

Magnetic Mixers

GIUSTI GMAG RANGE



Giusti has long recognised the benefits of Magnetic Mixers for ultra sterile operations. The vessel shell is not penetrated and there are no mechanical seals. This also prevents toxic or high value media from leaking out of the vessel.

Suitable for viscosities up to 1000 cps the GMAG range offers great batch flexibility, because a relatively small volume of

product will cover the impeller-mounted very close to the vessel bottom. Bottom mounting also leaves the top of the vessel clear for easy vessel access.

GMAG has a drive mechanism that can be removed quickly and easily – a major advantage, because small vessels can then be autoclaved rather than sterilised-in-place (if preferred). All product contact

parts are stainless steel 316L, with special grade tungsten carbide bearing surfaces. These allow smooth trouble free operation and are an integral part of the impeller head and carrier.

The open impeller design allows easy cleaning and can easily be removed for separate cleaning and sterilisation. Giusti has extensive experience of CIP/SIP.

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KEY TECHNICAL DATA

| Model Number | Mixing Capacity Litres (Gentle) | Mixing Capacity Litres (Blending) | Mixing Capacity Litres (Vigorous) | Motor Power Rating | Impeller Diameter | Vessel Pad Diameter |
|--------------|---------------------------------|-----------------------------------|-----------------------------------|--------------------|-------------------|---------------------|
| GMag120 | 10 to 40 | 10 to 30 | 10 to 20 | 0.12kW | 95mm | 60mm |
| GMag370 | 50 to 650 | 30 to 500 | 30 to 350 | 0.37kW | 115mm | 88mm |
| GMag750 | 500 to 2500 | 500 to 2000 | 500 to 1500 | 0.75kW | 170mm | 144mm |
| GMag1100 | 2000 to 6000 | 2000 to 5000 | 2000 to 3500 | 1.1kW | 200mm | 165mm |
| GMag1500 | 4000 to 12000 | 4000 to 10000 | 4000 to 7500 | 1.5kW | 240mm | 200mm |
| GMag3000 | 6000 to 25000 | 6000 to 20000 | 6000 to 12000 | 3.0kW | 300mm | 250mm |

Notes

- The mixing capacities above are based on aqueous like products with a density of 1000kg/m³ (S.G.=1) and a viscosity of 1cp.
- Typical applications for 'Gentle' mixing are where solids are held in suspension.
- Typical applications for 'Blending' are where soluble liquids are mixed together or where powders easily dissolve into the liquid.
- Typical applications for 'Vigorous' mixing are where a vortex is required for blending of powders into a liquid.
- As a guide, for viscosities up to 10cp reduce capacities by 20%, up to 100cp reduce capacities by 50%, up to 200cp reduce capacities by 60%, up to 500cp reduce capacities by 80% and up to 1000cp reduce capacities by 90%.
- Sanitary design to meet current pharmaceutical requirements.
- Mechanical seals are eliminated to give an aseptic design with no risk of contamination or leakage.
- Speed range 50 to 550 rpm using an inverter. Depending on the size of vessel and impeller-head, levels of agitation can range from vigorous to gentle. Very small mixing volumes can be achieved.
- Mixing viscosities up to 1000 cps.
- A machined pad is welded into the bottom of the vessel (usually offset from a central outlet valve) allowing the bearing, impeller head and drive unit to be mounted. Bottom mounting leaves the top of the vessel clear.
- Inside the impeller head is a ring of rare earth magnets encapsulated in a 316L stainless steel housing. Welded to this housing are the mixing blades, which form an integral impeller head. The blade shape and profile has been determined to optimise agitation levels and to direct a proportion of the cleaning fluid through the head.
- A drive unit mounts externally to the vessel and can be quickly and easily removed using a bayonet type connection. This is particularly useful when sterilising the vessel in an autoclave or when sharing a single drive unit between vessels.
- The impeller head runs on a special grade of tungsten carbide that has been manufactured under controlled conditions to achieve the correct size, grain structure and hardness. The running surfaces have a ground mirror finish.
- The vessel can be cleaned in place (CIP) using spray balls and/or by immersion in a cleaning fluid. For maximum effect rotating type spray heads are recommended. Sterilization in place (SIP) is possible with temperatures up to 145°C.
- All wetted parts are supplied with 3.1B mill certification.
- A magnetic proximity sensor can be fitted to measure the rotation of the impeller head (supplied with a digital speed indicator for panel mounting if required).
- A wide range of controls can be supplied from a simple stand-alone panel to a fully integrated automation system.
- Full testing of your product can be undertaken in our extensive test facilities.

While every attempt is made to ensure the accuracy of data, Briggs pursues a policy of continuous improvement and reserve the right to change specification without prior notice.

Briggs of Burton PLC

Briggs House
Derby Street
Burton on Trent
Staffordshire
UK, DE14 2LH
Phone: +44 (0)1283 566661
Fax: +44 (0)1283 545978
Email: sales@briggsplc.co.uk

Briggs of Burton, Inc

400 Airpark Drive
Suite 40
Rochester
New York
USA, NY 14624
Phone: +1 (585) 426 2460
Fax: +1 (585) 426 0250
Email: sales@briggsusa.com

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