

Load Holding Cartridges

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CBCB	1.5:1 pilot ratio, standard capacity counterbalance valve	1
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CBDBX	Fixed setting, 1.5:1 pilot ratio, semi-restrictive counterbalance
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CEBA	3:1 pilot ratio, restrictive, LoadAdaptive™ counterbalance
CEBC	3:1 pilot ratio, semi-restrictive, LoadAdaptive™ counterbalance
CECA	3:1 pilot ratio, standard capacity, LoadAdaptive™ counterbalance
MBDN	8:1 pilot ratio, load reactive load control



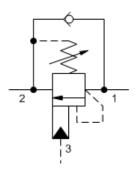
Cavity Information

Series	Ports	Cavities
Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size	2-Port	T-382A
11 - 14 Nm Valve Installation Torque		
Series P Cartridges	2-Port	T-8A
M16 Cartridge Thread	2-Port (Deep)	T-8DP
22,2 mm Valve Hex Size	3-Port	T-9A
27 - 33 Nm Valve Installation Torque		
Series 0 Cartridges	2-Port	T-162A
M16 Cartridge Thread	2-Port (Deep)	T-162DP
9,1 mm Valve Hex Size	3-Port	T-163A
25,4 mm Valve Hex Size		
27 - 33 Nm Valve Installation Torque		
Series 1 Cartridges	2-Port	T-10A
M20 Cartridge Thread	2-Port	T-13A
22,2 mm Valve Hex Size	3-Port	T-11A
1 - 47 Nm Valve Installation Torque	4-Port	T-21A
·	4-Port 6-Port	T-31A T-61A
	6-P0IL	1-01A
Series 2 Cartridges	2-Port	T-3A
L"-14 UNS Cartridge Thread	2-Port	T-5A T-2A
28,6 mm Valve Hex Size	3-Port 4-Port	T-2A T-22A
31 - 68 Nm Valve Installation Torque	4-Port	T-32A
	4-Port (Dual path)	T-52AD
	6-Port	T-52A
	6-Port	T-62A
Series 3 Cartridges	2-Port	T-16A
M36 Cartridge Thread	3-Port	T-17A
11.8 mm Valve Hex Size	4-Port	T-23A
103 - 217 Nm Valve Installation Torque	4-Port	T-33A
221 Mil Valvo Motaliadon Forque	4-Port (Dual path)	T-53AD
	6-Port	T-53A
	6-Port	T-63A
Series 4 Cartridges	2-Port	T-18A
M48 Cartridge Thread	2-Port (Undercut)	T-18AU
11,3 mm Valve Hex Size	3-Port	T-19A T-19AU
174 - 508 Nm Valve Installation Torque	3-Port (Undercut) 4-Port	T-19AU T-24A
	4-Port (Undercut)	T-24AU
	4-Port	T-24A0 T-34A
	4-Port (Dual path)	T-54AD
	6-Port	T-54A
	6-Port	T-64A

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A

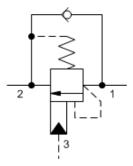


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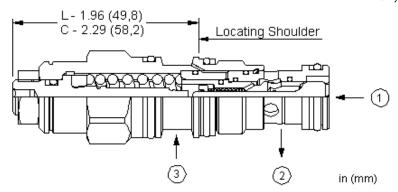


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCBLHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

 H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

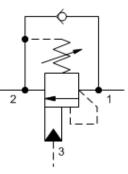
B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting N Buna-N
V Viton

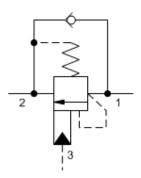
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel



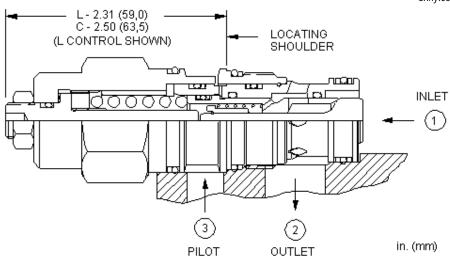




3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEBLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting N Buna-N

E EPDMV Viton

Standard Material/Coating

/AP Stainless Steel, Passivated

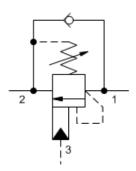
/LH Mild Steel, Zinc-Nickel

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1 400 - 1500 psi w/25 psi Clieck (28 - 105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

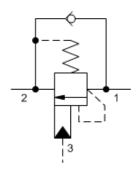


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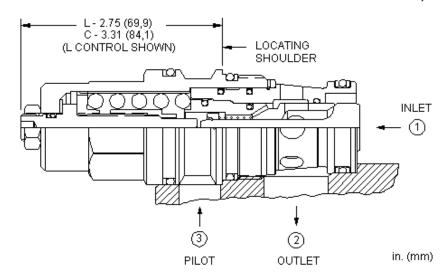


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGBLHN

V Viton

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

(210 bar) Standard Setting A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

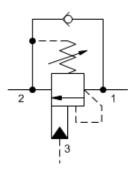
I 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

(N) MATERIAL/COATING (H) SEAL MATERIAL N Buna-N

IAP Stainless Steel, Passivated ILH Mild Steel, Zinc-Nickel

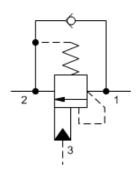


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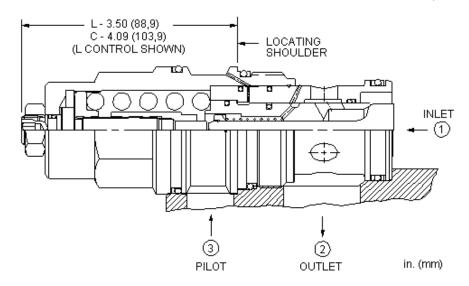


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBIBLHN

N Buna-N

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

(210 bar) Standard Setting

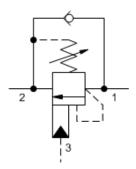
A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

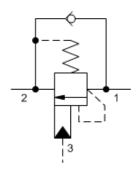
I 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

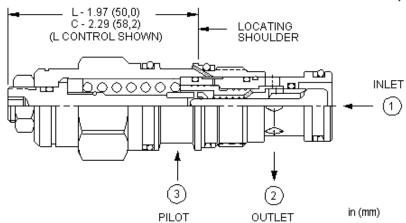
snhy.com/CBCY



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCYLHN

V Viton

(L) FUNCTIONAL SETTING RANGE CONTROL

- (H) SEAL MATERIAL N Buna-N
- (N) MATERIAL/COATING Standard Material/Coating

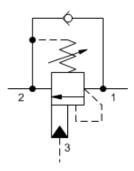
L Standard Screw Adjustment C Tamper Resistant - Factory Set

- H 1000 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting
- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

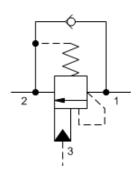
IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



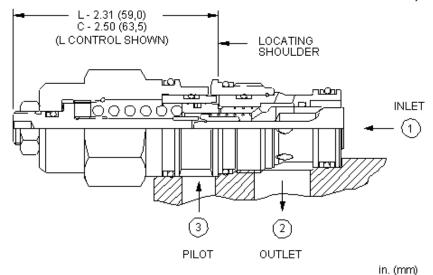
snhy.com/CBEY



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEYLHN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

(210 bar) Standard Setting

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

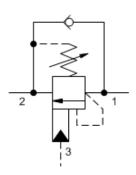
(H) SEAL MATERIAL

(N) MATERIAL/COATING Standard Material/Coating

> IAP Stainless Steel, Passivated **/LH** Mild Steel. Zinc-Nickel

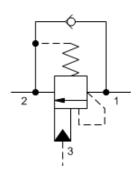


snhy.com/CBGY

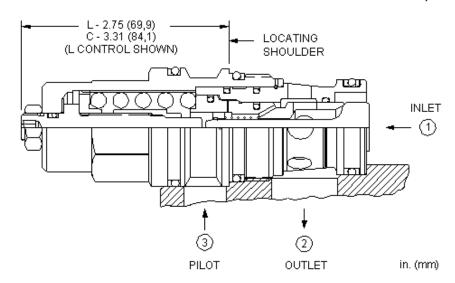


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGYLHN

N Buna-N

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

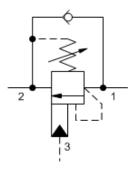
(210 bar) Standard Setting

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70

V Viton IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

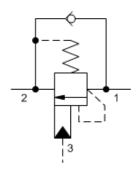
Standard Material/Coating

snhy.com/CBIY

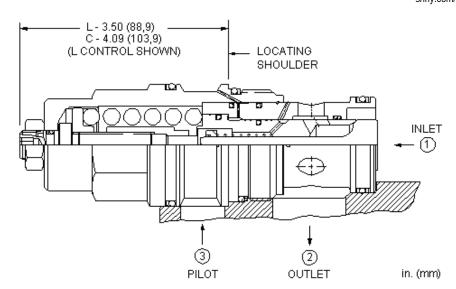


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBIYLHN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

H 1000 - 4000 psi w/25 psi Check (70 -(210 bar) Standard Setting

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70

N Buna-N V Viton

(H) SEAL MATERIAL

(N) MATERIAL/COATING

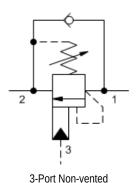
/LH Mild Steel, Zinc-Nickel

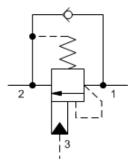
Standard Material/Coating



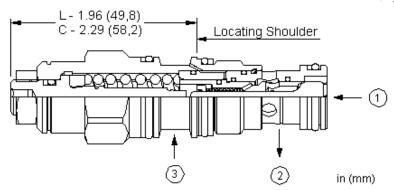


snhy.com/CBCL





3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCLLJN

L Standard Screw Adjustment

CONTROL

C Tamper Resistant - Factory Set

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi
- (140 bar) Standard Setting K 1000 - 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

(J) SEAL MATERIAL

N Buna-N E EPDM

V Viton

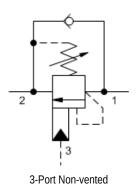
(N) MATERIAL/COATING

Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

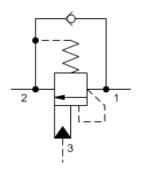
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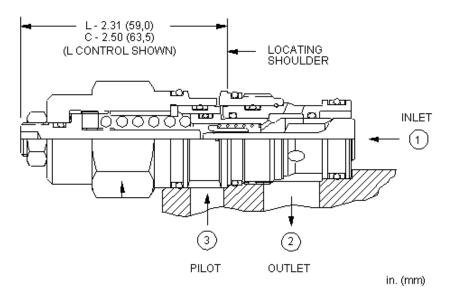
snhy.com/CBEL



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3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

Model Code Example: CBELLJN

CONTROL	(L) FUNCTIONAL SETTING RANGE	
L Standard Screw Adjustment	J 2000 - 5000 psi w/25 psi Check (2	

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi
- K 1000 2500 psi w/25 psi Check (70 -

N Buna-N V Viton

(J) SEAL MATERIAL

Standard Material/Coating

(N) MATERIAL/COATING

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

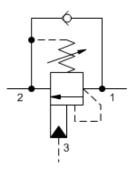
(140 bar) Standard Setting

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See www.sunhydraulics.com for detailed product information

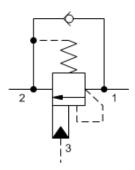
1/5 bar w/ 1,/ bar Check), 2000 psi (140 bar) Standard Setting

snhy.com/CBGL

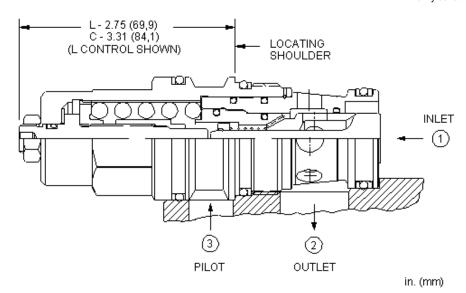


un hydraulics

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGLLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING Standard Material/Coating

L Standard Screw Adjustment C Tamper Resistant - Factory Set J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

N Buna-N **E** EPDM V Viton

IAP Stainless Steel, Passivated **/LH** Mild Steel. Zinc-Nickel

Created on 11/05/2016

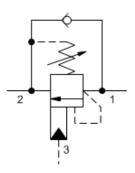
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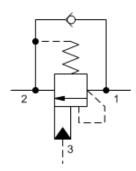
K 1000 - 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting



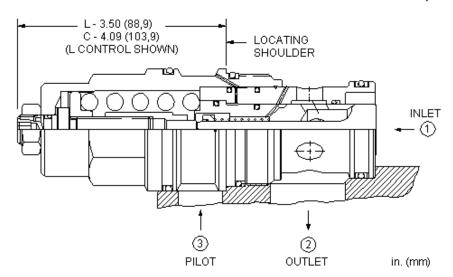
snhy.com/CBIL



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBILLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

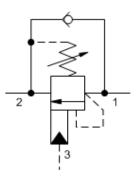
K 1000 - 2500 psi w/25 psi Check (70 -

N Buna-N V Viton

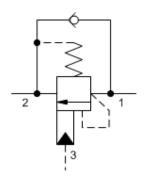
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

(140 bar) Standard Setting

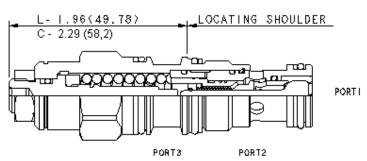
snhy.com/CBCA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCALHN

(L) FUNCTIONAL SETTING RANGE L Standard Screw Adjustment

C Tamper Resistant - Factory Set

CONTROL

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70

bar) Standard Setting

(H) SEAL MATERIAL N Buna-N

E EPDM

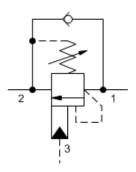
V Viton

(N) MATERIAL/COATING

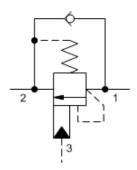
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



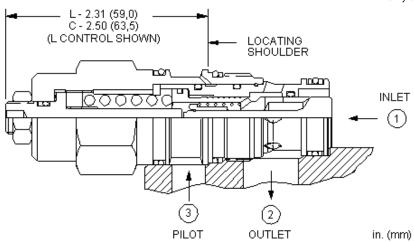
snhy.com/CBEA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEALHN

L Standard Screw Adjustment

CONTROL

C Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

A 1000 - 4000 psi w/4 psi Check (70 -

280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

- N Buna-N E EPDM

V Viton

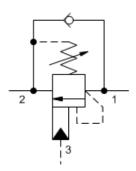
(N) MATERIAL/COATING

IAP Stainless Steel, Passivated **ILH** Mild Steel, Zinc-Nickel

Standard Material/Coating

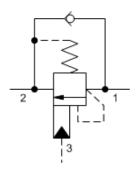


snhy.com/CBGA

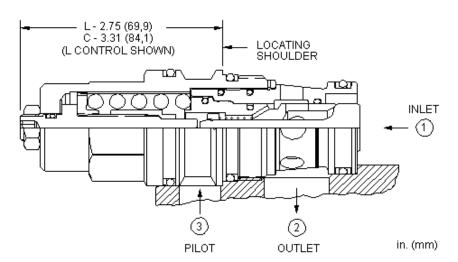


un hydraulics

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGALHN

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL

L Standard Screw Adjustment H 1000 - 4000 psi w/25 psi Check (70 - N Buna-N

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -

280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

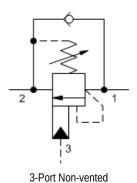
- B 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

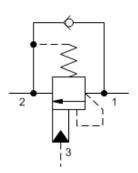
Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING

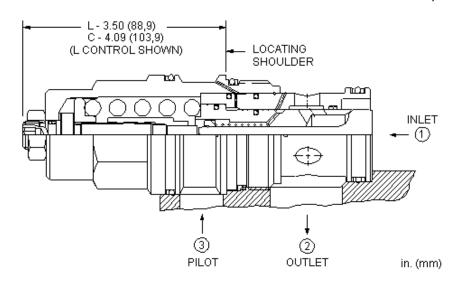


snhy.com/CBIA





3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBIALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

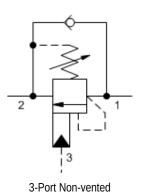
N Buna-N V Viton

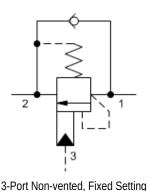
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

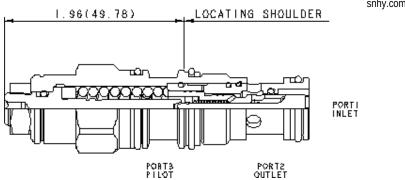
- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70



snhy.com/CBCG







Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

A fixed setting version is available for this model. To view this product page, use Sun's search box and type in the 4 letter model code. The search result will include the fixed setting version.

CONFIGURATION OPTIONS

Model Code Example: CBCGLJN

L Standard Screw Adjustment C Tamper Resistant - Factory Set 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi

175 bar w/ 1,7 bar Check), 2000 psi

(J) SEAL MATERIAL N Buna-N

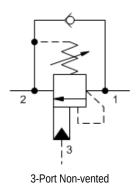
> **E** EPDM **V** Viton

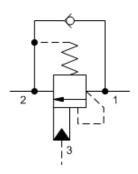
(N) MATERIAL/COATING

Standard Material/Coating IAP Stainless Steel, Passivated **ILH** Mild Steel, Zinc-Nickel

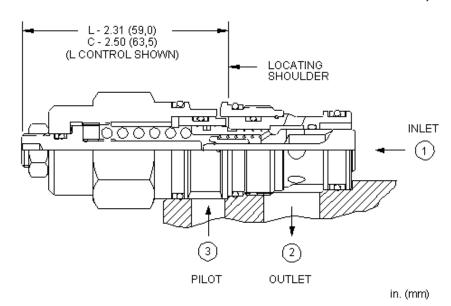


snhy.com/CBEG





3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEGLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL Standard Screw Adjustment

2000 - 5000 psi w/25 psi Check (140 -C Tamper Resistant - Factory Set 350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi N Buna-N V Viton

Standard Material/Coating IAP Stainless Steel, Passivated

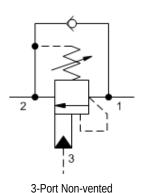
(N) MATERIAL/COATING

/LH Mild Steel, Zinc-Nickel

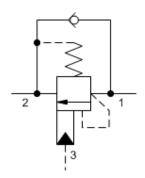
(140 bar) Standard Setting

K 1000 - 2500 psi w/25 psi Check (70 - 175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

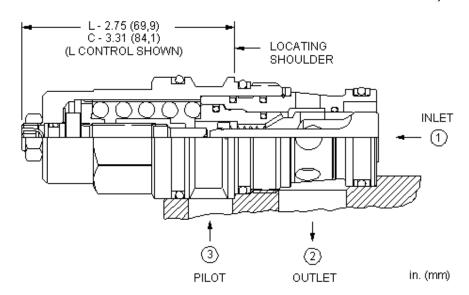
snhy.com/CBGG



sun hydraulics



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGGLJN

CONTROL (L)	FUNCTIONAL SETTING RANGE	(J)	SEAL MATERIAL	(N)	MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

(210 bar) Standard Setting

- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -

N Buna-N **E** EPDM V Viton

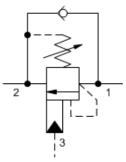
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

(140 bar) Standard Setting

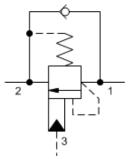
K 1000 - 2500 psi w/25 psi Check (70 - 175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting



snhy.com/CBIG

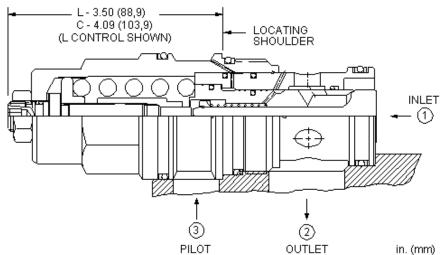


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3-Port Non-vented, Fixed Setting

3-Port Non-vented



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBIGLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

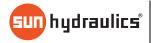
- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **D** 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -

N Buna-N V Viton

Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

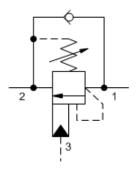
175 bar w/ 1,7 bar Check), 2000 psi © 2016 Sun Hydraulics Corporation

(140 bar) Standard Setting





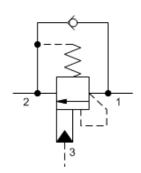
snhy.com/CBCH



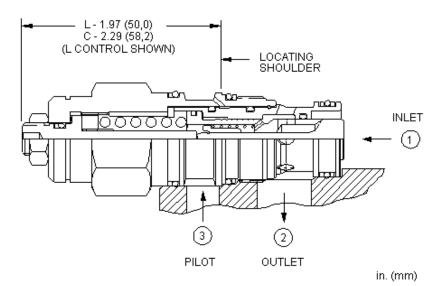
MODEL

CBCH

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCHLJN

CONTROL (N) MATERIAL/COATING (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL

L Standard Screw Adjustment C Tamper Resistant - Factory Set J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

K 1000 - 2500 psi w/25 psi Check (70 -

N Buna-N V Viton

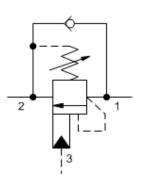
Standard Material/Coating IAP Stainless Steel, Passivated

/LH Mild Steel, Zinc-Nickel

1/5 bar w/ 1,/ bar Check), 2000 psi (140 bar) Standard Setting

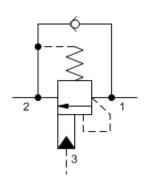


snhy.com/CBEH

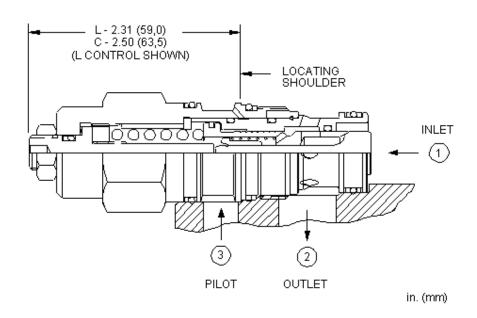


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEHLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi

N Buna-N V Viton

Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

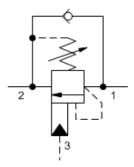
© 2016 Sun Hydraulics Corporation

(LIU Dai) Standard Sching

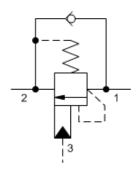
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting



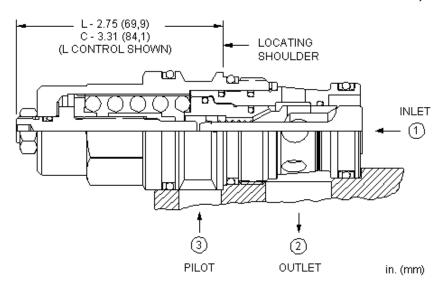
snhy.com/CBGH



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBGHLJN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

(210 bar) Standard Setting C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi

(210 bar) Standard Setting

- **D** 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi

N Buna-N V Viton

(J) SEAL MATERIAL

Standard Material/Coating

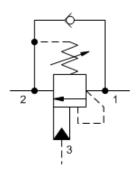
(N) MATERIAL/COATING

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

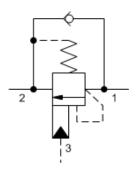
(140 bar) Standard Setting



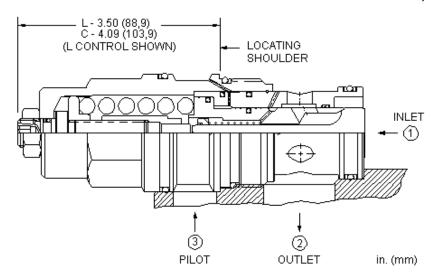
snhy.com/CBIH



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBIHLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

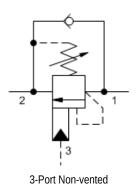
C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

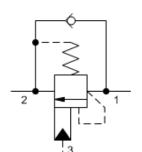
K 1000 - 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting N Buna-N V Viton Standard Material/Coating

/AP Stainless Steel, Passivated/LH Mild Steel, Zinc-Nickel

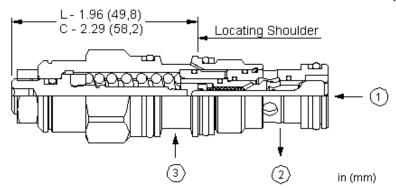
snhy.com/CBBB



M hydraulics



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBBLHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 - 280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

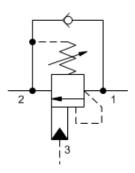
 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting N Buna-N
V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A



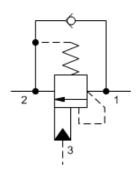
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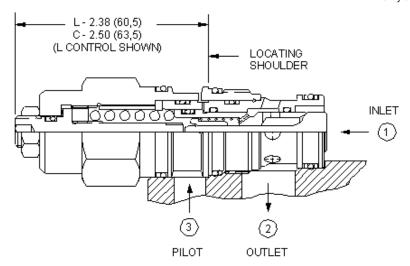
MODEL

CBDB

3-Port Non-vented



3-Port Non-vented, Fixed Setting



in. (mm)

Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDBLHN

N Buna-N

V Viton

CONTROL	(L)	FUNCTIONAL SETTING RANGE	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING
---------	-----	--------------------------	-----	---------------	-----	------------------

L Standard Screw Adjustment C Tamper Resistant - Factory Set H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

I 400 - 1500 psi w/25 psi Check (28

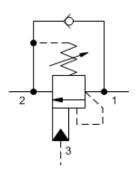
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See www.sunhydraulics.com for detailed product information

Standard Material/Coating

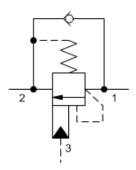
IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

snhy.com/CBFB

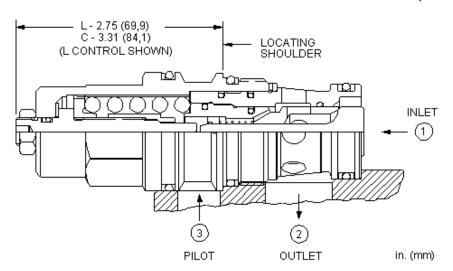


un hydraulics

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFBLHN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

(210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -

280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

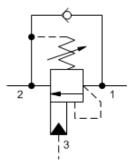
(H) SEAL MATERIAL

(N) MATERIAL/COATING

/LH Mild Steel, Zinc-Nickel

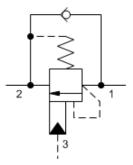


snhy.com/CBBL

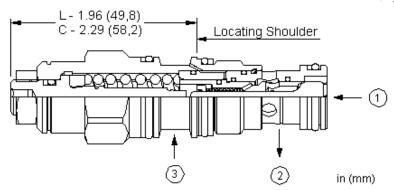


nydraulics 📆

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

A fixed setting version is available for this model. To view this product page, use Sun's search box and type in CBBLX and click on the resulting link. **NOTES**

CONFIGURATION OPTIONS

Model Code Example: CBBLLJN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

(L) FUNCTIONAL SETTING RANGE

- J 2000 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting
- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -
 - 175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

N Buna-N

V Viton

(J) SEAL MATERIAL

MATERIAL/COATING Standard Material/Coating

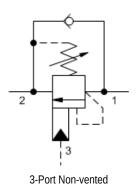
> IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A

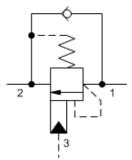


snhy.com/CBDL

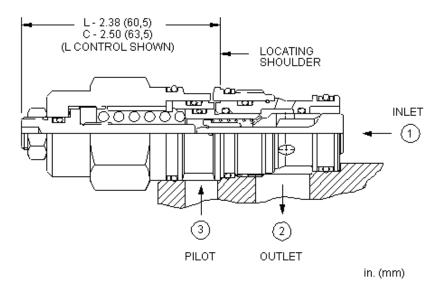


MODEL

CBDL



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDLLJN

L	Standard Screw Adjustment

CONTROL

C Tamper Resistant - Factory Set

(L) FUNCTIONAL SETTING RANGE

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

K 1000 - 2500 psi w/25 psi Check (70 -

(J) SEAL MATERIAL N Buna-N

V Viton

MATERIAL/COATING

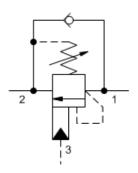
Standard Material/Coating IAP Stainless Steel, Passivated

/LH Mild Steel, Zinc-Nickel

1/5 bar w/ 1,/ bar Check), 2000 psi (140 bar) Standard Setting

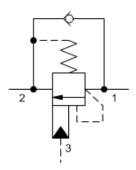


snhy.com/CBFL

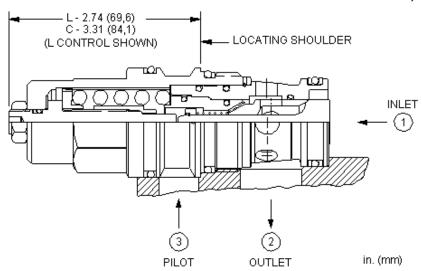


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFLLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING L Standard Screw Adjustment N Buna-N

C Tamper Resistant - Factory Set

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi

(210 bar) Standard Setting

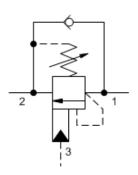
D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

K 1000 - 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

V Viton

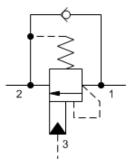
/LH Mild Steel, Zinc-Nickel

snhy.com/CBBC

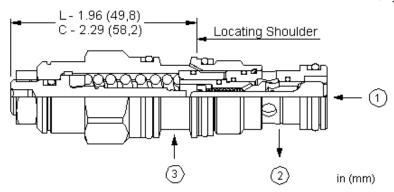


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBCLHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set 280 bar w/ 1,7 (210 bar) Stan

 H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

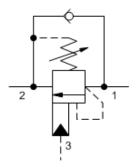
B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting N Buna-N Stan
V Viton JAP Stair

/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel



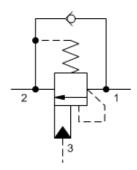
snhy.com/CBDC



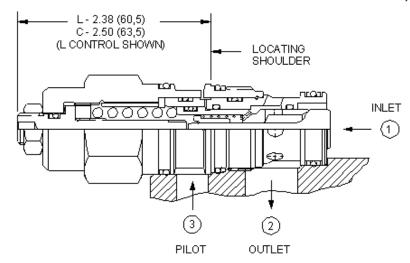
MODEL

CBDC

3-Port Non-vented



3-Port Non-vented, Fixed Setting



in. (mm)

Standard Material/Coating

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDCLHN

N Buna-N

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

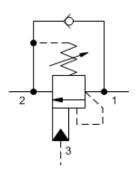
B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

I 400 - 1500 psi w/25 psi Check (28

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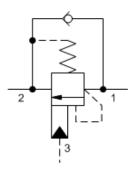
See www.sunhydraulics.com for detailed product information

snhv.com/CBFC

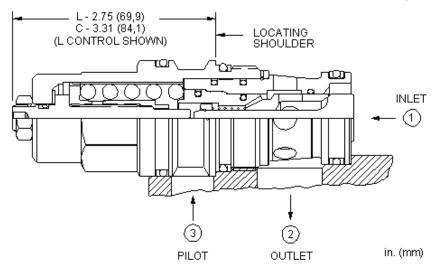


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFCLHN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

(210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

I 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

(H) SEAL MATERIAL

Standard Material/Coating

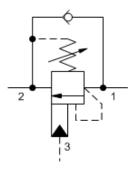
(N) MATERIAL/COATING

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

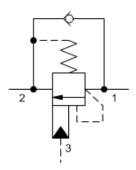




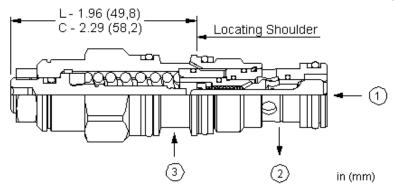
snhv.com/CBBD



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

A fixed setting version is available for this model. To view this product page, use Sun's search box and type in CBBDX and click on the resulting link.

CONFIGURATION OPTIONS

Model Code Example: CBBDLJN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

(L) FUNCTIONAL SETTING RANGE

- 2000 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting
- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

(J) SEAL MATERIAL N Buna-N

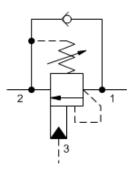
> **E** EPDM V Viton

(N) MATERIAL/COATING

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

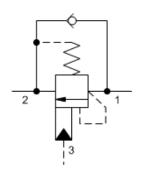


snhy.com/CBDD

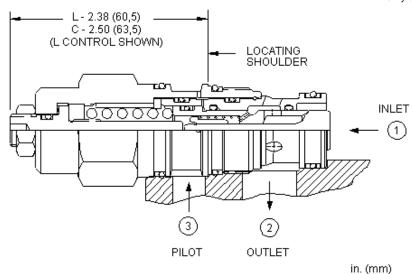


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDDLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

K 1000 - 2500 psi w/25 psi Check (70 -

N Buna-N V Viton

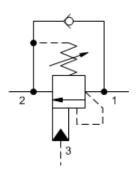
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

175 bar w/ 1,7 bar Check), 2000 psi

(140 bar) Standard Setting

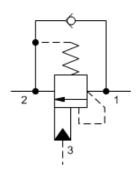


snhy.com/CBFD

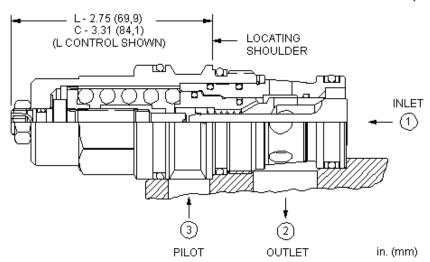


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFDLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -

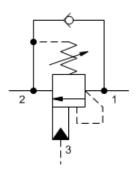
350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

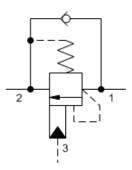
N Buna-N V Viton Standard Material/Coating IAP Stainless Steel, Passivated ILH Mild Steel, Zinc-Nickel



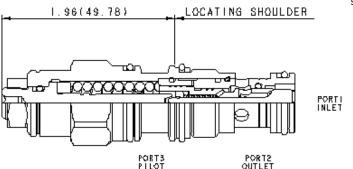




3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBYLHN

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

/LH Mild Steel, Zinc-Nickel

L Standard Screw Adjustment

CONTROL

C Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

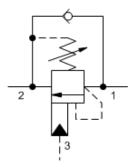
- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70

bar) Standard Setting

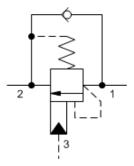
N Buna-N Standard Material/Coating V Viton IAP Stainless Steel, Passivated



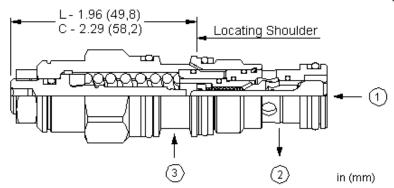
snhy.com/CBBA







3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBALHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

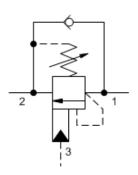
B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting

 400 - 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting N Buna-N
V Viton

IAP Stainless Steel, Passivated
ILH Mild Steel, Zinc-Nickel

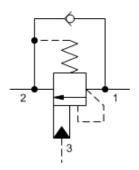


snhv.com/CBDA

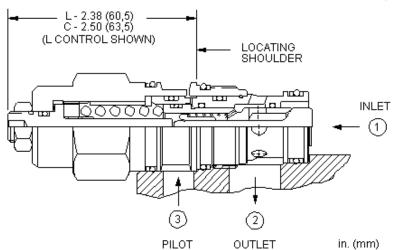


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDALHN

C Tamper Resistant - Factory Set

CONTROL

280 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

1000 - 4000 psi w/25 psi Check (70 -(210 bar) Standard Setting

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

N Buna-N

(H) SEAL MATERIAL

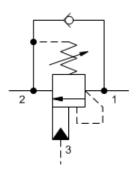
V Viton

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

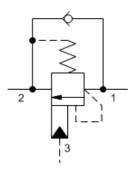
(N) MATERIAL/COATING



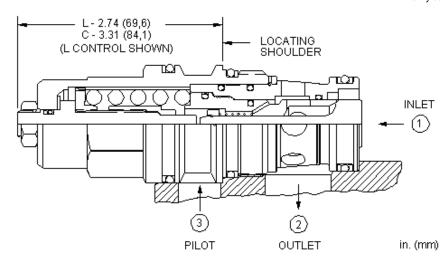
snhy.com/CBFA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFALHN

N Buna-N

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

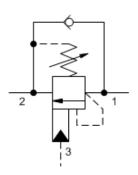
- H 1000 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting
- A 1000 4000 psi w/4 psi Check (70 280 bar w/ 0,3 bar Check), 3000 psi
- (210 bar) Standard Setting
 B 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

Standard Material/Coating

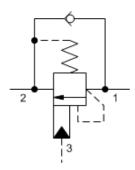
IAP Stainless Steel, Passivated
ILH Mild Steel, Zinc-Nickel



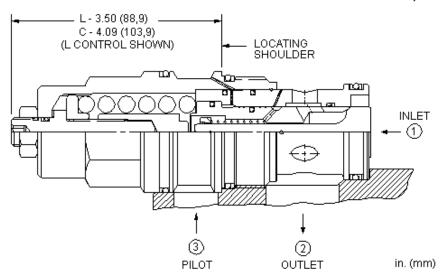
snhy.com/CBHA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBHALHN

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL L Standard Screw Adjustment H 1000 - 4000 psi w/25 psi Check (70 -N Buna-N

280 bar w/ 1,7 bar Check), 3000 psi

C Tamper Resistant - Factory Set

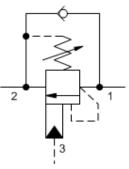
A 1000 - 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

(210 bar) Standard Setting

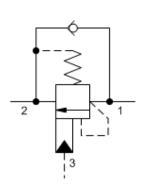
- **B** 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- I 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70



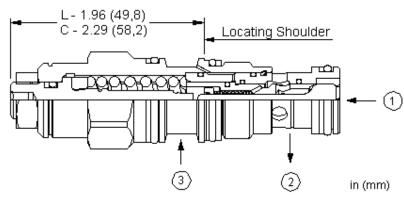
snhy.com/CBBG



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBGLJN

L Standard Screw Adjustment C Tamper Resistant - Factory Set

CONTROL

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

(L) FUNCTIONAL SETTING RANGE

- (210 bar) Standard Setting
- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- **D** 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

N Buna-N V Viton

(J) SEAL MATERIAL

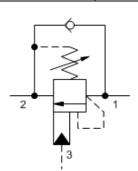
Standard Material/Coating IAP Stainless Steel, Passivated ILH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING

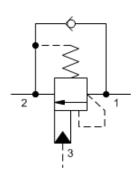
SERIES 2 / CAPACITY: 30 L/min. / CAVITY: T-2A



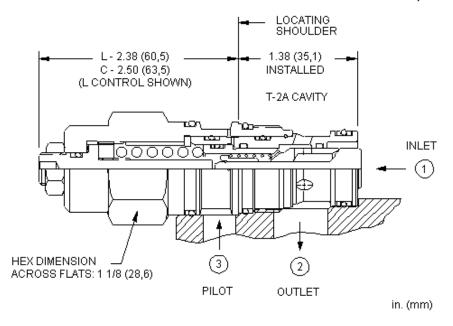
snhy.com/CBDG



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDGLJN

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL L Standard Screw Adjustment N Buna-N

C Tamper Resistant - Factory Set

- 2000 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting
- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi

V Viton

IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

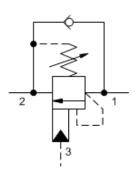
(N) MATERIAL/COATING

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(140 bar) Standard Setting

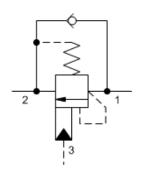
K 1000 - 2500 psi w/25 psi Check (70 - 175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting



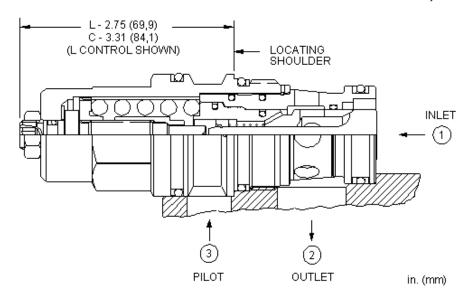


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3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CBFGLJN

N Buna-N

V Viton

CONTROL (L) FUNCTIONAL SETTING RANGE (J) SEAL MATERIAL MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -(140 bar) Standard Setting

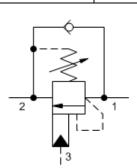
K 1000 - 2500 psi w/25 psi Check (70 -

175 bar w/ 0,3 bar Check), 2000 psi

Standard Material/Coating

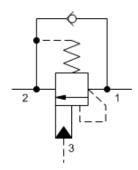
1/5 bar w/ 1,/ bar Check), 2000 psi (140 bar) Standard Setting



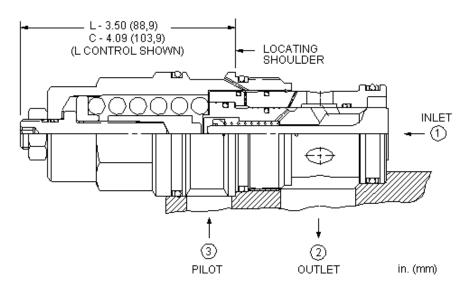


un hydraulics

3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CBHGLJN

L Standard Screw Adjustment

CONTROL

(L) FUNCTIONAL SETTING RANGE

(J) SEAL MATERIAL N Buna-N

V Viton

C Tamper Resistant - Factory Set

J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting

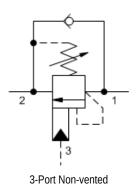
K 1000 - 2500 psi w/25 psi Check (70 -

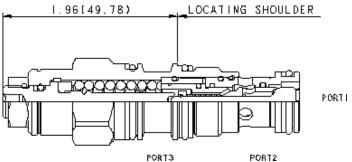
175 bar w/ 1,7 bar Check), 2000 psi

(140 bar) Standard Setting









Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBABLHN

L Standard Screw Adjustment

CONTROL

- C Tamper Resistant Factory Set
- R Lockwired Screw Adjustment
- H 1000 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- B 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

(H) SEAL MATERIAL N Buna-N

V Viton

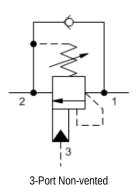
Standard Material/Coating

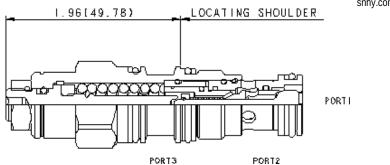
(N) MATERIAL/COATING

/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel



snhy.com/CBAA





Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBAALHN

L Standard Screw Adjustment

CONTROL

- C Tamper Resistant Factory Set
- R Lockwired Screw Adjustment

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

- A 1000 4000 psi w/4 psi Check (70 -280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- B 400 1500 psi w/4 psi Check (28 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting
- 400 1500 psi w/25 psi Check (28 -105 bar w/ 1,7 bar Check), 1000 psi (70 bar) Standard Setting

(H) SEAL MATERIAL N Buna-N

V Viton

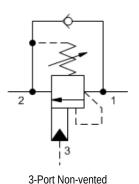
Standard Material/Coating

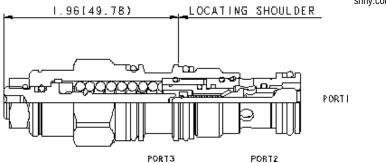
(N) MATERIAL/COATING

/AP Stainless Steel, Passivated
//LH Mild Steel, Zinc-Nickel









Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBAGLJN

L Standard Screw Adjustment

CONTROL

- C Tamper Resistant Factory Set
- R Lockwired Screw Adjustment

2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

- C 2000 5000 psi w/4 psi Check (140 -350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting
- D 1000 2500 psi w/4 psi Check (70 -175 bar w/ 0,3 bar Check), 2000 psi (140 bar) Standard Setting
- K 1000 2500 psi w/25 psi Check (70 -175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

(J) SEAL MATERIAL N Buna-N

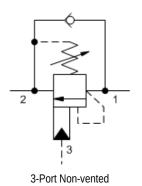
V Viton

(N) MATERIAL/COATING Standard Material/Coating

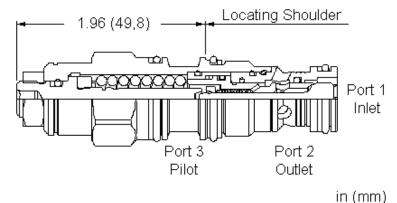
SERIES 1 / CAPACITY: 10 L/min. / CAVITY: T-11A



snhy.com/CBAH



🞹 hydraulics



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBAHLJN

	Adjustment	

CONTROL

C Tamper Resistant - Factory Set

(L) FUNCTIONAL SETTING RANGE (J 2000 - 5000 psi w/25 psi Check (140 -350 bar w/ 1,7 bar Check), 3000 psi

(210 bar) Standard Setting

C 2000 - 5000 psi w/4 psi Check (140 - 350 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

D 1000 - 2500 psi w/4 psi Check (70 - 175 bar w/ 0,3 bar Check), 2000 psi

(140 bar) Standard Setting
K 1000 - 2500 psi w/25 psi Check (70 - 175 bar w/ 1,7 bar Check), 2000 psi (140 bar) Standard Setting

(J) SEAL MATERIAL N Buna-N

V Viton

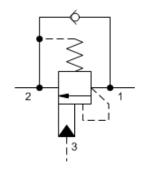
Standard Material/Coating

(N) MATERIAL/COATING

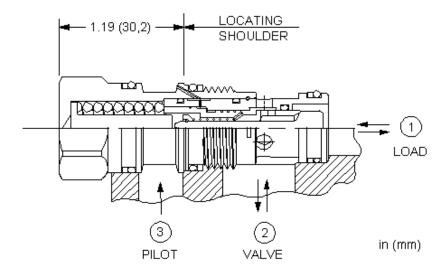
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel



snhy.com/CBCLX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCLXMN

FIXED PRESSURE RANGE	(M) SEAL MATERIAL	(N) MATERIAL/COATING
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FIXED PRESSURE RANGE	(W) SEAL MATERIAL	(N) MATERIAL/COA
M 4700 - 5600 psi (325 - 390 bar)	N Buna-N	Standard Mat

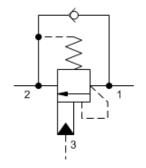
V 3200 - 3800 psi (220 - 260 bar) **E** EPDM ILH Mild Steel, Zinc-Nickel X 3500 - 4200 psi (245 - 290 bar) V Viton

Z 4125 - 4900 psi (285 - 340 bar)

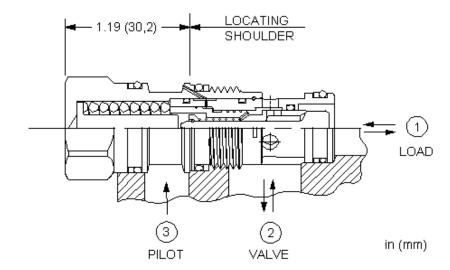
terial/Coating



snhy.com/CBCAX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCAXNN

۲	IVED	PKE22	UKE	RANGE	

(N) SEAL MATERIAL

(N) MATERIAL/COATING

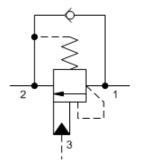
N 2900 - 3500 psi (200 - 245 bar) P 2250 - 2680 psi (155 - 185 bar) N Buna-NE EPDMV Viton

Standard Material/Coating

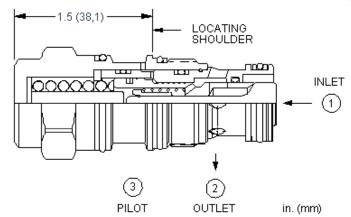
/AP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



snhy.com/CBEAX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBEAXNN

FIXED PRESSURE RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

N 2900 - 3500 psi (200 - 245 bar)
P 2250 - 2680 psi (155 - 185 bar)

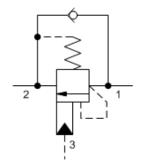
N Buna-N

Standard Material/Coating

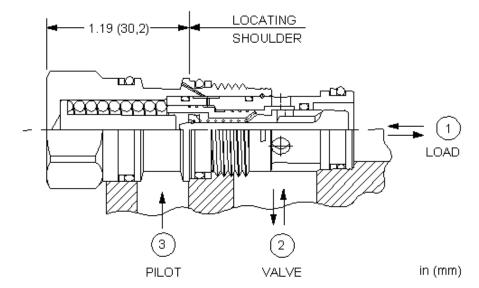
V Viton /LH Mild Steel, Zinc-Nickel



snhy.com/CBCGX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBCGXMN

FIXED PRESSURE RANGE SEAL MATERIAL (N) MATERIAL/COATING

W	4700 - 5600 psi (325 - 390 bar)	
٧	3200 - 3800 psi (220 - 260 bar)	

X 3500 - 4200 psi (245 - 290 bar) **Z** 4125 - 4900 psi (285 - 340 bar)

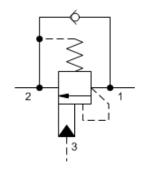
N Buna-N **E** EPDM V Viton

/LH Mild Steel, Zinc-Nickel

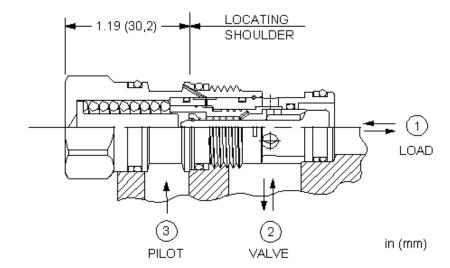
Standard Material/Coating



snhy.com/CBCHX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBCHXMN

FIXED PRESSURE RANGE (M) SEAL MATERIAL	(N)	MATERIAL/COATIN
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N Buna-N

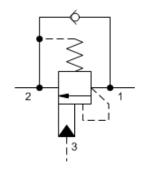
Standard Material/Coating

V 3200 - 3800 psi (220 - 260 bar)
X 3500 - 4200 psi (245 - 290 bar)
Z 4125 - 4900 psi (285 - 340 bar)

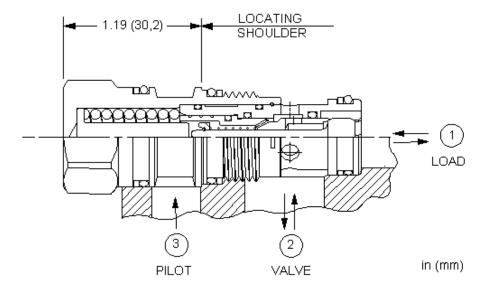
V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

snhy.com/CBBLX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2.3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CBBLXMN

FIXED PRESSURE RANGE (M) SEAL MATERIAL

(N) MATERIAL/COATING

M 4700 - 5600 psi (325 - 390 bar) V 3200 - 3800 psi (220 - 260 bar)

N Buna-N

V Viton

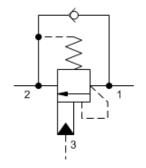
Standard Material/Coating

X 3500 - 4200 psi (245 - 290 bar)

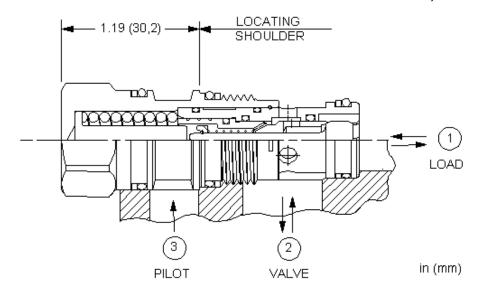
Z 4125 - 4900 psi (285 - 340 bar)



snhy.com/CBBCX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBBCXNN

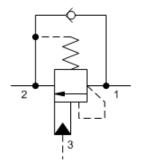
FIXED PRESSURE RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

 N
 2900 - 3500 psi (200 - 245 bar)
 N
 Buna-N
 Standard Material/Coating

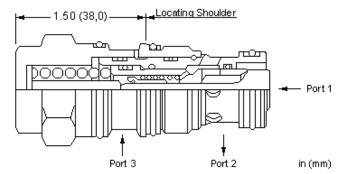
 P
 2250 - 2680 psi (155 - 185 bar)
 V
 Viton
 /LH Mild Steel, Zinc-Nickel



snhy.com/CBDCX



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDCXNN

FIXED PRESSURE RANGE (N) SEAL MATERIAL

(N) MATERIAL/COATING

N 2900 - 3500 psi (200 - 245 bar)

N Buna-N

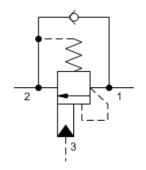
Standard Material/Coating

P 2250 - 2680 psi (155 - 185 bar)

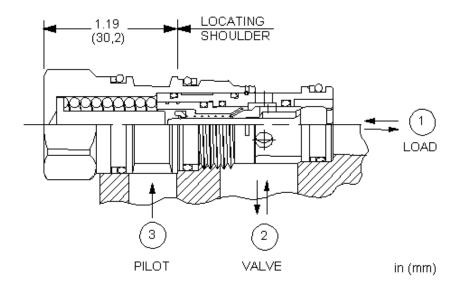
V Viton



snhy.com/CBBDX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	EPDM: 990011014	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBBDXXN

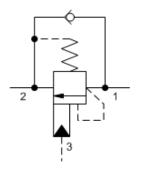
FIXED PRESSURE RANGE	(X) SEAL MATERIAL	(N) MATERIAL/COATING
X 3500 - 4200 psi (245 - 290 bar)	N Buna-N	Standard Material/Coating
M 4700 - 5600 nsi (325 - 390 har)	F EDDM	IAD Stainless Steel Passivated

V 3200 - 3800 psi (220 - 260 bar)Z 4125 - 4900 psi (285 - 340 bar)

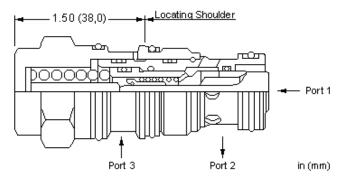
V Viton



snhy.com/CBDDX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Reseat	>85% of setting	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

Model Code Example: CBDDXXN

۲	IXED	PKE	SSU	KE I	RAN	GE

(X) SEAL MATERIAL

V Viton

(N) MATERIAL/COATING

X 3500 - 4200 psi (245 - 290 bar) M 4700 - 5600 psi (325 - 390 bar)

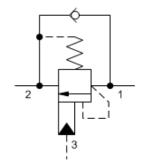
V 3200 - 3800 psi (220 - 260 bar)

Z 4125 - 4900 psi (285 - 340 bar)

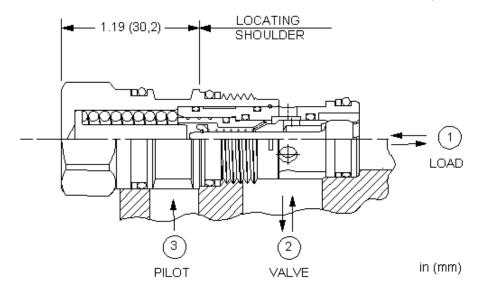
Standard Material/Coating



snhy.com/CBBAX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBBAXNN

FIXED PRESSURE RANGE

(N) SEAL MATERIAL

(N) MATERIAL/COATING

N 2900 - 3500 psi (200 - 245 bar)

N Buna-N

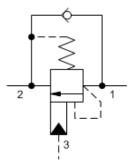
Standard Material/Coating

P 2250 - 2680 psi (155 - 185 bar) **V** Viton

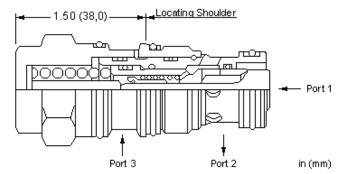
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel



snhy.com/CBDAX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDAXNN

FIXED PRESSURE RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

N 2900 - 3500 psi (200 - 245 bar)

N Buna-N

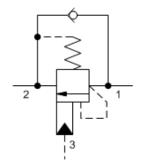
Standard Material/Coating

P 2250 - 2680 psi (155 - 185 bar)

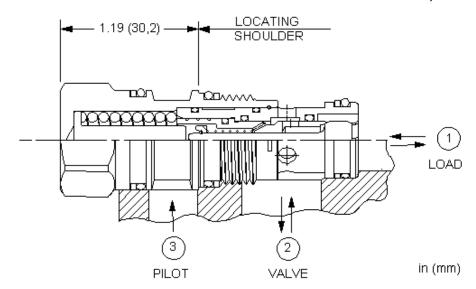
V Viton



snhy.com/CBBGX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBBGXMN

FIXED PRESSURE RANGE (M) SEAL MATERIAL

M 4700 - 5600 psi (325 - 390 bar) V 3200 - 3800 psi (220 - 260 bar) N Buna-N

(N) MATERIAL/COATING

X 3500 - 4200 psi (245 - 290 bar)

 ${f V}$ Viton

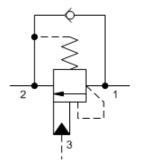
Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

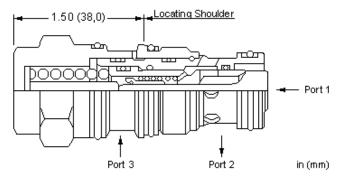
Z 4125 - 4900 psi (285 - 340 bar)



snhy.com/CBDGX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDGXXN

FIXED PRESSURE RANGE (X) SEAL MATERIAL (N) MATERIAL/COATING

V Viton

X 3500 - 4200 psi (245 - 290 bar)

M 4700 - 5600 psi (325 - 390 bar)V 3200 - 3800 psi (220 - 260 bar)

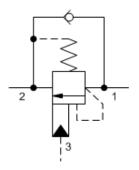
Z 4125 - 4900 psi (285 - 340 bar)

N Buna-N

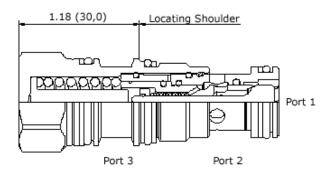
Standard Material/Coating



snhy.com/CBABX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBABXNN

FIXED PRESSURE RANGE	(N) SEAL MATERIAL	(N) MATERIAL/COATING
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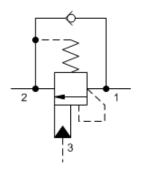
N 2900 - 3500 psi (200 - 245 bar) **N** Buna-N

Standard Material/Coating

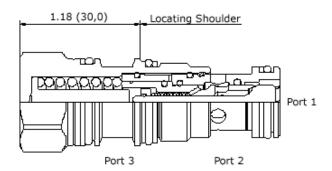
P 2250 - 2680 psi (155 - 185 bar) V Viton /LH Mild Steel, Zinc-Nickel



snhy.com/CBAAX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBAAXNN

FIXED PRESSURE RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

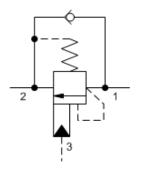
N 2000 2500 (2000 2451)

N 2900 - 3500 psi (200 - 245 bar) **N** Buna-N Standard Material/Coating

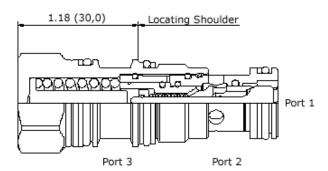
P 2250 - 2680 psi (155 - 185 bar) V Viton /LH Mild Steel, Zinc-Nickel



snhy.com/CBAGX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CBAGXMN

FIXED PRESSURE RANGE (M) SEAL MATERIAL (N) MATERIAL/COATING

M 4700 - 5600 psi (325 - 390 bar)

N Buna-N V Viton

Standard Material/Coating

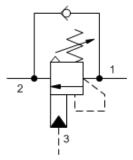
V 3200 - 3800 psi (220 - 260 bar)

X 3500 - 4200 psi (245 - 290 bar)

Z 4125 - 4900 psi (285 - 340 bar)

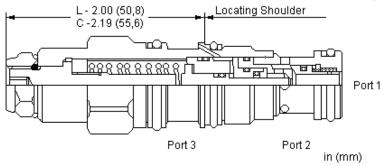


snhy.com/CABK



CABK

3-Port Atmospherically Referenced



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	3
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

2

3-Port Atmospherically Referenced, Non-adjustable

CONFIGURATION OPTIONS

Model Code Example: CABKLHN

CONTROL L Standard Screw Adjustment

(L) FUNCTIONAL SETTING RANGE 1000 - 4000 psi w/25 psi Check (70 -

(H) SEAL MATERIAL

N Buna-N V Viton

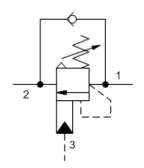
C Tamper Resistant - Factory Set

280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

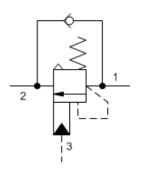
(N)



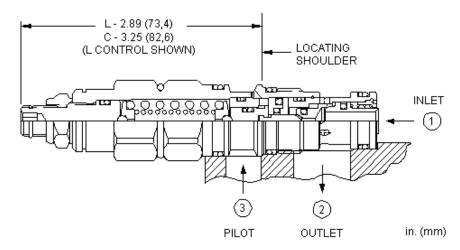
snhy.com/CACK



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990211007
Seal kit - Cartridge	Viton: 990211006

CONFIGURATION OPTIONS

Model Code Example: CACKLHN

L Standard Screw Adjustment

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

MATERIAL/COATING

C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

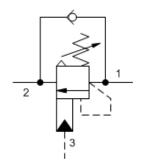
N Buna-N Viton

(70 bar) Standard Setting

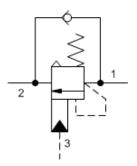
400 - 1500 psi (28 - 105 bar), 1000 psi



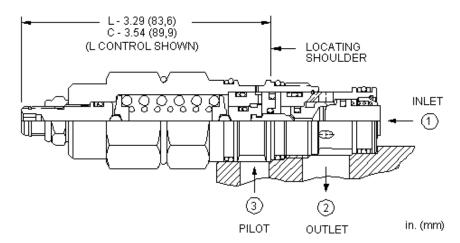
snhy.com/CAEK



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990302007
Seal kit - Cartridge	Viton: 990302006

CONFIGURATION OPTIONS

Model Code Example: CAEKLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

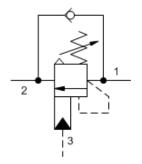
H 1000 - 4000 psi (70 - 280 bar), 3000 psi
(210 bar) Standard Setting

N Buna-N
V Viton

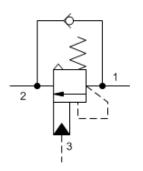
I 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting (N)



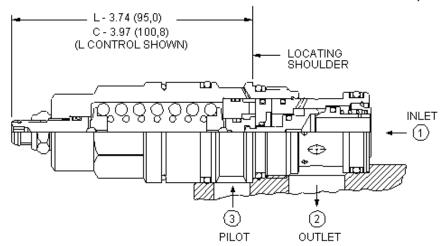
snhy.com/CAGK



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



in. (mm)

Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990117007
Seal kit - Cartridge	Viton: 990117006

CONFIGURATION OPTIONS

Model Code Example: CAGKLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N)

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

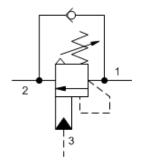
H 1000 - 4000 psi (70 - 280 bar), 3000 psi
(210 bar) Standard Setting

V Viton

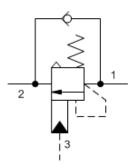
 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting



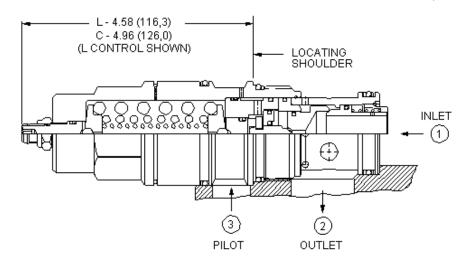
snhy.com/CAIK



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990119007
Seal kit - Cartridge	Polyurethane: 990119002
Seal kit - Cartridge	Viton: 990119006

CONFIGURATION OPTIONS

Model Code Example: CAIKLHN

L Standard Screw Adjustment

(L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL H 1000 - 4000 psi (70 - 280 bar), 3000 psi

(210 bar) Standard Setting

N Buna-N

C Tamper Resistant - Factory Set

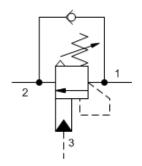
I 400 - 1500 psi (28 - 105 bar), 1000 psi

(70 bar) Standard Setting

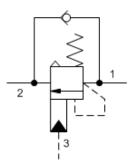
CONTROL



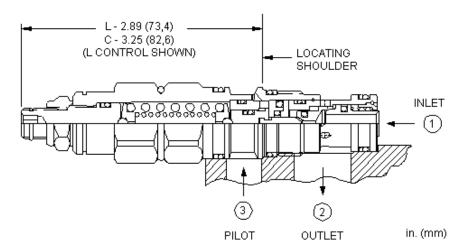
snhy.com/CACL



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990211007
Seal kit - Cartridge	Viton: 990211006

CONFIGURATION OPTIONS

Model Code Example: CACLLFN

CONTROL (L) FUNCTIONAL SETTING RANGE (F) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

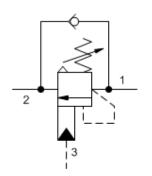
G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

N Buna-NV Viton

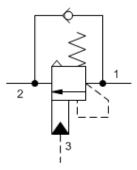
Standard Material/Coating
/LH Mild Steel. Zinc-Nickel

Created on 11/05/2016

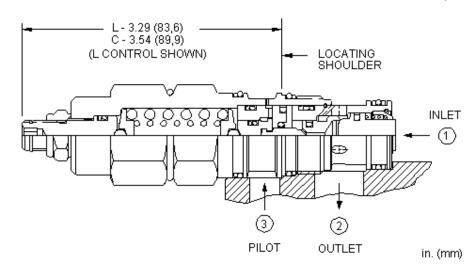
snhy.com/CAEL



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990302007
Seal kit - Cartridge	Viton: 990302006

CONFIGURATION OPTIONS

Model Code Example: CAELLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (
L Standard Screw Adjustment G 2000 - 6000 psi (140 - 420 bar), 4000 N Buna-N

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

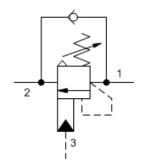
G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

V Viton

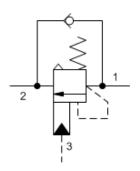
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting



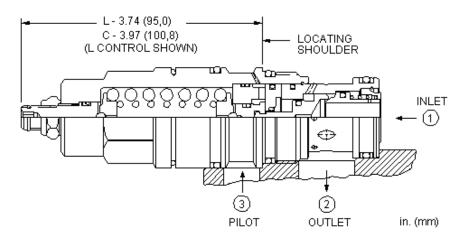
snhy.com/CAGL



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990117007
Seal kit - Cartridge	Viton: 990117006

CONFIGURATION OPTIONS

Model Code Example: CAGLLGN

(G) SEAL MATERIAL CONTROL (L) FUNCTIONAL SETTING RANGE MATERIAL/COATING L Standard Screw Adjustment N Buna-N

C Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

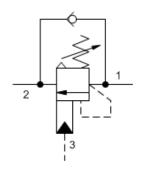
V Viton

Standard Material/Coating IAP Stainless Steel, Passivated

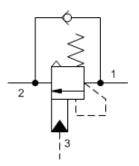
1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting



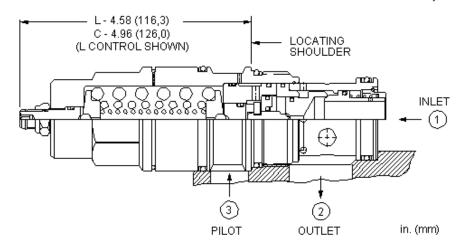
snhy.com/CAIL



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990119007
Seal kit - Cartridge	Polyurethane: 990119002
Seal kit - Cartridge	Viton: 990119006

CONFIGURATION OPTIONS

Model Code Example: CAILLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

N Buna-N
V Viton

Standard Material/Coating

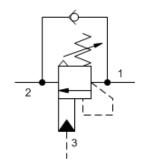
/LH Mild Steel, Zinc-Nickel

F 1000 - 2500 psi (70 - 175 bar), 2000 psi

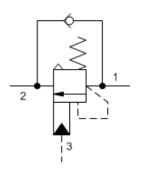
(140 bar) Standard Setting



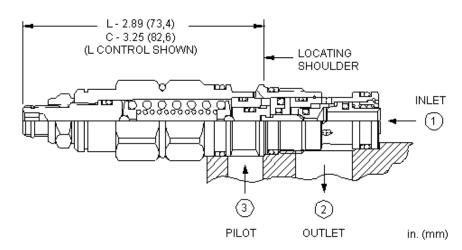
snhy.com/CACA



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990211007
Seal kit - Cartridge	Viton: 990211006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

Model Code Example: CACALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING L Standard Screw Adjustment

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

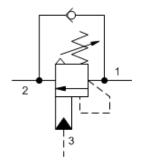
400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

N Buna-N

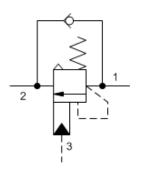
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



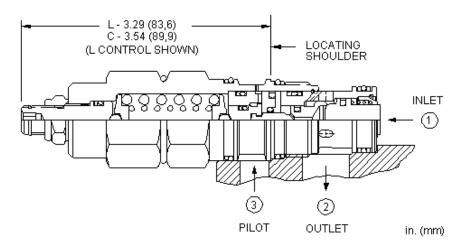
snhy.com/CAEA



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990302007
Seal kit - Cartridge	Viton: 990302006

CONFIGURATION OPTIONS

Model Code Example: CAEALHN

CONTROL (L) FUN

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

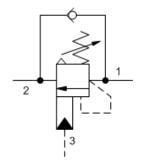
N Buna-N
V Viton

Standard Material/Coating

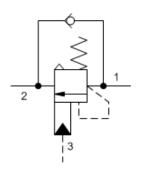
 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting ILH Mild Steel, Zinc-Nickel



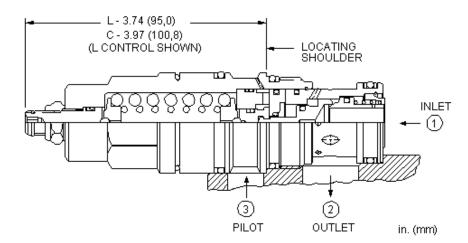
snhy.com/CAGA



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990117007
Seal kit - Cartridge	Viton: 990117006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

Model Code Example: CAGALHN

CONTROL
(L) FUNCTIONAL SETTING RANGE

L Standard Screw Adjustment
H 1000 - 4000 psi (70 - 280 bar), 3

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

(H) SEAL MATERIAL
psi N Buna-N
V Viton

MATERIAL/COATING

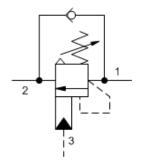
Standard Material/Coating

(AP Stainless Steel Passivates

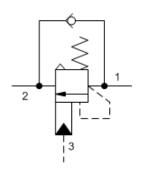
IAP Stainless Steel, Passivated
ILH Mild Steel, Zinc-Nickel



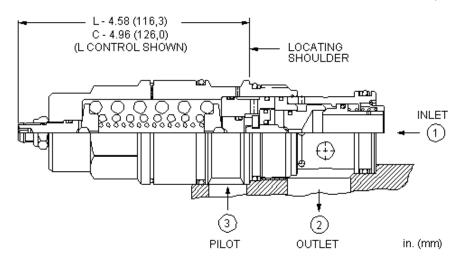
snhy.com/CAIA



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990119007
Seal kit - Cartridge	Polyurethane: 990119002
Seal kit - Cartridge	Viton: 990119006

CONFIGURATION OPTIONS

Model Code Example: CAIALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi
(210 bar) Standard Setting

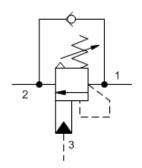
N Buna-N

V Viton

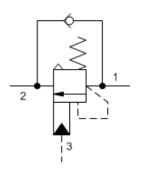
 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting



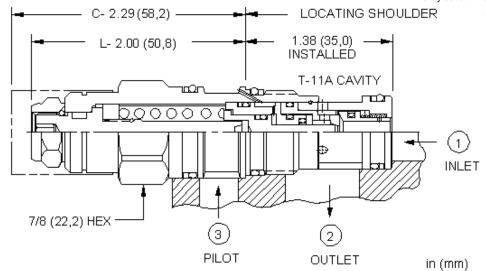
snhv.com/CABG



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	3
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CABGLHN

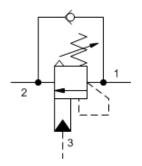
CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (
L Standard Screw Adjustment
H 1000 - 4000 psi w/25 psi Check (70 C Tamper Resistant - Factory Set

280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

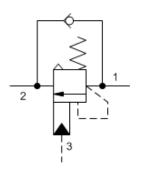
V Viton



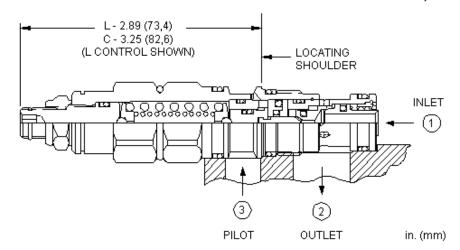
snhv.com/CACG



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990211007
Seal kit - Cartridge	Viton: 990211006

CONFIGURATION OPTIONS

Model Code Example: CACGLGN

L Standard Screw Adjustment

CONTROL

(L) FUNCTIONAL SETTING RANGE

(G) SEAL MATERIAL N Buna-N

MATERIAL/COATING

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

V Viton

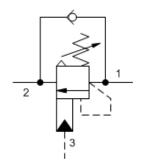
IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel

C Tamper Resistant - Factory Set

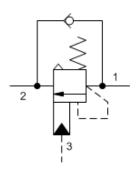
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting



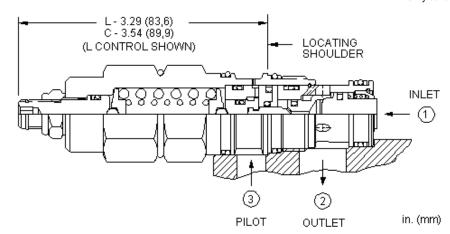
snhy.com/CAEG



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990302007
Seal kit - Cartridge	Viton: 990302006

CONFIGURATION OPTIONS

Model Code Example: CAEGLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment G 2000 - 6000 psi (140 - 420 bar), 4000 N Buna-N Standard Material/Coating

C Tamper Resistant - Factory Set psi (280 bar) Standard Setting

F 1000 - 2500 psi (70 - 175 bar) 2000

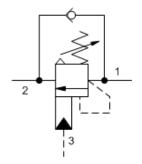
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

V Viton 2000 psi

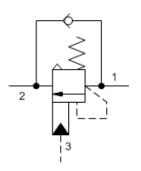
/AP Stainless Steel, Passivated



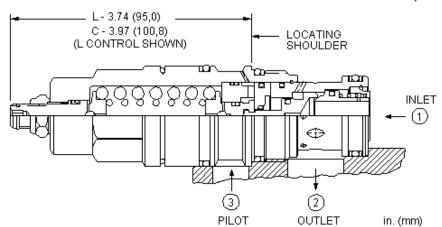
snhy.com/CAGG



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990117007
Seal kit - Cartridge	Viton: 990117006

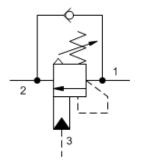
CONFIGURATION OPTIONS

Model Code Example: CAGGLGN

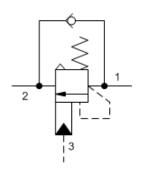
F 1000 - 2500 psi (70 - 175 bar), 2000 psi



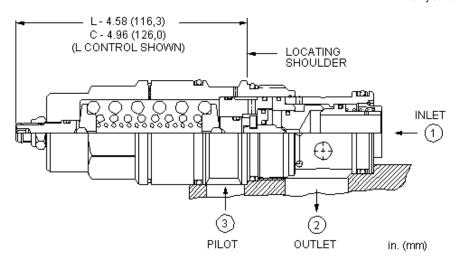
snhy.com/CAIG



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Seal kit - Cartridge	Buna: 990119007
Seal kit - Cartridge	Polyurethane: 990119002
Seal kit - Cartridge	Viton: 990119006

CONFIGURATION OPTIONS

Model Code Example: CAIGLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

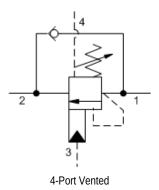
G 2000 - 6000 psi (140 - 420 bar), 4000
psi (280 bar) Standard Setting
V Viton

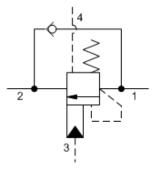
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

(N)

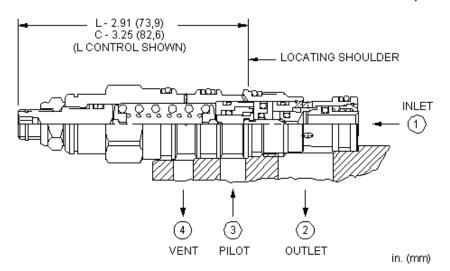


snhy.com/CWCK





4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

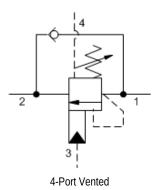
Model Code Example: CWCKLHN

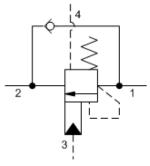
CONTROL	(L)	FUNCTIONAL SETTING RANGE (H)	<u>)</u> :	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment		H 1000 - 4000 psi (70 - 280 bar), 3000 psi		N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set		L 400 - 1500 nsi (28 - 105 har) 1000 nsi	ı	V Viton	IAP Stainless Steel, Passivated

(70 bar) Standard Setting

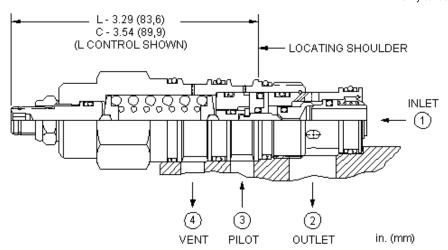


snhy.com/CWEK





4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: CWEKLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

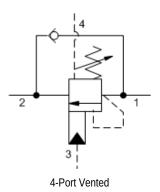
H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

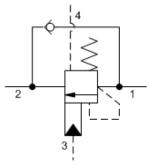
 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting N Buna-N V Viton Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

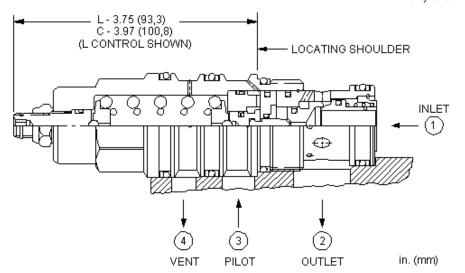


snhy.com/CWGK





4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: CWGKLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (I

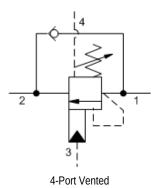
L Standard Screw Adjustment

H 1000 - 4000 psi (70 - 280 bar), 3000 psi

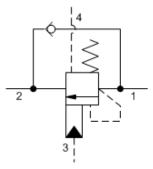
T 400 - 1500 psi (28 - 105 bar), 1000 psi
(70 bar) Standard Setting



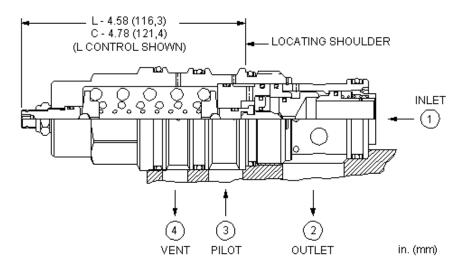
snhy.com/CWIK



M hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: CWIKLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi N Buna-N Standard Material/Coating

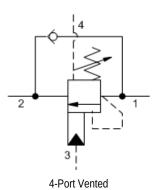
 $\boldsymbol{C}\ \ \text{Tamper Resistant}$ - Factory Set

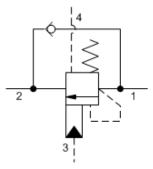
 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting **V** Viton

/LH Mild Steel, Zinc-Nickel

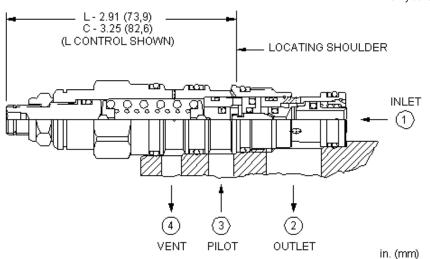


snhy.com/CWCL





4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: CWCLLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

N Buna-N V Viton

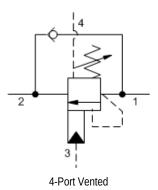
Standard Material/Coating

/AP Stainless Steel, Passivated

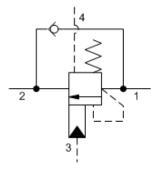
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting



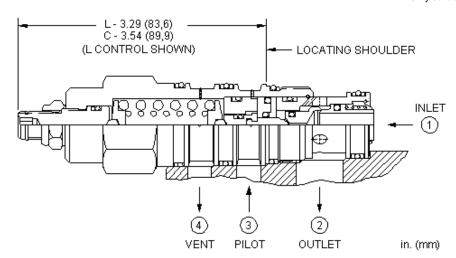
snhy.com/CWEL



M hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: CWELLGN

CONTROL **FUNCTIONAL SETTING RANGE** (G) SEAL MATERIAL MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

V Viton

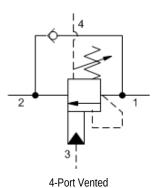
Standard Material/Coating IAP Stainless Steel, Passivated

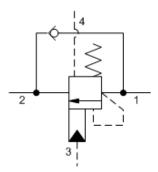
F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

/LH Mild Steel, Zinc-Nickel

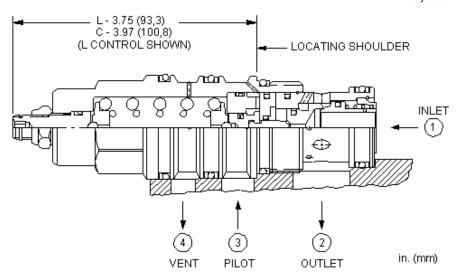


snhy.com/CWGL





4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

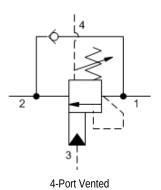
Model Code Example: CWGLLGN

CONTROL	(L)	FUNCTIONAL SETTING RANGE (G)	<u>s</u>	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		G 2000 - 6000 psi (140 - 420 bar), 4000		N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set		F 1000 - 2500 psi (70 - 175 bar), 2000 psi		V Viton		IAP Stainless Steel, Passivated

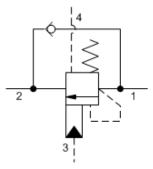
(140 bar) Standard Setting



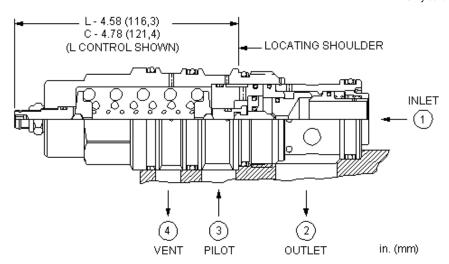
snhy.com/CWIL



M hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	2:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: CWILLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL L Standard Screw Adjustment N Buna-N

C Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

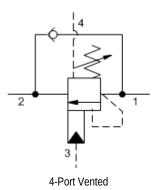
V Viton

Standard Material/Coating IAP Stainless Steel, Passivated

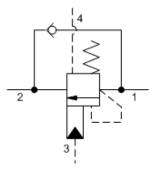
(N) MATERIAL/COATING

/LH Mild Steel, Zinc-Nickel

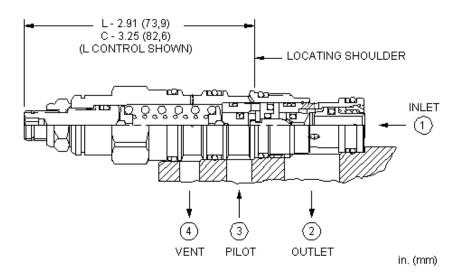
snhy.com/CWCA



nydraulics 📆



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: CWCALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL MATERIAL/COATING

L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi C Tamper Resistant - Factory Set (210 bar) Standard Setting

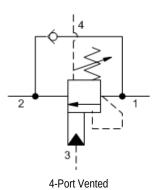
I 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

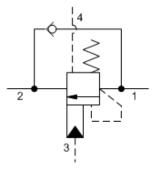
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



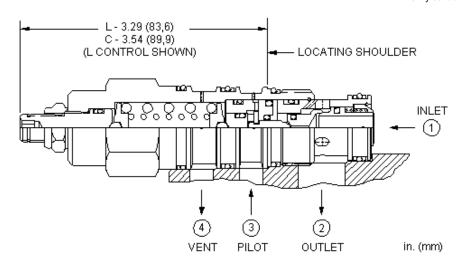
snhy.com/CWEA



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4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: CWEALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi

N Buna-N

(N) MATERIAL/COATING Standard Material/Coating

C Tamper Resistant - Factory Set

(210 bar) Standard Setting

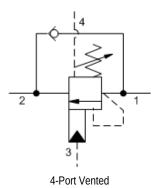
IAP Stainless Steel, Passivated

I 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

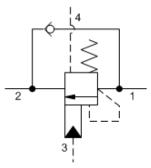
/LH Mild Steel, Zinc-Nickel



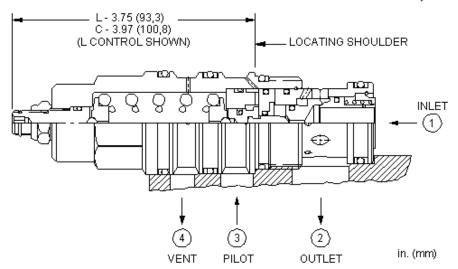
snhy.com/CWGA



un hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

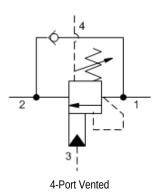
Model Code Example: CWGALHN

CONTROL	(L)	FUNCTIONAL SETTING RANGE (H)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		H 1000 - 4000 psi (70 - 280 bar), 3000 psi	N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set		I 400 - 1500 nsi (28 - 105 har) 1000 nsi	V Viton		/AP Stainless Steel, Passivated

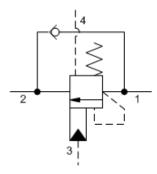
(70 bar) Standard Setting



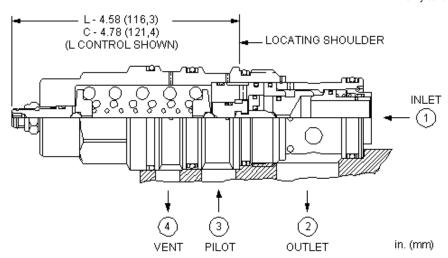
snhy.com/CWIA



m hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

Model Code Example: CWIALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL L Standard Screw Adjustment

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

I 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

N Buna-N

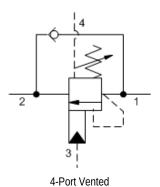
Standard Material/Coating

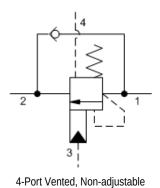
(N) MATERIAL/COATING

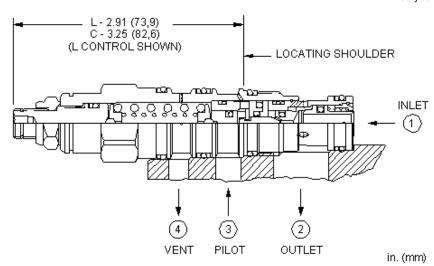
IAP Stainless Steel, Passivated **/LH** Mild Steel, Zinc-Nickel



snhy.com/CWCG







Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: CWCGLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL MATERIAL/COATING

L Standard Screw Adjustment

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

N Buna-N V Viton

Standard Material/Coating

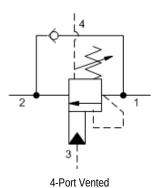
C Tamper Resistant - Factory Set

F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

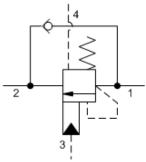
ICA Stainless Start-Ressivated



snhy.com/CWEG



M hydraulics



4-Port Vented, Non-adjustable

L - 3.29 (83,6) C - 3.54 (89,9) (L CONTROL SHOWN) LOCATING SHOULDER INLET (1) PILOT OUTLET in. (mm)

Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: CWEGLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

N Buna-N

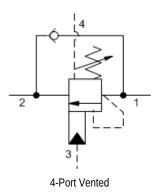
V Viton

Standard Material/Coating IAP Stainless Steel, Passivated

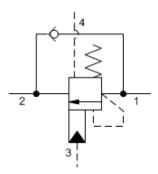
/LH Mild Steel, Zinc-Nickel



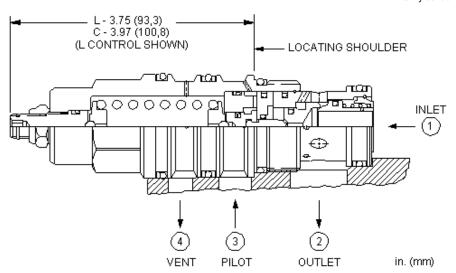
snhy.com/CWGG



un hydraulics



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

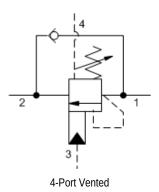
Model Code Example: CWGGLGN

CONTROL	(L)	FUNCTIONAL SETTING RANGE (G)	<u> </u>	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment		G 2000 - 6000 psi (140 - 420 bar), 4000		N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set		F 1000 - 2500 psi (70 - 175 bar), 2000 psi		V Viton	IAP Stainless Steel, Passivated ILH Mild Steel, Zinc-Nickel

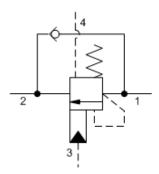
(140 bar) Standard Setting



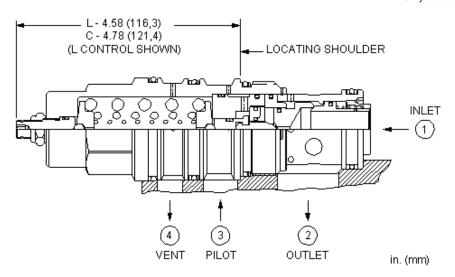
snhv.com/CWIG



nydraulics 📆



4-Port Vented, Non-adjustable



Vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	5:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,5 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: CWIGLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment G 2000 - 6000 psi (140 - 420 bar), 4000 N Buna-N Standard Material/Coating

 $\boldsymbol{C}\ \ \text{Tamper Resistant}$ - Factory Set

F 1000 - 2500 psi (70 - 175 bar), 2000 psi (140 bar) Standard Setting

V Viton

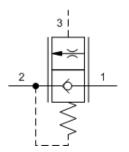
IAP Stainless Steel, Passivated ILH Mild Steel, Zinc-Nickel

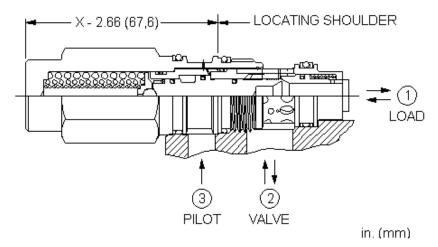
Balanced load control valve

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A



snhy.com/MBEM





Balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	See Technical Features
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: MBEMXIN

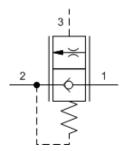
CONTROL	(X) MINIMUM CONTROL PRESSURE	(I) SEAL MATERIAL	(N)
X Not Adjustable	I 300 psi (20 bar)	N Buna-N	
	E 75 psi (5 bar)	V Viton	
	G 150 psi (10,5 bar)		
	H 200 psi (14 bar)		
	K 450 psi (33 bar)		
	M 525 psi (36,7 bar)		

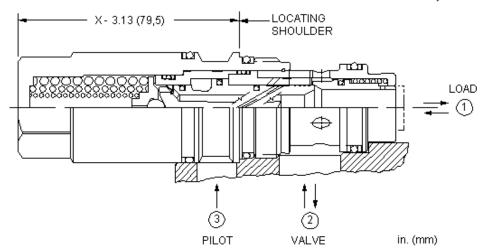
Balanced load control valve

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



snhy.com/MBGM





Balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	See Technical Features
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: MBGMXIN

CONTROL	(X)	MINIMUM CONTROL PRESSURE	(I)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Not Adjustable		I 300 psi (20 bar)		N Buna-N		Standard Material/Coating	
		E 75 psi (5 bar)		V Viton		/LH Mild Steel, Zinc-Nickel	

G 150 psi (10,5 bar)

K 450 psi (33 bar)

M 525 psi (36,7 bar)

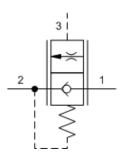


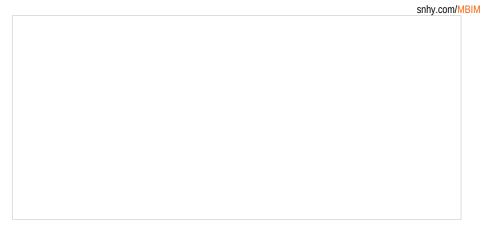


Balanced load control valve

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-19A







Balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at Reseat	See Technical Features	
Check Cracking Pressure	1,7 bar	

CONFIGURATION OPTIONS

Model Code Example: MBIMXIN

CONTROL	(X)	MINIMUM CONTROL PRESSURE	(I)	SEAL MATERIAL	(N)	MATERIAL/COATING
---------	-----	--------------------------	-----	---------------	-----	------------------

(Not Adjustable	I	300 psi (20 bar)
		Ε	75 psi (5 bar)

5 bar)

G 100 psi (7 bar)

H 200 psi (14 bar) K 450 psi (33 bar)

M 525 psi (36,7 bar)

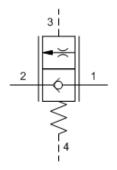
N Buna-N **E** EPDM V Viton

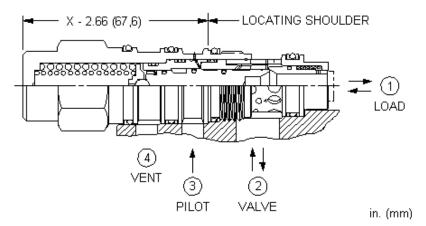
Standard Material/Coating IAP Stainless Steel, Passivated Vented, balanced, load control valve

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



snhy.com/MWEM





Vented, balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting. Backpressure at port 2 does not affect the flow setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	See Technical Features
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990022007
al kit - Cartridge Polyurethane: 990022002	
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: MWEMXIN

V Viton

CONTROL	(X)	MINIMUM CONTROL PRESSURE	(I) SEAL MATERIAL	(N)	MATERIAL/COATING
·		·			·
V Not Adjustable		1 200 pci (20 bar)	N. Duno N		Ctandard Material/Coating

300 psi (20 bar)

E 75 psi (5 bar)

G 150 psi (10,5 bar)

H 200 psi (14 bar)

K 450 psi (33 bar)

M 525 psi (36,7 bar)

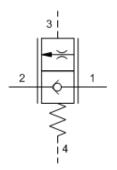
/LH Mild Steel, Zinc-Nickel

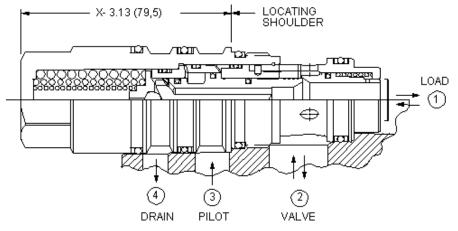
Vented, balanced, load control valve

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



snhy.com/MWGM





in. (mm)

Vented, balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting. Backpressure at port 2 does not affect the flow setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	See Technical Features
Check Cracking Pressure	1,7 bar
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge Polyurethane: 990023002	
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: MWGMXIN

CONTROL	(X) MINIMUM CONTROL PRESSUR	E (I) SEAL MATE	ERIAL (N) MATERIAL/COATING	
X Not Adjustable	I 300 psi (20 bar)	N Buna-N	Standard Material/Coa	ating
	E 75 psi (5 bar)	V Viton	IAP Stainless Steel, Passi	vated

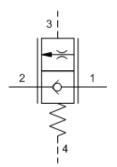
G 150 psi (10,5 bar) **K** 450 psi (33 bar)

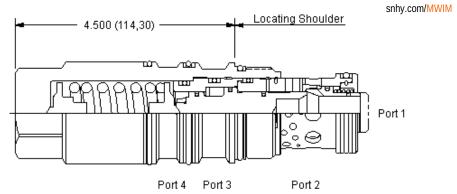
M 525 psi (36,7 bar)

Vented, balanced, load control valve

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A







Vented, balanced load control valves combine a balanced modulating element with a reverse flow check. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while the pilot to open modulating element controls flow from port 1 to port 2. Pilot pressure at port 3 determines the flow setting. Backpressure at port 2 does not affect the flow setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at Reseat	See Technical Features	
Check Cracking Pressure	1,7 bar	
Seal kit - Cartridge	Buna: 990024007	
Seal kit - Cartridge	Polyurethane: 990024002	
Seal kit - Cartridge	Viton: 990024006	

CONFIGURATION OPTIONS

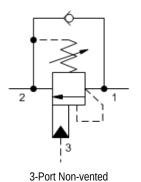
Model Code Example: MWIMXIN

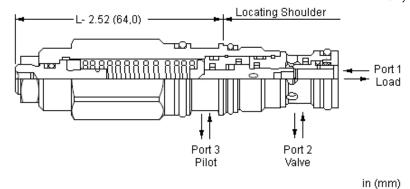
CONTROL	(X) MINIMUM CONTROL PRESSURE	(I) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	I 300 psi (20 bar)	N Buna-N	Standard Material/Coating
	E 75 psi (5 bar)	V Viton	IAP Stainless Steel, Passivated
	G 150 psi (10,5 bar)		
	H 200 psi (14 bar)		

K 450 psi (33 bar)M 525 psi (36,7 bar)



snhy.com/MBDB





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	6.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

(N)

CONFIGURATION OPTIONS

CONTROL

Model Code Example: MBDBLHN

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

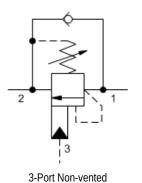
N Buna-N
V Viton

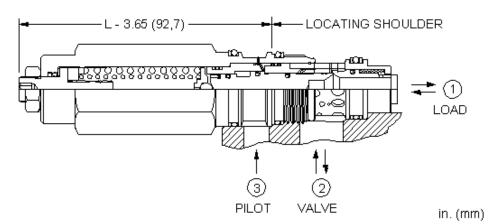
(H) SEAL MATERIAL

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MBEB





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: MBEBLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL L Standard Screw Adjustment **H** 1000 - 4000 psi (70 - 280 bar), 3000 psi N Buna-N

C Tamper Resistant - Factory Set

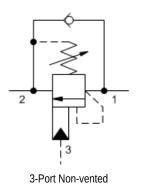
(210 bar) Standard Setting **J** 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

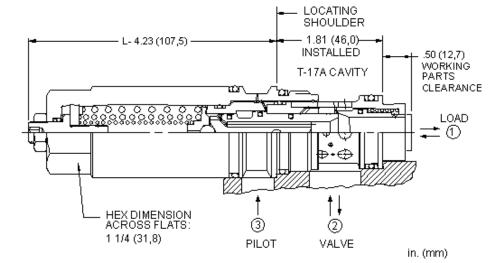
V Viton

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



snhy.com/MBGB





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

L Standard Screw Adjustment

Model Code Example: MBGBLHN

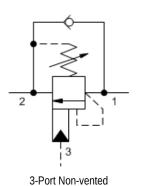
CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

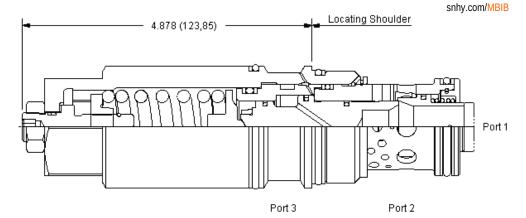
H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

N Buna-N V Viton Standard Material/Coating IAP Stainless Steel, Passivated

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting







Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	7
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: MBIBLHN

(L) FUNCTIONAL SETTING RANGE (N) MATERIAL/COATING CONTROL (H) SEAL MATERIAL L Standard Screw Adjustment

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

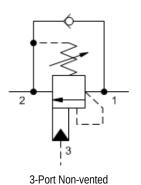
N Buna-N V Viton

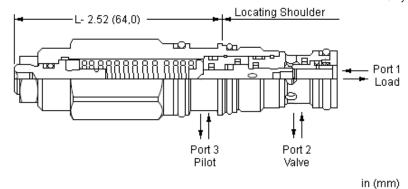
Standard Material/Coating IAP Stainless Steel, Passivated

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MBDA





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	6.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

(N)

CONFIGURATION OPTIONS

CONTROL

Model Code Example: MBDALHN

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

(L) FUNCTIONAL SETTING RANGE

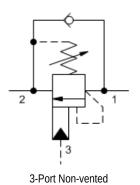
N Buna-N V Viton

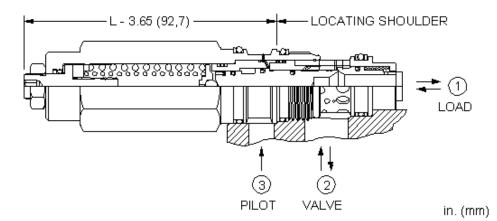
(H) SEAL MATERIAL

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MBEA





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: MBEALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

N Buna-NV Viton

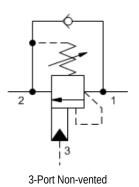
Standard Material/Coating

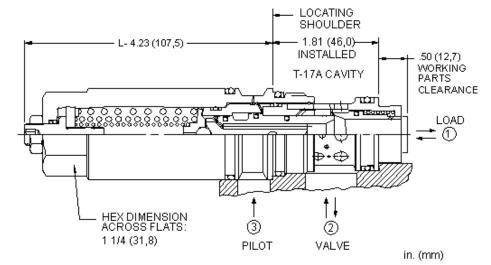
/AP Stainless Steel, Passivated

/LH Mild Steel, Zinc-Nickel



snhy.com/MBGA





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

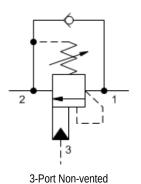
CONFIGURATION OPTIONS

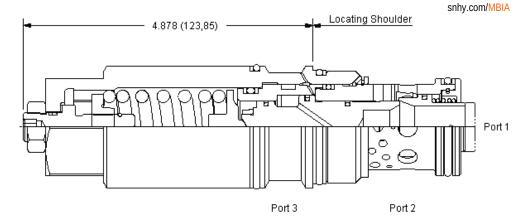
Model Code Example: MBGALHN

CONTROL	(L)	FUNCTIONAL SETTING RANGE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment		H 1000 - 4000 psi (70 - 280 bar), 3000 psi	N Buna-N	Standard Material/Coating
		(210 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
		J 2000 - 5000 psi (140 - 350 bar), 3000	V Viton	

psi (210 bar) Standard Setting







Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	7
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: MBIALHN

(L) FUNCTIONAL SETTING RANGE CONTROL (H) SEAL MATERIAL L Standard Screw Adjustment N Buna-N

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

V Viton

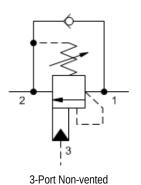
(N) MATERIAL/COATING Standard Material/Coating

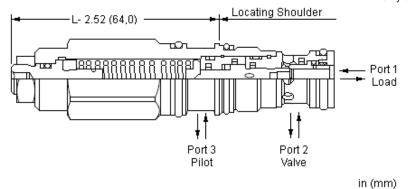
IAP Stainless Steel, Passivated

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MBDG





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio 4.5:1			
Maximum Recommended Load Pressure at Maximum Setting	270 bar		
Maximum Setting	350 bar		
Factory Pressure Settings Established at	30 cc/min.		
Maximum Valve Leakage at Reseat	0,3 cc/min.		
Check Cracking Pressure	1,7 bar		
Adjustment - Number of Counterclockwise Turns to Increase Setting	6.5		
Reseat	>85% of setting		
Locknut Hex Size	15 mm		
Locknut Torque	9 - 10 Nm		
Seal kit - Cartridge	Buna: 990011007		
Seal kit - Cartridge	Polyurethane: 990011002		
Seal kit - Cartridge	Viton: 990011006		

CONFIGURATION OPTIONS

Model Code Example: MBDGLHN

CONTROL (L) FUNCTIONAL SETTING RANGE Standard Screw Adjustment C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

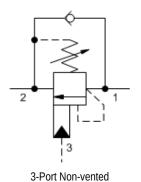
N Buna-N

(H) SEAL MATERIAL

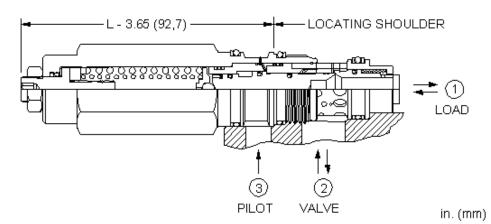
(N)



snhy.com/MBEG



un hydraulics



Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio 4.5:1			
Maximum Recommended Load Pressure at Maximum Setting 260 bar			
Maximum Setting	350 bar		
Factory Pressure Settings Established at	30 cc/min.		
Maximum Valve Leakage at Reseat 0,3 cc/min.			
Check Cracking Pressure	1,7 bar		
Adjustment - Number of Counterclockwise Turns to Increase Setting	9		
Reseat	>85% of setting		
Locknut Hex Size	15 mm		
Locknut Torque	9 - 10 Nm		
Seal kit - Cartridge	Buna: 990202007		
Seal kit - Cartridge	Polyurethane: 990002002		
Seal kit - Cartridge	Viton: 990202006		

CONFIGURATION OPTIONS

Model Code Example: MBEGLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

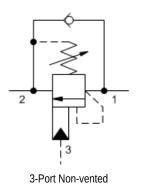
N Buna-N **V** Viton

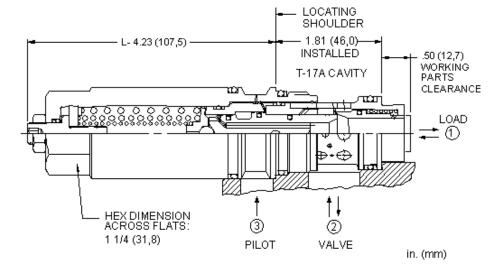
Standard Material/Coating IAP Stainless Steel, Passivated **/LH** Mild Steel. Zinc-Nickel

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MBGG





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

L Standard Screw Adjustment

Model Code Example: MBGGLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

N Buna-N V Viton

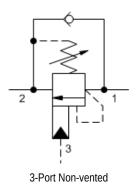
Standard Material/Coating

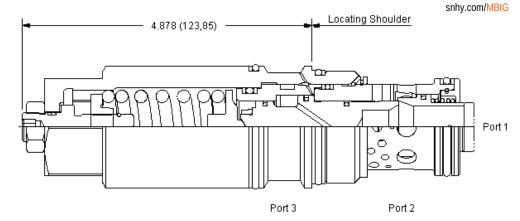
IAP Stainless Steel, Passivated

ILH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING







Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	7
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: MBIGLHN

CONTROL L Standard Screw Adjustment

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

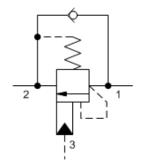
N Buna-N V Viton

J 2000 - 5000 psi (140 - 350 bar), 3000

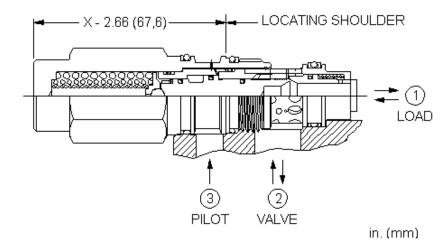
psi (210 bar) Standard Setting



snhy.com/MBEBX



3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

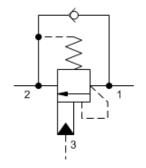
CONFIGURATION OPTIONS

Model Code Example: MBEBXLN

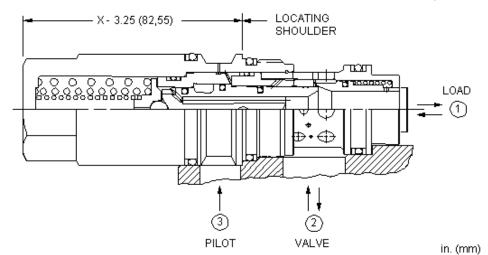
FACTORY SET	(L)	SEAL MATERIAL	(N)
L 4000 psi (280 bar)		N Buna-N	
K 3000 psi (210 bar)		V Viton	
M 5000 psi (350 bar)			







3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

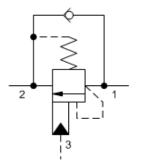
CONFIGURATION OPTIONS

Model Code Example: MBGBXLN

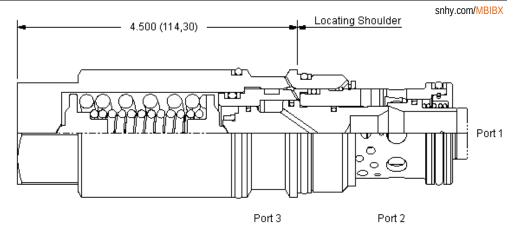
FACTORY SET	(L) SEAL MATERIAL	(N)
L 4000 psi (280 bar)	N Buna-N	
K 3000 psi (210 bar)	V Viton	

M 5000 psi (350 bar)





3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: MBIBXLN

 FACTORY SET
 (L)
 SEAL MATERIAL
 (N

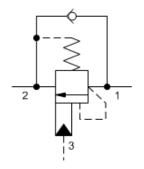
 L 4000 psi (280 bar)
 N Buna-N

 K 3000 psi (210 bar)
 V Viton

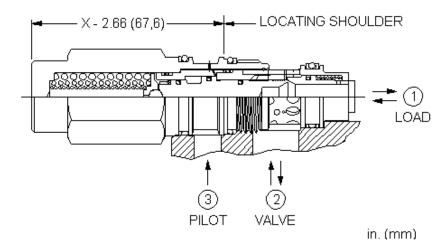
M 5000 psi (350 bar)



snhy.com/MBEAX



3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

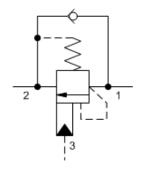
CONFIGURATION OPTIONS

Model Code Example: MBEAXLN

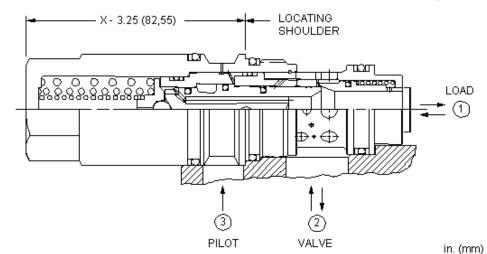
FACTORY SET	(L)	SEAL MATERIAL	(N)
L 4000 psi (280 bar)		N Buna-N	
K 3000 psi (210 bar)		V Viton	
M 5000 psi (350 bar)			







3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

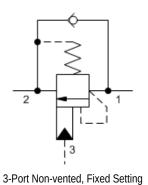
Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

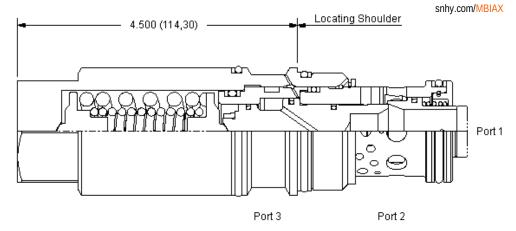
CONFIGURATION OPTIONS

Model Code Example: MBGAXLN

FACTORY SET	(L) SEAL MAT	TERIAL	(N)
L 4000 psi (280 bar)	N Buna-N	V	
K 3000 psi (210 bar)	E EPDM		
M 5000 psi (350 bar)	V Viton		







Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

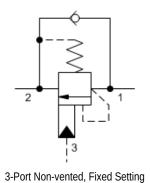
Model Code Example: MBIAXLN

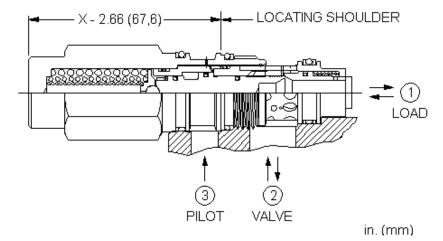
FACTORY SET	(L) SEAL MATERIAL	(N)
L 4000 psi (280 bar)	N Buna-N	
K 3000 psi (210 bar)	V Viton	

M 5000 psi (350 bar)



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Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	4.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

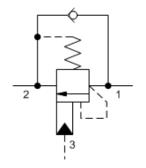
CONFIGURATION OPTIONS

Model Code Example: MBEGXLN

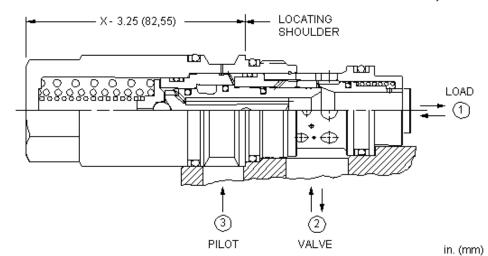
FACTORY SET	(L) SEAL MATERIAL	(N)
L 4000 psi (280 bar)	N Buna-N	
K 3000 psi (210 bar)	V Viton	
M 5000 psi (350 bar)		



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3-Port Non-vented, Fixed Setting



Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	4.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

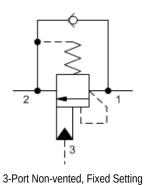
M 5000 psi (350 bar)

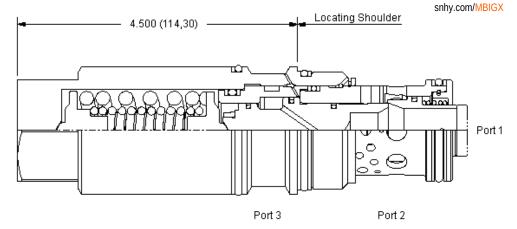
Model Code Example: MBGGXLN

FACTORY SET	(L) SEAL MATERIAL	(N) MATERIAL/COATING
L 4000 psi (280 bar)	N Buna-N	Standard Material/Coating
K 3000 psi (210 bar)	V Viton	/AP Stainless Steel, Passivated

Viton // IAP Stainless Steel, Passiv // ILH Mild Steel, Zinc-Nickel







Fixed setting, load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	4.5:1	
Factory Pressure Settings Established at	30 cc/min.	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Reseat	>85% of setting	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: MBIGXLN

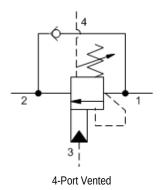
FACTORY SET	(L)	SEAL MATERIAL	(N)
L 4000 psi (280 bar)		N Buna-N	

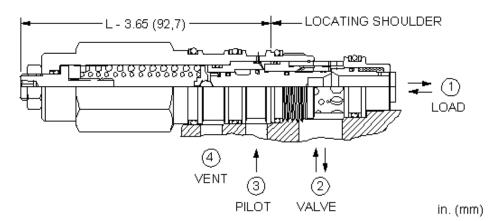
K 3000 psi (210 bar)M 5000 psi (350 bar)

V Viton



snhy.com/MWEB





Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: MWEBLHN

CONTROL Standard Screw Adjustment

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N)

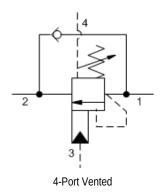
H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

N Buna-N V Viton

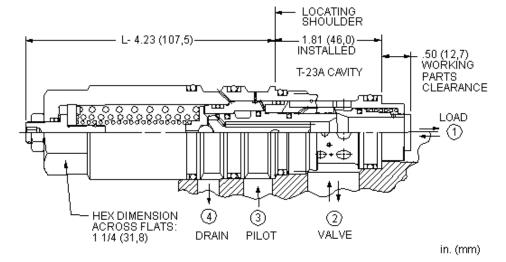
J 2000 - 5000 psi (140 - 350 bar), 3000



snhy.com/MWGB



un hydraulics



Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: MWGBLHN

V Viton

(L) FUNCTIONAL SETTING RANGE CONTROL (H) SEAL MATERIAL L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi N Buna-N

(210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000

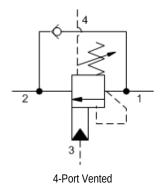
psi (210 bar) Standard Setting

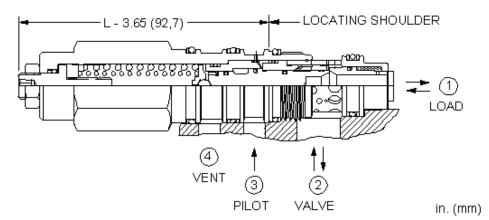
Created on 11/05/2016

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



snhy.com/MWEA





Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

Model Code Example: MWEALHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL

L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi N Buna-N

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

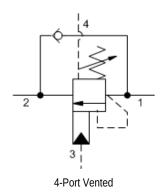
N Buna-NV Viton

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

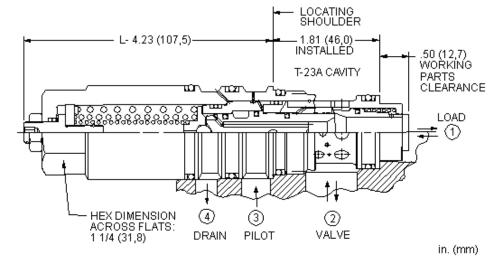
(N)



snhy.com/MWGA



un hydraulics



Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	8.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: MWGALHN

(L) FUNCTIONAL SETTING RANGE CONTROL (H) SEAL MATERIAL L Standard Screw Adjustment N Buna-N

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

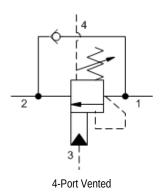
V Viton

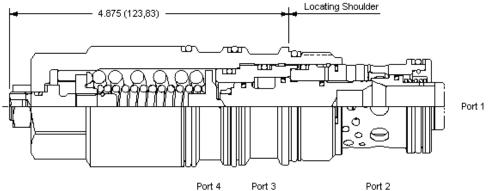
J 2000 - 5000 psi (140 - 350 bar), 3000

psi (210 bar) Standard Setting









Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	8.5
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: MWIALHN

CONTROL L Standard Screw Adjustment (L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N) MATERIAL/COATING

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

N Buna-N **V** Viton

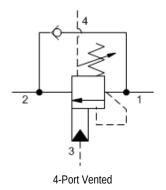
Standard Material/Coating

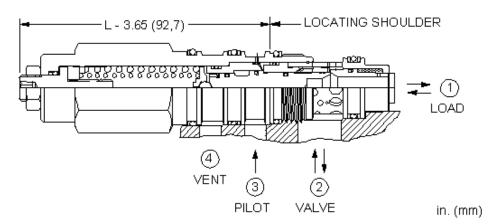
J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

IAP Stainless Steel, Passivated



snhy.com/MWEG





Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	8.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: MWEGLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment H 1000 - 4000 psi (70 - 280 bar), 3000 psi N Buna-N Standard Material/C

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

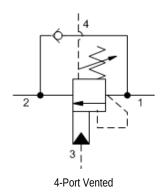
N Buna-N V Viton Standard Material/Coating

IAP Stainless Steel, Passivated

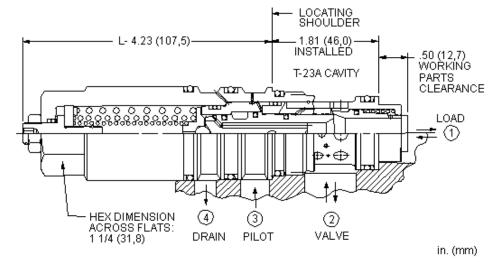
SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



snhy.com/MWGG



un hydraulics



Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	9
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

L Standard Screw Adjustment

Model Code Example: MWGGLHN

CONTROL (L) FUI

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N)

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

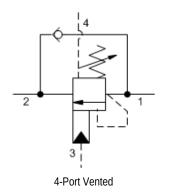
N Buna-N V Viton

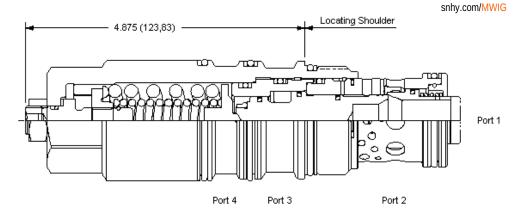
J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A









Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilotassisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	8.5
Reseat	>85% of setting
Locknut Hex Size	19,1 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: MWIGLHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N)

L Standard Screw Adjustment

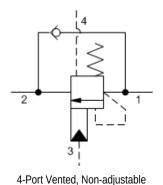
H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

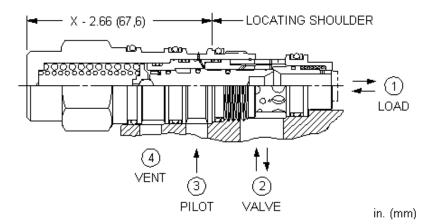
N Buna-N **V** Viton

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/MWEBX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

M 5000 psi (350 bar)

Model Code Example: MWEBXLN

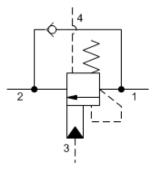
 FACTORY SET
 (L)
 SEAL MATERIAL
 (N

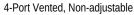
 L 4000 psi (280 bar)
 N Buna-N

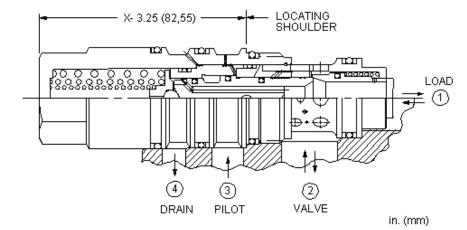
 K 3000 psi (210 bar)
 V Viton



snhy.com/MWGBX







Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

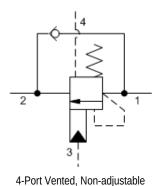
Model Code Example: MWGBXLN

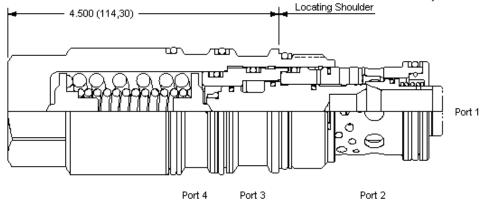
FACTORY SET	(L)	SEAL MATERIAL	(N)
L 4000 psi (280 bar)		N Buna-N	
K 3000 psi (210 bar)		V Viton	

M 5000 psi (350 bar)



snhy.com/MWIBX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

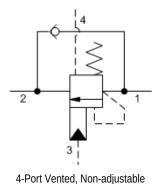
Model Code Example: MWIBXLN

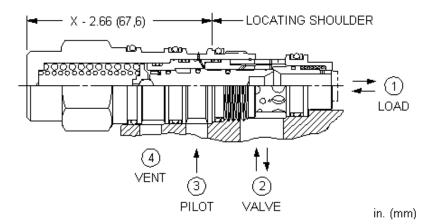
FACTORY SET (L) SEAL MATERIAL L 4000 psi (280 bar) N Buna-N K 3000 psi (210 bar)

M 5000 psi (350 bar)



snhy.com/MWEAX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: MWEAXLN

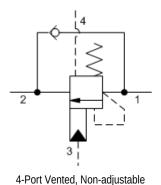
 FACTORY SET
 (L)
 SEAL MATERIAL
 (N

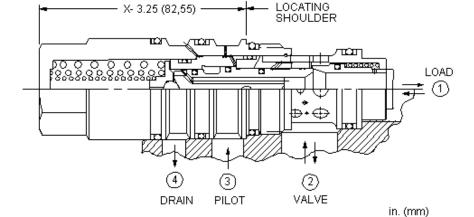
 L 4000 psi (280 bar)
 N Buna-N

K 3000 psi (210 bar)M 5000 psi (350 bar)



snhy.com/MWGAX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: MWGAXLN

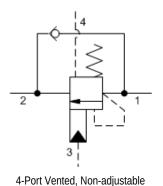
FACTORY SET	(L) SEAL MATERIAL	(N)
L 4000 psi (280 bar)	N Buna-N	
K 3000 psi (210 bar)	V Viton	

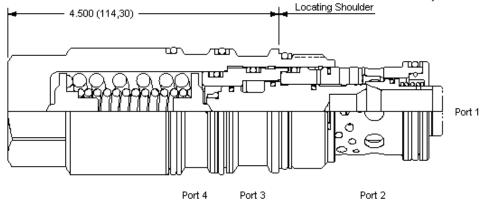
M 5000 psi (350 bar)

K 3000 psi (210 bar)



snhy.com/MWIAX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	3:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

M 5000 psi (350 bar)

Model Code Example: MWIAXLN

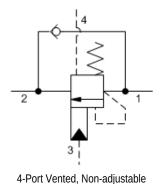
 FACTORY SET
 (L)
 SEAL MATERIAL
 (N)

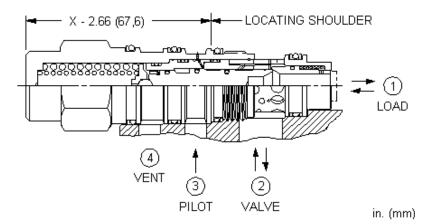
 L 4000 psi (280 bar)
 N Buna-N

 K 3000 psi (210 bar)
 V Viton



snhy.com/MWEGX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: MWEGXLN

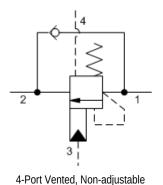
 FACTORY SET
 (L)
 SEAL MATERIAL
 (N

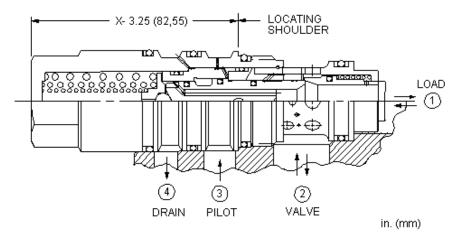
 L 4000 psi (280 bar)
 N Buna-N

K 3000 psi (210 bar)M 5000 psi (350 bar)



snhy.com/MWGGX





Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

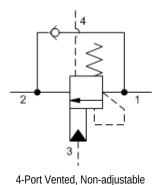
CONFIGURATION OPTIONS

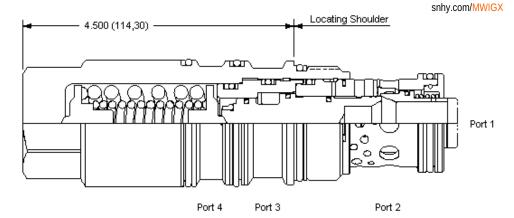
M 5000 psi (350 bar)

Model Code Example: MWGGXLN

FACTORY SET	(L) S	EAL MATERIAL	(N)
L 4000 psi (280 bar)		N Buna-N	
K 3000 psi (210 bar)		V Viton	<u>.</u>







Fixed setting, vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a directacting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	4.5:1
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

M 5000 psi (350 bar)

Model Code Example: MWIGXLN

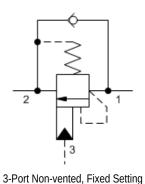
 FACTORY SET
 (L)
 SEAL MATERIAL
 (N

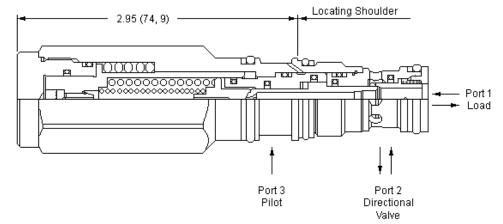
 L 4000 psi (280 bar)
 N Buna-N

 K 3000 psi (210 bar)
 V Viton



snhy.com/MBDP





in (mm)

These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting.

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: MBDPDHN

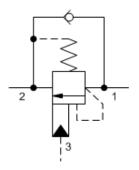
 CONTROL
 (D)
 FACTORY SET
 (H)
 SEAL MATERIAL
 (N

 D LoadMatch™
 H
 4000 psi (280 bar)
 N Buna-N

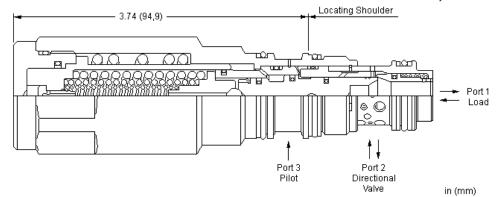
 J
 5000 psi (350 bar)
 V Viton



snhy.com/MBEP



3-Port Non-vented, Fixed Setting



These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting.

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

(N)

NOTES

Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: MBEPDHN

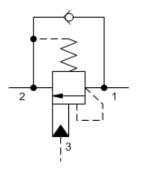
CONTROL (D) FACTORY SET (H) SEAL MATERIAL **D** LoadMatch™ N Buna-N H 4000 psi (280 bar) G 6000 psi (420 bar)

J 5000 psi (350 bar)

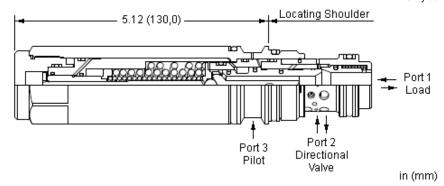
V Viton



snhy.com/MBGP



3-Port Non-vented, Fixed Setting



These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting.

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Reseat	>85% of setting	
Seal kit - Cartridge Buna: 990017007		
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge Viton: 990017006		

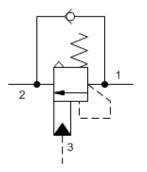
CONFIGURATION OPTIONS

Model Code Example: MBGPDHN

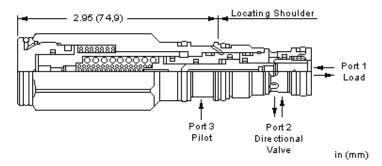
CONTROL	(D)	FACTORY SET	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING	_
D LoadMatch™		H 4000 psi (280 bar)		N Buna-N		Standard Material/Coating	
		G 6000 psi (420 bar)		V Viton		IAP Stainless Steel, Passivated	
		1 5000 nci (350 har)					



snhy.com/MADP



3-Port Atmospherically Referenced, Non-adjustable



These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting.

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Viton: 990011006

NOTES

Patents are pending for this product.

CONFIGURATION OPTIONS

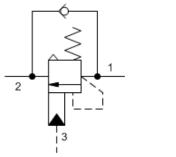
Model Code Example: MADPDHN

 CONTROL
 (D)
 FACTORY SET
 (H)
 SEAL MATERIAL
 (N)

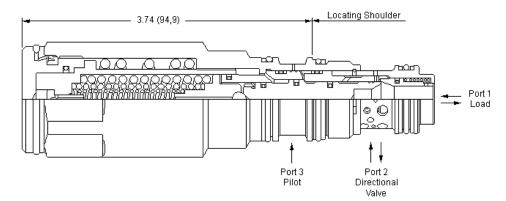
 D LoadMatch™
 H 4000 psi (280 bar)
 N Buna-N



snhy.com/MAEP







in (mm)

These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting. Backpressure at port 2 does not affect self setting performance because the spring chamber references the atmosphere.

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

- Patents are pending for this product.
- The pressures listed under FACTORY SET are approximate, mean values and should not be used for inspection purposes.

CONFIGURATION OPTIONS

Model Code Example: MAEPDHN

CONTROL	(D) FACTORY SET	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING
D LoadMatch™	H 4000 psi (280 bar)		N Buna-N		Standard Material/Coating
	G 6000 psi (420 bar)		V Viton		/LH Mild Steel, Zinc-Nickel
	J 5000 psi (350 bar)				

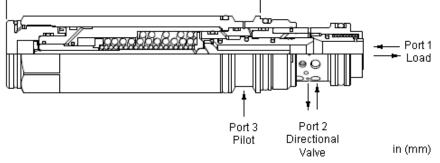
2



snhy.com/MAGP

5.12 (130,0) Locating Shoulder

3-Port Atmospherically Referenced, Non-adjustable



These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting. Backpressure at port 2 does not affect self setting performance because the spring chamber references the atmosphere.

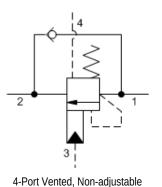
TECHNICAL DATA

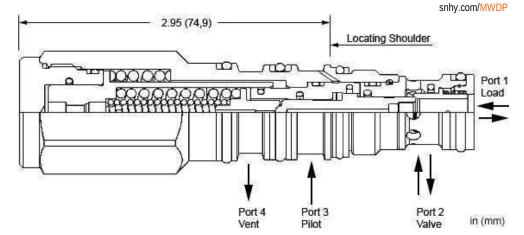
Factory Pressure Settings Established at	30 cc/min.	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at Reseat	0,3 cc/min.	
Check Cracking Pressure	1,7 bar	
Reseat	>85% of setting	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge Viton: 990117006		

CONFIGURATION OPTIONS

Model Code Example: MAGPDHN

CONTROL	(D) FACTORY SET	(H) SEAL MATERIAL	(N) MATERIAL/COATING
D LoadMatch™	H 4000 psi (280 bar)	N Buna-N	Standard Material/Coating
	G 6000 psi (420 bar)	V Viton	/AP Stainless Steel, Passivated
	J 5000 psi (350 bar)		/LH Mild Steel, Zinc-Nickel





These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting. Backpressure at port 2 does not affect self setting performance because the spring chamber references the vent (port 4).

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

(NI) MATERIAL ICOATING

NOTES Patents are pending for this product.

CONFIGURATION OPTIONS

CONTROL

Model Code Example: MWDPDHN

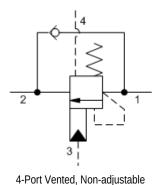
(H) SEAL MATERIAL

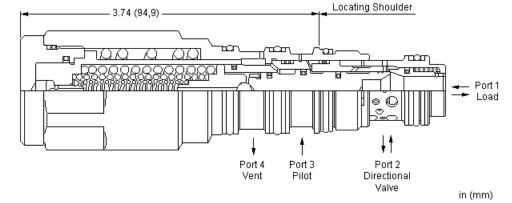
CONTINUE	(0)	I ACTORT SET	(11)	OLAL MATERIAL	(14)	MATERIALIOUATING	
D LoadMatch™		H 4000 psi (280 bar)		N Buna-N		Standard Material/Coating	
2 20001110011		11 1000 por (200 por)		TT Dariot II		Starradia Material Southing	
		J 5000 psi (350 bar)		V Viton		/LH Mild Steel. Zinc-Nickel	

(D) EACTORY SET



snhy.com/MWEP





These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting. Backpressure at port 2 does not affect self setting performance because the spring chamber references the vent (port 4).

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Patents are pending for this product.

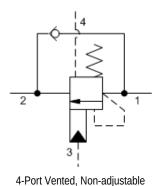
CONFIGURATION OPTIONS

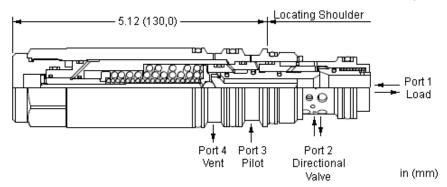
Model Code Example: MWEPDHN

CONTROL	(D) FACTORY SET	(H) SEAL MATERIAL	(N)
D LoadMatch™	H 4000 psi (280 bar)	N Buna-N	
	G 6000 psi (420 bar)	V Viton	
	J 5000 psi (350 bar)		



snhy.com/MWGP





These valves are self-setting counterbalance valves which combine multiple functions in one package; reverse free flow, load, and thermal relief. The check allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting pilot function self adjusts to approximately 1.3 times the load induced pressure up to the thermal relief setting. Backpressure at port 2 does not affect self setting performance because the spring chamber references the vent (port 4).

TECHNICAL DATA

Factory Pressure Settings Established at	30 cc/min.		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at Reseat	0,3 cc/min.		
Check Cracking Pressure	1,7 bar		
Reseat	>85% of setting		
Seal kit - Cartridge	Buna: 990023007		
Seal kit - Cartridge	Polyurethane: 990023002		
Seal kit - Cartridge	Viton: 990023006		

CONFIGURATION OPTIONS

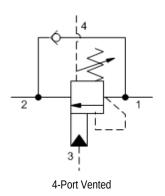
Model Code Example: MWGPDHN

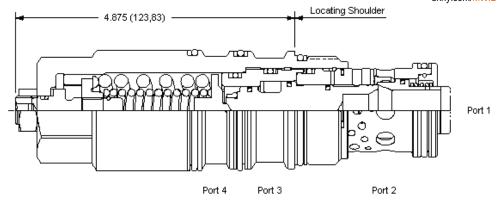
CONTROL	(D)	FACTORY SET	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING	
D LoadMatch™		H 4000 psi (280 bar)		N Buna-N		Standard Material/Coating	
		G 6000 psi (420 bar)		V Viton		IAP Stainless Steel, Passivated	
		J 5000 psi (350 bar)					

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A



snhy.com/MWIB





Vented, load reactive load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber references the vent (port 4).

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	260 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	8.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: MWIBLHN

CONTROL

(L) FUNCTIONAL SETTING RANGE

(H) SEAL MATERIAL

(N)

L Standard Screw Adjustment

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

N Buna-N V Viton

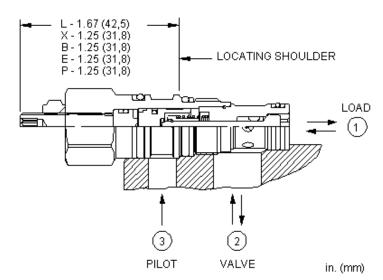
J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting



snhy.com/CKBB







This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990163007		
Seal kit - Cartridge	Polyurethane: 990163002		
Seal kit - Cartridge	Viton: 990163006		

CONFIGURATION OPTIONS

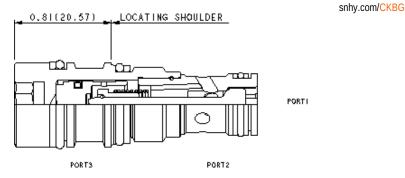
Model Code Example: CKBBXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	E 75 psi (5 bar)	V Viton	IAP Stainless Steel, Passivated
			/I H Mild Steel Zinc-Nickel

CAPACITY: 30 L/min. / CAVITY: T-163A







This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Valve Internal Hex Size	8 mm		
Seal kit - Cartridge	Buna: 990163007		
Seal kit - Cartridge	Polyurethane: 990163002		
Seal kit - Cartridge	Viton: 990163006		

CONFIGURATION OPTIONS

Model Code Example: CKBGXCN

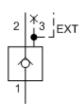
CONTROL	(X)	BIAS PRESSURE	(C)	SEAL MATERIAL (N	N)	MATERIAL/COATING	
X Not Adustable, Standard Hydraulic P	ilot	C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
		E 75 psi (5 bar)		V Viton		IAP Stainless Steel, Passivated	

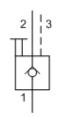
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A

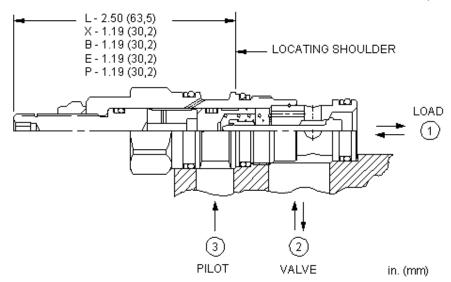












This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

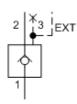
Model Code Example: CKCBXCN

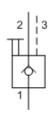
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		IAP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		ILH Mild Steel, Zinc-Nickel	
		D 50 psi (3,5 bar)					
		E 75 psi (5 bar)					
		F 100 psi (7 bar)					

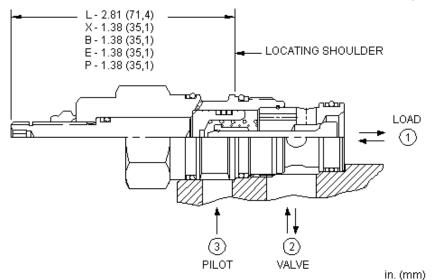


snhy.com/CKEB









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990202007		
Seal kit - Cartridge	EPDM: 990202014		
Seal kit - Cartridge	Polyurethane: 990002002		
Seal kit - Cartridge	Viton: 990202006		

CONFIGURATION OPTIONS

Model Code Example: CKEBXCN

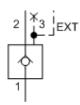
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		IAP Stainless Steel, Passivated
		B 15 psi (1 bar)		V Viton		ILH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				
		F 100 psi (7 bar)				

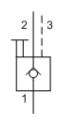
SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A

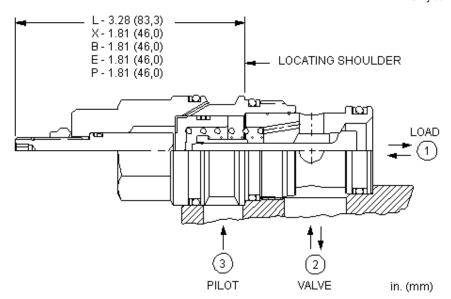


snhy.com/CKGB









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

(AI) MATERIAL/COATING

CONFIGURATION OPTIONS

CONTROL

Model Code Example: CKGBXCN

(C) CEAL MATERIAL

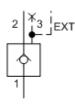
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		IAP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		ILH Mild Steel, Zinc-Nickel	
		D 50 psi (3,5 bar)					
		E 75 psi (5 bar)					
		F 100 psi (7 bar)					

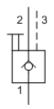
(V) CDACKING DDECCLIDE

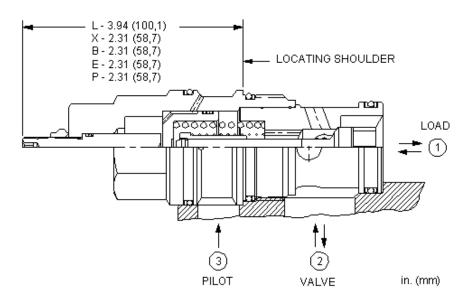


snhy.com/CKIB









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

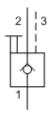
Model Code Example: CKIBXCN

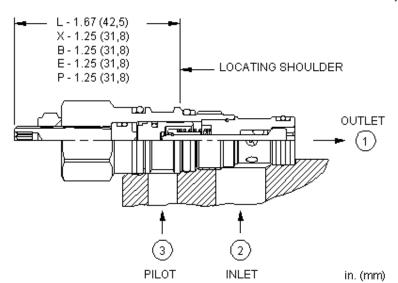
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM	<u>.</u>	IAP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		ILH Mild Steel, Zinc-Nickel	
		D 50 psi (3,5 bar)					
		E 75 psi (5 bar)					
		F 100 psi (7 bar)					



snhy.com/CKBD







This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: CKBDXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
<u> </u>			

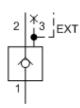
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	E 75 psi (5 bar)	E EPDM	IAP Stainless Steel, Passivated
		V Viton	/LH Mild Steel, Zinc-Nickel

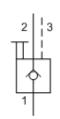
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A

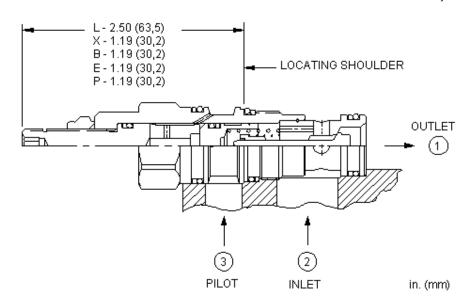


snhy.com/CKCD









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CKCDXCN

N Buna-N

V Viton

CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING

X Standard Pilot

L Manual Load Release

C 30 psi (2 bar) **A** 4 psi (0,3 bar)

Standard Material/Coating

B 15 psi (1 bar) **D** 50 psi (3,5 bar)

= --

E 75 psi (5 bar)

F 100 psi (7 bar)

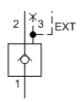
G 150 psi (10,5 bar)

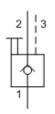
/AP Stainless Steel, Passivated/LH Mild Steel, Zinc-Nickel

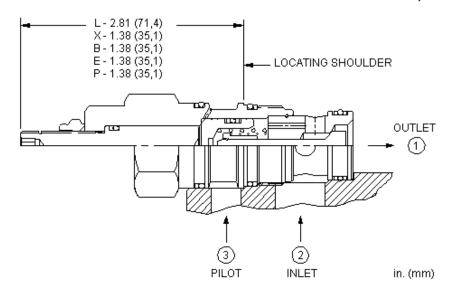


snhy.com/CKED









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CKEDXCN

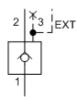
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar)	V Viton	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		ILH Mild Steel, Zinc-Nickel
	D 50 nsi (3.5 har)		

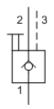
F 75 psi (5 bar)F 100 psi (7 bar)

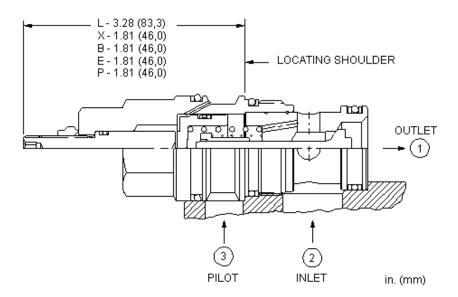


snhy.com/CKGD









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

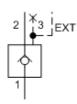
Model Code Example: CKGDXCN

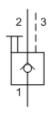
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING	
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating	
L Manual Load Release	A 4 psi (0,3 bar)	E EPDM	IAP Stainless Steel, Passivated	
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel	
	D 50 psi (3,5 bar)			
	E 75 psi (5 bar)			
	F 100 psi (7 bar)			

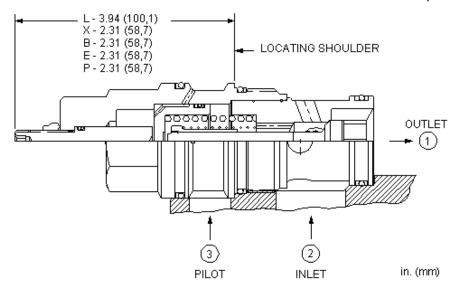


snhy.com/CKID









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: CKIDXCN

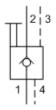
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar)	V Viton	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		

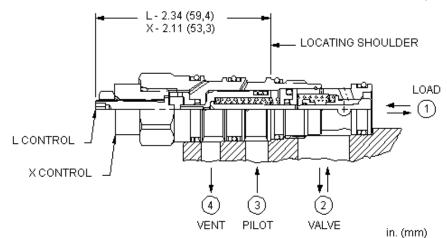
F 100 psi (7 bar)



snhy.com/CVCV







TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990021007		
Seal kit - Cartridge	Polyurethane: 990021002		
Seal kit - Cartridge	Viton: 990021006		

CONFIGURATION OPTIONS

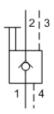
Model Code Example: CVCVXCN

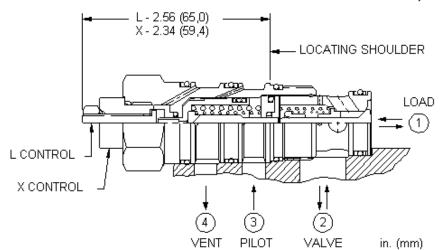
CONTROL	(X) CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar)		V Viton	<u>.</u>	IAP Stainless Steel, Passivated
	B 15 psi (1 bar)				ILH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)				
	E 75 psi (5 bar)				
	F 100 psi (7 bar)				



snhy.com/CVEV







TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990022007		
Seal kit - Cartridge	Polyurethane: 990022002		
Seal kit - Cartridge	Viton: 990022006		

CONFIGURATION OPTIONS

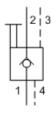
Model Code Example: CVEVXCN

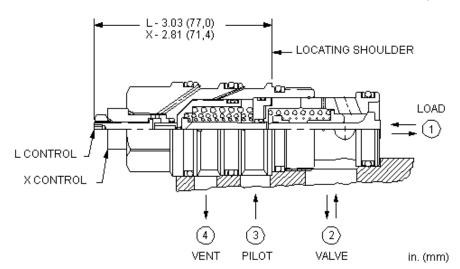
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release		A 4 psi (0,3 bar)		V Viton		IAP Stainless Steel, Passivated
		B 15 psi (1 bar)				ILH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				
		F 100 psi (7 bar)				



snhy.com/CVGV







TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990023007		
Seal kit - Cartridge	Polyurethane: 990023002		
Seal kit - Cartridge	Viton: 990023006		

CONFIGURATION OPTIONS

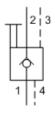
Model Code Example: CVGVXCN

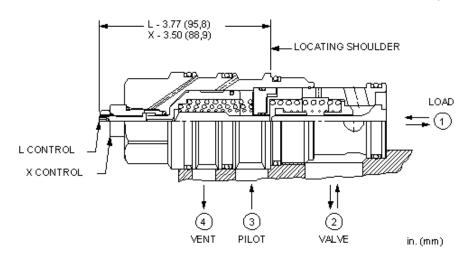
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release		A 4 psi (0,3 bar)		V Viton		IAP Stainless Steel, Passivated
		B 15 psi (1 bar)				ILH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				
		F 100 psi (7 bar)				



snhy.com/CVIV







TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Pilot Volume Displacement	4,9 cc		
Pilot Passage into Valve	2,3 mm		
Seal kit - Cartridge	Buna: 990024007		
Seal kit - Cartridge	EPDM: 990024014		
Seal kit - Cartridge	Polyurethane: 990024002		
Seal kit - Cartridge	Viton: 990024006		

CONFIGURATION OPTIONS

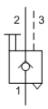
Model Code Example: CVIVXCN

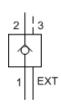
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		IAP Stainless Steel, Passivated
		B 15 psi (1 bar)		V Viton		ILH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				
		F 100 psi (7 bar)				

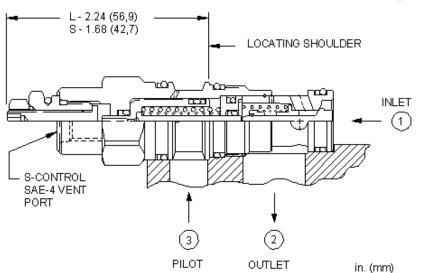


snhy.com/CKCV









TECHNICAL DATA

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990311007		
Seal kit - Cartridge	Polyurethane: 990011002		
Seal kit - Cartridge	Viton: 990311006		

CONFIGURATION OPTIONS

Model Code Example: CKCVXCN

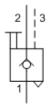
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot, Atmospheric Vent		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
S External 4-SAE Vent Port		A 4 psi (0,3 bar)		V Viton		IAP Stainless Steel, Passivated
		B 15 psi (1 bar)				ILH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				

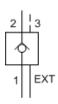
F 100 psi (7 bar)

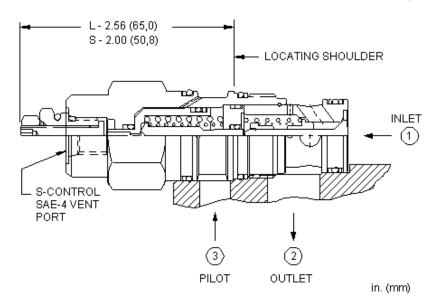


snhy.com/CKEV









TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CKEVXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N
V Standard Dilat Atmospharia Vant	C 20 pci (2 bor)	N Pupo N	

S External 4-SAE Vent Port

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

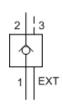
V Viton

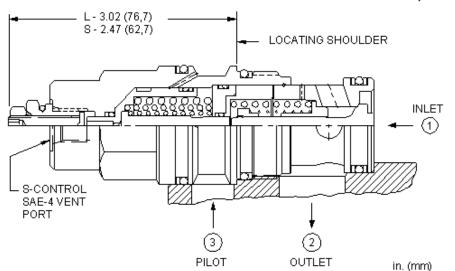


snhy.com/CKGV









TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CKGVXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot, Atmospheric Vent	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
S External 4-SAE Vent Port	A 4 psi (0,3 bar)	V Viton	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		
	D 50 nsi (3 5 har)		

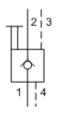
E 75 psi (5 bar) **F** 100 psi (7 bar)

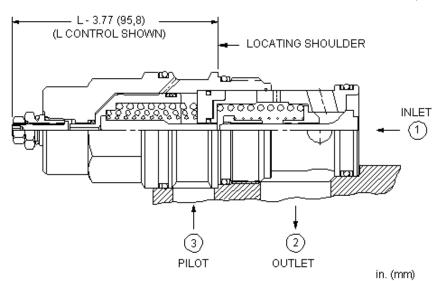


snhy.com/CKIV









TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CKIVXCN

CONTROL (X) CRACKING PRESSURE (N) MATERIAL/COATING (C) SEAL MATERIAL

X Standard Pilot, Atmospheric Vent

C 30 psi (2 bar) A 4 psi (0,3 bar) N Buna-N

S External 4-SAE Vent Port

V Viton

Standard Material/Coating IAP Stainless Steel, Passivated

D 50 psi (3,5 bar)

B 15 psi (1 bar)

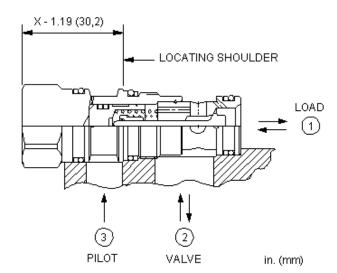
E 75 psi (5 bar)

F 100 psi (7 bar)









This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 3,9 mm	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CNCEXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL (N) C 30 psi (2 bar) Cracking Pressure, .016 -N Buna-N

X Not Adjustable

- .153 in. (0,4 3,9 mm) A 4 psi (0,3 bar) Cracking Pressure, .016
- .153 in. (0,4 3,9 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.153 in. (0,4 - 3,9 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.153 in. (0,4 - 3,9 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

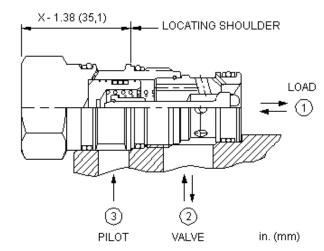
V Viton

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A









This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,4 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

(N)

CONFIGURATION OPTIONS

Model Code Example: CNEEXCN

V Viton

CONTROL (X) SETTING RANGE (C)

X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)

(C) SEAL MATERIAL

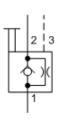
16 - N Buna-N

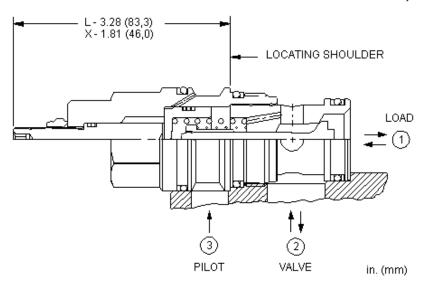
- A 4 psi (0,3 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 .135 in. (0,4 3,4 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 .135 in. (0,4 3,4 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 .135 in. (0,4 3,4 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 .135 in. (0,4 3,4 mm)



snhv.com/CNGE







This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range. An 'L' control option is available to manually release the load. See Option Selection below.

TECHNICAL DATA

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 5,5 mm	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

CONFIGURATION OPTIONS

Model Code Example: CNGEXCN

V Viton

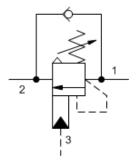
CONTROL (C) SEAL MATERIAL (X) SETTING RANGE N Buna-N C 30 psi (2 bar) Cracking Pressure, .016 -

X Not Adjustable

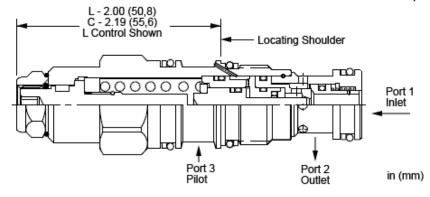
- .218 in. (0,4 5,5 mm) A 4 psi (0,3 bar) Cracking Pressure, .016
- .218 in. (0,4 5,5 mm) B 15 psi (1 bar) Cracking Pressure, .016 -
- .218 in. (0,4 5,5 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)
- F 100 psi (7 bar) Cracking Pressure, .016
 - .218 in. (0,4 5,5 mm)

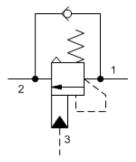


snhy.com/CABN



3-Port Atmospherically Referenced





3-Port Atmospherically Referenced, Non-adjustable

Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	7:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CABNLHN

 CONTROL
 (L)
 FUNCTIONAL SETTING RANGE
 (H)
 SEAL MATERIAL
 (N)

 L
 Standard Screw Adjustment
 H
 1000 - 4000 psi w/25 psi Check (70 N
 Buna-N

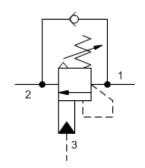
C Tamper Resistant - Factory Set

H 1000 - 4000 psi w/25 psi Check (70 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

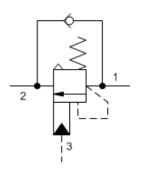
V Viton



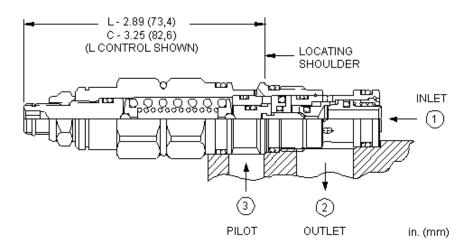
snhy.com/CACH



3-Port Atmospherically Referenced



3-Port Atmospherically Referenced, Non-adjustable



Atmospherically-vented counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. Backpressure at port 2 does not affect the valve setting because the spring chamber is atmospherically referenced.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	320 bar
Maximum Setting	420 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	2,8 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990211007
Seal kit - Cartridge	Viton: 990211006

CONFIGURATION OPTIONS

Model Code Example: CACHLGN

CONTROL (L) FUNCTIONAL SETTING RANGE (G) SEAL MATERIAL (N) MATERIAL/COATING

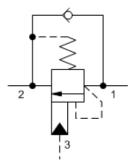
L Standard Screw AdjustmentC Tamper Resistant - Factory Set

G 2000 - 6000 psi (140 - 420 bar), 4000 psi (280 bar) Standard Setting

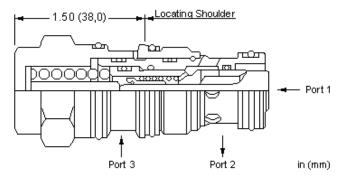
N Buna-N V Viton Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel



snhy.com/CBDBX



3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	1.5:1
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Reseat	>85% of setting
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDBXNN

FIXED PRESSURE RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

N 2900 - 3500 psi (200 - 245 bar)

N Buna-N

Standard Material/Coating

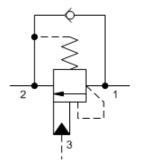
P 2250 - 2680 psi (155 - 185 bar) V

V Viton

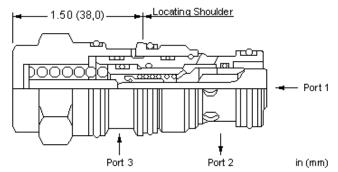
ILH Mild Steel, Zinc-Nickel







3-Port Non-vented, Fixed Setting



Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	10:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CBDHXXN

FIXED	PRESS	UKE I	RANGE

(X) SEAL MATERIAL

V Viton

(N) MATERIAL/COATING

			\	
М	4700 -	5600 nsi	$(325 \cdot$	- 390 har)

vi 4700 - 5600 psi (325 - 390 bar)

V 3200 - 3800 psi (220 - 260 bar)

Z 4125 - 4900 psi (285 - 340 bar)

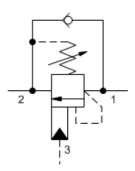
(N) MATERIALIONATING

/LH Mild Steel, Zinc-Nickel

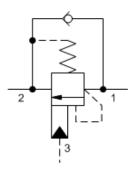
Standard Material/Coating



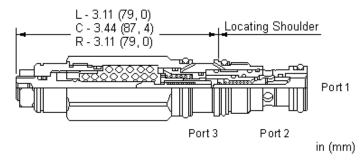
snhv.com/CEBA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. The LoadAdaptive™ counterbalance valve has a higher pilot ratio when the load-induced pressure is less than the setting of the valve (is not moving yet) and when the moving load is a positive load (not overrunning). See P1-P3 diagrams under 'performance curves.` The P1 (Y axis) vs P3 (X axis) curves show the effective setting P1 of the valve for different flows depending on pilot pressure P3. Click Here for LoadAdaptive Technical Tip

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Adaptive Pilot Ratio	See Performance Curves
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: CEBALHN

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

H 1500 - 4000 psi w/ 25 psi check (105 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) ADJUSTMENT RANGE

N Buna-NV Viton

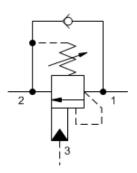
(H) SEAL MATERIAL

A 1500 - 4000 psi w/ 4 psi check (105 - 280 bar w/ 0,3 bar Check), 3000 psi

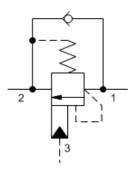
(210 bar) Standard Setting



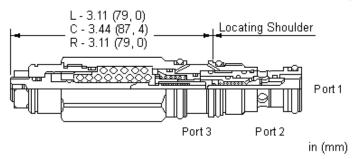
snhv.com/CEBC



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. The LoadAdaptive™ counterbalance valve has a higher pilot ratio when the load-induced pressure is less than the setting of the valve (is not moving yet) and when the moving load is a positive load (not overrunning). See P1-P3 diagrams under 'performance curves.` The P1 (Y axis) vs P3 (X axis) curves show the effective setting P1 of the valve for different flows depending on pilot pressure P3. Click Here for LoadAdaptive Technical Tip

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Adaptive Pilot Ratio	See Performance Curves
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES Patents are pe

Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: CEBCLHN

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

CONTROL

H 1500 - 4000 psi w/ 25 psi check (105 -280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) ADJUSTMENT RANGE

A 1500 - 4000 psi w/ 4 psi check (105 - 280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting

(H) SEAL MATERIAL

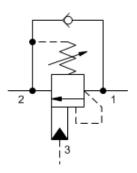
N Buna-N V Viton) MATERIAL/COATING

Standard Material/Coating

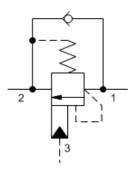
/LH Mild Steel, Zinc-Nickel



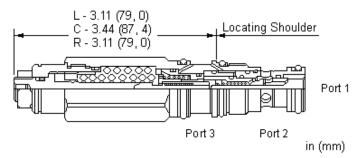
snhy.com/CECA



3-Port Non-vented



3-Port Non-vented, Fixed Setting



Counterbalance valves with pilot assist are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio. The LoadAdaptive™ counterbalance valve has a higher pilot ratio when the load-induced pressure is less than the setting of the valve (is not moving yet) and when the moving load is a positive load (not overrunning). See P1-P3 diagrams under 'performance curves.` The P1 (Y axis) vs P3 (X axis) curves show the effective setting P1 of the valve for different flows depending on pilot pressure P3. Click Here for LoadAdaptive Technical Tip

Other names for this valve include motion control valve and over center valve.

TECHNICAL DATA

Pilot Ratio	3:1
Adaptive Pilot Ratio	See Performance Curves
Maximum Recommended Load Pressure at Maximum Setting	215 bar
Maximum Setting	280 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns to Increase Setting	3.75
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

Patents are pending for this product.

CONFIGURATION OPTIONS

Model Code Example: CECALHN

L Standard Screw Adjustment
C Tamper Resistant - Factory Set

H 1500 - 4000 psi w/ 25 psi check (105 - 280 bar w/ 1,7 bar Check), 3000 psi (210 bar) Standard Setting

(L) ADJUSTMENT RANGE

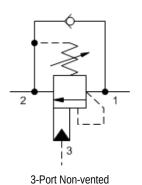
N Buna-NV Viton

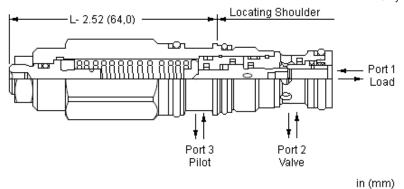
(H) SEAL MATERIAL

A 1500 - 4000 psi w/ 4 psi check (105 - 280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting



snhy.com/MBDN





Load reactive, load control valves with pilot assist combine two valves; a check valve and a relief valve. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

TECHNICAL DATA

Pilot Ratio	8:1
Maximum Recommended Load Pressure at Maximum Setting	270 bar
Maximum Setting	350 bar
Factory Pressure Settings Established at	30 cc/min.
Maximum Valve Leakage at Reseat	0,3 cc/min.
Check Cracking Pressure	1,7 bar
Adjustment - Number of Counterclockwise Turns to Increase Setting	6.5
Reseat	>85% of setting
Locknut Hex Size	15 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: MBDNLHN

CONTROL (L) FUNCTIONAL SETTING RANGE (H) SEAL MATERIAL

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

H 1000 - 4000 psi (70 - 280 bar), 3000 psi (210 bar) Standard Setting

J 2000 - 5000 psi (140 - 350 bar), 3000 psi (210 bar) Standard Setting

N Buna-N V Viton



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