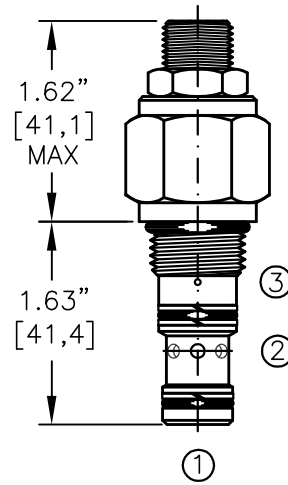
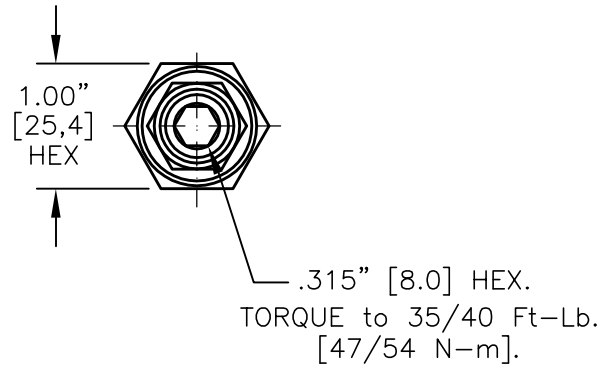
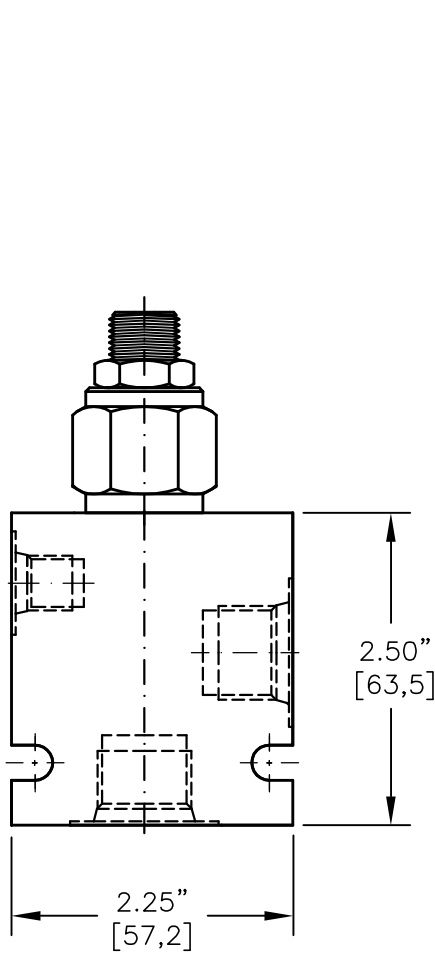
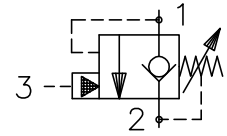


Counterbalance Valves

	MODEL	DESCRIPTION	FLOW	CAVITY	PAGE NO.
	CBPA-08	COUNTERBALANCE VALVE, FREE REVERSE	10 GPM	C0825	8-051.0
	CBPA-10		20 GPM	C1025	8-052.0
	CBPA-12		35 GPM	C1225	8-053.0
	DCBA-08	DUAL COUNTERBALANCE VALVE	10 GPM	C0825	8-061.0
	DCBA-10		20 GPM	C1025	8-062.0
	DCBA-12		35 GPM	C1225	8-063.0
	CBPS-08	COUNTERBALANCE, FREE REVERSE w/SEALS	10 GPM	C0825	8-071.0
	CBPS-10		20 GPM	C1025	8-072.0
	CBPS-12		35 GPM	C1225	8-073.0
	DCBS-08	DUAL COUNTERBALANCE, FREE REV. w/SEALS	10 GPM	C0825	8-081.0
	DCBS-10		20 GPM	C1025	8-082.0
	DCBS-12		35 GPM	C1225	8-083.0
	CBPG-08	COUNTERBALANCE, FREE REVERSE VENTED	10 GPM	C0825	8-091.0
	CBPG-10		20 GPM	C1025	8-092.0
	CBPG-12		35 GPM	C1225	8-093.0
	DCBG-08	DUAL COUNTERBALANCE, FREE REV. VENTED	10 GPM	C0825	8-101.0
	DCBG-10		20 GPM	C1025	8-102.0
	DCBG-12		35 GPM	C1225	8-103.0
	CBPA-20M	COUNTERBALANCE VALVE, SUN CAVITY	20 GPM	T-11A	8-112.0
	CBPS-20M		20 GPM	T-11A	8-122.0
	CBPG-20M	COUNTERBALANCE VALVE VENTED, SUN CAVITY	20 GPM	T-11A	8-132.0



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-021-1.

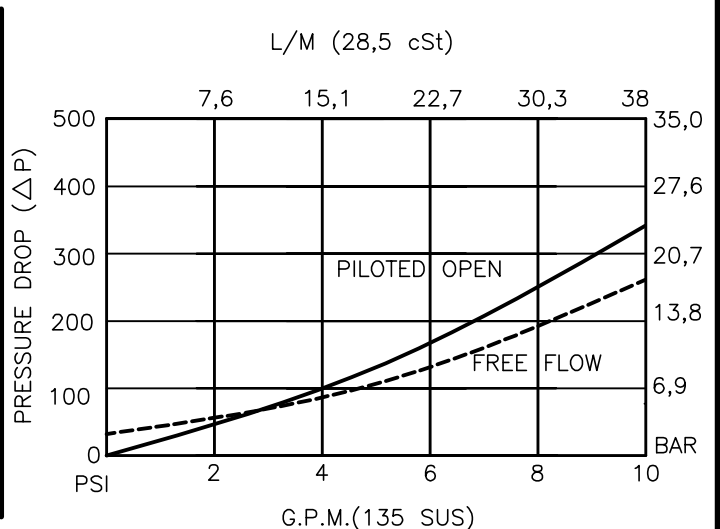
CBPA-08-X-X-X-XX

- 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

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 1500 TO 5000 PSI

- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
08TX = SAE - #8
"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 10.0 GPM [38 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-0828 for buna "N".

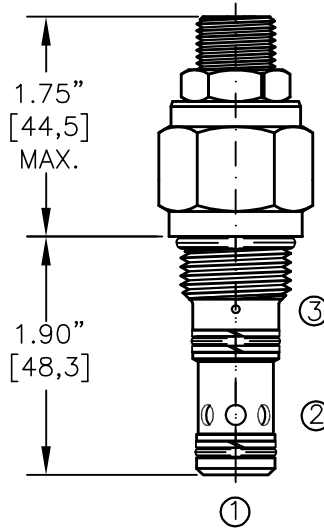
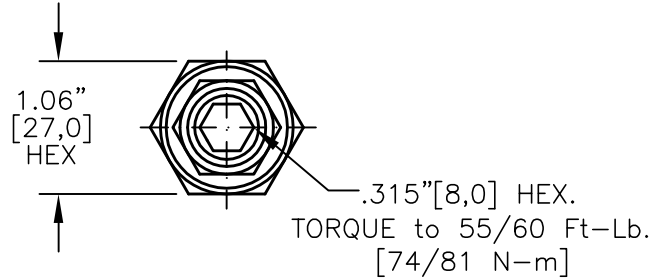
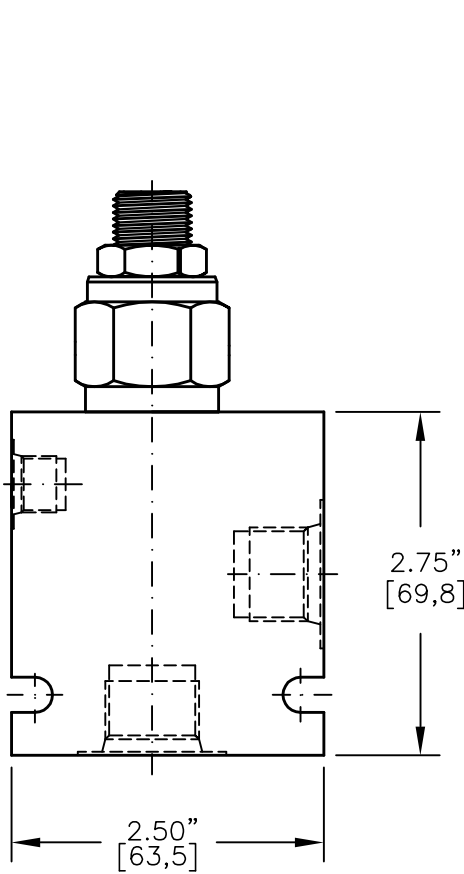
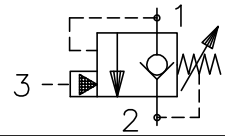
SKV-0828 for viton.

WEIGHT: 0.30 lb [.14 kg] cartridge only.

VALVE CAVITY: #C0825, See Page 0-021.0.



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.



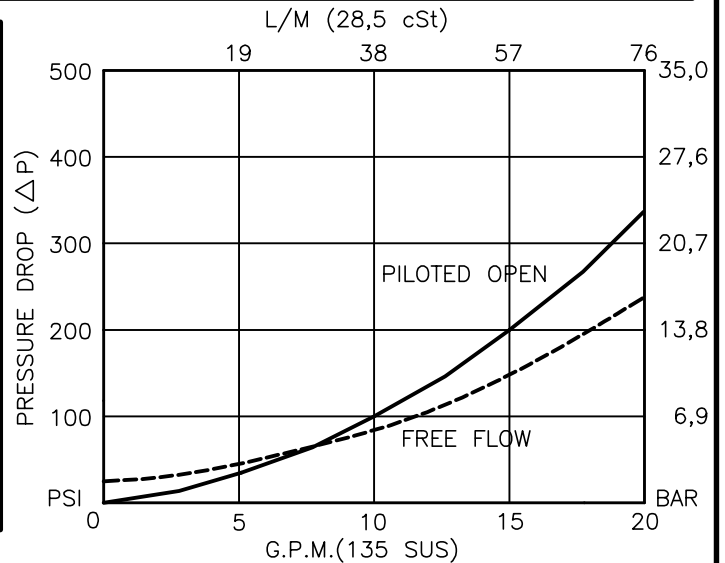
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-022-1.

CBPA-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 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
04BX = G 1/2" BSPP
08TX = SAE - #8
10TX = SAE - #10
"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE

POPPET TYPE WITH FREE REVERSE FLOW.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

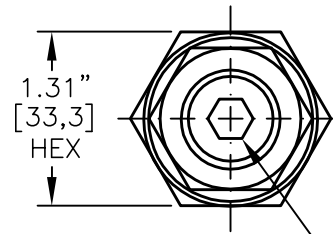
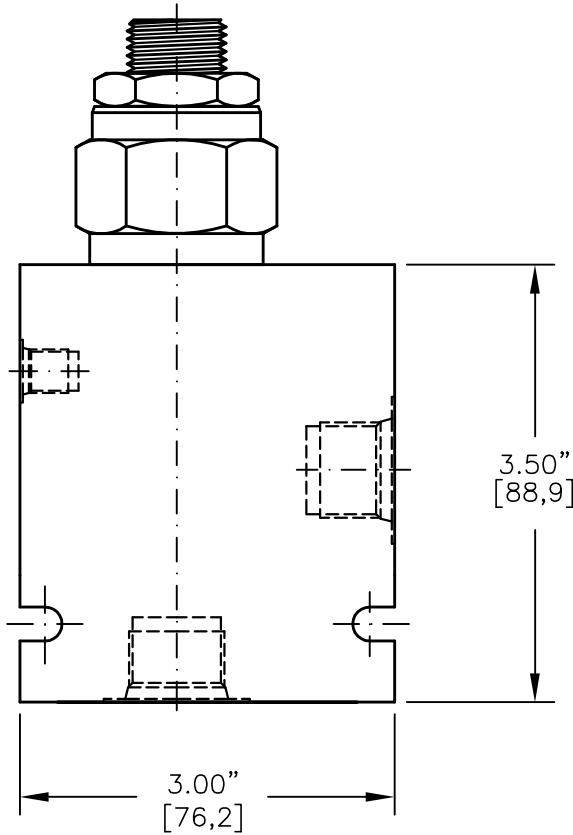
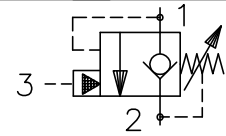
SKV-1028 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

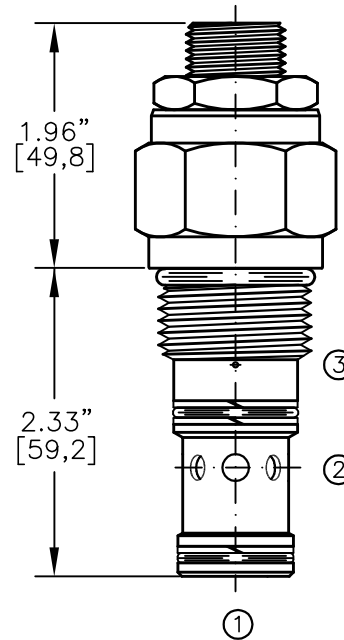
VALVE CAVITY: #C1025, See Page 0-022.0.



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.



TORQUE to 70/75 Ft-Lb.
[95/100 N-m]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-023-1.

CBPA-12-X-X-X-XX

BASIC

SIZE

12 = 1.062"-12 UNF

SEALS

N = BUNA "N"
V = VITON

ADJUSTMENT

S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

PRESSURE RANGE

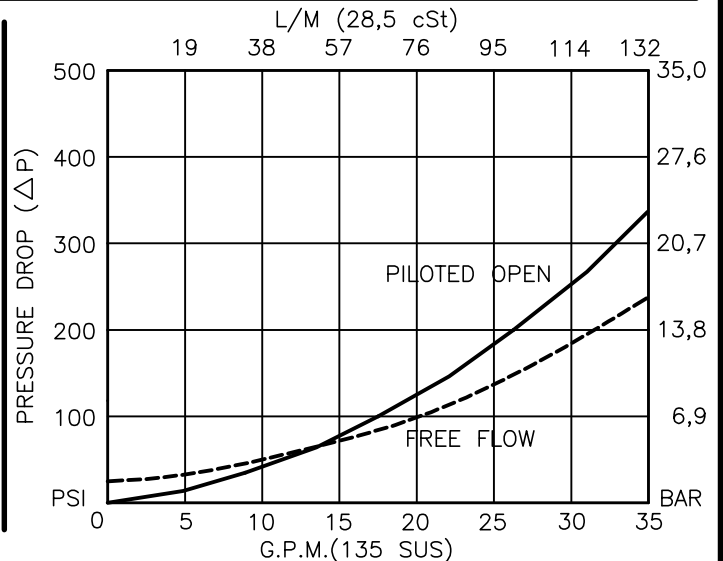
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
40 = 600 TO 4000 PSI

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

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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

Valve is available with screw, tamperproof, and capped adjustments.

All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1228 for Buna "N".

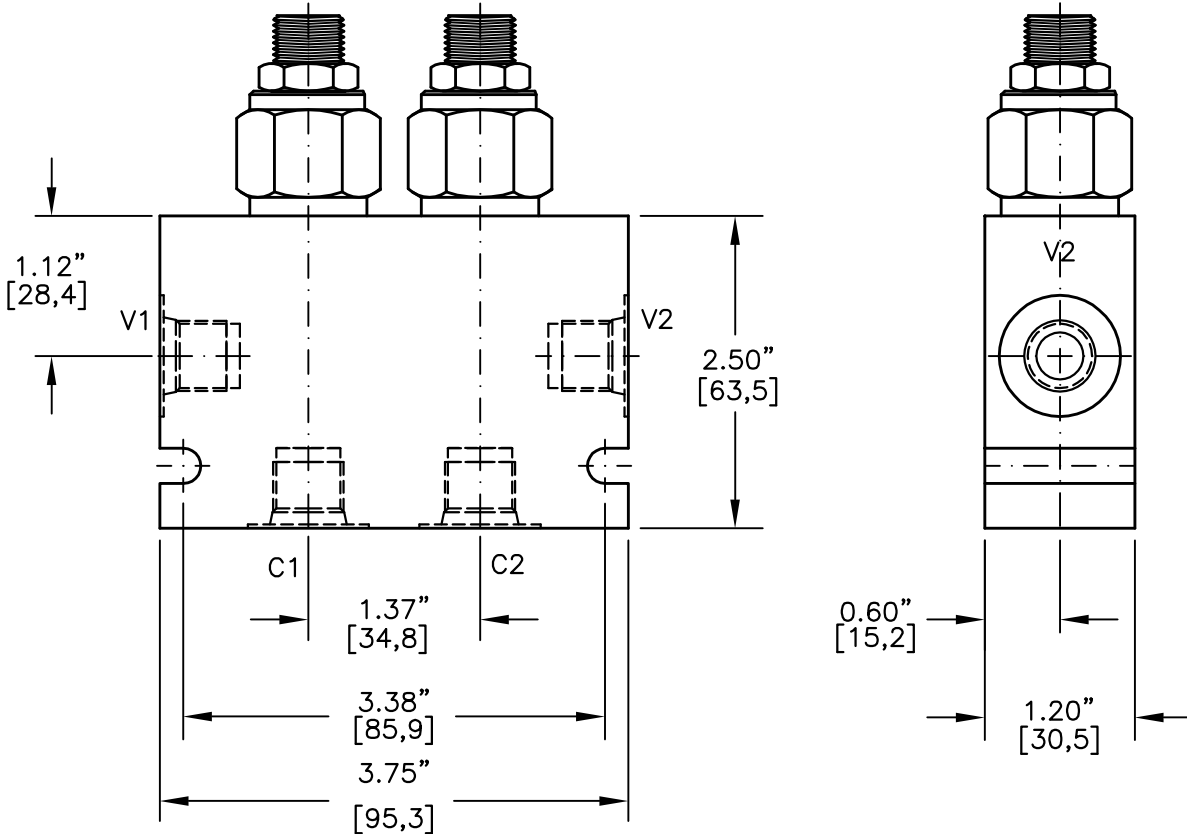
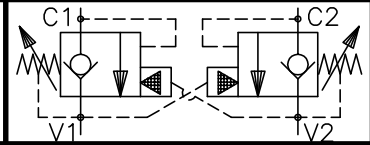
SKV-1228 for Viton.

WEIGHT: 0.84 lb [0,38 kg] cartridge only.

VALVE CAVITY: #C1225, See Page 0-023.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS



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

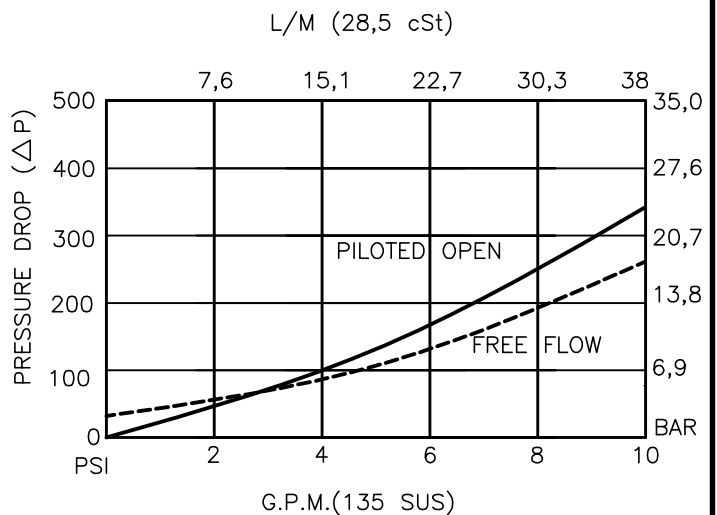
DCBA-08-X-X-X-XX

- BASIC
- SIZE
08 = 3/4"-16 UNF
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI

- PORTS
0 = CARTRIDGE ONLY
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





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS

DESCRIPTION

This unit consists of two CBPA cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 10.0 GPM [38 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-0828 for buna "N".

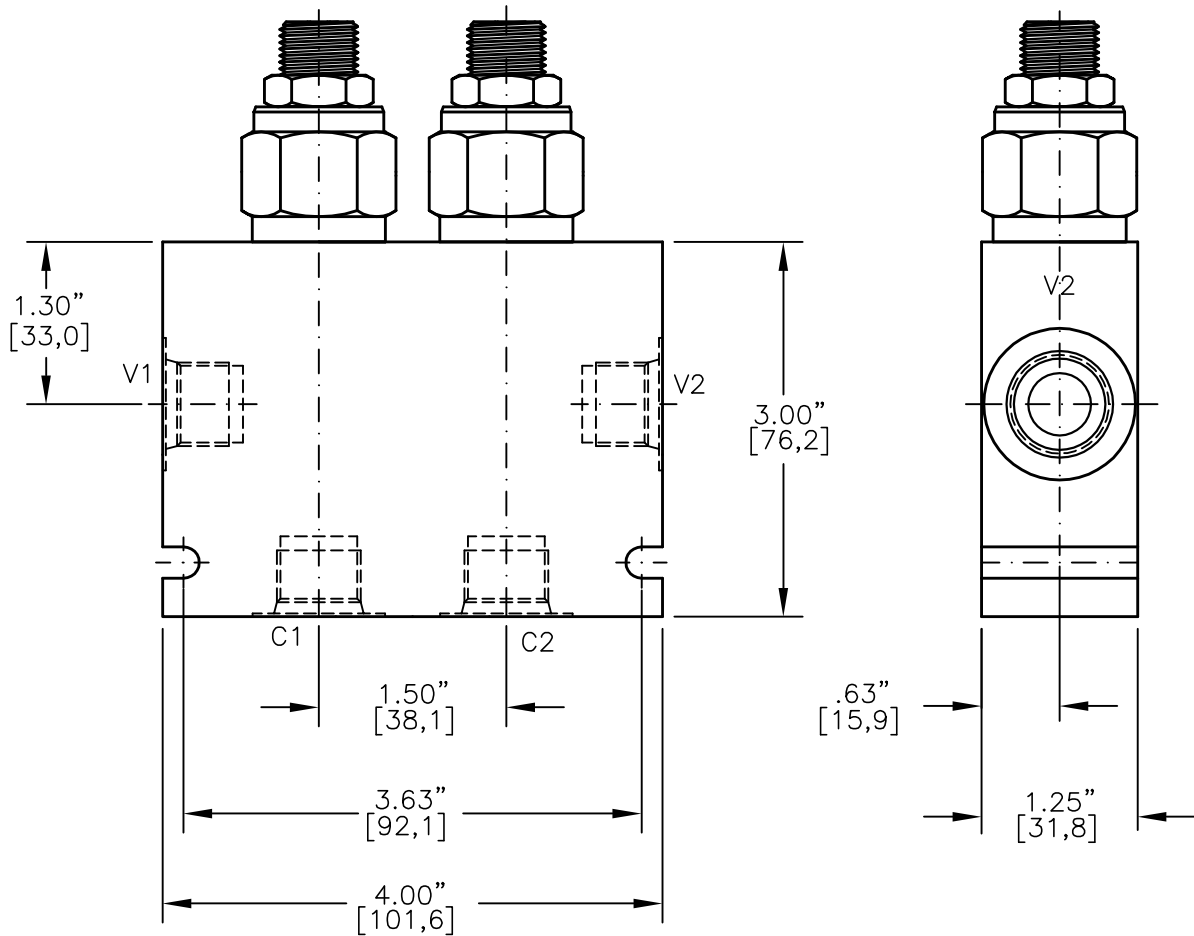
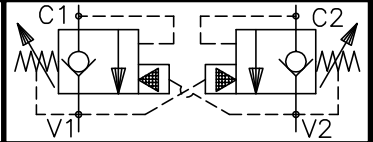
SKV-0828 for viton.

WEIGHT: 1 lb [0.4536 kg] Aluminum. 3.15 lbs [1.43 kg] Steel.

VALVE CAVITY: #C0825, See Page 0-021.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS.



DCBA-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

PRESSURE RANGE

15 = 100 TO 1500 PSI

30 = 300 TO 3000 PSI

50 = 500 TO 5000 PSI

PORTS

03BX = G 3/8" BSPP

04BX = G 1/2" BSPP

06TX = SAE - #6

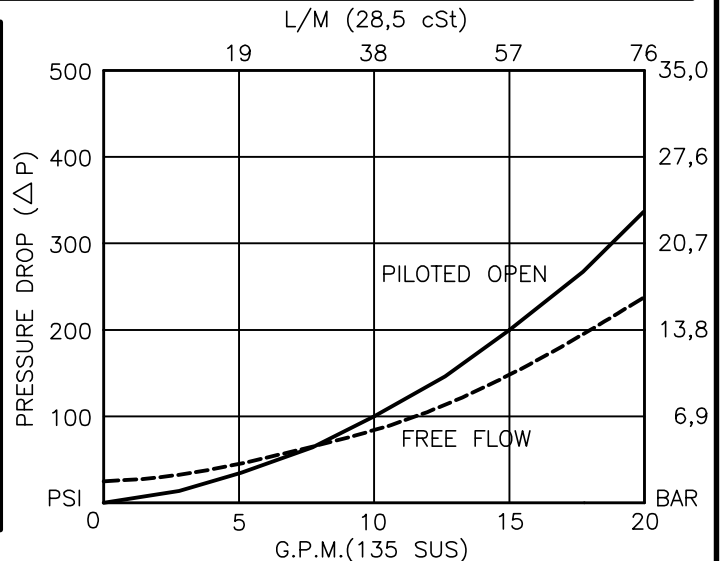
08TX = SAE - #8

10TX = SAE - #10

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS.

DESCRIPTION

This unit consists of two CBPA cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

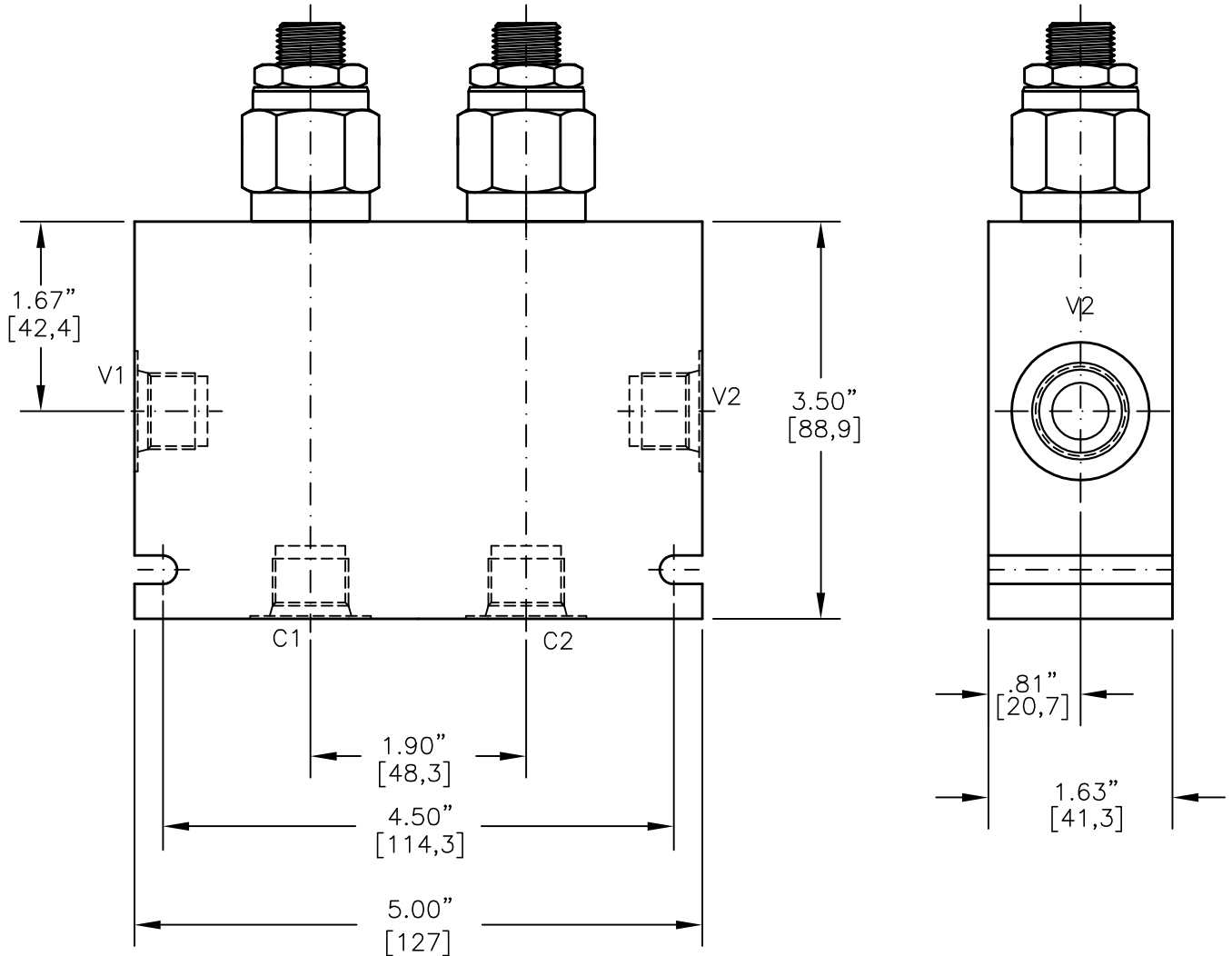
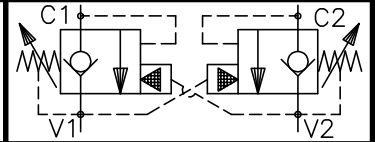
SKV-1028 for viton.

WEIGHT: 2.65 lbs [1.21 kg] Aluminum. 5.25 lbs [2,38] Steel.

VALVE CAVITY: #C1025, See Page 0-022.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE,
FREE REVERSE FLOW WITH CROSS-LINE PILOTS

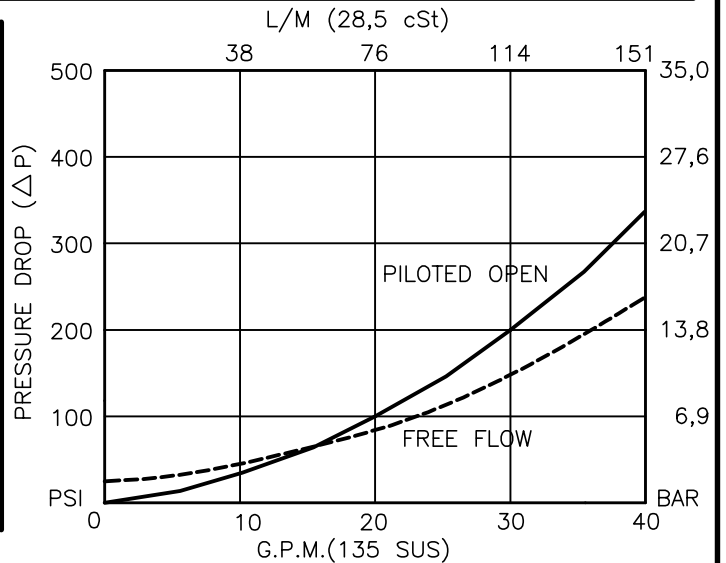


DCBA-12-X-X-X-XX

- BASIC
- SIZE
12 = 1.062"-12 UNF
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
40 = 600 TO 4000 PSI
- PORTS
04BX = G 1/2" BSPP
06BX = G 3/4" BSPP
10TX = SAE - #10
12TX = SAE - #12
- "A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS.

DESCRIPTION

This unit consists of two CBPA cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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

Valve is available with screw, tamperproof and capped adjustments.

All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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.

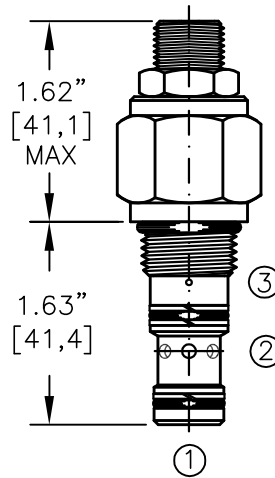
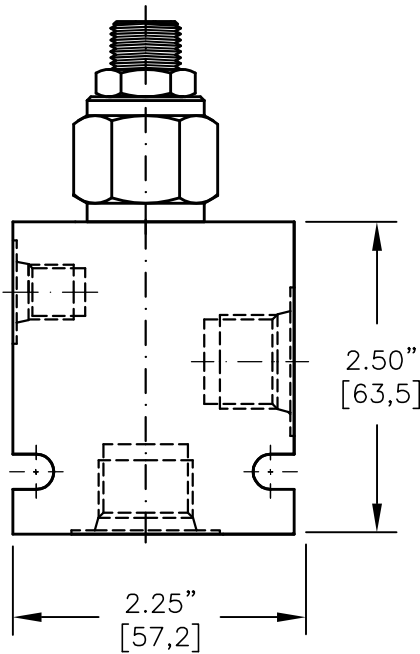
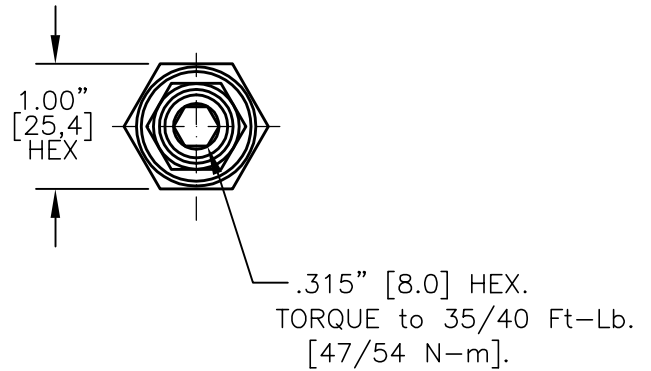
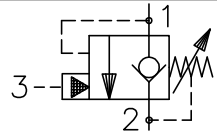
SEAL KIT NUMBER: SKN-1228 for Buna "N".

SKV-1228 for Viton.

WEIGHT: 2.65 lbs [1.21 kg] Aluminum. 5.25 lbs [2.38 kg] Steel.



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON

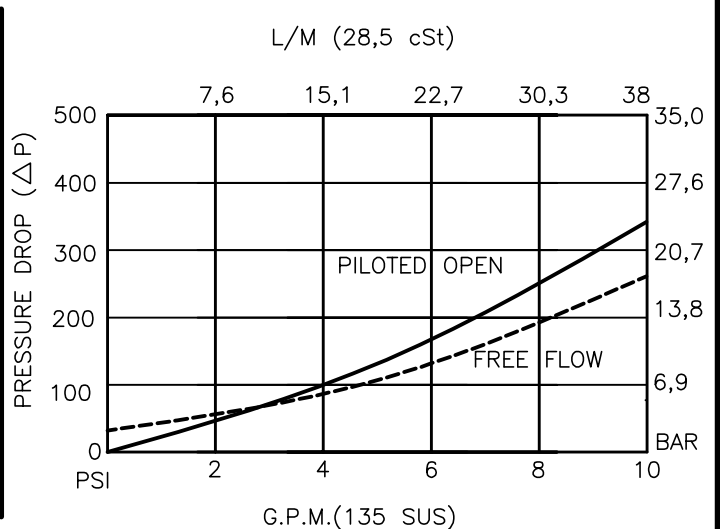


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-021-1.

CBPS-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
- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 1500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
08TX = SAE - #8
"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Seals on the pilot piston assures no interflow of fluid between port #2 and port #3.

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: 10.0 GPM [38 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-0828 for buna "N".

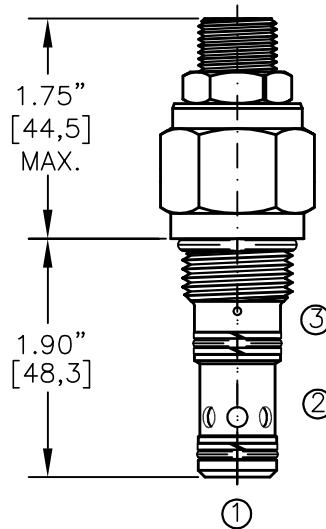
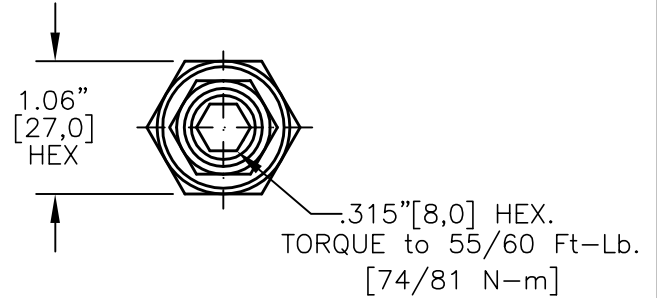
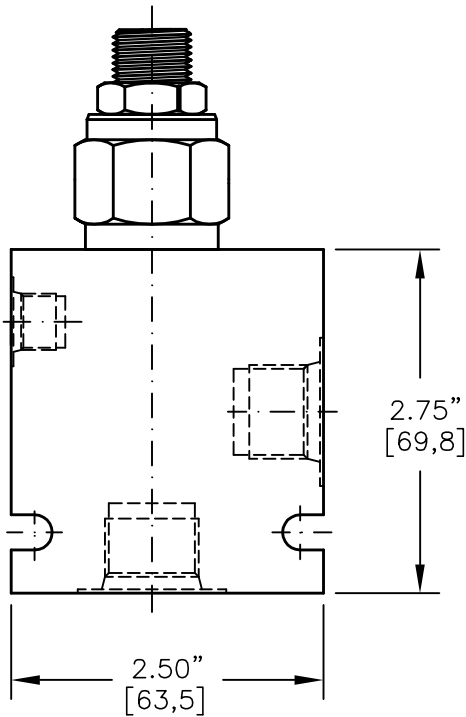
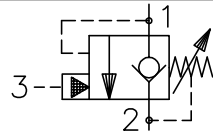
SKV-0828 for viton.

WEIGHT: 0.30 lb [.14 kg] cartridge only.

VALVE CAVITY: #C0825, See Page 0-021.0.



COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW & SEALS ON THE PISTON.

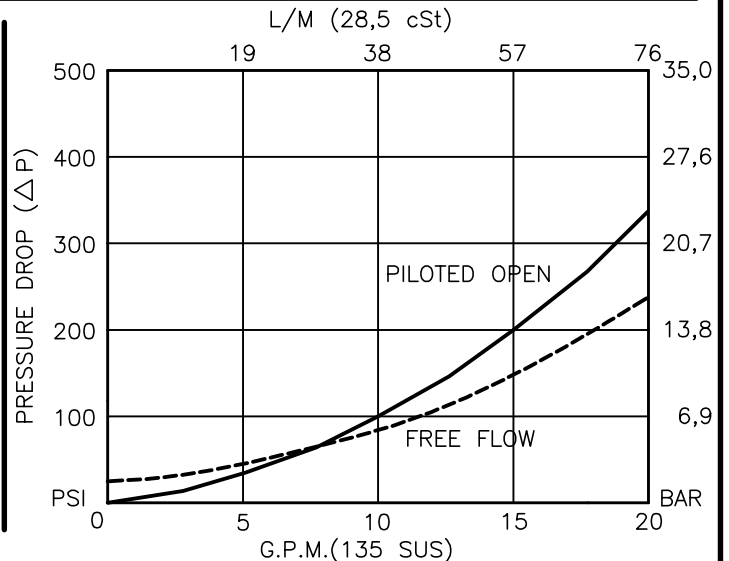


FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-022-1.

CBPS-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 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
04BX = G 1/2" BSPP
08TX = SAE - #8
10TX = SAE - #10
- "A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Seals on the pilot piston assures no interflow of fluid between port #2 and port #3.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

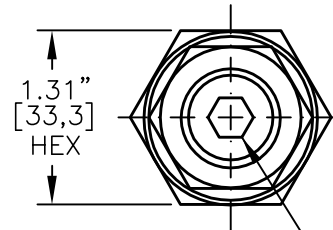
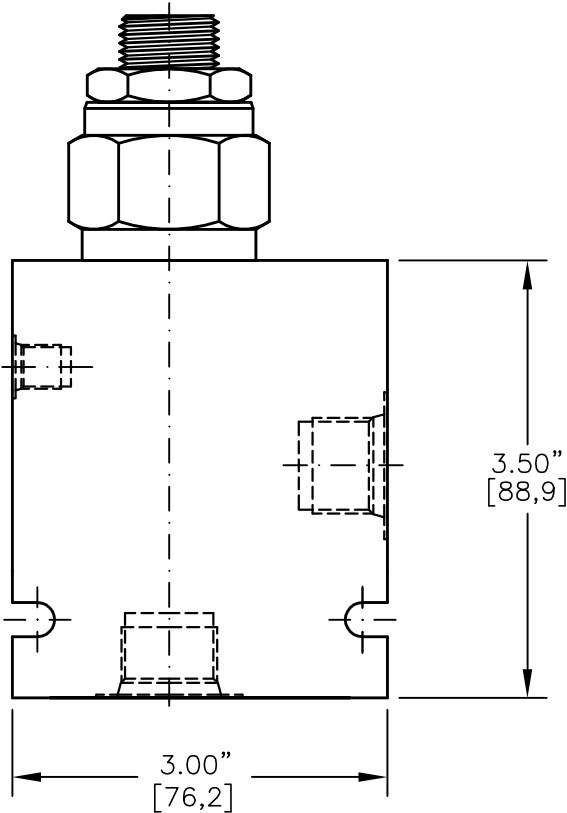
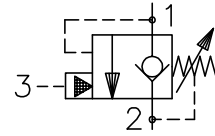
SKV-1028 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

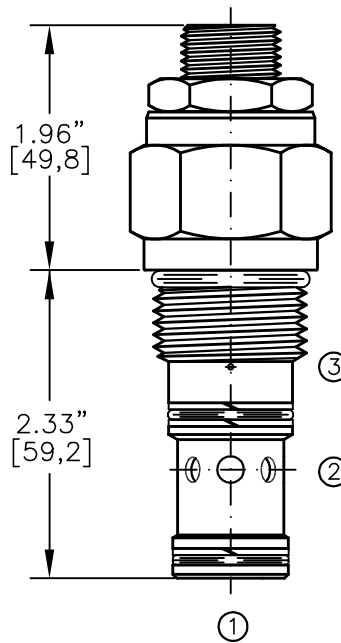
VALVE CAVITY: #C1025, See Page 0-022.0.



COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW & SEALS ON THE PISTON



.315" [8,0] HEX.
TORQUE to 70/75 Ft-Lb.
[95/100 N-m]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-023-1.

CBPS-12-X-X-X-XX

BASIC

SIZE

12 = 1.062"-12 UNF

SEALS

N = BUNA "N"

V = VITON

ADJUSTMENT

S = ADJUSTING SCREW

C = CAPPED

T = TAMPERPROOF

PRESSURE RANGE

15 = 100 TO 1500 PSI

30 = 300 TO 3000 PSI

40 = 600 TO 4000 PSI

PORTS

0 = CARTRIDGE ONLY

04BX = G 1/2" BSPP

06BX = G 3/4" BSPP

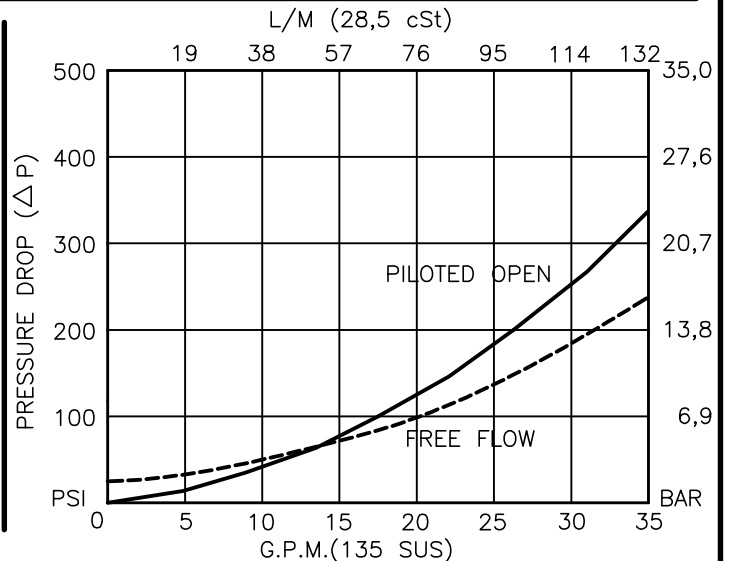
10TX = SAE - #10

12TX = SAE - #12

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Seals on the pilot piston assures no interflow of fluid between port #2 and port #3.

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

Valve is available with screw, tamperproof and capped adjustments.

All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1228 for Buna "N".

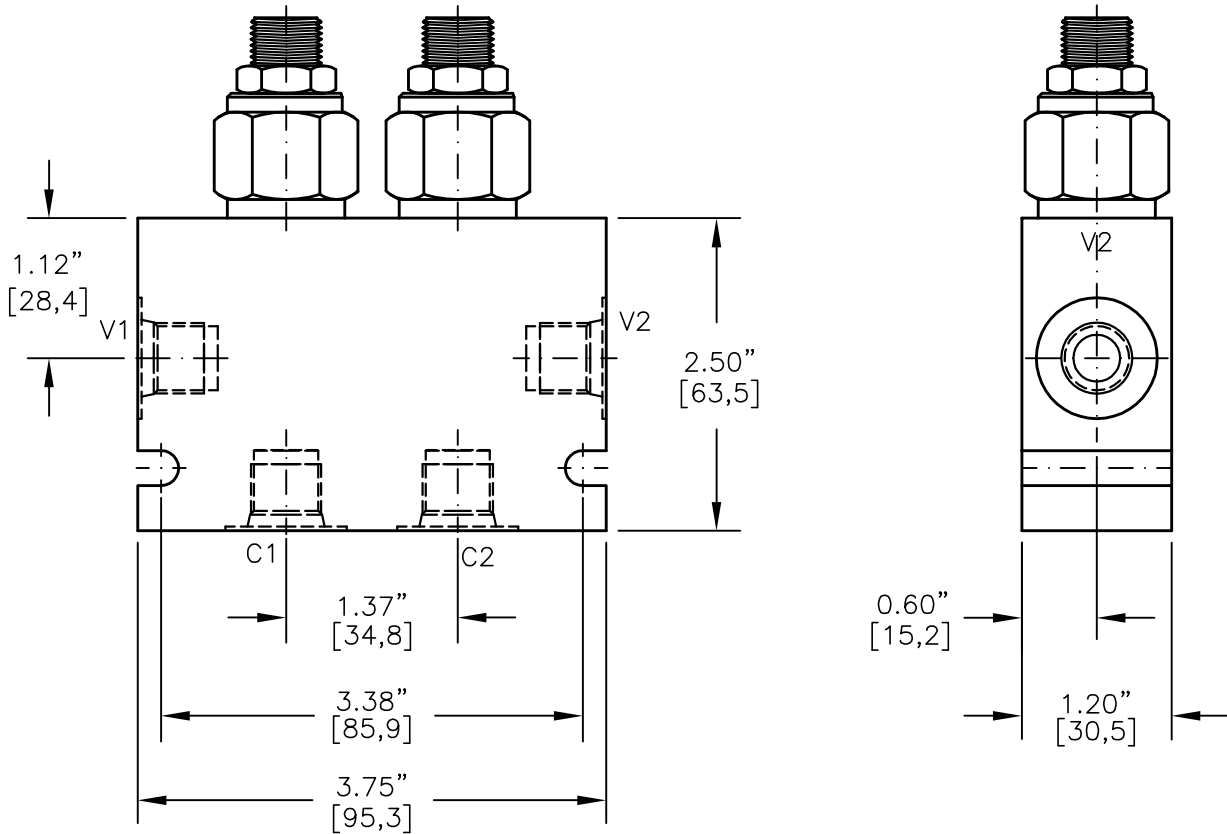
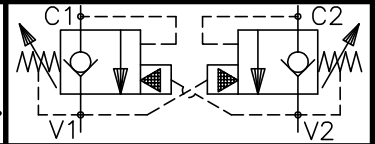
SKV-1228 for Viton.

WEIGHT: 0.84 lb [0,38 kg] cartridge only.

VALVE CAVITY: #C1225, See Page 0-023.0.



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON.



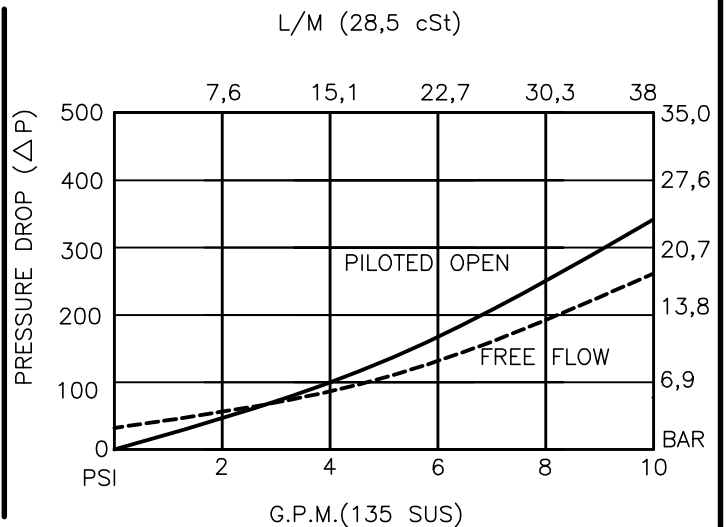
DCBS-08-X-X-X-XX

- BASIC
- SIZE
08 = 3/4"-16 UNF
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 1500 TO 5000 PSI

- PORTS
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





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & SEALS ON THE PISTON.

DESCRIPTION

This unit consists of two CBPS cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 10.0 GPM [38 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-0828 for buna "N".

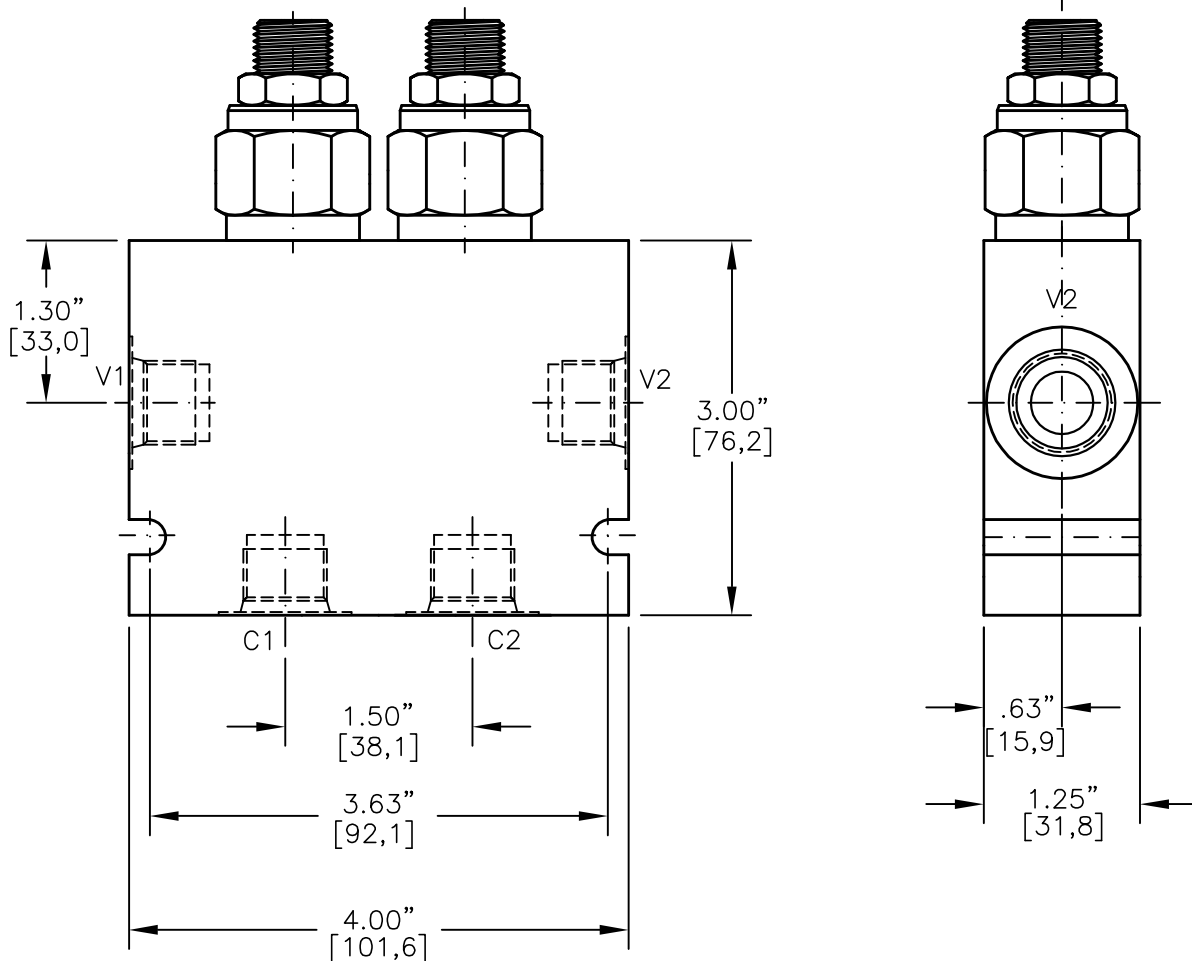
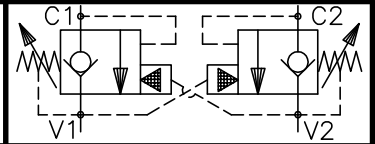
SKV-0828 for viton.

WEIGHT: 1 lb [0.4536 kg] Aluminum. 3.15 lbs [1.43 kg] Steel.

VALVE CAVITY: #C0825, See Page 0-021.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS



DCBS-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

PRESSURE RANGE

15 = 100 TO 1500 PSI

30 = 300 TO 3000 PSI

50 = 500 TO 5000 PSI

PORTS

03BX = G 3/8" BSPP

04BX = G 1/2" BSPP

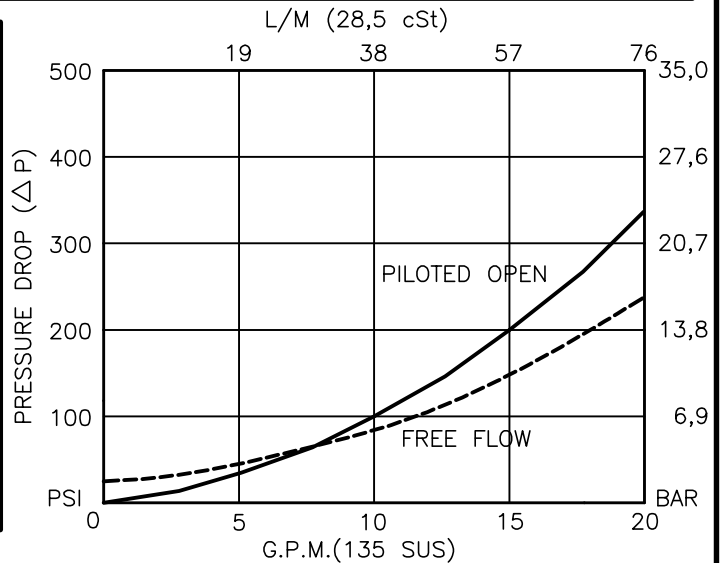
08TX = SAE - #8

10TX = SAE - #10

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH CROSS-LINE PILOTS.

DESCRIPTION

This unit consists of two CBPS cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

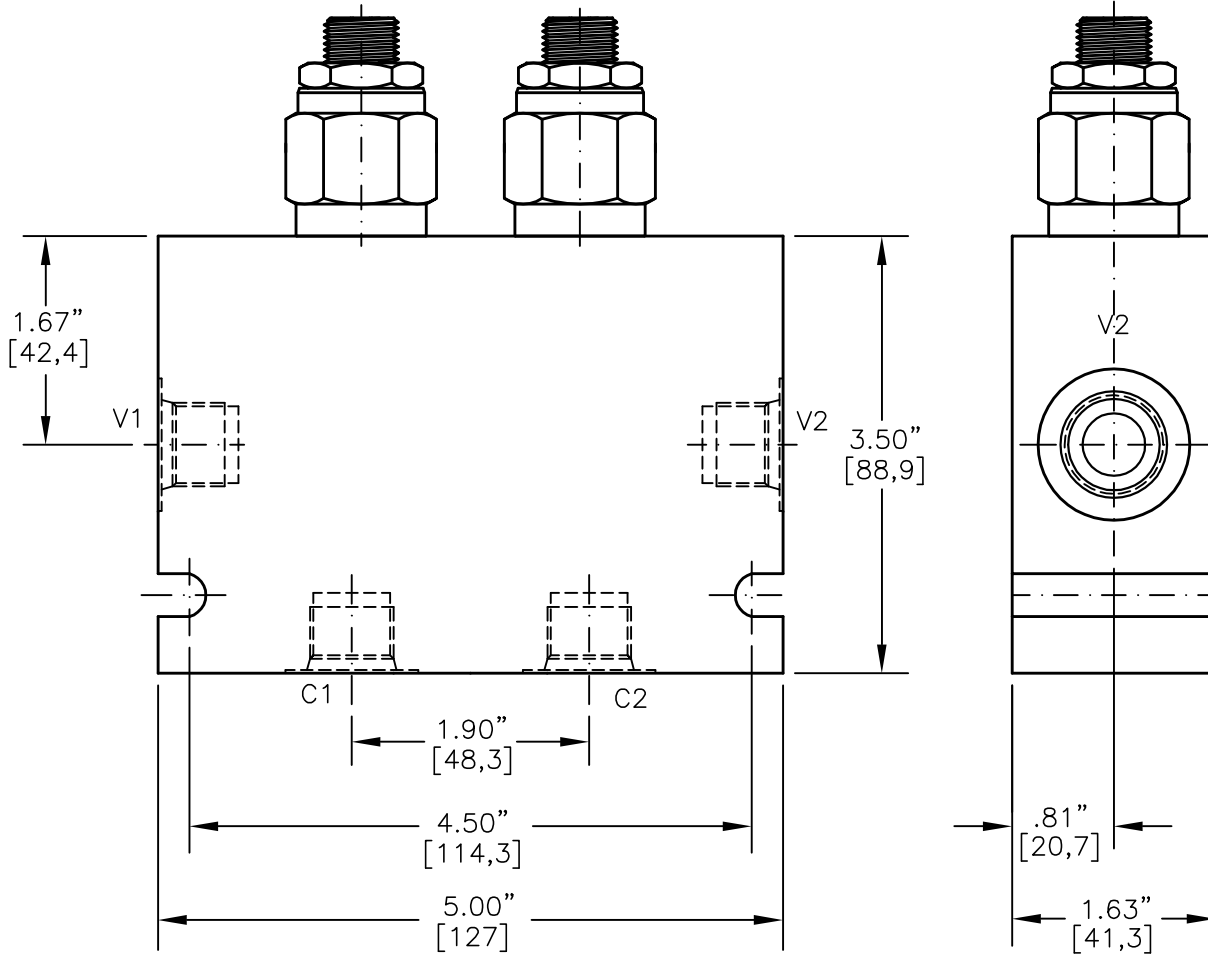
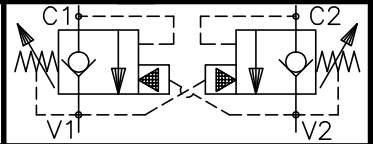
SKV-1028 for viton.

WEIGHT: 2.65 lbs [1.21 kg] Aluminum. 5.25 lbs [2,38] Steel.

VALVE CAVITY: #C1025, See Page 0-022.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH SEALS ON PISTON



DCBS-12-X-X-X-XX

BASIC

SIZE

12 = 1.062"-12 UNF

SEALS

N = BUNA "N"

V = VITON

ADJUSTMENT

S = ADJUSTING SCREW

C = CAPPED

T = TAMPERPROOF

PRESSURE RANGE

15 = 100 TO 1500 PSI

30 = 300 TO 3000 PSI

40 = 600 TO 4000 PSI

PORTS

04BX = G 1/2" BSPP

06BX = G 3/4" BSPP

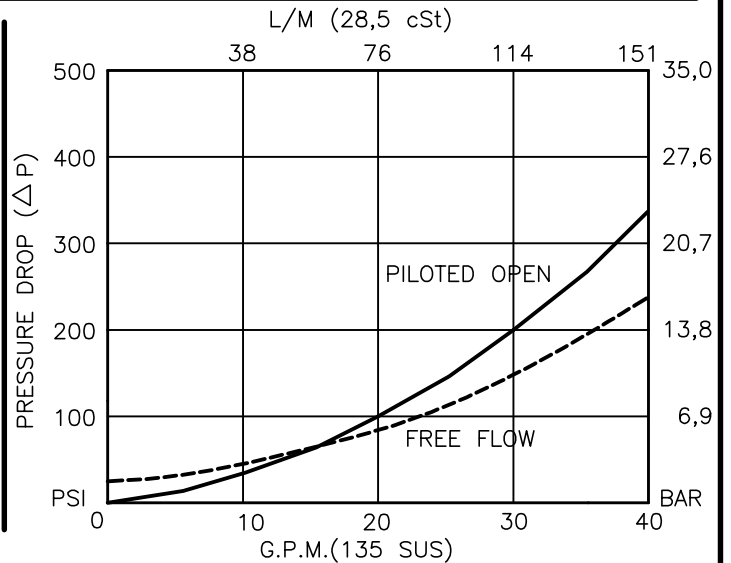
10TX = SAE - #10

12TX = SAE - #12

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH SEALS ON PISTON.

DESCRIPTION

This unit consists of two CBPS cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Seals on the pilot piston assures no interflow of fluid between port #2 and port #3.

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

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1228 for Buna "N".

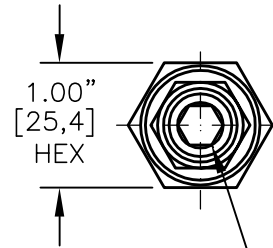
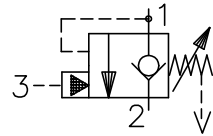
SKV-1228 for Viton.

WEIGHT: 2.65 lbs [1,21 kg] Aluminum. 5.25 lbs [2,38] Steel.

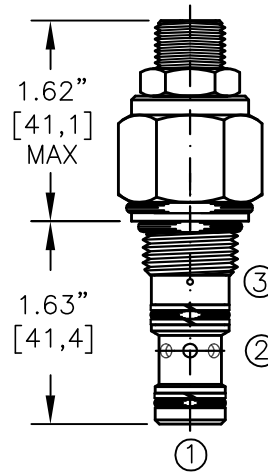
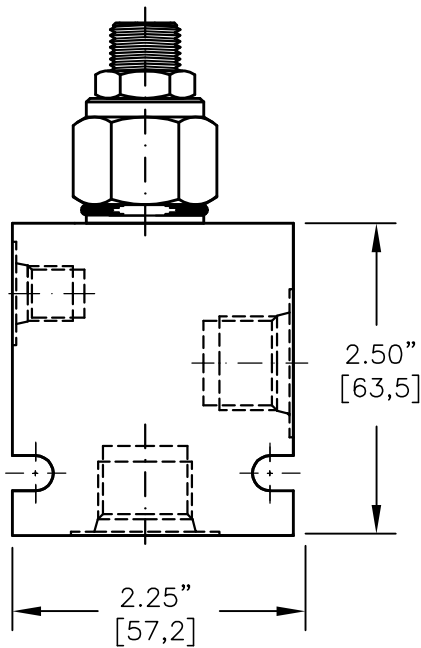
VALVE CAVITY: #C1225, See Page 0-023.0.



COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & VENTED PISTON



.315" [8.0] HEX.
TORQUE to 35/40 Ft-Lb.
[47/54 N-m].



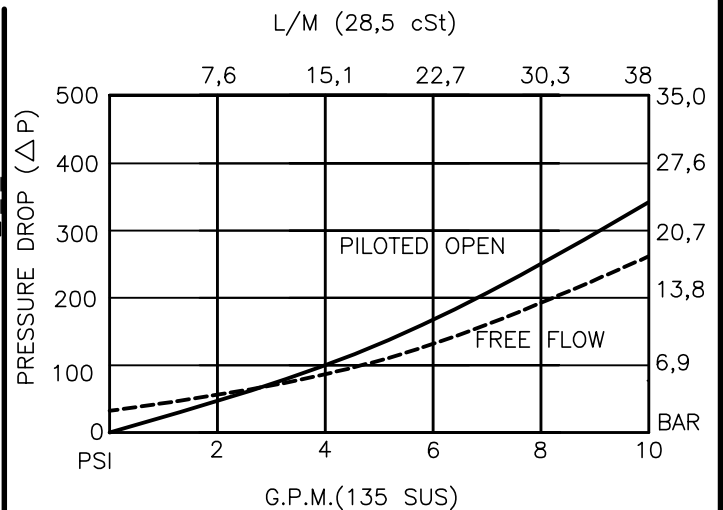
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-021-1.

CBPG-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

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 1500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
08TX = SAE - #8
"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE, WITH FREE REVERSE FLOW & VENTED PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a closed center valve or re-generative circuit.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

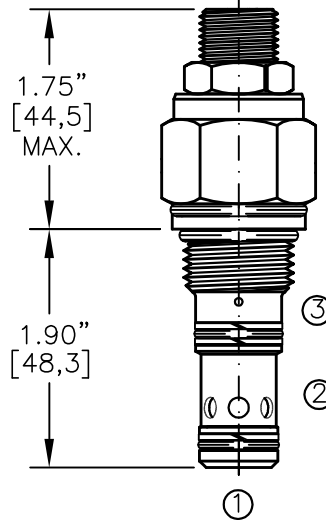
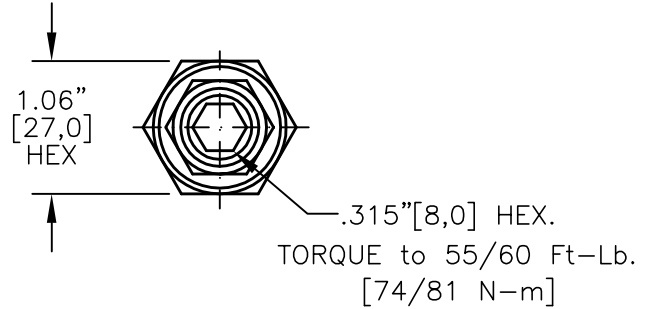
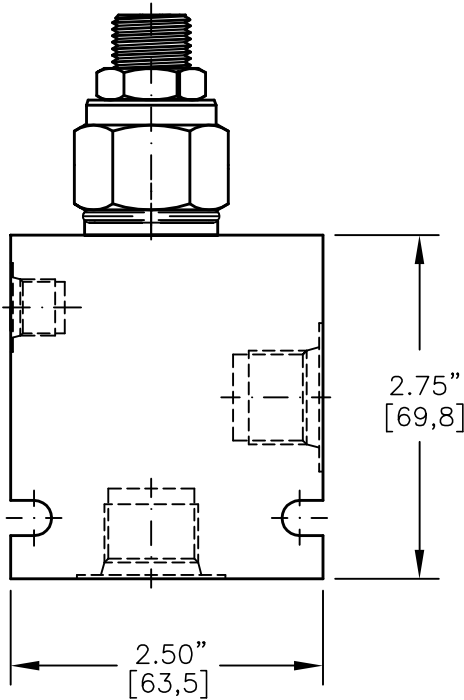
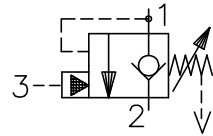
SKV-1028 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

VALVE CAVITY: #C1025, See Page 0-022.0.



COUNTERBALANCE VALVE POPPET TYPE, WITH FREE REVERSE FLOW & VENTED PISTON



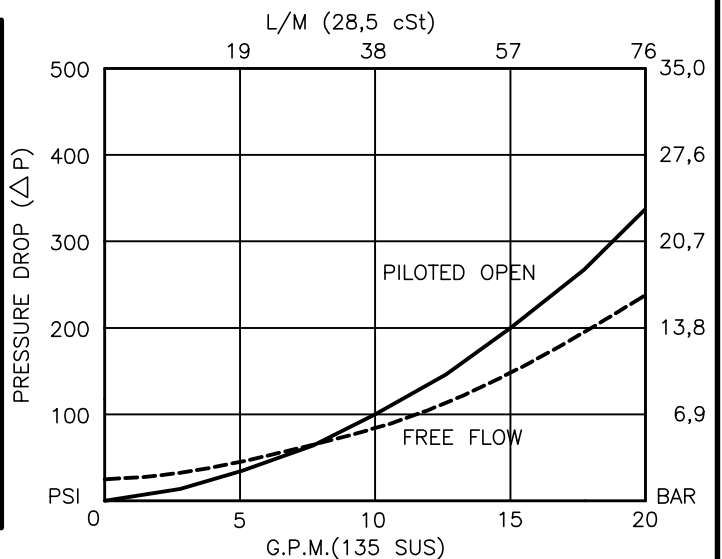
FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-022-1.

CBPG-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 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY
03BX = G 3/8" BSPP
04BX = G 1/2" BSPP
08TX = SAE - #8
10TX = SAE - #10
- "A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE, WITH FREE REVERSE FLOW & VENTED PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a closed center valve or re-generative circuit.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

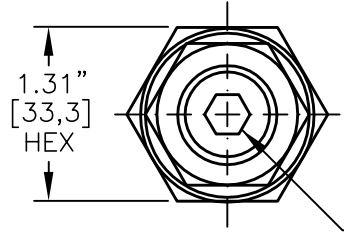
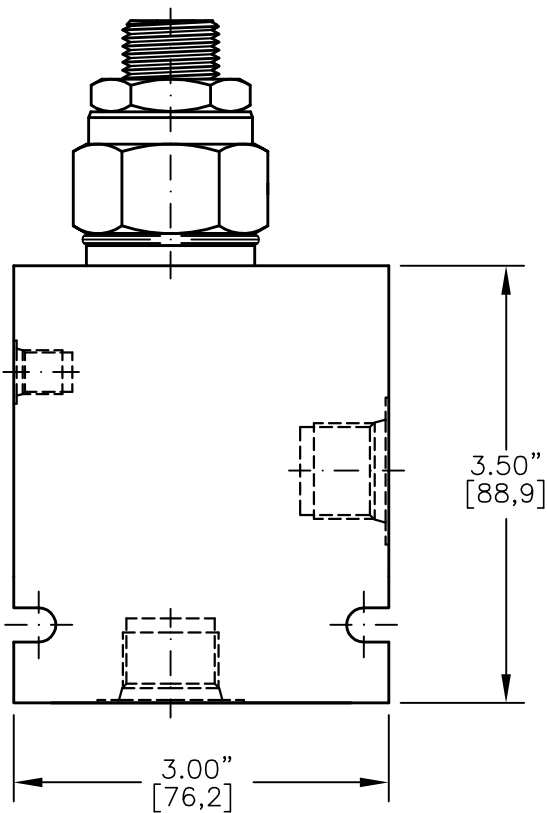
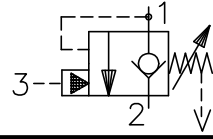
SKV-1028 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

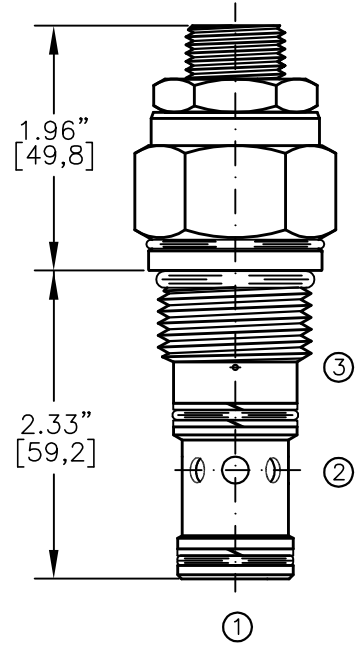
VALVE CAVITY: #C1025, See Page 0-022.0.



COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW & SEALS ON THE PISTON



.315" [8,0] HEX.
TORQUE to 70/75 Ft-Lb.
[95/100 N-m]



FOR ALUMINUM OR STEEL VALVE HOUSING CONFIGURATIONS SEE PAGE 0-023-1.

CBPG-12-X-X-X-XX

BASIC

SIZE

12 = 1.062"-12 UNF

SEALS

N = BUNA "N"
V = VITON

ADJUSTMENT

S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

PRESSURE RANGE

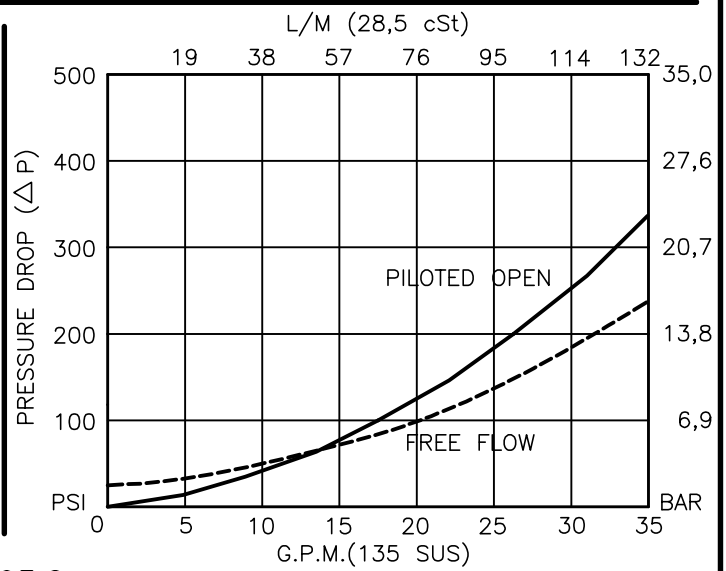
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
40 = 600 TO 4000 PSI

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

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE, WITH FREE REVERSE FLOW & VENTED PISTON

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a re-generative circuit.

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

Valve is available with screw, tamperproof and capped adjustments.

All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1228 for Buna "N".

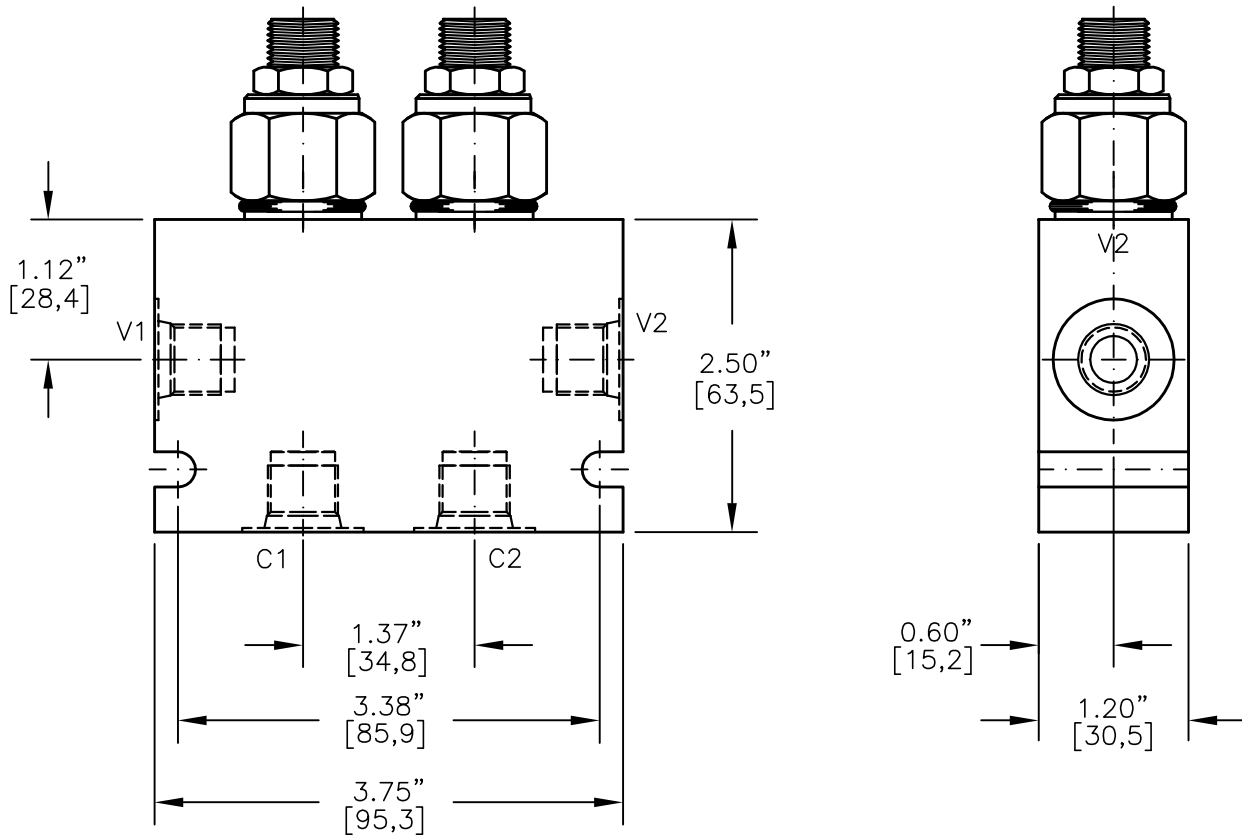
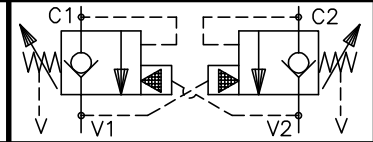
SKV-1228 for Viton.

WEIGHT: 0.84 lb [0,38 kg] cartridge only.

VALVE CAVITY: #C1225, See Page 0-023.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & VENTED PISTON



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

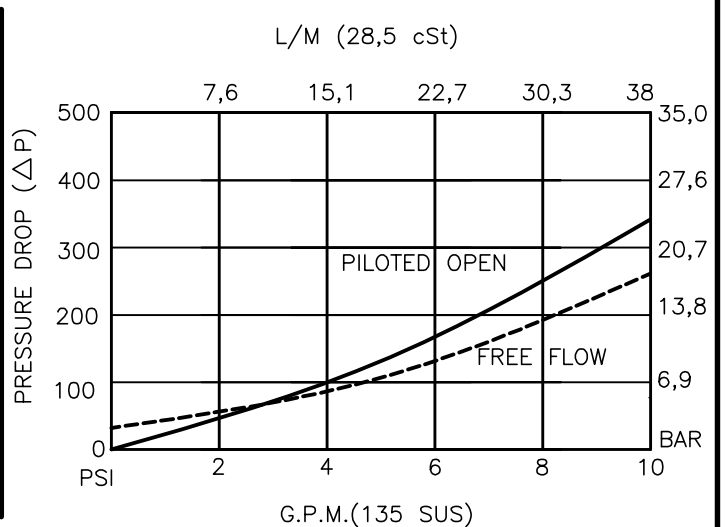
DCBG-08-X-X-X-XX

- BASIC
- SIZE
08 = 3/4"-16 UNF
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI

- PORTS
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





DUAL COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW & VENTED PISTON

DESCRIPTION

This unit consists of two CBPG cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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: 10.0 GPM [38 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-0828 for buna "N".

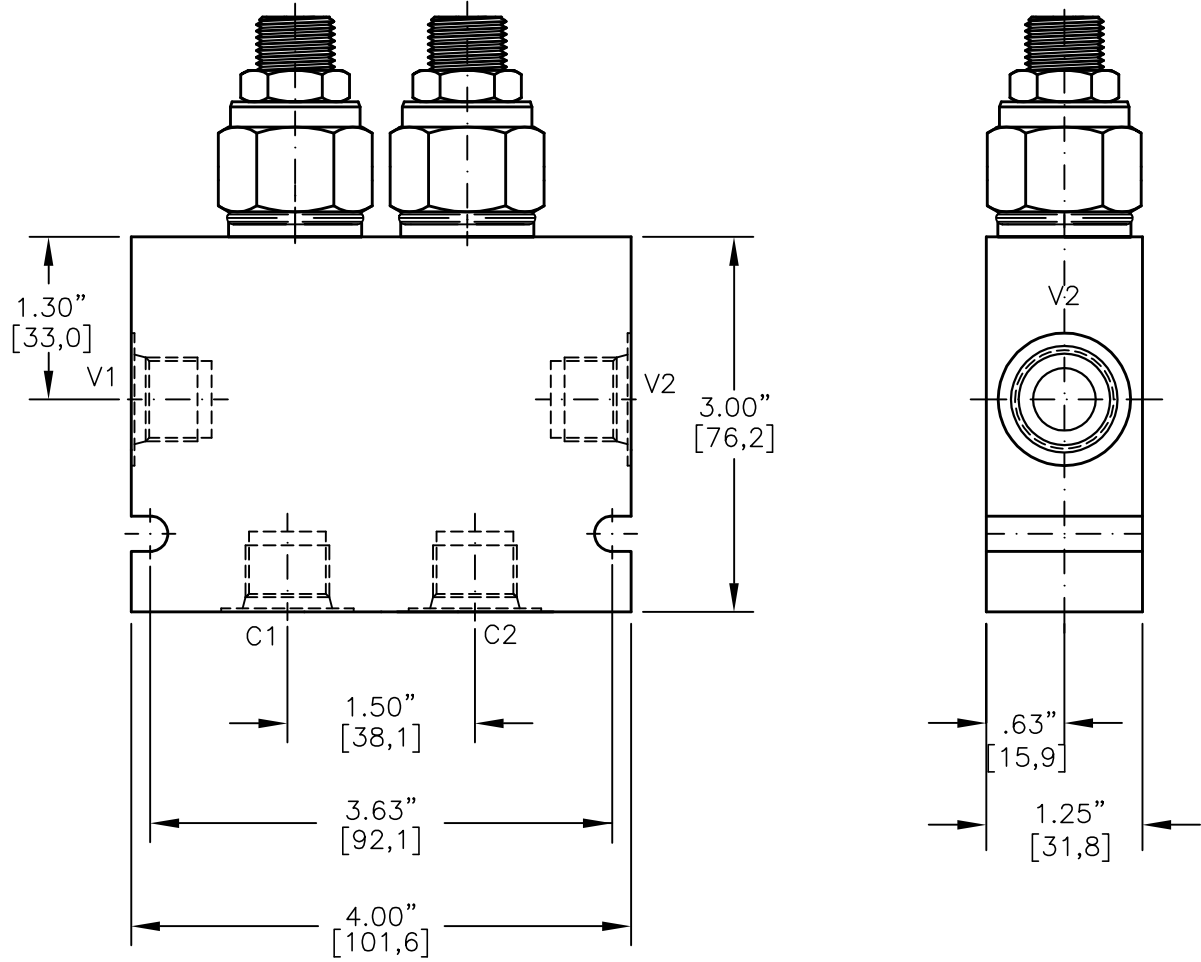
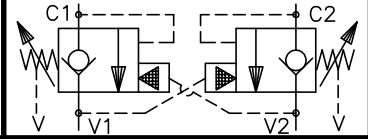
SKV-0828 for viton.

WEIGHT: 1 lb [0.4536 kg] Aluminum. 3.15 lbs [1.43 kg] Steel.

VALVE CAVITY: #C0825, See Page 0-021.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH VENTED PISTON



DCBG-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

PRESSURE RANGE

15 = 100 TO 1500 PSI

30 = 300 TO 3000 PSI

50 = 500 TO 5000 PSI

PORTS

03BX = G 3/8" BSPP

04BX = G 1/2" BSPP

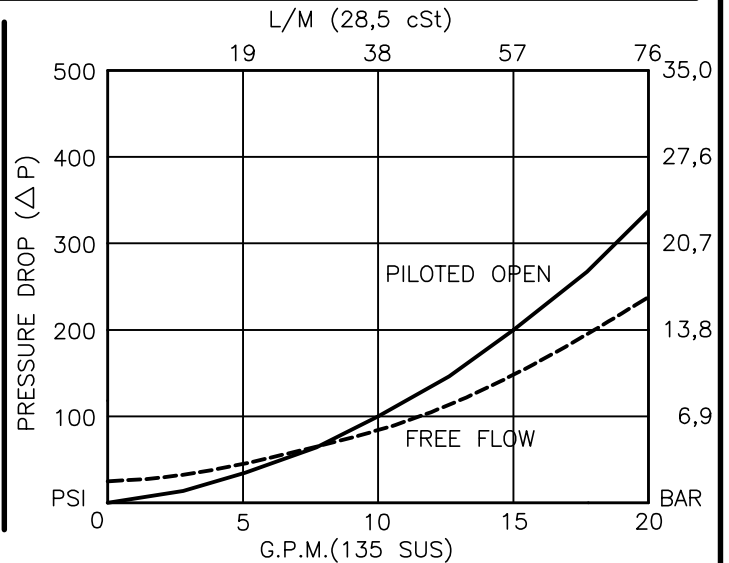
08TX = SAE - #8

10TX = SAE - #10

"A" - ALUM. HOUSING

"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH VENTED PISTON

DESCRIPTION

This unit consists of two CBPG cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a re-generative circuit.

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: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1028 for buna "N".

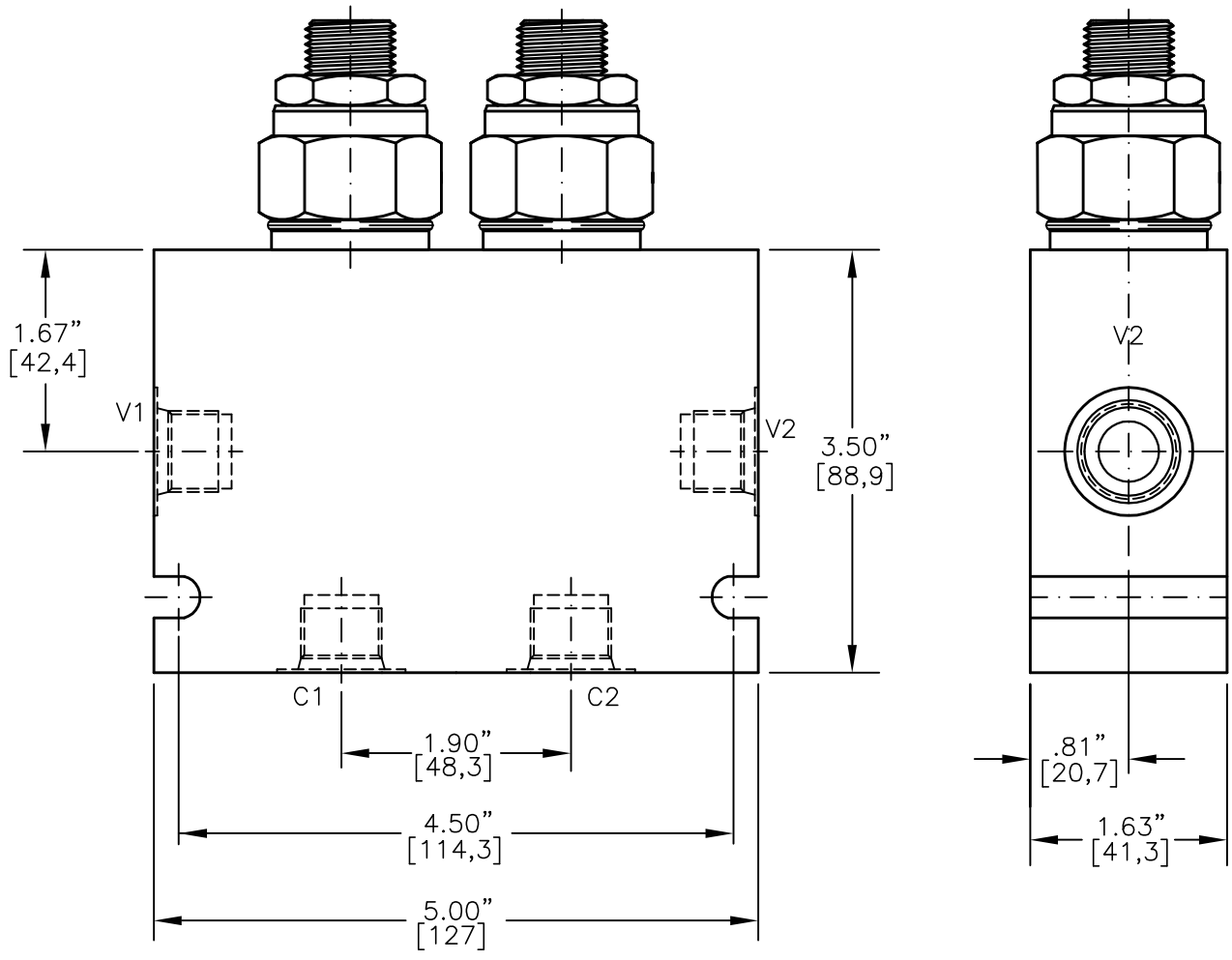
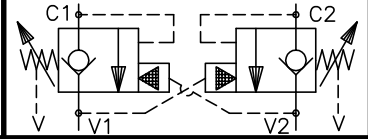
SKV-1028 for viton.

WEIGHT: 2.65 lbs [1.21 kg] Aluminum. 5.25 lbs [2,38] Steel.

VALVE CAVITY: #C1025, See Page 0-022.0.



DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH VENTED PISTON

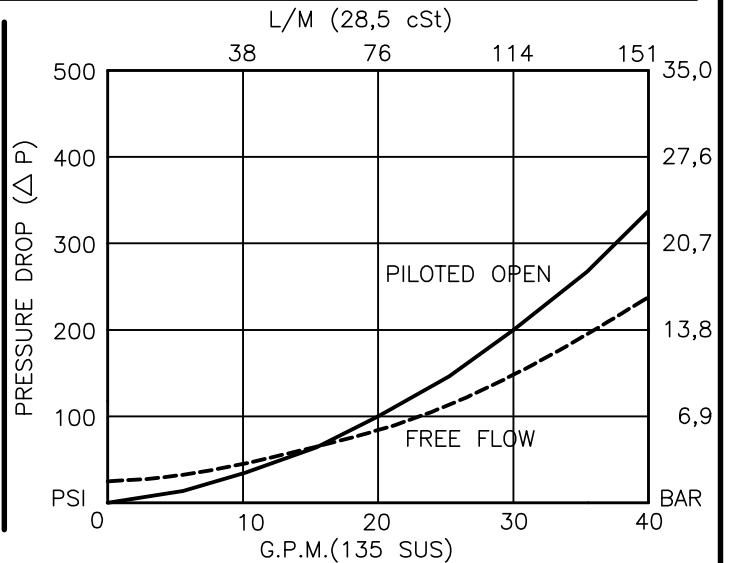


DCBG-12-X-X-X-XX

- BASIC
- SIZE
12 = 1.062"-12 UNF
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
40 = 600 TO 4000 PSI
- PORTS
04BX = G 1/2" BSPP
06BX = G 3/4" BSPP
10TX = SAE - #10
12TX = SAE - #12
"A" - ALUM. HOUSING
"S" - STEEL HOUSING

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





DUAL COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW WITH VENTED PISTON

DESCRIPTION

This unit consists of two CBPG cartridges in an inline housing. The cartridges are direct acting, screw in cartridge style, poppet type, adjustable, pilot assisted, hydraulic counterbalance valves.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port V1 to port C1 and V2 to C2 then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at pilot ports which are connected to ports V1 and V2 therefore modulating flow from port C1 or port C2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a re-generative circuit.

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

Valve is available with screw, tamperproof and capped adjustments.

All cartridge valves are 100% functionally tested.

SPECIFICATIONS

OPERATING PRESSURE: 4,000 PSI [276 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 35.0 GPM [132 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% 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-1228 for buna "N".

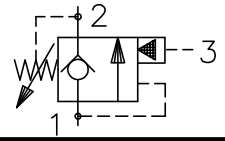
SKV-1228 for viton.

WEIGHT: 2.65 lbs [1,21 kg] Aluminum. 5.25 lbs [2,38] Steel.

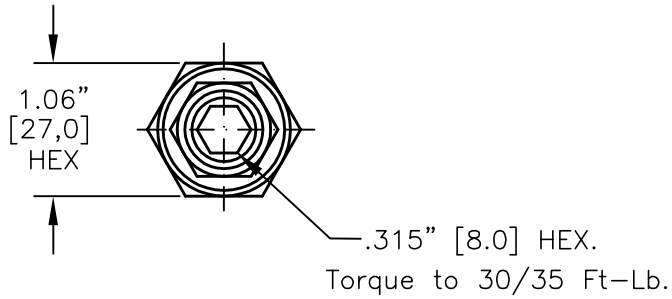
VALVE CAVITY: #C1225, See Page 0-023.0.



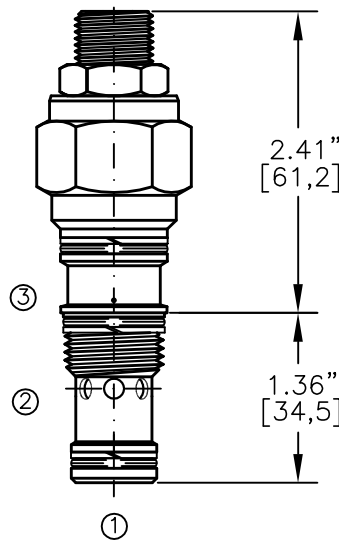
COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.



FITS INTO SUN CAVITY #T-11A



Turn screw clockwise to increase the pressure setting.



CBPA-20M-X-X-X-XX

BASIC
SIZE
20M=20,0x1,5MM THD.

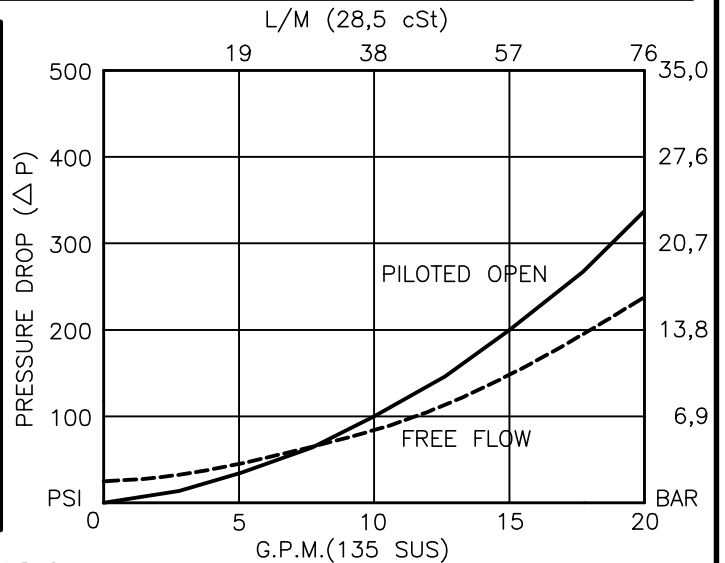
SEALS
N = BUNA "N"
V = VITON

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

PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI

PORTS
0 = CARTRIDGE ONLY

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE WITH FREE REVERSE FLOW.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating out flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody cage construction and with no dynamic seals on all moving parts provides very low hysteresis (1.5%) and reliable operation.

Minor internal leakage past the pilot piston purges the air from the pilot line thus improving stability.

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.

Fits in to SUN cavity # T-11A.

SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% of crack pressure.

DEFINITION OF CRACK: evident at 0.06 GPM [0.25 LPM]

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-1029 for buna "N".

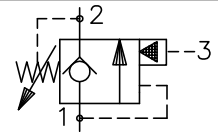
SKV-1029 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

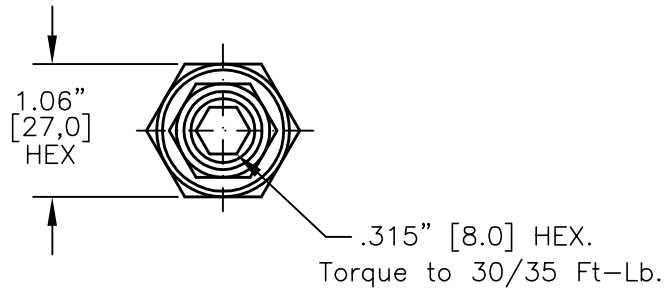
VALVE CAVITY: SUN # T-11A.



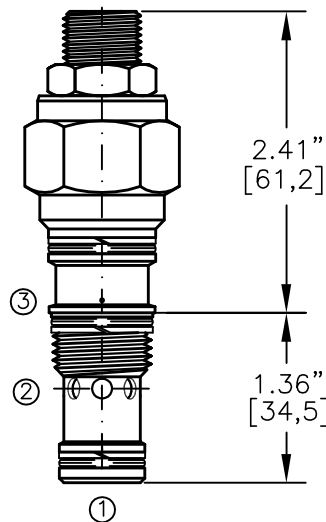
COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW & SEALS ON THE PILOT PISTON



FITS INTO SUN CAVITY # T-11A



Turn screw clockwise to increase the pressure setting.

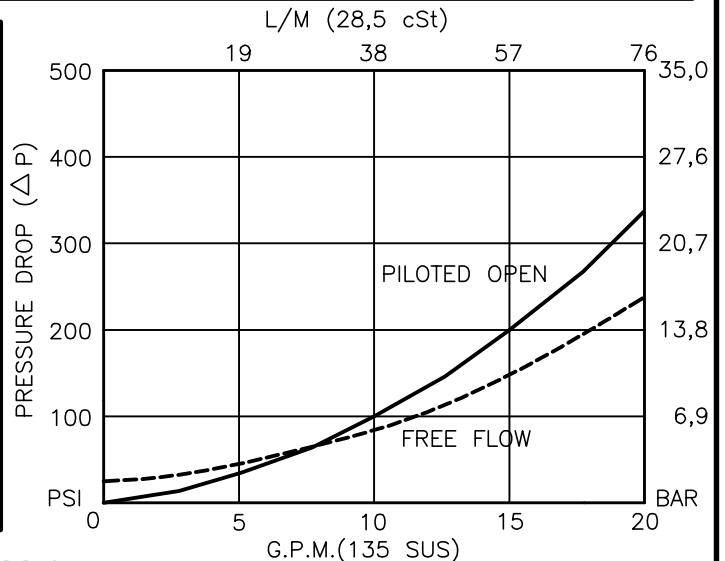


CBPS-20M-X-X-X-XX

- BASIC
- SIZE
20M=20,0x1,5MM THD.
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF
K = HANDKNOB
M = METAL HANDKNOB

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY

FOR ADJUSTMENT CONTROL OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE, FREE REVERSE FLOW & SEALS ON THE PILOT PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating out flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Seals on the pilot piston assures no flow of fluid between port #2 and port #3.

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.

Fits in to SUN cavity # T-11A.

SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% of crack pressure.

DEFINITION OF CRACK: evident at 0.06 GPM [0.25 LPM]

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-1029 for buna "N".

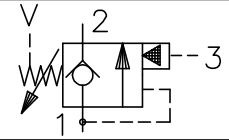
SKV-1029 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

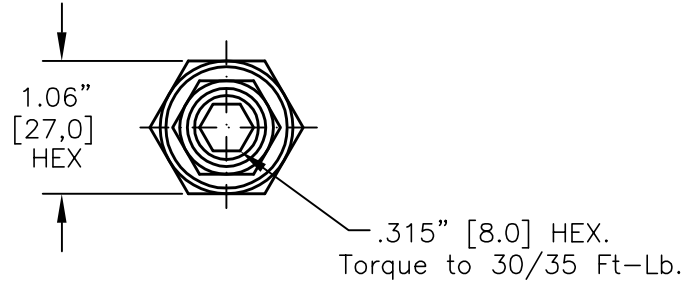
VALVE CAVITY: SUN # T-11A.



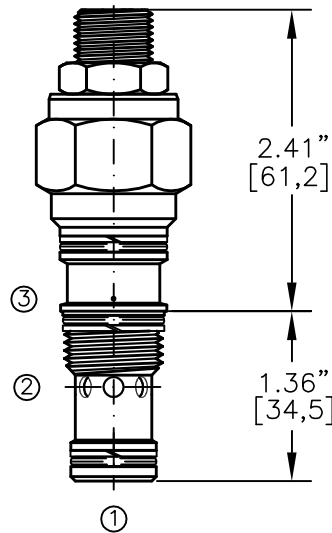
COUNTERBALANCE VALVE POPPET TYPE,
WITH FREE REVERSE FLOW & VENTED PISTON.



FITS INTO SUN CAVITY # T-11A



Turn screw clockwise to increase the pressure setting.

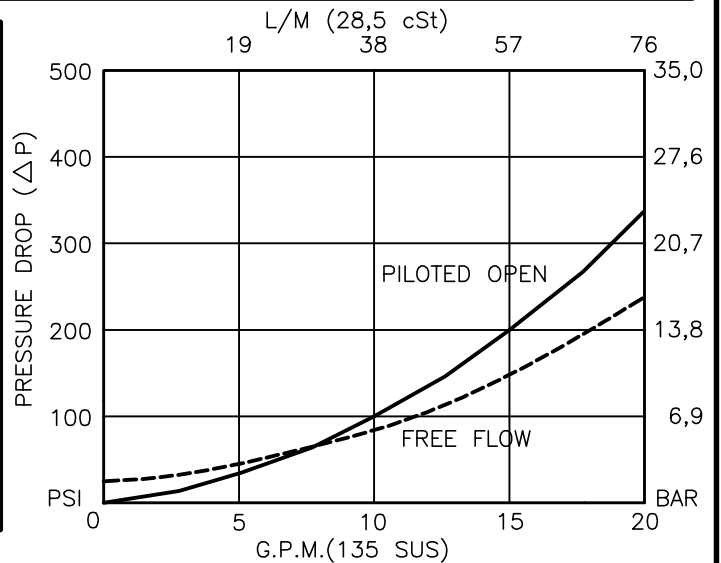


CBPG-20M-X-X-X-XX

- BASIC
- SIZE
20M = 20,0x1,5MM THD.
- SEALS
N = BUNA "N"
V = VITON
- ADJUSTMENT
S = ADJUSTING SCREW
C = CAPPED
T = TAMPERPROOF
K = HANDKNOB
M = METAL HANDKNOB

- PRESSURE RANGE
15 = 100 TO 1500 PSI
30 = 300 TO 3000 PSI
50 = 500 TO 5000 PSI
- PORTS
0 = CARTRIDGE ONLY

FOR ADJUSTMENT CONTROL
OPTIONS SEE PAGE 0-050.0





COUNTERBALANCE VALVE POPPET TYPE, WITH FREE REVERSE FLOW & VENTED PISTON.

DESCRIPTION

This unit is a DIRECT ACTING, SCREW IN CARTRIDGE STYLE, POPPET TYPE, ADJUSTABLE, PILOT ASSISTED, HYDRAULIC COUNTERBALANCE VALVE.

OPERATIONS

This valve controls moving load and preventing it from running ahead of the pump, locking the load in any position, it also provides static overload and thermal expansion protection.

This valve is a MODULATING DEVICE that allows free flow from port 2 to port 1 and then blocks reverse flow until a pilot pressure INVERSELY PROPORTIONAL to the load pressure is sensed at port 3 modulating out flow from port 1 to port 2.

FEATURES AND BENEFITS

Leakproof screw adjustment.

Adjustment screw can not be backed out of the valve.

Overset protection – spring can not go solid.

Hardened precision fitted poppet & cage provides reliable, long life.

A unibody adapter cage construction provides very reliable operation.

Vented pilot piston spring chamber to atmosphere allows this valve to be used with a re-generative circuit.

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.

Fits in to SUN cavity # T-11A.

SPECIFICATIONS

OPERATING PRESSURE: 5,000 PSI [350 Bar]

PROOF PRESSURE: 10,000 PSI [700 Bar]

FLOW: 20.0 GPM [76 L/M] nominal. See performance chart.

PILOT RATIO: 4 to 1

INTERNAL LEAKAGE: 5 drops/min @ 90% of crack pressure.

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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-1029 for buna "N".

SKV-1029 for viton.

WEIGHT: 0.46 lb [.21 kg] cartridge only.

VALVE CAVITY: SUN # T-11A.