

# The Vilter VSS System. How It All Works Together.

## REFRIGERANT FLOW

Refrigerant gas to the VSS unit flows through a Vilter manufactured, weld-in-line combination stop/check valve. The stop/check valve can be manually opened or closed, and when set in the automatic position, the valve works as a suction check valve to prevent reverse rotation of the compressor upon shutdown.

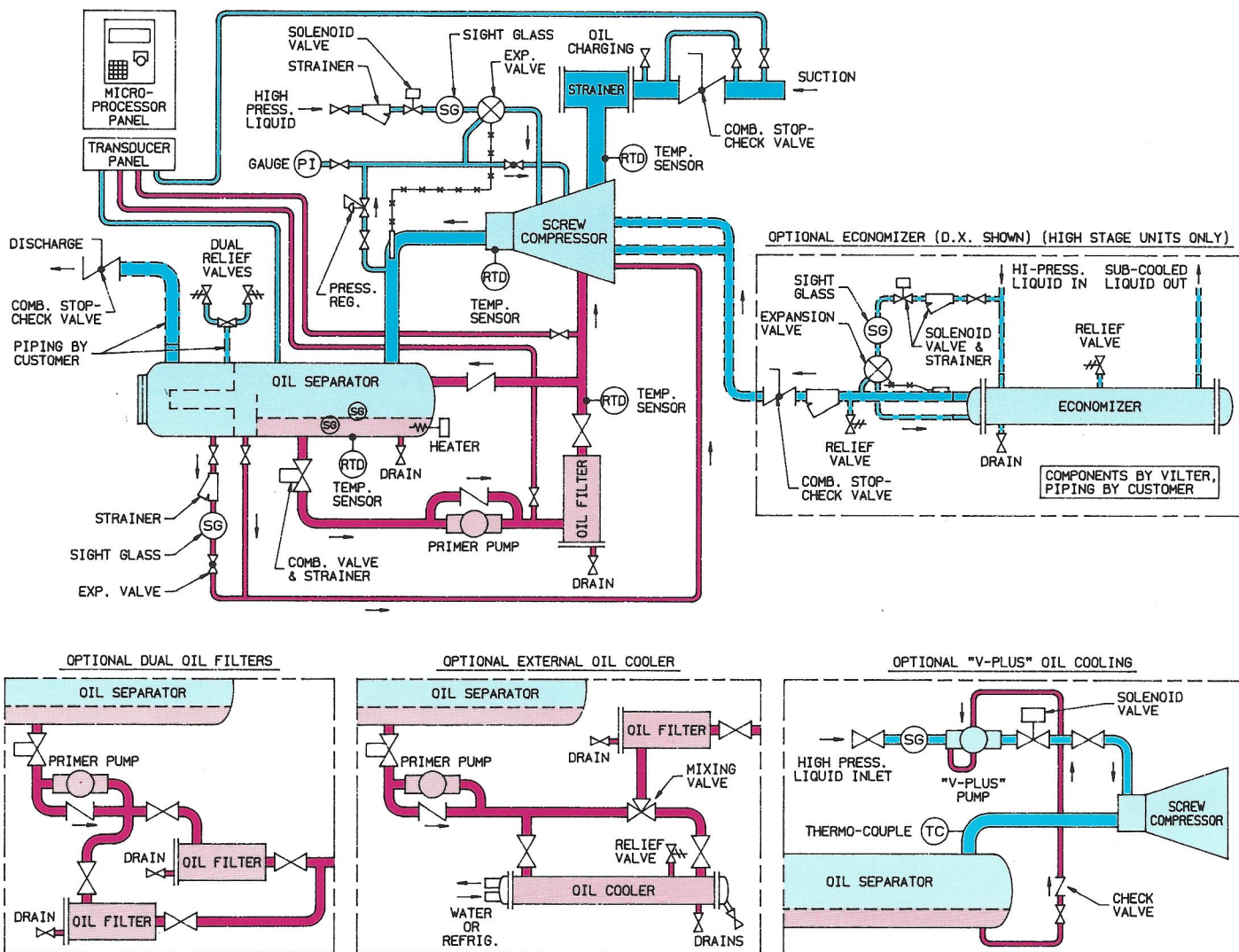
The refrigerant gas then flows through the Vilter fabricated suction strainer

that contains a fine mesh, stainless steel screen reinforced by a heavy stainless steel woven mesh. A connection is provided at the inlet of the suction strainer to allow oil charging at low pressure during operation.

The Vilter VSS Single Rotor Screw Compressor then compresses the gas from low to high pressure. The compression process occurs on the top and bottom half of the compressor simultane-

ously. This unique feature yields a compressor with minimal radial loads, thus resulting in extremely light bearing loads and near vibration free operation.

The discharge gas enters the Vilter ASME-coded horizontal oil separator where six stages of oil separation work to deliver a nearly oil-free gas stream to the system.



*This simplified schematic of a VSS unit shows the refrigerant circuit (in dark blue); and how lubricating oil (in dark red) is separated, cooled, filtered, pumped and distributed by the Vilter-designed oil handling system.*