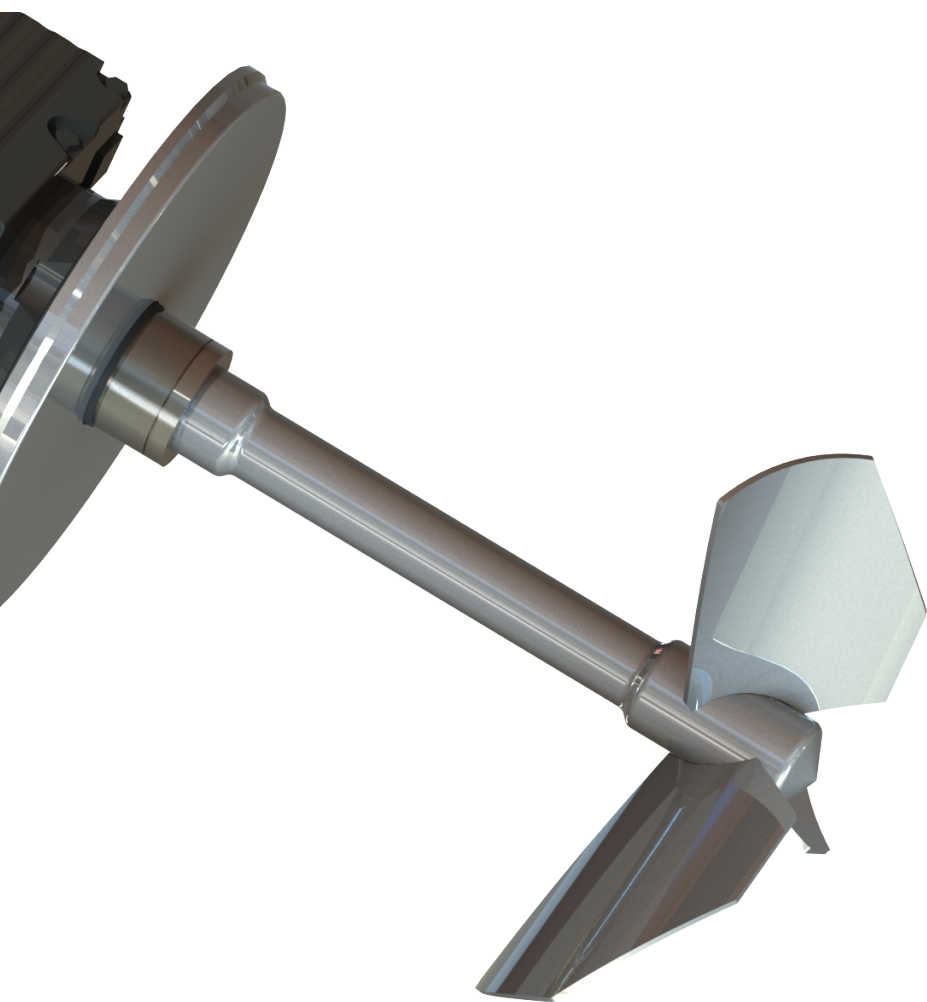


# Ingenious agitation solutions



Process  
Mixing  
Solutions

# Who we are

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Founded in 1980, PMS is specialised in mixing and agitation solutions. It is backed up by a €60m industrial group.

## Our business

PMS designs, manufactures and markets mixing and agitation solutions for the pharmaceuticals, cosmetics, food processing and chemical industries. PMS is now also able to undertake studies with CFD simulations and laboratory modelling and intends to use this expertise to conquer new markets.

## Our DNA

Project study, Design, Manufacturing, Retrofitting and Research for the optimisation of processes associated with Hygienic, Safety and Environment (HSE) constraints.

## Our Ambition

PMS offers support in the development and continual improvement of your processes by providing personalised and efficient solutions.

“ Your Agitation and Mixing engineering ”

## Our sectors of activity



Agri-food



Cosmetics & Pharmaceuticals



Chemistry & Environment



PMS is an ISO 9001 certified company

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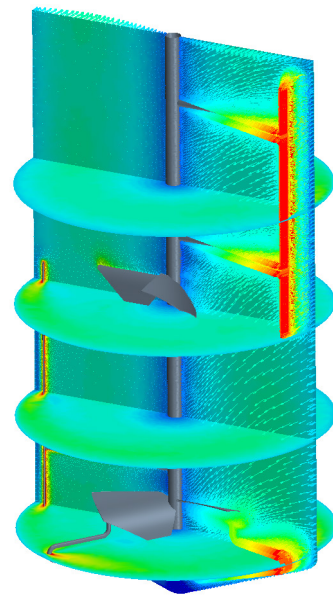
# CFD, the expertise of PMS

PMS has strengthened its expertise with the acquisition of a fluid mechanics simulation software package to consolidate its Agitation and Mixing engineering position.

These models mimic the behaviour of real-world mixing and agitation systems based on varying input data such as : temperature, pressure, flow, grading, viscosity, density, etc....

Digital models allow the examination of complex behaviour and scenarios of agitation and mixing systems on a wide range of conditions far more quickly and inexpensively than with physical systems. Useful insights about different decisions in the design and process could be gleaned with the access to all the data (speed, pressure, concentration, etc...)

PMS then helps you in your costs and time saving quest at all life cycle phases of your systems.

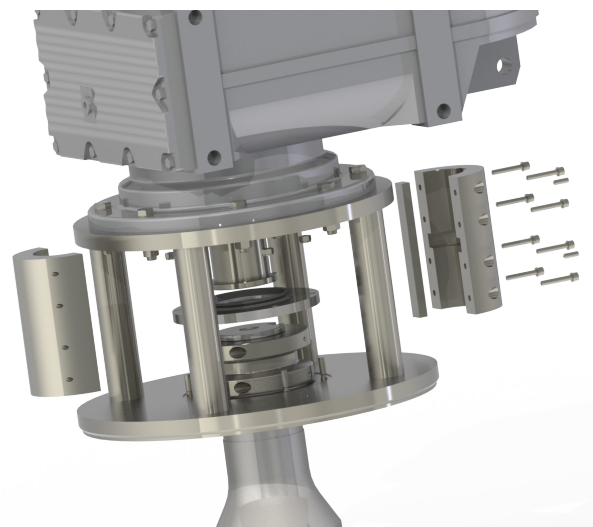


## Easy Maintenance

As part of its Eco-design approach PMS develops, during the design of its devices, simplified Easy Maintenance assembly and disassembly systems.

This system offers a real gain in performance on the device in its global environment as well as :

- Ergonomy and security
- Significantly lower maintenance times and costs
- Noticeable increases in the productivity of the installation
- Reduction in the handling resources
- Absence of a flat seal between tank flange/support frame flange
- A versatile system
- Construction meeting hygienic manufacturing and design international standards



## PMS, your lasting partner

### Characteristics of our agitators

- Materials : stainless steel 316L, 304L (On request: 316Ti, Uranus B6, Hastelloy, etc.)
- Sealings : gaskets, simple or lubricated mechanical seals, etc.
- Pressure / vacuum : absolute vacuum to 6 bars
- Temperature : up to 200°C
- Our equipment is available with aa surface roughness

down to 0.25  $\mu\text{m}$  with electro-polished or mirror-polished surface.

- Our mixers are available in ATEX version (zone 1 or 2 internal, gas and dust)
- Traceability through component certificates (3.1B, FDA, 1935/2004, USP class VI, etc.)

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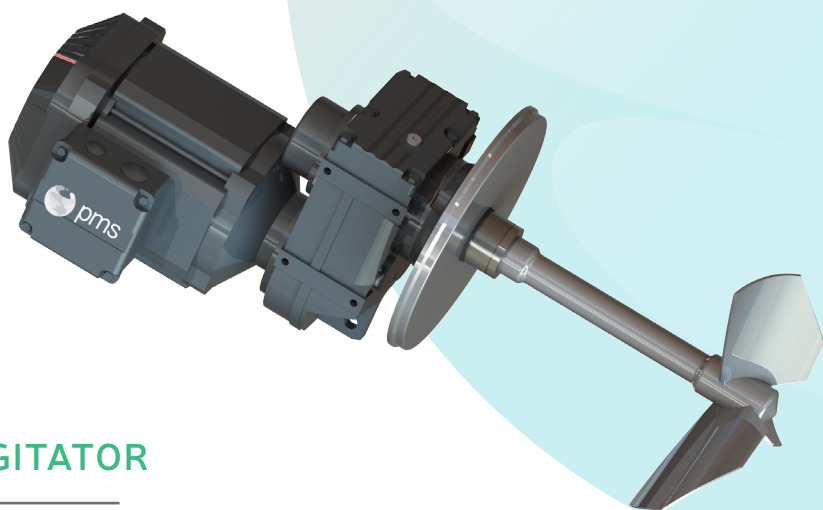
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## PENDULUM AGITATOR



- Hygienic design meeting the most demanding international standards
- Determination of the propeller profiles and equipment characteristics in line with agitator functionality
- Easy Maintenance (option)



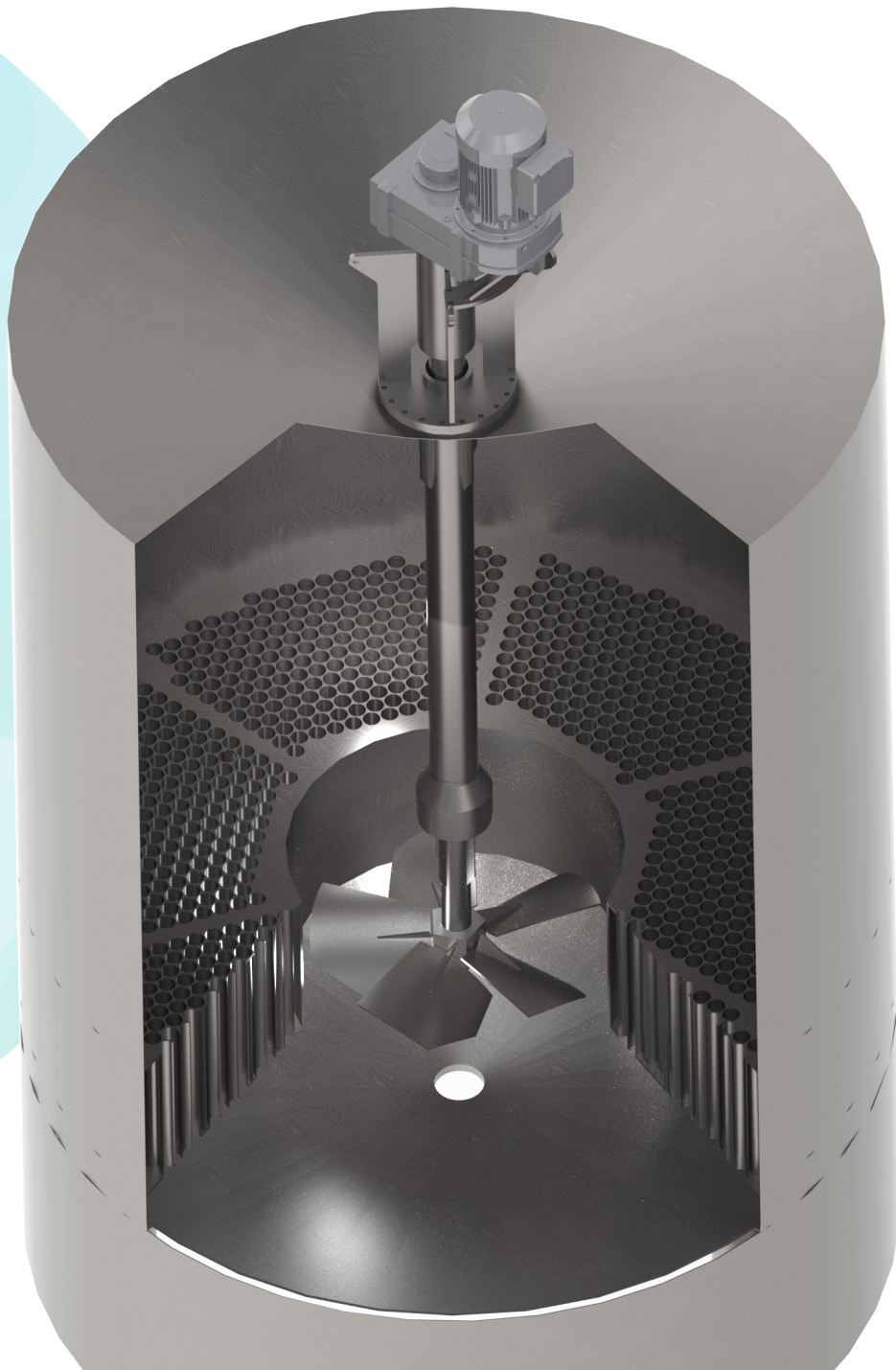
## HORIZONTAL AGITATOR

- Hygienic design
- Interchangeability of the mechanical seals and geared motor, regardless of the manufacturers
- Direct assembly on the flange to weld without seal
- Easy Maintenance

Dairy products - Ice creams - Baby Food - Egg products - Chocolates - Jams - Compotes - Alcohols  
 Mixing / Hydration / Maintaining in suspension / Solids suspension / Thermal exchange / Maturation / Curdling, drainage

## VACUUM PAN (SUGAR CRYSTALLIZATION)

- Robust construction suitable for intensive use during sugar harvest season
- Guiding turret with dual bearing
- In-line geared motors (transmission via pulleys/belts version available)



SUGAR REFINERY & DISTILLERY

alcoholic and non-alcoholic beverages - Fruit juices - Sodas - Wines & Liqueurs - Sauces - Pet Food  
draining / Crystallisation / Emulsion / Juice preparation (carbonation, liming, acidification) / Crystallisation / Remelt / Distillery

## DUAL MOVEMENT AGITATOR

- Thin blade propeller profile allowing less power to be used while maintaining mixing efficiency
- High pumping flow
- Preservation of product integrity
- Easy servicing
- Tank wall scraping :
  - Optimised thermal exchange
  - Reduction in product residuals in the tank and CIP cycle times
- Scrapers :
  - Clip assembly, fully washable
  - Automatic system adjustment
  - Optimised positioning to facilitate draining



## ROTOR STATOR\*

- Double flow aspiration and forced lateral output
- 100% of the product is sucked in and enters the shearing area
- Reach particle or droplet size reduction < 10 µm
- Integration at tank bottom close to the powder intake valve for direct aspiration and immediate dispersion
- Double cage option for smaller particle size



\*Patented system



Perfume - Lacquer - Lotions - Shampoo - Gel - Creams - Make-up - Toothpaste

Mix / Homogenisation / Maintaining in suspension / Dispersion / Emulsion / Melters / Thermal exchange

Ointments - Active ingredients - Drinkable solutions - Syrups - Dermatological products - Blood derivatives -  
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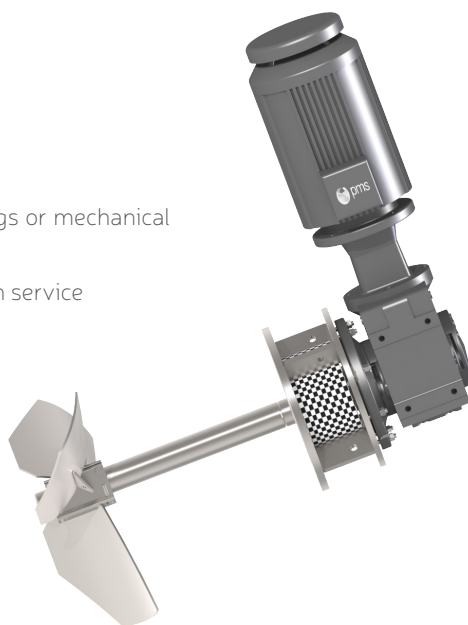
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## HORIZONTAL AGITATOR

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- Propeller profile favouring high pumping capacity
- Robust and economical version with sealing by packings or mechanical seal
- Option enabling the sealing replacement on a full tank in service



## PENDULUM AGITATOR

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- Guiding by the gear mechanism with or without tank bottom bearing by single or double turret bearing
- Thin blade propeller profile allowing less power to be used for high mixing efficiency
- High pumping flow
- Preservation of product integrity



## AGITATOR WITH FOLDING BLADES

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- Solid shaft
- Thin blade propeller profile allowing less power to be used for high mixing efficiency or with greater shearing profile for solids suspension
- High pumping flow
- Preservation of product integrity
- Foldable propellers



Synthesis chemistry - Basic chemistry - Painting - Ceramics - Petrochemicals - Products - Bitumen products - Carbon chemistry - Public works

Storage / Dispersion / Reaction / Homogenisation / Thermal exchange / Maintaining in suspension / Powders, gases, liquids mixes

Liming / Reagent preparation / Flocculation / Neutralisation / Coagulation / Putting in contact (reaction)

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