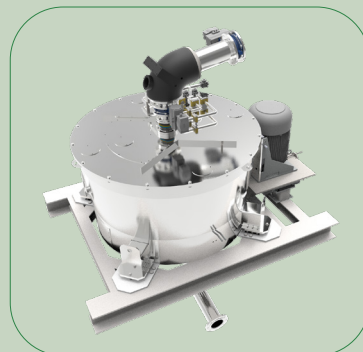
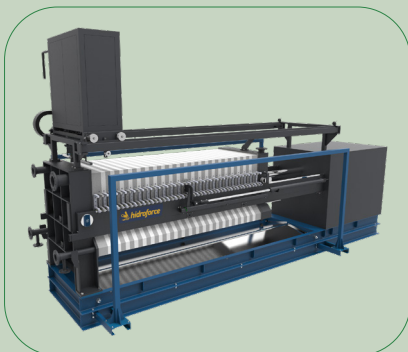


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# Sugar factory machinery & equipment catalogue





# HIDROFORCE

## YOUR EXPERT BUSINESS PARTNER IN THE SUGAR PROCESSING INDUSTRY



With its extensive experience in the production of machinery and hydraulic equipment, Hidroforce offers special solutions for sugar beet processing facilities. Thanks to its deep expertise in the operating principles of sugar factories, our company aims to provide customers with the most suitable and efficient equipment. With years of proven experience in the industry, Hidroforce stands out as a reliable and innovative business partner.

Providing comprehensive services in the field of sugar beet processing machinery, Hidroforce offers a wide range of services from design to installation, renewal to maintenance. The machines we produce are specifically used in sugar beet loading and unloading processes, sampling units, filtration and crystallization processes, and automation systems.

Equipped with modern technologies, our products deliver long-lasting use and minimal maintenance requirements, adding value to sugar factories.

Hidroforce has the capacity to develop new machines adapted to the specific demands and projects of our customers, closely following the latest advancements in the industry to provide the most suitable solutions. Our innovative engineering team develops and implements custom projects that add value to our customers' production processes. In this way, we optimize the production processes of factories, increasing efficiency.

Through the solutions it offers for sugar factories, Hidroforce demonstrates the strength of domestic production by reducing dependency on imported equipment. With local production and engineering services, we contribute to the strengthening of Turkish industry and aim to enhance the global competitiveness of sugar factories. With the high-quality services we provide and our long-term partnerships, we continue our work as one of the leading companies in the industry.



# Press Filter

## Hidroforce HF-PF Series Press Filters

A filter press is a purification mechanism used to separate solid and liquid substances in industrial processes.

It is also known as a sludge treatment or dewatering machine. Filter presses consist of a series of filter plates operating under high pressure. These plates and filter cloths filter the material to be separated, dividing it into solid and liquid phases.



***The dewatering of carbonation sludge is carried out in the HF-PF series filter press machines designed and manufactured by Hidroforce.***

The carbonation sludge is trapped between plates equipped with special fabric filter cloths and is gradually pressed for the dewatering process. The fully automatic filter press machine not only allows the adjustment of all process parameters but also reduces operating time with its specially designed hydraulic system.



| Model                             | HF-PF-100    | HF-PF-100E   | HF-PF-130    | HF-PF-180    | HF-PF-240    |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Filtration area (m <sup>2</sup> ) | 86           | 100          | 125-130      | 160-200      | 200-240      |
| Plate dimensions                  | 1200x1200mm  | 1200x1200mm  | 1200x1200mm  | 1300x1300mm  | 1300x1300mm  |
| Working pressure                  | maks 270 bar | maks 270 bar | maks 270 bar | maks 270 bar | maks 270 bar |
| Total length                      | 6880 mm      | 7850 mm      | 8050 mm      | 9650 mm      | 12080 mm     |
| Total width                       | 2720 mm      | 2720 mm      | 2720 mm      | 2920 mm      | 2920 mm      |
| Total height                      | 4100 mm      | 4100 mm      | 4100 mm      | 4400 mm      | 4400 mm      |
| Washing pressure                  | 20 bar       | 20 bar       | 20 bar       | 20 bar       | 20 bar       |
| Water consumption                 | 330 l/min    | 330 l/min    | 330 l/min    | 370 l/min    | 370 l/min    |

# Press Filter

## Hidroforce HF-PF Series Press Filters



1

Automatic cloth washer



2

Head stand



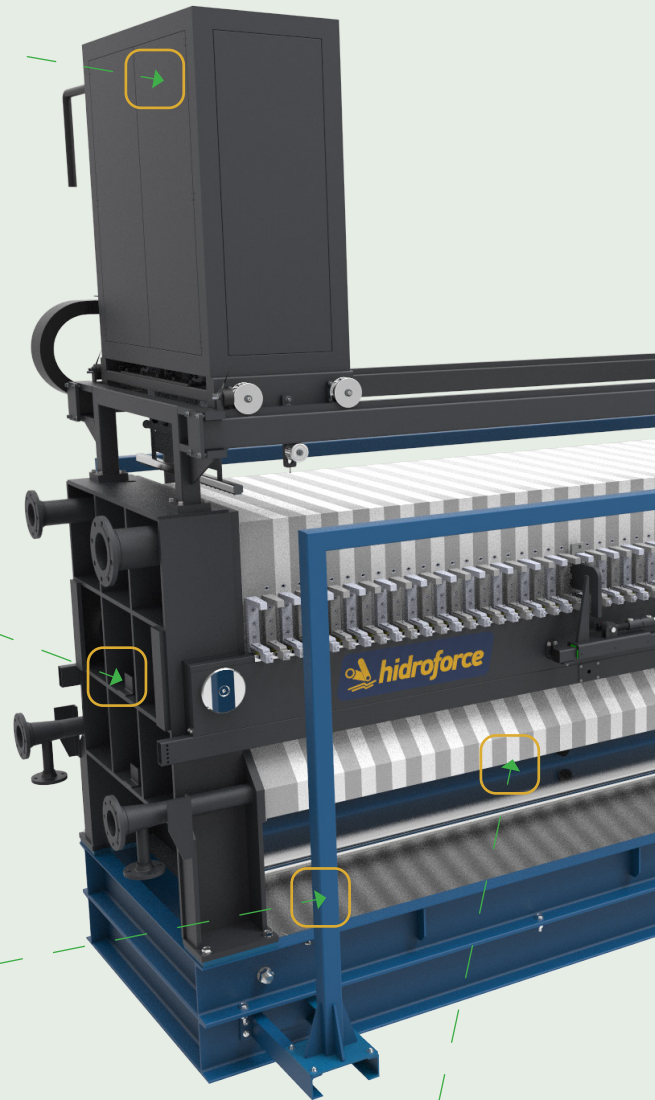
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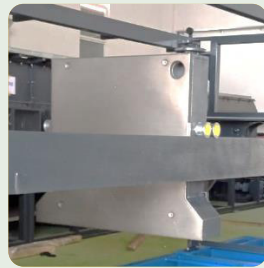
Safety curtains



4

Filter plates & cloths





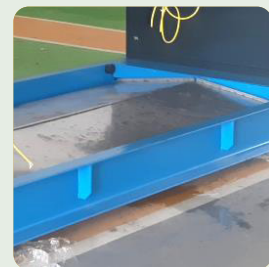
**5**  
End plate (follower)



**6**  
Hydraulic and control unit



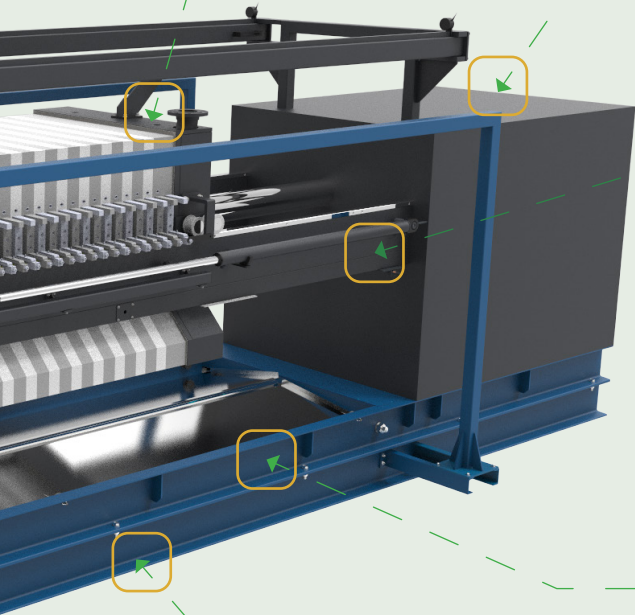
**7**  
Side rails



**8**  
Drip tray



**9**  
Support frame



# Lenser

## Membrane Filter Plates

*LENSER is one of the world's leading manufacturers of filter elements for solid/liquid separation. It develops and produces filter elements for various industrial applications and designs plates used in sugar factories*



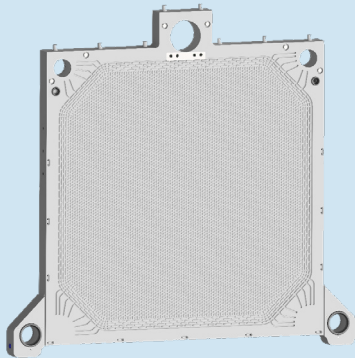
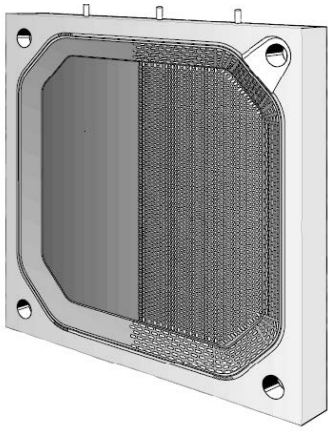
### LENSER KME BLOC

The KM BLOC type is designed as a single-piece welded membrane, allowing for a more uniform cake thickness and superior cake washing results.

#### Features

- Bloc design offering higher volume
- Double sided feeding due to feeding hole opening
- Welded design offers more durability and strength
- Even cake thickness distribution across filtration area





## LENSER KMA 1300

The KM R type, membrane spares are attached to the main body plate using screws and cable ties. This design allows for easy and seamless replacement of the membrane.

### Features

- Designed for sugar industry
- Membrane halve design incorporates external feed port only
- Improved drainage channel design
- Membrane halve is screwed to the plate at the corner bore holes and at the inlet area



## LENSER KME RUD

The KM RUD type, the membrane is secured to the designated mounting grooves of the main body using clamping strips.

### Features

- Exchangeable design offers less cost maintenance
- Less accessories due to mounting of RUD design
- Frame free half design decreases possible complications
- Membrane attachment with clamping strip

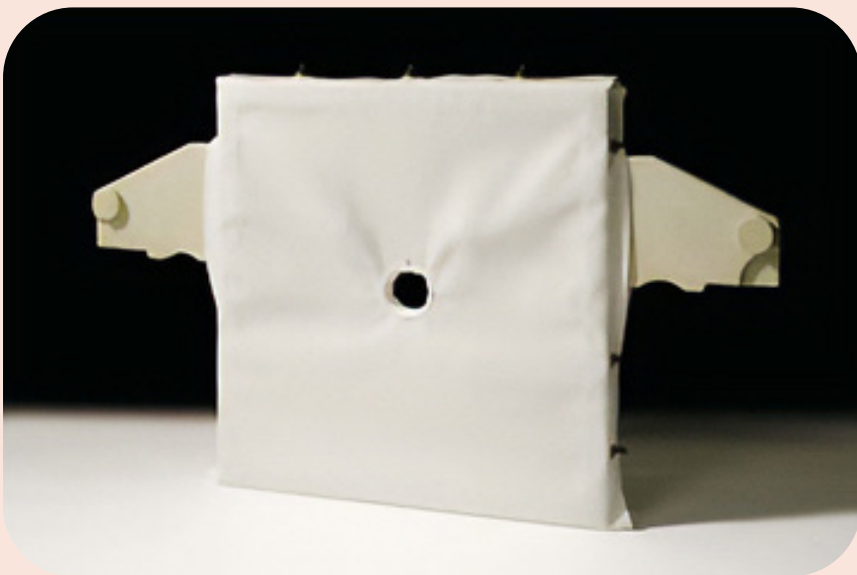
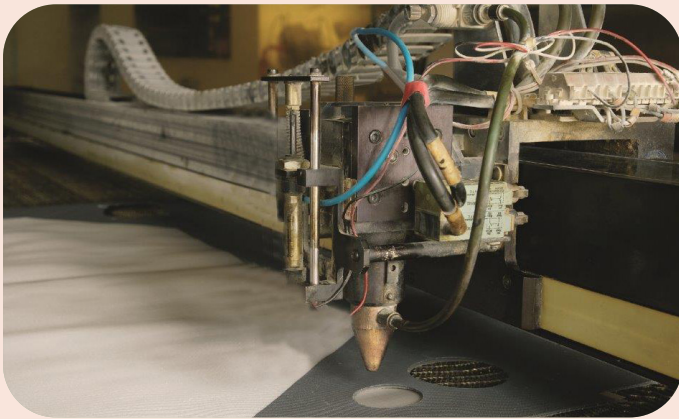
# Mortelecque

## Filter Cloths

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- Filter Press Fabrics
- Drum Filter Fabrics
- Fabrics for Dryers
- Bags for Dryers
- Belt Press Fabrics
- Fabrics for Drainage Tables
- Bags for Frame Filters
- Filter Bags in Any Diameter and Length
- Disk Filter Fabrics
- Sewn or Unsewn Candle Filter Fabrics and generally all custom-made products



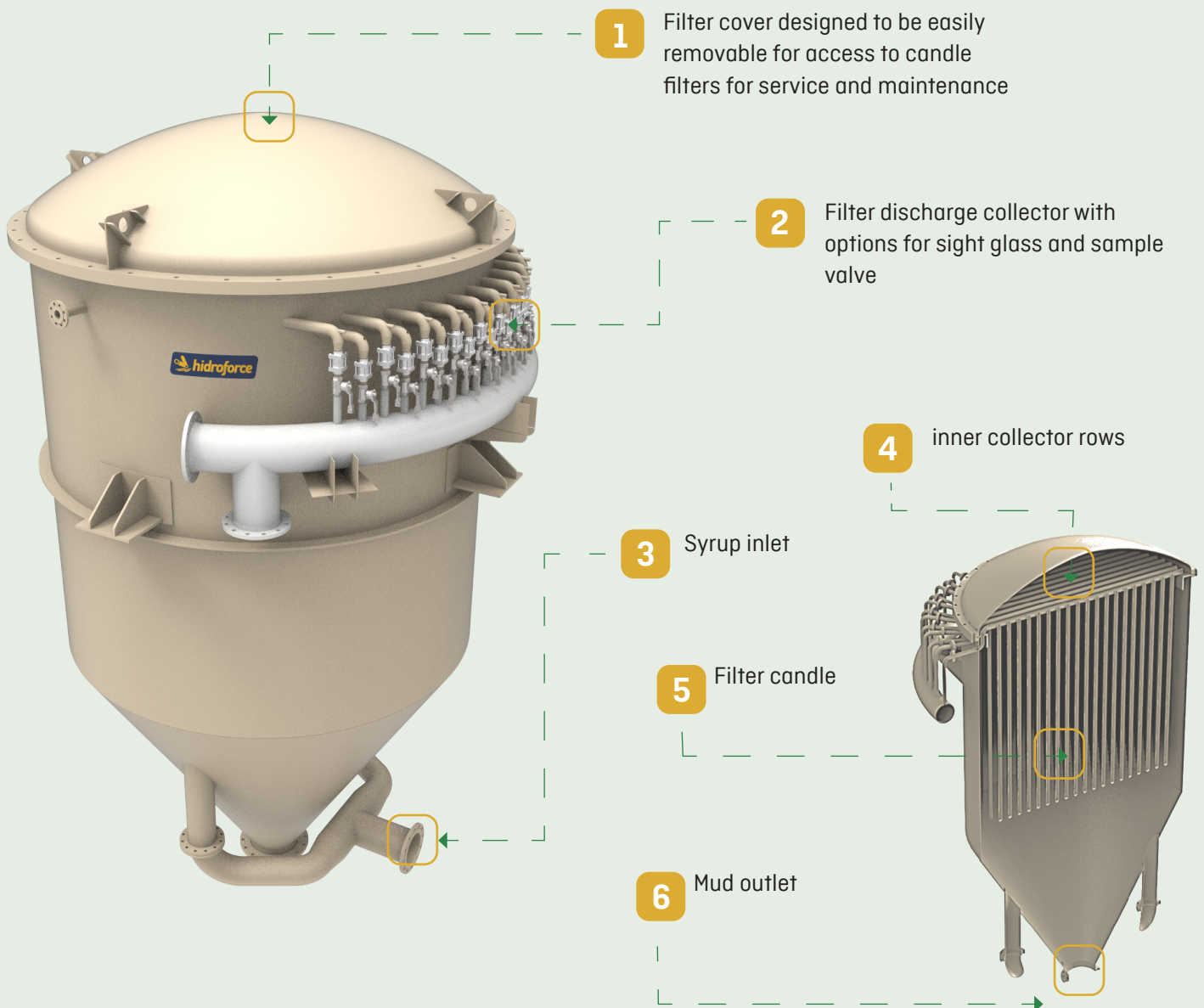


# Candle Filters

## Hidroforce HF-CF Series Candle Filters

*Hidroforce HF-CF series candle filters are used in the filtration of carbonation syrup, sludge thickening, and the concentration of liquid syrup.*

The configuration of the filter frame, filter area, candle arrangement, and internal parameters such as the gap between them can be adjusted according to project requirements. Other design options include filter cleaning and control systems with programmable automation. Candle filters provide ease of purification in the sugar process and increase the efficiency of the factory.



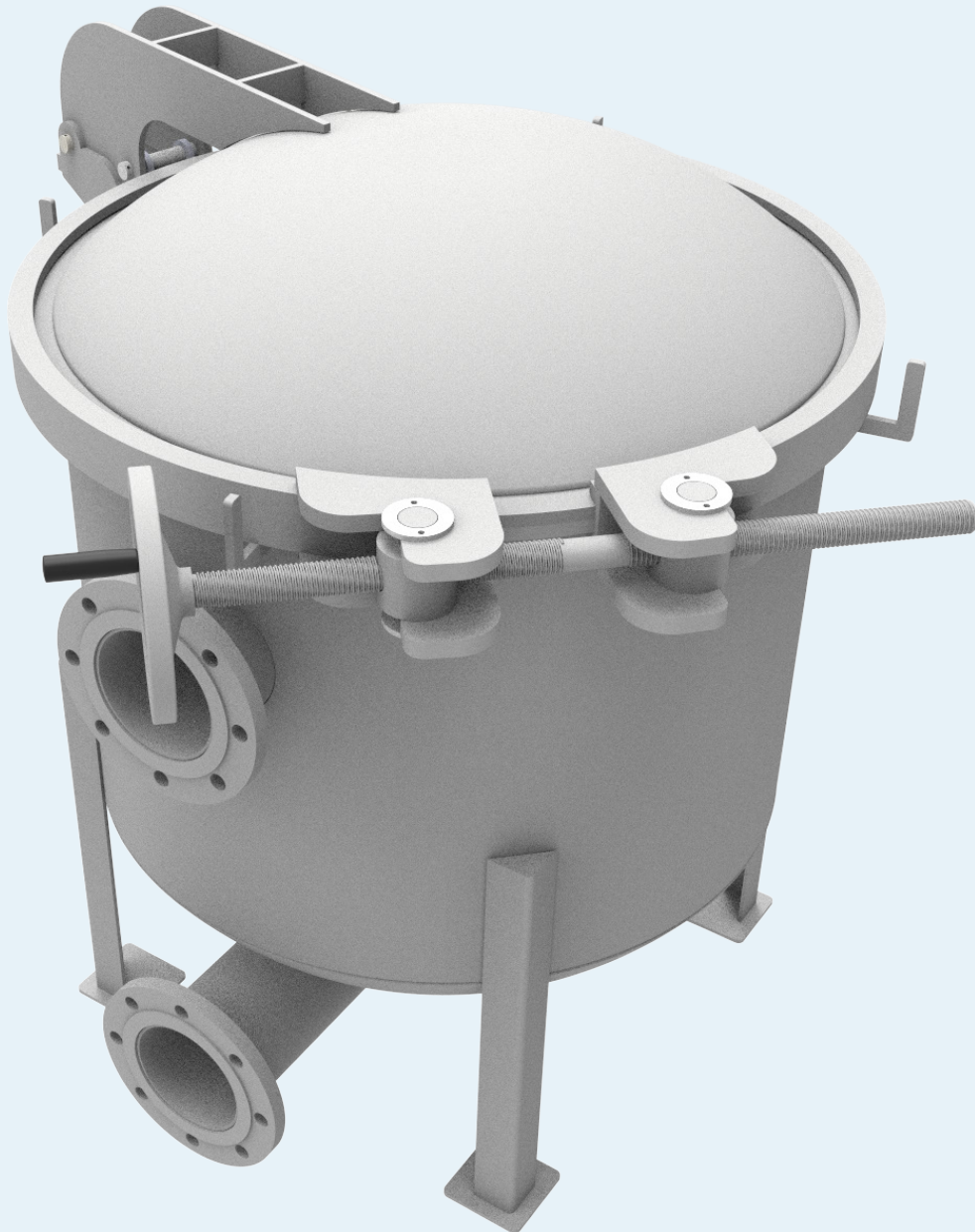


| Model                            | HF-CF-140 | HF-CF-160 | HF-CF-180 | HF-CF-200 |
|----------------------------------|-----------|-----------|-----------|-----------|
| Filter area (m <sup>2</sup> )    | 140       | 160       | 180       | 200       |
| Number of candle filters         | 281       | 323       | 360       | 402       |
| Total diameter (mm)              | 2800      | 2900      | 3000      | 3100      |
| Total height (mm)                | 5800      | 5800      | 5800      | 5800      |
| Empty weight (kg)                | 12000     | 12500     | 13000     | 14500     |
| Maximum operating pressure (bar) | 6-8       | 6-8       | 6-8       | 6-8       |
| Body material                    | EN P265GH | EN P265GH | EN P265GH | EN P265GH |
| <b>Candles</b>                   |           |           |           |           |
| Diameter (mm)                    | Ø60       | Ø60       | Ø60       | Ø60       |
| Length (mm)                      | 2600      | 2600      | 2600      | 2600      |
| Material                         | AISI 304  | AISI 304  | AISI 304  | AISI 304  |

# Pressure Tube Filters

## Hidroforce HF-KF Series Pressure Tube Filters

*HF-KF series filters used in sugar production from beets /canes play an important role in the sugar production process. These filters are used to separate the liquid and solid materials that are formed during the processing of sugar beets / canes.*





**Solid-Liquid Separation:** After the sugar beet juice is extracted, the remaining solid materials need to be separated. Pressure tube filter helps achieve this by filtering out the solids, resulting in clean sugar juice.

**Purification** During the sugar production process, beet juice may contain various impurities. These filters help remove impurities, enabling the production of a purer sugar solution.

**Increased Efficiency:** The filtration process enhances the efficiency of the production process. A cleaner sugar solution leads to fewer issues in subsequent steps, improving overall production quality.

**Energy Savings:** A more efficient filtration process reduces energy consumption, lowering production costs and minimizing environmental impacts.

These filters are a critical part of the sugar production process and are essential for producing high-quality sugar

# Fully Automatic Continuous Sugar Centrifuge

## Hidroforce CC-3000 series

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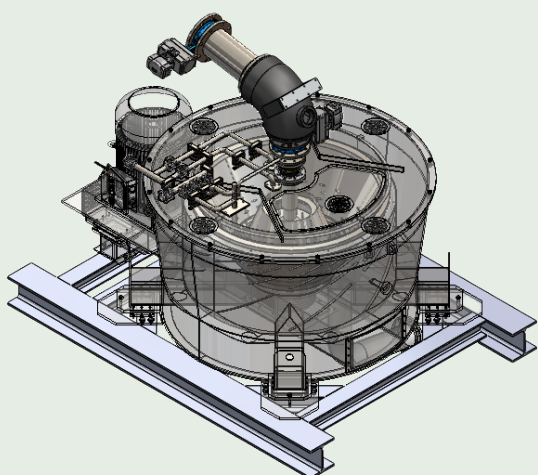
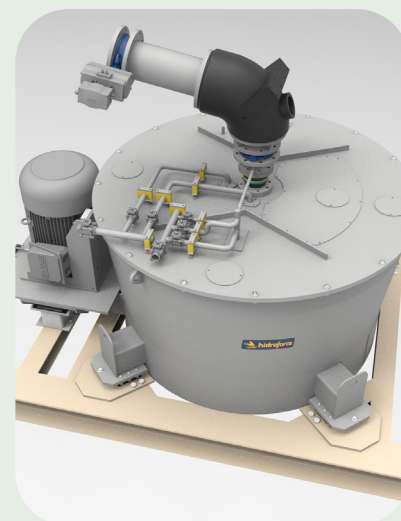
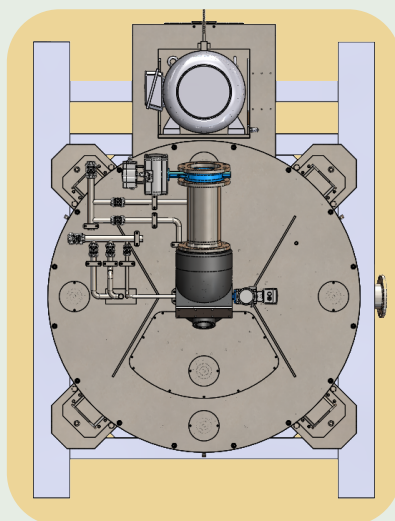
*Our research and development efforts have led to the completion of the fully automatic continuous sugar centrifuges, which we began production of this year.*

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These centrifuges are used in the refinery section for B-product, C-product, and C-affination sugars. The conical basket, adjusted to the appropriate rotational speed for the type of sugar, carries out the separation of syrup and crystal sugar. The basket, with two different cone angles, ensures a more efficient separation process.







| Model                             | CC-3000            |
|-----------------------------------|--------------------|
| Basket diameter (mm)              | 1300               |
| Basket angle (°)                  | 14°/30°            |
| Motor power                       | 90 Kw              |
| Motor speed                       | 1500 rpm           |
| Maximum basket speed              | 2000 rpm           |
| Height (mm)                       | 1160               |
| Filtration area (m <sup>2</sup> ) | 1,7 m <sup>2</sup> |

## Advantages

- Preventing overflow and imbalance through controlled sugar mush intake
- Efficient and orderly placement of the sugar mush at the bottom of the basket thanks to the turbo distributor
- More efficient filtration process due to the conical basket with two different angles
- Basket made of duplex material resistant to wear and corrosion
- Easy-to-use water and steam washing system
- Fully automatic and user-friendly automation with a user panel
- Rust and lime-resistant, food safety-compliant, all stainless steel body
- Closed drive system protected against external influences
- New-generation bearing system resistant to high forces
- Low transmission cost due to easy mechanical and electrical maintenance
- Safe operation with vibration sensor

# Turkish Sugar Factories

## Our references







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