

MAXIMUM EFFICIENCY FOR YOUR ENERGY PRODUCTION



*Agitator technology
for the biogas industry*

EXONDER®
A World of High Quality Products

PRG
RÜHRTECHNIK IN PERFEKTION



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

More than 40 years of experience, innovative technologies and excellent service: this mix has turned PRG into one of the world's leading suppliers of agitator technology, agitators and agitator systems.

With the highest precision and state-of-the-art production methods, we develop and produce agitating machines and systems for you. You can not only rely on the quality of our products, but also on our extensive consulting expertise: in-depth knowledge of the industry and a sound understanding of processes ensure that we always provide you with the optimum technical solution for your requirements – whether you are a plant planner for large industrial applications or a medium-sized company.

We carry out a test run of all our agitators at the factory to check the functionality and technical details. This allows you to commission our agitator technology on site very promptly. The agitators we use impress with their durability and maximum system availability. In addition, our service technicians are available to you flexibly for service assignments. This ensures short response times for maintenance and servicing issues.

Quality and precision down to the smallest detail – this is what customers worldwide from a wide range of industries rely on.



FOOD



NEW FOOD



COSMETICS



BIOGAS



PHARMA



BIOTECH



CHEMICALS

HIGHEST PRECISION: **FROM THE DEVELOPMENT TO THE AGITATOR**



Highest level of consulting expertise



Customised solutions...



... which are suitable for every system concept.

AGITATORS FROM PRG: AS INDIVIDUAL AS YOUR BIOGAS PLANT

We offer you a wide range of highly developed agitators so that you can achieve the best mixing results in biogas production. Special designs are also possible.

All of the agitators we offer are freely configurable and available for all common installation situations. This enables seamless integration into your processes. You can trust us to always provide you with the best technical solution for your production processes.

Do you have a challenging system or special requirements? No problem. Our internal development department will create special designs for you.

As diverse as our agitators are: they are all characterised by excellent material quality and maximum cost-effectiveness. Our exceptional production depth enables us to manufacture the majority of the required agitator components independently or process them in-house. This enables us to implement your wishes with the greatest possible flexibility.

At the same time, we guarantee precision and quality down to the smallest detail. It is a matter of course for us that, when manufacturing our products, we always comply with the applicable legal requirements and your in-house factory standards.

***So whatever you have
in mind: we will build
the right agitator
for you!***



FOR US AT PRG, IT'S ALL ABOUT BIOGAS PRODUCTION

With over 750 central agitators installed since 2005 and more than 20 years of experience in the biogas sector, PRG offers you a wide range of highly developed agitator types that can be perfectly matched to the respective task and plant size – for optimal yields and maximum operational reliability right from the start.

We manufacture our agitators for the biogas industry either from steel, steel/stainless steel or completely from stainless steel. Shaft lengths of up to 24,000 mm (free-floating) and shaft diameters of up to 240 mm can be realised. An exceptionally high level of vertical integration also allows us to independently manufacture or process a large proportion of the required agitator components. This means we can fulfil your requirements with the greatest possible flexibility while also guaranteeing precision, quality and ease of maintenance.

Our SCC-certified technicians and supervisors ensure that you receive first-class service for your PRG agitator technology – which can also be part of a customised maintenance contract if requested.

All these factors have made PRG's agitator technology the first choice of well-known customers all over the world. We look forward to convincing you of our services too!

End products of the biogas industry:

Electricity

Heating energy

Biomethane

Fertiliser



OUR CENTRAL AGITATOR LETS YOUR PLANT RUN AT FULL THROTTLE

Efficient agitator technology is indispensable for successful biogas production. PRG offers you technically sophisticated central agitators for a wide range of applications – whether on a laboratory scale or for industrial production in large tanks with volumes of up to 10,000 m³.

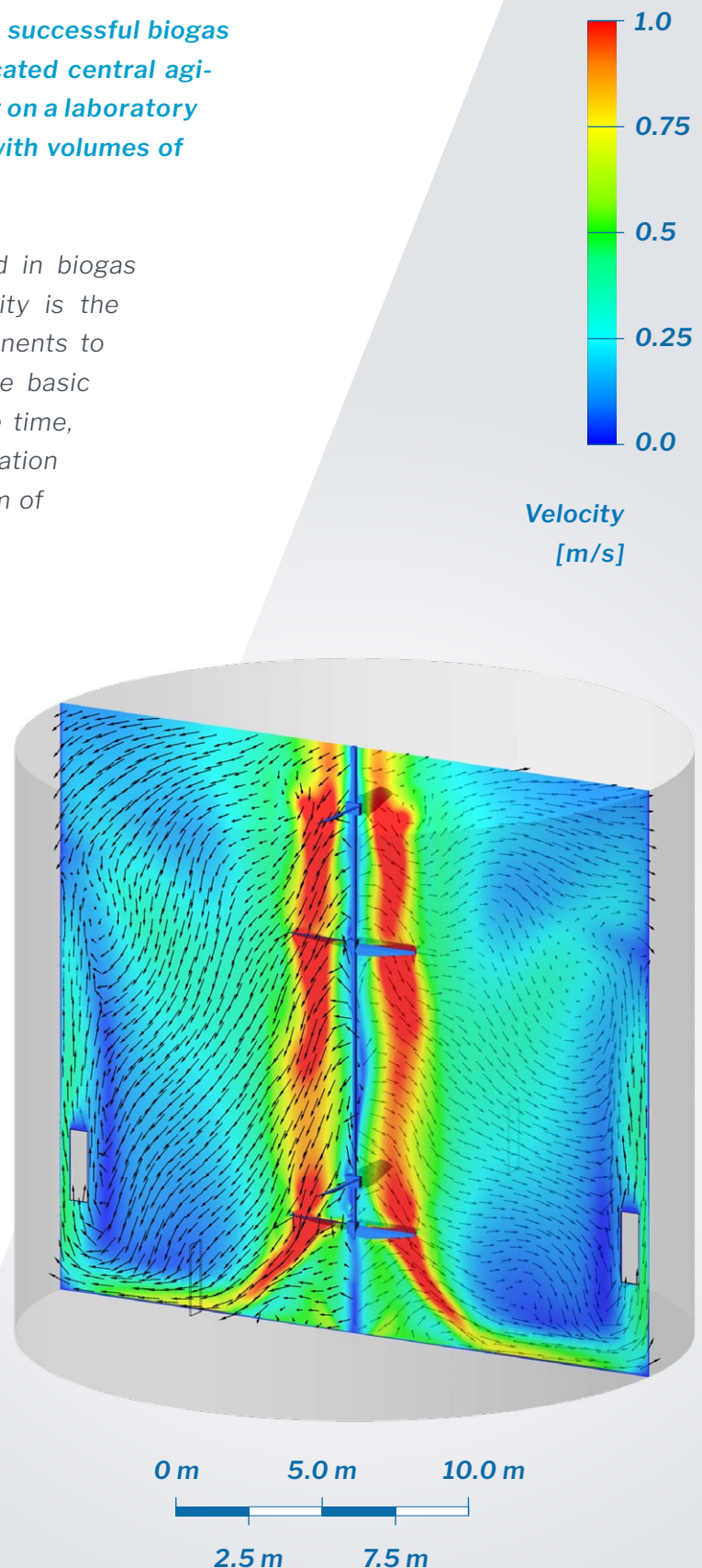
Our central agitators perform the tasks involved in biogas production precisely and reliably. The top priority is the homogeneous distribution of the product components to enable optimal material and heat transport – the basic requirement for maximum gas yield. At the same time, our central agitators effectively prevent the formation of a floating layer and sedimentation at the bottom of the container.

Whether it's a hydrolysis tank, sanitisation tank, fermenter or secondary fermenter: our central agitators can be installed in all common container types, whether they are concrete tanks, bolted and coated steel containers or enamelled containers. We also offer you the greatest possible flexibility in terms of the media to be processed: the spectrum ranges from renewable raw materials to silage and slurry, as well as animal and kitchen waste. A dry matter content of up to 16 % is standard for our agitators.

As drive units, we use robust and durable gear motors from renowned German manufacturers with an operating factor of ≥ 2 .

Rest assured: you'll get the best solution with PRG agitator technology.

Figure: CFD simulation of an 8,500 m³ biogas digester



THROUGH THE WALL: AGITATORS FOR LATERAL INSTALLATION

For use in secondary fermenters with gas storage, agitator technology usually needs to be installed laterally. PRG can also provide you with customised solutions of the highest quality for this, for use in areas of up to 7,000 m³.

The installation position and the number of belt-driven agitators required are determined by the respective useful volume. This ensures that the contents of the tank are mixed optimally. In the case of bolted containers, the agitator is mounted on a column so that no forces are introduced into the tank wall. Our agitators can also be easily mounted on concrete tanks, so that there are virtually no limits to their possible uses.

Benefit from the many advantages that custom-made agitators from PRG offer you as a biogas producer – we would be happy to advise you in detail in a personal meeting!

**Certificates /
conformities:**

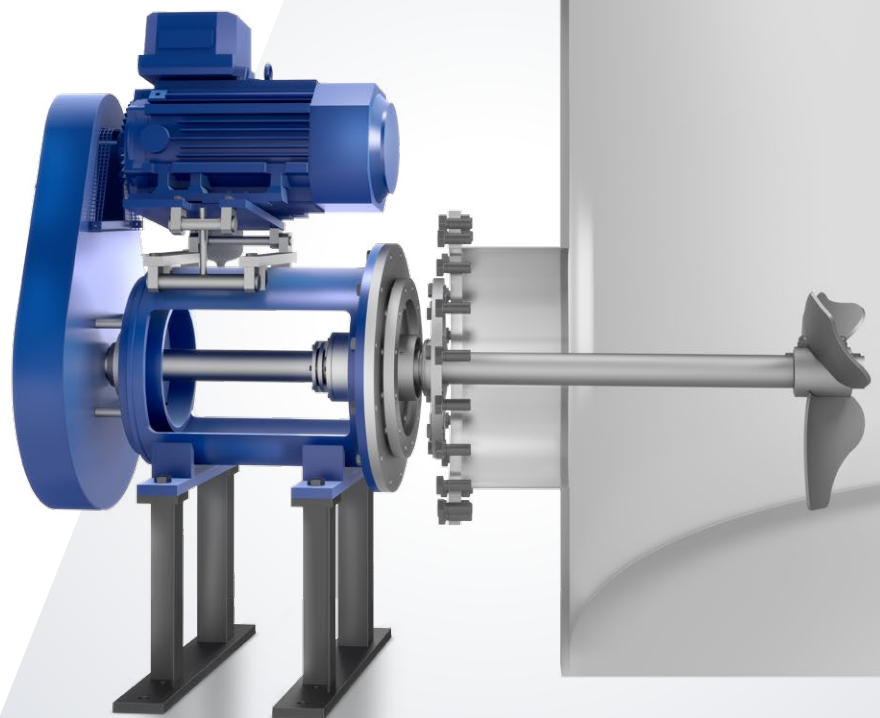
Penetration testing (PT)

Radiographic testing (RT)

Visual testing (VT)

Material substitution testing

X-ray fluorescence analysis

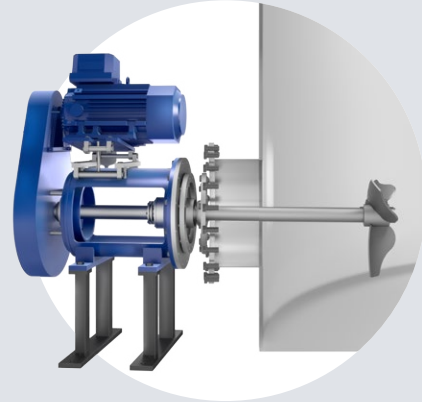


AGITATORS FOR THE BIOGAS INDUSTRY



Central agitators for biogas digesters

- ✓ Standard sizes from 18.5 kW to 55.0 kW for digester volumes from 2,000 m³ to 10,500 m³
- ✓ Special sizes from 75.0 kW to 90.0 kW for digester volumes from 11,000 m³ to 16,000 m³
- ✓ Free-floating agitator shaft length of up to 26.0 m
- ✓ Hydrofoil agitator up to 5.6 m in diameter
- ✓ Wear-free, gas-tight water seal
- ✓ No wearing parts inside the tank
- ✓ Maintenance of the drive unit possible with the tank cover closed
- ✓ Complies with globally applicable Ex regulations and energy efficiency classes
- ✓ CFD-based agitator design for optimal mixing
- ✓ Wall flow agitators in the tank are not required
- ✓ More than 20 years of experience in the design, construction and installation of central agitators for biogas plants
- ✓ More than 750 central agitators installed world-wide in the last 20 years
- ✓ Experienced and globally operating installation team



Lateral agitators for biogas secondary fermenters

- ✓ Standard sizes from 7.5 kW to 30.0 kW for post-fermentation digesters from 300 m³ to 9,000 m³
- ✓ Suitable for mounting on bolted steel tank walls or on concrete tank walls
- ✓ Double-acting, robust mechanical seal for wastewater
- ✓ 'Shut-down device' for servicing the drive unit and the seal, without having to open or empty the tank
- ✓ Complies with globally applicable Ex regulations and energy efficiency classes
- ✓ Flow-optimised hydrofoil agitator
- ✓ More than 20 years of experience in the design, construction and assembly of lateral agitators for secondary fermentation tanks
- ✓ Experienced and globally operating installation team

TAKE YOUR AGITATOR TECHNOLOGY TO A NEW LEVEL! **WE LOOK FORWARD TO RECEIVING YOUR INQUIRY**



Quality products made in Germany & India



PRG operates a certified quality management procedure
according to DIN EN ISO 9001/2015 and also holds
Ex certification according to Directive 2014/34/EU

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System
ISO 9001:2015

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