

**THE NEW FLOTTWEG DECANter Z3E**  
Flexible, Easy to Maintain, and Efficient



# THE FLOTTWEG DECANTER Z3E

## Engineered For Your Success

For more than 60 years we have been developing and manufacturing decanter centrifuges, disk stack centrifuges, belt presses, and systems at our headquarters in Germany. All over the world, these machines are considered extremely efficient and reliable. They play key roles in many industrial sectors when clarifying liquids, separating liquid mixtures, concentrating, and dewatering.

### RELIABILITY

is very important to us. Every machine that leaves our premises in the south of Germany represents our values and our philosophy: we want our customers to obtain unbeatable results using Flottweg Machines. Our thinking and actions are determined by our passion for perfectionism in big things and in small.

With the Z3E Decanter, we are taking a big step forward towards our goal. The easy-to-open hinged cover provides fast, easy access to the main components. This ease of maintenance as well as another special feature – the deep pond – underscore the know-how included in this machine.

The Flottweg Z3E Decanter is available for two-phase separation (solid-liquid) as well as for three-phase separation (solid-liquid-liquid) as the Tricanter®. It is used for the following applications: chemistry, pharmacy, biotechnology, food and beverage industries, vegetable oils, animal fats and biofuel, waste water and oil sludge.

All product-wetted parts are made of acid-proof stainless steel, e.g. Duplex. In short, the Flottweg Z3E Decanter is flexible in application and of top quality, deserving of our slogan, **Engineered For Your Success.**

### Advantages of Flottweg Separation Technology

- Energy savings of up to 20 % thanks to the Flottweg Recuvane® System
- High separation efficiency thanks to the Flottweg Simp Drive® and independent regulation of the bowl and differential speed
- Easy handling and user-friendly regulation due to the Flottweg Touch Control
- Minimal monitoring required, round-the-clock operation possible (automatic start at the push of a button)
- Long service life thanks to the use of high quality, acid-proof stainless steel as well as optimal wear protection





### SIMP DRIVE®

The Flottweg Simp Drive® controls the differential speed between the decanter bowl and the decanter scroll as a function of the scroll torque during operation. The bowl and the scroll allow for entirely independent operation. The Flottweg Simp Drive® can assure the highest torque when the bowl is at standstill as well as when it is at the highest speed. During operation, any changes in sludge compression are detected and the scroll speed adapts itself to the highest torque. That means the highest dry content is assured in the discharged solids, since it is possible to react to varying changes in the feed at any time.

### Advantages of the Flottweg Simp Drive®

- High flexibility in the selection of operating bowl and scroll speed (differential speed can be adjusted independently)
- High capacity due to high bowl speed and precisely adjusted differential speed
- High energy efficiency
- Machine can be cleared out at standstill (no need to dismantle system components)



### SUPER DEEP POND

The ratio between discharge diameter and bowl diameter is 140 mm/300 mm, or 0.46. The smaller this value, the deeper the pond – and the less energy required. That means the centrate can be discharged even more closely to the center into the housing. (In case of a decanter this means that the closer the liquids surface is to the axis of rotation, the smaller are energy losses, thus the smaller is energy consumption).

In case of normal pond depth, this ratio is 170 mm/300 mm, which is equivalent to a value of 0.56.

### Advantages of the Super Deep Pond

- The Z3E is available with high or normal pond depth
- Significant energy savings are possible
- More efficient processing of sludge and pastes (super pond depth)
- More efficient pressing thanks to the high scroll torque (super pond depth)
- Processing of granular sediments with correct filtration characteristics (normal pond depth)
- Dewatering through drainage and filtration (normal pond depth)

## Z3E DATA AND FACTS

FLOTTWEG DECANTER Z3E			
<b>Rotor</b>	State-of-the-art Flottweg Engineering with optimal bowl and scroll design for highest product compaction, best energy recovery, complete wear protection thanks to the use of premium bearings and robust construction, long service life, and maintenance-friendly design		
<b>Materials of Construction</b>	All product-wetted parts are made of acid-proof stainless steel, e.g. Duplex and 1.4571 (AISI 316 Ti) / 1.4404 (AISI 316 L).		
<b>Housing</b>	Hinged cover providing fast access without the need for a lifting device, vapor-tight or gas-tight according to customer requirements		
<b>Base</b>	Compact steel base frame with rubber vibration isolators, protected cable supply lines, single-piece belt guard		
<b>Drive</b>	Frequency inverter driven bowl and scroll drive, Flottweg Simp Drive® with independent scroll and bowl operation, high torque, reduced energy consumption, easy accessible drive components, off the shelf motors and VFDs		
<b>Machine Design</b>	Ergonomic design for easy access to the motors, drive, housing, and rotor, position of the motors ensuring compact footprint		
<b>Technical Data</b>	Length x width x height: 2950 mm x 840 mm x 800 mm	maximum 5250/min	maximum 4600 g
<b>Options</b>	Hygienic design, available in versions for areas at risk of explosion (Ex zones 1 and 2 in compliance with ATEX)		
<b>Centrate discharge</b>	Uses a continuously adjustable impeller; impeller can be adjusted during operation or via discharge under pressure; impeller with remote control		

# Flottweg Separation Technology – Engineered For Your Success



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