

## Magnetic Stirrers, Overhead Stirrers



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



**MS-3000** and **MMS-3000** are compact magnetic stirrers with stainless steel working surface. Units provide stirring of liquids with rotation speed of magnetic element up to 3000 rpm. Up to date it is the highest value of the maximal speed for magnetic stirrers of global producers.

Strong magnets hold the driven magnetic element firmly in the magnetic clutch. Stirring is performed without undesirable heating and noise.

Enclosures of stirrers **MS-3000** and **MMS-3000** are made of strong steel and painted with powder enamel, which is chemically resistant to acids and alkali.

**MMS-3000** is equipped with a detachable stand for supporting various sensor elements (temperature, pH and others) inside the stirred liquid.

The stirrers are supplied with a cylinder-shape magnetic stirring bar (6 × 25 mm) encapsulated in PTFE for universal use.

Magnetic stirrers are ideal laboratory instruments for PH-metering, extraction and dialysing with the small quantities of substances.

Operation temperature range +5°C to +40°C (from cold rooms to incubators) at maximal relative humidity 80%.

Choice of two colours is available — blue (standard), white (on request).

**MS-3000**  
Standard colour



### Catalogue number:

<b>MS-3000 blue</b>	MA-010301-ABF
<b>MS-3000 white</b>	MA-010301-AAF
<b>MMS-3000</b>	MA-010305-AAF

**MS-3000**  
white colour



**MMS-3000**  
with a stand



Specifications:	MS-3000	MMS-3000
Model	MS-3000	MMS-3000
Speed range	0–3000 rpm	
Stirring volume up to (H <sub>2</sub> O)	5 litres	<b>A</b> 20 litres
Plate's material	Stainless steel	
Stand height	—	320 mm
Max. length of magnetic stirring element (bar)	50 mm	70 mm
Stirring liquid viscosity	up to 1170 mPa.s	
Operation in closed laboratory rooms	at ambient temperature from +4°C to +40°C	
Working plate size	110 × 110 mm	Ø 160 mm
Overall dimensions (W × D × H)	120 × 150 × 65 mm	185 × 230 × 75 mm
Weight, not more	1.1 kg	1.5 kg
Input current/power consumption	12V, 220 mA / 2.6W	12V, 250 mA / 3W
External power supply	Input AC 100-240 V 50/60Hz; Output DC 12V	

**MMS-3000**

**A** Max. stirring volume 20 litres



**MS-3000**



## MSH-300 and MSH-300i, Magnetic Stirrers with hot plate



**MSH-300** and **MSH-300i** are magnetic stirrers of the new generation. Enclosures of stirrers are made of metal painted with powder enamel chemically resistant to acids and alkali. The stirrers are equipped with a detachable stand for supporting various sensor elements (temperature, pH and others) inside the stirred liquid.

The stirrers are supplied with a cylinder-shape magnetic stirring bar (6 × 25 mm) for universal use covered with Teflon.

Units are equipped with the overheat protection providing an automatic switch-off of the device when overheating for the set temperature difference occurs.

Magnetic stirrers with heating can be used for laboratory operations such as organic synthesis, extraction, analysis of oil products, pH-measurements, dialysis, soil suspending, preparing buffer solutions, etc.

Operation temperature range +5°•2E to +40°•2E (from cold rooms to incubators) at maximal relative humidity 80%.

**MSH-300i** is a digital version of magnetic stirrer with heating; it is designed for laboratories with higher requirements. It offers digital setting and control of temperature and rotation speed.

A powerful magnet allows mixing solutions with glycerine viscosity level. Maximum volume of stirred liquid (water) is 20 litres.

An external probe provides direct control of the stirred liquids temperature.

### External temperature probe:

Probe type	Thermocouple
Connection	type K

A cable is covered with Teflon, mechanically strong, elastic and chemically stable against oils, acids, aggressive reagents and liquids

Cable length	1 m
Operation temperature range	-50°C to +250°C

### Catalogue number:

<b>MSH-300</b>	MA-010302-OAA
<b>MSH-300i</b>	MA-010309-AAA
<b>External temperature probe</b>	MA-010309-BK
<b>Clamp</b>	MA-010309-AK
<b>Double clamp</b>	MA-010309-CK

### MSH-300i interface



**MSH-300  
with a stand**



**MSH-300i  
with a stand  
and external  
probe**



Specifications:		
Model	MSH-300	MSH-300i
Speed range	250–1250 rpm	100–1250 rpm (10 rpm increment)
Max. stirring volume (H <sub>2</sub> O)	15 litres	20 litres
Temperature range	+30°C...+330°C	+30°C...+330°C (1°C increment)
Temperature measurement range using external probe	—	+20°C...+150°C
Display	—	LCD
Uniformity on the plate	±3°C	
Working plate heating time till 330°C	15 min	11 min
Power consumption (Stirring)	8,5 W	
Power consumption (Heating)	550 W	
Diameter of working plate	160 mm	
Plate material	aluminium alloy	
Stand height	320 mm	
Max. length of magnetic stirring element	50 mm	70 mm
Max. stirring liquid viscosity	up to 1170 mPa.s	
Operation in closed laboratory rooms	at ambient temperature from +4°C to +40°C	
Overall dimensions (W × D × H)	190 × 275 × 100 mm	
Weight, not more	3.3 kg	
Nominal operating voltage	230V; 50/60Hz or 120V; 50/60Hz	
Power consumption (230 V)	550 W (2.4 A)	

### Plate heat up time for MSH-300

from 25°C — 15 min — to 330°C

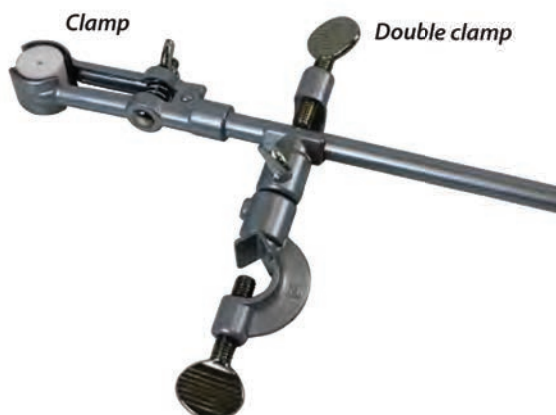
### Plate heat up time for MSH-300i

from 25°C — 11 min — to 330°C

### Connection external probe to MSH-300i



### Double clamp with holder for external probe



## MM-1000, Overhead Stirrer Multi Mixer



Overhead Stirrer Multi Mixer **MM-1000** is designed for stirring liquids up to 20 litres. Quiet and reliable mixer that can provide stable continuous mixing up to 7 daynights. It can realize three types of motion: **1 Rotational 2 Reciprocal 3 Vibration.**

**MM-1000** perform separate (mono-) (1; 2; 3), consecutive binary cycles (c) (1-2) × c; (1-3) × c and (2-3) × c and complex tri-cycles (1-2-3) × c.

Speed, angle and time of stirrer rotation is under micro-processor control.

Multi-mixer can be used for stirring solutions up to the "medium viscosity" range (from 1 000 to 10 000 mPa.s). It is an ideal instrument for biotechnology, organic synthesis, analytical laboratories.

The innovative combination of three motion types provides high level of homogeneity due to consecutive combination of laminar and turbulent flows that cause substances to dissolve faster.

Electrically safe and energy efficient — powered by external AC / AC power supply (220V / 12V, 1 A).

MM-1000  
with a stand



### Specifications of movement types:

#### 1 Rotation:

Speed regulation range	40–1000 rpm
Time	0–250 sec

#### 2 Reciprocal motion:

Turning angle	0°–360° (increment 30°)
Time	0–250 sec

#### 3 Vibro motion:

Turning angle	0°–5° (increment 1°)
Time	0–5 sec

### General Specifications:

General timer	1 min – 96 hrs
of device operation	(increment 1 min)
Overall dimensions (W × D × H)	135 × 400 × 250 mm
Weight, not more	2.5 kg
Input current/power consumption	12V, 700 mA / 8.4 W
External power supply	Input AC 100-240 V 50/60 Hz, Output AC 12 V

### Catalogue number:

<b>MM-1000</b>	MA-010306-AAH
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**Accessories for Multi Mixer MM-1000:**

Accessory	Type	Dimensions	Catalogue number:
<b>A</b> MP-1	Paddle stirrer	(70 × 70 mm)	BS-010306-AK
<b>B</b> MP-2	Propeller stirrer	2 folding blades (Ø 60 mm)	BS-010306-BK
<b>C</b> MP-3	Propeller stirrer	3 folding blades (Ø 50 mm)	BS-010306-CK
<b>D</b> MA-1	Anchor stirrer	(Ø 90 mm, height 48 mm)	BS-010306-DK
<b>E</b> MC-1	Centrifugal stirrer	(Ø 50 mm)	BS-010306-EK
<b>F</b> Double clamp	—	—	VELA00001301
<b>G</b> Rod and base (page 64)	—	—	VELA00001300

**A** MP-1

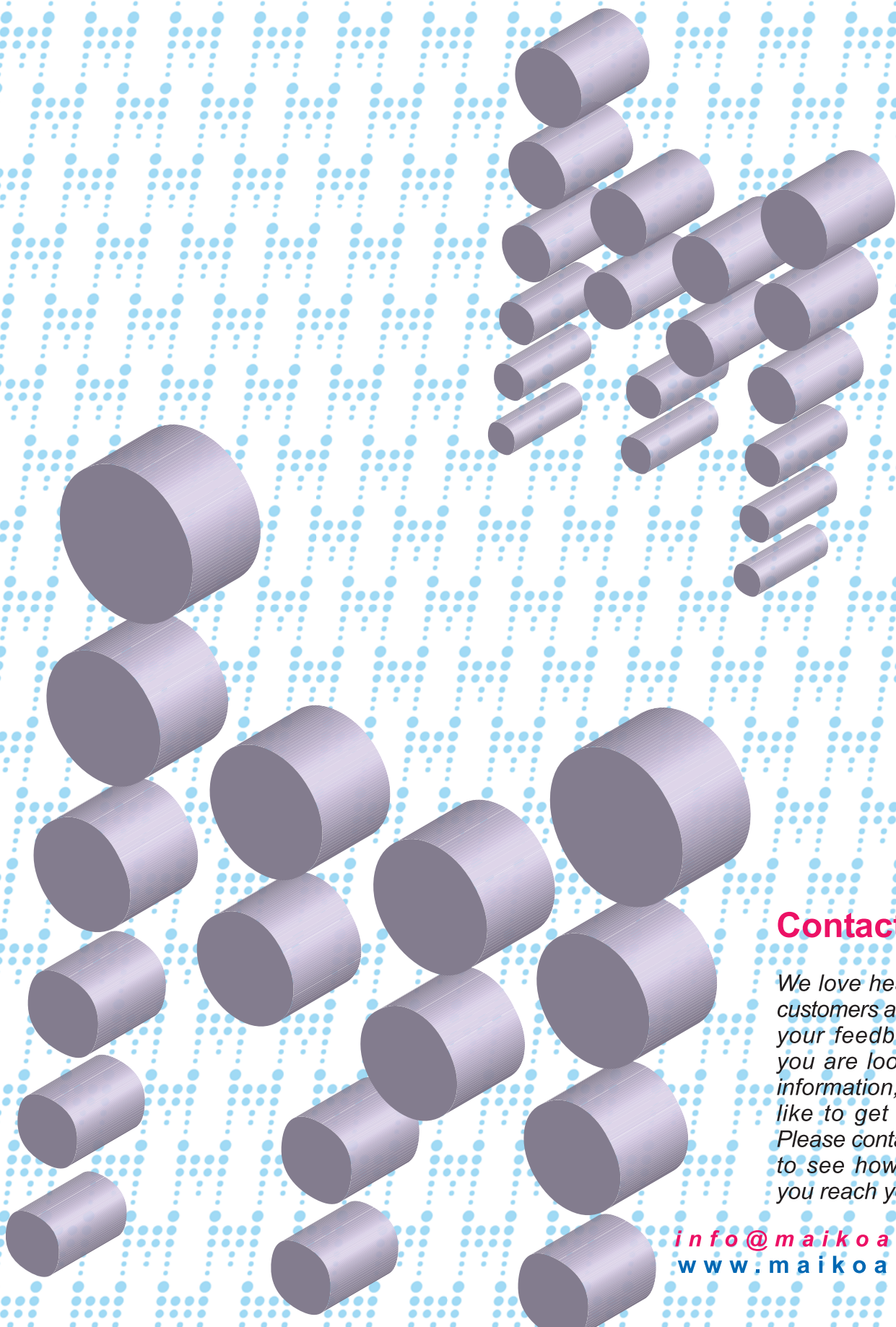
**B** MP-2

**C** MP-3

**D** MA-1

**E** MC-1

**F** Double clamp

## Contact Us

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