

Bulletin HY14-2105/US

Series MV5 Mini-Pak Directional Control Valves

Effective: February 1, 2004
Supersedes: Cat. No. PMF 1004 dated 10/99

Features

- Superior versatility in many combinations of different working sections
- Unique series/parallel banking
- Full manual overrides
- Optional high flow inlets (low ΔP)
- Solenoid coils are weather-resistant and provide continuous duty at nominal rated voltage
- Proportional flow inlet
- Both open and closed center configurations
- Power beyond feature

Description

The Parker Series MV4 Mini-Pak, solenoid-operated valves provide multiple-function directional control. The modular banking design concept eliminates costly fittings and potential leak points. Parker Mini-Pak valves are easy to install in both the factory and in the field.

Solenoid actuator construction utilizes the proven wet plunger design. Series, parallel and series-parallel valve circuitry offers application flexibility and energy savings potential.

Specifications

Flow: 6 GPM (23 L/M).

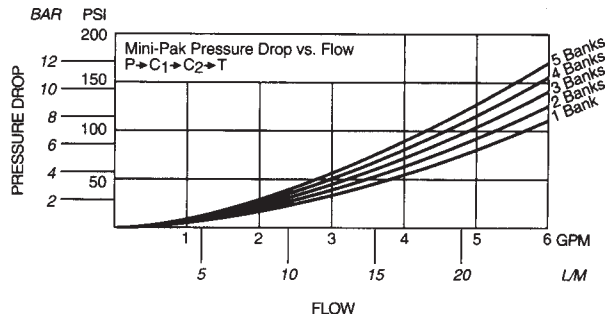
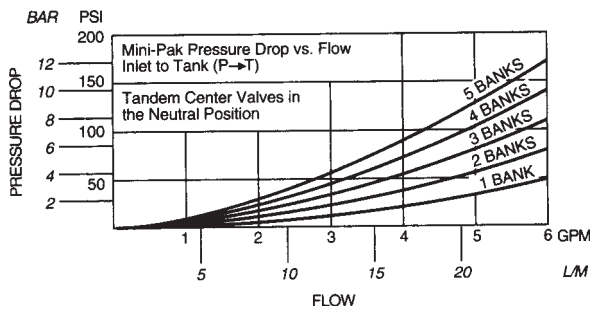
Operating Pressure: 3000 PSI (207 Bar) maximum.

Operating Fluid: Standard petroleum-based.

Leakage C-T at 3000 PSI (207 Bar): 10.8 in³/min. (177 cc/min.) at 100°F (38°C), 150 SSU (32 cSt).

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: Hardened steel spool, precision fit into high-strength alloy cast iron body. Buna "N" seals. Solenoid coils are epoxy-encapsulated (weather-resistant), with Class H magnet wire and PVC-coated lead wires.

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

Banking Limitation:

Recommended to 5 sections only. Additional sections on factory-approved applications.

Tie Rod Torque Specification:

115-125 lb. in. (13.0-14.1 N-m)

Shipping Weight Per Section:

9.5 lbs. (4.3 kg) approx.

ELECTRICAL DATA

Input Voltages: 9, 12, 24 VDC or 115 VAC 50/60 Hz.

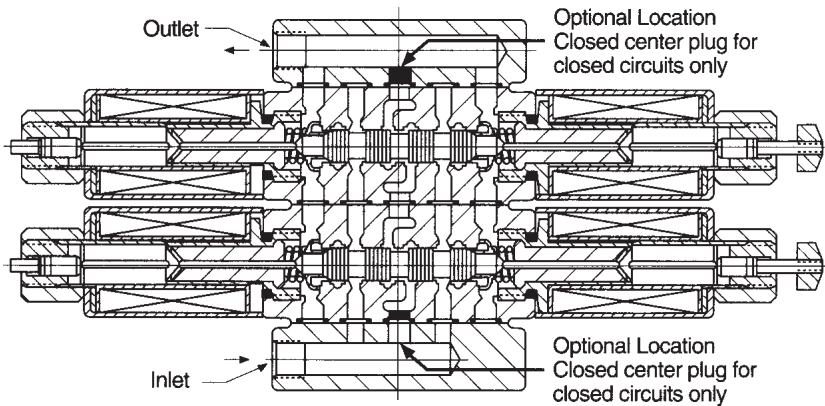
Current Draw:

9 VDC — 3.1 A at 68° F (20°C)

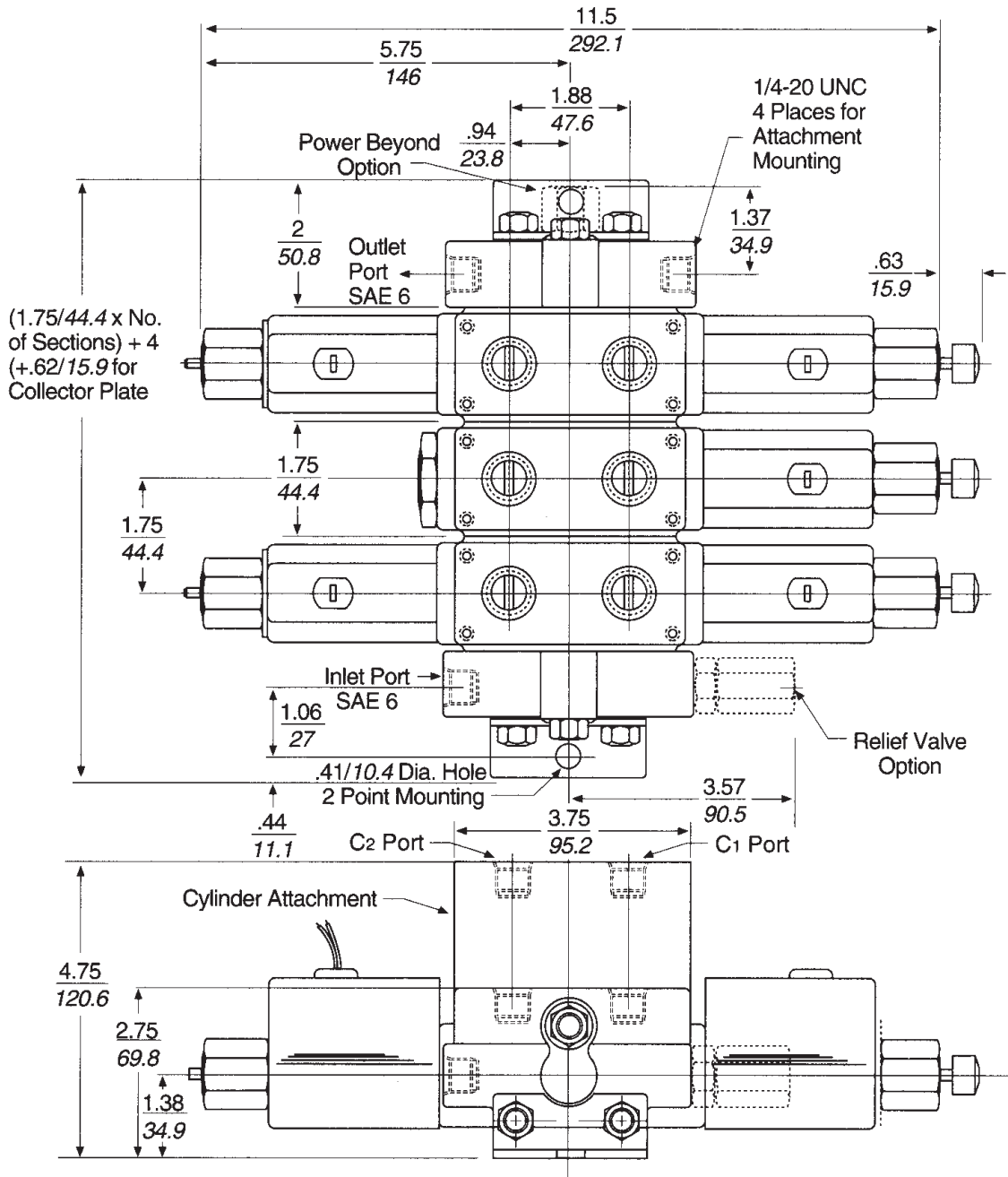
12 VDC — 2.4 A at 68° F (20°C)

24 VDC — 1.2 A at 68° F (20°C)

115 VAC — .30 A at 68° F (20°C)



DIMENSIONS

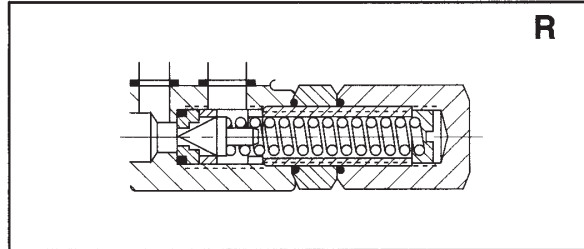


DIMENSIONS ARE IN INCHES (MILLIMETERS) AND ARE FOR REFERENCE ONLY.

OPTIONS

OPTIONS

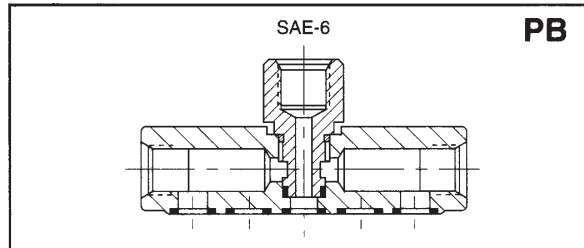
- Integral adjustable inlet relief valve.
- Priority inlet with direct-acting relief valve.
- Convertible to open center series or closed center parallel circuit stacks.
- Accessory cylinder port attachments.
- Bankable manual sections may be installed upstream of solenoid sections.
- Palm button manual override.
- Proportional flow inlet.
- Variety of coil terminations.



R

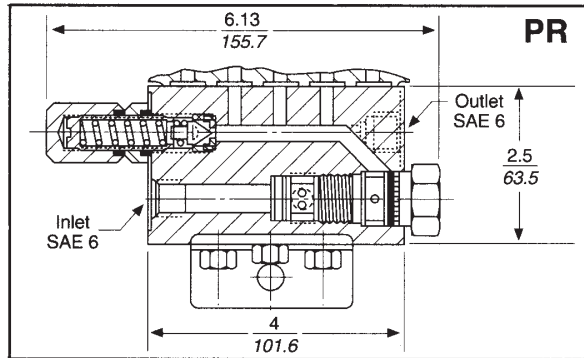
Direct Acting Relief Valve

Adjustable in 2 pressure ranges: 50-500/500-3000 psi (3.5-35/35-207 BAR)



PB

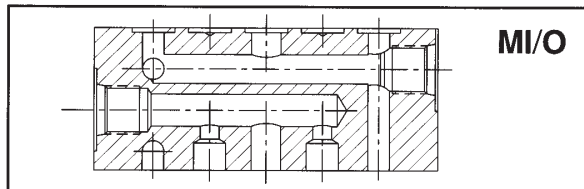
Power Beyond Outlet Section



PR

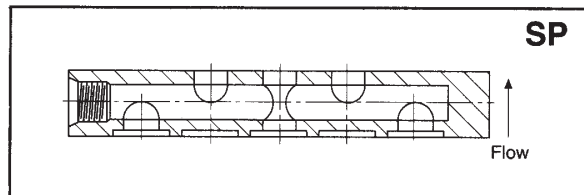
Priority Inlet with Direct Acting Relief

Adjustable in 2 pressure ranges: 50-500/500-3000 psi (3.5-35/35-207 BAR)



MI/O

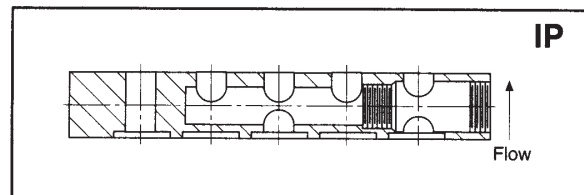
Mid Inlet/Outlet



SP

Series Conversion Plate

Used in series circuits

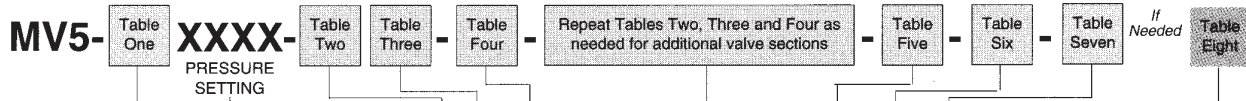


IP

Isolator Plate

Used to isolate downstream sections

ORDER CODE



Example: MV5-R2000-10A-SP-10TT-SP-10A-SO-12-LA MV5-BK5
 (Complete Assembly)

Example on ordering individual parts: MV5-SI or MV5-10-12-LA

TABLE ONE	
SI	Standard Inlet
RI	Reverse Ported Inlet
DIP	Dual Ported Inlet Ports
R	Inlet with Direct Acting Adjustable Relief
PR	Inlet With Priority Flow and Direct Acting Relief
EF	Proportional Inlet with Direct Acting Relief (Bypass port T2 must go directly to tank)

Specify pressure setting on **R**
Specify pressure and flow on **PR**

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 4 way C1 Plugged (Single acting cyl. circuit)
20	2 position 4 way N/C (C1 and C2 Blocked)
25	2 position 4 way N/O (C1 and C2 Open)
35	2 position 4 way Selector (P to C1 C2 to tank) Must be used with IP plate
JJ	Palm button manual override

(Note: Spool number precedes JJ designation)

TABLE THREE	
A	Dual lock valve
B	Lock valve with thermal relief
F	Crossover relief fixed setting (Specify pressure settings)
TT	Crossover reliefs (Adjustable 0-3000 psi)
L	Single lock valve (Specify work port)

Specify pressure setting

TABLE FOUR	
SP	Converts the power-beyond port to a true series circuit
IP	Isolates the valve sections down stream

Omit if not required

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	Open Outlet w/reverse check (Open Circuit only)

TABLE SIX		
Coil	Part #	
9	CO4-9-LA	9 volts DC
	CO4-9-TD	
12	CO4-12-LA	12 volts DC
	CO4-12-TD	
24	CO4-24-LA	24 volts DC
	CO4-24-TD	
115	CO4-115-LA	115 volts AC

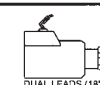
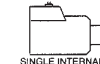
TABLE SEVEN		
LA		9 volts DC 12 volts DC 24 volts DC 115 volts DC
TD		9 volts DC 12 volts DC 24 volts DC

TABLE EIGHT	
MV5-	Banking Kits consist of 3 fatigue proof steel tie rods, 6 hex nuts, 6 washers, mounting brackets. Tie rods are sized to accept an Inlet/Outlet and then the number spool sections and/or conversion plates required.
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.

ACCESSORIES	
Attachment bolt Kits	
MV5-AK1	Single attachment
MV5-AK2	Double attachment

Please Note: "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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