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



MSH-300 and Intelli-Stirrer 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  $(6 \times 25 \text{ mm})$  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  $+4^{\circ}$ C to  $+40^{\circ}$ C (from cold rooms to incubators) at maximal relative humidity 80%.

**Intelli-Stirrer 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:	
MSH-300	BS-010302-OAA
Intelli-Stirrer MSH-300i	BS-010309-AAA
External temperature probe	BS-010309-BK
Clamp	BS-010309-AK
Double clamp	BS-010309-CK

#### Intelli-Stirrer MSH-300i interface









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

Specifications:	MSH-300	Intelli-Stirrer MSH-300i
Speed range	250–1250 rpm	100–1250 rpm (10 rpm increment)
Max. stirring volume (H2O)	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 $\times$ D $\times$ 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 Intelli-Stirrer MSH-300i

from 25°C 11 min to 330°C

#### Connection external probe to MSH-300i



#### Double clamp with holder for external probe

