

Pressure Control Valves Flow Control Valves



Northman



Index

Pressure Control Valves		Page(s)
Direct Acting Relief Valves		
	Pilot Control RF-G01 (0.5 GPM Max.)	4
	Direct RF-G02 (4.2 GPM Max.)	6
Pilot Operated Relief Valves		
	Standard RF-*04/06/10 (100 GPM Max.)	10
	Low Noise HRF-*04/06/10 (105.6 GPM Max.)	14
Solenoid Controlled Relief Valves		
	Standard SRF-*04/06/10 (100 GPM Max.)	17
	Low Noise HSRF-*04/06/10 (105.6 GPM Max.)	23
Pressure Control		
	Sequence, Unloading, Counterbalance, Relief: SV & SCV Series (66 GPM Max.)	26
	Pressure Reducing PRV & PRCV Series (66 GPM Max.)	34
Subplates		
	MF-02 (RF-G01/G02)	42
	MF-04/06/10 (RF, HRF, SRF, HSRF)	44
	SVM-03/06/10 (SV, SCV, PRV, PRCV)	46
Flow Control Valves		
	Restrictors	50
	Sub Plates	58
Accessory Valves		
	Lift Valve	60
	Pressure Switch	62

REMOTE CONTROLLED RELIEF VALVE

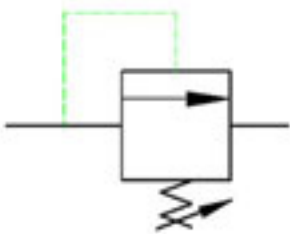
RF-G01 SERIES



FEATURES

- This adjustable pressure relief valve is designed as a remote control valve for a pilot operated pressure control valve.

Symbol



Model Code

RF - G 01 - 1 - **

1 **2** **3** **4** **5**

1 Series
RF: Relief Valve

2 Mounting Style
G: Subplate Mounted

3 Size
01: 0.5 GPM

4 Pressure Adj. Range
1: 100-1000 PSI (7-69 BAR)
2: 500-2000 PSI (35-138 BAR)
3: 1000-3550 PSI (69-245 BAR)

5 Design Number

REMOTE CONTROLLED RELIEF VALVE

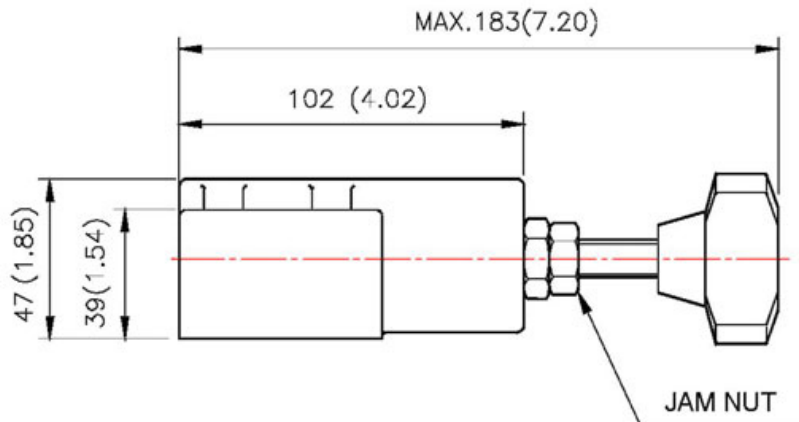
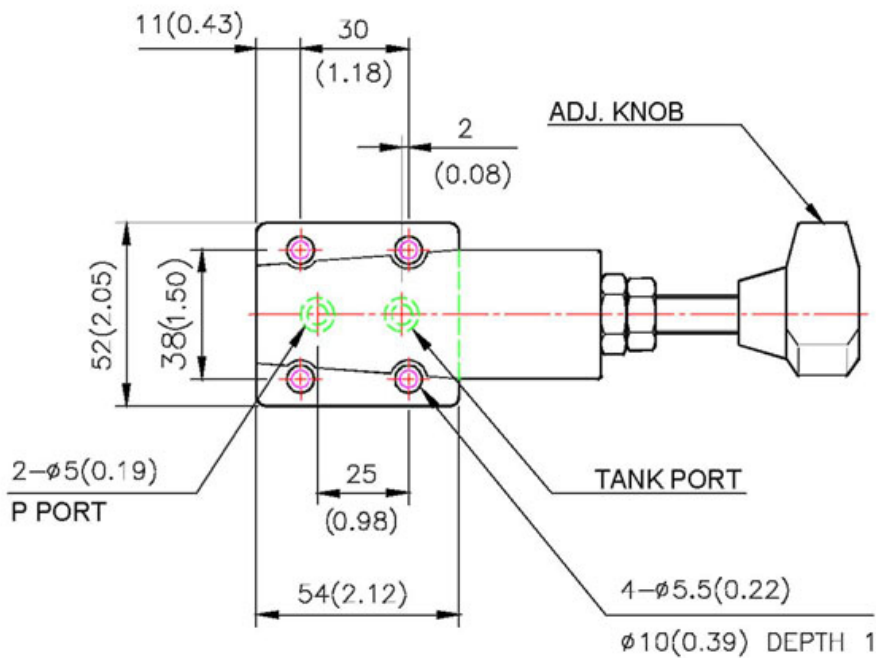
RF-G01 SERIES

SPECIFICATIONS

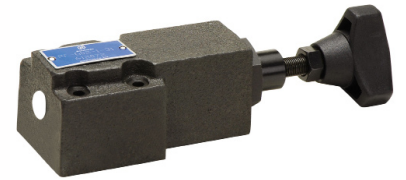
MODEL	MAX. PRESSURE BAR (PSI)	PRESSURE ADJ. RANGE BAR(PSI)	FLOW RATE LPM(GPM)	MOUNTING BOLTS MM(INCH)
RF-G01	245(3550)	1:7-69(100-1000) 2:35-138(500-2000) 3:69-245(1000-3550)	2(0.5)	M5x40Lx4 PCS (#10-24UNC-1-1/2"x4 PCS)

DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)



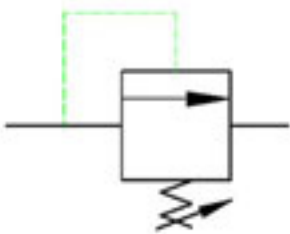
DIRECT TYPE RELIEF VALVE RF-G02 SERIES



FEATURES

- This adjustable pressure relief valve is a direct acting valve designed for applications requiring a valve of small maximum flow capacity.

Symbol



Model Code

RF - G 02 - 1 - ** - N

1 2 3 4 5 6

1 Series

RF: Relief Valve

2 Mounting Style

G: Subplate Mounted

3 Size

02: 4.2 GPM

4 Pressure Adj. Range

1: 100-1000 PSI (7-69 BAR)

2: 500-2000 PSI (35-138 BAR)

3: 1000-3000 PSI (69-207 BAR)

5 Design Number

6 Ports

N: 1/4" NPT Ports

DIRECT TYPE RELIEF VALVE

RF-G02 SERIES

SPECIFICATIONS

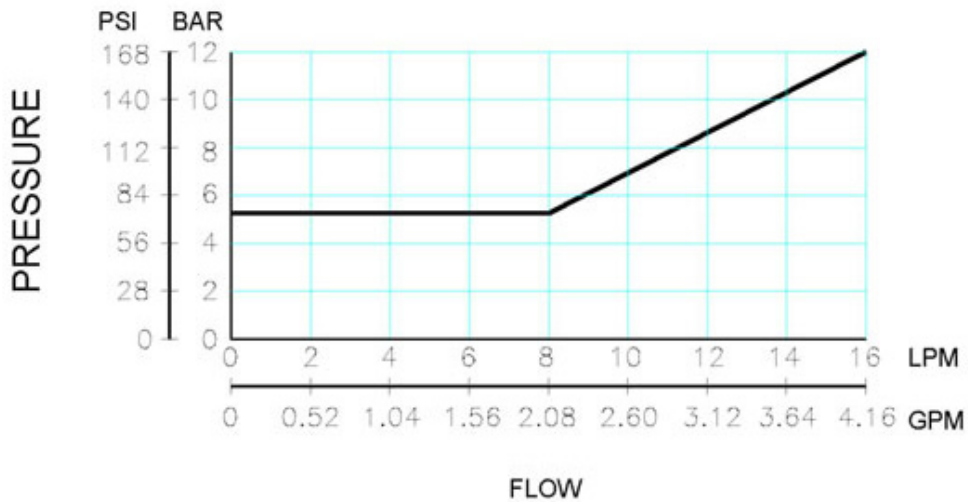
MODEL	MAX. PRESSURE BAR(P SI)	PRESSURE ADJ. RANGE BAR(P SI)	FLOW RATE LPM(GPM)	MOUNTING BOLTS MM(INCH)
RF-G02	207(3000)	1:7-69(100-1000) 2:35-138(500-2000) 3:69-207(1000-3000)	16(4.2)	M5x40Lx4 PCS (#10-24UNC-1-1/2"x4 PCS)

PERFORMANCE CURVES

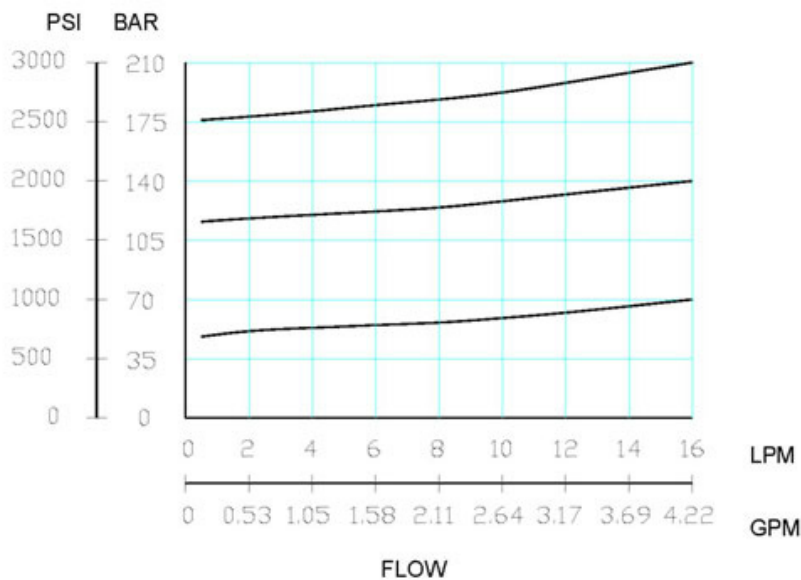
TEST CONDITIONS

Viscosity: 35 cSt (175 SSU) Temperature: 50° C (122° F)

MIN. ADJ. PRESSURE



NOMINAL OVERRIDE



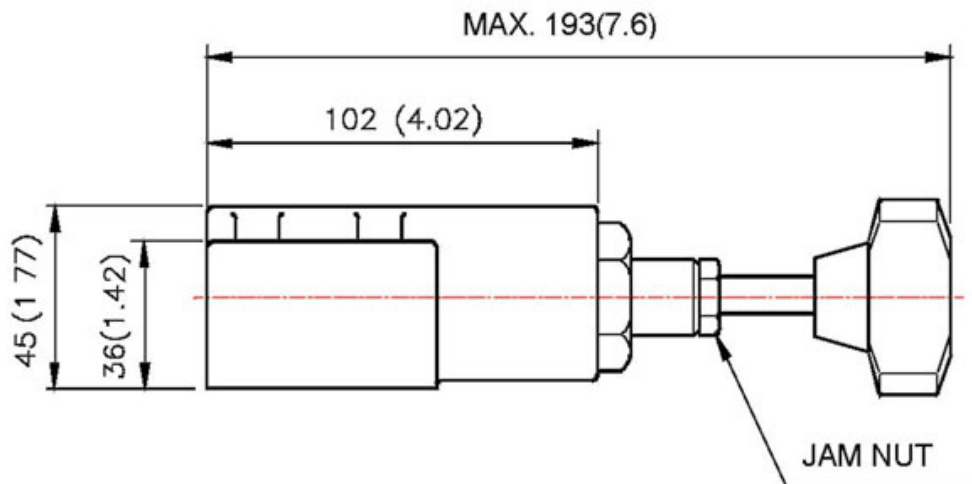
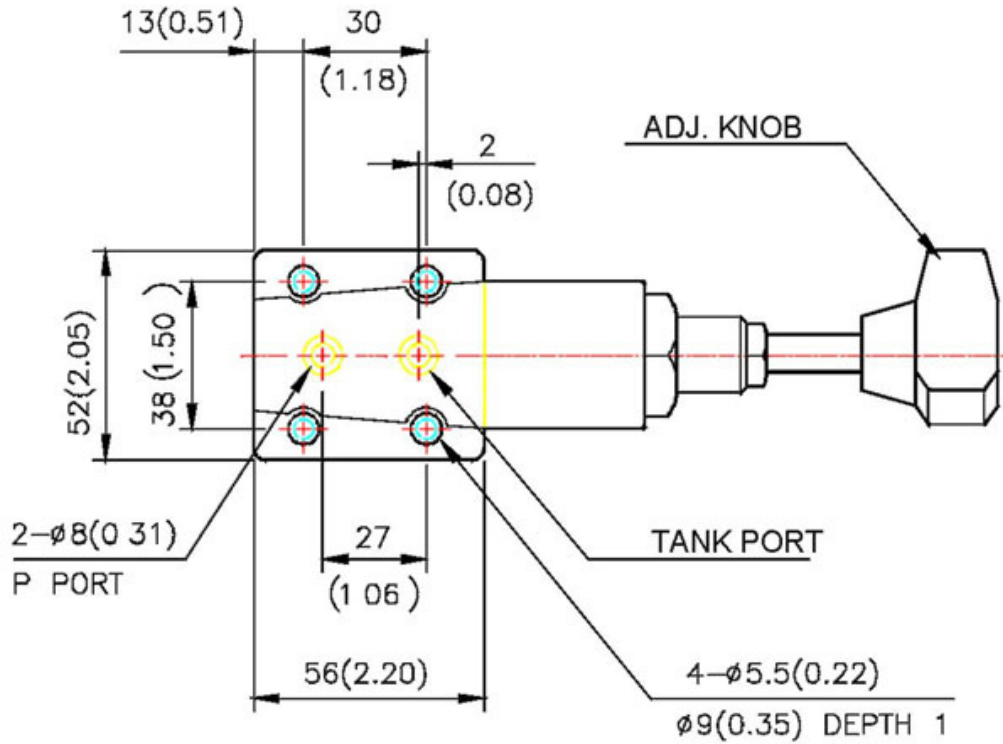


DIRECT TYPE RELIEF VALVE RF-G02 SERIES

DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)

RF-G02

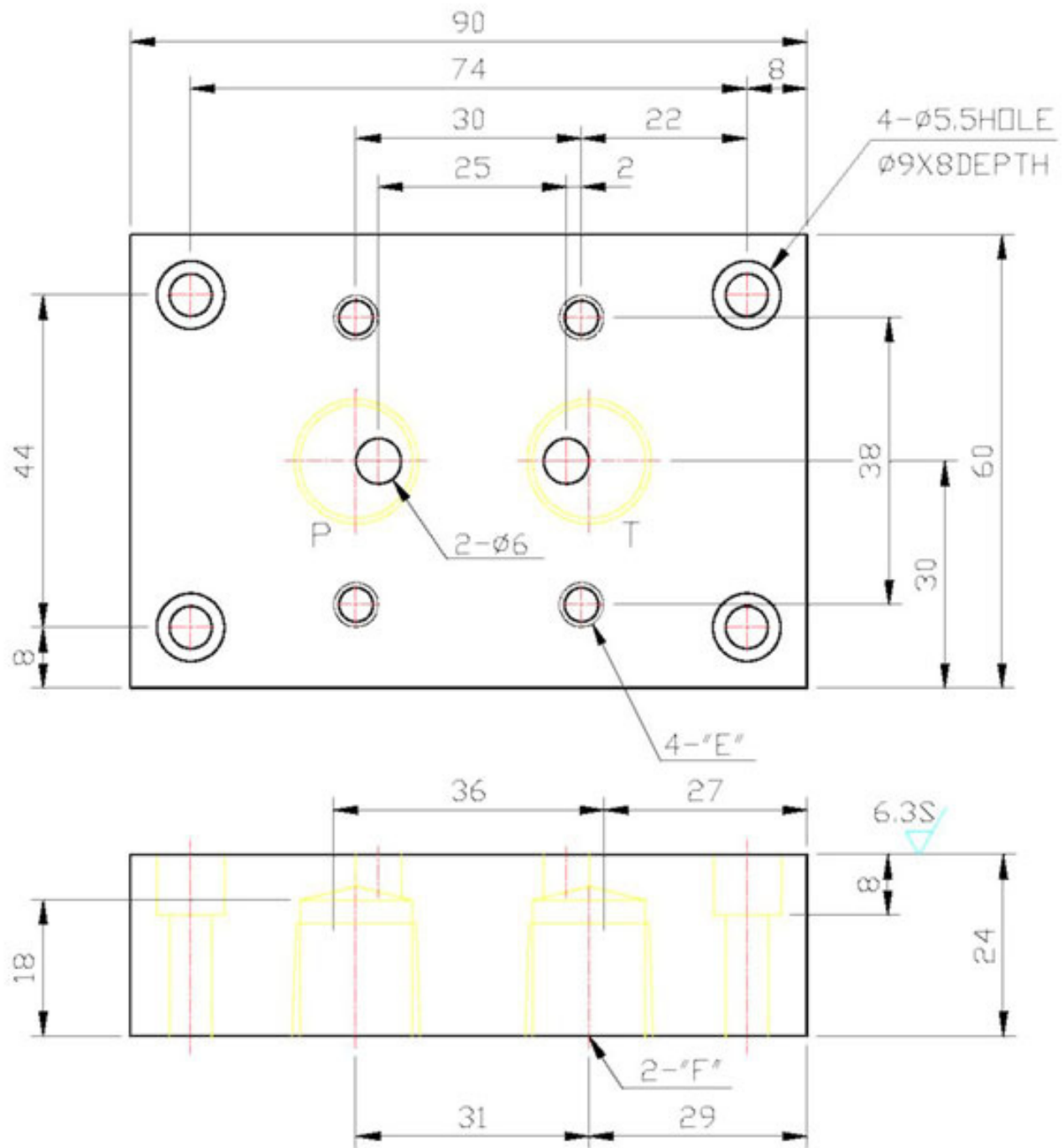


DIRECT TYPE RELIEF VALVE
RF-G02 SERIES

DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)

MF-02



HOW TO ORDER	E	F
MF-02-02-N	#10-24UNCx12L	NPT 1/4"

PILOT OPERATED RELIEF VALVE

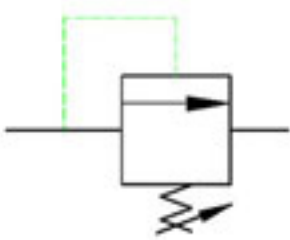
RF SERIES



FEATURES

- RF series relief valve is designed on the theory of differential pressure created by flow across the orifice of the balance piston. This differential pressure acts to open the piston against the spring, permitting enough fluid vented to tank at the set pressure.
- Piston moves smoothly, and controlled by pilot pressure, provides stable pressure control and good repeatability.

Symbol



Model Code

RF - T 06 - 1 - ** - N

1 Series

RF: Relief Valve

2 Mounting Style

G: Subplate Mounted

T: Threaded Body

3 Size

04: 25 GPM

06: 50 GPM

10: 100 GPM

4 Pressure Adj. Range

1: 100-1000 PSI (7-69 BAR)

2: 500-2000 PSI (35-138 BAR)

3: 1000-3550 PSI (69-247 BAR)

5 Design Number

6 Ports

No Code: For "G" Subplate Style

N: NPT Ports for "T" Threaded Body Style

04: 1/2" NPT

06: 3/4" NPT

10: 1-1/4" NPT

S: SAE St. Thd. O-Ring Ports for "T"

Threaded Body Style

04: 3/4 - 16 SAE

06: 1-1/16 - 12 SAE

10: 1-5/8 - 12 SAE

PILOT OPERATED RELIEF VALVE

RF SERIES

SPECIFICATIONS

MODEL	MAX. PRESSURE BAR (PSI)	PRESSURE ADJ. RANGE BAR (PSI)	MAX. FLOW LPM(GPM)	MOUNTING BOLTS (FOR G TYPE) MM(INCH)
RF-*04	245 (3550)	1:7-69(100-1000)	100 (25)	M12x70L(1/2"x2-3/4") 2PCS M12x90L(1/2"x3-1/2") 2PCS
RF-*06		2:35-138(500-2000)	200 (50)	M16x60L(5/8"x2-1/4") 2PCS M16x80L(5/8"x3-1/4") 2PCS
RF-*10		3:69-247(1000-3550)	400 (100)	M20x70L(3/4"x2-3/4") 2PCS M20x90L(3/4"x3-1/2") 2PCS

PERFORMANCE CURVES

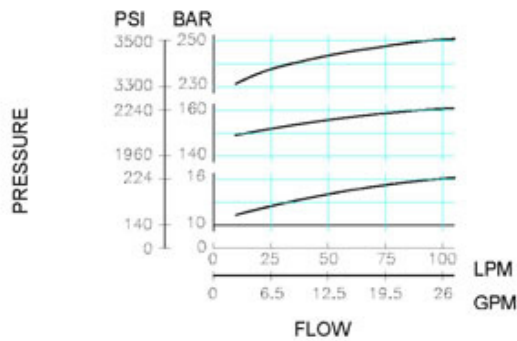
TEST CONDITIONS

Viscosity: 35 cSt (175 SSU) Temperature: 50° C (122° F)

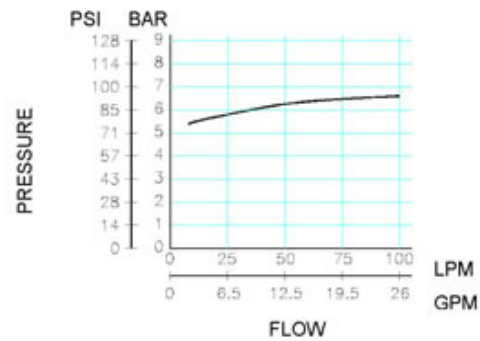
NOMINAL OVERRIDE

MIN. ADJ. PRESSURE

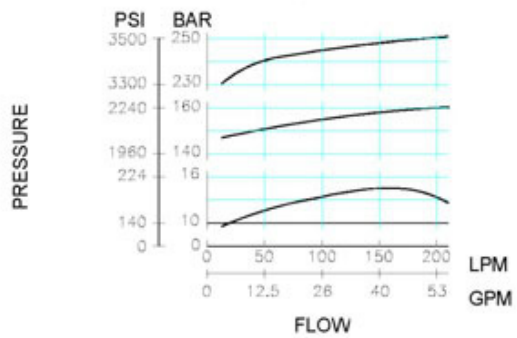
RF-G04, RF-T04



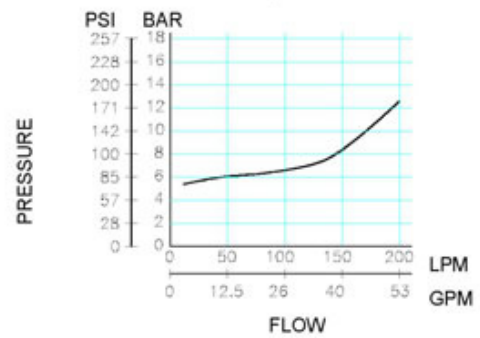
RF-G04, RF-T04



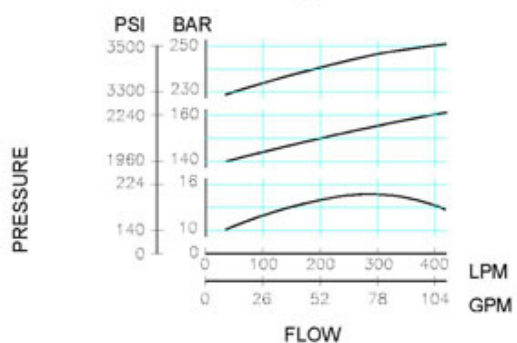
RF-G06, RF-T06



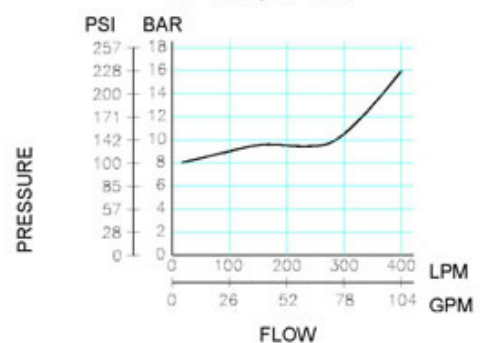
RF-G06, RF-T06



RF-G10, RF-T10



RF-G10, RF-T10

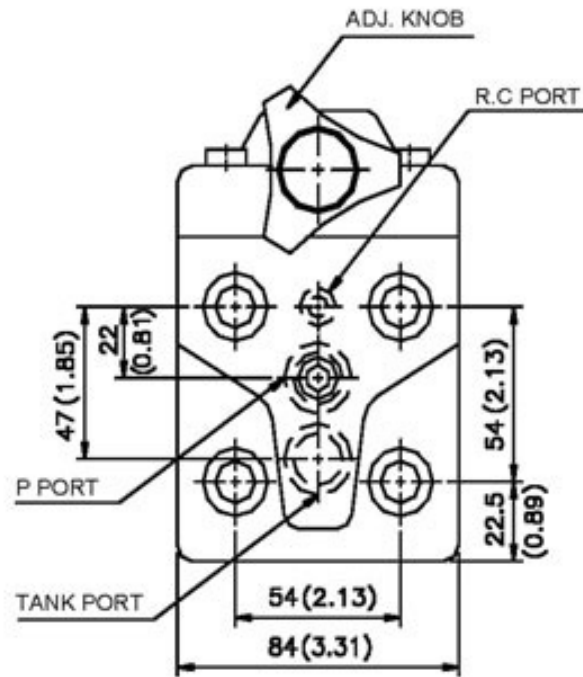
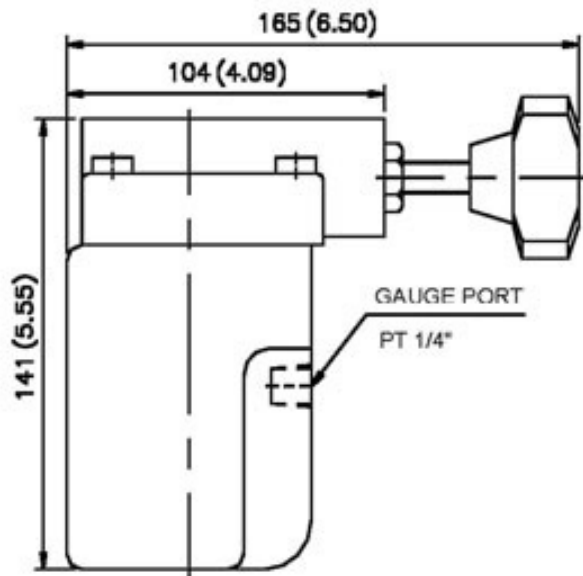


PILOT OPERATED RELIEF VALVE RF SERIES

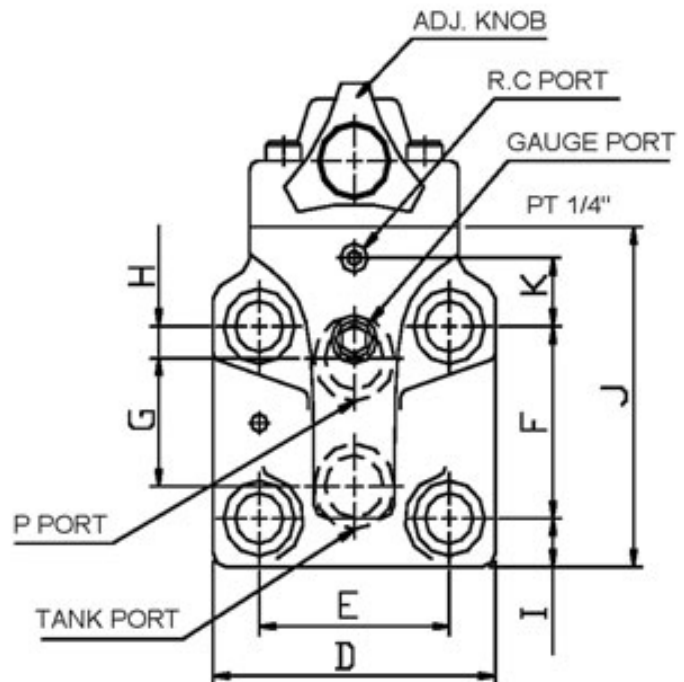
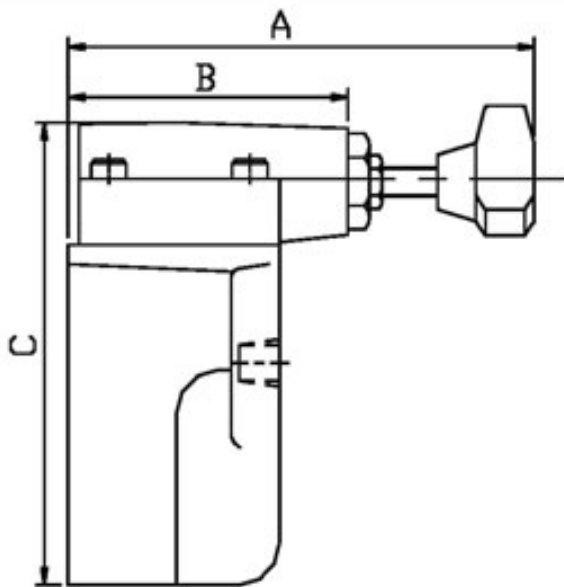
DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)

RFG-04



RFG-06/10



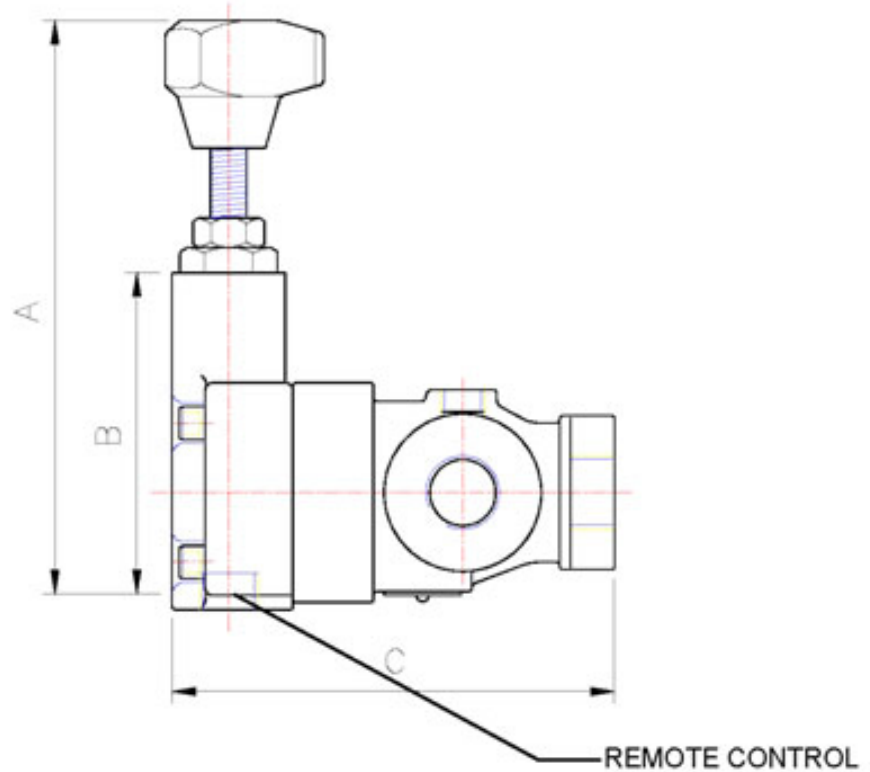
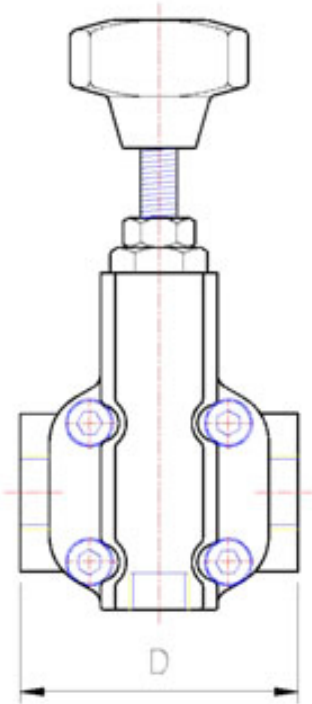
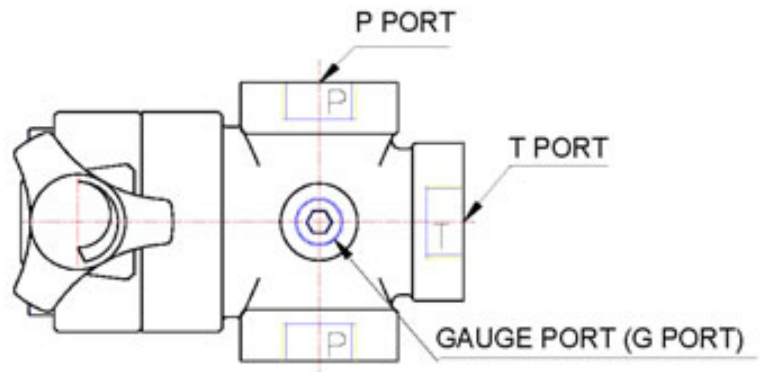
MODEL	A	B	C	D	E	F	G	H	I	J	K	WEIGHT	
												KGS	LBS
RF-G06	175 (6.89)	104 (4.09)	160 (6.30)	104 (4.09)	70 (2.76)	66.6 (2.62)	44.1 (1.74)	11.1 (1.74)	19.5 (0.76)	122 (4.80)	23.8 (0.94)	6.7	14.7
RF-G10	184 (7.24)	120 (4.72)	195 (7.68)	125 (4.92)	82 (3.23)	88.9 (3.50)	63.6 (2.50)	12.7 (0.50)	18.5 (0.73)	150 (5.91)	31.8 (1.25)	10.1	22.1

PILOT OPERATED RELIEF VALVE RF SERIES

DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)

RF-T*



MODEL	A	B	C	D	P PORT	T PORT	G PORT	WEIGHT	
								KGS	LBS
RF-T04 SERIES	MAX. 142 (5.59)	92 (3.62)	111 (4.37)	84.5 (3.33)	PT 1/2"	PT 1/2"	PT 1/4"	3.4	7.5
RF-T06 SERIES	MAX. 148 (5.83)	102 (4.02)	140 (5.51)	103 (4.05)	PT 3/4"	PT 3/4"	PT 1/4"	5.3	11.7
RF-T10 SERIES	151 MAX. (5.94)	120 (4.72)	183 (7.20)	120 (4.72)	PT 1-1/4"	PT 1-1/4"	PT 1/4"	8.5	18.7

LOW NOISE PILOT OPERATED RELIEF VALVE

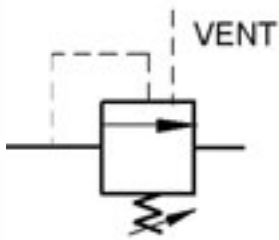
HRF SERIES



FEATURES

- HRF series relief valve is designed on the theory of differential pressure created by flow across the orifice of the balance piston. This differential pressure acts to open the piston against the spring, permitting enough fluid vented to tank at the set pressure.
- Piston moves smoothly, and controlled by pilot pressure, provides stable pressure control and good repeatability.
- Special internal passage design keeps flow noise to a minimum.

Symbol



Model Code

HRF - G 06 - 1 - R - ** - N

1 2 3 4 5 6 7

1 Series
HRF: Relief Valve, Low Noise

2 Mounting Style
G: Subplate Mounted

3 Valve Size
03: 26.4 GPM
06: 52.8 GPM
10: 105.6 GPM

4 Pressure Adj. Range
1: 0-1000 PSI (0-69 BAR)
2: 0-2000 PSI (0-138 BAR)
3: 0-3500 PSI (0-242 BAR)

5 Knob Orientation
R: Right (P Port Side)
L: Left (T Port Side)

6 Design Number

7 Bolt Kit
No Code: Metric Bolt Kit
N: Inch Bolt Kit

LOW NOISE PILOT OPERATED RELIEF VALVE HRF SERIES

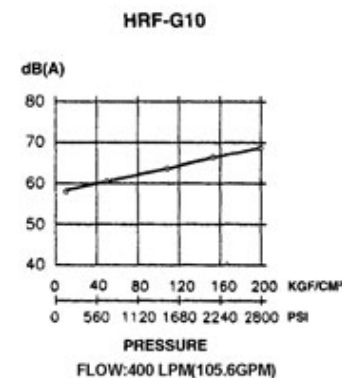
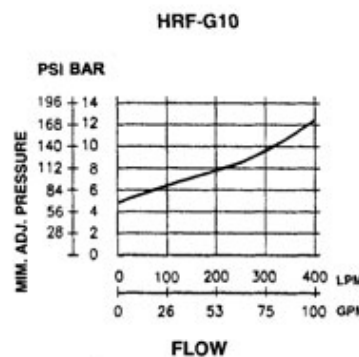
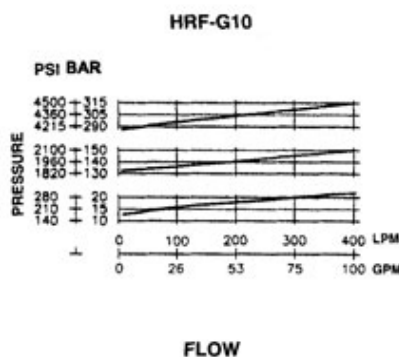
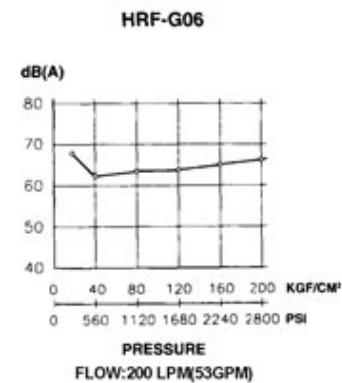
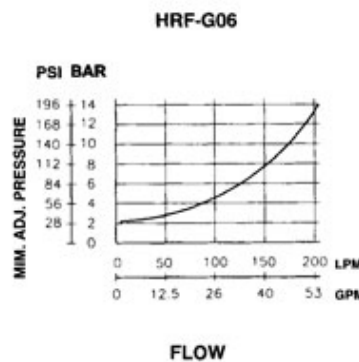
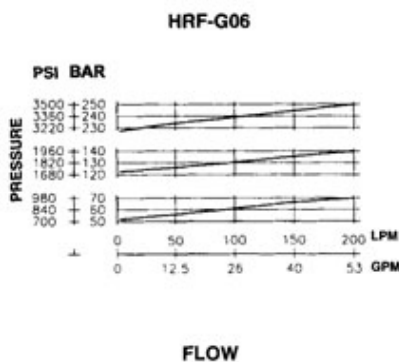
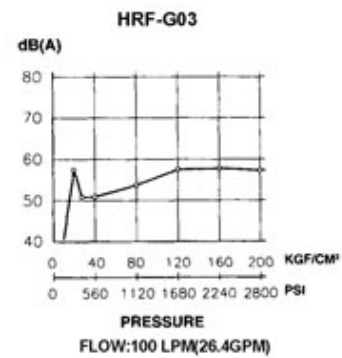
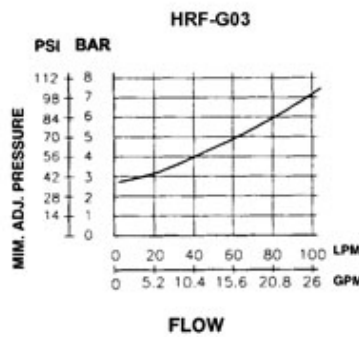
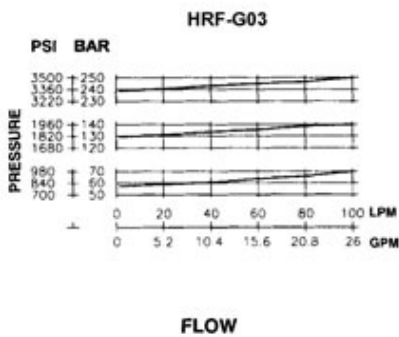
SPECIFICATIONS

MODEL	MAX. PRESSURE BAR (PSI)	MAX. FLOW LPM (GPM)	MOUNTING BOLTS METER (INCH)
HRF-G03-*. *	242 (3500)	100 (26.4)	M12x40Lx4(1/2"x1-3/5")
HRF-G06-*. *		200 (52.8)	M16x50Lx4(5/8"x2")
HRF-G10-*. *		400 (105.6)	M20x60Lx4(3/4"x2-2/5")

PERFORMANCE CURVES

TEST CONDITIONS

Viscosity: 35 cSt (175 SSU) Temperature: 50° C (122° F)

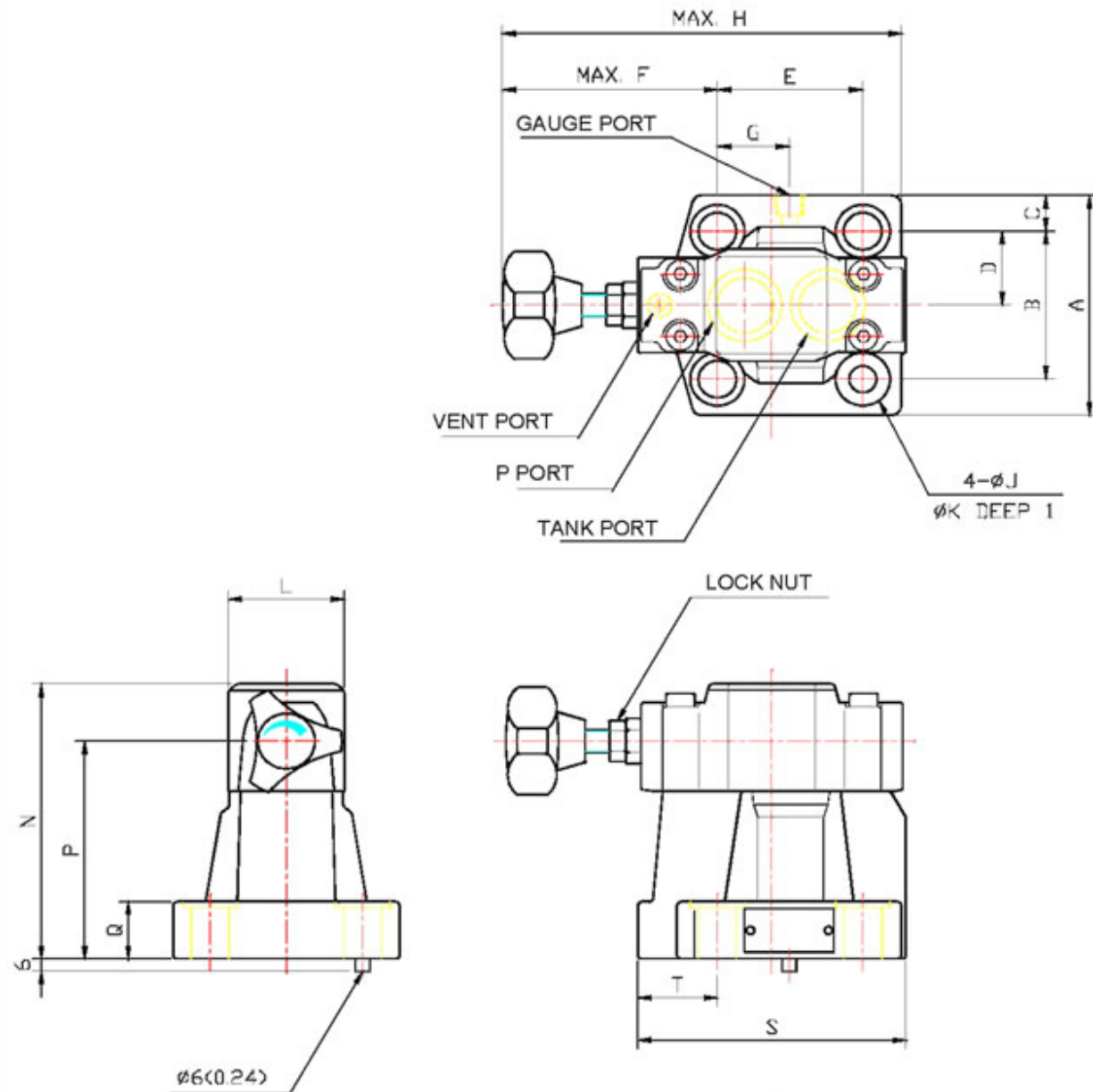


LOW NOISE PILOT OPERATED RELIEF VALVE HRF SERIES

DIMENSIONS

UNIT: mm(inch) WEIGHT: 1.5 kgs(3.4 lbs)

HRF-G03/G06/G10-R



MODEL	A	B	C	D	E	F	G	H	J
HRF-G03	76(3)	53.8(2.12)	11.1(0.44)	26.9(1.06)	53.8(2.11)	113.5(4.47)	27(1.06)	171(6.73)	13.5(0.53)
HRF-G06	104(4.09)	70(2.76)	17(0.67)	35(1.38)	66.7(2.63)	98.8(3.89)	33.7(1.33)	171(6.73)	17.5(0.69)
HRF-G10	120(4.72)	82.6(3.25)	18.7(0.74)	41.3(1.63)	88.9(3.5)	89(3.35)	44.9(1.77)	219(8.62)	21.5(0.85)

MODEL	K	L	N	P	Q	S	T	SUBPLATE TYPE
HRF-G03	21(0.83)	51(2.01)	132(5.2)	104(4.09)	22(0.86)	106(4.17)	26(1.02)	MF-04
HRF-G06	25(0.98)	51(2.01)	132(5.2)	104(4.09)	27(1.06)	123(4.84)	36.5(1.44)	MF-06
HRF-G10	32(1.26)	65(2.56)	167(6.52)	135(5.32)	33.5(1.32)	155(6.1)	47(1.85)	MF-10

SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

SRF SERIES



FEATURES

•SRF-T/G valve is the combination of solenoid operated directional control valve and a RF-G relief valve in one integrated body to provide a wide variety of pressure control possibilities. Solenoid control permits convenient electrical selection of system pressures. Selection for pressure or vent, either of two pressures, or two pressures and vent, or one of three pressures can be achieved by proper selection of the valves listed below.

Model Code

SRF – G 06 – 1PN – 1 – A120 – 10 – ** – A1 – N

1 2 3 4 5 6 7 8 9 10

1 Series
SRF: Solenoid Controlled Pilot Operated Relief Valve

2 Mounting Style
G: Subplate Mounted
T: Threaded Body

3 Interface
04: "G" Subplate Mount Only
06: "G" Subplate Mount or "T" 3/4" NPT Threaded Body
10: "G" Subplate Mount Only

4 Function
1PN: Normally Vented
1NP: Energized to Vent
2P: Dual Pressure Adjusting Ranges
2PN: Dual Pressure and Vent
3P: Three Pressure Adjusting Ranges

5 Pressure Adj. Range
1: 100-1000 PSI (7-69 BAR)
2: 500-2000 PSI (35-138 BAR)
3: 1000-3550 PSI (69-245 BAR)

6 Coil Voltage
A110: AC110V, 60HZ; AC100V, 50Hz
A120: AC120V, 60HZ; AC110V, 50Hz
A220: AC220V, 60HZ; AC200V, 50Hz
A240: AC240V, 60HZ; AC220V, 50Hz
R110: AC110V, 50/60Hz
R120: AC120V, 50/60Hz
R220: AC220V, 50/60Hz
R240: AC240V, 50/60Hz
D12 : DC12V
D24 : DC24V

7 Electric Connection
10: Junction Box with Indicator Light
20: DIN 43650 Connector with Indicator Light
31: Lead Wire (DC Only)
41: Dual Spade (DC Only) SAE J858A

8 Design Number

9 Solenoid Valve Orientation
No Code: Standard
A1: Rotated 90° (See Installation Drawing)

10 Ports
No Code: For "G" Subplate Style
N: 3/4" NPT Ports for "T" Threaded Body Style

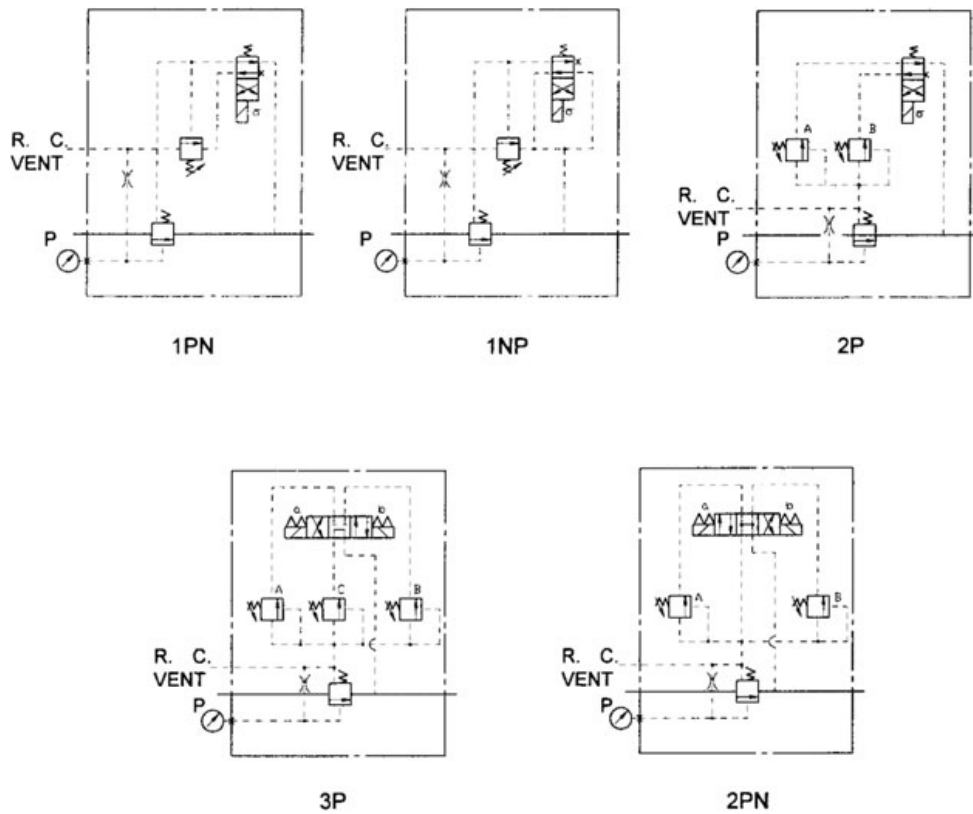
SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

SRF SERIES

SPECIFICATIONS

MODEL	MAX. PRESSURE BAR (PSI)	RATED FLOW LPM(GPM)	PRESSURE ADJ. RANGE BAR (PSI)
SRF-G04	245 (3550)	100(26.4)	1: 7-69 (100-1000)
SRF-G/T06		200(52.8)	2: 35-138(500-2000)
SRF-G10		400(105.6)	3: 69-245(1000-3550)

SYMBOLS & FUNCTION TABLES



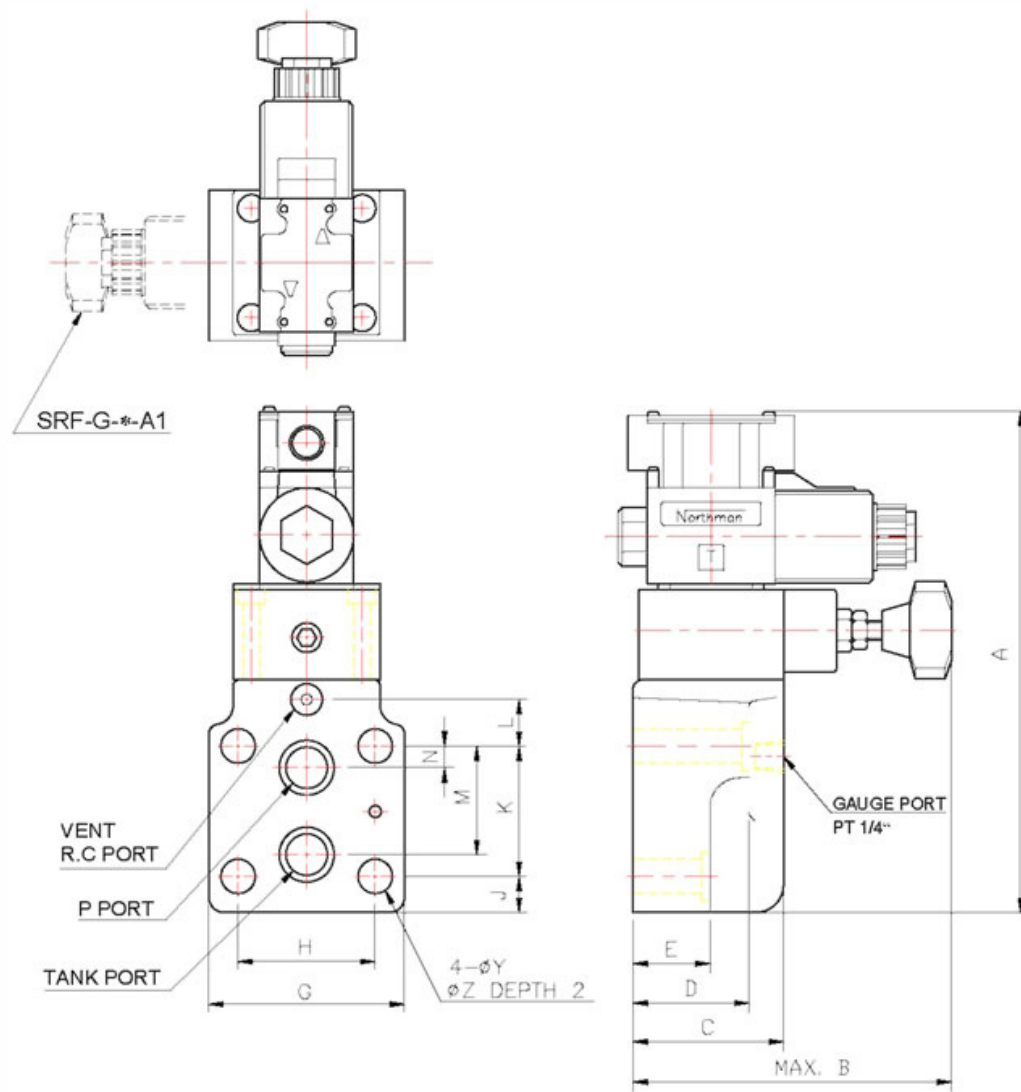
MODEL	INPUT		OUTPUT
	SOL b	SOL a	
1PN	OFF	NONE	VENTED
	ON		ADJUSTABLE PRESSURE
1NP	NONE	OFF	ADJUSTABLE PRESSURE
		ON	VENTED
2P	OFF	NONE	ADJUSTABLE PRESSURE AT A
	ON		ADJUSTABLE PRESSURE AT B
2PN	OFF	OFF	VENTED
	ON	OFF	ADJUSTABLE PRESSURE AT A
	OFF	ON	ADJUSTABLE PRESSURE AT B
3P	OFF	OFF	ADJUSTABLE PRESSURE AT C
	ON	OFF	ADJUSTABLE PRESSURE AT A
	OFF	ON	ADJUSTABLE PRESSURE AT B

SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

SRF SERIES

DIMENSIONS

SRF-G*-1PN/1NP



MODEL	A	B	C	D	E	G	H	J	K
SRF-G04 SERIES	228.5 (9)	175 (6.89)	78 (3.07)	78 (3.07)	57 (0.67)	82 (3.23)	53.8 (2.12)	21.5 (0.89)	53.8 (2.12)
SRF-G06 SERIES	254 (9.61)	175 (6.85)	78 (3.07)	60 (2.36)	40 (0.67)	102 (4.09)	70 (2.76)	19 (0.67)	66.7 (2.63)
SRF-G10 SERIES	281 (11.06)	184 (7.24)	87.5 (3.45)	67 (2.64)	47 (0.71)	124 (4.88)	82.6 (3.25)	20 (0.71)	88.9 (3.5)

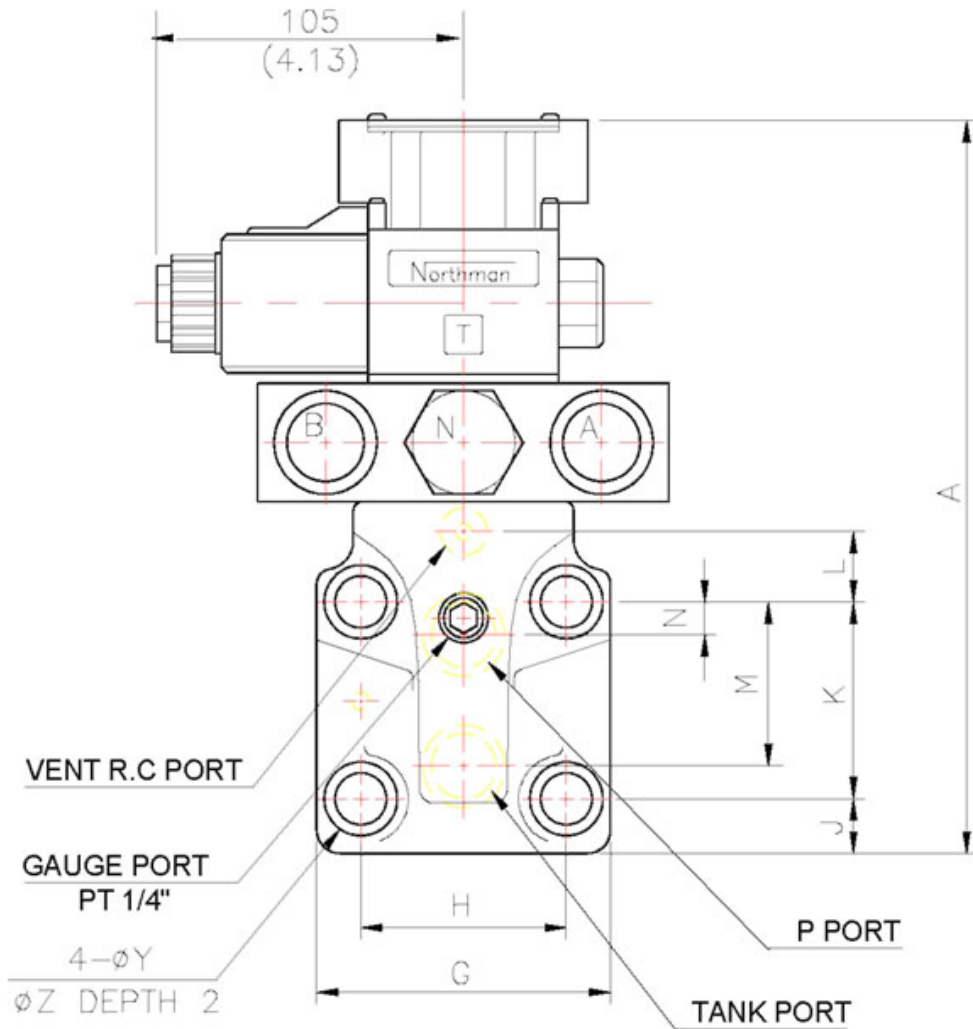
MODEL	L	M	N	Y	Z	WEIGHT KGS(LBS)	SUBPLATE TYPE
SRF-G04 SERIES	0 (0)	47.5 (2.13)	22 (0.87)	13.5 (0.53)	21 (0.83)	7.5 KGS (16.5 LBS)	MF-04
SRF-G06 SERIES	23.8 (0.94)	55.5 (2.19)	11 (0.43)	17.5 (0.69)	26 (1.02)	8.0 KGS (17.6 LBS)	MF-06
SRF-G10 SERIES	31.8 (1.25)	76.2 (3.00)	12.7 (0.50)	22 (0.85)	32 (1.26)	25 KGS (55.1 LBS)	MF-10

SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

SRF SERIES

DIMENSIONS

SRF-G06/G10-2P



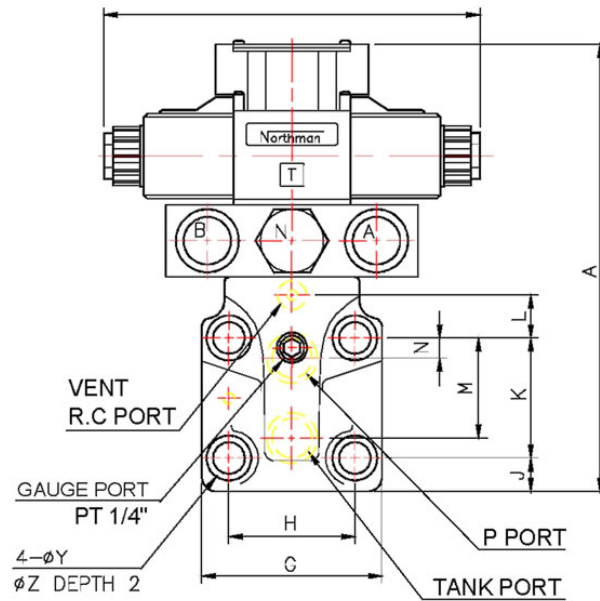
MODEL	A	G	H	J	K	L	M	N	Y	Z	WEIGHT KGS(LBS)	SUBPLATE TYPE
SRF-G06 SERIES	244 (9.61)	104 (4.09)	70 (2.76)	16.9 (0.67)	66.7 (2.63)	23.8 (0.94)	55.5 (2.19)	11 (0.43)	17.5 (0.69)	26 (1.02)	10 KGS (22.0LBS)	MF-06
SRF-G10 SERIES	281 (11.06)	124 (4.88)	82.6 (3.25)	18 (0.71)	88.9 (3.5)	31.8 (1.25)	76.2 (3.00)	12.7 (0.50)	21.5 (0.85)	32 (1.26)	27 KGS (59.5LBS)	MF-10

SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

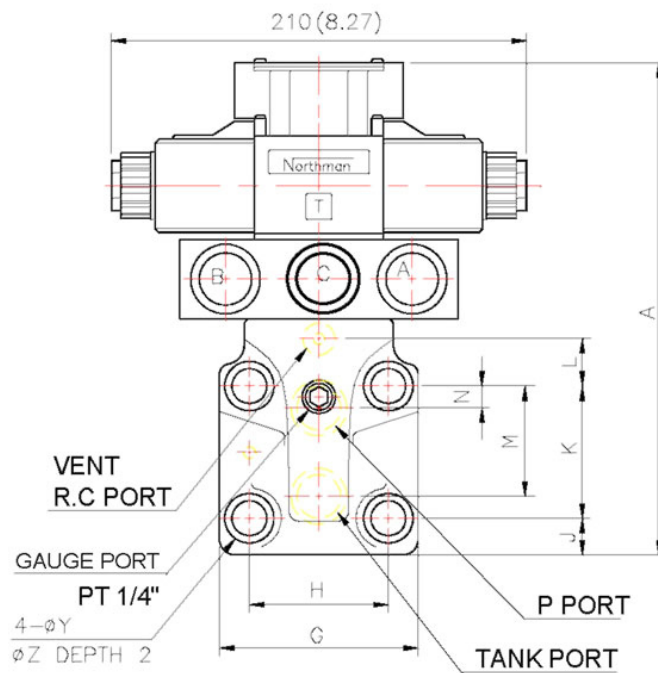
SRF SERIES

DIMENSIONS

SRF-G06/G10-2PN



SRF-G06/G10-3P



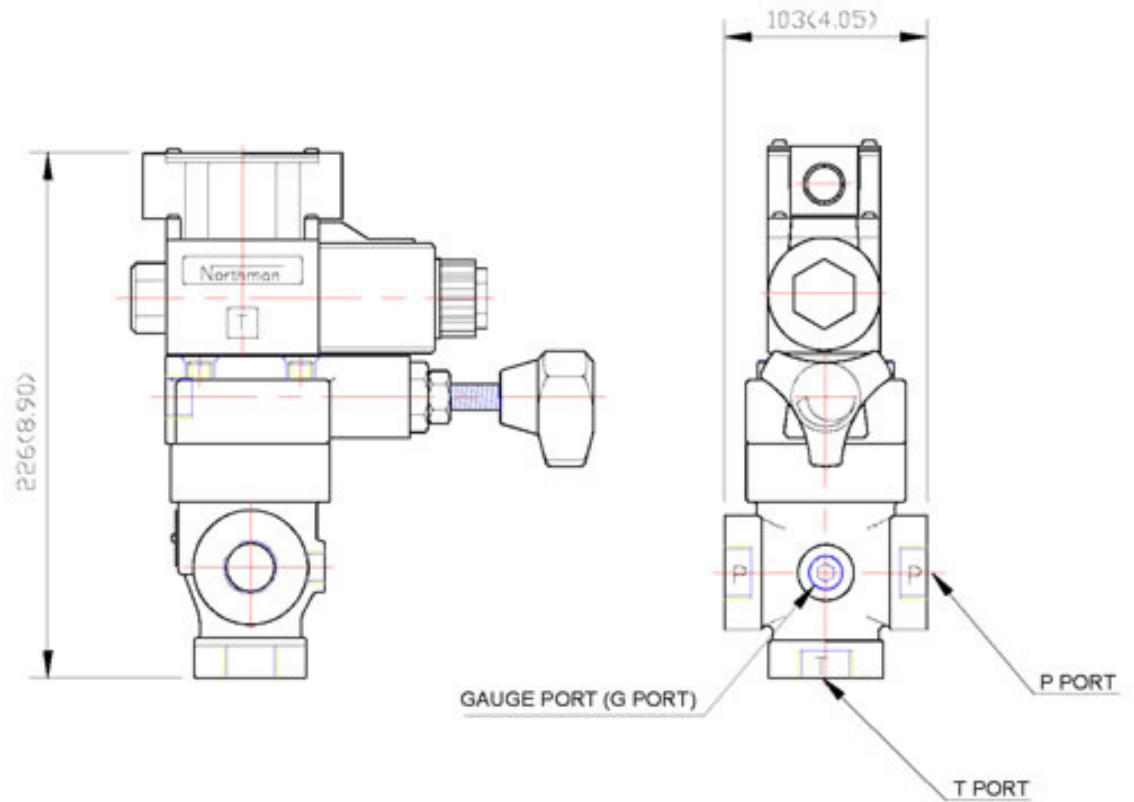
MODEL	A	G	H	J	K	L	M	N	Y	Z	WEIGHT KGS(LBS)	SUBPLATE TYPE
SRF-G06 SERIES	244 (9.61)	104 (4.09)	70 (2.76)	16.9 (0.67)	66.7 (2.63)	23.8 (0.94)	55.5 (2.19)	11 (0.43)	17.5 (0.69)	26 (1.02)	12 KGS (26.4LBS)	MF-06
SRF-G10 SERIES	281 (11.06)	124 (4.88)	82.6 (3.25)	18 (0.71)	88.9 (3.5)	31.8 (1.25)	76.2 (3.00)	12.7 (0.50)	21.5 (0.85)	32 (1.26)	29 KGS (63.9LBS)	MF-10

SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE SRF SERIES

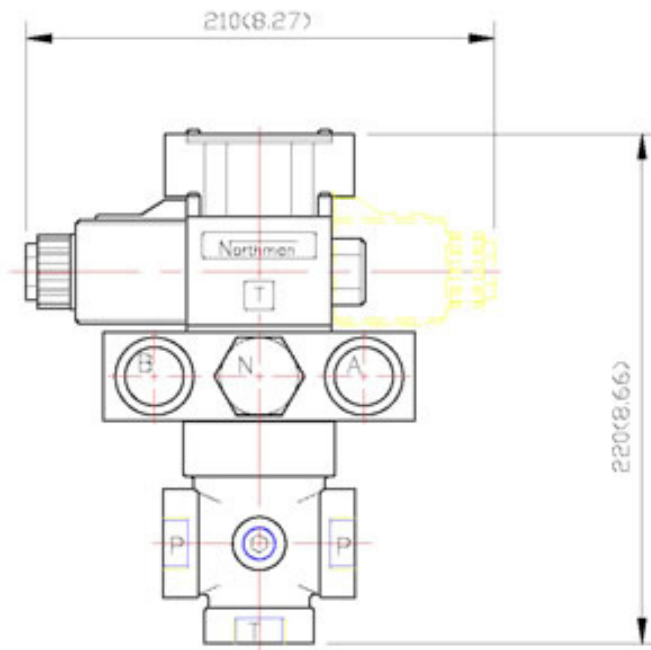
DIMENSIONS

SRF-T06-1PN/1NP

UNIT: mm(inch) WEIGHT: 8kgs(17.6lbs)



SRF-T06-2P/2PN/3P



LOW NOISE SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

HSRF SERIES



FEATURES

- HSRF-G valve is the combination of solenoid operated directional control valve and a HRF-G relief valve in one integrated body to provide a wide variety of pressure control possibilities. Solenoid control permits convenient electrical selection of system pressures. Selection for pressure or vent, either of two pressures, or two pressures and vent, or one of three pressures can be achieved by proper selection of the valves listed below.
- Special internal passage design keeps flow noise to a minimum.

Model Code

HSRF – G 06 – 1PN – 1 – A120 – 10 – R – ** – N

<p>1 Series</p> <hr/> <p>HSRF: Low Noise Solenoid Controlled Pilot Operated Relief Valve</p>	<p>5 Pressure Adjusting Range</p> <hr/> <p>1: 100-1000 PSI (7-69 BAR) 2: 500-2000 PSI (35- 138 BAR) 3: 1000-3000 PSI (69-242 BAR)</p>	<p>7 Wiring</p> <hr/> <p>10: Junction Box with Indicator Light 20: DIN 43650 Connector with Indicator Light 31: Lead Wire (DC Only) 41: Dual Spade (DC Only) SAE J858A</p>
<p>2 Mounting Style</p> <hr/> <p>G: Subplate Mounted</p>	<p>6 Coil Voltage</p> <hr/> <p>A110: AC110V, 60HZ; AC100V, 50Hz A120: AC120V, 60HZ; AC110V, 50Hz A220: AC220V, 60HZ; AC200V, 50Hz A240: AC240V, 60HZ; AC220V, 50Hz R110: AC110V, 50/60Hz R120: AC120V, 50/60Hz R220: AC220V, 50/60Hz R240: AC240V, 50/60Hz D12 : DC12V D24 : DC24V</p>	<p>8 Handle Orientation</p> <hr/> <p>R: Right ("P" Port Side) L: Left ("T" Port Side)</p>
<p>3 Valve Size</p> <hr/> <p>03: 26.4 GPM 06: 52.8 GPM</p>		<p>9 Design Number</p> <hr/>
<p>4 Function</p> <hr/> <p>1PN: Normally Vented 1NP: Energized to Vent</p>		<p>10 Bolt Kit</p> <hr/> <p>No Code: Metric Bolt Kit N: Inch Bolt Kit</p>

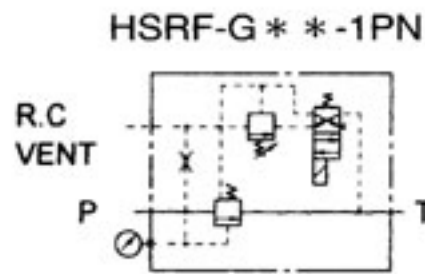
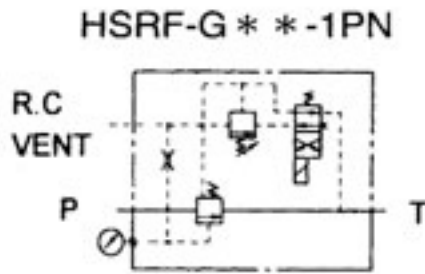
SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE

SRF SERIES

SPECIFICATIONS

MODEL	MAX. PRESSURE BAR(PSI)	MAX. FLOW LPM (GPM)	MOUNTING BOLTS METER (INCH)
HSRF-G03-*	242 (3500)	100 (26.4)	M12x40Lx4 (1/2"x1-3/5")
HSRF-G06-*		200 (52.8)	M16x50Lx4 (5/8"x2")

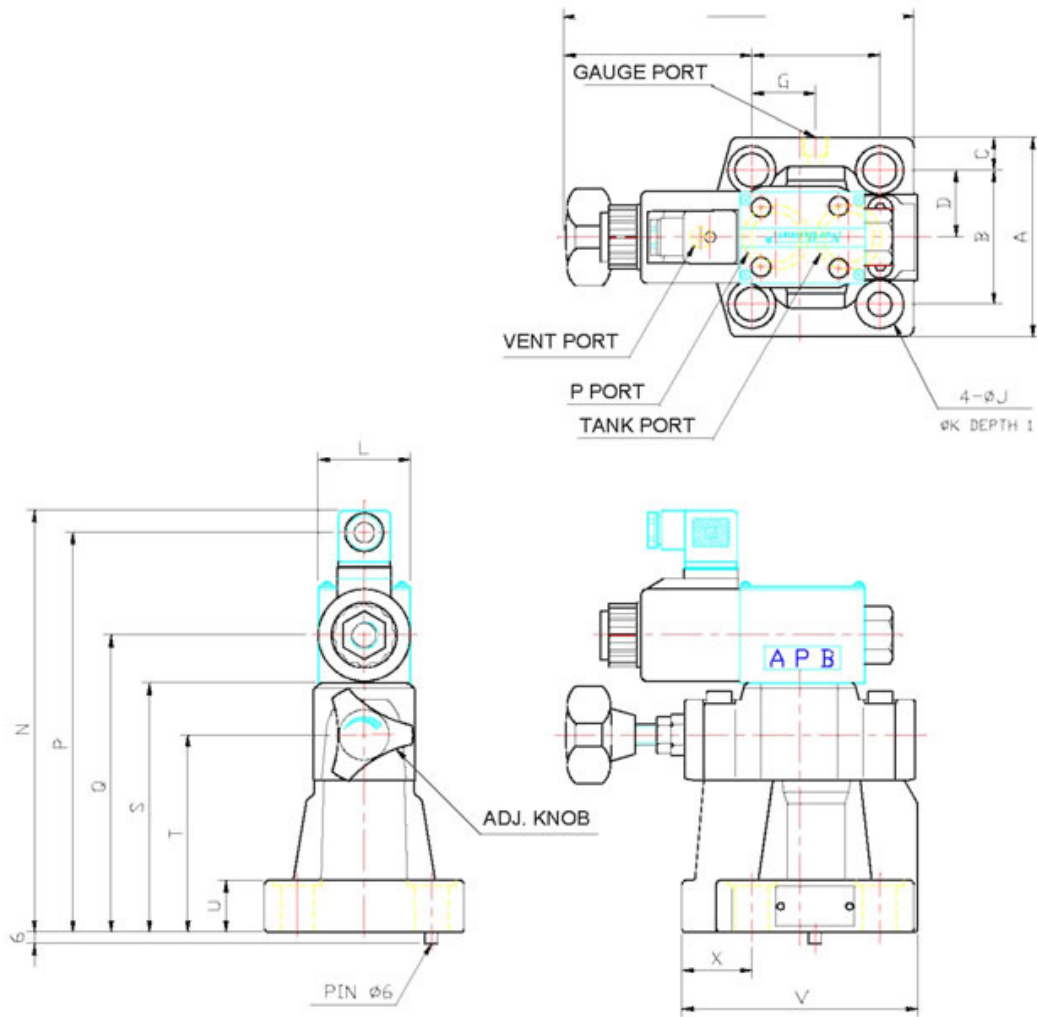
SYMBOLS



SOLENOID CONTROLLED PILOT OPERATED RELIEF VALVE SRF SERIES

DIMENSIONS

HSRF-G03/06/-1PN/1NP-R UNIT: mm(inch)



MODEL	A	B	C	D	E	F	G	H	J
HSRF-03	76(3)	53.8(2.12)	11.1(0.44)	26.9(1.06)	53.8(2.11)	113.5(4.47)	27(1.06)	171(6.73)	13.5(0.53)
HSRF-06	104(4.09)	70(2.76)	17(0.67)	35(1.38)	66.7(2.63)	98.8(3.89)	33.7(1.33)	171(6.73)	17.5(0.69)

MODEL	K	L	N	P	Q	S	T	U	V
HSRF-03	21(0.83)	48(1.89)	220.5(8.7)	206.8(8.1)	157(6.18)	132(5.2)	104(4.09)	22(0.86)	106(4.17)
HSRF-06	25(0.98)	48(1.89)	220.5(8.7)	206.8(8.1)	157(6.18)	132(5.2)	104(4.09)	27(1.06)	123(4.84)
HSRF-10	32(1.26)	48(1.89)	235(9.25)	220(8.66)	172(6.77)	146(5.75)	120(4.72)	37(1.46)	152(5.98)

MODEL	X	SUBPLATE TYPE
HSRF-G03	26(1.02)	MF-04
HSRF-G06	36.5(1.44)	MF-06

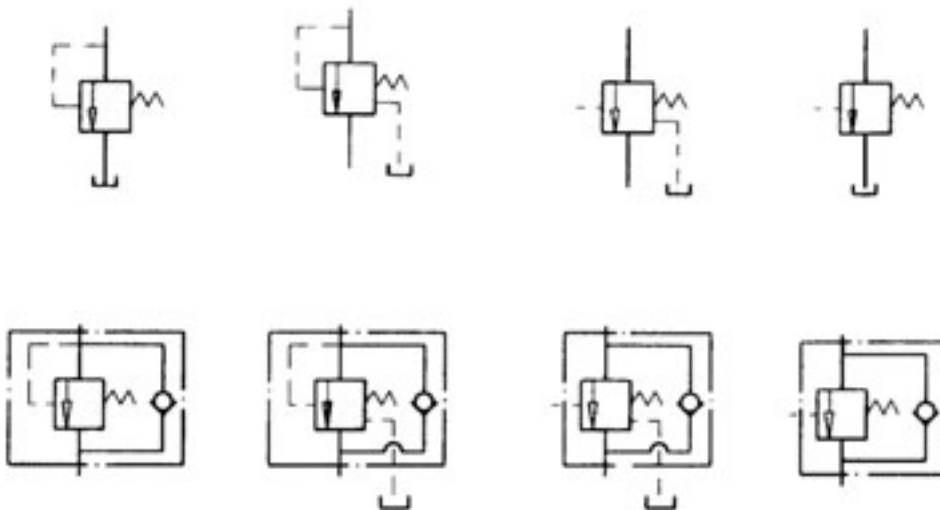
PRESSURE CONTROL VALVE H & HC TYPE



FEATURES

- This series of valve is configured at assembly to function as either a relief valve, sequence valve, unloading valve, or counterbalance valve. They are available with or without a reverse free flow check valve.

SYMBOLS



Model Code

SV - T 06 - 1 - ET - ** - N

1 2 3 4 5 6 7 8

1 Series
SV: H Type Pressure Control Valve
SCV: HC Type Pressure Control Valve

2 Mounting Style
G: Subplate Mounted
T: Threaded Body

3 Valve Size
03: 13 GPM
06: 33 GPM
10: 66 GPM

4 Pressure Adj. Range
0: 250-500 PSI (17-35 BAR)
1: 500-1000 PSI (35-69 BAR)
2: 1000-2000 PSI (69-138 BAR)

5 Pilot Pressure
No Code: Internal Pilot
E: External Pilot

6 Drain
No Code: Internal Drain
T: External Drain

7 Design Number

8 Ports
No Code: For "G" Subplate Style
N: NPT Ports for
 "T" Threaded Body Style
 03: 3/8" NPT
 06: 3/4" NPT
 10: 1-1/4" NPT
S: SAE St. Thd. O-Ring Ports
 for "T" Threaded Body Style
 03: 9/16 - 18 SAE
 06: 1-1/16 - 12 SAE
 10: 1-5/8 - 12 SAE

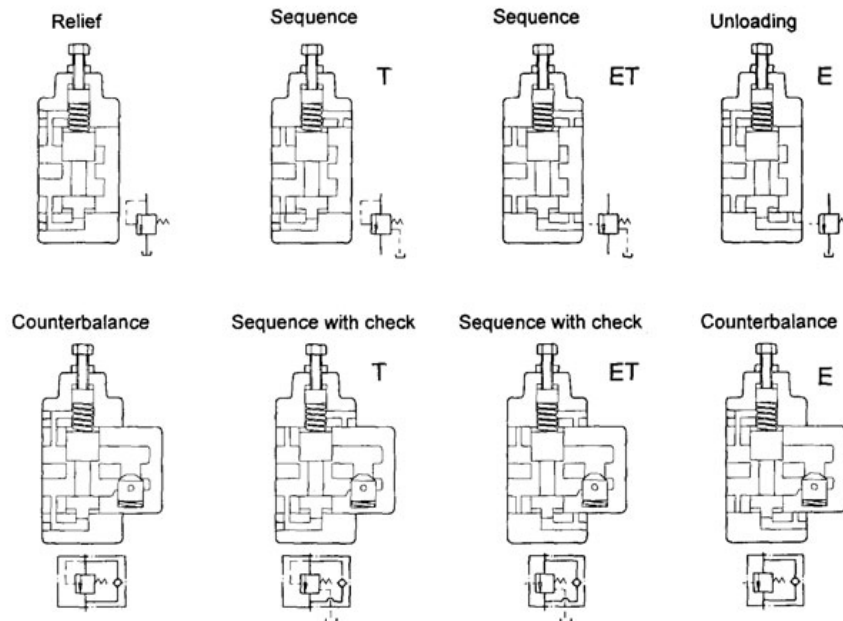
PRESSURE CONTROL VALVE

H & HC TYPE

SPECIFICATIONS

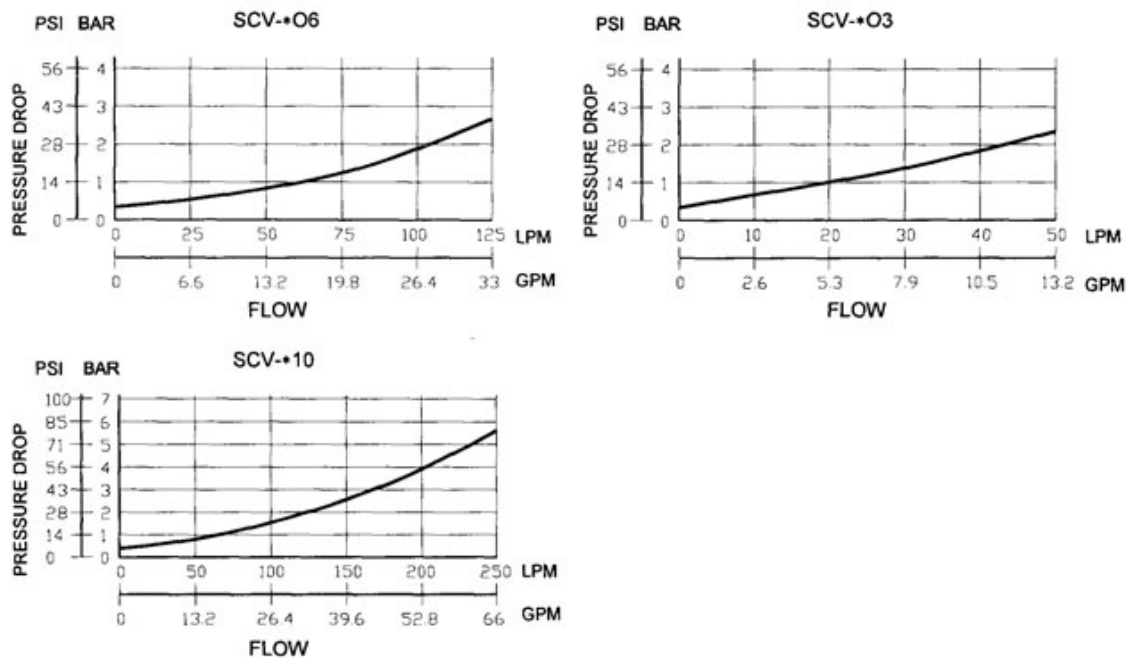
MODEL	MAX. PRESSURE BAR (PSI)	PRESSURE ADJ. RANGE BAR (PSI)	MAX. FLOW LPM(GPM)
SV/SCV-*03	207 (3000)	0: 17-35(250-500)	50(13)
SV/SCV-*06		1: 35-69 (500-1000)	125(33)
SV/SCV-*10		2: 35-138(1000-2000)	250(66)

VALVE TYPE



PERFORMANCE CURVES

PRESSURE DROP FOR REVERSED FREE FLOW

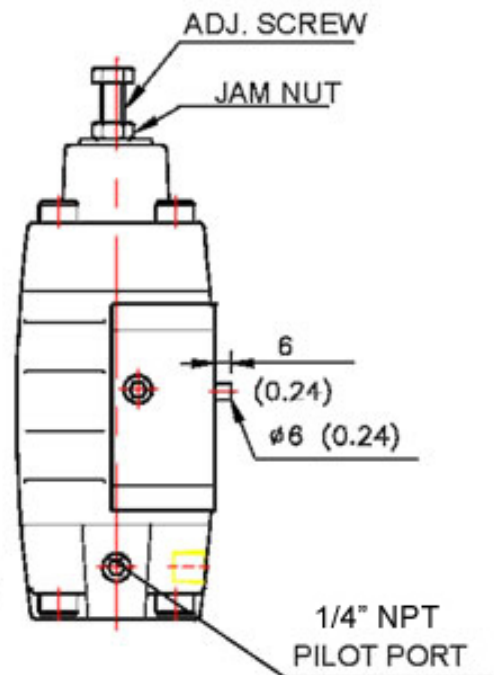
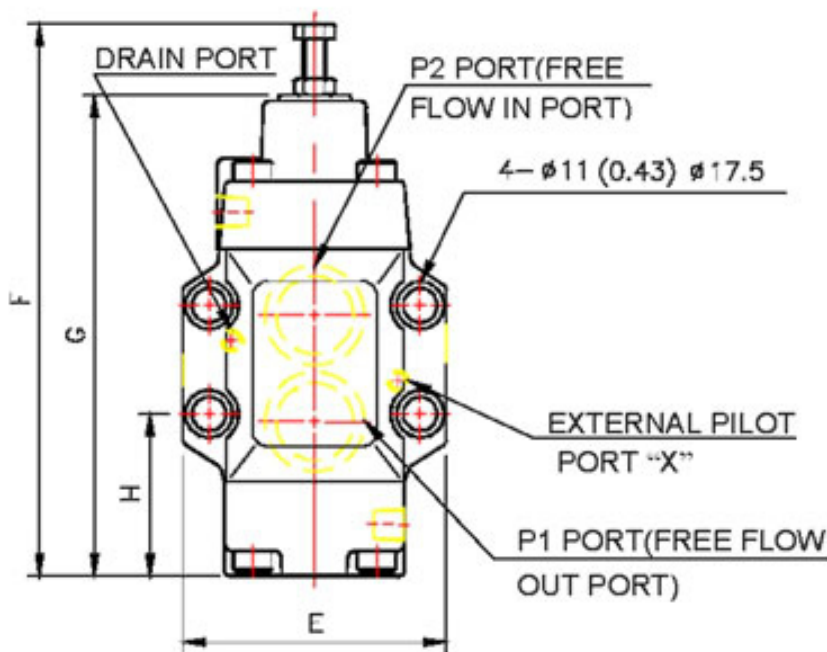
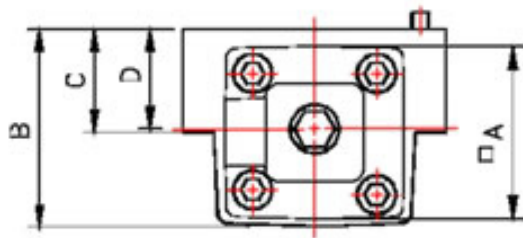


PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SV-G03/06

UNIT: mm(inch)



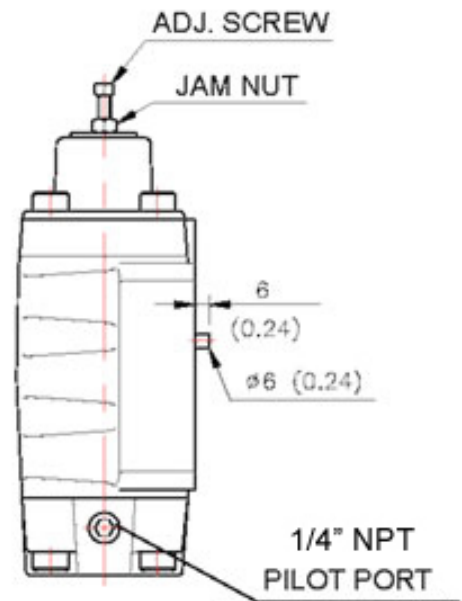
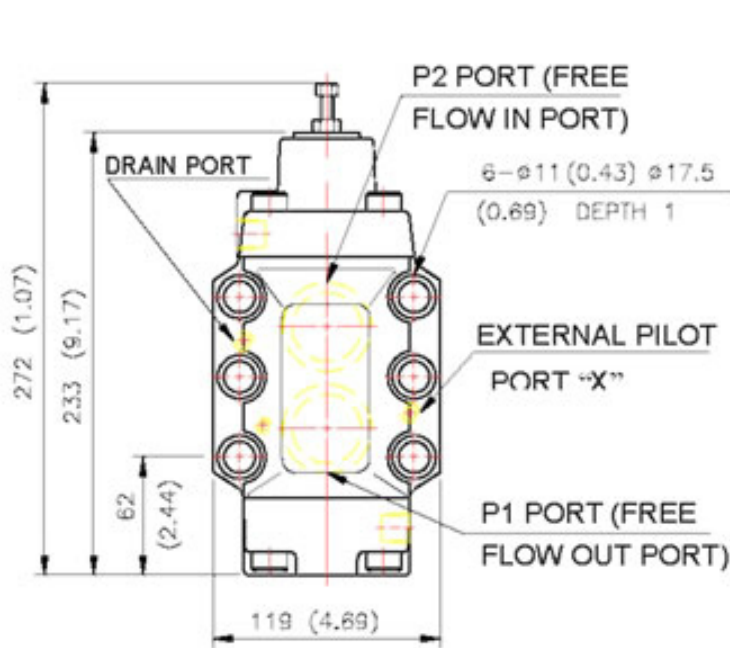
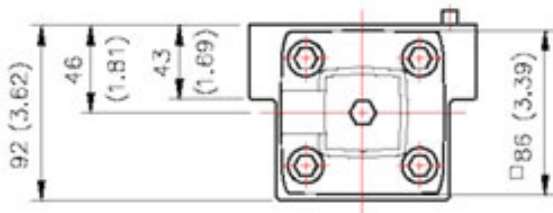
MODEL	A	B	C	D	E	F	G	H	BOLT METER(INCH)	WEIGHT	
										KGS	LBS
SV-G03	60 (2.36)	67 (2.64)	41.7 (1.64)	39 (1.54)	89 (3.50)	195 (7.68)	170.3 (6.70)	52.3 (2.06)	M10x50x4PCS (3/8"x2"x4PCS)	4	8.8
SV-G06	73 (2.87)	81 (3.19)	41.5 (1.63)	39 (1.54)	102 (4.02)	219 (8.62)	192 (7.56)	51 (2.01)	M10x50x4PCS (3/8"x2"x4PCS)	6.1	13.4

PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SV-G10

UNIT: mm(inch)

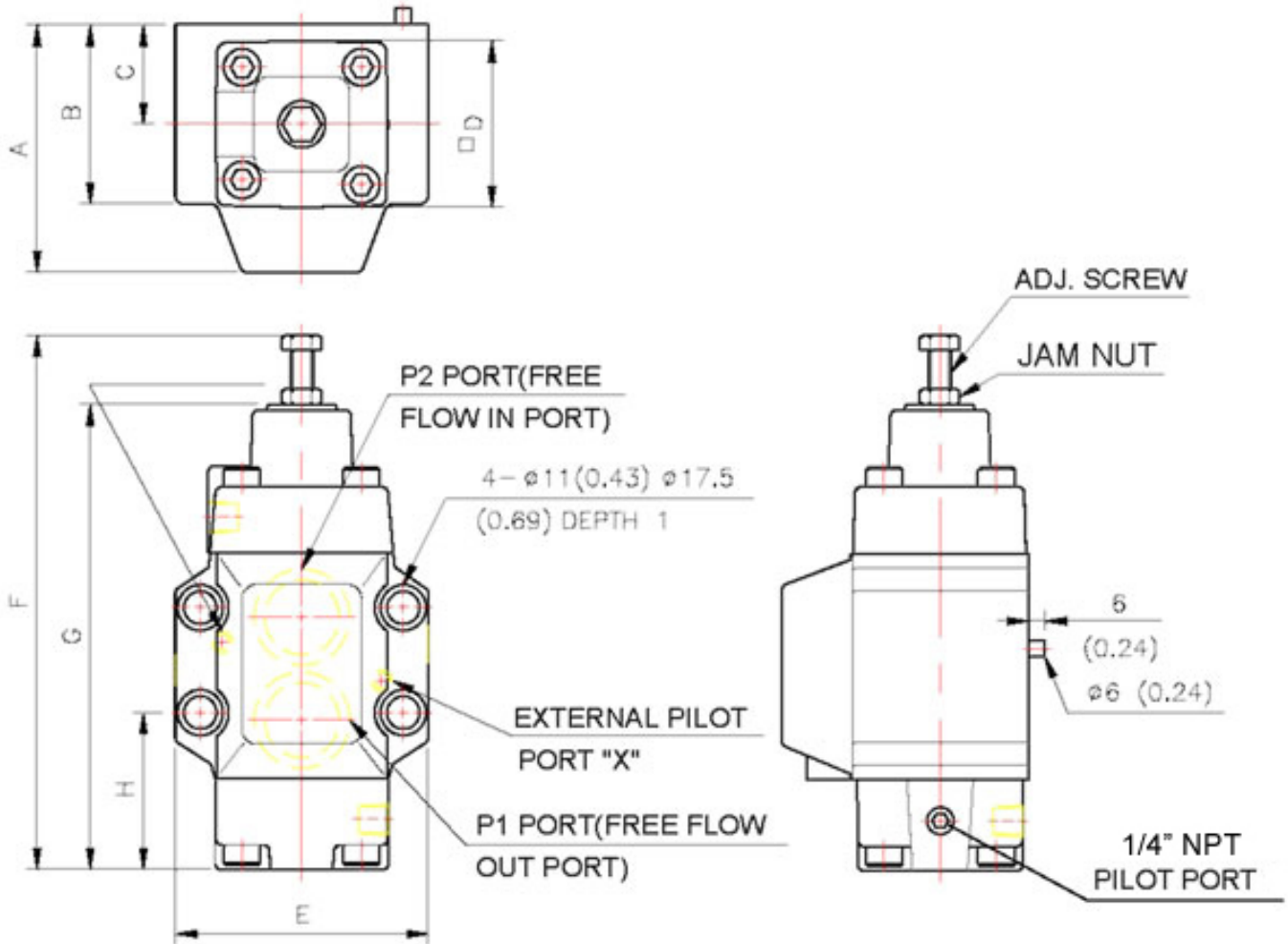


PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SCV-G03/06

UNIT: mm(inch)



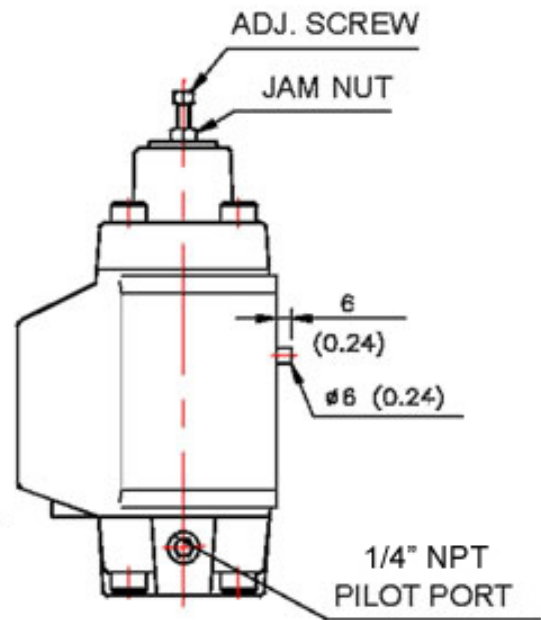
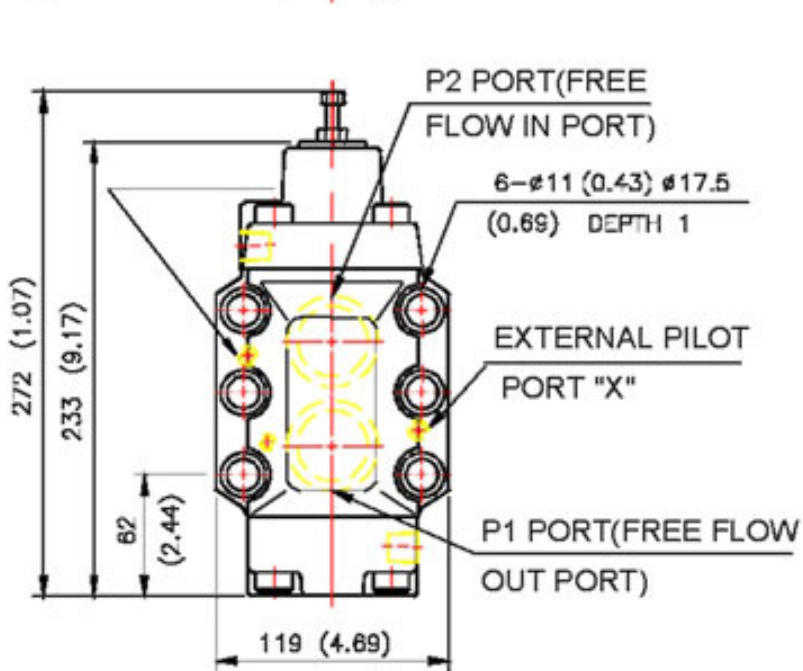
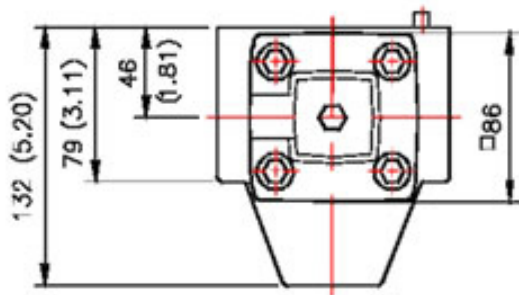
MODEL	A	B	C	D	E	F	G	H	BOLT METER(INCH)	WEIGHT	
										KGS	LBS
SCV-G03	87 (3.43)	59 (2.32)	35 (1.38)	60 (2.36)	89 (3.50)	191 (7.52)	170 (6.69)	49.6 (1.95)	M10x70x4PCS (3/8"x2 -3/4"x4PCS)	4.8	10.6
SCV-G06	108 (4.25)	69 (2.72)	40 (1.57)	73 (2.87)	102 (4.02)	221 (8.70)	188 (7.40)	51 (2.01)	M10x80x4PCS (3/8"x3 -1/4"x4PCS)	7.8	17.2

PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SCV-G10

UNIT: mm(inch)

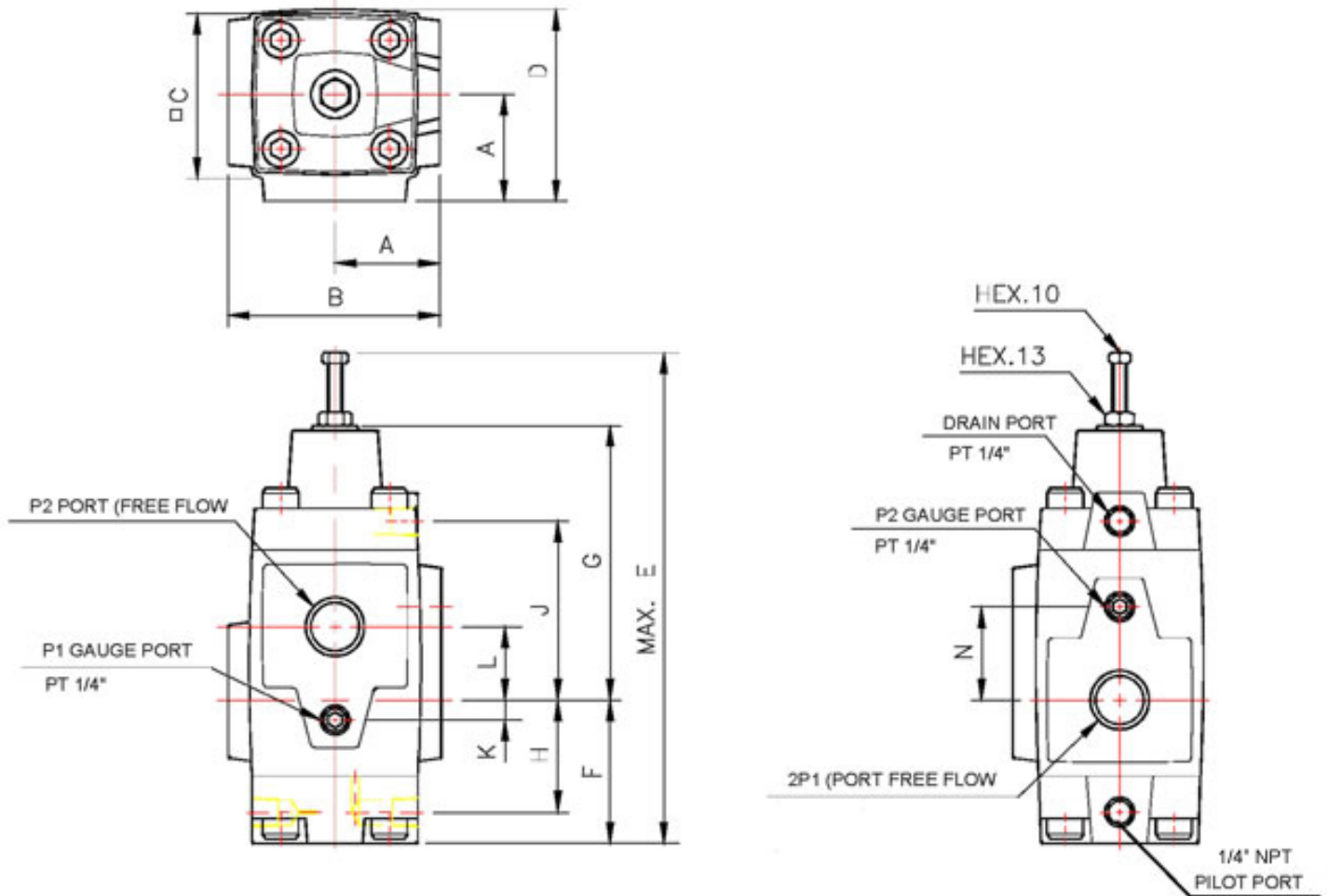


PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SV-T03/06/10

UNIT: mm(inch)



MODEL	A	B	C	D	E	F	G	H
SV-T03	42 (1.65)	84 (3.31)	61 (2.40)	74 (2.91)	195 (7.68)	57 (2.24)	106 (4.17)	43 (1.69)
SV-T06	48 (1.89)	96 (3.78)	73 (2.87)	86 (3.39)	219 (8.62)	64.5 (2.54)	123.5 (4.86)	50.5 (1.99)
SV-T10	68.5 (2.70)	137 (5.39)	84 (3.31)	103 (4.05)	272 (10.71)	84 (3.31)	149 (5.87)	66 (2.60)

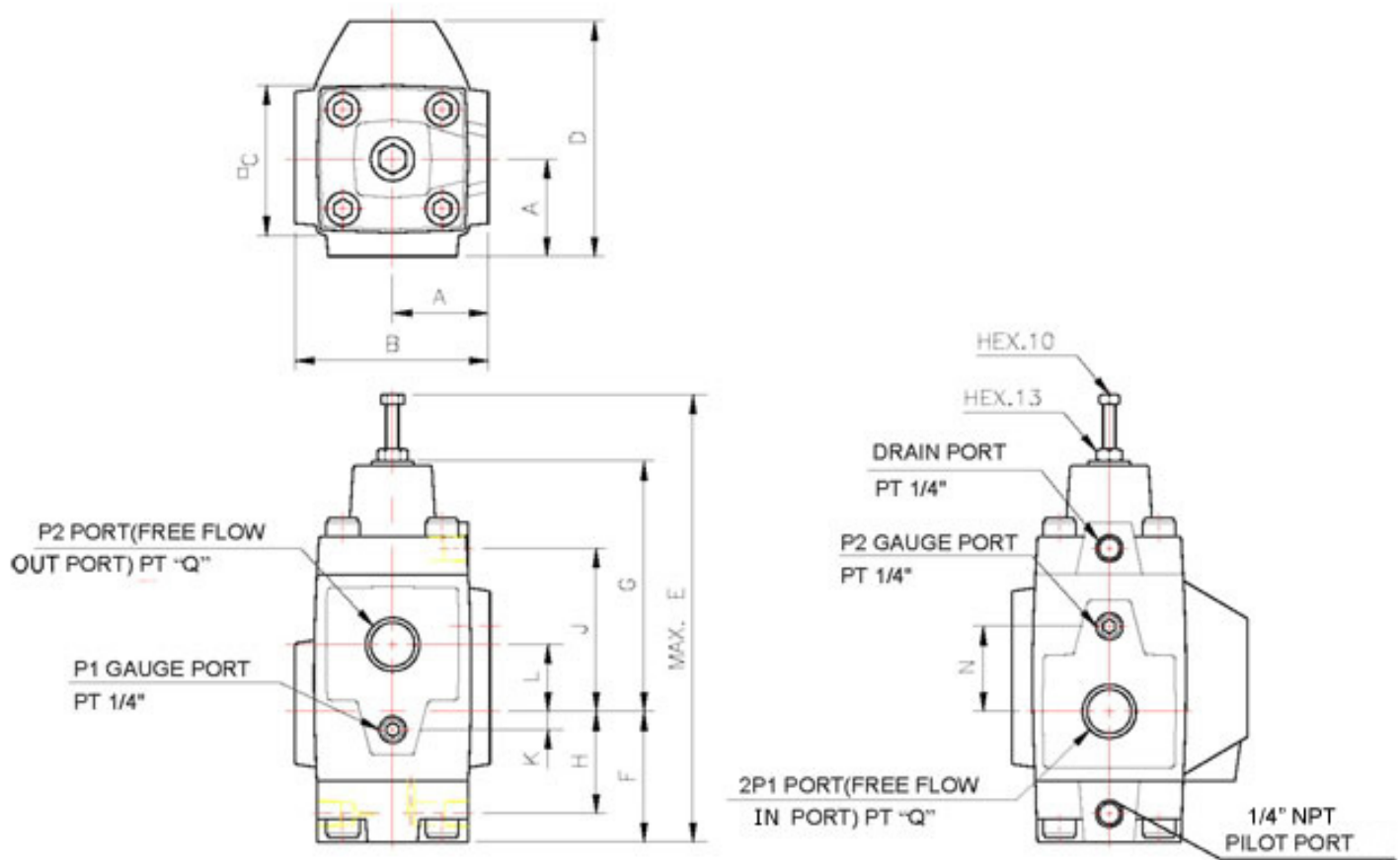
MODEL	J	K	L	N	Q	WEIGHT	
						KGS	LBS
SV-T03	70 (2.76)	0 (0)	28 (1.10)	28 (1.10)	3/8 (1/2)	3.7	8.1
SV-T06	80.5 (3.17)	9 (0.35)	33 (1.30)	42 (1.65)	3/4 (1)	6.2	13.6
SV-T10	98 (3.86)	12 (0.47)	40 (1.57)	52 (2.05)	1 1/4 (1 1/2)	12	26.4

PRESSURE CONTROL VALVE H & HC TYPE

DIMENSIONS

SCV-T03/06/10

UNIT: mm(inch)



MODEL	A	B	C	D	E	F	G	H
SCV-T03	41 (1.61)	82 (3.23)	63 (2.48)	96 (3.78)	194 (7.64)	59 (2.32)	110 (4.33)	43 (1.69)
SCV-T06	50 (1.97)	100 (3.94)	76 (2.99)	118 (4.65)	223.5 (8.80)	64.5 (2.54)	123.5 (4.86)	50.5 (1.99)
SCV-T10	68.5 (2.70)	137 (5.39)	84 (3.31)	156 (6.14)	269 (10.59)	84 (3.31)	149 (5.87)	66 (2.60)

MODEL	J	K	L	N	Q	WEIGHT	
						KGS	LBS
SCV-T03	70 (2.76)	0 (0)	28 (1.10)	28 (1.10)	3/8 (1/2)	4.2	4.2
SCV-T06	80.5 (3.17)	9 (0.35)	33 (1.30)	42 (1.65)	3/4 (1)	7.5	16.5
SCV-T10	98 (3.86)	12 (0.47)	40 (1.57)	52 (2.05)	11/4 (11/2)	13.8	30.4

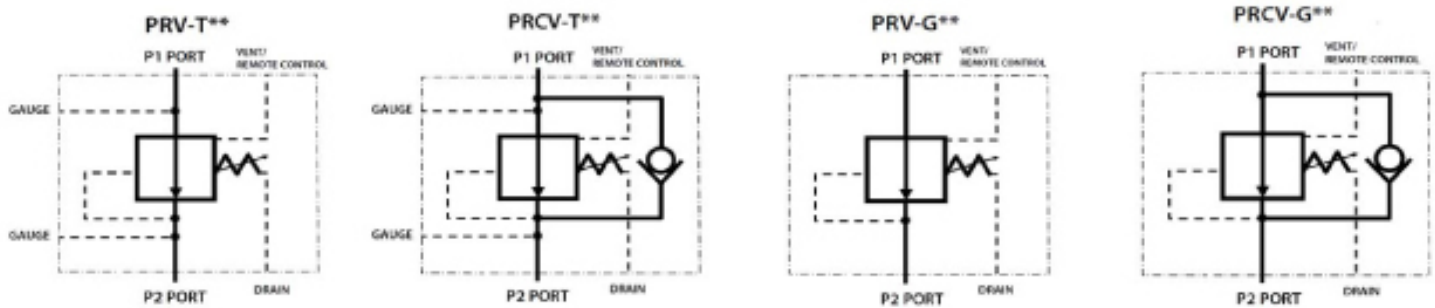
PRESSURE REDUCING VALVE



FEATURES

•The adjustable pressure reducing valve will ensure that the operating pressure in a branch of a hydraulic system will be maintained at a lower setting than that of the main system pressure. It is available with or without a reverse free flow check valve.

SYMBOLS



Model Code

PRCV - T 03 - 1 - ** - N

1

2

3

4

5

6

1 Series

PRV: Pressure Reducing Valve

PRCV: Pressure Reducing Valve
with Bypass Check

3 Size

03: 3/8" NPT

06: 3/4" NPT

10: 1-1/4" NPT

5 Design Number

6 Ports

No Code: For "G" Subplate
Style

N: NPT Ports for "T" Threaded
Body Style

2 Mounting Style

T: Threaded Body

G: Subplate Mounted

4 Pressure Adj. Range

1: 100-1000 PSI (7-69 BAR)

2: 500-2000 PSI (35-138 BAR)

3: 1000-3000 PSI (69-207 BAR)

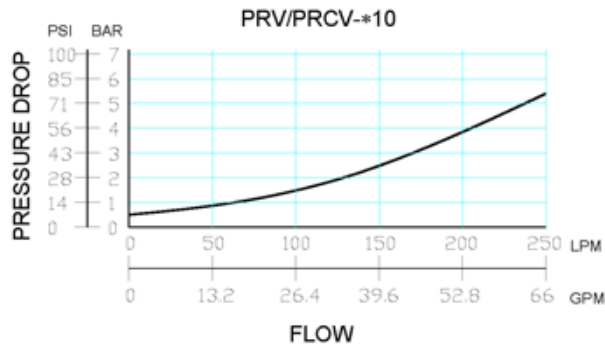
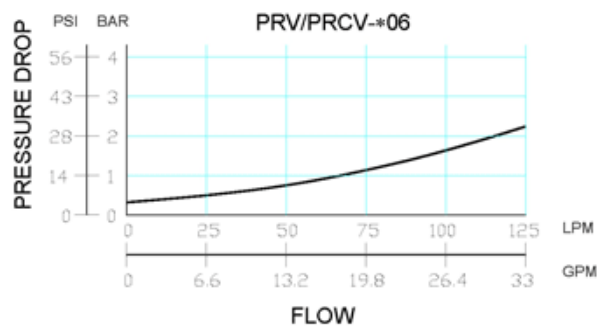
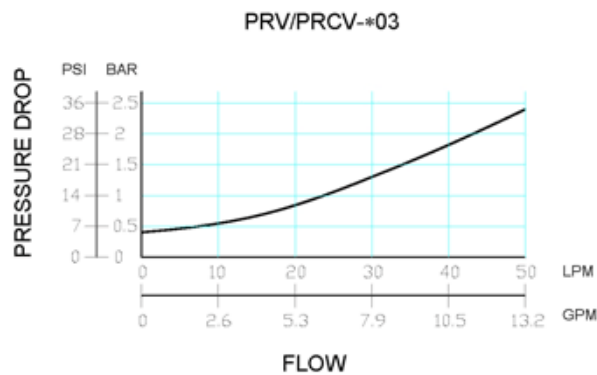
PRESSURE REDUCING VALVE

SPECIFICATIONS

MODEL	MAX. PRESSURE BAR(PSI)	PRESSURE ADJUSTING RANGE BAR(PSI)	MAX. FLOW LPM(GPM)	MOUNTING BOLTS METER(INCH)
PRV-*03 PRCV-*03	207(3000)	1:7-69(100-1000)	50(13.2)	M10x70(3/8"x2-3/4") 4PCS
PRV-*06 PRCV-*06		2:35-138(500-2000)	125(33)	M10x80(3/8"x3-1/4") 4PCS
PRV-*10 PRCV-*10		3:7-207(1000-3000)	250(66)	M10x90(3/8"x3-1/2") 6PCS

PERFORMANCE CURVES

PRESSURE DROP FOR REVERSED FREE FLOW

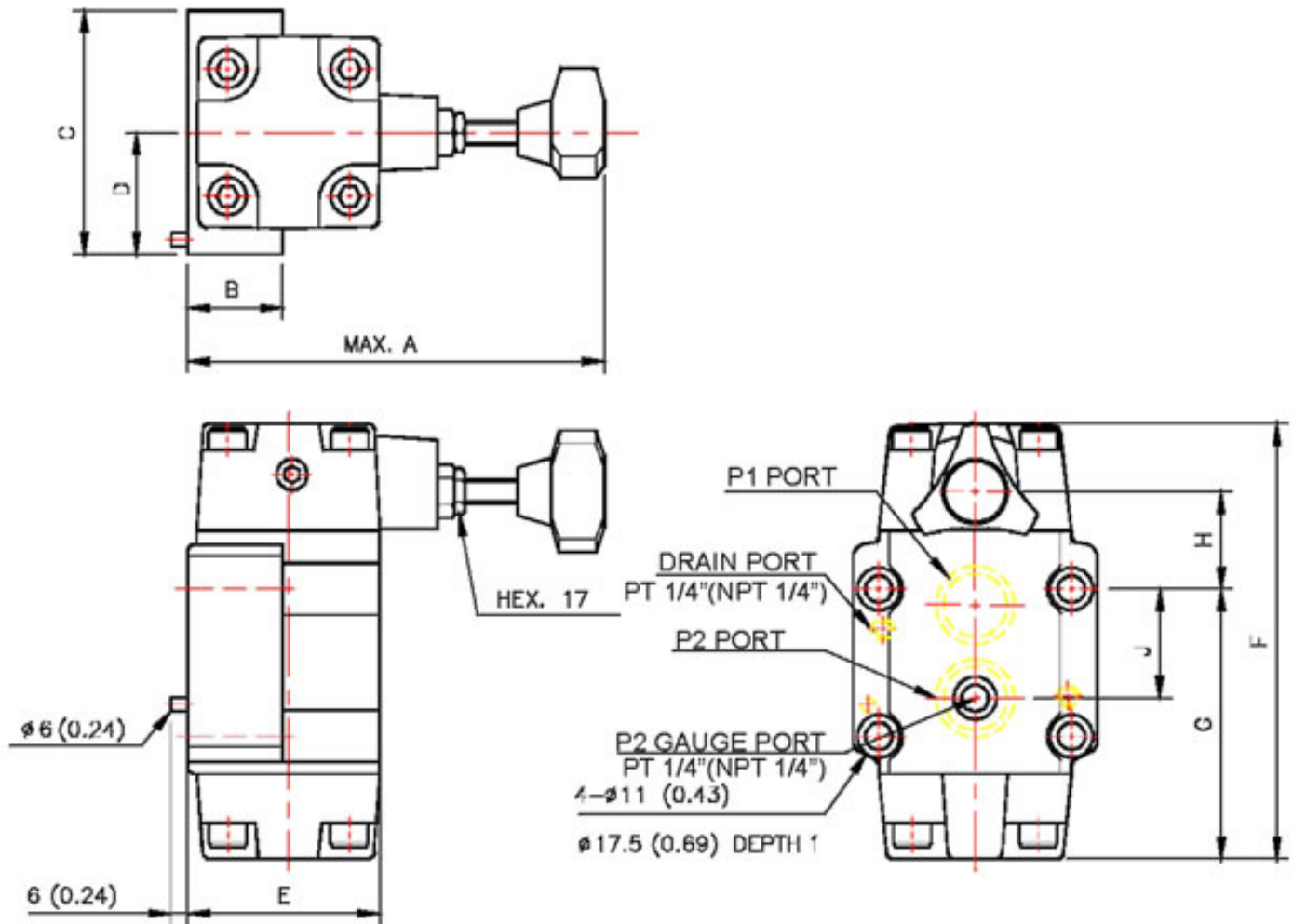


PRESSURE REDUCING VALVE

DIMENSIONS

PRV-G03/06

UNIT: mm(inch)



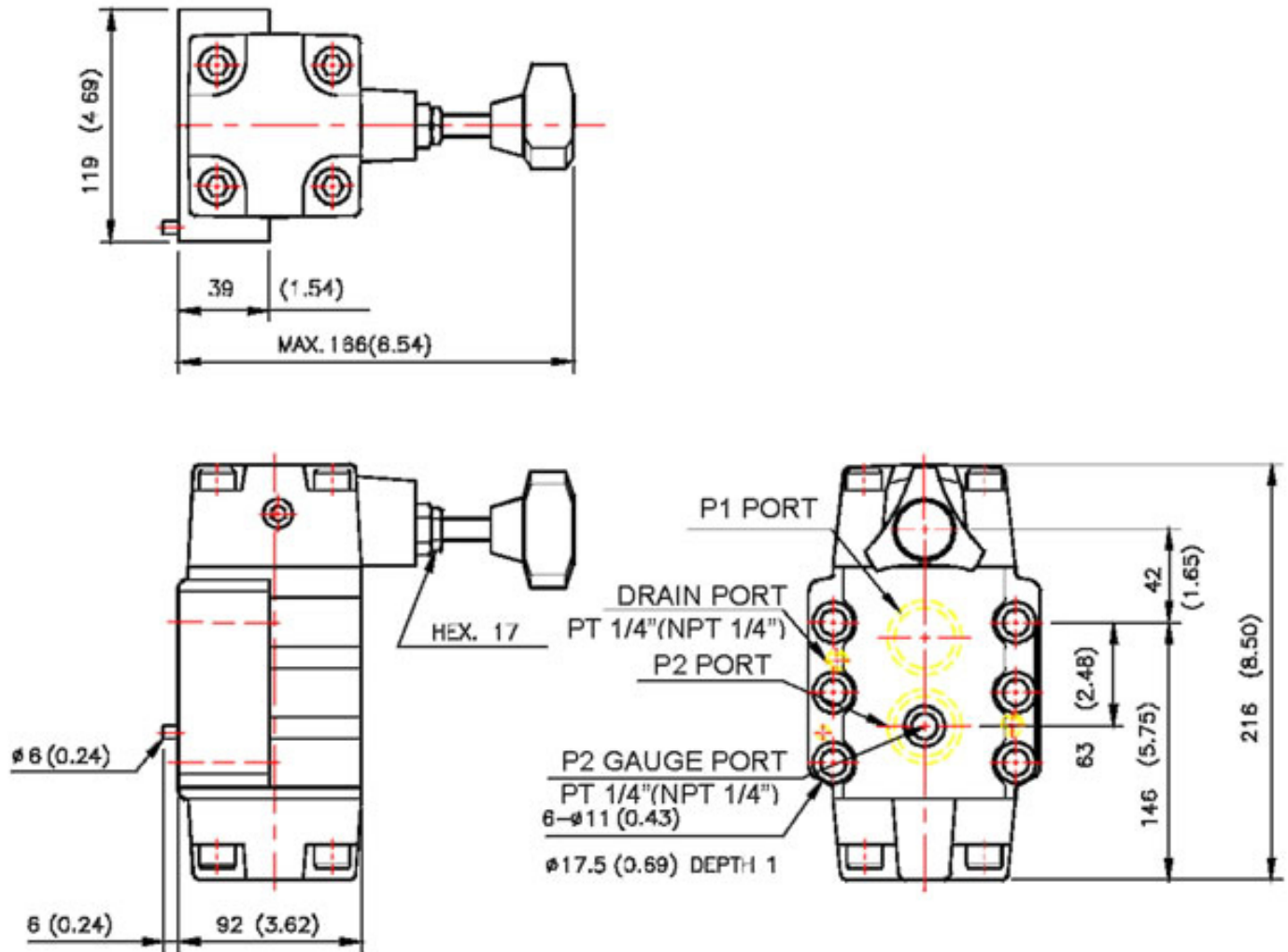
MODEL	A	B	C	D	E	F	G	H	J	WEIGHT	
										KGS	LBS
PRV-G03	164 (6.46)	42 (1.65)	89 (3.23)	44.5 (1.75)	67 (2.64)	155.5 (6.12)	92.4 (3.64)	40.6 (1.60)	35 (1.38)	4.5	10.1
PRV-G06	165.8 (6.53)	42 (1.65)	100 (3.94)	50 (1.97)	74 (2.91)	182 (7.17)	111 (4.37)	40 (1.57)	48 (1.89)	6.8	15.2

PRESSURE REDUCING VALVE

DIMENSIONS

PRV-G10

UNIT: mm(inch)

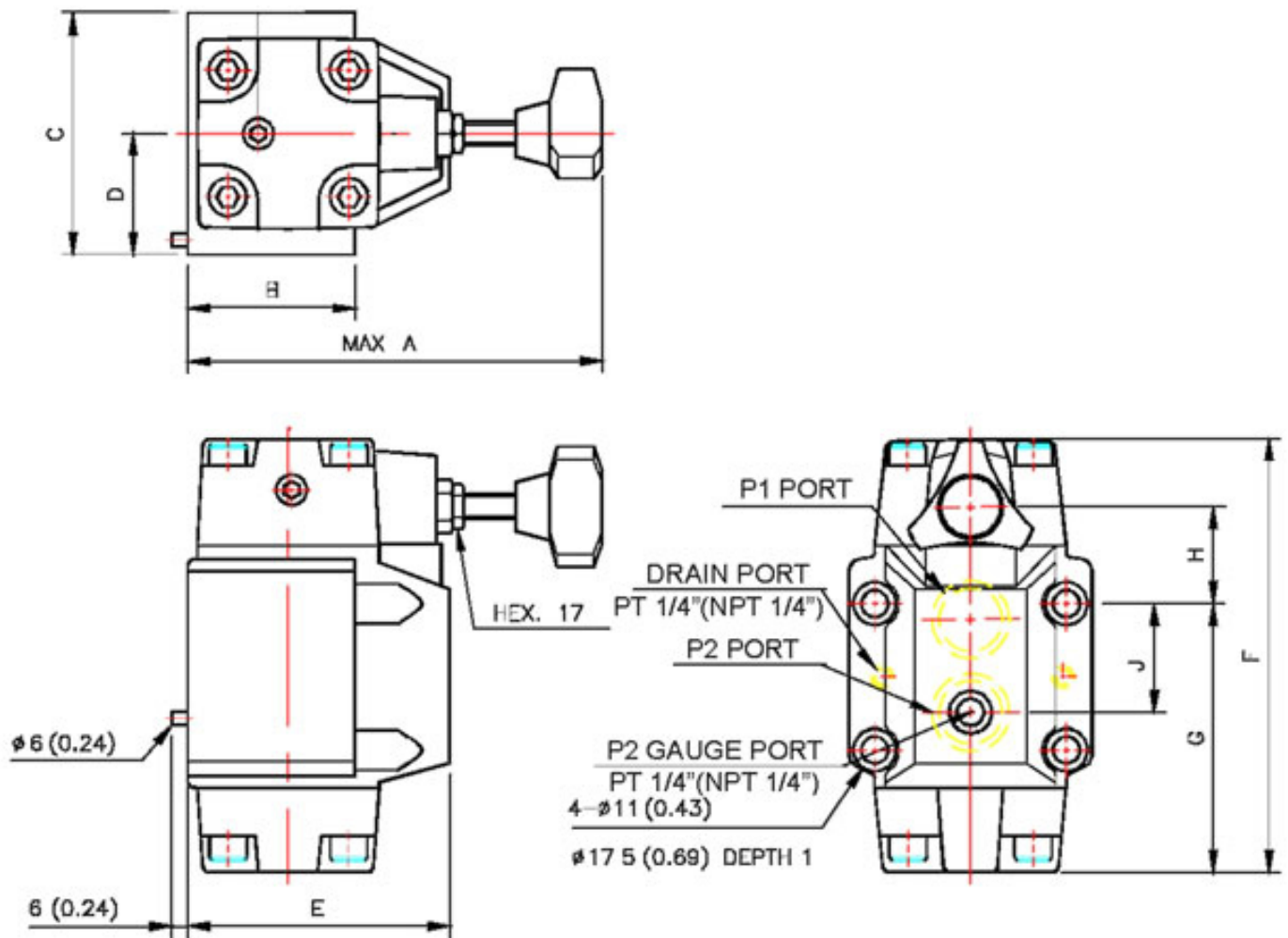


PRESSURE REDUCING VALVE

DIMENSIONS

PRCV-G03/06

UNIT: mm(inch)



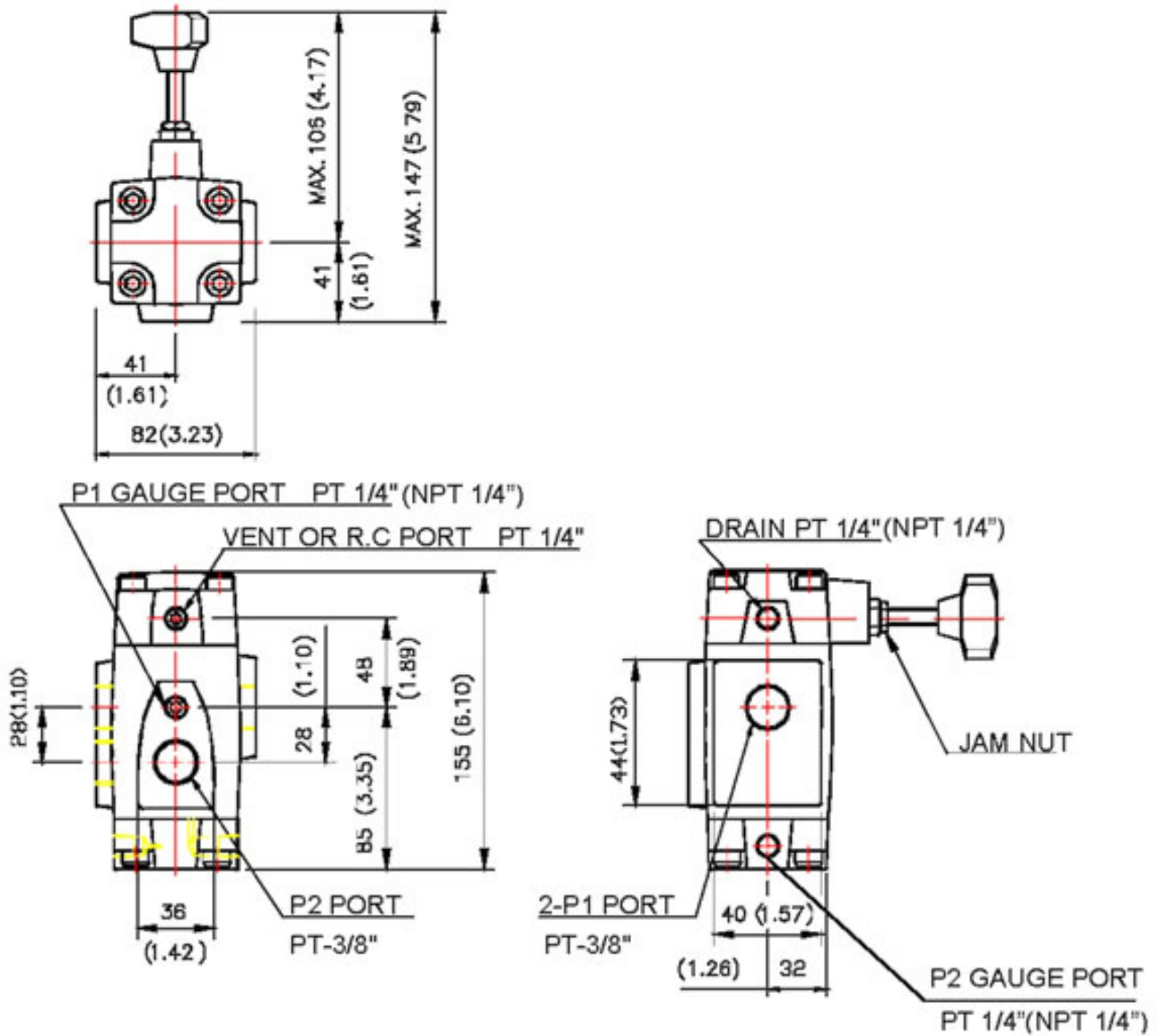
MODEL	A	B	C	D	E	F	G	H	J	WEIGHT	
										KGS	LBS
PRCV-G03	164 (6.46)	61 (2.40)	90 (3.54)	45 (1.77)	88 (3.46)	155 (6.10)	92.4 (3.64)	45 (1.77)	34.9 (1.37)	5.2	11.45
PRCV-G06	164 (6.46)	70.5 (2.78)	104 (4.09)	52 (2.05)	109 (4.29)	182 (7.17)	111 (4.37)	40 (1.57)	48 (1.89)	8.3	18.28
PRCV-G10	166 (4.57)	79 (3.11)	119 (4.69)	59.5 (2.34)	132 (5.20)	216 (8.50)	146 (5.75)	42 (1.65)	63 (2.48)	18.5	40.78

PRESSURE REDUCING VALVE

DIMENSIONS

PRV-T03

UNIT: mm(inch)

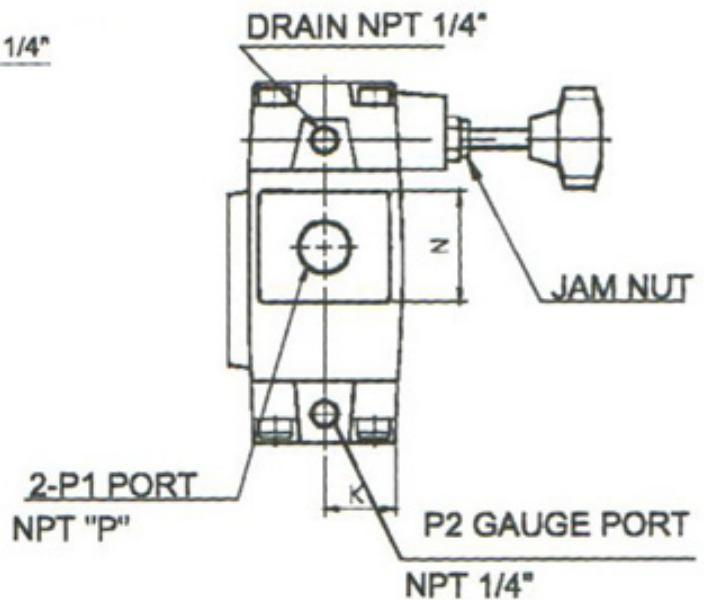
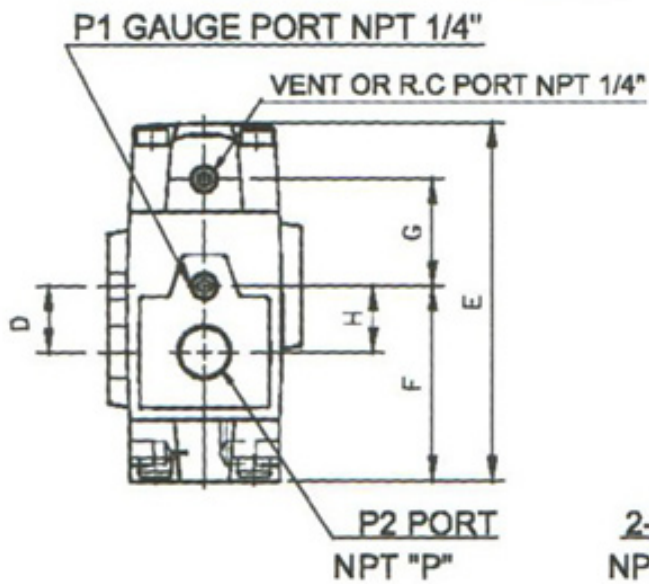
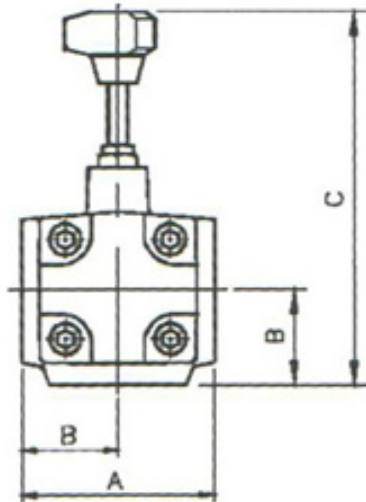


PRESSURE REDUCING VALVE

DIMENSIONS

PRV-T06/10

UNIT: mm(inch)



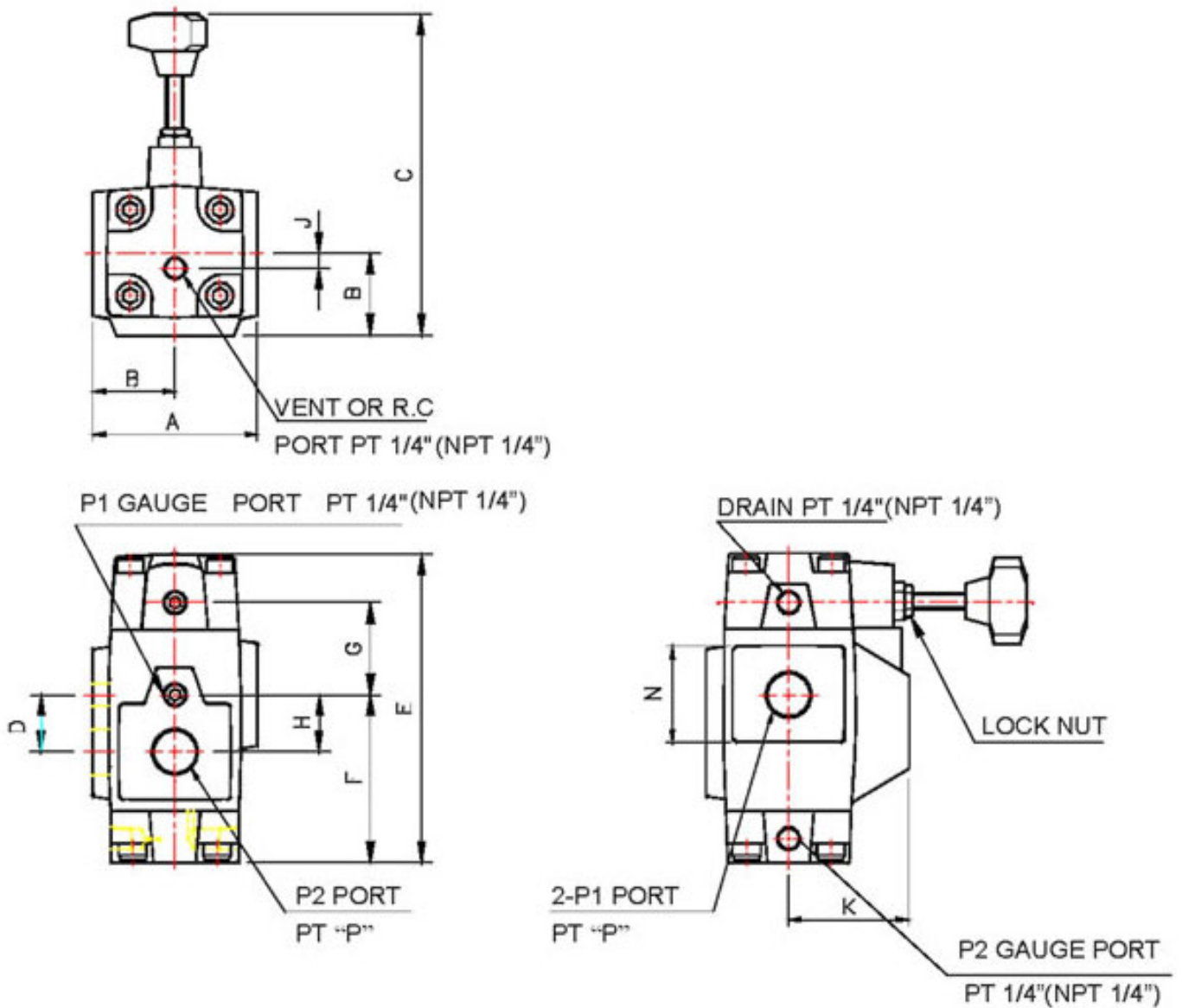
MODEL	A	B	C	D	E	F	G	H	K	N	P	WEIGHT	
												KGS	LBS
PRV-T06	94.8 (3.73)	47.4 (1.87)	150 (5.90)	42 (1.65)	179 (7.06)	97 (3.83)	53.5 (2.11)	33 (1.30)	39 (1.54)	62 (2.44)	M19 (3/4")	6	13.2
PRV-T10	132 (5.20)	66 (2.60)	167 (6.57)	52 (2.05)	216 (8.50)	124 (4.88)	64 (2.52)	40 (1.57)	50 (1.97)	79 (3.11)	M32 (1-1/4")	12	26.45

PRESSURE REDUCING VALVE

DIMENSIONS

PRCV-T06/T10

UNIT: mm(inch)



MODEL	A	B	C	D	E	F	G	H	J	K	N	P	WEIGHT	
													KGS	LBS
PRCV-T06	94 (3.70)	48 (1.89)	150 (5.90)	42 (1.65)	179 (7.06)	97.5 (3.84)	44.5 (1.75)	42 (1.66)	9 (0.35)	66 (2.60)	62 (2.44)	M19 (3/4")	7.8	17.1
PRCV-T10	137 (5.40)	68.5 (2.70)	167 (6.57)	52 (2.05)	216 (8.50)	124 (4.88)	52 (2.04)	52 (2.04)	12 (0.47)	84 (3.31)	79 (3.11)	M32 (1-1/4")	14.4	31.7

SUBPLATE FOR RF-G01 & RF-G02



FEATURES

-

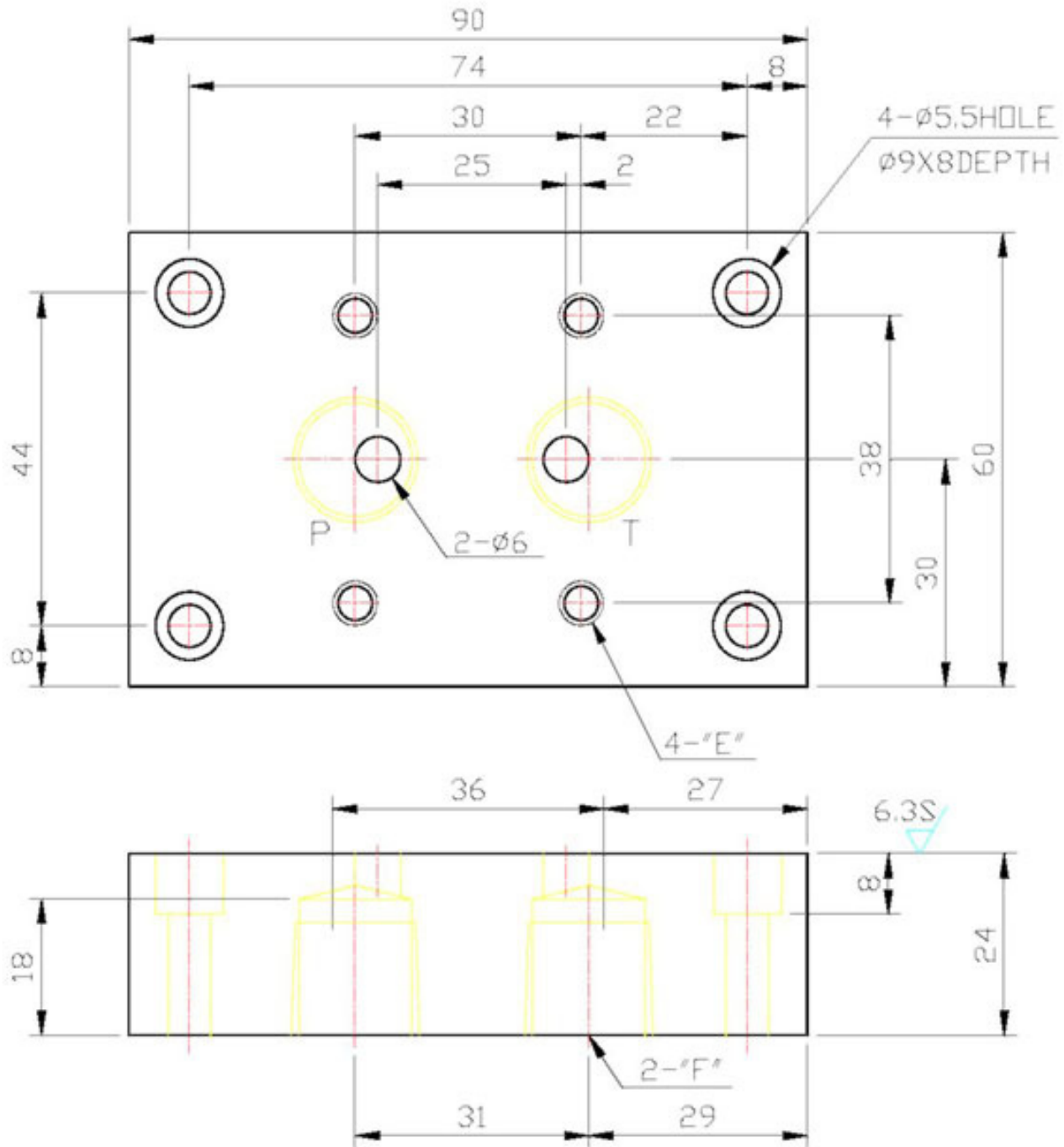
Model Code

MF-02-02-N

SUBPLATE FOR RF-G01 & RF-G02

DIMENSIONS

MF-**



HOW TO ORDER	E	F
MF-02-02-N	#10-24UNCx12L	NPT 1/4"

SUBPLATE FOR RF-, HRF-, SRF-, HSRF.



FEATURES

-

Model Code

MF 04 – 04 – N

1 **2** **3** **4**

1 Series

MF: Subplate for
RF-G04, RF-G06, RF-G10
HRF-G03, HRF-G06
SRF-G04, SRF-G06, SRF-G10
HSRF-G03, HSRF-G06

3 Port Size

04: 1/2" NPT
06: 3/4" NPT
08: 1" NPT
10: 1-1/4" NPT
12: 1-1/2" NPT

2 Valve Size

04: 1/2"
06: 3/4"
10: 1-1/4"

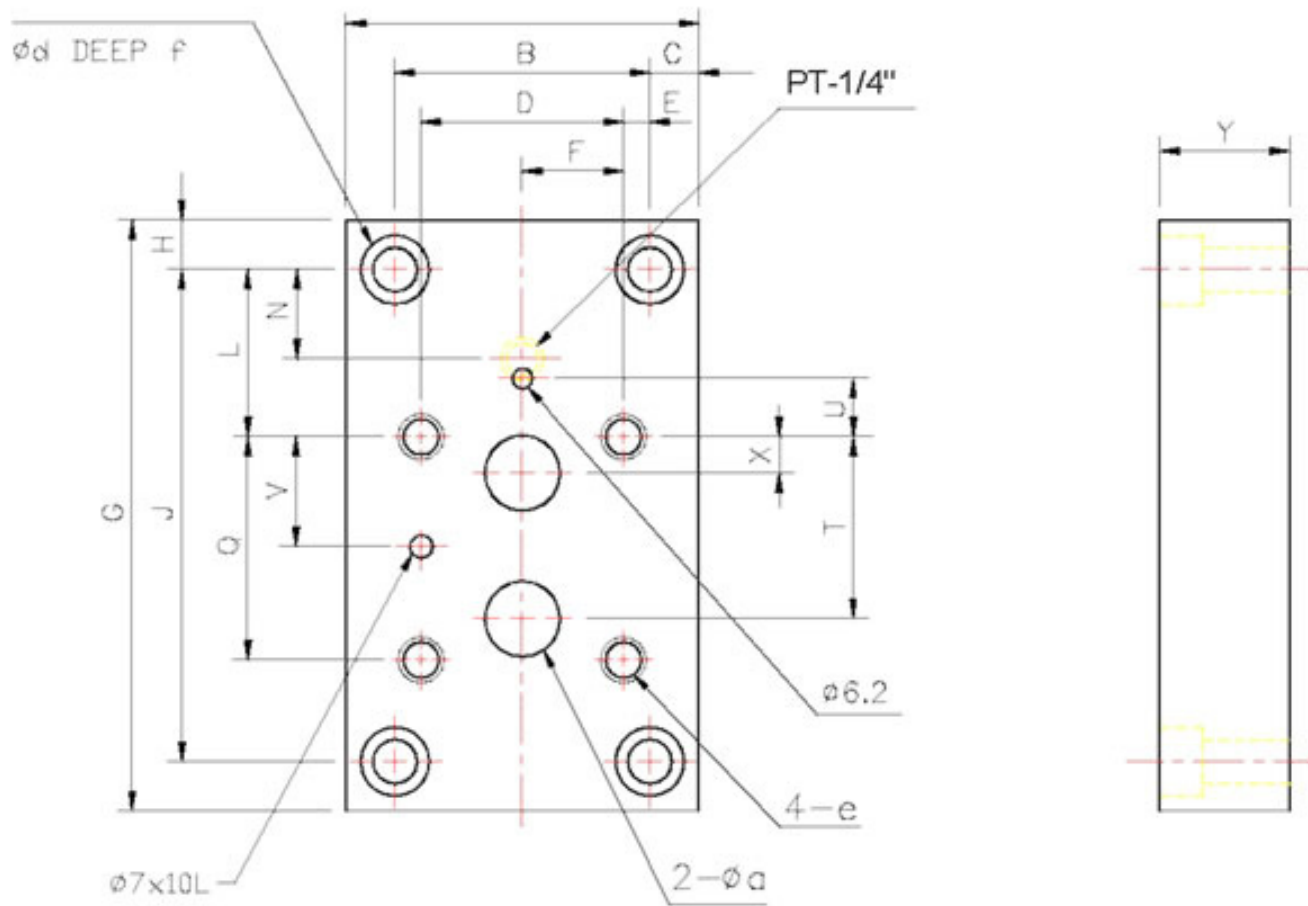
4 Port Thread

N: NPT Threads

SUBPLATE FOR RF-, HRF-, SRF-, HSRF.

DIMENSIONS

MF-**



MODEL	A	B	C	D	E	F	G	H
MF-04	86 (3.39)	60 (2.36)	13 (0.51)	53.8 (2.12)	3.1 (0.12)	26.9 (1.06)	149 (5.87)	13 (0.51)
MF-06	108 (4.25)	78 (3.07)	15 (0.59)	70 (2.76)	4 (0.16)	35 (1.38)	180 (7.09)	15 (0.59)
MF-10	126 (4.96)	94 (3.70)	16 (0.63)	82.6 (3.25)	5.7 (0.22)	41.3 (1.63)	227 (8.94)	16 (0.63)

MODEL	J	L	N	Q	T	U	V	X
MF-04	123 (4.84)	32 (1.26)	26 (1.02)	53.8 (2.12)	47.5 (1.87)	0 (0.00)	22.1 (0.87)	22.1 (0.87)
MF-06	150 (5.91)	51 (2.01)	27.2 (1.07)	66.7 (2.63)	55.6 (2.19)	23.8 (0.94)	33.4 (1.31)	11.1 (0.43)
MF-10	195 (7.68)	62 (2.44)	30.2 (1.19)	88.9 (3.5)	76.2 (3.00)	31.8 (1.25)	44.5 (5.44)	12.7 (0.50)

MODEL	Y	a	b	d	e	f
MF-04	32 (1.26)	14.5 (0.57)	11 (0.43)	17.5 (0.69)	M12x20L (1/2-13UNCx20L)	12 (0.47)
MF-06	40 (1.57)	23 (0.91)	13.5 (0.53)	21 (0.83)	M16x25L (5/8-11UNCx25L)	12 (0.47)
MF-10	50 (1.97)	28 (1.10)	17.5 (0.69)	26 (1.02)	M20x28L (3/4-10UNCx28L)	17 (0.67)

SUBPLATE FOR SV/SCV PRV/PRCV



FEATURES

-

Model Code

SVM 03 – 03 – N

1

2

3

4

1 Series

SVM: Subplate for
SV-G**, SCV-G**
PRV-G**, PRCV-G**

3 Ports

03: 3/8" NPT
06: 3/4" NPT
10: 1-1/4" NPT

2 Valve Size

03: G03
06: G06
10: G10

4 Port Threads

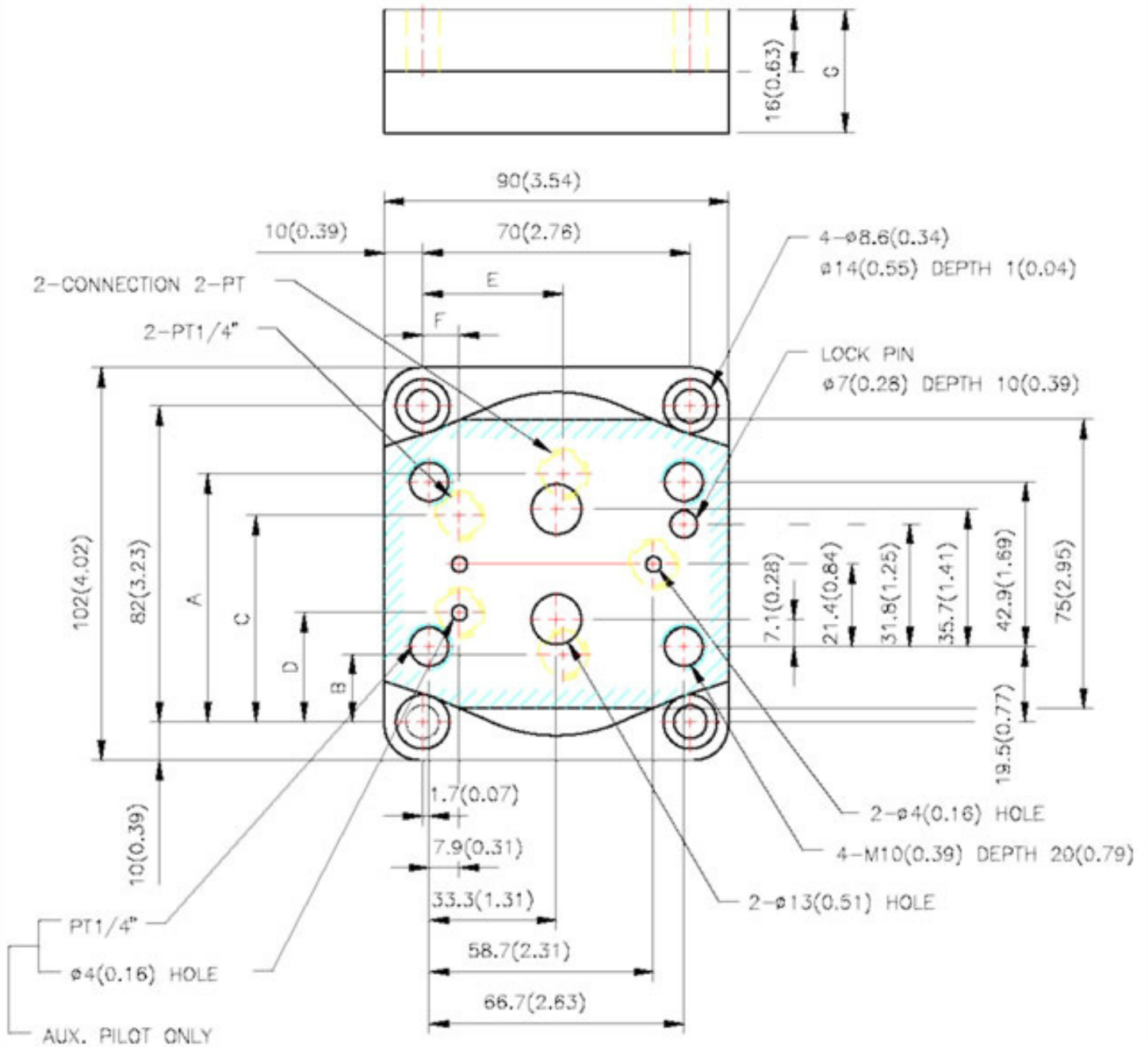
N: NPT

SUBPLATE FOR SV/SCV PRV/PRCV

DIMENSIONS

SVM-03-**

ISO 5781-AG-06-2-A



THIS SUBPLATE IS USED FOR SV/SCV-G03, PRV/PRCV-G03

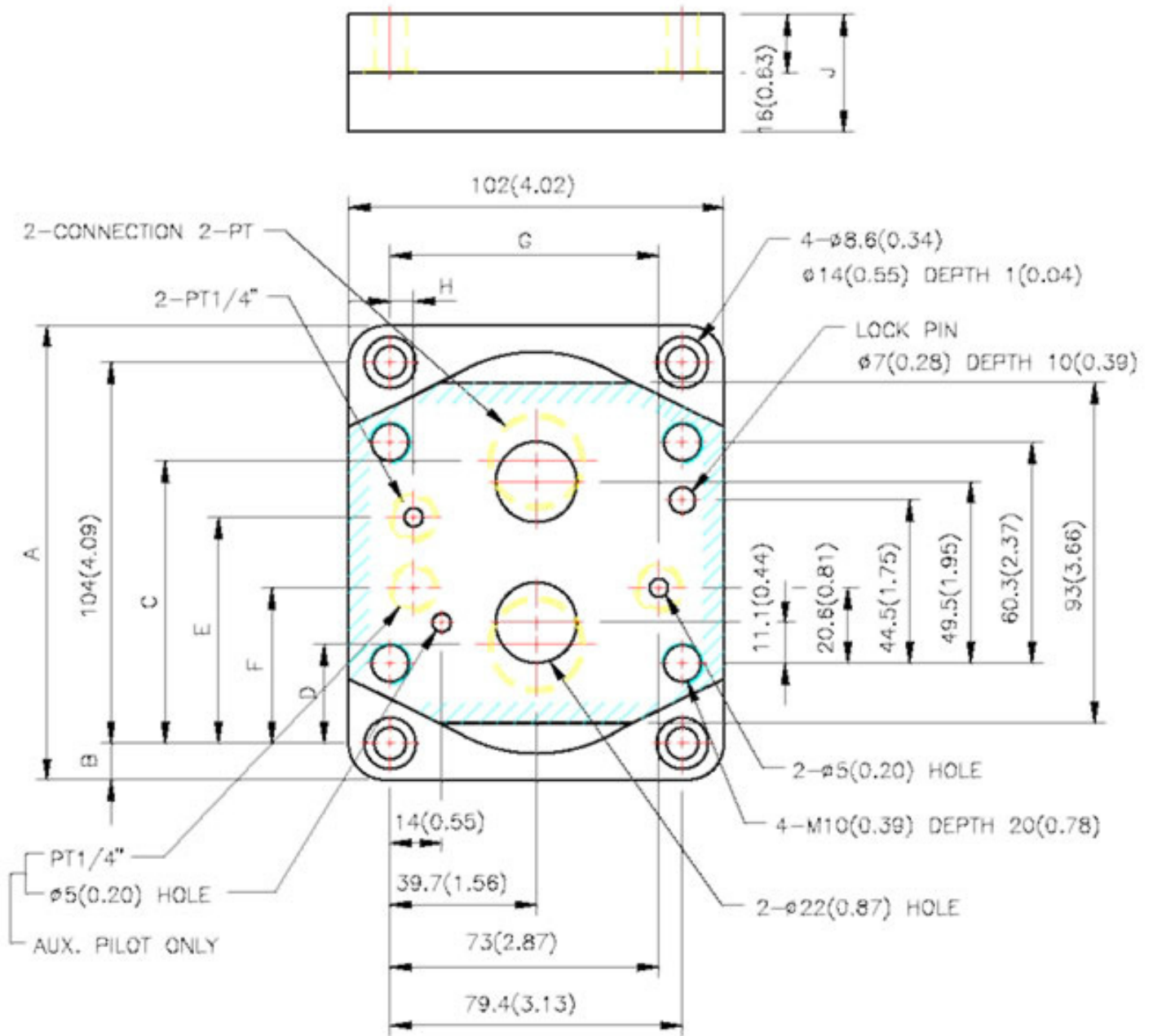
SUBPLATE	PORT PT	A	B	C	D	E	F	G
SVM-03-03	3/8"	61 (2.40)	21 (0.83)	40.9 (1.61)	-	35 (1.38)	9.6 (0.38)	32 (1.26)

SUBPLATE FOR SV/SCV PRV/PRCV

DIMENSIONS

SVM-06-**

ISO 5781-AH-08-2-A



THIS SUBPLATE IS USED FOR SV/SCV-G06, PRV/PRCV-G03

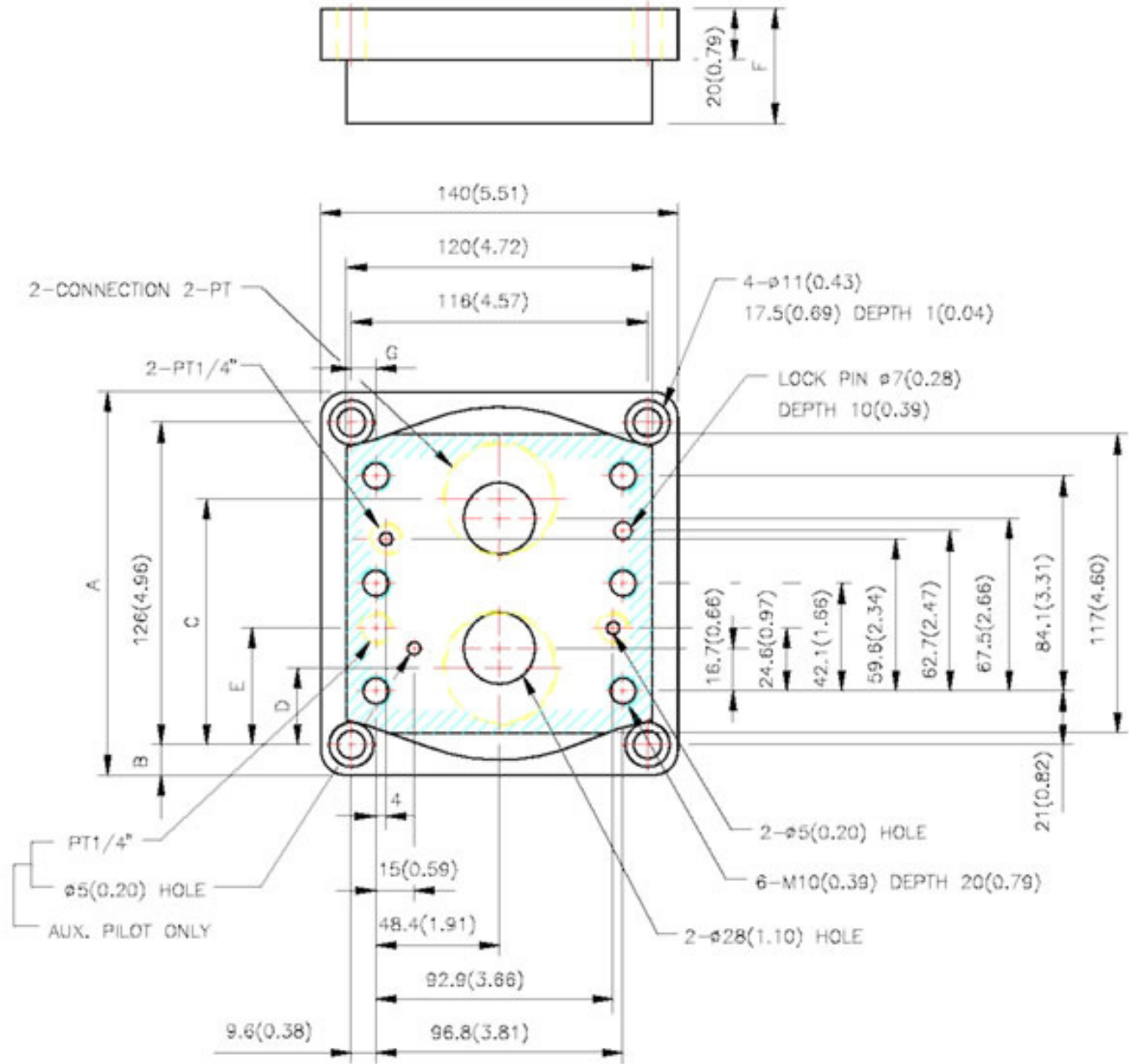
SUBPLATE	PORT PT	A	B	C	D	E	F	G	H	J
SVM-06-06	3/4"	124 (4.88)	10 (0.39)	77 (3.03)	27 (1.06)	61.7 (2.43)	-	73 (2.87)	6.4 (0.25)	36 (1.42)

SUBPLATE FOR SV/SCV PRV/PRCV

DIMENSIONS

SVM-10-**

ISO 5781-AJ-10-2-A



SUBPLATE	PORT PT	A	B	C	D	E	F	G
SVM-10-10	1-1/4"	150 (5.91)	12 (0.47)	96 (3.78)	30 (1.18)	-	45 (1.77)	13.6 (0.54)

FLOW CONTROLS

RESTRICTORS



FEATURES

- The TV adjustable valve functions as a needle valve flow restrictor. The TCV adjustable valve functions as a flow control valve, with a needle valve flow restrictor in one direction and free flow in the opposite direction.

Symbol



TV



TCV

Model Code

TV - T 03 - ** - N

1 2 3 4 5

1 Series

TV: Needle Valve

TCV: Flow Control Valve with Reverse Free Flow Check

2 Mounting Style

T: Threaded Body

G: Subplate Mounted

3 Valve Size

03: 8 GPM

06: 20 GPM

10: 50 GPM

4 Design Number

5 Ports

No Code: For "G" Subplate Style

N: NPT Ports for "T" Threaded

Body Style

03: 3/8" NPT

06: 3/4" NPT

10: 1-1/4" NPT

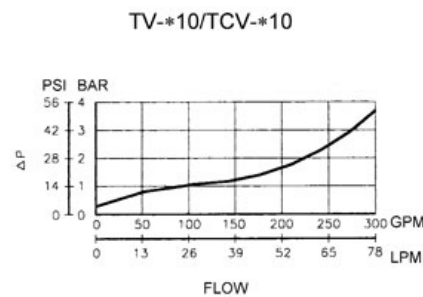
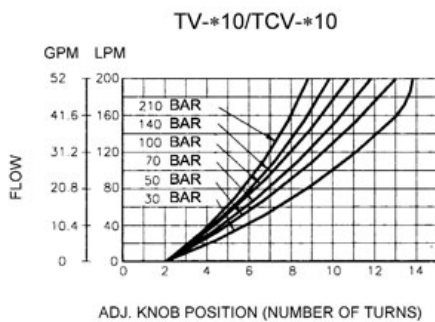
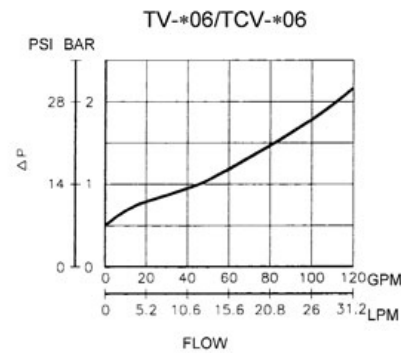
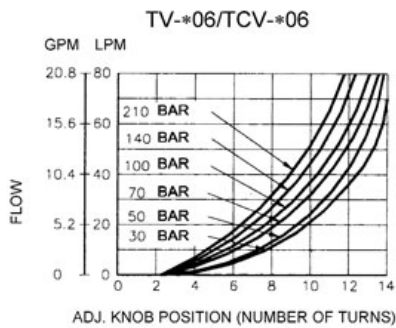
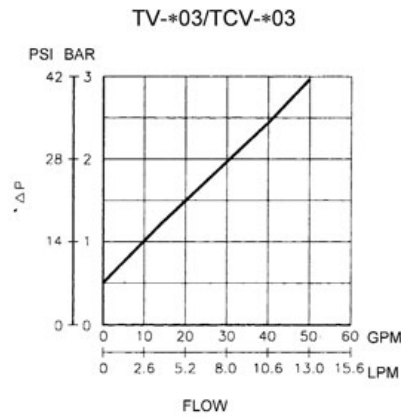
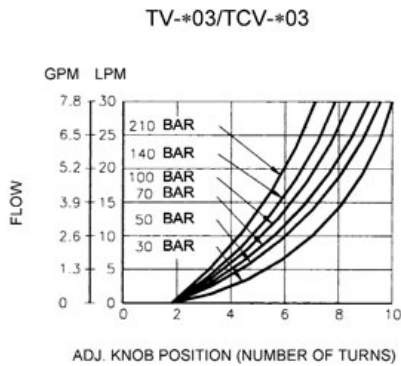
FLOW CONTROLS RESTRICTORS

SPECIFICATIONS

MODEL NUMBERS		MAX. OPERATED PRESSURE BAR (PSI)	RATED FLOW LPM (GPM)	WEIGHT KGS (LBS)	
THREAD TYPE	SUBPLATE TYPE				
TV-T03	TV-G03	207 (3000)	30 (8)	1.4(3.1)	1.5(3.1)
TCV-T03	TCV-G03			1.5(3.1)	2.1(4.6)
TV-T06	TV-G06		80 (20)	2.6(5.7)	2.7(6.0)
TCV-T06	TCV-G06			3.5(7.7)	4.0(8.8)
TV-T10	TV-G10		200 (50)	5.2(11.5)	6.1(13.5)
TCV-T10	TCV-G10			7.4(16.3)	8.1(17.8)

PERFORMANCE CURVES

PRESSURE DROP FOR REVERSED FREE FLOW

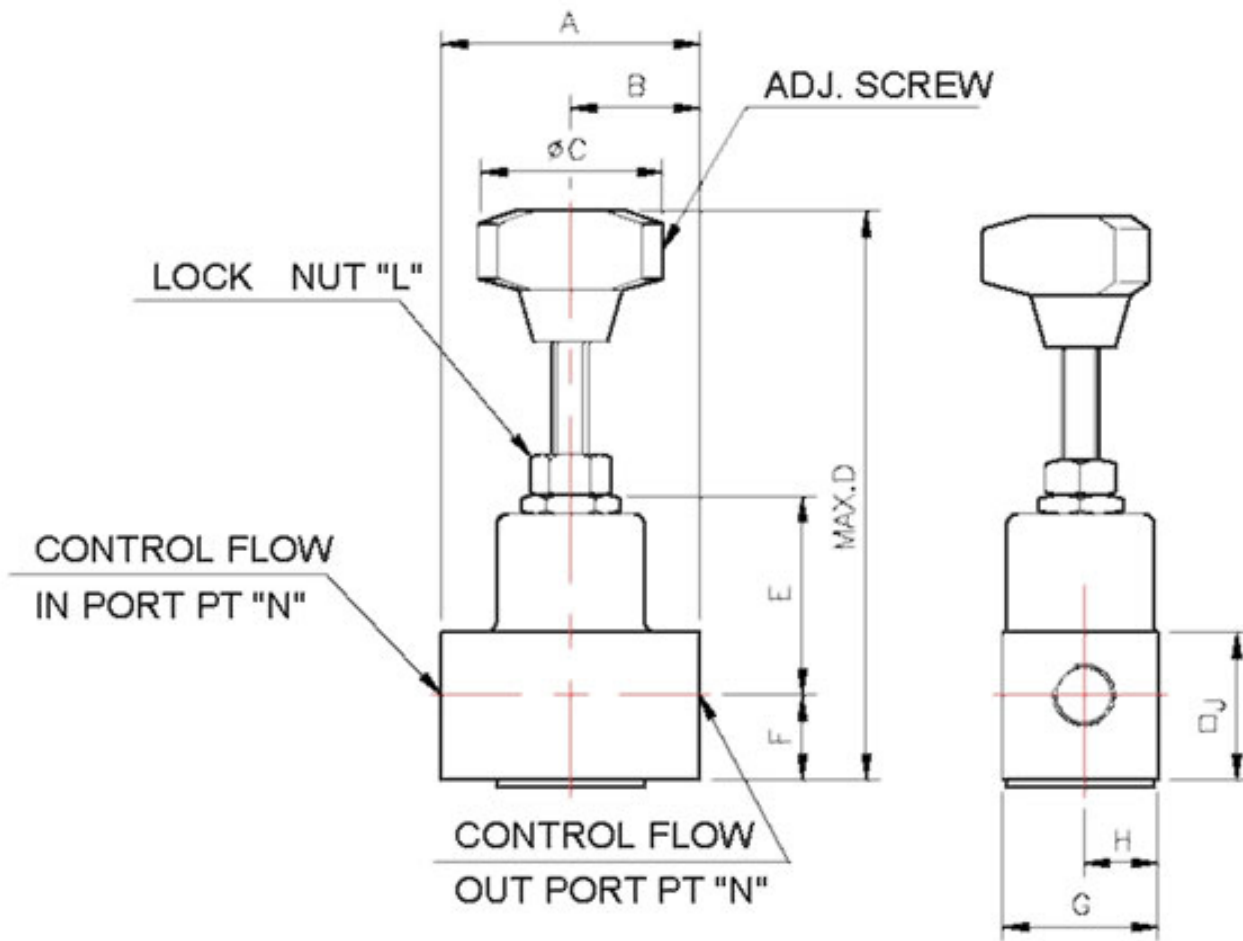


FLOW CONTROLS RESTRICTORS

DIMENSIONS

TV-T03/06/10-**

UNIT :	mm(inch)
WEIGHT :	kgs(lbs)
T03	1.40(3.08)
T06	2.60(5.72)
T10	5.20(11.44)



MODEL	A	B	C	D	E	F	G	H	J	L	N
TV-T03	70 (2.76)	35 (1.38)	40 (1.57)	143 (5.63)	54 (2.13)	23 (0.91)	42 (1.65)	20 (0.79)	40 (1.57)	19 (0.75)	M10 (3/8")
TV-T06	100 (3.94)	50 (1.97)	40 (1.57)	136.5 (5.37)	62 (2.44)	30 (1.18)	62 (2.44)	30 (1.18)	60 (2.36)	19 (0.75)	M19 (3/4")
TV-T10	130 (5.12)	65 (2.56)	56 (2.20)	173 (6.81)	73 (2.87)	40 (1.57)	82 (3.23)	40 (1.57)	80 (3.15)	22 (0.87)	M32 (1-1/4")

FLOW CONTROLS RESTRICTORS

DIMENSIONS

TV-G03/06/10-**

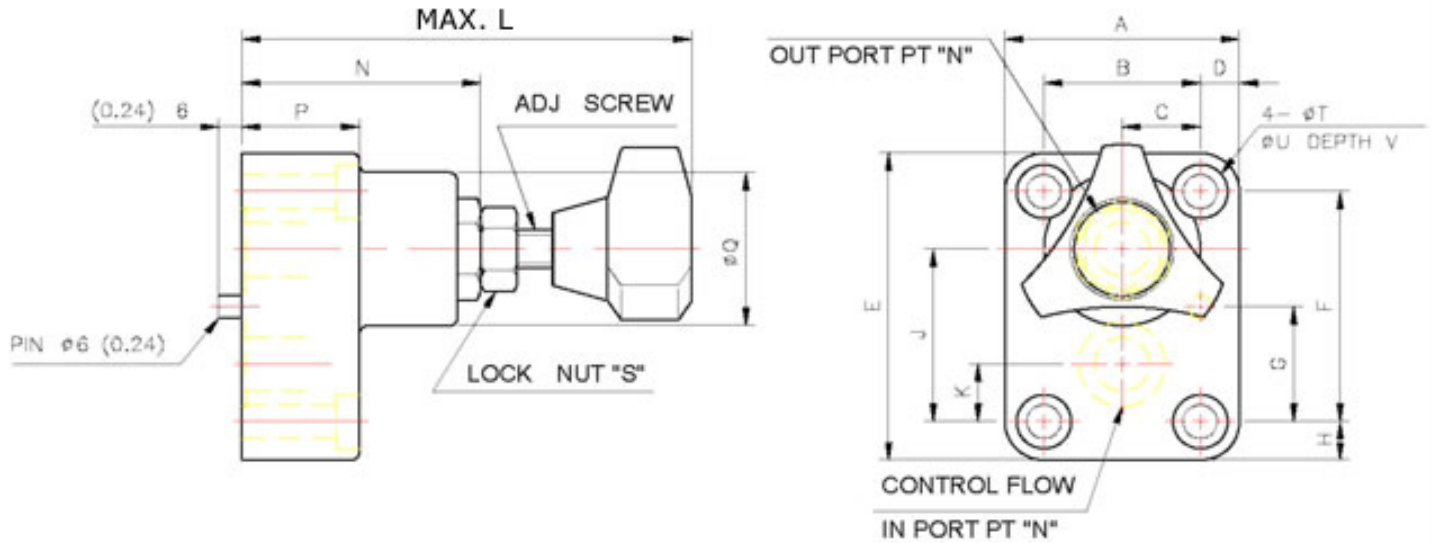
UNIT : mm(inch)

WEIGHT : kgs(lbs)

G03 1.50(3.30)

G06 2.70(5.94)

G10 6.10(13.42)



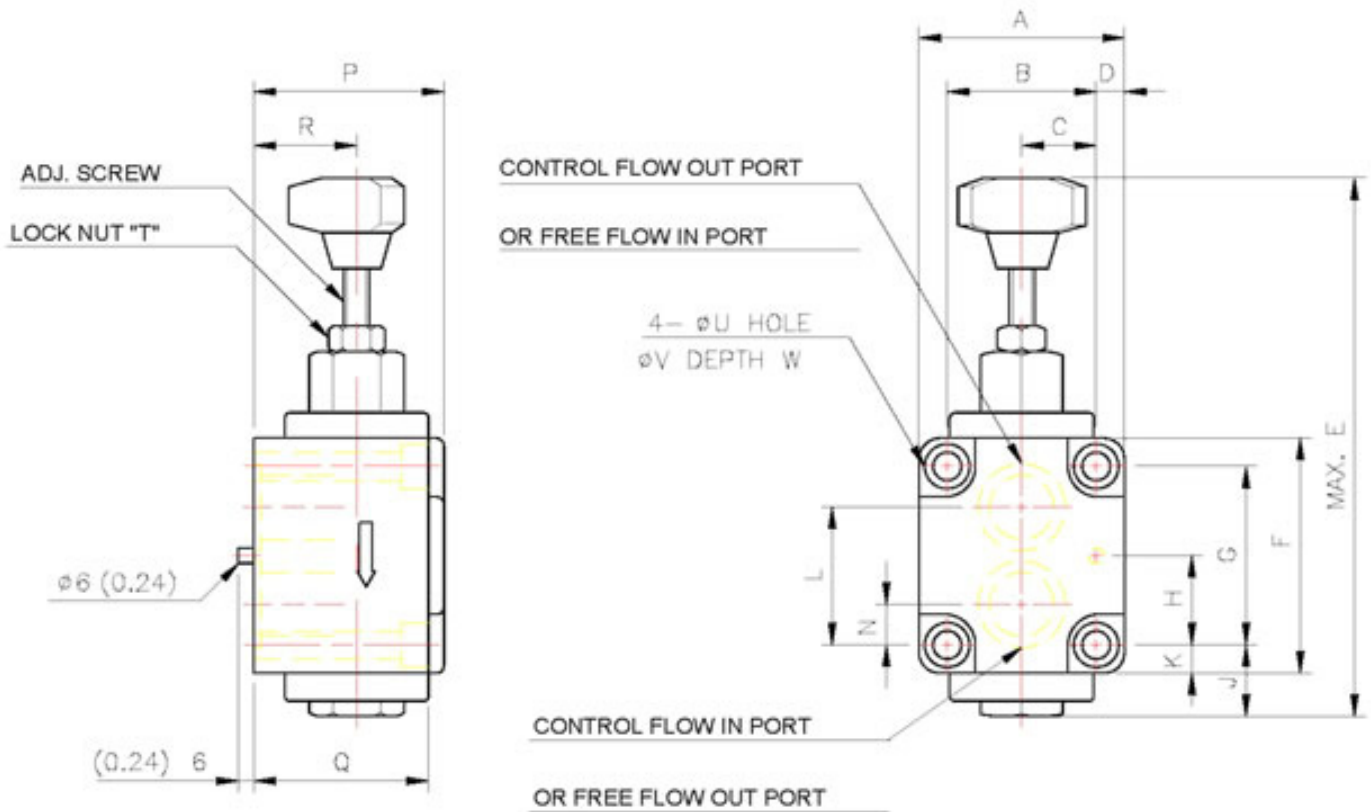
MODEL	A	B	C	D	E	F	G	H	J
TV-G03	60 (2.36)	40 (1.57)	20 (0.79)	10 (0.39)	80 (3.14)	60 (2.36)	30 (1.18)	10 (0.39)	45 (1.77)
TV-G06	80 (3.15)	58 (2.28)	29 (1.14)	11 (0.43)	92 (3.62)	70 (2.76)	35 (1.38)	11 (0.43)	54 (2.13)
TV-G10	100 (3.94)	72 (2.83)	36 (1.42)	14 (0.55)	120 (4.72)	92 (3.62)	46 (1.81)	14 (0.55)	71 (2.80)

MODEL	K	L	N	P	Q	S	T	U	V
TV-G03	15 (0.59)	100 (3.94)	65 (2.56)	30 (1.18)	44 (1.73)	19 (0.75)	9 (0.35)	14 (0.55)	8.6 (0.34)
TV-G06	16 (0.63)	117.5 (4.63)	73 (2.87)	42 (1.65)	41.5 (1.63)	23 (0.90)	11 (0.43)	17.5 (0.69)	10.8 (0.43)
TV-G10	21 (0.83)	145 (5.71)	100 (3.94)	55 (2.17)	56 (2.20)	23 (0.90)	13.5 (0.53)	21 (0.83)	1.0 (0.04)

FLOW CONTROLS RESTRICTORS

DIMENSIONS

TCV-G03/06/10-**



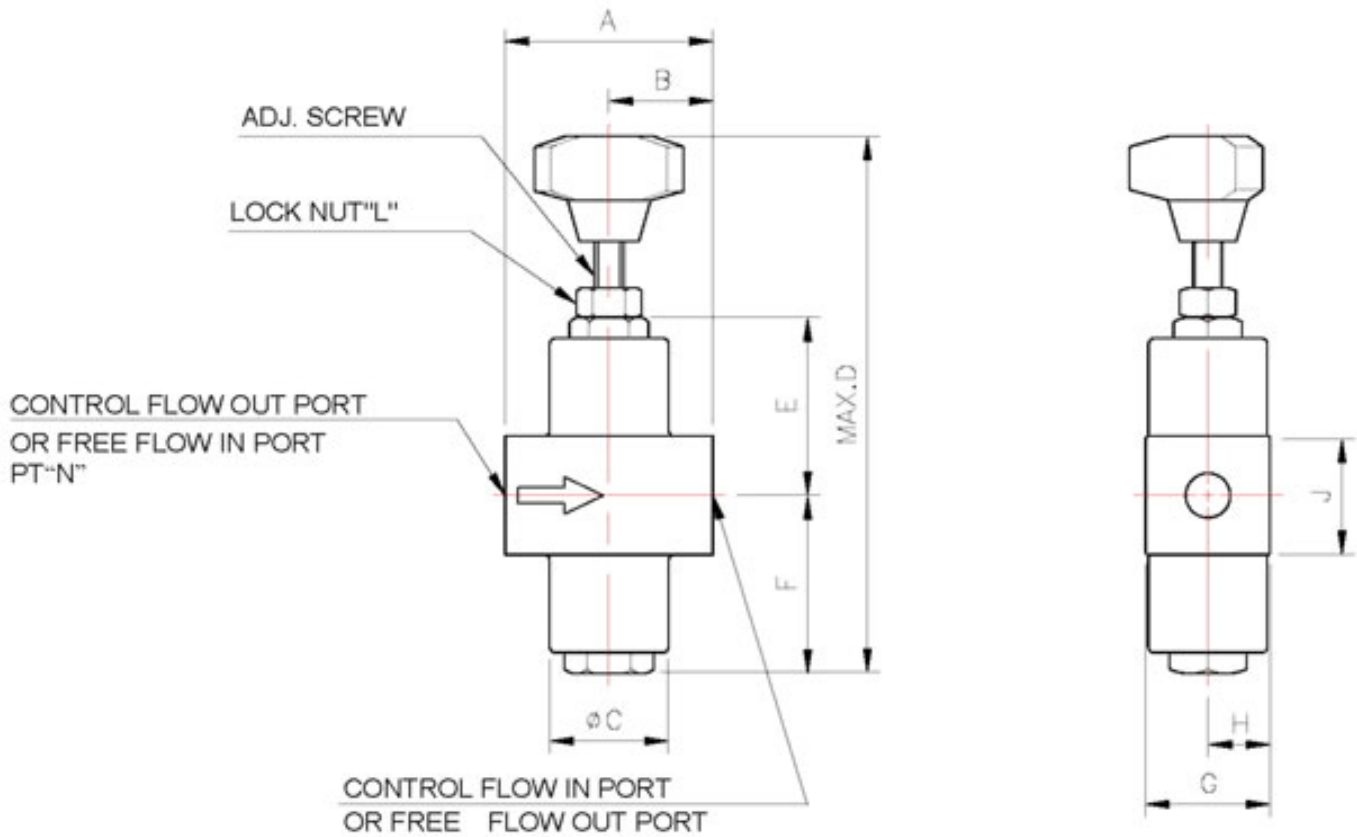
MODEL	A	B	C	D	E	F	G	H	J
TCV-G03	60 (2.36)	40 (1.57)	20 (0.79)	10 (0.39)	179 (7.05)	80 (3.14)	60 (2.36)	30 (1.18)	28 (1.10)
TCV-G06	80 (3.15)	58 (2.28)	29 (1.14)	11 (0.43)	213 (8.39)	95 (3.74)	70 (2.76)	35 (1.38)	30 (1.18)
TCV-G10	100 (3.94)	72 (2.83)	36 (1.42)	14 (0.55)	228 (8.98)	120 (4.72)	92 (3.62)	46 (1.81)	31 (1.22)

MODEL	K	L	N	P	Q	R	T	U	V	W
TCV-G03	10 (0.39)	45 (1.77)	15 (0.59)	62 (2.44)	55 (2.17)	35 (1.38)	19 (0.75)	8.8 (0.35)	14 (0.55)	8.6 (0.34)
TCV-G06	11 (0.43)	54 (2.13)	16 (0.63)	74 (2.91)	68 (2.68)	40 (1.57)	19 (0.75)	11 (0.43)	17.5 (0.69)	10.8 (0.43)
TCV-G10	14 (0.55)	71 (2.80)	21 (0.83)	97 (3.82)	82 (3.23)	50 (1.97)	22 (0.87)	13.5 (0.53)	21 (0.83)	1 (0.04)

FLOW CONTROLS RESTRICTORS

DIMENSIONS

TCV-T03/06/10-**



MODEL	A	B	C	D	E	F	G	H	J	L	N
TCV-T03	70 (2.76)	35 (1.38)	40 (1.57)	180 (7.08)	62.5 (2.46)	58 (2.28)	42 (1.65)	21 (0.82)	40 (1.57)	19 (0.75)	M10 (3/8")
TCV-T06	100 (3.94)	50 (1.97)	60 (2.36)	215 (8.46)	83 (3.27)	65 (2.56)	62 (2.44)	31 (1.22)	60 (2.36)	19 (0.75)	M19 (3/4")
TCV-T10	130 (5.12)	65 (2.56)	80 (3.15)	228 (8.98)	106 (4.17)	77 (3.03)	82 (3.23)	41 (1.61)	80 (3.15)	22 (0.87)	M32 (1-1/4")

FLOW CONTROLS RESTRICTORS

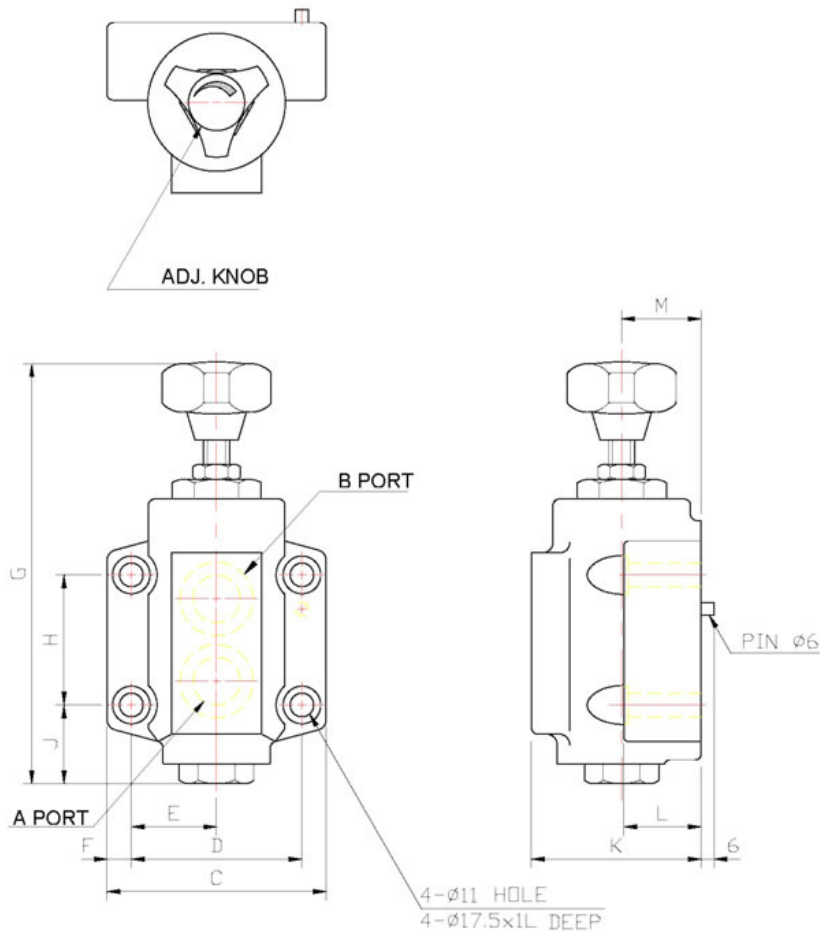
DIMENSIONS

TV/TCV-G03/06

TV/TCV-G03: ISO 5781-AG-06-2-A

TV/TCV-G06: ISO 5781-AH-08-2-A

MODEL		A PORT	B PORT
TV	-3	CONTROL FLOW IN PORT	CONTROL FLOW OUT PORT
	-6		
TCV	-3	CONTROL FLOW IN PORT OR	CONTROL FLOW OUT PORT OR
	-6	FREE FLOW OUT PORT	FREE FLOW IN PORT



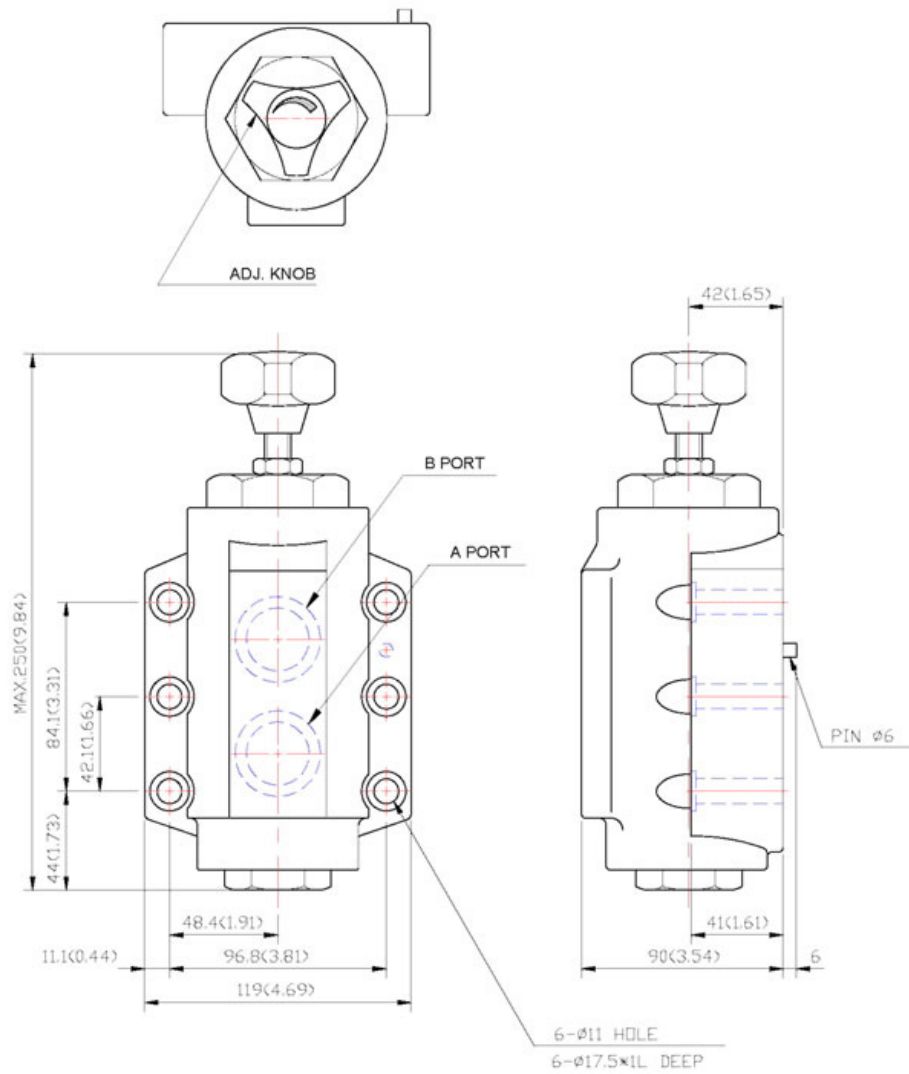
MODEL	C	D	E	F	G	H	J	K
TV/TCV-G03	90 (3.54)	66.7(2.63)	33.3(1.31)	11.7(0.46)	173(6.81)	42.9(1.69)	32(1.26)	64(2.52)
TV/TCV-G06	102(4.02)	79.4(3.13)	39.7(1.56)	11.3(0.44)	203(7.99)	60.3(2.37)	36.5(1.44)	79(3.11)

MODEL	L	M
TV/TCV-G03	31(1.22)	31(1.22)
TV/TCV-G06	36(1.42)	37(1.46)

FLOW CONTROLS RESTRICTORS

DIMENSIONS

TV/TCV-G10



MODEL		A PORT	B PORT
TV-G10	-3	CONTROL FLOW IN PORT	CONTROL FLOW OUT PORT
	-6		
TCV-G10	-3	CONTROL FLOW IN PORT OR FREE FLOW OUT PORT	CONTROL FLOW OUT PORT OR FREE FLOW IN PORT
	-6		

FLOW CONTROLS SUBPLATE



FEATURES

Model Code

TVM 03 – 03 – N

1 **2** **3** **4**

1 **Series**

TVM: Subplate for Non-ISO Standard TV/TCV

2 **Valve Size**

03: 3/8"

06: 3/4"

10: 1-1/4"

3 **Port Size**

03: 3/8" NPT

06: 3/4" NPT

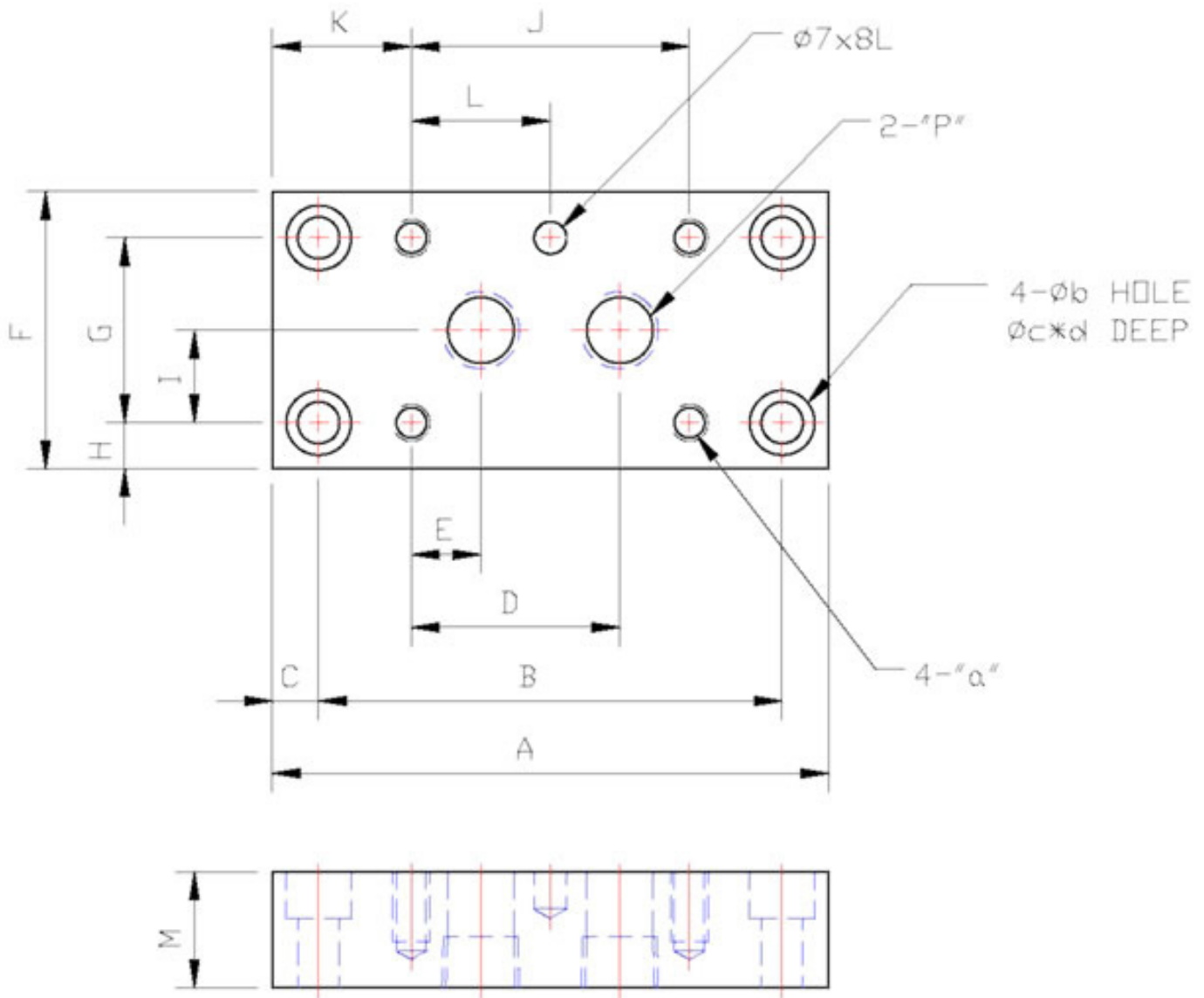
10: 1-1/4" NPT

4

N: NPT Threads

FLOW CONTROLS RESTRICTORS

DIMENSIONS



MODEL	A	B	C	D	E	F	G	H	I	J
TVM-03	120 (4.72)	100 (3.94)	10 (0.39)	45 (1.77)	15 (0.59)	60 (2.36)	40 (1.57)	10 (0.39)	20 (0.79)	60 (2.36)
TVM-06	134 (5.28)	110 (4.33)	12 (0.47)	54 (2.13)	16 (0.63)	82 (3.23)	58 (2.28)	12 (0.47)	29 (1.14)	70 (2.76)
TVM-10	160 (6.30)	132 (5.20)	14 (0.55)	71 (2.80)	21 (0.83)	100 (3.94)	72 (2.83)	14 (0.55)	36 (1.42)	92 (3.62)

MODEL	K	L	M	P	a	b	c	d
TVM-03	30 (1.18)	30 (1.18)	25 (0.98)	M10 (3/8")	M8x15L (5/16"x0.6"L)	9 (0.35)	14 (0.55)	10 (0.39)
TVM-06	32 (1.26)	35 (1.38)	32 (1.26)	M19 (3/4")	M10x20L (3/8"x0.8"L)	11 (0.43)	18 (0.71)	12 (0.47)
TVM-10	34 (1.34)	46 (1.81)	50 (1.97)	M32 (1-1/4")	M12x35L (1/2"x1.4"L)	13 (0.51)	20 (0.79)	14 (0.55)

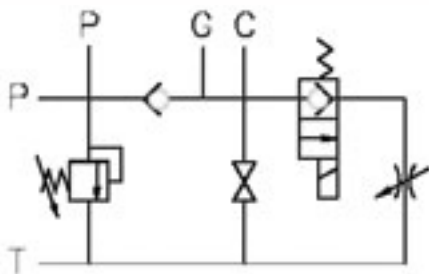
LIFT VALVE



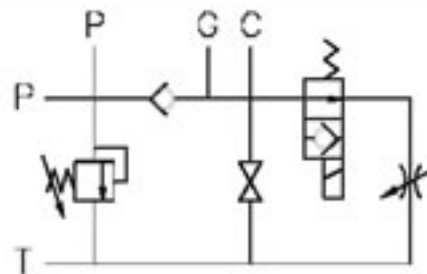
FEATURES

- It provides four functions in one integrated body-system relief, check, flow control and solenoid operated directional control feature which is particularly needed by whoever builds hydraulic lifters or uses single acting cylinder for hydraulic control mechanism.

Symbol



NORMAL CLOSE



NORMAL OPEN

Model Code

KLV - T 03 - A120 - NC - N - **

1

2

3

4

5

6

7

1 Series

KLV: Lift Valve

2 Mounting Style

T: Threaded Body

3 Body Size

03: 3/8"

4 Function

NC: Normally Closed

NO: Normally Open

5 Coil Voltage

A120: AC120V, 60HZ; AC110V, 50Hz

A220: AC220V, 60HZ; AC200V, 50Hz

D12 : DC12V

D24 : DC24V

6 Port Thread

N: 3/8" NPT

7 Design Number

LIFT VALVE

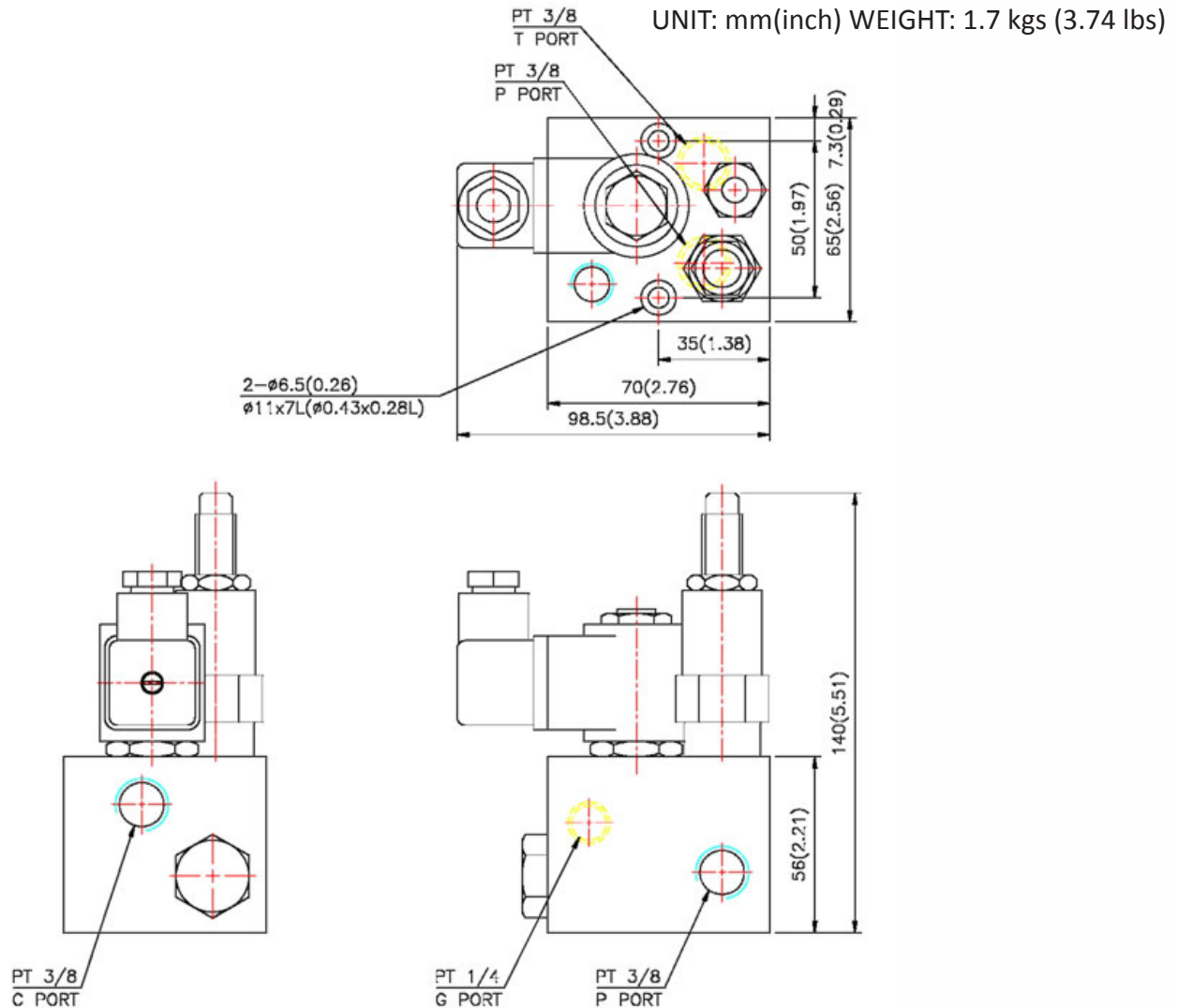
SPECIFICATIONS

MAX. OPERATING PRESSURE	210 KGF/CM ² (3000PSI)
MAX. FLOW CAPACITY	20 LPM (5.3 GPM)
MAX. FREQUENCIES OF OPERATING	60 CPM
MAX. TANK LINE BACK PRESSURE	7 KGF/CM ² (100PSI)

SOLENOID RATINGS

COIL DATA(14.7WATTS)		
SOLENOID COIL	VOLTAGE	HOLDING CURRENT(A)
AC115	AC115V/60HZ	0.13
AC230	AC230/60HZ	0.06
DC12	DC12	1.22
DC24	DC12	0.61

SOLENOID RATINGS



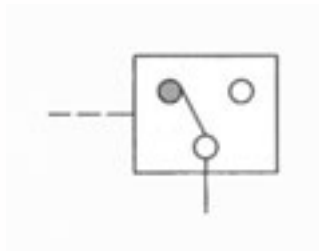
PISTON TYPE PRESSURE SWITCH



FEATURES

- A micro switch will activate when an adjustable pressure setting is reached. It will remain actuated until the pressure falls below the setting.

Symbol



Model Code

PS – 150 – 20 – N

1

2

3

4

1 **Series**

PS: Pressure Switch

3 **Design Number**

2 **Pressure Adj. Range**

35: 100-500 PSI (7-35 BAR)

70: 150-1000 PSI (10-70 BAR)

150: 420-2200 PSI (30-150 BAR)

230: 700-3300 PSI (50-230 BAR)

420: 1300-6000 PSI (90-420 BAR)

4 **Ports**

N: 3/8" NPT Ports

PISTON TYPE PRESSURE SWITCH

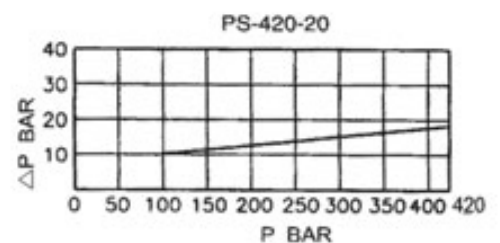
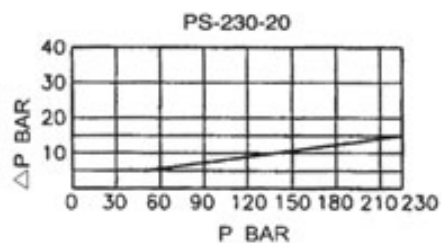
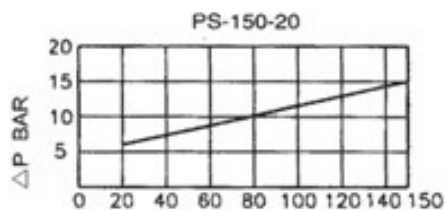
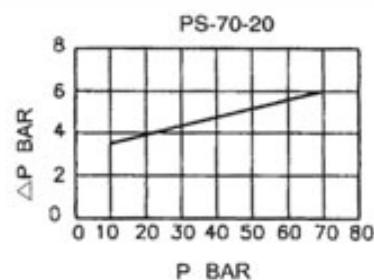
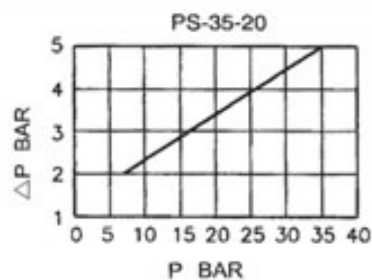
SPECIFICATIONS

Model	Pressure range BAR(Psi)	Adjustment range BAR(Psi)	Max. pressure BAR(Psi)
PS-35-*	35(500)	7-35(100-500)	210(3000)
PS-70-*	70(1000)	10-70(150-1000)	210(3000)
PS-150-*	150(2200)	30-150(420-2200)	210(3000)
PS-230-*	230(3300)	50-230(700-3300)	350(5000)
PS-420-*	420(6600)	90-420(1300-6000)	500(7250)

General	
Fluid	Mineral oil-based hydraulic fluids, Flame retardant Liquids (HFA, HFB, HFC).
Fluid temperatures	-30°C ~ +110°C (-22°F ~ +22°F)
Viscosity range	10-800 cSt (50-3700 SSU)
Fluid cleanliness	Max. permissible oil contamination to NAS 1638 class 9, recommend achieved with filter $\beta_{10} \geq 75$
Switching repeatability	Within 1% of Max. pressure
Switching rate	60 times/min

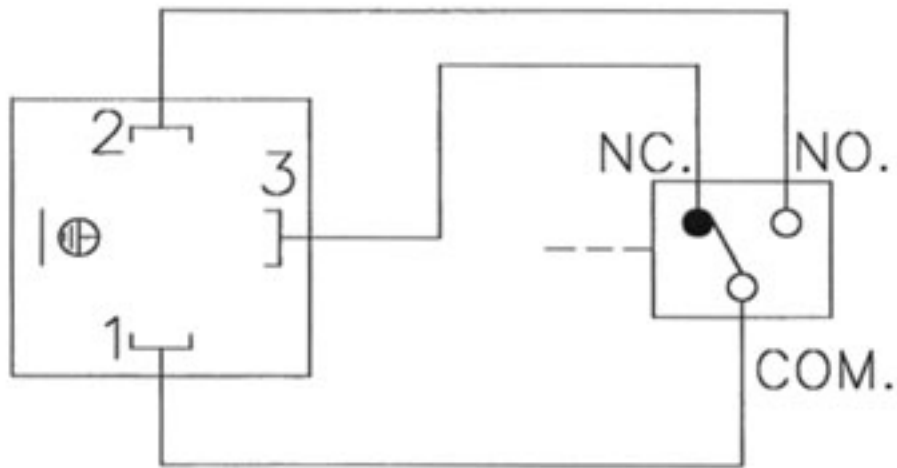
Electric data		
Electrical connections	According to ISO 4400	
Wire size	1.5 mm ²	
Contact rating	AC	250V.5A
	DC	30V.5A
Mass	0.8 kg	

SWITCHING HYSTERESIS DIAGRAM



PISTON TYPE PRESSURE SWITCH

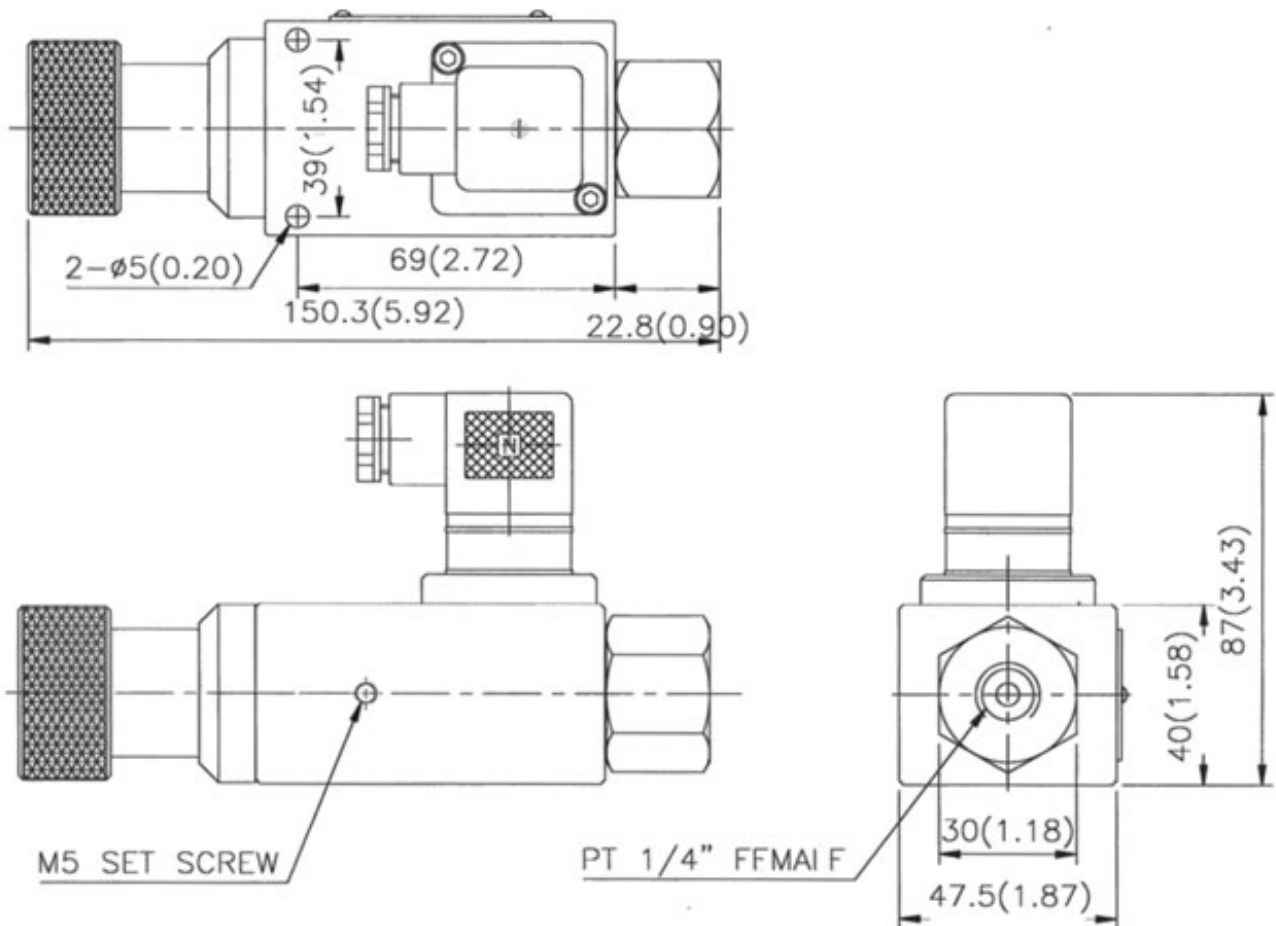
ELECTRICAL CONNECTION SYMBOL



without pressure

DIMENSIONS

UNIT: mm(inch) WEIGHT : 1kgs(2.2lbs)



Northman

Solenoid Directional Valve

Modular Valve

Pressure Control Valve

Flow Control Valve

Variable Vane Pump

High Pressure Vane Pump



Our Commitment

We are committed to excellent customer care, quality products and a very timely delivery.

Northman's reputation for reliability is built on high quality products, engineering and manufacturing systems.

Northman America, Inc.
739 Kimberly Drive
Carol Stream, IL 60188

Phone: (630) 588-8488
Fax : (630) 588-8487

inquiry@northmanfp.com

www.northmanfp.com