Please visit us at www.deltrolfluid.com for information on these other Deltrol product lines:
• High Performance Hydraulic Cartridge Valves
• Hydraulic Integrated Circuit Manifolds
• In-Line Flow Control, Needle, Check and Accessory Valves
• Custom Solutions for Your Fluid Power and Fluid Control Demands

Or Contact Us and Request a Free Catalog.

RV SERIES
High Pressure Anti-Cavitation Relief Valves

DESCRIPTION
A cartridge valve designed to combine a shock relief valve (direct acting), and anti-cavitation function through the check valve.

OPERATION
The RV Series prevents flow from 2 to 1 until the set crack pressure at 2 is achieved. The valve unseats from the cavity allowing flow from 2 to 1, protecting the circuit from over pressurization.

The RV Series allows free flow from 1 to 2. As pressure at 1 exceeds pressure at 2 the valve unseats from the cavity allowing flow from 1 to 2.

FEATURES AND BENEFITS
• Rapid response to pressure surges.
• Anti-cavitation function through the check valve.
• Hardened precision poppet and seat for long life.
• Fast opening and closing.
• Low hysteresis.
• Compact size.

HOW TO ORDER

Distributed by NORMAN EQUIPMENT COMPANY
800-323-2710
Please visit us at www.deltrolfluid.com
for information on these other Deltrol product lines:
• High Performance Hydraulic Cartridge Valves
• Hydraulic Integrated Circuit Manifolds
• In-Line Flow Control, Needle, Check and Accessory Valves
• Custom Solutions for Your Fluid Power and Fluid Control Demands

Or Contact Us and Request a Free Catalog.

DESCRIPTION
A cartridge valve designed to combine a shock relief valve (direct acting), and anti-cavitation function through the check valve.

OPERATION
The RV Series presents flow from 2 to 3 until the set crack pressure at 2 is achieved. The valve unseats from the cavity allowing flow from 2 to 1, protecting the circuit from over pressurization.

The RV Series allows free flow from 1 to 2. As pressure at 1 exceeds pressure at 2, the valve unseats from the cavity allowing flow from 1 to 2.

FEATURES AND BENEFITS
• Rapid response to pressure surges.
• Anti-cavitation function through the check valve.
• Hardened precision poppet and seat for long life.
• Fast opening and closing.
• Low hysteresis.
• Compact size.

HOW TO ORDER

DELTRON FLUID PRODUCTS
A Division of Deltrol Corp.
3001 Grant Avenue
Bellwood, IL 60104
(708) 547-0500

www.deltrolfluid.com
**RV SERIES**

**RV-050 Relief Valve Cartridge**

- **USASI/ISO**
- **Installation Dimensions**
- **Pressure Drop vs. Flow**
- **Pressure Rise vs. Flow**

**Specifications**

- **Operating Pressure:** 5500 psi (380 Bar)
- **Max. Flow:** 16 gpm (60 L/min)
- **Internal Leakage:** 1.0 cc/min at 80% set
- **Crack Pressure:**
  - Defined: Determined at 25 gpm (9.9 L/min)
  - Reidentified: Nominal 80% of crack pressure
- **Temperature:** -30°F to +220°F (-35°C to +104°C)
- **Recommended Filtration:** ISO 20/18/14
- **Fluids:** Mineral-based fluids
  - **Cavity/Cavity Tool:** R05-2

**RV-060 Relief Valve Cartridge**

- **USASI/ISO**
- **Installation Dimensions**
- **Pressure Drop vs. Flow**
- **Pressure Rise vs. Flow**

**Specifications**

- **Operating Pressure:** 5500 psi (380 Bar)
- **Max. Flow:** 20 gpm (77 L/min)
- **Internal Leakage:** 1.0 cc/min at 80% set
- **Crack Pressure:**
  - Defined: Determined at 25 gpm (9.9 L/min)
  - Reidentified: Nominal 80% of crack pressure
- **Temperature:** -30°F to +220°F (-35°C to +104°C)
- **Recommended Filtration:** ISO 20/18/14
- **Fluids:** Mineral-based fluids
  - **Cavity/Cavity Tool:** R06-2

**RV-080 Relief Valve Cartridge**

- **USASI/ISO**
- **Installation Dimensions**
- **Pressure Drop vs. Flow**
- **Pressure Rise vs. Flow**

**Specifications**

- **Operating Pressure:** 5500 psi (380 Bar)
- **Max. Flow:** 24 gpm (91 L/min)
- **Internal Leakage:** 1.0 cc/min at 80% set
- **Crack Pressure:**
  - Defined: Determined at 25 gpm (9.9 L/min)
  - Reidentified: Nominal 80% of crack pressure
- **Temperature:** -30°F to +220°F (-35°C to +104°C)
- **Recommended Filtration:** ISO 20/18/14
- **Fluids:** Mineral-based fluids
  - **Cavity/Cavity Tool:** R08-2
RV SERIES

RV-050 Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 14 gpm (60 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (0.9 L/min)
- Re-set Pressure: Nominal 80% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R05-2

USASI/ISO

INSTALLATION DIMENSIONS

PRESSURE DROP VS. FLOW

PRESSURE RISE VS. FLOW

RV-060 Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 20 gpm (77 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (0.9 L/min)
- Re-set Pressure: Nominal 80% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R06-2

USASI/ISO

INSTALLATION DIMENSIONS

PRESSURE DROP VS. FLOW

PRESSURE RISE VS. FLOW

RV-080 Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 24 gpm (91 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (0.9 L/min)
- Re-set Pressure: Nominal 80% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R08-2

USASI/ISO

INSTALLATION DIMENSIONS

PRESSURE DROP VS. FLOW

PRESSURE RISE VS. FLOW
RV SERIES

RV-050
Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 16 gpm (60 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (9.9 L/min)
- Re-set Pressure: Nominal 40% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R05-2

INSTALLATION DIMENSIONS

USASI/ISO

RV-060
Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 20 gpm (77 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (9.9 L/min)
- Re-set Pressure: Nominal 40% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R06-2

INSTALLATION DIMENSIONS

USASI/ISO

RV-080
Relief Valve Cartridge

SPECIFICATIONS
- Operating Pressure: 5500 psi (380 Bar)
- Max. Flow: 24 gpm (91 L/min)
- Internal Leakage: 1.0 cc/min at 80% set
- Crack Pressure Defined: Determined at 25 gpm (9.9 L/min)
- Re-set Pressure: Nominal 40% of crack pressure
- Temperature: -30°F to +220°F (-35°C to +104°C)
- Recommended Filtration: ISO 20/18/14
- Fluids: Mineral-based fluids
- Cavity/Cavity Tool: R08-2

INSTALLATION DIMENSIONS

USASI/ISO
DESCRIPTION
A cartridge valve designed to combine a shock relief valve (direct acting), and anti-cavitation function through the check valve.

OPERATION
The RV Series prevents flow from 2 to 1 until the set crack pressure at 2 is achieved. The valve unseats from the cavity allowing flow from 2 to 1, protecting the circuit from over pressurization.

The RV Series allows free flow from 1 to 2. As pressure at 1 exceeds pressure at 2, the valve unseats from the cavity allowing flow from 1 to 2.

FEATURES AND BENEFITS
• Rapid response to pressure surges.
• Anti-cavitation function through the check valve.
• Hardened precision poppet and seat for long life.
• Fast opening and closing.
• Low hysteresis.
• Compact size.

HOW TO ORDER

RV - XXX - 1 - 2

<table>
<thead>
<tr>
<th>Porting Options</th>
<th>RPM</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Ports - 1/2&quot; NPT</td>
<td>3050</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>2 Ports - 3/4&quot; NPT</td>
<td>4050</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>2 Ports - 1&quot; NPT</td>
<td>5050</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
<tr>
<td>3 Ports - 1/2&quot; NPT</td>
<td>6050</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>3 Ports - 3/4&quot; NPT</td>
<td>7050</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
</tr>
<tr>
<td>3 Ports - 1&quot; NPT</td>
<td>8050</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
<td>140</td>
</tr>
</tbody>
</table>

( ) Parentheses = Millimeters
Other porting options available.
Contact factory.

Please visit us at
www.deltrolfluid.com
for information on these other Deltrol product lines:
• High Performance Hydraulic Cartridge Valves
• Hydraulic Integrated Circuit Manifolds
• In-Line Flow Control, Needle, Check and Accessory Valves
• Custom Solutions for Your Fluid Power and Fluid Control Demands

Or Contact Us and Request a Free Catalog.

DELTROL FLUID PRODUCTS
A Division of Deltrol Corp.
Distributed by NORMAN EQUIPMENT COMPANY
800-323-2710