

## Magnetic stirrers

**PRG**

Präzisions-Rührer GmbH  
Agitators Stirrers



Engineering at its best.

## Magnetic stirrers

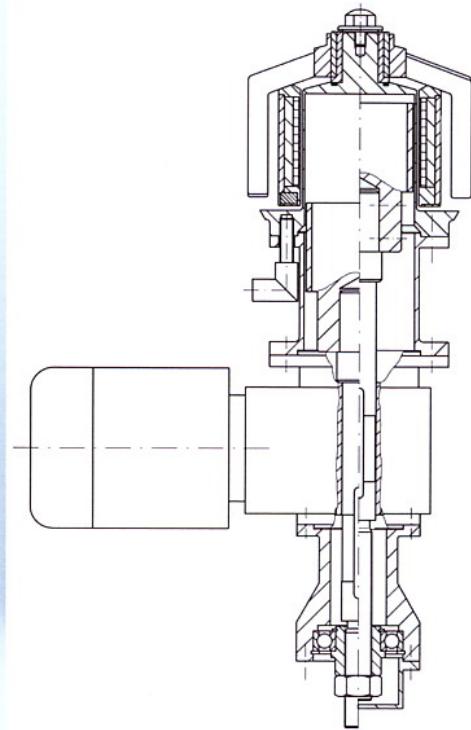
Beside special drives and special sealing technology more and more magnetic stirrers are used, especially in the biotechnology, one of the most sophisticated fields of process technology.

The advantage of this compact mixing system is, that no sealing technology is necessary and the rotation of the mixing tool is created by a magnetic field.

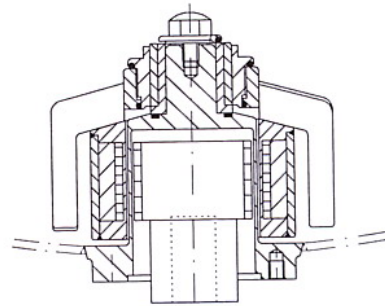
The rotating magnet can be equipped with different mixing elements, e.g. marine impeller or rushton turbine.

Magnetic couplings transmit their torque without direct touch. Therefore they are working nearly without mechanical wear. With correct design and exact working temperatures they have a very long endurance.

The maintenance and service work is reduced to a minimum because the magnets do not lose their field if they are not extended to high temperatures and electric fields. The energy consumption is very economical.



Magnetic stirrer with speed-indicator and mounting device.



Sectional drawing of rotor



Assembly units of magnetic stirrers



Example for standard-magnetic-rotor

## The advantages of the design

### Absolutely tight system

- No danger of contamination and leakage.
- Optimal for aseptic production.
- No influence on the integrity of the system, necessary for sterile and aseptic systems in health care.

### Easy cleaning and sterilisation

- Can be done directly in the vessel by steam or water or with an autoclave.
- Repeatability of results and possibility of cleaning automatization.

### Control of temperature

The optimized mixing effect allows a temperature control, which was more difficult before at batchwise sterilisation.

### Low sherrate

The smooth mixing allows handling of sensitive products, e.g. proteins, cells, bloodfractions or factors.

### Easy assembly

For torques over 70 Nm an assembly kit for the inner magnet is optional. This allows an easy handling of the mixing element.

### Speed control

A speed indicator for the real speed of the mixing element is optional.

## Mainparts of magnetic stirrers

### Drive (gear drive)

- Can be AC or DC motor.
- Explosion proof possible.
- Option: integrated frequency converter.

### Adapter flange

- Between motor and welded flange.

### Welded flange

- With housing for drive magnet.

### Journal

- With bushings made of tungston carbide with dry-cycle time and minimized particle ejection.
- Option: silicone carbide bushings.

### Magnet housing

- With magnet carrier and mixing elements.

### Different designs

Magnetic stirrers can be installed on top of the vessel or from bottom. 95% of the magnetic stirrer applications are finished with a bottom installation. The low height and the low weight of the drive are of advantage.

### Surface treatment

For the pharmaceutical and biotechnical industry the used material as well as the surface quality are of immense importance. For the reason the product wetted parts can be electro polished.

Based upon scientific research and with latest technical know how we develop your optimal solution.

Product Quantity	PRG-Type	Power [kW]	Basic Speed [1/min]
to 50 ltr.	WGR(r)-MR-88	0,18	332
to 200 ltr.	WGR(r)-MR-125	0,25	324
to 500 ltr.	WGR(r)-MR-140	0,37	323
to 1000 ltr.	WGR(r)-MR-155	0,55	329
to 2000 ltr.	WGR(r)-MR-170	0,75	329
to 5000 ltr.	WGR(r)-MR-190	1,1	329
to 10000 ltr.	WGR(r)-MR-300	2,2	326

Data related to water. Bigger sizes on demand.

## Industries

We have grown and developed with the requirements of our customers. Our endeavours to constantly provide "state-of-the-art" technology that satisfies the highest quality requirements, have strengthened the trust of our customers in PRG. Constant optimisations and modifications of diverse process technologies enable us to adequately respond to increasingly stringent statutory requirements. This has made PRG a strong partner to industries worldwide, including the following in particular:

- Chemical industry
- Pharmaceutical industry
- Paint, lacquer and varnish industry
- Food industry
- Cosmetics industry

Take advantage of our expertise!

## Products

Agitation is one of the most important basic operations in applied process engineering. Our extensive range of products contains simple propeller agitators as well as geared agitators and special design solutions tailored to your requirements.

Our range of products:

- High-speed agitators
- Geared agitators
- Coaxial agitators/  
double-motion agitators
- Homogenisers
- Magnetic stirrers
- Special design solutions
- Tripods
- Accessories

PRG offers a reliable partnership and products of the highest quality standard.

You can rely on it!



Your partner

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