



SOLUTIONS FOR PHARMA

THREE-COLUMN CENTRIFUGES

Three-column filtration centrifuges are widely used for dewatering fine suspension in the chemical and pharmaceutical industries. The solid particles subjected to centrifugal force settle on the inner semi-permeable surface of the centrifuge drum, forming a so-called filter cake, and the liquid (leachate) with the remains of solid fine particles passes through the filtration screen and is then released into the area between the housing and the drum, from where it is discharged to the outside.

The centrifuge is primarily designed for industrial installation and for cyclic operation: the complete working cycle consists of filling, filtration and discharge. This cycle is manually or semi-automatically controlled and ends with the manual removal of the sediment from the drum. The duration of a cycle depends on the mixture separated by centrifugation (its filtering capacity) and on the requirements for the separated products (final moisture of the filtration cake).

Three-column centrifuge has a perforated filtration drum. The inner wall of the drum is covered with metal mesh and/or fabric, which forms the filter barrier. The drum, housing, cover and elements in direct contact with the centrifuged medium are made of stainless steel, while the drive components and base plate are made of carbon steel protected by anti-corrosion coatings. The centrifuge is operated via a control panel. For safety reasons, the operation of the lid opening is secured with mechanical safety switch.

During normal operation the noise level does not exceed 70 dB (A).

The main filtration materials used are:

- Cotton fabric, resistant to 9% H₂SO₄ 5% NaOH,
- Rayon fabric resistant to 15 - 25 % HCl,
- Plastic fabric.

WHY WE ARE RIGHT PARTNER FOR YOU?

SFUP Sp. z o.o. is committed to offering **comprehensive services** to clients in planning, designing and manufacturing industrial equipment and apparatus. Additionally, we provide overhaul and modernisation services for industrial equipment and installations.

- Over 70 year of experience on the market,
- All-in-one: design office, production and installation services,
- Project **integration** and **customisation**,
- Practical knowledge for the implementation of projects in the European Union and worldwide,
- Short series and unique single items manufacturing,
- Production workshop of 25 000 m², which allows for on site assembly and FATs of large units,
- 200 experienced workers.

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Certificate Conformity of the Factory Production Control
2451-CPR-EN1090-2014.1303.004

Want to know more? Check us on:

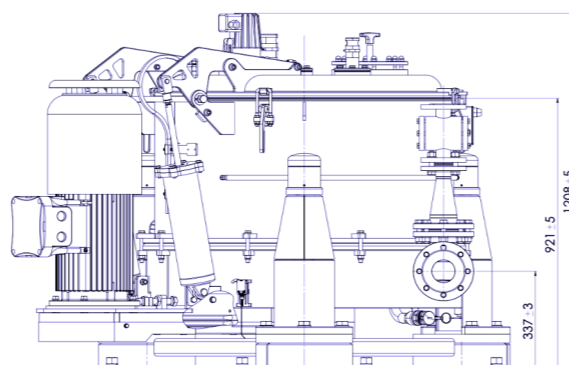
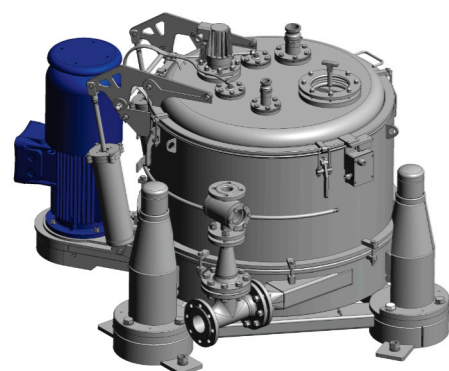




CUSTOMISATION OF CENTRIFUGES

Customisation options for our Three-column Filtration Centrifuge may include:

- The drum, housing, components in direct contact with the feed material can be made of 316Ti and 904L stainless steel.
- The equipment can be designed for use in ATEX hazardous areas.
- The unit can be equipped with an inertization system that feeds nitrogen gas from an external installation to the centrifuge and bearings, removing oxygen and minimising the risk of explosive mixtures during operation with dangerous substances.
- Monitoring of the thickness of the filter cake.
- The inner surface of the drum may be coated with a material which has been certified by FDA and is chemically resistant.



Basic parameters		WT- 600KWA	WT- 800KWA	WT- 1000KWA	WT- 1200KWDW
The internal diameters of the drums	mm	600	800	1 000	1 200
The active height of drums	mm	325	420	430	800
Drum capacity	l.	45	90	135	350
Drum speed - nominal	1/min	460 - 960			380 - 1 100
Braking method	--	brake integrated in the motor			
Motor power - engine design	kW	5,5	7,5	18,5	30
Supply voltage	V	400 / 690 - 50Hz			
Unloading	---	Manual / bag			Bottom discharge / scraper
Maximum load	kg	80	180	200	475
Flap opening	--	pneumatic			
Noise level	dB	80			
Options	--	316 Ti or 904L, ATEX, inertization, filter cake monitoring, FDA			

DRUMS (coating, polishing, conditioning)

Our drums are suitable for the dry and liquid coating, polishing, smoothing, and mixing of tablets and various types of pills. We can supply them adapted to work in a continuous or batch regime.

The drums are fully manufactured from stainless steel AISI 304 and 316L in accordance with the strictest hygienic requirements. The capacity of the units can be adjusted to meet the requirements of the customer. On request, we can supply skid-mounted equipment that incorporates drums with liquid and dry coating feeding units, discharging, and conveying lines.

Our offer also includes engineering, installation, supervision and commissioning of the equipment.



FEEDING / DISCHARGING SYSTEMS

For handling bulk material that can be discharged by gravity we offer customised feeding/ discharging systems. Our solutions integrate conveyors, feed/discharge hoppers and tanks.

The system can be tailored to individual orders, available in multiple capacities, design together with support frames and access platforms and delivered as a skid. This option provides a cost-effective and user-friendly alternative to other pre-feeders, thanks to its simplified design and reduced number of moving parts. On request, elements in direct contact with the feed material can be made of 316Ti and 904L stainless steel.



STAINLESS STEEL TANKS / REACTORS

We manufacture and supply vertical and horizontal pressure and non-pressure vessels/ tanks/ reactors and other large-sized equipment. The proportion of stainless steel products (mainly AISI 304 and 316L) and other high-alloy steels is steadily increasing in our production.

For need of this type of production, we have prepared a special 6 000 m² production zone, so-called „white zone”, equipped with two cranes of 32t load capacity each. Our offer is addressed to all customers interested in highly durable product and its functionality, which satisfies the rigid sanitary standards.

