



HEATING CONSTANT TEMPERATURE BATH "VT-TMP"

Operating manual

! *Before using this instrument, carefully read the operating manual.*

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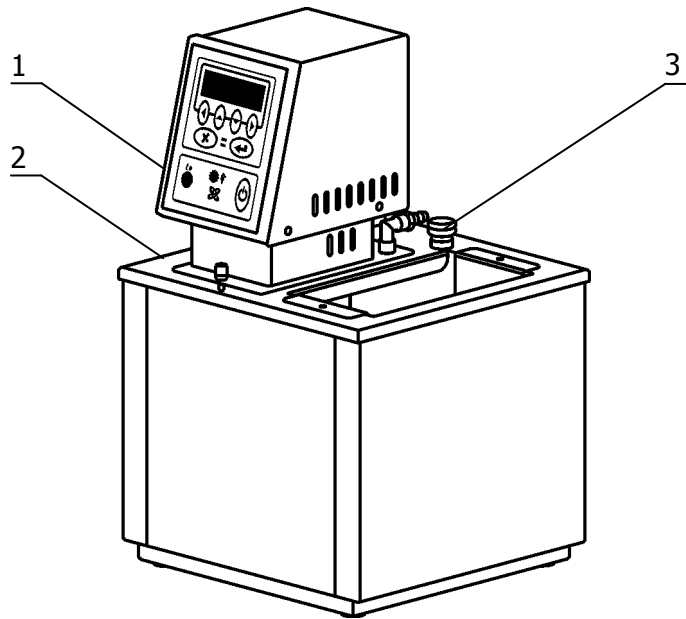
This manual provides the information needed to operate heating constant temperature bath "VT-TMP".

INTRODUCTION

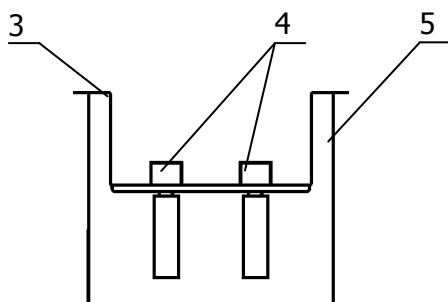
Intended use

Heating constant temperature bath is intended for standard test method for corrosiveness to copper from petroleum products by copper strip test according to ASTM D130 and ISO 2160.

Appearance and parts names

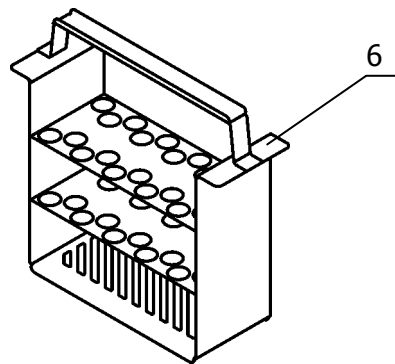


- Heating constant temperature bath "VT-TMP" consists of:
- 1 - Heating immersion circulator "M01";
 - 2 - Stainless steel bath tank with adapter for test thermometer 3.



Heating immersion circulator 1 includes a rotary pump, a heater, a temperature sensor, an output pipe for thermal fluid circulation and a built-in cooling coil.

Place base 3 with vessels 4, which are intended for running a copper strip test of petroleum products, or test tubes inserted in stand 6, inside operating bath 5, located in the bath tank.



The operating principle of the bath is based on supporting a preset constant temperature of flowing thermal fluid in the bath tank and providing a good temperature uniformity of the operating bath. The circulation of thermal fluid around test vessels is provided by the rotary pump, which is located in heating immersion circulator 1.

Maintaining of the preset temperature by means of heating is provided by immersion circulator 1. To operate the instrument, read the "M01 Heating Immersion Circulator. Operating manual".

When operating instrument with thermal fluid temperature close to ambient, it might be necessary to provide the cooling by means of built-in coil.

Environmental Conditions

Indoor use only.

Ambient temperature: +10...+35 °C.

Air humidity: max. relative humidity 80 % for temperatures up to +31 °C,

Max. mains fluctuation of ± 10 % are permissible.

Safety Recommendations

Avoid strikes to the housing, vibrations, damage to the operating element panel (keypad, display), and contamination.

Do not store the instrument in aggressive atmosphere.

Protect the instrument from contamination.

Only qualified personnel are authorized to perform configuration, installation, maintenance and repairs of the circulator.

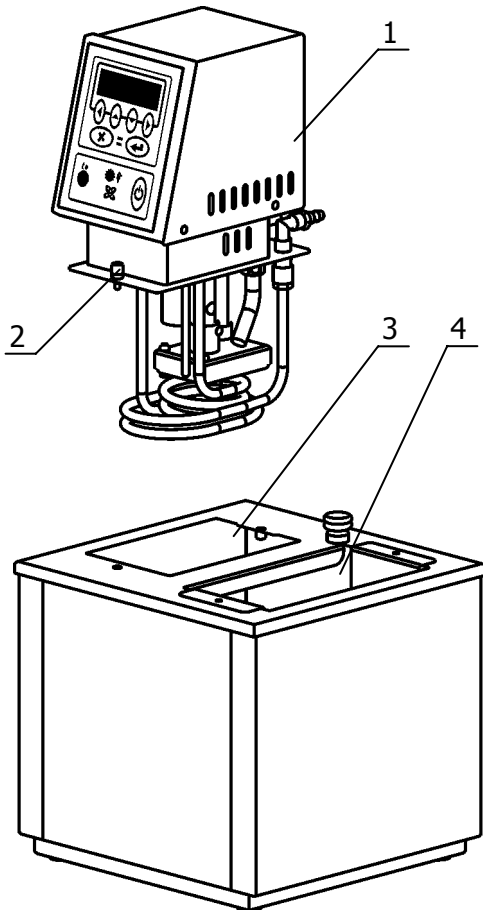
Routine operation can also be carried out by untrained personnel who should however be instructed by trained personnel.

! *CAUTION: The instrument is not for use in explosive atmosphere.*

USING THE HEATING CONSTANT TEMPERATURE BATH

! Before using bath circulator, carefully read the operating manual.

Preparation



Carefully select a spot for installing instrument with free air access for the circulator ventilation. Make sure it is far away from any kind of heat source.

Place the instrument on an even surface with a pad, made of nonflammable material.

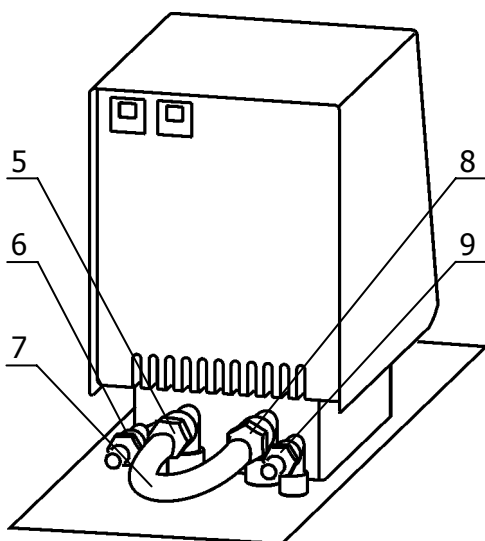
Install circulator 1 into the adapter on the bath cover 3. Secure the circulator with screws 2.

! While setting up the circulator, supply cord should not be connected to the power source.

Fill up the bath tank with thermal fluid through aperture under bath cover 4. Level of thermal fluid should be 30 mm lower than the cover level.

! When filling the bath up, do not spill any thermal fluid on the front panel of the circulator.

Connect input 5 and output 8 connectors with hose 7 and secure it with the straps from our delivery package.



! If using polymethylsiloxane as a thermal fluid, utilizing of silicone hose is prohibited.

Place stainless steel vessels on the base. If necessary, remove the base and place the stand with test tubes directly on the bath tank.

When operating instrument with thermal fluid temperature close to ambient, it might be necessary to provide the cooling by means of built-in coil. In order to do that, connect thermostat to tap water supply with hoses, attached to the coil connectors 6 and 9. The flow of the cooling water must be even and slightly weak. The cooling is not necessary if thermal fluid temperature is at least 15 °C higher than ambient temperature.

To operate the instrument, read the "M01 Heating Immersion Circulator. Operating manual".

GENERAL SPECIFICATIONS

Working temperature range:	+20...+100 °C
Set-point resolution	0.01 °C
Display resolution	0.01 °C
Temperature stability	±0.1 °C
Temperature uniformity	±0.1 °C
Digital setting accuracy	±0.5°C
Digital setting repeatability	±0.05 °C
Heating capacity	2000 W
Bath volume	14 Liters
Dimensions, WxDxH	285×285×460 mm
Bath opening	100×190 mm
Bath depth	230 mm
Weight	18 kg
Power supply	230 V, 50/60 Hz, 2.5 kW
Warranty	2 years