



**HPV-02 ELECTRO HYDRAULIC CONTROL
"E1 and E2 "
CONTROL CHARACTERISTICS**

**Bulletin No.
HPV-02 000
06.00/008/03**

1. General Description

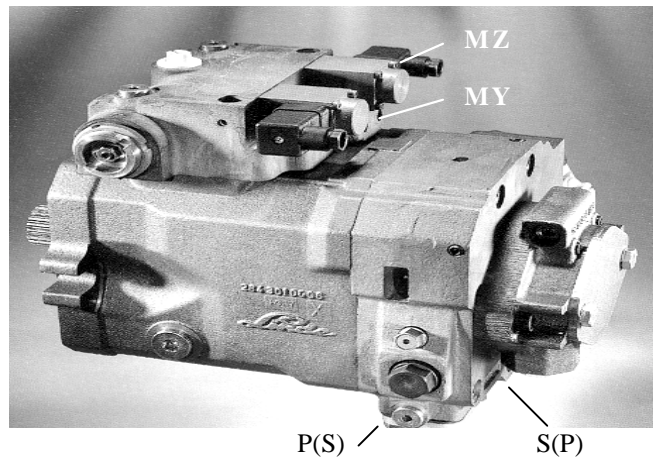
By applying a control current to the proportional solenoids Y or Z, a proportional control pressure is felt on the servo piston. The movement of the servo piston manipulates a spool valve which leads the oil flow from the boost circuit to the actuation cylinders to control the swash plate in the pump. This determines the amount and direction of oil flow from the main pump.

2. Flow Direction

The pump will not discharge any oil when the servo piston is in the center or neutral position. This is customarily when both control solenoids are deenergized but can also occur when the control solenoids are energized equally. Flow from the pump is established by applying an electrical current to one solenoid. The magnitude of the current will determine the amount of pump flow and the direction from the pump's main pressure ports.

2.1 Control Logic:

	Energized Control Solenoid:	
	MY	MZ
CW PUMP In - out	S(P) - P(S)	P(S) - S(P)
CCW PUMP In - out	P(S) - S(P)	S(P) - P(S)



3. Rated Voltage:

12 VDC 24 VDC

4. Max. Power Input:

22 Watts 22 Watts

5. Max. Continuous Current:

1.30 A 650 mA

6. Control Current: Swash Begin:
Full Displ.:

350 mA \pm 10 175 mA \pm 10
720 mA 360 mA

If used with an HMV-02 infinitely variable motor, the following currents applied to the pump solenoids will develop control pressures which in turn can be used to control the displacement of the motor.

Motor Destroke Begin: 720 mA 360 mA
Full Minimum Displ.: 1.15 A 555 mA

7. Coil Resistance:

7 ohm 26.5 ohm

8. Relative Duty cycle:

100% ED 100% ED

9. Protection Level:

IP 54 IP 54



**HPV-02 ELECTRO HYDRAULIC CONTROL
"E1 and E2 "
CONTROL CHARACTERISTICS**

**Bulletin No.
HPV-02 000
06.00/008/03**

10. Required Dither Signal:

Pulse Width Modulated
100 - 150 Hz

11. Response Time:

≥ 1 sec

12. Geometric Displacement vs
Control Current:

