

HEATER TREATERS

Global Vessel and Tank offers Vertical and Horizontal Heater Treaters in both ASME Code and Non Code.

Global also has an industry exclusive design for a no leak fire tube flange know as Enviro-flange™

Marketing material on Enviro-Flange™ available on our website as well as electronically.

TYPE A Vertical

The wellstream enters the gas separation section at the top of the treater and is deflected outward by the fluid diverter. This action initiates the gas separation process. The oil, water, emulsion, and solution gas flow downward through the downcomer pipe and strike a deflector plate. This breaks a large part of the emulsion.

The free water settles to the bottom section and is discharged from the vessel through the waterleg. Oil and emulsion distributed by the downcomer deflector plate into the hot water section begin to rise around the firetube. As the fluids begin to rise the increase in temperature breaks the emulsion. The water released coalesces to the bottom section of the vessel and is discharged along with the free water. The rest of the water is separated by gravity in the settling section. Clean oil at the top of the settling section exits the treater through piping onward to storage.

Entrained gas, which breaks out during the heating and retention cycle travels upward through an equalizer pipe and mixes with the cool incoming gas. This causes condensation of valuable heavier fractions in the gas, which are recovered in the oil. The gas continues to rise and flows through a mist extractor and out of the vessel.

TYPE B Vertical

This treater works in the same fashion as the Type A vessel. The Type B is provided with an internal heavy wall inlet line beginning in the hot water section and rising into the gas section of the treater. This line preheats the incoming wellstream a few degrees and improves release of the solution gas.

An internal heavy wall oil outlet line is also provided. This arrangement reduces heat loss, saves fuel, and greatly reduces the hook up cost. The internal oil outlet line releasing hot oil to storage will reduce the frequency of hot oiling flow lines were paraffin's present a problem

Information Needed to Quote

Volume per day of Oil and Water

Operating Pressure

SG of Oil and Water

H2S or CO2 Present

Coating internally of Fire Tube, Water Leg or Water Section

Enviro-Flange™

Global Vessel and Tank has the ultimate solution to increase safety for direct fired vessels by offering its new Raised Face Oblong Fire tube flange. See page 34 for details.

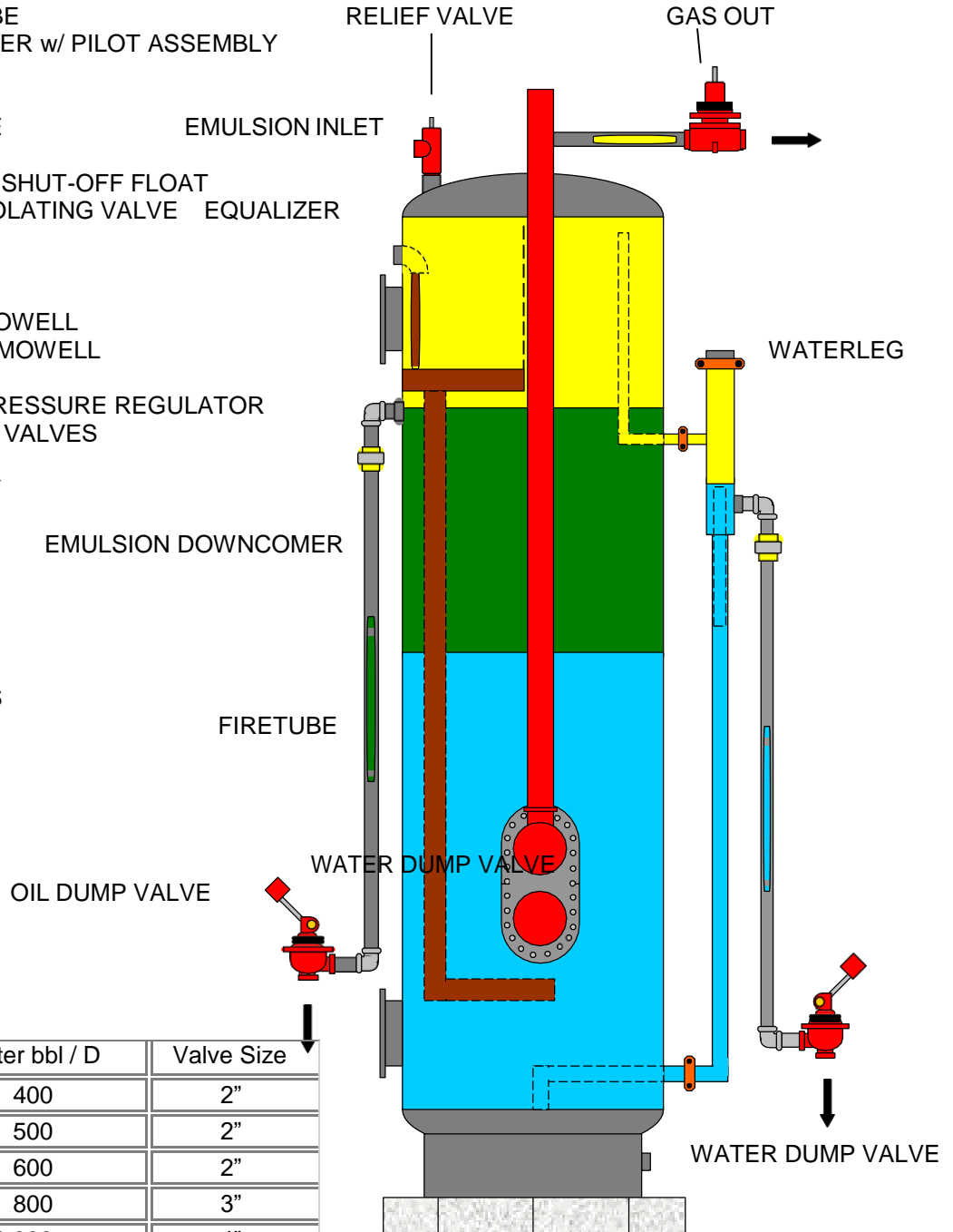
VERTICAL HEATER TREATER

STANDARD ACCESSORIES

- 1-16" REMOVABLE FIRETUBE
- 1-FLAME ARRESTOR BURNER w/ PILOT ASSEMBLY
- 1-2" SAFETY RELIEF VALVE
- 2-16" MANWAYS
- 1-HEAT RETAINING BAFFLE
- 1-FUEL GAS REGULATOR
- 1-FUEL GAS SCRUBBER w/ SHUT-OFF FLOAT
- 1-PRESSURE GAUGE w/ ISOLATING VALVE EQUALIZER
- 1-FLANGED STACK
- 1-LADDER
- 1-ADJUSTABLE WATERLEG
- 1-THERMOSTAT w/ THERMOWELL
- 1-THERMOMETER w/ THERMOWELL
- 1-BURNER MANIFOLD
- 1-2" KIMRAY 212 SGT-BP PRESSURE REGULATOR
- 2-2" KIMRAY 26 SWA DUMP VALVES
- 1-CONCRETE BASE BLOCK
- 3-SIGHT GLASS ASSEMBLY
- 1-COAT PRIMER & PAINT

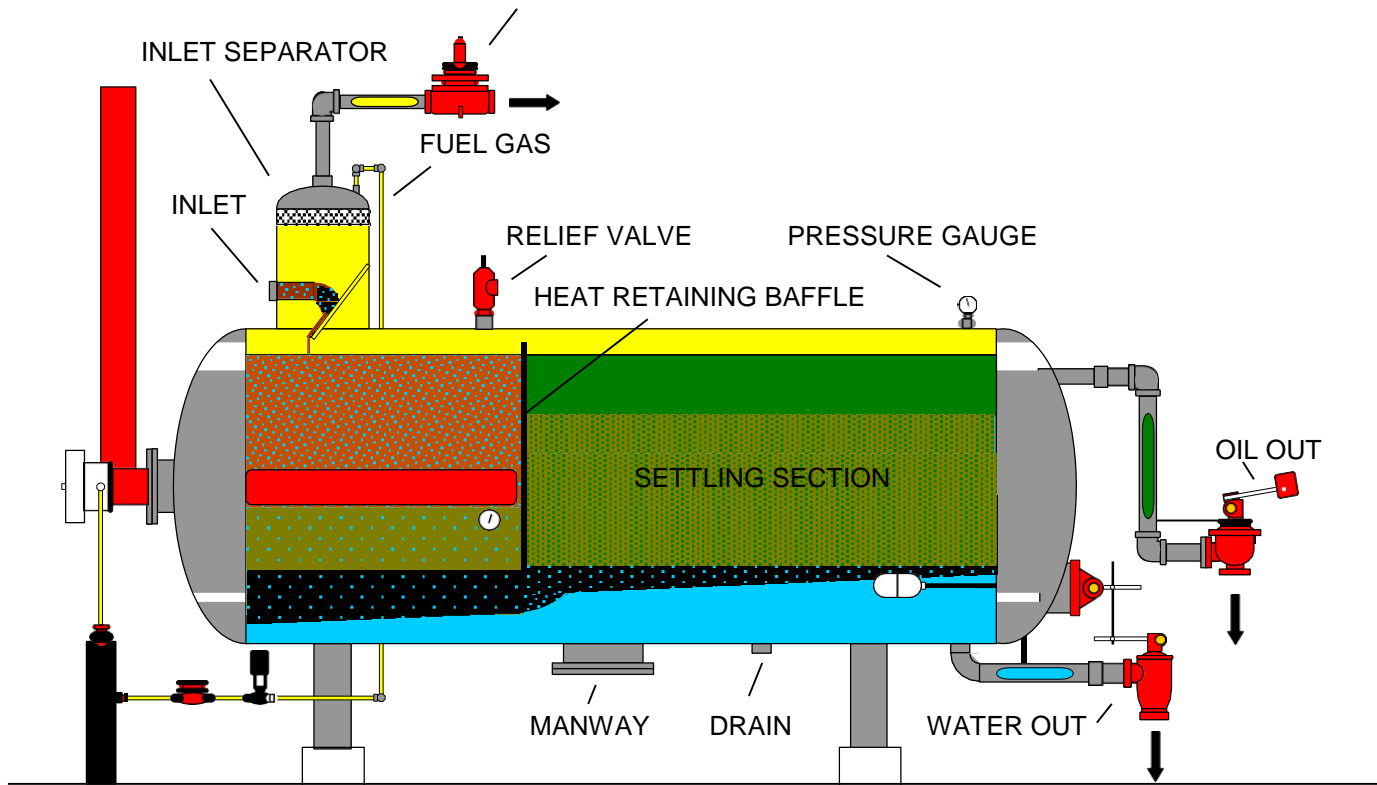
OPTIONAL ACCESSORIES

- 1-PROTECTIVE COATING
- 1-FLANGED CONNECTIONS
- 1-LARGER VALVES



Size	Oil bbl / D	Water bbl / D	Valve Size
4'X20'	300	400	2"
4'X27'	400	500	2"
6'X20'	500	600	2"
6'X27'	600	800	3"
8'X20'	700	1,000	4"

HORIZONTAL HEATER TREATER



STANDARD ACCESSORIES

- 1-REMOVABLE FIRETUBE
- 1-FLANGED STACK
- 1-16" ROUND EXTENDED MANWAY
- 1-HEAT RETAINING BAFFLE
- 1-S.S. WIRE MESH MIST EXTRACTOR
- 1-FLAME ARRESTOR BURNER w/ PILOT ASSEMBLY
- 1-SAFETY RELIEF VALVE
- 1-FUEL GAS REGULATOR
- 1-THERMOSTAT w/ THERMOWELL
- 1-THERMOMETER w/ THERMOWELL
- 1-FUEL GAS SCRUBBER w/ SAFETY SHUT-OFF FLOAT
- 1-PRESSURE GAUGE w/ ISOLATING VALVE
- 1-BURNER MANIFOLD
- 2-SIGHT GLASS ASSEMBLY
- 1-INTERFACE FLOAT ASSEMBLY
- 1-KIMRAY 212 SGT-BP BACK PRESSURE REGULATOR
- 1-KIMRAY 26 SWA OIL DUMP VALVE
- 1-KIMRAY 212 SOA WATER DUMP VALVE
- 1-KIMRAY 112 SMT DAB MOTOR VALVE
- 1-LOW LIQUID LEVEL BURNER SHUT DOWN
- 1-SET CONCRETE PIERS
- 1-COAT PRIMER AND PAINT

HORIZONTAL HEATER TREATER

Horizontal Heater Treaters have a large cross sectional interface area and are well suited for facilities producing high volumes of oil. The horizontal configuration allows for much larger firetube construction, which will be required to maintain proper heat levels needed for high capacity fluid flow.

The fluids enter the vessel and strike the spreader baffle located in the inlet separator section. This action initiates the gas separation process. The spreader baffle disburse and redirects the fluid flow allowing for even distribution into the heating section. The fluids and entrained solution gas then flow downward toward the firetube. By incorporating the down flow method of heating, the solution gas will have the retention time needed to settle out of the fluids in the heating section of the vessel prior to entering the settling section. Solution gas breaking out in the settling section can cause rolling of the liquids and interfere with the settling process.

The large surface area of the firetube quickly heats the oil, water, and emulsion flowing downward, and breaks a large portion of the emulsion and reduces the viscosity of the oil. Viscosity is a measure of a fluids resistance to flow or friction. In this case reducing the oil viscosity decreases the amount of drag the oil exerts on the water particles and allows for rapid settling.

Once heated the freewater rapidly settles to the bottom of the vessel as the oil and remaining emulsion flow to the settling section. Here the remaining water releases and coalesces downward and combines with the freewater to be discharged to disposal or storage. The clean oil at the top of the settling section exits the treater through piping onward to storage.

Gases released by the heated oil bed in the settling section flow back toward the inlet separator and combine with the solution gas rising from the fluid bed in the heating section. These gases then mix with the cool incoming gas causing condensation, which is recovered in the oil. The gas continues to rise into the inlet separator and flows through a wire mesh mist extractor. The mist extractor and the volume of the inlet separator ensure a good source of dry fuel and instrumentation gas needed to operate the heater treater