VALV-O-MATIC 43/PPC-HDL

4W3P Proportional Pressure Compensated with Heavy Duty Manual Lever

Electro-hydraulic Directional Proportional Control Valve System

**Monoblock Directional Control Valve**
Load sensing / Pressure compensated.
Fixed or Variable Displacement Pump configuration.
1 to 6 working sections in the same bank.

**Electro-Hydraulic Controls**
Multi-function / Direct acting non-feedback proportional solenoid.

**Manual Control Options**
Full size/ Heavy-duty Manual Control levers.

**Principle of Operation**
The VOM 43/PPC-HDL is a closed center, load sensing sectional valve with pressure compensation of each section and manual lever control. Depending on the configuration of the inlet section, this system can be used with FIXED DISPLACEMENT pumps or with pressure/flow compensated VARIABLE DISPLACEMENT pumps. When multiple functions are selected, the VOM 43/PPC-HDL valve system will automatically resolve the highest function load pressure, which is then transmitted to the inlet unloaded/by-pass pressure compensator of a fixed displacement pump, or to the pressure/flow compensator element of an automatic variable displacement pump. The VOM 43/PPC-HDL valve bank comes with a system relief valve, while work port pressure limiting is accomplished by using auxiliary anti-shock/anti-cavitation valves at each port. For systems where dual REMOTE and MANUAL control is requested, or in case of electrical power loss, regular size MANUAL LEVERS are provided to maintain full LOAD SENSE functionality of the system.

**Hydraulic Specifications**
- Max. operating flow: 45 lt/min
- Max. flow per section: 25 lt/min
- Max. work pressure: 250 bar
- By-pass pressure compensator setting: 10-14 bar
- Max. back pressure at T port: 10 bar
- Media operating temperature range: -15°C/+105°C
- Max. contamination level: 18/15/10 (ISO 4406)
- Fluid viscosity range: 20-480 cSt
- Seals: Buna-N (std.) / Viton (opt.)

**Electrical Specifications**
- Nominal coil voltage: 12/24 VDC
- Supply voltage tolerance: ±15%
- Coil Ohmic resistance: 3.9/15.6 Ohm
- Max. control current: 1880/900 mA
- C/Current characteristic: PWM
- Optimum dither frequency: 100-125 Hz
- Coil duty cycle: 100% ED
- Env. Protection class: IP67
- Coil termination: DT= Deutsch DT04, AJ= Amp Junior Time, HC= DIN 43650

**Applications**
- Service Cranes
- Aerial Platforms
- AG Implements
- Stabilizers Control
- Self-leveling Structures
- Extendable & Tilting Trailers

Manufacturers of Hydraulics and Electronic Management Systems
VALV-O-MATIC 43PPC  VALVE SYSTEM CONFIGURATION AND OPTIONS

**Valve Family**
- **IFC-00** FDP = fixed displacement pump
- **IFC-49** FDP with EV49 full flow dump valve
- **IV0-00** VDP = variable displacement pump
- **IV0-49** VDP with EV49 full flow dump valve

**Inlet section**
- **EGS4P08/HDL** Proportional / 0 to 8 lt/min / Cyl. Spool wih manual lever
- **EGS4P10/HDL** Proportional / 0 to 10 lt/min / Motor Spool wih manual lever
- **EGS4P18/HDL** Proportional / 0 to 18 lt/min / Cyl. Spool wih manual lever
- **EGS4M25/HDL** Proportional / 0 to 25 lt/min / Motor Spool wih manual lever

**Work section**
- **IFC-00** FDP = fixed displacement pump
- **IFC-49** FDP with EV49 full flow dump valve
- **IV0-00** VDP = variable displacement pump
- **IV0-49** VDP with EV49 full flow dump valve

**Voltage & Terminal**
- **12VDT**
  - **12V** = 12VDC
  - **24V** = 24VDC
  - **DT** = Deutsch DT04
  - **AJ** = AMP Jr. Time
  - **HC** = DIN 43650

**Valve Bank Length**

<table>
<thead>
<tr>
<th>Sections</th>
<th>Dim. A (mm)</th>
</tr>
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<tbody>
<tr>
<td>1F</td>
<td>136</td>
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<tr>
<td>2F</td>
<td>176</td>
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<tr>
<td>3F</td>
<td>216</td>
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<tr>
<td>4F</td>
<td>256</td>
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<tr>
<td>5F</td>
<td>296</td>
</tr>
<tr>
<td>6F</td>
<td>336</td>
</tr>
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**Hydraulic Schematic**

**Control Characteristic Flow (lt/min) vs. Current (mA)**

**PWM Driver**

**EC-PWM-P8-MPC4-H**

**Calibration & Adjustments**

**Example**