

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 ΔP)
- 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).

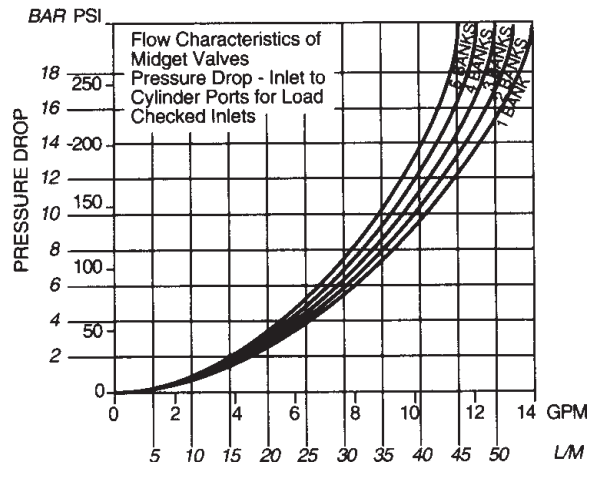
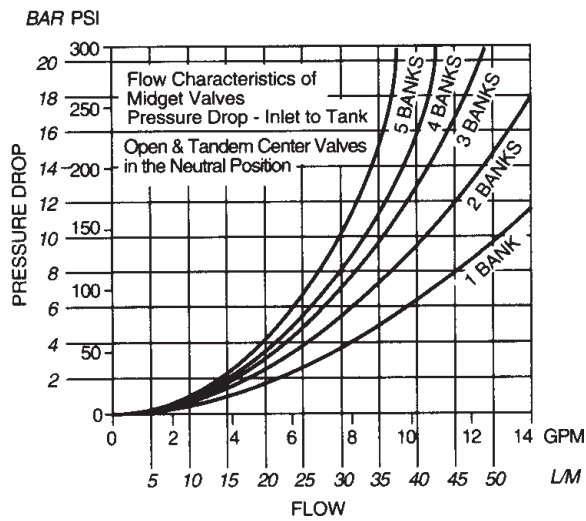
Operating Fluid: Standard petroleum-based.

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

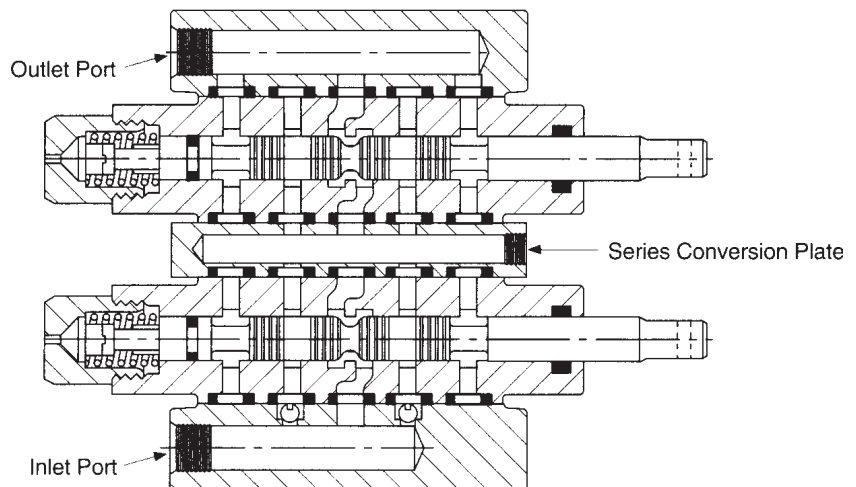
Construction: Hard chrome-plated precision spool, high-strength alloy cast iron body, standard Buna "N" seals.

Porting: SAE-6 (9/16" x 18 thread)

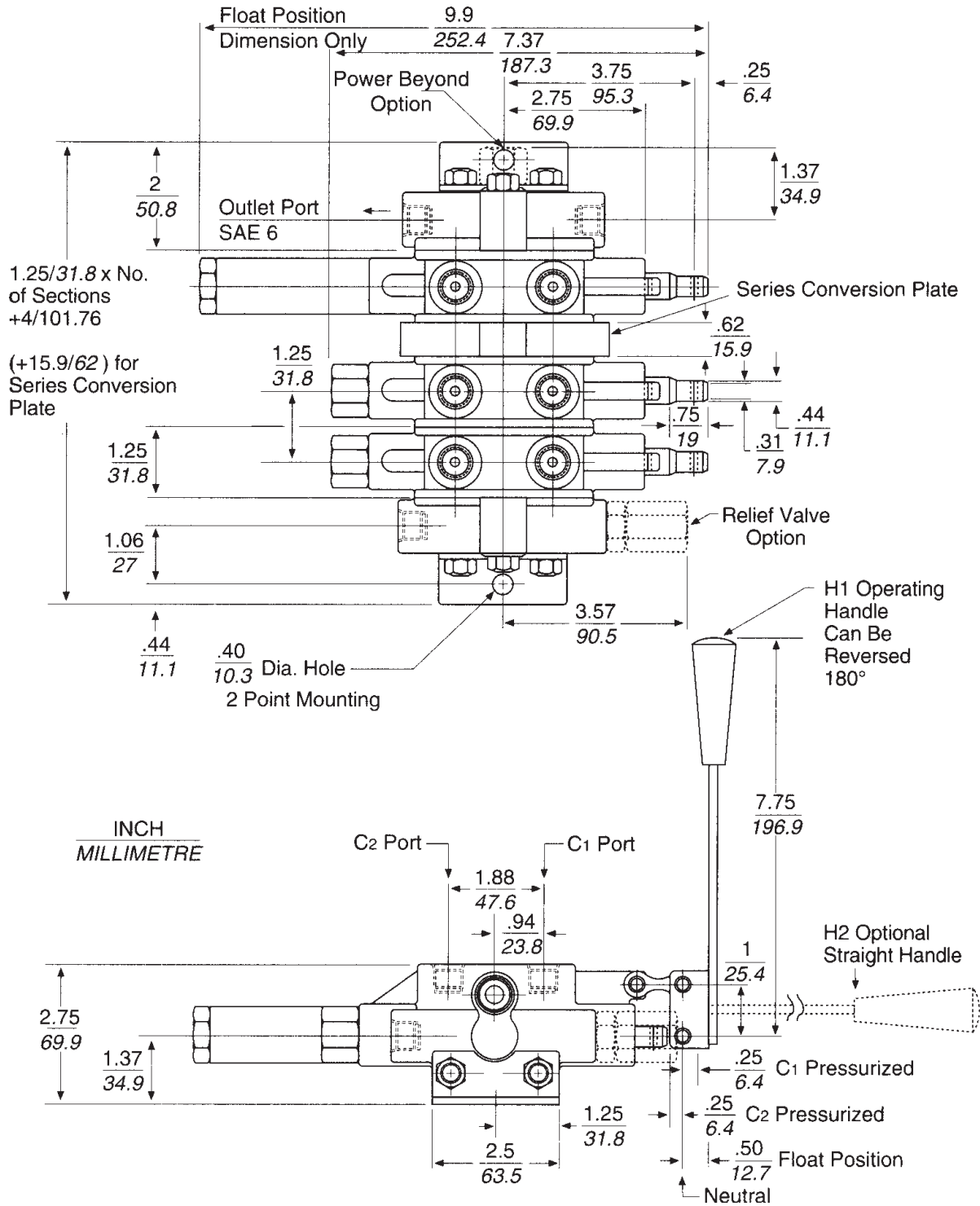
Stacking Limitation: Recommended to 5 sections at maximum rated flow and pressure. For additional sections consult factory.

Tie Rod Torque Specification: 115-125 lb. in. (13.0-14.1 N-m)

Shipping Weight Per Section: 6 lbs. (2.7 kg) approx.



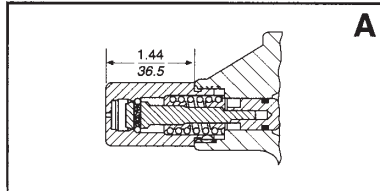
DIMENSIONS



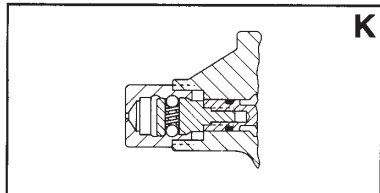
DIMENSIONS ARE IN INCHES (MILLIMETERS) AND ARE FOR REFERENCE ONLY.

OPTIONS

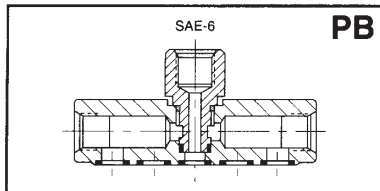
- Spring-centered or detented spools in any combination.
- Integral, adjustable inlet relief valve.
- Priority inlet with direct-acting relief valve; available in 50 - 3,000 psi (3.5 - 207 BAR).
- Power beyond outlet sections.
- Electric limit switches for DC power unit switching with 1/4" (6.35 mm)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



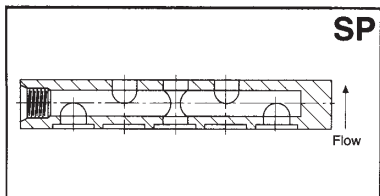
A
Spring Center/Detent Position Cap



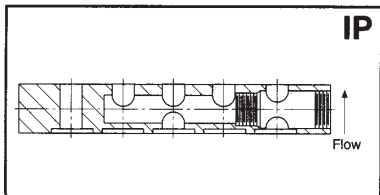
K
2K, 2-Position Detented Cap
3K, 3-Position Detented Cap



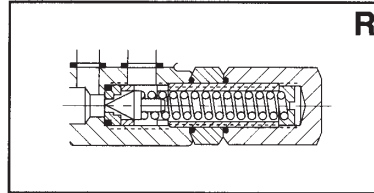
PB
Power Beyond Outlet Section



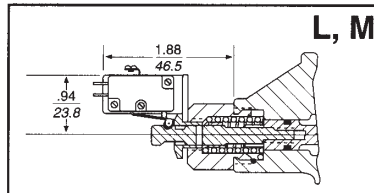
SP
Series Conversion Plate



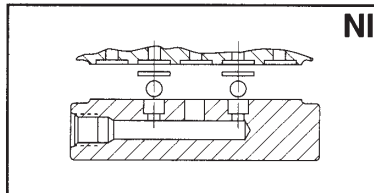
IP
Isolator Plate



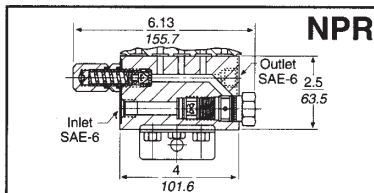
R
Direct Acting Relief Valve
Adjustable in 2 Pressure Ranges
50-500/500-3000 psi
(3.5-35/35-207 BAR)



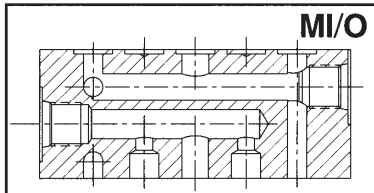
L, M
Electric Limit Switch on Spool Cap
1/4" (6.35 mm) Spade Adaptors
L - 3 position
M - 2 position



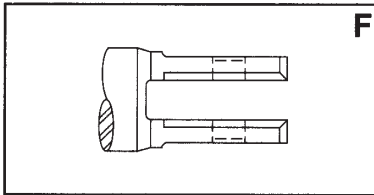
NI
Load Drop Checks



NPR
Priority Inlet with Direct Acting Relief
Adjustable in 2 Pressure Ranges
50-500/500-3000 psi
(3.5-35/35-207 BAR)



MI/O
Mid Inlet/Outlet



F
Forked End Spool

ORDER CODE

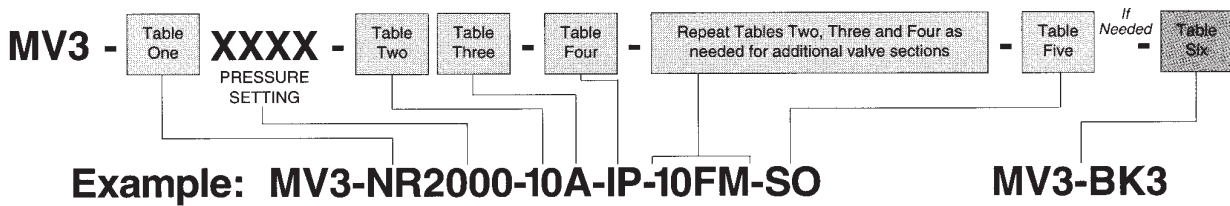


TABLE ONE		
NI		Inlet w/Load Checks
NRI		Reverse Ported Inlet w/Load Checks
NDIP		Dual Ported Inlets w/Load Checks
NR		Inlet w/Load Checks and Adjustable Direct Acting Relief
NPR		Inlet w/Load Checks Priority Flow and Direct Acting Relief

Specify pressure setting on **NR**
Specify pressure and flow on **NPR**

TABLE TWO		
10		3 position 4 way N/C (C1 and C2 Blocked)
14		3 position 4 way Motor (C1 and C2 Open to Tank)
17		3 position 3 way (C2 Blocked)
20		2 position 4 way N/C (C1 and C2 Blocked)
34		4 position 4 way (Float) (C1 and C2 Blocked)
35		Tool Priority Selector (Must be used with IP plate)

TABLE THREE		
A		Detented (Spool In) Spring Centered
B		Detented (Spool Out) Spring Centered
F		Forked End Spool
K		Detented In Both Operating Positions
L		Micro-Switch Operated in 3 Positions
M		Micro-Switch Operated in 2 Positions
FM	Fine Metering available on #10 and #14 spools only. Designed to give the operator some touch and Feel (As a Meter-Out device it is not recommended to be used with load holding valves.)	

TABLE FOUR		
SP		Series Conversion Plate (Not to be used w/Inlet relief)
IP		Isolator Plate

ACCESSORIES	
Handle Kits order separately	
MV3-H1	Right Angle handle
MV3-H2	Straight handle

TABLE FIVE		
SO		Standard Outlet (Open Circuit)
SC		Standard Outlet (Closed Circuit)
PB-		Power beyond (Open Circuit)
DTO		Dual tank Outlet (Open Circuit)
DTC		Dual tank Outlet (Closed circuit)
NO		Standard Outlet w/reverse check (Open Circuit only)

TABLE SIX	
Banking Kits consist of 3 fatigue proof steel tie rods, 6 hex nuts, 6 washers, 2 foot brackets. Tie rods are sized to accept an Inlet/Outlet and then the number spool sections and/or conversion plates required.	
MV3-BK1	1 spool section+inlet/outlet
BK2	2 spool section+inlet/outlet
BK3	3 spool section+inlet/outlet
BK4	4 spool section+inlet/outlet
BK5	5 spool section+inlet/outlet
Please consult factory when stacking more than 5 sections.	

Please Note: Mylar shims and "O" rings are shipped with each valve section.

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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9/91-P

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