

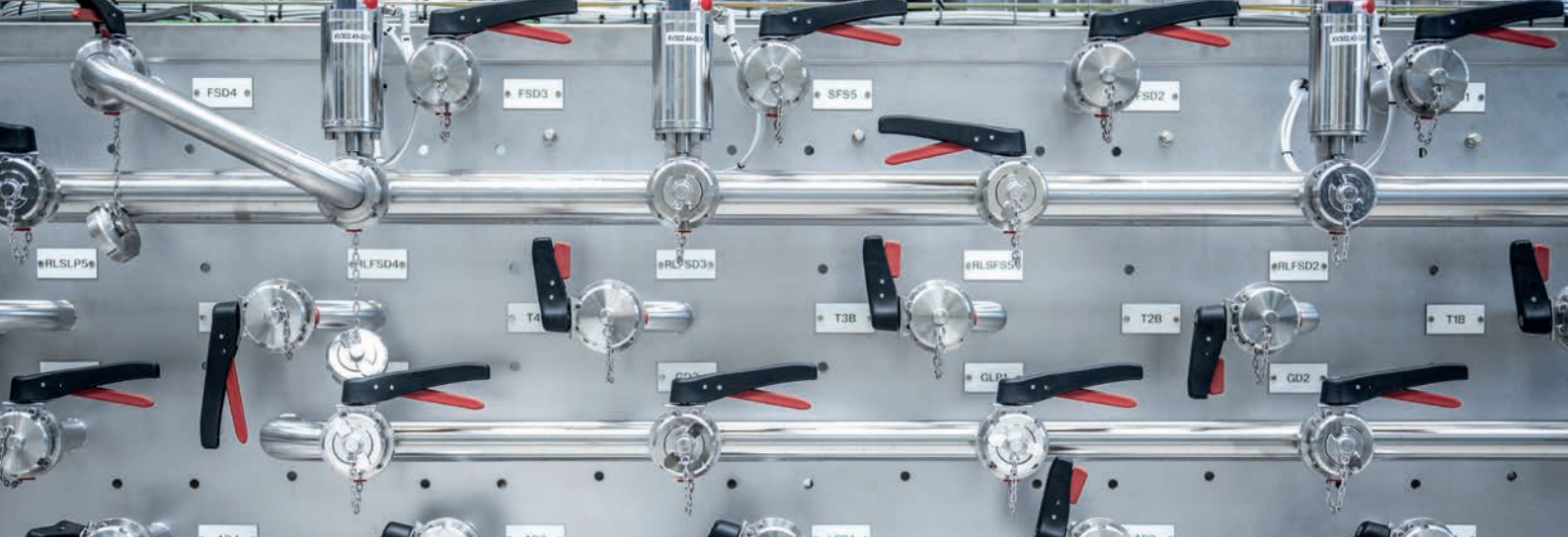


FLOTTWEG PROCESS CENTER

From the first test to a secure investment decision



Engineered For Your Success



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INVESTMENT SECURITY THROUGH RELIABLE DATA

New products, new raw materials or changing market demands constantly present companies with the same challenges: Which process works reliably? Which technology achieves the best results? And how can an investment reliably be secured?

You will find answers to these questions at the Flottweg Process Center. Together with our experts, we analyze your application, develop suitable process solutions and validate them under real-world conditions.

Base your decisions on data, not assumptions!

The path to reliable data

- Can the product even be separated satisfactorily? Does the idea work?
- Which separation technology is the right one?
- What yield can I expect?
- What separation quality or residual solids moisture can I expect?
- Can the process be scaled economically?
- How high is the investment risk?

These questions are answered at the Flottweg Process Center. Customers receive reliable data and work with Flottweg to develop the optimal solution.



YOUR PARTNER FOR END-TO-END PROCESS DEVELOPMENT

From the initial idea to an industrial solution

01



Laboratory – understanding the product

- Feasibility analyses
- Material characterization
- Determination of separation properties
- Initial process assessment

02



Pilot plant – validating the process

- Tests with full-scale machinery
- Production-level tests
- Optimization of process parameters
- Verification of performance metrics

03



Scale-up – scaling reliably

- Transition to industrial-scale processes
- Design of machines and processes
- Sound basis for investment decisions



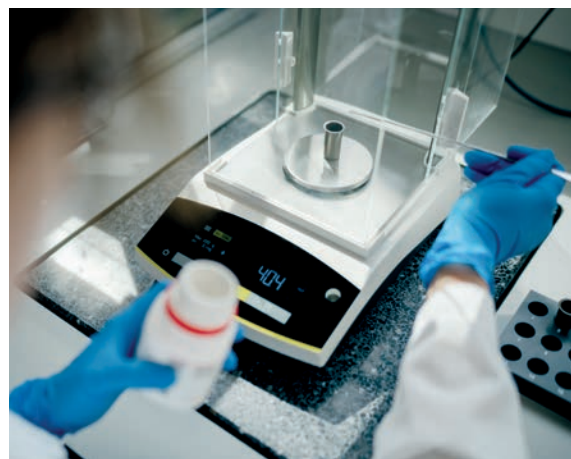
01 LABORATORY ANALYSIS

The foundation of successful processes – understanding your product before testing begins

Our laboratory analyses provide the basis for informed decisions and efficient test programs. For an initial analysis, small amounts of around two liters are sufficient.

- Feasibility studies even with small product quantities
- Comprehensive material characterization
- Investigation of separation behavior and efficiency
- Estimation of product quality and yield
- Initial assessment of process suitability

Result: reliable process predictions and targeted test planning.





Our laboratory analytics for your success

Our laboratory equipment allows us to analyze all key parameters that are critical to your separation results.

- Determination of the physical parameters of two-phase and three-phase samples (dry residue, filterable solids, non-filterable substances, pH value, chloride content, electrical conductivity, turbidity, ash residue, sand content)
- Measurement of fat content in animal and vegetable fats and oils as well as in oil sludges using the classic Soxhlet method or the solvent-free CEM Oracle method
- Determination of the water content in the oil phase using volumetric Karl Fischer titration
- Determination of particle size distribution using the Malvern Panalytical Mastersizer 3000 in accordance with DIN ISO 13320
- Investigation of the rheological behavior of two-phase and three-phase samples using the MCR 302 rheometer or the RheoLab QC viscometer from Anton Paar
- Measurement of the nitrogen content in protein and wheat flour samples using the Elementar rapid MAX N exceed nitrogen analyzer
- Determination of gluten quantity and stability in wheat flour using the Glutomatic system
- Measurement of gluten quality using the GlutoPeak system
- Measurement of wastewater-relevant parameters such as phosphate, ammonium, nitrate, calcium, magnesium or COD using the WTW photoLAB 6100 VIS photometer
- Completion of pressing tests using a laboratory belt press to determine the optimal process parameters for continuous solid/liquid separation



02 PILOT PLANT

More room for innovation – state-of-the-art testing facilities covering 2,000 m²

The new Flottweg Process Center offers you optimal conditions for tests across a wide range of applications in a space of approximately 2,000 m². Our versatile selection of test machines allows us to customize processes and adjust them during testing. To this end, we make various machine models available: Sedicanter®, Tricanter®, decanters and our separators (3-phase/2-phase).

Tests involving approximately 2,000 liters can be easily conducted on-site. The Process Center also offers the opportunity to compare separation results from different types of centrifuges and, in conjunction with the associated laboratory analysis, determine the optimal process design.

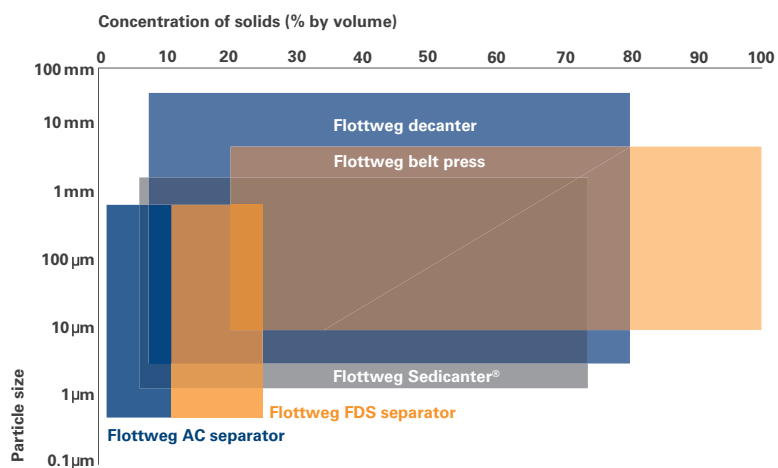
- Separate “white” and “black” areas
- Both quasi-continuous and batch operation possible
- Flexible process setups
- Integration of additional test equipment
- Modern media supply
- Product temperature adjustment with steam or hot water
- CIP cleaning and wastewater treatment
- Fluorescence test for cleaning validation



Success is... a matter of design

Through pilot trials, we bridge the gap between the laboratory and industrial production. The pilot plant provides the necessary insights and baseline data for reliable scaling of your

processes. With our complete machine portfolio comprising separators, decanter centrifuges and belt presses, we offer the optimal separating unit for every customer process.





03 SCALE-UP

Large-scale tests under real-world conditions – for reliable results

From small-scale pilot tests to throughputs of up to 90 m³/h, processes can be investigated under realistic conditions. And sometimes, tests simply have to be conducted on site to gain the necessary process engineering insights under real-world conditions. To this end, we offer mobile test systems worldwide, while our expert staff provide you with personalized support.

Our mobile test systems cover the entire Flottweg portfolio:

- Decanters
- Tricanter®
- Sedicanter®
- Separators
- Sorticanter®
- Belt presses

In addition, we offer custom test setups for multi-stage processes and rental containers.



On site for your success





EXPERTISE MEETS FLEXIBILITY

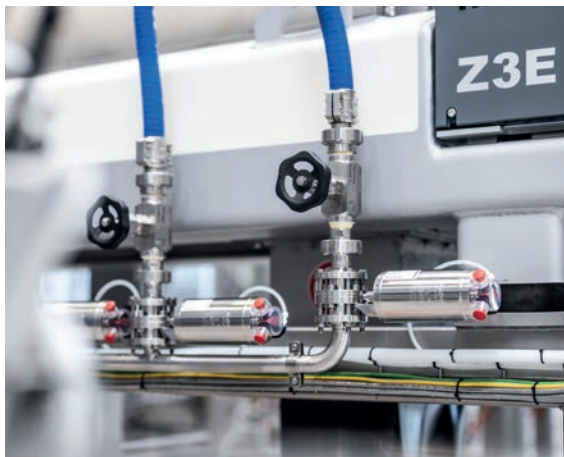
Success is... working together to develop the best solution

At the Flottweg Process Center, customers gain more than just access to test systems.

Our specialists support you in every step:

- Selection of suitable technologies
- Development of process concepts
- Optimization of existing applications
- Scale-up to industrial plants
- Evaluation of cleaning and operating concepts

Close collaboration creates transparency and accelerates development processes.





YOUR BENEFITS AT A GLANCE

Success is... benefiting from more than 70 years of experience

Throughout more than seven decades, we have acquired a wealth of knowledge in the field of mechanical solid/liquid separation. We apply this knowledge every day, all over the world, to ensure our customers' success.

We view our customers as partners and support them with our expertise. We listen to them and strive to offer the best solution on the market, based on our technology and experience. In an increasingly dynamic market environment, we understand our customers' challenges down to the last detail.

We ensure that Flottweg customers stay ahead of the competition:

Testing

- Testing before investment
- High flexibility

Validation

- Validated process data
- Reduced project risk

Decision-making

- Well-informed investment decisions
- Direct collaboration with experts

Scaling

- Faster time to market
- Seamless scale-up

ENGINEERED FOR YOUR SUCCESS

Now is the time for your success! Whether it's an initial consultation, a feasibility study, process optimization or industrial scaling: The Flottweg Process Center supports you every step of the way toward finding the optimal process solution.

We lay the foundation for this with state-of-the-art infrastructure, extensive process expertise and practical testing.

Are you in a particular hurry? Feel free to use the following preliminary considerations. You don't need to know all the details right now – brainstorming helps you reach your desired goal even faster:

01

Input

Process and Industry

Where does the product come from?

Processing

☐ Continuous ☐ Batch operation

Throughflow

Estimated capacity (m³/h, hl/h, t/day, etc.)

02

Process

Your separation goal in one sentence (what you want to achieve):

.....

Two- or three-phase separation

☐ Solid-liquid ☐ Solid-liquid-liquid

☐ Other separation goal (e.g. classification)

Which phase represents the value product?

.....

Additional media required/known (hot water, steam, additives, etc.)

.....

Treatment of by-products or process streams (processing, landfilling, etc.)

.....

03

Output

Additional treatment/process stages for phases, if applicable

Liquid phase 1:

Liquid phase 2:

Solid:



04

Let us work together to drive your project forward –
contact us now for a no-obligation initial consultation

www.flottweg.com/contact/contact-form/





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