



## High speed magnetic stirrers MS-3000, MMS-3000

MMS-3000 Magnetic Stirrer is designed for effective stirring of different viscosity liquids.

MMS-3000 is a compact magnetic stirrer with the stainless steel working surface. It provides liquid stirring with the magnetic element rotation speed up to 3000 rpm (max. speed depends on the magnetic element size, stirred volume, viscosity, glassware shape, etc.).

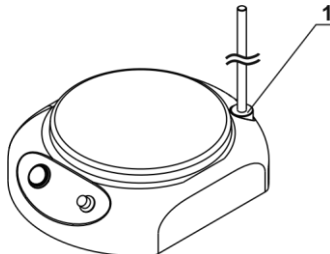
The unit is designed for operation with different size magnetic stirring elements (20-70 mm long). Other size magnetic elements may not provide appropriate operation.

MMS-3000 is equipped with an attachable stand that allows inserting different sensors (temperature, pH etc.) inside the liquid.

Application fields:

Chemistry	Stirring reaction ingredients during the fine organic synthesis, research in the organic catalysis field, different viscosity chemical reagents dissolving.
Biochemistry	Solutions preparation, dialyze, salt and alcohol sedimentation of macromolecules, gradient forming in the column chromatography, etc.
Soil science	Biological and chemical substances and samples extraction, research of the soil and ground chemical and biochemical compounds.
Biotechnology	Using as a minireactor in the micro-organism cells cultivation, culture medium preparation, titration, etc.

- 4.1. **Unpacking.** Remove packing materials carefully and retain them for future shipment or storage of the unit. Examine the unit carefully for any damage incurred during transit. The warranty does not cover in-transit damage. Warranty covers only the units transported in the original package.
- 4.2. **Complete set.** Package contents:
- 4.2.1. MS-3000
- MS-3000, high speed magnetic stirrer ..... 1 pce.
  - Magnetic stirring element ..... 1 pce.
  - External power supply ..... 1 pce.
  - Operating manual, declaration of conformity ..... 1 copy
- 4.2.2. MMS-3000
- MMS-3000, high speed magnetic stirrer ..... 1 pce
  - Magnetic stirring element ..... 1 pce
  - SR-1 attachable stand ..... 1 pce
  - External power supply unit..... 1 pce
  - Operating manual, declaration of conformity.....1 copy
- 4.3. **Setup.** Place the unit on the horizontal even working surface. Plug the external power supply unit into the 12 V socket at the rear side of the unit.
- 4.4. **Detachable stand installation (MMS-3000).** Remove the screw on the fixing socket at the stirrer back (fig. 1/1) and retain for future use. Screw the part of the stand with the counter-nut into the fixing socket and secure with the counter-nut. Screw in the second part of the stand into the attached first part.



**Figure 1. Detachable stand for MMS-3000**

# Specifications

The unit is designed for operation in cold rooms, incubators and closed laboratory rooms at ambient temperature from +4°C to +40°C in a non-condensing atmosphere and maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.

Grant is committed to a continuous programme of improvement and reserves the right to alter design and specifications of the equipment without additional notice.

	MS-3000	MMS-3000
Speed control range	0–3000 rpm	
Maximum stirring volume (H <sub>2</sub> O)	5 L	20 L
Working surface dimensions	110x110 mm	Ø160 mm
Working surface material	Stainless steel	
SR-1 detachable stand size	—	Ø8x320 mm
Maximum length of magnetic stirring element	50 mm	70 mm
Maximum stirred liquid viscosity	Up to 1170 mPa*s	
Maximum continuous operation time	24 h	



**Note.**

Maintain at least a 1 hour long pause between prolonged continuous operations.

Working current / Power consumption	220 mA / 2.6 W	250 mA / 3 W
External power supply	in 100–240 V~, 50/60 Hz, out 12 V=	
Weight, accurate within ±10%	0.8 kg	1.5 kg
Dimensions	120x150x65 mm	185x230x75 mm

**Table 1. MS-3000 and MMS-3000 maximal speed in RPM, depending on H<sub>2</sub>O volume and magnetic element length**

Magnetic element length, mm	MS-3000		MMS-3000			
	2 L	5 L	2 L	5 L	15 L	20 L
25	3000	2400	3000	2800	2650	2600
50	700	700	1700	1500	1300	1250
70	—	—	620	530	440	360





# WolfLabs

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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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