## Pressure Reducing Valves

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</tbody>
</table>

Reference: S20-P-050000-EN-00/09.2015
PRPS-10

PRESSURE REDUCING VALVE
PILOT OPERATED, SLIDING SPOOL

Pat.#5,546,980

TORQUE:
Steel = 55/60 Ft-Lb. [74/81 Nm]
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

PATENTED

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0–050.0

PRPS-10-X-X-X-XX

BASIC
SIZE
10 = 7/8"–14 UNF

SEALS
N = BUNA "N"
V = VITON

ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF
K = HANDKNOB
M = METAL HANDKNOB

PRESSURE RANGE
15 = 50 TO 1500 PSI
30 = 50 TO 3000 PSI
50 = 50 TO 5000 PSI

PORTS
0 = CARTRIDGE ONLY
02BX = G 1/4" BSPP
03BX = G 3/8" BSPP
06TX = SAE – #6
08TX = SAE – #8

"A" – ALUM. HOUSING
"S" – STEEL HOUSING

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0–032.1

L/M (28,5 cSt)

PRESSURE DROP (ΔP)

PSI
0 2.5 5 7.5 10
0 1000 2000 3000 4000

BAR
0 69 138 207 276

G.P.M.(135 SUS)
0 2.5 5 7.5 10
0 9.5 19 28.5 38

Reference: 520-P-050120-EN-00/09.2015
## PRESSURE REDUCING VALVE
### PILOT OPERATED, SLIDING SPOOL

### DESCRIPTION
This unit is a PILOT OPERATED, SLIDING SPOOL, SCREW IN CARTRIDGE STYLE, HYDRAULIC PRESSURE REDUCING VALVE, designated to act as a pressure-regulating device for secondary circuit.

### OPERATIONS
This valve will allow flow from port 2 to port 1 until pressure in port 1 exceeds the force of the spring bias then the spool will shift and block flow from port 2 to port 1 and maintain the same pressure as the force of the spring setting regardless of the pressure at port 2.

### FEATURES AND BENEFITS
- Leakproof screw adjustment.
- Pressure in tank port (3) will add to the bias spring setting, and is limited to 2000 PSI.
- Adjusting screw can not be backed out of the valve.
- Overset protection—pilot spring can not go solid.
- Hardened precision fitted spool & cage provides reliable, long life.
- A unique self aligning (floating) cage provides very low hysteresis and reliable operation.
- All external carbon steel parts are plated for longer life against the elements.
- Valve is available with screw, tamperproof, capped and handknob adjustments.
- All cartridge valves are 100% functionally tested.
- Industry common cavity.

### SPECIFICATIONS
- **OPERATING PRESSURE:** 5,000 PSI [350 Bar]
- **PROOF PRESSURE:** 10,000 PSI [700 Bar]
- **FLOW:** 12.0 GPM [46 L/M] nominal. See performance chart.
- **INTERNAL LEAKAGE:** 5 cu.in./min [.82 cc/m] @ 85% of crack pressure.
- **DEFINITION OF CRACK:** evident at 0.06 GPM [0.25 LPM]
- **VALVE HOUSINGS:** 2500 PSI [175 Bar] = Aluminum - Anodized. 5000 PSI [350 Bar] = Steel - Unplated.
- **OPERATING TEMPERATURE:** -40° to +250° F. [-40° to +120° C.]
- **OPERATING MEDIA:** All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.

### INSTALLATION:
No restriction.

### FILTRATION:
25 microns or better.

### SEAL KIT NUMBER:
- SKN-1031 for buna "N".
- SKV-1031 for viton.

### WEIGHT:
0.42 lb [.19 kg] cartridge only.

### VALVE CAVITY:
#C1030, See Page 0-032.0.

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Reference: S20-P-050120-EN-00/09.2015
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0–031.1

PRRS-08-X-X-X-XX

BASIC
SIZE
08 = 3/4"–16 UNF

SEALS
N = BUNA “N”
V = VITON

ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF
K = HANDKNOB
M = METAL HANDKNOB

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0–050.0

TORQUE:
Steel = 35/40 Ft-Lb. [47/54 Nm]
Aluminum = 25/30 Ft-Lb. [34/41 Nm]

Reference: 520-P-050210-EN-00/09.2015
PRESSURE REDUCING/RELIEVING VALVE
PILOT OPERATED, SLIDING SPOOL

DESCRIPTION
This unit is a PILOT OPERATED, SLIDING SPOOL, SCREW IN CARTRIDGE STYLE, HYDRAULIC PRESSURE REDUCING/RELIEVING VALVE, designated to act as a pressure-regulating device for secondary circuit.

OPERATIONS
This valve will allow flow from port 2 to port 1 until pressure in port 1 exceeds the force of the spring bias then the spool will shift and block flow from port 2 to port 1 and maintain the same pressure as the force of the spring setting regardless of the pressure at port 2. In this mode, the valve will also relieve from port 1 to port 3, regulating pressure at port 1.

FEATURES AND BENEFITS
Leakproof screw adjustment.
Pressure in tank port (3) will add to the bias spring setting, and is limited to 2000 PSI.
Adjusting screw can not be backed out of the valve.
Overset protection—pilot spring can not go solid.
Hardened precision fitted spool & cage provides reliable, long life.
A unique self aligning (floating) cage provides very low hysteresis and reliable operation.
All external carbon steel parts are plated for longer life against the elements.
Valve is available with screw, tamperproof, capped and handknob adjustments.
All cartridge valves are 100% functionally tested.
Industry common cavity.

SPECIFICATIONS
OPERATING PRESSURE: 5,000 PSI [350 Bar]
PROOF PRESSURE: 10,000 PSI [700 Bar]
INTERNAL LEAKAGE: 5 cu.in./min [.82 cc/m] @ 85% of crack pressure.
DEFINITION OF CRACK: evident at 0.06 GPM [0.25 LPM]
5000 PSI [350 Bar] = Steel – Unplated.
OPERATING TEMPERATURE: –40° to +250° F. [–40° to +120° C.]
OPERATING MEDIA: All general purpose hydraulic fluids such as MIL–H–5606, SAE–#10, SAE–#20, etc.
INSTALLATION: No restriction.
Filtration: 25 microns or better.
SEAL KIT NUMBER: SKN–0831 for buna ”N”.
SKV–0831 for viton.
WEIGHT: 0.30 lb [.14 kg] cartridge only.
VALVE CAVITY: #C0830, See Page 0–031.0.

Reference: 520-P-050210-EN-00/09.2015

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The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.
PRESSURE REDUCING/RELIEVING VALVE
PILOT OPERATED, SLIDING SPOOL

Pat.#5,546,980

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-032.1

PRRS-10-X-X-X-XX

<table>
<thead>
<tr>
<th>BASIC</th>
<th>SIZE</th>
<th>SEALS</th>
<th>ADJUSTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>N = BUNA &quot;N&quot;</td>
<td>S = ADJUSTING SCREW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V = VITON</td>
<td>C = CAPPED</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T = TAMPERPROOF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>K = HANDKNOB</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M = METAL HANDKNOB</td>
</tr>
</tbody>
</table>

PRESSURE RANGE
06 = 50 TO 600 PSI
15 = 50 TO 1500 PSI
30 = 50 TO 3000 PSI
50 = 50 TO 5000 PSI

PORTS
0 = CARTRIDGE ONLY
02BX = G 1/4" BSPP
03BX = G 3/8" BSPP
06TX = SAE - #6
08TX = SAE - #8

"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0-050.0

TORQUE:
Steel = 55/60 Ft-Lb. [74/81 Nm]
Aluminum = 35/40 Ft-Lb. [47/54 Nm]

PRRS-10

Reference: 520-P-050220-EN-00/09.2015
DESCRIPTION
This unit is a PILOT OPERATED, SLIDING SPOOL, SCREW IN CARTRIDGE STYLE, HYDRAULIC PRESSURE REDUCING/RELIEVING VALVE, designated to act as a pressure-regulating device for secondary circuit.

OPERATIONS
This valve will allow flow from port 2 to port 1 until pressure in port 1 exceeds the force of the spring bias then the spool will shift and block flow from port 2 to port 1 and maintain the same pressure as the force of the spring setting regardless of the pressure at port 2. In this mode, the valve will also relieve from port 1 to port 3, regulating pressure at port 1.

FEATURES AND BENEFITS
Leakproof screw adjustment.
Pressure in tank port (3) will add to the bias spring setting, and is limited to 2000 PSI.
Adjusting screw can not be backed out of the valve.
Overset protection—pilot spring can not go solid.
Hardened precision fitted spool & cage provides reliable, long life.
A unique self aligning (floating) cage provides very low hysteresis and reliable operation.
All external carbon steel parts are plated for longer life against the elements.
Valve is available with screw, tamperproof, capped and handknob adjustments.
All cartridge valves are 100% functionally tested.
Industry common cavity.

SPECIFICATIONS
OPERATING PRESSURE: 5,000 PSI [350 Bar]
PROOF PRESSURE: 10,000 PSI [700 Bar]
FLOW: 12.0 GPM [46 L/M] nominal. See performance chart.
INTERNAL LEAKAGE: 5 cu.in./min [.82 cc/m] @ 85% of crack pressure.
DEFINITION OF CRACK: evident at 0.06 GPM [0.25 LPM]
5000 PSI [350 Bar] = Steel – Unplated.
OPERATING TEMPERATURE: -40° to +250° F. [-40° to +120° C.]
OPERATING MEDIA: All general purpose hydraulic fluids such as MIL-H-5606, SAE-#10, SAE-#20, etc.
INSTALLATION: No restriction.
FITURATION: 25 microns or better.
SEAL KIT NUMBER: SKN-1031 for buna "N".
SKV-1031 for viton.
WEIGHT: 0.42 lb [.19 kg] cartridge only.
VALVE CAVITY: #C1030, See Page 0–032.0.
PRRS-12

PRESSURE REDUCING/RELIEVING VALVE
PILOT OPERATED, SLIDING SPOOL

Pat. # 5,546,980

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-033.1

<table>
<thead>
<tr>
<th>BASIC SIZE</th>
<th>12 = 1.062&quot;-12 UNF</th>
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<tbody>
<tr>
<td>SEALS</td>
<td>N = BUNA &quot;N&quot;</td>
</tr>
<tr>
<td>V = VITON</td>
<td></td>
</tr>
<tr>
<td>ADJUSTMENT</td>
<td>S = ADJUSTING SCREW</td>
</tr>
<tr>
<td>C = CAPPED</td>
<td></td>
</tr>
<tr>
<td>T = TAMPERPROOF</td>
<td></td>
</tr>
<tr>
<td>K = HANDKNOB</td>
<td></td>
</tr>
<tr>
<td>M = METAL HANDKNOB</td>
<td></td>
</tr>
</tbody>
</table>

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0-050.0

PRESSES FOR ADJUSTMENT

OPTIONS SEE PAGE 0-050.0

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-033.1

PRRS-12-X-X-0-XX

PRESSURE RANGE
15 = 50 TO 1500 PSI
30 = 50 TO 3000 PSI
50 = 50 TO 5000 PSI

PORTS
0 = CARTRIDGE ONLY
04BX = G 1/2" BSPP
06BX = G 3/4" BSPP
10TX = SAE - #10
12TX = SAE - #12

L"A" - ALUM. HOUSING
"S" - STEEL HOUSING

TORQUE:

Steel = 70/75 Ft-Lb. [95/102 Nm]
Aluminum = 55/60 Ft-Lb. [74/81 Nm]

Reference: 520-P-050230-EN-00/09.2015
**DESCRIPTION**  
This unit is a PILOT OPERATED, SLIDING SPOOL, SCREW IN CARTRIDGE STYLE, HYDRAULIC PRESSURE REDUCING/RELIENING VALVE, designated to act as a pressure-regulating device for secondary circuit.

**OPERATIONS**  
This valve will allow flow from port 2 to port 1 until pressure in port 1 exceeds the force of the spring bias then the spool will shift and block flow from port 2 to port 1 and maintain the same pressure as the force of the spring setting regardless of the pressure at port 2. In this mode, the valve will also relieve from port 1 to port 3, regulating pressure at port 1.

**FEATURES AND BENEFITS**  
Leakproof screw adjustment.  
Pressure in tank port (3) will add to the bias spring setting, and is limited to 2000 PSI.  
Adjusting screw can not be backed out of the valve.  
Overset protection—pilot spring can not go solid.  
Hardened precision fitted spool & cage provides reliable, long life.  
A unique self aligning (floating) cage provides very low hysteresis and reliable operation.  
All external carbon steel parts are plated for longer life against the elements.  
Valve is available with screw, tamperproof, capped and handknob adjustments.  
All cartridge valves are 100% functionally tested.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>OPERATING PRESSURE:</th>
<th>5,000 PSI [350 Bar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROOF PRESSURE:</td>
<td>10,000 PSI [700 Bar]</td>
</tr>
<tr>
<td>FLOW:</td>
<td>24.0 GPM [91 L/M] nominal. See performance chart.</td>
</tr>
<tr>
<td>INTERNAL LEAKAGE:</td>
<td>5 cu.in./min [.82 cc/m] @ 85% of crack pressure.</td>
</tr>
<tr>
<td>DEFINITION OF CRACK:</td>
<td>evident at 0.06 GPM [0.25 LPM]</td>
</tr>
<tr>
<td></td>
<td>5000 PSI [350 Bar] = Steel - Unplated.</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>−40° to +250° F. [−40° to +120° C.]</td>
</tr>
<tr>
<td>OPERATING MEDIA:</td>
<td>All general purpose hydraulic fluids such as MIL−H−5606, SAE−#10, SAE−#20, etc.</td>
</tr>
<tr>
<td>INSTALLATION:</td>
<td>No restriction.</td>
</tr>
<tr>
<td>FILTRATION:</td>
<td>25 microns or better.</td>
</tr>
<tr>
<td>SEAL KIT NUMBER:</td>
<td>SKN−1231 for Buna &quot;N&quot;. SKV−1231 for Viton.</td>
</tr>
<tr>
<td>WEIGHT:</td>
<td>0.56 lb [0.26 kg] cartridge only.</td>
</tr>
<tr>
<td>VALVE CAVITY:</td>
<td>#C1230, See Page 0−033.0.</td>
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