

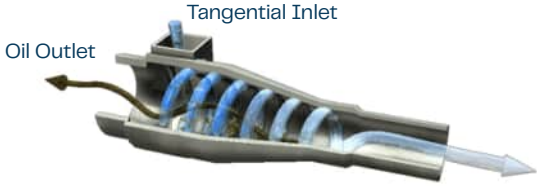
P-Klone™ Hydrocyclone

Primary Produced Water Deoiling

The P-Klone™ Hydrocyclone is a highly efficient and economic approach to processing oil-laden water. It is a well-proven method for taking water from the production separator with oil concentrations up to 5% and readying it for secondary treatments such as induced gas flotation or filtration. This hydrocyclone can be designed to handle any flow volumes and output pressures you require. The P-Klone is small, lightweight and insensitive to orientation or motion, making it an ideal solution for offshore and space-constrained onshore applications.

How It Works

The P-Klone converts the velocity of water flowing from the production separator into centrifugal force. The shape of the unit causes the water to form a vortex, much like a whirlpool. The water moves faster as the sides taper in, causing a reverse-flowing low-pressure area in the center. The heavier water moves to the outside wall of the unit, while the lighter oil concentrates in the center. Water exits at the clean-water outlet and the oil exits at the opposite end. This entire separation process happens in less than two seconds.



Key Benefits

Cost Saving

- Cost-effective, efficient way to reduce oil concentration prior to secondary de-oiling
- Eliminates the cost of a feed pump by using existing process pressure
- Easy to ship, install, and start up, making it ideal for temporary and long-term projects

Better Performance

- Low risk technology, with nearly 30 years of proven performance and thousands of units in service
- Easy to maintain with no moving parts, no failure-prone mechanisms, and no fugitive emissions

Flexibility

- Works flawlessly regardless of orientation or pitch and roll motions offshore
- Wide turndown range allows flow rates ideal to your operation

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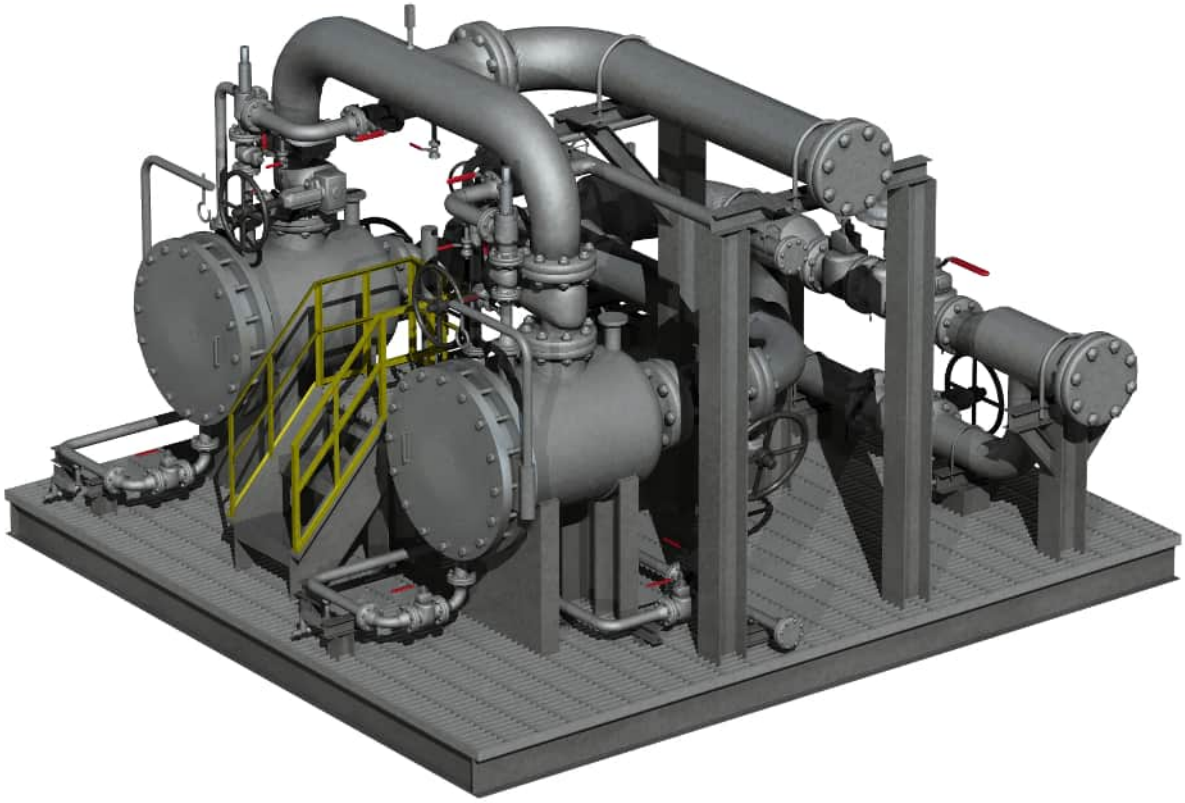
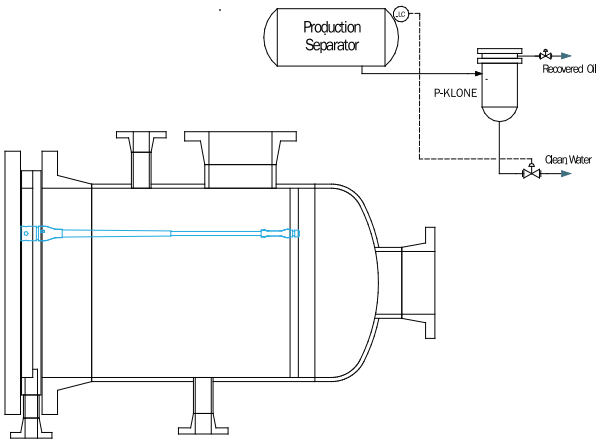


Standard Features

- ASME code pressure vessel, vertical or horizontal orientation
- Flanged liner access
- Complete process review

Materials of Construction

- Pressure vessel: internally coated carbon steel
- Support plates: coated carbon steel
- Internals: Duplex 2205



Standard Options

- Blanking liners to adapt for low-flow conditions
- Pump-driven system
- Skid, piping, instrumentation, and controls
- Water characterization services
- Chemical selection and supply
- Upgraded materials for vessels, internals, valves, instruments, and piping (Duplex SS, Hasteloy)
- Ancillary equipment such as transfer pumps and chemical injection
- Cold-weather protection such as skid enclosure and insulation
- Other options as required to meet your specifications

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