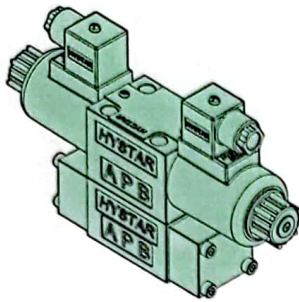
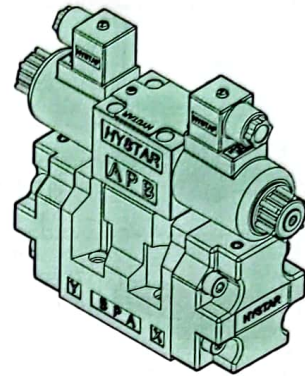


DSHG-N-01



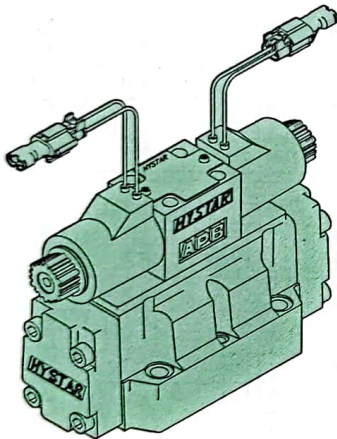
Max. Pressure : 210bar (3000PSI)
 Max. Flow : 40lpm (10.6USgpm)

DSHG-N-03



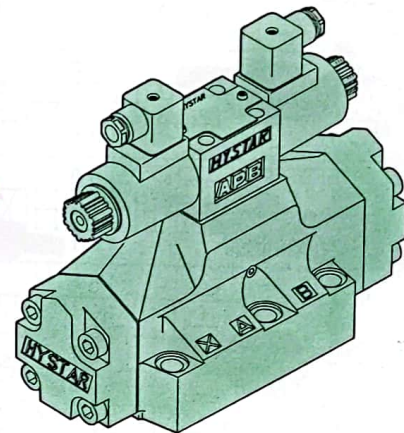
Max. Pressure : 250bar (3600PSI)
 Max. Flow : 160lpm (42.3USgpm)

DSHG-Y-04



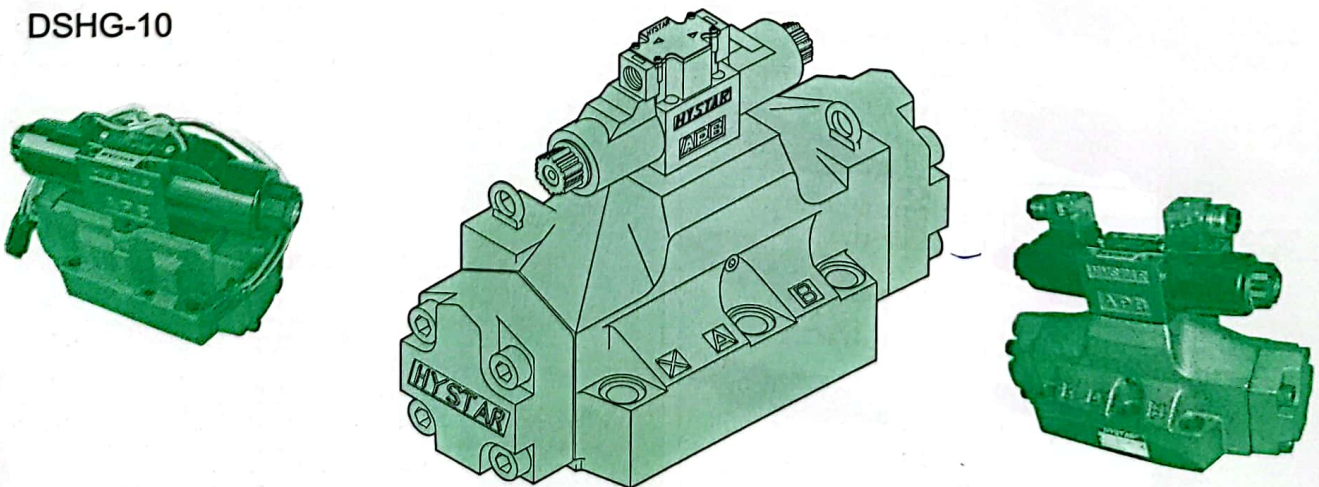
Max. Pressure : 250bar (3600PSI)
 Max. Flow : 300lpm (79.3USgpm)

DSHG-N-06



Max. Pressure : 250bar (3600PSI)
 Max. Flow : 500lpm (132USgpm)

DSHG-10



Max. Pressure : 250bar (3600PSI)

Max. Flow : 1100lpm (291USgpm)

MODEL NO SPECIFICATIONS (Solenoid Controlled Pilot Operated Directional Valves)

Spool Type & Graphic Symbols		Rated Flow Capacity -Maximum Flow Capacity				
SYMBOLS	MODEL NO	DSHG-01	DSHG-03	DSHG-04	DSHG-06	DSHG-10
	DSHG-2B2-**	~40 lpm (~10.6USgpm)	60~160 lpm (15.9~42.3USgpm)	135~300 lpm (35.7~79.3USgpm)	310~500 lpm (82~132USgpm)	570~1100 lpm (150~291USgpm)
	DSHG-2B3-**					
	DSHG-2B4-**					
	DSHG-2N2-**					
	DSHG-2N3-**					
	DSHG-3C2-**					
	DSHG-3C3-**					
	DSHG-3C4-**					
	DSHG-3C40-**					
	DSHG-3C7-**					
	DSHG-3C9-**					
	DSHG-3C10-**					
	DSHG-3C11-**					
	DSHG-3C12-**					
	DSHG-3C5-**	~40 lpm (~10.6USgpm)	60~160 lpm (15.9~42.3USgpm)	245~280 lpm (64.8~74.5USgpm)	230~450 lpm (60.8~120USgpm)	570~950 lpm (150~250USgpm)
	DSHG-3C6-**	~40 lpm (~10.6USgpm)	60~160 lpm (15.9~42.3USgpm)	245~280 lpm (64.8~74.5USgpm)	230~450 lpm (60.8~120USgpm)	570~950 lpm (150~250USgpm)
	DSHG-3C60-**					
Max. Operating Pressure (bar)		315 (4500 PSI)				
Min. Required Pilot Pressure (bar)		8 (114 PSI)				10 (143 PSI)
Max. Pilot Pressure (bar)		250 (3600 PSI)				
Permissible Back Pressure (T) (bar) Ext. Drain		210 (3000 PSI)				
Permissible Back Pressure (T) (bar) Int. Drain		160 (2300 PSI)				
Weight (Kgs)	Double Solenoid	3.5	7.2	8.9	12.8	45.4
	Single Solenoid	2.9	6.6	8.3	12.2	44.8
Switching Frequency (times/min)		120	120	120	120	110
Hydraulic Fluids		Use Hydraulic Fluids Equivalent to ISO VG32 or VG46				
Operating Temperature Range Recommended (°C)		-15 ~ +70 (+5 ~ +160°F)				
Operating Viscosity (cSt)		15 ~ 400 (80 ~ 1800SSU)				
Filtration		25 Microns Absolute or Finer				

SPRING OFFSET 2 POSITION	GRAPHIC SYMBOLS (STANDARD)	SPRING CENTERED 3 POSITION	GRAPHIC SYMBOLS (STANDARD)	NO SPRING 2 POSITION	GRAPHIC SYMBOLS (STANDARD)
2A2		3C2		2N2	
2A3		3C3		2N3	
2A14		3C4		2N4	
2B2		3C40		2N40	
2B29		3C5		2N7	
2B3		3C6		2N2A	
2B4		3C60		2N3A	
2B40		3C7		2N4A	
2B7		3C8		2N40A	
		3C9		2N5A	
		3C10		2N6A	
		3C11		2N60A	
		3C12		2N7A	
		3C25		2N9A	
		3C29		2N10A	
		3C48		2N11A	
				2N12A	

SPECIAL TWO POSITION VALVES (DSHG-04/06/10)

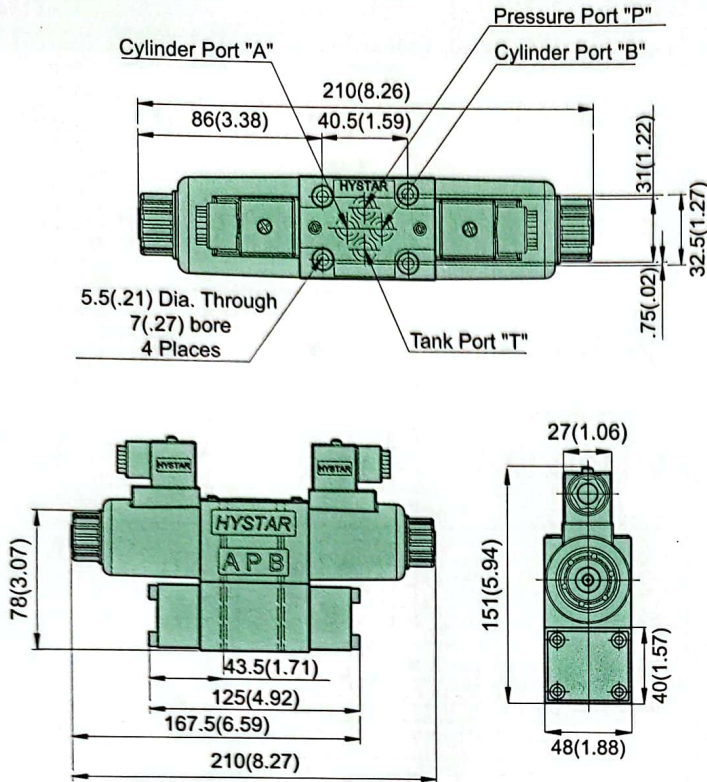
SPRING OFFSET 2 POSITION	GRAPHIC SYMBOLS		SPRING OFFSET 2 POSITION	GRAPHIC SYMBOLS	
	STANDARD	ALTERNATED		STANDARD	ALTERNATED
2B2A(L)			2B2B(L)		
2B3A(L)			2B3B(L)		
2B4A(L)			2B4B(L)		
2B40A(L)			2B40B(L)		
2B5A(L)			2B5B(L)		
2B6A(L)			2B6B(L)		
2B60A(L)			2B60B(L)		
2B7A(L)			2B7B(L)		
2B8A(L)			2B8B(L)		
2B9A(L)			2B9B(L)		
2B10A(L)			2B10B(L)		
2B11A(L)			2B11B(L)		
2B12A(L)			2B12B		
2B25A(L)			2B25B(L)		
2B29A(L)			2B29B(L)		
2B48A(L)			2B48B(L)		

NOTE : Standard Model No. + L = Alternate Model.
 For example, 2B2A is Standard Model, 2B2AL is Alternate Model.

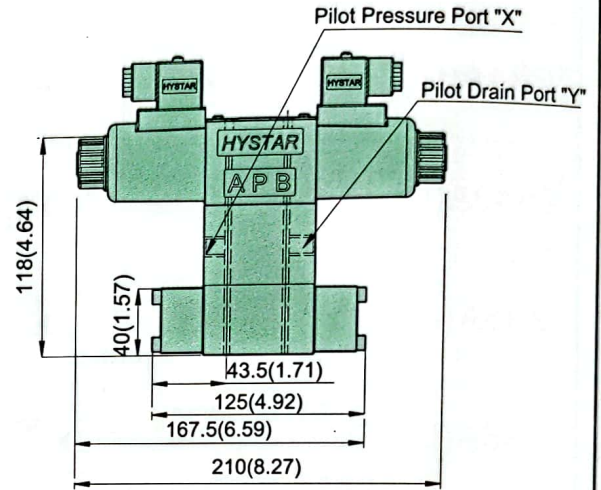
DSHG-01

1P1D: Internal pilot, internal drain

MOUNTING SURFACE: DSHG-01-CETOP3
ISO 03-NFPAD03



1P2D: Internal pilot, external drain
2P1D: External pilot, internal drain
2P2D: External pilot, external drain

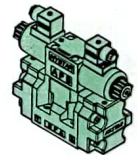
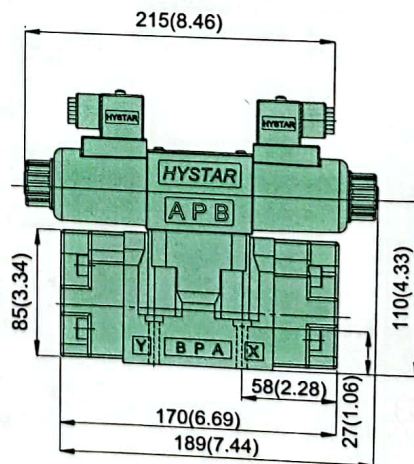
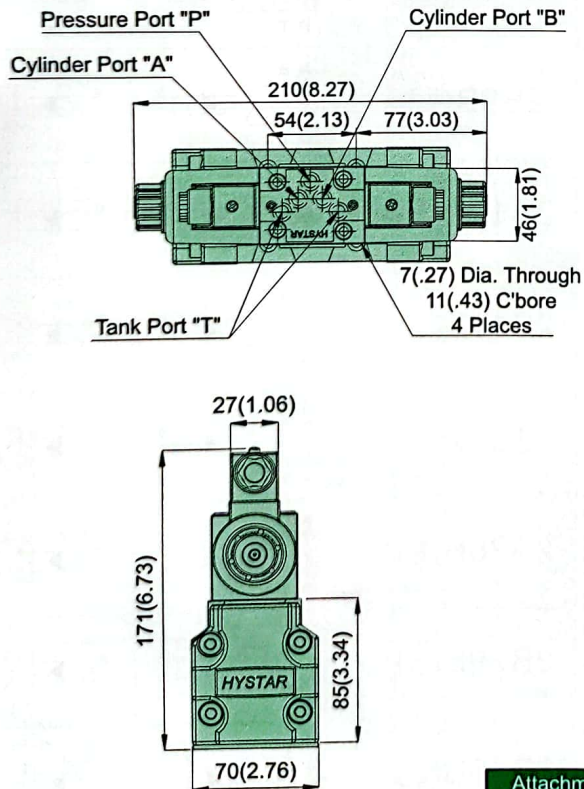


•Dimensions for models with terminal box type, reference page 15 for details.

Attachment Name	Description	Tightening Torque	Code
Soc. Hd. Cap Screw	M5 X45LgX4pcs	5-7 Nm	30
Soc. Hd. Cap Screw	10-24UNCX1-3/4"LgX4pcs	43-60 in.lbs	3090

DSHG-03

MOUNTING SURFACE: DSHG-03-CETOP5
ISO 05-NFPAD05

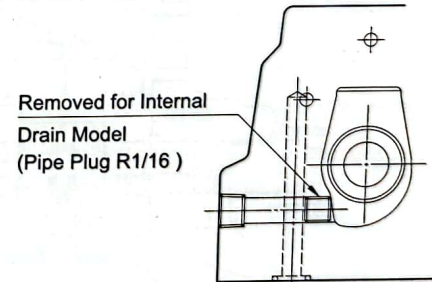
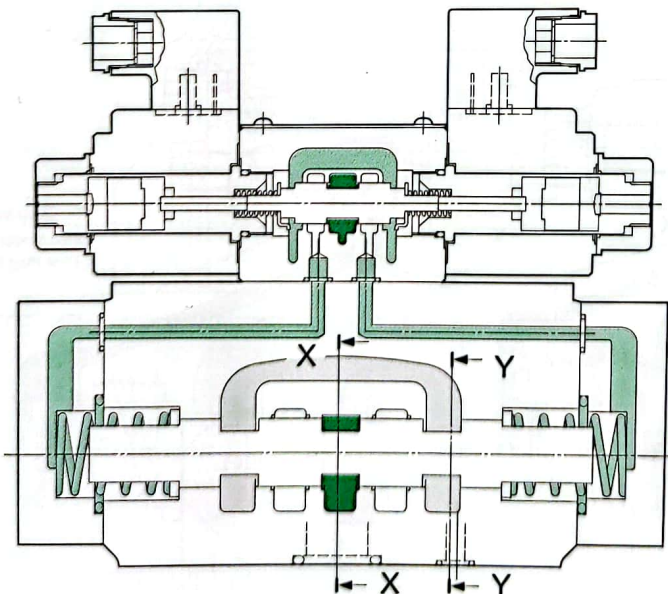
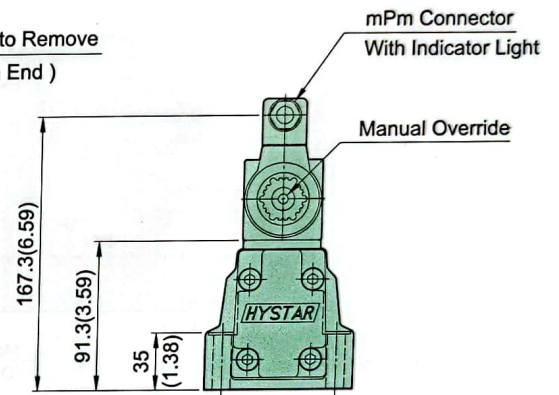
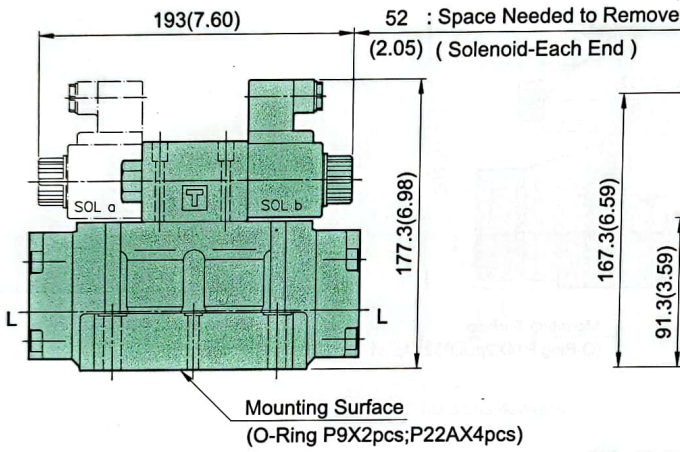
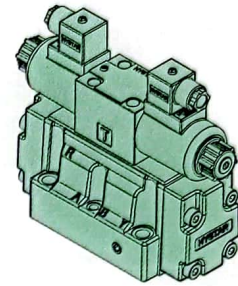
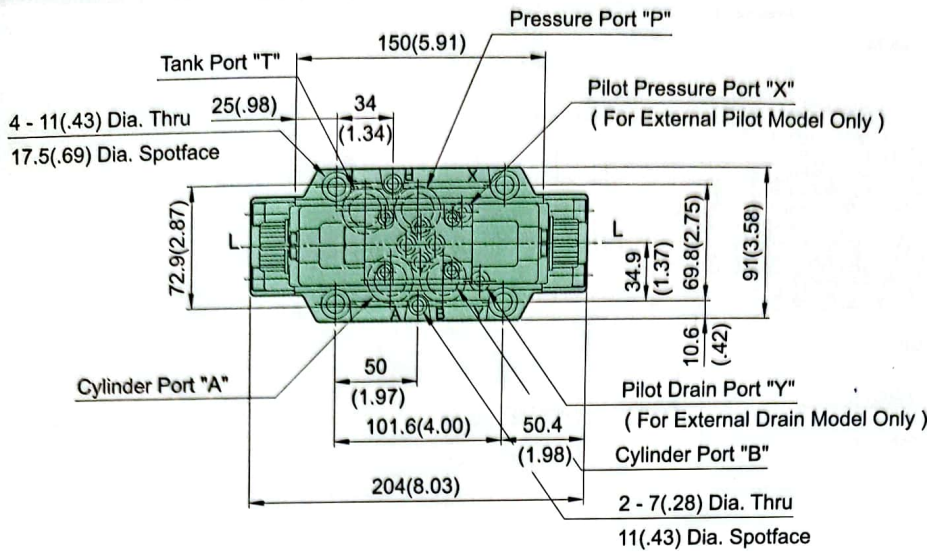


•Dimensions for models with Din connector, reference page 15 for details.

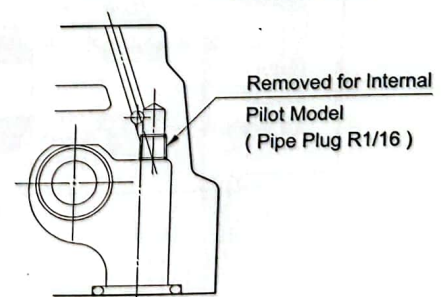
Attachment Name	Description	Tightening Torque	Code
Soc. Hd. Cap Screw	M6 X35LgX4pcs	12-15 Nm	30
Soc. Hd. Cap Screw	1/4-20UNCX1-1/2"LgX4pcs	105-130 in.lbs	3090

04(1/2")(S)DSHG-***-N-04

MOUNTING SURFACE: DSHG-04-CETOP7
ISO 07-NFPAD07



Section Y-Y

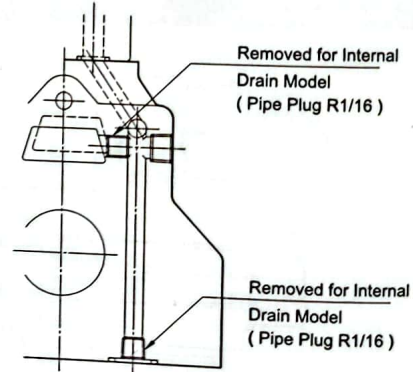
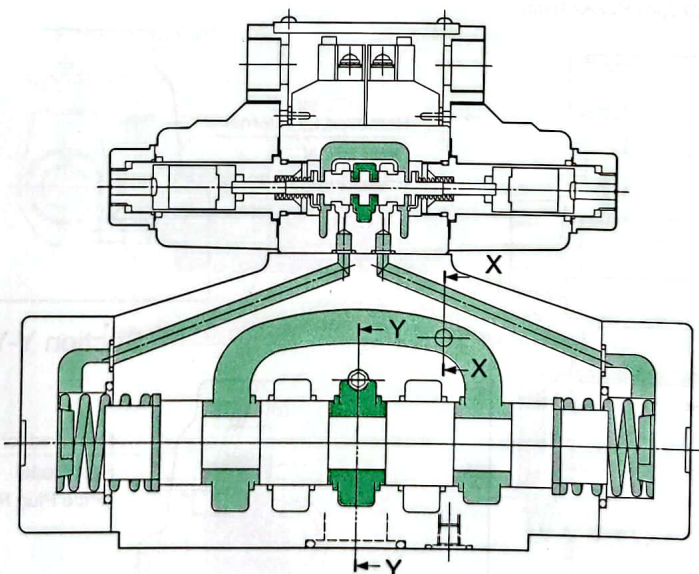
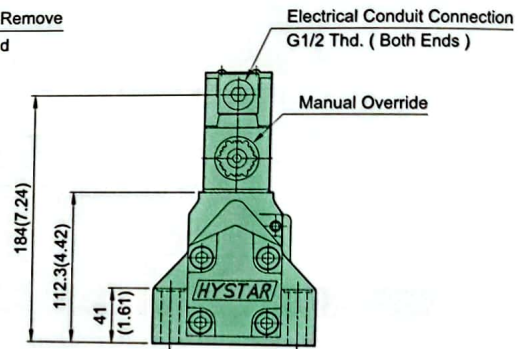
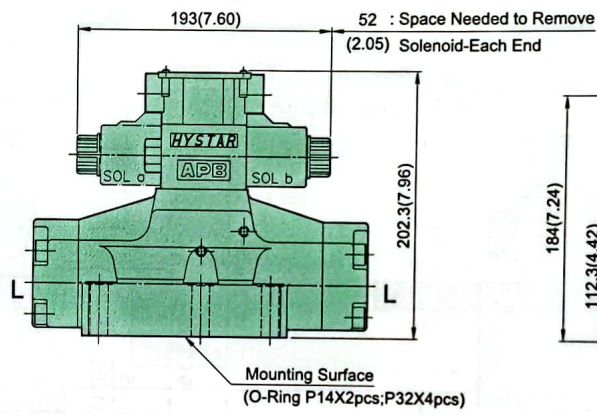
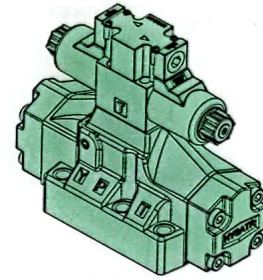
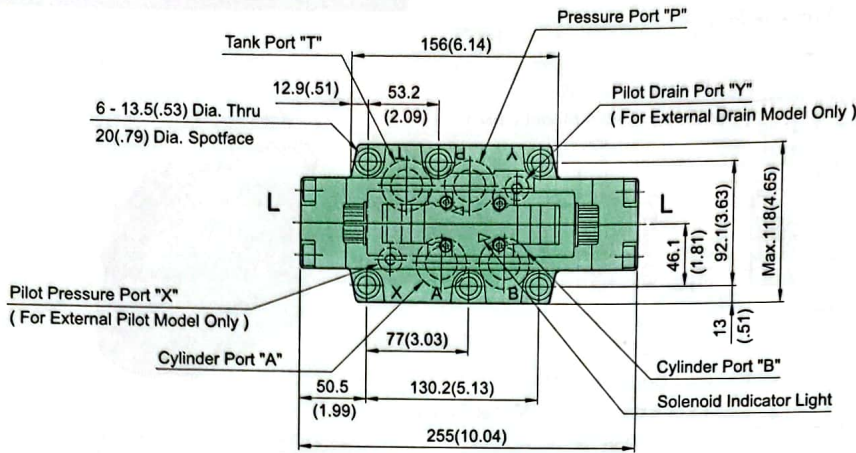


Section X-X

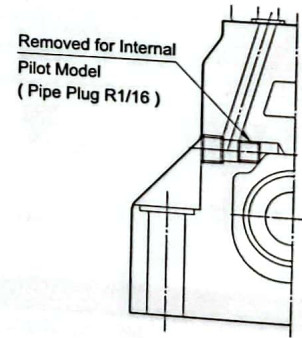
Attachment Name	Description	Tightening Torque	Code
Soc. Hd. Cap Screw	M6X45LgX2pcs M10X45LgX4pcs	12-15 Nm 58-72 Nm	30
Soc. Hd. Cap Screw	1/4-20UNCX1-3/4"LgX2pcs 3/8-16UNCX1-3/4"Lg X4pcs	104-130 in.lbs 504-625 in.lbs	3090

06(3/4")(S)DSHG-**-06

MOUNTING SURFACE: DSHG-06-CETOP8
ISO 08-NFPAD08



Section X-X

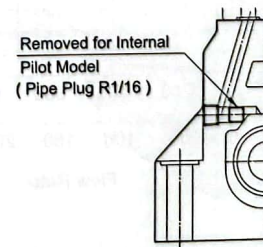
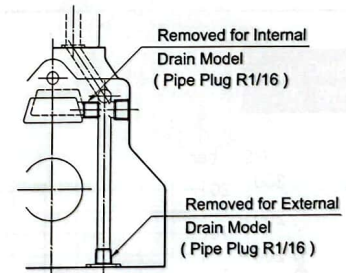
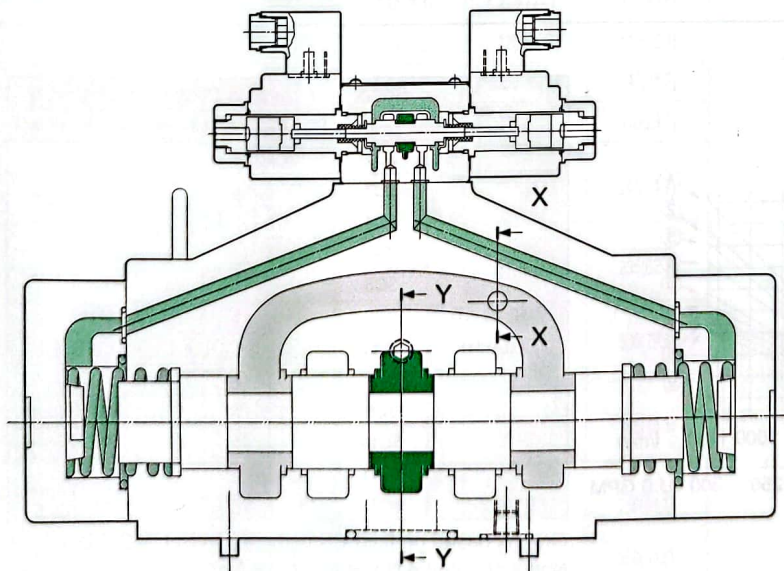
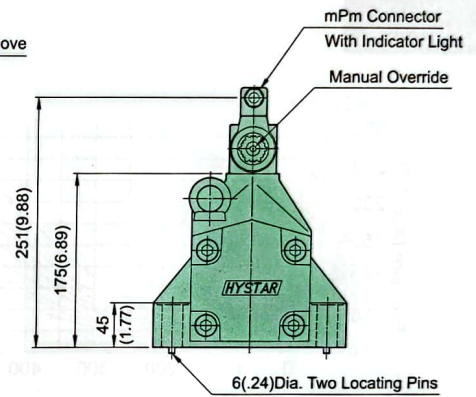
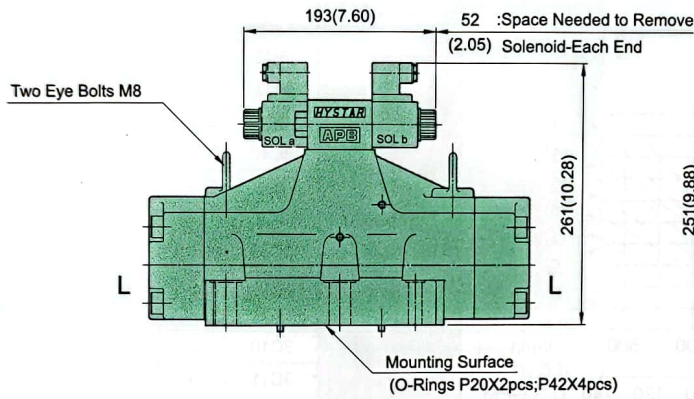
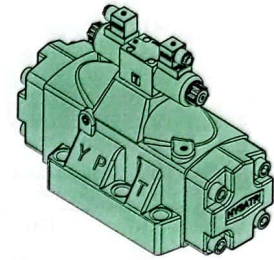
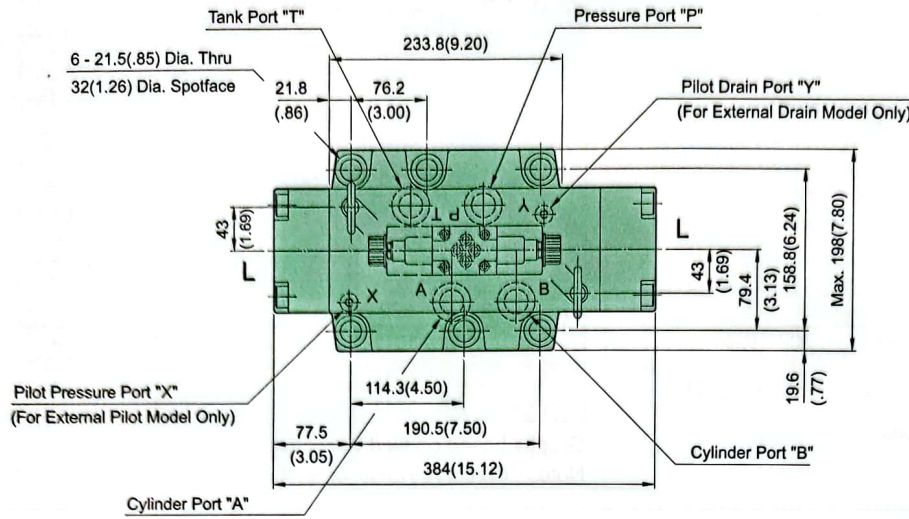


Section Y-Y

Attachment Name	Description	Tightening Torque	Code
Soc. Hd. Cap Screw	M12X55LgX6pcs	100-123 Nm	30
Soc. Hd. Cap Screw	1/2-13UNCX2-1/8"Lg X6pcs	868-1068 in.lbs	3090

10(1-1/4")(S)DSHG-***-10

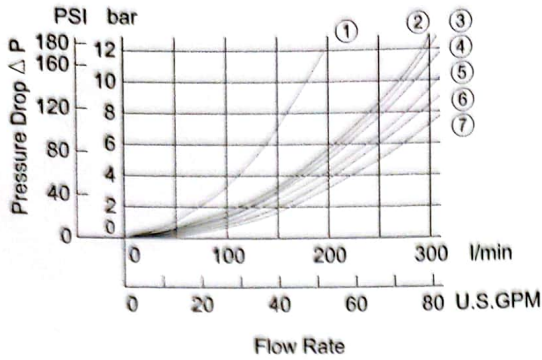
MOUNTING SURFACE: DSHG-10-CETOP10
ISO 10-NFPAD10



Attachment Name	Description	Tightening Torque	Code
Soc. Hd. Cap Screw	M20X75LgX6pcs	473-585 Nm	30
Soc. Hd. Cap Screw	3/4-10UNCX3"Lg X6pcs	4106-5078 in.lbs	3090

PRESSURE DROP

DSHG-04 DSHG-04-S

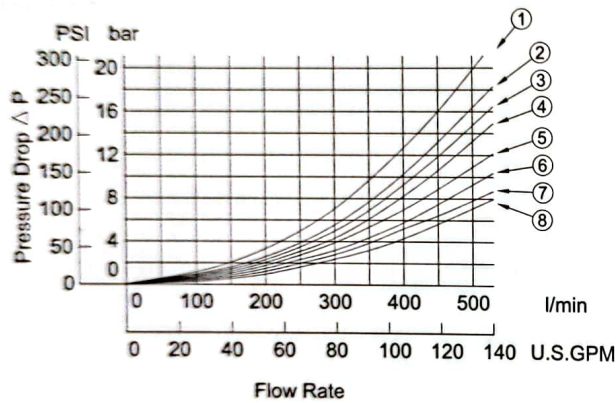


Series	Spool Type	Pressure Drop Curve Number				
		P→A	B→T	P→B	A→T	P→T
DSHG-04 DSHG-04-S	3C2	⑤(②)	④(②)	⑤(②)	⑥(④)	—
	3C3	⑤	③	⑤	⑤	⑦
	3C4	⑤(②)	③(③)	⑤(②)	⑤(⑤)	—
	3C40	⑤(②)	④(④)	⑤(②)	⑥(⑥)	—
	3C5	⑦	④	⑤	⑤	⑤
	3C8	⑤(⑥)	③(④)	⑤(⑥)	⑥(⑦)	①(②)
	3C60	⑦	⑤	⑦	⑦	②
	3C7	⑤	④	⑤	⑥	—
	3C9	⑤	④	⑤	⑥	—
	3C10	⑤(②)	②(②)	⑤(②)	⑥(④)	—
	3C11	⑥	④	⑤	⑥	—
	3C12	⑤(②)	④(②)	⑤(②)	⑤(⑤)	—

Graphs based on fluid viscosity of 35 cSt (162 SSU).

Notes : () curve No. is for shock-less type.

DSHG-06 DSHG-06-S

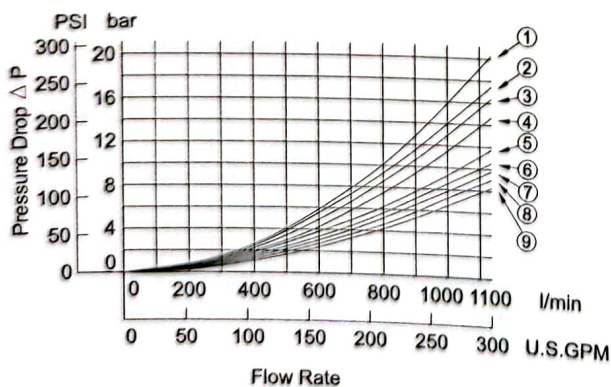


Series	Spool Type	Pressure Drop Curve Number				
		P→A	B→T	P→B	A→T	P→T
DSHG-06 DSHG-06-S	3C2	⑧(⑥)	⑤(①)	⑧(⑥)	⑦(②)	—
	3C3	⑥	④	⑥	⑦	⑥
	3C4	⑧(⑥)	⑤(②)	⑧(⑥)	⑦(②)	—
	3C40	⑧	⑤	⑧	⑦	—
	3C5	⑧	④	⑤	⑦	②
	3C6	⑤	①	⑤	④	③
	3C60	⑥(⑥)	⑤(②)	⑥(⑥)	⑦(③)	③(①)
	3C7	⑥	④	⑥	⑦	—
	3C9	⑥	⑤	⑥	⑦	—
	3C10	⑧	⑤	⑧	⑦	—
	3C11	⑧	④	⑤	⑦	—
	3C12	⑧	⑤	⑧	⑦	—

Graphs based on fluid viscosity of 35 cSt (162 SSU).

Notes : () curve No. is for shock-less type.

DSHG-10 DSHG-10-S



Series	Spool Type	Pressure Drop Curve Number				
		P→A	B→T	P→B	A→T	P→T
DSHG-10 DSHG-10-S	3C2	⑨(⑧)	⑥(③)	⑨(⑧)	⑧(④)	—
	3C3	⑦	⑥	⑦	⑦	⑤
	3C4	⑨(⑧)	⑥(⑤)	⑨(⑧)	⑥(⑥)	—
	3C40	⑨	⑥	⑨	⑧	—
	3C5	⑨	⑥	⑧	⑥	①
	3C6	⑤	③	⑤	④	②
	3C60	⑧(⑧)	⑤(④)	⑧(⑧)	⑤(④)	③(②)
	3C7	⑦	⑥	⑦	⑦	—
	3C9	⑦	⑥	⑦	⑧	—
	3C10	⑨	⑤	⑨	⑧	—
	3C11	⑨	⑥	⑧	⑦	—
	3C12	⑨	⑦	⑨	⑥	—

Graphs based on fluid viscosity of 35 cSt (162 SSU).

Notes : () curve No. is for shock-less type.

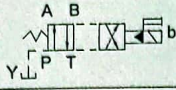
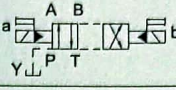
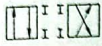


FLOW LIMITATIONS :

Pressure drop is influenced by forces acting within the valve. The graphs shown assume simultaneous equal flow rates P to A or B, and from A or B to T.

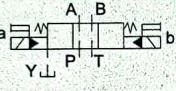
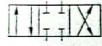
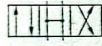
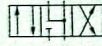

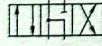
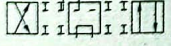

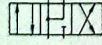
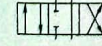
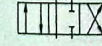
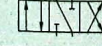
Care should be taken in applications where high flow rates are used in conjunction with high pressure, i.e., greater than 250 bar (3600 PSI). Also when single flow paths, or substantially different simultaneous flow rates are required between P to A or B, and A or B to T.

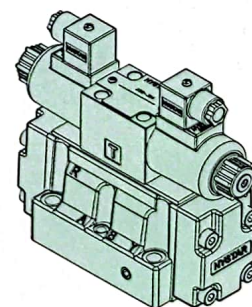
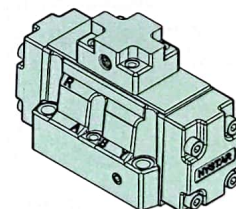
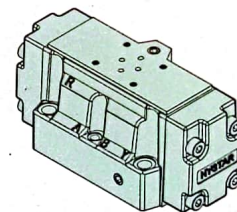
FLOW RATINGS CHART [DSHG-(N)-04]

Two Positions

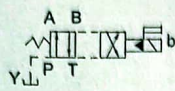
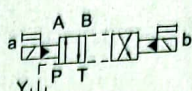
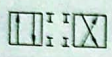

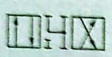
Spool Type	Spring Offset				No-Spring			
	Graphic Symbol 	Maximum Flow lpm(USgpm)			Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	(S-)DSHG-2B2-04	300(79.3)	300(79.3)	300(79.3)	(S-)DSHG-2N2-04	300(79.3)	300(79.3)	300(79.3)
	DSHG-2B3-04	300(79.3)	300(79.3)	300(79.3)	DSHG-2N3-04	300(79.3)	300(79.3)	300(79.3)
	(S-)DSHG-2B4-04	300(79.3)	300(79.3)	300(79.3)				

Three Positions

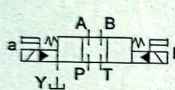
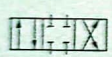
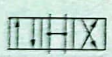
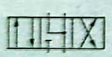
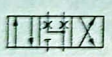
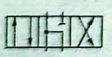
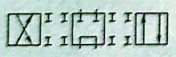
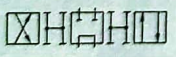

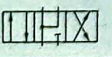
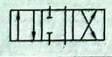
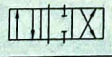
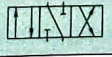
Spool Type	Spring Centered			
	Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	DSHG-3C2-04	300(79.3)	250(66)	145(38.3)
	S-DSHG-3C2-04	300(79.3)	185(48.8)	110(29.1)
	DSHG-3C3-04	300(79.3)	300(79.3)	300(79.3)
	DSHG-3C4-04	300(79.3)	275(72.6)	165(43.6)
	S-DSHG-3C4-04	300(79.3)	220(58.1)	110(29.1)
	DSHG-3C40-04	300(79.3)	250(66)	145(38.3)
	S-DSHG-3C40-04	300(79.3)	185(48.8)	110(29.1)
	DSHG-3C5-04	250(66.1)	248(65.5)	245(64.7)
	DSHG-3C6-04	300(79.3)	253(66.8)	235(62.1)
	DSHG-3C60-04	300(79.3)	300(79.3)	300(79.3)
S-DSHG-3C60-04				
	DSHG-3C7-04	300(79.3)	250(66.1)	145(38.3)
	DSHG-3C9-04	300(79.3)	290(76.6)	250(66.1)
	DSHG-3C10-04	300(79.3)	250(66.1)	150(39.6)
	S-DSHG-3C10-04	300(79.3)	185(48.8)	110(29.1)
	DSHG-3C11-04	300(79.3)	210(55.5)	140(37.0)
	DSHG-3C12-04	300(79.3)	225(59.4)	135(35.7)
	S-DSHG-3C12-04	300(79.3)	185(48.8)	110(29.1)

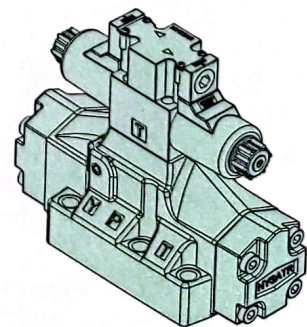
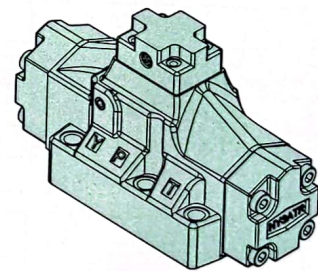
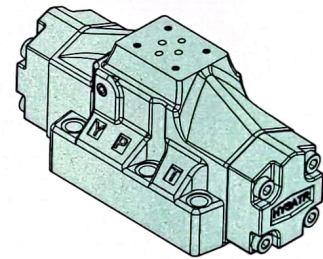


Two Positions

Spool Type	Spring Offset				No-Spring			
	Graphic Symbol 	Maximum Flow lpm(USgpm)			Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	(S-)DSHG-06-2B2	500(132)	500(132)	500(132)	(S-)DSHG-06-2N2	500(132)	500(132)	500(132)
	DSHG-06-2B3	500(132)	500(132)	500(132)	DSHG-06-2N3	500(132)	500(132)	500(132)
	(S-)DSHG-06-2B4	500(132)	500(132)	500(132)				

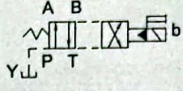
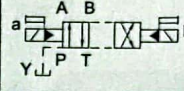
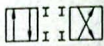

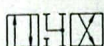
Three Positions

Spool Type	Spring Centered			
	Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	(S-)DSHG-06-3C2	500(132)	455(120) 500(132)	310(81.9) 500(132)
	DSHG-06-3C3	500(132)	480(126.7)	370(97.8)
	(S-)DSHG-06-3C4	500(132)	455(120) 500(132)	310(81.9) 500(132)
	(S-)DSHG-06-3C40	500(132)	455(120) 500(132)	310(81.9) 500(132)
	DSHG-06-3C5	500(132)	462(122)	350(92.5)
	DSHG-06-3C6	475(125)	345(91.1)	230(60.8)
	(S-)DSHG-06-3C60	475(125)	380(100.3)	280(74.0)
	DSHG-06-3C7	500(132)	475(125.4)	360(95.1)
	DSHG-06-3C9	500(132)	475(125.4) 500(132)	360(95.1) 500(132)
	(S-)DSHG-06-3C10	500(132)	455(120) 500(132)	310(81.9) 500(132)
	DSHG-06-3C11	500(132)	455(120) 500(132)	310(81.9) 500(132)
	(S-)DSHG-06-3C12	500(132)	455(120) 500(132)	310(81.9) 500(132)

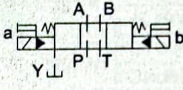

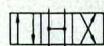
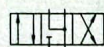

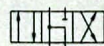
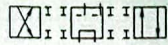
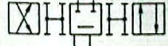

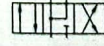
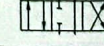
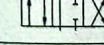
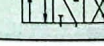


FLOW RATINGS CHART [DSHG-(N)-10]

Two Positions

Spool Type	Spring Offset				No-Spring			
	Graphic Symbol 	Maximum Flow lpm(USgpm)			Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	(S-)DSHG-10-2B2	1100(291)	1100(291)	1100(291)	(S-)DSHG-10-2N2	1100(291)	1100(291)	1100(291)
	DSHG-10-2B3	1100(291)	1100(291)	1100(291)	DSHG-10-2N3	1100(291)	1100(291)	1100(291)
	(S-)DSHG-10-2B4	1100(291)	1100(291)	1100(291)				

Three Positions

Spool Type	Spring Centered			
	Graphic Symbol 	Maximum Flow lpm(USgpm)		
	Model Numbers	100bar (1430PSI)	205bar (2930PSI)	315bar (4500PSI)
	(S-)DSHG-10-3C2	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)
	DSHG-10-3C3	1100(291)	1080(285.1)	895(236)
	(S-)DSHG-10-3C4	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)
	(S-)DSHG-10-3C40	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)
	DSHG-10-3C5	1100(291)	1040(274.5)	850(225)
	DSHG-10-3C6	1050(277)	790(208.5)	570(151)
	(S-)DSHG-10-3C60	1050(277)	862(227.5)	680(180)
	DSHG-10-3C7	1100(291)	1070(282.5) 1100(291)	870(230) 1100(291)
	DSHG-10-3C9	1100(291)	1070(282.5)	870(230)
	(S-)DSHG-10-3C10	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)
	DSHG-10-3C11	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)
	(S-)DSHG-10-3C12	1100(291)	1025(270.6) 1100(291)	750(198) 1100(291)

