

VERTICAL HEATER TREATERS

| Size | Test Pressure PSIG | BTU/Hr | NOM. Oil Capacity bbl/D | NOM. Water Capacity bbl/D | Gas MMSCF/D | Conn. Size |
|----------|--------------------|-----------|-------------------------|---------------------------|-------------|------------|
| 3' x 15' | 75 | 125,000 | 50 | 100 | .5-.8 | 3" |
| 4' x 20' | 75 | 335,000 | 300 | 400 | 1.0-2.0 | 3" |
| 6' x 20' | 75 | 525,000 | 500 | 600 | 2.0-4.0 | 3" |
| 8' x 20' | 60 | 1,000,000 | 700 | 1000 | 3.0-6.0 | 4" |

Other sizes and working pressures on application

Note: Liquid volumes will vary depending on temperature required, gravities, viscosity, and slugging.

Contact Permian Tank representative for specific applications.



Vertical Treater Operation

The well stream enters the treater in the top gas separation section and strikes the inlet deflector. Centrifugal action, reduced velocity and retention time combine to allow gas to separate from the liquid and flow upward through the mist extractor to the gas outlet.

Oil and water travel downward through the large internal conductor pipe and are released below the firebox. Free-water continues downward to be discharged from the bottom portion of the treater. Oil and entrained water are distributed by the spreader and rise around the firebox through the heated water section.

The increase in temperature breaks the emulsion resulting in small droplets of water coalescing into drops which enlarge in size and weight until they start settling downward to the water section. This settling action continues as the oil rises at minimum velocity through the full diameter settling section.

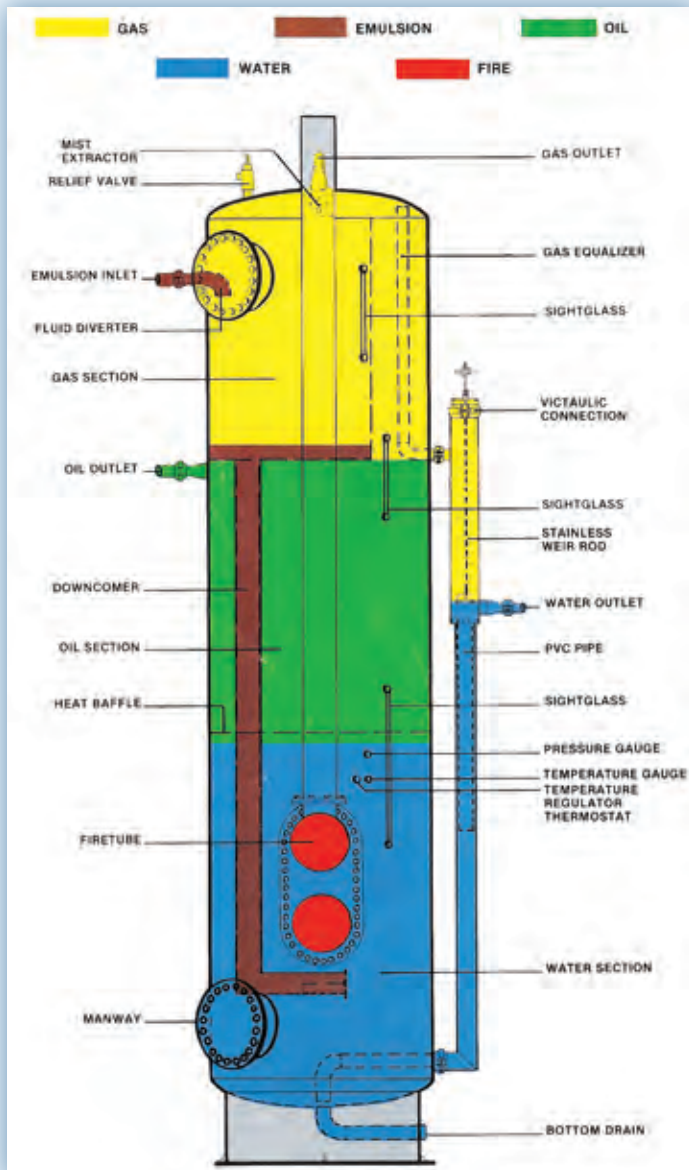
Clean oil at the top of the settling section spills over and travels through piping to the head operated dump valve.

Water is removed from the bottom portion of the treater through an externally adjustable water siphon and head operated dump valve.

VERTICAL HEATER TREATERS

FEATURES:

1. Large diameter gas separation section for increased removal of entrained liquids.
2. Mist eliminator to assure dry outlet gas.
3. Full diameter free-water knockout section for removal of free-water with a minimum of heating, and to assure clean discharged water.
4. Efficient spreader system to allow even dispersion of the emulsion under the firebox.
5. Heat retaining baffle for better utilization of available heat.
6. Water level can be changed while treater is in operation by utilizing the stainless steel adjusting rod.
7. Minimum velocity and channeling of oil through the full diameter settling section allows maximum water fallout.



STANDARD ACCESSORIES:

- 1-1 flanged stack w/bracket
- 1-removable firebox
- 1-heat retaining baffle
- 1-burner and pilot assembly
- 1-thermostat w/thermowell
- 1-thermometer w/thermowell
- 3-gauge glass assembly
- 1-pressure gauge w/isolating valve
- 1-relief valve
- 1-set equalizer tubing and fittings
- 1-mist extractor
- 1-outside adjustable water siphon
- 2-16" manways
- 1-outside ladder
- 2-2" oil and water dump valves (Kimray 26-SWA)
- 1-2" gas backpressure valve (Kimray 212-SGT-BP)
- 1-6" x 36" fuel gas scrubber w/ high level shutoff and drain
- 1-fuel gas regulator
- 1-burner manifold w/valve, gauges and fittings
- 1-concrete block

OPTIONAL ITEMS:

- 1-flame arrestor
- 1-large valves
- 1-internal coatings
- 1-higher working pressure
- 1-cold weather options
- 1-firebox platform
- 1-hay section