

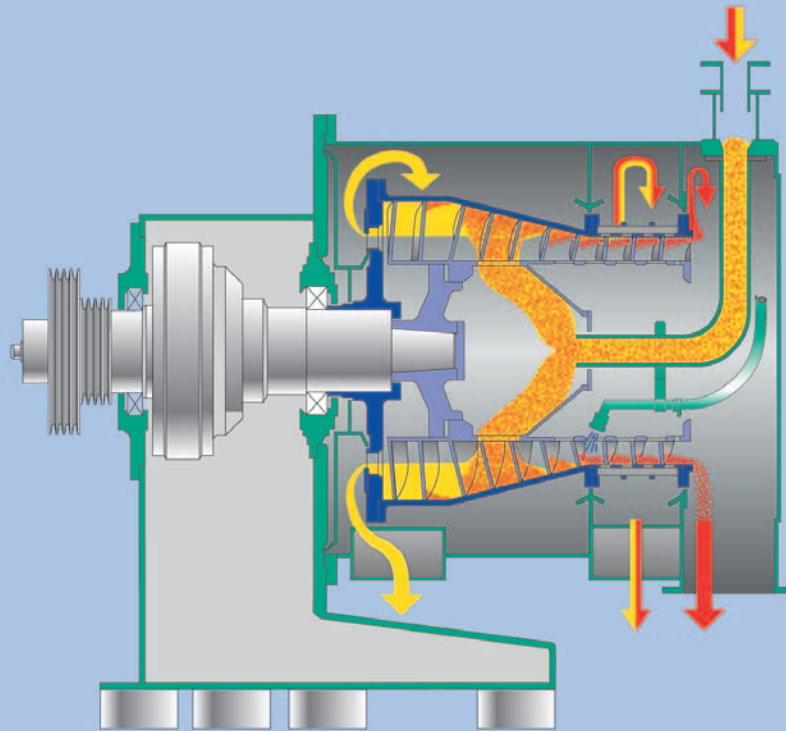
CONTHICK



*Worm/Screen Centrifuge
with pre-thickening*



Worm/Screen Centrifuge with Pre-thickening Type CONTHICK



General

The design of this centrifuge is based on the technology of our CONTURBEX Worm/Screen Centrifuge with additional pre-thickening unit for high efficiency separation of low solid concentration slurry as well as high recovery of fines.

Operation

The purpose of this centrifuge is to separate solids from liquids out of a slurry. The slurry is fed via an inlet pipe to the pre-thickening part of the centrifuge via openings at the center in the worm body.

The main liquid will be discharged at the backside of the bowl via a stepless adjustable overflow to obtain a clean liquid separation (filtrate).

The solids will be pre-thickened and transported to the centrifuge's screen where final dewatering and product washing, if needed, takes place.

Both liquid streams can be discharged separately or jointly together in one liquid stream through a double or single filtrate discharge cyclone, depending on the process requirements.

The loss of fine particles is relatively low and can even be minimized by feeding the screen liquid back to the feed of the CONTHICK.

The solids retained on the cylindrical screen are transported axially over the screen by the worm to the solids discharge housing.

Machine

An amply dimensioned Cyclo-gear unit ensures a constant differential speed between worm and bowl/screen and so a constant process performance.

The centrifuge is driven by means of an electric motor with V-belt transmission. Depending on process requirements a frequency converter can be used for variable main speed and/or variable differential speed. The machine is arranged on large rubber buffers for vibration isolation.

The centrifuge is equipped with a special profile wedge-wire screen with maximum open area but, if processwise required, also with special perforated screen plates. All screens are very easily replaceable without dismantling the machine and rotating parts.

Depending on process requirements the centrifuge housing can be equipped with rinsing connections for cleaning of the process parts.

Another important option is the possible modification of an existing CONTURBEX to CONTHICK type in case of a change in product specification and/or feed conditions.

Typical application

- Crystals, Granulates or fibres with good sedimentation properties
- Particle size $d' > 0,050$ mm in RRSB-graph
- Feed concentration of solids to the centrifuge from 0 - 60 wt %

Todate with normal screen centrifuges an efficient separation (yield) of fine particles in the range of 50 to 100 micron could be achieved only under the condition of a very good pre-thickening of the feed slurry. This pre-thickening stage is included in the design of the CONTHICK centrifuge.

Material quality

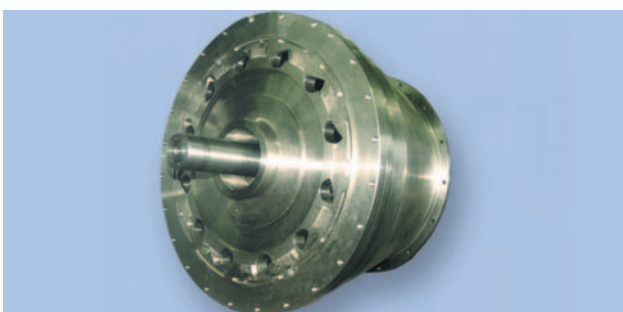
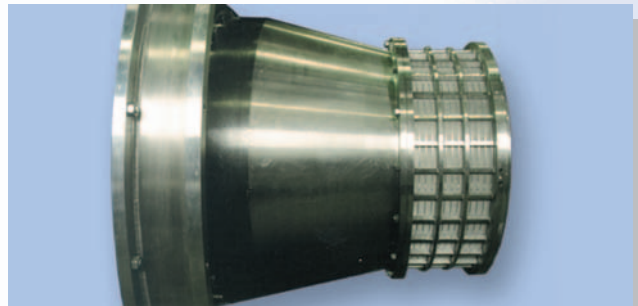
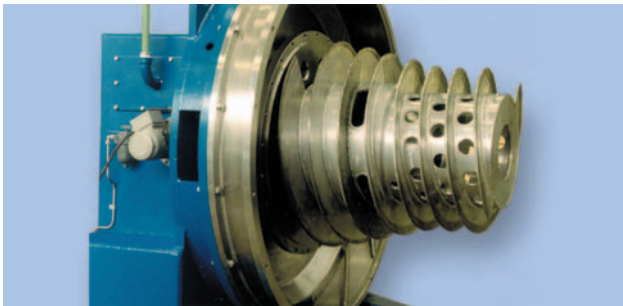
For normal general application the rotating (wetted) parts are made from stainless steel, quality 1.4581/71 (AISI 316 Ti) and in addition the flight-tips could have a highly wear resistant hard coating.

The gear and bearing housing are from a very strong welded normal mild steel construction. Other materials are available depending on process requirements, up to titanium etc.

The great advantages

- High yield (low solids loss)
- Low final moisture
- Long service life of screen element
- Overhung design offering:
 - Easy replacement of screen without dismantling of worm
 - Simple design of gastight execution
 - Possible modification of existing CONTURBEX

Details of rotating parts



Standard executions

Type	CONTHICK H/V	240/180	320/240	450/340	600/450	800/600	1000/750	1200/900
Drive motor	ca. kW	5.5	7.5	15	30	55	90	132
Length	mm	1150	1200	1550	1800	2250	2700	3200
Width	mm	1200	1200	1550	2000	2100	2660	3100
Height	mm	800	850	1100	1300	1800	2100	2300
Weight	kg	700	750	1300	2000	4200	7500	10000

Delivery Program



Screening Machines Process Equipment

**circular motion screens
double counterweight screens
round screens
jigs
attrition machines
flotation cells**



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**