

Pressure Relief Valve

WHAT IS A PRESSURE RELIEF VALVE?

A type of valve used to control or limit the pressure that can build up by a clogged outlet or system failure.

WHY IS IT IMPORTANT?

Positive-displacement piston pumps do not function well if the discharge is blocked. Because a piston pump produces virtually the same flow regardless of pressure, it will try to continue stroking regardless of whether its discharge is open, partially blocked or closed. When torque and pressure continue to build, something will have to give, such as a tripped motor, a blown seal or an even more dangerous failure.

HOW TO INSTALL

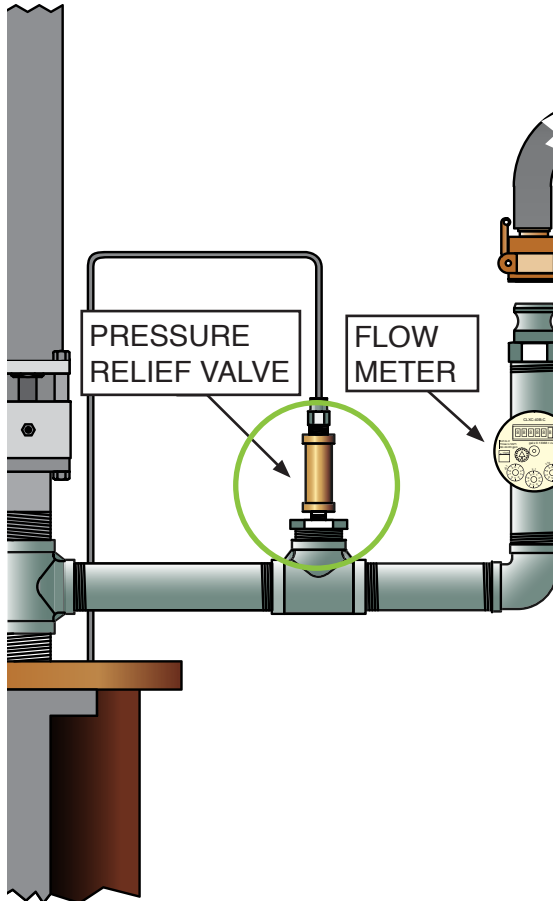
Screw the valve inlet into the discharge pipe after the tee. Attach a drain tube to the valve outlet, and then run the tube back into the well through the wellhead.



Blackhawk's pressure relief valves feature an accurate set pressure, a wide range of cracking pressures, positive reseats at high percentage of cracking pressure and zero leakage to 95 percent of cracking pressure.

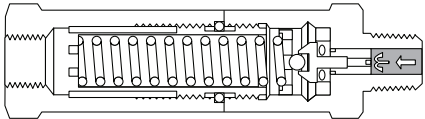
Blackhawk recommends

For most situations, choose an in-line, stainless-steel model with Buna or Viton O-ring and a cracking pressure rating of 0-50 psig, 0 to 3.45 bar. Several material combinations are available.

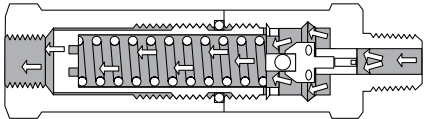


How It Works

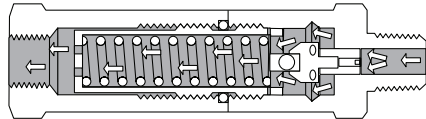
The relief valve opens at a set pressure to protect pump components. When that pressure is exceeded, the valve is forced open and a portion of the liquid is diverted through a drain tube.



Closed
 The spring load is carried by a metal-to-metal stop. The O-ring provides a leak-tight seal. Sealing efficiency increases as the pressure increases up to the cracking pressure.



Cracking
 The ports in poppet open fully and eliminate rapid increase in the pressure. The flow is throttled between the poppet shoulder and the seat, which provides regularly increasing flow area with increasing flow rates.



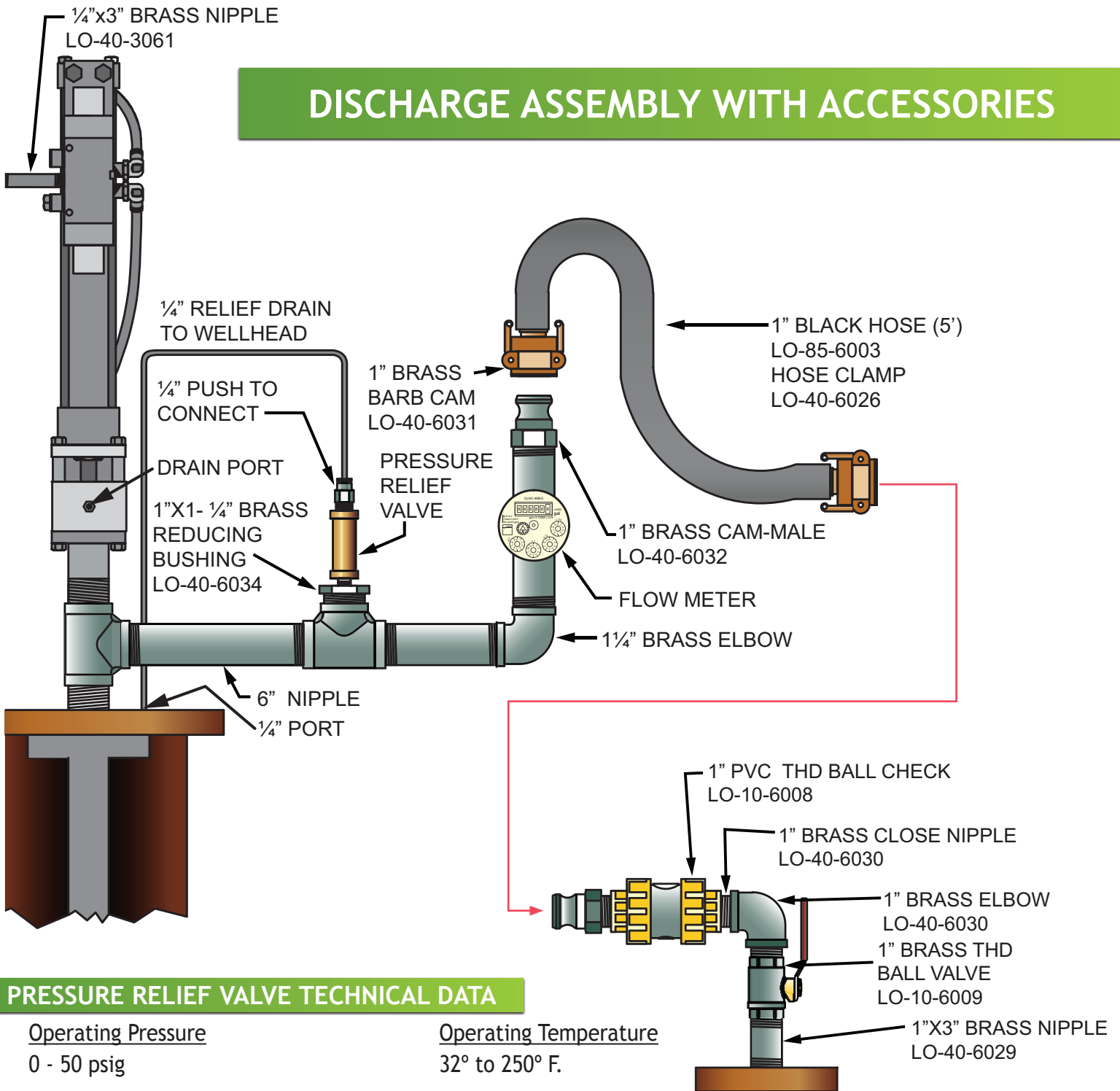
Open
 The inline construction and full flow ports permit maximum flow with minimum increase in the system pressure.

Maximize your investment in Blackhawk Pumps

Fact Sheet #6

Pressure Relief Valve

DISCHARGE ASSEMBLY WITH ACCESSORIES



PRESSURE RELIEF VALVE TECHNICAL DATA

Operating Pressure
0 - 50 psig

Set Pressure
10 psi above operating pressure

Operating Temperature
32° to 250° F.

Connection sizes
1/8" to 1/4"

The best-performing environmental pump in the business

