TERMEX

PRECISION AT THE HEART OF STABILITY

HEATING CONSTANT TEMPERATURE BATHS "VT-R-01", "VT-R-03"

Operating manual

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

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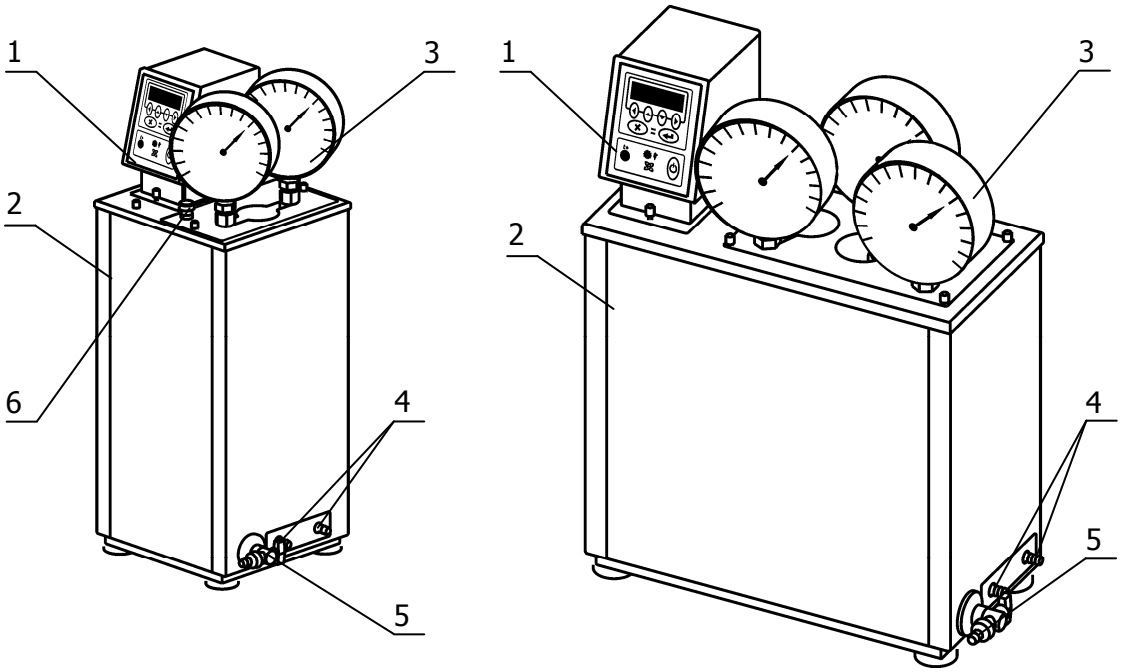
This manual provides the information needed to operate heating constant temperature baths "VT-R-01" and "VT-R-03".

INTRODUCTION

Intended use

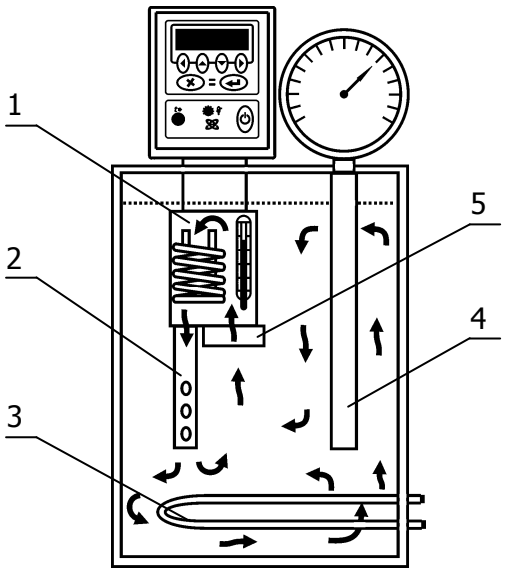
Heating constant temperature baths are intended for standard test method for vapor pressure of petroleum products (Reid Method) according to ASTM D323 and ASTM D1267.

Appearance and parts names



Heating constant temperature baths consist of heating immersion circulator "M03" and a bath tank.

The bath tank includes built-in cooling coil 4 and drain valve 5. When running tests, install Reid-vapor pressure vessels with pressure gauges 3. Adapter 6 is intended for installing a test thermometer.



The operating principle of the baths 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.

Pump 5 pours thermal fluid from the top part of the bath into chamber 1 and, then, to the bottom of the bath by means of output pipe 2. It provides circulation around Reid-vapor pressure vessels 4. To drain thermal fluid, use valve 5.

Maintaining of the preset temperature by means of heating is provided by immersion circulator 1.

The cooling of the thermal fluid is carried out by means of heat exchange with environment or cooling liquid, passed through built-in cooling coil 3.

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.

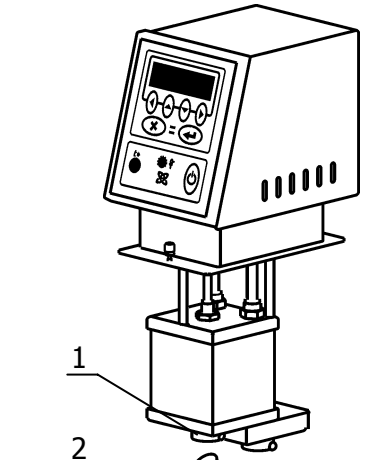
Routine operation can also be carried out by untrained personnel who should however be instructed by trained personnel.

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

USING THE HEATING CONSTANT TEMPERATURE BATHS

! *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.

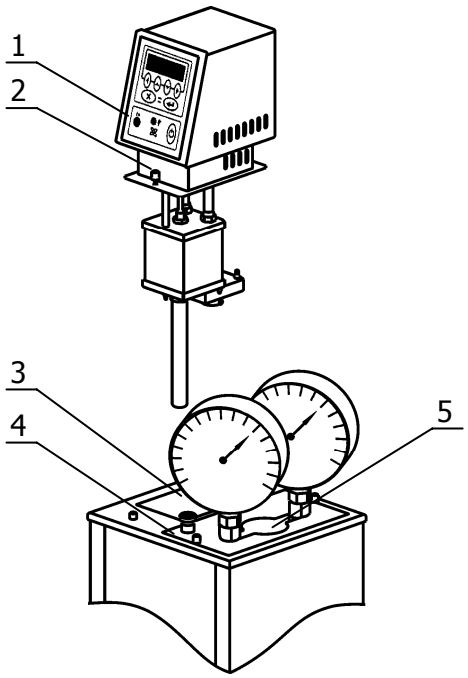
Place the instrument on an even surface with a pad, made of nonflammable material.

Insert output pipe 2 with its taper end up to the stop in corresponding socket 1 and secure it with a screw.

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.*

Attach a pressure gauge to a Reid-vapor pressure vessel. Insert the vessel into adapter 5 and slide into the slot.



Fill up the bath tank with thermal fluid through aperture under bath cover 4. When submerging test vessels, make sure that thermal fluid level will not go over the edges of the tank. Put a hose on valve socket 5 to drain the excess of thermal fluid.

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. 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 "M03 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: • VT-R-01 • VT-R-03	 30 Liters 40 Liters
Dimensions, W×D×H: • VT-R-01 • VT-R-03	 330×275×775 mm 540×245×775 mm
Bath opening: • VT-R-01 • VT-R-03	 120×210 mm 290×160 mm
Bath depth	500 mm
Weight: • VT-R-01 • VT-R-03	 22 kg 25 kg
Power supply	230 V, 50/60 Hz
Warranty	2 years