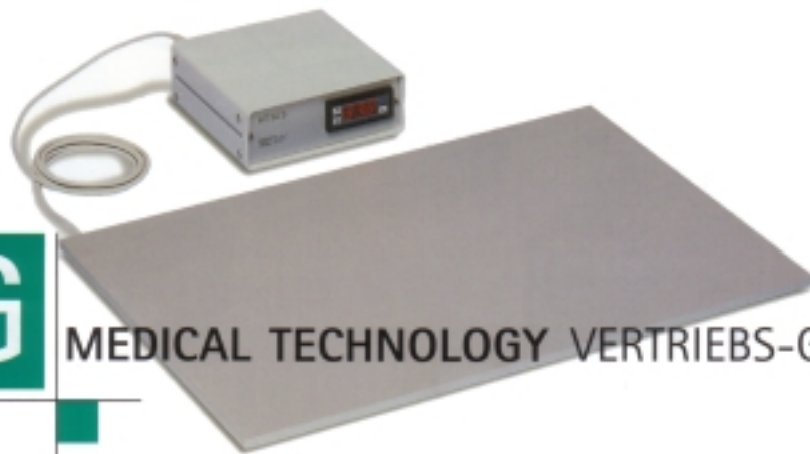


Heating Systems for Microscopes



MTG

MEDICAL TECHNOLOGY VERTRIEBS-GMBH

Heating Systems for Transmitted Light Microscopes

Original microscope stages of all leading brands can be equipped with the Minitüb heating system. This technique combines exact temperature control of the object on the stage with the user friendliness of the original microscope design. For the installation of the heating system, the original stage has to be sent to our premises.

If the installation of a heating system in the original stage is not an option, we offer a clamp-on heating stage with a very thin plate and the possibility to reinstall the cross moving guide through a slot of the clamp-on stage.

Both solutions, the original stage with built-in system and the clamp-on stage have to be combined with one of the control units HT 50, HT 200, HT 300 or HT 400. On these control units, the user can choose a temperature between ambient and +55°C. With an accuracy of $\pm 0.2^\circ\text{C}$, the control of Minitüb heating systems is extremely precise.



▲ Heating System for original stage of transmitted light microscope, includes installation, to be combined with one of the control units HT
Ref. No. 12055/0015



▲ Clamp-on heating stage, 130 x 130 x 2,8 mm, central hole 30 mm
Ref. No. 12055/0002

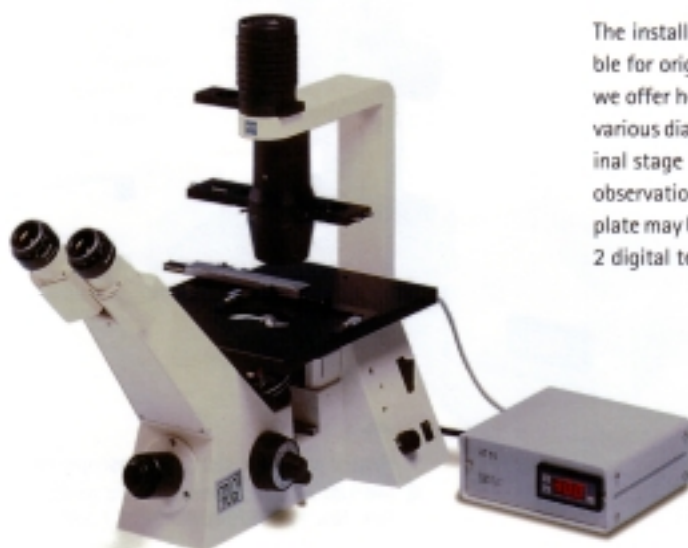


▲ Control unit HT 50
Ref. No. 12055/0050



▲ Control unit HT 200
Ref. No. 12055/0200

Heating Systems for Inverted Microscopes



The installation of a Minitüb heating system is also available for original stages of inverted microscopes. Additionally, we offer heated circular aluminum and glass insert plates in various diameters, which are combined with the heated original stage in order to control the temperature of the area of observation. Both, the heated stage and the additional insert plate may be controlled by the same control unit HT 300, with 2 digital temperature displays.

Heating System for original stage of inverted microscope, includes installation, to be combined with one of the control units HT
Ref. No. 12055/0004

Heated insert plate for inverted microscope, glass

for Nikon Ref. No. 12055/0032
for Olympus Ref. No. 12055/0033

Control unit HT 30 for heated glass insert plate
Ref. No. 12055/0230



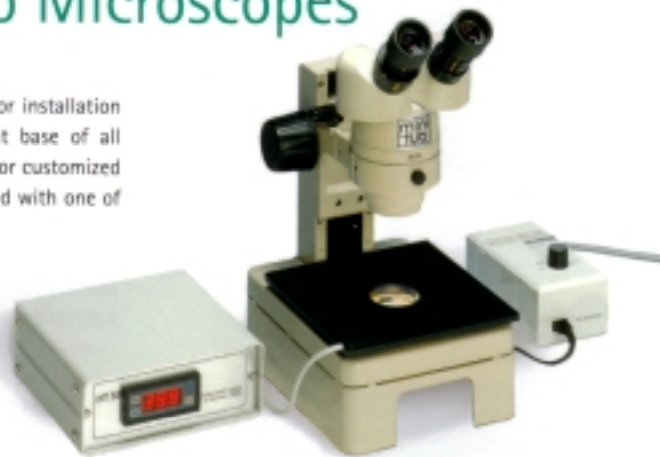
Heated insert plate for inverted microscope, aluminum
for Nikon Ref. No. 12055/0031
for Olympus Ref. No. 12055/0034
for Leica Ref. No. 12055/0150

Control unit HT 300 for temperature control of microscope stage and aluminum insert plate
Ref. No. 12055/0300



Heating Systems for Stereo Microscopes

Heated stages in any dimensions required, for installation on top of the transmitted or incident light base of all stereo microscopes are available as standard or customized solutions. The heated stage must be combined with one of the HT control units.



Heated stage for stereo microscope, standard 180 x 180 x 10 mm
Ref. No. 12055/0003



Heated stage for Nikon SMZ-U or Olympus SZH stereo microscopes, 265 x 180 x 10 mm
Ref. No. 12055/0039

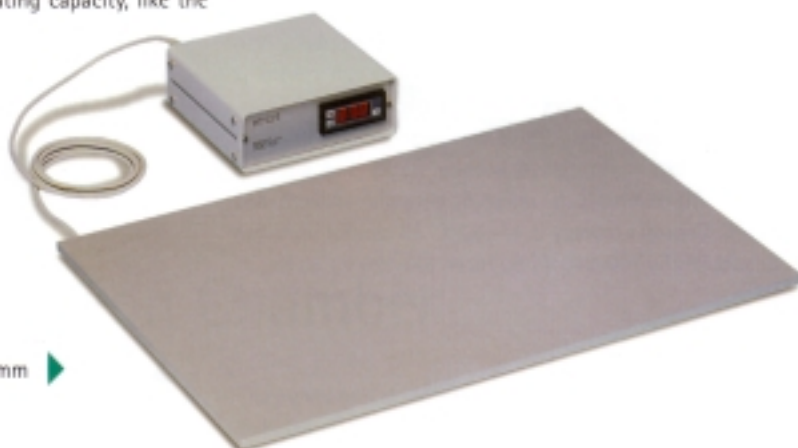
Heated stage for Nikon SMZ 1000
Ref. No. 12055/0040

Heated stage for Olympus SZ 40
Ref. No. 12055/0045

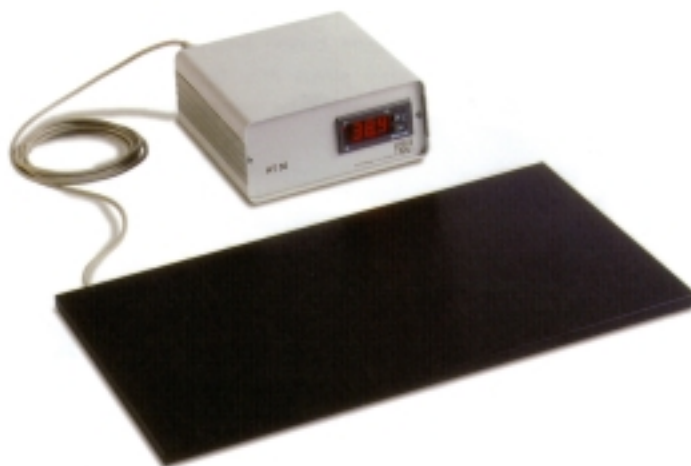


Laboratory Warming Plates

Warming plates with exact temperature control can be offered in standard and customized sizes. The anode treated aluminum surface is extremely resistant. Warming plates require a control unit with high heating capacity, like the HT 50 S.



Warming plate, size 600 x 400 x 10 mm
Ref. No. 12055/0009



Warming plate, size 470 x 263 x 10 mm
Ref. No. 12055/0450

Control unit HT 50 S
Ref. No. 12055/0205



Warming plate, size 180 x 180 x 10 mm,
control unit included
Ref. No. 12055/0202

Warming plate, size 180 x 180 x 10 mm,
requires control unit
Ref. No. 12055/1200

The Control Units

The Minitüb control units are protected by a durable metal casing with functional design. Digital displays help to select the desired temperature. The control units HT 200 and HT 400 are equipped with an additional heated plate for prewarming of slides, cover slips, counting chambers, Petri dishes etc. The units HT 300 and HT 400 can control 2 heated microscope stages simultaneously.

The control units described on this page can be combined with the before mentioned heating stages and warming plates. The temperature range is between ambient and +55°C. Control accuracy is +/- 0.2°C. All control units can be supplied by 200-240 V / 50 Hz or 100-120 V / 60 Hz.



Control unit HT 50, for one heated microscope stage.
Heating capacity: 50 VA,
dimensions: 185 x 180 x 75 mm, weight: 1.8 kg
Ref. No. 12055/0050

HT 50 S: 160 VA
Ref. No. 12055/0205



Control unit HT 200, for one heated microscope stage.
With warming plate 180 x 180 mm, heating capacity:
50 VA, dimensions: 185 x 180 x 84 mm, weight: 2.8 kg
Ref. No. 12055/0200



Control unit HT 400, for one to two heated microscope stages. With warming plate 470 x 263 mm, heating capacity: 160 VA,

dimensions: 470 x 263 x 116 mm, weight: 7.2 kg

1 output

Ref. No. 12055/0400

2 outputs

Ref. No. 12055/0409



Control unit HT 300, for two heated microscope stages. Heating capacity: 160 VA,
dimensions: 200 x 245 x 90 mm, weight: 3.3 kg
Ref. No. 12055/0300

High Temperature Heating Systems

A heating stage for very high temperatures (up to +100°C) is available in 2 standard dimensions. It requires the control unit HT 300 H which is specially suited for very high temperatures.

Stage 180 x 180 mm
Stage 130 x 120 mm
Control unit HT 300 H

Ref. No. 12055/0550
Ref. No. 12055/0555
Ref. No. 12055/0350

The Bead Bath

The Bead Bath is a temperature controlled incubator for sample tubes or straws of different sizes (up to 15 mm diameter), with steel balls inside for secure fixation and it needs no water. The temperature range lies between ambient and +55°C. It requires a control unit HT 50 S or HT 400. If combined with control unit HT 400, it can share the controller with a heated microscope stage and with the heated platform on top of the control unit.

Bead bath with control unit HT 50 S

Ref. No. 12055/5000

Bead bath with control unit HT 400

Ref. No. 12055/5400



Heated Incubation Chamber



The incubation chamber can be mounted on the stage of an inverted microscope, for the long term observation of cells under incubation conditions. It consists of a temperature controlled aluminum chamber with heated gas inflating system and heated moistening system. It is completely equipped with sterile filter, waterbath, controlled CO₂-measurement system, control unit HT 300 and accessories.

◀ Ref. No. 19300/0120

Cooling Stage

The Minitüb cooling system for all kinds of microscopes consists of a cooled stage or plate for the microscope and a cooling thermostat with built-in temperature control. The dimensions of the cooled microscope plate is variable and will be custom made. Circular and rectangular plates can also be provided. The system can cool or heat with a very high precision of $\pm 0.5^{\circ}\text{C}$. It allows for the presetting of 2 temperatures and has an integrated maximum and minimum temperature protection. Temperature range: 0°C to $+100^{\circ}\text{C}$.

Cooled insert plate for inverted microscope,
circular shape

for Nikon
for Olympus

Ref. No. 12055/0710

Ref. No. 12055/0720

rectangular shape, 150 x 150mm
for Leica

Ref. No. 12055/0730

Thermostat for Cooling Stage with integrated temperature
controller

Ref. No. 12055/0700

HT 007 – the simple solution

The heating system HT 007 consists of a simple control unit with LED's to show the actual temperature of the heating stage. The user can choose any temperature between +35°C and +42°C.

Control accuracy: $\pm 0.5^\circ\text{C}$.

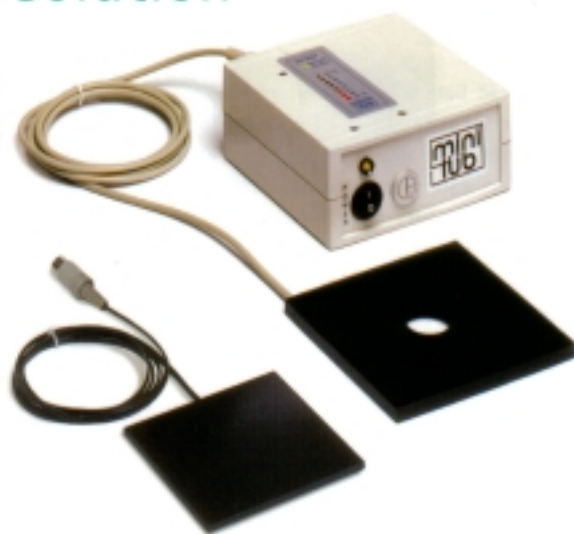
Stage dimensions: 120 x 120 x 5 mm

HT 007 heating stage with control unit, to be placed on top of the microscope stage, without cross moving guide

Ref. No. 12055/2007

HT 007 warming plate with control unit

Ref. No. 12055/3007



Electronic Thermometer

Easy-to use handheld thermometer with surface sensor for demonstrating the accuracy of heating systems or for checking the temperature on daily routine. Additionally, we recommend the submersible sensor to check the temperature of liquids and the sensor for air and gases.

Electronic thermometer GMH 3230 with probe GDF 130

Ref. No. 22000/3230

Submersible sensor

Ref. No. 22000/GTT0515

Sensor for air and gases

Ref. No. 22000/GTF300



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