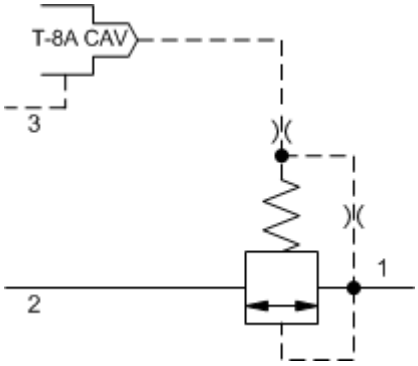
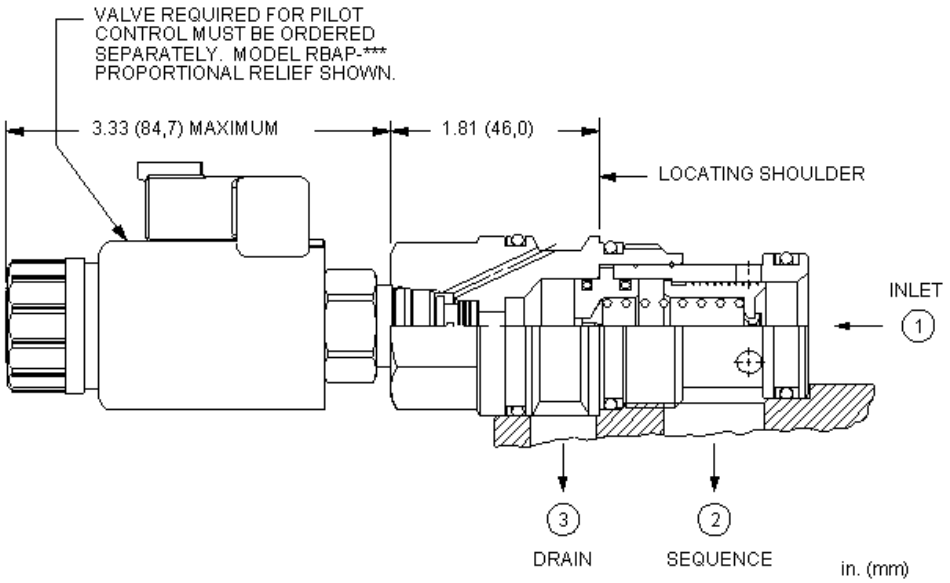
Pilot-operated, balanced piston sequence main stage with integral T-8A control cavity

CAPACITY: 60 gpm / CAVITY: T-17A

sunhydraulics.com/model/RSHC8





This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2 , up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

TECHNICAL DATA

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

Cavity	T-17A
Series	3
Capacity	60 gpm
Maximum Operating Pressure	5000 psi
Control Pilot Flow	15 - 20 in^3/min.
Main stage leakage at 110 SUS (24 cSt)	4 in^3/min.@1000 psi
Pilot Control Cavity	T-8A
Response Time - Typical	10 ms
Valve Hex Size	1 1/4 in.
Valve Installation Torque	150 - 160 lbf ft
Model Weight	1.08 lb.
Seal kit - Cartridge	Buna: 990-017-007
Seal kit - Cartridge	Polyurethane: 990-017-002
Seal kit - Cartridge	Viton: 990-017-006

NOTES:
- Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

OPTION SELECTION EXAMPLE: RSHC8WN

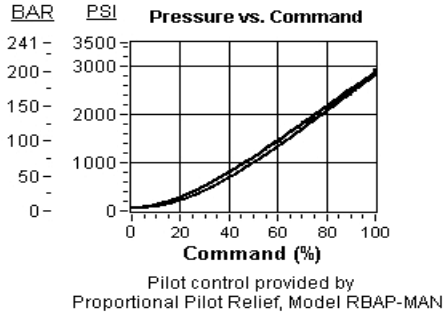
MINIMUM CONTROL PRESSURE	(W)
W	100 psi (7 bar)
D	25 psi (1,7 bar)

SEAL MATERIAL	(N)
N	Buna-N
V	Viton

TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- 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



Pilot control provided by
Proportional Pilot Relief, Model RBAP-MAN