

COUNTLESS OPTIONS IN SEPARATION TECHNOLOGY

The right technology for every separation technology task — From thermal or mechanical separation technology to exhaust air purification, GEA offers everything from a single source. Thanks to the variety and range of available technologies, R&D facilities, and test centers, GEA can offer extensive expert knowledge and the necessary experience required to develop customer-optimized process solutions and plant components for a wide range of different markets.

Centrifugal Separation

Differences in density are exploited to decant or centrifuge fluids and/or insoluble solids contained in them. This is also used for separation of sewage sludge or biomass.



Membrane Filtration

Variations in density or particle size allow mixtures of different substances to be filtered and selectively separated in numerous processes in food processing or the chemical industry.



Distillation

Due to the different vapor pressures in mixtures of substances, the more volatile fluid can be evaporated and then captured via condensation. This principle is used in the recovery of solvents or in the production of spirits.



Evaporation

This process takes advantage of differences in boiling temperature in order to concentrate/evaporate fluids or separate out valuable substances.



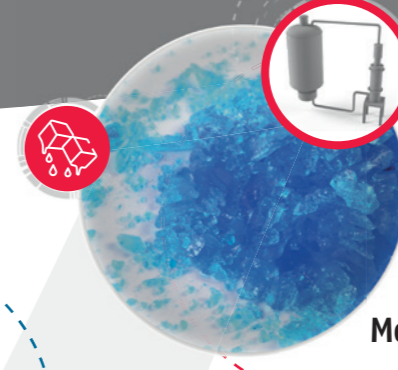
Crystallization

In the production of salt or fertilizers, differences in solution equilibriums are exploited in order to produce pure crystals.



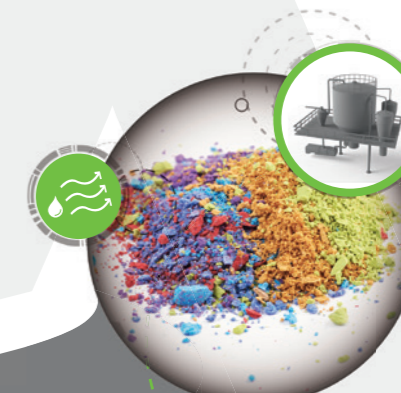
Melt Crystallization

Melt crystallization takes advantage of wide disparities in freezing points to separate substances, delivering a high degree of purity in the process.



Drying

In drying processes, heat is used to trigger a phase transformation. This is one of the most commonly used thermal methods of separation and is applied in the production of all kinds of powders — for everything from ceramics, metals, and polymers to paints, detergents, and baby food.



Exhaust Air Purification

When it comes to purifying exhaust air, the particle size, density, solubility, and electrostatic charge of particles and gases are important parameters — whether in incineration plants, production facilities or laboratories.



WE MAKE THE DIFFERENCE

WELL SEPARATED — MECHANICALLY AND THERMALLY

Our applications and our customers are at the heart of our business activities. At GEA, we foster a strong partnership with our customers. In the process, we offer customized and sustainable solutions for a wide range of customer-specific applications and maintain an extensive service portfolio.

GEA is one of the largest system suppliers for the food processing industry as well as for a broad range of other industries. The global technology group focuses on process engineering, components, and systems for sophisticated production processes in diverse end-user markets.