Bedienungsanleitung / Operating Manual

Rührsystem / Stirring System

IS 6 – Var

Contents

General information

Symbols used

indicates notes that you must read - for your own safety, the safety of others and to protect your meter from being damaged.

indicates notes that inform you of special features.

Accuracy when going to press
The use of advanced technology and the high quality standard of our instruments are the result of continuous development. This may result in differences between this operating manual and your instrument. We cannot guarantee that there are absolutely no errors in this manual. We are sure you will understand that we cannot accept any legal claims resulting from the data, figures or descriptions.

Warranty
The designated instrument is covered by a warranty of 12 months from the date of purchase.
The instrument warranty extends to manufacturing faults that are determined within the period of warranty. The warranty claim extends to restoring the instrument to readiness for use but not, however, to any further claim for damages. Improper handling or unauthorized opening of the instrument invalidates any warranty claim.
To ascertain the warranty liability, return the instrument and proof of purchase together with the date of purchase freight paid or prepaid.

Safety guidelines

Read these safety guidelines carefully before putting the instrument into operation!

This instrument has been built and tested according to the IEC 1010 safety standards for electronic measuring instruments and has left our works in a condition complying with all the requirements of technical safety.

The perfect functioning and operational safety of the instrument can only be ensured if the user observes the normal safety precautions as well as the specific safety guidelines stated in the present operating instruction.

ATTENTION: MAGNETISM!
Effects of the magnetic field have to be taken into account (e.g. with cardiac pacemakers, data carriers...).

- Before connecting the plug-in power supply unit to the electricity supply network it must be ensured that the operating voltage stated on the plug-in power supply unit corresponds to the mains voltage (statement of the supply voltage range).
- The perfect functioning and operational safety of the instrument can only be maintained under the climatic conditions specified in the "Technical data" section of these operating instructions.
- When the instrument is moved from cold to warm surroundings, condensate may occur and interfere with the functioning of the instrument. In such a case, the user should wait until the temperature of the instrument has adapted to the ambient temperature before using the instrument again.
- Balancing, maintenance and repair work must only be carried out by a suitably qualified technician authorized by us.
- If there is reason to assume that the instrument can no longer be employed without a risk, it must be set aside and appropriately marked to prevent further use.
- The safety of the user may be endangered, e.g., if the instrument
  - shows visible damage,
  - no longer operates as specified,
  - has been stored over a longer period under unsuitable conditions,
  - has been subjected to difficult conditions during transport.
- If in doubt, the instrument should as a rule be sent back to the manufacturer's - "Wissenschaftlich-Technische Werkstätten GmbH" - for repair and maintenance.

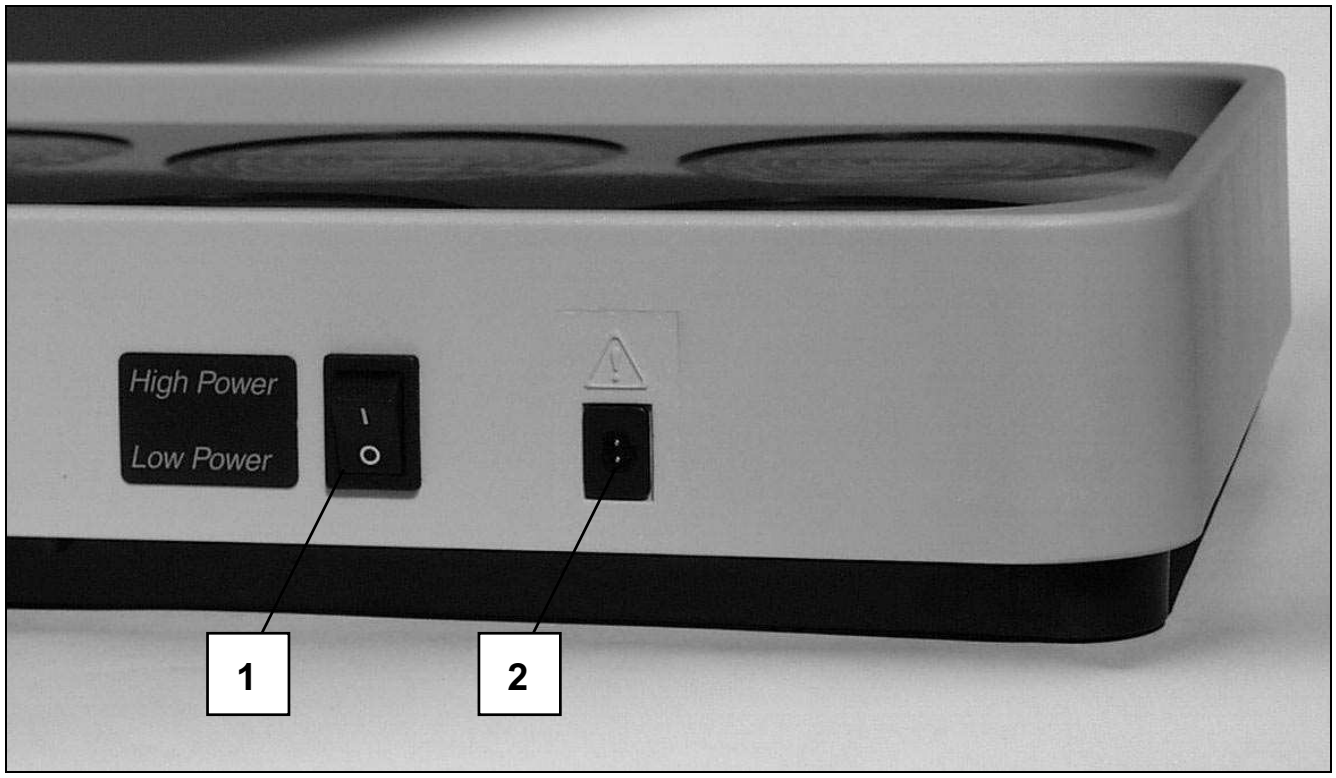
Overview

The IS 6 – Var Stirring System has been especially developed for the WTW OxiTop®. All commercial sample bottles up to max. 93 mm bottom diameter can be used.

The stirring procedure is activated by a magnetic rotary field. This rotary field activates the permanently magnetic stirring rods.

The electronic interval control of the rotary field allows

- To place sample bottles on the stirring system at any time
- Disturbed stirring procedures to restart independently while the measuring operation is running.



1 *Stirring power* switch-over 2 *Line adaptor* connection

For BOD measurements with OxiTop® systems the stirring power should be set to „Low Power“, as the higher power causes the temperature of the sample to rise.

Commissioning

Use the original line adaptor only.

The mains voltage must correspond to the operating voltage stated on the line adaptor!

– Place the stirring system into a thermostat cabinet or a thermostat box.

– Plug the line adaptor into the mains socket.

– Connect the line adaptor to the instrument (2).
After a waiting time of approx. 3 s the inductive rotary field is automatically built up and thus the stirring rods are activated.

To guarantee an optimal and secure stirring function, use only original WTW stirring rods, RST 600.

– Place the prepared sample bottles on the center of the stirring places designed.

– Observe stirring operation, if necessary correct bottle position.

Operating note

Via the *Stirring power* switch-over (1) you can adjust the stirring power to meet the requirements of the sample.

When working with increased stirring power (“High Power“), the electronically controlled rotary field is operated with increased power. This causes an increased self-warming. If a perfect stirring operation is possible with reduced stirring power, work with “Low Power“ preferably.

Cleaning

– Clean with a soft cloth and aqueous soap solution.

Do not use solvents or detergents that contain solvents (e. g. alcohol, acetone) for cleaning.

Technical data

Function principle	Magnetic rotary field
Power supply (Line adaptor) *Euro version:* Friwo FW6798/11.8369, Friwo Part. No. 1769278 Input: 230 VAC (+10%/-15%)/ 50/60 Hz / 24 VA Output: 18 VAC / 1 A	*USA version:* Friwo FW6798/11.8371, Friwo Part. No. 1769294 Input: 120 VAC (+10%/-15%)/ 50/60 Hz / 23 VA Output: 18 VAC / 1 A
Power consumption	24 VA max.
Number of stirring places	6
Diameter of vessel bottom	max. 93 mm
Speed of stirring rods	Program-controlled 180 ... 450 min^{-1}
Instrument security	Protection class: 3, IEC 1010 Protection degree: IP30
EMC	Emissions: EN50081-1/FCC class A Immunity: EN50082-1 EN50082-2, Namur
Climate class	2, VDI/VDE 3540
Ambient temperature	Storage: - 25 °C ... + 65 °C Operation: + 5 °C ... + 40 °C
Relative humidity	Yearly mean: < 75 % 30 days/year: < 95 % Other days: < 85 %
Test mark	CE
Dimensions (WxDxH)	350 x 266 x 70 [mm]
Weight (including line adaptor)	3.2 kg

What to do if...

Error	Cause	Action
No stirring function	– Mains power missing	– Connect stirring system to power supply via line adaptor
	– Line adaptor defective	– Replace line adaptor
	– Stirring system defective	– Send stirring system to service department
Stirring function not sufficient	– Stirring rods unsuitable	– Use original WTW stirring rods
	– Vessel bottom weakens the magnetic field (vessel bottom is too thick, crooked, or deformed)	– Use suitable vessel
Centering of stirring rods faulty	– Vessel is not placed centrically on the stirring system	– Adjust vessel position
	– Vessel bottom is too thick, crooked, or deformed	– Use suitable vessel
	– Magnetic field is too weak	– Send stirring system to service department

Spare parts

	Model	Order no.
Stirring rods	RST 600	209 120
Stirring rod remover	REF 600	209 130

Accessories

The accessories that can be supplied are described in the WTW general catalog and in the price list.