Take control with Muncie Power Products’ L125 directional control valve. The L125 is constructed with high-grade iron castings and nickel-plated spools for use in high-pressure applications and can be configured with many different spool, control and positioner options. The L125 is designed for flow rates up to 40 GPM (150 LPM), and offers superior performance in a compact package. Muncie Power Products takes pride in supplying the highest quality products along with outstanding service and support.

**KEY FEATURES**

- High-grade iron castings allow for high-pressure capabilities for the most extreme applications
- Nickel-plated spools resist wear allowing for long life under high-pressure conditions
- Tight tolerances and precision machining keep internal spool leakages low
- Internal oil core design allows for higher flow rates and low pressure drops
- Load checks on work sections and inlet relief valves are standard
- Versatile design can be configured with different spool, control, positioner and accessory options
- Work sections are preassembled and 100 percent tested prior to shipping

**TECH SPECS**

<table>
<thead>
<tr>
<th>DESIGN TYPE</th>
<th>SECTIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Work Sections</td>
<td>10</td>
</tr>
<tr>
<td>Circuit Types</td>
<td>Post-compensated load sense with open or closed center</td>
</tr>
<tr>
<td>Flow Capacity</td>
<td>Nominal: 33 GPM (125 LPM) Maximum: 40 GPM (150 LPM)</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>5,075 PSI (350 BAR)</td>
</tr>
<tr>
<td>Maximum Back Pressure</td>
<td>145 PSI (10 BAR)</td>
</tr>
<tr>
<td>Stand by Pressure</td>
<td>200 PSI (14 BAR)</td>
</tr>
<tr>
<td>Recommended Filtration</td>
<td>20/18/15 (ISO 4406:1999)</td>
</tr>
<tr>
<td>Oil Viscosity Range</td>
<td>60 to 1,360 SUS (10 to 300 cSt)</td>
</tr>
<tr>
<td>Oil Temperature Range</td>
<td>-40 to 185°F (-40 to 85°C)</td>
</tr>
<tr>
<td>Recommended Oil Temperature</td>
<td>-40 to 140°F (-40 to 60°C)</td>
</tr>
<tr>
<td>Approximate Weights</td>
<td>Inlet: 13.8 lbs. (6.26 kg) Outlet: 8.3 lbs (3.74 kg) Work Section: 8.8 lbs (4.0 kg) (Manual Control) 10.8 lbs (4.9 kg) (Electrohydraulic Control)</td>
</tr>
</tbody>
</table>

Additional options available, lead times may apply.
PERFORMANCE CURVES
FIXED DISPLACEMENT SYSTEMS

Post-compensated Spool Flow Characteristics

Stroke (mm) vs. Flow (GPM)

-7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0

Stroke (inches)

1.3 Spool
2.6 Spool
4.0 Spool
6.6 Spool
9.2 Spool
13.2 Spool
17.2 Spool
21 Spool
26.4 Spool

Flow (LPM)

0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

Spool Travel with Electric Current or Hydraulic Pressure

Stroke (mm) vs. Current (mA)

0 1 2 3 4 5 6 7 8
0 300 250 200 150 100 50

Current (mA)

0 200 400 600 800 1000 1200 1400

Hyd. Pressure (PSI)

0 50 100 150 200 250 300 350

12V Current (mA) 24V Current (mA) Pressure (PSI)
VARIABLE DISPLACEMENT SYSTEMS

Post-compensated Spool Flow Characteristics as a Function of Pump ∆P Setting
DIMENSIONS
MANUAL CONTROL VERSION
Port Size and Type
Inlet Ports = -12 SAE
Work Ports = -10 SAE
T1 Outlet = -12 SAE
D1 & D2 = -6 SAE

Note: With the “1MI” end plate for manual controls, LS signal and pilot pressure drain internally
ELECTROHYDRAULIC CONTROL VERSION

Port Size and Type
Inlet Ports = -12 SAE
Work Ports = -10 SAE
T1 Outlet = -12 SAE
D1 & D2 = -6 SAE

Note: Either D1 or D2 can be utilized as the LS signal & pilot pressure drain (One must be plumbed to tank)
### BACK-CAP OPTIONS

**Manual Control Options**

- **L125-BC-01**
  Standard 3 Position Spring Center

  ![Diagram](image1)

  - 1.59 [40.5]

- **L125-BC-06**
  06 – Detent Spool “IN”, Spring Spool “Out”

  ![Diagram](image2)

  - 2.93 [74.5]

- **L125-BC-08**
  3 Position Detent (Detent in “A” and “B” Only, Spring Return to Neutral)

  ![Diagram](image3)

  - 2.93 [74.5]

- **L125-BC-12**
  3 Position Spring Return with 4th Position Detent

  ![Diagram](image4)

  - 2.93 [74.5]

- **L125-BC-33**
  Pneumatic Air Shift, On/Off or Proportional (Use with Control Type AA, AE or AJ)

  ![Diagram](image5)

  - 4.06 [103.0]

### CONTROL OPTIONS

- **L125-CT-AA**
  Standard Lever Cap *(Note: Handle Lever Not Included)*
  P/N VLH-01-B-180

  ![Diagram](image6)

  - 3.16 [80.3]

- **L125-CT-AB**
  Lever Cap for Float Spool *(Note: Handle Lever Not Included)*
  P/N VLH-01-B-180

  ![Diagram](image7)

  - 3.16 [80.3]

- **L125-CT-AJ**
  Spool Eye Only for Direct Connection

  ![Diagram](image8)

  - 0.28 [7.0]

- **L125-CT-AK**
  Spool Eye Only for Direct Connection

  ![Diagram](image9)

  - 0.50 [12.7]

### Electrohydraulic Options (Must be used together)

- **L125-BC-49**
  3 Position Electrohydraulic Control, Proportional 12 VDC (Deutsch, DT4)

  ![Diagram](image10)

  - 5.70 [144.7]

  - 2.68 [68.0]

- **L125-CT-BV**
  12VDC Electrohydraulic Proportional Control with Lever Connection and Stroke Limiters

  ![Diagram](image11)

  - 5.70 [144.7]

  - 3.27 [83.0]
**INLET SECTIONS**

**L125-A-QK-J00-25-20-X**

- **MPP Valve Series**
  - L125 = 33 GPM Nominal LS Valve

- **Section Type:**
  - A = Inlet

- **Port Type:**
  - QK = -12 SAE by -12 SAE w/-6 SAE LS Port

- **Inlet Options:**
  - K00 = Inlet for Fixed Displacement Pumps
  - J00 = Inlet for Variable Displacement Pumps

**Special Features:**
- X = Standard

**LS Relief Valve Setting**:  
- 13 = 1,815 PSI (125 BAR)  
- 15 = 2,175 PSI (150 BAR)  
- 20 = 2,900 PSI (200 BAR) Standard

**Main RV Setting**:  
- 17 = 2,400 PSI (165 BAR)  
- 20 = 2,900 PSI (200 BAR)  
- 25 = 3,625 PSI (250 BAR) Standard

*LS Relief must be, at minimum, 580 PSI (40 BAR) less than the Main RV

---

**INLET RELIEF VALVES (Main & Load Sense)**

**L125-AB-L-200-LS**

- **L125 Valve Series**
  - L125 = 33 GPM Nominal LS Valve

- **Section Type:**
  - AB = Used with Inlet

**Relief Valve Adjustment Range:**
- **Main RV Options:**
  - N = 580-2,900 PSI (40-200 BAR)
  - R = 2,915-6,090 PSI (201-420 BAR)
- **Load Sense RV Options:**
  - L = 725-3,625 PSI (50-250 BAR)
  - M = 3,640-5,075 PSI (251-650 BAR)

**Relief Valve Use:**
- Leave Blank for Main Relief Valve
- LS = Load Sense Relief Valve

**Relief Valve Setting in BAR:**
- **Main RV Options:**
  - 165 = 2,400 PSI
  - 200 = 2,900 PSI
  - 250 = 3,625 PSI
- **Load Sense RV Options:**
  - 125 = 1,185 PSI
  - 150 = 2,175 PSI
  - 200 = 2,900 PSI

---

**END PLATES**

**L125-C-ER-1MI-XXX**

- **L125 Valve Series**
  - L125 = 33 GPM Nominal LS Valve

- **Section Type:**
  - C = End Plate

- **Port Size & Type:**
  - ER = -6 SAE by -6 SAE LS Drain Ports

**Additional Outlet Options:**
- XXX = No options

**Outlet Type:**
- 1MI = End Plate for Manual Controls
  - (Internal Drain for LS signal Pilot Pressure)
- 2EH = End Plate for Electrohydraulic Controls
  - (Must utilize -6 SAE external drain for LS signal and Pilot Pressure)

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**STUD KITS**

**L125-T-01**

- **L125 Valve Series**
  - T = Tie Rod

**Number of Work Sections**
- 01-10 (1-10 Work Sections)

---

<table>
<thead>
<tr>
<th>No. of Work Sections</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;L&quot; (in/mm)</td>
<td>3.74 / 95</td>
<td>5.24 / 133</td>
<td>6.77 / 172</td>
<td>8.27 / 210</td>
<td>9.76 / 248</td>
<td>11.30 / 287</td>
<td>12.76 / 324</td>
<td>14.21 / 361</td>
<td>15.75 / 400</td>
<td>17.24 / 438</td>
</tr>
</tbody>
</table>

---

"L" (in/mm)
MODEL NUMBER CONSTRUCTION

**WORK SECTIONS**

**L125-ZR-AA-01 FM-02-X**

**L125 Valve Series**

L125 = 33 GPM Nominal LS Valve

**Work Port Option:**

W33 = Work Port RV + Anti-Cavitation
WCX = Blanking Plug

**Setting Range:**

Z = No Range, Used with W33
X = Used with WCX

**Spool Type:**

<table>
<thead>
<tr>
<th>Cylinder</th>
<th>Motor Code</th>
<th>4th Pos.</th>
<th>Max Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZC</td>
<td>YE</td>
<td>--</td>
<td>1.3</td>
</tr>
<tr>
<td>ZD</td>
<td>YE</td>
<td>XH</td>
<td>2.6</td>
</tr>
<tr>
<td>ZE</td>
<td>YG</td>
<td>--</td>
<td>4.0</td>
</tr>
<tr>
<td>ZF</td>
<td>YH</td>
<td>--</td>
<td>6.6</td>
</tr>
<tr>
<td>ZG</td>
<td>YJ</td>
<td>XM</td>
<td>9.2</td>
</tr>
<tr>
<td>ZJ</td>
<td>YM</td>
<td>--</td>
<td>13.2</td>
</tr>
<tr>
<td>ZM</td>
<td>YP</td>
<td>XS</td>
<td>17.2</td>
</tr>
<tr>
<td>ZN</td>
<td>YR</td>
<td>XT</td>
<td>21.0</td>
</tr>
<tr>
<td>ZR</td>
<td>YT</td>
<td>--</td>
<td>26.4</td>
</tr>
</tbody>
</table>

**Control Type:**

AA = Handle Control Actuator (Handle not included)  
(See Note 1)
AB = Handle Control Actuator for 4th Position Spools  
(Handle not included) (See Note 1)
AJ = Spool Eye Only for Direct Connection
AK = Spool Eye Only for Direct Connection  
for 4th Position Spools
BV = "A" Side Electrohydraulic Control with Stroke  
Limitor and Connection for Backup Lever  
(12V Deutsch) (See Notes 1 & 2)

**Back-cap Positioners & Controls:**

01 = 3 Position Spring Return
06 = Detent Spool "IN", Spring Spool "OUT"
08 = 3 Position Detent
12 = 3 Position Spring Return with 4th Position Detent
33 = Pneumatic Positioning (On/Off or Proportional)
49 = "B" Side Electrohydraulic Shifter (12V Deutsch, DT4)  
(See Note 2)

**Special Features:**

X = No Option (Standard)

**Work Port Options:**

W33 - RV Setting (in Bar):

- Standard Settings:
  - 050 = 725 PSI (50 BAR)
  - 080 = 1,200 PSI (80 BAR)
  - 130 = 1,900 PSI (130 BAR)
  - XXX = No Setting

**Combined Relief & Anti-cavitation Valve Options RV+AC Set @ 725 PSI (50 BAR) NOT ADJUSTABLE**

- 50 = RV+AC on "A" Port, Set @ 725 PSI (50 BAR)
- 51 = RV+AC on "B" Port, Set @ 725 PSI (50 BAR)
- 52 = RV+AC on "A & B" Port, Set @ 725 PSI (50 BAR)

**RV+AC Set @ 1,200 PSI (80 BAR) NOT ADJUSTABLE**

- 47 = RV+AC on "A" Port, Set @ 1,200 PSI (80 BAR)
- 48 = RV+AC on "B" Port, Set @ 1,200 PSI (80 BAR)
- 49 = RV+AC on "A & B" Port, Set @ 1,200 PSI (80 BAR)

**RV+AC Set @ 1,900 PSI (130 BAR) NOT ADJUSTABLE**

- 53 = RV+AC on "A" Port, Set @ 1,900 PSI (130 BAR)
- 54 = RV+AC on "B" Port, Set @ 1,900 PSI (130 BAR)
- 55 = RV+AC on "A & B" Port, Set @ 1,900 PSI (130 BAR)

**Steel Plug to Create P-T for Single-acting Function**

56 = Steel Plug on "A" Port for Single-acting Function on "B"
57 = Steel Plug on "B" Port for Single-acting Function on "A"

**Port Type**

FM = -10 SAE

**Notes:**

1. Standard Handle Kit P/N: VLVH-01-B-180  
   (Length: 7" (180mm))
2. Control "BV" and Back-cap "49" Must Be Used Together

**ORDER EXAMPLE**

If you would like to order an assembled valve, you will need to order each item separately. The order in which parts are entered is how the valve will be built from left to right. On the right is an example of a three work section valve order:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L125-A-QK-J00-25-20-X</td>
<td>1</td>
<td>Inlet with relief valve and LS Relief</td>
</tr>
<tr>
<td>L125-ZR-AA-01-FM-02-X</td>
<td>2</td>
<td>Work section 1 and 2</td>
</tr>
<tr>
<td>L125-YH-AJ-01-FM-50-X</td>
<td>1</td>
<td>Work section 3</td>
</tr>
<tr>
<td>VLVH-01-B-180</td>
<td>2</td>
<td>7.0&quot; (180mm) handle kits for WS 1 and 2</td>
</tr>
<tr>
<td>L125-C-ER-1ML-XXX</td>
<td>1</td>
<td>Standard outlet</td>
</tr>
<tr>
<td>L125-T03</td>
<td>1</td>
<td>Stud kit for 3 section assembly</td>
</tr>
</tbody>
</table>

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A Member of the Interpump Group
MP17-01 (Rev. 11-18)