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# AGITATOR TECHNOLOGY IN PERFECTION

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# EXCELLENT QUALITY, FIRST-CLASS ADVICE: THE PERFECT MIX FOR YOUR SUCCESS

With more than 35 years of experience in agitation technology and process engineering, innovative technologies and first-class advice, PRG mbH is one of the world's leading suppliers of agitators and agitation plants.

With the highest level of precision and state-of-the-art manufacturing methods, we develop and produce agitators and mixing systems that perfectly fit for your processes. You can rely not just on the quality of our products but also on our well-established expertise as consultants: Exceptional knowledge of the industry and a sound understanding of its processes ensure that we will always offer you the best possible technical solution to meet your needs. This is something that

our customers from a wide range of industries can always count on, whether they come from the cosmetics, chemicals, biotechnology, food, biogas or pharmaceuticals sectors, or are system planners for large-scale industrial applications or medium-sized companies.

**Economical, innovative, reliable: Take your agitation technology to a new level - we look forward to your enquiry!**

>120  
EMPLOYEES

4,800 m<sup>2</sup>  
PRODUCTION  
AREA

>50%  
EXPORT QUOTA



High level consulting from the very beginning of a project



Every Detail in high end finishing



Innovative technology for highest requirements



PRG company history from 1981 to the present

**1981**  
Founded by  
Hubert Dierkes

**1990**  
New building goes up  
at the Warburg site

**2001**  
Frank Dierkes  
appointed  
Managing Director

**2004**  
PRG joins the  
BANG training  
network

**2005**  
Expansion:  
Production area

**2007**  
Further construction:  
Warehouse customi-  
sation and the production  
of steel parts, offices and  
training rooms

**2010**  
PRG India  
founded

**2012**  
Further construction:  
Offices, social areas, tech-  
nical centre, final assembly  
for pharma/biotech, small  
parts and pallet storage

**2016**  
Expansion:  
Surface  
finishing

**2017**  
Further construction:  
self-contained ware-  
house and logistics





## AGITATORS FROM PRG: QUALITY AND PRECISION FOR THE HIGHEST DEMANDS

Top hygiene standards, consistent product quality and reliable reproducibility – agitator systems for pharmaceutical and biotechnical applications must meet high level specifications. As one of the leading European manufacturers in both areas, PRG offers you technically sophisticated custom solutions that are perfectly tailored to your requirements.

All the agitators we provide are freely configurable to ensure seamless integration into your processes. We can also offer special constructions designed for you by our own development department. As diverse as our agitators are, they all feature excellent materials and production quality, meet the highest specifications for aseptic design and of course comply with internationally recognised industry standards such as the FDA and GMP.



Tested welding technology of the highest quality

Another of our strengths is that we document the manufacturing quality of our products in detail and can provide evidence of this with a variety of certificates and works attestations. From welding seam documentation to dye penetration testing and ultrasonic testing, we carry out numerous intensive tests to prove the quality of our products in detail and at the same time guarantee maximum transparency. Proven safety which has been trusted by our industry and research customers for many years.

### Some references and certificates for our products:

- Stainless steel inspection certificate according to DIN EN 10204 (3.1)
- FDA
- EG 1935/2004
- Biocompatibility according to ISO 10993 and USP Class VI (USP Class 6)
- ADI Free
- WPS (Welding Procedure Specification)
- Penetration test
- PMI testing

In addition, the surface quality and the concentricity properties of the agitator shaft are carefully checked and documented.

### Certified quality down to the last detail:

- Quality management system according to ISO 9001:2015
- Quality assurance system for ATEX according to EU Directive 2014/34 EU
- Specialist welding company according to AD2000 HPO, DIN EN ISO 3834-2 and PED 2014/68/EU



## A HEALTHY MIX OF TECHNOLOGY AND EFFICIENCY: AGITATORS FOR THE PHARMACEUTICAL INDUSTRY

From creams and ointments to liquid medicines or pharmaceuticals in tablet form, PRG offers its customers advanced agitator technology and tailor-made supply systems for a variety of pharmaceutical products.

Our agitators are available for all common installation situations and can be scaled individually to ensure seamless integration into your processes. Through innovative ideas and continual further development of our products we also contribute to making production processes even more effective and economical. For example, our low-maintenance magnetic agitator for sterile processes has a new, patented magnetic bearing currently in its evolutionary phase, offering even better energy efficiency and optimised performance.

Sterile designs and a low gap implementation in our agitators make for an aseptic design that meets the highest standards and enables uncomplicated CIP and SIP cleaning. We follow the recognised standards of the European Hygienic Engineering & Design Group (EHEDG) for structural and procedural layout. And naturally we fulfil the requirements of the FDA and EU Regulation 1935/2004.

Whether for large-scale industrial production or research purposes, whatever the requirement agitator technology from PRG offers you the right solution at the highest quality level.



### AGITATOR TECHNOLOGY FOR THE PHARMACEUTICAL INDUSTRY

**Processes:** batching, buffer and storage containers and a sterile processes

**Agitator tasks:** homogenizing, suspending, dispersing, heat transfer

**Agitator volume range:** 5 litres - 50,000 litres

**Design:** exact, optimal selection and design of the agitator unit



Agitator technology for high-quality pharmaceutical products





## HIGH-TECH FOR THE MOST DEMANDING APPLICATIONS: AGITATORS FOR THE BIOTECH INDUSTRY

Biotechnological processes have become an integral part of the development and production of innovative drugs and numerous other products. PRG offers you powerful agitators that enable maximum yield, can be adapted to your processes down to the last detail and can be used in all upstream and downstream processes.

Like our agitators for the pharmaceutical industry our fermenter agitators also meet the highest specifications of aseptic design. For example, the low-gap connection of different impeller designs to the shaft ensures optimum hygiene and sterility at all times. Whether it involves the upstream process with its fermentation of bacterial strains or cell cultures for the production of biomass or the downstream process where purification, filtration and harvesting of metabolic products is the focus, thanks to our excellent knowledge of the industry and its processes we can provide you with comprehensive advice and supply you

with agitator systems that are ideal for your requirements. It goes without saying that during construction and implementation we also focus precisely on the process parameters you have defined.

An exceptionally high range of vertical production enables us to manufacture or process a large proportion of the required agitator components ourselves. This enables us to meet your requirements with the greatest possible flexibility and at the same time guarantee precision and quality down to the smallest detail. The space-saving and energy-efficient drive technology of our agitators in asynchronous or servo design is another factor that makes our products the first choice when it comes to efficiency, economy and maximum reliability.

**Agitators from PRG for the biotech industry: quality, precision and innovative capacity deliver sustainable optimisation for your biotechnological processes.**



Optimised agitator technology for high yields



### CELL CULTURE FERMENTER

**Agitator volume:** 5 litres – 10,000 litres

**Peripheral speed:** 0 m/s – 2.5 m/s

**Gas flow:** 0 vvm – 0,5 vvm

**Sealing systems:** sterile mechanical seals, hermetically sealed systems (magnetic coupling)

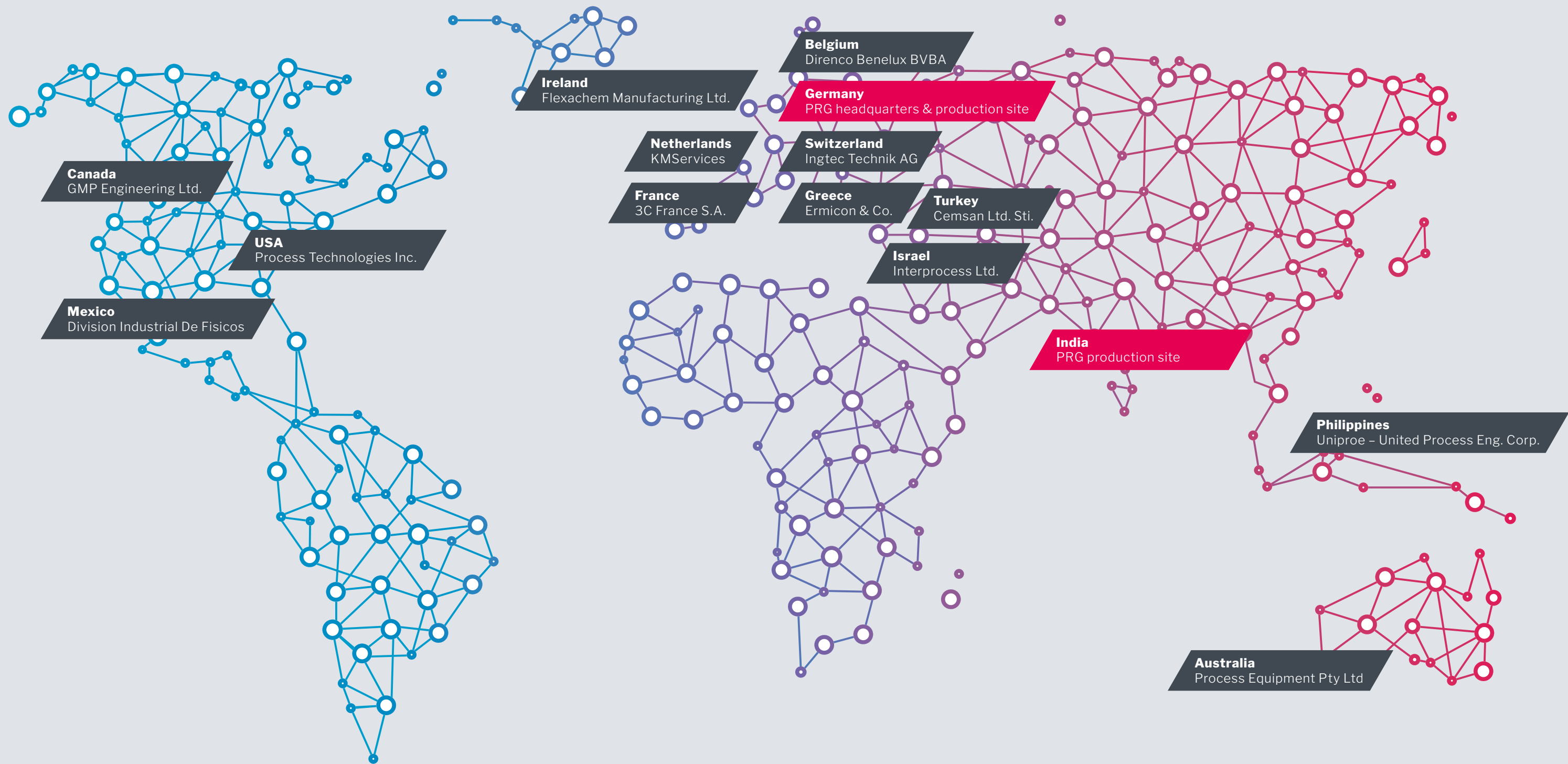
### BACTERIAL CULTURE FERMENTERS

**Agitator volume:** 5 litres – 50,000 litres

**Peripheral speed:** 0 m/s – 7,5 m/s

**Gas flow:** 0 vvm – 2,5 vvm

**Sealing systems:** sterile mechanical seals, hermetically sealed systems (magnetic coupling on request)



## WE'RE AT YOUR SERVICE THROUGHOUT THE WORLD

We take pride in offering you the best service for your PRG agitators and agitation plants at all times. This starts with advice and planning – and continues way beyond the manufacture of our products.

We're there for you around the clock – and around the world – and are on hand at all times with all the advice and practical support you need. Regardless of whether your agitation equipment needs maintenance, you want to further optimise your processes

or you need quick support and the right spare part in the event of a repair: With 15 sites or representatives on four continents, we're always close by and at your disposal at all times. We look forward to a cooperative partnership with you!



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## **Agitator technology for the Pharmaceutical- and Biotech industry**

With more than 35 years of experience, innovative technologies and first-class consulting expertise, PRG GmbH is one of the world's leading suppliers of agitators and agitation plants. Our products are used around the globe in a wide variety of industries – not only in pharmaceuticals and biotechnology, but also in the food industry and in the cosmetics, chemicals and biogas sectors.

- Made-to-measure agitator technology
- Consulting expertise at the highest levels
- A broad product range
- Quality and precision down to the last detail

 **Quality products made in Germany**

 **The PRG GmbH operates a certified quality management according to DIN EN ISO 9001/2015 and also an Ex-certificate according to guideline 2014/34/EU.**

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