



# Centrifuges

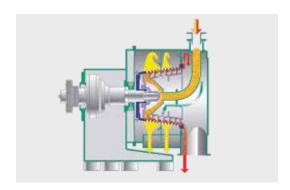
**Product Range** 

### SIEBTECHNIK TEMA CENTRIFUGES

Continuous centrifuges are the best solution for mechanical separation of solids from liquids from technical and economical point of view.

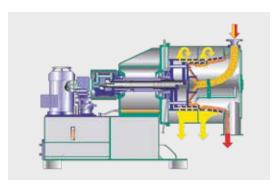
They can dewater large quantities of solids to low final moistures, while needing little space, energy or time.

#### FILTERING CENTRIFUGES



### CONTURBEX | screen scroll centrifuge

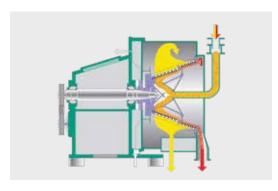
The most versatile of our continuosly operating filtration machines are our screen scroll centrifuges. The cantilever design provides a clear separation of drive end and product housing with only one shaft feedthrough. The solids retained by the screening element are conveyed by the drum inclination and by a scroll with slightly different rotational speed from the small to the large diameter. The feed particle size of the solids to be separated is ideally greater than 80  $\mu m$ .



### SHS | pusher centrifuge

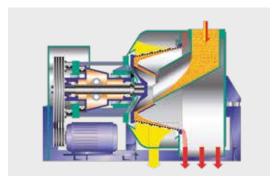
In the pusher centrifuge, the solid matter is retained on a wedge wire basket and pushed ring by ring to the solid discharge by means of a oscillating plate.

With the low transport speed of the thick layer of retained solids, the machine design allows high retention time, low fine losses and minimal particle breakage. Furthermore, the multi-stage design allows high washing efficiency through displacement washing.



### TURBOCASCADE | sliding centrifuge

The TURBOCASCADE is specially developed for de-watering solids with a uniform particle size of 0.5 mm and larger. The particles slide individually, i.e. not in a closed layer, over the screens arranged in stages. Despite the very short residence time of the individual particles in the centrifuge, final moistures as low as 0.01 % can be achieved.



#### HSG | vibrating centrifuge

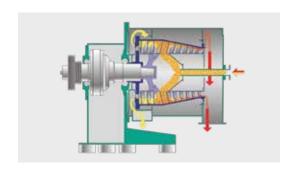
Our largest capacity machines, these vibrating centrifuges process up to 450 tph of solids. The particles are retained on the screen basket and conveyed from the small to the large diameter by an axial vibration superimposed over the centrifugal motion. The most common applications are dewatering coal, sea salt and sand.

### SIEBTECHNIK TEMA CENTRIFUGES

### SEDIMENTING CENTRIFUGES

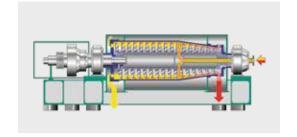
### SHORTBOWL | decanter centrifuge

The SHORTBOWL decanter with cantilever design is the optimal solution for hot applications and high cleaning requirements. Precondition for the use of an SBD due to the cantilever-design are good sedimentation properties respectively high density differences between liquid and solid.



### DZ | decanter centrifuge (solid bowl)

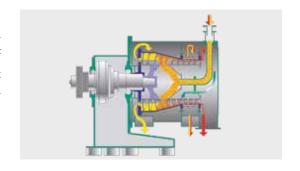
In decanter centrifuges, very fine solids are separated from liquids with a lower specific gravity. The solids sediment from the liquid due to the centrifugal forces inside the rotating bowl. The settled solids are then transported to the small diameter by a scroll and discharged there. The clarified liquid exits the machine via an adjustable weir at the cylindrical end of the bowl.



### HYBRID CENTRIFUGES

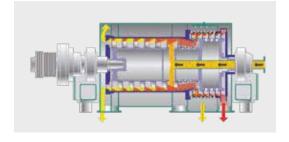
### CONTHICK | screen bowl decanter centrifuge

The design of this centrifuge is based on the cantilever technology. Common to all our hybrid centrifuges is the combination of sedimenting first part with the option to perform a displacement wash. The washing liquid from the screen section can be threated separately.



### TURBOSCREEN | screen bowl decanter centrifuge

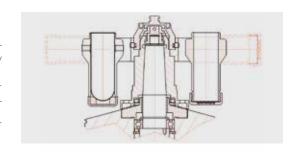
If higher g-forces are necessary, a TURBOSCREEN decanter is the best choice. In case of products with good filtration properties the screen section can be continued directly with the decanter outlet diameter. For for products with poor filtration properties the screen diameter can be increased to allow a thin layer filtration and dewatering.



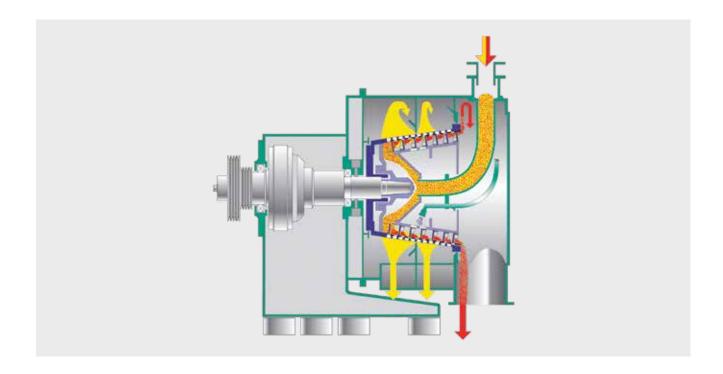
### LABORATORY CENTRIFUGES

### CENTRIFLEX & CENTRILAB | laboratory centrifuges

The laboratory centrifuges CENTRIFLEX & CENTRILAB are universal centrifuges to examine the options for separation of solids/liquids mixtures under the influence of high centrifugal forces. The wide range of inserts allow applications for filtration, washing, rinsing, clarification and continuous separation of two liquids.



### CONTURBEX | SCREEN SCROLL CENTRIFUGE



### Universal machine for demanding tasks

The SIEBTECHNIK CONTURBEX screen scroll centrifuge is a machine concept for demanding tasks that has been proving its worth for decades.

The CONTURBEX is a continuously operating filtration centrifuge for a broad range of applications. We achieve this flexibility by means of a centrifuge scroll driven at a differential speed.

There are thousands of CONTURBEX screen scroll centrifuges in operation in the most varied industrial sectors worldwide. They perform tasks in the chemical industry with specific corrosion-resistance requirements or gas-tight processes as well as fulfilling hygiene requirements in the food industry. We also offer versions of the CONTURBEX with USDA certification.

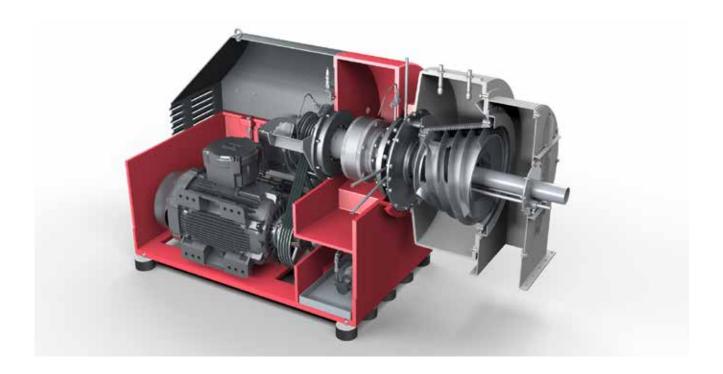
It was the increasingly demanding requirements, particularly for improved throughput rates, that motivated us to expand our CONTURBEX series. The CX type machine was developed with the aid of the latest design and production methods and on the basis of decades of experience.

The design principle simplifies maintenance and thanks to an optimum centre of gravity position guarantees a vibration-free and economically efficient operation with high throughput rates.

All CONTURBEX centrifuges have universal application and impress by their quiet running characteristics, even where feed conditions fluctuate.

- ♦ Continuous operation
- Wide range of applications
- Very quiet running characteristics, even with fluctuating feed conditions
- Excellent product washing
- Low specific costs
- Advantageous design with shaft througholes on one side
- Proven suitability for hygienic applications
- Flexible drive concept
- High machine availability
- Minimum maintenance
- ◆ Long service life

# **CONTURBEX | SCREEN SCROLL CENTRIFUGE**



### **Standard Machine Sizes**

		200	250	350	450	520	670	730	900	1,000	1,200	1,500
Length	mm	700	910	1,150	1,150	1,480	1,560	2,150	2,400	2,600	4,200	4,200
Width	mm	880	1,050	1,500	1,500	1,920	2,000	2,100	2,600	2,700	2,800	2,800
Height	mm	570	800	970	1,150	1,470	1,470	1,650	2,600	2,600	2,600	2,600
Weight	kg	230	560	900	1,100	1,800	2,000	4,000	7,000	8,000	12,000	13,000

Special versions on request.

### **Main Industries**



Fertilizers



Food & Dairy



Organic Compounds



Polymers



Recycling & ZLD



& ZLD Minerals & Min

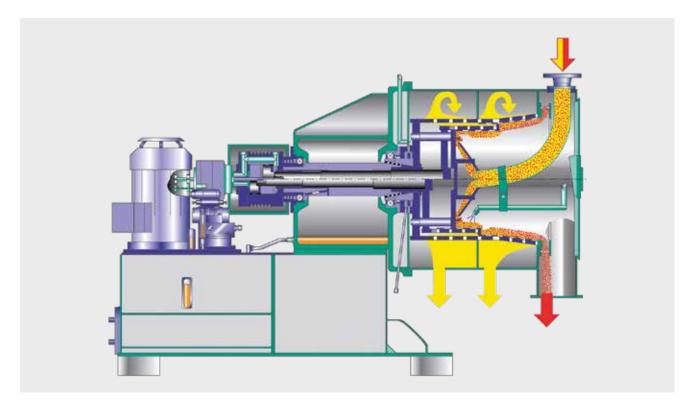


Other Industries

- Ammoniumchlorid
- Ammoniumsulfate
- ♦ Caprolactam
- Citric Acid
- ♦ EPS
- Glaubersalt
- ◆ Lactose
- ◆ Lithiumchlorid
- Lithiumhydroxid
- Monosodiumglutamate
- MOP

- Nickelsulfate
- Polyvinylalcohole
- Sodiumsulfate
- ♦ SOP
- ◆ Styrolcopolymerisate
- ...

### SHS | PUSHER CENTRIFUGE



### Application-focused to the last detail

The SIEBTECHNIK SHS pusher centrifuge has established and proved itself as a modern high-performance machine in many areas of industry. It reliably performs separation work in crystalline applications. SIEBTECHNIK is also one of the leading suppliers of pusher centrifuges for polymer products.

The basis for this success are individual design variants that perform complex separating tasks. All SIEBTECH-NIK pusher centrifuges guarantee best results, amongst them low residual moisture, high solid yield and outstanding washing efficiency. Special attention is paid to the protection of the valuable solid particles. Especially in the areas of feed and discharge, where the product flow is accelerated and decelerated, SIEBTECHNIK offers individual solutions for every application.

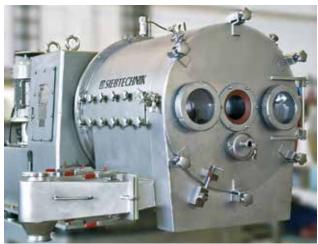
We would be pleased to show you the possible applications of the SIEBTECHNIK SHS pusher centrifuge. Together with you we will find new solutions for your special separation task.

- Continuous operation
- Optimum product washing
- High solid yield
- ♦ Low specific costs
- Multi-stage rotor designs
- Product feed and pre-dewatering (Patent no. 195 46 019 C1)
- High machine availability
- Minimum maintenance
- Long service life



# **SHS | PUSHER CENTRIFUGE**





### **Standard Machine Sizes**

		250	350	450	530	600	800	900	1,000	1,100	1,200
One-stage cylindrical-conical		×	×	×	X	×	×	×	×	Х	Х
Two-stage cylindrical-conical		X	X	×	×	×	×	X	×	X	X
Three-stage cylindrical & cylind	rical-conical		×			×	×	×	×	×	X
Length	approx. mm	1,500	1,750	1,900	2,600	2,600	2,750	2,750	3,300	3,675	3,750
Width	approx. mm	850	950	1,100	1,800	1,800	2,000	2,000	2,400	2,400	2,400
Height	approx. mm	950	1,020	1,050	1,700	1,700	2,050	2,050	2,150	2,250	2,250
Operating weight	approx. kg	800	1,150	1,900	5,000	5,600	8,000	10,000	14,000	15,000	16,000

Special versions on request.

### **Main Industries**















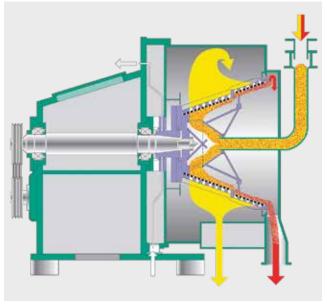


Other Industries

- ABS/ASA
- Ammonium Chloride
- Ammonium Sulfate
- Aspertame
- Copper Sulfate
- Ferrous Sulfate
- Gelatine
- Glaubersalt
- HDPE
- Lithiumhydroxide

- Monosodiumglutamate
- MOP
- PVB
- Sodium Nitrate
- Sodiumsulfate
- SOP

# TURBOCASCADE | SLIDING CENTRIFUGE





### Centrifuge for granulates

The TURBOCASCADE sliding centrifuge is a special unit that is used mainly for the dewatering of granulate-like particles.

The main areas of application for this machine are polymer pellets that are especially carefully separated from the carrying water or from a suspension. Despite the short time spent by the products in the centrifuge end-moisture levels of up to 0.05 % are achieved.

The TURBOCASCADE is a robust, powerful and efficient centrifuge. Installation and maintenance are outstandingly uncomplicated.

### **Advantages**

- ♦ Continuous operation
- Product-safe operation
- Product protection thanks to gas-tightdesign
- ♦ Intensive separating action
- ♦ Low specific energy consumption
- ♦ Small footprint
- Low heat losses thanks to air circulationsystem
- Optional trace heating and isolation
- High machine availability
- Minimum maintenance
- Long service life

### **Typical Applications**

- Compound pellets
- ◆ PA 6.6
- ◆ Polycarbonates

### **Main Industries**



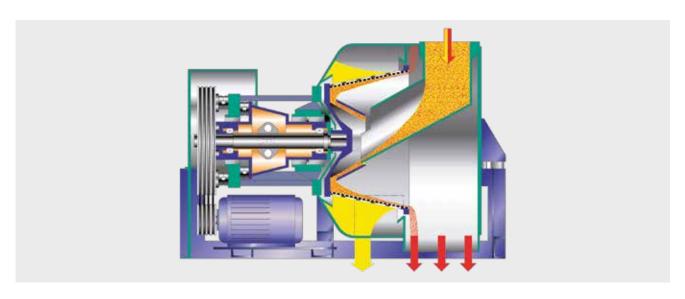
Polymers

### **Standard Machine Sizes**

	330	400	520	670
Drive motor approx. kW	5.5	7.5	11.0	22.0
Length mm	1,150	1,250	1,550	1,900
Width mm	800	800	1,450	1,800
Height mm	800	850	1,350	1,700
Weight kg	550	650	1,250	1,800

Special versions on request.

# **HSG | VIBRATING CENTRIFUGE**



### Master of solid quantity throughput

With the SIEBTECHNIK HSG vibrating centrifuge you can continuously dewater the largest quantities of solid material in the world. Coarse salts, sea salt, potash, coal, sand or whatever: the HSG continuously dewaters the largest quantities of solid material reliably, fully automatically and self-regulatingly. Even with fluctuating feeds the HSG does its work at the lowest possible energy cost.

Steady and continuous operation and a maintenance-friendly construction are the result of over 70 years of consistent further-development of SIEBTECHNIK HSG centrifuges.

### **Advantages**

- Continuous operation
- Reduced maintenance costs
- Stable vibration behaviour
- High solid-material throughput
- High machine availability
- Minimum maintenance
- Long service life

### **Standard Machine Sizes**

		600	800	1,000	1,100	1,200	1,300	1,500	1,650
Drive motor	approx. kW	7.5	15	22	30	37	55	75	110
Length	mm	1,500	2,070	2,200	2,400	2,400	2,900	3,950	4,175
Width	mm	1,270	1,650	1,900	2,000	2,000	2,230	2,610	3,075
Height	mm	1,200	1,425	1,650	1,770	1,770	2,040	2,340	2,815
Weight	kg	1,000	2,500	3,400	3,800	3,900	7,000	9,000	13,500

Special versions on request.

#### **Main Industries**





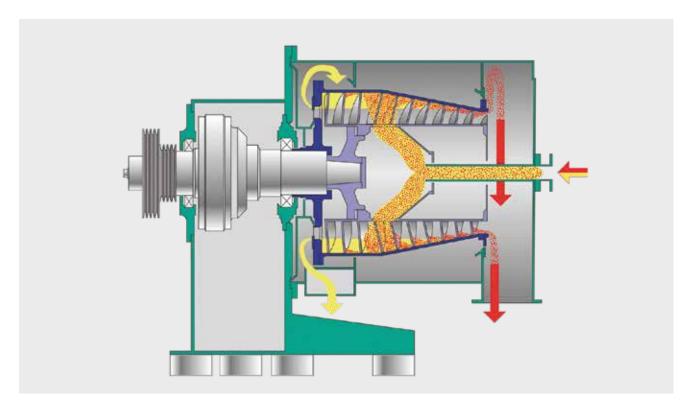






- Course Coal
- Fine Coal
- Flotation Residue
- Iron Ore Sand
- Limestone
- Quartz Sand
- Sea Salt

## SHORTBOWL | DECANTER CENTRIFUGE



### As long as necessary – with enormous advantages

The SHORTBOWL decanter centrifuge is designed overhung-mounted. Because of the special geometry of the rotating parts it is highly suited for the separation of fine solid particles having a specific gravity that is very different from the liquid phase.

The design principle with its strict separation of process and drive unit makes this decanter ideal for applications in pharmaceutical or food manufacturing operations (CIP standard). This machine concept also means that the decanter can be used in high-temperature areas or for pressure-tight processes.

From laboratory standard through to rough work in the primary materials industry the SBD decanter is ideally suited. Versions in special materials, explosion protection and inert gas overlay or hot gas blanketing have been part of our offering for over 50 years. We also increase operational reliability by fitting oil-circuit lubrication for all bearings, including gear unit and scroll bearings. We also offer this version with USDA certification.

Product washing can be more advantageously carried out than with normal decanters.

- ♦ Continuous operation
- Overhung-mounted
- ♦ Short design
- Free and unobstructed discharge of the solid matter from the product housing
- High-temperature versions
- USDA versions
- Better product washing than in normal decanters
- Flexible drive concept
- High machine availability
- Minimum maintenance
- Long service life

# SHORTBOWL | DECANTER CENTRIFUGE

### **Standard Machine Sizes**

		140	250	350	500	600	750	900
Drive motor	approx. kW	3	7.5	15	30	45	75	110
Length	approx. mm	855	1,195	1,635	1,750	2,150	2,550	3,010
Width	approx. mm	760	1,200	1,550	1,600	2,100	2,250	2,600
Height	approx. mm	515	776	1,015	1,100	1,560	1,750	1,950
Weight	approx. kg	220	850	1,930	3,000	4,500	7,000	8,200

Special versions on request.



### **Main Industries**



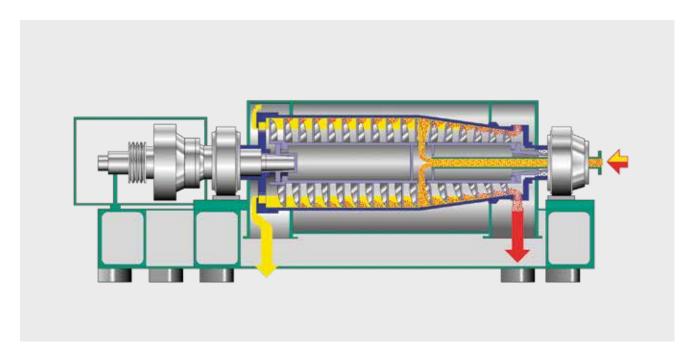






- Alpha-Gypsum
- Thermoplastic Polymer Pellets
- Fryer Oil Recovery
- Glycerin
- Lactose

## DZ | DECANTER CENTRIFUGE - SOLID BOWL



### Individual, functional and versatile

The SIEBTECHNIK decanter centrifuge is a continuously operating solid-bowl scroll centrifuge in tunnel or pedestal bearing design. Our decanters are individual, functional and versatile. They offer highly efficient separation of even the finest solid materials together with nearly complete clarification of the liquid phase.

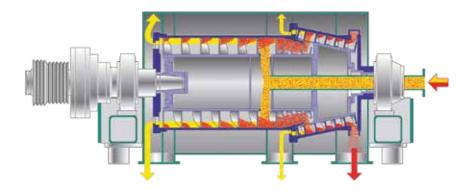
The wish to further and further reduce the pollutant levels in waste water for the lasting protection of our environment (ZLD – zero liquid discharge) and demand by industry for production shops to be as efficient as possible make the decanter one of the most frequently used machines.

Whether it's highest or the lowest throughputs, lowest or highest temperatures, gas-tight design, chemical resistance or explosion protection – we offer a solution.

Operational reliability under all operating conditions through, amongst other things, oil-circuit lubrication for all bearings, including gear unit and scroll bearings has priority on SIEBTECHNIK decanter centrifuges.

Low maintenance costs as well as individual adaptation and design variants make our decanter centrifuges a unique separating apparatus for nearly all technical separating processes. These include pure separating processes (clarification and solids dewatering), thickening (compacting) and classification both in the open and gastight process.

- Continous operation
- Wide range of applications in all areas of industry
- Flexible drive concept
- High machine availability
- Minimum maintenance
- ◆ Long service life



Double conical design for separate washing water discharge

# DZ | DECANTER CENTRIFUGE - SOLID BOWL

### **Standard Machine Sizes**

	250	300	350	450	500	600	710	850	1,000	1,100	1,200
Length from -	to mm 1,400 2,000	,	2,020- 2,740	2,020- 3,040	2,650- 3,650	2,900- 4,100	3,300- 4,720	3,500- 5,200	4,570- 6,570	4,770- 6,970	5,060- 7,460
Width appro	ox. mm 1,100	1,370	1,500	1,750	2,035	2,060	2,580	2,700	3,160	3,260	3,600
Height appro	ox. mm 800	940	980	1,110	1,325	1,400	1,450	1,600	1,660	1,750	1,915
Weight from	- to kg 900-	,	1,500- 2,100	2,100- 2,800	3,000- 4,000	4,200- 5,800	5,000- 7,000	7,000- 9,800	10,000- 15,000	12,800- 18,300	20,500- 25,500
	Special versions on request.										



### **Main Industries**



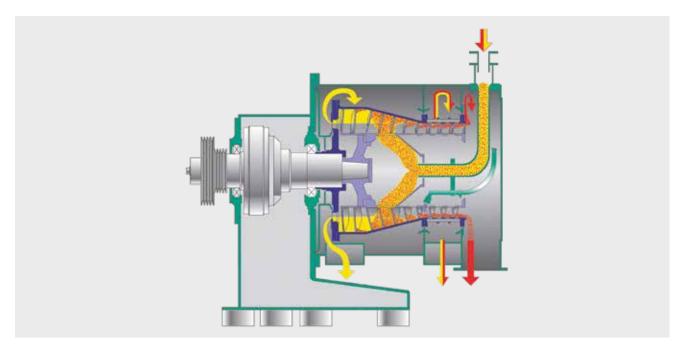




- Amino Acids
- Calcium Carbonate
- Celluloseether
- Dicarboxylic Acid
- **EPS**
- HDPE
- PMMA

- POM
- PVC
- Threonin
- UHMWPE

# **CONTHICK | SCREEN BOWL DECANTER CENTRIFUGE**



### Efficient separation plus pre-thickening

The SIEBTECHNIK CONTHICK screen bowl decanter is a hybrid centrifuge consisting of a solid bowl in the product feed zone and a screen bowl fitted downstream.

Solid materials are separated by sedimentation in the solid bowl and thickened. The product can then be washed and dewatered up to the mechanically separable dewatering limit. A further special feature of the CONTHICK is its overhung mounting. This design enables easy cleaning and fast access to the parts in contact with the product. As a result, maintenance costs and maintenance times are considerably reduced.

The second stream of liquid is drained off through a separate drainhole.

All CONTHICK centrifuges are individually adapted to suit product conditions and system requirements.

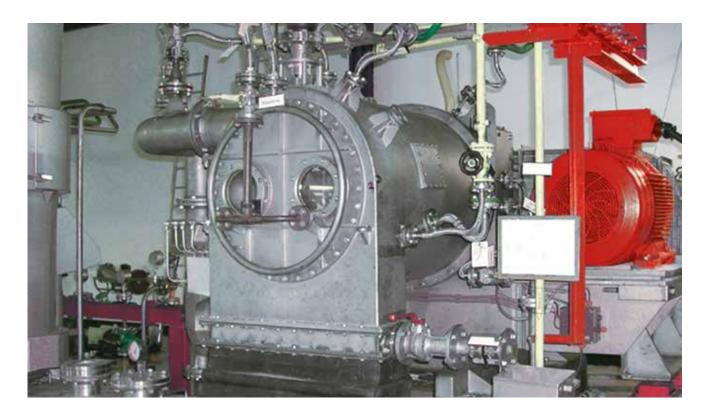


- ♦ Continuous operation
- High yield/minimum loss of solid matter
- Excellent washing results
- Mother liquor and washing liquid can be separated separately from each other
- Little residual moisture
- Easy cleaning
- Easy replacement of screens without dismantling the scroll
- Flexible drive concept
- High machine availability
- Minimum maintenance
- ♦ Long service life

# **CONTHICK | SCREEN BOWL DECANTER CENTRIFUGE**

### **Standard Machine Sizes**

		240	320	450	600	800	1,000		
Drive motor	approx. kW	5.5	7.5	15	30	55	90		
Length	mm	1,150	1,200	1,550	1,800	2,250	2,700		
Width	mm	1,200	1,200	1,550	2,000	2,100	2,660		
Height	mm	800	850	1,100	1,300	1,800	2,100		
Weight	kg	700	750	1,300	2,000	4,200	7,500		
	Special versions on request.								



### **Main Industries**







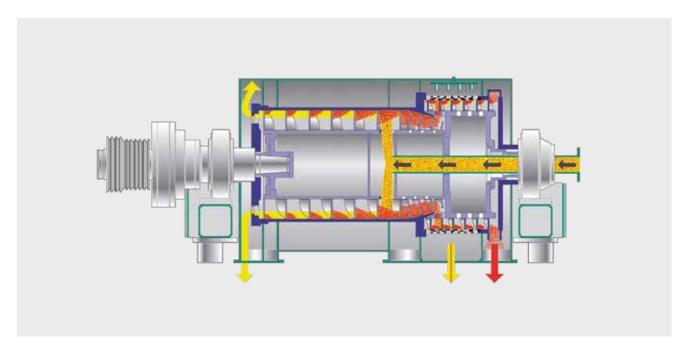






- Citric Acid
- Herbicides
- Isomaltulose
- Ketogulon Acid
- Pentaerythite
- Potassium Sulfate
- Sodium Pyrosulfide
- Vinasse

### TURBOSCREEN | SCREEN BOWL DECANTER CENTRIFUGE



### Customized according to specific application

On standard solid bowl screen centrifuges the screening section is connected to the small diameter of the solid bowl cone and the diameter of the screen is identical. This design has the disadvantage of a low volume in the dewatering section of the centrifuge. This leads to a high solids load and the lowest centrifugal force at the solid outlet.

The SIEBTECHNIK TURBOSCREEN screen decanter, is in screen-diameter and -design adapted to the specific application.

The solid materials are separated by means of sedimentation in the solid bowl and thickened. This is followed by our special designed and dimensioned screen. Bearings on both sides allow high centrifugal forces and long residence times.

Centrate, filtrate and solids are discharged in separate outlets.

All SIEBTECHNIK TURBOSCREEN decanters are individually adapted to suit product conditions and process requirements.

- Continuous operation
- ♦ High yield/minimum loss of solid matter
- Good washing results
- Mother liquor and washing liquid can be separated separately from each other
- ♦ Little residual moisture
- Flexible drive concept
- High machine availability
- Minimum maintenance
- Long service life

# TURBOSCREEN | SCREEN BOWL DECANTER CENTRIFUGE

### **Standard Machine Sizes**

		250	350	450	600	750	800	1,000	
Drive motor	approx. kW	22	45	90	132	160	200	250	
Length	approx. mm	2,500	2,800	3,150	3,350	4,000	4,200	4,600	
Width	approx. mm	1,800	1,850	2,300	2,500	2,800	3,000	3,250	
Height	approx. mm	920	1,020	1,300	1,500	1,800	1,900	2,100	
Weight	approx. kg	1,900	2,650	4,500	7,000	11,500	13,500	18,000	
	Special versions on request.								











- Monosodium Glutamate
- MOP
- SOP
- Threonine

### **CENTRIFLEX & CENTRILAB | LABORATORY CENTRIFUGES**

### High-performance centrifuges for the laboratory

For tests to laboratory standard and for the preparation of small quantities SIEBTECHNIK offers two different laboratory centrifuges.





### **CENTRIFLEX**

The SIEBTECHNIK CENTRIFLEX centrifuge is a laboratory centrifuge with a wide range of applications.

The CENTRIFLEX can be used to test the separability of suspensions in the centrifugal field. Based on such laboratory tests the selection of a suitable centrifuge type as well as dimensional scaling of the centrifuge are possible. The CENTRIFLEX is characterized by very short start and stop times (few seconds depending on the selected g-force). With our laboratory centrifuge filtering and sedimenting centrifuges as well as continuous- or batch-centrifuges can be simulated by appropriate tests. For this purpose suitable beaker inserts are used in the centrifuge.

The CENTRIFLEX can also be used for many kinds of preparative work.

When fitted with the appropriate accessories, it can be used for filtration, washing, clarification, for continuous separation of two liquids and for the preparation of emulsions.

### **Advantages**

- Multifunctional laboratory centrifuge
- ♦ High g force (6,000 g)
- Extremely short start/stop times

#### **CENTRILAB**

The CENTRILAB developed on the basis of the CENTRI-FLEX laboratory centrifuge is used solely for testing the separability of suspensions in the centrifugal field. The choice of a suitable centrifuge type and dimensional scaling of a centrifuge are possible based on such laboratory tests. Practically every type of centrifugal can be tested and/or simulated very easily with the CENTRI-LAB, using a small quantity of material.

- Portable design
- ◆ High g force (3,500 g)
- Extremely short start/stop times

### **CENTRIFLEX & CENTRILAB | LABORATORY CENTRIFUGES**

#### **Standard Machine Sizes**

CENTRIFLEX						
Maximum Centrifugal-Acceleration	6,000 g					
Volume of beaker	2 x 150 ml / 4 x 150 ml					
Size / W x D x H	560 x 950 x 1525 mm					
Weight	250 kg					
Power Supply required (CEE Connector, 5 pol.)	400 V / 16 A					
Subject to change without prior notice						

CENTRILAB						
Maximum Centrifugal-Acceleration	3,500 g					
Volume of beaker	2 x 125 ml					
Size / W x D x H	940 x 650 x 480 mm					
Weight	80 kg					
Power Supply required (CEE Connector, 5 pol.)	400 V / 16 A					
Subject to change without prior notice						

### Fitting variants CENTRIFLEX

With the appropriate accessories and in a few hand movements the CENTRIFLEX can be converted to the following variants:

### Beaker centrifuge

For testing the sedimentation behaviour of suspensions or filtration behaviour of solids cakes. The centrifuge's bottle holder holds 2 bottles or 4 bottles each with a capacity of 150 ml. Depending on the application, solid beakers or filter beakers are used.

The following filtering media can be inserted in the filter beakers:

- ◆ CONIDUR® slot-perforated plates
- Laser-perforated plates
- Slotted screen panels
- Filter paper

# Beaker centrifuge (bottle centrifuge) with rotary feed system

If beakers are used, the centrifuge can be additionally fitted with a co-rotating feed system so that it can be filled while in operation. With the filtration beaker insert washing tests can also be conducted. Windows in the beaker sides and a special stroboscopic lamp (both optional) enable filtration and sedimentation processes to also be monitored and assessed visually.

### Screen centrifuge with washing pipe

The screen centrifuge insert can be used for the separation of solids from liquids.

For this purpose the bowl is fitted with a wire mesh inlay and a filter bag (CONIDUR®, laser and slotted-screen inserts can also be used). After ejection of the liquids the solids cake can also be washed and/or neutralised with the aid of a spray pipe.

### Solid bowl centrifuge with overflow weir

or additionally with peeling tube. As a sedimentation centrifuge, this is used in many different ways to clarify liquids, particularly if the solid matter does not settle readily and requires longer centrifuging times.

The liquid rising to the surface can be discharged through a peeler tube after the solid matter has settled. Without the peeler tube the solid bowl can also be used as an overflow centrifuge for decanting liquids.

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