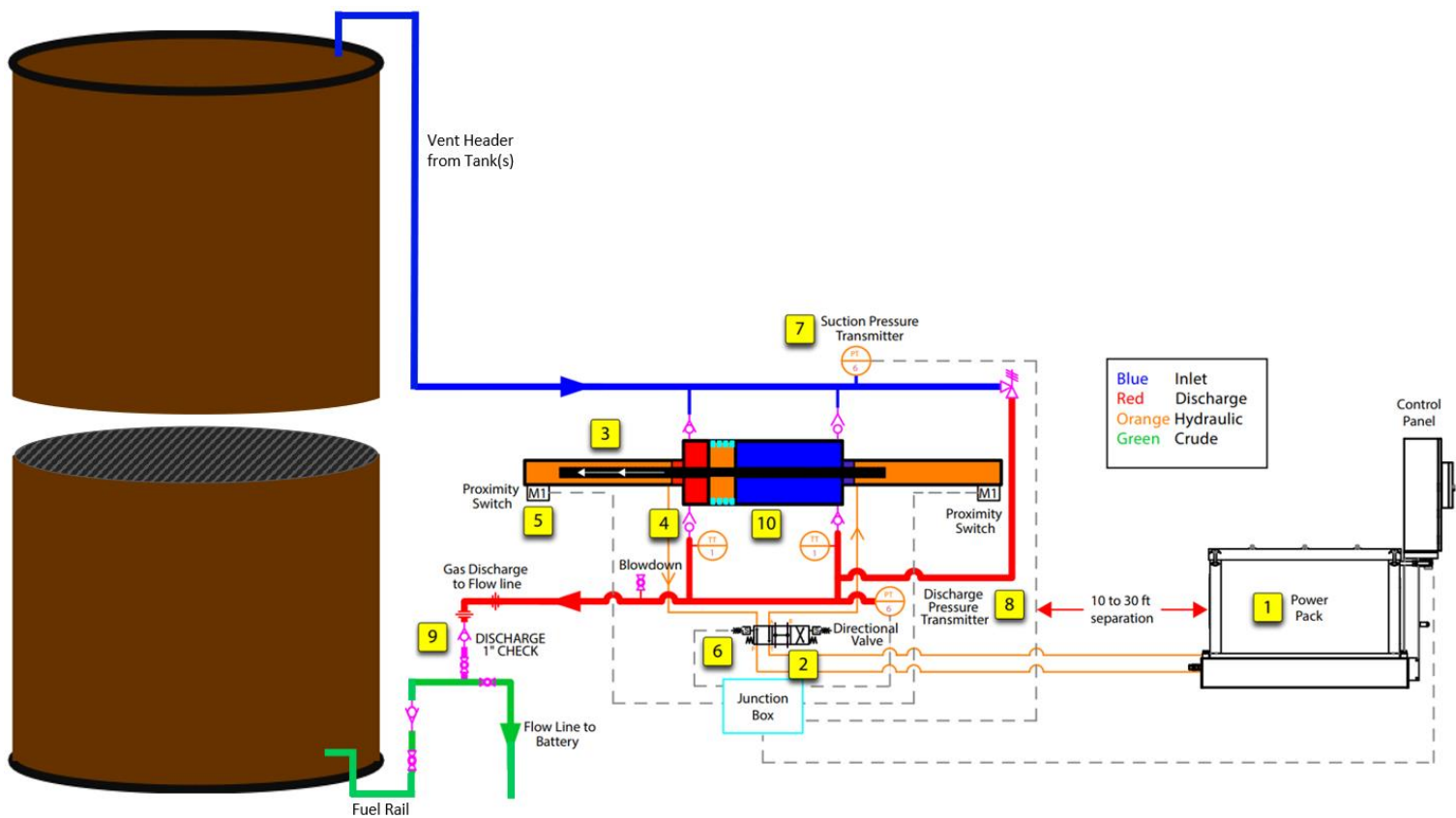


Hydraulic Vapor Recovery Compressor (HVR) Schematic



1 The power pack provides hydraulic power for the compressor. The control panel governs the operation of the compressor using proprietary code.

2 The hydraulic fluid supply and return lines pass through a directional valve that directs the flow of power fluid to either side of the compression cylinder. In this example, fluid is supplied to the right side of the cylinder and returned from the left side.

3 As the piston is driven through its stroke by the hydraulic ram, gas enters the compression cylinder through the suction check valve (blue).

4 At the same time, gas is compressed on the opposite side of the compression cylinder (red), exiting through the discharge check valve which opens when flowline pressure is reached during the compression cycle.

5 A position sensor registers the end of the stroke and sends a signal to the control panel PLC.

6 The control panel PLC sends a signal to the directional valve to reverse the flow of hydraulic fluid to the cylinder. The piston reverses direction and the second half of a single compression cycle begins

7 Suction pressure is continuously relayed to the control panel PLC by the suction pressure transmitter.

8 Discharge pressure is continuously relayed to the control panel by the discharge pressure transmitter. The control panel PLC logic ensures that the maximum pressure differential for the cylinder is not exceeded. Three additional levels of redundancy exist to ensure maximum differential pressure is not exceeded; hydraulic system relief valve, pressure safety valve, and electric motor overload.

9 The compressed gas passes through a check valve into the production -flowline. A plunger or ball check valve is recommended over a -flapper check valve due to higher cyclical reliability.

10 The compressed gas passes through a check valve into the production -flowline. A plunger or ball check valve is recommended over a -flapper check valve due to higher cyclical reliability.

