Hydraulic Valve Solutions
For Industrial Applications

Parker

ENGINEERING YOUR SUCCESS.
Parker Hydraulic Valves

Planning a new motion control system comprised of hydraulic valves? Parker Hannifin is the world leader in Motion Control technologies and systems. Parker’s breadth of product line, application expertise, global support, and customer service are second to none.

Parker is a global, Fortune 300 company with nearly $11 billion in sales, more than 400,000 customers, and thousands of distributors worldwide.

Our products, engineering expertise, and manufacturing excellence make us the logical single source for your hydraulic valves and systems. Customers who work closely with Parker benefit from the value of a one-stop-shop hydraulic valve solutions provider.

Parker is your engineering partner whether you’re developing new products or improving existing ones. As industry’s foremost source for Motion and Control technologies, Parker excels in pneumatics, fluid connectors, filtration, and electromechanical products and systems in addition to hydraulics.

---

**Table of Contents**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td><strong>Manifold Mounted</strong></td>
<td></td>
</tr>
<tr>
<td>Solenoid, Lever, Air, Cam Operated Directional Control Valves</td>
<td>4</td>
</tr>
<tr>
<td>Sandwich Valves</td>
<td>7</td>
</tr>
<tr>
<td>Lo-Torq Directional Control Valves</td>
<td>8</td>
</tr>
<tr>
<td>Exactrol Directional Control Valves</td>
<td>9</td>
</tr>
<tr>
<td>Proportional Directional Control Valves</td>
<td>10</td>
</tr>
<tr>
<td>Proportional Pressure Control Valves</td>
<td>12</td>
</tr>
<tr>
<td>Servo valves</td>
<td>13</td>
</tr>
<tr>
<td><strong>In-Line Mounted</strong></td>
<td></td>
</tr>
<tr>
<td>Check Valves</td>
<td>14</td>
</tr>
<tr>
<td>Flow Control Valves</td>
<td>16</td>
</tr>
<tr>
<td>Ball Valves</td>
<td>18</td>
</tr>
<tr>
<td>Pressure Control Valves</td>
<td>20</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>19</td>
</tr>
<tr>
<td><strong>Electronic Drivers</strong></td>
<td>24</td>
</tr>
<tr>
<td><strong>DIN Slip-In Cartridges</strong></td>
<td>25</td>
</tr>
<tr>
<td><strong>Water Hydraulic Valves and Systems</strong></td>
<td>26</td>
</tr>
<tr>
<td><strong>Action Directory</strong></td>
<td>28</td>
</tr>
<tr>
<td><strong>CD Catalog</strong></td>
<td>29</td>
</tr>
</tbody>
</table>

---

**Fast Delivery of the Best Solutions**

We specialize in quick response. We’ll have your hydraulic valve solution designed, built, and delivered before our competitors fully understand your needs.

Whether you work directly with us, or with one of our premier distributors, Parker promises to deliver your hydraulic valve or system where and when you need it.
Your Single Source Vendor
You need to look no further than Parker to fulfill any hydraulic valve requirement. We provide the industry’s most comprehensive selection of valves including:

- Directional control valves and sandwich valves
- DIN slip-in cartridge valves
- Check, pressure, and flow control valves
- High and low pressure ball valves
- Servo and proportional valves

Focus on Innovation
At Parker, we’re always looking for ways to make our valves better, or to design new solutions for customers. One of our most recent offerings, the DFplus valve, was designed to replace torque motor servovalves in high-performance machine applications. DFplus valves are more cost-effective and reliable than servos in applications such as blow molding and material testing.

We Know Your Market
Being a quality supplier of hydraulic systems and components is only half the story. Parker understands industrial markets and applications, so customers are assured the right combination of products and services to improve machine reliability and performance. Some of Parker’s key focused markets include:

- Factory Automation
- Machine Tool
- Metal Forming
- Plastic and Rubber Molding
- Die Casting
- Industrial Balers and Compactors
- Material Handling
- Power Generation
- Aircraft Ground Support
- Marine
- Amusement and Entertainment
- Oil & Gas
- Automotive

Tested and Certified
Parker hydraulic valves and manifold systems are fully tested before being released to the customer. Customers can be confident that Parker hydraulic valve products will work the first time, every time.

In addition, Parker is fully committed to complying with international standards. Our valves comply with ISO, CSA, and CE standards, and we offer directional control and servovalves that are ATEX rated.
Engineering and Systems

Manifold Solutions
We offer our customers added value by designing and manufacturing custom manifold systems. By integrating valves into manifolds we provide a compact, reliable, and less costly application than employing externally mounted valves. Additionally, manifolds employ fewer connections, resulting in a reduced number of leak points. And because our custom manifolds are more compact than traditional configurations, they have a smaller footprint, facilitating streamlined machine design. Customers can order integral-valve manifold systems using a single part number.

Engineering Support
Parker Hydraulic Valve customers enjoy in-depth engineering support. Our field sales engineers work directly with customers to evaluate applications and provide the appropriate solution. Parker customers can also take advantage of our Hydraulic Technology Centers (HTCs) — distributors that design hydraulic valve systems from the ground up. These one-stop-shops offer advanced systems design and technology services such as diagnostics, troubleshooting, computer design, testing, and integrating electronic controls into systems.

Total Systems from the Ground Up
Parker HVD’s Value Proposition is second to none. In line with our corporate philosophy, HVD believes that it takes more than our great products, competitive prices, and on-time delivery to satisfy customer demands. It takes a commitment to provide exceptional value. At Parker HVD, value is not a commodity. Instead, it is the result of personal interaction and resources. Our value-added services include:

- Machine analysis and troubleshooting
- Design-engineering assistance and support
- Custom system and subsystem design
- Custom component manufacturing
- Component selection, assemblies and kits
- Global support and service
- ISO certification
- 3-D manifold design for optimal economics
- 3-D assembly drawings and documentation
- Factory assembled, tested and backed by Parker Hydraulic Valve Division
Value-Added Services

Premier Customer Service
Parker is serious about every aspect of your experience—from placing your order to receiving your product on time. Our customer service programs are designed to get the right system or component to you at the right time. Every time.

However, it takes more than great products, competitive prices, and on-time delivery to satisfy our customer needs. It takes a commitment to provide exceptional value. Parker’s value-added services include:
- System Design
- Component Selection
- New Product Development
- Custom Component Manufacturing
- Global Support and Service
- ISO Certification

Training Excellence
Parker’s training for hydraulic technology is the best in the world. We offer hands-on classes — everything from the basics through advanced motion control. Our HTCs are also partners in the training process, teaching customers how to specify and maintain Parker hydraulic valves and systems.

Moreover, hundreds of North American colleges and universities use Parker textbooks in Motion Control courses. Parker also provides instructor guides, computer-based training discs, digital overheads on CD, final exams, drafting and simulation software, lab manuals, and trainer stands.

Find out more about Parker training by calling 216-896-2495 or visiting us at www.parker.com/training.

Three-Year Extended Warranty
Parker extends its standard limited warranty to 36 months on all hydraulic valves used in properly installed and maintained systems supplied by Parker and/or its authorized HTCs. Contact your local Parker representative for details.

Parker is your partner when it comes to increased productivity and profitability. No matter what your needs, Parker is your single source provider of all your hydraulic motion and control solutions. Parker—Engineering your Success.
Directional Control Valves

Parker offers industry’s largest selection of directional control valves. Our markets include machine tools, power generation, metal forming, compacting and baling, materials testing, ground support, and primary metals processing.

Parker provides solenoid controlled as well as manually operated valves controlled by levers, cams, air or oil pilot. Our valves are some of industry's most adaptable, with a large number of coil termination options available.

Valve options include 21 standard spool configurations that meet a range of application specifications. For example, the soft shift and decompression features of our V-Notch spool reduces shock by slowing the spool shift time. We offer UL/CSA-recognized and ATEX-certified valves, as well as IP67-rated coils.

### DCV Overview

**Series D1V, D3W**
- High performance, direct operated
- 4-chamber, 3 or 4-way, 2 or 3-position (cam controlled 2-position only)
- Solenoid, cam, lever, air or oil pilot controlled

**Series D31V, D61V, D81V, D101V**
- High performance, solenoid controlled, pilot operated
- 5-chamber, 2-stage, 4-way valves, 2 or 3-position
- Rugged four land spools
- Solenoid, lever, air or oil pilot controlled

### Valve Specifications

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>D1SE</th>
<th>D1V</th>
<th>D3V</th>
<th>D31V</th>
<th>D61V</th>
<th>D81V</th>
<th>D101V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum flow* (LPM) (GPM)</td>
<td>20</td>
<td>83</td>
<td>150</td>
<td>175</td>
<td>390</td>
<td>622</td>
<td>946</td>
</tr>
<tr>
<td>Max operating pressure (Bar) (PSI)</td>
<td>350</td>
<td>345</td>
<td>345</td>
<td>345</td>
<td>207</td>
<td>345</td>
<td>207</td>
</tr>
<tr>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>3000</td>
<td>5000</td>
<td>3000</td>
<td></td>
</tr>
<tr>
<td>Mounting style (NFPA) (CETOP) (NG)</td>
<td>D03</td>
<td>D03</td>
<td>D05</td>
<td>D05H</td>
<td>D08</td>
<td>D08</td>
<td>D10</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>5</td>
<td>5H</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>10</td>
<td>-</td>
<td>25</td>
<td>25</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

*Depending on spool
**Manifold Mounted Directional Control Valves**

**Solenoid Operated**

**Series D1VW**
- Direct operated, wet armature solenoid controlled
- DC surge suppression
- Nine electrical connection options
- AC & DC lights available
- Waterproof (NEMA 4 rated)
- Explosion proof coils available
- CSA approved and UL recognized available

**Series D3W**
- High performance, direct operated
- 4-chamber, 3 or 4-way
- 2 or 3 position
- 22 standard spool styles, including proportional
- AC & DC lights
- CSA & NEMA 4 rated
- Explosion proof coils available

**Series D31VW**
- Global design is available worldwide
- Manifold or subplate mounting
- Mounting bolts below center line of spool to minimize spool binding
- 5-chamber style eliminates pressure spikes in tubes
- High pressure and low flow ratings give increased performance in compact valve

**Series D61VW, D81VW, D101VW**
- Low pressure drop design
- Manifold or subplate mounted
- Hardened spools provide long life
- Fast response option available
- Explosion proof available
- Wide variety of voltages and electrical connections

**Series D31VL**
- Global design is available worldwide
- Pilot operated, lever controlled
- Manifold or subplate mounting
- Mounting bolts below center line of spool to minimize spool binding
- 5-chamber style eliminates pressure spikes in tubes
- High pressure and low flow ratings give increased performance in compact valve

**Lever Operated**

**Series D1VL**
- Direct operated, lever controlled
- Spring return or detent styles
- Heavy duty handle design

**Series D61VL, D81VL, D101VL**
- Lever operated
- Manifold or subplate mounted
- Low force required to shift spool
- Hardened spools provide long life
- Low pressure drop design

**Series D1SE**
- Equipped with wet pin armature solenoid, drain-free, tapered poppet valve
- All steel design
- Inner parts are hardened
- Low leakage poppet design
- Poppet and seat are grinded
- Pressure balanced

**Series D3L**
- High performance, 4-chamber
- Direct operated, lever controlled
- 3 or 4-way, 2 or 3-position
- Spring return or detent styles
- High flow, low pressure drop
- Heavy duty handle

---

**Manifold Mounted**

www.parker.com/hyd/dcv
Manifold Mounted Directional Control Valves

Air and Oil Pilot Operated

Series D1VA, D1VP
- 2 or 3-position
- Low pilot pressure required 3.4 Bar (50 PSI) minimum
- Manual override standard

Series D3C, D3D
- Choice of 2 cam roller positions
- Short stroke option
- High flow, low pressure drop design

Series D1VC, D1VD, D1VG
- 2-position
- Choice of 2 cam roller positions (parallel & perpendicular)
- Two styles available (cam and cam lever)
- Short stroke option

Series D3A
- 2 or 3-position
- Low pilot pressure required
- Manual override standard
- High flow, low pressure drop design

Series D3P
- Design available worldwide
- Minimized spool binding
- High pressure and flow ratings in a compact valve

Series D61VA, D81VA, D101VA
- 2 or 3-position
- Low pressure drop
- Fast response and stroke adjust options available

Series D3C, D3D
- Choice of 2 cam roller positions
- Short stroke option
- High flow, low pressure drop design

Series D6P, D8P, D10P
- 2 or 3-position
- Low pressure drop
- Hardened spools provide long life
- Fast response and stroke adjust options available

CAM Operated

Series D1VA, D1VP
- 2 or 3-position
- Low pilot pressure required 3.4 Bar (50 PSI) minimum
- Manual override standard

Series D3A
- 2 or 3-position
- Low pilot pressure required
- Manual override standard
- High flow, low pressure drop design

Series D3P
- Design available worldwide
- Minimized spool binding
- High pressure and flow ratings in a compact valve

Series D61VA, D81VA, D101VA
- 2 or 3-position
- Low pressure drop
- Fast response and stroke adjust options available

Series D3C, D3D
- Choice of 2 cam roller positions
- Short stroke option
- High flow, low pressure drop design

Series D6P, D8P, D10P
- 2 or 3-position
- Low pressure drop
- Hardened spools provide long life
- Fast response and stroke adjust options available

www.parker.com/hyd/dcv
Sandwich Valves

Sandwich valves are auxiliary type valves that provide check, flow control, pressure reducing and relief functions in a convenient package. These “sandwich” type valves are meant to be mounted between the directional control valve and the subplate, or the main valve of a pilot operated style valve.

All bodies and hardened internal components are made from steel to assure strength and durability.

A full range of options include cracking pressure, knob adjustments and pressure ranges.

Series CM
- Provide an integral, full flow check valve in the P, A, B or T port of the directional control valve
- Reverse flow is blocked
- CM2 and CM3 offer a combined P and T version

Series PRDM
- Used to regulate pressure in one area of a hydraulic circuit below normal system pressure. The sandwich style valve is well suited for this function as it mounts directly below the directional control valve

Series FM
- Permit free flow from the directional valve to the actuator
- Adjustable independent flow regulation in each return line from the actuator (meter-out)
- FM2 and FM3 can be inverted for meter-in applications

Series RM
- Limit system pressure by opening to tank when system pressure reaches the valve setting
- RM2 valves can be configured to limit the A or B work port pressures independently

Series SPC
- Provides load-independent flow to the actuator
- 2-way or 3-way pressure compensators
- Standard pressure differential 5 Bar (73 PSI)

<table>
<thead>
<tr>
<th>Series</th>
<th>CM</th>
<th>CPOM</th>
<th>FM</th>
<th>PRDM</th>
<th>PRM</th>
<th>RM</th>
<th>SPC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type</td>
<td>Check</td>
<td>P.O. Check</td>
<td>Flow control</td>
<td>Direct operating pressure reducing</td>
<td>Pressure reducing</td>
<td>Pressure relief</td>
</tr>
<tr>
<td>Maximum flow LPM (GPM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D03 Mounting, Size 2</td>
<td>76 (20)</td>
<td>53 (14)</td>
<td>76 (20)</td>
<td>151 (40)</td>
<td>64 (17)</td>
<td>53 (14)</td>
<td>33 (9)</td>
</tr>
<tr>
<td>D05 Mounting, Size 3</td>
<td>113 (30)</td>
<td>76 (20)</td>
<td>113 (30)</td>
<td>303 (80)</td>
<td>189 (50)</td>
<td>76 (20)</td>
<td>85 (22)</td>
</tr>
<tr>
<td>D08 Mounting, Size 6</td>
<td>340 (90)</td>
<td>227 (60)</td>
<td>340 (90)</td>
<td>340 (90)</td>
<td>340 (90)</td>
<td>340 (90)</td>
<td></td>
</tr>
<tr>
<td>Max optional pressure: (Bar) (PSI)</td>
<td>345</td>
<td>345</td>
<td>345</td>
<td>315</td>
<td>345</td>
<td>345</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>4560</td>
<td>5000</td>
<td>5000</td>
<td>5075</td>
</tr>
</tbody>
</table>
Manifold Mounted Directional Control Valves

Lo-Torq Valves
In high pressure applications where manually operated directional control valves are used, such as backup systems in oil and gas, marine, ground support, and testing-equipment applications, there is no better choice than Parker lo-torq valves. Parker’s lo-torq valves provide industry leading performance with less than one drop per minute internal leakage. Plus, balanced disk-and-seal valve design ensures that handle effort stays constant even when pressures increase.

Lo-torq valves employ numerous media including oil, water, air, lube oil, solvents, inert gases, and Skydrol. They handle flows to 200 GPM, and operating pressures to 600 PSI.

Series 8000E, 8100E
• Shear-type positive seat
• Zero leakage
• High contamination tolerance
• Standard valves are interflow
• Low turning torque
• Side, bottom or subplate mounted
• Panel mounting standard
• Lubricated air, hydraulic oil and water
• Operating temperature -40° to +250°F

Series 8400E
• Shear-type positive seat
• Zero leakage
• High contamination tolerance
• Low turning torque
• Panel mounting standard
• Lubricated air and hydraulic oil

Series 8000C, 8100C
• Shear-type positive seat
• Zero leakage
• High contamination tolerance
• Low turning torque
• Panel mounting standard
• Lubricated air, hydraulic oil and water

Series 8500
• Shear-type positive seat
• Zero leakage
• High contamination tolerance
• Low turning torque
• Panel mounting standard
• Lubricated air, hydraulic oil and water

### Specifications Table

<table>
<thead>
<tr>
<th>Series</th>
<th>8000E</th>
<th>8100E</th>
<th>8000C</th>
<th>8100C</th>
<th>8400E</th>
<th>8500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size, NPT</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>1/8&quot; - 1&quot;</td>
<td>1/4&quot; - 1/2&quot;</td>
<td>1/4&quot; - 1/2&quot;</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>1/8&quot; - 1&quot;</td>
</tr>
<tr>
<td>Working Pressure (Bar)</td>
<td>207</td>
<td>414</td>
<td>207</td>
<td>414</td>
<td>207</td>
<td>207</td>
</tr>
<tr>
<td>(PSI)</td>
<td>3000</td>
<td>6000</td>
<td>3000</td>
<td>6000</td>
<td>3000</td>
<td>3000</td>
</tr>
<tr>
<td>Body Material</td>
<td>Steel X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aluminum Alloy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
**Exectrol Valves**

Parker offers an exclusive line of very low leakage directional control valves with a maximum leakage of less than one drop per minute per port, up to the full rated pressure. These valves are uniquely suited for critical applications where the hydraulic actuator must remain locked in position over extended periods of time. Unique to Parker's self compensating shear-seal slide technology, these valves maintain very low leakage performance over their entire life span—where the leakage of traditional spool valves continue to increase with life. Typical applications range from roller locks in steel mills, to dam gate controls, through deck blast deflectors on aircraft carriers.

---

**Exectrol Valves**

**Series 21100, 21200, 25100, 25200**

- Shear-type positive seal
- Very low leakage (one drop/minute per port)
- Ideal for both hydraulic oil and water soluble fluids
- Standard valves are interflow
- High tolerance to contamination and silting
- Manual overrides standard
- Operating temperature range -40° to +225° with nitrile o-rings
- Available in one and two stage versions

**Series 213**

- Designed to handle grease and oil in centralized lubricating system
- Self-cleaning and dirt resistant
- Shear-type positive seal
- Operating temperature range -40° to +225° with nitrile o-rings

---

**Table:**

<table>
<thead>
<tr>
<th>Series</th>
<th>21100</th>
<th>21200</th>
<th>25100</th>
<th>25200</th>
<th>21353</th>
<th>21356</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Size</td>
<td>Subplate</td>
<td>Subplate</td>
<td>Subplate</td>
<td>Subplate</td>
<td>3/16&quot;</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>Maximum flow (LPM) (GPM)</td>
<td>11 3</td>
<td>38 10</td>
<td>94 25</td>
<td>169 45</td>
<td>30 8</td>
<td>30 8</td>
</tr>
<tr>
<td>Working pressure (Bar) (PSI)</td>
<td>414 6000</td>
<td>414 6000</td>
<td>414 6000</td>
<td>414 6000</td>
<td>310 4500</td>
<td>310 4500</td>
</tr>
<tr>
<td>Operation Solenoid Air/Oil</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Body material Steel Aluminum</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Proportional Valves

Parker proportional valves employ powerful voice-coil valve technology, which allows higher flows from smaller valves. Our valves offer extremely high response up to 300 Hz, and are offered with or without on-board control electronics.

Three performance levels are provided:

- Economical standard performance valves are suitable for automotive, marine equipment, and metal fabrication applications, offering open-loop controlling velocity.
- Medium performance valves employ spool feedback and use both open and closed-loop control in applications such as material feeding and edge grinding.
- Applications requiring pressure and force control, as well as closed-loop control for tight positioning, are perfect for Parker’s high-performance proportional valves.

Series D*FP

- Servovalve dynamics
- Full flow capacity up to 315 Bar (4500 PSI) pressure drop through the valve
- Maximum tank pressure 315 Bar (4500 PSI) with external drain Y-port
- Spool moves to defined position on loss of power
- High flow

Series D*1FS

- High performance, two-stage pilot operated solenoid valves
- Electronic spool position feedback
- High frequency response
- Spring-centered main stage spool
- LED functional diagnostic indicator
- Wide selection of spool options and flow capacity
- 2:1 ratio and regeneration spool options

Series D**FL

- Integrated microprocessor based valve electronics
- On-board open-loop motion control profiler
- Optically isolated ‘on-off’ inputs trigger motion profiles
- User selectable operation modes: slow shift or profiler
- Test points indicating speed and ramp settings
- On-board microprocessor self-diagnostics on start-up
- LED functional diagnostic indicators
- Spring-centered spool
- Manual overrides

Series D1FC

- Spool/Sleeve designs
- Spool position feedback
- High repeatability from valve to valve
- Very low hysteresis
- Manual override

Series D*FW, D*FT

- Optional integrated control electronics with ramp adjustment
- Low leakage
- Progressive flow characteristics for improved low flow resolution
- Spring-centered main stage spool
- Wide selection of spool options and flow capacity

Series D*FB

- Spool/Sleeve designs
- High repeatability from valve to valve
- Low hysteresis
- Manual override
**Manifold Mounted Proportional Directional Control Valves**

**Series D*1FW, D*1FT**
- 2-stage pilot operated
- Optional integrated control electronics with ramp adjustment
- Low leakage
- Progressive flow characteristics for improved low flow resolution
- Spring-centered main stage spool
- Wide selection of spool options and flow capacity
- 2:1 ratio spool options

**Series D*1FH**
- High performance, 2-stage pilot operated solenoid valve
- Electronic spool position feedback
- High frequency response
- Spring-centered main stage spool
- LED functional diagnostic indicator
- Wide selection of spool options and flow capacity
- 2:1 ratio and regeneration spool options

**Series D*1FW, D*1FT**
- High performance, 2-stage pilot operated solenoid valve
- Electronic spool position feedback
- High frequency response
- Spring-centered main stage spool
- LED functional diagnostic indicator
- Wide selection of spool options and flow capacity
- 2:1 ratio spool options

**Series D*1FH**
- High performance, 2-stage pilot operated solenoid valve
- Integrated valve electronics
- Spool position feedback
- Spring-centered main stage spool
- LED functional diagnostic indicator
- Wide selection of spool options and flow capacity
- 2:1 ratio spool options

---

**Series D*1FX**
- Versatile electronic control options
- Spool position feedback
- Spring-centered spool
- Manual override
- Progressive flow characteristics for high resolution flow rate adjustment for small commands
- LED functional diagnostics

---

<table>
<thead>
<tr>
<th>Pilot Operated Series</th>
<th>D*1FW</th>
<th>D*1FT</th>
<th>D*FL</th>
<th>D*1FS</th>
<th>D*1FH</th>
<th>D*1FP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
</tr>
<tr>
<td>Mounting:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG10, ISO/CETOP 5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NG16, ISO/CETOP 7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NG25, ISO/CETOP 8</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NG32, ISO/CETOP 10</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Spool feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated electronics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max operating pressure (Bar)(PSI)</td>
<td>345 5000</td>
<td>345 5000</td>
<td>345 5000</td>
<td>345 5000</td>
<td>345 5000</td>
<td>350 5075</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Direct Operated Series</th>
<th>D1FB, D3FB</th>
<th>D1FC</th>
<th>D1FW</th>
<th>D1FT</th>
<th>D*FL</th>
<th>D*1FS</th>
<th>D*1FH</th>
<th>D1FM</th>
<th>D3FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
<td>Std.</td>
</tr>
<tr>
<td>Mounting:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG06, ISO/CETOP 3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NG10, ISO/CETOP 5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Spool feedback</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated electronics</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Max operating pressure (Bar)(PSI)</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
<td>315 4500</td>
</tr>
</tbody>
</table>

---

- www.parker.com/hyd/pdcv
Manifold Mounted Proportional Pressure Control Valves

Series RE06*T
- Standard DIN/ISO interface
- Integrated valve electronics
- MIN and MAX potentiometers for setting minimum and maximum pressure values
- Adjustable electronic ramp control with two potentiometers

Series PE
- Standard DIN/ISO interface
- Sliding spool main stage
- Optional reverse flow check valve on the PE
- MIN and MAX potentiometers for setting minimum and maximum pressure values
- Adjustable electronic ramp control with two potentiometers

Series RE*T
- Standard DIN/ISO interface
- Mechanical maximum pressure
- MIN and MAX potentiometers for setting minimum and maximum pressure values adjustment
- Adjustable electronic ramp control with two potentiometers

Series RE06M*W2
- Standard DIN/ISO/CETOP/NFPA interface
- Very low hysteresis
- Excellent repeatability
- Very low minimum pressure
- Flows up to 5 LPM (1.3 GPM) capability
- Four pressure ranges available

Series RE*W
- Standard DIN/ISO interface
- Mechanical maximum pressure adjustment
- Off-board electronic driver modules

<table>
<thead>
<tr>
<th>Series</th>
<th>RE06’T</th>
<th>RE06M*W2</th>
<th>RE’T</th>
<th>RE’W</th>
<th>PE</th>
<th>VBY</th>
<th>VMY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting: NG06, ISO/CETOP 3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG10, ISO/CETOP 5</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG25, ISO/CETOP 8</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG32, ISO/CETOP 10</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated electronics</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max operating pressure (Bar) (PSI)</td>
<td>350 5075</td>
<td>350 5075</td>
<td>350 5075</td>
<td>350 5075</td>
<td>350 5075</td>
<td>415 4500</td>
<td>415 4500</td>
</tr>
</tbody>
</table>

www.parker.com/hyd/ppcv
Servovalves
Servovalves are used in high precision applications that also require operating power of 200mW or less. These conditions are often found in process plant power generation, mining, oil and gas, and simulation applications.

The torque-motor pilot design of our servovalves incorporates mechanical feedback for high response. In addition, servovalves that meet ATEX, CSA, and Factory Mutual requirements are available for applications in hazardous conditions. Parker servovalves can directly replace competitive models in existing applications.

### Series SE
- 2-stage, 4-way flapper and nozzle design
- Lapped spool and sleeve
- Aluminum body (steel on SEMT)
- Jewel feedback ball for durability
- Medium/high performance
- On-board electronics on SE2E

### Series PH76
- Built to survive tank port pressure spikes
- No ball glitch
- Tool steel spool and body
- Optional 5th port for external pilot
- ISO 10372 standard 22.23 mm (0.875") port circle

### Series BD
- Rugged, reliable trouble-free operation
- Reduced contaminant sensitivity
- Linear flow gain characteristics
- Intrinsically safe model available
- Explosion-proof available

### Series DY
- Nozzle and flapper style valve
- Precision lapped spool and sleeve
- Tool steel or stainless steel body and spool
- No ball glitch
- Versatile port circle on most sizes
- Larger valves survive high tank port pressures

---

<table>
<thead>
<tr>
<th>Series</th>
<th>SE05, 10, 15</th>
<th>SE2N</th>
<th>SE20</th>
<th>SE2E</th>
<th>SE31</th>
<th>SE60</th>
<th>BD15</th>
<th>BD30</th>
<th>PH76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max flow rating @ 70 Bar (1000 PSI), (GPM)</td>
<td>7</td>
<td>1.8</td>
<td>57</td>
<td>15</td>
<td>125</td>
<td>33</td>
<td>75</td>
<td>20</td>
<td>75</td>
</tr>
<tr>
<td>Max pressure rating (Bar)</td>
<td>210</td>
<td>3000</td>
<td>315</td>
<td>4500</td>
<td>210</td>
<td>3000</td>
<td>315</td>
<td>4500</td>
<td>315</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Series</th>
<th>DY1S</th>
<th>DY3H, DY6H</th>
<th>DY01</th>
<th>DY05</th>
<th>DY10</th>
<th>DY12</th>
<th>DY15</th>
<th>DY25</th>
<th>DY45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max flow rating @ 70 Bar (1000 PSI), (GPM)</td>
<td>.4*</td>
<td>.1*</td>
<td>11</td>
<td>22</td>
<td>11</td>
<td>3</td>
<td>19</td>
<td>5</td>
<td>38</td>
</tr>
<tr>
<td>Max pressure rating (Bar)</td>
<td>90</td>
<td>1300</td>
<td>105</td>
<td>1500</td>
<td>210</td>
<td>3000</td>
<td>210</td>
<td>3000</td>
<td>210</td>
</tr>
</tbody>
</table>

* @90 bar (1300 PSI)
Check Valves
Industry’s widest selection of check valves come from Parker. Our valves are used in a virtually limitless range of applications—from air and fuel systems to load holding. Our check valves utilize a variety of media including oil, air, water, and Skydrol, and are made from materials such as aluminum, stainless steel, brass, and carbon steel. They employ economical metal seating or zero-leak seating with elastomer seals.

In-Line Mounted Check Valves

Series C, VCL
- Poppet style check
- Free flow in one direction; dependable shut-off in reverse

Series LT, LTF
- Operate in any position
- Restrictors available for throttle function
- Accurate control of double-acting cylinders

Series C5P
- Direct operated check valve
- SAE 61 and SAE 62 flanges
- Four sizes (SAE 3/4", 1", 1¼", 1½")
- Three springs
- Two different seal configurations

Series C5V
- Pilot operated check valve
- SAE 61 and SAE 62 flanges
- Four sizes (SAE 3/4", 1", 1¼", 1½")
- Three springs
- Two different seal configurations

Series VLS
- Protect system in event of line rupture
- Return to open position when pressure is equalize

Series 480, 490
- High velocity applications
- Resilient molded seal permanently locked to poppet for zero leakage

Series 440, 450
- For high-shock service
- Qualified to military specifications

Series J416A, J417A
- Double cylinder locking valve
- Prevent movement in any direction
- Military equivalent valves

Series AVF
- Provides automatic air line rupture shut-off
- Eliminates hose whip (pneumatic service)
- Hydraulic and pneumatic service
-Limits oil spillage and potential component damage
-Adjustable closing flow
# In-Line Mounted Check Valves

## Series 580, 590
- Mount in any position
- Full flow with low opening pressure
- Military equivalent valve

## Series SVLE
- High flow, low pressure drop design
- Minimal internal leakage
- Leak-free seat type cartridge

## Series SPR
- High flow, low pressure drop design
- Minimal internal leakage
- Leak-free seat type cartridge

![Image](image.png)

### Table: Series Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>C Type</th>
<th>VCL</th>
<th>CP</th>
<th>LT, LTF</th>
<th>VLS</th>
<th>440, 450</th>
<th>480, 490</th>
<th>580, 590</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check</td>
<td>Check</td>
<td>P.O. Check</td>
<td>Line Throttle</td>
<td>Velocity Fuse</td>
<td>High Press.</td>
<td>Soft Seat</td>
<td>Swing</td>
</tr>
<tr>
<td>Max flow range (LPM) (GPM)</td>
<td>11 - 569</td>
<td>23 - 189</td>
<td>30 - 95</td>
<td>2 - 341</td>
<td>500 - 500</td>
<td>4 - 100</td>
<td>4 - 100</td>
<td></td>
</tr>
<tr>
<td>Body material</td>
<td>Brass</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Port types/sizes:</td>
<td>NPT</td>
<td>-4 thru -32</td>
<td>1/8&quot; - 1/8&quot;</td>
<td>-8 thru -24</td>
<td>1/8&quot; - 1/2&quot;</td>
<td>1/4&quot; - 2&quot;</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>1/4&quot; - 2&quot;</td>
</tr>
<tr>
<td>SAE</td>
<td>BSPP</td>
<td>BSPT</td>
<td>JIC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/8&quot; - 1/4&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body material</td>
<td>Brass</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Port types/sizes:</td>
<td>NPT</td>
<td>-4 thru -32</td>
<td>1/8&quot; - 1/8&quot;</td>
<td>-8 thru -24</td>
<td>1/8&quot; - 1/2&quot;</td>
<td>1/4&quot; - 2&quot;</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>1/4&quot; - 2&quot;</td>
</tr>
<tr>
<td>SAE</td>
<td>BSPP</td>
<td>BSPT</td>
<td>JIC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/8&quot; - 1/4&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max operating press (Bar) (PSI)</td>
<td>345</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>210</td>
<td>345</td>
<td>210</td>
<td>24</td>
</tr>
</tbody>
</table>

### Table: Series AVF Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>C Type</th>
<th>C5V</th>
<th>SPR</th>
<th>SVLE</th>
<th>J416A, J417A</th>
<th>AVF</th>
<th>Pneu</th>
<th>Hyd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P.O. Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>P.O. Check</td>
<td>Mini</td>
<td>Velocity Fuse</td>
</tr>
<tr>
<td>Max flow range (LPM) (GPM)</td>
<td>180 - 600</td>
<td>100 - 700</td>
<td>180 - 585</td>
<td>180 - 585</td>
<td>4 - 110</td>
<td>5 - 60</td>
<td>2 - 227</td>
<td></td>
</tr>
<tr>
<td>Body material</td>
<td>Brass</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
<td>Check</td>
</tr>
<tr>
<td>Port types/sizes:</td>
<td>NPT</td>
<td>-4 thru -32</td>
<td>1/8&quot; - 1/8&quot;</td>
<td>-8 thru -24</td>
<td>1/8&quot; - 1/2&quot;</td>
<td>1/4&quot; - 2&quot;</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>1/4&quot; - 2&quot;</td>
</tr>
<tr>
<td>SAE</td>
<td>BSPP</td>
<td>BSPT</td>
<td>JIC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/8&quot; - 1/4&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subplate</td>
<td>3/8&quot;, 1/4&quot;, 1/2&quot;</td>
<td>3/8&quot;, 1/4&quot;, 1/2&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max operating press (Bar) (PSI)</td>
<td>350</td>
<td>420</td>
<td>350</td>
<td>350</td>
<td>345</td>
<td>136</td>
<td>340</td>
<td></td>
</tr>
</tbody>
</table>

---

www.parker.com/hyd/checkvalves
In-Line Mounted Flow Control Valves

Flow Control Valves
Parker flow control valves are industry’s most widely known brand. Our valves are used in a range of applications such as conveyors, food-processing machines and material-handling equipment. We offer a breadth of products that ensure velocity by guaranteeing consistent flow regardless of load. Flow control valves come in a variety of materials including stainless steel, brass, and carbon steel.

Series PC*MS
- Pressure compensated
- Adjustable flow setting
- Optional reverse flow check
- Subplate mounting

Series F
- Parker exclusive Colorflow® scale on stem
- Controlled flow in one direction, free flow in reverse
- Simple set screw for locking
- Tamperproof option

Series TPC
- Pressure compensated
- Insensitive to oil temperature changes
- Optional reverse flow checks
- Optional lunge control (1/8, only)

Series N
- Exclusive Colorflow scale on stem
- Provides controlled flow in both directions
- Set screw securely locks setting
- Standard or fine metering needles
- Tamperproof option

Series PC*M
- Pressure compensated
- Flow precision within ±5% of regulated flow
- Parker exclusive Colorflow scale on stem
- Set screw securely locks valve setting
- Available with reverse flow check
- Tamperproof option

Series FG3PKC
- Pressure and temperature compensated
- Adjustable flow setting
- Reverse flow check standard
- Optional lunge control, lock and trim adjustment
- Subplate mounting

Series 2F1C
- 2-way flow control valve
- Subplate mounting according to ISO 6263
- Excellent fine adjustment
- Adjustable response time
- Closed in neutral position
- Optional reverse flow check valve

Series FG3PKC
In-Line Mounted Flow Control Valves

Series MV
- Exclusive Colorflow scale on stem
- Provides controlled flow in both directions
- Fine and micro-fine needles
- Straight and right angle body styles
- Panel mounting kit available

Series MVI
- Installed in machined cavity of manifold
- Choice of three needles
- Precise metering control and full shut-off

Series PC*K
- Pressure compensated
- Factory set for specified flow
- Flow precision within ±5% of regulated flow
- Available with reverse flow check

Series D
- Cam-operated, 2-way valve
- Normally open, normally closed available
- Tapered spool for gradual decrease in flow
- Inline and subplate mounted

Series F
- Flow PCflow

<table>
<thead>
<tr>
<th>Series</th>
<th>PC*M</th>
<th>PC*MS</th>
<th>TPC</th>
<th>FG3PKC</th>
<th>N</th>
<th>MVI</th>
<th>MV</th>
<th>D</th>
<th>2F1C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>PC flow</td>
<td>PC flow</td>
<td>T &amp; PC flow</td>
<td>T &amp; PC flow</td>
<td>Needle</td>
<td>Cartridge Needle</td>
<td>Metering</td>
<td>Deceleration</td>
<td>PC flow</td>
</tr>
<tr>
<td>Max flow (LPM) (GPM)</td>
<td>11 - 189 3 - 50</td>
<td>11 - 189 3 - 50</td>
<td>3.8 - 95 .1 - 25</td>
<td>41.3 11</td>
<td>11 - 265 3 - 70</td>
<td>2 - 95 .5 - 25</td>
<td>4 - 110 .5 - 40</td>
<td>72 - 227 19 - 60</td>
<td>110 29</td>
</tr>
<tr>
<td>Body material</td>
<td>Brass</td>
<td>Steel</td>
<td>Stainless Steel</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Port types/sizes</td>
<td>NPT SAE BSPP BSPT</td>
<td>1/4&quot; - 1/4&quot; -6 thru -16</td>
<td>1/4&quot; - 1/4&quot; -4 thru -20</td>
<td>1/4&quot; - 1/4&quot;</td>
<td>1/4&quot; - 1&quot; -4 thru -16</td>
<td>1/4&quot; - 1/2&quot;</td>
<td>1/4&quot; - 1/4&quot;</td>
<td>1/4&quot; - 1/4&quot;</td>
<td></td>
</tr>
<tr>
<td>Subplate</td>
<td>1/4&quot; - 1&quot;</td>
<td></td>
<td>1/4&quot;</td>
<td></td>
<td>1/4&quot; - 1/4&quot;</td>
<td></td>
<td>1/4&quot; - 1/4&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max operating press (Bar) (PSI)</td>
<td>210 3000</td>
<td>210 3000</td>
<td>210 3000</td>
<td>345 5000</td>
<td>345 5000</td>
<td>345 5000</td>
<td>210 3000</td>
<td>350 5075</td>
<td></td>
</tr>
</tbody>
</table>
Ball Valves

Ball valves complete the Parker valves line-up. As with other valves, we offer a wide product line that is fully ported to provide low pressure drops. Our port configurations support a wide range of system requirements. A unique, rotating, four-bolt SAE flange design provides for easy alignment, fewer potential leaks, and lower installation costs. Our valves also employ polyamide thrust-bearing and ball-seal compounds that allow low actuation torque and high-cycle expectancy.

Series BVHP, BVAH, BVHH
- Inline ball valves, threaded and flanged connections
- Carbon and stainless steel
- Design minimizes torque needed to open and close the valve
- Options include locking handles, panel mounting, limit switches and high temperature seals

Series V500
- Cost effective solution when high pressure is not required
- Carbon steel, stainless steel, and aluminum models
- Valve available vented and option of padlocking handle

Series BV3D, BV3H, BV4H
- A variety of 3-way and 4-way ball patterns allow different flow paths
- Options include locking handles, panel mounting, limit switches and high temperature seals

Series BV3D, BV3H, BV4H
- Suction and low pressure service
- PTFE seals are compatible with a wide range of media
- Locking handles, panel mounting and limit switches available

Series BVMM
- Manifold mounting eliminates external fluid connection
- Carbon steel, stainless steel, and aluminum models
- 2-way and 3-way models

Series BVAL
- Manifold mounting eliminates external fluid connection
- Carbon steel, stainless steel, and aluminum models
- 2-way and 3-way models
## In-Line Mounted Ball Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Function</th>
<th>Pressure Bar (PSI)</th>
<th>Port Sizes</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BVHP</td>
<td>2-Way</td>
<td>414 (6000)</td>
<td>1/4&quot; - 1&quot;</td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td>BVAH</td>
<td>2-Way</td>
<td>414 (6000)</td>
<td>1/4&quot; - 4&quot;</td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td>BVHH</td>
<td>2-Way</td>
<td>689 (10,000)</td>
<td>1/2&quot; - 2&quot;</td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td>BV3H/BV4H</td>
<td>3 &amp; 4-Way</td>
<td>414 (6000)</td>
<td>1/4&quot; - 2&quot;</td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td>BVMM</td>
<td>2 &amp; 3-Way</td>
<td>414 (6000)</td>
<td></td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td><strong>Medium Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BV3D</td>
<td>3-Way (Diverter)</td>
<td>207 (3000)</td>
<td>1/4&quot; - 2&quot;</td>
<td>Steel or Stainless Steel</td>
</tr>
<tr>
<td>V500CS</td>
<td>2-Way</td>
<td>138 (2000)</td>
<td>1/4&quot; - 1&quot;</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td><strong>Low Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BVAL</td>
<td>2-Way (Suction)</td>
<td>28 (400)</td>
<td>1/4&quot; - 4&quot;</td>
<td>Aluminum</td>
</tr>
<tr>
<td>V500P</td>
<td>2-Way</td>
<td>41 (600)</td>
<td>1/4&quot; - 2&quot;</td>
<td>Brass</td>
</tr>
<tr>
<td>V590P</td>
<td>2-Way (Right Angle)</td>
<td>17 (250)</td>
<td>1/4&quot; - 1/8&quot;</td>
<td>Brass</td>
</tr>
</tbody>
</table>

### Accessories

#### Series GF
- Pressure snubber
- Isolate gage from damage and pressure surge
- One piece construction
- Requires no adjustment or maintenance

#### Series GT
- Gage isolator valve
- Push-to-read knob delivers instant pressure to the gage
- Spring-loaded spool drains fluid back to reservoir when knob is released
- Partial snubbing action protects the gage

#### Series 910
- Double-acting hand operated pumps
- Flange mount in any position
- Use anywhere since no power source is required
- Provide 2 cubic inches per cycle (2 strokes)
- Standard #6 or #8 IST ports
- Available with built-in needle valve (910N) or built-in relief valve (910R)

In-Line Mounted Pressure Control Valves

Pressure Control Valves
Parker in-line pressure control valves perfectly complement our broad range of inline mounted flow, needle, and check valves. These pressure relief valves provide the adjustable pressure control and limiting functions often required in applications where pressures need to be accurately controlled, while allowing the facility to be manually set in the field. Common applications are conveyors, food-processing, material handling, and process control.

Series 62**, 63**, 64**
- Right angle body
- 13 pressure ranges between 4 PSI and 3600 PSI (0.25 and 250 Bar)
- Soft seat poppets provide a near zero leak performance (brass and stainless steel only)
- Non-standard sizes and port styles available on request

Series 665
- In-line style
- Pressure ranges between 4 and 3600 PSI (0.25 and 250 Bar)
- Soft seat poppets available in brass and stainless steel
- Special sizes and port styles available on request

<table>
<thead>
<tr>
<th>Series</th>
<th>620</th>
<th>63x</th>
<th>64x</th>
<th>665</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size NPT SAE</td>
<td>(\frac{1}{4})&quot; - (\frac{3}{16})&quot; -4 thru -12</td>
<td>(\frac{1}{8})&quot; - (\frac{3}{4})&quot; -4 thru -12</td>
<td>(\frac{1}{4})&quot; - (\frac{3}{4})&quot; -4 thru -12</td>
<td>(\frac{1}{4})&quot; - 1&quot; -4 thru -16</td>
</tr>
<tr>
<td>Direct acting Pilot operated</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working pressure (Bar) (PSI)</td>
<td>0.3 - 248 4 - 3600</td>
<td>0.3 - 248 4 - 3600</td>
<td>0.3 - 248 4 - 3600</td>
<td>0.3 - 248 4 - 3600</td>
</tr>
<tr>
<td>Body material Stainless steel</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aluminum</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Soft seat</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Series VM
- Direct operated, pressure reducing valve with manual adjustment
- Four pressure ranges at NG6
- Three pressure ranges at NG10
- Two adjustment modes

Series UR*M, US*M
- Pilot operated unloading valve
- Two interfaces
- Four pressure ranges
- Two switching types (series US*M)
- Three adjustment modes: hand knob, screw with locknut, and DIN lock

Series S*M
- Pilot operated sequence valve
- Two interfaces
- Four pressure ranges
- Three adjustment modes: hand knob, screw with hexagon socket, and DIN knob

www.parker.com/hyd/inlinepcv
In-Line Mounted Pressure Control Valves

**Series VB**
- Direct operated sequence valve
- Manifold mounting
- Five pressure ranges at NG06
- Two adjustment modes
- Three pressure ranges at NG10

**Series R*M**
- Normally closed
- Four pressure ranges
- Two adjustment modes: hand knob and DIN lock

**Series R4V**
- Pilot operated pressure relief valve
- Two interfaces
- Three pressure stages
- Three adjustment modes: hand knob, acorn with lead seal, and DIN lock
- With optional vent function

**Series VS**
- Manifold mounting
- Spool type valve
- Five pressure ranges
- Two adjustment modes
- Direct operated pressure relief valve

**Series VBY**
- Pilot operated sequence valve
- Main stage spool type valve
- Pilot stage seated type valve
- Four pressure ranges
- Two adjustment modes: screw with hexagon socket and DIN knob

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Relief</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td>XX</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Reducer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unloader</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Operating Pressure (Bar) (PSI)</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
<th>350</th>
<th>5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Flow NG06 LPM (GPM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NG10 LPM (GPM)</td>
<td>150 (40)</td>
<td>250 (67)</td>
<td>150 (40)</td>
<td>250 (67)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td>150 (40)</td>
<td></td>
</tr>
<tr>
<td>NG25 LPM (GPM)</td>
<td>300 (80)</td>
<td>500 (133.3)</td>
<td>300 (80)</td>
<td>500 (133.3)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td>300 (80)</td>
<td></td>
</tr>
<tr>
<td>NG32 LPM (GPM)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td>650 (173)</td>
<td></td>
</tr>
</tbody>
</table>
In-Line Mounted Pressure Control Valves

Series R5P
- Direct operated, 3-way pressure compensator valve
- Seated type
- 8.4 Bar (122 PSI) control pressure
- Pressure relief function (optionally proportional)
- With optional vent function

Series R5R
- Pilot operated pressure reducing valve
- Normally closed to avoid unintended motion
- Three pressure stages
- Three adjustment modes: hand knob, acorn with lead seal, and DIN lock
- With optional vent function

Series R5U
- Pilot operated pressure unloading valve
- Three pressure stages
- Three adjustment modes: hand knob, acorn with lead seal, and DIN lock
- With optional vent function

Series R5V
- Pilot operated pressure relief valve
- Three pressure stages
- Three adjustment modes: hand knob, acorn with lead seal, and DIN lock
- With optional vent function

Series R5S
- Pilot operated sequence valve
- Three pressure stages
- Two adjustment modes: hand knob and acorn with lead seal

Series R5A
- Direct operated, 2-way pressure compensator valve
- Seated type
- 8.4 Bar (122 PSI) control pressure

Series R, RS
- Pilot operated manual adjustment
- Three interfaces
- Four pressure ranges
- Two switching types (series RS)
- Three adjustment modes: hand knob, acorn with lead seal, and DIN lock
## In-Line Mounted Pressure Control Valves

<table>
<thead>
<tr>
<th>Series/Function</th>
<th>R5V</th>
<th>R5R</th>
<th>R5U</th>
<th>R5S</th>
<th>R5A</th>
<th>R5P</th>
<th>R4V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relief</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure Reducer</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unloader</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensator</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Operating Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>(Bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PSI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210, 280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210, 280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210, 280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210, 280, 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3045, 4060, 5075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Maximum Flow

#### (In-line)

<table>
<thead>
<tr>
<th>SAE 8 LPM (GPM)</th>
<th>90 (23.7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE 16 LPM (GPM)</td>
<td>300 (79.2)</td>
</tr>
<tr>
<td>SAE 12 LPM (GPM)</td>
<td>300 (79.2)</td>
</tr>
<tr>
<td>SAE 20 LPM (GPM)</td>
<td>600 (158.5)</td>
</tr>
</tbody>
</table>

#### (Flange)

<table>
<thead>
<tr>
<th>SAE 1/4&quot; LPM (GPM)</th>
<th>90 (24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE 1&quot; LPM (GPM)</td>
<td>300 (79)</td>
</tr>
<tr>
<td>SAE 1 1/2&quot; LPM (GPM)</td>
<td>600 (159)</td>
</tr>
<tr>
<td>SAE 1 1/4&quot; LPM* (GPM)</td>
<td>600 (159)</td>
</tr>
</tbody>
</table>

*3-port body only
# Electronic Drivers

## Electronics
- Valve drivers provide ramping, setpoints and deadband compensation
- Feedback amplifiers provide advantages of closed loop control
- Power supplies for a variety of valve applications
- DIN card holders

### Drivers – Proportional Directional Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWDXXA-400</td>
<td>Programmable, Feedback, Min, Max</td>
<td>Driving Open loop valves with external feedback. (Future: D**FS, D<em>FC, RLL</em>R)</td>
</tr>
<tr>
<td>PWD00A-400</td>
<td>Programmable, Min, Max, ramps, setpoint</td>
<td>D**FW, D*FB, WLL, RLL</td>
</tr>
<tr>
<td>EW104</td>
<td>Adjustable; Min, Max, 2 ramps</td>
<td>D**FS</td>
</tr>
</tbody>
</table>

### Drivers – Proportional Pressure Control Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCD00A-400</td>
<td>Programmable, Min, Max, ramps</td>
<td>VBY, VMY, RE<em>W, PE</em>W</td>
</tr>
<tr>
<td>ED104</td>
<td>Adjustable; Min, Max, 2 ramps</td>
<td>DSA/DWE/DWU</td>
</tr>
</tbody>
</table>

### Drivers – Proportional Throttle Valves

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCD00A-400</td>
<td>Programmable, Min, Max, ramps</td>
<td>VBY, VMY, RE<em>W, PE</em>W</td>
</tr>
<tr>
<td>ET104</td>
<td>Adjustable; Min, Max, 2 ramps (<em>L</em> Solenoid)</td>
<td>TDA</td>
</tr>
<tr>
<td>ET154</td>
<td>Adjustable, Min, Max (<em>M</em> Solenoid)</td>
<td>TDA</td>
</tr>
</tbody>
</table>

### Drivers – Servovalves

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Use with</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD90</td>
<td>Closed loop, dual PID, snap track</td>
<td>BD</td>
</tr>
<tr>
<td>BD101</td>
<td>Closed loop, single PID, snap track</td>
<td>BD, D<em>FX, D</em>FH, D*FP</td>
</tr>
<tr>
<td>PID00A-400</td>
<td>Programmable, closed loop</td>
<td>BD, D<em>FX, D</em>FH, D*FP</td>
</tr>
</tbody>
</table>

### Auxiliary Function Cards

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZD00A-40*</td>
<td>Programmable, Signal Conditioning</td>
<td>Standard proportional control cards or valves with integrated electronics</td>
</tr>
<tr>
<td>EZ150</td>
<td>Adjustable; 6 commands, 7 ramps</td>
<td></td>
</tr>
<tr>
<td>EZ154</td>
<td>Adjustable; Min, Max, 2 ramps, 1 external ramp</td>
<td></td>
</tr>
<tr>
<td>EZ595</td>
<td>Closed loop PID, DIN card</td>
<td></td>
</tr>
</tbody>
</table>

[Electronic Drivers](www.parker.com/hyd/electronics)
DIN Slip-In Cartridges

DIN Slip-In Cartridge Valves
DIN slip-in cartridge valves are used in high-demand, high-pressure systems. These applications include die-cast and plastic machines, hydroelectric equipment, as well as powdered-metal and other large presses. Parker’s modular design allows a variety of valve configurations from simple check to high-response throttle valves. Engineers can set on/off or proportional pressure, flow, and directional control. Our DIN slip-in cartridge valves handle pressure to 5,000 PSI and flows up to 3,000 GPM.

DIN Slip-In Cartridges

- Available in sizes 16 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm
- Flows up to 17,000 LPM (4500 GPM)
- Maximum operating pressures up to 350 Bar (5000 PSI)
- Proportional throttle, relief and pressure controls
- Complete selection of pressure controls
- Variety of direct and pilot operated checks
- Directional controls to 7500 LPM (2000 GPM)

www.parker.com/hyd/din

<table>
<thead>
<tr>
<th>Series</th>
<th>Proportional Throttle</th>
<th>Proportional Relief</th>
<th>Pressure Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TDA</td>
<td>TEA</td>
<td>TEH</td>
</tr>
<tr>
<td>Normal sizes (NG)</td>
<td>16 -100</td>
<td>25 - 100</td>
<td>25 - 100</td>
</tr>
<tr>
<td>Max operating pressure (PSI)</td>
<td>350</td>
<td>5075</td>
<td>350</td>
</tr>
</tbody>
</table>

*Y port = 100 bar (1450 psi); any pressure at Y is additive to valve setting

<table>
<thead>
<tr>
<th>Series</th>
<th>C101</th>
<th>C10</th>
<th>C111</th>
<th>C121</th>
<th>C13DCC</th>
<th>C18DCC</th>
<th>C18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>2-pos, 2-way</td>
<td>With poppet monitor switch</td>
<td>With poppet stroke limiter</td>
<td>With pilot valve interface</td>
<td>Active cartridge with poppet switch</td>
<td>Active cartridge with dampening poppet &amp; monitor switch</td>
<td>Active cartridge with dampening poppet</td>
</tr>
<tr>
<td>Normal sizes (NG)</td>
<td>16 -100</td>
<td>16 - 63</td>
<td>16 -100</td>
<td>16 -100</td>
<td>25 - 63</td>
<td>25 - 63</td>
<td>25 - 63</td>
</tr>
<tr>
<td>Maximum Flow (LPM) (GPM)</td>
<td>7000</td>
<td>1852</td>
<td>4000</td>
<td>1058</td>
<td>7000</td>
<td>1852</td>
<td>4000</td>
</tr>
<tr>
<td>Max operating pressure (Bar) (PSI)</td>
<td>350</td>
<td>5075</td>
<td>350</td>
<td>5075</td>
<td>350</td>
<td>5075</td>
<td>350</td>
</tr>
</tbody>
</table>
Advanced Technologies

Innovative Ceramic Technology
Parker offers the water hydraulic industry ceramic-based products as standard materials in our line of directional valves. The ceramic spool/sleeve pilot valve is unsurpassed in performance and reliability. Close tolerance and extremely hard surfaces gives the valve long life with no filtration requirements. In addition, Parker applies the same wear characteristics of ceramics to a full line of Descale Valves and Proportional Flow Control Valves.

Mill Duty Valves
Our valves are specifically designed for 5000 PSI service with water, 95/5 kerosene based roll coolants and other low viscosity fluids. The sealing technology incorporated in the design will provide zero leakage service with any hydraulic fluid; including water glycols, synthetic fluids, inverted emulsions, and mineral oil. The efficiency of the poppet design allows much greater flow capacity than comparably sized plunger type valves. The user can often select a smaller valve to accomplish the same work.

We manufacture a full range of mill duty valves from DIN 10 (1/2") to DIN 250 (10”). Valves are available in 2-way, 3-way and 4-way configurations. Dual speed (Six-Pack) valves and pump protection modules are also available.

Valves for Water Hydraulic Applications
- Custom Designed Value Stands
- Proportional Flow Control valves
- Descale Valves
- Pressure Control Valves
- Directional Valves
- Engineered Turnkey Systems
Valve Specifications
for Mill Duty Applications

In-Line Top Down Maintenance
• Poppet removed with lifting plug

Test Gage Ports for Each Poppet
• Allow easy troubleshooting

Bolt Direct to Hunt
• V07, V034, V33, combo and Salem Type 10 subbases will mount to any footprint with adapter plate

Ceramic Spool/Sleeve Pilot Valve
• Direct solenoid operated – no air
• Extremely dirt tolerant – no filtration specs
• 3 Year – 100% Replacement Warranty

“BLACK ARMOR”
• Corrosion and erosion resistance hardening treatment for extended service life

Markets Served

Steel Mills
Aluminum Mills
Tire Press Industry
Cast Iron Pipe Industry
Forging Press Industry
Extrusion Press Industry
Parker Hydraulic Valve wants to keep you informed. Listed below are connection opportunities for you to resource additional information or speak directly with the industry's most knowledgeable hydraulic valve professionals.

To order literature or locate a distributor by phone
1-800-C-Parker

For the latest hydraulic valve information
www.parker.com/hydraulicvalve

To locate your nearest hydraulic valve distributor
www.parker.com/hyd/distloc

For North America, Europe and rest of the world regional offices, see page 26

For detailed product information
Right Now:
Use the enclosed CD-ROM or the one-click Zip URLs

Parker Hannifin Corporation
Hydraulic Valve Division
520 Ternes Avenue
Elyria, Ohio 44035
Tel: 440-366-5200
Fax: 440-366-5253

WARNING – USER RESPONSIBILITY

Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuming that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

OFFER OF SALE

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed “Offer of Sale” elsewhere in this document or available at www.parker.com/hydraulicsite

SAFETY GUIDE

For safety information, see Safety Guide SS HY14-1000 at www.parker.com/safety or call 1-800-C-Parker.
CD Catalog

System Requirements
To view the CD, the following are required:
• Pentium®-class processor
• Win® 95 OSR 2.0, Win 98 Sec. Ed., Win ME, Win NT 4.0 (with Service Pack 5 or 6), Win 2000 or Win XP
• 16 MB of RAM (32 recommended)
• 20 MB of available hard-disk space

Acrobat Reader
Catalog files are viewed using Adobe Acrobat Reader. If you do not have Acrobat Reader installed on your PC, it will install from the CD. If you have Acrobat Reader but do not have the search plug-in, you will be given the option to install Acrobat Reader 6.0 with search.

You must have the search plug-in to take advantage of the search feature described in the next section.

To View the CD
The CD is self-loading. Just place it in your CD drive. Acrobat Reader will open (or install), and the opening page will appear on your monitor. From this page you can navigate to the following sections.

• Search takes you to the search feature. When the search window opens, type a word(s) or code* and press enter. A list of pages where that word appears is shown. Select one and click the View button. Repeat as needed.
• Contents takes you to the selection of catalogs and products on the CD.
• Product Overview takes you to a .pdf file of this Industrial Hydraulic Valve Product Range.
• Warning/Offer of Sale takes you to these legal documents.
• Getting Started provides a summary of how to navigate using Acrobat Reader.
• Contact Us provides you with phone, fax and online information.

Text links are easily identified by grey type. The catalog files are fully bookmarked to make navigation quick and easy.

Each catalog also has a bookmark which will take you to the Parker web home page for that division if you are online while you are viewing the CD. You must first enter your web browser information into the Acrobat preferences.

Adobe and Acrobat are registered trademarks of Adobe Systems Inc. Windows is a registered trademark of Microsoft Corp.

*Use the CD search codes provided in this catalog to go directly to the section for that product.

*Use the web addresses provided with each product to go directly to that product or series on the Parker website.

www.parker.com/hyd/X
Parker Hydraulics International Sales Offices

North America
Hydraulics Group Headquarters
6035 Parkland Boulevard
Cleveland, OH 44124-4141 USA
Tel: 216-896-3000
Fax: 216-896-4031

Parker Hannifin Canada
Motion & Control Division – Milton
160 Chisholm Drive Milton
Ontario Canada L9T 3G9
Tel: 905-693-3000
Fax: 905-676-1958

Mexico
Parker Hannifin de México
Av eje uno norte num 100
Parque Industrial Toluca 2000
Toluca, Mex C.P. 50100
Tel: 52 722 2754200
Fax: 52 722 2799308

Europe
Europe Hydraulics Group
Parker Hannifin Corporation
Parker House
55 Maylands Avenue
Hemel Hempstead, Herts
HP2 4SJ England
Tel: 44 1442 458000
Fax: 44 1442 458085

Latin America
Brazil
Hydraulics Division
Parker Hannifin Ind. e Com. Ltda
Av. FredericoRitter, 1100
Cachoeirinha RS, 94830-000 Brazil
Tel: 55 51 3470 9144
Fax: 55 51 3470 3100

Pan American Division
7400 NW 19th Street, Suite A
Miami, FL 33126 USA
Tel: 305-470-8800
Fax: 305-470-8808

Mobile Sales
Mobile Sales Organization and Global Sales
595 Schelter Road
Suite 100
Lincolnshire, IL 60069 USA
Tel: 847-821-1500
Fax: 847-821-7600

Industrial Sales
Great Lakes Region
3700 Embassy Parkway
Suite 260
Fairlawn, OH 44333 USA
Tel: 330-670-2680
Fax: 330-670-2681

Southern Region
1225 Old Alpharetta Road
Suite 290
Alpharetta, GA 30005 USA
Tel: 770-619-9767
Fax: 770-619-9806

Chicago Region
1163 E. Ogden Avenue
Suite 705, #358
Naperville, IL 60563 USA
Tel: 630-964-0796
Fax: 666-473-9274

Pacific Region
8460 Kass Drive
Buena Park, CA 90621 USA
Tel: 714-228-2510
Fax: 714-228-2511

Eastern Region
100 Corporate Drive
Loban, NJ 08833 USA
Tel: 908-236-4121
Fax: 908-236-4146

Gulf Region
20002 Standing Cypress Drive
Spring, TX 77379 USA
Tel: 317-519-8490
Fax: 866-390-4986

Asia Pacific
Asia Pacific Headquarters
Parker Hannifin Hong Kong Ltd
8/F, Kin Yip Plaza
9 Cheung Yee Street
HK-Cheung Sha Wan, Hong Kong
Tel: 852 2428 8008
Fax: 852 2425 6896

Australia Headquarters
Parker Hannifin Pty Ltd.
9 Carrington Road
Castle Hill, NSW 2154, Australia
Tel: 612 9634 7777
Fax: 612 9842 5111

China Headquarters
Parker Hannifin Motion & Control (Shanghai) Co., Ltd
280 Yunjiao Road,
Jin Qiao Export Processing Zone
CN-Shanghai 201206, China
Tel: 8 21 5031 2525
Fax: 86 21 5834 3714

Korea Headquarters
Parker Hannifin Korea Ltd
6F Daehwa Plaza
169 Samsung-dong, Gangnam-gu
KR-Seoul, 135-090, Korea
Tel: 82 2 559 0400
Fax: 82 2 556 8187

South Africa
Parker Hannifin Africa Pty Ltd
Parker Place
10 Berne Avenue Aeropport
P.O. Box 1153
ZA-Kempton Park 1620,
Republic of South Africa
Tel: 27 11 961 0700
Fax: 27 11 392 7213

Middle East
Egypt
Parker Hannifin Corporation
8B Zahraa Maadi
Region 17F
 Cairo, Egypt
Tel: (20) 2 5190418
Fax: (20) 2 5190605

© 2008 Parker Hannifin Corporation, all rights reserved

Parker Hannifin Corporation
Hydraulics Valve Division
520 Ternes Avenue
Elyria, Ohio 44035 USA
Tel: 440-366-5200
Fax: 440-366-5253
www.parker.com/hydraulicvalve