

# The Cleanest Solution since there has been Separation Technology

Breweries, dairies, juice producers and other food companies: they have all set themselves the goal of producing in the most hygienic manner possible. In choosing the production machines, it is therefore crucial that these machines work as hygienically as possible.



Hygienic Sedicanter®: The Sedicanter® combines the advantages of a separator and a decanter.

In the field of separation technology, the problem frequently occurs that product residues cannot be completely removed from the machine. It is the perfect breeding ground for bacteria. For several years, however, the Bavarian centrifuge builder Flottweg has been manufacturing decanter centrifuges and separators, which set standards in terms of processing, service life and especially hygienic design.

## Really cleaned out

Everyone knows the problem. You brush your teeth, scrub to the left, scrub to the right and everything in nice circular motions, just like you learned as a child. However, in spite of the thorough care of your teeth, it frequently happens that there is still food residue between your teeth. A similar problem can result when there are difficult-to-clean areas in the product compartment and in the machine housing.

When cleaning machines, residual product can always get stuck in the decanter. Since many production steps in the food sector, such as the processing of whey protein, occur at a temperature between 30 and 45°C, it is a perfect breeding ground for bacteria. Flottweg decanters in the hygienic configuration are specifically designed for the requirements in the food industry. All parts that come into contact with food have a minimum of so-called dead spaces. In addition, all welds are hygienically polished (see image). Another important point is the surface roughness. The surfaces of the parts that come into contact with food are a maximum of 0.8 µm, depending on the process requirement.

So that the gear units can also run safely in the food sector, the SIMP-DRIVE® is only lubricated with lubricants approved according to NSF H1. The same applies to the bearings, which are also lubricated with the food-safe lubricant NSF H1. In addi-



The surfaces of the hygienic scroll that come into contact with food are a maximum of 0.8 µm, depending on the process requirement.

on, all seals that come into contact with the product are made of FDA and EU VO 1935/2004-compliant plastics and are used as a standard.

## More than just wiping and walking away

Originally designed for the food and dairy product industry, Cleaning in Place is a common procedure in the most varied of application fields. Cleaning in Place, or CIP for short, describes a procedure for localized cleaning of process engineering systems. As is obvious from the name, surfaces that come into contact with the product can be cleaned here without significant disassembly. Flottweg decanters offer



The hygienic design decanter from Flottweg in action

various solutions here, which support this procedure.

In all different zones of the decanter centrifuge, spray options are installed in the area of the rotor, the solids discharge and in the bowl. This cleans all areas within the machine so they are free of residue. It is a crucial advantage, especially for longer production breaks or product changes.

Another feature that facilitates the cleaning is the adjustable impeller. The adjustable impeller is a modification of the conventional impeller, which makes it possible to discharge the clarified liquid into a closed system under pressure. In this variant, an adjustment mechanism alters the position of the impeller. The adjustable impeller forms the basis for automating the cleaning process and implementing it as efficiently as possible.

Another important factor for cleaning the machine is also the system periphery. An

optimally designed system periphery additionally supports the cleaning of the decanter. This includes the entire control system of the decanter, valves and pumps as well as an optimally designed cleaning program.

### Summary

The most stringent hygienic requirements apply in all sectors, whether in the food industry, pharmaceuticals or biotechnology. Flottweg has succeeded in offering optimal separation technology at the highest standard with its hygienic decanter series. And the best thing about it: it's worth it. For a look at the lifetime costs will tell you that an investment pays off quickly. With its easy-to-clean components and surfaces, valuable cleaning time is saved. At the same time, less water, cleaning agents and energy are required. For one thing is clear:

Those who clean faster, can produce for longer.

### Flottweg hygienic design at a glance

- Minimized dead spaces in the product space
- The entire machine is CIP-capable
- The screw blade with a maximum roughness of 0.8 µm
- Welds hygienically polished
- Food-safe lubricants pursuant to NSF H1 are used
- Hygienically optimized product based on EHEDG guidelines
- Optimal cleanliness due to adjustable impeller and peripheral design
- Plastics pursuant to FDA are used
- Gear units and bearings outside of the product space