

Solenoid Controlled Pilot Operated Directional Valves Max. Pressure 31.5 MPa

DSHG Series

These valves are composed of a solenoid operated pilot valve and a pilot operated slave valve. When a solenoid is energized the pilot valve directs the flow to move the spool of the slave valve, thus changing the direction of flow in the hydraulic circuit.

High Pressure High Flow

High pressure (315kgf/cm²) along with high flow means compact system design. (e.g. "04" size valve- 300 L/min, "06" size valve- 500 L/min, "10" size valve- 1100 L/min.

Lower Pressure Drop

System energy saving increased as pressure drop of each valve has been greatly reduced.



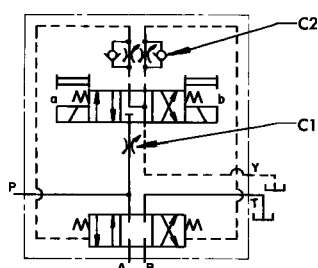
Ratings

Valve Size	Model Number	*1 Max. Flow L/min	Max. Operating Pressure MPa (kgf/cm ²)	Max. Pilot Pressure MPa (kgf/cm ²)	Max. T-Line Back Pressure MPa	Changeover Frequency Cycles/min	Mass kg
1/2	DSHG-04-2B※-50	300	31.5 (315)	0.8~25 (8~250)	21 (16) *2	120	8.2
	DSHG-04-3C※-50						8.8
	DSHG-04-2N※-50						8.8
3/4	DSHG-06-2B※-51	500	31.5 (315)	0.8~25 (8~250)	21 (16) *2	120	12.1
	DSHG-06-3C※-51						12.7
	DSHG-06-2N※-51						12.7
1 1/4	DSHG-10-2B※-41	1100	31.5 (315)	1~21(10~210)	21 (16) *2	60	44.7
	DSHG-10-3C※-41			1~25 (10~250)		100	45.3
	DSHG-10-2N※-41					120	45.3

*1 .Max. flow depends on the type of spool and operating conditions.

*2 .Please refer to the bracket for T-Line back pressure.

Graphic Symbol with Choke Valve



Model Number Designation

DSHG-04-3C2-CI-ET-A110-N1-※-50HZ

Series Number
(Sub-plate mounting)

Valve Size 04, 06, 10

Valve Type
(Please refer to next page)

With pilot choke valve(optional)

C1: with C1 Choke valve

C2: with C2 Choke valve

C1C2: with C1 & C2 Choke valve
(Omit if not required)

Nobe: 60Hz or DC or R※
50 Hz: 50Hz only

★ Please note voltage applicable range for different frequency. In 50 Hz area, if you want to use same voltage as the coil type, please add (50Hz) after the design number. It is not necessary for R※ type coil.

Design Number

Electrical Conduit Connection

Coil Type

A110, A220, D12, D24, R110, R220...etc.

* Drain Connection T: Internal Drain. None: External Drain

* Pilot Connection E: External Pilot. None: Internal pilot)












* Classification of application on spool type "3", "5", "60" & "7" has been described as below.

Pilot Connection	Drain Connection	Attention
Internal Pilot	External Drain	Hold back pressure in the tank line so that the difference between pilot pressure and drain pressure is always more than minimum required pilot pressure.
	Internal Drain	Combination is not available.
External Pilot	External Drain	No limitation in use.
	Internal Drain	

● Minimum Pilot pressure: 1/2, 3/4 size valve are 0.8 MPa (kgf/cm²), 1-1/4 size valve is 1 MPa (10kgf/cm²).

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Valve Type

Valve Type	3C2	3C3	3C4	3C40	3C5	
Graphical Symbol						
Valve Type	3C60*	3C12	2B2	2B7	2N2	2N7
Graphical Symbol						

- Valves, other than the type above are available, please contact our sales engineers for your requirement.
- The "2B2", "2B7", "2N2" & "2N7" type valves have no center position.

Sub-plate

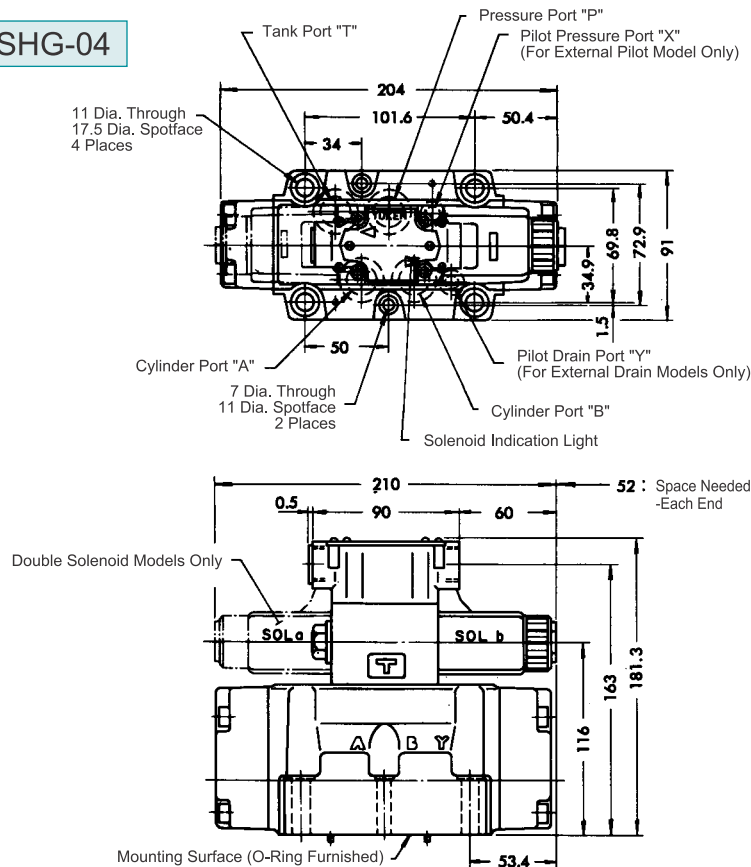
Valve Model No.	Sub-plate Model No.	Piping Size Rc	Mass kg
DSHG-04	DHGM-04-20	1/2	4.4
	DHGM-04X-20	3/4	4.1
DSHG-06	DHGM-06-50	3/4	7.4
	DHGM-06X-50	1	
DSHG-10	DHGM-10-40	1 1/4	21.5
	DHGM-10X-40	1 1/2	

Sub-plates are available. When ordering, please specify sub-plate model from the table above. Please refer to page 97, 98 for dimensions.

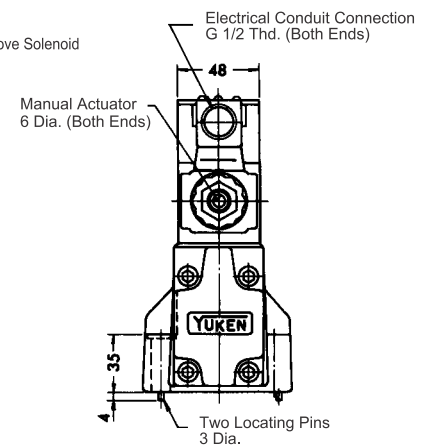
Mounting Bolts (Attachment)

Valve Model No.	Socket Head Cap Screw	Q'ty	Tightening Torque N•m (kgf.m)
DSHG-04	M6 x 45 Lg	2	12~15 (1.2~1.5)
	M10 x 50 Lg	4	58~72 (5.9~7.3)
DSHG-06	M12 x 60 Lg	6	100~123 (10.2~12.5)
DSHG-10	M20 x 75 Lg	6	473~585 (48.2~59.7)

DSHG-04



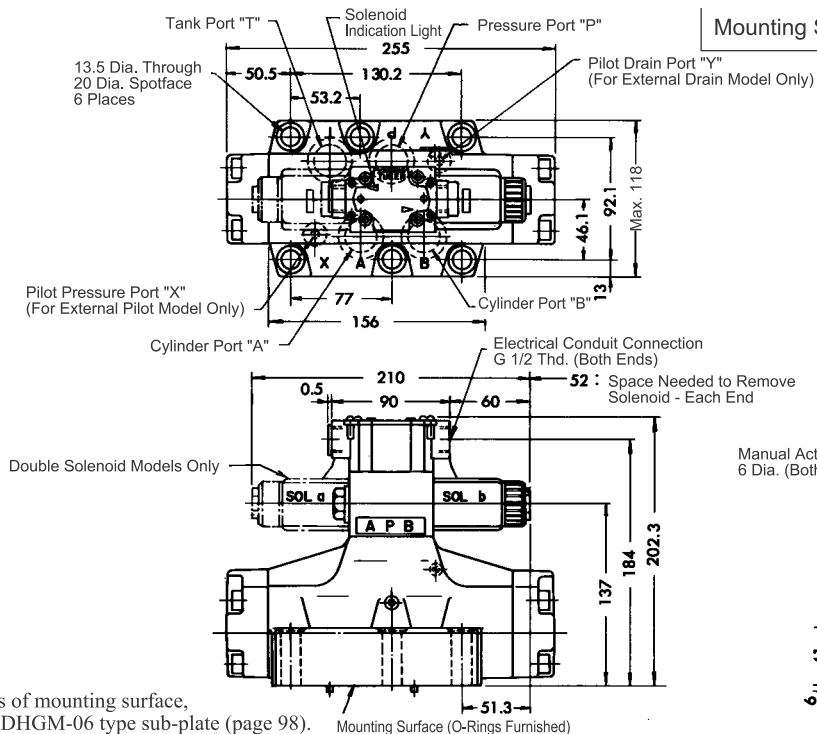
Mounting Surface: ISO 4401-AD-07-4-A-80



Note: For dimensions of mounting surface, please refer to DHGM-04 type sub-plate (page 97).

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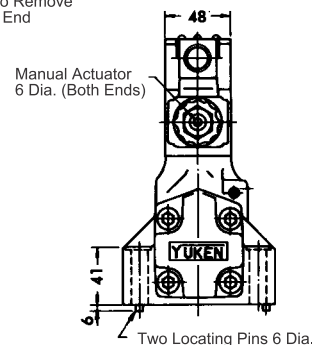
DSHG-06



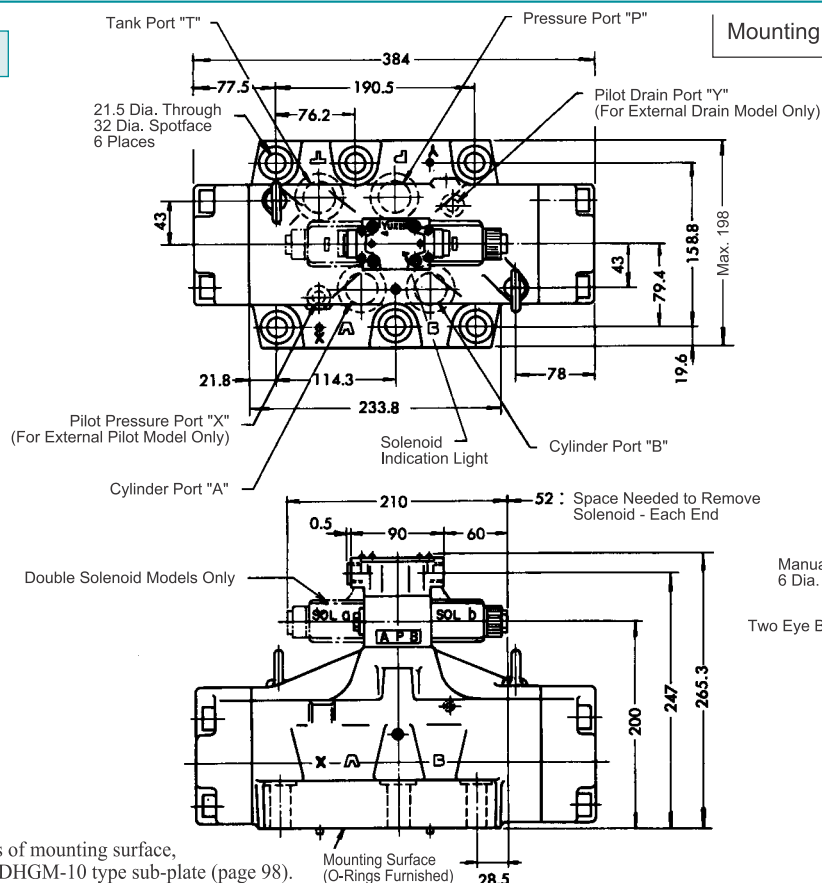
Mounting Surface:ISO 4401-AE-08-4-A-80

Note: For dimensions of mounting surface, please refer to DHGM-06 type sub-plate (page 98).

Mounting Surface (O-Rings Furnished)



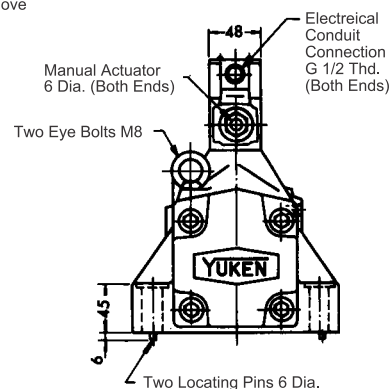
DSHG-10



Mounting Surface:ISO 4401-AF-10-4-A-80

Note: For dimensions of mounting surface, please refer to DHGM-10 type sub-plate (page 98).

Mounting Surface (O-Rings Furnished)

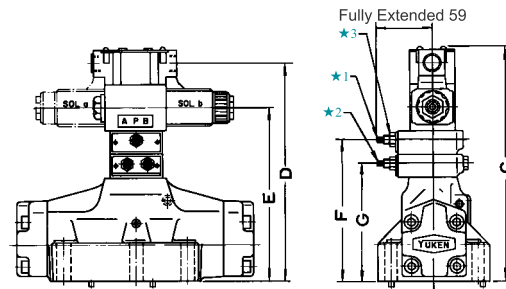
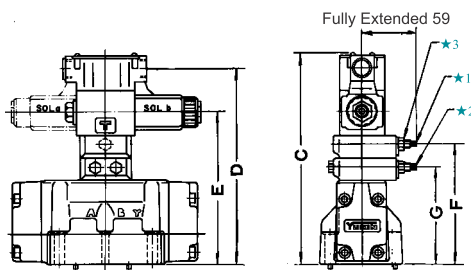


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Options-Model with Pilot Choke Valve

DSHG-04-※※※-C1,C2,C1C2

DSHG-06-※※※-C1,C2,C1C2
10

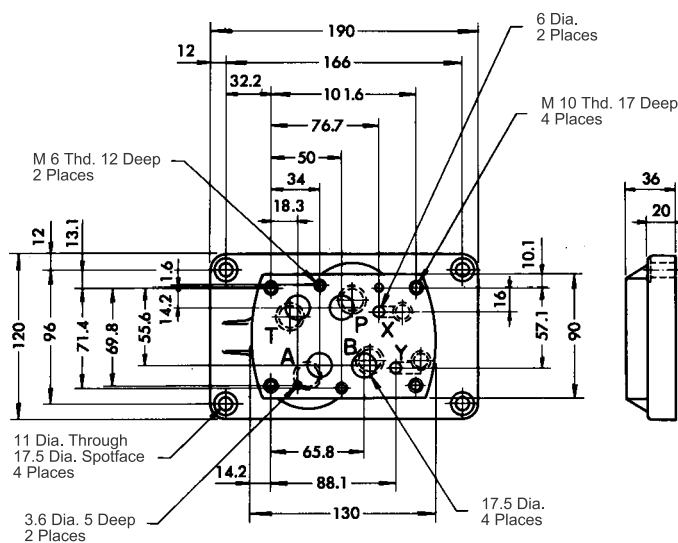


- * 1. C1 Choke Adj. Screw 6 Hex.
- * 2. C2 Choke Adj. Screw 6 Hex.
- * 3. C1 Lock Nut 12 Hex.

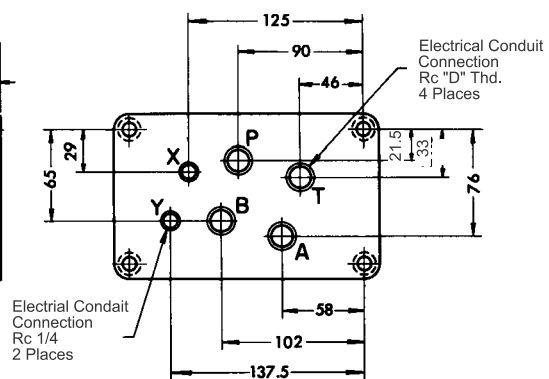
Model No.	C	D	E	F	G
DSHG-04-※※※-C1	206.3	188	141	106	-
DSHG-04-※※※-C2				-	106
DSHG-04-※※※-C1C2	231.3	213	166	131	106
DSHG-06-※※※-C1	227.3	209	162	127	-
DSHG-06-※※※-C2				-	127
DSHG-06-※※※-C1C2	252.3	234	187	152	127
DSHG-10-※※※-C1	290.3	272	225	190	-
DSHG-10-※※※-C2				-	190
DSHG-10-※※※-C1C2	315.3	297	250	215	190

D

Sub-Plate: DHGM-04 / 04X-20

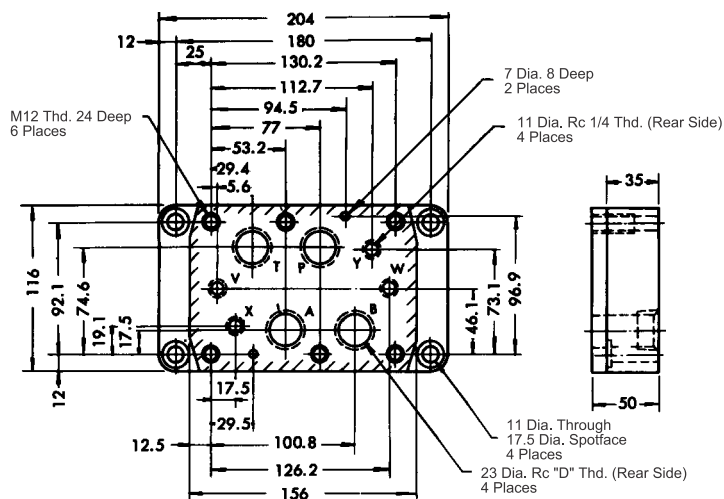


Sub-plate Model No.	D
DHGM-04-20	1/2
DHGM-04X-20	3/4



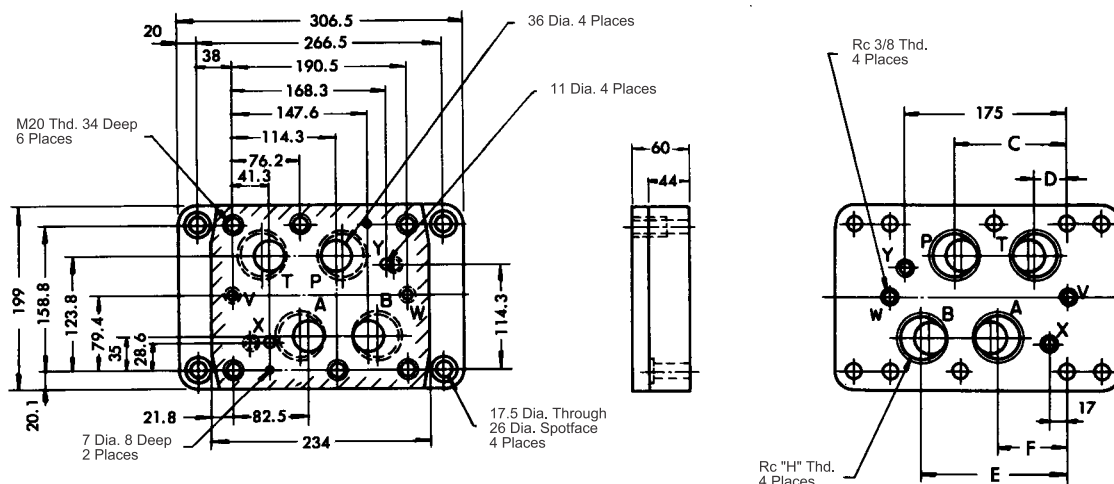
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Sub-plate DHGM-06 / 06X-50



Model No.	D
DHGM-06-50	3/4
DHGM-06X-50	1

Sub-plate DHGM-10 / 10X-40



Model No.	C	D	E	F	H
DHGM-10-40	114	41	147.5	82.5	1-1/4
DHGM-10X-40	118	36	156.5	74.5	1-1/2

Note: For Uses of Port "X" "Y" , "V" and "W" "

Valve Types		X	Y	V *W*
Solenoid Controlled Pilot Operated Directional Valves	Spring Centered	Used only on external Pilot type valves	Used as drain port only on external drain type valves.	Not used (Plug is not required)
	No Spring		To be plugged on internal drain type valves	
Pilot Operated Directional Valves	Spring Centered	To be plugged on internal pilot type valves	Used as pilot pressure port	
	No Spring			
	Spring Offset	Used	Used as pilot drain port	

*DHGM-04, 04X types do not have these ports. (Port "V" and Port "W")