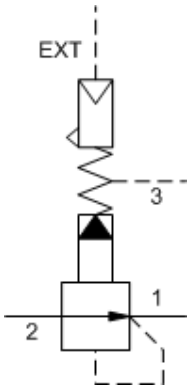
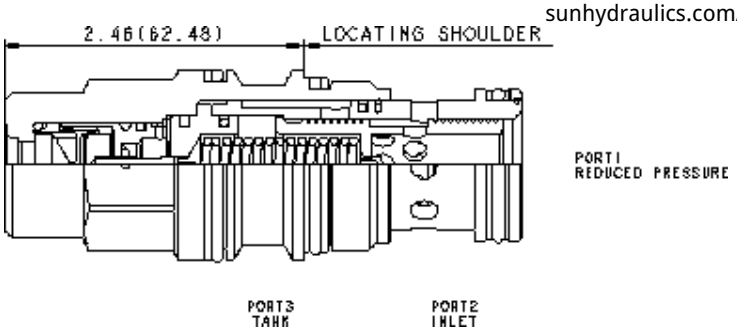
MODEL
PBHC

Air-controlled, pilot-operated, pressure reducing valve
SERIES 3 / CAPACITY: 40 gpm / CAVITY: T-17A

sunhydraulics.com/model/PBHC





Air-controlled, pilot-operated pressure reducing cartridges use compressed air over a diaphragm instead of an adjustable spring as the setting to reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1. The air signal is supplied through a port in the hex-end of the cartridge and the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).

CONFIGURATION

B	Control	External 4-SAE Port
B	Operating Range	50 - 1500 psi (3,5 - 105 bar)
N	Seal Material	Buna-N

TECHNICAL DATA

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

Cavity	T-17A
Series	3
Capacity	40 gpm
Maximum Operating Pressure	2000 psi
Pilot Ratio	20:1
Control Pilot Flow	15 - 20 in^3/min.
Maximum Air Pressure	150 psi
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	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	1.22 lb.

CONFIGURATION OPTIONS

Model Code Example: PBHCBBN

CONTROL (B)	OPERATING RANGE (B)	SEAL MATERIAL (N)
B External 4-SAE Port	**B** 50 - 1500 psi (3,5 - 105 bar)	**N** Buna-N
		V Viton

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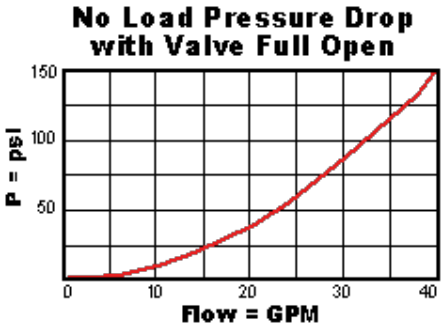
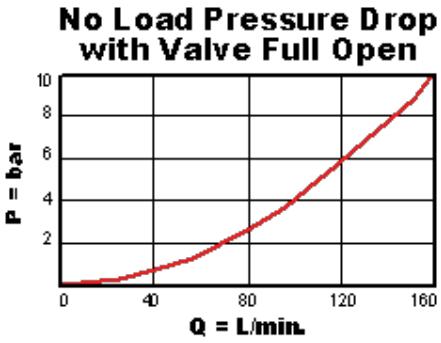
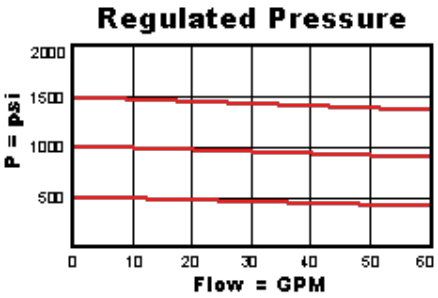
TECHNICAL FEATURES

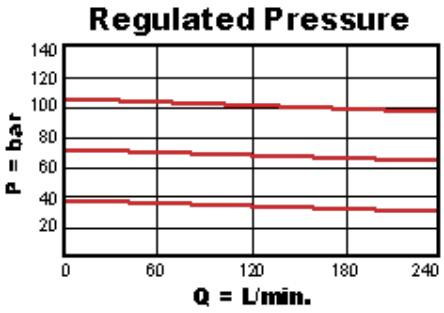
- All three-port pressure reducing and reducing/relieving cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size). When considering mounting configurations, it is sometimes recommended that a full capacity return line (port 3) be used with reducing/relieving cartridges.
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- The pressure at port 3 determines the minimum valve setting and should not exceed 1000 psi (70 bar).
- The full adjustment range is 50 to 1500 psi (3,5 to 105 bar).
- Maximum air pressure should not exceed 150 psi (10,5 bar) due to the strength of the diaphragm.
- Maximum pressure differential, inlet to outlet, should not exceed 3000 psi (210 bar).
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- The air control feature allows explosion proof remote control.
- 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









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