

HANAG
STERILTECHNIK AG

MAGNETIC AGITATOR HMR



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TYPE HMR contactless driven agitator for sterile applications

TYPE HMR Ex contactless driven agitator for sterile applications and use in potentially explosive atmospheres

The magnetic agitator HMR is available in different sizes and with different stirring blades. CIP/SIP compliant design allows the use in sterile environment.

A SiC bearing and high-quality stainless steel materials meet the highest demands regarding abrasion and GMP confirmity.

One magnetic agitator - three types and different sizes:

Recommended areas of application:

The different type sizes of the magnetic agitator HMR-H and HMR-S are suitable for the following vessels:

HMR Size	Wing Types	Vessels
HMR-0.3	H, S, P	< 10 Liters
HMR-0.5	H, S, P	10 to 20 Liters
HMR-1	H, S, P	20 to 100 Liters
HMR-4	H, S, P	100 to 500 Liters
HMR-8	H, S, P	400 to 1000 Liters
HMR-12	H, S	1000 to 2000 Liters
HMR-24	H, S	2000 to 4000 Liters for simple mixing activities up to 10'000 Liters

Wing Types



HMR-H
For smooth mixing
Suitable for most applications
Easy mixing functions
Low air inlet
Low foam forming
Maximum speed 50-450 rpm



HMR-S
For strong mixing
Suitable for most applications
Mixing of hardly soluble substances possible
Mixing of large quantity of solids possible
Maximum speed 50-450 rpm



HMR-P
For very smooth mixing
Mixing of very delicate molecules without breaking them up in the process.
Maximum speed 50-150 rpm

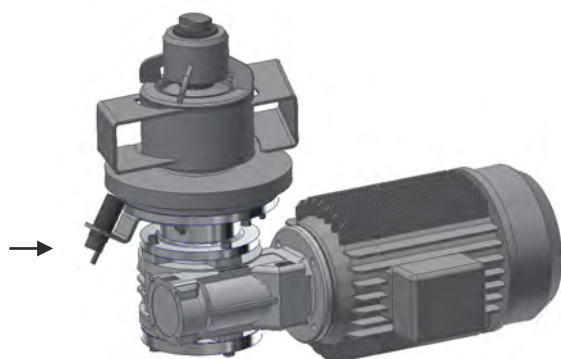
Motor Types



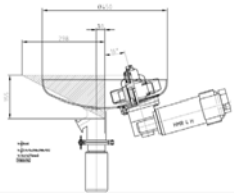
Worm gear motor
IP55 (or higher on request)

Spur gear motor
IP55 (or higher on request)

Option
Speedsensor mounted on the Welding flange
PNP-Sensor contactless

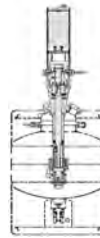


Mounting Types



Mounted in tank bottom

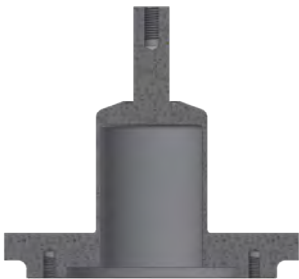
Excentric mounting
Better mixing without
baffels in the tank.



Top mounted with flange Customized

In case of low space in the
bottom
Can be installed if there is no
space for the agitator in the
bottom of the tank.

Welding flanges



Single Piece

Installed as a complete unit.
No sealings and therefore no
sealing gaps.



Two pieces

Easy to repair and maintain,
as the centering hood can
be replaced very easily.

The flange can be provided
with a blind cover, and thus
prepared for an agitator.

The agitator head cannot be
disassembled through the hole.

Operating Data

Design Pressure	-1 / 3 bar
Design Temperature	140 °C
CIP/SIP Capability	yes
Speed Range	50-450 rpm

Material

Surfaces in Contact with Product	1.4435 (Alternatives: 1.4410, 1.4529, 1.4539)
Bearing	Silicium Carbide
Sealing	EPDM (FDA)
Ferrite	< 3 % (1.4435)

Finish

Surfaces in Contact with Product	Ra < 0.6 µm
Agitator Head	electropolished
Welding Sleeve	grinded, Ra < 0.6 µm

Other technical specifications on request.

Documentation:

Assembly drawing

Operating Manual and Welding Instructions

Material - list with 3.1 certification according to EN10204

Surface Roughness Protocol

Ferrite Protocol of welding sleeve and agitator head

FDA and USP class VI certificate for all wetted gaskets