

Boost performance.
Save energy.

Munters mass transfer



Munters mass transfers your problems into solutions

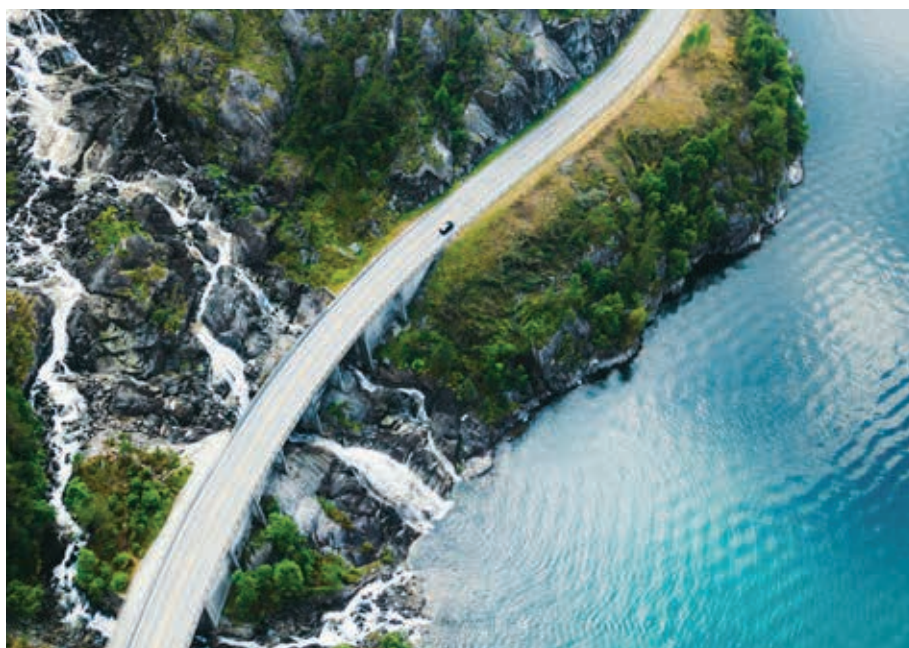
Improve the performance of your distillation, absorption, liquid extraction, stripping or heat transfer processes with Munters mass transfer equipment. Our customized solutions help solve your most critical separation challenges using the least possible amount of energy.

Munters mass transfer solutions are part of the clean technologies segment in Munters. Also featuring VOC abatement and mist elimination, Clean technologies by Munters deliver solutions that enhance process productivity, lower emissions, and bring us closer to achieving our zero environmental impact goal.

We also serve customers in the traditional processes such as fertilizer, petroleum refinery, oil and gas, petrochemical, fine chemical, pharmaceutical

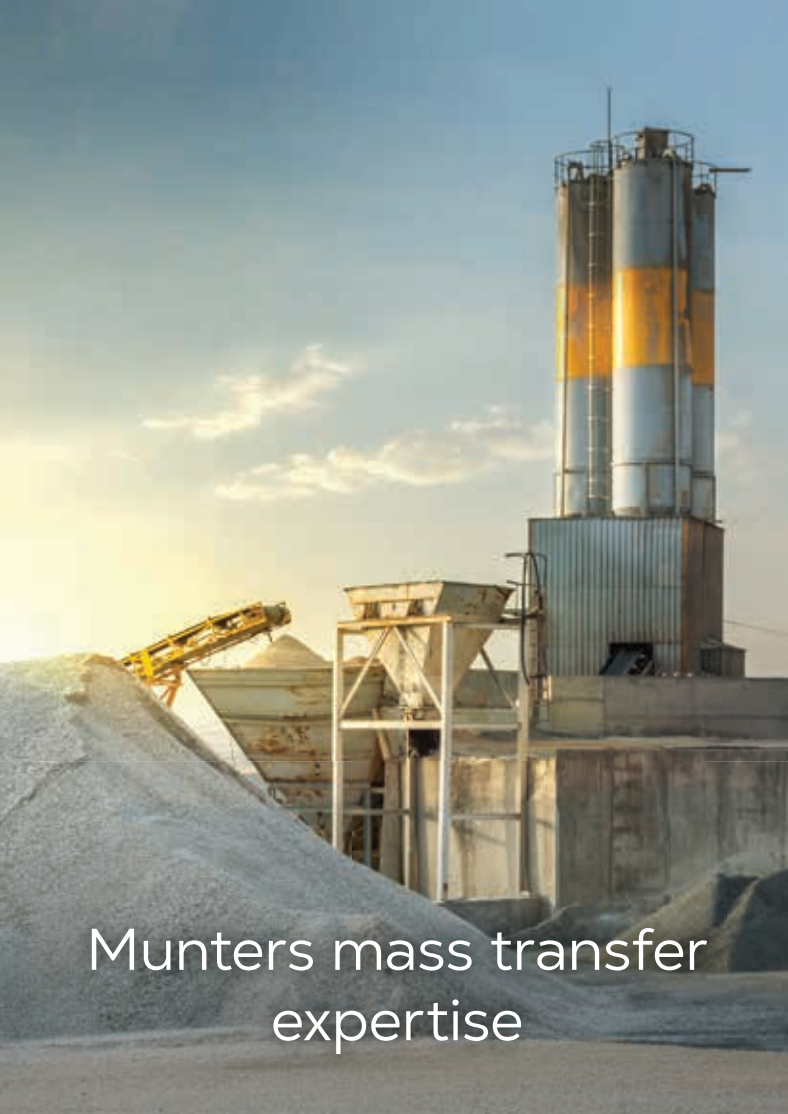
industries, etc. throughout the world and many green technologies such as biogas, bio refinery/ bio diesel; offering highly customized solutions that solve their most critical separation challenges.

Installation of our cost-effective products improves the performance of our customers' critical distillation, absorption, liquid-liquid extraction, stripping and heat transfer processes.



Clean technologies by Munters

With our vast knowledge in mist elimination, mass transfer, and VOC abatement, Munters has solutions that enhance process productivity, lower emissions, and bring us closer to achieving our zero environmental impact goal. Clean technologies by Munters deliver clean air to the world and help create a healthier planet.



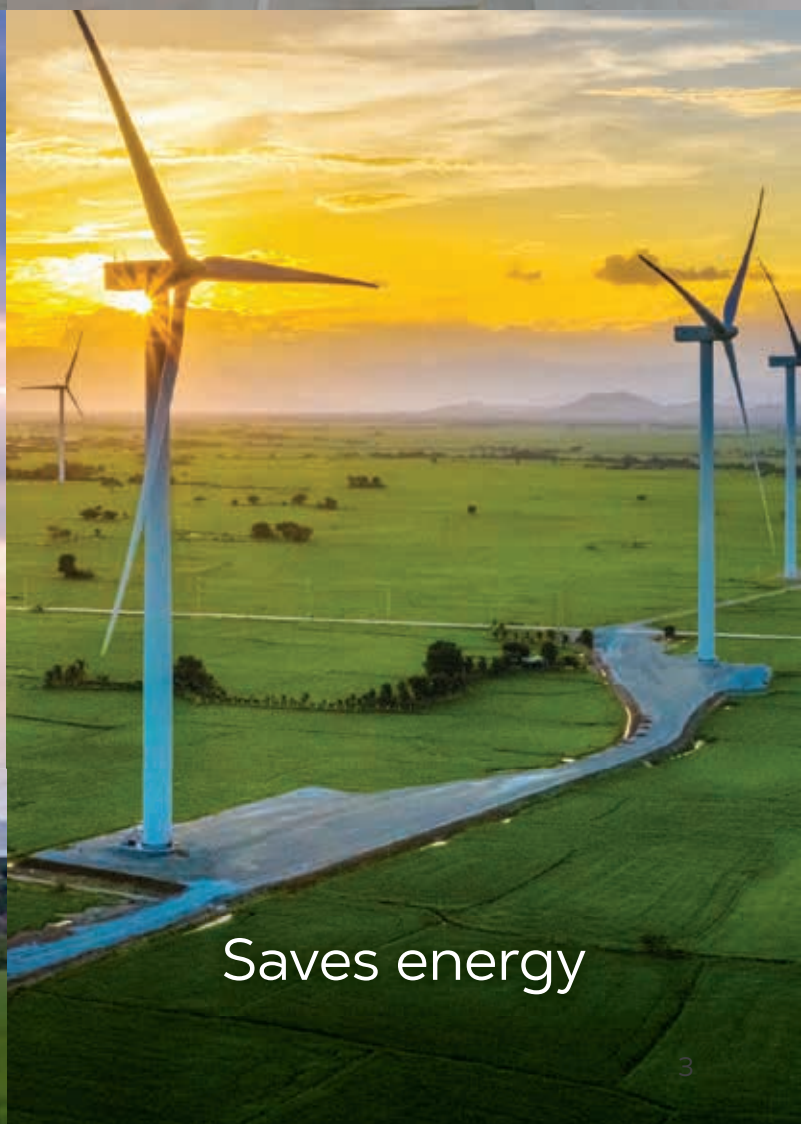
Munters mass transfer expertise



Solves critical separation challenges



Improves performance in process industries



Saves energy

Munters mass transfer solutions

Munters offers in-house capabilities to design, engineer, manufacture and supply mass transfer products including:

- Tower trays
- Random packings
- Structured packings
- Liquid distributors
- Vapor distributors
- Feed devices
- Collectors/Chimney trays
- Support plates
- Bed limiters
- Internals for liquid-liquid extraction
- Plastic internals
- Mist eliminators



Engineering competence

Take advantage of Munters world-class engineering capabilities, including services such as process design, hydraulic rating, adequacy check, mechanical design, and research and development.

A proven success record and satisfied, loyal customers are a testament to the quality and design of Munters mass transfer equipment. Used for fractionation, absorption and extraction in process industries such as oil and gas, petrochemical, refining, chemical, fertilizer and pharmaceutical,

Munters mass transfer equipment optimizes pressure drop vs capacity with solutions for most process industry separation challenges. Munters offers in-house capabilities to design, engineer, manufacture and supply mass transfer products, including:



1 Tower packing – Random and structured

Random packing: Munters complete portfolio includes Medal-Pak®, Tall-Pak®, Omni-Pak®, Tierce Ring and other first- and second- generation packings. Structured packing: Different types of corrugated, textured packings, including Grid Packing, ME-II®, ME II Wire Mesh, and Vantage® Additional®, are available in X and Y inclination angles, depending upon the process.

2 Fractionation trays

A wide range of fractionation trays, including sieve trays, bubble cap trays, floating valve trays, and high-capacity valve trays cater to the complex process requirements for diameters ranging from 1 ft (approx. 300 mm) to more than 26 ft (approx. 8000 mm). Munters also supports customers with necessary hardware in case of shutdown or scale-up operations.

3 All peripheral column internals

Munters complete range of associated internals for packed/tray towers includes gas-liquid distributors, Flash Feed Chambers, two-phase flashing feed devices, collector (take-off) trays, feed pipes, and supporting and retaining arrangements to optimize distribution and separation requirements.

4 Mist eliminators

To remove entrained liquid droplets from gas or vapor streams, Munters provides complete solutions to help achieve the required separation efficiency using WIN-Mesh® Type and WIN-Vane® Type mist eliminator models.

All packings and internals come in various materials, including stainless steel, duplex, super duplex, Monel, Hastelloy, alloy 625/825, aluminum, zirconium, titanium, copper, and plastics.

Over the years, Munters has supplied mist eliminators to more than 5,000 installations. These include column diameters up to 40 ft (approx. 12000 mm), with structured packing, associated internals and all tray types up to four-pass, including valve, sieve, bubble cap and dual flow trays.

Traditional mass transfer process solutions

Munters is a leading provider of comprehensive mass transfer solutions and equipment designed specifically for towers/columns used in petroleum refining, chemical, petrochemical, and fertilizer plants worldwide.

From efficient distillation and absorption processes to effective stripping and desorption operations, Munters solutions ensure optimal mass transfer

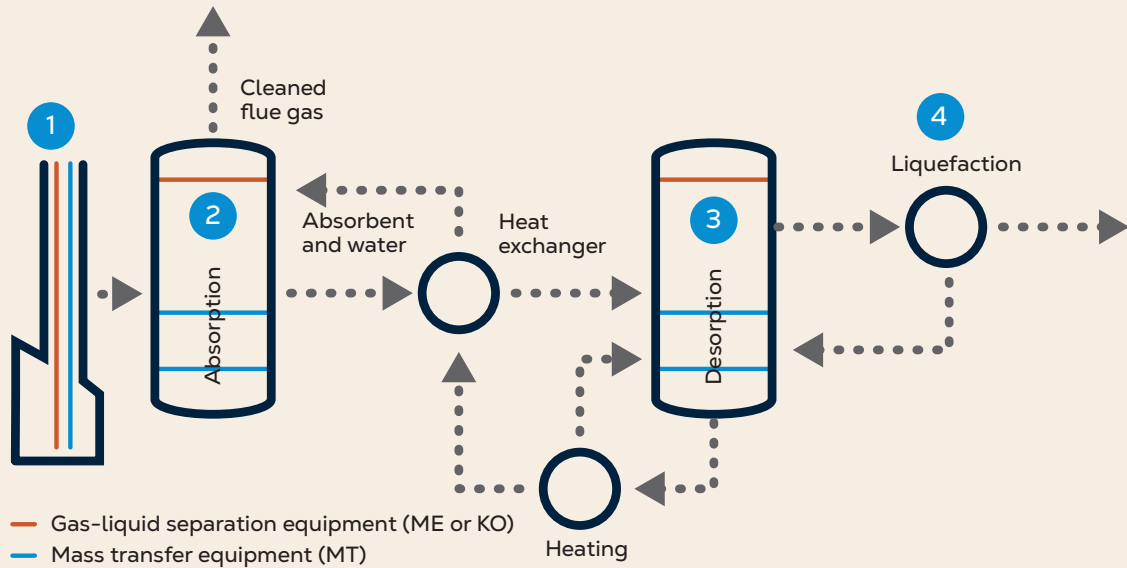
efficiency, enhanced separation capabilities, and improved overall plant performance.

By combining cutting-edge technologies, rigorous engineering expertise, and a commitment to customer satisfaction, Munters helps customers achieve greater operational efficiency, reduce energy consumption, and maximize product quality and yield.



Clean technologies by Munters

Clean technologies by Munters improve process productivity while reducing emissions and your carbon footprint. Munters supports cutting-edge green processes such as carbon capture and e-fuel production with critical mass transfer solutions. Together we can deliver clean air to the world.

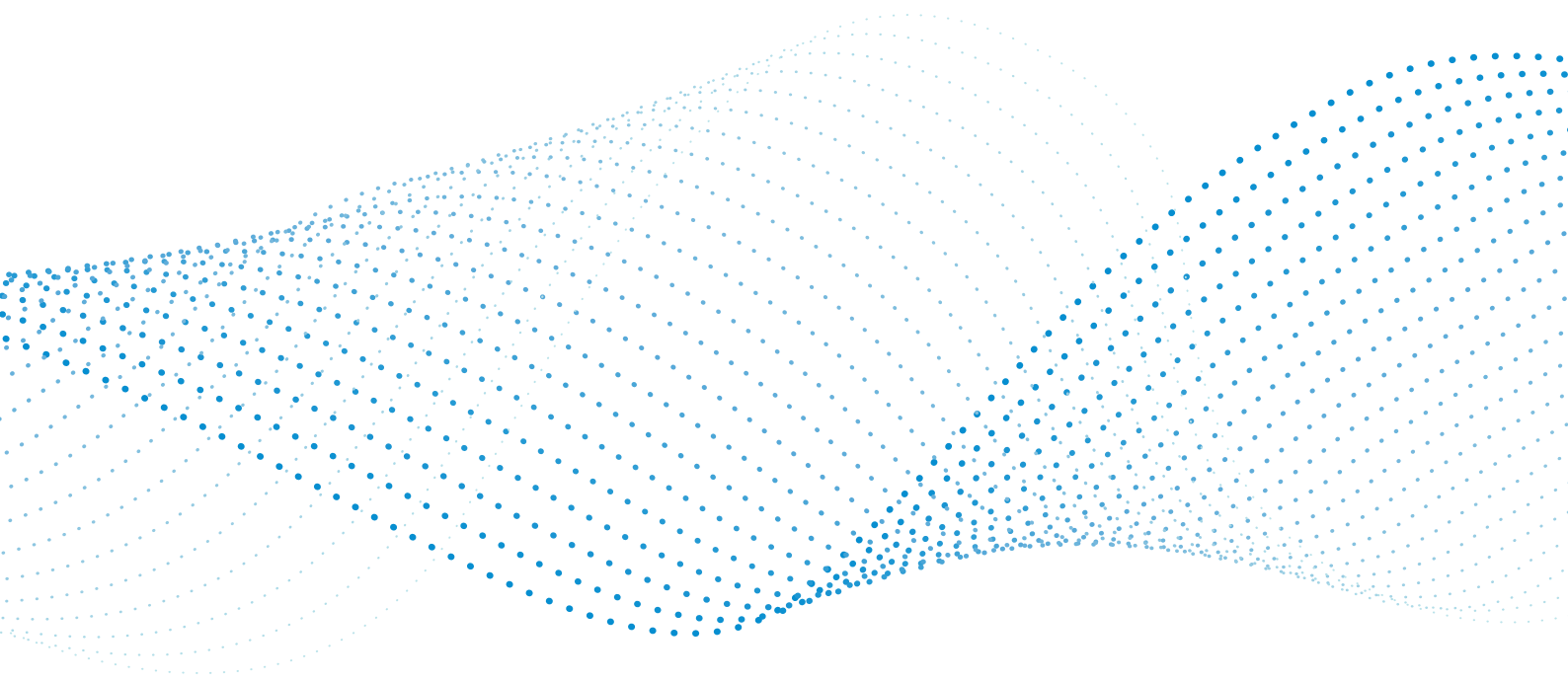


Carbon capture

Carbon capture limits carbon dioxide emissions into the atmosphere by safely capturing, using or storing carbon dioxide. This technology is crucial to reducing greenhouse gas emissions and mitigating climate change. By using mass transfer technology, industries can capture and utilize CO₂ while ensuring safe storage. With years of experience and expertise, Munters offers proven solutions for carbon capture projects.

E-fuel

Cutting-edge electrofuels or e-fuels produced from renewable energy sources like solar, wind, water, and captured carbon dioxide are carbon neutral. Munters mass transfer equipment is crucial to harvesting CO₂ and producing climate-friendly e-fuels compatible with conventional engines.



Munters is a global leader in energy-efficient air treatment and climate solutions. Using innovative technologies, Munters creates the perfect climate for customers in a wide range of industries.

Munters has been defining the future of air treatment since 1955. Today, around 4,000 employees carry out manufacturing and sales in more than 30 countries.

For more information, please visit www.munters.com