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**Agitation systems  
tailor-made to your needs**

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**YOUR  
CUSTOMIZED  
AGITATION  
SYSTEMS ARE  
SELECTED AND  
DESIGNED BY  
OUR PROCESS  
EXPERTS.**

## Your customized agitators

**Boccard meets your stirring needs with a wide range of mixing, dispersion, emulsion, incorporation, scraping, homogenization and fermentation devices.**

Our century-old family business specializes in the manufacture of stainless steel materials for various industries. Boccard Process Vessels designs and manufactures process vessels and has developed an expertise in stirring and mixing over the last twenty years.

Expert in pharmaceutical, cosmetic, food and chemical processes, Boccard answers the needs of these industries with turnkey solutions that meet the specific criteria of each interlocutor.

Boccard offers tailor-made solutions in compliance with current standards and regulations: DESP, CODAP, ASME, GOST, Ü Certification (Stamp Ü), ATEX.



**Food &  
Beverages**



**Pharma  
& Biotech**



**Cosmetic  
& Hygiene**



**Specialty  
Chemistry**



**Nuclear  
Industry**



# Design and manufacturing of your customized agitators

## UPSTREAM

- Assisting in the definition of a new agitation for a new process
- Scaling of a process with increased production volumes
- Audit and putting in perspective technical solutions to optimize the batch production times
- Design of a tank and integration validation of an agitation profile already used in your production units



## DOWNSTREAM

- On-site intervention to maintain agitators and tanks to maintain the original function
- Process optimization and revamping

### CFD to :

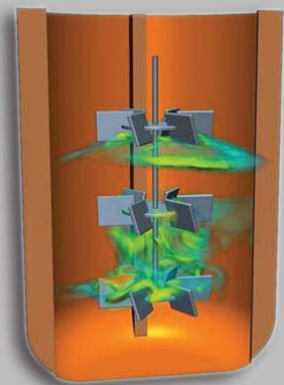
Develop and optimize  
your agitators

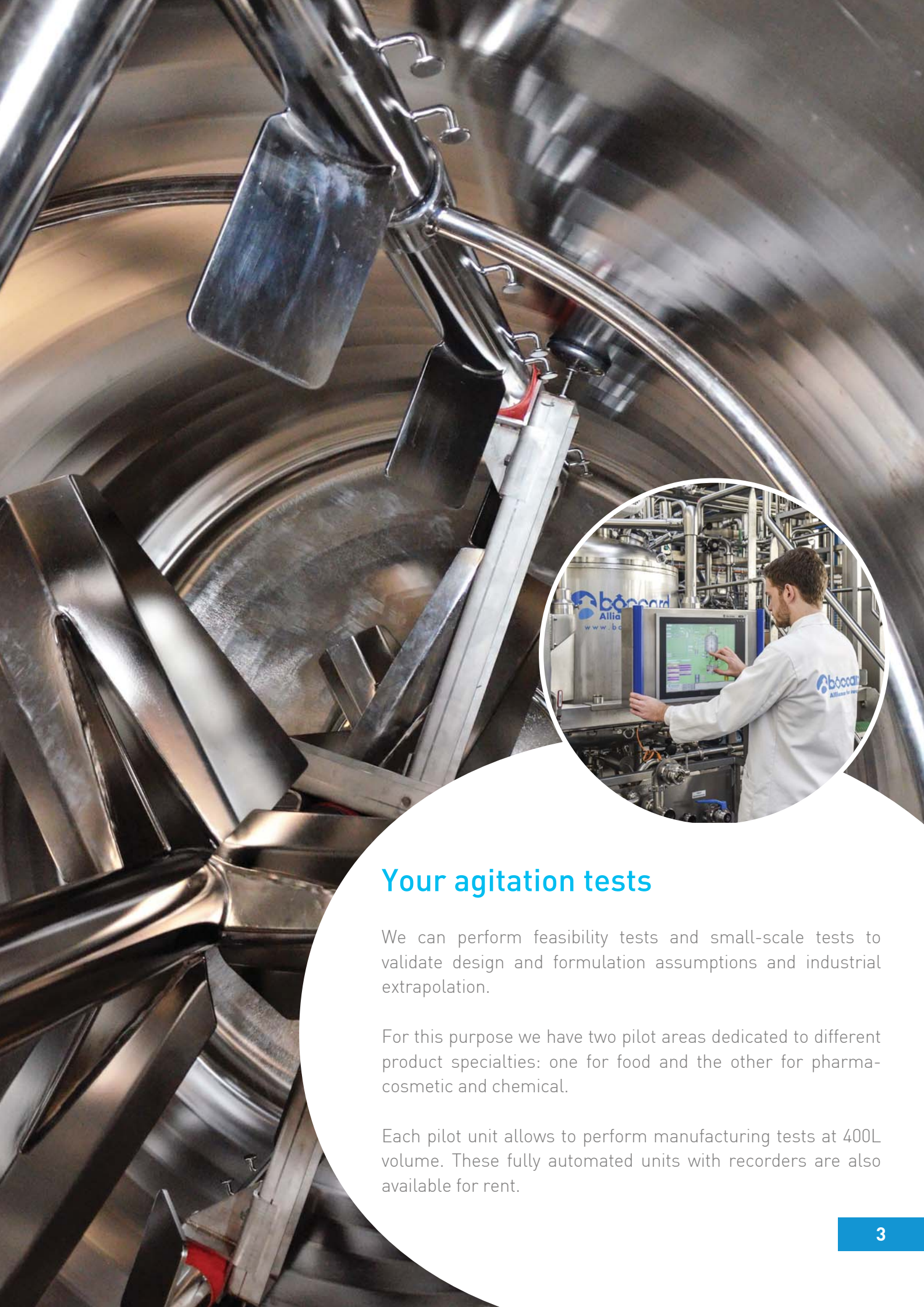
Validate solutions  
selected to respect  
your Specifications

## A TOOL TO DESIGN AND OPTIMIZE YOUR PROCESS

Our expert in CFD (Computational Fluid Dynamics) simulates in real volume the agitation of a product in a tank.

This software simulates agitation design assumptions from the calculations performed and their interpretation and our agitation expert can supply a visualization of results upon request.





## Your agitation tests

We can perform feasibility tests and small-scale tests to validate design and formulation assumptions and industrial extrapolation.

For this purpose we have two pilot areas dedicated to different product specialties: one for food and the other for pharmaceutical and chemical.

Each pilot unit allows to perform manufacturing tests at 400L volume. These fully automated units with recorders are also available for rent.

# Our customized solutions

## for agitation and mixing

Fluid agitation and mixing in tanks are key steps in the manufacturing process for many industries. Proper sizing, characterization and design of stirring and mixing systems require specific expertise and knowledge, particularly because of the complexity of the tank-agitator systems and the nature of the flows.

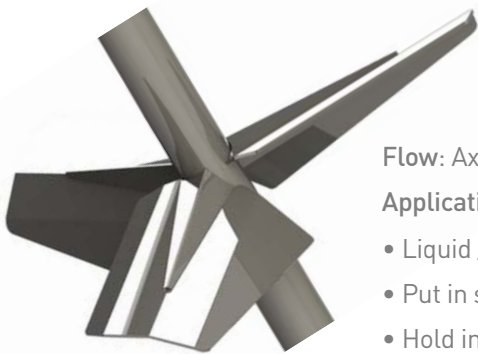
The definition of the agitation system adapted to the constraints of the industrial process takes into account the functions or combinations of functions to be fulfilled:

- **Homogenization**
- **Maintenance and / or suspension**
- **Mixers and melters**
- **Heat exchange**
- **Chemical reaction**
- **Liquid / liquid or solid / liquid dispersion**
- **Gas / liquid**
- **Emulsion**

In order to fulfill these functions, our agitation experts will select different mobiles or combinations of mobiles depending on the desired result.

### TRIPAL or BIPAL PROPELLER

Three-bladed or two-bladed propellers for multiple mixing or homogenization applications requiring significant pumping



**Flow:** Axial

**Application :**

- Liquid / liquid mixing
- Put in suspension
- Hold in suspension
- Thermal transfer

### HELICAL RIBBON

Helical ribbon for high viscosity products such as paints, silicones or purees and compotes

**Flow :** Axial

**Application :**

- Mix of very viscous fluids



### DISC TURBINE

High-shear (Rushton) or curved, high-shear turbines used for immiscible gas-liquid or liquid-liquid two-phase systems



**Flow:** Radial

**Application :**

- Liquid / gas dispersion





## ROTOR / STATOR

Rotor / Stator for the homogenization of the bottom of the tank to obtain a large shear necessary especially for the dispersion of the powders

**Flow:** Radial

**Application:**

- Non miscible liquid / liquid emulsion
- Solid / liquid dispersion
- Homogenization

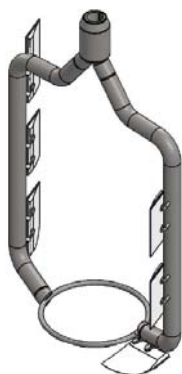
## DISPERSION TURBINE

Also known as a deflocculating turbine, the dispersion turbine creates a large shear making it possible in particular to disperse powders who need to be suspended and to prevent the formation of aggregates.

**Flow:** Radial

**Application:**

- Avoid sedimentation of solids
- Dispersion of solids in a liquid
- Process requiring high shear



## ANCHOR (with or without wall scraper)

Anchor for scraping the edges of the tank during a thermal transfer for highly viscous products to prevent them from sticking to the walls (for products such as chocolate, cosmetic creams, caramel ...)

**Flow:** Tangential

**Application:**

- Thermal transfer (viscous products)
- Homogenization, product and temperature for viscous product

## CHARACTERISTICS OF OUR AGITATORS

|                                                          |                                                            |
|----------------------------------------------------------|------------------------------------------------------------|
| <b>MATERIALS</b>                                         | 316L, 304L, Uranus B6, Hastelloy (others possible)         |
| <b>SEALING</b>                                           | Vring seals, lip seals, dry or lubricated mechanical seals |
| <b>SURFACE</b>                                           | up to 0.25 µm in mechanical polishing or electropolishing  |
| ATEX version possible                                    |                                                            |
| Agitation for atmospheric tanks or pressure / depression |                                                            |



## CONTACT US

**Boccard Process Solutions**  
Process Vessels

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[www.boccard.com/en/  
tanks-vessels](http://www.boccard.com/en/tanks-vessels)

We design, manufacture, assemble and install stainless steel process mixing vessels and storage tanks for our customers worldwide who transform raw materials into products for people's direct consumption. Our centers of excellence (Food & Beverage, Health&Care and Brewery) are committed to achieving the highest levels of quality and safety in over 100 countries, while ensuring optimal productivity to serve demanding markets.

Our experts in Process Intelligence and Project Management work on a partnership basis with companies of all sizes, including major global players, to build new facilities or upgrade existing systems to meet and surpass key performance indicators: product excellence and consistency, efficient time-to-market, responsiveness and flexibility.

In everything we do, our goal is to provide you with the best process experience, now and in the future.

