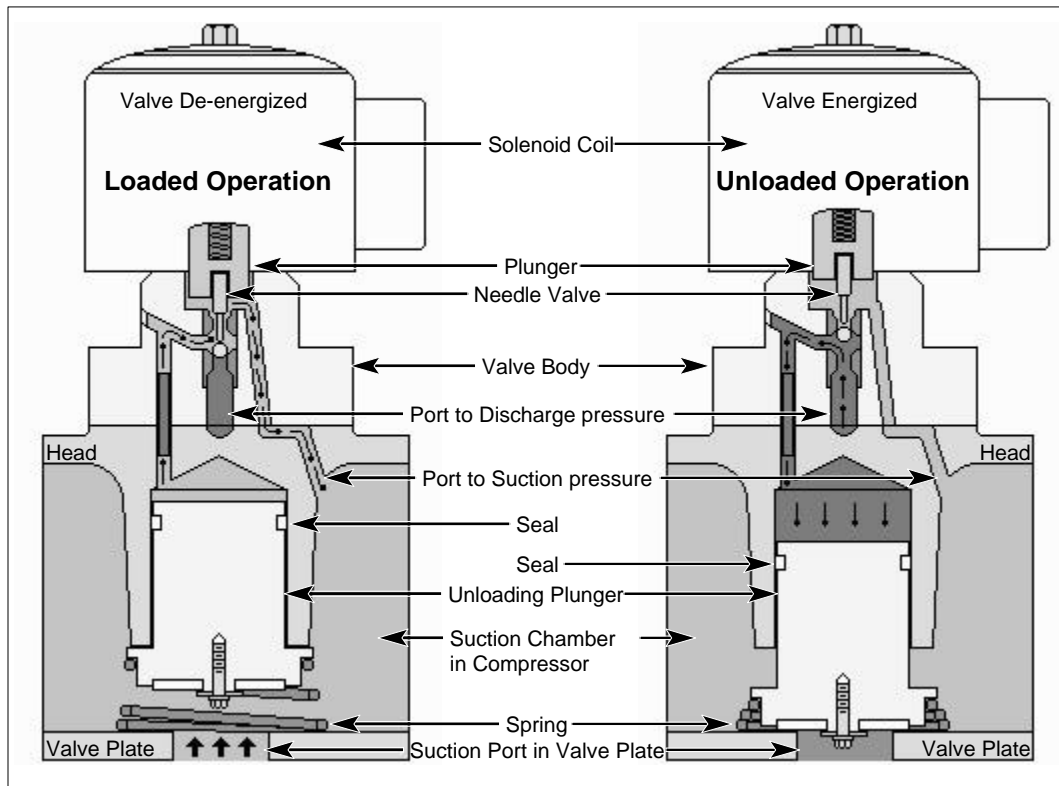


Copeland

Blocked Suction Unloading for 4, 6, and 8 cylinder compressors



LOADED OPERATION

In the normal (full capacity) operating position with the solenoid valve deenergized, the needle valve is seated on the lower port, and the unloading plunger chamber is exposed to suction pressure through the suction port. Since the face of the plunger is open to the suction chamber, the gas pressures across the plunger are equalized, and the plunger is held in the open position by the spring allowing suction gas to enter the suction port in the valve plate to the suction chamber in the head and into the cylinders.

UNLOADED OPERATION

When the solenoid valve is energized, the needle valve is seated on the upper port, and the unloading plunger chamber is exposed to discharge pressure through the discharge port. The differential between the discharge and suction pressure forces the plunger down, sealing the suction port in the valve plate, thus preventing the entrance of suction vapor into the unloaded cylinders.

The seal on the unloading plunger minimizes any leakage in pressure so that a pumpdown cycle may be used with the valve either energized or deenergized without