



Vortex Mixer

**VM-1**

Instructions for use



**Thank you for purchasing this Norlab Vortex Mixer from Amtech Design Ltd. Please read the following instructions carefully in order to get the best performance from the equipment.**

## **Safety**

The VM-1 has been tested to meet the following safety and Laboratory standards.

- ❖ 2004/108/EC – EMC Directive
- ❖ 2006/95/EC – LVD Directive
- ❖ EN61010-1:2010
- ❖ EN61010-2-051
- ❖ EN61326-1:2006

The power supply is certified to international and national standards (See certification marks on the unit).

### **Precautions before first operating the Vortex Mixer**

- ❖ If this product has been transported in cold or humid conditions, condensation may form inside it. If that has happened allow time for this to evaporate before using. This unit could be damaged if switched on before the condensation has evaporated.
- ❖ Use the mixer only with the power supply provided, which has an output of 12VDC 2A.
- ❖ This mixer is for indoor use only and should be used in a well-ventilated area.
- ❖ Ensure that the mains switch and power supply plug are easily accessible during use.

## Precautions during and after operation

- ❖ Do not stop the platform cup by hand during use.
- ❖ Do not mix flammable liquids or use the equipment in hazardous atmospheres.
- ❖ Never move or carry the equipment unless it has been powered down due to ESD sensitivity issues.
- ❖ Mechanical energy can lead to breakage of glass vessels. Use with care.
- ❖ Clean the equipment with a damp cloth using water only.
- ❖ Disconnect from the mains supply after using the equipment.
- ❖ The protection offered by this equipment may be impaired if not used in the manner specified in this manual.
- ❖ In the case of a mains interrupting, a fault or mechanical failure the unit will NOT continue to operate on removal of fault.

## Operation

- ❖ Position the equipment on a firm level surface, ensuring that the mains socket is within easy reach.
- ❖ Plug the power supply into the mains socket and the output connector into the DC socket on the back of the unit. See Fig.1



Fig. 1

- ❖ **Touch Mode** – Ensure that the Mode switch is set to ‘Touch’ and press the base of the vessel firmly down onto the Platform cup to mix the contents. Only light pressure is required to activate the mixing. Adjust the speed by turning the Speed control clockwise to increase or anti clockwise to decrease. See Fig.2
- ❖ **Continuous Mode** – Ensure the Mode switch is set to ‘Continuous’. The Platform cup will automatically rotate. Adjust the speed as before. See Fig.2
- ❖ To stop mixing: –  
*When In Touch mode* - Lift the vessel off the Platform cup.  
*When in Continuous mode* – Turn the unit back to ‘Touch’ mode and lift the vessel off the Platform cup.
- ❖ To turn the unit off, switch off at the mains.

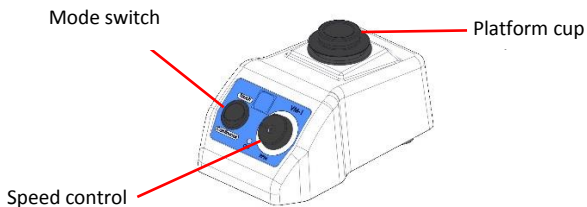


Fig. 2

## Specifications

The VM-1 Vortex mixer is designed for use in an ambient temperature range between +5°C to +40°C and maximum relative humidity of 80%.

**Speed range**.....100-2500rpm

**Orbit**.....3.5mm

### Power Supply

Input.....100-240V AC, 50-60Hz

Output.....12V DC, 2A

**Dimensions**.....166x100x84mm

**Weight**.....0.6kg

### Construction

Body.....Polypropylene

Platform cup.....Polypropylene

Base.....Stainless steel

Speed control knob.....Polypropylene

Mode switch.....Nylon

Rubber Gater.....Silicone

## **Maintenance**

No routine maintenance is required but regular cleaning is recommended – see page 3.

## **Guarantee**

When used indoors in laboratory conditions and in accordance with these instructions the VM-1 is guaranteed for TWO YEARS against faulty materials or workmanship.

## **Service**

Equipment requiring repair should be sent to our service department in the UK.

AMTech Design Ltd

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Stoke on Trent

Staffordshire

ST6 7EE

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## Declaration of Conformity

Description of equipment  
Model Number  
Supplier

**Vortex Mixer**  
**VM-1**  
AMTech Design Ltd  
1 Bluestone Avenue  
Stoke on Trent  
Staffordshire  
ST6 7EE  
t: 01782 819596

This product complies with the requirements of the EU directives and applied standards below.

**Directives:** - EMC Directive 2004/108/EC  
LVD Directive 2006/95/EC

**Standards:-**  
EN 61326-1:2006 Electrical equipment for measurement, control and laboratory use – EMC requirements.

EN61010-1:2010  
Part 1: General requirements  
Safety requirements for electrical equipment for measurement, control and laboratory use.  
Part 1: General requirements  
Part 2-051: Particular requirements for laboratory equipment for mixing and stirring.

I confirm that this equipment conforms to the above directives and standards.

Signed .....

A.Mellor, Director, Amtech Design Ltd.

