

Condensate and NGL Stabilization Systems

Recover valuable hydrocarbons and reduce stock-tank emissions

APPLICATIONS

- Midstream central gathering
- Midstream natural gas liquid (NGL) processing

ADVANTAGES

- Standard skid-mounted, modular designs that accommodate both refluxed and nonrefluxed applications
- Finished goods inventory available for immediate delivery
- Optional wellsite NGL recovery module
- NGL packages that incorporate high-efficiency hot oil systems for reduced emissions
- Standard products that enable customization based on product specification



Schlumberger condensate stabilizers improve midstream operations by separating NGL fractions and converting them into Y-grade NGLs or suitable hydrocarbon liquid products.

NGL or condensate stabilization involves flashing the volatile light ends from raw liquids using controlled conditions to produce a more suitable product for market. Schlumberger has designed an optional wellsite NGL recovery unit to separate NGL fractions to produce Y-grade NGLs or other suitable hydrocarbon liquid products. Our wellsite condensate stabilization units are designed to

- increase hydrocarbon recovery by lowering the vapor pressure of raw condensate to minimize evaporation losses when stored or transported in atmospheric vessels
- reduce stock tank emissions
- remove acidic constituents, such as carbon dioxide (CO₂) and hydrogen sulfide (H₂S)
- produce a suitable product for transport, blending, or a specific market.

Our portfolio also includes NGL stabilization units for midstream gathering and processing facilities.

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How it works

Condensate is brought into the system from the inlet separator and preheated in the stabilizer feed or bottom exchanger before entering the top of the contactor tower. The contactor tower can be either a tray or packed column. Within the contactor, the liquid is heated by the hot vapors rising from the reboiler as it flows downward across the trays or packing. The stabilized liquid is collected in the bottom of the contactor and exits through the feed or bottom exchanger to pipelines or storage facilities. The vapor exits the top of the contactor to either a downstream flare or vapor-residue pipeline.

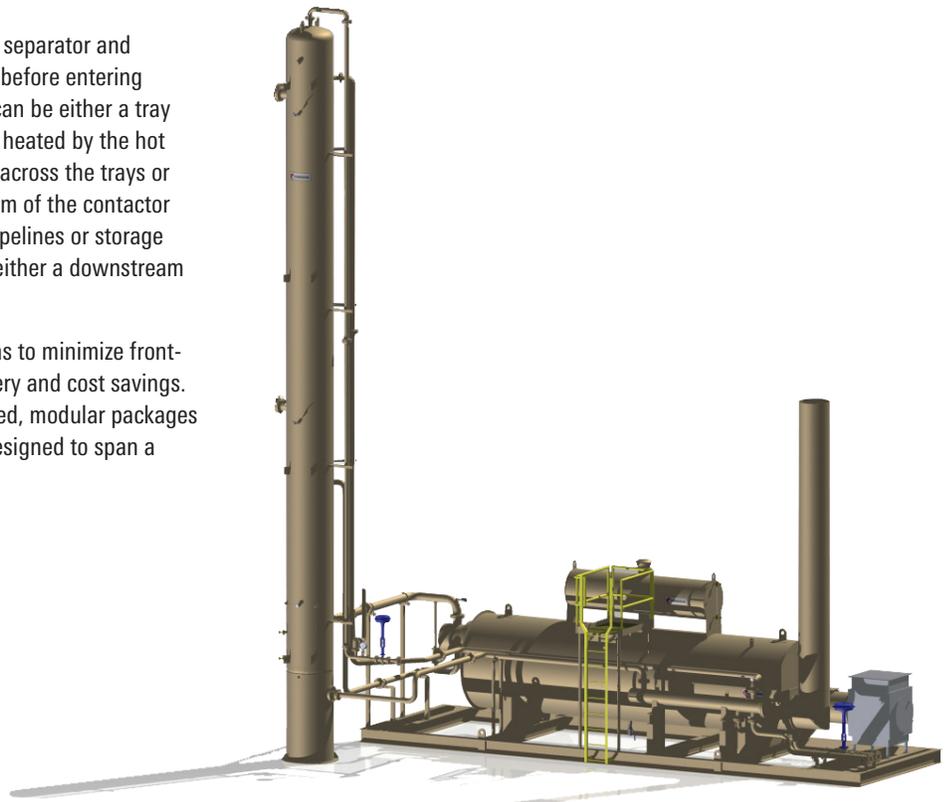
Schlumberger provides standardized stabilizer designs to minimize front-end engineering and design, resulting in faster delivery and cost savings. The standard plants are shop-fabricated, skid-mounted, modular packages that include all piping and controls. The plants are designed to span a variety of flow rates and applications.

Each stabilizer includes

- stabilizer contactor
- indirect heater, reboiler, or hot oil heater
- feed or bottom heat exchanger
- condensate heat exchanger
- pneumatic or digital controls
- burner management system.

Standard specifications

- Operating pressure from 30 to 500 psi [0.21 to 3.5 MPa]
- Operating temperature from 150 to 300 degF [66 to 149 degC]
- Wellsite
 - Standard units to handle 1,000, 2,000, and 5,000 bbl/d
 - Optional NGL recovery units for up to 5,000 bbl/d
- Midstream central gathering
 - Units to handle 5,000 and 10,000 bbl/d
- Midstream NGL processing
 - Units to handle 5,000, 10,000, and 20,000 bbl/d



Condensate stabilizer.

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