

Petroleum - Oil Production – Separation – Free Water Knock Out (FWKO) Capabilities:

This type of vessel is well suited for applications where a large volume of water in the production flow needs to be separated. This process reduces water load on the treating equipment and can also reduce the size and cost of operating the downstream treating equipment. Palmer of Texas manufactures free water knockouts in diameters up to 10' with typical working pressures ranging from 50 to 75 P.S.I.

Operation:

The well stream or product flow, consisting of a mixture of liquids and gases, enters the FWKO through the inlet connection and collides with the inlet deflector – forcing the fluid to change direction and contact the vessel wall. This action pushes the gases to the top of the vessel and allows the fluids to fall to the bottom. The gases and the oil are released through the oil outlet connection to the treating equipment.

The water discharge is controlled by the interface float and a lever, which operates a water dump valve. The water continues from the FWKO to the water storage tanks.