Bulletin HY14-2103/US

Series MV3
Midget Directional Control Valves

Effective: February 1, 2004
Supersedes: Cat. No. PMF 1002 dated 10/99

Features

- Superior versatility
- Both open and closed center configurations
- Excellent metering characteristics
- Inlet load drop checks
- Optional high flow inlets (low ∆P)
- Fourth position float
- Combinable with Parker Mini-Pak solenoid operated directional control valves
- Power beyond feature

Description

The Parker Series MV3 Midget Directional Control Valves provide multiple-function directional control in series, parallel and series-parallel circuits. Proven for more than 30 years in thousands of mobile and industrial hydraulic systems, these Parker Midget Valves are modular in design and can be assembled in a wide variety of circuit configurations.

Specifications

Operating Pressure: 3000 PSI (207 Bar) maximum.

Power Beyond Pressure Capability: 3000 PSI (207 Bar).

Operating Fluid: Standard petroleum-based.

Leakage C-T at 3000 PSI (207 Bar): 5.4 in³/min. (88.5 cc/min.) at 100°F (38°C), 150 SSU (32 cSt).

Handle Pull Force at 3000 PSI (207 Bar): 15 lbs. (66.6 N) maximum, spring centered or detent.

Filtration Requirement: Recommend 25 micron (nominal). Class 18/15 according to ISO 4406, or cleaner.
PERFORMANCE

NOTE: SAE 10 oil at 100°F (38°C), Viscosity 150 SSU (32 cSt)

MATERIALS

Construction: Hard chrome-plated precision spool, high-strength alloy cast iron body, standard Buna “N” seals.

Porting: SAE-6 (9/16” x 18 thread)

Stacking Limitation:
Recommended to 5 sections at maximum rated flow and pressure. For additional sections consult factory.

Tie Rod Torque Specification:
115-125 lb. in. (130-14.1 N-m)

Shipping Weight Per Section:
6 lbs. (2.7 kg) approx.
DIMENSIONS ARE IN INCHES (MILLIMETERS) AND ARE FOR REFERENCE ONLY.
OPTIONS

- Spring-centered or detented spools in any combination.
- Integral, adjustable inlet relief valve.
- Priority inlet with direct-acting relief valve; available in 50 - 3,000 psi (3.5 - 207 BAR).
- Power beyond outlet sections.
- Electric limit switches for DC power unit switching with 1/4" (6.35 mm) spade connectors.
- Open center series conversion.
- Closed center parallel circuit stack conversion.

- **R** Direct Acting Relief Valve
  Adjusted in 2 Pressure Ranges
  50-500/500-3000 psi
  (3.5-35/35-207 BAR)

- **L, M** Electric Limit Switch on Spool Cap
  1/4" (6.35 mm)
  Spade Adaptors
  L - 3 position
  M - 2 position

- **NI** Load Drop Checks

- **PB** Power Beyond Outlet Section

- **SP** Series Conversion Plate

- **IP** Isolator Plate

- **MI/O** Mid Inlet/Outlet

- **F** Forked End Spool
**ORDER CODE**

**MV3** - Table One: **XXXX** - Table Two - Table Three - Table Four - Repeat Tables Two, Three and Four as needed for additional valve sections - Table Five - Table Six

Example: **MV3-NR2000-10A-IP-10FM-SO**

### TABLE ONE

<table>
<thead>
<tr>
<th>INLET OPTIONS</th>
<th>SPOIL OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NI</td>
<td></td>
</tr>
<tr>
<td>NRI</td>
<td></td>
</tr>
<tr>
<td>NDIP</td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td></td>
</tr>
<tr>
<td>NPR</td>
<td></td>
</tr>
</tbody>
</table>

Specify pressure setting on NR; Specify pressure and flow on NPR.

### TABLE TWO

<table>
<thead>
<tr>
<th>SPOIL CONFIGURATION</th>
<th>10</th>
<th>14</th>
<th>17</th>
<th>20</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 position 4 way N/C (C1 and C2 Blocked)</td>
<td>3 position 4 way Motor (C1 and C2 Open to Tank)</td>
<td>3 position 3 way (C2 Blocked)</td>
<td>2 position 4 way N/C (C1 and C2 Blocked)</td>
<td>4 position 4 way (Float); (C1 and C2 Blocked)</td>
</tr>
</tbody>
</table>

### TABLE THREE

<table>
<thead>
<tr>
<th>OUTLET OPTIONS</th>
<th>SPOOL OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td></td>
</tr>
<tr>
<td>DTO</td>
<td></td>
</tr>
<tr>
<td>DTC</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE FIVE**

- **Standard Outlet (Open Circuit)**
- **Standard Outlet (Closed Circuit)**
- **Power beyond (Open Circuit)**
- **Dual Tank Outlet (Open Circuit)**
- **Dual Tank Outlet (Closed Circuit)**
- **Standard Outlet w/Reverse check (Open Circuit only)**

### TABLE SIX

- **Banking Kits**
  - **MV3**
    - 1 spool section=inlet/outlet
    - 2 spool section=inlet/outlet
    - 3 spool section=inlet/outlet
    - 4 spool section=inlet/outlet
    - 5 spool section=inlet/outlet
  - Please consult factory when stacking more than 5 sections.

### TABLE FOUR

- **Series Conversion Plate**
  - (Not to be used with isolation relief)
- **Isolator Plate**

### ACCESSORIES

- **MV3-H1**
  - Right Angle handle
- **MV3-H2**
  - Straight handle

**HOW TO ORDER:** Parker Mini-Pak Valves are coded by the assembled stack configuration (Left to Right) in a sequential order from inlet to outlet. Please refer to the ordering tables, to select a circuit type, inlet options, spool configuration, spool options, circuit conversion options as they apply to your application.
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Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA
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