

DECANTER CENTRIFUGES & PLANTS FOR SOLID/LIQUID SEPARATION



CENTRIFUGE TECHNOLOGY FOR BIODIESEL EXTRACTION - FROM ORGANIC RESOURCES

Alternative fuels will be increasingly important in the future.

Along with bioethanol, the production of biodiesel is constantly increasing. This development has its basis not only in the rising price of crude oil on the world market, but also in the development of new technologies which enable the production of new fuels from renewable resources. Additionally, there is an increased focus on climate protection in both national and international politics.

Typical uses for the HILLER decanters are:

- clarifying fresh and used oil, for use in biodiesel production
- separation of glycerine, fatty acids and salts in the glycerine processing during the production of biodiesel
- separation of methanol and washed salts from the glycerine process
- yeast separation in the biodiesel production
- dewatering of the slurry after distillation (Bioethanol)
- dewatering of fermentation substrate produced in the production of biogas
- solid matter separation from the filtrate during the pressing process

BASIC PROCEDURAL APPROACH

Raw materials used for biodiesel are traditionally mostly fresh plants, and also old cooking fat and oil, including animal fats. While in northern Europe rapeseed oil is mostly used, in the USA it is soya oil and in tropical countries palm oil.

The HILLER DecaOil high performance centrifuge is a solid-bowl scroll centrifuge which has been specially developed as a high-efficiency separator of solid matter, simultaneously separating via one or two (not mixable) fluid phases.

The mixture arrives through a fixed inlet pipe, and is fed into a rotating bowl which is spun radially. Through the effect of the centrifugal force, the fluid and the solid matter are separated. While the solid matter particles adhere to the bowl wall and then are forced out of the screw, the fluid collects at the other end of the machine. Depending on the centrifuge design and the number of liquid phases, the discharge of the clarified liquids takes place under gravity through overflow weirs or adjustable immersion tubes or under pressure via a centripetal pump.



HILLER - ADVANTAGES

- a space-saving concept
- the possibility of a 2- or 3-phase operation
- fully automatic operation due to the HILLER control system
- the most modern scroll drive operation system
- special and non-corrosive materials for each product feature
- explosion protection features
- adjustable centripetal pump for the lighter phase
- flexible use: as 3-phase machine can also be used in 2-phase operation

SCHEMATIC SECTIONAL THROUGH A HILLER DECA OIL 3-PHASE CENTRIFUGE

