

# Hydraulic Interface Valve

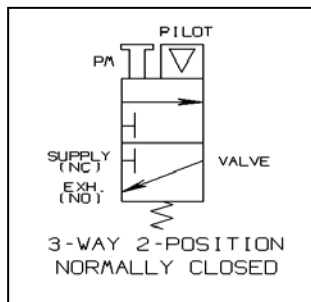
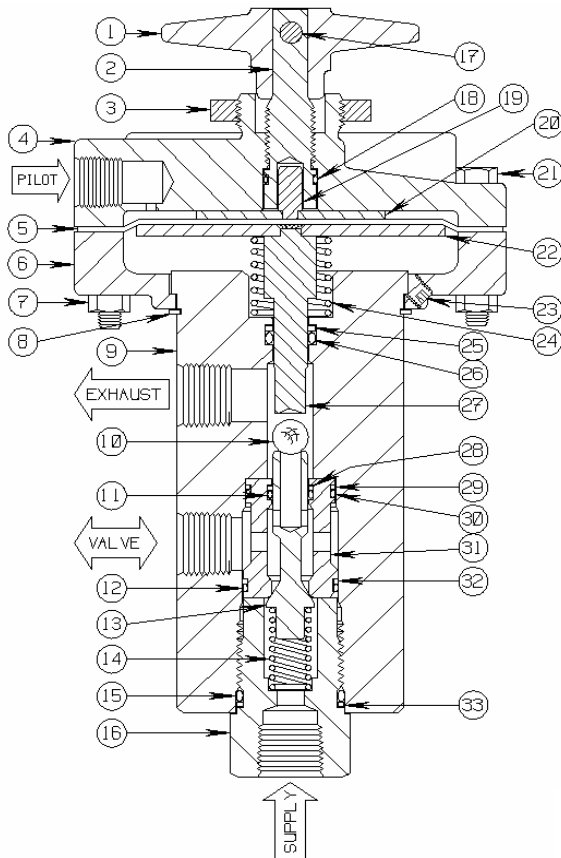
## Diaphragm (150 PSI Max)

3-WAY NC, 3/8" FNPT, .218 ORIFICE, 6,000 PSI W/MANUAL OVERRIDE,  
PANEL MOUNT

Model 20HM154



Conforms to the SEP category of the European Pressure Equipment Directive  
Issue No. 97/23/EC



The **20HM154** is a two position, three-way normally closed, Pilot Supply pressure operated, **high flow** hydraulic control valve assembly. It is designed to establish high pressure hydraulic fluid output automatically with each application of relatively low Pilot Supply pressure. A loss of operating Pilot Supply pressure will block the hydraulic Supply (inlet) port and exhaust the accumulated operating pressure within the high pressure receiving control circuit.

Hydraulic Interfaces are used to control the open/close operating sequence of Surface Controlled Sub Surface Safety Valves (SCSSV) or Surface Safety Valves (SSV).

The **20HM154** has a manual Override Handle to establish internal hydraulic Supply to Valve flow without the application of operating Pilot Supply pressure. This feature allows the SCSSV or SSV to be opened for normal start-up operation or for maintenance/testing purposes.

### PARTS LIST:

- |                     |                      |                      |
|---------------------|----------------------|----------------------|
| 1. Override Handle  | 12. O Ring *         | 23. Soc. Set Screw * |
| 2. Override Plunger | 13. Valve Seat       | 24. Spring *         |
| 3. Panel Nut        | 14. Spring *         | 25. Back Up Ring *   |
| 4. Upper Housing    | 15. O Ring *         | 26. O Ring *         |
| 5. Diaphragm *      | 16. Retainer         | 27. Plunger          |
| 6. Lower Housing    | 17. Cross Pin        | 28. Back Up Ring *   |
| 7. Hex Nut *        | 18. O Ring *         | 29. Back Up Ring *   |
| 8. Spiral Ring *    | 19. Guide Pin        | 30. O Ring *         |
| 9. Valve Body       | 20. Diaph. Protector | 31. Valve Spool *    |
| 10. Ball *          | 21. Hex Head Bolt *  | 32. Back Up Ring *   |
| 11. O Ring *        | 22. Pressure Plate   | 33. Back Up Ring *   |

\* Indicates parts included in a Repair Kit

**Sigma Model Number 20HM154**  
3-WAY NC, 3/8" FNPT, .218 ORIFICE, 6,000 PSI W/MANUAL OVERRIDE,  
PANEL MOUNT

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**Product Specifications**

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**Flow Control Application:** Normally Closed

**Control Function:** Three-Way (Block & Bleed)

**Weight:** 9.75 Lbs.

**Body Pressure Rating (Control Ports):** 6,000 PSI (413 bar) maximum

**Seal Material:** Viton

**Operator (Pilot Cap):** Diaphragm Assembly 150 PSI (10.34 bar) maximum - 30 PSI (2.06 bar) minimum

**Instrument Supply Media for Operator (Pilot Cap):** Pneumatic

**Pilot Port Rotation (Orientation) Capability:** Full Turning Radius of 360°

**Manual Override Handle:** Rotating Screw Type (Green indicator band visible in normal placement)

**Connection Size (Body):** 1/4-18 Female N.P.T. Pilot, 3/8-18 Female N.P.T. Supply, Valve, Exhaust

**Wetted Component Material (Metal):** 316 Stainless Steel and 17-4PH SS

**Panel Mount:** Yes

**Panel Hole Cutout Size Required:** 1-1/8 Diameter

**Pilot Supply Operating Ratio:** 50 to 1

**Orifice:** .218 Diameter      **Cv Factor:** .63

**Operating Temperature:** -20° F to +250° F (-29° C to +121° C)

**Overall Dimensions:** 8-5/16 Height x 4-5/8 Pilot Head Diameter (21.11 cm Height x 11.75 cm PHD)

**Pressure Equipment Directive (PED):** This product conforms to the SEP Category of the European P.E.D.

**Installation and Maintenance Instructions:**

Remove the Cross Pin (#17), Override Handle (#1), and Panel Nut (#3). Insert the Controller in a pre-drilled 1-1/8" diameter hole. Replace the Panel Nut, Handle, and Cross Pin. Sigma recommends the use of appropriate thread sealant for each port connection.

**Shelf Position Port Status**

|                |   |
|----------------|---|
| <b>Pilot</b>   | Pilot Supply Inlet (Pneumatic On/Off Operating Pressure)            |
| <b>Supply</b>  | Inlet (Instrument Supply Pressure) Closed to Valve Port             |
| <b>Valve</b>   | Outlet Pressure to Receiving Control Circuit (Open to Exhaust Port) |
| <b>Exhaust</b> | Hydraulic Fluid Return to Reservoir                                 |

**Repair Kit Information**

Repair Kits contain all of the Seals and other components typically replaced when repairing the assembly. In order to maintain optimum operating control function.