

Separation - Gas Production Units:

Features:

Palmer gas production units are designed to provide a complete, shop assembled, fully enclosed, skid mounted package that contains heating and separating equipment for gas-condensate wells. These units consist of an indirect heater and a high-pressure horizontal separator mounted in an integral unit with all interconnecting piping, controls and instrumentation. The unit is ready for operation, requiring the hook-up of only the well stream inlet, gas outlet and oil outlet connections (also, the water outlet if three phase operation is desired). Each standard unit is sized and selected to match the requirements of the customer's wellhead production.

Operation:

The well stream enters the indirect heater coil inlet connection and travels through the preheat coil to the choke where the pressure is reduced, and the gas is expanded. As the well stream passes through the coil, it is heated in a submerged liquid bath to prevent the formation of hydrates as the pressure is reduced. The well stream then flows into the separator where it contacts the inlet deflector, which forces the liquid out of the gas stream. This action causes a quick release of the gas and allows the liquid to accumulate in the settling section where additional separation takes place. Oil and water is then discharged to storage. The gas passes through a wire mesh mist extractor and leaves the separator through the outlet connection in the top of the separator.

As the gas leaves the separator, a portion is passed through a preheat coil in the water bath to be used as fuel and instrument gas. A thermostat is located in the gas section of the separator to control the heater firing rate by regulating the fuel gas supply to the burner. Another thermostat is located in the water bath of the indirect heater and is set to shut the heater down if the water temperature becomes too high.