

Heater Treater

Vertical Treater Operations

The wellstream enters the treater in the top gas separation section and strikes the inlet deflector. Centrifugal action, reduced velocity and retention time combine to allow the 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.

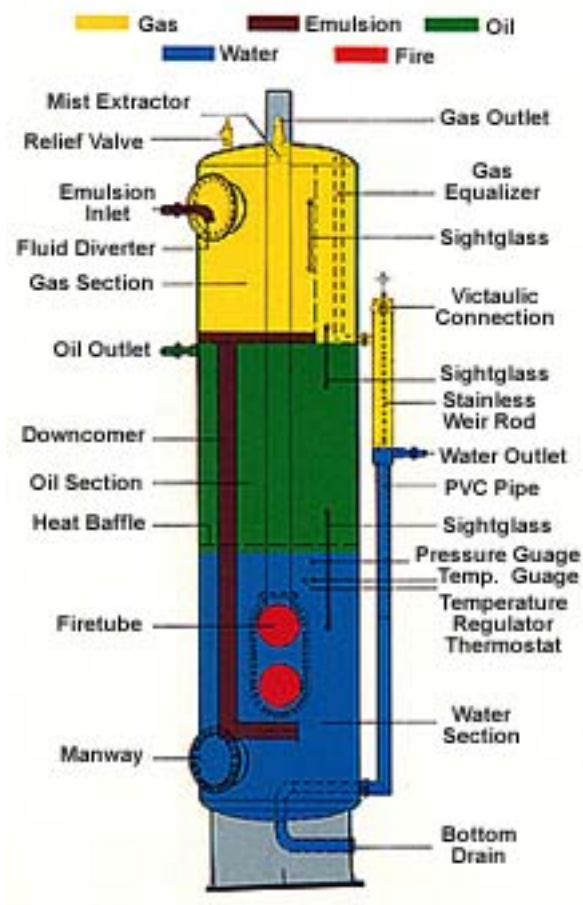
Clean oil at the top of the settling section spills over and travels through piping to the head operated dump valve. Water is removed from the bottom portion of the treater through an externally adjustable water siphon and head operated dump valve. Entrained gas which breaks out during the heating and retention cycle travels upward, combines with the cool incoming gas and is discharged through the gas outlet.

Other vessels manufactured by Permian Tank include separators, gun barrels and free water knockouts.

Specifications

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 - 2	3"
6' x 20'	75	525,000	500	600	2 - 4	3"
8' x 20'	60	1,000,000	700	1000	3 - 6	4"





Type A Model

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 discharge.
- 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 the oil through the full diameter settling section allows maximum water fallout.

Standard Accessories

- 1 flanged tack w/bracket
- 1 removable firebox
- 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
- 1 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 Firebox platform
- 1 large valves
- 1 hay section
- 1 internal coatings
- 1 cold weather option
- 1 higher working pressure

Features:

The "B" treater is designed for maximum efficiency at a lower initial investment. For lower volume wells, it provides the advantages of a 20' treater in the same cost range as many 15' or 12' treaters. The inlet gas section is an internal flume and there is no heat retaining baffle.

The advantages over many economy type treaters are:

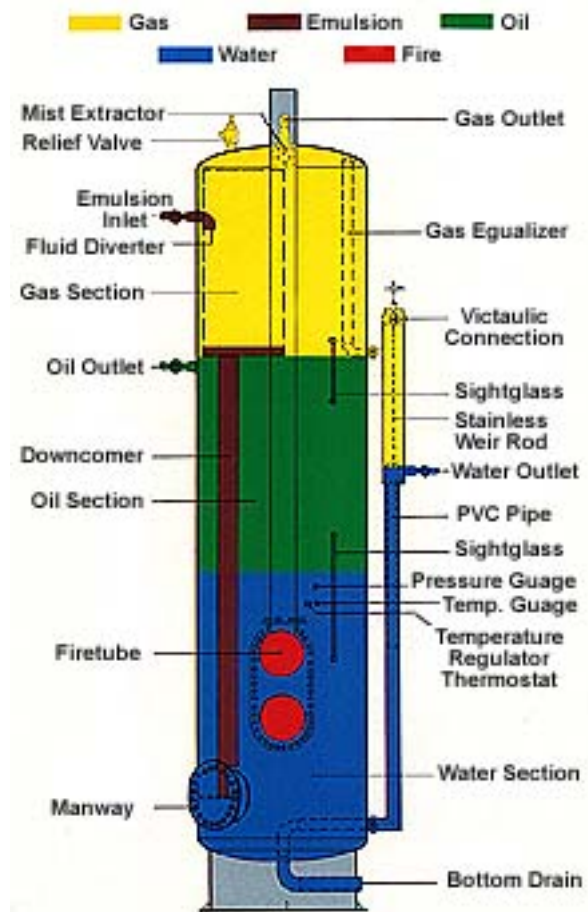
- 1 The inlet goes into a 24" internal flume section instead of going straight into the downcomer pipe.
- 2 There is a cleanout manway in the bottom of the treater.
- 3 The BTU/hr rating of the firebox is not reduced from the standard treater.

Standard Accessories

- 1 flanged tack w/bracket
- 1 removable firebox
- 1 burner and pilot assembly
- 1 thermostat w/thermowell
- 1 thermometer w/thermowell
- 2 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
- 1 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 Firebox platform
- 1 large valves
- 1 internal coatings
- 1 cold weather option
- 1 higher working pressure



Type B Model

Available only in 3 x 15

