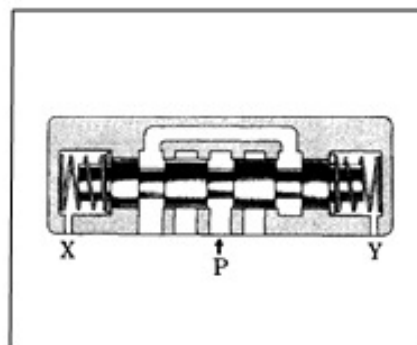
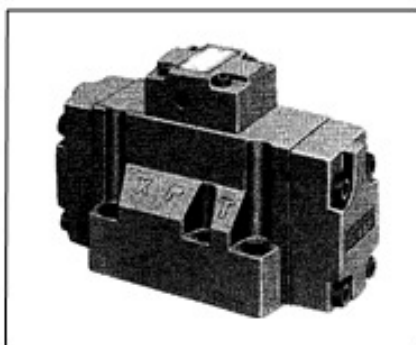


* Pilot Operated Directional Valves

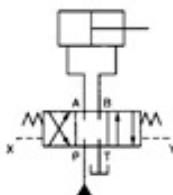
These valves perform a change over of spool by hydraulic pilot and shift the direction of oil flow



❖ Ratings

Model Numbers	Maximum Flow l/min				Max. Operating Pressure kgf/cm ²	Max. Pilot Pressure kgf/cm ²	Min. Required Pilot Pressure kgf/cm ²	Max. T-Line Back Pres. kgf/cm ²	Mass kg
	100 kgf/cm ²	160 kgf/cm ²	250 kgf/cm ²	315 kgf/cm ²					
DHG-04-3C*-50	300 *1	300 *1	300 *1	300 *1	315	250	8	210	7.4
DHG-04-2N*-50	300	300	300	300					7.4
DHG-04-2B*-50	130	70	70	60					7.8
DHG-06-3C*-50	500 *2	500 *2	500 *2	500 *2	315	250	8	210	11.2
DHG-06-2N*-50	500	500	500	500					11.2
DHG-06-2B*-50	140	100	90	80					11.7
DHG-10-3C*-40	1100 *3	1100 *3	1100 *3	1100 *3	315	250	10	210	43.8
DHG-10-2N*-40	1100	1100	1100	1100					43.8
DHG-10-2B*-40	460	300	220	200					45.6

Note : Max. flow refers to a ceiling flow which does not affect the normal function (changeover) of the valve. Also, max. flow in the above table indicates values when the flow condition is as shown in the right-hand figure, P A B T (or P B A T). Max. flow varies according to the circuit if port "A" or "B" is to be blocked. Consult Yuken for such application.



- *1. Varies depending on the spool type.
- *2. Varies depending on the spool type and pilot pressure. For more information, see page 167 for the List of Spool Functions (DSHG-06) related to the Solenoid Controlled Pilot Operated Directional Valves.
- *3. Varies depending on the spool type and pilot pressure. For more information, see page 168 for the List of Spool Functions (DSHG-10) related to the Solenoid Controlled Pilot Operated Directional Valves.
- *4. Minimum Pilot Pressure for the models with pilot piston is 18 kgf/cm².

* Pressure Drop

Same as those Solenoid Controlled Pilot Operated Directional Valves. See page 170 for the related information

④ Instruction

In case of spring Offset Models, directly connect the pilot pressure port "Y" to the reservoir as a drain port.

* Model Number Designation

F	DH	G	-04	-2	B	2	A	-C2	-RA	-H	-50
Special Seals	Series Number	Type of Conne- ction	Valve Size	Number of Valve Positions	Spool Spring Arrange- ment	Spool Type	Special Two Position Valve	Models with Pilot Choke Valve (Options)	Spool Control Modification (Options)	Built-in Orifice for Pilot Line	Design Number
F: Special seals for Phosphate Ester Type Fluids (Omit if not required)	DH : Pilot Operated Directional Valve	G: Sub plate Mounting	04	3	C: Spring Centred	2 .3 4 .40 5 .6 60.7 9 .10 11.12	A*2, B*2 (Omit if not required)	C2: With C2 Choke	R2: With Stroke Adjustment, Both Ends RA: With Stroke Adjustment, Port A End RB: With Stroke, Adjustment, Port B End	—	50
			06		N: No-Spring					H*3	50
			10	2	B: Spring Offset						Refer to *1

- * 1 For various combinations, see the List of Valve Types below.
- * 2 Refer to the column "valves with centre position and one offset position" (Special 2-position valve) on page 180.
- * 3 When the spool-spring arrangement is of "H" (pressure Centre Type) and the pilot pressure more than 100 kgf/cm² always be sure to specify "H" (with built in orifice)

⌘ List of Valve Type

Spool Type	Valve Types		
	Three Positions	Two Positions	
	Spring Centred	No Spring	Spring Offset
	Graphic Symbols		
	3C2	2N2	2B2
	3C3	2N3	2B3
	3C4	2N4	2B4
	3C40	2N40	2B40
	3C5		
	3C6		
	3C60		
	3C7	2N7	2B7
	3C9		
	3C10		
	3C11		
	3C12		

⌘ List of Options

Model Numbers	Option Code			
	C2	R2	RA	RB
DHG-04-3C*	O	O	O	O
DHG-04-2N*	O	O	O	O
DHG-04-2B*	O	X	O	X
DHG-06-3C*	O	O	O	O
DHG-06-2N*	O	O	O	O
DHG-06-2B*	O	X	O	X
DHG-10-3C*	O	O	O	O
DHG-10-2N*	O	O	O	O
DHG-10-2B*	O	X	O	X

Note O Mark : Available
 X Mark : Not Available

✳ Sub-plate

Valve Model Numbers	Sub-Plate Model Numbers	Thread Size	Approx. Mass kg
DHG-04	DHGM-04-2080	1/2 BSP.F	4.4
	DHGM-04X-2080	3/4 BSP.F	4.1
DHG-06	DHGM-06-5080	3/4 BSP.F	8.5
	DHGM-06X-5080	1 BSP.F	8.5
DHG-10	DHGM-10-4080	1-1/4BSP.F	21.5
	DHGM-10X-4080	1-1/2 BSP.F	21.5

✳ Sub-plates are available. Specify sub-plate model from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.

✳ Sub-plates are shared with those for Solenoid Controlled Pilot Operated Directional Valves. Refer page 175 and 176 for dimensions.

✳ Mounting Bolts

Model Numbers	Socket Head Cap Screw	Qty.	Tightening Torque kgf-m	Bolt kit Model No.
DHG-04	M6 x 45 Lg.	2	1.2-1.5	BKDHG-04-50
	M10 x 50 Lg.	4	5.8-7.2	
DHG-06	M12 x 60 Lg.	6	10.0-12.3	BKDHG-06-50
DHG-10	M20 x 75 Lg.	6	47.3-58.5	BKDHG-10-40

✳ Options

✳ Models with Pilot Choke Adjustment (C2)

To lower the changeover speed, turn the adjusting screw clockwise. In particular, the centering speed which is controlled by spring force can be lowered. This applies to Spring Centered Models and Spring Offset Models. These models can be used in combination with Spring Centered Models, No Spring Detented Models, and Models with Stroke Adjustment.

Graphic Symbols
Spring Centred Models



✳ Models with Stroke Adjustment (R✳)

When the adjusting screw is turned in, the spool strike becomes shorter as flow rate reduces.

Graphic Symbol

Spring Centred Models with Stroke Adjustment on Both Ends (R2)



✳ Additional Mass of Options

Add mass of options below to mass of standard type(see page 177) if options are used.

Model Numbers	With Pilot Choke Valve	With Stroke Adjustment	
		R2	RA RB
DHG-04	0.65	1.0	0.5
DHG-06	0.65	1.2	0.6
DHG-10	0.65	3.7	1.85

kg

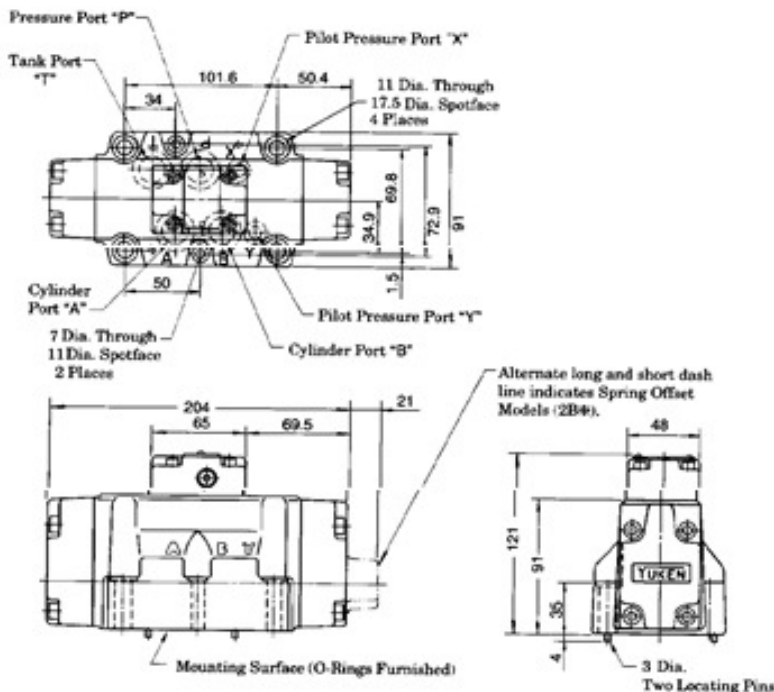
* Valves with Centre Position and One Offset Position (Special Two Position Valves)

In addition to the standard Two Position Valves (2B*), the following two types of two position valves are available: Valves with centre position and pilot Y pressure position (2B*A), valves with centre position and pilot X pressure position (2B*B).

Model Numbers	Graphic Symbols	Model Numbers	Graphic Symbols
04 DHG-06-2B*A 10		04 DHG-06-2B*B 10	
DHG-*2B2A		DHG-*2B2B	
DHG-*2B3A		DHG-*2B3B	
DHG-*2B4A		DHG-*2B4B	
DHG-*2B40A		DHG-*2B40B	
DHG-*2B5A		DHG-*2B5B	
DHG-*2B6A		DHG-*2B6B	
DHG-*2B60A		DHG-*2B60B	
DHG-*2B7A		DHG-*2B7B	
DHG-*2B9A		DHG-*2B9B	
DHG-*2B10A		DHG-*2B10B	
DHG-*2B11A		DHG-*2B11B	
DHG-*2B12A		DHG-*2B12B	

DHG-04-***-50

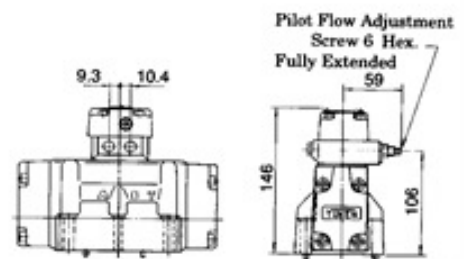
DIMENSION IN
MILLIMETERS



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

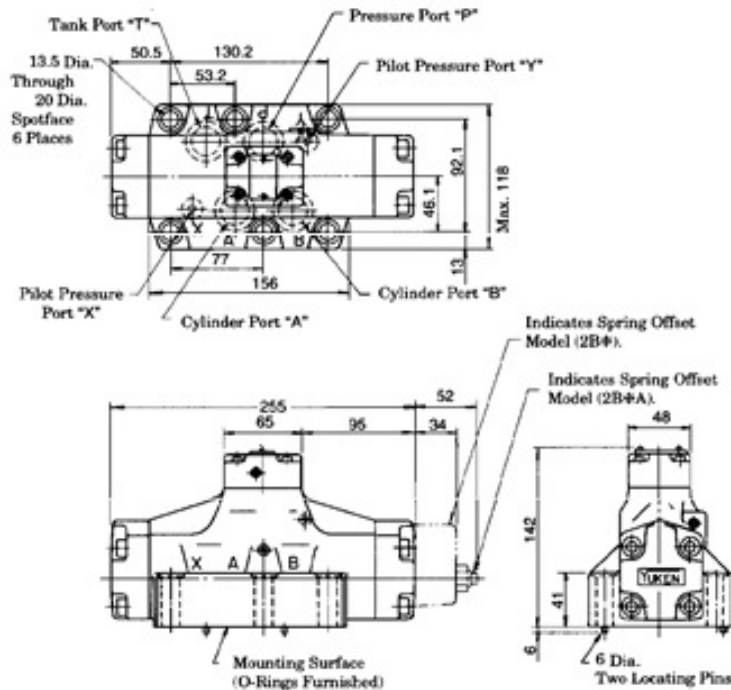
Options

⌘ Models with Pilot Choke Valve
DHG-04-***-C2



For Spring Offset Models (2B*2B*- A/B) it functions as a drain port. When that model is used directly connect it to the reservoir.

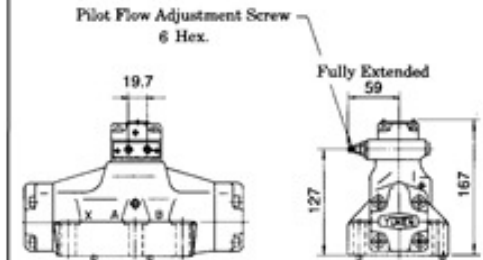
DHG-06-***-50



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

Options

⌘ Models with Pilot Choke Valve
DHG-06-***-C2



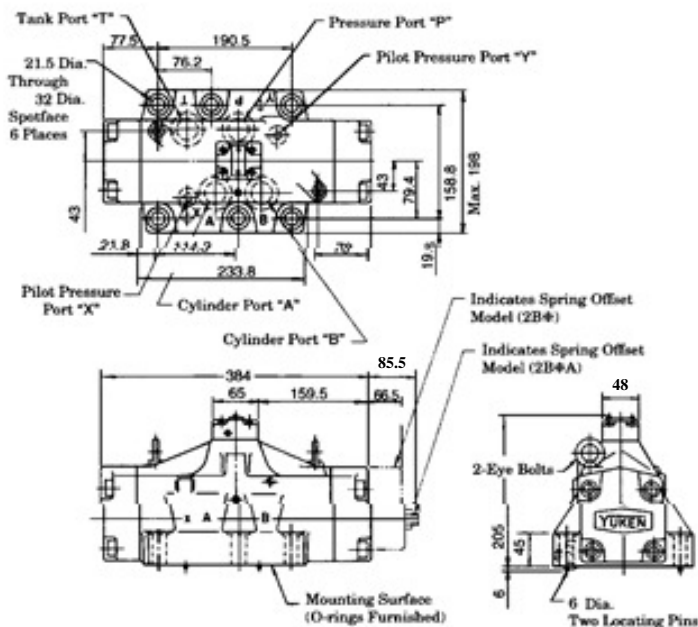
⌘ Models with Stroke Adj. (RJ)

Outside dimensions are the same as those of the main valve of Solenoid Controlled Pilot Operated Directional Valves (DSHG-06). See page 172.

In case of Spring Offset Models (2B*-2B*-^A/_B) it functions as a drain port. When that model is used directly connect it to the reservoir

DIMENSION IN MILLIMETERS

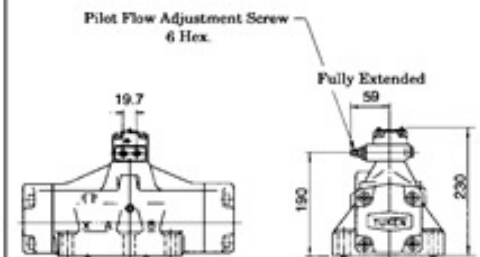
DHG-10-***-40



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

Options

⌘ Models with Pilot Choke Valve
DHG-10-***-C2



⌘ Models with Stroke Adj. (RJ)

Outside dimensions are the same as those of the main valve of Solenoid Controlled Pilot Operated Directional Valves (DSHG-10). See page 173.

In case of Spring Offset Models (2B*-2B*-^A/_B) it functions as a drain port. When that model is used directly connect it to the reservoir

DIMENSION IN MILLIMETERS