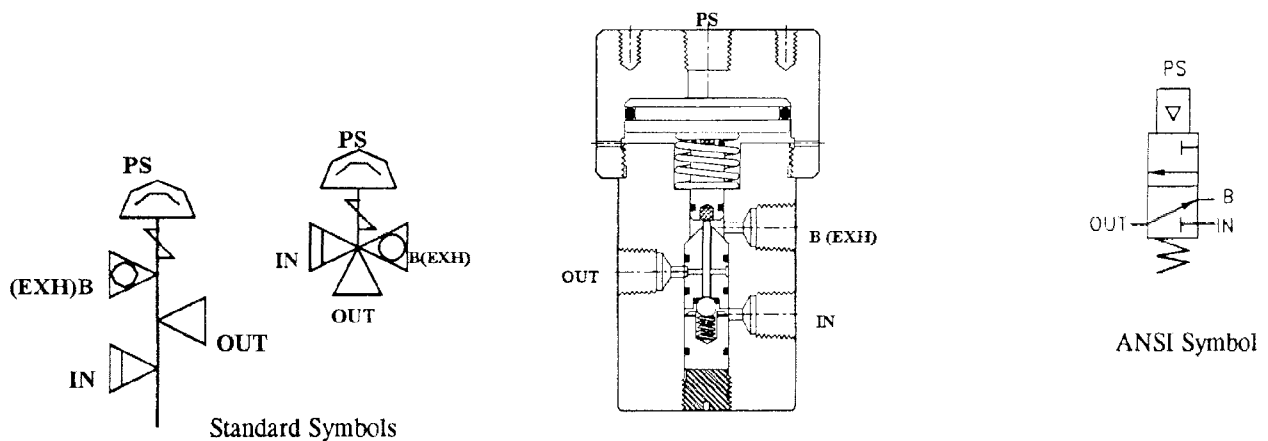


HYDRAULIC VALVE - HLR 7950A

Designed for three way Normally Closed “Block & Bleed”, control circuit operation of **Surface Controlled Sub-Surface Safety Valves (SCSSV)**. The assembly is a two position, three way **Normally Closed**, Pilot Supply pressure operated, automatic reset (spring return), 10,000 PSI, flow control valve. Each On/Off application of Pilot Supply pressure will automatically shift the internal component’s placement. Applying Pilot Supply would automatically pressurize the receiving hydraulic control circuit, for normal operation. The subsequent loss of Pilot Supply pressure reestablishes the original Outlet to Exhaust flow path.

Special Features: The valve’s Upper Seat has **dual** sealing surfaces. *Once the original seal surface becomes worn, the Upper Seat is simply reinstalled with its second side (new) seal surface positioned for usage.* The HLR 7950A also has a **Ball/Check** assembly that instantly seals the valve’s Inlet upon Pilot Supply pressure loss.

Reason To Use: Three way Normally Closed, “Block & Bleed” hydraulic valve models are generally selected to control the open/close sequence of an individual Surface Controlled Subsurface Safety Valve. In multi well applications, other hydraulic valves in parallel operated control circuits are unaffected by the loss of operating pressure in one control circuit segment.



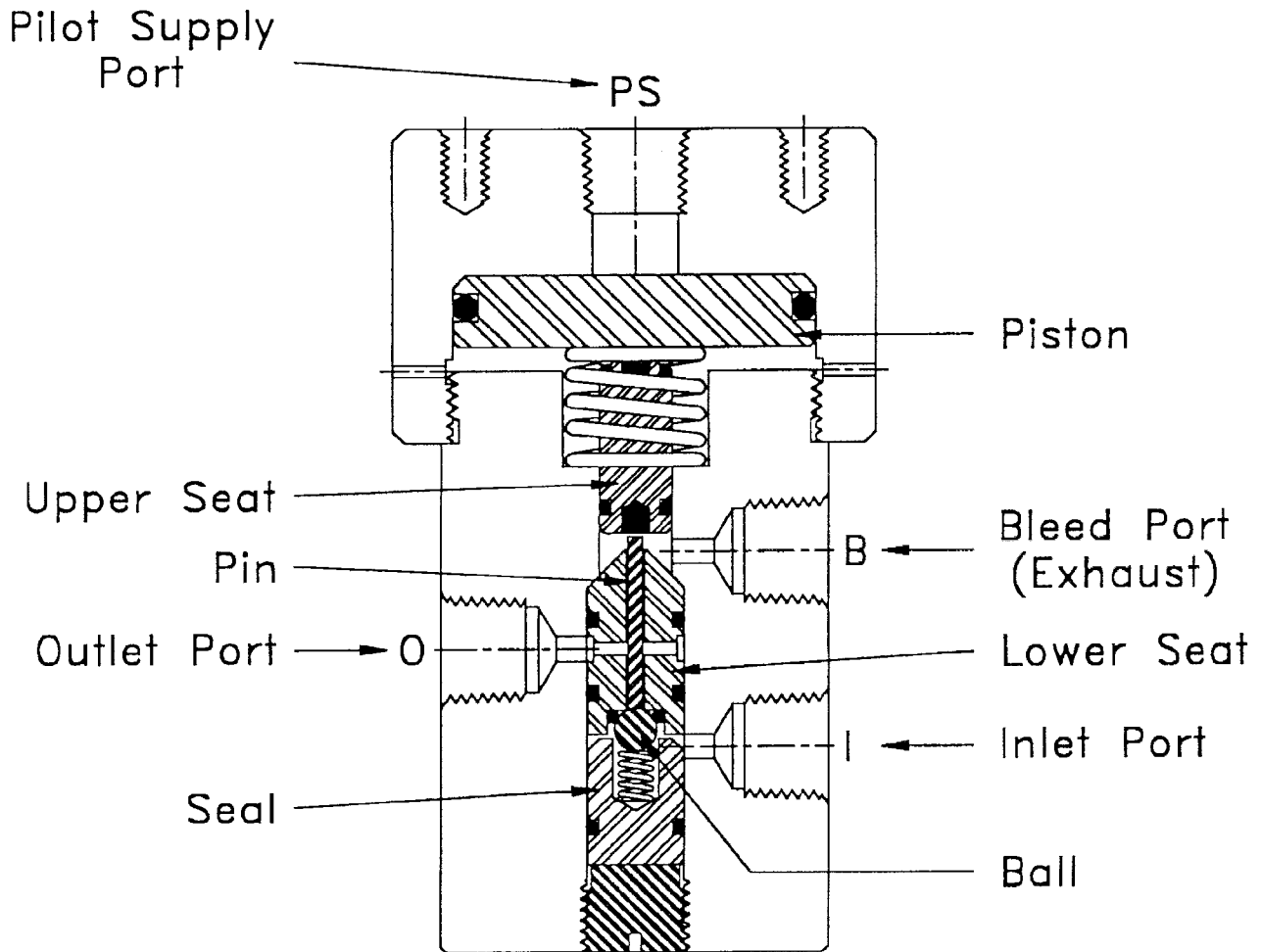
Characteristics

1. Dimensions: 2.500" Dia. X 4.250"L.
2. Working Pressure:
Control Ports - up to 10,000 PSI.
*Pilot Supply - 250 PSI Max.
3. Connections: 1/4"-18 N.P.T.
4. Material: 316 Stainless Steel
5. Seals: Viton
6. Weight: 4.3 Lb.

Mounting Details: Two (2) 1/4"-20 NC Bolt Holes on a 1.750 Inch Bolt Hole Circle.

** See Chart for Minimum Pilot Supply Operating Pressure and correlated Hydraulic Fluid Pressure applied at Inlet for details.*

HLR 7950A - Hydraulic Valve
Major Component Listing Illustration



INSTRUCTIONAL SCHEMATIC

ANSI Symbols

For

HLR 7950 SERIES – 3 WAY, N.C. HYD. VALVE
10,000 PSI W.P.

HYD. CIRCUIT APPLICATION: NORMALLY CLOSED

CONNECTION – FUNCTION ASSUMED

I – HYD. SUPPLY INLET
O – OUTLET TO ACTUATOR
B – EXHAUST TO HYD. RETURN
PS – PILOT SUPPLY

The diagram shows a hydraulic valve in its unactuated state. On the left, a line labeled 'HYD. SUPPLY PRESSURE' with an arrow pointing right enters the valve at port 'I'. The valve's internal spool is shifted to the left by a spring, blocking the flow path to port 'O' and allowing flow to port 'B'. Port 'B' is labeled 'VENT'. Below the valve is a 'PILOT SUPPLY' (PS) port. To the right of the valve, a line leads to a square symbol representing the 'RECEIVING HYDRAULIC CONTROL CIRCUIT STATUS: DEPRESSURIZED'. Below this, text indicates 'PILOT SUPPLY PRESSURE: ABSENT'.

HYDRAULIC VALVE STATUS: UNACTUATED (SHELF)

The diagram shows the same hydraulic valve in its actuated state. The 'PILOT SUPPLY' (PS) line now has an arrow pointing right, indicating pressure is applied. This pressure acts on the bottom of the valve's spool, overcoming the spring force and shifting the spool to the right. This opens the flow path from port 'I' to port 'O'. Port 'B' is now blocked. To the right of the valve, a circle with a 'c' inside represents the 'RECEIVING HYDRAULIC CONTROL CIRCUIT STATUS: PRESSURIZED'. Below this, text indicates 'PILOT SUPPLY PRESSURE: APPLIED'.

HYDRAULIC VALVE STATUS: ACTUATED (IN-SERVICE) POSITION

4-12-96

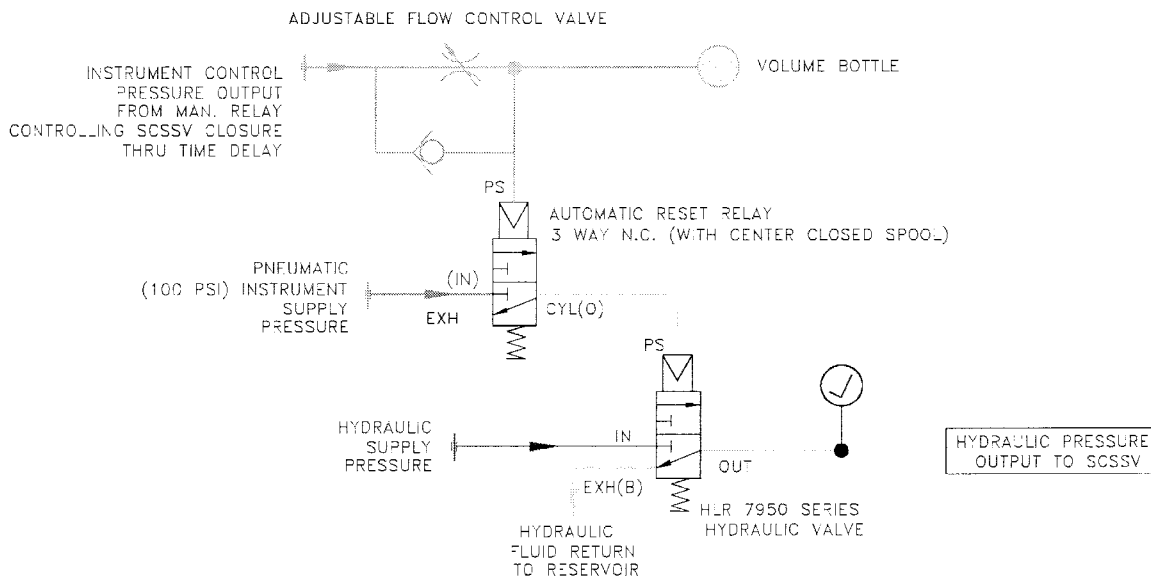
File 7950SCHM

Time Delay - Hydraulic Control Circuit Schematic

Requirement: Provide “Snap Acting” Open/Close control sequencing of HLR 7950 Series Hydraulic Valves.

The HLR 7950 Series Hydraulic Valves have an internal Ball/Check assembly that requires the operating Pilot Supply pressure to be either on (applied) or off (absent). A slow reduction or gradual decrease in operating Pilot Supply pressure will prevent the Ball/Check assembly from sealing properly.

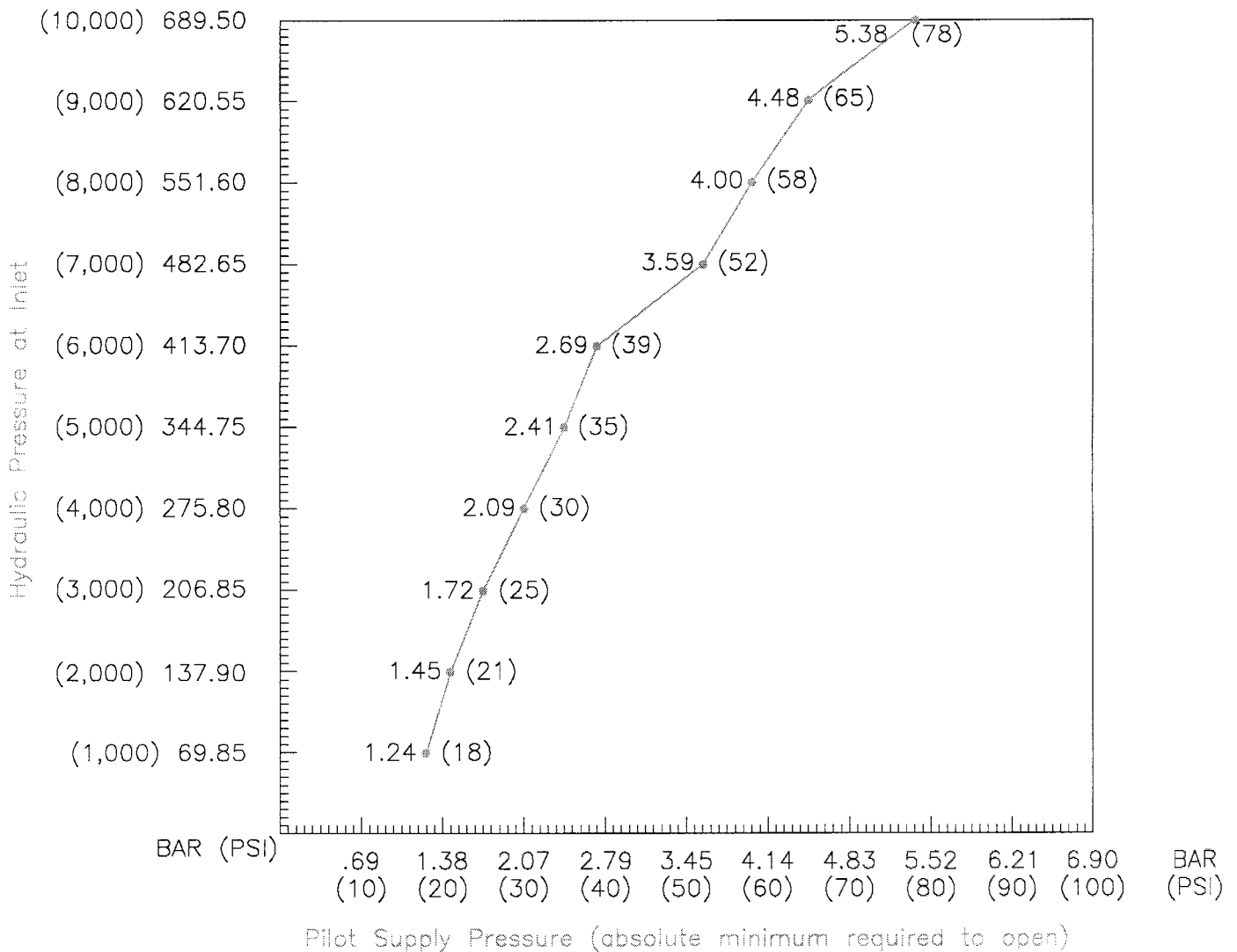
The schematic provided depicts a Time Delay circuit that indirectly operates the HLR 7950 Series Hydraulic Valve. *Note this control circuit is used for special applications that do not utilize Time Delay components to directly control the operation of a Group Master (SCSSV - Manual Reset) Relay.*



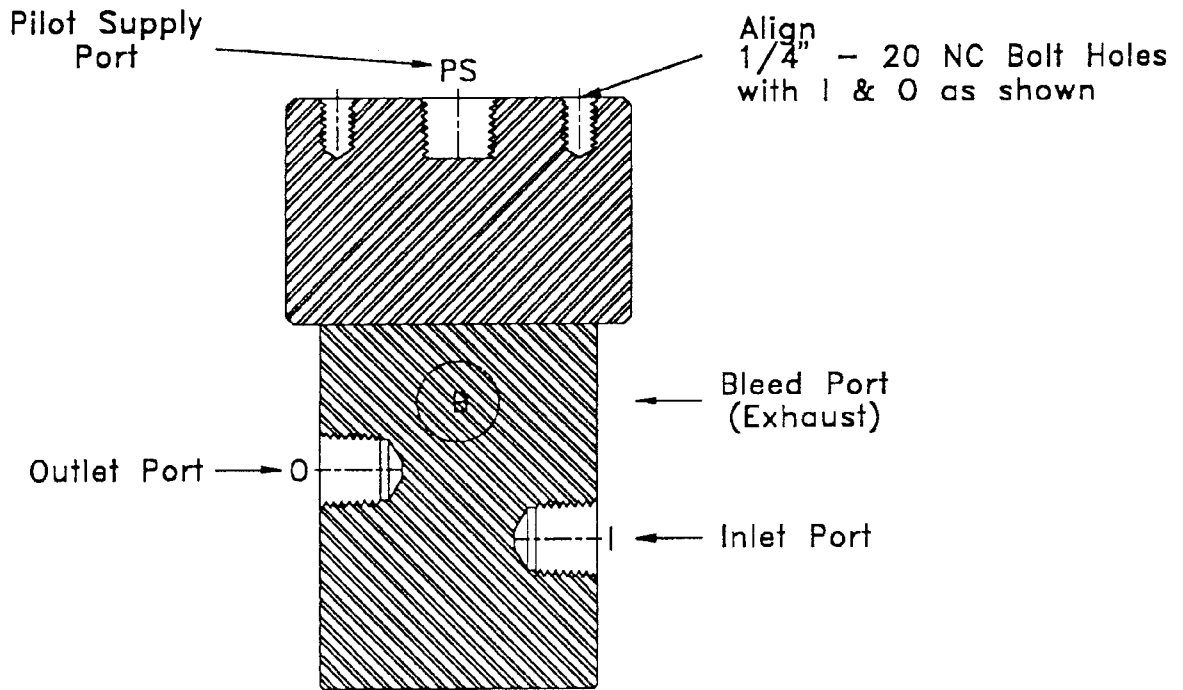
Inlet Hydraulic Fluid/Pilot Supply Pressure Pressure Chart

(PSI) BAR

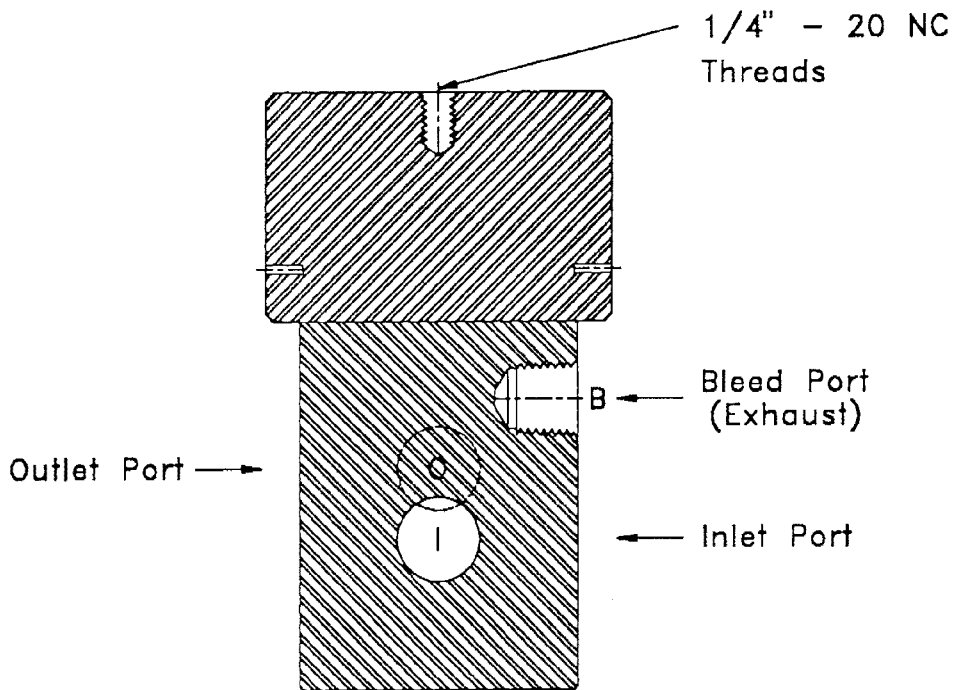
Shown in BAR and PSI



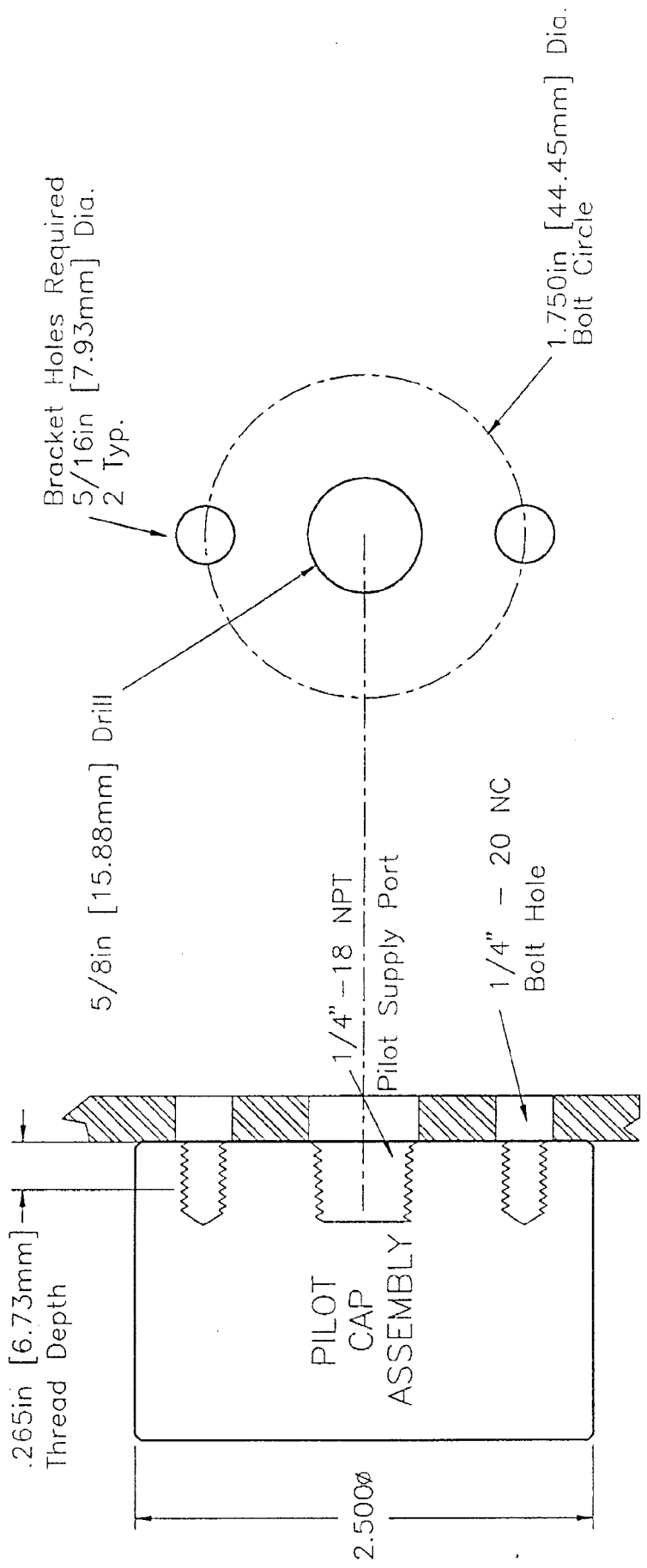
HLR 7950A - Hydraulic Valve
Orientation Drawing



FRONT VIEW
(Bleed Port Offset 90° From Both I & O)



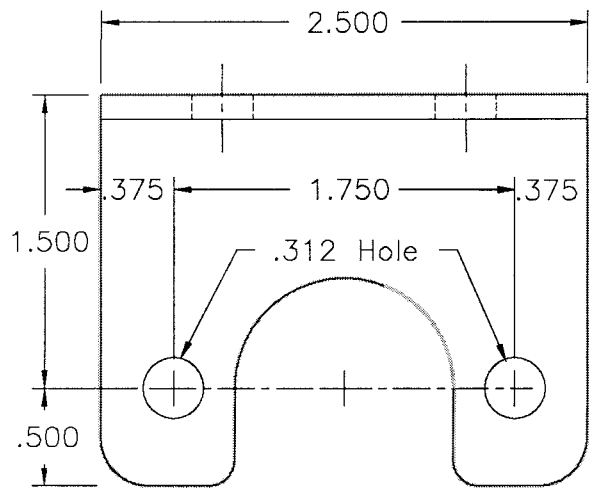
SIDE VIEW



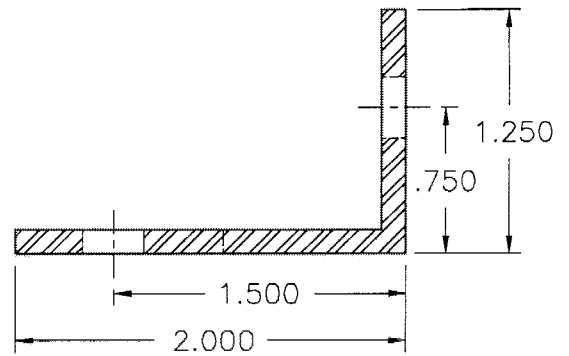
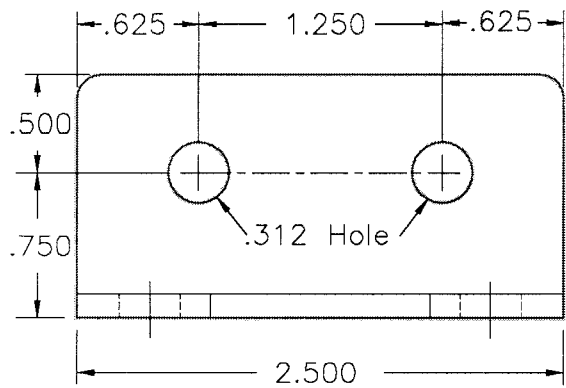
BOLT HOLE CIRCLE
DETAIL

HLR HYDRAULIC VALVES
7950A & 7960A

HLR 25HVB SUPPORT BRACKET (INCHES)
 FOR ALL MODELS
 HLR 7950A SERIES & 7960A SERIES HYDRAULIC VALVE



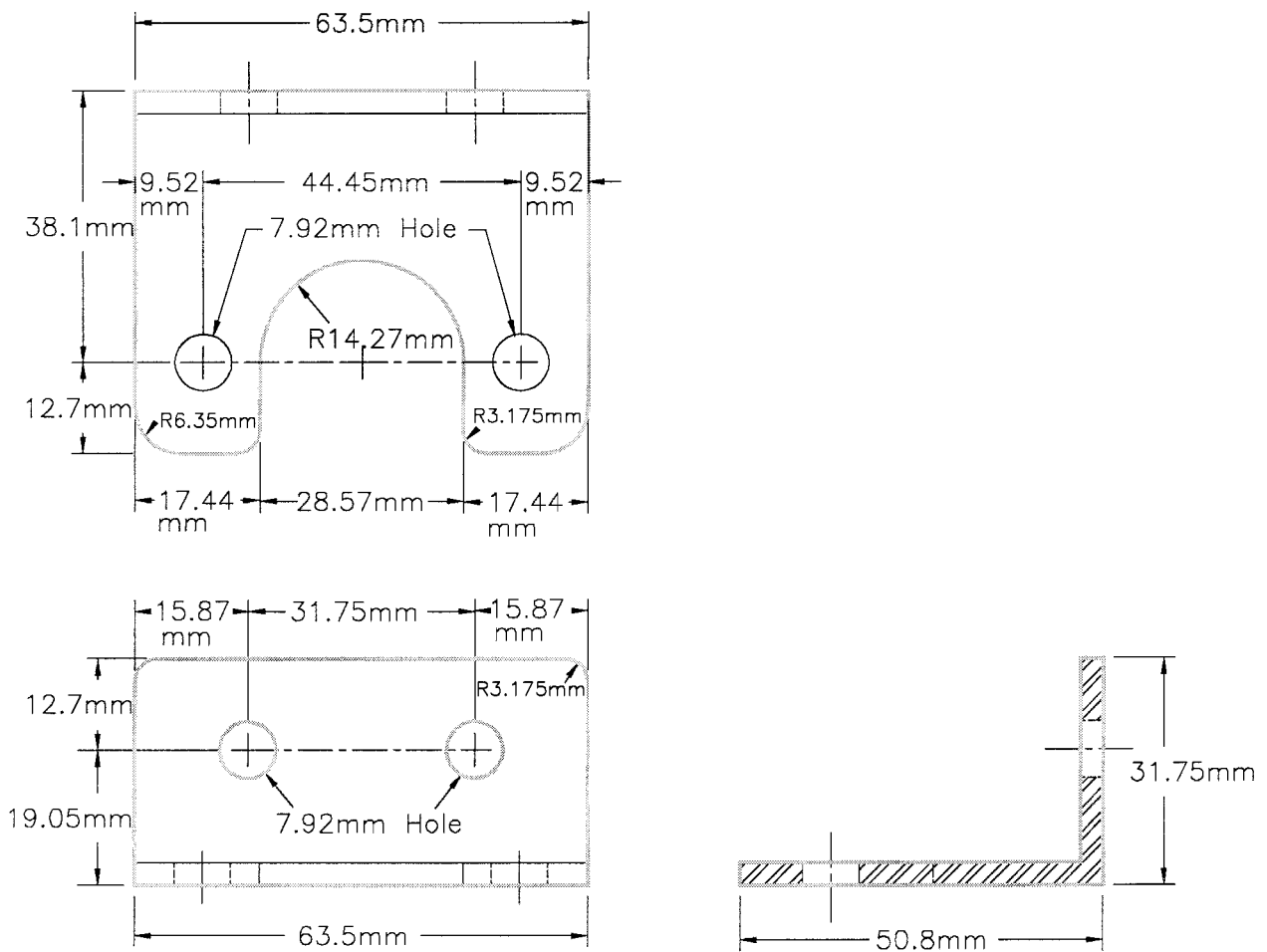
PANEL INSTALLATION
 DIMENSION DETAILS



PART NUMBER – HLR 25HVB
 Material: 12 GA.(3.175mm Thickness) 316SS
 HLR File: 12-35(Dwg #1A) 9-10-97
NOTE: All Dimensions in Inches

HLR 25HVB SUPPORT BRACKET (MILLIMETERS)
 FOR ALL MODELS
 HLR 7950A SERIES & 7960A SERIES
 HYDRAULIC VALVES

Suggested for use whenever Valves are mounted within the Control Panel



PART NUMBER – HLR 25HVB

Material: 12 GA.(3.175mm Thickness) 316SS

File: 12-35 4-24-97

NOTE: All Dimensions in Millimeters