CE 630
Solid-liquid extraction

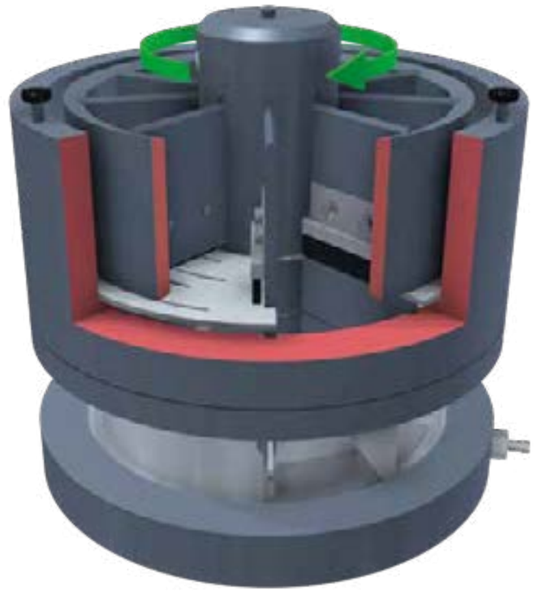
Application of a thermal separation process in soil treatment

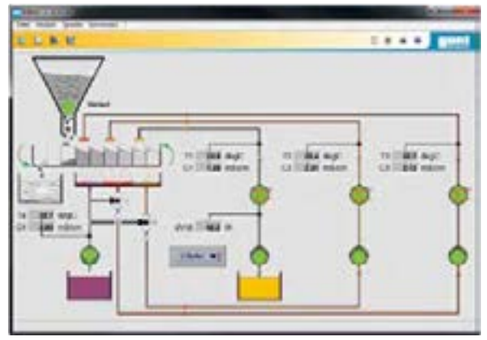
Contaminants may be present on the solid particles of the soil in a sorbed state. Solid-liquid extraction enables the separation of these contaminants from the soil particles. A suitable solvent needs to be selected for this process depending on the contaminant and the type of soil.

Our CE 630 teaching device is particularly suited to demonstrating the basic principle of this process practically and clearly. You can use the device either in continuous or discontinuous mode. In addition, you can adjust the temperature of the solvent.

1 process schematic
2 container for extraction material (solid)
3 solids dispenser
4 extractor
5 collection tank for extraction residue
6 collection tank for extract
7 storage tank for solvent
8 switch cabinet with control elements and digital displays

About the product:





Software

The device is equipped with software which displays all key process variables continuously. You can save the recorded measured values to analyse the experiments.

Rotating extractor

The main component of CE 630 is a rotating extractor, which is divided into several chambers. The extraction material, i.e. the solid with the substance to be eliminated, enters these chambers. The solvent enters the chambers from above via three sprinklers and absorbs the material to be extracted. A 3-stage process control is possible due to the rotation of the extractor. You can adjust the speed of the extractor.

Learning objectives

- basic principle of solid-liquid extraction
- influence of operation mode (continuous/discontinuous)
- investigation of the 1-stage, 2- stage and 3-stage process
- typical parameters influencing the process:
  - solvent flow rate
  - solvent temperature
  - extraction material flow rate
  - extractor speed

A satisfied lecturer at the Industrial College in Yanbu (Saudi Arabia) after successful commissioning of CE 630