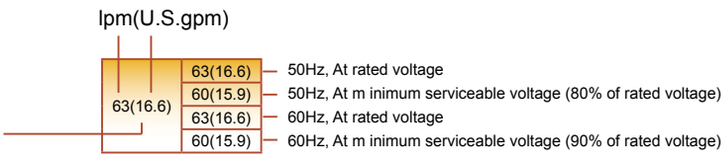
※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【SWG-02-***-AC-(*)】：

No. Of Valve Position	Spool-Spring Arrangement	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM)								
				P ↗ A → B ↘ T P ↘ B → A ↗ T			P → A (PORT "B" BLOCKED)			P → B (PORT "B" BLOCKED)		
				5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)	5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)	5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	40(10.6)	63(16.6)	63(16.6)	40(10.6)
							30(7.9)	15(4.0)	10(2.6)	30(7.9)	15(4.0)	10(2.6)
							45(11.9)	20(5.3)	13(3.4)	45(11.9)	20(5.3)	13(3.4)
							25(6.6)	10(2.6)	5(1.3)	25(6.6)	10(2.6)	5(1.3)
		3C3		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)
		3C4		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	55(14.5)	63(16.6)	63(16.6)	55(14.5)
						48(12.7)	25(6.6)	20(5.3)	10(2.6)	25(6.6)	20(5.3)	10(2.6)
						63(16.6)	58(15.3)	35(9.2)	13(3.4)	58(15.3)	35(9.2)	13(3.4)
						43(11.4)	20(5.3)	15(4)	5(1.3)	20(5.3)	15(4)	5(1.3)
		3C40		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	40(10.6)	63(16.6)	63(16.6)	40(10.6)
							30(7.9)	15(4.0)	10(2.6)	30(7.9)	15(4.0)	10(2.6)
							45(11.9)	20(5.3)	13(3.4)	45(11.9)	20(5.3)	13(3.4)
							25(6.6)	10(2.6)	5(1.3)	25(6.6)	10(2.6)	5(1.3)
		3C60		45(11.9)	40(10.6)	-	45(11.9)	40(10.6)	-	45(11.9)	40(10.6)	-
		3C9		63(16.6)	63(16.6)	63(16.6)	28(7.4)	15(4)	10(2.6)	28(7.4)	15(4)	10(2.6)
		3C10		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)
							38(10.0)	25(6.6)	13(3.4)	38(10.0)	25(6.6)	13(3.4)
							63(16.6)	30(7.9)	15(4.0)	63(16.6)	30(7.9)	15(4.0)
							33(8.7)	20(5.3)	8(2.1)	33(8.7)	20(5.3)	8(2.1)
		3C11		63(16.6)	63(16.6)	63(16.6)	30(7.9)	20(5.3)	10(2.6)	63(16.6)	63(16.6)	63(16.6)
										63(16.6)	50(13.2)	50(13.2)
										63(16.6)	63(16.6)	63(16.6)
										58(15.3)	45(11.9)	45(11.9)
		3C12		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)
							30(7.9)	23(6.1)	15(4.0)	30(7.9)	23(6.1)	15(4.0)
							63(16.6)	25(6.6)	15(4.0)	63(16.6)	25(6.6)	15(4.0)
							25(6.6)	18(4.8)	10(2.6)	25(6.6)	18(4.8)	10(2.6)
Two Positions	Spring Offset	2B2		63(16.6)	63(16.6)	63(16.6)	20(5.3)	20(5.3)	20(5.3)	63(16.6)	63(16.6)	63(16.6)
											50(13.2)	45(11.9)
											63(16.6)	63(16.6)
											45(11.9)	40(10.6)
		2B3		63(16.6)	63(16.6)	63(16.6)	50(13.2)	50(13.2)	50(13.2)	63(16.6)	63(16.6)	63(16.6)
					60(15.9)	60(15.9)				63(16.6)	63(16.6)	63(16.6)
					63(16.6)	63(16.6)				63(16.6)	63(16.6)	63(16.6)
					60(15.9)	60(15.9)				55(14.5)	55(14.5)	55(14.5)
		2B8		-	-	-	25(6.6)	10(2.6)	10(2.6)	63(16.6)	63(16.6)	50(13.2)
										28(7.4)	20(5.3)	10(2.6)
										63(16.6)	23(6.1)	10(2.6)
										23(6.1)	15(4.0)	5(1.3)
	No Spring Detended	2D2		63(16.6)	63(16.6)	63(16.6)	45(11.9)	45(11.9)	45(11.9)	45(11.9)	45(11.9)	45(11.9)
									25(6.6)			25(6.6)
									30(7.9)			30(7.9)
									20(5.3)			20(5.3)

Notes : 1. The relation between the maximum flow in the table above and the frequency /voltage (within the serviceable voltage) is as shown below.

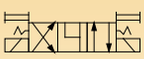
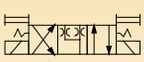
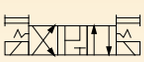
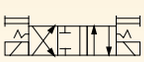
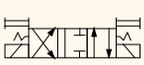
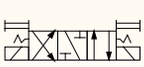
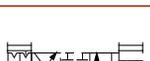
EX:

The maximum flow rate is 63 constant regardless of 50 Hz or 60 Hz and of any voltage variants within the serviceable voltage



A

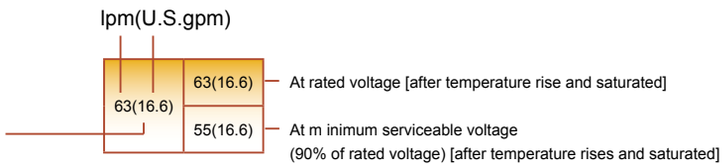
※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【SWG-02-***-DC-(*)】：

No. Of Valve Position	Spool-Spring Arrangement	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM)								
				P ↗↘ A → B ↘↗ T B → A			P → A (PORT "B" BLOCKED)			P → B (PORT "B" BLOCKED)		
				5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)	5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)	5MPa (730psi)	16MPa (2320pis)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		63(16.6)	63(16.6)	63(16.6)	45(11.9)	20(5.3)	13(3.4)	45(11.9)	20(5.3)	13(3.4)
							33(8.7)	15(4)	10(2.6)	33(8.7)	15(4)	10(2.6)
		3C3		63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)	63(16.6)
		3C4		63(16.6)	63(16.6)	35(9.2)	63(16.6)	35(9.2)	28(7.4)	63(16.6)	35(9.2)	28(7.4)
						23(6.1)	50(13.2)	23(6.1)	13(3.4)	50(13.2)	23(6.1)	13(3.4)
		3C40		63(16.6)	63(16.6)	63(16.6)	45(11.9)	20(5.3)	13(3.4)	45(11.9)	20(5.3)	13(3.4)
							33(8.7)	15(4)	10(2.6)	33(8.7)	15(4)	10(2.6)
		3C60		45(11.9)	40(10.6)	-	45(11.9)	40(10.6)	-	45(11.9)	40(10.6)	-
		3C9		63(16.6)	63(16.6)	63(16.6)	25(6.6)	15(4)	10(2.6)	25(6.6)	15(4)	10(2.6)
		3C10		63(16.6)	63(16.6)	45(11.9)	63(16.6)	40(10.6)	20(5.3)	63(16.6)	40(10.6)	20(5.3)
						23(6.1)		28(7.4)	13(3.4)		28(7.4)	13(3.4)
		3C11		63(16.6)	63(16.6)	63(16.6)	30(7.9)	20(5.3)	10(2.6)	63(16.6)	55(14.5)	55(14.5)
											50(13.2)	50(13.2)
		3C12		63(16.6)	63(16.6)	38(10.0)	63(16.6)	40(10.6)	20(5.3)	63(16.6)	40(10.6)	20(5.3)
						23(6.1)		28(7.4)	15(4.0)		28(7.4)	15(4.0)
Two Positions	Spring Offset	2B2		63(16.6)	63(16.6)	63(16.6)	20(5.3)	18(4.8)	18(4.8)	63(16.6)	40(10.6)	30(7.9)
				53(14.0)	53(14.0)	53(14.0)					28(7.4)	25(6.6)
		2B3		38(10.0)	38(10.0)	38(10.0)	48(12.7)	45(11.9)	40(10.6)	63(16.6)	63(16.6)	63(16.6)
				28(7.4)	28(7.4)	28(7.4)	45(11.9)	40(10.6)	38(10.00		60(15.9)	60(15.9)
		2B8		-	-	-	25(6.6)	10(2.6)	8(2.1)	63(16.6)	25(6.6)	15(10.0)
											20(5.3)	10(2.6)
	No Spring Detended	2D2		63(16.6)	63(16.6)	63(16.6)	45(11.9)	45(11.9)	30(7.9)	45(11.9)	45(11.9)	30(7.9)
				58(15.3)	55(14.5)	55(14.5)			25(6.6)			25(6.6)

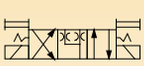
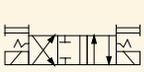
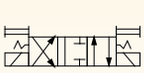
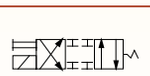
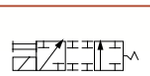
Notes : 1. The relation between the maximum flow in the table above and the frequency /voltage (within the serviceable voltage) is as shown below.

EX:

The m aximum flow rate is constant regardless of any voltage variants within the serviceable voltage



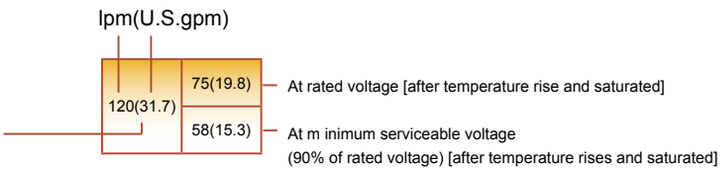
※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【SWG-03-***-AC-(*)】：

No. Of Valve Position	Spool-Spring Arrangement	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM)								
				P ↗ A → B ↘ T P ↘ B → A ↗ T			P → A (PORT "B" BLOCKED)			P → B (PORT "B" BLOCKED)		
				10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)	10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)	10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		100(26.4)	100(26.4)	100(26.4)	100(26.4)	96(25.4)	85(17.2)	100(26.4)	96(25.4)	85(17.2)
							70(18.5)	28(7.4)	24(6.3)	70(18.5)	28(7.4)	24(6.3)
							90(23.8)	34(9.0)	26(6.9)	90(23.8)	34(9.0)	26(6.9)
							49(12.9)	19(5.0)	15(4.0)	49(12.9)	19(5.0)	15(4.0)
		3C3		90(23.8)	90(23.8)	90(23.8)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)
							81(21.4)	81(21.4)	81(21.4)	81(21.4)	81(21.4)	81(21.4)
							100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)
							81(21.4)	81(21.4)	81(21.4)	81(21.4)	81(21.4)	81(21.4)
		3C4		80(21.1)	80(21.1)	80(21.1)	100(26.4)	76(20.1)	46(12.2)	100(26.4)	76(20.1)	46(12.2)
					65(17.6)	25(6.6)	58(15.3)	22(5.8)	19(5.0)	58(15.3)	22(5.8)	19(5.0)
					75(19.8)	30(7.9)	90(23.8)	28(7.4)	22(5.8)	90(23.8)	28(7.4)	22(5.8)
					20(5.3)	15(4.0)	47(12.4)	18(4.8)	15(4)	47(12.4)	18(4.8)	15(4)
		3C40		100(26.4)	100(26.4)	100(26.4)	100(26.4)	84(22.2)	48(12.7)	100(26.4)	84(22.2)	48(12.7)
						75(19.8)	62(16.4)	21(5.5)	18(4.8)	62(16.4)	21(5.5)	18(4.8)
						100(26.4)	62(16.4)	27(7.1)	20(5.3)	62(16.4)	27(7.1)	20(5.3)
						25(6.6)	40(10.6)	16(4.2)	12(3.2)	40(10.6)	16(4.2)	12(3.2)
		3C5		30(7.9)	30(7.9)	30(7.9)	26(6.9)	18(4.8)	16(4.2)	26(6.9)	18(4.8)	16(4.2)
		3C60		70(18.5)	70(18.5)	-	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)
		3C9		100(26.4)	100(26.4)	100(26.4)	60(15.9)	60(15.9)	60(15.9)	60(15.9)	60(15.9)	60(15.9)
		3C10		80(23.8)	80(23.8)	80(23.8)	100(26.4)	60(15.9)	34(9.0)	100(26.4)	60(15.9)	34(9.0)
					30(7.9)	20(5.3)	55(14.5)	23(5.5)	16(4.2)	55(14.5)	23(5.5)	16(4.2)
					30(7.9)	20(5.3)	60(15.9)	23(6.1)	17(4.5)	60(15.9)	23(6.1)	17(4.5)
					25(6.6)	15(4)	38(10.1)	14(3.7)	11(2.9)	38(10.1)	14(3.7)	11(2.9)
		3C11		100(26.4)	100(26.4)	100(26.4)	100(26.4)	85(22.5)	62(16.4)	100(26.4)	85(22.5)	62(16.4)
							80(21.1)	35(9.2)	28(7.4)	80(21.1)	35(9.2)	28(7.4)
							80(21.1)	51(13.5)	45(11.9)	80(21.1)	51(13.5)	45(11.9)
							60(15.9)	32(8.5)	25(6.6)	60(15.9)	32(8.5)	25(6.6)
		3C12		90(23.8)	90(23.8)	90(23.8)	100(26.4)	60(15.9)	34(9.0)	100(26.4)	60(15.9)	34(9.0)
					30(7.9)	20(5.3)	55(14.5)	21(5.5)	16(4.2)	55(14.5)	21(5.5)	16(4.2)
					40(10.6)	20(5.3)	60(15.9)	23(6.1)	17(4.5)	60(15.9)	23(6.1)	17(4.5)
					20(5.3)	15(4.0)	38(10.0)	14(3.8)	11(2.9)	38(10.0)	14(3.8)	11(2.9)
Two Positions	Spring Offset	2B2		100(26.4)	100(26.4)	100(26.4)	34(9.0)	20(5.3)	19(5.0)	100(26.4)	100(26.4)	94(24.8)
										62(16.4)	44(11.6)	37(9.8)
				100(26.4)	100(26.4)	100(26.4)				80(21.1)	63(16.6)	51(13.5)
				90(23.8)	90(23.8)	90(23.8)				42(11.1)	34(9.0)	33(8.7)
		2B3		100(26.4)	100(26.4)	100(26.4)	57(15.1)	57(15.1)	57(15.1)	100(26.4)	100(26.4)	100(26.4)
										79(20.9)	64(16.9)	59(15.6)
				100(26.4)	100(26.4)	100(26.4)				92(24.3)	78(20.6)	70(18.5)
				75(19.8)	75(19.8)	75(19.8)				55(14.5)	28(7.4)	27(7.1)
		2B8		-	-	-	26(6.9)	18(4.8)	16(4.2)	100(26.4)	61(16.1)	49(12.9)
										35(9.2)	9(2.4)	7(1.8)
										45(11.9)	15(4.0)	11(2.9)
										21(5.5)	9(2.4)	6(1.6)
	No Spring Detended	2D2		120(31.7)	120(31.7)	120(31.7)	45(11.9)	30(7.9)	28(7.4)	60(15.9)	40(10.6)	35(9.2)

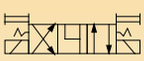
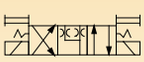
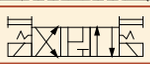
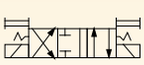
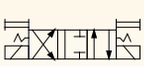
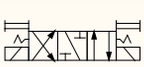
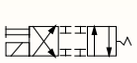
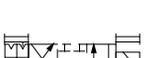
Notes : 1. The relation between the maximum flow in the table above and the frequency /voltage (within the serviceable voltage) is as shown below.

EX:

The m aximum flow rate is constant regardless of any voltage variants within the serviceable voltage



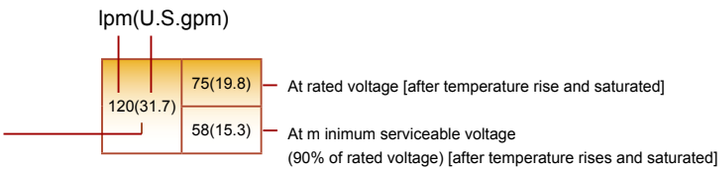
※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【SWG-03-***-DC-(*)】：

No. Of Valve Position	Spool-Spring Arrangement	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM)								
				P ↗↘ A → B ↘↗ T B → A			P → A (PORT "B" BLOCKED)			P → B (PORT "B" BLOCKED)		
				10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)	10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)	10MPa (1450psi)	25MPa (3630pis)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		120(31.7)	120(31.7)	120(31.7)	120(31.7)	80(21.1) 54(14.3)	55(14.5) 43(11.4)	120(31.7)	80(21.1) 54(14.3)	55(14.5) 43(11.4)
		3C3		120(31.7)	120(31.7)	120(31.7)	120(31.7)	120(31.7)	120(31.7)	120(31.7)	120(31.7)	120(31.7)
		3C4		120(31.7)	120(31.7)	120(31.7)	120(31.7)	84(22.2) 65(17.2)	64(16.9) 53(14.0)	120(31.7)	84(22.2) 65(17.2)	64(16.9) 53(14.0)
		3C40		120(31.7)	120(31.7)	120(31.7)	120(31.7)	62(16.4) 57(15.2)	49(12.9) 42(11.1)	120(31.7)	62(16.4) 57(15.2)	49(12.9) 42(11.1)
		3C5		50(13.2)	50(13.2)	50(13.2)	35(9.2)	21(5.5)	20(5.3)	45(11.9)	45(11.9)	45(11.9)
		3C60		120(31.7)	120(31.7)	-	120(31.7)	120(31.7)	-	120(31.7)	120(31.7)	-
		3C9		120(31.7)	120(31.7)	120(31.7)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)	100(26.4)
		3C10		120(31.7)	120(31.7) 65(17.2)	65(17.2) 50(13.2)	120(31.7)	60(15.9) 46(12.2)	51(13.5) 40(10.6)	120(31.7)	60(15.9) 46(12.2)	51(13.5) 40(10.6)
		3C11		120(31.7)	120(31.7)	120(31.7)	100(26.4)	80(21.1) 62(16.4)	65(17.2) 52(13.7)	100(26.4)	80(21.1) 62(16.4)	65(17.2) 52(13.7)
		3C12		120(31.7)	120(31.7) 65(17.2)	65(17.2) 50(13.2)	120(31.7)	62(16.4) 47(12.4)	51(13.5) 40(10.6)	120(31.7)	62(16.4) 47(12.4)	51(13.5) 40(10.6)
Two Positions	Spring Offset	2B2		110(2.91) 100(26.4)	110(2.91) 100(26.4)	110(2.91) 100(26.4)	68(18.0)	38(10.0)	38(10.0)	120(31.7)	75(19.8) 58(15.3)	63(16.6) 48(12.7)
		2B3		120(31.7)	120(31.7)	120(31.7)	77(20.3)	77(20.3)	77(20.3)	120(31.7)	120(31.7)	120(31.7) 103(27.2)
		2B8		-	-	-	53(14.0)	24(6.3)	23(6.1)	120(31.7)	62(16.4) 40(10.6)	47(12.4) 37(9.8)
	No Spring Detended	2D2		120(31.7)	120(31.7)	120(31.7)	45(11.9)	30(7.9)	28(7.4)	60(15.9)	40(10.6)	35(9.2)

Notes : 1. The relation between the maximum flow in the table above and the frequency /voltage (within the serviceable voltage) is as shown below.

EX:

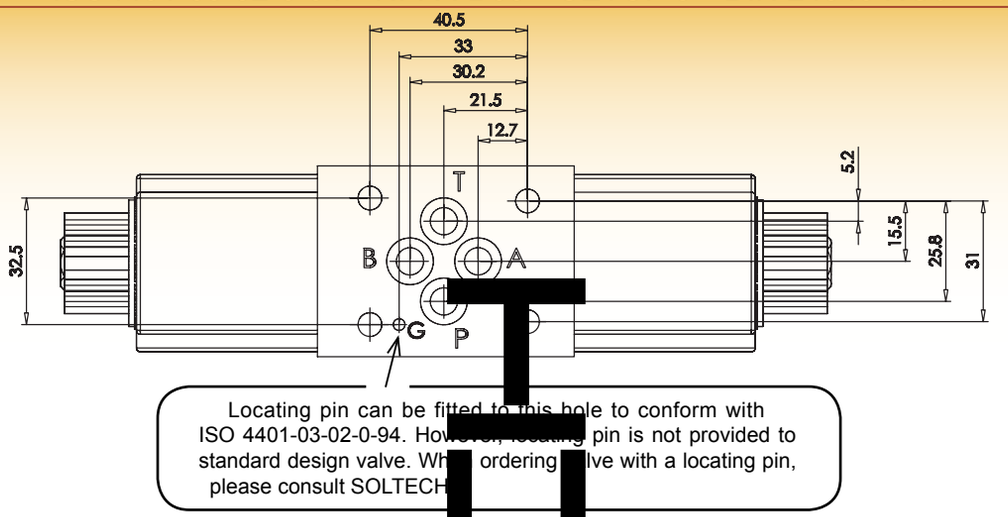
The m aximum flow rate is constant regardless of any voltage variants within the serviceable voltage



A

【DIMENSIONS】

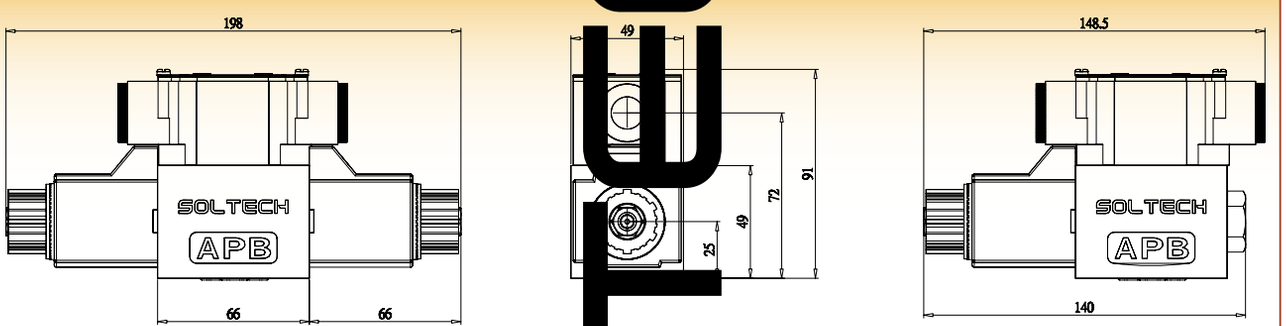
ISO4401-03-02-0-94、NFPA-D03、CETOP 3、DIN 24340 NG6



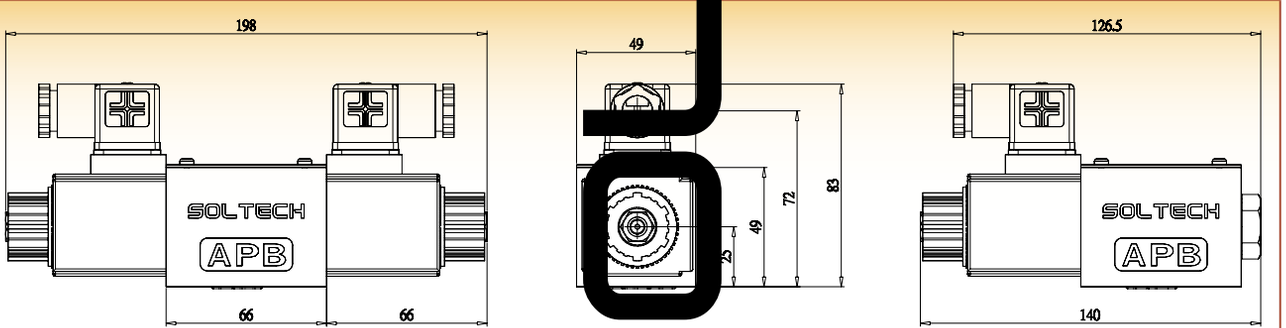
Locating pin can be fitted to this hole to conform with ISO 4401-03-02-0-94. However, locating pin is not provided to standard design valve. When ordering valve with a locating pin, please consult SOLTECH.

UNIT: M.M.

SWG-(H)-02-※※※-AC SERIES



SWG-(H)-02-※※※-AC-N SERIES

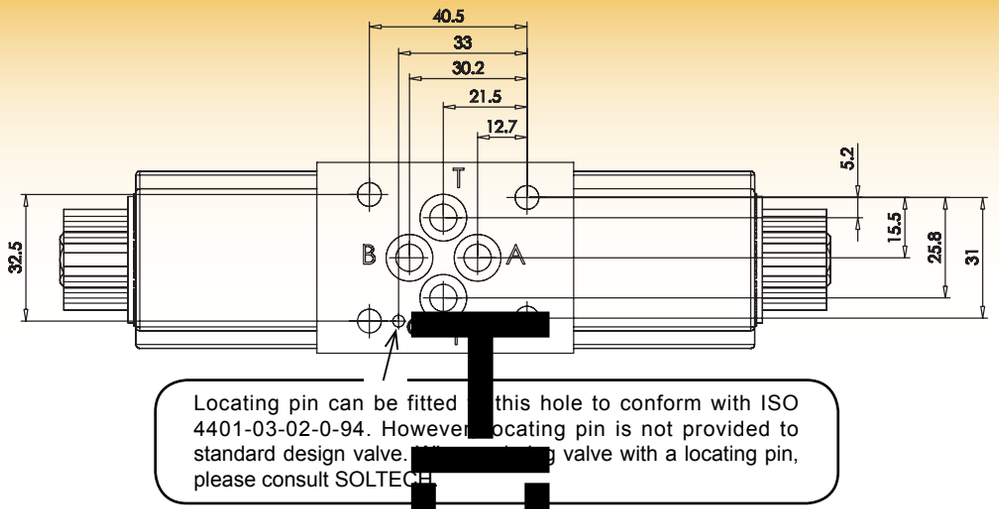


SWG-(H)-02-※※※-AC-L SERIES

A

【DIMENSIONS】

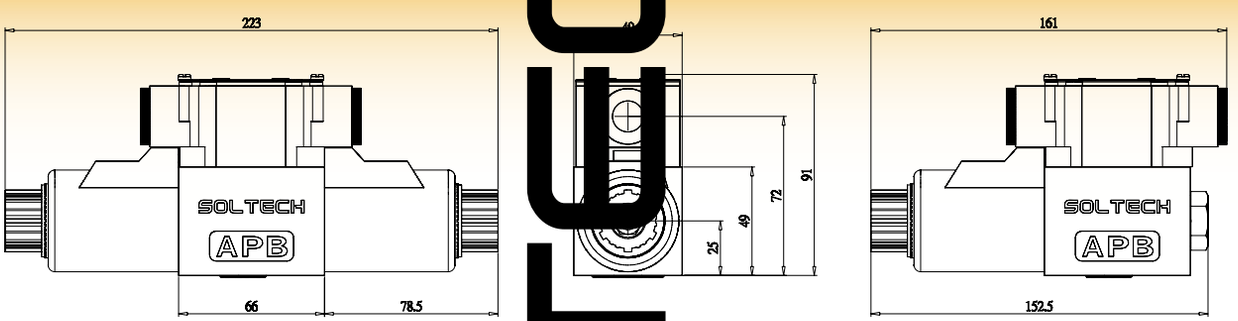
ISO4401-03-02-0-94、NFPA-D03、CETOP 3、DIN 24340 NG6



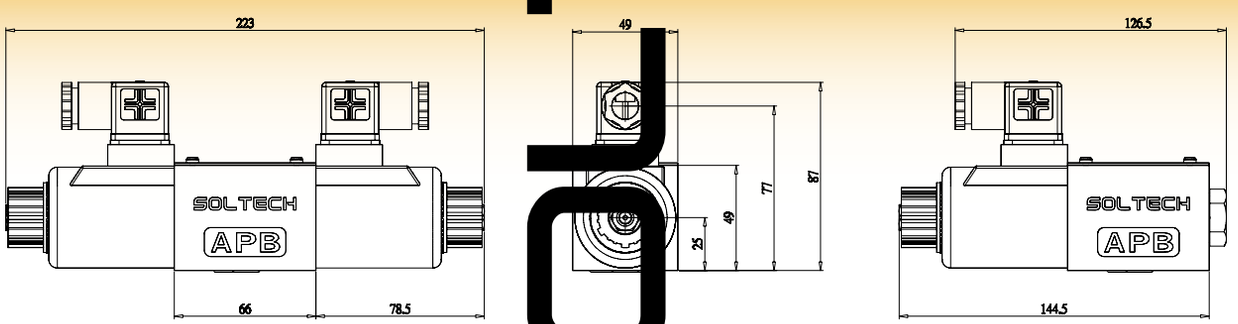
Locating pin can be fitted in this hole to conform with ISO 4401-03-02-0-94. However, locating pin is not provided to standard design valve. When ordering valve with a locating pin, please consult SOLTECH.

UNIT: M.M.

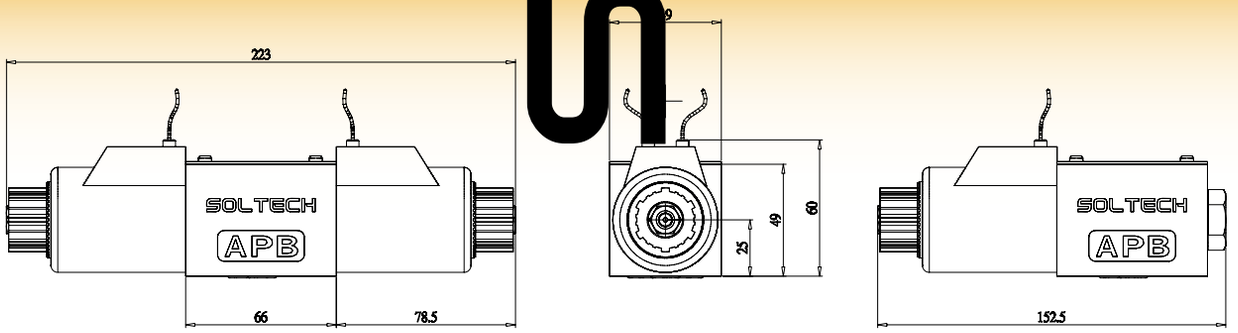
SWG-(H)-02-※※※-DC SERIES



SWG-(H)-02-※※※-DC-N SERIES



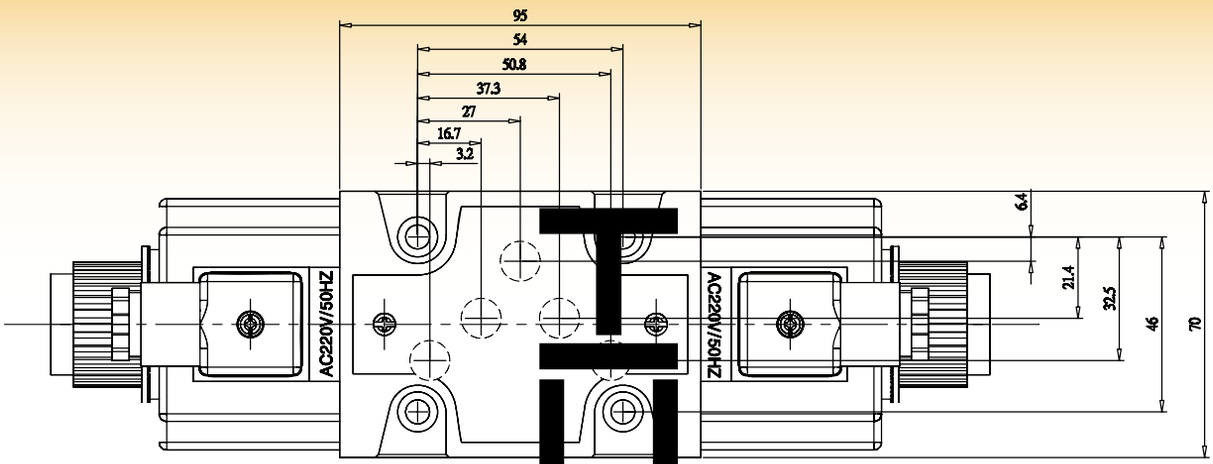
SWG-(H)-02-※※※-DC-L SERIES



A

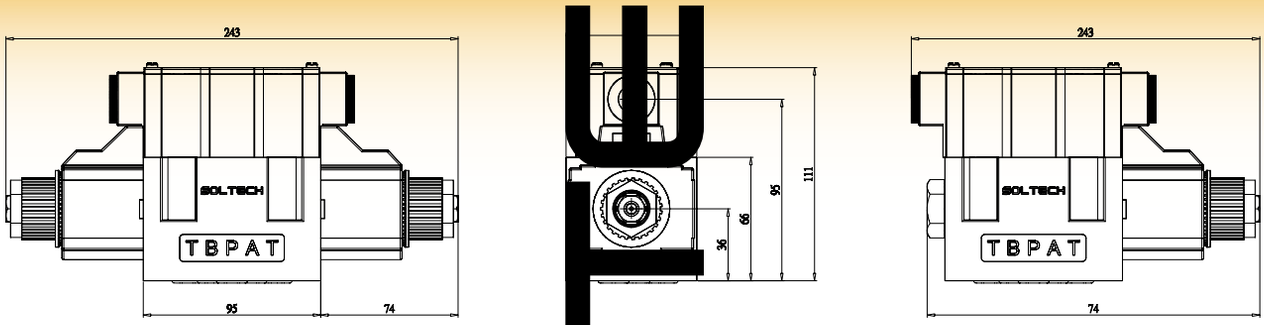
【DIMENSIONS】

ISO4401-AC-05-4-A、NFPA-D05、CETOP 5、DIN 24340 NG10

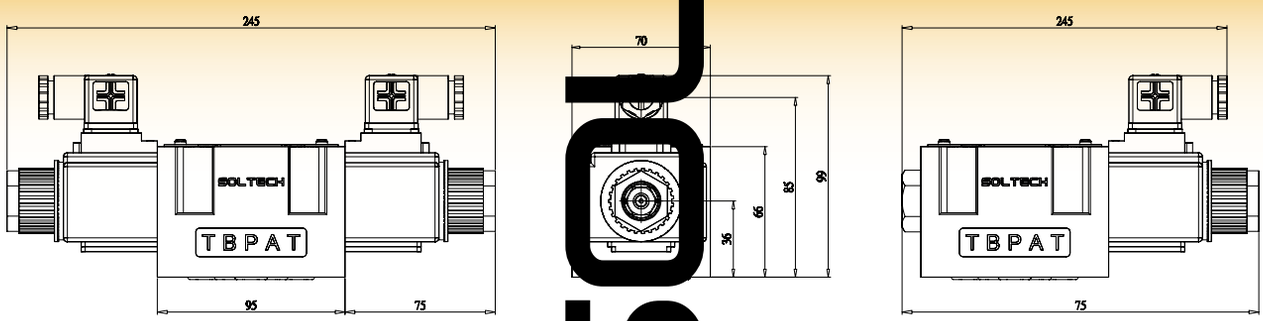


UNIT: M.M.

SWG-(H)-03[illegible]AC SERIES



SWG-(H)-03-※※※-[illegible]C-N SERIES

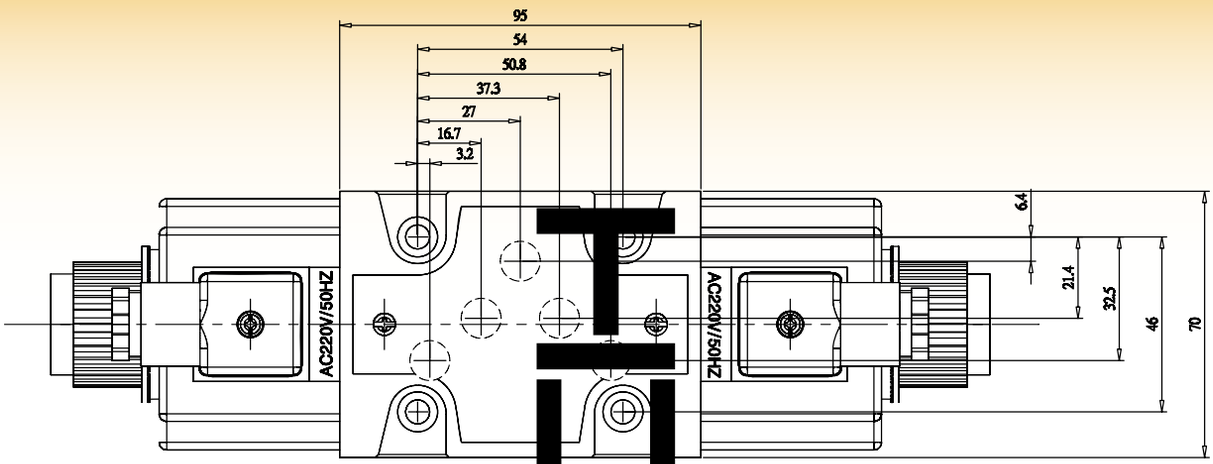


SWG-(H)-03[illegible]※※※-[illegible]C-L SERIES

A

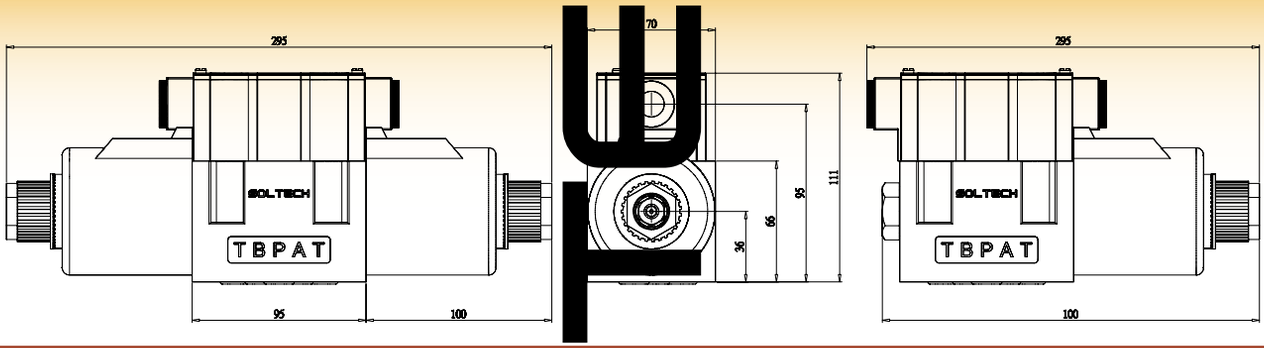
【DIMENSIONS】

ISO4401-AC-05-4-A、NFPA-D05、CETOP 5、DIN 24340 NG10

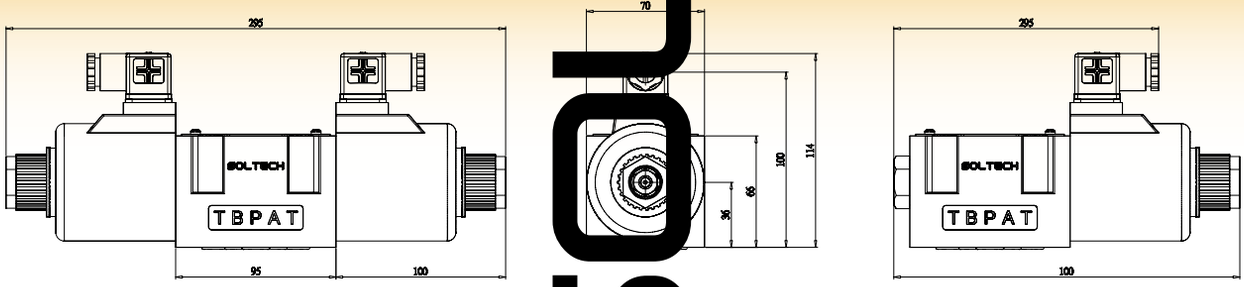


UNIT: M.M.

SWG-(H)-03[illegible]DC SERIES

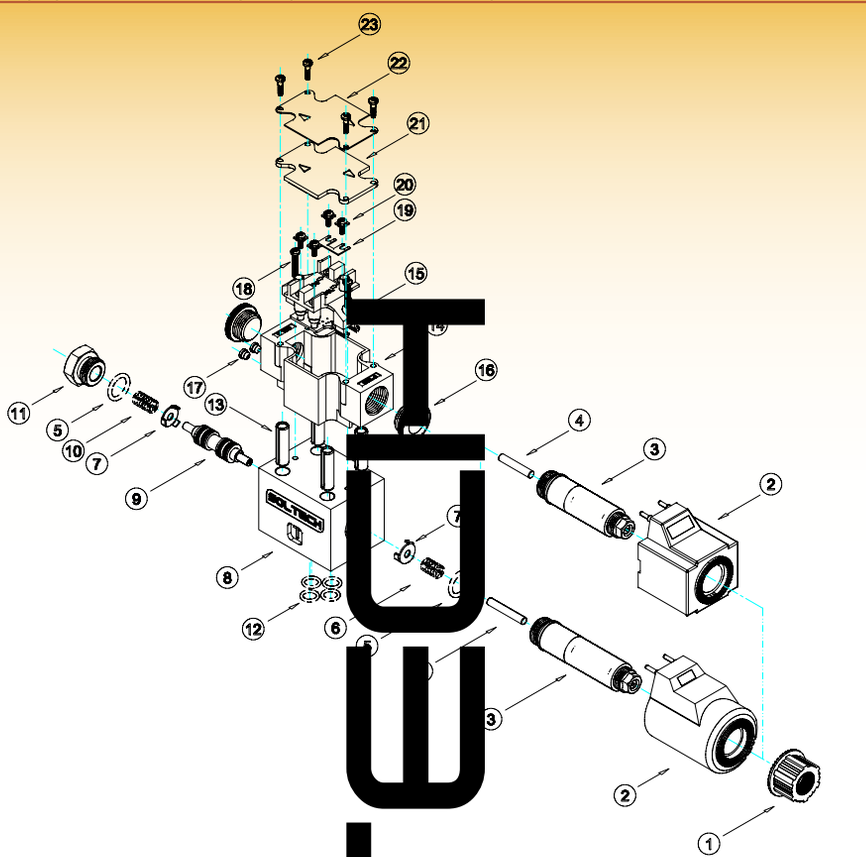


SWG-(H)-03-※※※-[illegible]C-N SERIES

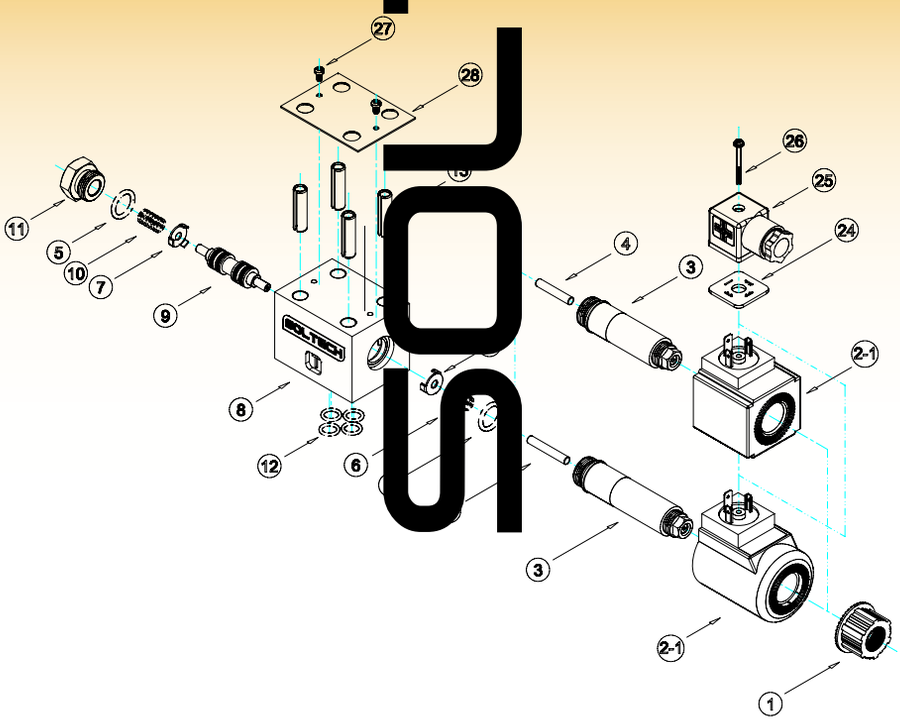


SWG-(H)-03[illegible]※※※-[illegible]C-L SERIES

SWG-(H)-02-2B2-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)

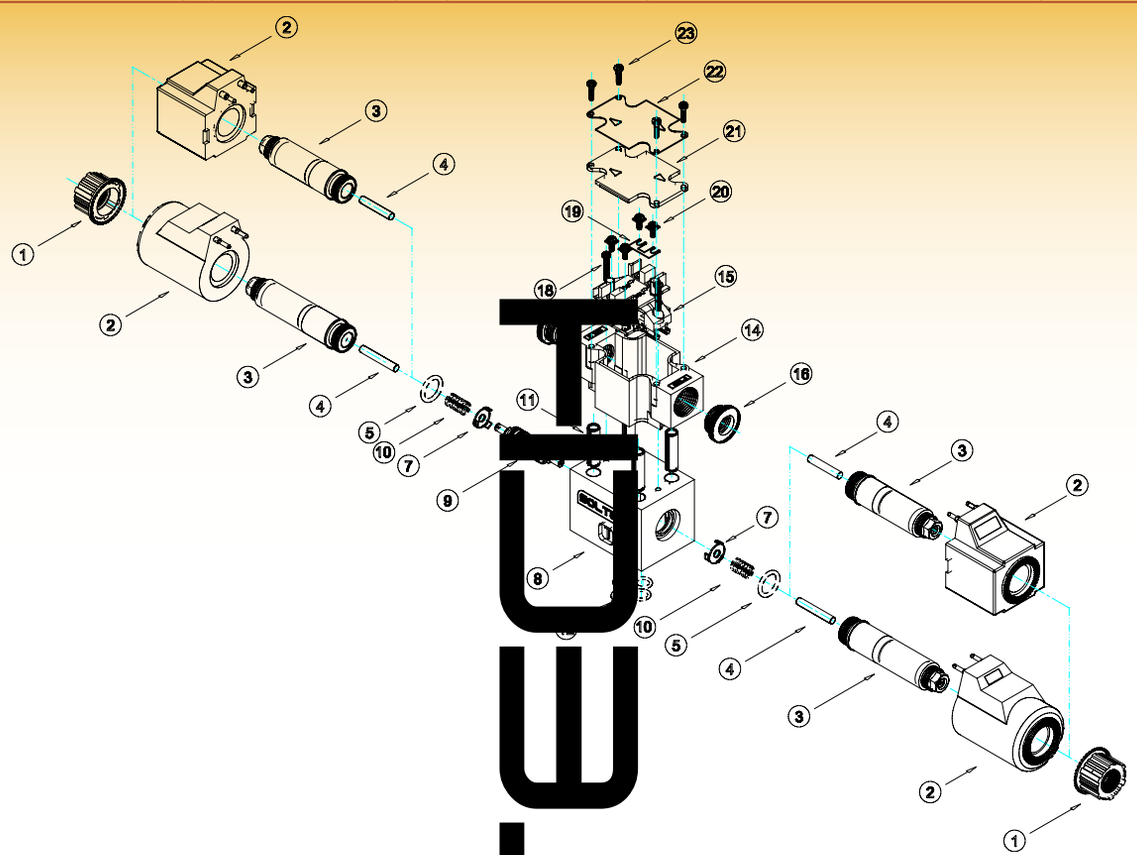


SWG-(H)-02-2B2-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)

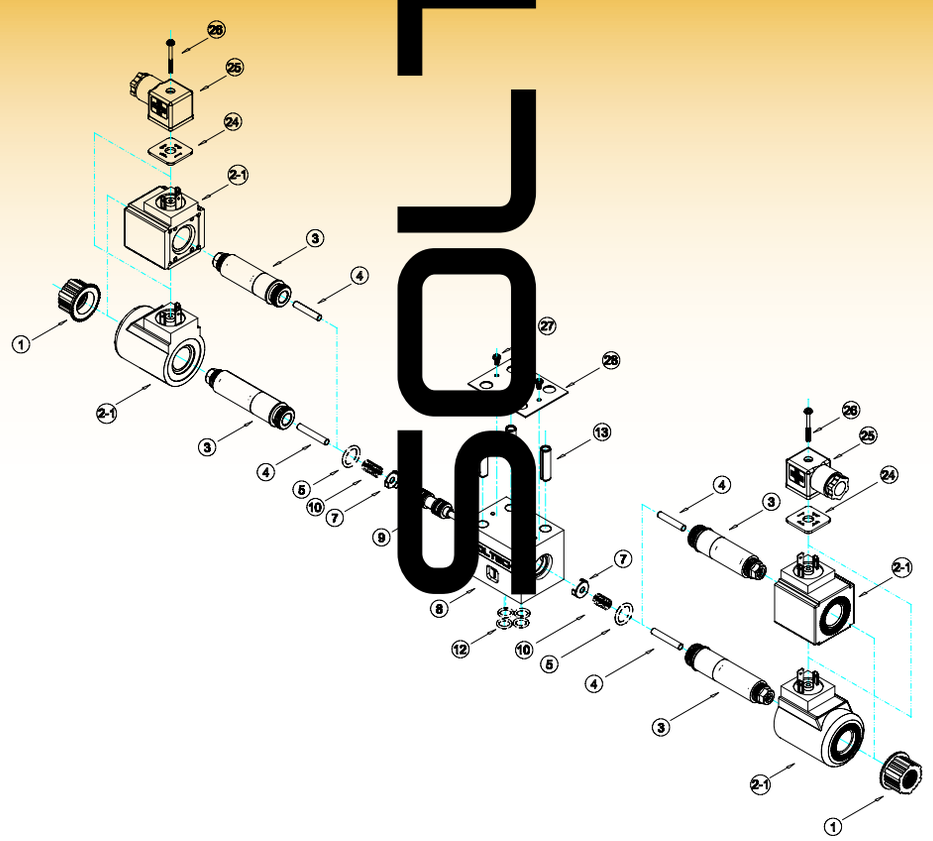


A

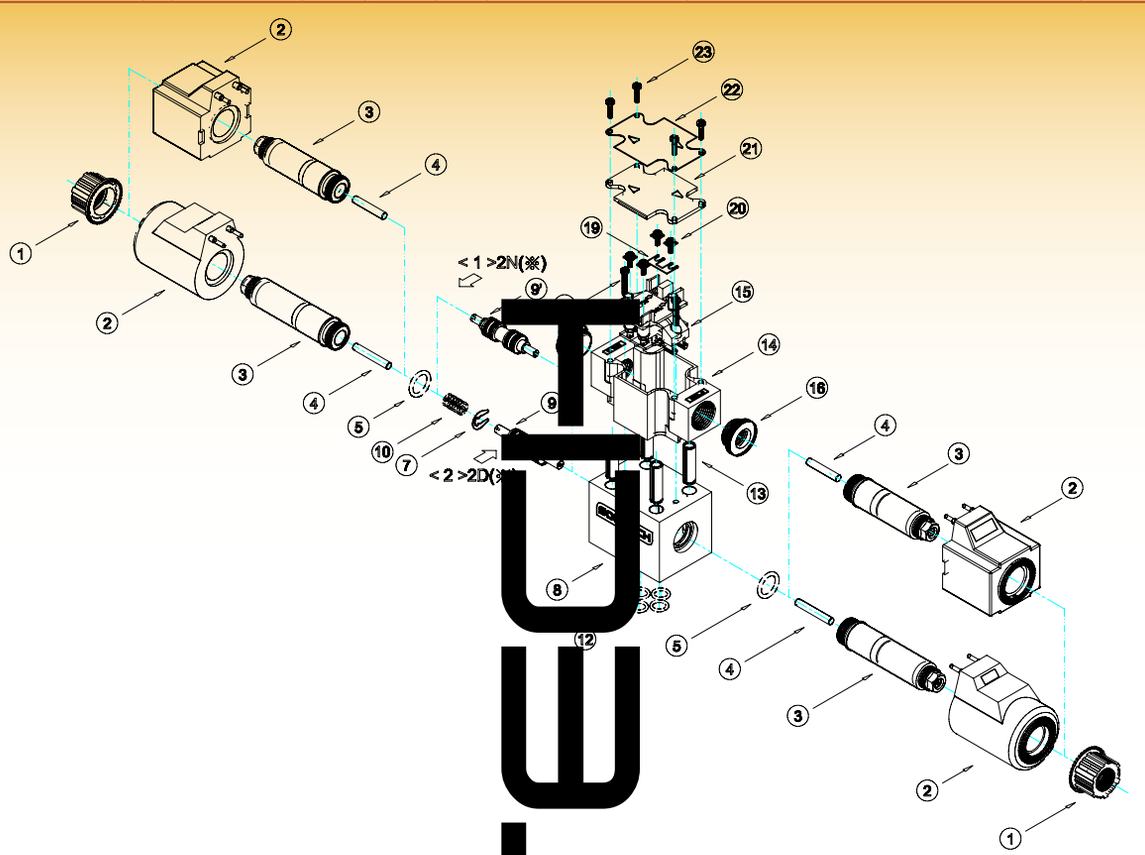
SWG-(H)-02-3C2-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)



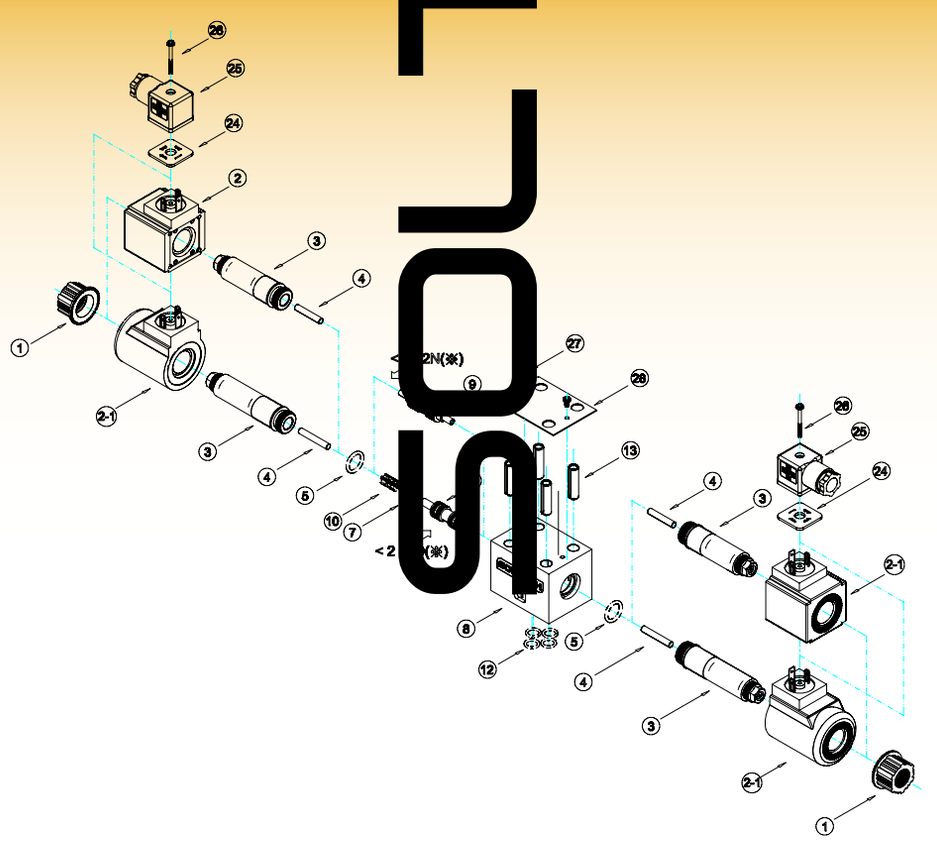
SWG-(H)-02-3C2-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)



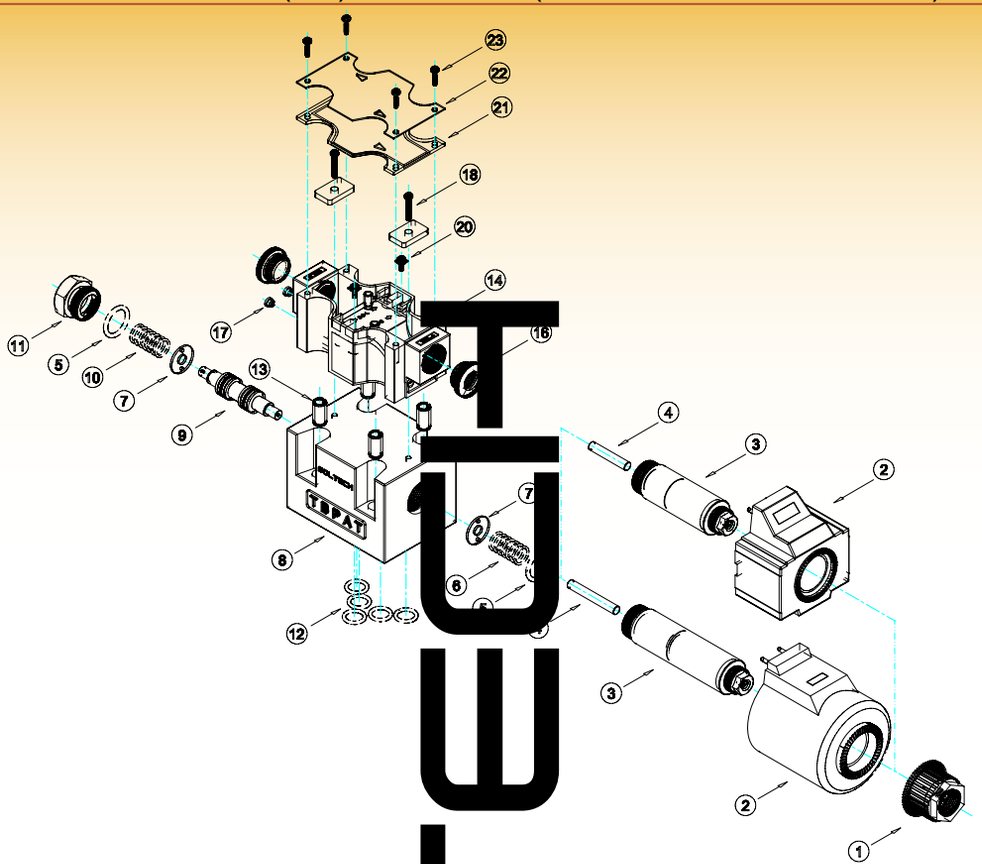
SWG-(H)-02-2D2(2N2)-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)



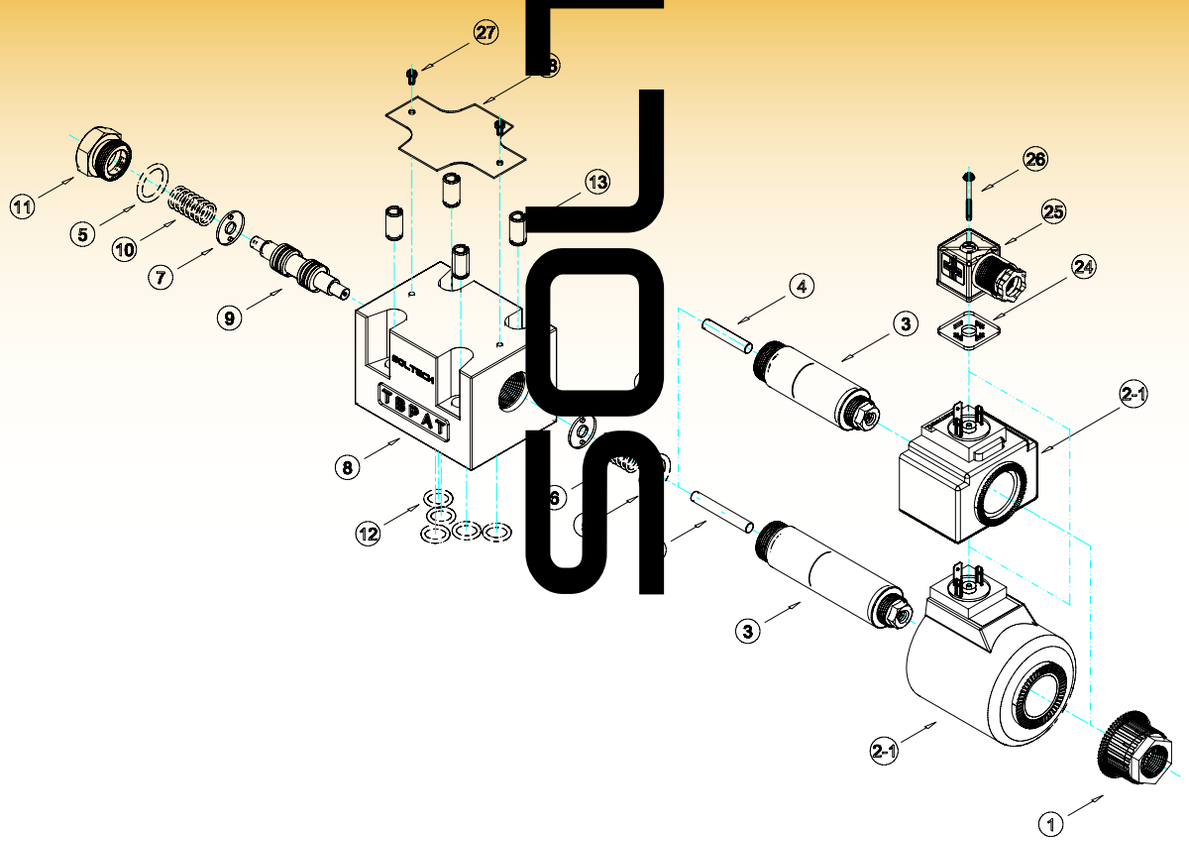
SWG-(H)-02-2D2(2N2)-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)



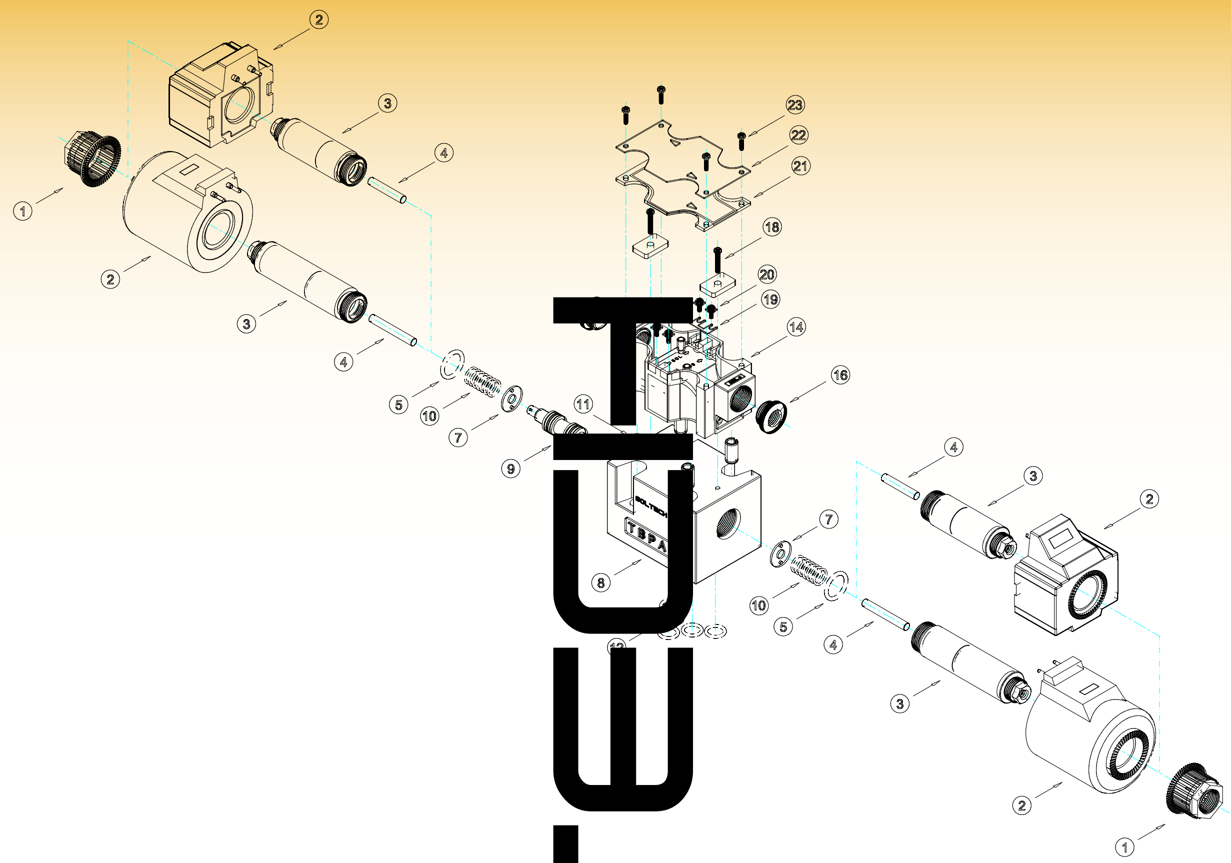
SWG-03-2B2-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)



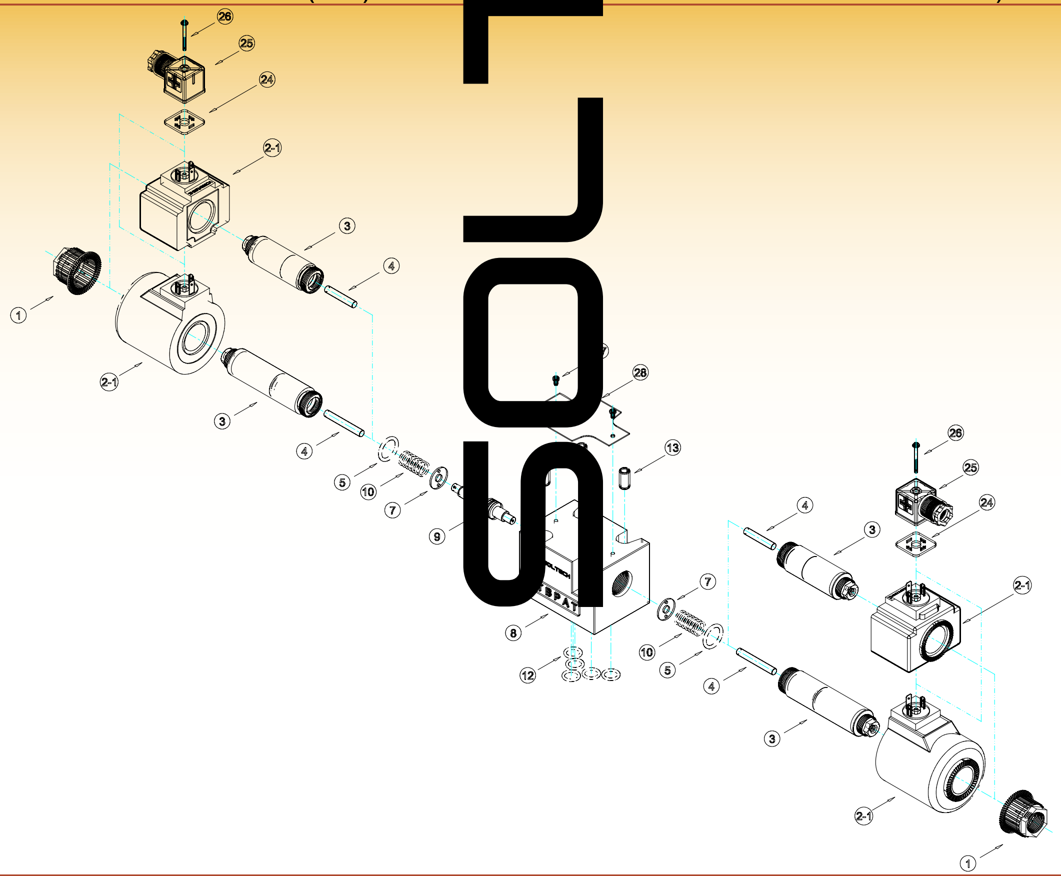
SWG-03-2B2-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)



SWG-03-3C2-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)

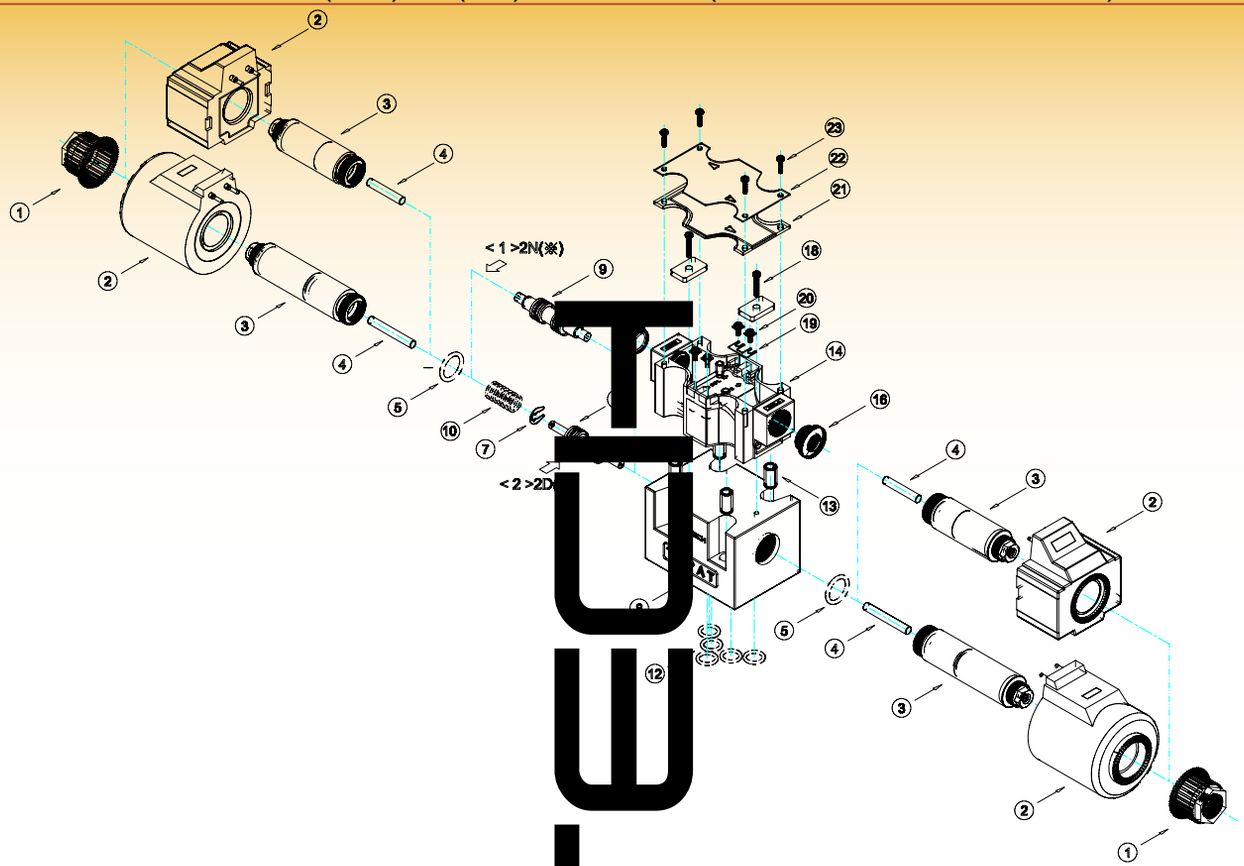


SWG-03-3C2-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)

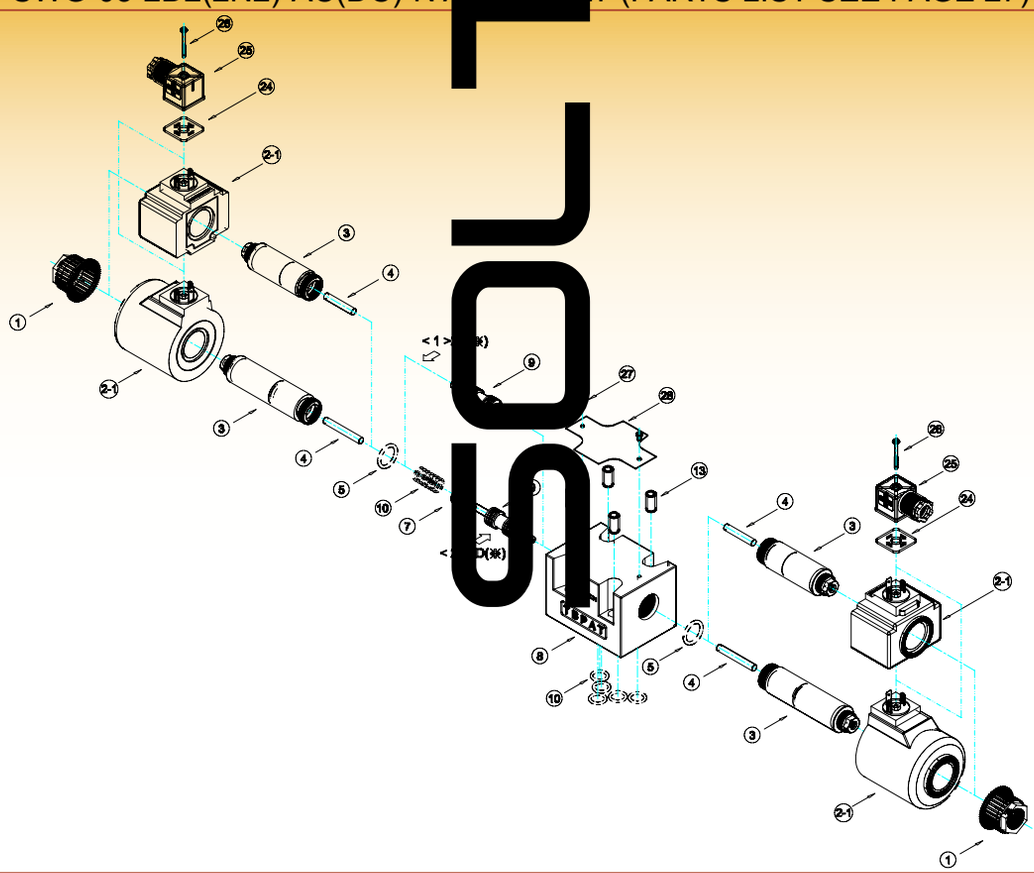


A

SWG-03-2D2(2N2)-AC(DC) ASSEMBLY (PARTS LIST SEE PAGE 27)



SWG-03-2D2(2N2)-AC(DC)-N ASSEMBLY (PARTS LIST SEE PAGE 27)



【PARTS LIST OF "SWG" SERIES】

NO.	PART NAME	SWG-02-AC	QTY.	SWG-02-DC	QTY.	SWG-03-AC	QTY.	SWG-03-DC	QTY.
1	Lock Nut	05080102	1~2	05080102	1~2	05080101	1~2	05080101	1~2
3	Tube	05072901	1~2	05072903	1~2	05072904	1~2	05072905	1~2
4	Push Pin	06011701	1~2	05071409	1~2	05071408	1~2	05071407	1~2
5	O Ring-AS113	05072601	1~2	05072601	1~2	05072605	1~2	05072605	1~2
6	Spring for Single Sol.	05081004	0~1	05081004	0~1	05081003	0~1	05081003	0~1
7	Retainer	05071501	2	05071501	2	05071502	2	05071502	2
8	Body	05010701	1	05010701	1	05010801	1	05010801	1
9	Spool	See page 3,4	1	See page 3,4	1	See page 3,4	1	See page 3,4	1
10	Spring for Double Sol.	05080103	1~2	05080103	1~2	05081002	1~2	05081002	1~2
11	Back Cover	05072001	0~1	05072001	0~1	05071903	0~1	05071903	0~1
12	O Ring	05072603	4	05072603	4	05072604	4	05072604	4
13	Pin	05071503	4	05071503	4	05071504	4	05071504	4

TERMINAL BOX TYPE

NO.	PART NAME	SWG-02-AC	QTY.	SWG-02-DC	QTY.	SWG-03-AC	QTY.	SWG-03-DC	QTY.
2	Coil	05080403	1~2	05081108	1~2	05081107	1~2	05080404	1~2
14	Terminal Box	05100608	1	05100608	1	05100705	1	05100705	1
15	Terminal Base	06012003	1	06012003	1	----	1	----	1
16	Gland Nut	05081001	2	05081001	2	05081001	2	05081001	2
17	Plastic Cover for	05072909	0~2	05072909	0~2	05072909	0~2	05072909	0~2
18	Fixing Screw-M3.5x19	06011801	2	06011801	2	06011801	2	06011801	2
19	Cooper	04050801	0~1	04050801	0~1	04050801	0~1	04050801	0~1
20	Fixing Screw-M3x8	06012502	2	06012502	2	06012502	2	06012502	2
21	Plastic Cover	05100701	1	05100701	1	05100708	1	05100708	1
22	NamePlate	06021605	1	06021605	1	06021607	1	06021607	1
23	Fixing Screw	06012004	2	06012004	2	06012004	2	06012004	2

DIN CONNECTOR TYPE "DIN 46350"

NO.	PART NAME	SWG-02-AC	QTY.	SWG-02-DC	QTY.	SWG-03-AC	QTY.	SWG-03-DC	QTY.
2-1	Coil	05081107	1~2	05080404	1~2	05040801	1~2	05080505	1~2
24	Gasket	06021603	1~2	06021603	1~2	06021603	1~2	06021603	1~2
25	Housing	06021601	1~2	06021602	1~2	06021601	1~2	06021602	1~2
26	Fixing Screw	06021604	1~2	06021604	1~2	06021604	1~2	06021604	1~2
27	Fixing Screw-M3.5x6	05100501	2	05100501	2	05100501	2	05100501	2
28	Nameplate	06021606	1	06021606	1	06021608	1	06021608	1

LEAD WIRE TYPE: "SWP CONNECTOR OR DT-04-2P CONNECTOR"

NO.	PART NAME	SWG-02-AC	QTY.	SWG-02-DC	QTY.	SWG-03-AC	QTY.	SWG-03-DC	QTY.
2-2	Coil	06021609	1~2	06021610	1~2	06021611	1~2	06021612	1~2
29	SWP Connector	06021613	1~2	06021613	1~2	06021613	1~2	06021613	1~2
30	DT04-2P Connector	06021614	1~2	06021614	1~2	06021614	1~2	06021614	1~2

- The value of "1~2" in the "QTY.", means that if the valve is single solenoid, it needs "1" unit, if the valve is double solenoid, it needs "2" units.
- The value of "06021614" in the "SWG-02-AC", means the part No. and CAD No., if you need the CAD file, please contact with SOLTECH.
- The spool type includes "2B2, 2B3, 3C2, 3C3...", please see the page 3 and 4.
- The coil include Alternate Current: AC 110V/50HZ, 220V/50HZ, 240V/50HZ or Direct Current: DC 12V, 24V...

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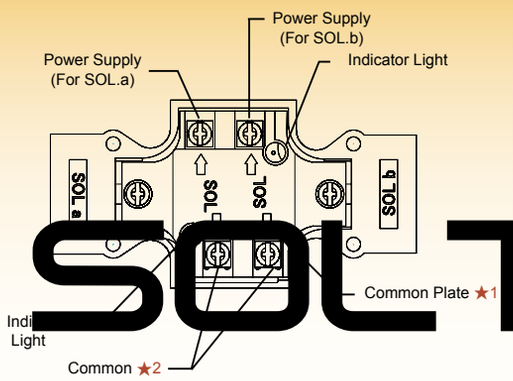
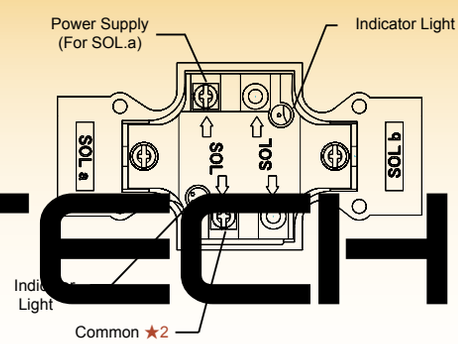
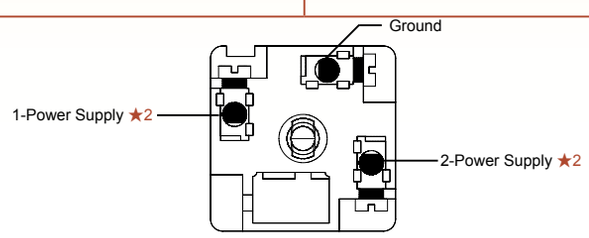
LEAD WIRE CONNECTION AND DETAILS OF RECEPTACLE-"SWG-02 SERIES"

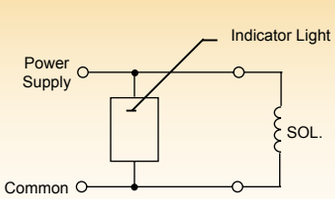
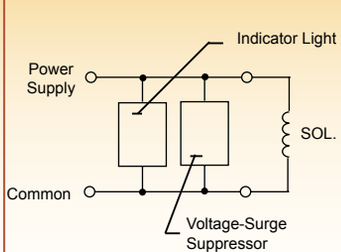
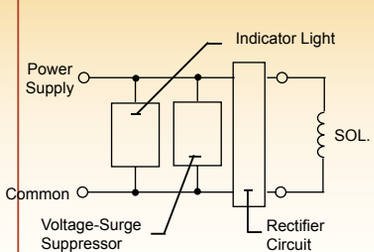
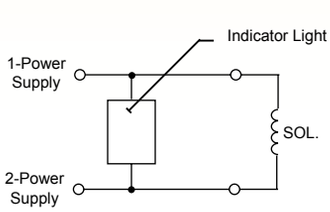
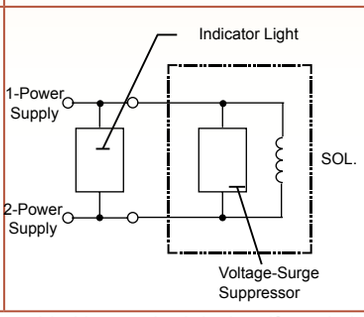
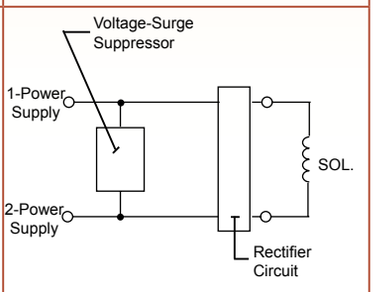
Type of Electrical Conduit Connection	Double Solenoid Type	Single Solenoid Type
Terminal Box Type		
Plug-in Connector Type		

★1. If you do not need the common plate, remove it.
★2. With DC solenoids, polarity is no question.

! DANGER !

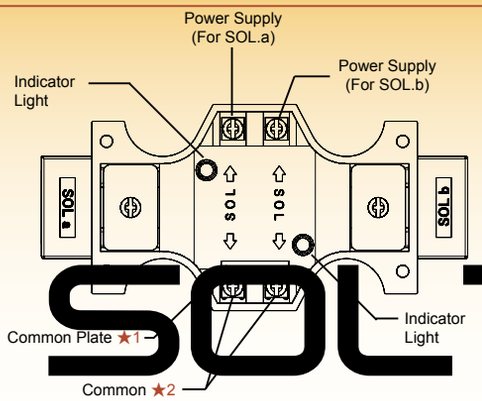
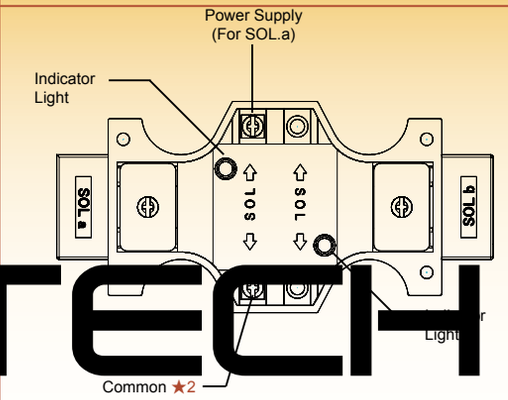
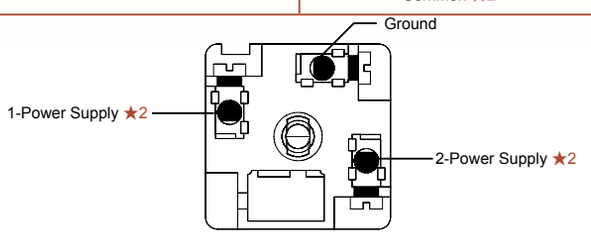
- Do not perform wiring while the power is on. Doing so may result in electric shock, burns or death.
- Make the wiring properly. Improper wiring will cause an irregular movement of the machine, resulting in a grave accident.

ELECTRICAL CIRCUIT

Type of Electrical Conduit Connection	Electric Source		
	AC	DC	AC→DC Recetified
Terminal Box Type			
Plug-in Connector Type			

- Voltage-Surge Suppressor(Circuit composed in coil) is not added in standard design. if need please consult SOLTECH.

LEAD WIRE CONNECTION AND DETAILS OF RECEPTACLE-"SWG-03 SERIES"

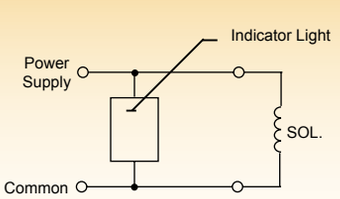
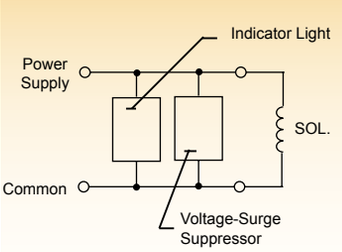
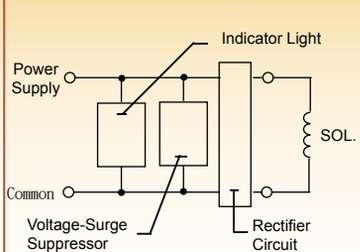
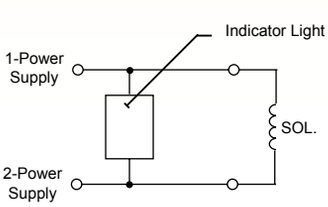
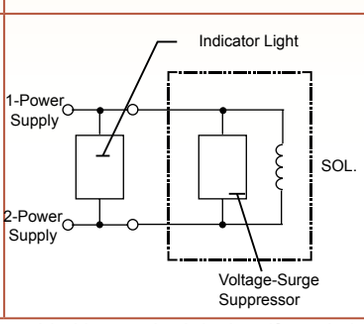
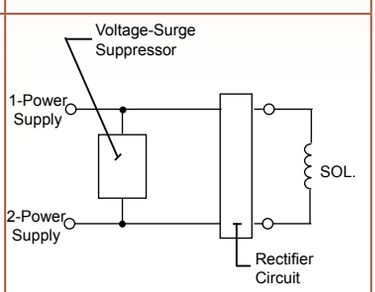
Type of Electrical Conduit Connection	Double Solenoid Type	Single Solenoid Type
Terminal Box Type		
Plug-in Connector Type		

★1. If you do not need the common plate, remove it.
★2. With DC solenoids, polarity is no question.

! DANGER !

- Do not perform wiring while the power is on. Doing so may result in electric shock, burns or death.
- Make the wiring properly. Improper wiring will cause an irregular movement of the machine, resulting in a grave accident.

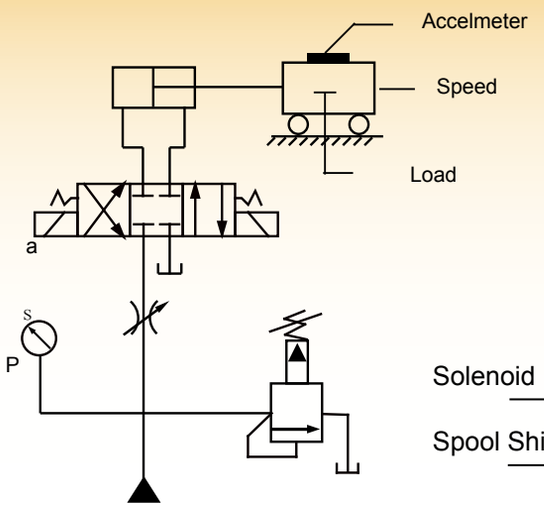
ELECTRICAL CIRCUIT

Type of Electrical Conduit Connection	Electric Source		
	AC	DC	AC→DC Recetified
Terminal Box Type			
Plug-in Connector Type			

- Voltage-Surge Suppressor(Circuit composed in coil) is not added in standard design. if need please consult SOLTECH.

【CHANGEOVER TIME】

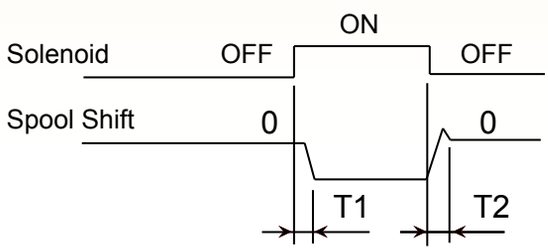
●Test Circuit and Conditions



●Test Conditions

Pressure: 16MPa(163 kgf/cm²)
Flow: 31.5 L/min
Viscosity: 35mm²/s{cst}
Voltage:100% of rated voltage(After the coil temperature raises and saturated)

●Result of Measurement



Type	Model No.	Time(ms)	
		T1	T2
AC	SWG-(H)-02-3C2-A※-(※)	12	5
DC	SWG-(H)-02-3C2-D※-(※)	51	22
RF	SWG-(H)-02-3C2-R※-(※)	57	104

Type	Model No.	Time(ms)	
		T1	T2
AC	SWG-(H)-03-3C2-A※-(※)	29	25
DC	SWG-(H)-03-3C2-D※-(※)	100	37
RF	SWG-(H)-03-3C2-R※-(※)	100	204

【INSTRUCTIONS】

※ MOUNTING：No-spring detented models not energized continuously must be installed so that the spool axis will be horizontal. Other models are not restricted to mounting horizontally.

※ ENERGIZATION：On double solenoid valves, do not energize both solenoids at the same time. Solenoid burn-out may occur.

※ VALVE TANK PORT：Avoid connection of the valve tank port to a line where surge pressure is likely to occur. Pipe end of tank line should be submerged in oil.

※ HYDRAULIC FLUID：

◎ Type of Fluid

★ Petroleum based fluids: Equivalent to ISO VG32 or 46.
★ Synthetic fluids: Phosphate ester or Polyol ester type.
★ Water Containing Fluids: Water-glycol fluids or W/O emulsion type.

◎ Recommended Viscosity and Temperature

★ Always be sure to use hydraulic fluids within the stipulated conditions as follows:
Oil Temperature: 5 to 160 degrees F
Viscosity: 77 to 1800 SSU

◎ Control of Contamination

★ Due caution must be used to maintain control over contamination of hydraulic fluids which may otherwise lead to breakdown and shorter valve life.
★ Please maintain the degrees of contamination between NAS 1638-Grade 12, Use 9.8 x 10 inch or filter line filter.

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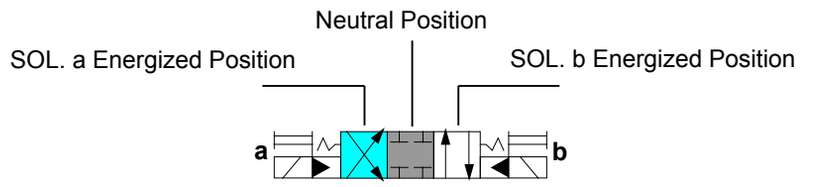
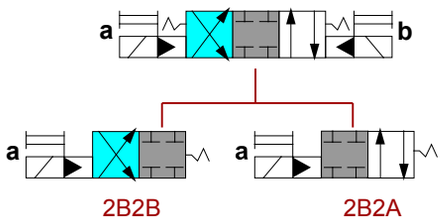
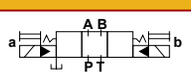
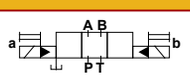
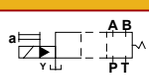
【GRAPHICAL SYMBOLS】

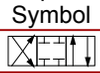
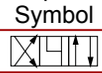
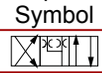
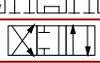
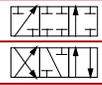
(Example)In Case Of Spool Type "3C2"



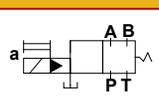
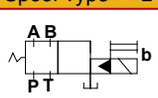
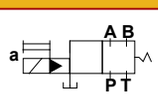
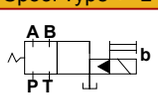


1) Example: Three switched position(3C) with spool type "2", ordering code "3C2".
2) Example: Two switched positon(2B) with spool type "60" , ordering code "2B2".
3) Example: Two switched position(2B) with spool type "8" and reverse assembled, ordering code "2B8L".
4) The dotted line of graphical symbol(2B, 2N) represent the momentary switched position.

Three Switched Position Spring Centred Model No: "3C"+ Spool Type	Graphical Symbol	Two Switched Position No Spring Model No: "2N"+ Spool Type	Graphical Symbol	Two Switched Position Spring Offset Model No: "2B"+ Spool Type	Graphical Symbol
					

Spool Type	Graphical Symbol	Spool Type	Graphical Symbol	Spool Type	Graphical Symbol	Spool Type	Graphical Symbol	Spool Type	Graphical Symbol
"2"		"3"		"4"		"40"		"5"	
"60"		"7"		"8"		"85"		"9"	
"10"		"11"		"12"					

1) Example: Two switched position(2B) with spool type "2A", ordering code "2B2A".
2) Example: Two switched position(2B) with spool type "8B" and reverse assembled, ordering code "2B8BL".
3) Example: Two switched position(2B) with spool type "12A" and reverse assembled, ordering code "2B12AL".
4) Valves Only Using Neutral Position and Side Position (Two Position Valve, No Intermediate or Momentary Swithched Position)

Two Switched Position Spring Offset Model No: "2B"+ Spool Type	Graphical Symbol Standard Assembled	Graphical Symbol Reverse Assembled Model No: Spool Type + "L"	Three Switched Position Spring Offset Model No: "2B"+ Spool Type	Graphical Symbol Standard Assembled	Graphical Symbol Reverse Assembled Model No: Spool Type + "L"
					

Spool Type	Graphical Symbols		Spool Type	Graphical Symbols	
2A			2B		
3A			3B		
4A			4B		
40A			40B		
5A			5B		
60A			60B		
7A			7B		
8A			8B		
9A			9B		
10A			10B		
11A			11B		
12A			12B		

A

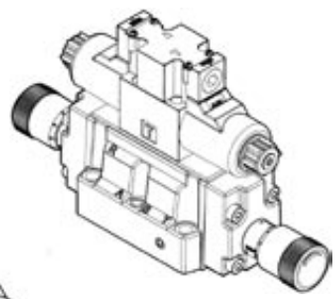
【DSHG-04】

ISO 4401-AD-07-4-A, NG 16

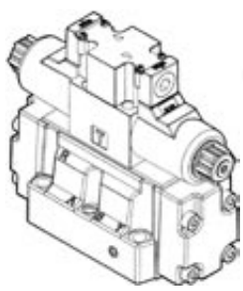
※SPECIFICATION

Model	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Max. Pilot Pres. (MPa)/(PSI)	Weight (kg)
DSHG-04	300(79.3)	31.5(4570)	25(3630)	6.2
DSHG-04-AB				8

Model	Min. Required Pilot Pres. (MPa)/(PSI)	Max. T-Line Back Pressure MPa(PSI)		Max. Changeover Frequency (Cycles/Min)
		Ext.Drain	Int.Drain	
DSHG-04	0.8(120)	21(3050)	16(2320)	120
DSHG-04-AB				



DSHG-04-AB



DSHG-04

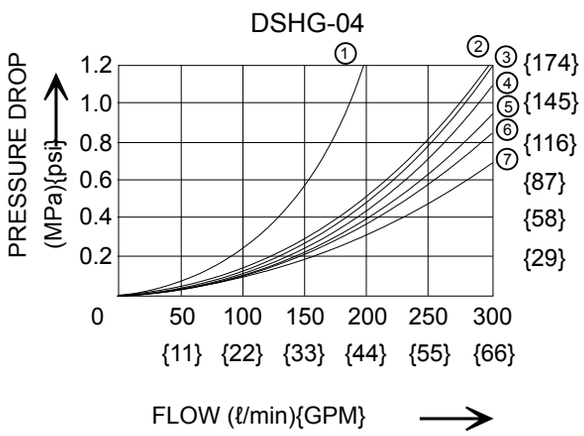
※ACCESSORIES

Model	Socket Head Screw Cap				O Ring		
	European Design Std.	North America Design Std.					
DSHG-04	M6 × 45 Lg.	1/4-20 UNC × 1-3/4 Lg.	2	Pcs	P9	2	Pcs
	M10 × 50 Lg.	3/8-16 UNC × 2 Lg.	4	Pcs	P22A	4	Pcs

※MODEL NUMBER DESIGNATION

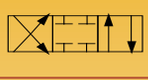
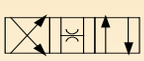
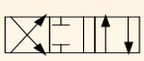
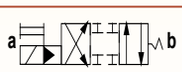
DSHG	04	3C60	AB	(E)	(T)	(90)
SERIES NO.	VALVE SIZE 04：NG16	SPOOL TYPE	ADJ. HANDHOLD	E:EXTERNAL PILOT OMIT:INTERNAL PILOT	T:INTERNAL DRAIN OMIT:EXTERNAL DRAIN	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

※PERFORMANCE CURVE



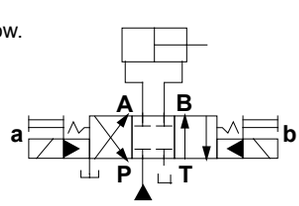
Spool Type	Pressure Drop Curve Numbers				
	P→A	B→T	P→B	A→T	P→T
2	5	4	5	6	---
3	5	3	5	5	7
4	5	3	5	5	---
40	5	4	5	6	---
5	7	4	5	5	5
6	5	3	5	6	1
60	7	5	7	7	2
7	5	4	5	6	---
9	5	4	5	6	---
10	5	2	5	6	---
11	6	4	5	6	---
12	5	4	5	5	---

※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【DSHG-04】：

No. Of Valve Position	Spool-Spring	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM)			
				10MPa (1450psi)	16MPa (2320pis)	25MPa (3630psi)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		300(79.3)	300(79.3)	300(79.3)	145 (38.3)
		3C3		300 (79.3)	300 (79.3)	300 (79.3)	300 (79.3)
		3C4		300 (79.3)	300 (79.3)	250 (66.1)	165 (43.6)
		3C40		300 (79.3)	300 (79.3)	200 (52.8)	145 (38.3)
		3C5		250 (66.1)	250 (66.1)	245 (64.7)	245 (64.7)
		3C60		300 (79.3)	300 (79.3)	300 (79.3)	300 (79.3)
		3C7		300 (79.3)	300 (79.3)	200 (52.8)	145 (38.3)
		3C9		300 (79.3)	300 (79.3)	280 (74.0)	250 (66.1)
		3C10		300 (79.3)	300 (79.3)	200 (52.8)	150 (39.6)
		3C11		300 (79.3)	260 (68.7)	160 (42.3)	140 (37.0)
		3C12		300 (79.3)	280 (74.0)	170 (44.9)	135 (35.7)
Two Positions	Spring Offset	2B2		300 (79.3)	300 (79.3)	300 (79.3)	300 (79.3)
		2B3					
		2B4					
		2B40					
		2B7					

Notes:1. Max flow described above shown value at pilot pressure m ore than 0.8 MPa (120 PSI).shown below.

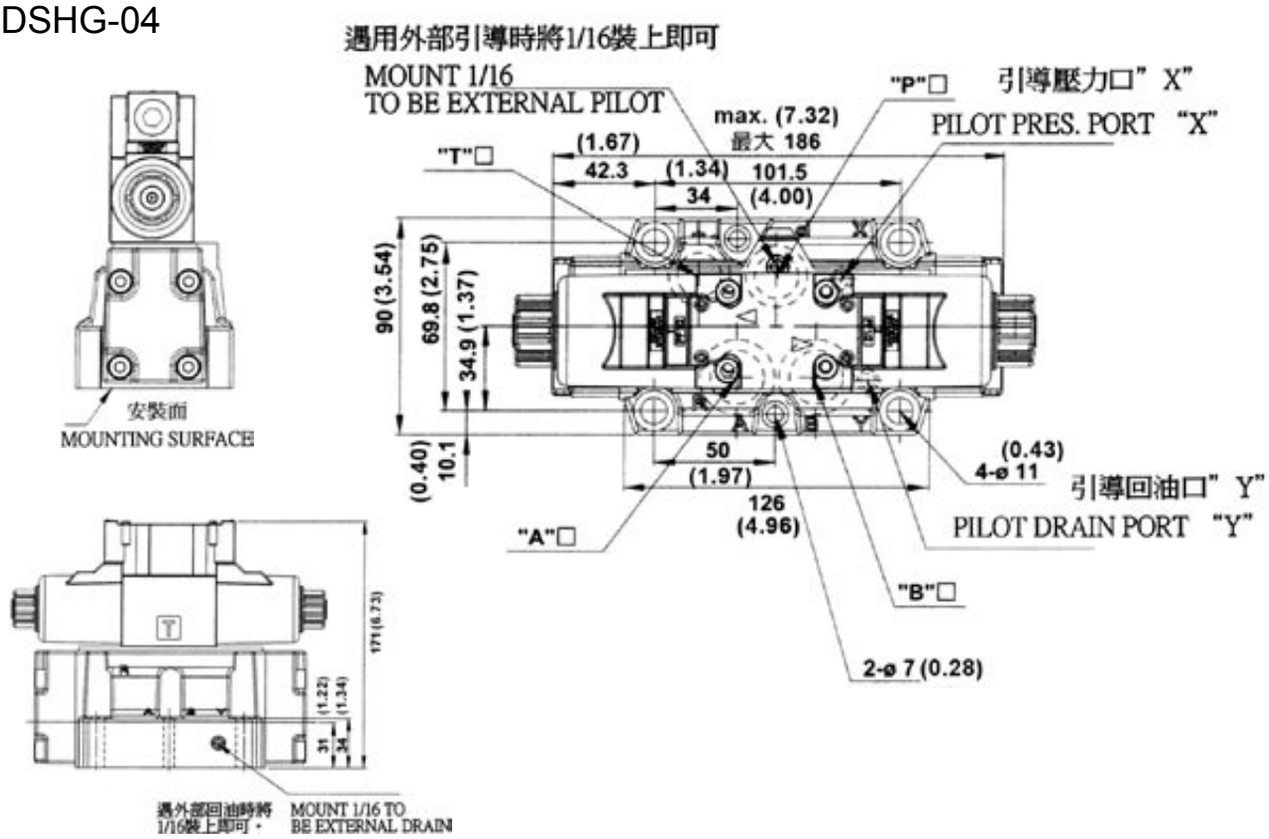
2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.
In case the valve is used in the condition that either A or B port is blocked, the m aximum flow differs according to a hy draulic circuit, therefore, please consult us for details.



A

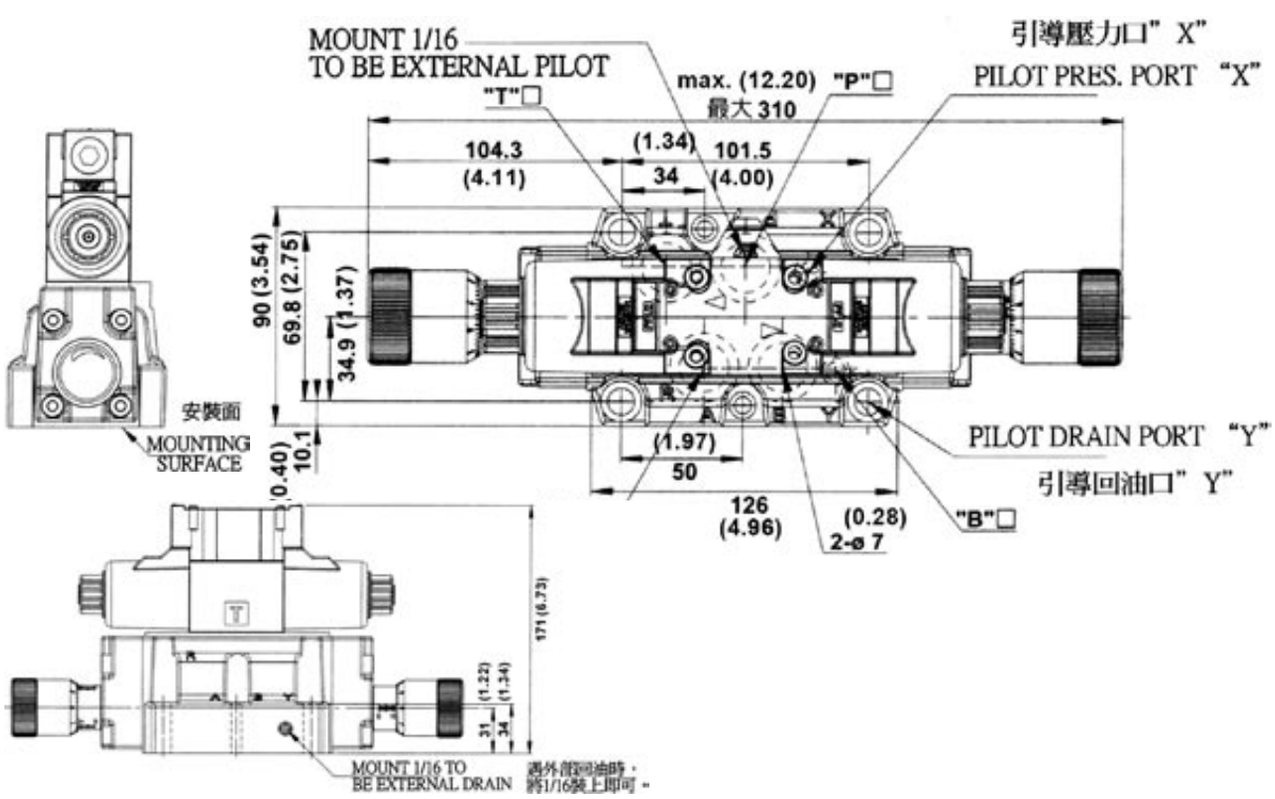
DIMENSIONS

DSHG-04



DIMENSIONS

DSHG-04-AB



A

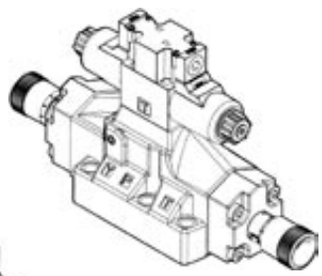
【DSHG-06】

ISO 4401-AE-08-4-A, NG-25

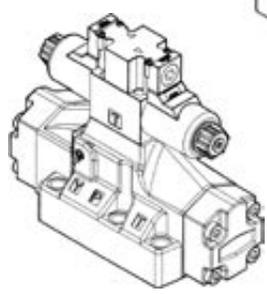
※SPECIFICATION

Model	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Max. Pilot Pres. (MPa)/(PSI)	Weight (kg)
DSHG-06	500(132)	31.5(4570)	25(3630)	12
DSHG-06-AB				14

Model	Min. Required Pilot Pres. (MPa)/(PSI)	Max. T-Line Back Pressure MPa(PSI)		Max. Changeover Frequency (Cycles/Min)
		Ext.Drain	Int.Drain	
DSHG-06	0.8(120)	21(3050)	16(2320)	120
DSHG-06-AB				



DSHG-06-AB



DSHG-06

※ACCESSORIES

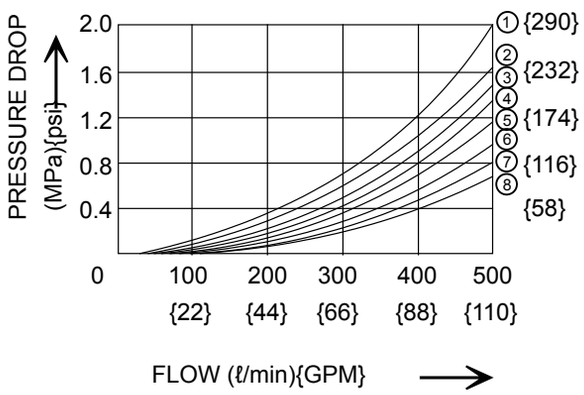
Model	Socket Head Screw Cap				O Ring		
	European Design Std.	North America Design Std.					
DSHG-06	M12 × 60 Lg.	1/2-13 UNC × 2-1/2 Lg.	6	Pcs	P14	2	Pcs
					P32	4	Pcs

※MODEL NUMBER DESIGNATION

DSHG	06	3C60	AB	(E)	(T)	(90)
SERIES NO.	VALVE SIZE 06：NG25	SPOOL TYPE	ADJ. HANDHOLD	E: EXTERNAL PILOT OMIT: INTERNAL PILOT	T:INTERNAL DRAIN OMIT:EXTERNAL DRAIN	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

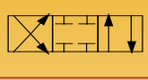
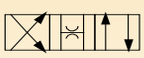
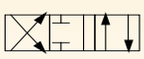
※PERFORMANCE CURVE

DSHG-06



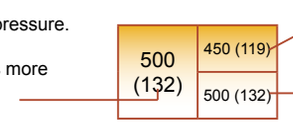
Spool Type	Pressure Drop Curve Numbers				
	P→A	B→T	P→B	A→T	P→T
2	8	5	8	7	---
3	6	4	6	7	4
4	8	5	8	7	---
40	8	5	8	7	---
5	8	4	5	7	1
6	5	3	5	4	1
60	6	5	6	7	1
7	6	4	6	7	---
9	6	4	6	7	---
10	8	5	8	7	---
11	8	4	5	7	---
12	8	5	8	7	---

※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【DSHG-06】：

No. Of Valve Position	Spool-Spring	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM) 10MPa (1450psi)	16MPa (2320pis)	25MPa (3630psi)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		500 (132)	500 (132)	410 (108)	310 (81.9)
						500 (132)	500 (132)
		3C3		500 (132)	500 (132)	460 (122)	370 (97.8)
		3C4		500 (132)	500 (132)	410 (108)	310 (81.9)
						500 (132)	500 (132)
		3C40		500 (132)	500 (132)	410 (108)	310 (81.9)
						500 (132)	500 (132)
		3C5		500 (132)	500 (132)	425 (112)	350 (92.5)
		3C60		475 (125)	420 (111)	340 (89.8)	280 (74.0)
		3C7		500 (132)	500 (132)	450 (119)	360 (95.1)
		3C9		500 (132)	500 (132)	1040 (275)	870 (230)
		3C10		500 (132)	500 (132)	450 (119)	360 (95.1)
						500 (132)	500 (132)
		3C11		500 (132)	500 (132)	450 (119)	360 (95.1)
						500 (132)	500 (132)
		3C12		500 (132)	500 (132)	450 (119)	360 (95.1)
						500 (132)	500 (132)
Two Positions	Spring Offset	2B2		500 (132)	500 (132)	500 (132)	500 (132)
		2B3					
		2B4					
		2B40					
		2B7					

Notes: 1. The relation between m ax. flow and pilot pressure in the table above is as shown below.

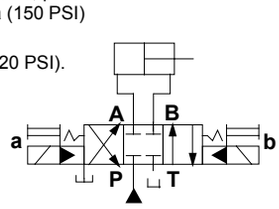
Maximum flow rate is constant regardless of pilot pressure.
Pilot Pressure m ore than 0.8 MPa (120 PSI).
In case pressure centred m odels, pilot pressure is more than 1 MPa (150 PSI).



Pilot Pressure at 0.8 MPa (120 PSI).
In case pressure centred models, pilot pressure is more than 1 MPa (150 PSI)

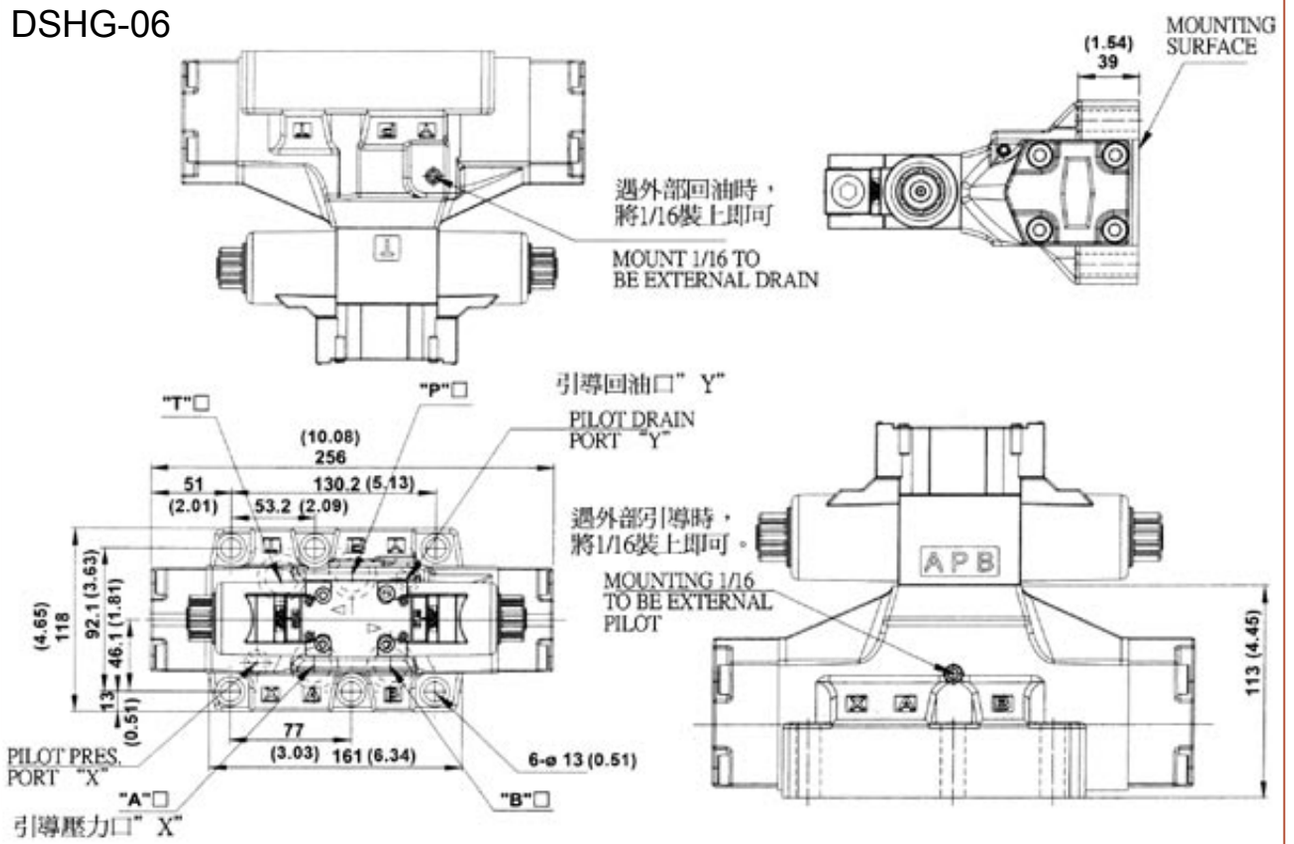
Pilot Pressure at 1.5 MPa (220 PSI).

2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.
In case the valve is used in the condition that either A or B port is blocked, the m aximum flow differs according to a hy draulic circuit, therefore, please consult us for details.



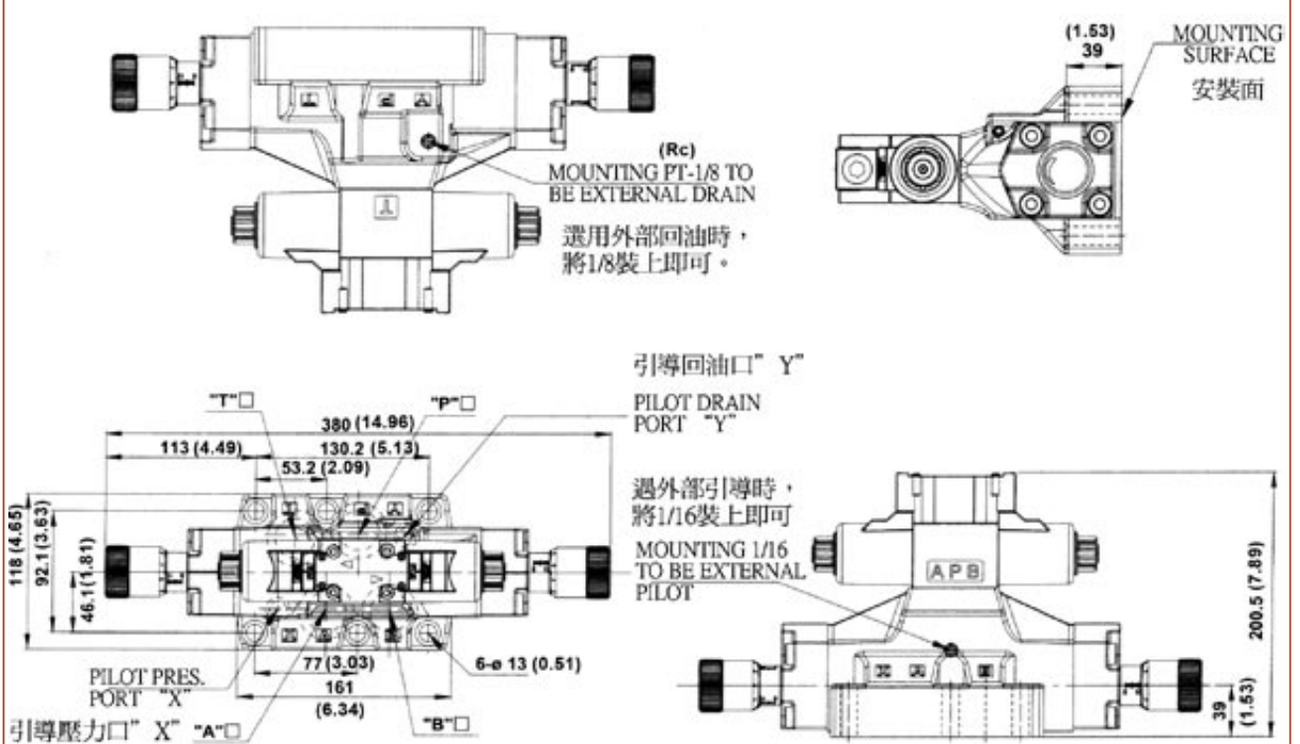
DIMENSIONS

DSHG-06



DIMENSIONS

DSHG-06-AB



A

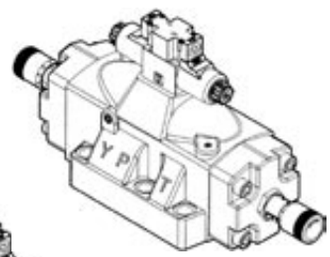
【DSHG-10】

ISO 4401-AF-10-4-A, NG 32

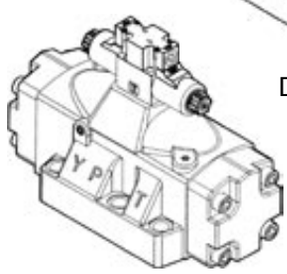
※SPECIFICATION

Model	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Max. Pilot Pres. (MPa)/(PSI)	Weight (kg)
DSHG-10	1100(291)	31.5(4570)	25(3630)	50
DSHG-10-AB				51.5

Model	Min. Required Pilot Pres. (MPa)/(PSI)	Max. T-Line Back Pressure MPa(PSI)		Max. Changeover Frequency (Cycles/Min)
		Ext.Drain	Int.Drain	
DSHG-10	1.0(150)	21(3050)	16(2320)	110
DSHG-10-AB				



DSHG-10-AB



DSHG-10

※ACCESSORIES

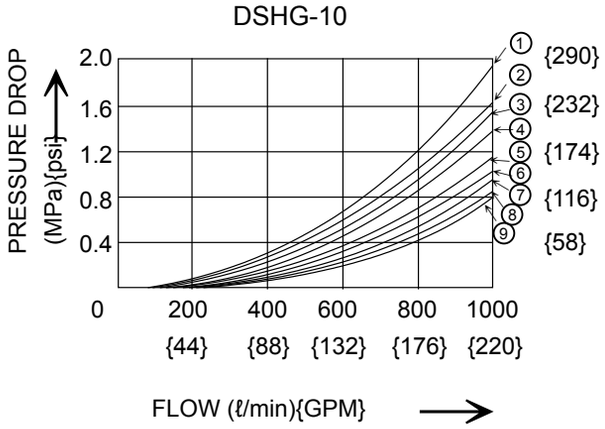
Model	Socket Head Screw Cap				O Ring		
	European Design Std.	North America Design Std.					
DSHG-10	M20 × 75 Lg.	3/4-10 UNC × 3 Lg.	6	Pcs	P20	2	Pcs
					P42	4	Pcs

※MODEL NUMBER DESIGNATION

DSHG	10	3C60	AB	(E)	(T)	(90)
SERIES NO.	VALVE SIZE 06：NG 32	SPOOL TYPE	ADJ. HANDHOLD	E: EXTERNAL PILOT OMIT: INTERNAL PILOT	T:INTERNAL DRAIN OMIT:EXTERNAL DRAIN	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

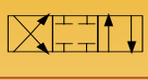
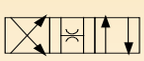
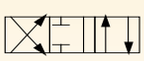
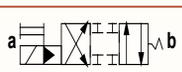
※PERFORMANCE CURVE

DSHG-10



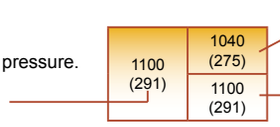
Spool Type	Pressure Drop Curve Numbers				
	P→A	B→T	P→B	A→T	P→T
2	9	6	9	8	---
3	7	6	7	7	5
4	9	6	9	6	---
40	9	6	9	8	---
5	9	6	8	6	1
6	5	3	5	4	2
60	8	5	8	5	2
7	7	6	7	7	---
9	7	6	7	8	---
10	9	5	9	8	---
11	9	6	8	7	---
12	9	7	9	6	---

※LIST OF STANDARD MODEL AND MAXIMUM FLOW：【DSHG-10】：

No. Of Valve Position	Spool-Spring	Model No. & Description	Graphic Symbols	Max. Flow lpm(U.S.GPM) 10MPa (1450psi)	16MPa (2320pis)	25MPa (3630psi)	31.5MPa (4570psi)
Three Positions	Spring Centered	3C2		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
		3C3		1100 (291)	1100 (291)	1060 (280)	895 (236)
		3C4		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
		3C40		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
		3C5		1100 (291)	1100 (291)	980 (259)	850 (225)
		3C60		1050 (277)	940 (248)	700 (185)	570 (151)
		3C7		1100 (291)	1100 (291)	1040 (275)	870 (230)
						1100 (291)	1100 (291)
		3C9		1100 (291)	1100 (291)	1040 (275)	870 (230)
		3C10		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
		3C11		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
		3C12		1100 (291)	1100 (291)	950 (251)	750 (198)
						1100 (291)	1100 (291)
Two Positions	Spring Offset	2B2		1100 (291)	1100 (291)	1100 (291)	1100 (291)
		2B3					
		2B4					
		2B40					
		2B7					

Notes: 1. The relation between m ax. flow and pilot pressure in the table above is as shown below.

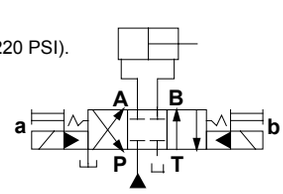
Maximum flow rate is constant regardless of pilot pressure.
Pilot Pressure more than 1 MPa (150 PSI).



Pilot Pressure at 1 MPa (150 PSI).

Pilot Pressure at 1.5 MPa (220 PSI).

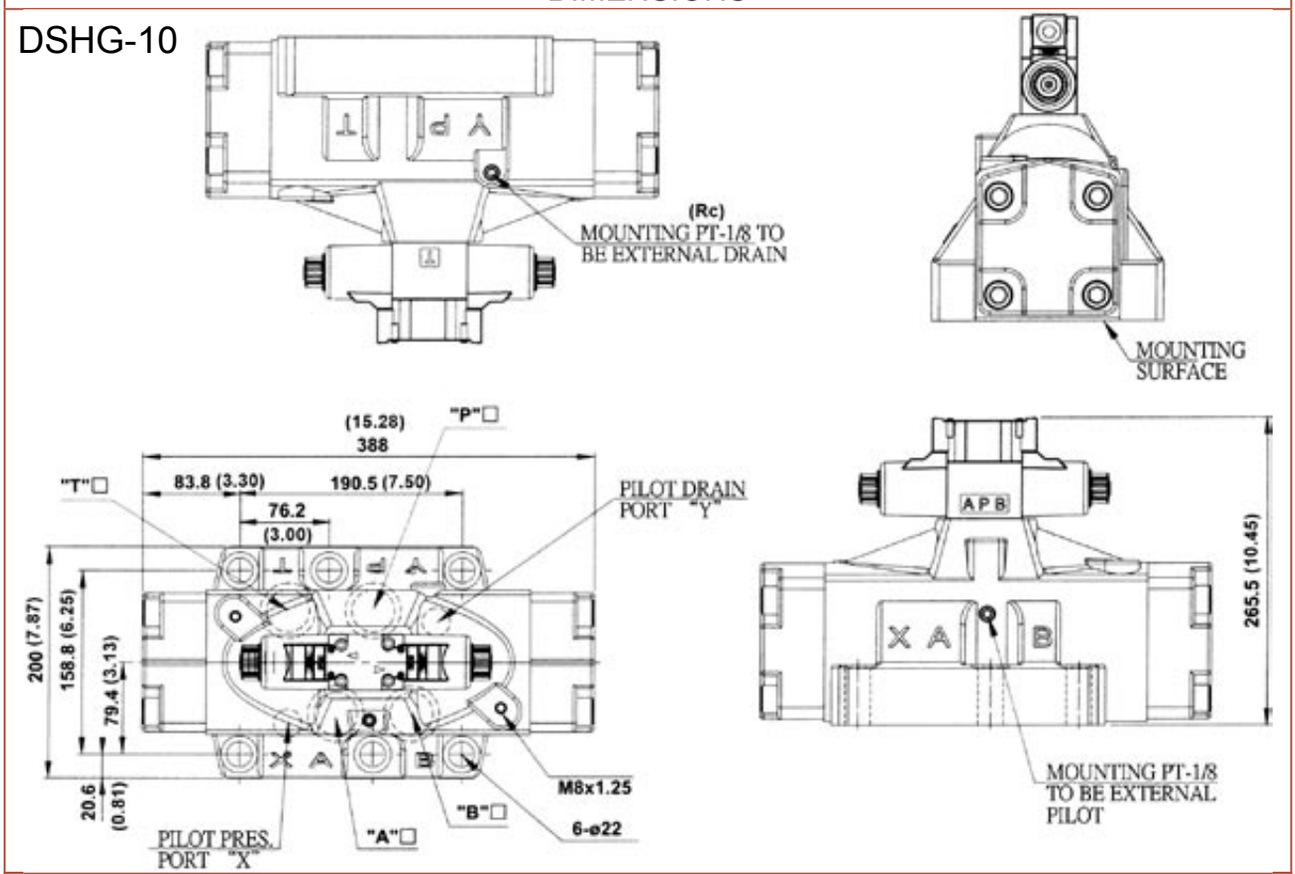
2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.
In case the valve is used in the condition that either A or B port is blocked, the m aximum flow differs according to a hy draulic circuit, therefore, please consult us for details.



A

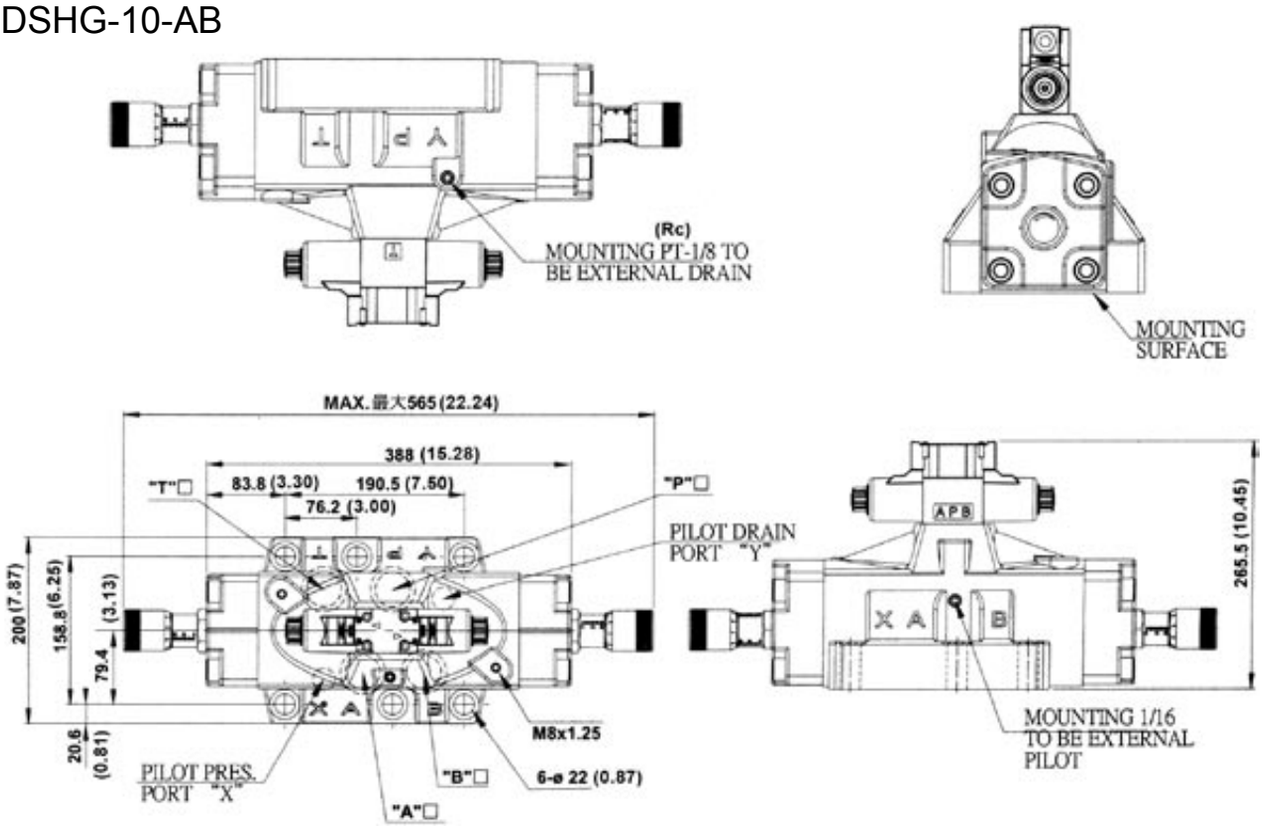
DIMENSIONS

DSHG-10



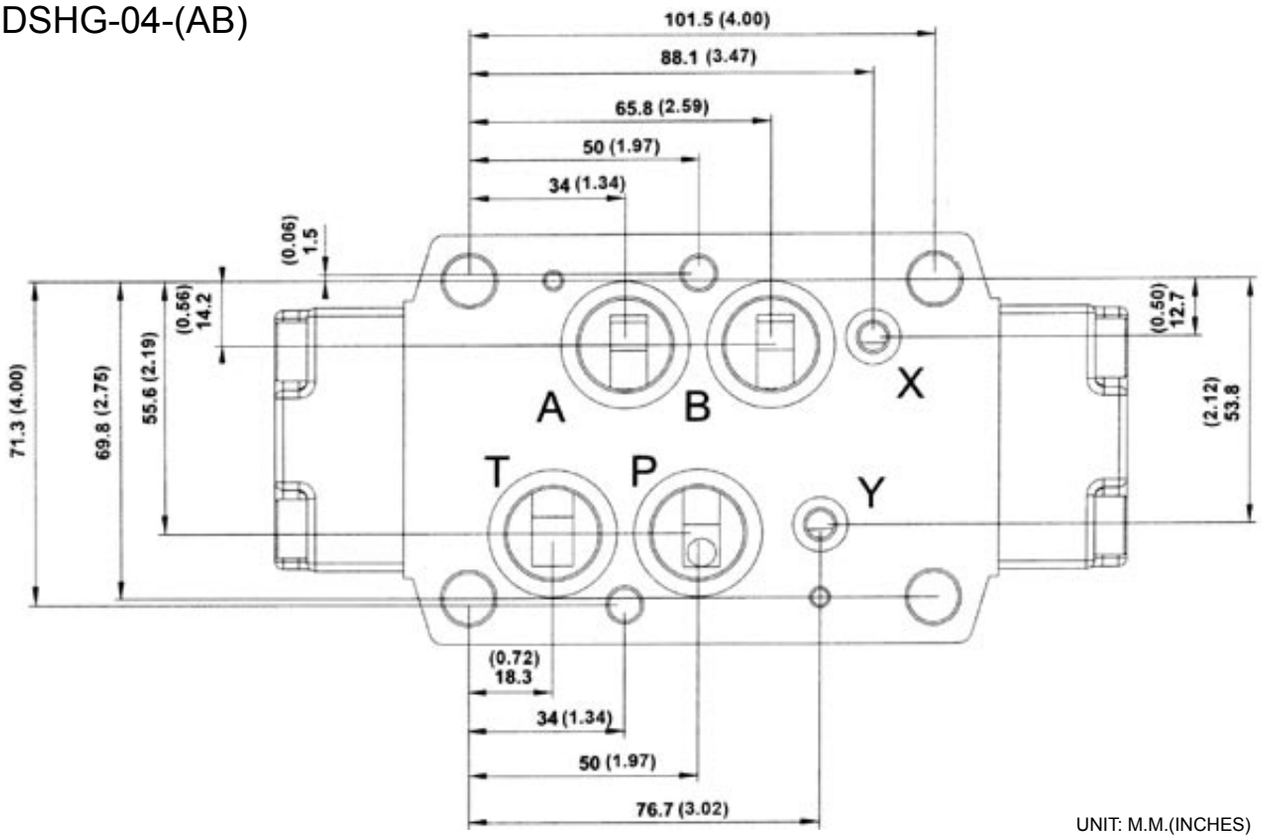
DIMENSIONS

DSHG-10-AB



DIMENSIONS

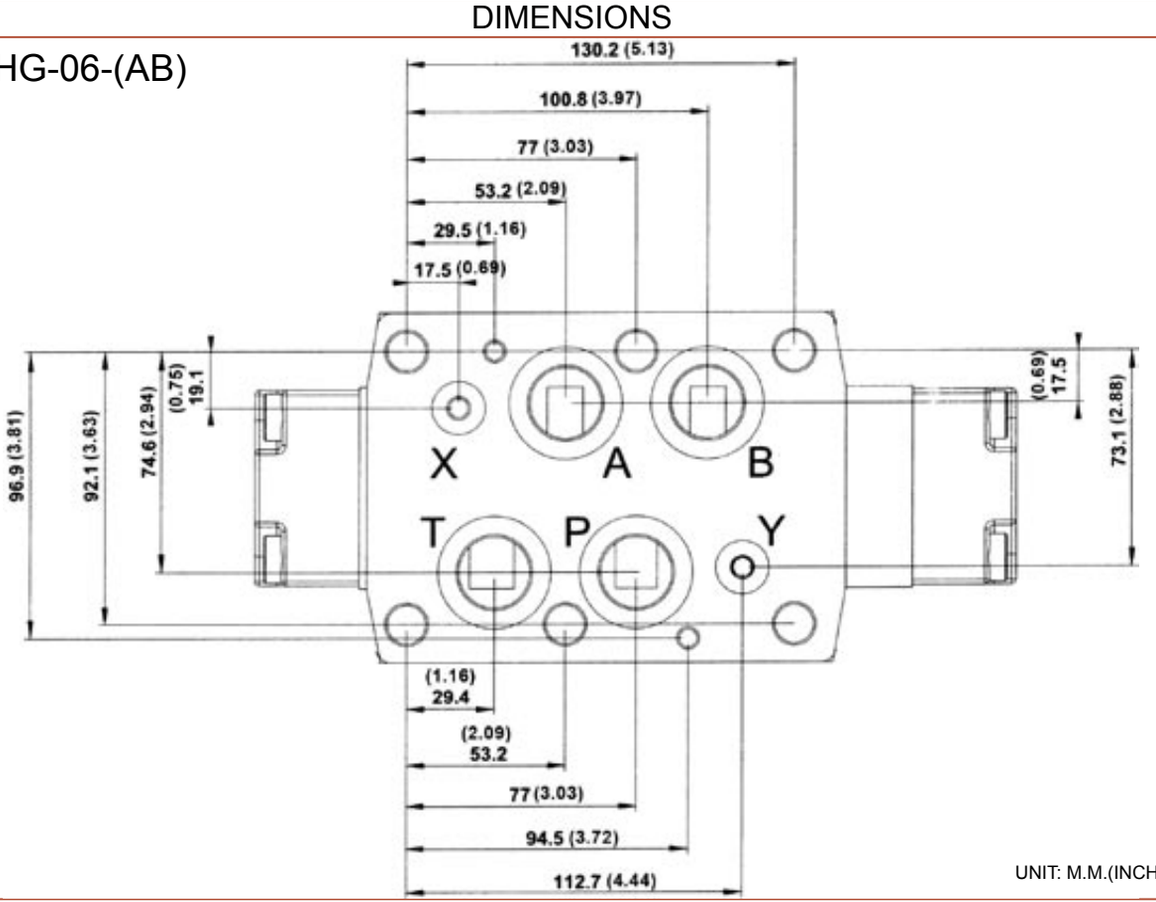
DSHG-04-(AB)



UNIT: M.M.(INCHES)

DIMENSIONS

DSHG-06-(AB)

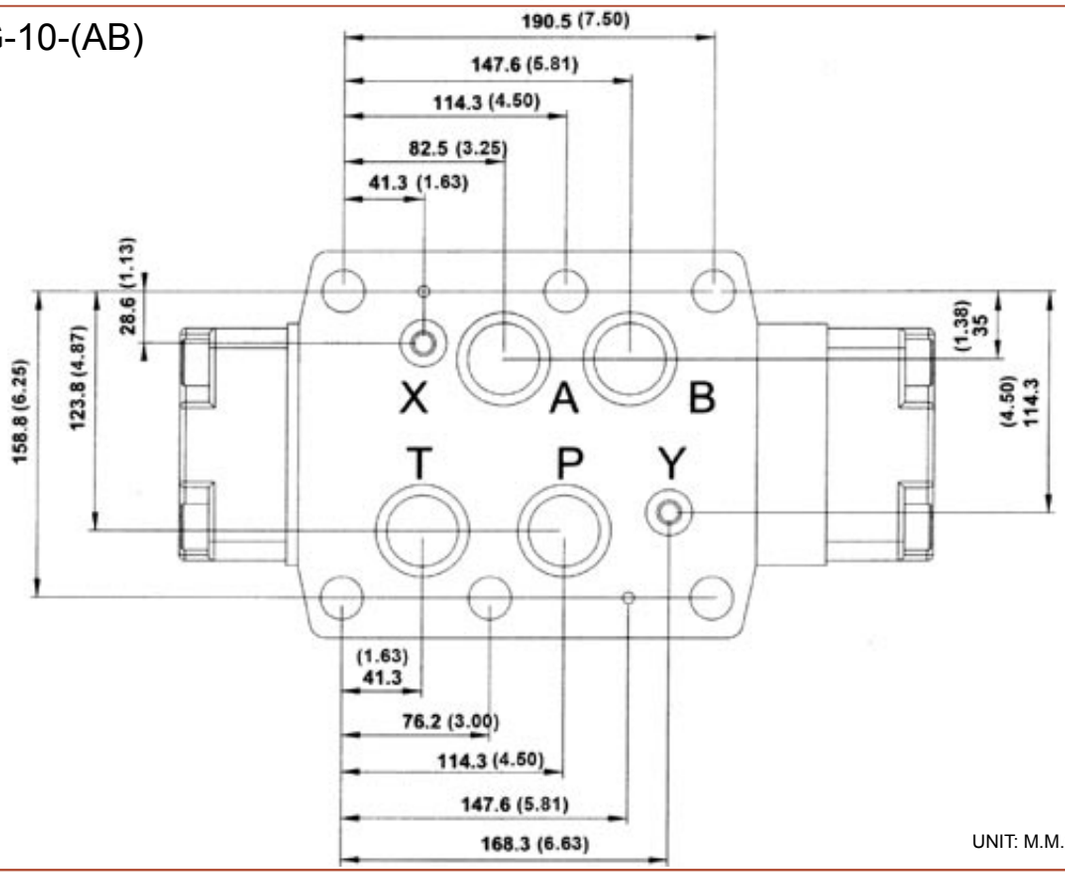


UNIT: M.M.(INCHES)

A

DIMENSIONS

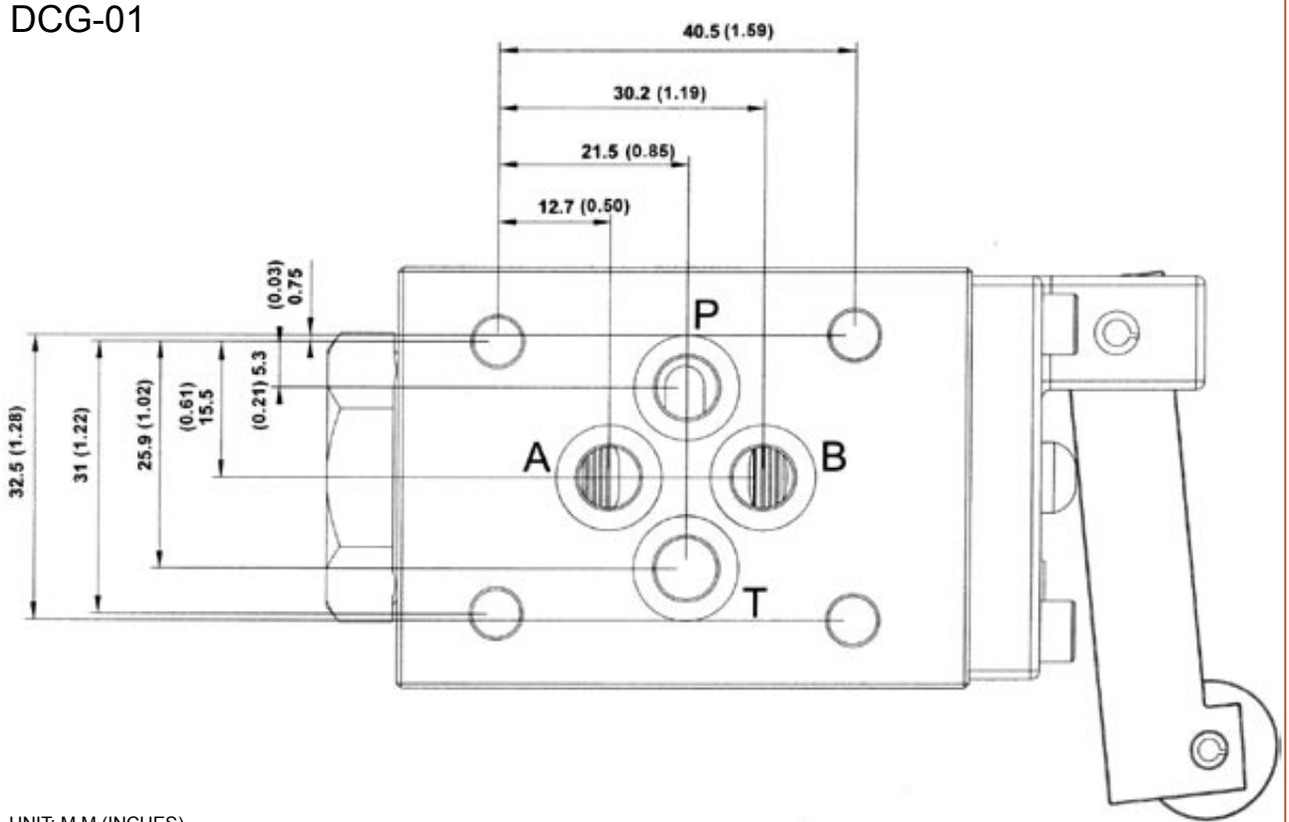
DSHG-10-(AB)



UNIT: M.M.(INCHES)

DIMENSIONS

DCG-01

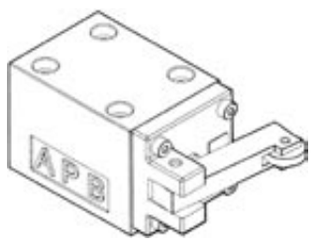


UNIT: M.M.(INCHES)

【DCG-01】

ISO4401-AB-03-4-A

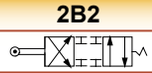
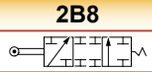
A



※SPECIFICATION

Model	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Weight (kg)
DCG-01	30(7.9)	31.5(4570)	1

※GRAPHIC SYMBOL

2B2	2B3	2B8
		

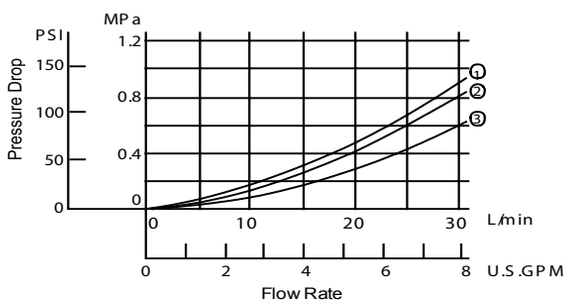
※ACCESSORIES

Model	Socket Head Screw Cap				O Ring			
	European Design Std.	North America Design Std.						
DCG-01	M5 × 45 Lg.	10-24 UNC × 1-3/4 Lg.	4	Pcs	P9	4	Pcs	

※MODEL NUMBER DESIGNATION

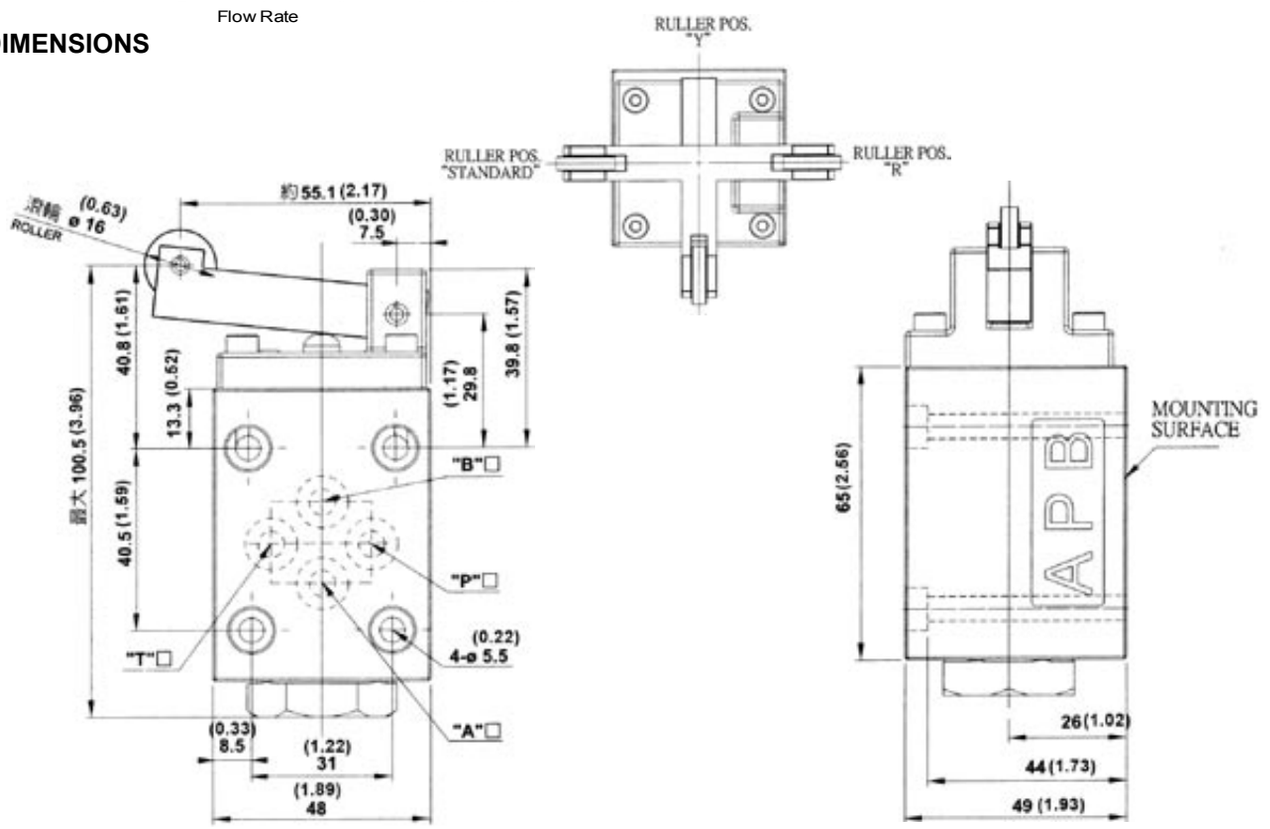
DC	G	02	2B2	(90)
SERIES NO.	CONNECTION TYPE G: SUB-PLATE TYPE T: THREADED TYPE	VALVE SIZE 02：NG06	SPOOL TYPE	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

※PERFORMANCE CURVE



Model Numbers	Pressure Drop Curve No.			
	P→A	B→T	P→B	A→T
DCG-02-2B2	2	2	3	3
DCG-02-2B3				
DCG-02-2B8	3	---	3	---

※DIMENSIONS



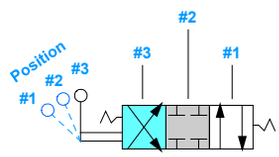
UNIT: M.M.(INCHES)

THE DIMENSIONS OF MOUNTING INTERFACE PLEASE REFER TO PAGE 42

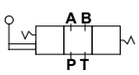
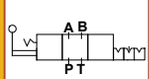
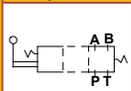
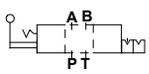
A

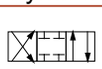
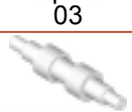
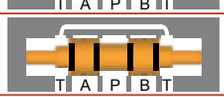
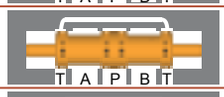
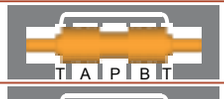
【GRAPHICAL SYMBOLS】

(Example): In Case Of Spool Type"3C2"
範例：芯軸型式’3C2’



1) Example: Three switched position(3C) with spool type "2", ordering code "3C2".
2) Example: Two switched positon(2B) with spool type "2" , ordering code "2B2".
3) Example: Three switched position(3D) with spool type "2" , ordering code "3D2".
4) The dotted line of graphical symbol(2B, 2D) represent the momentary switched position.

Three Switched Position	Graphical Symbol	Three Switched Position	Graphical Symbol	Two Switched Position	Graphical Symbol	Two Switched Position	Graphical Symbol
Spring Centred Model No: "3C"+ Spool Type		No Spring-With Detent Model No: "3D"+ Spool Type		Spring Offset Model No: "2B"+ Spool Type		No Spring-With Detent Model No: "2D"+ Spool Type	

Spool Type	Graphical Symbol	Physical Relationship (Neutral Position)	Spool 02	Spool 03	Remark
"2"					
"3"					
"4"					
"40"					
"5"					
"60"					In the momentary switched position, ABPT are all opened.
"7"					
"8"					
"85"					
"9"					
"10"					
"11"					
"12"					

A

【DMG/DMT 02, 03, 04, 06, 10】

NG 6, 10, 16, 25, 32

※ СПЕЦИФИКАЦИЯ

Модель	Максим произв Л/мин	Макс давление, МПа	Давление на сливе МПа	Вес, кг
DMG-02	50	31.5	2	3.4
DRT-03				3.4
DMT(G)-03			10	4.0
DMT-04	100		14	7.6
DMT-06	180			13.0
DMT-10	300			22.0

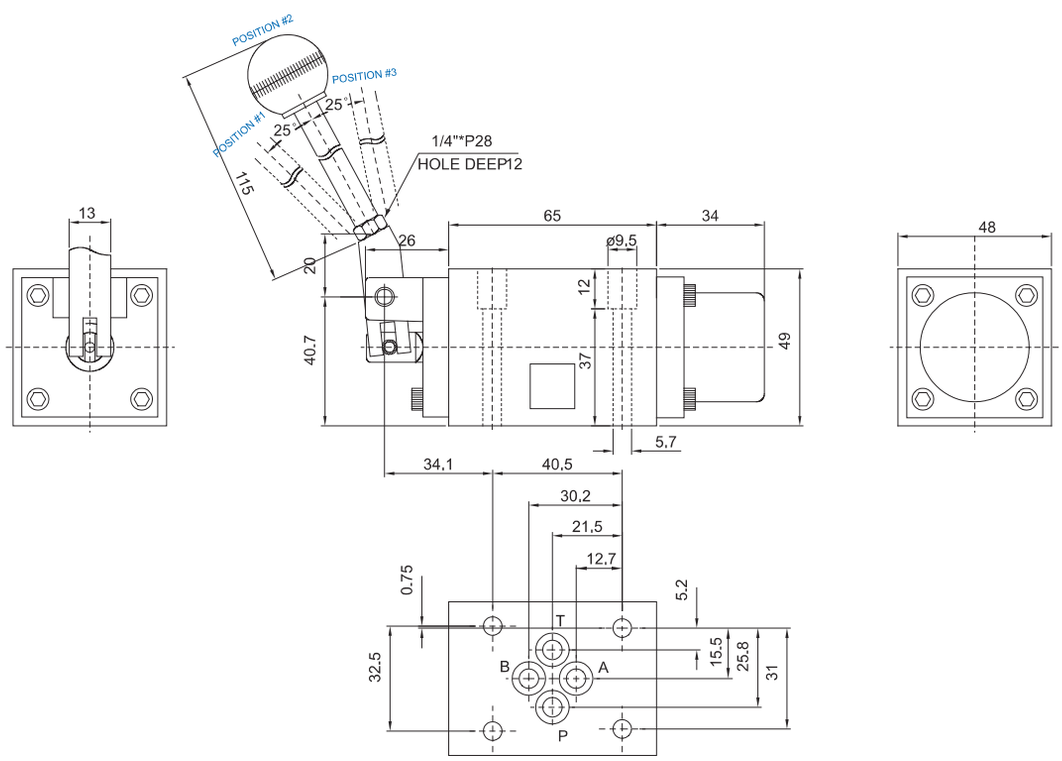
※ АКСЕССУАРЫ

Модель	Болт с внутр шестигранн			О-кольцо		
DMG-02	M5 × 45 Lg.	4	шт	P9	4	шт
DMG-03	M6 × 45 Lg.	4	шт	P12	5	шт

※ РАСШИФРОВКА ОБОЗНАЧЕНИЯ

D	M	T	04	3C60	(90)
СЕРИЯ	РУЧНОЕ УПР M: вертик R: поворотн	ТИП МОНТАЖА G: стыковой T: резьбовой	ТИПОРАЗМЕР 02: 1/4", ISO 4401-AB-03-4-A, NG6, CETOP 3 03: 3/8", ISO 4401-AC-05-4-A, NG10, CETOP 5 04：1/2", ISO 4401-AD-07-4-A NG16, CETOP 7 06: 3/4", ISO 4401-AE-08-4-A, NG25, CETOP 8 10: 1-1/4", ISO 4401-AF-10-4-A, NG32, CETOP 10	СХЕМА РАСПРЕД	ДИЗАЙН б/о DIN 912 болт 90: UNC болт

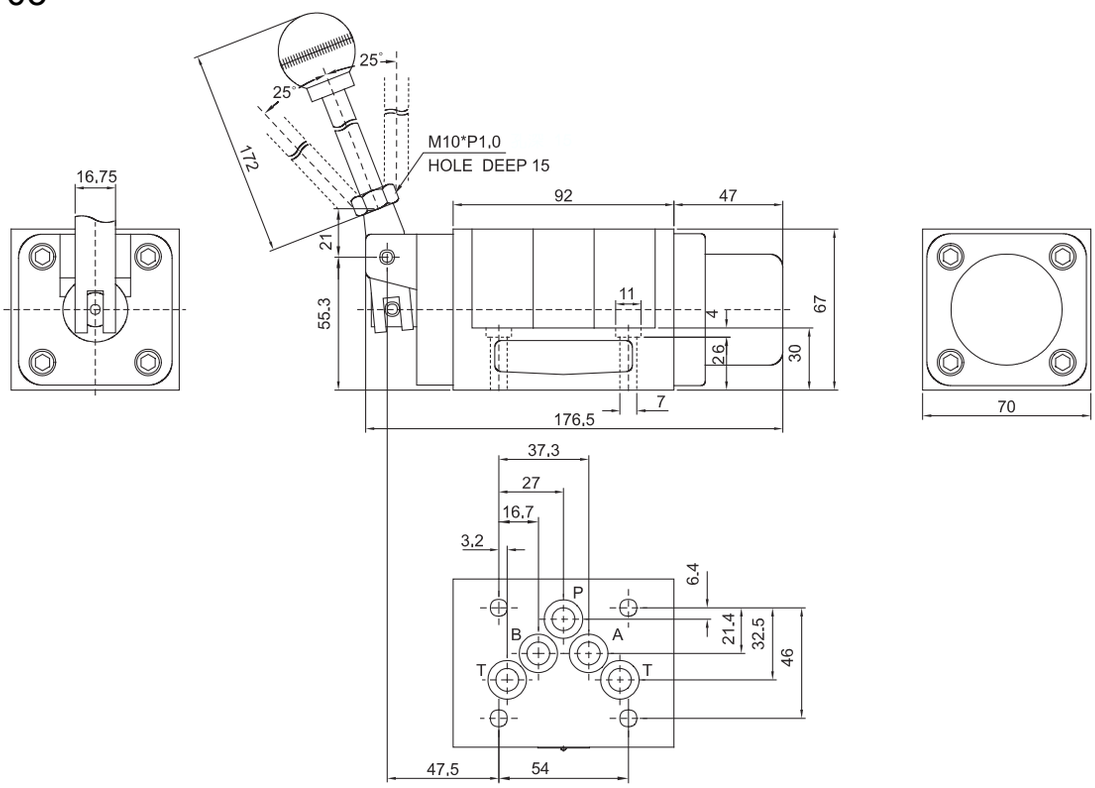
※ РАЗМЕРЫ



A

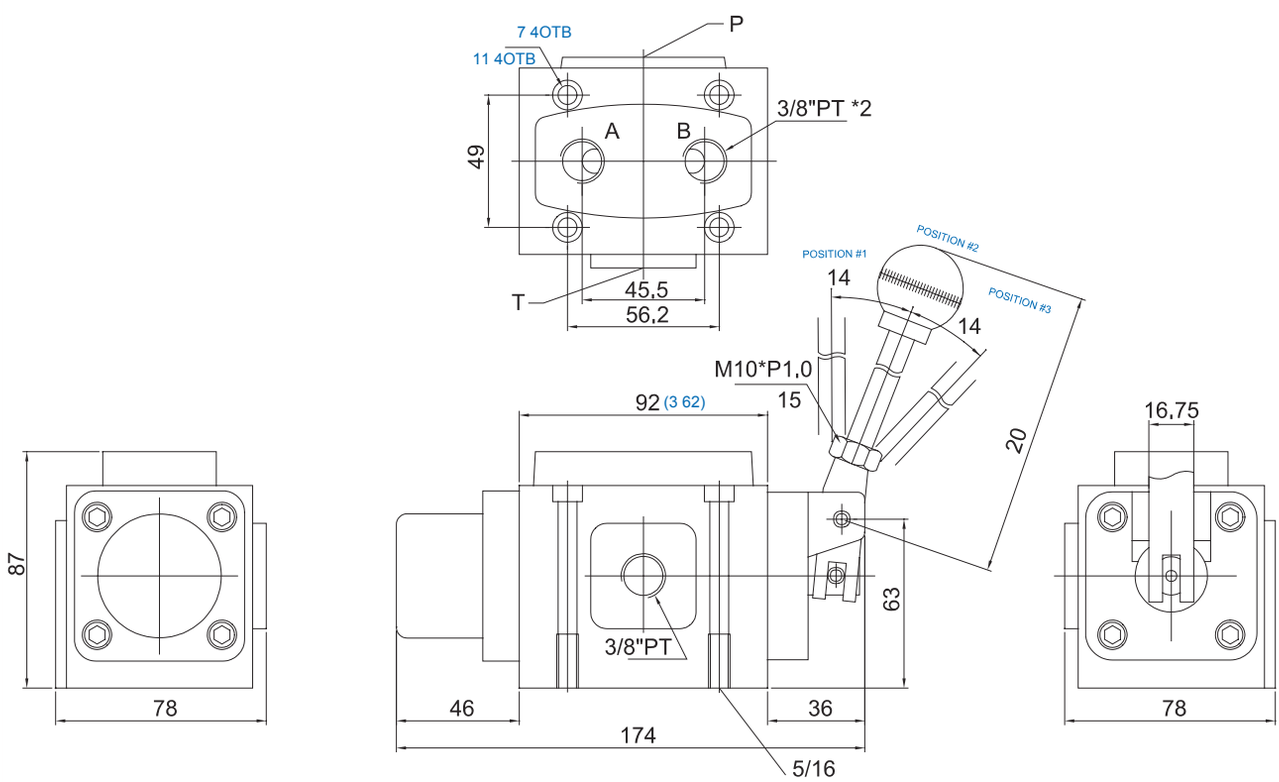
РАЗМЕРЫ

DMG-03



РАЗМЕРЫ

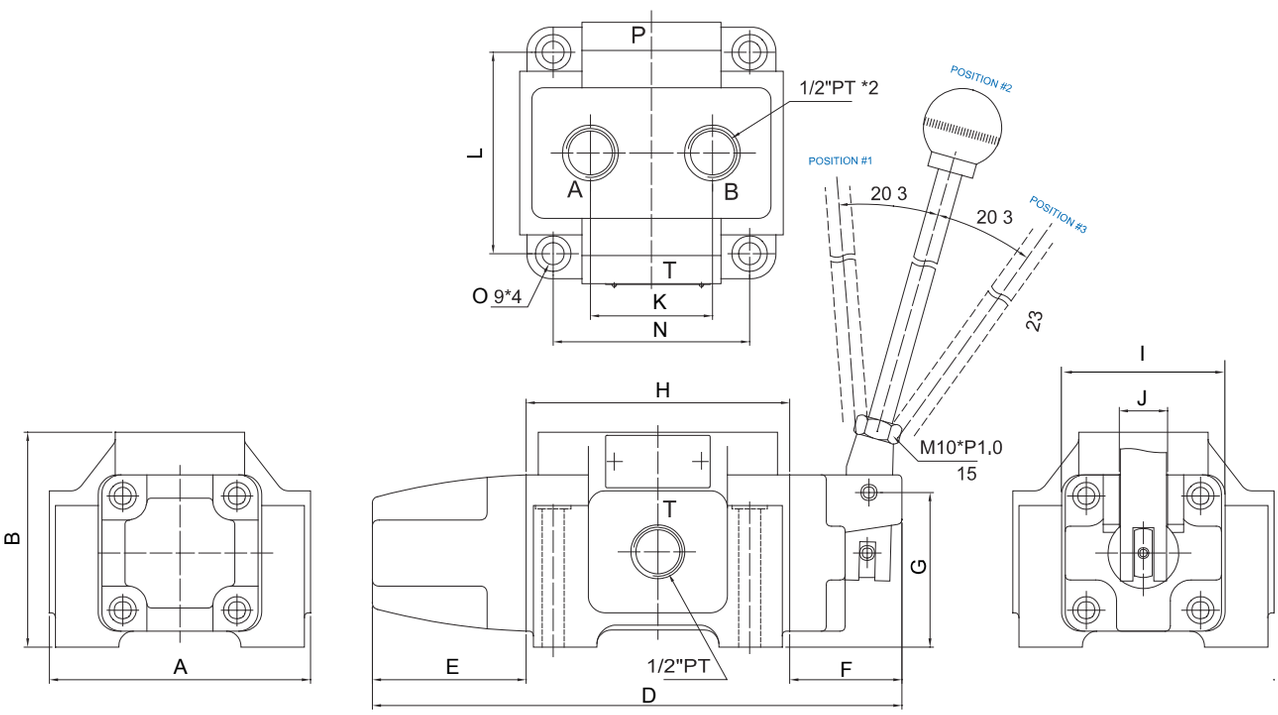
DMT-03



A

РАЗМЕРЫ

DMT



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M
DMT-04	107(4.21)	88.5(3.48)	***	227.5(8.95)	63.5(2.50)	46(1.81)	63(2.48)	118(4.64)	***	19.8(0.77)	50(1.96)	82.5(3.24)	80.5(3.16)
DMT-06	128(5.03)	99(3.89)	78(3.07)	258(10.1)	72(2.83)	56(2.20)	69(2.71)	130(5.11)	78(3.07)	19.8(0.77)	64.8(2.55)	94.4(3.71)	97(3.81)
DMT-10	163(6.41)	121(4.76)	98(3.85)	335(13.1)	94(3.70)	70(2.75)	88.5(3.48)	171(6.73)	99(3.89)	22.7(0.89)	79(3.11)	126(4.96)	132.3(5.20)

A

【CV, CIT】

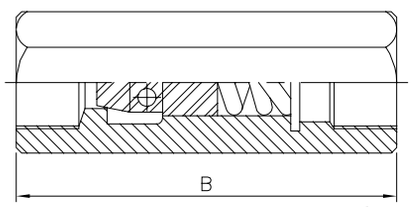
※MODEL NUMBER DESIGNATION

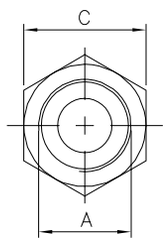
CIT	03	05	(90)
SERIES NO. CV: 21 MPa(3000 PSI) CIT: 31.5(4000 PSI)	VALVE SIZE	CRACKING PRESSURE MPa(psi) 05: 0.05(6) 50: 0.5(70)	DESIGN NO. OMIT: TAIWAN STD.(Rc/PT) 80: EUROPEAN STD.(PF) 90: NORTH AMERICA STD.(NPT)


CV-03

※GRAPHIC SYMBOL

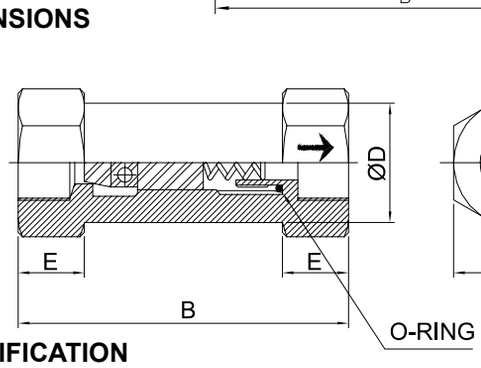
CV, CIT

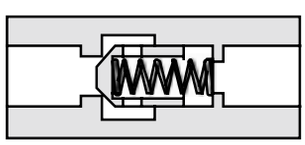






CIT-03

※DIMENSIONS





※SPECIFICATION

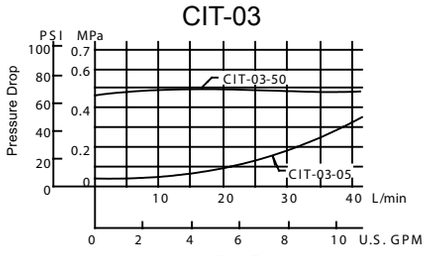
UNIT: M.M.(INCHES)

Model	A (Rc/PT)	B	C	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Weight (kg)
CV-03	3/8"	70(2.76)	23(0.91)	40(10.6)	21(3000)	0.18
CV-04	1/2"	80(3.15)	29(1.14)	60(15.9)		0.31
CV-06	3/4"	90(3.54)	35(1.38)	100(26.4)		0.48
CV-08	1"	113(4.45)	46(1.81)	150(39.6)		1.07
CV-10	1-1/4"	133(5.24)	53(2.09)	200(52.8)		1.75
CV-12	1-1/2"	133(5.24)	65(2.56)	280(74.0)		2.60
CV-16	2"	154(6.06)	71(2.80)	400(105.7)		3.12

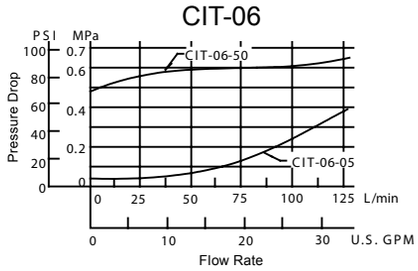
Model	A (Rc/PT)	B	C	D	E	O-Ring	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Oper. Pres. (MPa)/(PSI)	Weight (kg)
CIT-02	3/8"	75(2.95)	29(1.14)	27(1.06)	14(0.55)	P-16	30(7.93)	35(5075)	0.30
CIT-03	1/2"	75(2.95)	32(1.26)	30(1.18)	14(0.55)	P-16	40(10.57)		0.36
CIT-04	3/4"	104(4.09)	35(1.38)	34(1.34)	25(0.98)	P-20	60(15.86)		0.62
CIT-06	1"	120(4.72)	41(1.61)	40(1.57)	27(1.06)	G-30	100(37.83)		1.00
CIT-08	1-1/4"	139(5.47)	51(2.24)	56(2.20)	32(1.26)	G-45	150(39.65)		2.20

※PERFORMANCE CURVE

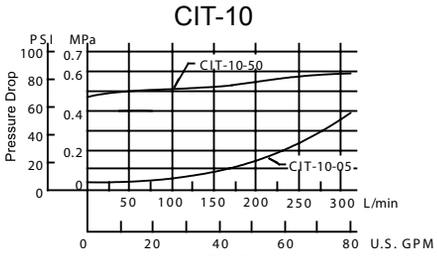
CIT-03



CIT-06



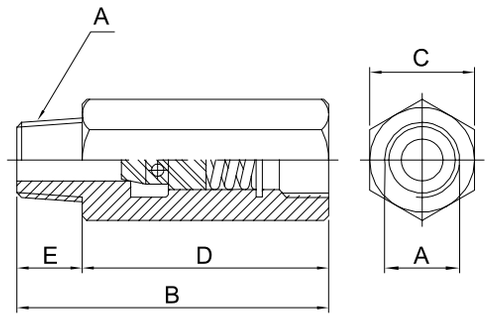
CIT-10



【CE】

※GRAPHIC SYMBOL

CE



※MODEL NUMBER DESIGNATION

UNIT: M.M.(INCHES)

CE	03	05	(90)
SERIES NO.	VALVE SIZE 03: 3/8" 04: 1/2"	CRACKING PRESSURE MPa(psi) 05: 0.05(6) 50: 0.5(70)	DESIGN NO. OMIT: TAIWAN STD.(PT) 80: EUROPEAN STD.(PF) 90: NORTH AMERICA STD.(NPT)

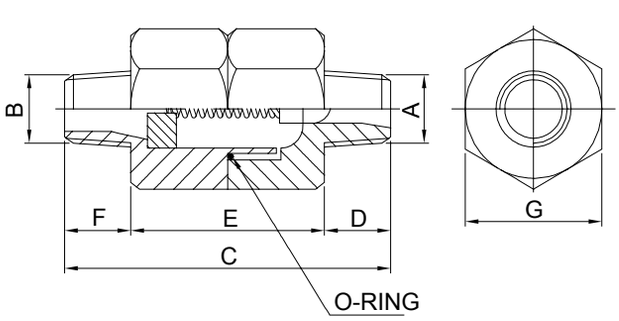
※SPECIFICATION

Model	A (Rc/PT)	B	C	D	E	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Pres. MPa(Psi)	Weight (Kg)
CE-03	3/8"	66(2.60)	23(0.91)	53(2.09)	13(0.51)	40(10.6)	21(3045)	0.14
CE-04	1/2"	70(2.76)	29(1.14)	55(2.17)	15(0.59)	60(15.9)		0.24

【CK】

※GRAPHIC SYMBOL

CK



※MODEL NUMBER DESIGNATION

UNIT: M.M.(INCHES)

CK	03	05	(90)
SERIES NO. CV: 21 MPa(3000 PSI) CIT: 31.5(4000 PSI)	VALVE SIZE 03: 3/8" 04: 1/2"	CRACKING PRESSURE MPa(psi) 05: 0.05(6) 50: 0.5(70)	DESIGN NO. OMIT: "Rc/PT" THREAD 90: "PS" THREAD

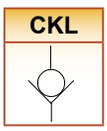
※SPECIFICATION

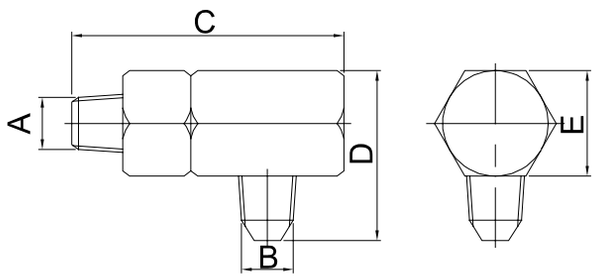
Model	A (PT)	B (PS)	C	D	E	F	G	O-Ring	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Pres. MPa(Psi)	Weight (Kg)
CK-03	3/8"	3/8"	70(2.76)	15(0.59)	40(1.57)	15(0.59)	26(1.02)	AS-568-017	40(10.6)	21(3045)	0.18
CK-04	1/2"	1/2"		19(0.75)	35(1.38)	16(0.63)	32(1.26)	AS-568-024	60(15.9)		0.24

A

90° TYPE【CKL】

※GRAPHIC SYMBOL





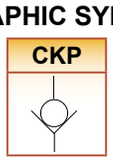
※SPECIFICATION

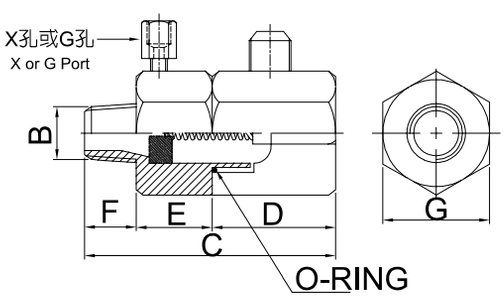
UNIT: M.M.(INCHES)

Model	A (Rc/PT)	B (PS)	C	D	E	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Pres. MPa(Psi)	Cracking Pres. MPa(Psi)	Weight (Kg)
CKL-03	3/8"	3/8"	72(2.83)	46(1.81)	26(1.02)	40(10.6)	21(3045)	0.05(6)	0.22
CKL-04	1/2"	1/2"	73(2.87)	53(2.09)	32(1.26)	60(15.9)			0.32
CKL-04A	3/8"	1/2"	73(2.87)	53(2.09)	32(1.26)	60(15.9)			0.32

90° TYPE【CKP】

※GRAPHIC SYMBOL



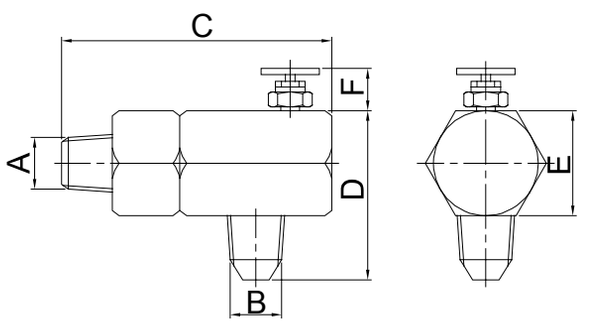


※SPECIFICATION

UNIT: M.M.(INCHES)

Model	A (PT)	B (PS)	C (PT)	D	E	F	G	L	O-Ring	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Pres. MPa(Psi)	Cracking Pres. MPa(Psi)	Weight (Kg)
CKP-04	1/2"	1/2"	1/4"	45(1.77)	36(1.42)	19(0.75)	32(1.26)	100(3.93)	AS-568-024	60(15.9)	**21(3045)**	**0.05(6)**	0.32

WITH STOP VAVLE【CKLG】



※SPECIFICATION

UNIT: M.M.(INCHES)

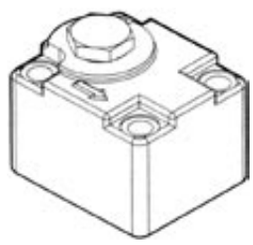
Model	A (PT)	B (PS)	C (PT)	D	E	F	L	Max. Flow (ℓ/min)/(U.S.GPM)	Max. Pres. MPa(Psi)	Cracking Pres. MPa(Psi)	Weight (Kg)
CKLG-03	3/8"	3/8"	1/4"	46(1.81)	26(1.02)	23(0.91)	90(3.54)	40(10.6)	21(3045)	0.05(6)	0.32
CKLG-04	1/2"	1/2"	1/4"	53(2.09)	32(1.26)	23(0.91)	92(3.62)	60(15.9)			0.48
CKLG-04A	3/8"	1/2"	1/4"	53(2.09)	32(1.26)	23(0.91)	92(3.62)	60(15.9)			0.48

【CRG-03, 06, 10-(ISO)】

A

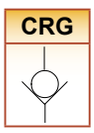
※SPECIFICATION

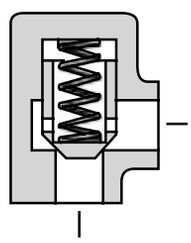
Model	Max. Oper. Pres. (MPa)/(PSI)	Max. Flow (ℓ/min)/(U.S.GPM)	Cracking Pres. (MPa)/(PSI)	Weight (kg)	
				CRG	CRG-ISO
CRG-03-(ISO)	25(3630)	30(7.9)	0.05(7.25)	2	2.2
CRG-06-(ISO)		80(21.1)	0.3(43.5)	4	3.2
CRG-10-(ISO)		200(52.9)	0.5(72.5)	8	6.5



CRG-03

※GRAPHIC SYMBOL





※ACCESSORIES

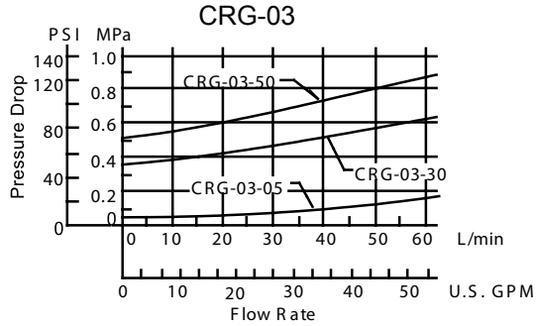
Model	Socket Head Screw Cap				O Ring		
	European Design Std.	North America Design Std.					
CRG-03-ISO	M10 × 45 Lg.	3/8-16 UNC × 1-3/4 Lg.	4	Pcs	P22A	2	Pcs
CRG-06-ISO	M10 × 50 Lg.	3/8-16 UNC × 2 Lg.	4	Pcs	P29	2	Pcs
CRG-10-ISO	M10 × 55 Lg.	3/8-16 UNC × 2-1/4 Lg.	6	Pcs	P36	2	Pcs
CRG-03	M10 × 60 Lg.	---		Pcs	P22A	2	Pcs
CRG-06	M16 × 55 Lg.	---		Pcs	P29	2	Pcs
CRG-10	M20 × 70 Lg.	---		Pcs	P36	2	Pcs

※MODEL NUMBER DESIGNATION

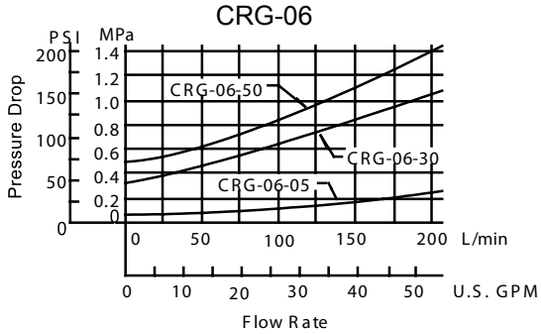
CR	G	03	05	ISO	(90)
SERIES NO.	CONNECTION TYPE G: SUBPLATE TYPE T: THREADED TYPE	PORT SIZE 03: 3/8", ISO 5781-AG-06-2-A 06: 3/4", ISO 5781-AH-08-2-A 10: 1-1/4", ISO 5781-AJ-10-2-A	CRACKING PRESSURE MPa(psi) 05: 0.05(6) 30: 0.3(50) 50: 0.5(70)	MOUNTING INTERFACE OMIT: NONE ISO STD. ISO: ISO STANDARD	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

※PERFORMANCE CURVE

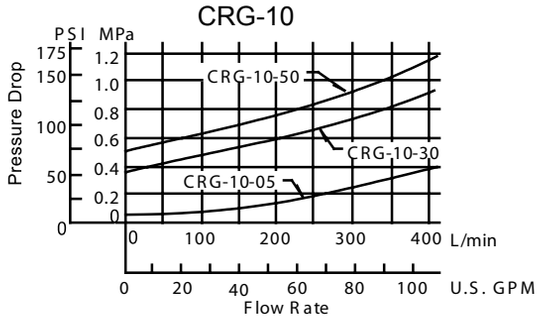
CRG-03



CRG-06

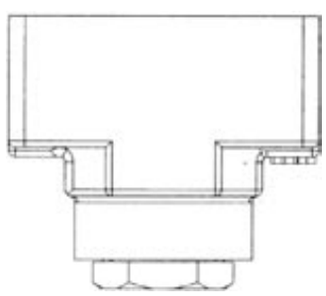


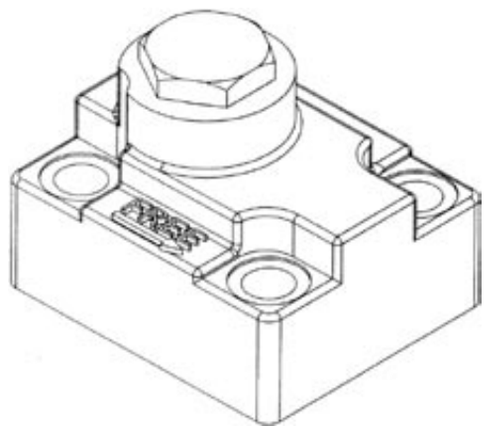
CRG-10

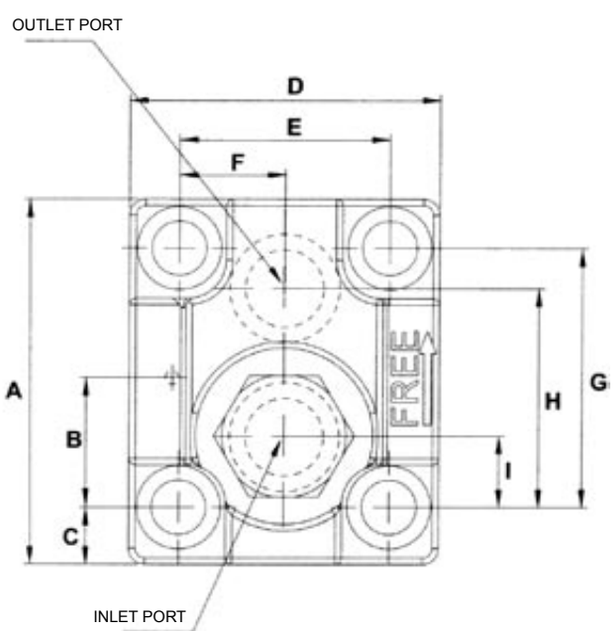


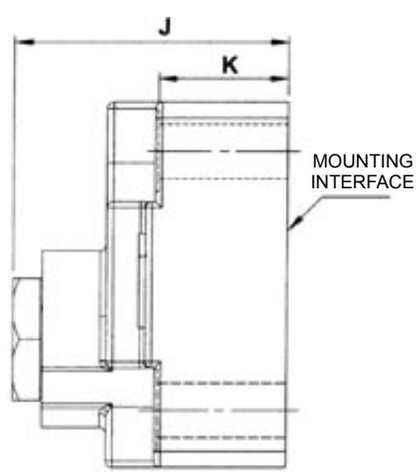
DIMENSIONS

CRG SERIES







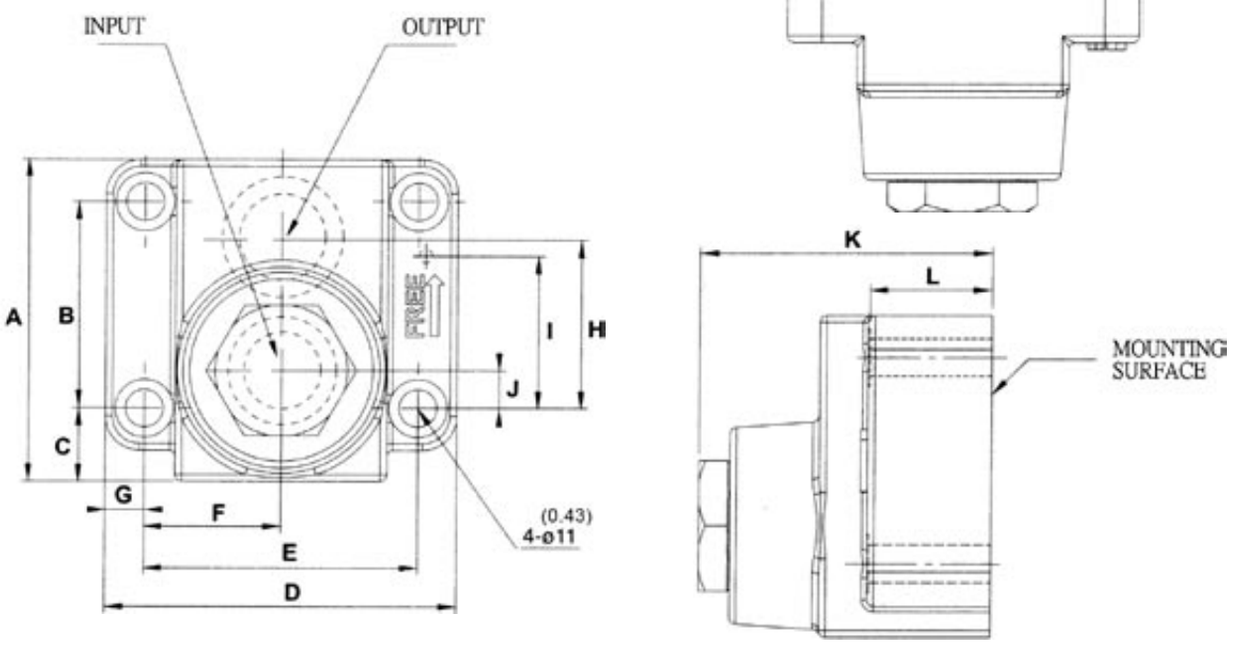


UNIT: M.M.(INCHES)

MODEL	A	B	C	D	E	F	G	H	I	J	K
CRG-03	80(3.14)	30.1(1.18)	10(0.39)	68(2.67)	47.6(1.87)	23.8(0.93)	60(2.36)	47.6(1.87)	12.7(0.50)	65.5(2.57)	49(1.92)
CRG-06	114(4.48)	40.5(1.59)	17.8(0.70)	96(3.77)	65.1(2.56)	32.6(1.28)	80.9(3.18)	68.2(2.68)	22.2(0.87)	85(3.34)	40(1.57)
CRG-10	131(5.15)	46(1.81)	19.5(0.76)	129(5.07)	92.1(3.62)	46.1(1.81)	92.1(3.62)	71.4(2.81)	20.1(0.79)	100(3.93)	51(2.00)

DIMENSIONS

CRG-ISO

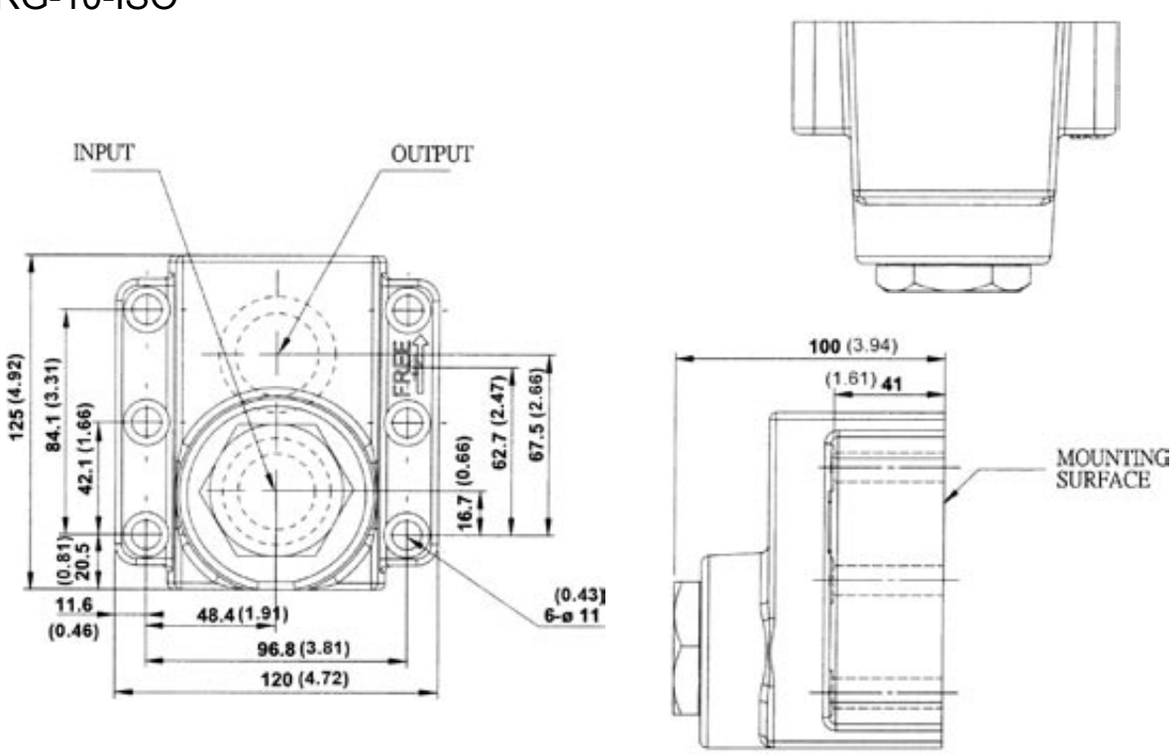


MODEL	A	B	C	D	E	F	G	H	I	J	K	L
CRG-03-ISO	73(2.87)	42.9(1.68)	18(0.70)	89(3.50)	66.7(2.62)	33.4(1.31)	11.2(0.44)	35.7(1.40)	31.8(1.25)	7(0.27)	68(2.67)	33(1.29)
CRG-06-ISO	94(3.70)	60.3(2.37)	21.5(0.84)	102(4.01)	79.4(3.12)	39.7(1.56)	11.3(0.44)	49.2(1.93)	44.5(1.75)	11.1(0.43)	85(3.34)	35(1.37)

UNIT: M.M.(INCHES)

DIMENSIONS

CRG-10-ISO



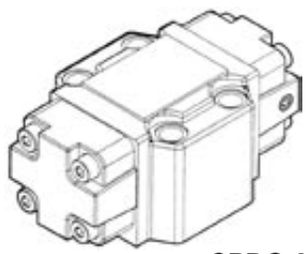
UNIT: M.M.(INCHES)

A

【CPDG, CPDT, CPDF】

※SPECIFICATION

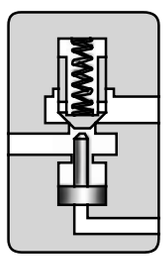
Model	Max. Oper. Pres. (MPa)/(PSI)	Max. Flow (ℓ/min)/(U.S.GPM)	Cracking Pres. (MPa)/(PSI)	Weight (kg)		
				CPDG	CPDT	CPDF
CPD※-03	25(3630)	50(13.2)	0.05(7.25) 0.5(72.5)	5	3	---
CPD※-06		125(33)		6.5	5.8	---
CPD※-10		315(83.2)		12	11.4	11.4
CPD※-16		500(132)		---	---	30



CPDG-03

※GRAPHIC SYMBOL

INTERNAL DRAIN TYPE	EXTERNAL DRAIN TYPE
	



※ACCESSORIES

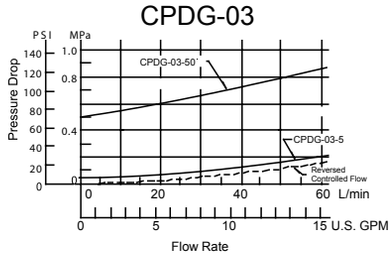
Model	Socket Head Screw Cap				O Ring (Flange)					
	European Design Std.	North America Design Std.								
CPDG-03	M10 × 45 Lg.	3/8-16 UNC × 1-3/4 Lg.	4	Pcs	P9	2	Pcs	P18	2	Pcs
CPDG-06	M10 × 50 Lg.	3/8-16 UNC × 2 Lg.	4	Pcs	P9	2	Pcs	P25	2	Pcs
CPDG-10	M10 × 55 Lg.	3/8-16 UNC × 2-1/4 Lg.	6	Pcs	P9	2	Pcs	P38	2	Pcs
CPDF-16	M16 × 50 Lg.	---	8	Pcs	(2")	2	Pcs	G65	2	Pcs

※MODEL NUMBER DESIGNATION

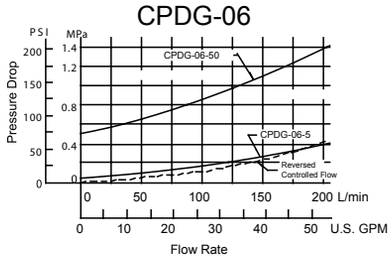
CPD	G	03	(E)	05	(90)
SERIES NO. CP: PILOT CONTROLLED CHECK VALVE CPD: DECOMPRESSION TYPE PILOT CONTROLLED CHECK VALVE	CONNECTION TYPE G: SUBPLATE TYPE T: THREADED TYPE F: FLANGE TYPE	PORT SIZE 03: 3/8", ISO 5781-AG-06-2-A 06: 3/4", ISO 5781-AH-08-2-A 10: 1-1/4", ISO 5781-AJ-10-2-A 16: 2"	OMIT: INTERNAL DRAIN E: EXTERNAL DRAIN	CRACKING PRESSURE MPa(psi) 05: 0.05(6) 50: 0.5(70)	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)

※PERFORMANCE CURVE

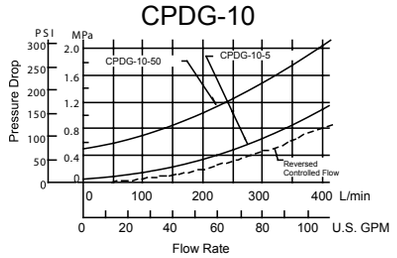
CPDG-03



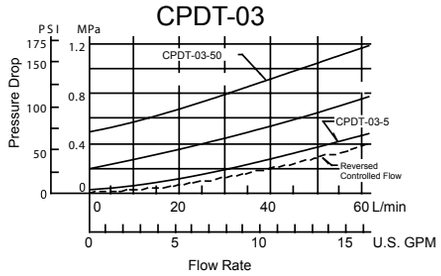
CPDG-06



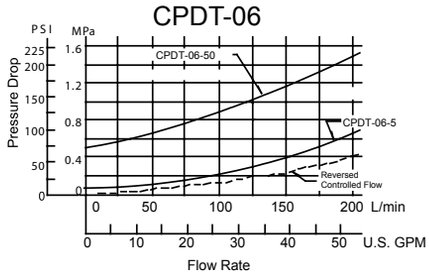
CPDG-10



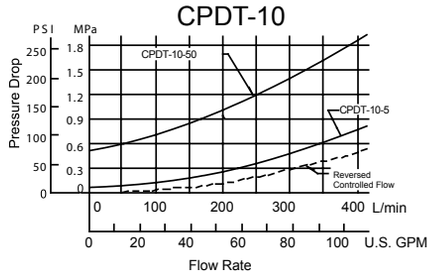
CPDT-03



CPDT-06

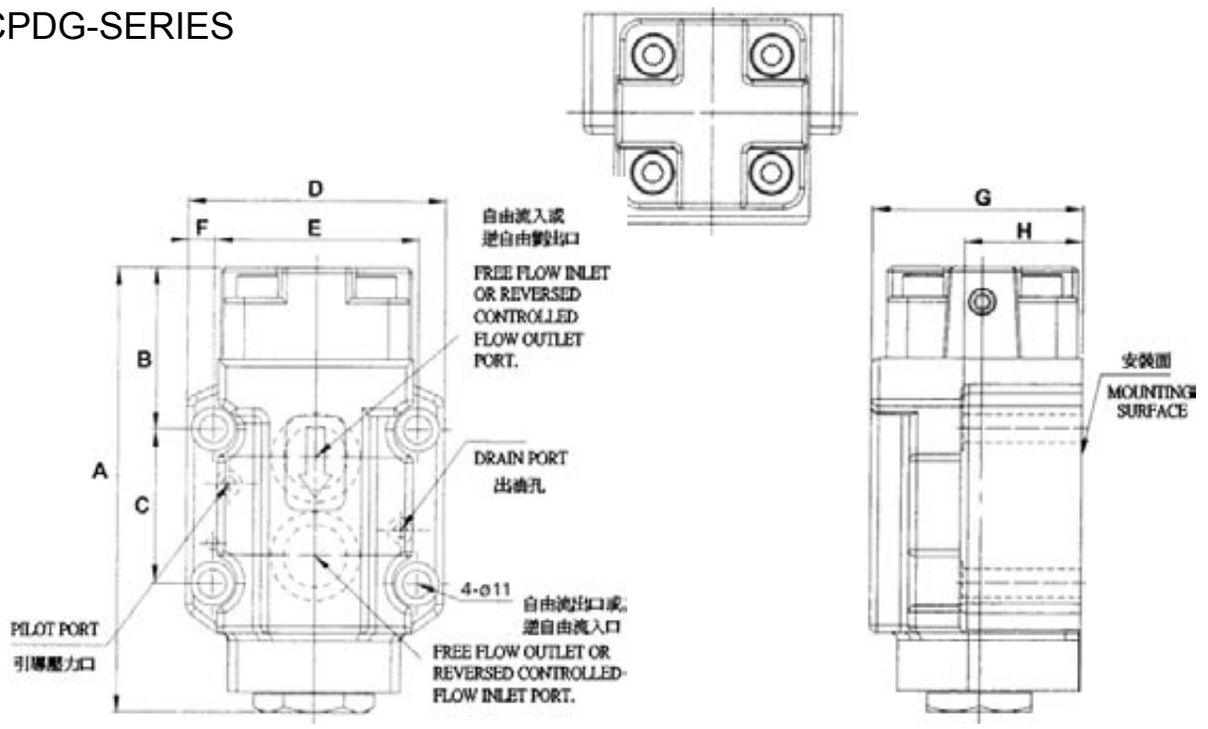


CPDT-10



DIMENSIONS

CPDG-SERIES

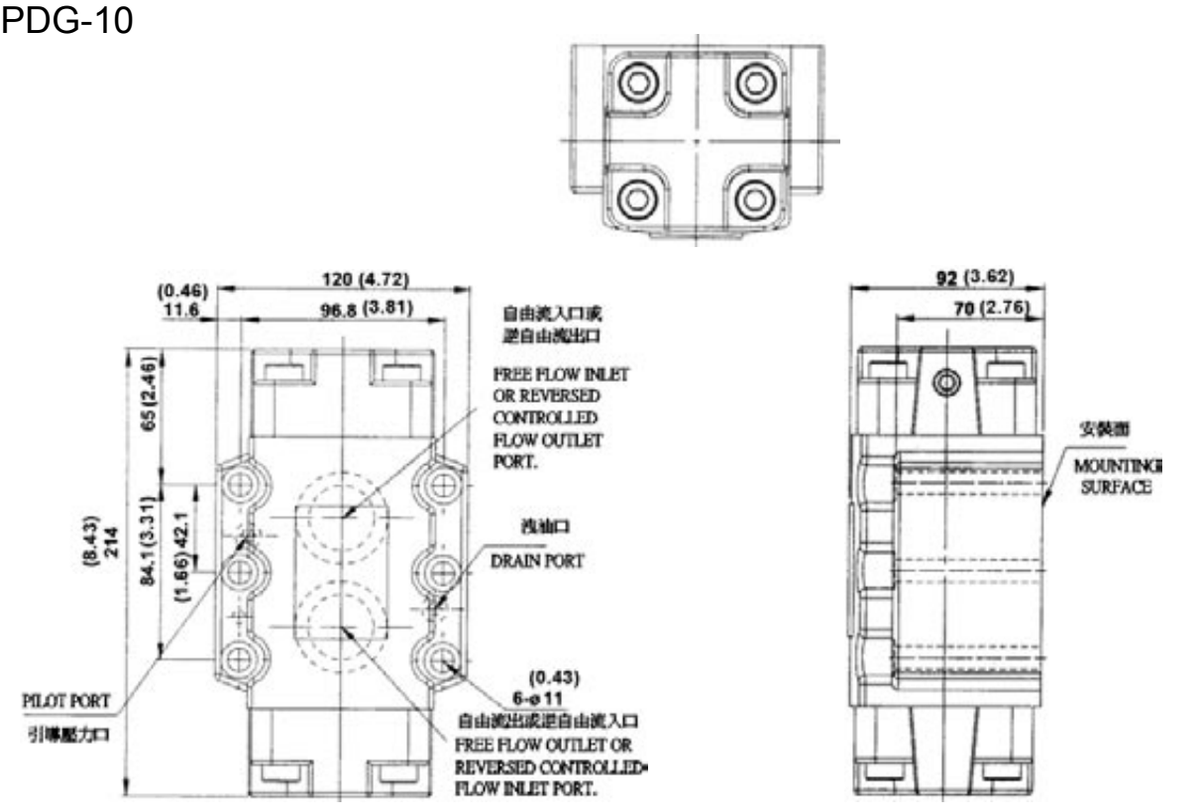


MODEL	A	B	C	D	E	F	G	H
CPDG-03	148(5.82)	52.6(2.07)	42.9(1.68)	91(3.58)	66.7(2.62)	12.2(0.48)	70(2.75)	61(2.40)
CPDG-06	174(6.85)	63.4(2.49)	60.3(2.37)	100(3.93)	79.4(3.12)	10.3(0.40)	82(3.22)	46(1.81)
CPDG-03-IRON	123(4.84)	37.6(1.48)	42.9(1.68)	85(3.34)	66.7(2.62)	9.2(0.36)	45(1.77)	13(0.51)

UNIT: M.M.(INCHES)

DIMENSIONS

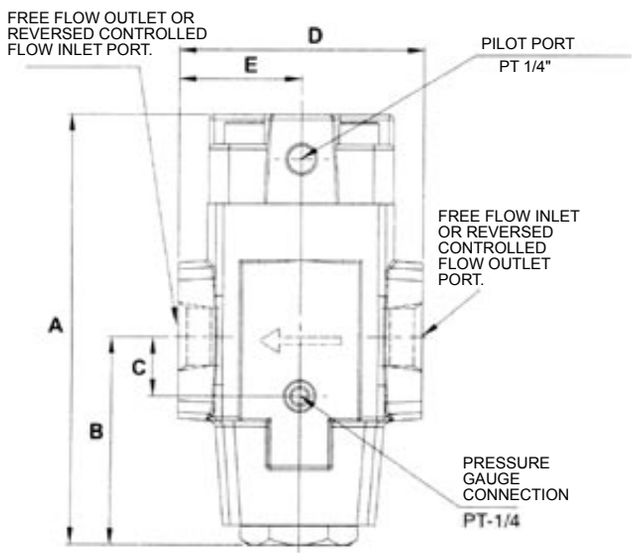
CPDG-10

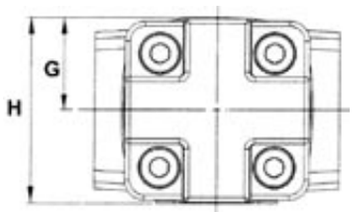


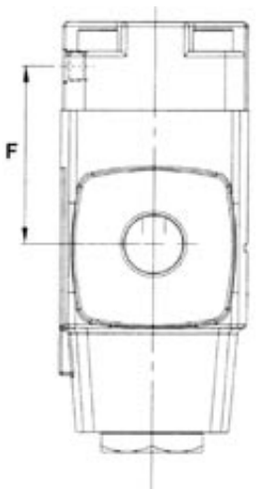
UNIT: M.M.(INCHES)

DIMENSIONS

CPDT-SERIES





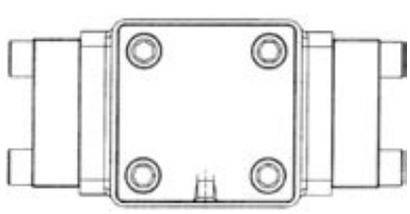


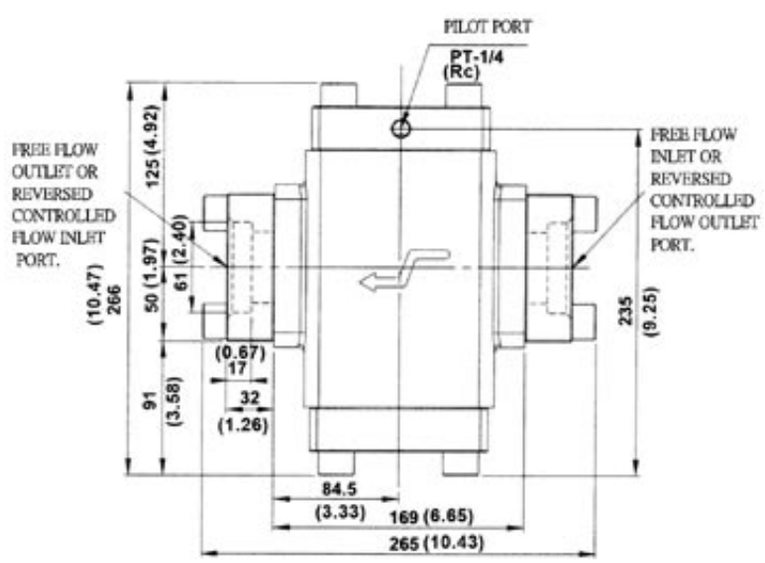
MODEL	A	B	C	D	E	F	G	H
CPDT-03	148(5.82)	74(2.91)	19(0.74)	80(3.14)	40(1.57)	59(2.32)	62(2.44)	31(1.22)
CPDT-06	174(6.85)	84(3.30)	24(0.94)	98(3.85)	49(1.92)	72(2.83)	75(2.95)	37.5(1.47)
CPDT-10	200(7.87)	90.5(3.56)	22.5(0.88)	140(5.51)	70(2.75)	92.5(3.64)	92(3.62)	46(1.81)

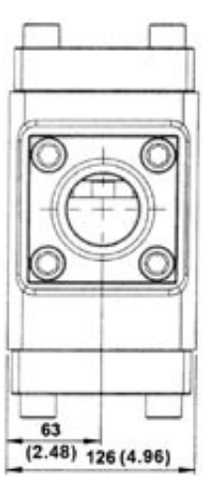
UNIT: M.M.(INCHES)

DIMENSIONS

CPDF-16







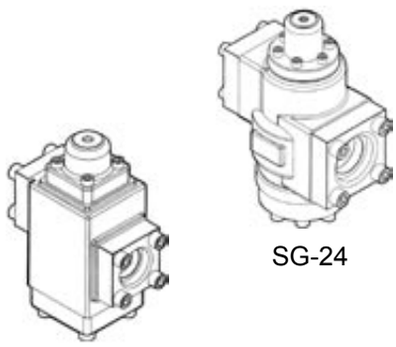
UNIT: M.M.(INCHES)

【SG-16, 24, 32】

A

※MODEL NUMBER DESIGNATION

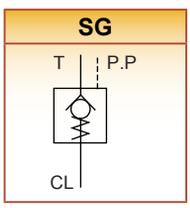
SG	24	R	(90)
SERIES NO.	VALVE SIZE 16: 2" 24" 3" 32: 4"	MOUNTING ANGLE NONE: 180° R: ANGLE(90°) L: MOUNTING 270°	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)



SG-24

SG-16

※GRAPHIC SYMBOL



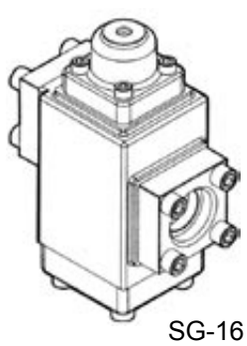
※SPECIFICATION

Model	Max. Oper. Pres. (MPa)/(PSI)	Rated. Flow (ℓ/min)/(U.S.GPM)		Oper. Pres. (MPa)/(PSI)		Cracking Pres. (MPa)/(PSI)	Weight (kg)
SG-16	25(3630)	260(6.9)	400(105.7)	260±100m(6.9±26.4)	400±100m(105.7±26.4)	0.12	30
SG-24		600(158.5)	900(237.8)	600±150m(158.5±39.6)	900±150m(237.8±39.6)	0.14	54
SG-32		1100(290.6)	1600(422.7)	1100±300m(290.6±79.2)	1600±300m(422.7±79.2)	0.16	100
SG-32-R							108

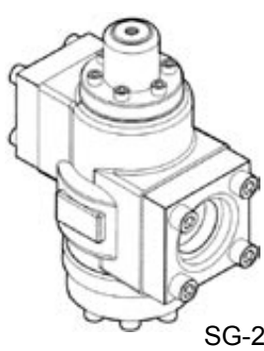
※ACCESSORIES

Model	Socket Head Screw Cap				Flange			O Ring		
	European Design Std.	North America Design Std.								
SG-16	M16 × 50 Lg.	10-24 UNC × 1-3/4 Lg.	8	Pcs	2"	2	Pcs	G65	2	Pcs
SG-24	M16 × 60 Lg.		4	Pcs	2-1/2"	1	Pcs	G85	2	Pcs
	M20 × 60 Lg.		4	Pcs	3"		Pcs			Pcs
SG-32	M16 × 50 Lg.		6	Pcs	3-1/2"		Pcs	G120	2	Pcs
	M20 × 60 Lg.		8	Pcs	4"		Pcs			Pcs
	M10 × 35 Lg.		4	Pcs	3/4"		Pcs	G30	1	Pcs

※PRODUCTS LIST



SG-16



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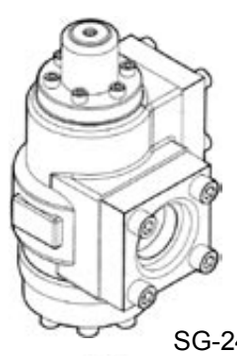
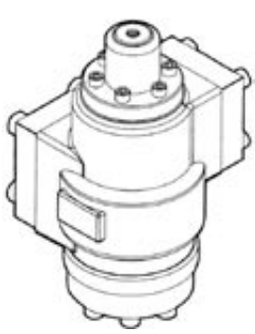


SG-24-R



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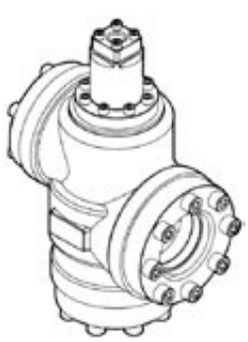

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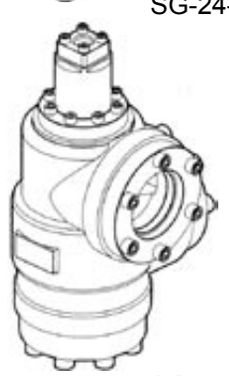
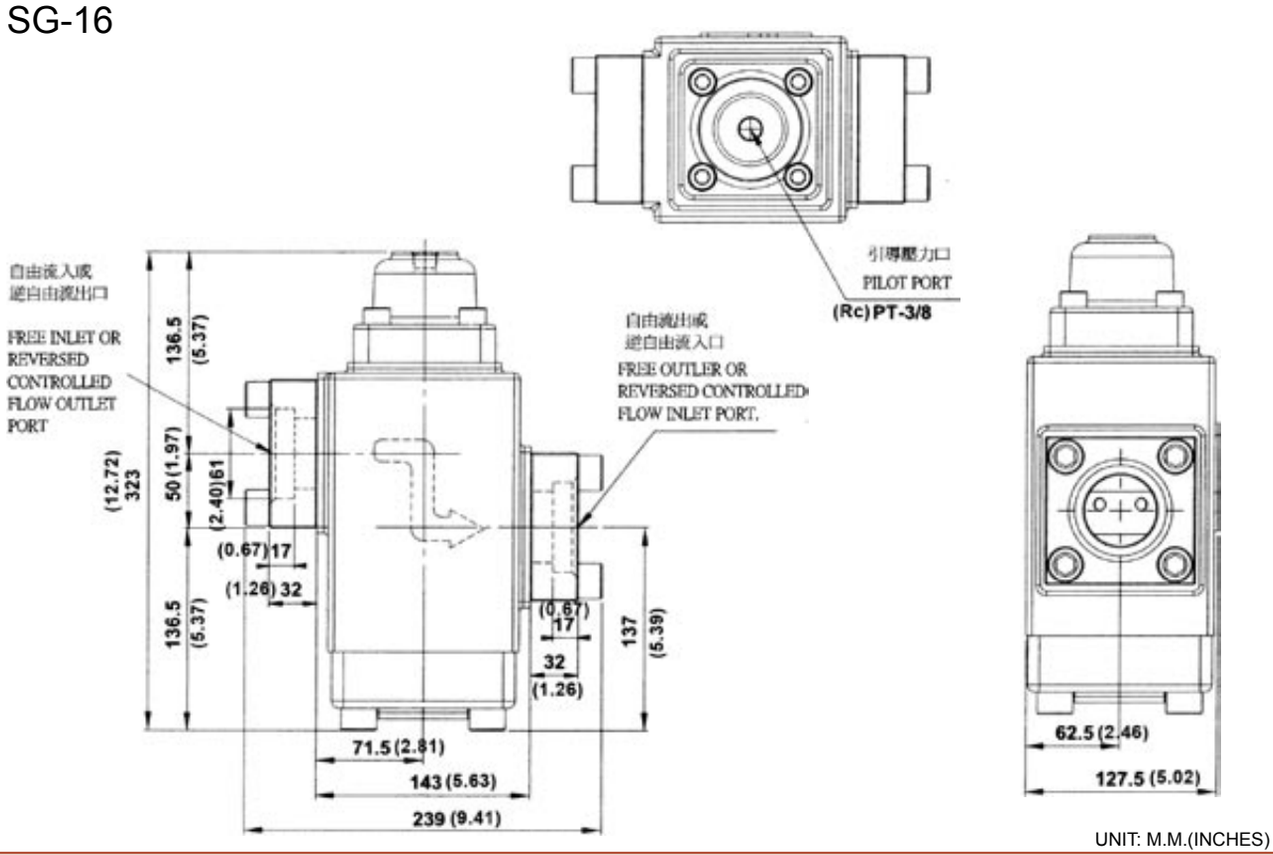


SG-32-R

A

DIMENSIONS

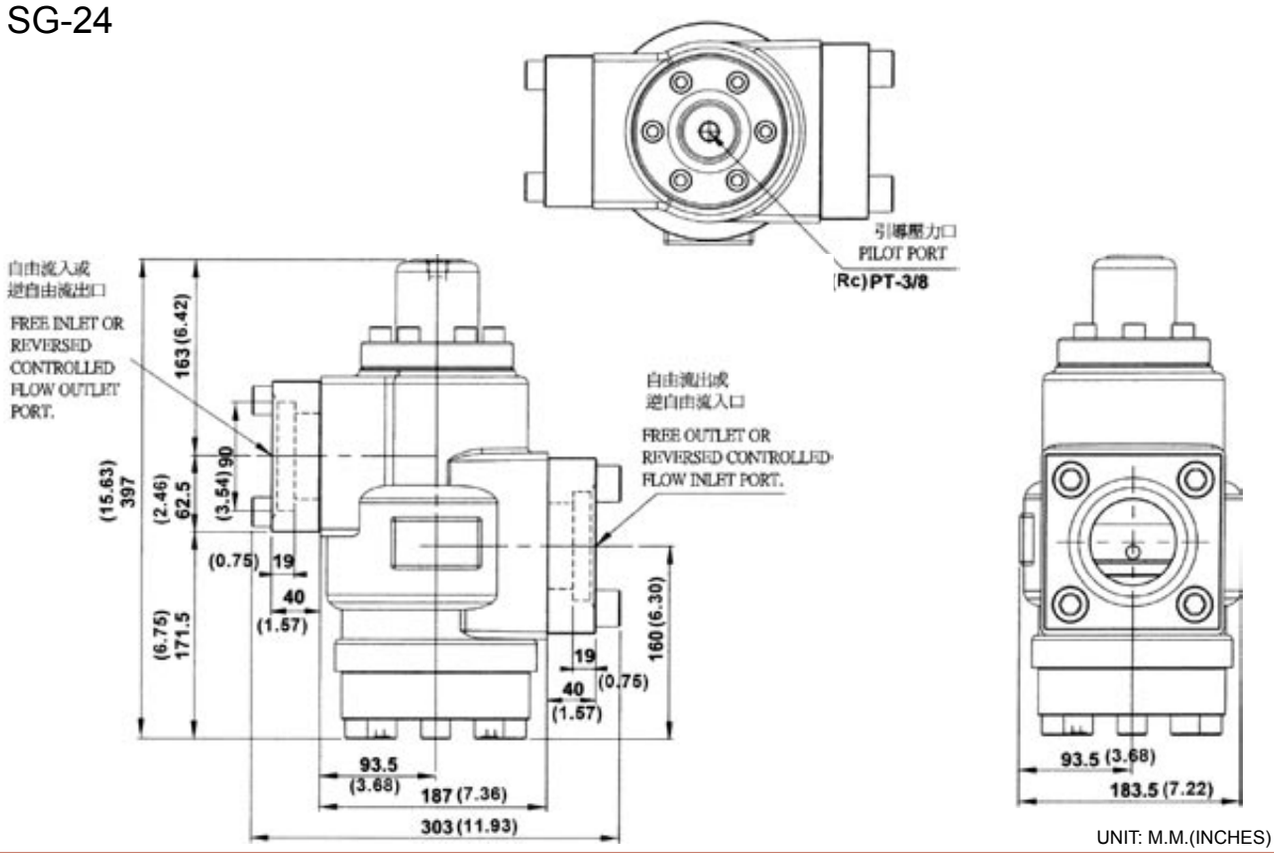
SG-16



UNIT: M.M.(INCHES)

DIMENSIONS

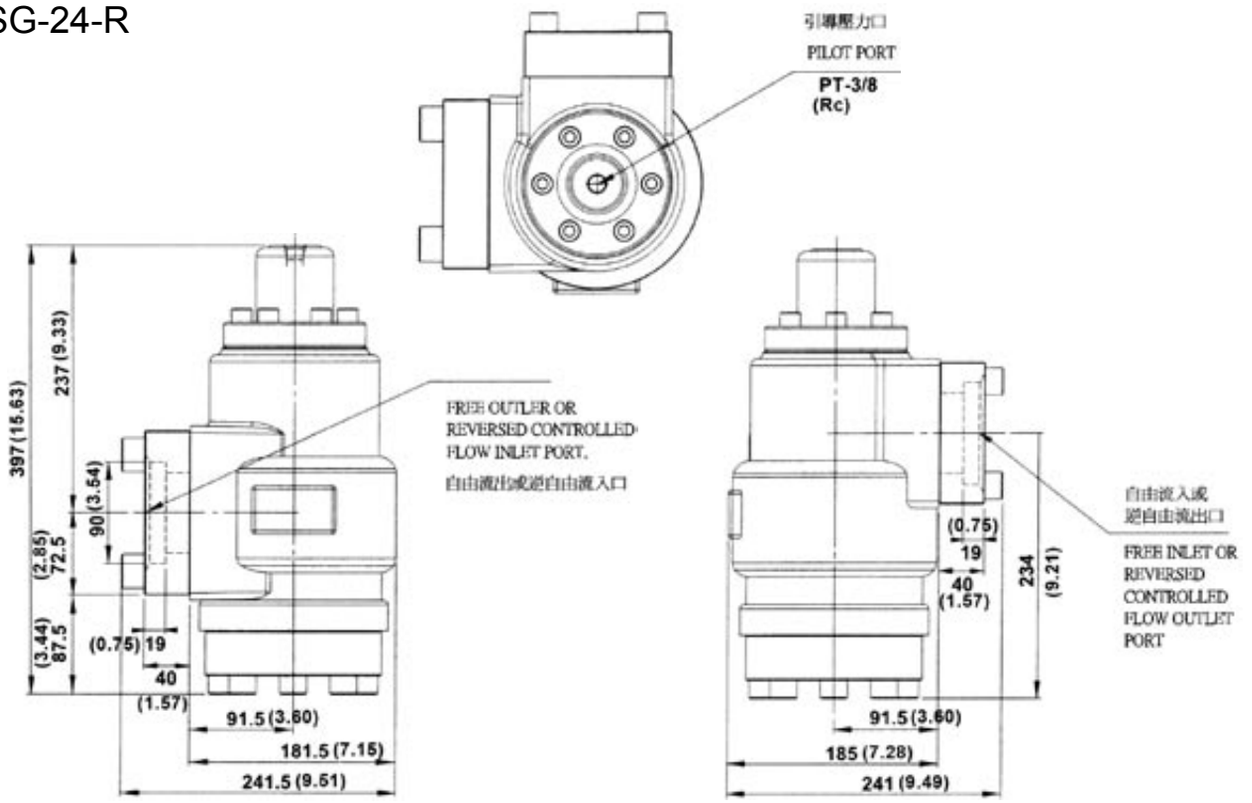
SG-24



UNIT: M.M.(INCHES)

DIMENSIONS

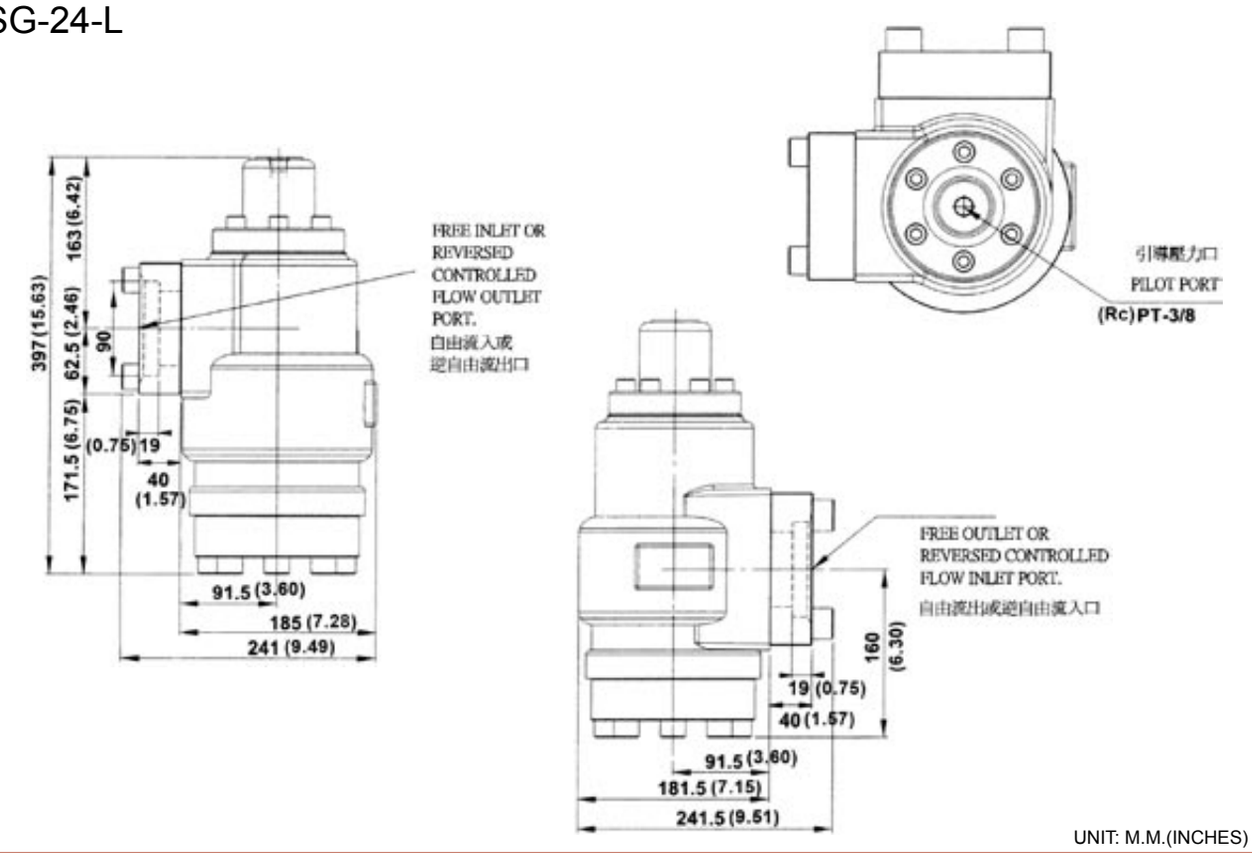
SG-24-R



UNIT: M.M.(INCHES)

DIMENSIONS

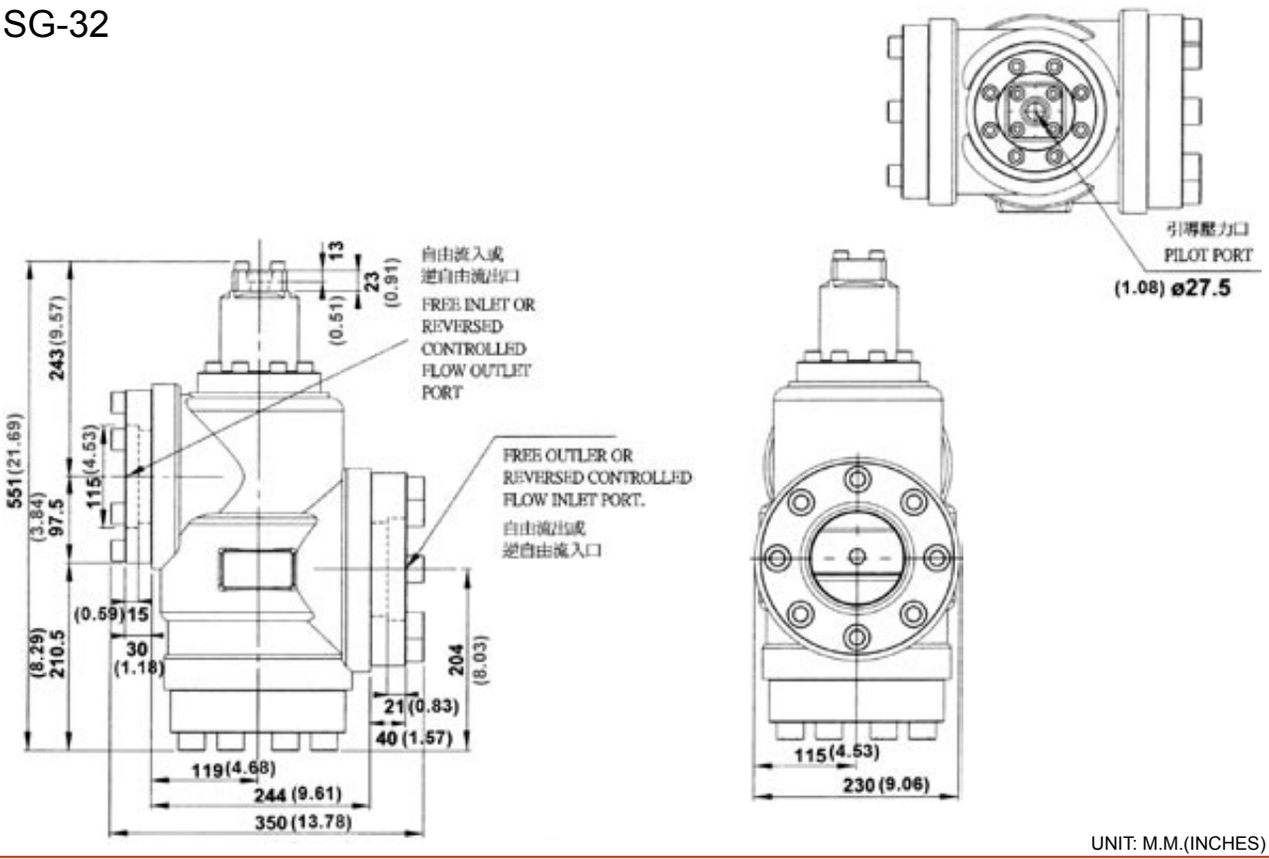
SG-24-L



UNIT: M.M.(INCHES)

DIMENSIONS

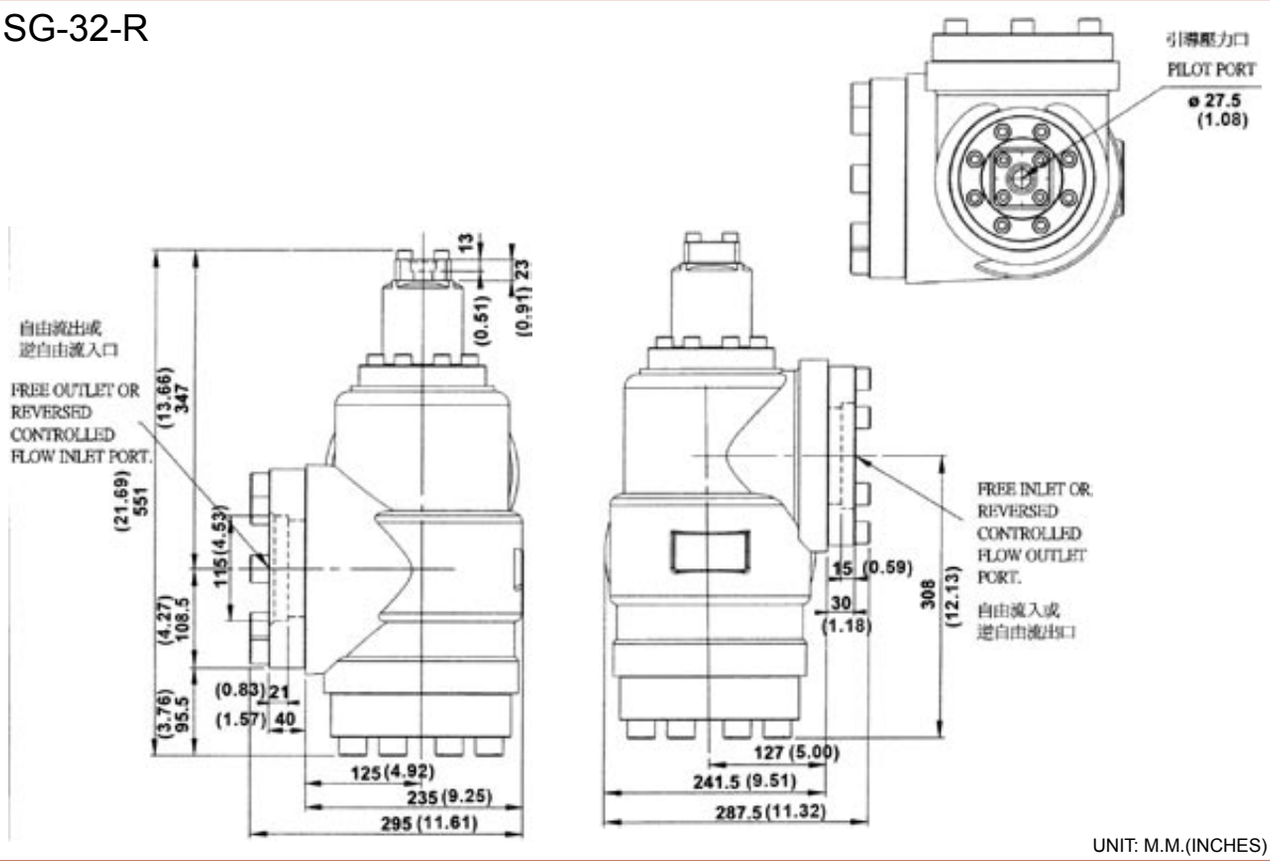
SG-32



UNIT: M.M.(INCHES)

DIMENSIONS

SG-32-R



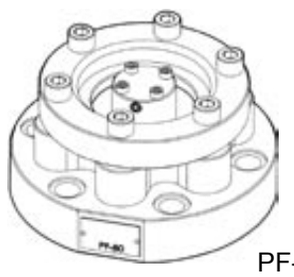
UNIT: M.M.(INCHES)

A

【PF】

※MODEL NUMBER DESIGNATION

PF	80	FT	(90)
SERIES NO.	VALVE SIZE(80: 3" 90: 3-1/2" 100: 4" 125: 5: 150: 6"	FLANGE KITS FPT: WITH P,T PORT FLANGE FP: WITH P PORT FLANGE FT: WITH T PORT FLANGE	DESIGN NO. OMIT: DIN 912 BOLTS 90: UNC BOLTS (NORTH AMERICA)



PF-80

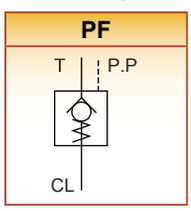
※SPECIFICATION

Model	Max. Oper. Pres. (MPa)/(PSI)	Max. Flow (ℓ/min)/(U.S.GPM)	Cracking Pres. (MPa)/(PSI)	Weight (kg)
PF-80	25(3630)	400(105.7)	0.12	8
PF-90		650(171.7)	0.12	11.5
PF-100		1000(264.2)	0.12	14.5
PF-125		1600(422.7)	0.12	23
PF-150		2500(660.5)	0.13	37

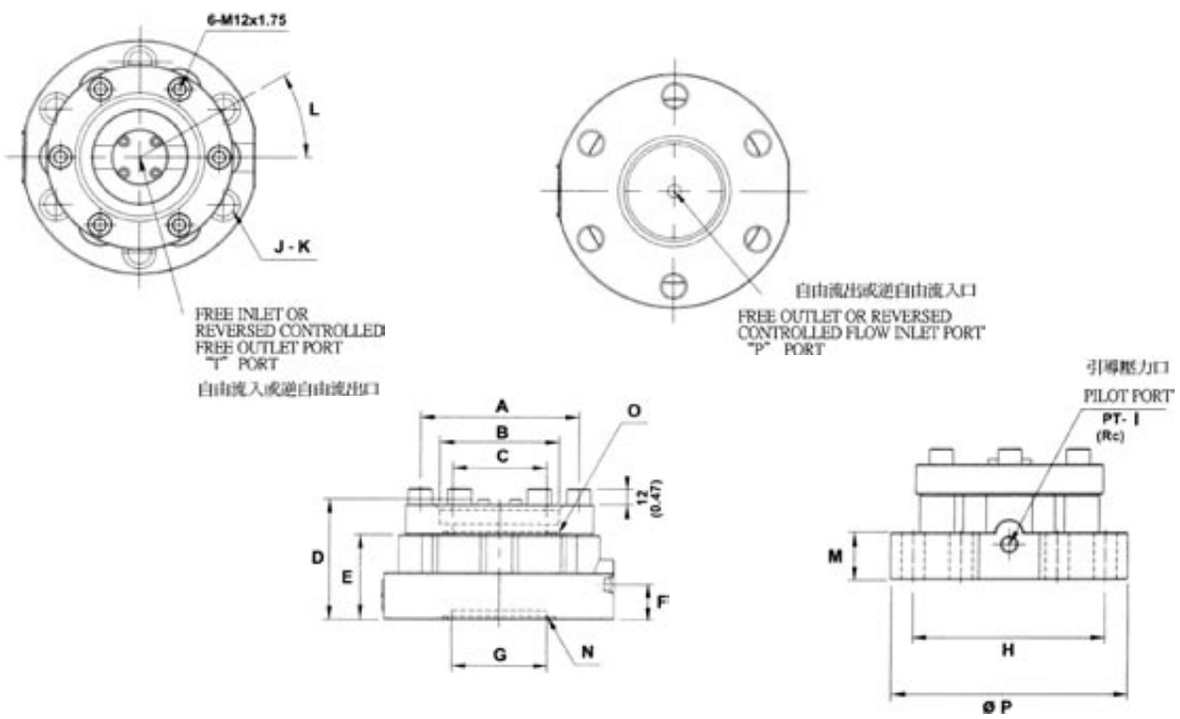
※ACCESSORIES

Model	Socket Head Screw Cap								O Ring					
	FP Flange Mounting			Weight (kg)	FT Flange Mounting			Weight (kg)						
PF-80	M16 × 55 Lg.	6	Pcs	6.5	M12 × 40 Lg.	6	Pcs	2.3	G80	1	Pcs	P4	1	Pcs
PF-90	M18 × 65 Lg.	6	Pcs	9	M12 × 40 Lg.	6	Pcs	2.8	G100	1	Pcs	P5	1	Pcs
PF-100	M20 × 70 Lg.	6	Pcs	14.5	M12 × 40 Lg.	6	Pcs	2.8	G115	1	Pcs	P5	1	Pcs
PF-125	M20 × 80 Lg.	12	Pcs	25.2	M12 × 50 Lg.	6	Pcs	4	G140	1	Pcs	P6	1	Pcs
PF-150	M20 × 95 Lg.	16	Pcs	28	M16 × 50 Lg.	8	Pcs	8	G180	1	Pcs	P8	1	Pcs

※GRAPHIC SYMBOL



※DIMENSIONS



UNIT: M.M.(INCHES)

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
PF-80	120(4.72)	90(3.54)	71(2.79)	92(3.62)	65(2.55)	27(1.06)	72(2.83)	146(5.74)	PT 1/4"	6(0.23)	17.5(0.68)	30(1.18)	33(1.29)	G80	G85	180(7.08)
PF-90	135(5.31)	101.5(3.99)	89(3.50)	119(4.68)	72(2.83)	27(1.06)	88(3.46)	165(6.49)	PT 1/4"	6(0.63)	17.5(0.68)	30(1.18)	44(1.73)	G100	G100	200(7.87)
PF-100	148(5.82)	115.5(4.54)	108(4.25)	133(5.23)	74(2.91)	32(1.25)	106(4.17)	191(7.51)	PT 1/4"	6(0.23)	17.5(0.68)	30(1.18)	44(1.73)	G115	G115	230(9.05)
PF-125	175(6.88)	141(5.13)	130.5(5.13)	165(6.49)	85(3.34)	43(1.69)	130(5.11)	23(9.05)	PT 1/4"	12(0.47)	22(0.87)	15(0.59)	52(2.04)	G140	G140	270(10.5)
PF-150	200(7.87)	167(6.57)	155(6.10)	204(8.03)	105(4.13)	45(1.77)	168(6.61)	260(10.2)	PT 3/8"	16(0.62)	22(0.87)	11.25(0.44)	64(2.51)	G180	G180	300(11.8)