728 Magnetic Stirrer

Manual

8.728.8001EN / 2019-11-29

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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 728 Magnetic Stirrer with base plate, support rod and electrode holder supplements Titrino and Dosino units.

1.1.1 Model versions

The 728 Magnetic Stirrer is available in the following six versions:

2.728.0010	728 Magnetic Stirrer	
2.728.0021	728 Magnetic Stirrer	With 115 V US power supply unit
2.728.0024	728 Magnetic Stirrer	With 230 V EURO power supply unit
2.728.0031	728 Magnetic Stirrer	With 115 V US power supply unit and stand
2.728.0034	728 Magnetic Stirrer	With 230 V EURO power supply unit and stand
2.728.0040	728 Magnetic Stirrer	Complete for Titrino/ Dosino

Each version includes different accessories according to its use *(see chapter 6, page 12)*.

1.1.2 Connectors

The 728 Magnetic Stirrer needs 5 to 12 V DC voltage.

The 728 Magnetic Stirrer is supplied with power via a direct connection to a Titrino, Dosino or via a power supply unit.

1.1.3 Intended use

The 728 Magnetic Stirrer is designed for usage in analytical laboratories.

This instrument is suitable for stirring chemicals and flammable samples. Usage of the 728 Magnetic Stirrer therefore requires the user to have basic knowledge and experience in handling toxic and caustic substances. Knowledge with respect to the application of the fire prevention measures prescribed for laboratories is also mandatory.

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 formatting may appear in this documentation:

*(5-**12**)*	**Cross-reference to figure legend** The first number refers to the figure number, the second to the instrument part in the figure.
1	**Instruction step** Carry out these steps in the sequence shown.
Method	**Dialog text**, **parameter** in the software
File ▶ New	Menu or menu item
[Next]	**Button** or **key**
	**WARNING** This symbol draws attention to a possible life-threatening hazard or risk of injury.
	**WARNING** This symbol draws attention to a possible hazard due to electrical current.
	**WARNING** This symbol draws attention to a possible hazard due to heat or hot instrument parts.
	**WARNING** This symbol draws attention to a possible biological hazard.
	**CAUTION** This symbol draws attention to possible damage to instruments or instrument parts.

NOTE

This symbol highlights additional information and tips.

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 Tubing and capillary connections

CAUTION

Leaks in tubing and capillary connections are a safety risk. Tighten all connections well by hand. Avoid applying excessive force to tubing connections. Damaged tubing ends lead to leakage. Appropriate tools can be used to loosen connections.

Check the connections regularly for leakage. If the instrument is used mainly in unattended operation, then weekly inspections are mandatory.

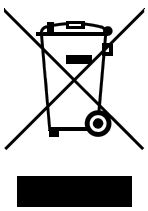
1.3.4 Flammable solvents and chemicals

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 Overview of the instrument

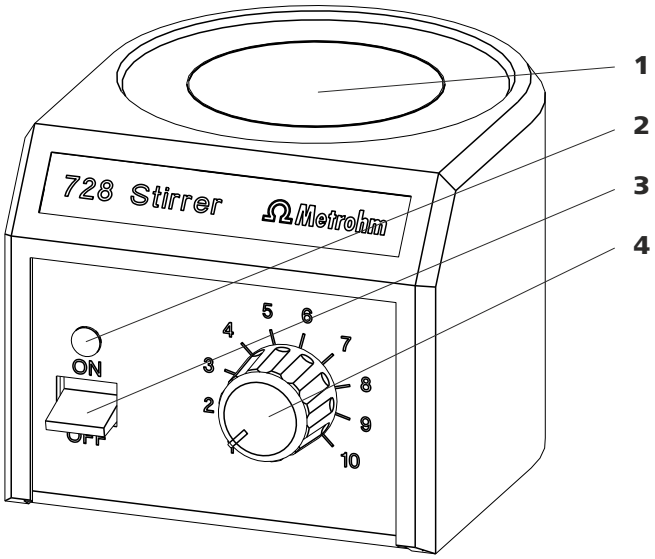


Figure 1 Front

1	**Sample space**	**2**	**On/off signal light**
3	**On/off switch**	**4**	**Shift rate controller**

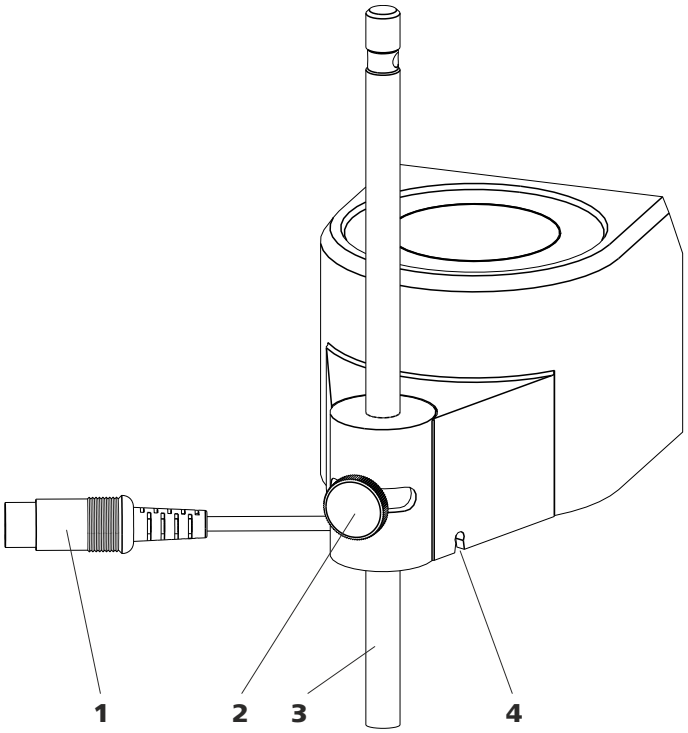


Figure 2 Rear with stand

1	**Connector plug**	**2**	**Stand clamping screw**
3	**Stand**	**4**	**Cable cut-out**

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 Installing the magnetic stirrer

The 728 Magnetic Stirrer is fastened to a support rod with a diameter of 10 mm.

3.3 Connecting the magnetic stirrer

Power supply

The 728 Magnetic Stirrer needs 5 to 12 V DC voltage.

It can be operated directly at a Metrohm instrument with a stirrer connector.

4 Operation and maintenance

4.1 General notes

4.1.1 Care

The 728 Magnetic Stirrer requires appropriate care. Excess contamination of the instrument may result in functional disruptions and a reduction in the lifetime of the otherwise sturdy mechanics and electronics.

Spilled chemicals and solvents should be removed immediately. Above all, the plug connections on the rear of the instrument (in particular the connection socket) should be protected from contamination.

CAUTION

Although this is extensively prevented by design measures, the connection cable should be unplugged immediately if aggressive media have found their way into the interior of the instrument to prevent serious damage to the instrument electronics. In such cases, Metrohm Service must be informed.

4.1.2 Maintenance by Metrohm Service

Maintenance of the 728 Magnetic Stirrer is best carried out as part of annual service, which is performed by specialist personnel from Metrohm. If working frequently with caustic and corrosive chemicals, a shorter maintenance interval could be necessary.

Metrohm Service offers every form of technical advice for maintenance and service of all Metrohm instruments.

5 Technical specifications

5.1 Magnetic stirrer

Direction of rotation	Counterclockwise
Rotational speed	200 - 1,900 rpm

5.2 Power supply

Power supply	5 - 12 V DC
Power consumption	≤ 2.5 VA

5.3 Interfaces and connectors

The 728 Magnetic Stirrer does not have any control interfaces. It is operated and controlled via the power supply.

5.4 Ambient temperature

Nominal function range	+5 - +45 °C
Transport and storage	–40 - +70 °C

5.5 Reference conditions

Ambient temperature	+25 °C (± 3 °C)
Relative humidity	≤ 60%

5.6 Dimensions/material

Width	90 mm
Height	76 mm
Depth	150 mm
Weight	660 g (without accessories)
Material	
Housing, upper part	PBT
Housing, bottom part	Steel sheet, stove-enameled

6 Accessories

Up-to-date information on the scope of delivery and optional accessories for your product can be found on the Internet. You can download this information using the article number as follows:

Downloading the accessories list

1. Enter *https://www.metrohm.com/* into your Internet browser.
2. Enter the article number (e.g. **728**) into the search field.
   The search result is displayed.
3. Click on the product.
   Detailed information regarding the product is shown on various tabs.
4. On the **Included parts** tab, click on **Download the PDF**.
   The PDF file with the accessories data is created.

NOTICE

Once you have received your new product, we recommend downloading the accessories list from the Internet, printing it out and keeping it together with the manual for reference purposes.

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