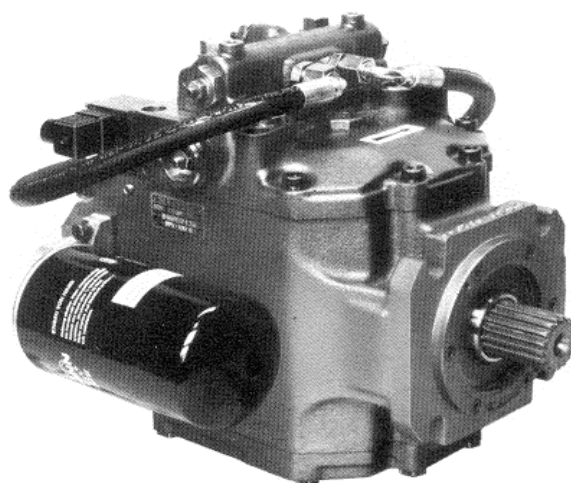


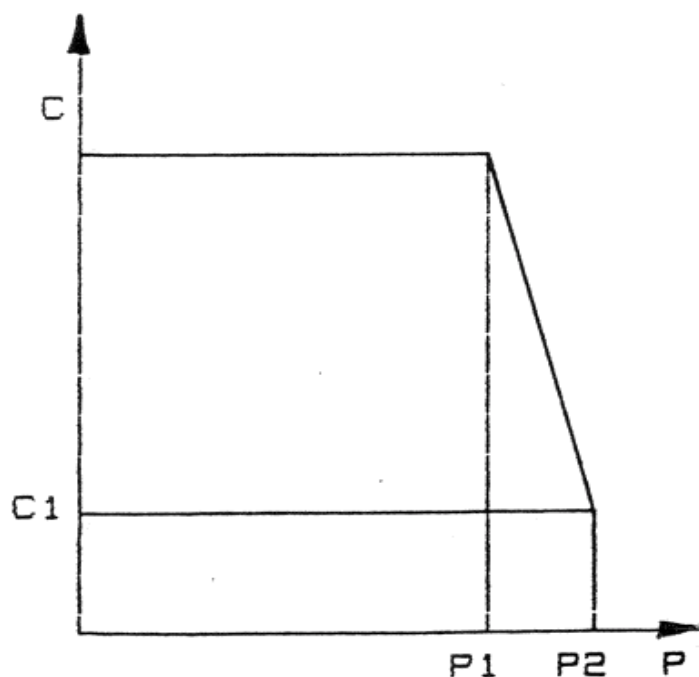
BPV..HF with Pressure Cut-off



BPV..EH with Pressure Cut-off

## PURPOSE

The purpose of the "PRESSURE CUT-OFF" is to prevent large amounts of oil from bleeding over a relief valve, which reduces overheating of the main loop in a closed loop application. The "PRESSURE CUT-OFF" reduces the control pressure of the pump so that the pump can stroke back towards neutral at a pre-determined maximum system pressure. Adjusting screws I and II are used to set the system pressure when the "PRESSURE CUT-OFF" becomes functional. Adjusting screw III determines the minimum pump flow going over the relief valve by establishing a minimum control pressure felt in the pump servo control once the "PRESSURE CUT-OFF" is active.



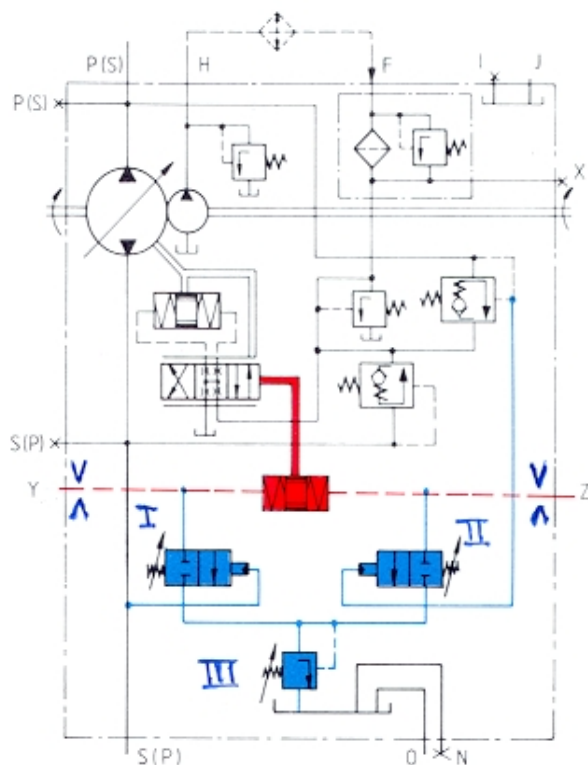
P = System Pressure

P1 = System Pressure at Maximum Flow

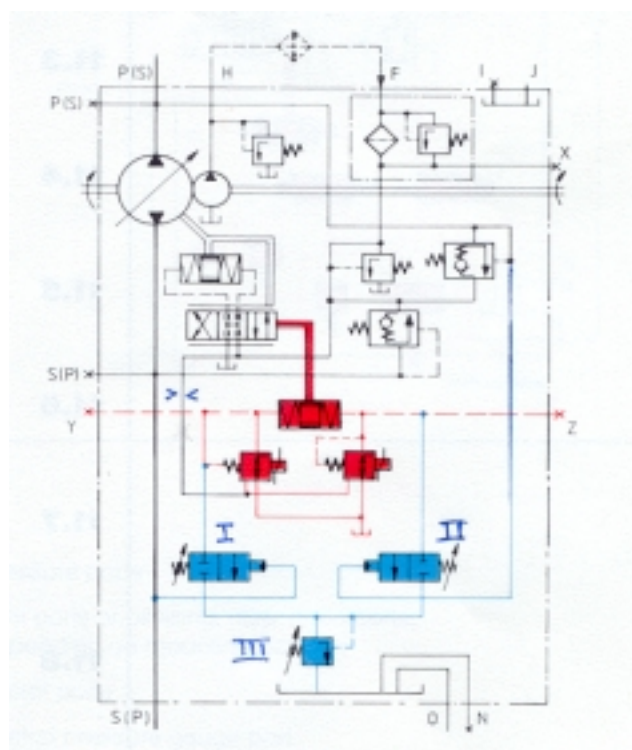
P2 = System Pressure at Minimum Flow

C = Control Pressure

C1 = Control Pressure at Minimum Flow



BPV...HF with Pressue Cut-off



BPV...EH with Pressue Cut-off

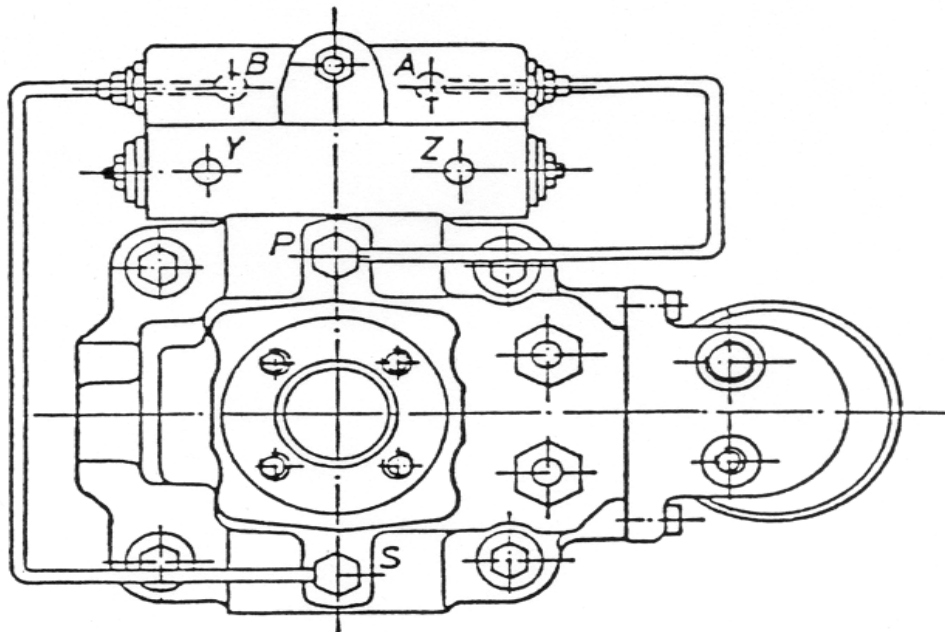


**PRESSURE CUT-OFF FOR LINDE BPV PUMPS  
TUBING DIAGRAM**

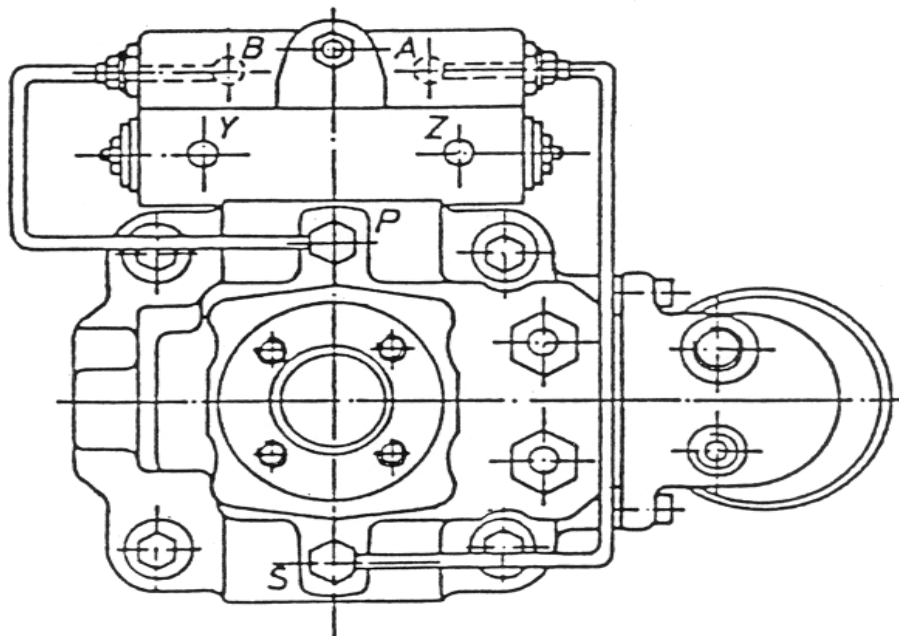
**Bulletin No.  
BPV 000  
03.89/001/06**

Page 3 / 5

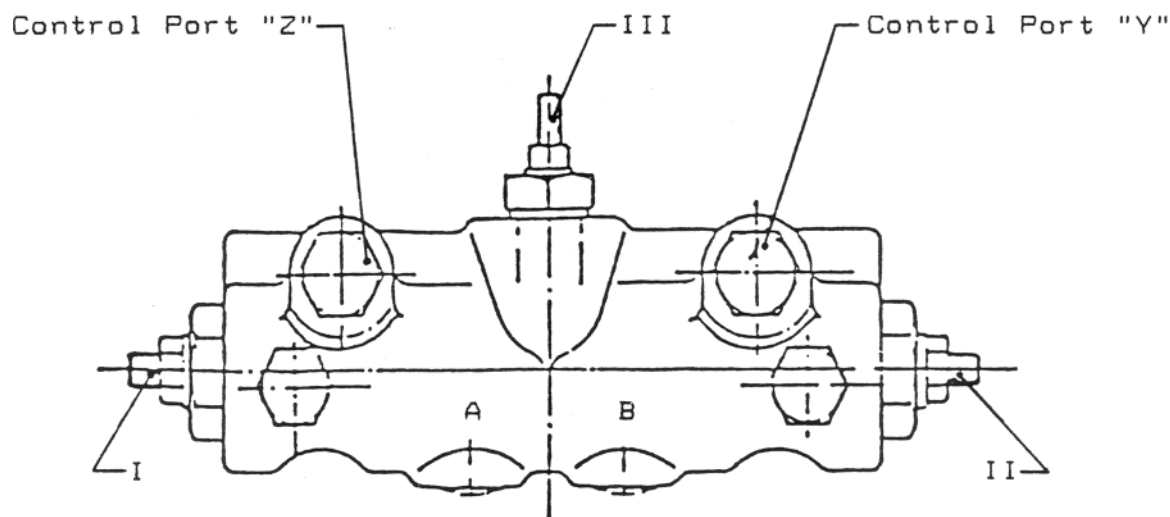
CLOCKWISE ROTATION



COUNTERCLOCKWISE ROTATION



Port identification and adjustment locations:



**1. INSTALL 1.0mm ORIFICES**

- A. For "HF" control: One in each control pressure line.
- B. For "EH" control: One in control cover (see parts book).

**2. PRE-ADJUSTMENTS**

- A. Check for proper adjustment of Rb, hydraulic neutral, high pressure R/V settings and plumbing of BPV.
- B. To insure the proper function of the pressure cut-off valve, control pressure at Y & Z should be limited to a maximum of 21 bar (305 psi).
- C. Mount pressure gauges to monitor system pressure and the control pressure downstream of the control orifices.
- D. Turn in adjustment screws I and II until the ends of the screws are flush with the lock nut. This will block the pressure cut-off valve.
- E. Adjustment screw III should be turned all the way out, but not removed.

**3. PRELIMINARY READINGS**

- A. With the discharge of the pump blocked (closed lines, blocked motor or cylinder), **very slowly** increase the control pressure to the pump. As control pressure increases the pump's discharge pressure will also increase. Continue raising control pressure until the discharge pressure stabilizes and remains constant.
- B. Note the constant discharge pressure and the corresponding control pressure to reach it for each direction of pump swash.
- C. To each control pressure reading, add 0.3 bar or 4.4 psi.



## PRESSURE CUT-OFF FOR LINDE BPV PUMPS ADJUSTMENT PROCEDURES

Bulletin No.  
BPV 000  
03.89/001/06

Page 5 / 5

### 4. FINAL ADJUSTMENTS

- A. Loosen adjustment screws I and II all the way out, but do not remove them.
- B. With the discharge of the pump still blocked, slowly introduce full control pressure to the pump, ie pump control valve in a fully open position. (The control pressure during this step should be below the control reading observed in step 38. If not, repeat steps 1 thru 4B).
- C. With full control on the pump, turn in the corresponding adjustment screw I or II (see chart below for relationship of adjustment screws to ports) until the calculated control pressure (step 3C) is registered on the appropriate control pressure gauge and lock adjustment screw with lock nut. Repeat procedure for opposite direction of pump swash, setting the appropriate control pressure reading from step 3C.
- D. Turn in adjustment screw III until the control pressure rises another  $0.1 \pm 0.1$  bar ( $1.5 \pm 1.5$  psi) and lock with lock nut.

### 5. INCIDENTALS

- A. Since oil will be bleeding over the main relief valves during this procedure, watch the oil temperature in the main loop.
- B. Any change in hardware, control pressure supply or system configuration after the initial adjustments are made, will probably alter the performance of the pressure cut-off valve. In this event, readjustment is necessary to retune the pressure cut-off valve to accommodate the change.
- C. The "Pressure Cut-Off" valve can be used only in combination with "HF" and "EH" controlled BPV pumps.

### 6. RELATIONSHIP OF ADJUSTMENT SCREWS TO PORTS

Control Port or Solenoid on BPV Pump	System Pressure Port on Pressure Cut-off valve	Corresponding Adjustment Screw
Z	B	I
Y	A	II