

Centriflex



The laboratory centrifuge



Machine description

The SIEBTECHNIK laboratory centrifuge CENTRIFLEX is a universal laboratory centrifuge for examining separation possibilities of solid/liquid mixtures using elevated centrifugal forces.

The pertinent equipment accessories enable this laboratory centrifuge to be used in a wide variety of ways for filtering, washing, rinsing, clarifying and for continuously separating two liquids as well as for producing emulsions.

When utilized as a beaker centrifuge, it can be equipped with full beakers and glass inserts for sedimentation tests to be carried out.

Additionally, the centrifuge can be fitted with perforated beakers so the filtering behavior of products can be examined using different filtering media.

The CENTRIFLEX can also be used as a discontinuous separator for small suspension volumes in a host of production fields.



CENTRIFLEX execution for the application in the explosion area zone 1, ATEX conformity.

Materials

Depending on the particular application, all contact parts with the centrifuged product can be manufactured in non-corrosive, austenitic steels, Hastelloy, titanium and similar.

Zones subject to abrasive products can be protected by wear-resistant materials.

Constructive design

As a floor-mounted unit, the CENTRIFLEX is designed for operator-friendly charging and filling. A shelf in the front of the housing serves as a protected storage area for collecting containers for disposal of centrifugal or filtrate waste.

The centrifuge is operated via a touch-screen control panel with digital display of the speed, centrifuging time and operating status. Automatic or manual operation with timer are chosen via the controls supplied, yielding great flexibility.

The CENTRIFLEX is brought to its operating speed in the shortest time and electrically driven until braked and stopped. Here, smooth ramp up or rapid stop is possible. The automatic rapid stop feature enables exact centrifuge times to be attained.

With the electronic controls supplied, the unit allows flexible or specific operation required to analyze any separation problem and also the ability to simulate existing or proposed operating parameters.



Naturally the centrifuge is equipped with an electric cover lock, so that access to the rotating parts is only possible when the unit is at a standstill.

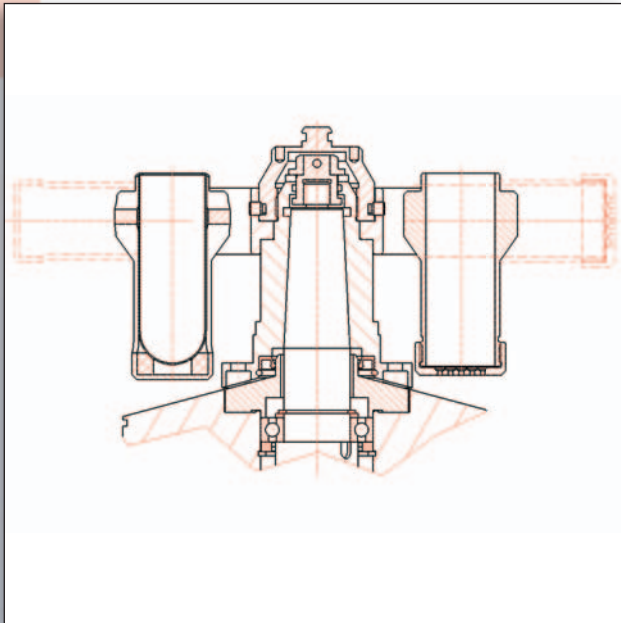
Equipment

The drums or inserts of the centrifuge can be changed quickly and easily. This enables not only individual jobs, but also treatment processes to be carried out successively.

The CENTRIFLEX can also be changed to a batch-type centrifuge with greater filling volumes on request.

The CENTRIFLEX can be converted to the following variants through corresponding accessories in a matter of minutes:

Variants



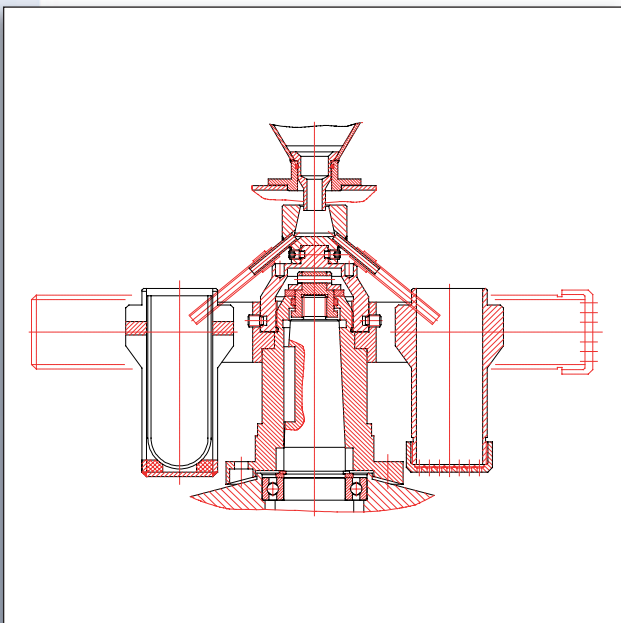
Beaker centrifuge

As a full-beaker centrifuge, it is used for sedimentation of small suspension samples. The bottle holder carries 2 or 4 bottles each with 100 cm³.

The bottle holder can also be equipped with filtering beakers, thus enabling filtration tests to be conducted with regard to residual moisture as well.

The following filter media can be used in the beakers:

- Filter paper
- CONIDUR®
slotted perforated sheets
- Laser perforated sheets
- Slotted-hole screen bases



Beaker centrifuge (bottle centrifuge) with rotating feeder system

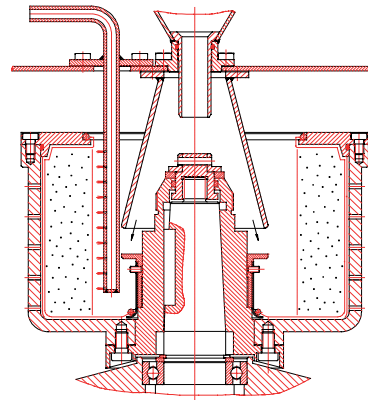
When used with beakers, the centrifuge can be equipped with a rotating feeder system, which allows filling during operation. This also allows washing tests to be conducted in the filtration beaker insert.

In conjunction with openings in the beaker walls and a special stroboscope lamp (both optional), precise filtration times through different solids layer thickness can be determined by adding dyed liquids during operation. In the same manner, when full glass beakers are used, the sedimentation process can be observed during centrifuge operation.

Screening centrifuge with washing pipe

The screening centrifuge can be used to separate solids from liquids.

The drum for this purpose is fitted with a wire-cloth inlay and filter sack (application of CONIDUR®, laser and bar screen inserts is also possible). Once the liquids have been centrifuged, the solids cake can be washed with a rinsing pipe, or neutralised as well.

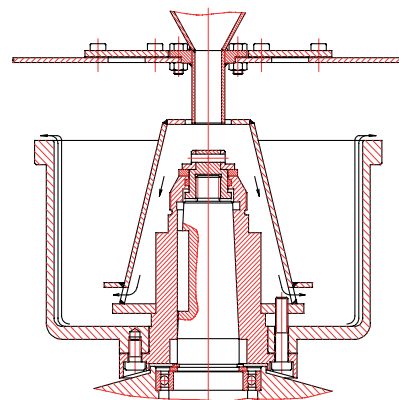


Emulsifying centrifuge

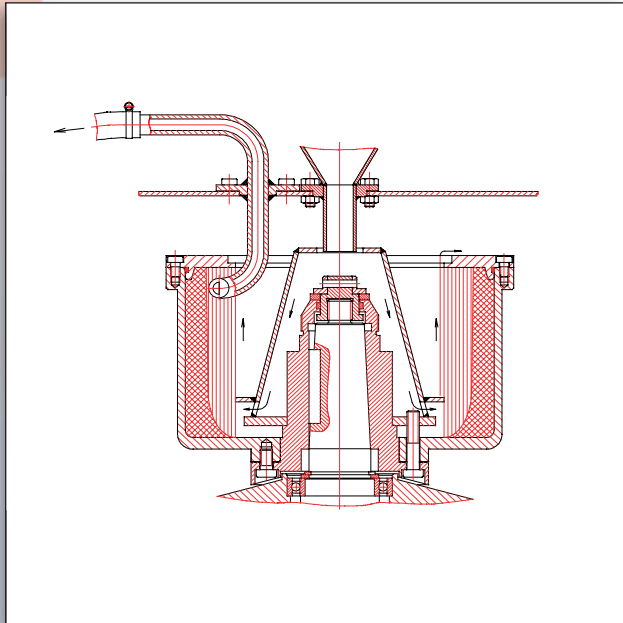
As an emulsifying centrifuge, it produces emulsions from two or more liquids.

With the action of centrifugal force, the liquid mixture pours over the edge of the drum in a very thin layer and is centrifuged against the wall of the collecting housing at high speed.

The stability of the emulsion can be increased still further – when required – by being charged several times.



Variants

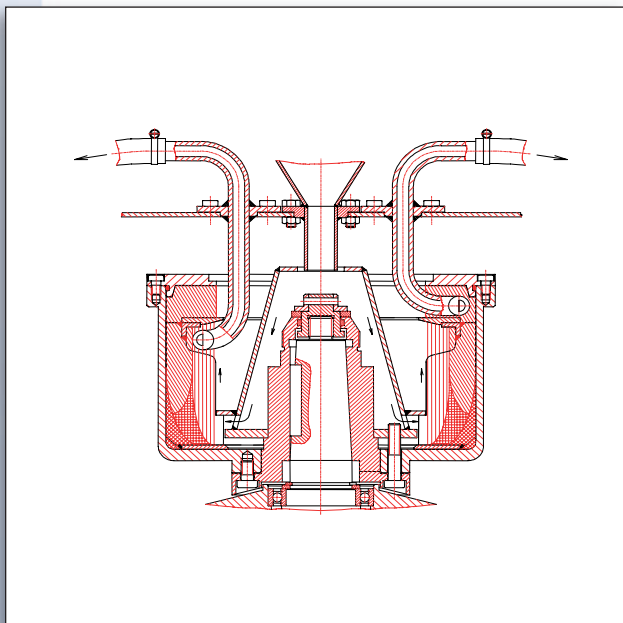


Solid drum centrifuge with overflow weir with or without peeler tube

As a sedimentation centrifuge, it finds versatile application to clarify liquids, above all, when the solid does not easily precipitate, thus requiring extended centrifugation times.

The liquid floating to the surface can be drawn off through a peeler tube after solids sedimentation.

Without the peeler tube, the solid-jacket drum can also be used as an overflow centrifuge for decanting liquids.



Separator centrifuge with two peeler tubes (3-phase separation)

As a separator centrifuge, it separates two liquids of different density, the solid settling on the drum base.

The two different liquid phases are drawn off continuously from the drum through two peeler tubes and separated independently from each other.

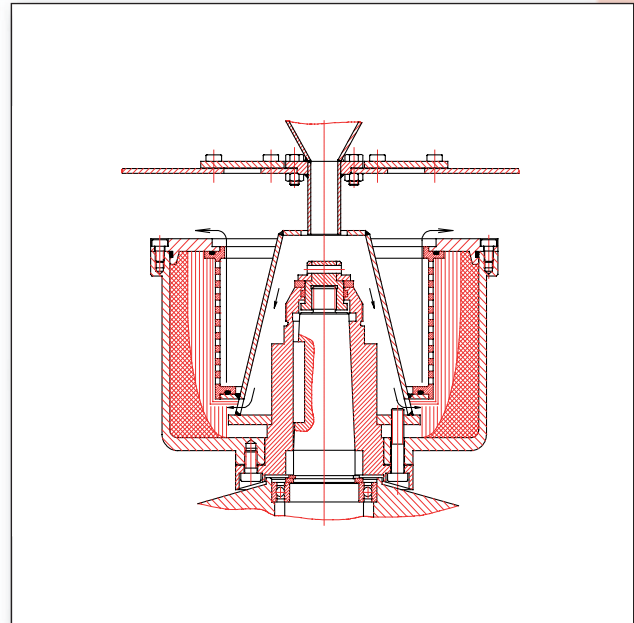
Variants

Inner filter centrifuge

When an inner filter insert is used, liquids can be separated from heavier or lighter solids through filtration from the outer filling area to the inside overflow through the filter.

The principal field of application here is filtration of slurries, forming under normal conditions a thick impervious filter cake. Another filter cloth is fixed over the fabric in the inner filter insert.

For the selective separation of lacquers and similar materials, a wire cloth is used with the appropriate mesh width. It is recommended to use a different drum for each principle color.

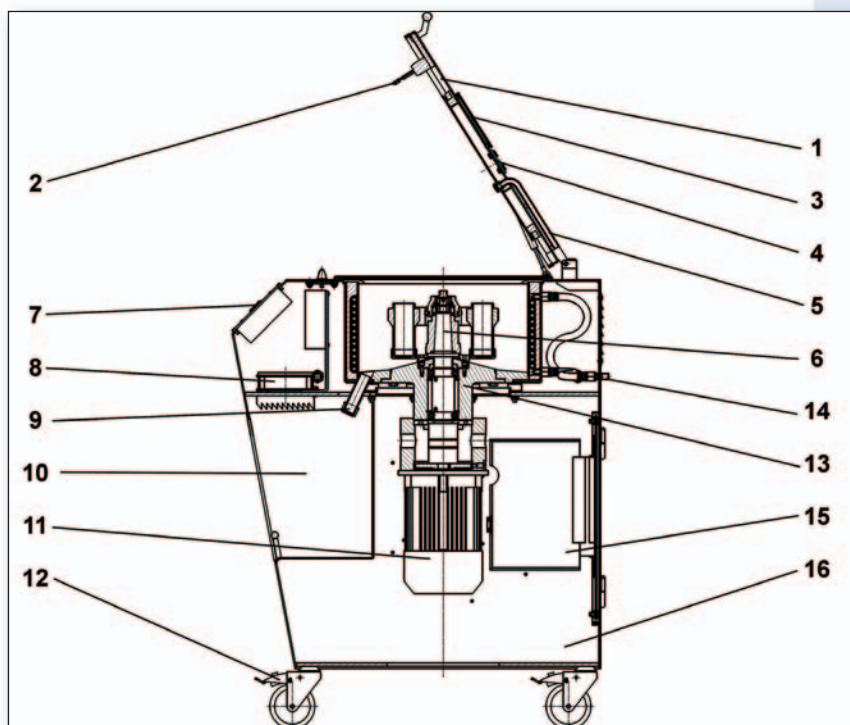


Further options are possible, e.g.

- explosion protection
(separate control system not explosion protected)
- heating/cooling of the collecting housing
- inerting - stroboscope

Component overview

- 1 Cover
- 2 Cover lock
- 3 Inspection window
- 4 Suspension feed
- 5 Temperature sensor
- 6 Rotor mounting
- 7 Control unit
- 8 Ventilator
- 9 Liquid discharge
- 10 Storage area
- 11 Drive motor
- 12 Rollers, lockable
- 13 Rotor bearing
- 14 Heating/Cooling connection
- 15 Frequency converter control
(separate for explosion area)
- 16 Centrifuge housing



Delivery Program



Screening Machines Process Equipment

circular motion screens
double counterweight screens
round screens
jigs



Sample Taking Size Reduction Machines Laboratory Equipment

individual units and complete installations
for sample taking and preparation
jaw crushers
roller mills
hammer and hammer impact mills
vibrating mills and ball mills
rotary shredders
test grading machines
analytical screening machines
dividers
testing drums



Centrifuges

scroll-screen centrifuges
pusher centrifuges
sliding discharge centrifuges
vibratory centrifuges
decanter centrifuges