

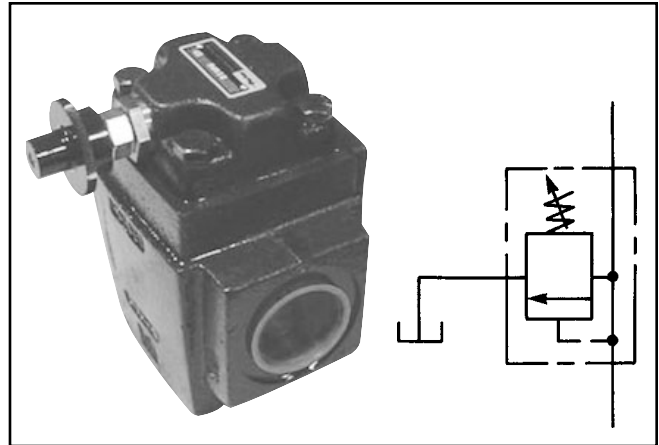
General Description

Series R direct relief valves limit system pressure by opening to tank when system pressure reaches the valve setting.

Specifications

Pressure Adjustment Range*	Code M: 10.2 - 68 Bar (150 - 1000 PSI) Code F: 10.2 - 136 Bar (150 - 2000 PSI) Code H: 10.2 - 205 Bar (150 - 3000 PSI)
Maximum Operating Pressure	205 Bar (3000 PSI)
Flow Rate	3.78 LPM (1 GPM) minimum
Minimum Pressure Setting	10.2 Bar (150 PSI) minimum with rated flow, 150 SSU oil and fluid temperature of 38°C (100°F) Note: Change in flow, temperature or fluid (SSU) rating will affect valve minimum pressure.

* See Ordering Information

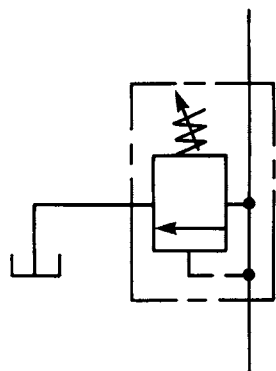
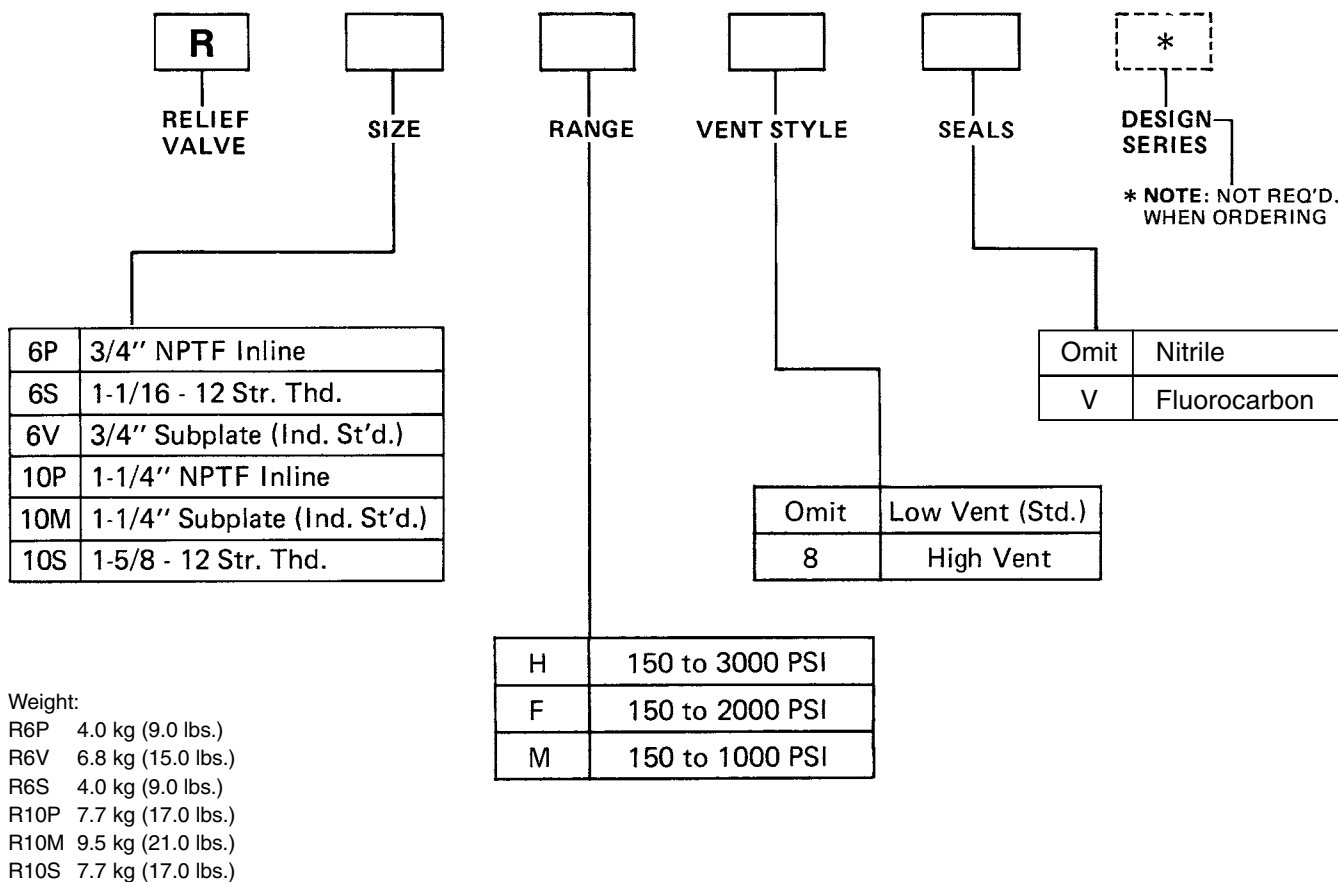


Flow Data

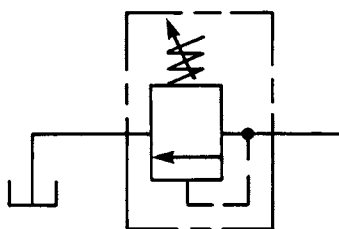
Valve Model	Maximum Flow	Mounting Style	Port Size
R2P	1 GPM (.27 L/M)	Inline	1/4 NPTF
R2M	1 GPM (3.78 L/M)	Manifold	1/4 NPTF
R6P	40 GPM (151 L/M)	Inline	3/4 NPTF
R6S	40 GPM (151 L/M)	Inline	1-1/16 - 12 Str. Thd.
R6V	40 GPM (151 L/M)	Ind. St'd. Subplate	3/4 NPTF*
R10P	90 GPM (340 L/M)	Inline	1-1/4 NPTF
R10S	90 GPM (340 L/M)	Inline	1-5/8 - 12 Str. Thd.
R10M	90 GPM (340 L/M)	Ind. Std. Subplate	1-1/4 NPTF

* Refers to subplate port size.

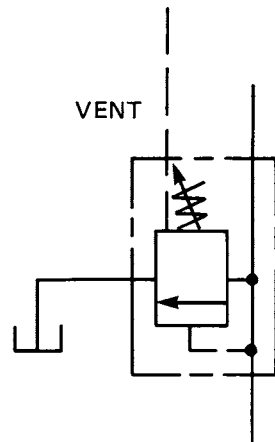




INLINE MOUNTED RELIEF VALVE



SUBPLATE MOUNTED RELIEF VALVE



INLINE MOUNTED RELIEF VALVE USING VENT CONNECTION

Relief Valve with Tri-Pressure Feature

R Relief Valve	Size	Control Style	Solenoid	Solenoid Connection	Solenoid Modifications	Variations	Range*	Vent Styles	Seals	Design Series NOTE: Not required when ordering.
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2P	1/4" NPTF ports
2M	1/4" Subplate mounted
6P	3/4" NPTF In-line
6V	3/4" Subplate (Ind. Std.)
6S	1 1/16-12 Std. thread
10P	1 1/4" NPTF In-line
10M	1 1/4" Subplate (Ind. Std.)
10S	1 5/8-12 Straight thread

C	Conduit Box
P	DIN with Plug
W	DIN without Plug

Omit	No Solenoids
J	24 VDC
K	12 VDC
T	240/60-220/50 VAC
Y	120/60-110/50 VAC

Omit	Standard Valve
5	Signal lights
6	Manplug single solenoid 3; double solenoid 5
1A	Manaplug single solenoid 5 pin

See D1VW Ordering Code for more variations.

L	8 Watt Coil DC Coils only
F	Low Amp Coil AC Coils only

* See Series D1VW Solenoid Electrical Characteristic Chart for additional information

D	Vent
H	150 to 3000 PSI
F	150 to 2000 PSI
M	150 to 1000 PSI

* Select two ranges for bi-pressure and three for tri-pressure

Omit	Nitrile
V	Fluorocarbon

Omit	Low vent (std.)
8*	High vent

* not available on R2M or R2P

Valve Style	Symbol	De-energized Position	Sol. "A" Ener.	Sol. "B" Ener.
7		Control at Head #2	---	Control at Head #1
8		Control at Head #2	Control at Head #3	Control at Head #1

Weight:

R2P (Bi-Press.)	2.2 kg (5.0 lbs.)
R2M (Bi-Press.)	1.8 kg (4.0 lbs.)
R2P (Tri-Press.)	2.5 kg (5.5 lbs.)
R2M (Tri-Press.)	2.0 kg (4.5 lbs.)
R6P (Bi-Press.)	5.4 kg (12.0 lbs.)
R6V (Bi-Press.)	8.1 kg (18.0 lbs.)
R6P (Tri-Press.)	6.3 kg (14.0 lbs.)
R6V (Tri-Press.)	9.0 kg (20.0 lbs.)
R10P (Bi-Press.)	9.0 kg (20.0 lbs.)
R10M (Bi-Press.)	10.8 kg (24.0 lbs.)
R10P (Tri-Press.)	9.9 kg (22.0 lbs.)
R10M (Tri-Press.)	11.8 kg (26.0 lbs.)



Relief Valve with Dual Pressure Feature

R																																						
Relief Valve	Size	Control Style	Solenoid	Solenoid Connection	Solenoid Modifications	Variations	Range	Vent Styles	Seals	Design Series																												
<table border="1"> <tr><td>6P</td><td>3/4" NPTF In-line</td></tr> <tr><td>6V</td><td>3/4" Subplate (Ind. Std.)</td></tr> <tr><td>6S</td><td>1 1/16-12 Std. thread</td></tr> <tr><td>10P</td><td>1 1/4" NPTF In-line</td></tr> <tr><td>10M</td><td>1 1/4" Subplate (Ind. Std.)</td></tr> <tr><td>10S</td><td>1 5/8-12 Straight thread</td></tr> </table>	6P	3/4" NPTF In-line	6V	3/4" Subplate (Ind. Std.)	6S	1 1/16-12 Std. thread	10P	1 1/4" NPTF In-line	10M	1 1/4" Subplate (Ind. Std.)	10S	1 5/8-12 Straight thread				<table border="1"> <tr><td>C</td><td>Conduit Box</td></tr> <tr><td>P</td><td>DIN with Plug</td></tr> <tr><td>W</td><td>DIN without Plug</td></tr> </table>	C	Conduit Box	P	DIN with Plug	W	DIN without Plug			<table border="1"> <tr><td>H</td><td>150 to 3000 PSI</td></tr> <tr><td>F</td><td>150 to 2000 PSI</td></tr> <tr><td>M</td><td>150 to 1000 PSI</td></tr> </table>	H	150 to 3000 PSI	F	150 to 2000 PSI	M	150 to 1000 PSI	<table border="1"> <tr><td>Omit</td><td>Nitrile</td></tr> <tr><td>V</td><td>Fluorocarbon</td></tr> </table>	Omit	Nitrile	V	Fluorocarbon		NOTE: Not required when ordering.
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See D1VW Ordering Code for more variations.

L	8 Watt Coil DC Coils only
F	Low Amp Coil AC Coils only

* See Series D1VW Solenoid Electrical Characteristic Chart for additional information

VALVE STYLE	SYMBOL	SPRING POSITION	SOL. "A" ENER.	SOL. "B" ENER.
2		Vent	Control at Port A	—
3		Vent	Control at Port A	Control at Port B
4		Control at Port B	Control at Port A	—
5		Pressure Setting of Main Valve	Control at Port A	—
6		Pressure Setting At Main Valve	Control at Port A	Control at Port B

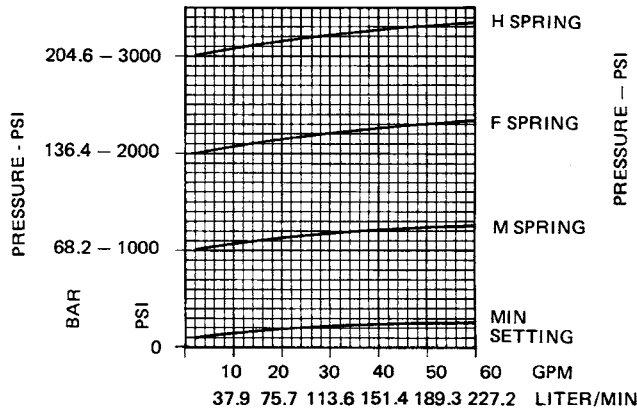
Weight:

R6P (Single)	6.5 kg (14.5 lbs.)
R6S (Single)	6.5 kg (14.5 lbs.)
R6V (Single)	6.5 kg (14.5 lbs.)
R6P (Double)	6.8 kg (15.0 lbs.)
R6V (Double)	6.8 kg (15.0 lbs.)
R10M (Single)	10.8 kg (24.0 lbs.)
R10P (Single)	9.0 kg (20.0 lbs.)
R10S (Single)	9.0 kg (20.0 lbs.)
R10M (Double)	11.1 kg (24.5 lbs.)
R10S (Double)	9.3 kg (20.5 lbs.)



OVERRIDE

All relief valves are subject to override. Given a valve setting and flow, any change in flow will be accompanied by a change in relief pressure. See table of curves (relief pressure vs. flow).

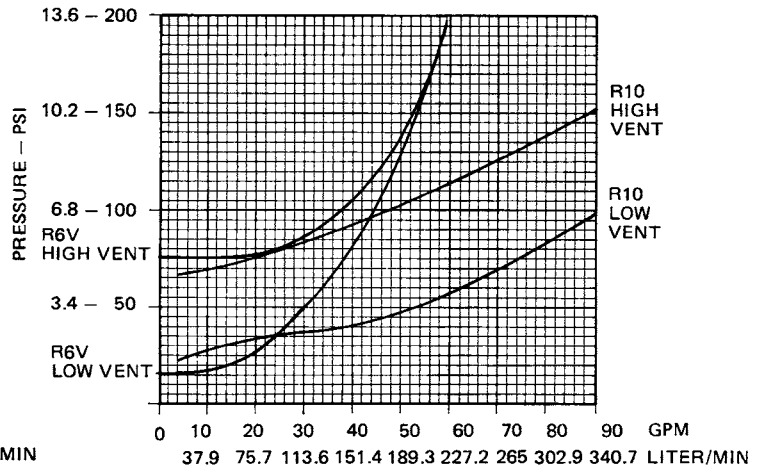


OVERRIDE CHARACTERISTICS

VENTING

Connecting the vent port to tank allows the relief valve to divert flow at minimum pressure.

An optional high vent spring provides sufficient circuit pilot pressure if required. Vent pressures corresponding to various flows can be read from vent pressure curve.



VENT CHARACTERISTICS

REMOTE CONTROL

A remote relief valve connected to the vent port of an R Series relief valve can be used to control the pressure. See Installation page this section.

NOTE: Set main valve pressure 15 percent higher than remote pilot.

See Order Information sheet this section for specifying vent style when ordering valves. Low vent is standard (OMIT) when specifying. To order high vent place the digit 8 in vent style block.

TANK LINE PRESSURE

Under no condition should tank pressure exceed system pressure or malfunction can result. Absolute tank pressure shall not exceed 1000 PSI.

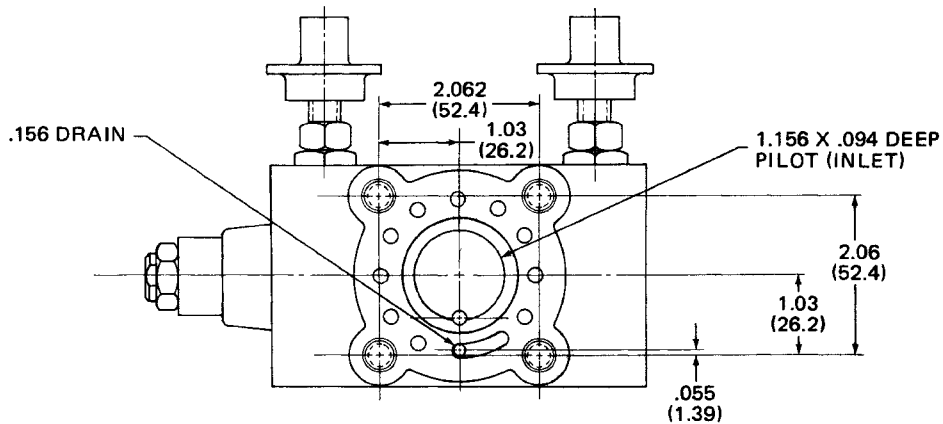
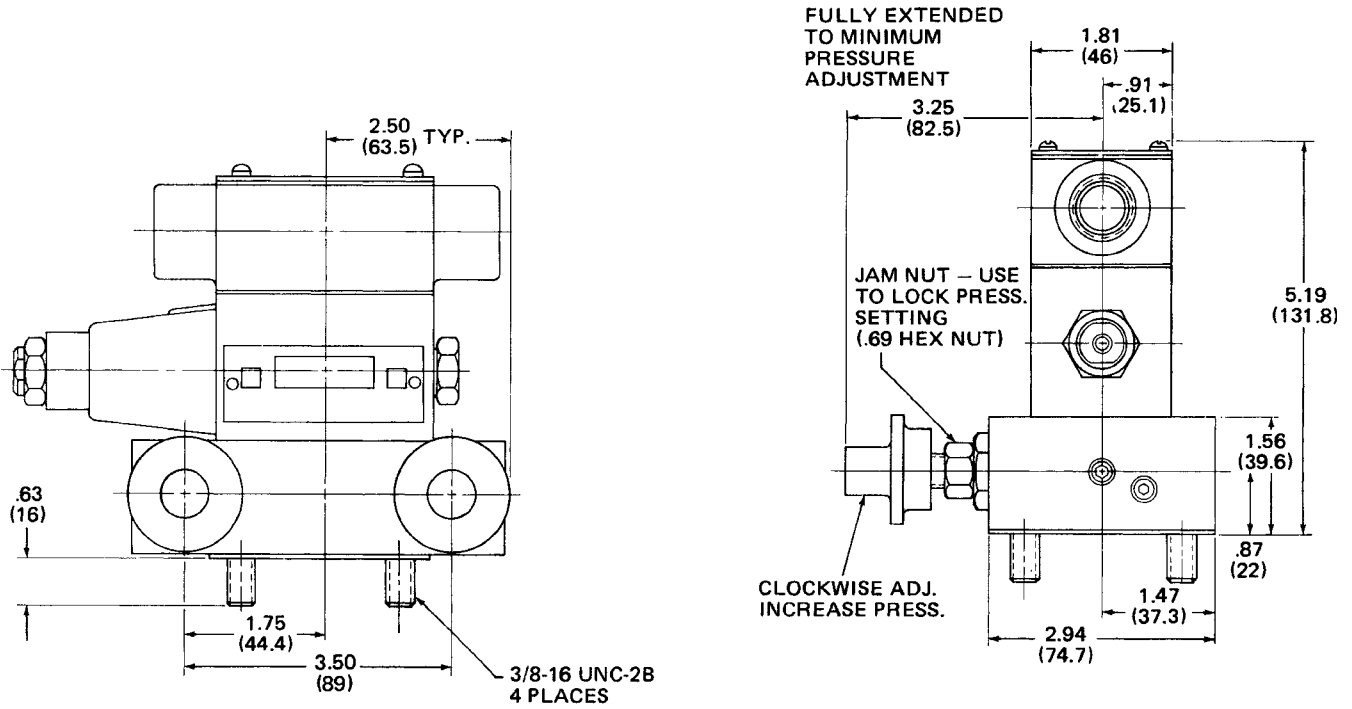
69 Bar (1000 PSI).

Curves were generated using 100 SSU hydraulic oil. For any other viscosity, pressure drop will change as per chart.	VISCOSITY CORRECTION FACTOR							
	Viscosity (SSU)	75	150	200	250	300	350	400
	Percentage of Δ P (Approx.)	93	111	119	126	132	137	141



Millimeter equivalents for inch dimensions are shown in (**)

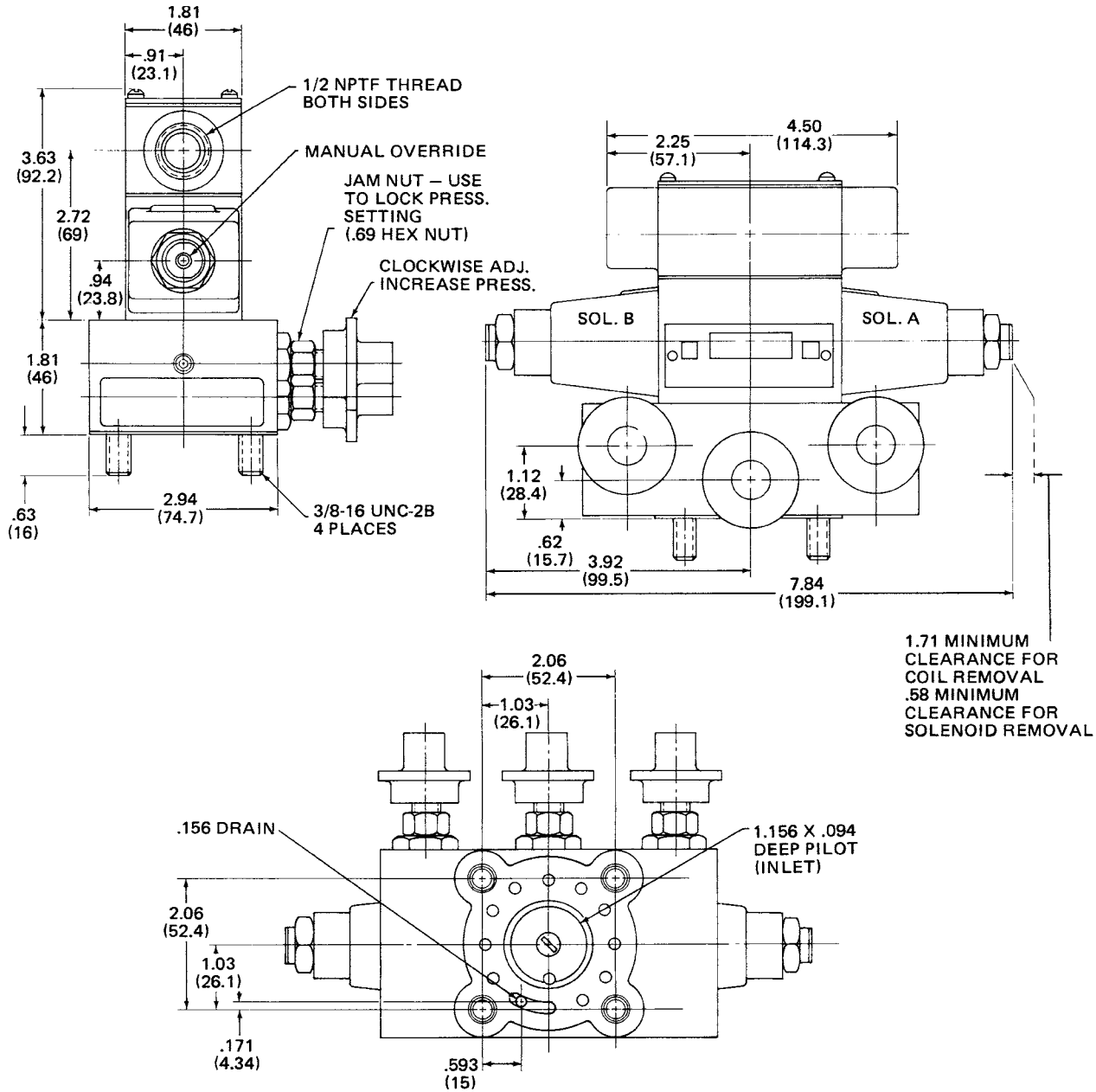
Manifold mounted, 1/4" Bi-pressure Relief Valve (pressure 7)



H

Millimeter equivalents for inch dimensions are shown in (**)

Manifold mounted, 1/4" Tri-pressure Relief Valve (pressure 8)

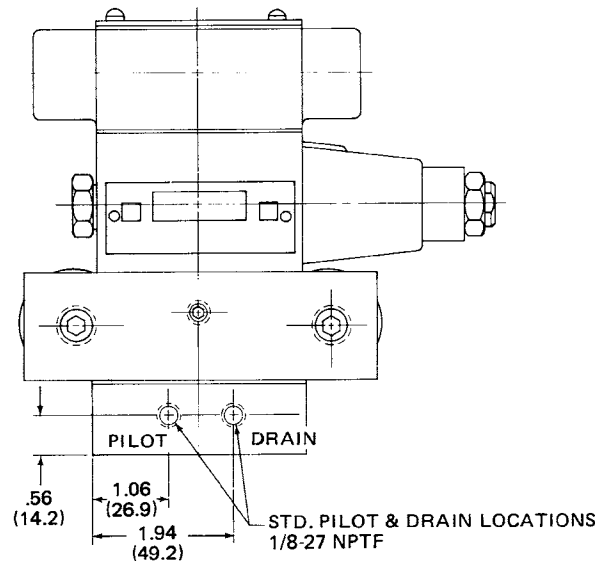
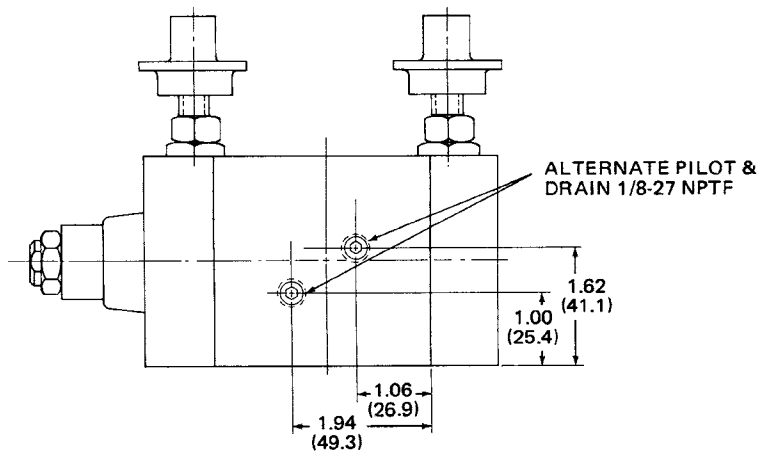
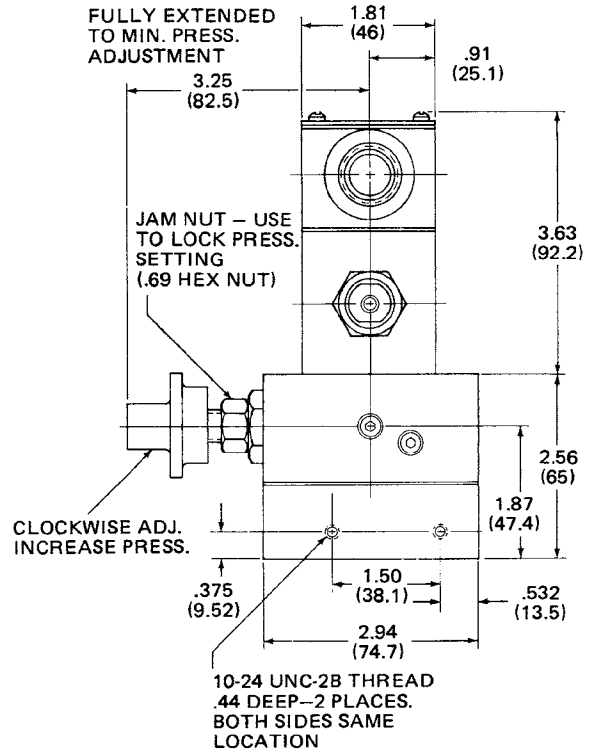
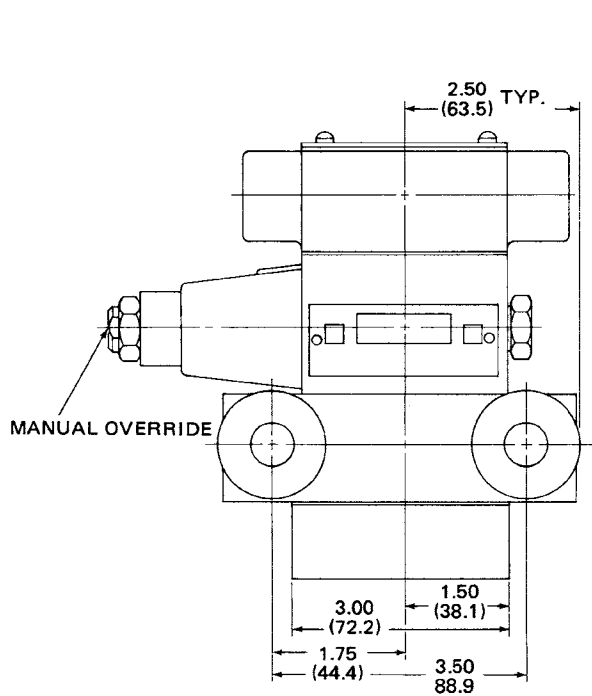


Dimensions

**Pressure Control Valves
Series R2P**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1/4" Bi-pressure Relief Valve (pressure 7)



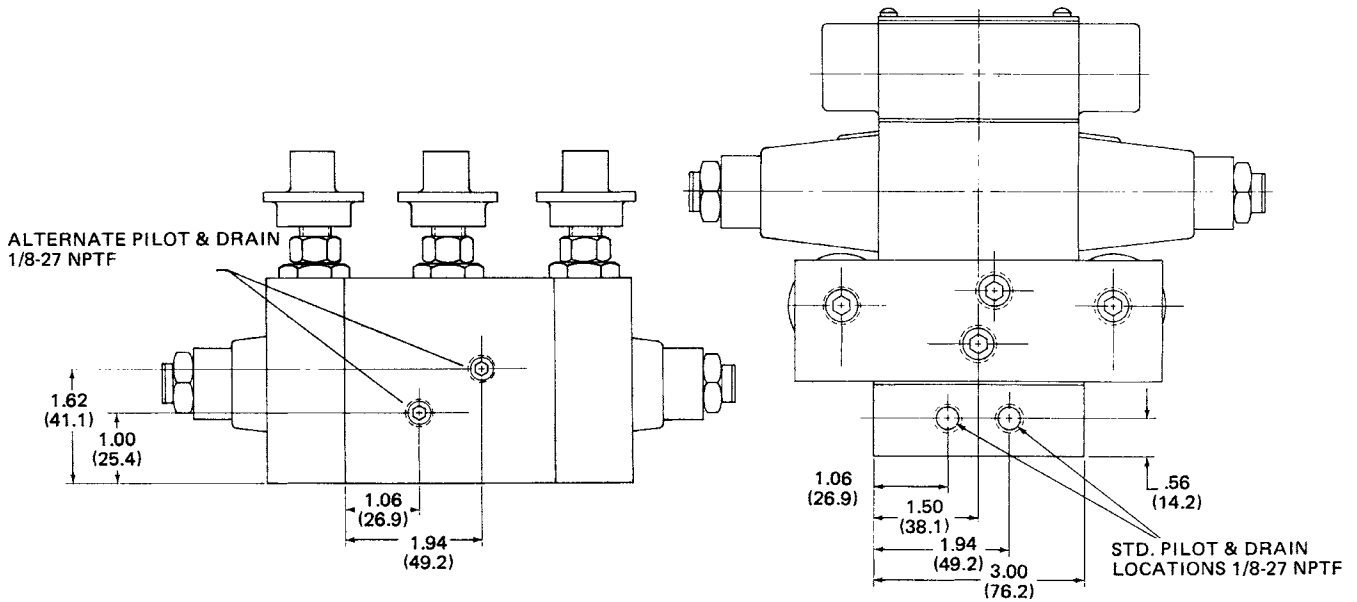
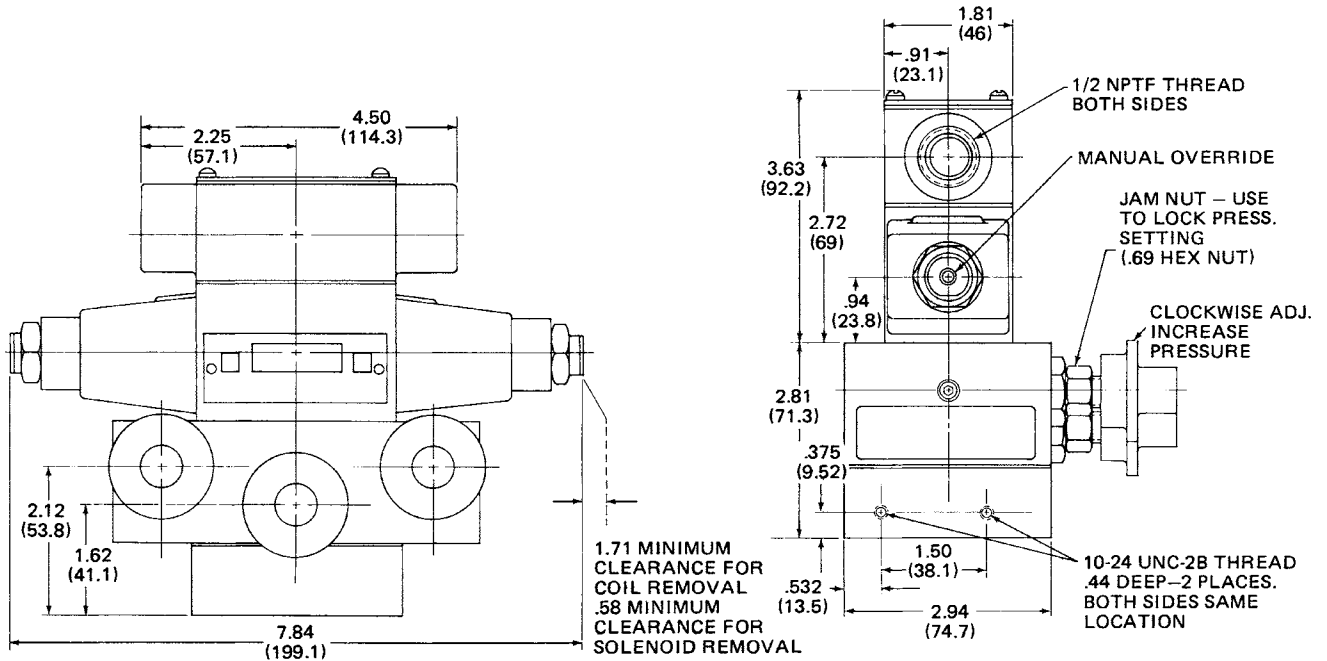
H

Dimensions

**Pressure Control Valves
Series R2P**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1/4" Tri-pressure Relief Valve (pressure 8)



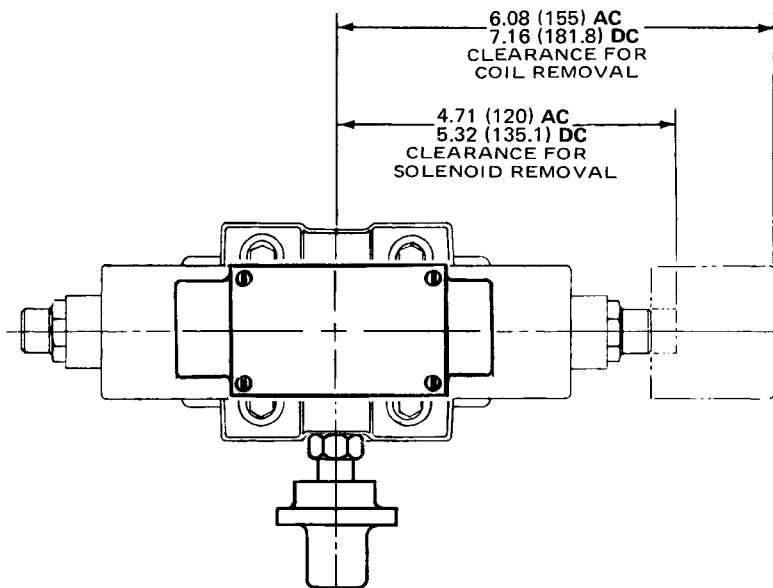
Dimensions

**Pressure Control Valves
Series R6P, R6S**

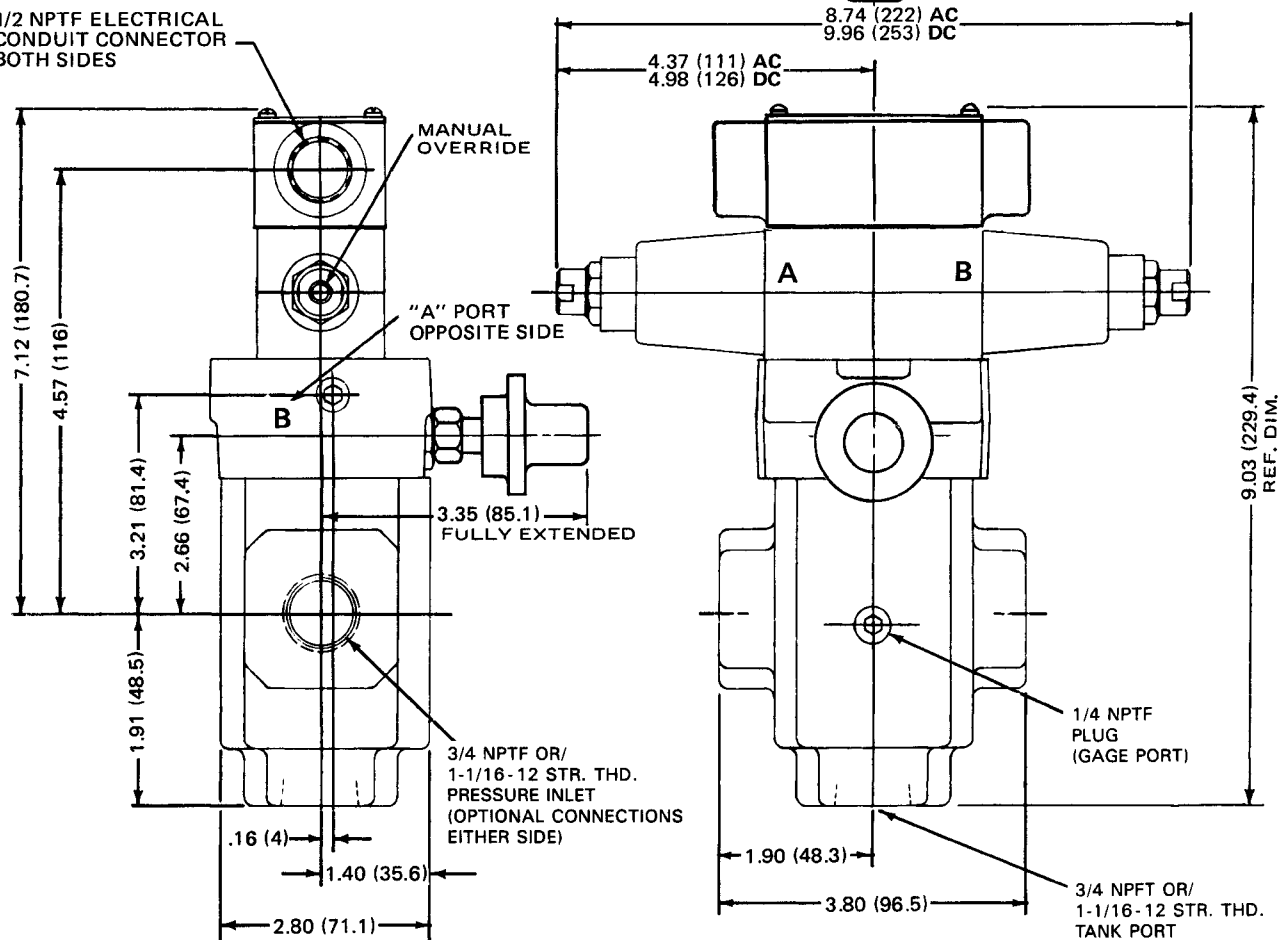
Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 3/4" solenoid operated
Relief Valve

NOTE:
WHERE TWO DIMENSIONS ARE SHOWN,
ONE OVER THE DIMENSION LINE AND
ONE BELOW IT, THE UPPER DIM.
DENOTES **AC** SOLENOID, LOWER DIM.
DENOTES **DC** SOLENOID.



1/2 NPTF ELECTRICAL
CONDUIT CONNECTOR
BOTH SIDES

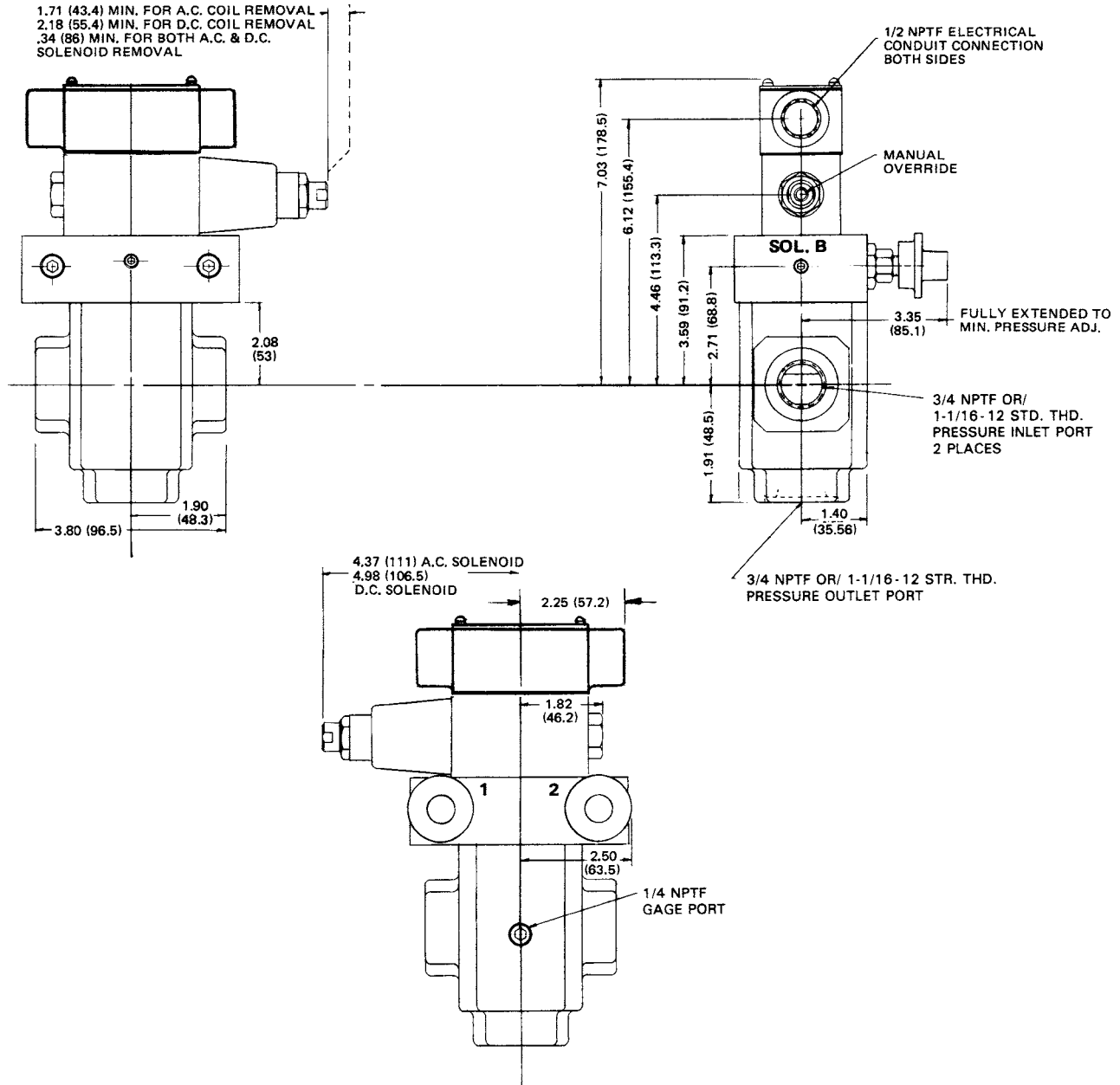


Dimensions

**Pressure Control Valves
Series R6P, R6S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 3/4" solenoid operated
Relief Valve (pressure 7)

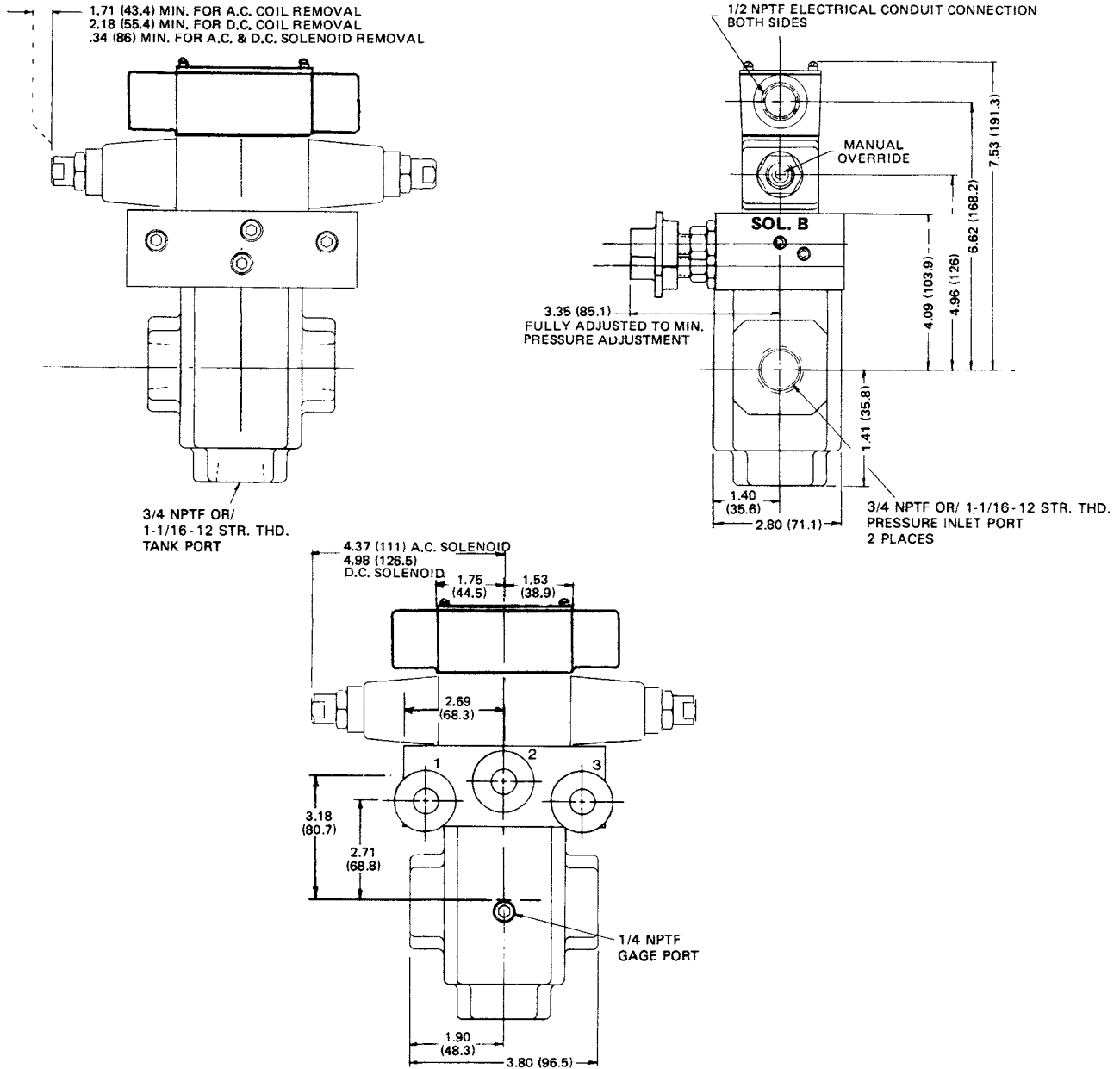


Dimensions

**Pressure Control Valves
Series R6P, R6S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 3/4" solenoid operated
Tri-pressure Relief Valve (pressure 8)

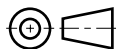
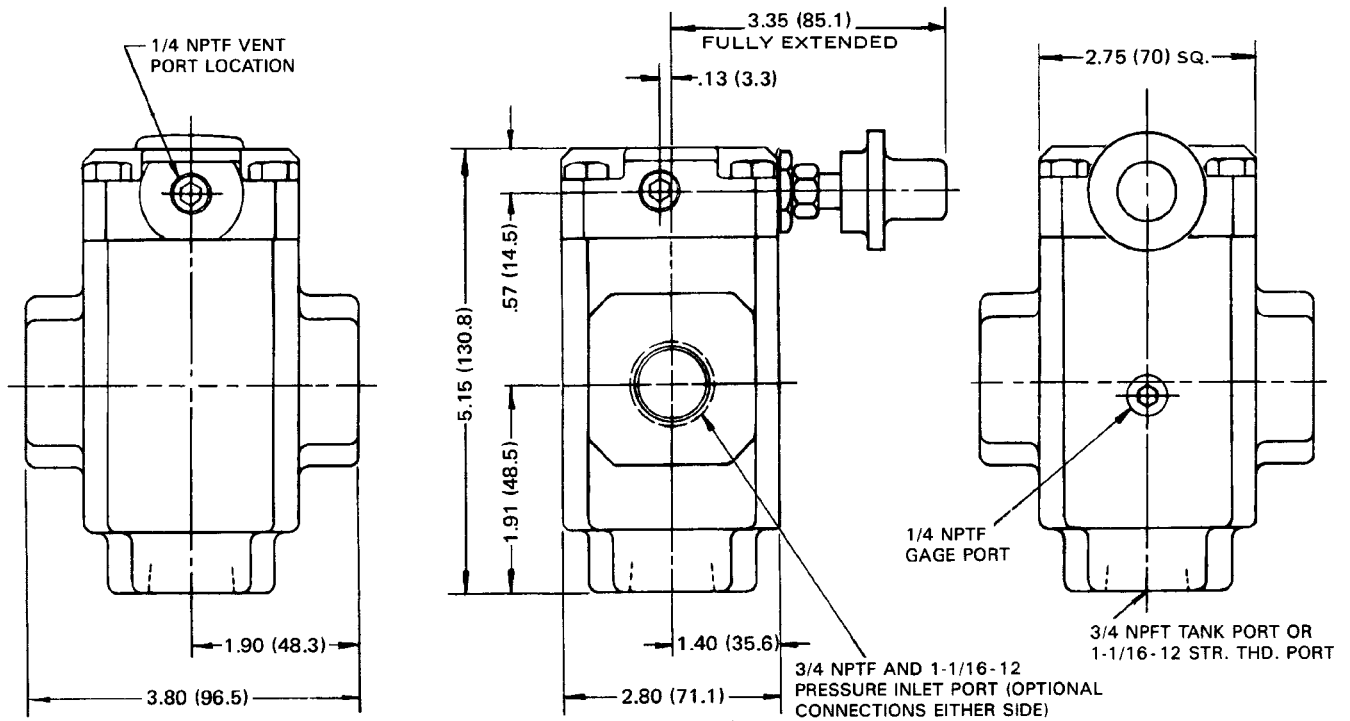
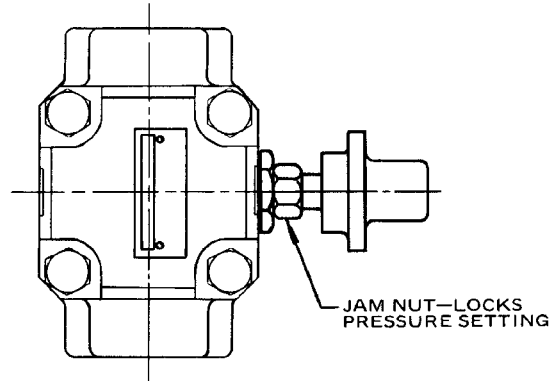


Dimensions

Pressure Control Valves Series R6P, R6S

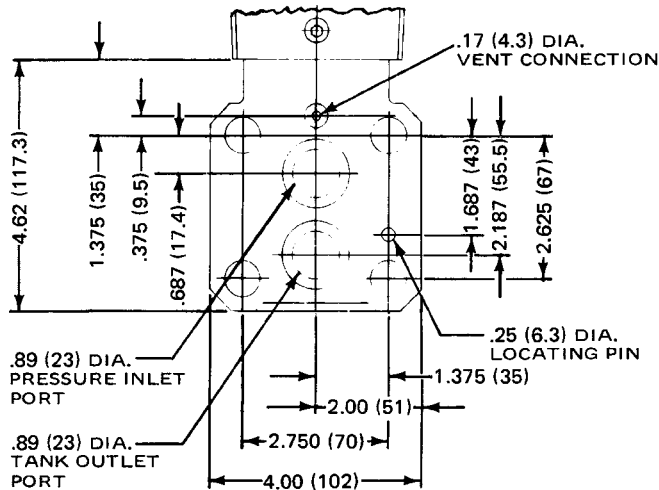
Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 3/4" pilot operated
Pressure Relief Valve

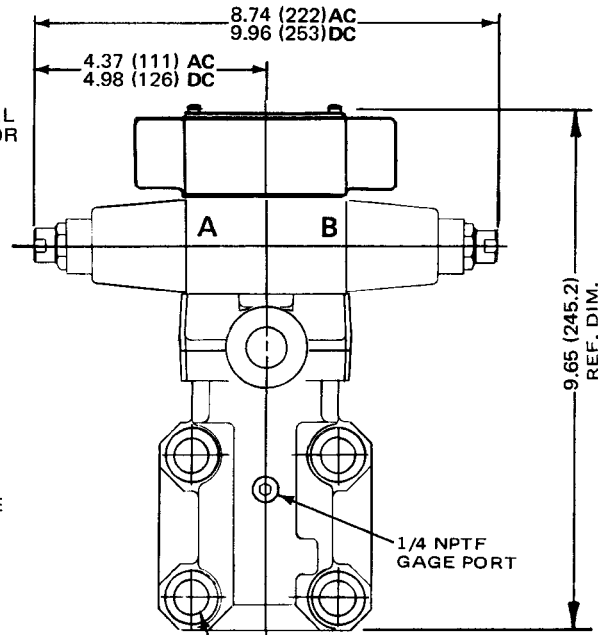
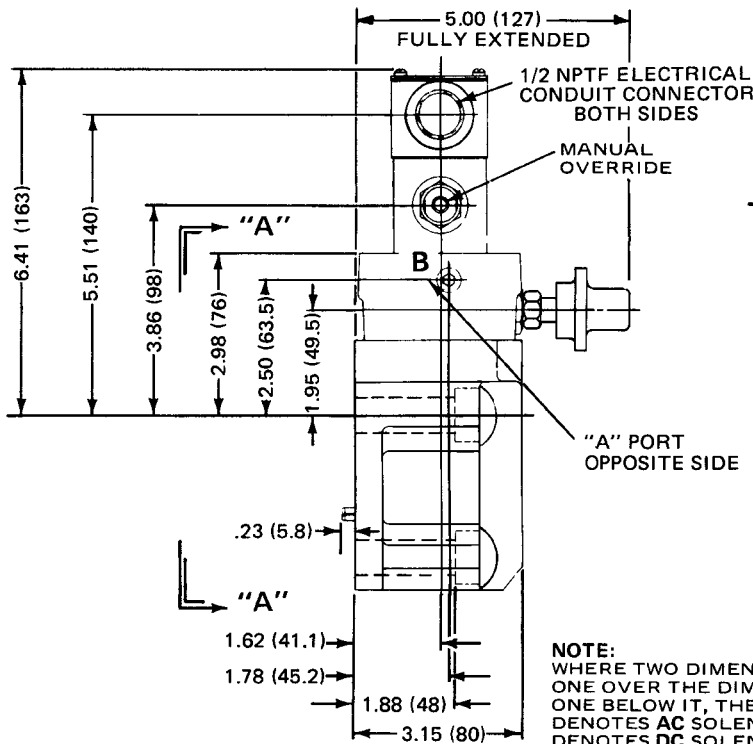
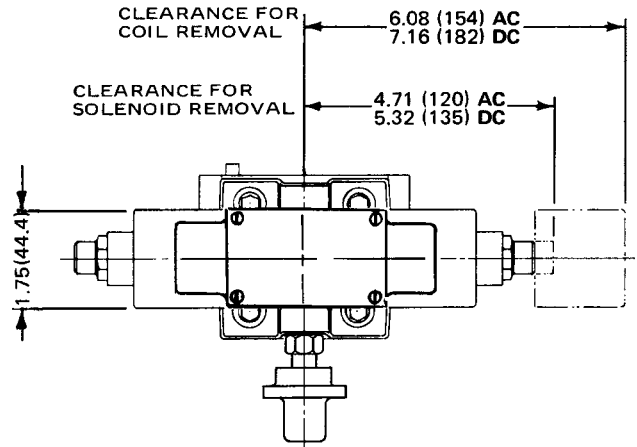


Millimeter equivalents for inch dimensions are shown in (**)

Industry standard, 3/4" solenoid operated Relief Valve



VIEW "A-A"
SUBPLATE MOUNTING



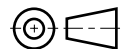
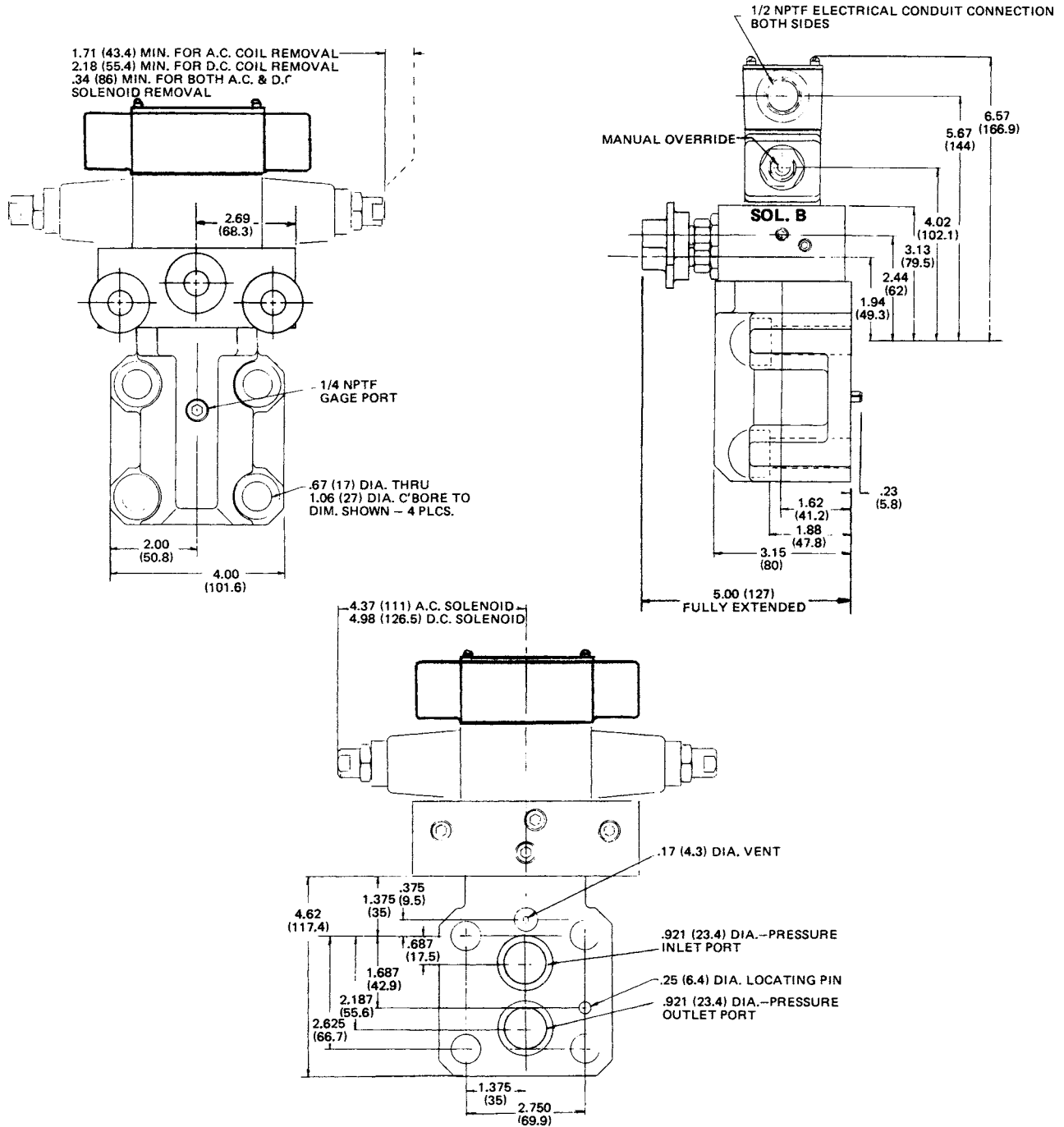
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DENOTES AC SOLENOID, LOWER DIM.
DENOTES DC SOLENOID.



Dimensions

**Pressure Control Valves
Series R6V**

Millimeter equivalents for inch dimensions are shown in (**)
Industry Standard, 3/4" solenoid operated
Tri-pressure Relief Valve (pressure 8)

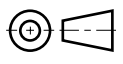
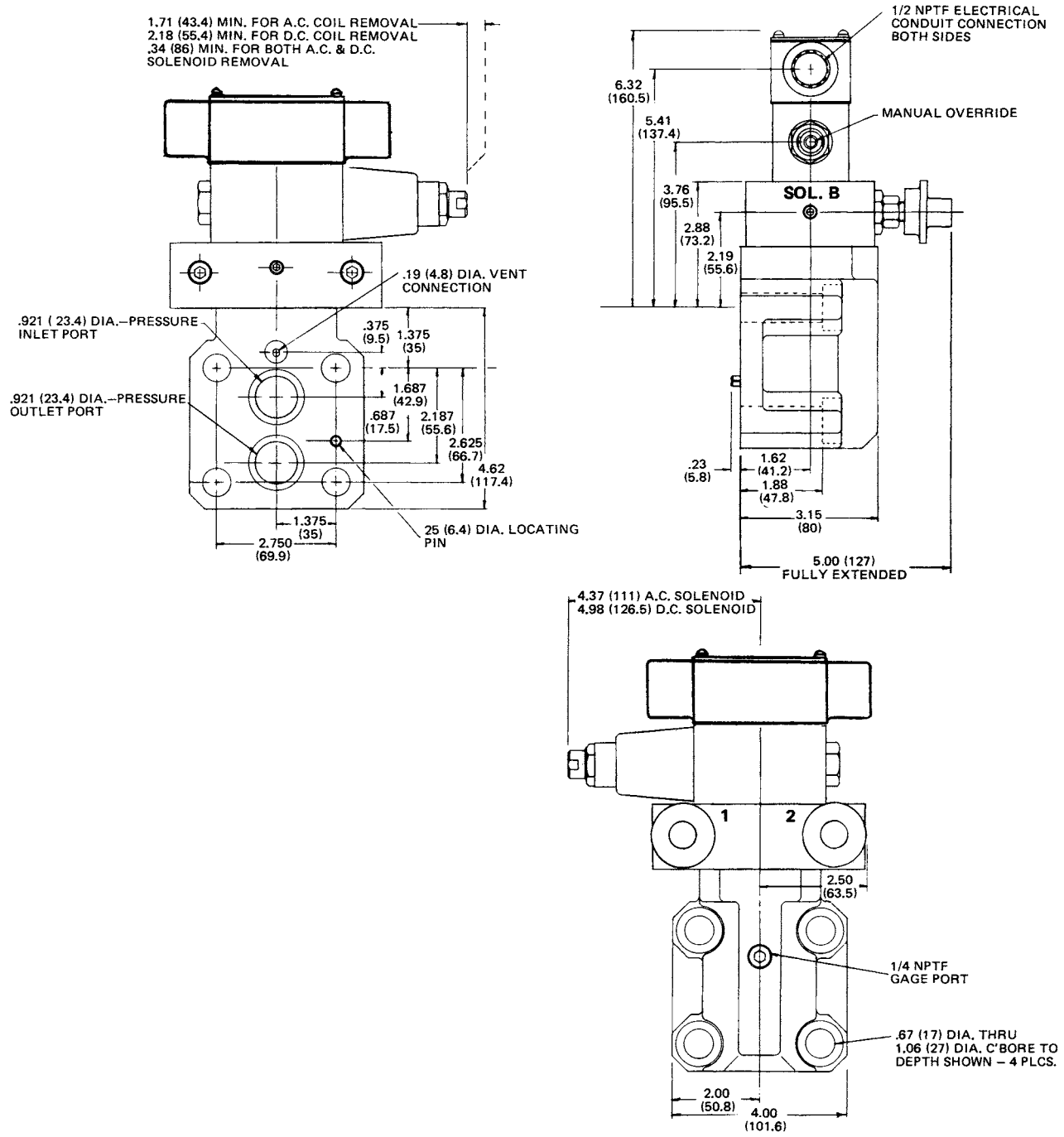


Dimensions

**Pressure Control Valves
Series R6V**

Millimeter equivalents for inch dimensions are shown in (**)

Industry standard, 3/4" solenoid operated
Bi-pressure Relief Valve (pressure 7)

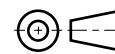
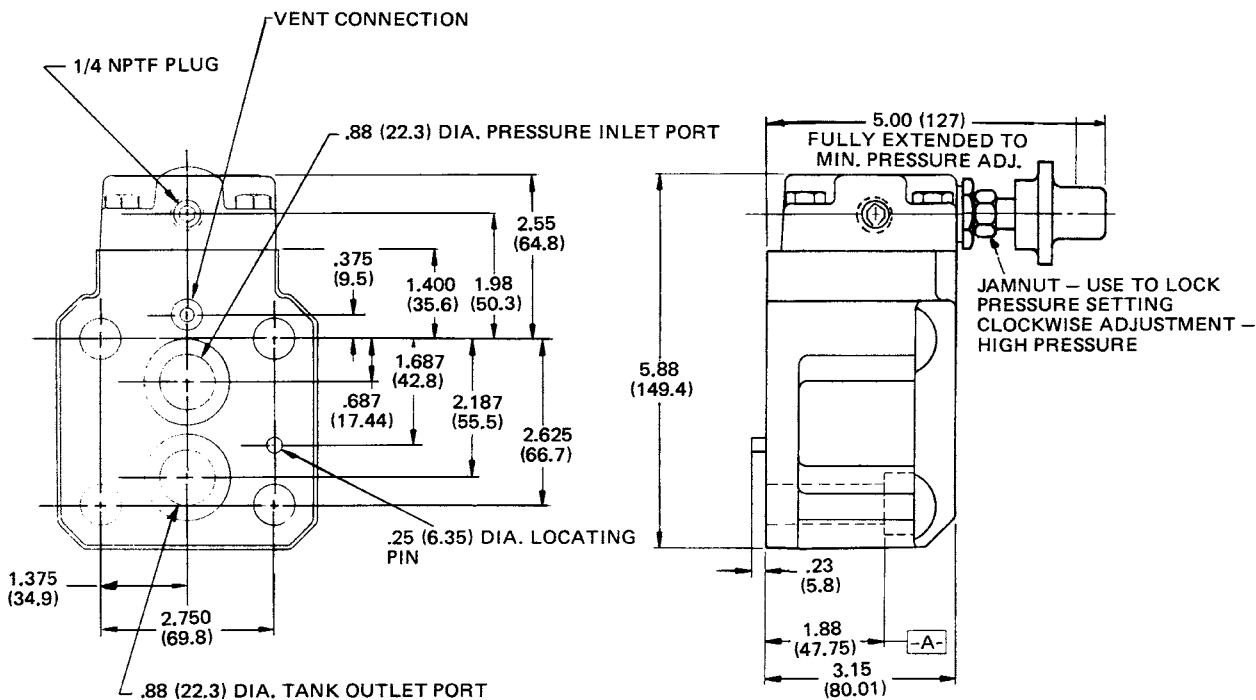
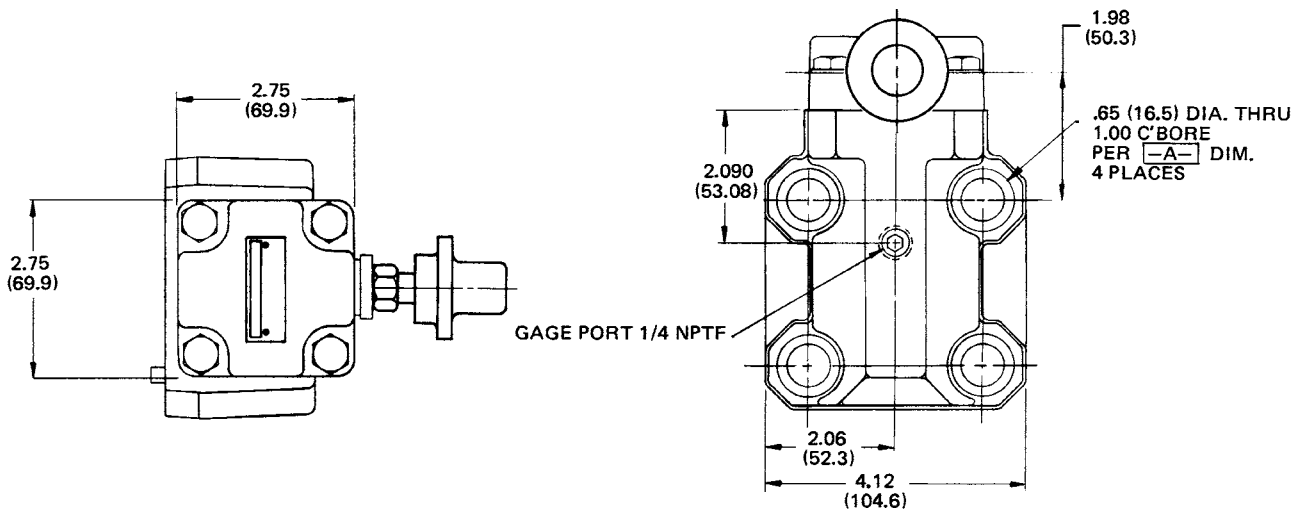


Dimensions

Millimeter equivalents for inch dimensions are shown in (**)

Manifold mounted, 3/4" pilot operated (industry standard)

Pressure Relief Valve

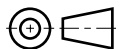
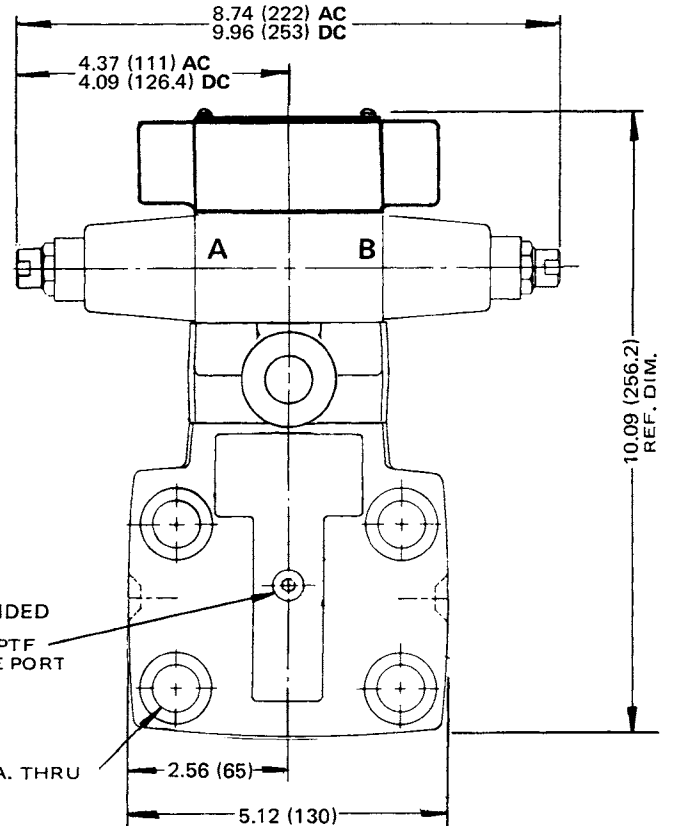
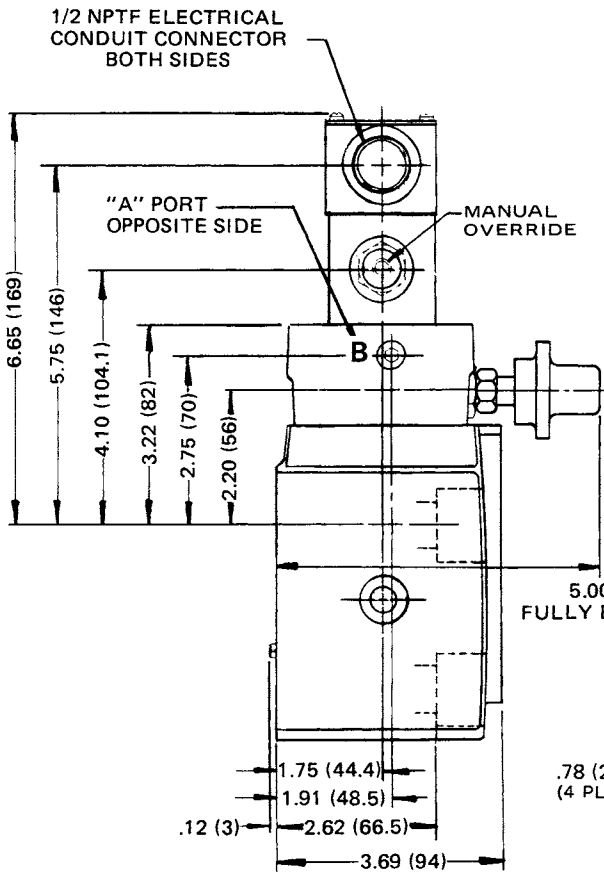
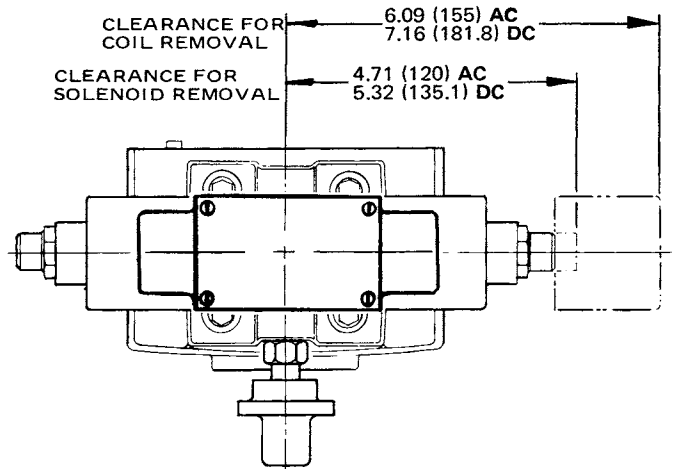
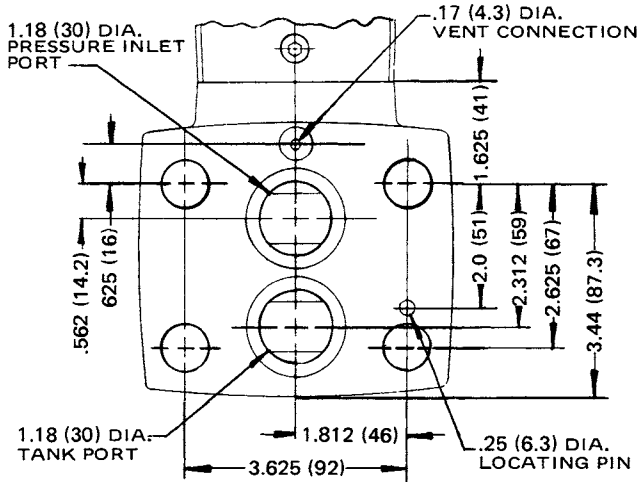


Dimensions

**Pressure Control Valves
Series R10M**

Millimeter equivalents for inch dimensions are shown in (**)

Manifold mounted, 1 1/4" solenoid operated
Relief Valve

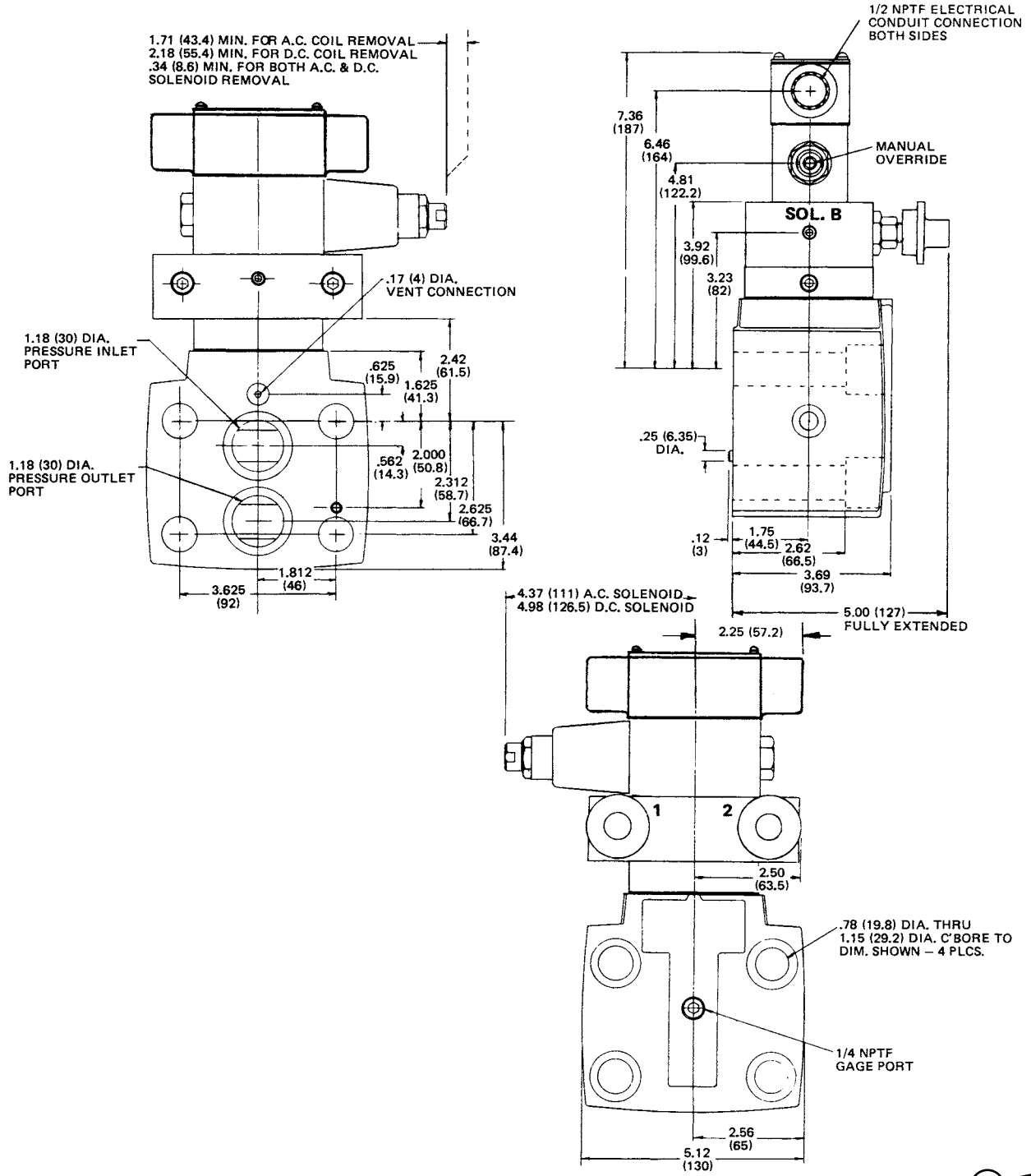


Dimensions

**Pressure Control Valves
Series R10M**

Millimeter equivalents for inch dimensions are shown in (**)

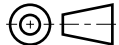
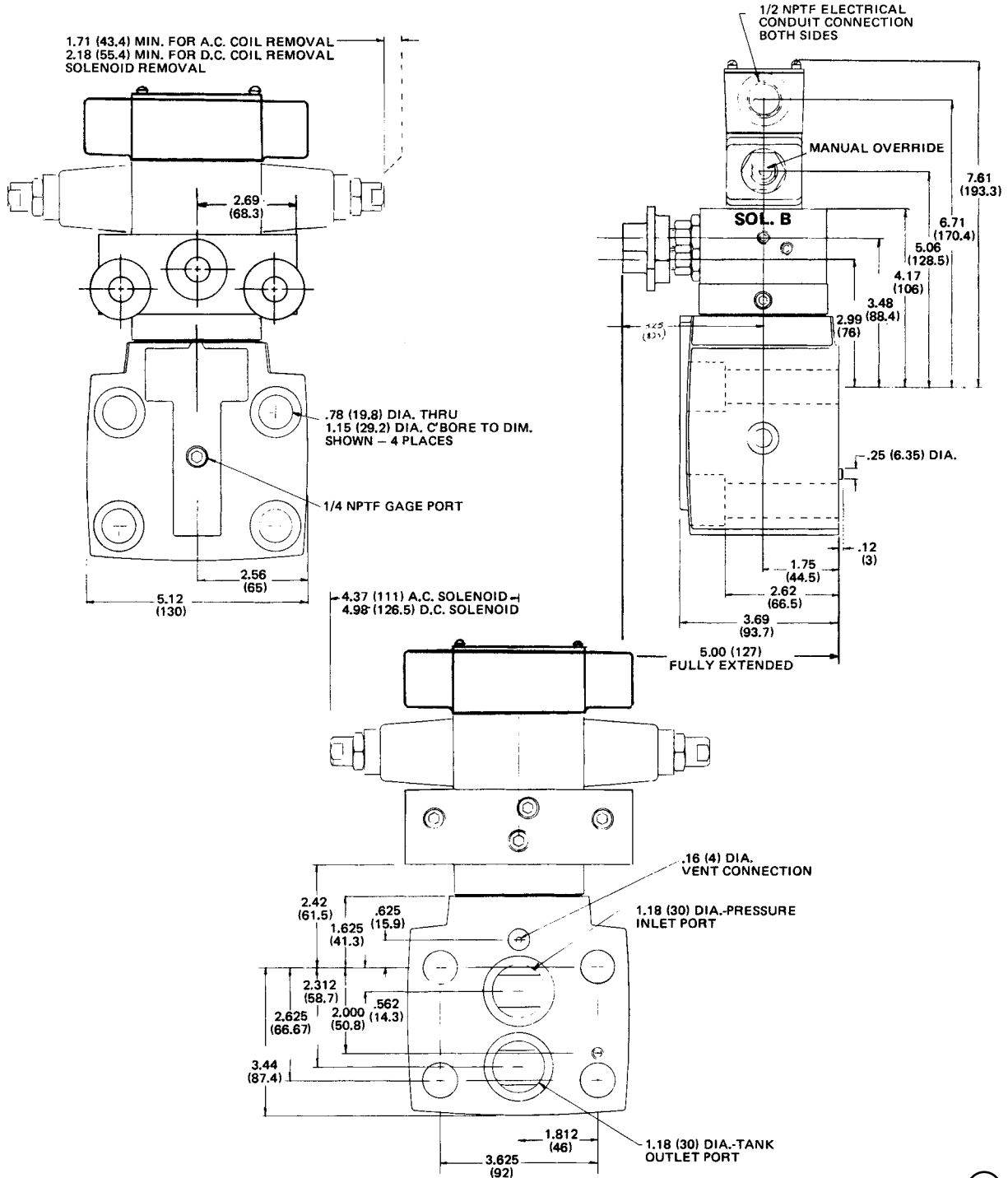
Manifold mounted, 1 1/4" solenoid operated
Bi-pressure Relief Valve (pressure 7)



Dimensions

**Pressure Control Valves
Series R10M**

Millimeter equivalents for inch dimensions are shown in (**)
 Manifold mounted, 1 1/4" solenoid operated
 Tri-pressure Relief Valve (pressure 8)

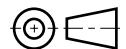
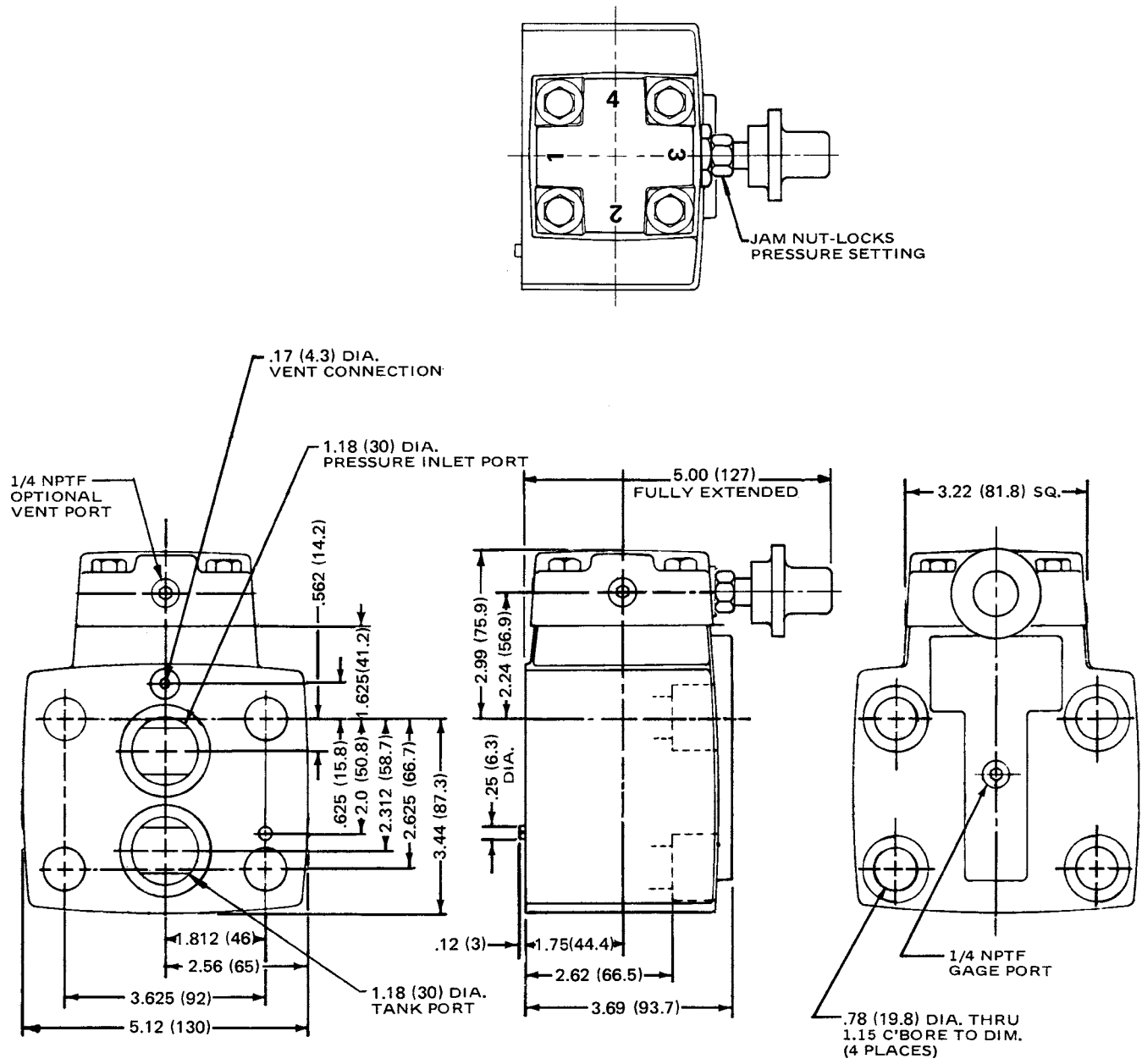


Dimensions

**Pressure Control Valves
Series R10M**

Millimeter equivalents for inch dimensions are shown in (**)

Manifold mounted, 1 1/4" pilot operated
Pressure Relief Valve



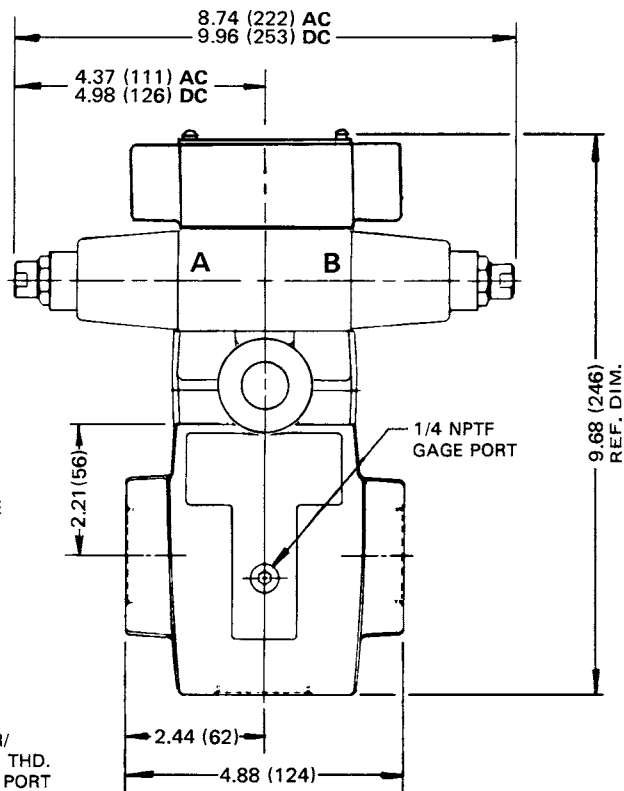
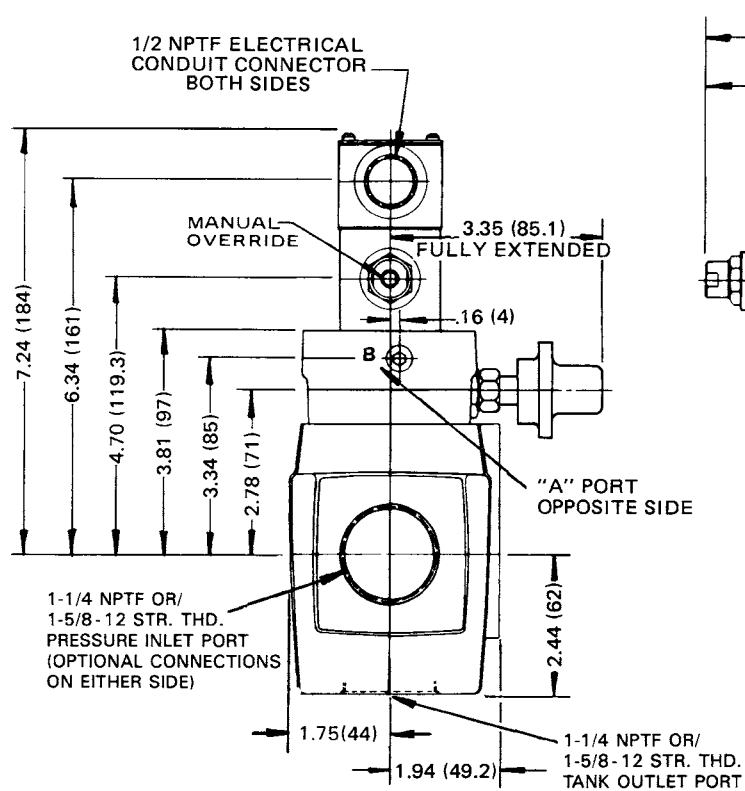
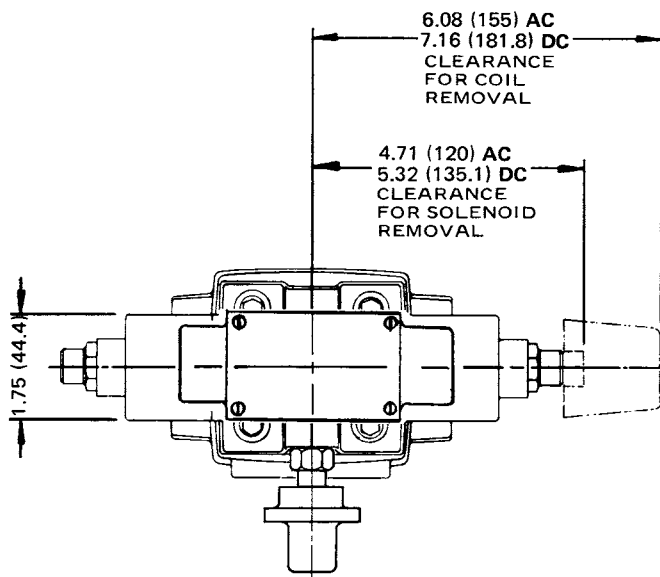
Dimensions

**Pressure Control Valves
Series R10P, R10S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1 1/4" solenoid operated
Relief Valve

NOTE:
WHERE TWO DIMENSIONS ARE SHOWN,
ONE OVER THE DIMENSION LINE AND
ONE BELOW IT, THE UPPER DIM.
DENOTES AC SOLENOID, LOWER DIM.
DENOTES DC SOLENOID.



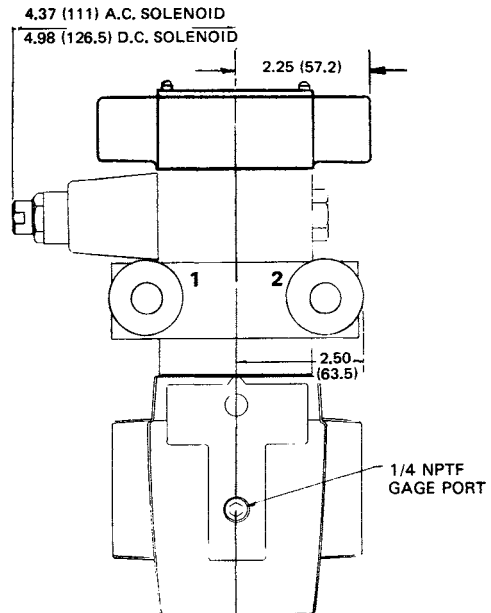
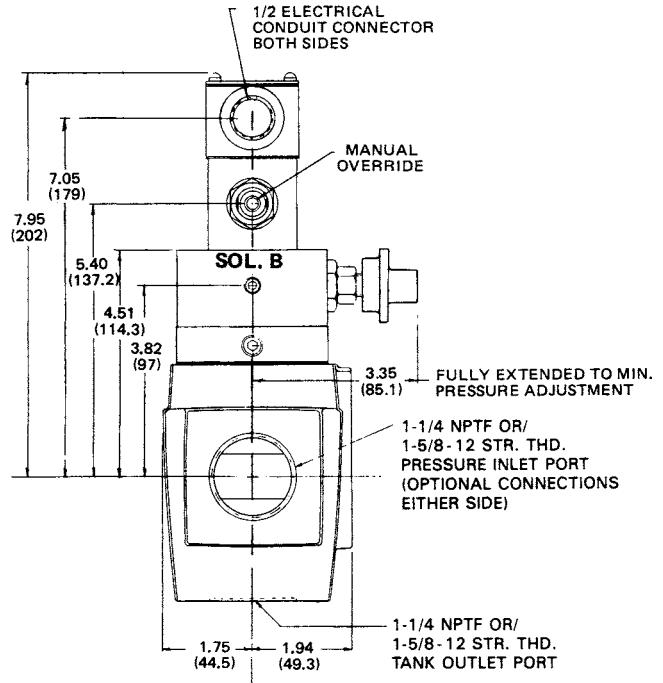
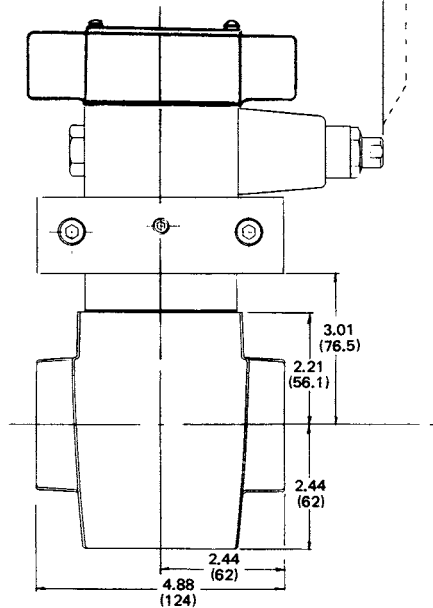
Dimensions

**Pressure Control Valves
Series R10P, R10S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1 1/4" solenoid operated
Bi-pressure Relief Valve (pressure 7)

1.71 (43.4) MIN. FOR A.C. COIL REMOVAL
2.81 (71.4) MIN. FOR D.C. COIL REMOVAL
.34 (8.6) MIN. FOR BOTH A.C. & D.C.
SOLENOID REMOVAL

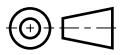
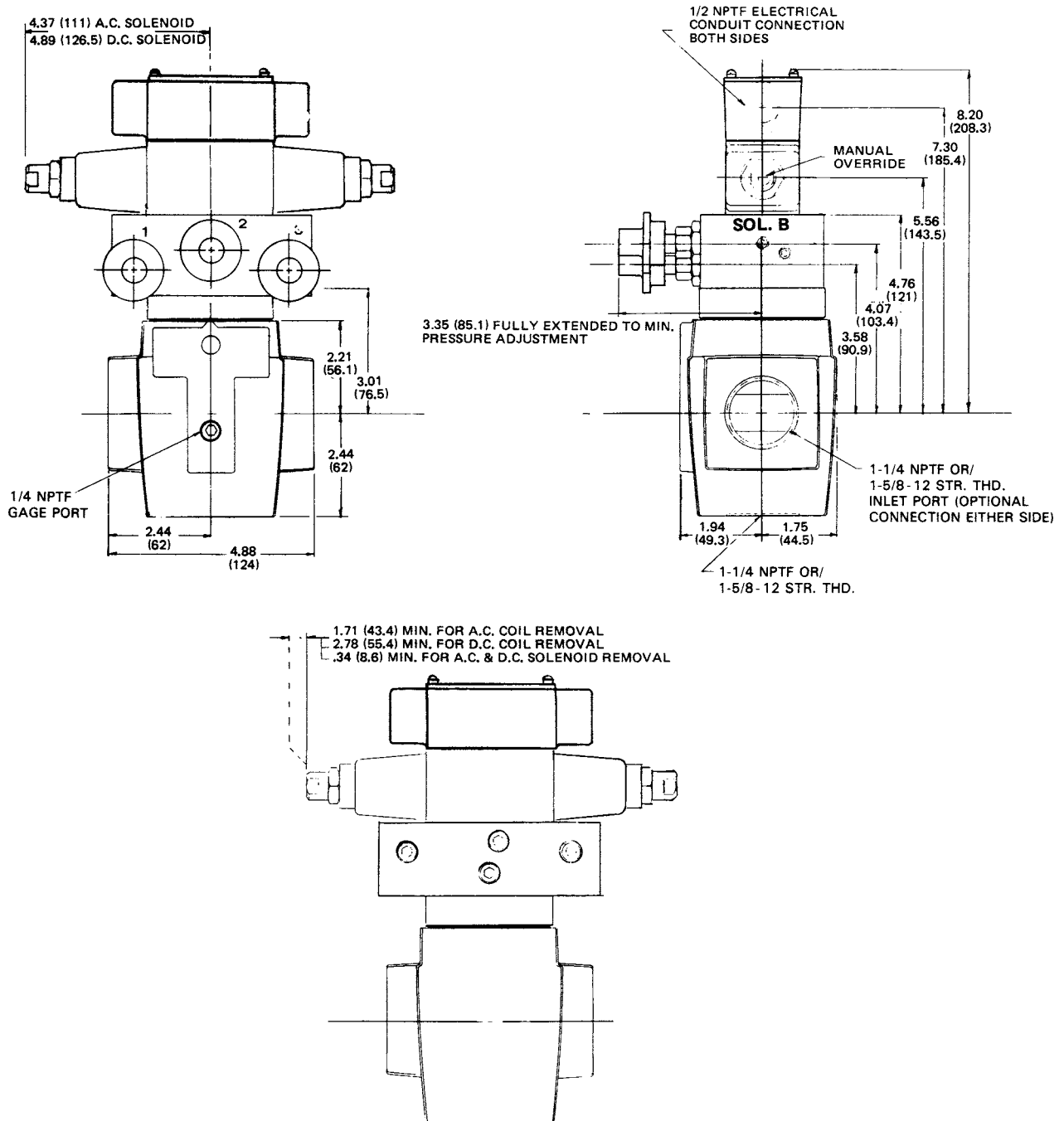


Dimensions

**Pressure Control Valves
Series R10P, R10S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1 1/4" solenoid operated
Tri-pressure Relief Valve (pressure 8)

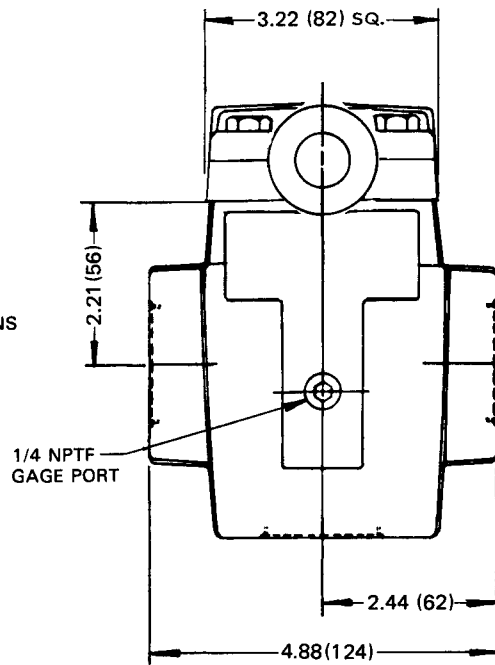
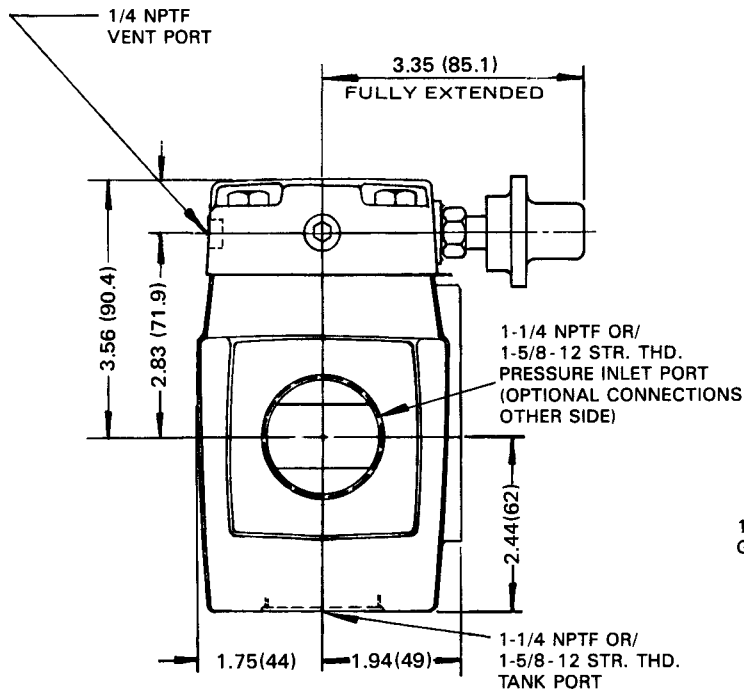
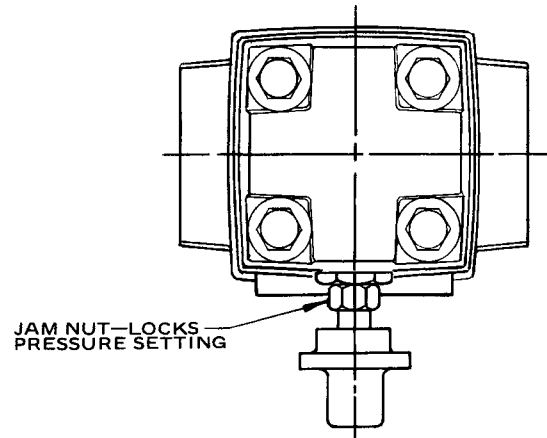


Dimensions

**Pressure Control Valves
Series R10P, R10S**

Millimeter equivalents for inch dimensions are shown in (**)

In-line mounted, 1 1/4" pilot operated
Pressure Relief Valve



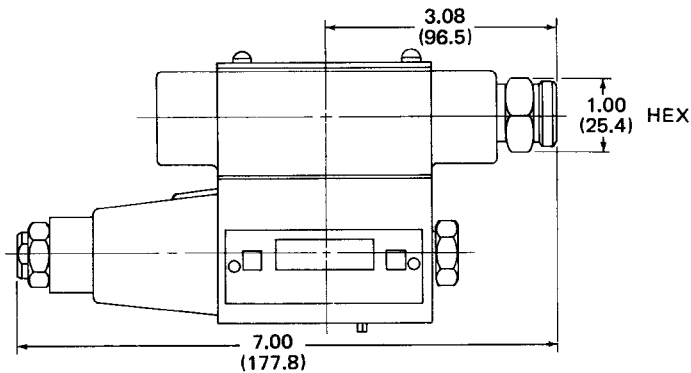
Millimeter equivalents for inch dimensions are shown in (**)

Valve with Terminal Strip (Variation 5) 540 no longer available
and/or valve with top side plug-on with lights (Variation 570) Top Side Plug no longer available

See D1VW Accessory section for Ordering Replacement Kits

Valve with Manaplug Plug-in (Variation 6)

NOTE: MANAPLUG PLUG-IN POSITION . . .
SINGLE SOLENOID MODELS—PLUG-IN IS ALWAYS OPPOSITE SOLENOID
DOUBLE SOLENOID MODELS—PLUG-IN IS ALWAYS ON "B" SOLENOID END.
SEE D1VW ACCESSORY SECTION FOR ORDERING REPLACEMENT KITS

**H**