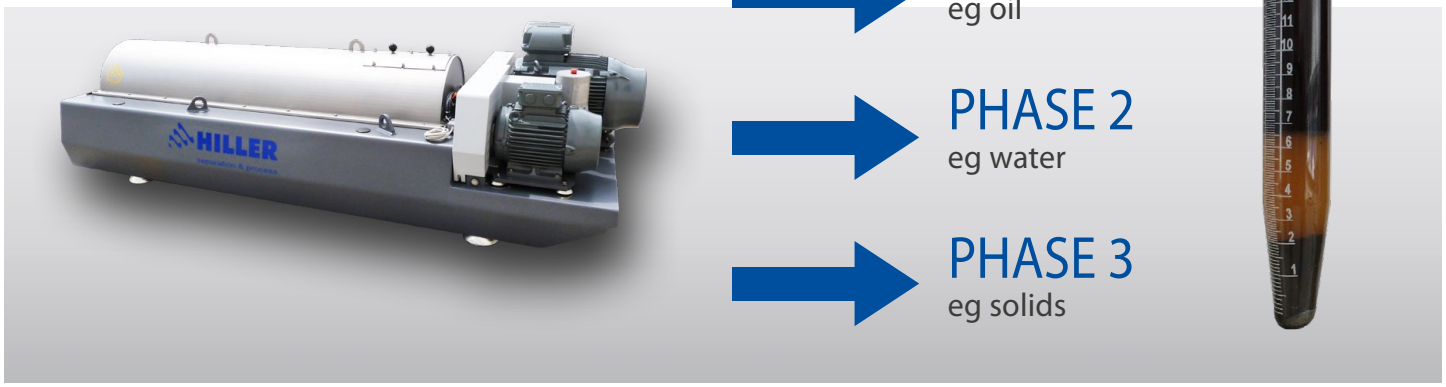
HILLER
separation & process
Member of the ferrum Group

DECANTER CENTRIFUGES
& PLANTS FOR SOLID/LIQUID SEPARATION



SEPARATION OF 3 PHASES
- WITH THE HILLER TRICAPRESS

In addition to the known effect of separation of solids by sedimentation in 2 phase decanters the HILLER Tricapress Decanters make use of the density differences of both liquids to separate them from each other in only one process step. Here two liquid phases with different densities – which cannot be mixed – are separated from a solids phase.

In addition to the well-known effect of separating solids by sedimentation, the density differences of the two liquids are used to separate them from each other.

RELY ON DECADES OF EXPERIENCE

The separation process itself is quite simple, but its optimization requires a huge know-how and long-lasting experience. This does not apply only for achieving the best possible product qualities, but also for managing impurities and for avoiding interfering effects to ensure a stable operation of the machine.

ECONOMIC EFFICIENCY AND QUALITY

- highest purity of the liquid phase maximise the value of the product
- lowest residual solid moisture for minimum disposal costs or maximum yield
- low power and operating material consumption
- various wear protection systems for long service life
- simple operation and high degree of automation

FUNCTION OF 3-PHASE SEPARATION WITH A DECANTER

The centrifugal force generated by the rotation of the bowl rapidly settles the solids particles on the bowl wall. There they are moved towards the solids discharge ports by a scroll conveyor.

As the clarified liquid flows along the bowl towards the liquids discharge zone, the centrifugal force causes the light and heavy liquid phases (typically oil and water) to separate; the oil moving upwards to the rotating axis and the water gathering in the middle between the oil and the sediment layers.

Depending on the requirements of customer and process the two liquids – now separated from each other – can be separately be drawn off from the TriaPress Decanter – be it unpressurized in the free overflow or in a closed and pressurized system.

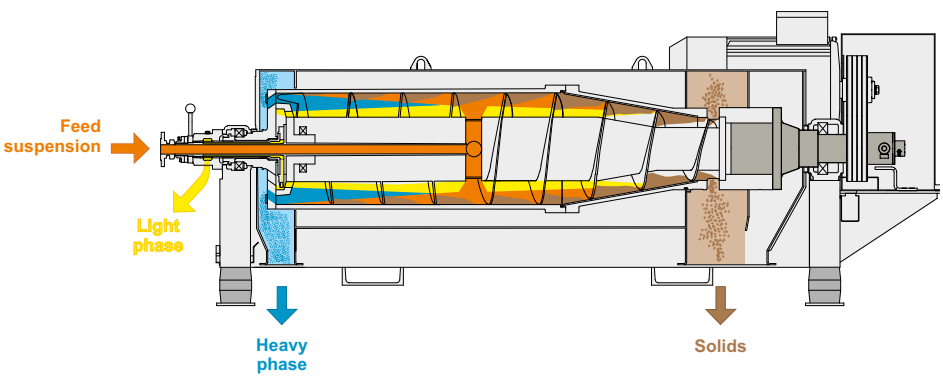
OPTIMUM SEPARATION RESULT

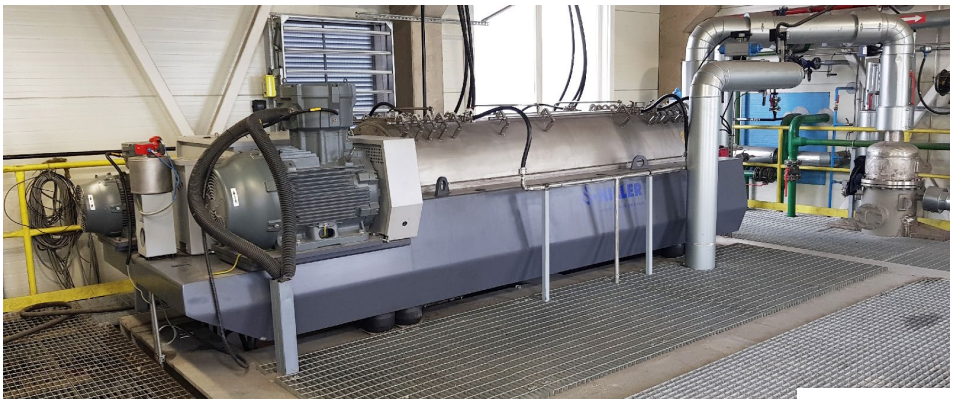
The choice of the suitable outlet system for the liquid phases, the design of the working area in the machine or the kind and manner how the particle streams are conducted in the machine are examples for design efforts. The correct choice of these efforts ensures already in advance the successful operation of each HILLER TricaPress Decanter.

Depending on the application these measures for separation are completed by hygienic and / or safety features (eg explosion protection).

TYPICAL APPLICATIONS

- production of cooking oil (eg olive oil, avocado)
- cleaning of core/seed oils
- oil recycling from sedimented sludge (eg palm oil)
- production of animal fats from slaughter waste
- tallow extraction from glue leather
- pulp press water processing in fish meal production
- fish oil extraction from fish remains
- slop oil processing
- ground sludges from crude oil storage tanks
- processing of sludges from oil lagoons
- oil containing sludges from oil drilling
- processing of used cooking oils as alternative fuels
- glycerine / fatty acid / salt separation in the production of biodiesel
- oil separation from suds of the drum laundry





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