

HYDRAULIC HOSES
HYDRAULIC PUMPS
HYDRAULIC MOTOR
HYDRAULIC CYLINDER
HYDRAULIC POWER PACK
HYDRAULIC ACCESSORIES
DIRECTIONAL CONTROL VALVE

PUMPS HYDRAULIC



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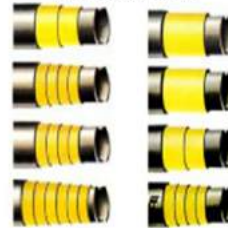
FITTING HYDRAULIC



PISTON PUMPS



PUMPS HYDRAULIC



SOLENOID VALVE



CYLINDER HYDRAULIC





DIRECTIONAL CONTROL VALVES

Directional Control Valves

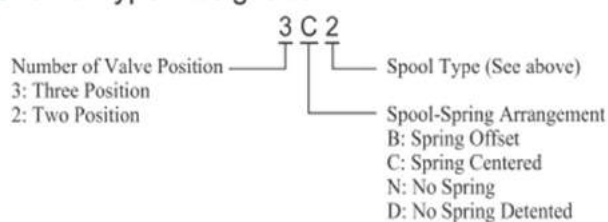
Directional Control Valves are designed to start, stop, control direction, accelerate and decelerate cylinders and hydraulic motors. Directional valves are classified into following five types depending on the operational method: Solenoid Operated Directional Valves, Solenoid Controlled Pilot Operated Directional Valves, Pilot Operated Directional Valves, Manually Operated Directional Valves, and Mechanically Operated Directional Valves.

Types of Spool

Spool No.	Schematic Drawing (Center position)	Functions	Graphic Symbols			
			Three Positions 3※※	Two Positions		
				2B※/2D※/2N※★	2B※A	2B※B
2		Closed Center all Ports		★		
3		Open Center all Ports		★		
4		Open Center A. B. & T		★		
40		Open Center A. B. & T Restricted Flow		★		
5		Open Center P. A. & T				
60		Open Center P & T Open Crossover	★	★	★	★
7		Open Center all Ports Restricted Flow		★		
8		Two Way		★		
9		Open Center P. A. & B				
10		Open Center B. & T				
11		Open Center P. & A				
12		Open Center A. & T				

★ These 2※※ type valves have no center position.

Valve Type Designation





DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 7 MPa

The valve is specially designed for power saving, high efficiency and space saving. Its power consumption is less than DSG-01 series and its mounting dimensions is as same as DSG-01, however its length with double solenoid (DC) is 18 mm less than DSG-01 series. It is available for shoe machine, CNC machine and low-pressure automatic equipment.

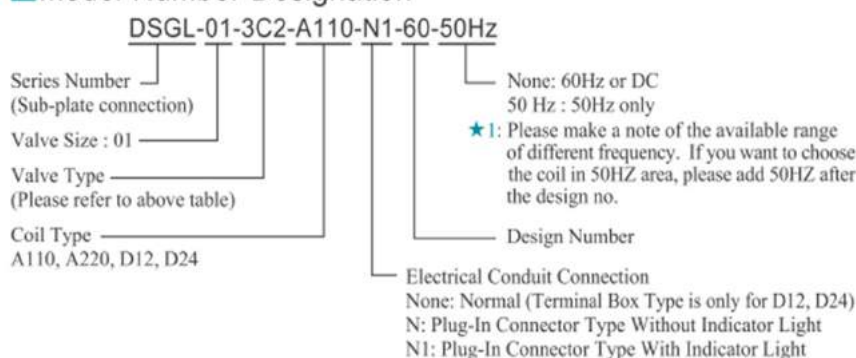


Ratings

Valve Size	Model No.	Max. flow L/min	Max. Operating pressure MPa (kgf/cm ²)	Max. T-Line Back Pressure MPa (kgf/cm ²)	Mass kg
1/8	DSGL-01-2B2-☼-60	40	7 (70)	7 (70)	1.5
	★ DSGL-01-2D2-☼-60				2
	DSGL-01-3C2-☼-60				2

★ The max. flow of 2D2 is 30 L/min.

Model Number Designation



Valve Types

Valve Type	3C2	3C4	3C10	3C12
Graphic Symbol				
Valve Type	2B2	2B3	2D2	3C9
Graphic Symbol				

- The valve other than above types are available, please contact our sales engineers for your requirement.
- These 2B2, 2B3 & 2D2 have no center position.

Solenoid Ratings

Electric Source	Coil Type	Serviceable Range		Current & Power at Rated Voltage		
		Frequency (Hz)	Voltage (V)	Inrush (A)	Holding (A)	Power (W)
AC	A110/50Hz	50	100-120	1.56	0.42	23
	A110/60Hz	60	100-120	1.72	0.37	18
	A220/50Hz	50	200-240	0.69	0.21	23
	A220/60Hz	60	200-240	0.82	0.18	18
DC	D12	-	10.8-13.2	-	1.75	20
	D24	-	21.6-26.4	-	0.85	20



DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 7 MPa

Sub-plate

Valve Model No.	Sub-plate Model No	Piping Size Rc	Mass kg
DSGL-01	DSGM-01-30	1/8	0.8
	DSGM-01X-30	1/4	
	DSGM-01Y-30	3/8	

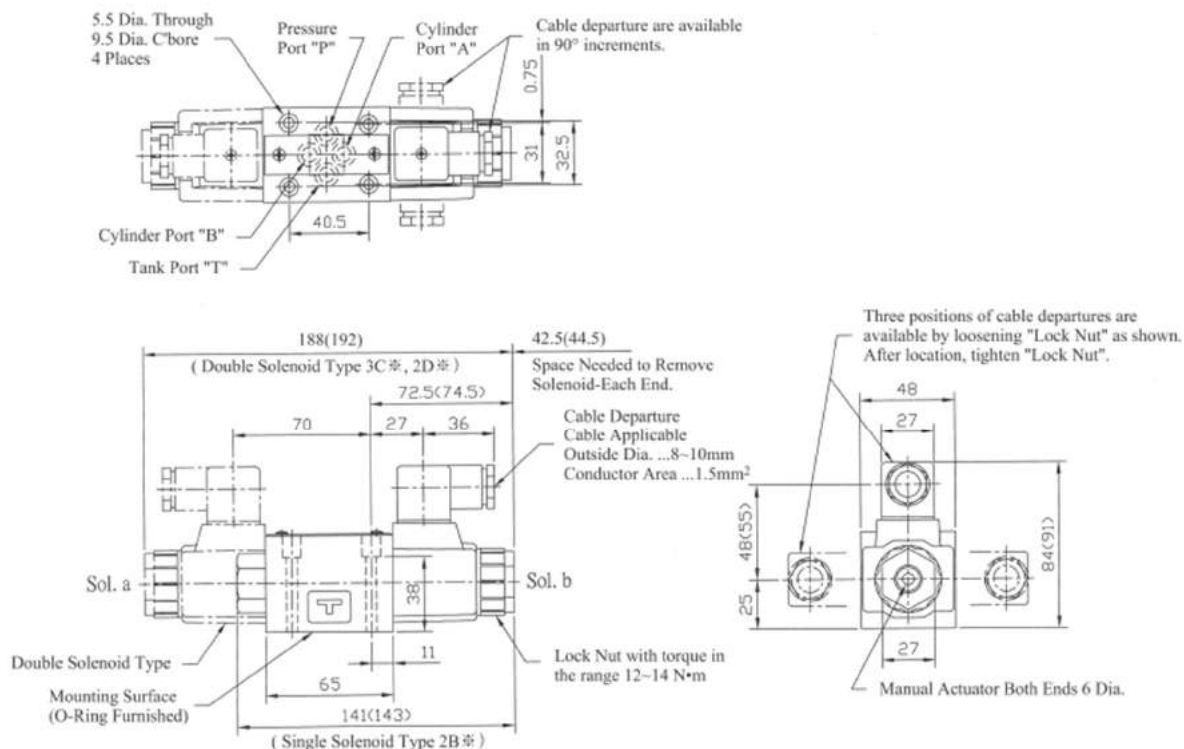
- Sub-plates are available. When ordering, please specify sub-plate model from the table above.
- Please refer to page 88 for dimension details.

Mounting Bolts (Attachment)

Socket Head Cap Screw	Tightening Torque
M5 x 45 Lg 4 Pcs	5~7 N·m

DSGL-01-※※※※※※-60 (-50HZ)

Mounting surface: ISO 4401-AB-03-4-A





DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa

DSG-01 Series

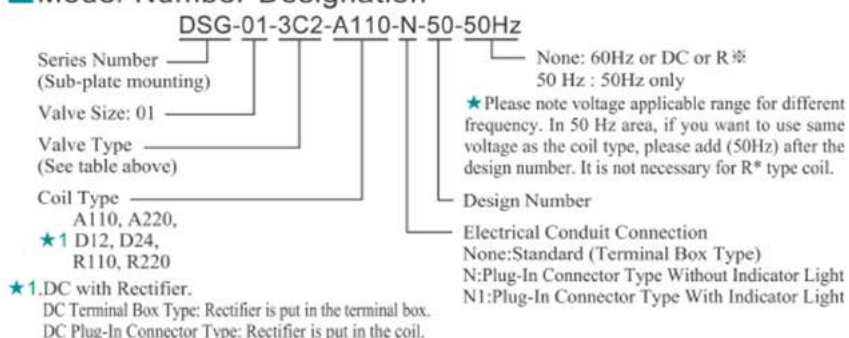
These valves are adapted with strong wet-type solenoid and circuit designs to accomplish high pressure, large volume flow and lower pressure drop. The optimum valve for any system can be utilized since many spool types and various solenoids are all available, along with other optional function.

Ratings



Valve Size	Model Number	Max. Flow L/min	Max. Pressure MPa (kgf/cm ²)	Max. T-Line Back Pressure MPa (kgf/cm ²)	Max. Changeover Frequency Cycle/min	Mass kg
1/8	DSG-01-3C※-※-50	63	31.5 (315) Spool Type 60 only 250	16 (160)	300 R Type only 120	2.2
	DSG-01-2D2-※-50					2.2
	DSG-01-2B※-※-50					1.6

Model Number Designation



Valve Type

Valve Type	3C2	3C3	3C4	3C40	3C60	3C12
Graphic Symbol						
Valve Type	2B2	2B3	2B8	2B2B	2D2	3C9
Graphic Symbol						

- Valves, other than the types above are available, please contact our sales engineer for your requirement.
- 2B2, 2B3, 2B8 & 2D2 type valves have no center position.

Mounting Bolts (Attachment)

Socket Head Cap Screw	Tightening Torque
M5 x 45Lg 4pcs	5 ~ 7 N•m (Applicable to working pressure higher than 25 MPa) 6 ~ 7 N•m

Sub-plate

Valve Model No.	Sub-plate Model No.	Piping Size Rc	Mass kg
DSG-01	DSGM-01-30	1/8	0.8
	DSGM-01X-30	1/4	
	DSGM-01Y-30	3/8	

Sub-plates are available. When ordering, please specify sub-plate model no. from the table above. Please refer to page 88 for dimension details.

Solenoid Rating

Electric Source	Coil Type	Serviceable Voltage Range		Current & Power at Rated Voltage		
		Frequency (Hz)	Voltage (V)	Inrush (A)	Holding (A)	Power (W)
AC	A110/50Hz	50	100-120	1.68	0.35	18
	A110/60Hz	60	100-120	1.79	0.35	20
	A220/50Hz	50	200-240	0.89	0.20	19
	A220/60Hz	60	200-240	0.90	0.18	21
DC	D12	-	10.8-13.2	-	2.00	24
	D24	-	21.6-26.4	-	1.10	26
AC→DC	R110	50/60	100-120	-	0.33	29
	R220	50/60	200-240	-	0.15	29

There are other coil types available, please contact our sales engineers for your requirement.

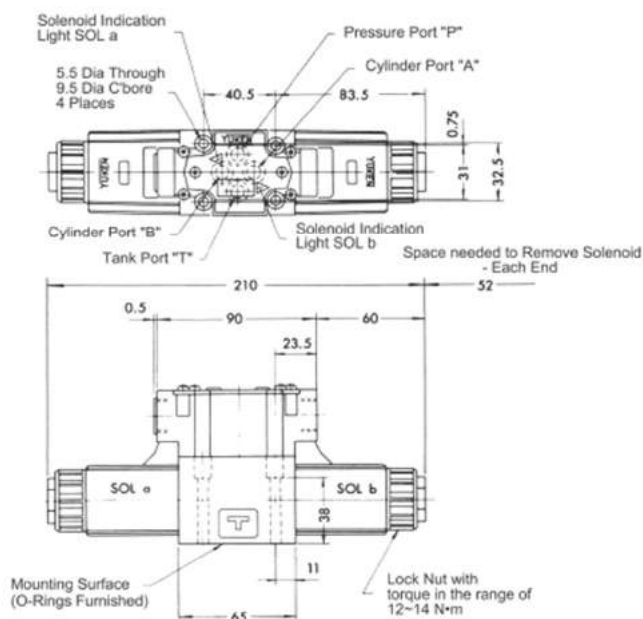


DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa

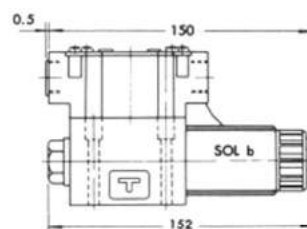
Model with AC solenoids : DSG-01-※※※-A※

- Spring Centered
- No Spring Detented

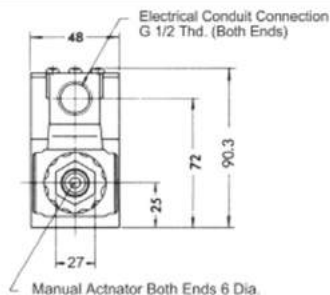


Mounting Surface : ISO 4401-AB-03-4-A

- Spring Offset

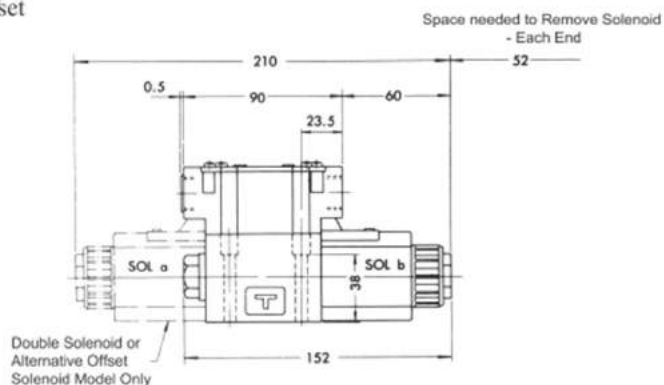


For other dimensions, please refer to left diagram.
Alternative models using solenoid "a" are also available.

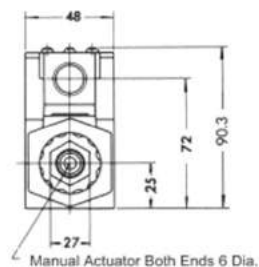


Model with DC solenoids : DSG-01-※※※-D※
Model with R solenoids : DSG-01-※※※-R※

- Spring Centered
- No Spring Detented
- Spring Offset



Mounting Surface : ISO 4401-AB-03-4-A



• For other dimensions, please refer to above model with AC solenoid.

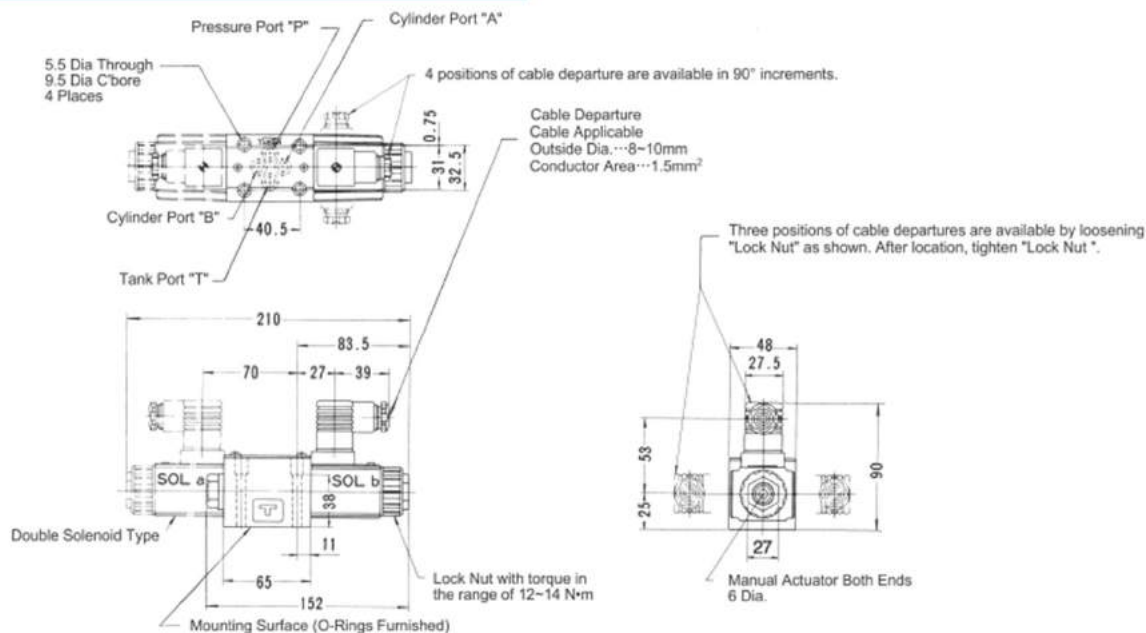


DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa

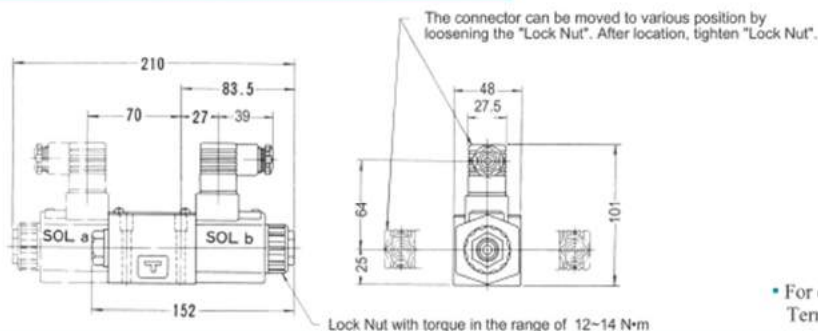
DIN Connector type, DIN Connector Type with Indicator Light

Model with AC Solenoids : DSG-01-***-A**-N/N1



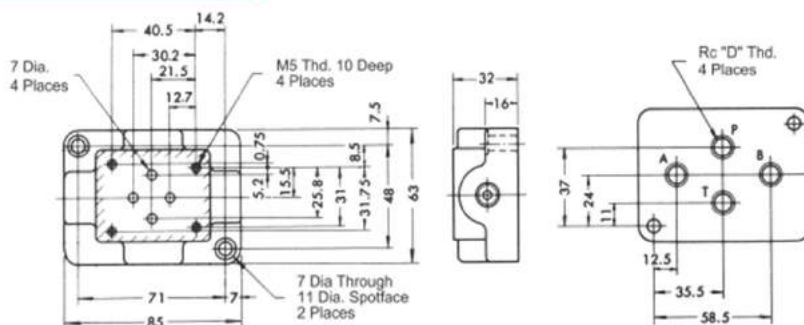
Model with DC solenoids : DSG-01-***-D**-N/N1

Model with R solenoids : DSG-01-***-R**-N/N1



• For other dimensions, please refer to Terminal Box Type (page87).

Sub-plate : DSGM-01, 01X, 01Y



Model No.	D
DSGM-01-30	1/8
DSGM-01X-30	1/4
DSGM-01Y-30	3/8



DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa



DSG-03 Series

These valves are adapted with strong wet-type solenoid and circuit designs to accomplish high pressure, large volume flow and lower pressure drop.

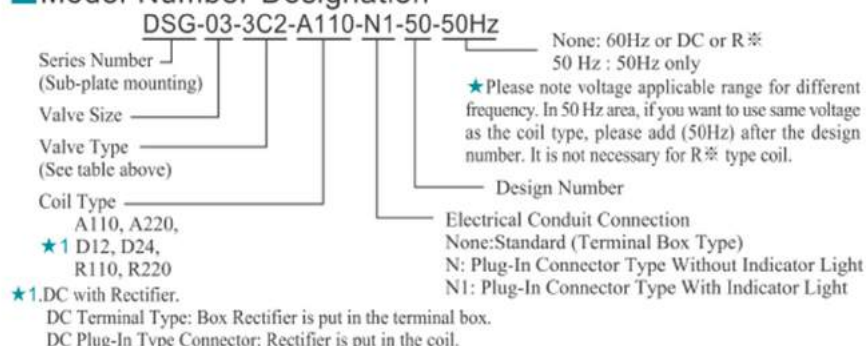
The optimum valve for any system can be utilized since many spool types and various solenoids are all available, along with other optional function.

- The pressure drop caused by the passing of pressurized oil is reduced to approx. 1/2 of the conventional Yuken model.
- Good Light Weight design has accomplished to reduce body weight.

Rating

Valve Size	Model No	Max. Flow L/min	Max. Pressure MPa (kgf/cm ²)	Max. T-Line Back Pressure MPa (kgf/cm ²)	Max. Changeover Frequency Cycle/min	Mass kg	
						Type of Solenoid	
3/8	DSG-03-2B※-※-50	120	31.5 (315) Spool Type 60 only 25 (250)	16 (160)	240 (R Type Only 120)	AC	2.9
	DSG-03-2D2-※-50					DC,R	3.6
	DSG-03-3C※-※-50						5

Model Number Designation



Sub-plate

Valve Model No.	Sub-plate Model No.	Piping Size Rc	Mass kg
DSG-03	DSGM-03-40	Rc	3
	DSGM-03X-40	3/8	
	DSGM-03Y-40	1/2	4.7

- Sub-plates are available. When ordering, please specify sub-plate model no. from the table above.
- Please refer to page 91 for dimension details.

Mounting Bolts (Attachment)

Socket Head Cap Screw	Tightening Torque
M6 x 35Lg 4pcs	12~15 N•m

Valve Type

Valve Type	3C2	3C3	3C4	3C40	3C60	3C12
Graphic Symbol						
Valve Type	2B2	2B3	2B8	2B2B	2D2	3C9
Graphic Symbol						

- Valve, other than the types above are available, please contact our sales engineers for your requirements.
- 2B2,2B3,2B8 & 2D2 type valves have no center position.

Solenoid Rating

Electric Source	Coil Type	Serviceable Voltage Range		Current & Power at Rated Voltage		
		Frequency (Hz)	Voltage (V)	Inrush (A)	Holding (A)	Power (W)
AC	A110/50Hz	50	100-120	3.90	0.78	39
	A110/60Hz	60	100-120	3.86	0.71	39
	A220/50Hz	50	200-240	1.82	0.34	37
	A220/60Hz	60	200-240	1.85	0.34	39
DC	D12	-	10.8-13.2	-	2.75	33
	D24	-	21.6-26.4	-	1.41	34
AC→DC	R110	50/60	100-120	-	0.42	38
	R220	60/60	200-240	-	0.20	38

There are other coil types available. please contact our sales engineers for your requirement.



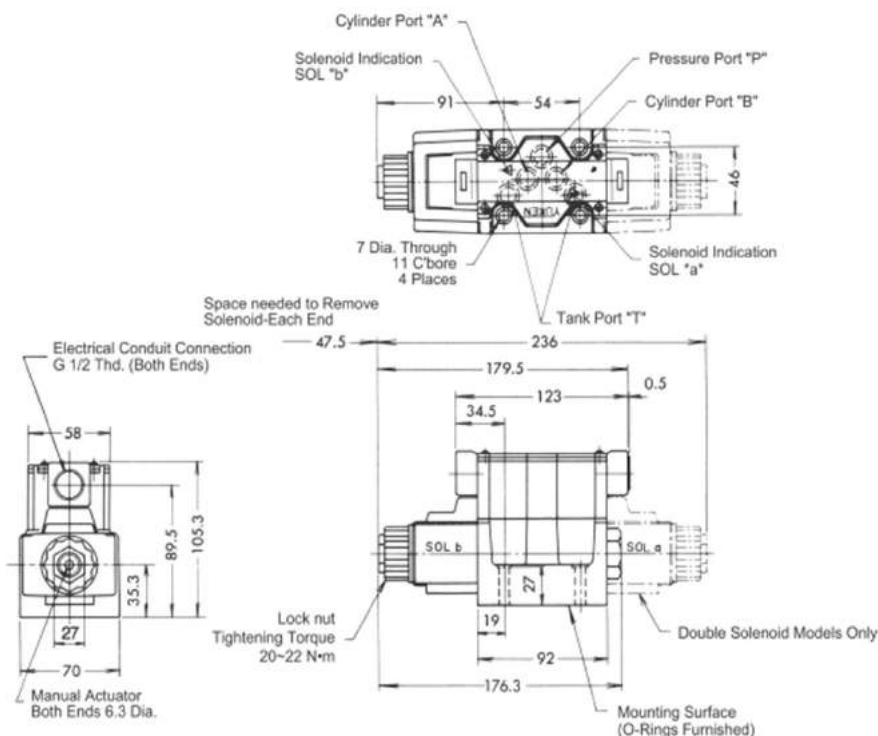
DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa

Model with AC solenoids : DSG-03-※※※-A※

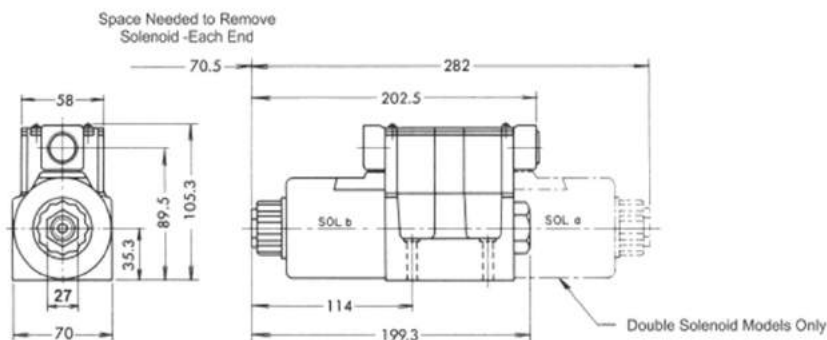
Mounting Surface:ISO 4401-AC-05-4-A-80

- Spring Centered
- No Spring Detented
- Spring Offset



Model with DC solenoids : DSG-03-※※※-D※

Model with R solenoids : DSG-03-※※※-R※



• For other dimensions, please refer to the above model with AC solenoids.

Note: For dimensions of mounting surface, please refer to DSGM-03 type sub-plate on page 91.



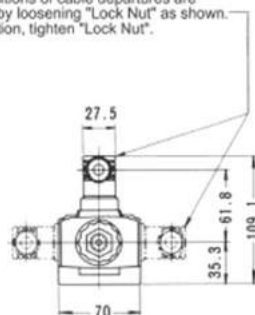
DIRECTIONAL CONTROL VALVES

Solenoid Operated Directional Valves Max. Pressure 31.5 MPa

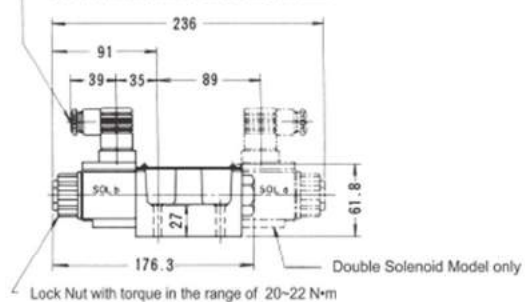
DIN type Connector, DIN Type Connector with Indicator Light

Model with AC Solenoids : DSG-03-※※※-A※-N/N1

Three positions of cable departures are available by loosening "Lock Nut" as shown. After location, tighten "Lock Nut".



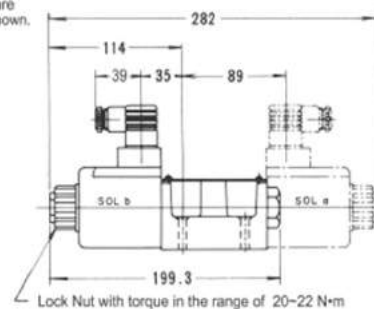
Cable Departure
Cable Applicable
Outside Dia. ...8~10mm
Conductor Area...Not exceeding 1.5mm²



Model with DC solenoids : DSG-03-※※※-D※-N/N1

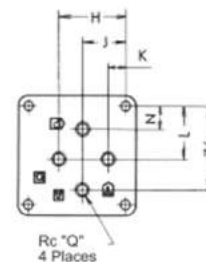
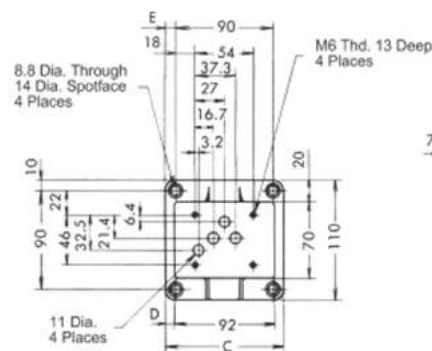
Model with R solenoids : DSG-03-※※※-R※-N/N1

Three positions of cable departures are available by loosening "Lock Nut" as shown. After location, tighten "Lock Nut".



• For other dimensions, please refer to Terminal Box Type.

Sub-plate DSGM-03, 03X, 03Y-40



Model No.	C	D	E	F	H	J	K	L	N	Q
DSGM-03-40	110	9	10	32	62	40	16	48	21	3/8
DSGM-03X-40										1/2
DSGM-03Y-40	120	14	15	50	80	45	10	47	16	3/4



DIRECTIONAL CONTROL VALVES

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 (31.5kgf/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.

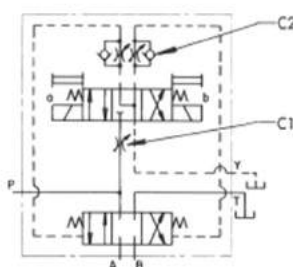
Ratings

Valve Size	Model Number	Max. Flow ^{*1} 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)	Nobe: 60Hz or DC or R※ 50 Hz: 50Hz only
Valve Size 04, 06, 10	★ 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.
Valve Type (Please refer to next page)	Design Number
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)	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).



DIRECTIONAL CONTROL VALVES

Solenoid Controlled Pilot Operated Directional Valves Max. Pressure 31.5 MPa

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

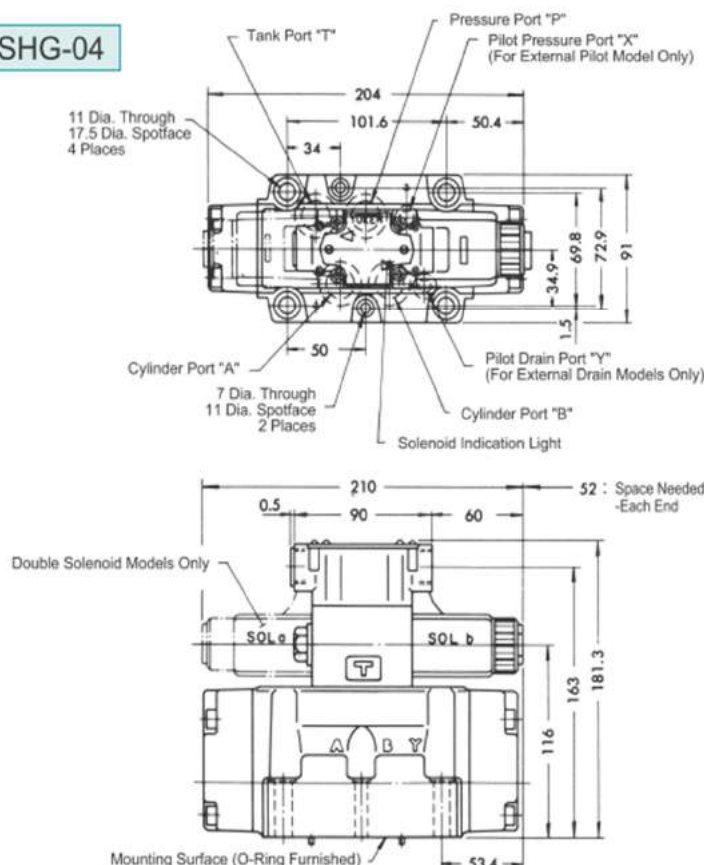
Valve Model No.	Sub-plate Model No.	Piping Size Rc	Mass kg
DSHG-04	DHGM-04-20	1/2	4.4
	DHGM-04X-20	3/4	4.1
DSHG-06	DHGM-06-50	3/4	7.4
	DHGM-06X-50	1	
DSHG-10	DHGM-10-40	1 1/4	21.5
	DHGM-10X-40	1 1/2	

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

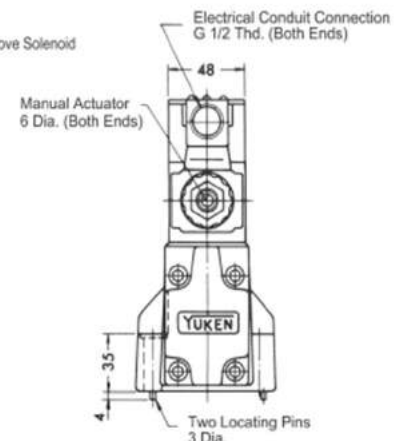
Mounting Bolts (Attachment)

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



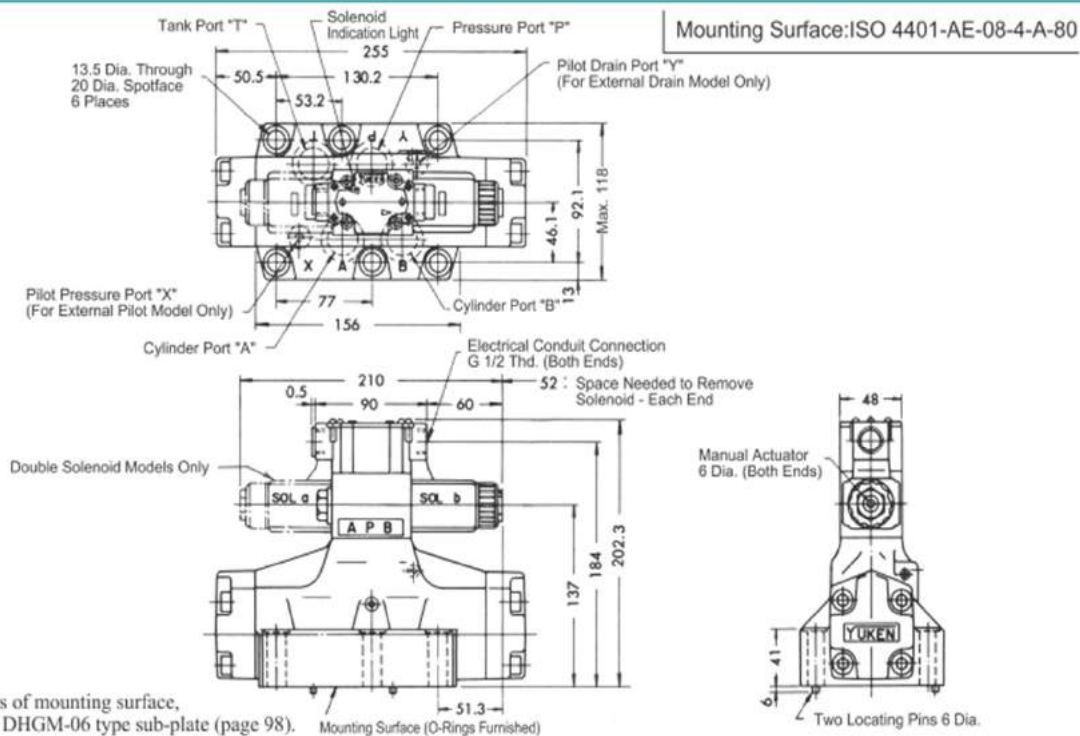
Note: For dimensions of mounting surface, please refer to DHGM-04 type sub-plate (page 97).



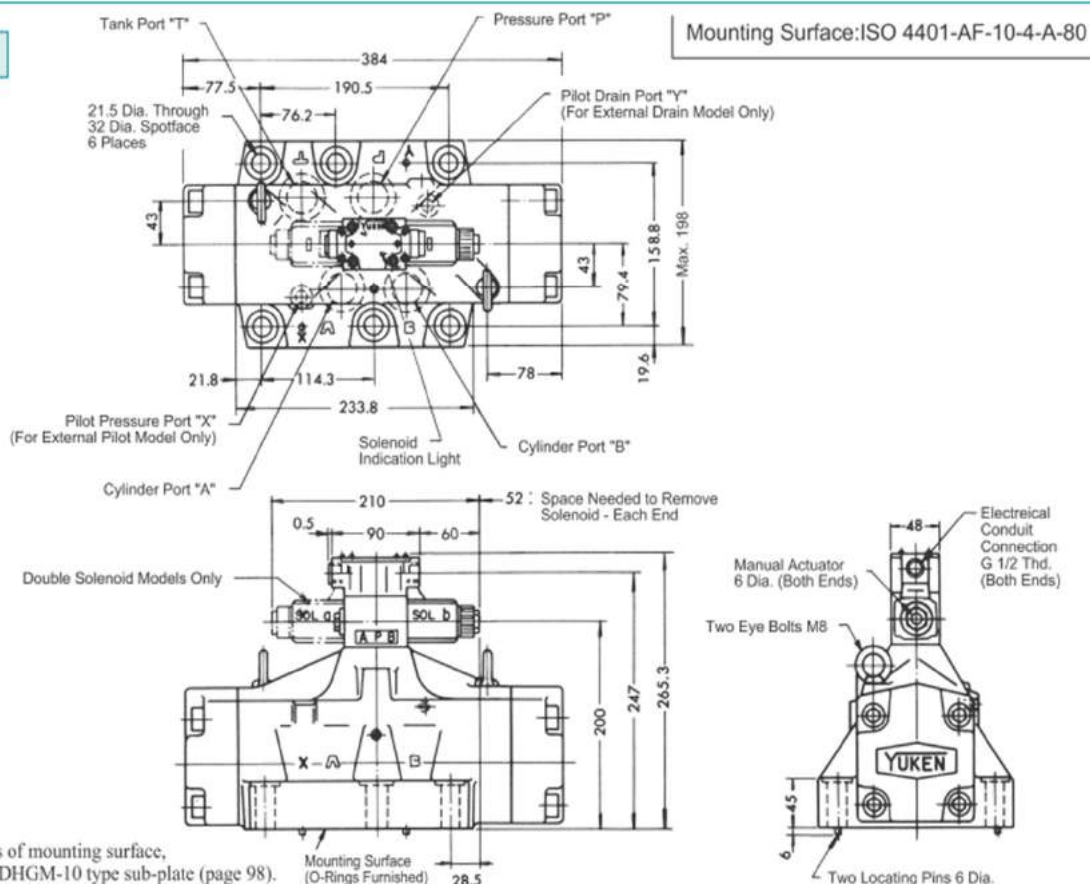
DIRECTIONAL CONTROL VALVES

Solenoid Controlled Pilot Operated Directional Valves Max. Pressure 31.5 MPa

DSHG-06



DSHG-10



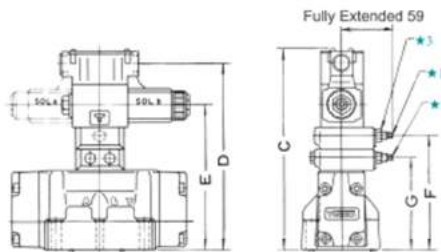


DIRECTIONAL CONTROL VALVES

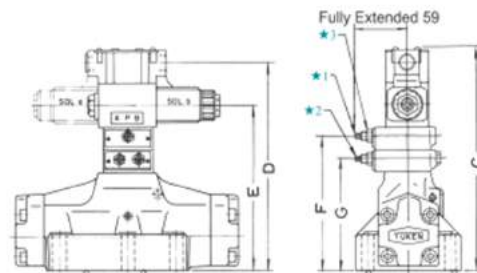
Solenoid Controlled Pilot Operated Directional Valves Max. Pressure 31.5 MPa

Options-Model with Pilot Choke Valve

DSHG-04-※※※-C1,C2,C1C2

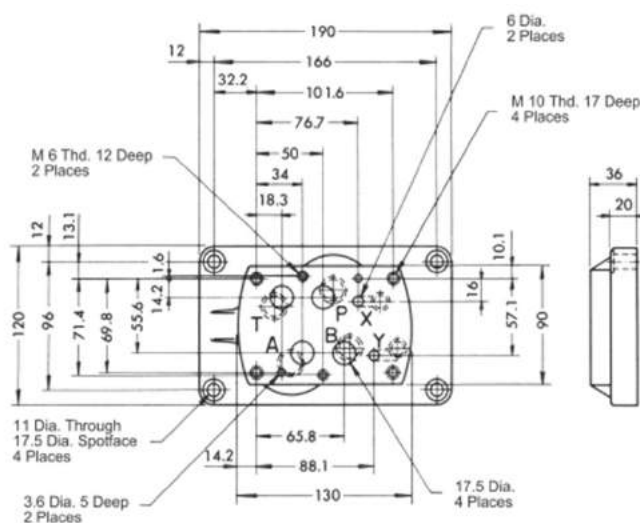


- * 1. C1 Choke Adj. Screw 6 Hex.
- * 2. C2 Choke Adj. Screw 6 Hex.
- * 3. C1 Lock Nut 12 Hex.

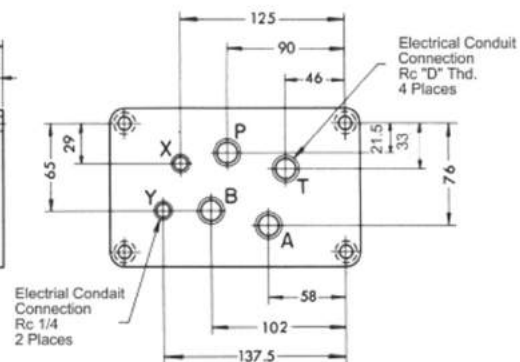
DSHG-06-※※※-C1,C2,C1C2
10


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

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



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

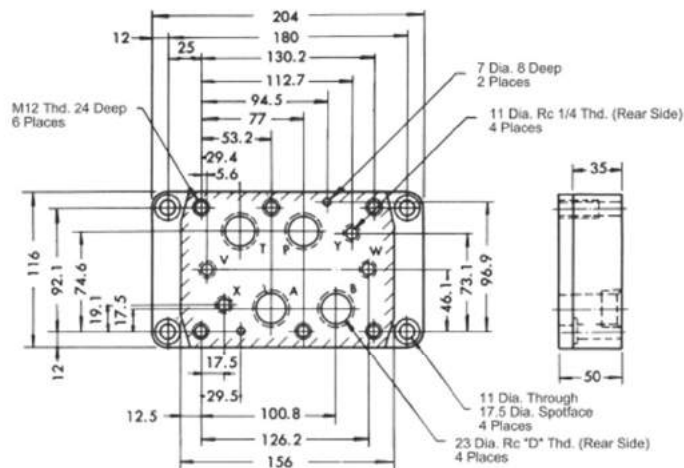




DIRECTIONAL CONTROL VALVES

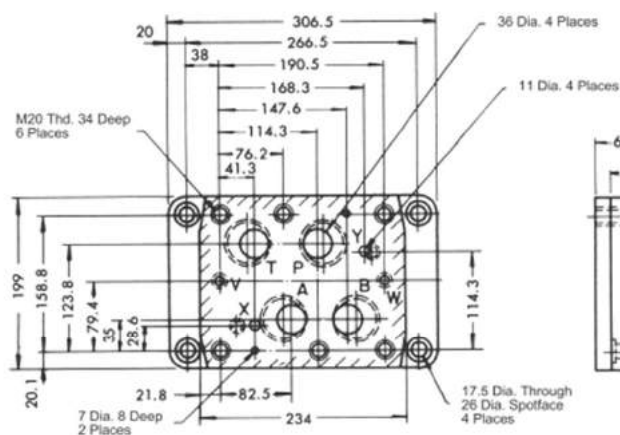
Solenoid Controlled Pilot Operated Directional Valves Max. Pressure 31.5 MPa

Sub-plate DHGM-06 / 06X-50

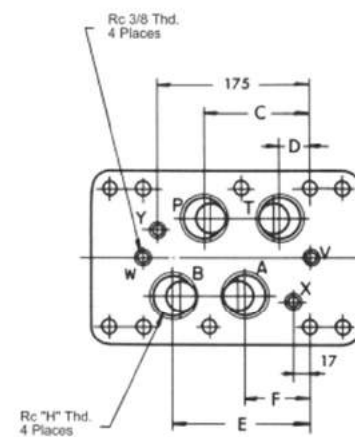


Model No.	D
DHGM-06-50	3/4
DHGM-06X-50	1

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")



DIRECTIONAL CONTROL VALVES

Manually Operated Directional Valves Max. Pressure 25 MPa



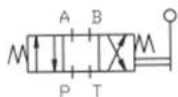
These valves may be used to manually shift the spool position and change the direction of oil flow.

Ratings

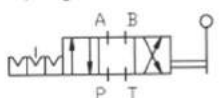
Valve Size	Model No.	Max. Flow L/min	Max. Pressure MPa (kgf/cm ²)	Max. T-Line Back Pressure MPa (kgf/cm ²)	Mass Kg.
3/8	DM *-03-2B *-50	100	25 (250)	16 (160)	DMT:5 DMG:4
	DM *-03-2D *-50				
	DM *-03-3C *-50				
	DM *-03-3D *-50				

Graphic Symbol

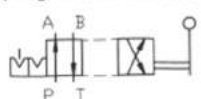
Spring Centered Models 3C※



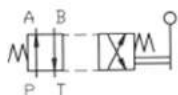
No-Spring Detented Models 3D※



No-Spring Detented Models 2D※



Spring Offset Models 2B※



Model Number Designation

DM T-03-3C2-50

Series Number —
Type of Connection —
T: Threaded Connection
G: Sub-plate Connection
Valve Size: 03 —
Valve Type —
Please refer to left graphic Symbol and page 73.
Design Number —

Note: For other valve types, please contact our sales engineers.

Sub-plates

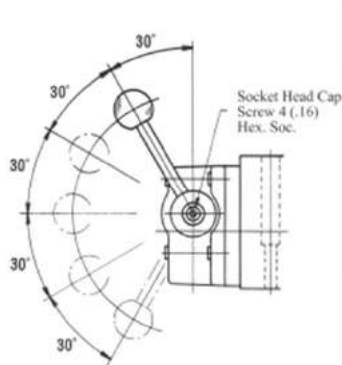
Valve Model No.	Sub-plate Model No.	Piping Size Rc	Mass kg
DMG-03	DSGM-03-40	3/8	3
	DSGM-03X-40	1/2	
	DSGM-03Y-40	3/4	4.7

Mounting Bolts (Attachment)

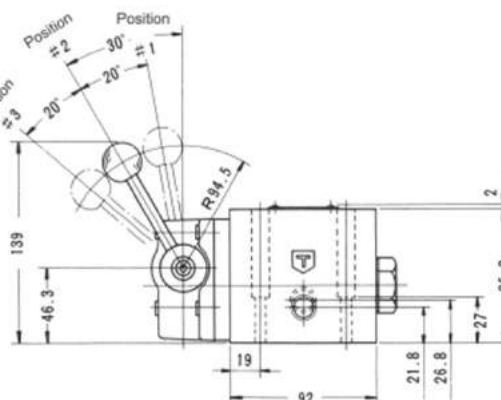
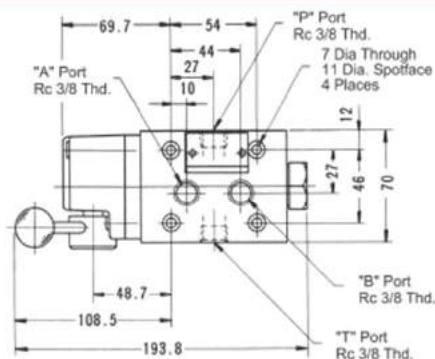
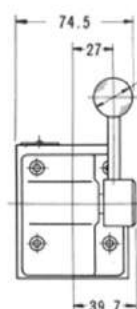
Model No.	Socket Head Cap Screw	Q'ty	Tightening Torque N•m
DMG-03	M6 x 35 Lg	4	12~15

DMT-03 How to change lever position

The lever position can be changed to any position in five different positions shown on the sketch in the right. For the lever position change, remove the Soc. Hd. Cap Screw and lever, set the lever at the required position and tighten it with Soc. Hd. Cap Screw firmly.



* Handle Lever Max. Torque
30 N•m (3.06 kgf•m)



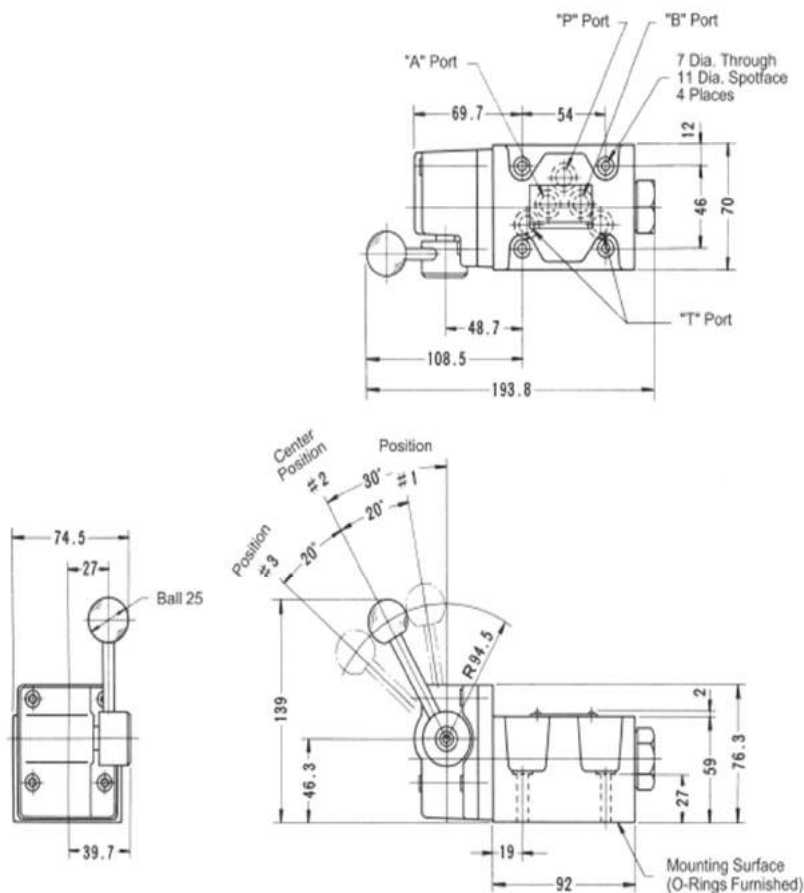


DIRECTIONAL CONTROL VALVES

Manually Operated Directional Valves Max. Pressure 25 MPa

DMG-03

Mounting Surface:ISO 4401-AC-05-4-A



★1.The position of operating the lever can be changed as required. For the details, please see the DMT-03 in the previous page.

★2.Max. torque of operating the lever:
30 N·m (3.06 kgf . m)

Note: For dimensions of mounting surface, please refer to the dimensional drawing of the sharable sub-plate (page 91).



DIRECTIONAL CONTROL VALVES

Pilot Controlled Check Valves

Max. Pressure 25 MPa

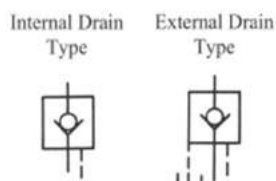


These check valves allow free flow in one direction and prevent reverse flow in the reverse direction until operated by a pilot pressure to allow free reverse flow. The specified cracking pressure is required to open the valve to allow free flow direction.

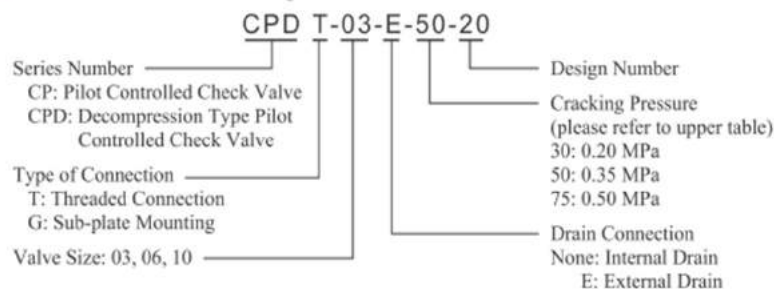
Ratings

Valve Size	Model No.		Rated Flow L/min	Cracking Pressure MPa (kgf/cm ²)	Mass kg	
	Threaded	Sub-plate			Threaded	Sub-Plate
3/8	CP※T-03-※-※-20	CP※G-03-※-※-20	50	0.20 (2)	3.4	4.5
3/4	CP※T-06-※-※-20	CP※G-06-※-※-20	125	0.35 (3.5)	5.2	7
1-1/4	CP※T-10-※-※-20	CP※G-10-※-※-20	315	0.50 (5)	11.6	12

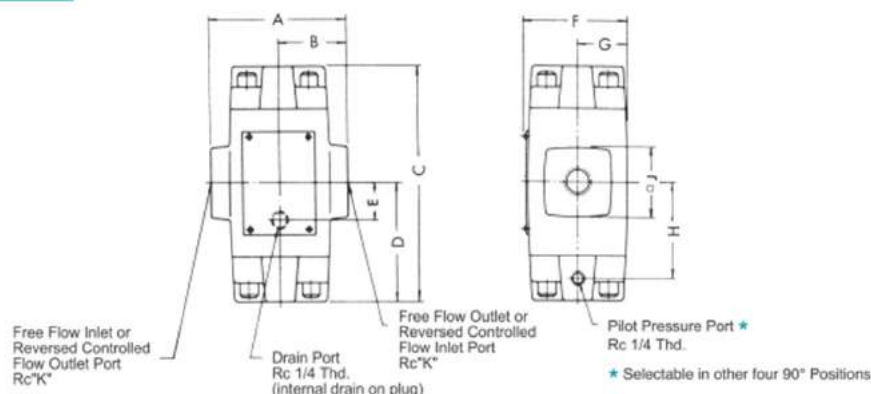
Graphic Symbol



Model Number Designation



CPT -03, 06, 10
CPDT



Model No.	A	B	C	D	E	F	G	H	J	K
CP※T-03	80	40	144	72	21	66	32	58	36	3/8
CP※T-06	96	48	168	84	26	78	38	70	60	3/4
CP※T-10	140	70	208	104	35	92	45	84	79	1-1/4



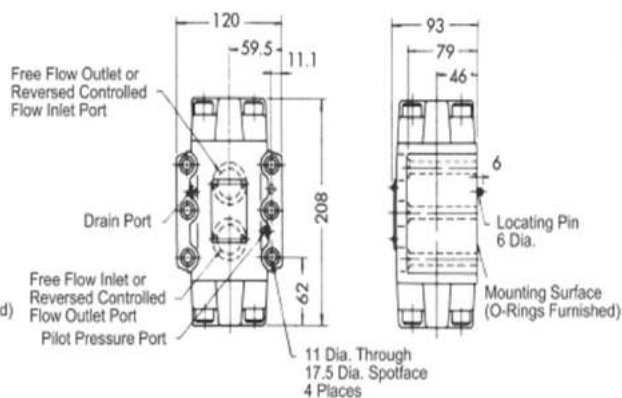
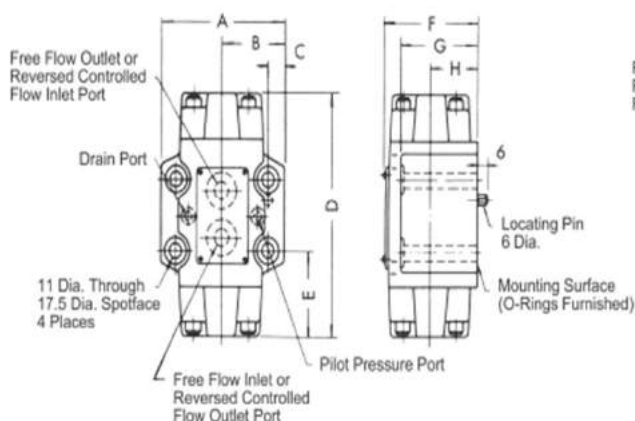
DIRECTIONAL CONTROL VALVES

Pilot Controlled Check Valves

Max. Pressure 25 MPa

CPG
CPDG -03, 06

CPG
CPDG -10



Model No.	A	B	C	D	E	F	G	H
CP※G-03	90	44.5	11.1	144	50.6	68	59	35
CP※G-06	102	51	11.3	168	54	80	69	40

Note: For dimensions of mounting surface, please refer to HGM type sub-plate (page 66).

Sub-plate

Valve Model no.	Sub-plate Model No.	Piping Size Rc	Mass kg
CPG -03 CPDG	HGM-03-20	3/8	1.6
	HGM-03X-20	1/2	1.6
CPG -06 CPDG	HGM-06-20	3/4	2.4
	HGM-06X-20	1	3.0
CPG -10 CPDG	HGM-10-20	1-1/4	4.8
	HGM-10X-20	1-1/2	5.7

Sub-plates are available. When ordering, please specify sub-plate model no. from the table above. Please refer to page 66.

Mounting Bolts (Attachment)

Model No.	Socket Head Cap Screw	Q'ty.	Tightening Torque N•m
CP※G-03	M10 x 70 Lg	4	60 ~ 74
CP※G-06	M10 x 80 Lg	4	
CP※G-10	M10 x 90 Lg	6	



DIRECTIONAL CONTROL VALVES

Poppet Type Directional Valves Max. Pressure 21 MPa



These valves are of poppet type structure, therefore, response time is quicker than that of spool type valves, moreover the valves have a little internal leakage. (below 0.25cm³/min)

Ratings

Model Number	Max. T-Line Back Pressure MPa (kgf/cm ²)	Max. Flow L/min	Mass kg
LVT-03-※-30	16 (160)	40	4.3
LVG-03-※-30			

Sub-plate

Valve Model No.	Piping Size Rc	Mass kg
LVGM-03-10	3/8	1.9
LVGM-03X-10	1/2	

Sub-plates are available. When ordering, please specify sub-plate model no. from the table above.

Model Number Designation

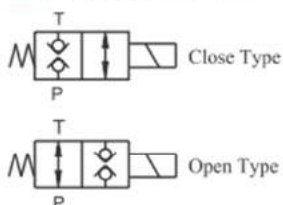
LV T-03-0-R220-N1-30

Series Number: LV
Type of Connection: T: Threaded Connection, G: Sub-plate Mounting
Valve Size: 03
Coil Type: R (When used in AC electric source, please select R * type coils.)
Design Number: 220
Electrical Conduit Connection: N1
Coil Type: 30 (The coil type is the same as that of the solenoid operated directional valve DSG-03.)

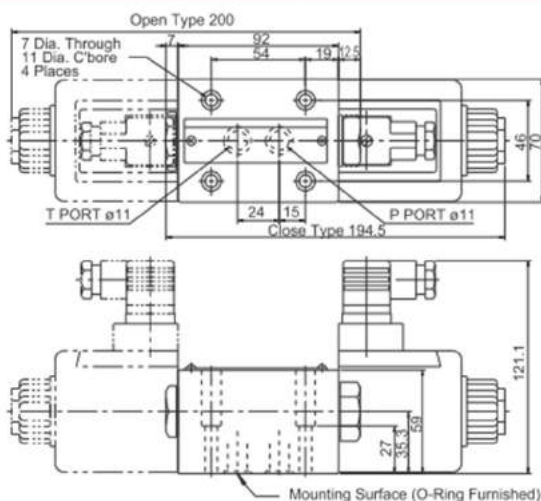
Mounting Bolts (Attachment)

Model No.	Socket Head Cap Screw	Q'ty	Tightening Torque N·m
LVT-03	M6 x 35 Lg	2	12~15
LVG-03	M6 x 35 Lg	4	12~15

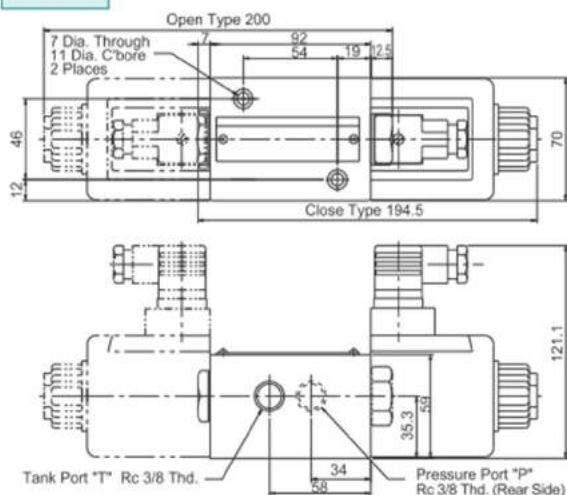
Graphic Symbol



LVG-03

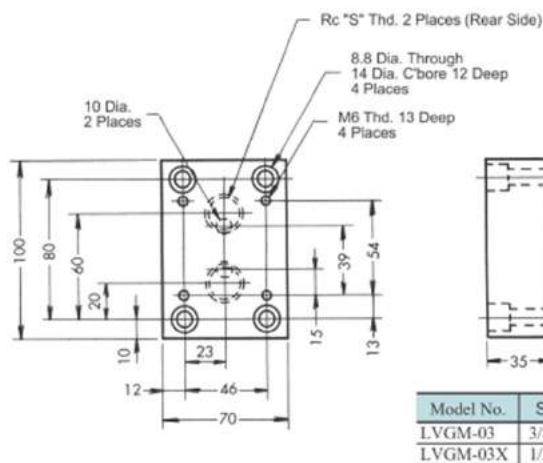


LVT-03



Sub-Plate

LVGM-03, 03X-10

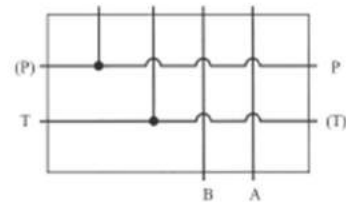




MODULAR BASE PLATES

Base Plates

Max. Pressure 31.5 MPa



MMC-01-1

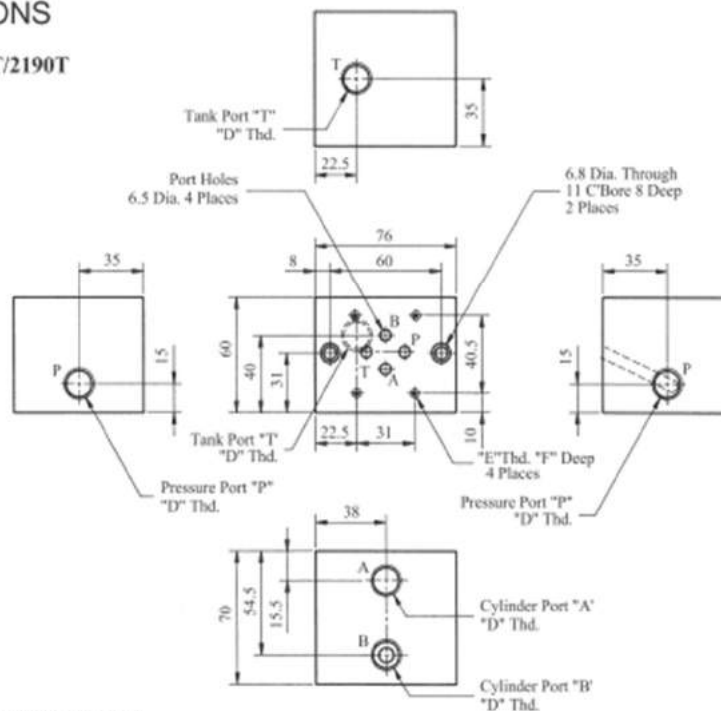
MODEL NUMBER DESIGNATION

MMC	-01	-1	-21T
Series Number	Plate Size	Number of Station	Design Number
MMC: Base Plates	01	1:1 Station	21T*

* Design Standards 21T . . .YUKEN Taiwan Standard
2190T . . .N. American Design Standard

DIMENSIONS

● MMC-01-1-21T/2190T



* Pressure Port "P"-2 positions
* Tank Port "T"-2 positions

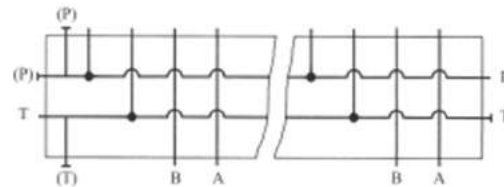
Model Numbers	Piping Size	"E"	Dimension mm	Mass Kg
	"D"		F	
MMC-01-1-21T	Re 3/8	M5	10	2.25
MMC-01-1-2190T	3/8 NPT	No.10-24 UNC	12	



MODULAR BASE PLATES

Base Plates

Max. Pressure 31.5 MPa



MMC-01-2 ~ 10

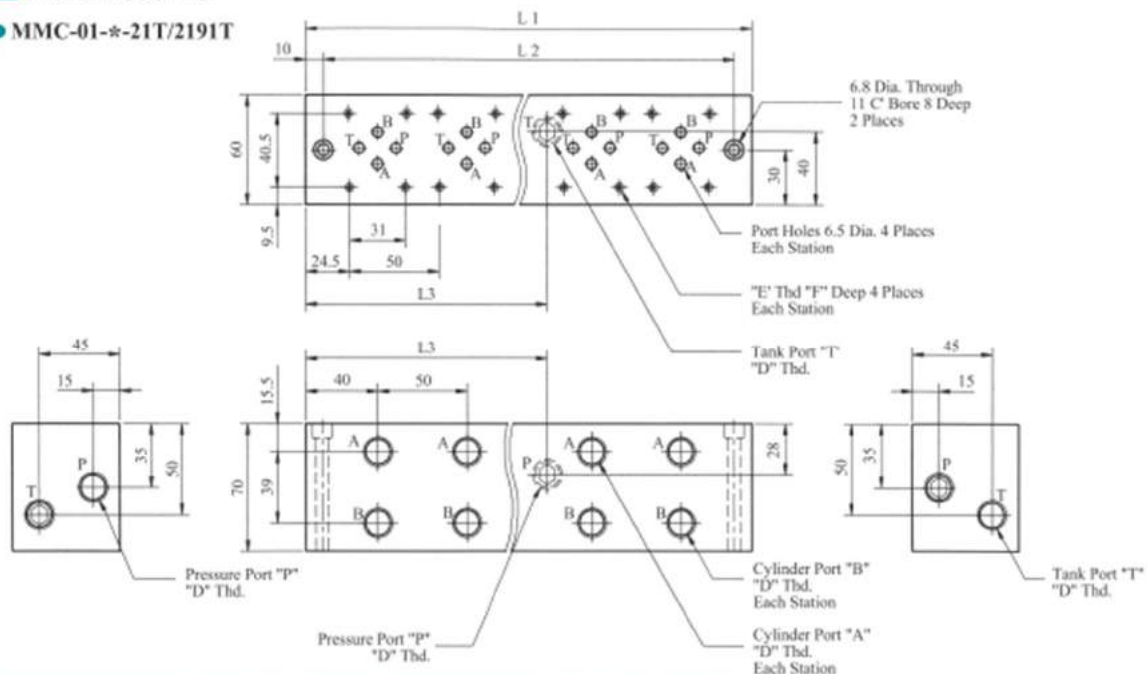
MODEL NUMBER DESIGNATION

MMC	-01	-6	-21T
Series Number	Plate Size	Number of Stations	Design Number
MMC: Base Plates	01	2:2 Stations	21T *
		3:3 Stations	
		4:4 Stations	
		5:5 Stations	
		6:6 Stations	

* Design Standards 21T . . .YUKEN Taiwan Standard
2190T . . .N. American Design Standard

DIMENSIONS

● MMC-01-~-21T/2191T



Model Numbers	Piping Size "D"	"E"	Dimension mm
MMC-01-~-21T	Re 3/8	M5	10
MMC-01-~-2190T	3/8 NPT	No.10-24 UNC	12

※ Pressure Port "P"-3 positions
※ Tank Port "T"-3 positions

Model Numbers	Dimensions mm			Mass Kg
	L1	L2	L3	
MMC-01-2	130	110	65	3.55
MMC-01-3	180	160	65	4.95
MMC-01-4	230	210	115	6.35
MMC-01-5	280	260	115	7.75
MMC-01-6	330	310	165	9.25

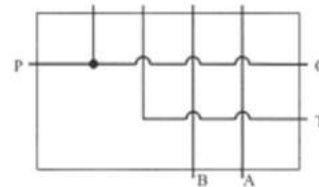
Model Number	Dimension mm			Mass Kg
	L1	L2	L3	
MMC-01-7	380	360	165	10.65
MMC-01-8	430	410	215	12.05
MMC-01-9	480	460	215	13.45
MMC-01-10	530	510	265	14.85



MODULAR BASE PLATES

Base Plates

Max. Pressure 31.5 MPa



MMC-03-1

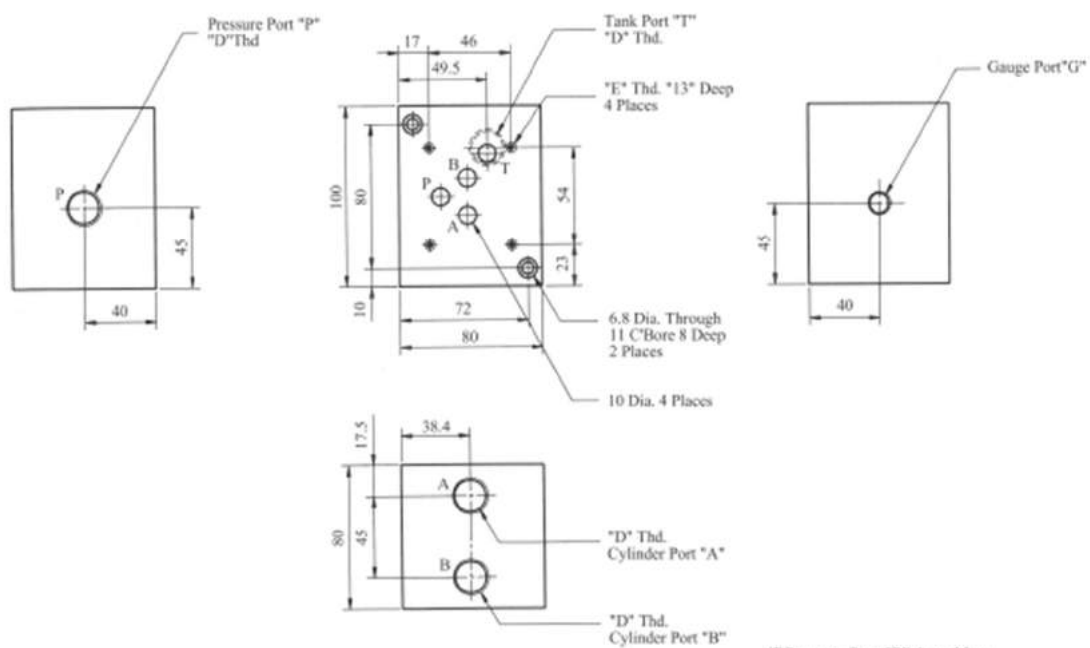
MODEL NUMBER DESIGNATION

MMC	-03	-1	-21T
Series Number	Plate Size	Number of Stations	Design Number
MMC: Base Plates	03	1:1 Station	21T*

* Design Standard : 21T ... YUKEN Taiwan Standard
2190T ... N. American Design Standard

DIMENSIONS

● MMC-03-1-21T/2190T



※ Pressure Port "P"-1 positions
※ Tank Port "T"-1 positions

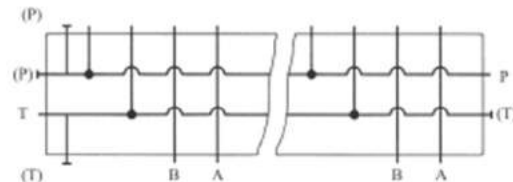
Model Numbers	Piping Size "D"	"E"	Gauge Port "G"	Mass KG
MMC-03-1-21T	Rc 1/2	M6	Rc 1/4	3.3
MMC-03-1-2190T	1/2 NPT	1/4-20 UNC	1/4 NPT	



MODULAR BASE PLATES

Base Plates

Max. Pressure 31.5 MPa



MMC-03-2~6

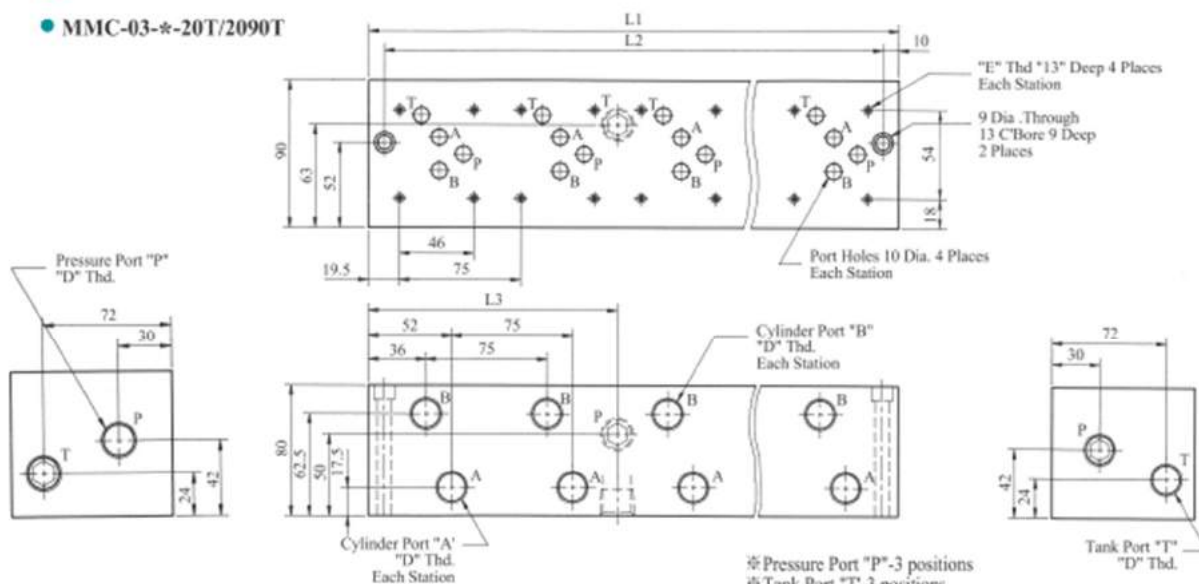
RATING

MMC	-03	-6	-20T
Series Number	Plate Size	Number of Station	Design Number
MMC: Base Plate	03	2:2 Stations 3:3 Stations 4:4 Stations 5:5 Stations 6:6 Stations	20T*

* Desing Standard : 20T . . .YUKEN Taiwan Standard
2090T . . .N.American Desing Standard

DIMENSIONS

● MMC-03-~-20T/2090T



Model Numbers	Piping Size	"E"	Dimension mm			Mass Kg
	"D"		L1	L2	L3	
MMC-03-2-20T	Re 1/2	M6	160	140	80	7.7
MMC-03-2-2090T	1/2 NPT	1/4-20 UNC				
MMC-03-3-20T	Re 1/2	M6	235	215	80	11.4
MMC-03-3-2090T	1/2 NPT	1/4-20 UNC				
MMC-03-4-20T	Re 1/2	M6	310	290	155	15.15
MMC-03-4-2090T	1/2 NPT	1/4-20 UNC				
MMC-03-5-20T	Re 1/2	M6	385	365	155	19.05
MMC-03-5-2090T	1/2 NPT	1/4-20 UNC				
MMC-03-6-20T	Re 1/2	M6	460	440	230	22.65
MMC-03-6-2090T	1/2 NPT	1/4-20 UNC				
MMC-03-7-20T	Re 1/2	M6	535	515	230	26.4
MMC-03-7-2090T	1/2 NPT	1/4-20 UNC				