

## **F-type decanter centrifuge**

Excellence in separation processes  
for the food industry



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## Excellence in separation processes for the food industry

With more than 15,000 decanter centrifuges installed around the world, ANDRITZ SEPARATION is one of the global leaders for the supply of centrifuges. F-type decanters designed especially for the food industry meet the most demanding requirements. Apart from having a high flow capacity, this technology contributes to your success by using various beneficial technical features. Is your application specific? So is our F-type decanter!

### Reliable and efficient separation technology

Created by combining the best of GUINARD and KHD HUMBOLT decanter technologies, the F-type decanter is a new generation of decanter that has proven its efficiency and reliability over decades in various industries. ANDRITZ SEPARATION has thousands of satisfied users with this equipment, not only because of its standard characteristics, but above all for the specific features added in the course of the time. At ANDRITZ SEPARATION, we know your process and we pay attention to your needs. So each application has its own specially designed decanter with specific features to achieve the best performance and meet your requirements.

### The tailor-made decanter

For perfect clarification and optimum solids dryness, we adjust the design of the rotor: standard or low angle, L/D ratio, open or plain flight scroll. The scroll speed can be adjusted very accurately thanks to the various possible designs of our gearboxes, which are available in different materials. Our decanter is provided with gravity (tangential or vertical) or pressure discharge (centripetal pump or adjustable skimmer) to ensure the most suitable liquid discharge for your application.

### Adjustable skimmer in operation

The liquid phase of our F-type decanter is discharged under pressure (1.5 to 2 bar) in both two- and three-phase configurations

by means of a skimmer (also named “pipette”) that can be adjusted per millimeter during operation. This device ensures better clarification, optimizes the yield when the feed is variable, and avoids downtime because there is no need to stop the machine to change the setup.

### Low energy consumption

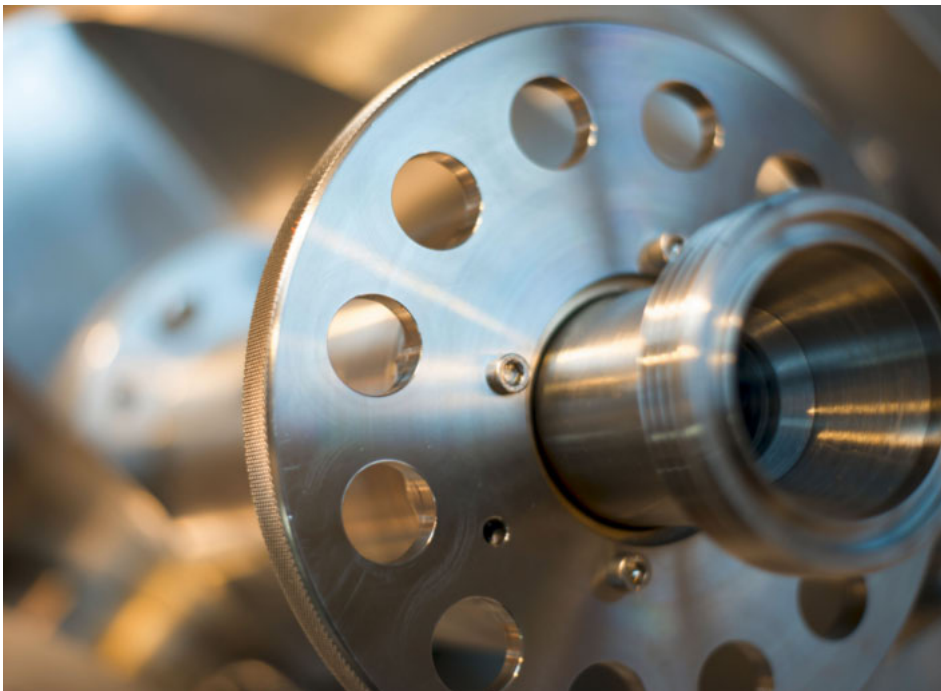
Each model is designed for low energy consumption and motors adapted to the needs of your application.

The drive system comprises either:

- Main motor and stepped pulleys for fixed speeds (a frequency inverter can be installed in order to vary the bowl speed) in order to obtain constant solids content in the feed.
- Main motor and generator (patented), each equipped with a frequency inverter, for adjustable bowl and screw speeds, suitable for most applications.
- Direct drive for more difficult applications. Applying power directly to the decanter’s scroll drive reduces the installed power and minimizes power losses.

### Easy dismantling

While you are saving time in production, there is no need to lose time during maintenance! The in-line design of our F-type decanter allows easy dismantling (requiring only basic lifting equipment and an operator). This configuration provides cost savings in maintenance and handling.



▲ Adjustable skimmer in operation

## Three levels of finish

Depending on your application and the destination of the final product, ANDRITZ SEPARATION experts will recommend you a different level of finish:

### BASE, PROVIDING GOOD VALUE FOR MONEY

*Carbon steel frame, plastic cover, wear protection tailored to needs*

### PERFORMANCE, THE ANDRITZ SEPARATION FOOD-GRADE STANDARD MACHINE

*Plain carbon steel frame with stainless steel inside, cover in stainless steel, wash ramps for top performance CIP, and polished if needed for the application*

### SANITARY, DESIGNED TO ENSURE MAXIMUM CLEANLINESS

*Same design as Performance except for frame, which is made of plain stainless steel with integrated casing, and with polishing up to  $RA < 0.8 \mu m$  if needed*

**Whatever the level of finish, you can benefit from the following standard scope of supply:**

- g-force of 3,000 to 3,500 g
- Three types of motors, depending on your application
- Polishing to the finest level needed for the respective application
- Protection against abrasion (replaceable tungsten carbide wear parts or special material on scroll flight). All wetted parts in SS or Duplex

- Standard washing points (solid casing, liquid casing, feed tube double skin)
- Bowl washing ramp and special added washing points for Performance and Sanitary models
- Centritune control (Standard PLC and automation device) linked with your SCADA system - centuries of experience in automation for ease of operation and production optimization

## Your benefits

- Three machines in one: heavy or light phase discharged under pressure and two-phase machine with plugs instead of nozzles in bowl for more production flexibility
- Ability to accommodate customer needs and provide best performance due to modular design
- Maximum security with vibration, bearing temperature, and motor probes, washing nozzles integrated into frame and not in cover
- Low maintenance cost and easy dismantling with unique inline design
- Low oxygen pick-up due to discharge under pressure from a hermetically sealed chamber
- Optimum product quality thanks to special feed chamber, ensuring gentle treatment
- Long service life due to robust design and high-grade materials



▲ Unique scroll design

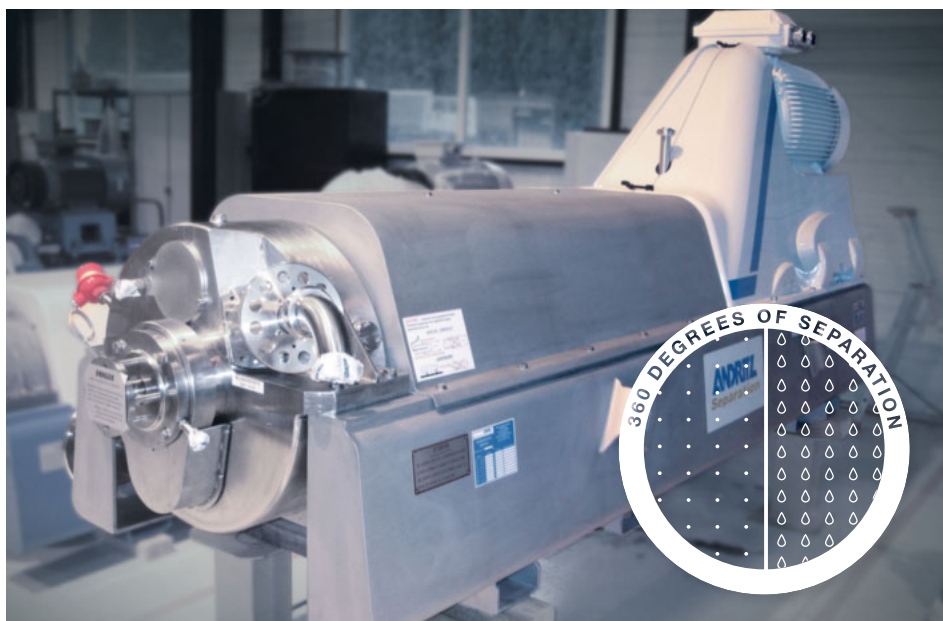


▲ CIP system

## Applications

- Beverage extraction (wine, juices)
- Beverage solid reduction (wine, juices, soya milk)
- Dairy (caseine, lactose, calcium phosphate)
- Oil and fats (olive oil – two and three phases, animal blood, animal fat)
- Green chemicals (starch, proteins, bioethanol, vinasses K<sub>2</sub>SO<sub>4</sub>)

... and many other products requiring a separation process!



	F2000	F3000	F4000	F5000	F6000	F7000	F8000
g-force (g)	>3,500	>3,500	>3,500	>3,500	>3,500	>3,000	>3,000
Main motor (kW)	11-15	22-37	30-45	45-90	75-110	90-160	110-200
Secondary motor (kW)	4-7.5	5.5-11	7.5-22	15-30	15-30	22-37	30-45

What is your separation challenge?  
**ASK YOUR SEPARATION SPECIALIST!**

Our engineers are looking forward to showing you how this product can provide the answers to your specific request.

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