




CoStrip™

A Robust Degasification Solution



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WATER TECHNOLOGIES

CoStrip™ is an ideal solution for degasification of water streams containing high loadings of oil and suspended solids. Unlike conventional degasification towers, which utilize packed beds that are highly susceptible to plugging or fouling, CoStrip effectively removes dissolved gases such as BTEX, CO₂, and H₂S without the need for upstream treatment, reducing overall treatment costs.

Technology Benefits

- Up to 99% removal of benzene, toluene, ethylbenzene, carbon dioxide, hydrogen sulfide, and various other dissolved gases, depending upon the application
- Counter-current gas flow lowers stripping gas requirements as well as off-gas treatment costs
- Extends the life of reverse osmosis membranes due to the removal of volatile organics
- Minimizes CAPEX and OPEX costs due to corrosion associated with high concentrations of acid gas within the treatment train
- Reduces chemical and sludge costs when paired with chemical precipitative softening
- Eliminates the need for upstream treatment prior to degasification
- Safe operation of downstream equipment due to H₂S reduction
- VOCs are removed, ensuring personnel safety and mitigating environmental impacts of air emissions and water discharges



Applications

Upstream Oil & Gas

- Pretreatment to chemical softening and RO membrane systems in Veolia's OPUS® II technology
- Acid gas and volatile organics removal to minimize corrosion and enhance personnel safety along a produced water treatment train
- Boiler water pretreatment

Downstream Oil & Gas

- Volatile organics removal from refinery wastewater to enhance personnel safety

Salt Cavern Storage

- Removal of volatile hydrocarbons prior to brine pond storage to meet environmental regulations

Solution Mining

- Removal of carbon dioxide and hydrogen sulfide from mining brine

CoStrip™ Advantages*

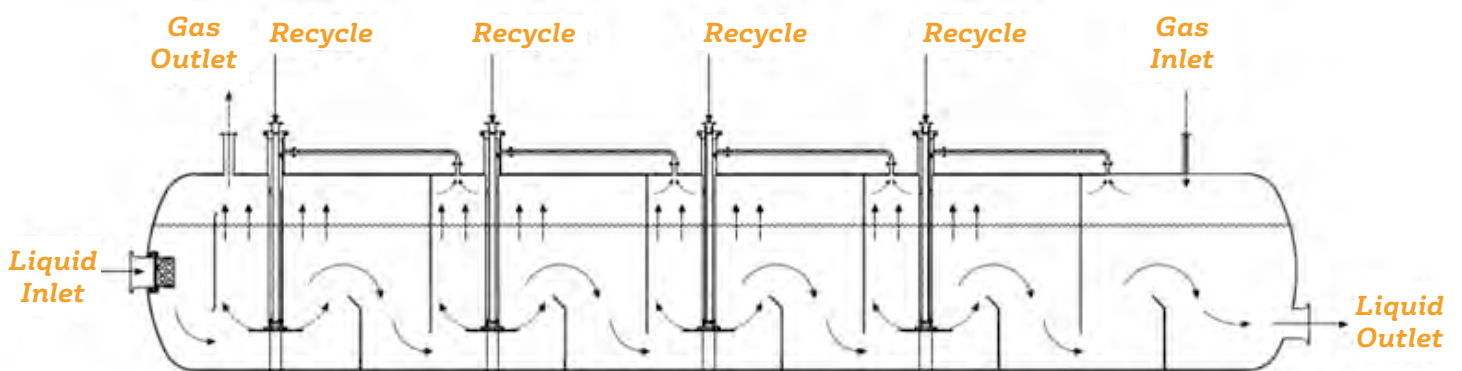
- Plugging and scaling potential diminished
- More reliable
- Maintenance-free operation
- Horizontal design minimizes height restrictions
- Performance is not affected by the presence of oil and grease or solids
- Available skid-mounted to lower installation costs

*as compared to conventional degasification tower

Technology Description

Veolia's patent-pending CoStrip degases raw water by introducing microbubbles of a stripping gas (air, nitrogen or fuel gas) counter-current to the liquid stream. First, the microbubbles are introduced into a series of chambers utilizing eductors. Next, they rise and capture dissolved gases due to the disequilibrium between the microbubble gases and the dissolved gases in the water. The microbubbles then burst within the headspace of the unit, releasing their contents. The combined off-gas is removed from the vessel and can be treated for reuse or flared. The stripping gas microbubbles provide efficient mixing and high surface area contact with the fluid to displace undesirable dissolved gases. The robust design of CoStrip enables it to handle untreated waters loaded with oil and solids while still removing 90% or more of dissolved gases.

Conventional degasification towers are tall and can be especially problematic in installations with height restrictions. Access to the media and cleaning the packed bed can be difficult due to the tower height. Unlike conventional degasification technologies that can foul, CoStrip is designed for easy, reliable, maintenance-free operation. CoStrip can also be supplied as a fully assembled skid-mounted system, providing easy installation and reducing total installed costs.




Standard Sizes

CoStrip is available in the following standard sizes. Sizing varies by application. Temperature, species being degassed, and influent/effluent quantities all impact equipment size. Higher and lower degassing levels can be achieved with appropriately sized equipment, depending upon your needs. Our experienced process engineers will recommend the best choice for your application.

MODEL NUMBER	NOMINAL CAPACITY (BBL/DAY)	NOMINAL CAPACITY (M3/HR)	APPROXIMATE DIMENSIONS (FT)	APPROXIMATE DIMENSIONS (M)
CS-15	15,000	100	5.6 D x 28 L	1.7 D x 8.5 L
CS-25	25,000	175	7.5 D x 38 L	2.3 D x 11.6 L
CS-40	40,000	275	8.5 D x 41 L	2.6 D x 12.5 L
CS-60	60,000	400	9 D x 44 L	2.7 D x 13.4 L
CS-85	85,000	575	9.5 D x 48 L	2.9 D x 14.6 L
CS-100	100,000	675	10 D x 53 L	3.0 D x 16.2 L
CS-125	125,000	825	10.5 D x 56 L	3.2 D x 17.1 L
CS-150	150,000	1,000	11 D x 58 L	3.4 D x 17.7 L
CS-175	175,000	1,150	12 D x 62 L	3.7 D x 18.9 L
CS-200	200,000	1,325	12.5 D x 67 L	3.8 D x 20.4 L

Resourcing the world



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