



SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE

SW-G06 SERIES



FEATURES

- Armature operates in system oil. Impact is decreased and cushioning added, making noise lowered & solenoid life Prolonged.
- Wet armature solenoid eliminates push pin seal, reducing seal wear or leakage for longer valve life.
- Molded coil gives maximum insulating properties. They are protected by a special resin and impervious to moisture and dirt for ease of maintenance.
- Plug-in solenoid, easy to change coil.
- Change of pilot and drain can be easily accomplished by plugging or unplugging.
- Spool is designed to avoid creating jet flow or turbulence under high pressure and flow.

SW - G06 - C2 - ET - A220 - 10 - AB - K

K: WITH KNOB

NO CODE: WITHOUT KNOB

NO CODE: STANDARD TYPE

AB: WITH STROKE ADJUSTMENT BOTH ENDS

A: WITH STROKE ADJUSTMENT PORT "A" END

B: WITH STROKE ADJUSTMENT PORT "B" END

WIRING:

10: WITH JOINTION BOX WITH INDICATING LIGHT

20: HIRSCHMANN TYPE WITH INDICATING LIGHT

COIL VOLTAGE:

A240: AC 240V, 60Hz; AC220V, 50Hz

A220: AC 220V, 60Hz; AC200V, 50Hz R 220: AC220V 50/60Hz

A120: AC 120V, 60Hz; AC110V, 50Hz

A110: AC 110V, 60Hz; AC100V, 50Hz R 110: AC110V 50/60Hz

D12: DC12V

D24: DC24V

T: EXTERNAL DRAIN (See page 2/8)

NO CODE: STANDARD INTERNAL DRAIN TYPE

E: EXTERNAL PILOT (See page 2/8)

NO CODE: FOR STANDARD INTERNAL PILOT TYPE

SPOOL TYPE (See Application Common Data)

NOMINAL SIZE: 3/4" (D08)

SUBPLATE MOUNTED

HIGH PRESSURE HIGH FLOW SONENOLD DIRECTIONAL VALVE

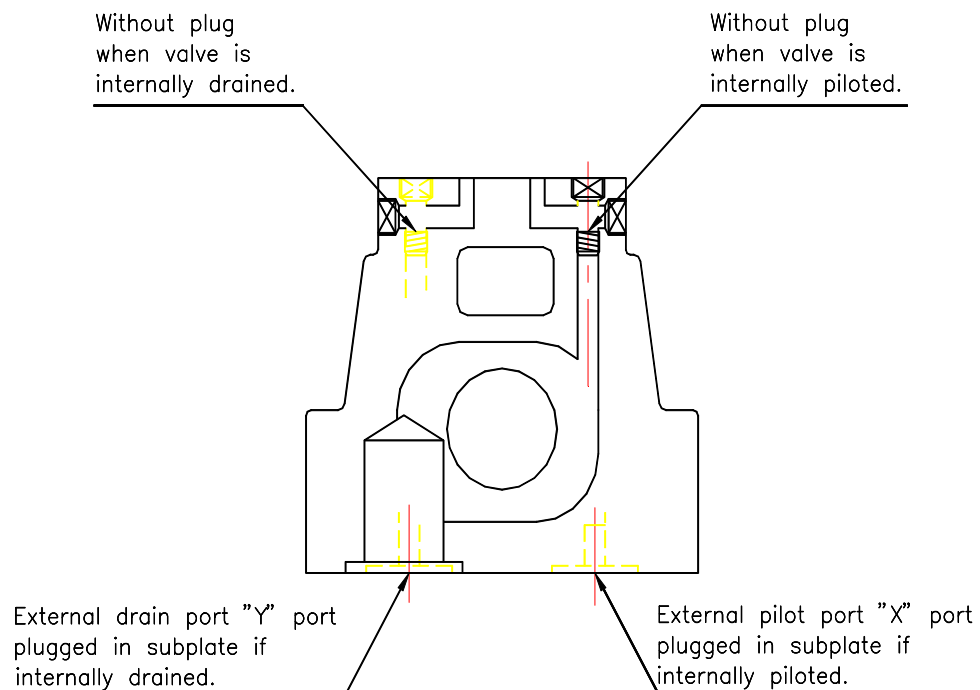
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SPECIFICATIONS

Maximum operating pressure	315 kgf/cm ² (4500 PSI)
Maximum tank line back pressure	210 kgf/cm ² (3000 PSI) externally drained
	140 kgf/cm ² (2000 PSI) internally drained
Pilot pressure	Min. 3.5 kgf/cm ² (50 PSI)
	Max. 250 kgf/cm ² (3550 PSI)
Maximum flow	500 LPM (133 GPM)
Weight	SW-G06-C,D SERIES 12.8 kgs (28 lbs)
	SW-G06-B SERIES 12.5 kgs(27.5 lbs)

OPTION ET





SOLENOID RATINGS

ELECTRIC SOURCE	COIL TYPE	VOLTAGE (V)			CURRENT & POWER AT RATED VOLTAGE		
		SOURCE RATED	Hz	RANGE	IN-RUSH CURRENT (A)	HOLDING CURRENT (A)	WATTAGE
A.C.	A110	AC100V	50	90-110	1.6	0.46	
		AC110V	60	99-121	1.5	0.39	
	A120	AC110V	50	99-121	1.3	0.38	
		AC120V	60	108-132	1.2	0.27	
	A220	AC200V	50	180-220	0.80	0.23	
		AC220V	60	198-242	0.75	0.19	
	A240	AC220V	50	198-242	0.67	0.19	
		AC240V	60	216-264	0.59	0.13	
D.C.	D12	DC12V		10.8-13.2	2.2	2.2	26
	D24	DC24V		21.6-26.4	1.1	1.1	

TECHNICAL DATA:

- Solenoid can be used within – 10% to + 10% of the rated voltage of the coil.
- Withstand voltage 1500 v/sec.
- Insulation resistance over 100MΩ.
- A momentary signal of approx. 0.1 second is required for shifting action.
- Pilot pressure of internally drained valves must always exceed tank port pressure by a minimum of 3.5 kgf/cm² (50 PSI)
Valve must be externally drained if there is a possibility of tank line pressure surges overcoming this differential.
- Open center spools C3, C5, C6, C60 must be externally piloted.

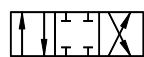
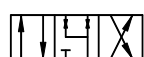
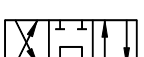
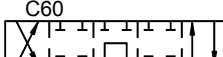
ACCESSORIES:

- Mounting bolt kits are supplied with valve socket head cap screws
M12x60L 6 pieces (1/2"-13UNC-2Bx2 3/8" L) for tightening torque 1000 - 1230 kgf-cm. (886 - 1066 lbs-in).
- O-ring P28 90° 4 pieces, P21 90° 2 pieces.

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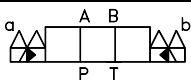
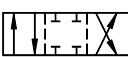
LIST OF SPOOL FUNCTION

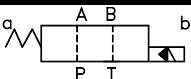
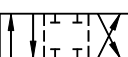
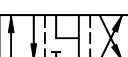
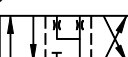
THE MAXIMUM FLOW RATE LPM (GPM) UNDER DIFFERENT PRESSURE kgf/cm ² (PSI)						
SPOOL TYPE NORMAL POSITION	SPRING CENTERED 					
	50kgf/cm ² (735 PSI)	100 kgf/cm ² (1470 PSI)	150 kgf/cm ² (2200 PSI)	210 kgf/cm ² (3000 PSI)	250 kgf/cm ² (3675 PSI)	315 kgf/cm ² (4500 PSI)
C2 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	410(109.3)	310(82.6)
	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
C3 	500(133.0)	500(133.0)	500(133.0)	480(128.0)	460(122.6)	360(96.0)
C4 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	410(109.3)	310(82.6)
	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
C40 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	410(109.3)	310(82.6)
	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
C5 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	420(112.0)	350(93.3)
C6 	500(133.0)	470(125.3)	400(106.6)	350(93.3)	300(80.0)	230(61.3)
C60 	500(133.0)	470(125.3)	425(113.3)	385(102.6)	340(90.6)	280(74.6)
	500(133.0)	470(125.3)	425(113.3)	385(102.6)	340(90.6)	280(74.6)
C7 	500(133.0)	500(133.0)	500(133.0)	480(128.0)	450(120.0)	360(96.0)
C8 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	410(109.3)	310(82.6)
	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
C9 	500(133.0)	500(133.0)	500(133.0)	450(120.0)	410(109.3)	310(82.6)
	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)

NOTE: The upper-side number in table describes the maximum flow for standard type.
The lower-side number in table describes the maximum flow for shock-less type.



LIST OF SPOOL FUNCTION

THE MAXIMUM FLOW RATE LPM (GPM) UNDER DIFFERENT PRESSURE kgf/cm ² (PSI)						
SPOOL TYPE NORMAL POSITION	NO SPRING 					
	50kgf/cm ² (735 PSI)	100 kgf/cm ² (1470 PSI)	150 kgf/cm ² (2200 PSI)	210 kgf/cm ² (3000 PSI)	250 kgf/cm ² (3675 PSI)	315 kgf/cm ² (4500 PSI)
N2 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
N3 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
N4 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
N40 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)

SPOOL TYPE NORMAL POSITION	SPRING OFFSET 					
	50kgf/cm ² (735 PSI)	100 kgf/cm ² (1470 PSI)	150 kgf/cm ² (2200 PSI)	210 kgf/cm ² (3000 PSI)	250 kgf/cm ² (3675 PSI)	315 kgf/cm ² (4500 PSI)
B2 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
B3 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
B4 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)
B40 	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)	500(133.0)

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PRESSURE DROP AND PERFORMANCE CURVES

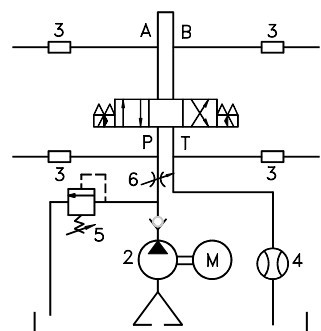
TEST SYSTEMS

1. Testing Valve
2. Pump
3. Pressure sensor
4. Flow sensor
5. Relief valve
6. Throttle valve

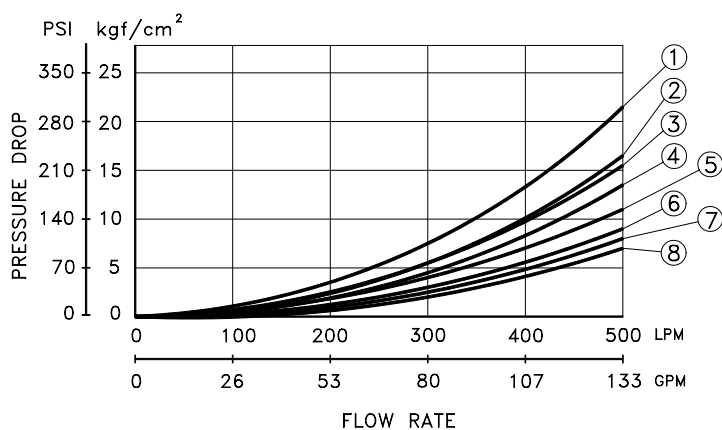
TEST CONDITIONS

Pressure: 70 kgf/cm² (1000 PSI)
Flow Rate: 600 L/min (189 GPM)
Viscosity: 35 cSt

TEST CIRCUIT



PERFORMANCE CURVES



SPOOL TYPE	Pressure Drop Curve Number				
	P→A	B→T	P→B	A→T	P→T
C2	8	5	8	7	—
C3	6	4	6	7	6
C4	8	5	8	7	—
C40	8	5	8	7	—
C5	8	4	5	7	2
C6	5	1	5	4	3
C60	6	5	6	7	3
C7	6	5	6	7	—
C8	8	5	8	7	—
C9	8	4	5	7	—
D2	8	5	8	7	—
D3	6	4	6	7	—
B2	8	5	8	7	—
B3	6	4	6	7	—
B20	5	—	8	—	—
B2S	8	5	8	7	—
B3S	6	4	6	7	—
B20S	8	—	5	—	—

CONTRAST CHART BETWEEN FACTORS AND VISCOSITIES

VISCOSITY	cSt	15	20	30	40	50	60	70	80	90	100
	SSU	77	98	141	186	232	278	324	371	417	464
FACTOR(G')		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

The pressure drop ($\Delta P'$) can be obtained from the formula
 $\Delta P' = \Delta P (G/0.85)$ for other specific gravity (G').



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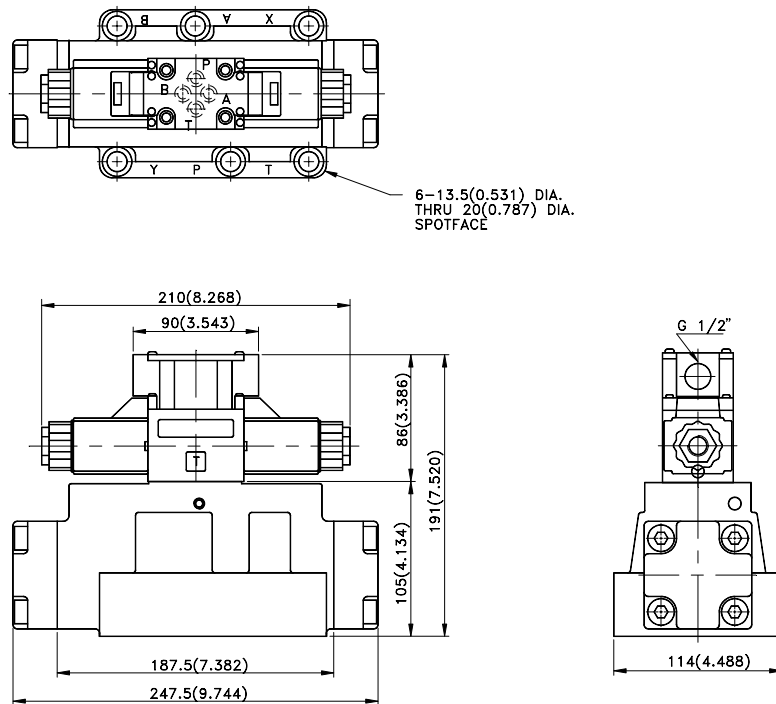
SW-G06 SERIES

INSTALLATION DIMENSIONS

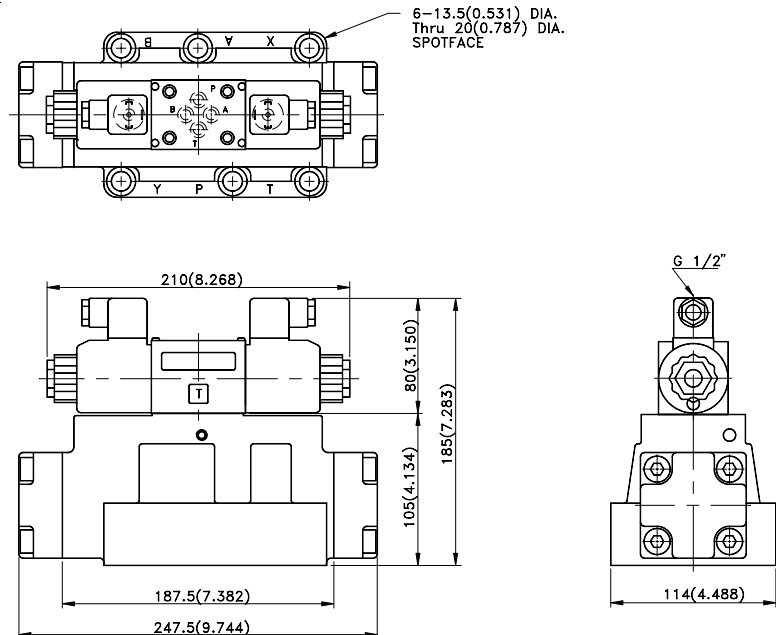
Mounting Surface: ISO 4401-AE-08-4-A

UNIT: mm (inch)

SW-G06-***-***-***-10



SW-G06-***-***-***-20



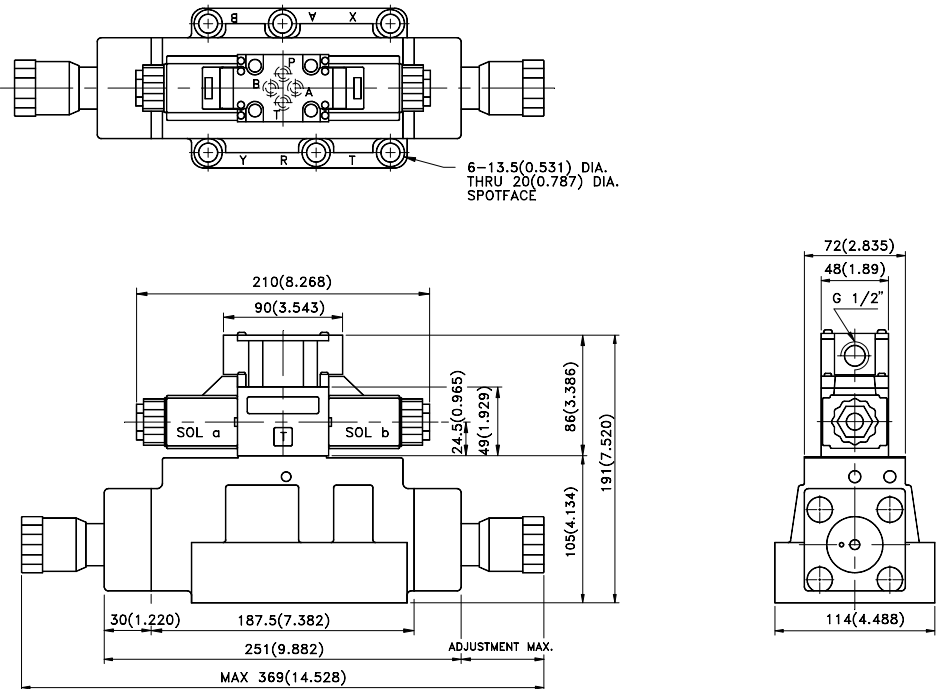
SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE
SW-G06 SERIES

INSTALLATION DIMENSIONS

Mounting Surface: ISO 4401-AE-08-4-A

UNIT:mm (inch)

SW-G06-*****-10-AB-K



SW-G06-*****-10-AB

