## Check Valves

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<th>DESCRIPTION</th>
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<th>CAVITY</th>
<th>PAGE NO.</th>
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<td>C0820</td>
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<td>CVRP-08</td>
<td>REVERSE GUIDED POPPET TYPE</td>
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<td>CVRP-10</td>
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<td>10 GPM</td>
<td>C0820</td>
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<td>CVRP-12</td>
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<td>18 GPM</td>
<td>C1020</td>
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<tr>
<td>CVRP-16</td>
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<td>36 GPM</td>
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<td>CVRP-16</td>
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<td>50 GPM</td>
<td>C1620</td>
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<tr>
<td>CVFB-04</td>
<td>FORWARD GUIDED BALL TYPE</td>
<td>2.5 GPM</td>
<td>C0420</td>
<td>1-030.0</td>
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<td>CVFB-08</td>
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<td>C0820</td>
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<td>CVFB-10</td>
<td></td>
<td>18 GPM</td>
<td>C1020</td>
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</tr>
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<td>POCI-08</td>
<td>PILOT OPERATED CHECK, INTERNAL PILOT</td>
<td>10 GPM</td>
<td>C0825</td>
<td>1-101.0</td>
</tr>
<tr>
<td>POCI-10</td>
<td></td>
<td>18 GPM</td>
<td>C1025</td>
<td>1-102.0</td>
</tr>
<tr>
<td>POCI-12</td>
<td></td>
<td>35 GPM</td>
<td>C1225</td>
<td>1-103.0</td>
</tr>
<tr>
<td>POCX-08</td>
<td>PILOT OPERATED CHECK, EXTERNAL PILOT</td>
<td>10 GPM</td>
<td>C0820</td>
<td>1-111.0</td>
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<tr>
<td>POCX-10</td>
<td></td>
<td>18 GPM</td>
<td>C1020</td>
<td>1-112.0</td>
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<tr>
<td>POCX-12</td>
<td></td>
<td>35 GPM</td>
<td>C1220</td>
<td>1-113.0</td>
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<tr>
<td>PDCV-08</td>
<td>PILOT OPERATED DUAL CHECK</td>
<td>5 GPM</td>
<td>C0840</td>
<td>1-151.0</td>
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<tr>
<td>POCB-08</td>
<td>replaced by PDCV-08</td>
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<tr>
<td>POCB-10</td>
<td></td>
<td>10 GPM</td>
<td>C1040</td>
<td>1-132.0</td>
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<td>DPOC-08</td>
<td>DUAL PILOT OPERATED CHECK</td>
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<td>DPOC-10</td>
<td></td>
<td>10 GPM</td>
<td>C0825</td>
<td>1-141.0</td>
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<tr>
<td>DPOC-12</td>
<td></td>
<td>18 GPM</td>
<td>C1025</td>
<td>1-142.0</td>
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<tr>
<td>DPOC-12</td>
<td></td>
<td>36 GPM</td>
<td>C1225</td>
<td>1-143.0</td>
</tr>
<tr>
<td>PTCC-10</td>
<td>PILOT OPERATED CHECK, CLOSEPILOT</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>10 GPM</td>
<td>C1025</td>
<td>1-202.0</td>
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</tbody>
</table>

Reference: 520-P-010000-EN-02/05.2018
Cartridge Check Valve, Size SAE 08 / NG 5

Q_{\text{max}} = 10.0 \text{ gpm} \ [38 \text{l/min}], \quad p_{\text{max}} = 5000 \text{ psi} \ [350 \text{bar}]

seat design, poppet style forward guided

Series CVPF-08...

1 Description

This valve is a screw in cartridge type, guided poppet, hydraulic check valve. Use as a blocking or load holding device for 5000 psi (350 bar) applications. All external parts of the cartridge are zinc plated to DIN 50 979 and are thus suitable for use in the harshest operating environments. If you intend to manufacture your own cavities or are designing a line-mounting installation, please refer to the section “Related data sheets”.

2 Symbol

USASI:  
ISO:

3 Technical data

<table>
<thead>
<tr>
<th>General characteristics</th>
<th>Description, value, unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation</td>
<td>cartridge check valve</td>
</tr>
<tr>
<td>Design</td>
<td>seat design, poppet style forward guided</td>
</tr>
<tr>
<td>Mounting method</td>
<td>screw-in cartridge 3/4-16 UNF-2B</td>
</tr>
<tr>
<td>Size</td>
<td>SAE 08 / NG 5, for cavity type C0820</td>
</tr>
<tr>
<td>Weight</td>
<td>0.15 lbs [0.07 kg]</td>
</tr>
<tr>
<td>Mounting attitude</td>
<td>unrestricted</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-40 °F ... +248 °F [-40 °C ... +120 °C]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydraulic characteristics</th>
<th>Description, value, unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating pressure</td>
<td>5000 psi [350 bar]</td>
</tr>
<tr>
<td>Maximum flow rate</td>
<td>10.0 gpm [38 l/min]</td>
</tr>
<tr>
<td>Flow direction</td>
<td>shut-off direction 2 → 1</td>
</tr>
<tr>
<td>Opening pressure 1 → 2</td>
<td>5 /15 / 30 / 60 psi [.35 / 1 / 2 / 4 bar]</td>
</tr>
<tr>
<td>Leakage flow rate</td>
<td>5 drops @ 5000 psi [5 drops @ 350 bar]</td>
</tr>
<tr>
<td>Hydraulic fluid</td>
<td>HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER</td>
</tr>
<tr>
<td>Hydraulic fluid temperature range</td>
<td>-13 °F ... +176 °F [-25 °C ... +80 °C]</td>
</tr>
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Reference: 520-P-010410-EN-01
Hydraulic characteristics

<table>
<thead>
<tr>
<th>Description, value, unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity range</td>
</tr>
<tr>
<td>10…500 mm²/s (cSt), recommended 15…250 mm²/s (cSt)</td>
</tr>
<tr>
<td>Minimum fluid cleanliness</td>
</tr>
<tr>
<td>Cleanliness class to ISO 4406 : 1999 20/18/15</td>
</tr>
</tbody>
</table>

4 Performance graphs

[measured with oil viscosity 33 mm²/s (cSt)]

\[ \Delta p = f(Q) \] Pressure drop - Flow rate characteristic

\[ \Delta p \ [\text{psi (bar)}] \]

5 Dimensions & sectional view

6 Installation information

**IMPORTANT!**
When fitting the cartridges, use the specified tightening torque. No adjustments are necessary, since the cartridges are set in the factory.

**ATTENTION!**
Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.

Seal kit

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Backup ring 9.5 x 1.5</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>O-ring no. 908 0.644 x 0.087</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>O-ring 9.5 x 1.5</td>
</tr>
</tbody>
</table>

**IMPORTANT!**
Item no. 5207300004 = Seal kit NBR (Buna)
Item no. 5207300055 = Seal kit FKM (Viton)
7 Ordering code

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>CVPF</td>
<td>Check Valve Poppet-style Forward-guided</td>
</tr>
<tr>
<td>08</td>
<td>size SAE 08 / NG 5</td>
</tr>
<tr>
<td>N</td>
<td>NBR (Nitrile) seals (standard)</td>
</tr>
<tr>
<td>V</td>
<td>FKM (Viton) seals (special seals - please consult BUCHER)</td>
</tr>
<tr>
<td>0</td>
<td>cartridge only (standard))</td>
</tr>
<tr>
<td>02BA</td>
<td>line-mounting body G ¼ BSPP aluminum (on request)</td>
</tr>
<tr>
<td>02BS</td>
<td>line-mounting body G ¼ BSPP steel (on request)</td>
</tr>
<tr>
<td>06TA</td>
<td>line-mounting body SAE-#6 aluminum</td>
</tr>
<tr>
<td>06TS</td>
<td>line-mounting body SAE-#6 steel</td>
</tr>
<tr>
<td>005</td>
<td>opening (crack) pressure 5 psi [.35 bar]</td>
</tr>
<tr>
<td>015</td>
<td>15 psi [1 bar]</td>
</tr>
<tr>
<td>030</td>
<td>30 psi [2 bar]</td>
</tr>
<tr>
<td>060</td>
<td>60 psi [4 bar]</td>
</tr>
<tr>
<td>120</td>
<td>120 psi [8 bar] (on request)</td>
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</table>

8 Related data sheets

<table>
<thead>
<tr>
<th>Reference</th>
<th>(Old no.)</th>
<th>Description</th>
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<tr>
<td>520-P-000050</td>
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<tr>
<td>520-P-000110</td>
<td>(0–011.0)</td>
<td>Cavity type C0820</td>
</tr>
<tr>
<td>520-P-000111</td>
<td>(0–011.1)</td>
<td>Line-mounting body, 8 Series – 2 way</td>
</tr>
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</table>

info.el@bucherhydraulics.com  www.bucherhydraulics.com/commoncavity

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Classification: 430.315.340.305.310.330
CHECK VALVE FORWARD GUIDED POPPET

CRACK PRESSURE

- 5 PSI
- 15 PSI
- 30 PSI
- 60 PSI
- 120 PSI

SEALS

- 10 = 7/8"-14 UNF
- N = BUNA "N"
- V = VITON

PORTS

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

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

TORQUE:

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

CHECK VALVE FORWARD GUIDED POPPET

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-012.1

CVFP-10-X-X-XXX

BASIC

SIZE

10 = 7/8"-14 UNF

SEALS

N = BUNA "N"
V = VITON

PORTS

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

PRESSURE DROP (ΔP)

L/M (28.5 cSt)

G.P.M. (135 SUS)

PSI

BAR

Reference: 520-P-010120-EN-00/09.2015
CHECK VALVE FORWARD GUIDED POPPET

DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 or holding a load.

FEATURES AND BENEFITS
Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 18.0 GPM [68 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1021 Buna “N”
SKV-1021 Viton
WEIGHT: .25 lb [.12 kg] cartridge only.
VALVE CAVITY: #C1020, See Page 0-012.0.
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-013.1

CVFP-12-X-X-XXX

SIZE
12 = 1.062"-12 UNF

SEALS
N = BUNA "N"
V = VITON

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

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

CRACK PRESSURE
005 = 5 PSI
015 = 15 PSI
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

PRESSURE DROP (\(\Delta P\))

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

Reference: 520-P-010130-EN-00/09.2015
# CHECK VALVE FORWARD GUIDED POPPET

## DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

## OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 or holding a load.

## FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.

All external carbon steel parts are plated for longer life against the elements.

All cartridge valves are 100% functionally tested.

## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING PRESSURE</td>
<td>5,000 PSI [350 Bar]</td>
</tr>
<tr>
<td>PROOF PRESSURE</td>
<td>10,000 PSI [700 Bar]</td>
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<tr>
<td>FLOW</td>
<td>36.0 GPM [136 l/m] nominal. See performance chart.</td>
</tr>
<tr>
<td>INTERNAL LEAKAGE</td>
<td>5 drops per minute maximum @ 5,000 PSI [350 Bar]</td>
</tr>
<tr>
<td>VALVE HOUSINGS</td>
<td>2500 PSI [175 Bar] = Aluminum - Anodized.</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 restrictions.</td>
</tr>
<tr>
<td>SEAL KIT</td>
<td>SKN–1231 Buna &quot;N&quot;</td>
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<tr>
<td></td>
<td>SKV–1231 Viton</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>0.50 lb [0.22 kg] cartridge only.</td>
</tr>
<tr>
<td>VALVE CAVITY</td>
<td>#C1220, See Page 0–013.0</td>
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</tbody>
</table>

Reference: 520-P-010130-EN-00/09.2015

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Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. 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.
CHECK VALVE FORWARD GUIDED POPPET

TORQUE:
Steel = 95/100 Ft-Lb. [129/136 Nm]
Aluminum = 70/75 Ft-Lb. [95/102 Nm]

CVFP-16-X-X-XXX

BASIC

SIZE
16 = 1.312”-12 UNF

SEALS
N = BUNA "N"
V = VITON

PORTS
0 = CARTRIDGE ONLY
08BX = G 3/4” BSPP
12TX = SAE - #12
16TX = SAE - #16

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

CRACK PRESSURE
005 = 5 PSI
015 = 15 PSI
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

PRESSES DROP (ΔP) vs. G.P.M. (135 SUS)

Reference: 520-P-010140-EN-00/09.2015
CHECK VALVE FORWARD GUIDED POPPET

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 or holding a load.

FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 60.0 GPM [228 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1621 Buna "N"
SKV-1621 Viton
WEIGHT: 0.86 lb [0.39 kg] cartridge only.
VALVE CAVITY: #C1620, See Page 0-014.0.
CVRP-08

CHECK VALVE REVERSE GUIDED POPPET

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.438 DIA.)

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1

CVRP-08-X-X-XXX

BASIC

SIZE
08 = 3/4"-16 UNF

SEALS
N = BUNA "N"
V = VITON

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

"A" = ALUM. HOUSING
"S" = STEEL HOUSING

CRACK PRESSURE
005 = 5 PSI
015 = 15 PSI
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

PRESSURE DROP (ΔP)

L/M (28,5 cSt)

BAR

PSI

G.P.M.(135 SUS)

TORQUE:

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

Reference: S20-P-010210-EN-00/09.2015
CHECK VALVE REVERSE GUIDED POPPET

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load.

FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 10.0 GPM [38 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-0821 Buna “N”
SKV-0821 Viton
WEIGHT: .20 lb [.12 kg] cartridge only.
VALVE CAVITY: #C0820, See Page 0-011.0.
**CVRP-10**

**CHECK VALVE REVERSE GUIDED POPPET**

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

**NOTE:** CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.570" DIA.)
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0–012.1

**CVRP-10-X-X-XXX**

- **SIZE**
  - 10 = 7/8" - 14 UNF

- **SEALS**
  - N = BUNA "N"
  - V = VITON

- **PORTS**
  - 0 = CARTRIDGE ONLY
  - 02BX = G 1/4" BSPP
  - 03BX = G 3/4" BSPP
  - 06TX = SAE – #10
  - 08TX = SAE – #12

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

**CRACK PRESSURE**
- 005 = 5 PSI
- 015 = 15 PSI
- 030 = 30 PSI
- 060 = 60 PSI
- 120 = 120 PSI

Reference: S20-P-010220-EN-01/01.2016
CHECK VALVE REVERSE GUIDED POPPET

DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, used as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load.

FEATURES AND BENEFITS
Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 18.0 GPM [68 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN−1021 Buna "N"
SKV−1021 Viton
WEIGHT: .25 lb [.12 kg] cartridge only.
VALVE CAVITY: #C1020, See Page 0−012.0.
CHECK VALVE REVERSE GUIDED POPPET

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.750" DIA.)
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-013.1

CVRP-12-X-X-XXX

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CRACK PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 = 1.062&quot;-12 UNF</td>
<td>005 = 5 PSI</td>
</tr>
<tr>
<td>04BX = G 1/2&quot; BSPP</td>
<td>015 = 15 PSI</td>
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<tr>
<td>06BX = G 3/4&quot; BSPP</td>
<td>030 = 30 PSI</td>
</tr>
<tr>
<td>10TX = SAE - #10</td>
<td>060 = 60 PSI</td>
</tr>
<tr>
<td>12TX = SAE - #12</td>
<td>120 = 120 PSI</td>
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</tbody>
</table>

SEALS
N = BUNA "N"
V = VITON

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

"A" = ALUM. HOUSING
"S" = STEEL HOUSING

TORQUE:
Steel = 70/75 Ft-Lb. [95/102 Nm]
Aluminum = 55/60 Ft-Lb. [74/81 Nm]
CHECK VALVE REVERSE GUIDED POPPET

DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, used as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load.

FEATURES AND BENEFITS
Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 36.0 GPM [136 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1221 Buna “N”
SKV-1221 Viton
WEIGHT: 0.50 lb [0.22 kg] cartridge only.
VALVE CAVITY: #C1220, See Page 0-013.0.
CHECK VALVE REVERSE GUIDED POPPET

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-014.1

TORQUE:
Steel = 95/100 Ft-Lb. [129/136 Nm]
Aluminum = 70/75 Ft-Lb. [95/102 Nm]

CRACK PRESSURE
005 = 5 PSI
015 = 15 PSI
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

SEALS
N = BUNA "N"
V = VITON

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

Reference: 520-P-010240-EN-00/09.2015
CHECK VALVE REVERSE GUIDED POPPET

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic check valve, used as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load.

FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.
All external carbon steel parts are plated for longer life against the elements.
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: 50.0 GPM [190 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1621 Buna “N”
      SKV-1621 Viton
WEIGHT: 0.82 lb [0.37 kg] cartridge only.
VALVE CAVITY: #C1620, See Page 0–014.0.
CHECK VALVE FORWARD GUIDED BALL

TORQUE to 10/12 Ft-Lb. [14/16 N·m].

CVFB-04-X-0-XXX

BASIC
SIZE 04 = 7/16"-20 UNF
SEALS N = BUNA "N" V = VITON
PORTS 0 = CARTRIDGE ONLY (NO HOUSING OFFERED)

CRACK PRESSURE
005 = 5 PSI
020 = 20 PSI

PRESSURE DROP (ΔP)

G.P.M. (135 SUS)

L/M (28.5 cSt)

Reference: 520-P-010300-EN-00/09.2015
CHECK VALVE FORWARD GUIDED BALL

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided ball, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 or holding a load.

FEATURES AND BENEFITS

All external carbon steel parts are plated for longer life against the elements. All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]
PROOF PRESSURE: 10,000 PSI [700 Bar]
FLOW: 2.5 GPM [9.5 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-0421 Buna "N"
SKV-0421 Viton
WEIGHT: .08 lb [.04 kg] cartridge only.
VALVE CAVITY: #C0420.

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Reference: S20-P-010300-EN-00/09.2015
CHECK VALVE FORWARD GUIDED BALL

CVFB-08

CRACK PRESSURE

005 = 5 PSI
010 = 10 PSI
025 = 25 PSI
050 = 50 PSI

SEALS
N = BUNA "N"
V = VITON

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

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

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

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1

Reference: 520-P-010310-EN-00/09.2015
CHECK VALVE FORWARD GUIDED BALL

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided ball, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 or holding a load.

FEATURES AND BENEFITS

All external carbon steel parts are plated for longer life against the elements. 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: 10.0 GPM [38 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN–0821 Buna "N"
SKV–0821 Viton
WEIGHT: .20 lb [.12 kg] cartridge only.
VALVE CAVITY: #C0820, See Page 0–011.0.
CHECK VALVE FORWARD GUIDED BALL

CRACK PRESSURE

005 = 5 PSI
015 = 15 PSI
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

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

CVFB-10-X-X-XXX

BASIC

SIZE
10 = 7/8" - 14 UNF

SEALS
N = BUNA "N"
V = VITON

PORTS
0 = CARTRIDGE ONLY
02BX = G 1/4" BSPP
03BX = G 3/4" BSPP
06TX = SAE - #10
08TX = SAE - #12

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

PRESSURE DROP (ΔP)

L/M (28,5 cSt)

REFERENCE: 520-P-010320-EN-01/01.2016
CHECK VALVE FORWARD GUIDED BALL

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided ball, hydraulic check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 for holding a load.

FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.

All external parts are zinc plated for longer life against the elements.

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: 18.0 GPM [68 l/m] nominal. See performance chart.
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.

SEAL KIT: SKN-1021 Buna “N”
SKV-1021 Viton

WEIGHT: .25 lb [.12 kg] cartridge only.

VALVE CAVITY: #C1020, See Page 0-012.0.
POCI-08

PILOT OPERATED CHECK VALVE POPPET TYPE,
PILOT TO OPEN, 3 TO 1 PILOT RATIO

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.500 DIA.).
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-021-1.

POCI-08-X-F-X-XXX

CRACK PRESSURE
010 = 10 PSI
030 = 30 PSI
060 = 60 PSI

PORTS
D = CARTRIDGE ONLY
03BX = G 3/8" BSP
08TX = SAE - #8

"A" = ALUM. HOUSING
"S" = STEEL HOUSING

PRESSURE DROP (ΔP)

L/M (28,5 cSt)

PSI

7,6 15,1 22,7 30,3 38 14,0

BAR

G.P.M.(135 SUS)

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

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

**OPERATIONS**

This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when pressure is applied to port 3. This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

**FEATURES AND BENEFITS**

A low friction seal on pilot piston is standard. A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.

All external carbon steel parts are plated for longer life against the elements. 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: 10.0 GPM [38 l/m] nominal. See performance chart. |
| PILOT RATIO: 3 TO 1 |
| INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar] |
| 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 restrictions.

**SEAL KIT:** SKN−0828 Buna “N”  
SKV−0828 Viton

**WEIGHT:** .26 lb [.12 kg] cartridge only.

**VALVE CAVITY:** #C0825, See Page 0−021.0.
PILOT OPERATED CHECK VALVE POPPET TYPE,
PILOT TO OPEN, 3 TO 1 PILOT RATIO.

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSIONS (.563 DIA.)
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-022-1.

POCI-10-X-X-X-XXX

BASIC
SIZE
10 = 7/8"-14 UNF
SEALS
N = BUNA "N"
V = VITON
ADJUSTMENT
F = FIXED
M = MANUAL RELEASE

CRACK PRESSURE
010 = 10 PSI
030 = 30 PSI
060 = 60 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

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

PRESSURE DROP (P)
G.P.M. (135 SUS)

PSI
BAR
0 5 10 15 20
0 50 100 150 200
250 19 38 57 76
13,6 10,2 6,8 3,4

L/M (28,5 cSt)

Reference: S20-P-011020-EN-00/09.2015
PILOT OPERATED CHECK VALVE
POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when pressure is applied to port 3.

This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

FEATURES AND BENEFITS

A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.
Optional screw type manual load release is available.
All external carbon steel parts are plated for longer life against the elements.
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: 18.0 GPM [70 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN−1028 Buna “N”
SKV−1028 Viton
WEIGHT: .39 lb [.18 kg] cartridge only.
VALVE CAVITY: #C1025, See Page 0−022.0.

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Reference: S20-P-011020-EN-00/09.2015
POCI-12

PILOT OPERATED CHECK VALVE POPPET TYPE,
PILOT TO OPEN, 3 TO 1 PILOT RATIO.

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

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.750 DIA.).
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-023-1.

POCI-12-X-X-X-XXX

BASIC
SIZE
12 = 1.062"-12 UNF
SEALS
N = BUNA "N"
V = VITON
ADJUSTMENT
F = FIXED
M = MANUAL RELEASE

CRACK PRESSURE
010 = 10 PSI
030 = 30 PSI
060 = 60 PSI

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

"A" = ALUM. HOUSING
"S" = STEEL HOUSING

L/M (28,5 cSt)

PRESSURE DROP (P)
G.P.M.(135 SUS)
PSI
BAR

Reference: 520-P-011030-EN-00/09.2015
## PILOT OPERATED CHECK VALVE
### POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

### DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

### OPERATIONS
This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when sufficient pilot pressure is applied to port 3. This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

### FEATURES AND BENEFITS
A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.
Optional screw type manual load release is available.
All external carbon steel parts are plated for longer life against the elements.
All cartridge valves are 100% functionally tested.

### SPECIFICATIONS
- **OPERATING PRESSURE:** 5,000 PSI [350 Bar]
- **PROOF PRESSURE:** 10,000 PSI [700 Bar]
- **FLOW:** 35.0 GPM [132.4 l/m] nominal. See performance chart.
- **PILOT RATIO:** 3 TO 1
- **INTERNAL LEAKAGE:** 5 drops per minute maximum @ 5,000 PSI [350 Bar]
- **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 restrictions.
- **SEAL KIT:** SKN-1228 Buna "N"
  - SKV-1228 Viton
- **WEIGHT:** 0.63 lb [0.25 kg] cartridge only.
- **VALVE CAVITY:** #C1225, See Page 0-023.0.

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Reference: 520-P-011030-EN-00/09.2015
POCX-08

PILOT OPERATED CHECK VALVE POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

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

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.500 DIA.).
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-011.1

Reference: 520-P-01111 0-EN-00/09.2015
# PILOT OPERATED CHECK VALVE POPPET TYPE,
## PILOT TO OPEN, 3 TO 1 PILOT RATIO

## DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

## OPERATIONS
This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when pressure is applied to pilot port "P".
This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at pilot port "P" to open the valve.
We recommend to use an orifice to dampen the pilot signal (X) when used with an on/off (hard shifting) valve.

## FEATURES AND BENEFITS
Wide selection of bias springs allows flexibility for back-pressure application. A low friction seal on pilot piston is standard. All external carbon steel parts are plated for longer life against the elements. 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:** 10.0 GPM [38.0 l/m] nominal. See performance chart.
- **PILOT RATIO:** 3 TO 1
- **INTERNAL LEAKAGE:** 5 drops per minute maximum @ 5,000 PSI [350 Bar]
- **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 restrictions.
- **SEAL KIT:** SKN-0821 Buna "N"  SKV-0821 Viton
- **WEIGHT:** .34 lb [.15 kg] cartridge only.
- **VALVE CAVITY:** #C0820, See Page 0-011.0.

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Reference: 520-P-01111 0-EN-00/09.2015
POCX-10

PILOT OPERATED CHECK VALVE POPPET TYPE,
PILOT TO OPEN, 3 TO 1 PILOT RATIO.

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.563 DIA.).
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0–012.1

POCX-10-X-X-XX-XXX

BASIC
SIZE
10 = 7/8"–14 UNF

SEALS
N = BUNA "N"
V = VITON

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

CRACK PRESSURE
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

"P" PILOT PORT
2B = G 1/4” BSPP
4T = SAE = #4

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

L/M (28.5 cSt)

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<th>10</th>
<th>15</th>
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<td>PSI</td>
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<td>100</td>
<td>150</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>PRESSURE DROP (ΔP)</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>150</td>
<td>200</td>
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</table>

Reference: 520-P-011120-EN-00/09.2015
PILOT OPERATED CHECK VALVE
POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when pressure is applied to pilot port "P". This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at pilot port "P" to open the valve.

FEATURES AND BENEFITS
Wide selection of bias springs allows flexibility for back-pressure application.
A low friction seal on pilot piston is standard.
All external carbon steel parts are plated for longer life against the elements.
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: 18.0 GPM [70 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN–1021 Buna "N"
SKV–1021 Viton
WEIGHT: .31 lb [.14 kg] cartridge only.
VALVE CAVITY: #C1020, See Page 0–012.0.
POCX-12

PILOT OPERATED CHECK VALVE POPPET TYPE,
PILOT TO OPEN, 3 TO 1 PILOT RATIO.

NOTE: CAVITY BOTTOM HOLE MUST ALLOW FOR POPPET EXTENSION (.630 DIA.).
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-013.1

POCX-12-X-X-XX-XXX

BASIC
SIZE
12 = 1.062"-12 UNF
SEALS
N = BUNA "N"
V = VITON
PORTS
0 = CARTRIDGE ONLY
04BX = G 1/2" BSPP
06BX = G 3/4" BSPP
10TX = SAE - #10
12TX = SAE - #12
"A" = ALUM. HOUSING
"S" = STEEL HOUSING

CRACK PRESSURE
030 = 30 PSI
060 = 60 PSI
120 = 120 PSI

"P" PILOT PORT
2B = G 1/4" BSPP
4T = SAE - #4

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

Crack Pressure

PSI
0 10 20 30 40
G.P.M.(135 SUS)
0 10 20 30 40
L/M (28.5 cSt)

Reference: 520-P-01130-EN-00/09.2015
PILOT OPERATED CHECK VALVE

POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

DESCRIPTION

This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 2 to port 1 and blocks flow from port 1 to port 2 or holding a load. Flow will be allowed from port 1 to port 2 when sufficient pilot pressure is applied to port "P".

This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at pilot port "P" to open the valve.

We recommend to use an orifice to dampen the pilot signal (X) when used with an on/off (hard shifting) valve.

FEATURES AND BENEFITS

Wide selection of bias springs allows flexibility for back-pressure application.

A low friction seal on pilot piston is standard.

All external carbon steel parts are plated for longer life against the elements.

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: 35.0 GPM [132.5 l/m] nominal. See performance chart.

PILOT RATIO: 3 TO 1

INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]


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 restrictions.

SEAL KIT: SKN-1221 Buna "N"

SKV-1221 Viton

WEIGHT: 0.31 lb [0.14 kg] cartridge only.

VALVE CAVITY: #C1220, See Page 0-013.0.
Dual P.O. Check Valve Cartridge, SAE 08 / NG 5

Q\text{max} = 5 \text{ gpm (19 l/min)}, \quad p\text{max} = 3600 \text{ psi (250 bar)}

Pilot operated
Series PDCV-08...

• A low friction pilot piston is standard
• Compact construction for cavity types: C0840 and AN/C0840 – 3/4-16 UNF
• Separate springs assure fast return to neutral position
• Reliable and high positive re-seat duration
• All exposed parts with zinc-nickel plating
• Can be fitted in a line-mounting body
• Replaces POCD-08...

1 Description

The PDCV-08... series dual pilot operated check valve cartridges are size SAE 08 / NG 5, high performance screw-in valves with a 3/4-16 UNF mounting thread. This unit is a cartridge type, high strength steel guided poppet for realizable low leakage performance, dual hydraulic pilot operated check valve, for use as a blocking or load holding device at high pressure applications. This valve allows free flow from port 2 to port 1 and from port 3 to port 4 and it blocks flow from port 1 to port 2 and from port 4 to port 3. Flow is allowed from port 1 to port 2 when pilot pressure is sensed at port 3 or flow is allowed from port 4 to port 3 when pilot pressure is sensed at port 2. In order to pilot the valve opens, the pressure at port 2 or port 3 needs to exceed one-third of the load pressure from port 1 or port 4. All external parts of the cartridge are zinc-nickel plated to DIN 50 979 and are thus suitable for use in the harshest operating environments. If you intend to manufacture your own cavities or are designing a line-mounting installation, please refer to the section “Related data sheets”.

2 Symbol

PDCV-08-...-C...

PDCV-08-...-3...

3 Technical data

<table>
<thead>
<tr>
<th>General characteristics</th>
<th>Description, value, unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation</td>
<td>dual p.o. check valve cartridges</td>
</tr>
<tr>
<td>Design</td>
<td>pilot operated</td>
</tr>
<tr>
<td>Mounting method</td>
<td>screw-in cartridge 3/4-16 UNF</td>
</tr>
<tr>
<td>Size</td>
<td>SAE 08 / NG 5 for cavity type C0840 and AN/C0840</td>
</tr>
<tr>
<td>Weight</td>
<td>0.26 lbs (0.12 kg)</td>
</tr>
<tr>
<td>Mounting attitude</td>
<td>unrestricted</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-40 °F...+250 °F (-40 °C...+120 °C)</td>
</tr>
<tr>
<td>Optional internal thermal relief valve</td>
<td>from port 4 to port 3 3000 psi (210 bar), not adjustable</td>
</tr>
</tbody>
</table>

Reference: 520-P-011510-EN-01
Hydraulic characteristics

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating pressure</td>
<td>3600</td>
<td>psi (250 bar)</td>
</tr>
<tr>
<td>Maximum flow rate</td>
<td>5</td>
<td>gpm (19 l/min)</td>
</tr>
<tr>
<td>Pilot Ratio</td>
<td>3.0 to 1</td>
<td></td>
</tr>
<tr>
<td>Leakage flow rate</td>
<td>5 drops/min @ 3500 psi</td>
<td>(5 drops/min @ 240 bar)</td>
</tr>
<tr>
<td>Flow direction</td>
<td>see symbol</td>
<td></td>
</tr>
<tr>
<td>Hydraulic fluid</td>
<td>HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER</td>
<td></td>
</tr>
<tr>
<td>Hydraulic fluid temperature range</td>
<td>-40 °F…+250 °F</td>
<td>(-40 °C…+120 °C)</td>
</tr>
<tr>
<td>Viscosity range</td>
<td>15…380 mm²/s (cSt), recommended 20…130 mm²/s (cSt)</td>
<td></td>
</tr>
<tr>
<td>Minimum fluid cleanliness</td>
<td>Cleanliness class to ISO 4406 : 1999</td>
<td>class 18/16/13</td>
</tr>
</tbody>
</table>

4 Performance graphs

measured with oil viscosity 33 mm²/s (cSt)

$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic

"free flow 2 → 1"

![Graph 1](EL_P0022.ai)

$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic

"free flow 3 → 4"

![Graph 2](EL_P0023.ai)

$Q = f(\Delta p; I)$ Flow rate adjustment characteristic

"pilot 3 flow 1 → 2"

![Graph 3](EL_P0024.ai)

$Q = f(I; \Delta p)$ Flow rate adjustment characteristic

"pilot 2 flow 4 → 3"

![Graph 4](EL_P0025.ai)

Attention:
When flow passes through the check valve and there is a large pressure difference, the poppet in the main stage can be damaged.
5 Dimensions & sectional view

Dimensions in inches (millimeters)

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td>O-ring no. 908 0.644 x 0.087 N90 Inch</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>O-ring 13.00 x 1.50 FKM mm</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>O-ring 11.00 x 1.50 FKM mm</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>O-ring 9.50 x 1.50 FKM mm</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Backup ring 13.00 x 1.50 x 1.00 Fl0751 mm</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Backup ring 11.30 x 1.50 x 1.00 Fl0751 mm</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>Backup ring 9.50 x 1.50 x 1.00 Fl0751 mm</td>
</tr>
</tbody>
</table>

Tightening torque $M_A$ $\pm$ 10%

<table>
<thead>
<tr>
<th>Cavity type</th>
<th>C0840, AN/C0840</th>
</tr>
</thead>
<tbody>
<tr>
<td>When fitted in steel</td>
<td>37 ft-lbs (50 [Nm])</td>
</tr>
<tr>
<td>When fitted in aluminium</td>
<td>27 ft-lbs (37 [Nm])</td>
</tr>
</tbody>
</table>

6 Installation information

Important:
When fitting the cartridges, use the specified tightening torque. No adjustments are necessary, since the cartridges are set in the factory.

ATTENTION!
Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.

Seal kit NBR no. SKN-0828 1)

1) Seal kit with FKM (Viton) seals, no. SKV-0828
7 Ordering code

PDCV = pilot operated dual check valve
08 = size SAE 08 / NG 5
N = NBR (Nitrile) seals (standard)
V = FKM (Viton) seals (special seals - please consult BUCHER)
C = no thermal relief
3 = 3000 psi (210 bar) internal thermal relief from port 4 to port 3, not adjustable
0 = cartridge only

02BA = line-mounting body G1/4 BSPP aluminum
02BS = line-mounting body G1/4 BSPP steel
06TA = line-mounting body SAE-#6 aluminum
06TS = line-mounting body SAE-#6 steel

8 Related data sheets

<table>
<thead>
<tr>
<th>Reference</th>
<th>(Old no.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>520-P-000050</td>
<td></td>
<td>Form tools</td>
</tr>
<tr>
<td>520-P-000410</td>
<td></td>
<td>Cavity type C0840</td>
</tr>
<tr>
<td>…</td>
<td></td>
<td>Cavity type ANIC0840</td>
</tr>
<tr>
<td>520-P-000411</td>
<td></td>
<td>Line-mounting body, 08 Series – 4-way</td>
</tr>
</tbody>
</table>
PILOT OPERATED DUAL CHECK VALVE WITH OPTIONAL THERMAL RELIEF

POCD-10

BASIC
SIZE
10 = 7/8"-14 UNF
SEALS
N = BUNA "N"
V = VITON
TYPE
C = NO THERMAL RELIEF
3 = 3000 PSI RELIEF
S = 5000 PSI RELIEF

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

1 = ALUM. HOUSING
2 = STEEL HOUSING

1.06" [27,0] HEX
2.49" [63,2]
3.50" [88,9]
2.50" [63,5]

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

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-042.1

Reference: 520-P-011320-EN-00/09.2015
PILOT OPERATED DUAL CHECK VALVE
WITH OPTIONAL THERMAL RELIEF

DESCRIPTION
This unit is a SCREW IN, cartridge type, guided poppet, hydraulic pilot operated dual check valve, for use as a blocking or load holding device for high pressure applications. Thermal relief option available in one direction.

OPERATIONS
This check valve allows free flow from port 2 to port 1 and from port 3 to port 4. It blocks flow from port 1 to port 2 and from port 4 to port 3 or holds a load. Flow will be allowed from port 1 to port 2 when pilot pressure is applied to port 3 that is higher than one-third of the load pressure at port 1. Flow will be allowed from port 4 to port 3 when pilot pressure is applied to port 2 that is higher than one-third of the load pressure at port 4.
This pilot operated check valve has a 3 to 1 pilot ratio.
Port 4 can be equipped with a thermal relief. The relief is set to open when the pressure in port 4 exceeds the relief setting.

FEATURES AND BENEFITS
All external carbon steel parts are plated for longer life against the elements. 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: 10.0 GPM [37.9 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1042 Buna ”N”
SKV-1042 Viton
WEIGHT: .40 lb. [.19 kg] cartridge only.
VALVE CAVITY: #C1040, See Page 0-042.0.
DUAL PILOT OPERATED CHECK VALVE POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-026.0

DPOC-08-X-X-X-XXX

BASIC

SIZE
08 = 3/4"-16 UNF

SEALS
N = BUNA "N"
V = VITON

ADJUSTMENT
F = FIXED

PRESSURE DROP (Δ P)

L/M (28.5 cSt)

CRACK PRESSURE
010 = 10 PSI
030 = 30 PSI
060 = 60 PSI

PORTS
03BX = G 3/8" BSPP
04BX = G 1/2" BSPP
08TX = SAE - #8

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

Reference: 520-P-011410-EN-00/09.2015
DUAL PILOT OPERATED CHECK VALVE
POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

DESCRIPTION
This unit is a cartridge type, guided poppet, with cross line pilot, dual hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore opening flow from port C1 or port C2.

This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

FEATURES AND BENEFITS
A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.
All external carbon steel parts are plated for longer life against the elements.
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: 10.0 GPM [38 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN–0828 Buna “N”
SKV–0828 Viton
WEIGHT: 1.70 lb [.77 kg].
VALVE CAVITIES: #C0825, See Page 0–021.0.
DUAL PILOT OPERATED CHECK VALVE POPPET

TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

"M" MANUAL LOAD RELEASE

DPOC-10

BASIC

SIZE

10 = 7/8"-14 UNF

SEALS

N = BUNA "N"
V = VITON

ADJUSTMENT

F = FIXED
M = MANUAL RELEASE

PORTS

03BX = G 3/8" BSPP
04BX = G 1/2" BSPP
08TX = SAE - #8
10TX = SAE - #10

L/M (28,5 cSt)

PRESSURE DROP (Δ P)

G.P.M.(135 SUS)

0 5 10 15 20
0 50 100 150 200
0 3,4 6,8 10,2 13,6
0 10 30 60 90

PSI

BAR

Reference: 520-P-011420-EN-00/09.2015
DESCRIPTION
This unit is a cartridge type, guided poppet, with cross line pilot, dual hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore opening flow from port C1 or port C2. This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

FEATURES AND BENEFITS
A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.
Optional screw type manual load release is available.
All external carbon steel parts are plated for longer life against the elements.
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: 18.0 GPM [70 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1028 Buna "N" SKV-1028 Viton
WEIGHT: 1.85 lb [.92 kg].
VALVE CAVITIES: #C1025, See Page 0–022.0.
DPOC-12

DUAL PILOT OPERATED CHECK VALVE POPPET

TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

"M" MANUAL LOAD RELEASE

CRACK PRESSURE
010 = 10 PSI
030 = 30 PSI
060 = 60 PSI

SEALS
N = BUNA "N"
V = VITON

ADJUSTMENT
F = FIXED
M = MANUAL RELEASE

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

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

L/M (28,5 cSt)

<table>
<thead>
<tr>
<th>L/M (28.5 cSt)</th>
<th>G.P.M. (135 SUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>0 PSI</td>
</tr>
<tr>
<td>68</td>
<td>50 PSI</td>
</tr>
<tr>
<td>102</td>
<td>100 PSI</td>
</tr>
<tr>
<td>136</td>
<td>150 PSI</td>
</tr>
<tr>
<td>17.0</td>
<td>200 PSI</td>
</tr>
</tbody>
</table>

PSI

BAR

Reference: 520-P-011430-EN-00/09.2015
DUAL PILOT OPERATED CHECK VALVE
POPPET TYPE, PILOT TO OPEN, 3 TO 1 PILOT RATIO.

DESCRIPTION
This unit is a cartridge type, guided poppet, with cross line pilot, dual hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS
This valve allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore opening flow from port C1 or port C2.

This pilot operated check valve has a 3 to 1 pilot ratio, meaning that it takes at least one-third of the load pressure held at port 1 that is required at port 3 to open the valve.

FEATURES AND BENEFITS
A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-seat.
Optional screw type manual load release is available.
All external carbon steel parts are plated for longer life against the elements.
All cartridge valves are 100% functionally tested.

SPECIFICATIONS
OPERATING PRESSURE: 5,000 PSI [350 Bar]
PROOF PRESSURE: 10,000 PSI [700 Bar]
FLOW: 36.0 GPM [136.3 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
FILTERATION: 25 microns or better.
SEAL KIT: SKN-1228 Buna “N”
SKV-1228 Viton
WEIGHT: 2.65 lb [1.21 kg] Aluminium. 5.25 lbs [2.38] Steel.
VALVE CAVITIES: #C1225

info.el@bucherhydraulics.com
www.bucherhydraulics.com/commoncavity

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Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. 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.

Reference: 520-P-011430-EN-00/09.2015
NOTE: FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-022.1.

PTCC-10

PILOT OPERATED CHECK VALVE POPPET TYPE, PILOT TO CLOSE, PILOT RATIO.

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

Reference: 520-P-012020-EN-00/09.2015
PILOT OPERATED CHECK VALVE
POPPET TYPE, PILOT TO CLOSE, PILOT RATIO.

DESCRIPTION

This unit is a SCREW-IN cartridge type, guided poppet, hydraulic pilot operated check valve, for use as a blocking or load holding device for high pressure applications.

OPERATIONS

This valve allows free flow from port 1 to port 2 and blocks flow from port 2 to port 1 for holding a load. Flow will not be allowed from port 2 to port 1 when pressure is applied to port 3. This pilot operated check valve has a 3 to 1 or 2 to 1 pilot ratio, meaning that port 3 requires at least one-third or half of the load pressure held at port 2 to close the valve.

FEATURES AND BENEFITS

A low friction seal on pilot piston is standard.
A separate heavy spring assures fast return of the pilot piston for a very quick, reliable and positive valve re-open.
Optional screw type manual load release is available.
All external carbon steel parts are plated for longer life against the elements.
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: 10.0 GPM [38 l/m] nominal. See performance chart.
PILOT RATIO: 3 TO 1 OR 2 TO 1
INTERNAL LEAKAGE: 5 drops per minute maximum @ 5,000 PSI [350 Bar]
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 restrictions.
SEAL KIT: SKN-1028 Buna "N"
SKV-1028 Viton
WEIGHT: .32 lb [.15 kg] cartridge only.
VALVE CAVITY: #C1025, See Page 0-022.0.

Reference: 520-P-012020-EN-00/09.2015

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