

## RevoLift® VS Flotation

### Secondary Produced Water Oil Removal



The RevoLift® VS and RevoLift® VSL (low flow) provides the performance of highly specified induced gas flotation systems at a fraction of the cost. The units utilize microbubble flotation technology (MBF®) to deliver flow rates anywhere from 0 to 30,000 BWPD at water quality targets as low as <10 ppm. The entire unit is housed in a standard 40-foot (VS) or 20-foot (VS-L) ISO container, allowing quick shipping, installation, and commissioning with minimal engineering and site preparation. The system drives itself hydraulically with no internal moving parts resulting in a wide turndown range, high tolerance for upsets, and nonstop performance.

### HOW IT WORKS

RevoLift VS uses fluid hydraulics coupled with MBF to optimize oil-in-water separation. The multi-chambered design has no internal moving parts and requires no mechanical adjustments. Produced water enters the chambers sequentially as microbubbles are introduced. Oil is lifted upon the bubble layer and is skimmed off by overflowing an oil weir. The water then flows into the next chamber where more microbubbles are introduced and more oil is separated. The process drives itself hydraulically through all chambers, and water exits the system at targets as low as <10 ppm.

### KEY BENEFITS

#### COST SAVING

- Pre-engineered, value-spec, space-saving design and simple deploy and redeploy logistics lead to lower capital costs
- Substantially lower tie-in costs compared to high-spec systems
- No moving parts within the tank, reducing costly failures and delays

#### BETTER PERFORMANCE

- Significant operational flexibility vs. high-spec systems at a much lower cost
- Wide turndown range handles variable flows without performance loss
- High tolerance for upsets due to multi-chamber design with no short-circuit paths

#### HIGH FLEXIBILITY

- Compact, self-contained design is easy to ship, install, and commission
- Autonomous operation through built-in control panel, or run Ethernet to your DCS for longer-term projects
- Remote monitoring and operation
- Quick delivery to move operations forward and achieve goals sooner
- Ability to treat difficult fluids such as polymer and frac flowback applications

**STANDARD FEATURES**

- Hydraulic skimming
- Microbubble technology via Onyx® pump for VS
- Microbubble technology via Gas Liquid Reactor (GLR®) for VS-L
- Skimmings collection tank
- Skimmings transfer pump
- Instrumentation and PLC for full automation with various control options
- Complete process review

**MATERIALS OF CONSTRUCTION**

- Tank: internally coated carbon steel
- Non-Pressurized Piping: FRP
- Pressurized Piping: FRP/Duplex 2205
- Instruments: 316 SS wetted parts
- Onyx pump: Duplex SS
- GLR vessel: Duplex 2205

**STANDARD OPTIONS**

- Water characterization services
- Chemical selection and supply
- Ancillary equipment such as transfer pumps and chemical injection
- Insulation
- Computational fluid dynamics modeling

**CONTRACTING MODELS**

- Lease
- Purchase
- Contract Operations
- Purchase + O&M

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