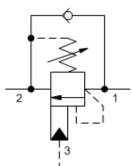
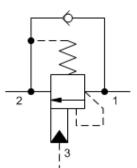




snhy.com/CBGA



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**

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-17A		
Series	3		
Capacity	60 gpm		
Pilot Ratio	3:1		
Maximum Recommended Load Pressure at Maximum Setting	3075 psi		
Maximum Setting	4000 psi		
Factory Pressure Settings Established at	2 in³/min.		
Maximum Valve Leakage at Reseat	5 drops/min.		
Adjustment - No. of CCW Turns from Min. to Max. Setting	3.75		
Operating Characteristic	Standard		
Reseat	>85% of setting		
Valve Hex Size	1 1/4 in.		
Valve Installation Torque	150 - 160 lbf ft		
Adjustment Screw Internal Hex Size	5/32 in.		
Locknut Hex Size	9/16 in.		
Locknut Torque	80 - 90 lbf in.		
Seal kit - Cartridge	Buna: 990017007		
Seal kit - Cartridge	EPDM: 990017014		
Seal kit - Cartridge	Polyurethane: 990017002		
Seal kit - Cartridge	Viton: 990017006		
Model Weight	1.36 lb.		

3-Port Non-vented, Fixed Setting

#### **CONFIGURATION OPTIONS**

# Model Code Example: CBGALHN

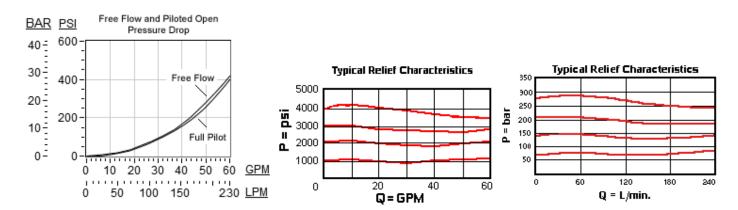
CONTROL	(L)	FUNCTIONAL SETTING RANGE (H)	SEAL MATERIAL	(N)	MATERIAL/COATING
L Standard Screw Adjustment		H 1000 - 4000 psi w/25 psi Check (70 -	N Buna-N		Standard Material/Coating
C Tamper Resistant - Factory Set	280 bar w/ 1,7 bar Check), 3000 psi	E EPDM		IAP Stainless Steel, Passivated	
		(210 bar) Standard Setting A 1000 - 4000 psi w/4 psi Check (70 - 280 bar w/ 0,3 bar Check), 3000 psi (210 bar) Standard Setting	V Viton		ILH Mild Steel, Zinc-Nickel
		<ul> <li>B 400 - 1500 psi w/4 psi Check (28 - 105 bar w/ 0,3 bar Check), 1000 psi (70 bar) Standard Setting</li> </ul>			
		I 400 - 1500 psi w/25 psi Check (28 - 105 bar w/ 1,7 bar Check), 1000 psi (70			

#### **TECHNICAL FEATURES**

• Counterbalance valves should be set at least 1.3 times the maximum load induced pressure.

bar) Standard Setting

- Turn adjustment clockwise to decrease setting and release load.
- Full clockwise setting is less than 200 psi (14 bar).
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Reseat exceeds 85% of set pressure when the valve is standard set. Settings lower than the standard set pressure may result in lower reseat percentages.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Sun counterbalance cartridges can be installed directly into a cavity machined in an actuator housing for added protection and improved stiffness in the circuit.
- Two check valve cracking pressures are available. Use the 25 psi (1,7 bar) check unless actuator cavitation is a concern.
- This valve has positive seals between all ports.
- All 3-port counterbalance, load control, and pilot-to-open check cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge
  machining variations.



# PERFORMANCE CURVES