

802 Stirrer



Manual

8.802.8001EN / 2020-03-30



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This documentation has been prepared with great care. However, errors can never be entirely ruled out. Please send comments regarding possible errors to the address above.

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1 Introduction

1.1 Instrument description

The propeller rod stirrer 802 Stirrer is controlled by a Touch Control or a computer software.

It however has its own control. The stirring rate is set by a controller.

The 802 Stirrer can be connected to a titration stand, a tower of a sample changer or directly to a sample changer.

1.2 About the documentation






CAUTION




Please read through this documentation carefully before putting the instrument into operation. The documentation contains information and warnings which the user must follow in order to ensure safe operation of the instrument.

1.2.1 Symbols and conventions

The following symbols and styles are used in this documentation:

(5-12)	<p>Cross-reference to figure legend</p> <p>The first number refers to the figure number, the second to the instrument part in the figure.</p>
1	<p>Instruction step</p> <p>Carry out these steps in the sequence shown.</p>
	<p>Warning</p> <p>This symbol draws attention to a possible life hazard or risk of injury.</p>
	<p>Warning</p> <p>This symbol draws attention to a possible hazard due to electrical current.</p>
	<p>Warning</p> <p>This symbol draws attention to a possible hazard due to heat or hot instrument parts.</p>



	<p>Warning</p> <p>This symbol draws attention to a possible biological hazard.</p>
	<p>Caution</p> <p>This symbol draws attention to a possible damage of instruments or instrument parts.</p>
	<p>Note</p> <p>This symbol marks additional information and tips.</p>

1.3 Safety instructions

1.3.1 General notes on safety



WARNING

Operate this instrument only according to the information contained in this documentation.

This instrument left the factory in a flawless state in terms of technical safety. To maintain this state and ensure non-hazardous operation of the instrument, the following instructions must be observed carefully.

1.3.2 Electrical safety

The electrical safety when working with the instrument is ensured as part of the international standard IEC 61010.



WARNING

Only personnel qualified by Metrohm are authorized to carry out service work on electronic components.



WARNING

Never open the housing of the instrument. The instrument could be damaged by this. There is also a risk of serious injury if live components are touched.

There are no parts inside the housing which can be serviced or replaced by the user.

Supply voltage



WARNING

An incorrect supply voltage can damage the instrument.

Only operate this instrument with a supply voltage specified for it (see rear panel of the instrument).

Protection against electrostatic charges



WARNING

Electronic components are sensitive to electrostatic charges and can be destroyed by discharges.

Do not fail to pull the power cord out of the power socket before you set up or disconnect electrical plug connections at the rear of the instrument.

1.3.3 Working with liquids



CAUTION

Periodically check all system connections for leaks. Observe the relevant regulations in respect to working with flammable and/or toxic fluids and their disposal.

1.3.4 Flammable solvents and chemicals



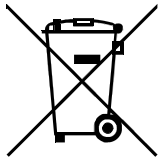
WARNING

All relevant safety measures are to be observed when working with flammable solvents and chemicals.

- Set up the instrument in a well-ventilated location (e.g. fume cupboard).
- Keep all sources of flame far from the workplace.
- Clean up spilled liquids and solids immediately.
- Follow the safety instructions of the chemical manufacturer.



1.3.5 Recycling and disposal



This product is covered by European Directive 2012/19/EU, WEEE – Waste Electrical and Electronic Equipment.

The correct disposal of your old instrument will help to prevent negative effects on the environment and public health.

More details about the disposal of your old instrument can be obtained from your local authorities, from waste disposal companies or from your local dealer.

2 Device overview

2.1 802 Stirrer

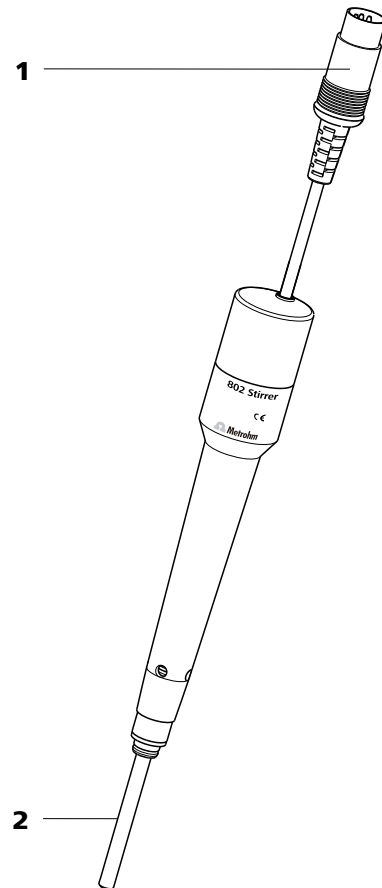


Figure 1 802 Stirrer

1 Connector plug

For connecting the propeller stirrer to the stirrer connector of a device or to a controller.

2 Metal rod

For fastening a stirring propeller.



2.2 802 Stirrer with its own control

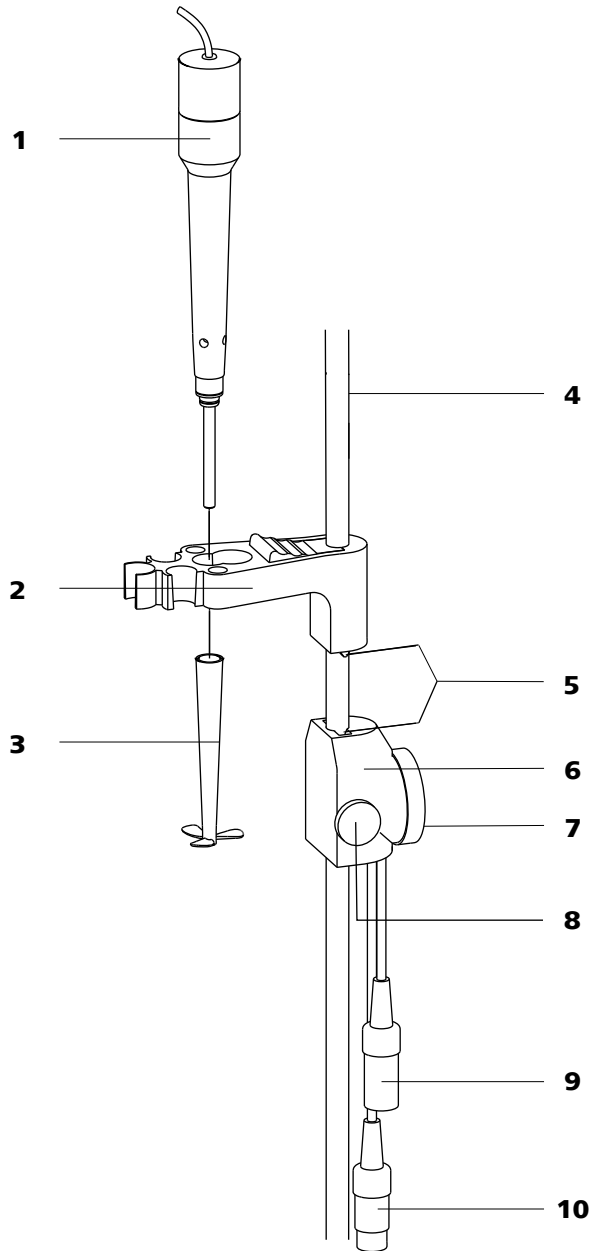


Figure 2 802 Stirrer with its own control

<p>1 Drive of the propeller stirrer</p>	<p>2 Electrode holder (6.2021.020)</p>
<p>3 Stirring propeller (6.1909.0104)</p>	<p>4 Support rod (6.2016.070) Length 40 cm</p>
<p>5 Switching contacts The stirrer is switched on by a suitably attached electrode holder.</p>	<p>6 Controller (6.2137.000) For controlling the stirring rate</p>

7 Rotary wheel

For setting the stirring rate. If the end of the scale is reached, turn to the other end in order to readjust the scale.

9 Connector plug

For connecting the propeller stirrer.

8 Clamping screw

For fixing the positioning height of the 6.2137.000 rotary controller on the support rod.

10 Connector plug

For connecting a power supply:
EU 230V / 9V DC
USA 110V / 9V DC



3 Installation

3.1 Setting up the instrument

3.1.1 Packaging

The instrument is supplied in protective packaging together with the separately packed accessories. Keep this packaging, as only this ensures safe transportation of the instrument.

3.1.2 Checks

Immediately after receipt, check whether the shipment has arrived complete and without damage by comparing it with the delivery note.

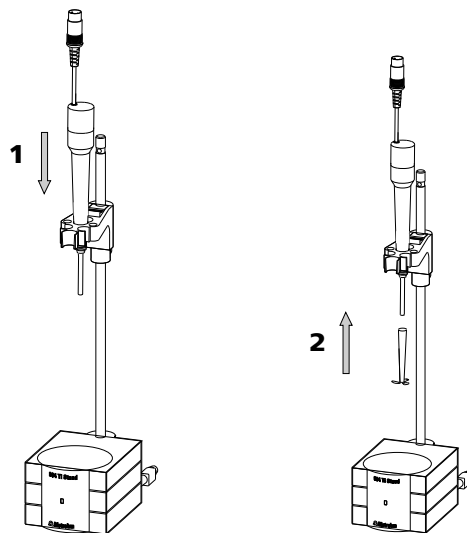
3.1.3 Location

The instrument has been developed for operation indoors and may not be used in explosive environments.

Place the instrument in a location of the laboratory which is suitable for operation and free of vibrations and which provides protection against corrosive atmosphere and contamination by chemicals.

The instrument should be protected against excessive temperature fluctuations and direct sunlight.

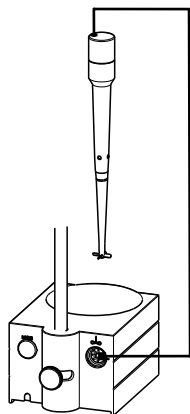
3.2 Mounting the 802 Stirrer to the titration stand



Mounting the propeller stirrer as follows:

- 1 Insert the propeller stirrer 802 Stirrer without the stirring propeller from above into the center opening of the electrode holder.
- 2 Plug the stirring propeller from below to the propeller stirrer.

3.3 Connecting the 802 Stirrer to the titration stand



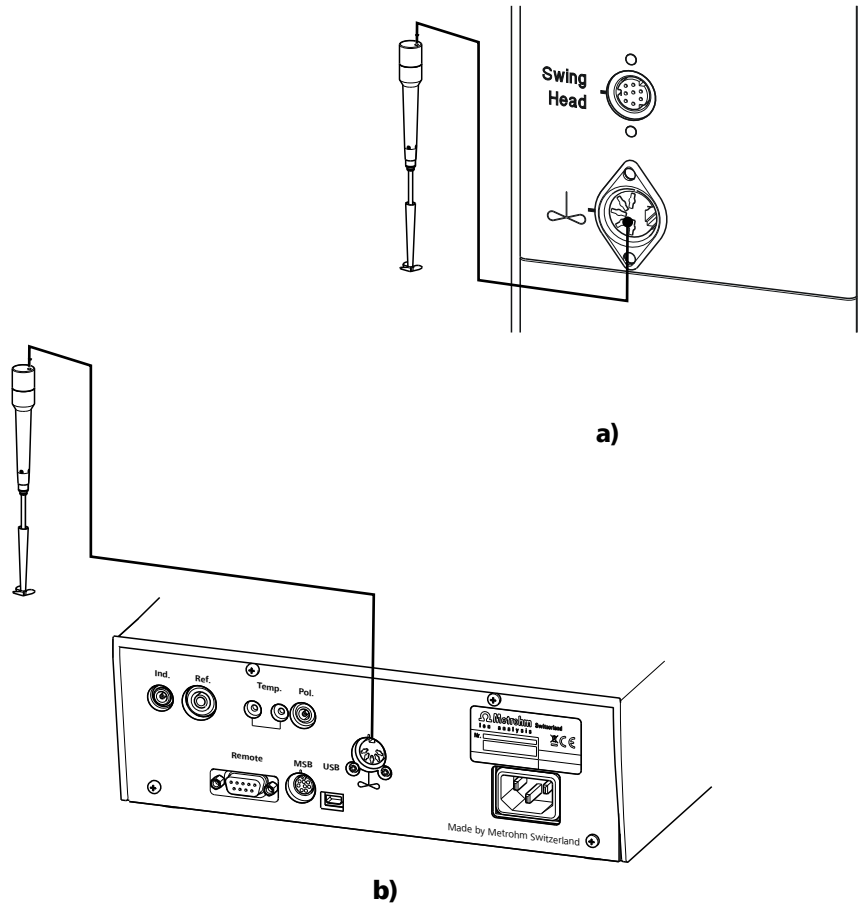
Connect the propeller stirrer as follows:

- 1 Connect the cable of the 802 Stirrer to the corresponding stirrer connector (with stirrer symbol) of the titration stand.



3.4 Connecting the 802 Stirrer to the sample changer

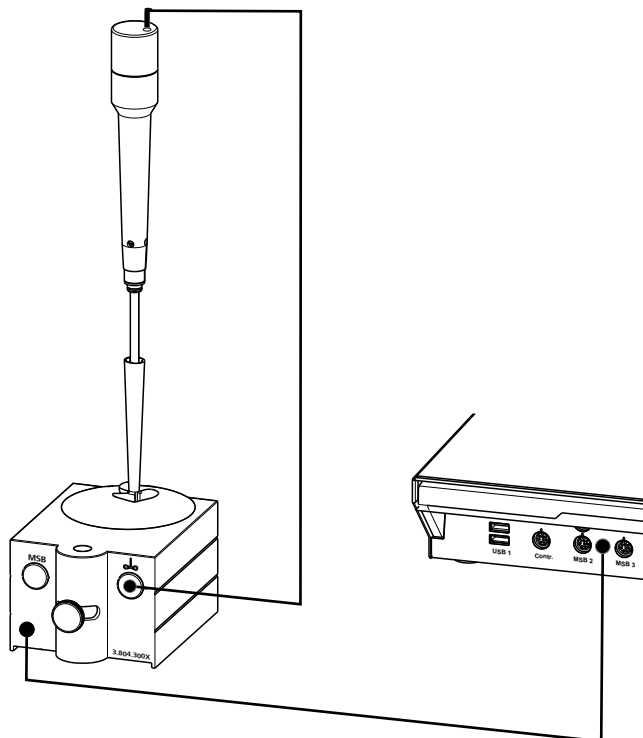
Connecting the propeller stirrer directly to the sample changer



Connect the propeller stirrer as follows:

- 1 Connect the cable of the 802 Stirrer to the stirrer connector (with stirrer symbol) on the rear of the tower (a) or directly to the sample changer (b).

Connecting the propeller stirrer with the titration stand to the sample changer



Connect the propeller stirrer with the titration stand as follows:

- 1 Exit the control software.
- 2 Connect the connection cable of the titration stand to one of the sockets marked with **MSB** on the rear of the control device.
- 3 Connect the propeller stirrer to the stirrer socket (with stirrer symbol) of the titration stand.
- 4 Start the control software.



4 Technical specifications

4.1 Ambient conditions

<i>Nominal function range</i>	+5 - +45 °C at max. 80% relative humidity non-condensing
<i>Storage</i>	+5 - +45 °C

4.2 Energy supply

<i>Nominal voltage</i>	±12 VDC +5 VDC
<i>Power consumption</i>	4 W
<i>Protection</i>	Electronic overload protection

4.3 Dimensions

<i>Diameter</i>	max. 27 mm
<i>Height</i>	250 mm without propeller
<i>Weight</i>	300 g

4.4 Housing

<i>Material</i>	Polypropylene (PP)
<i>IP degree of protection</i>	IP 20



4.5 Connectors specifications

Energy supply 5-pin DIN plug

4.6 Stirrer specifications

Maximum rotational speed 2,250 rpm

Rotational speed settings -15 - +15

Change in rotational speed per step 140 - 150 rpm

