



HEATING SYSTEMS FOR MICROSCOPES



Minitube heating systems for microscopes enjoy a longstanding excellent reputation for their technical standards, especially for their high accuracy and uniform temperature distribution.

The temperature control units of Minitube are of high quality and very user friendly. The warming plates in different sizes are particularly robust and easy to clean.

A wide range of standard products offers a modular approach enabling customised solutions for multiple applications in reproductive medicine, biology, chemistry and other areas.

- Complete solutions from a single supplier
- Modular system for different requirements
- Custom stage modification: integration of digitally controlled and monitored heating systems into an existing stage



Heating stages for upright microscopes

Original microscope stages of all leading brands can be equipped with the Minitube 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.

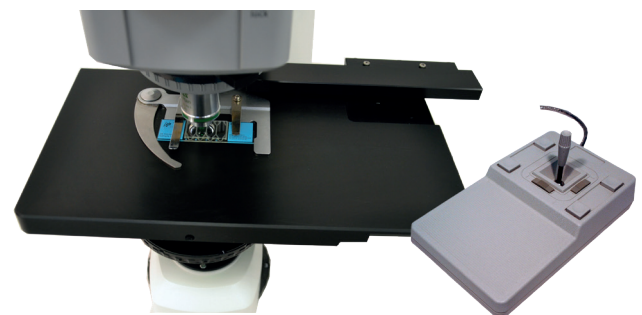
The automated microscope stage has an integrated heating system and can be used with a variety of different microscopes. Analysis points within a counting chamber are automatically approached using the selected path of the microscope stage. Thus, the analysis time is reduced. The ScanStage can also be used with slide and cover glass.



Heating system for the stage of an upright microscope

including installation

REF. : 12055/0015



ScanStage, automatic stage for microscope,
heating installed, with joystick (57 W)

REF. : 12048/0000

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. Through a slot on the clamp-on heating stage a transversely movable guidance is guaranteed.

Clamp-on heating stage (15 W)

130 x 130 x 3 mm, opening 30 mm



REF. : 12055/0002





Heated microscope stages have to be combined with a suitable control unit. With an accuracy of $\pm 0.2^\circ\text{C}$, the Minitube control units regulate heating systems precisely. With these control units, you can choose a temperature between ambient and $+55^\circ\text{C}$.





The control units - HT series

Control unit	HT 50	HT 50 S
		
Ref.	12055/0050	12055/0056
Dimensions (W x H x D)	185 x 80 x 180 mm	185 x 80 x 180 mm
Ambient temperature	+5°C to +40°C	
Control range	Ambient temperature up to +55°C	
Deviation	+/- 0.2°C	
Power supply	230 V/50 Hz - 115 V/60 Hz	
Output jacks	1 output jack	1 output jack
Power output total	45 W	155 W
Application	Temperature control of a heated microscope stage <u>or</u> a warming plate (≤ 20 W).	The more powerful HT 50 S is used to control the temperature of a warming plate (> 20 W) <u>or</u> a bead bath.

Control unit	HT 200	HT 200 S
		
Ref.	12055/0201	12055/0203
Dimensions (W x H x D)	185 x 80 x 180 mm	245 x 90 x 200 mm
Ambient temperature	+5°C to +40°C	
Control range	Ambient temperature up to +55°C	
Deviation	+/- 0.2°C	
Power supply	230 V/50 Hz - 115 V/60 Hz	
Output jacks	2 output jack	2 output jacks
Power output total	40 W	240 W
Application	2 consumers e.g. temperature control of a heated microscope stage <u>and</u> a warming plate (≤ 20 W).	The more powerful HT 200 S can be used to control the temperature of a heated microscope stage <u>and</u> a warming plate (> 20 W) or a bead bath.



The control units - HT series

Control unit	HT 300	HT 400
		
Ref.	12055/0301	12055/0401
Dimensions (W x H x D)	245 x 90 x 200 mm	
Ambient temperature	+5°C to +40°C	
Control range	Ambient temperature up to +55°C	
Deviation	+/- 0.2°C	
Power supply	230 V/50 Hz - 115 V/60 Hz	
Output jacks	3 output jacks	4 output jacks
Power output total	235 W	230 W
Application	Temperature control of heated microscope stage, warming plate and bead bath.	Temperature control of two heated microscope stages, one warming plate and a bead bath.

Control units from Minitube are equipped with a 9-pole SUB-D connection system, which guarantees maximum connection safety to the user. The control unit and the warming plate are available separately, allowing the user maximum flexibility in designing the workplace with extended combination options.

HT 10 - The simple solution

The control unit HT 10 is preset to + 37°C. Temperatures between + 35° and + 42°C can be preset. An LED signals the reaching of the setpoint temperature.

Control unit HT 10 (28 W)

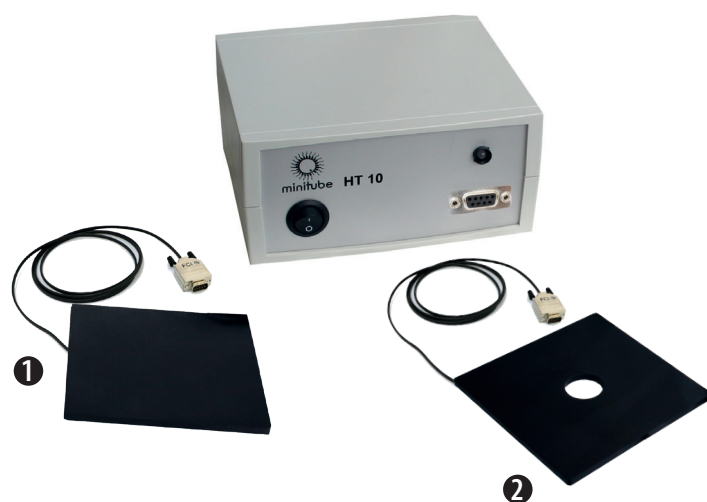
230 V [REF. : 12055/0023](#)

115 V [REF. : 12055/0024](#)

Warming plate (18 W), 120 x 120 x 5 mm (1) [REF. : 12055/0026](#)

Heated stage to be placed on existing microscope stage (18 W),

120 x 120 x 5 mm, opening 25 mm (2) [REF. : 12055/0025](#)

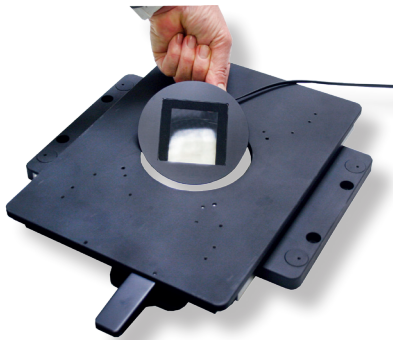




Heating systems for inverted microscopes

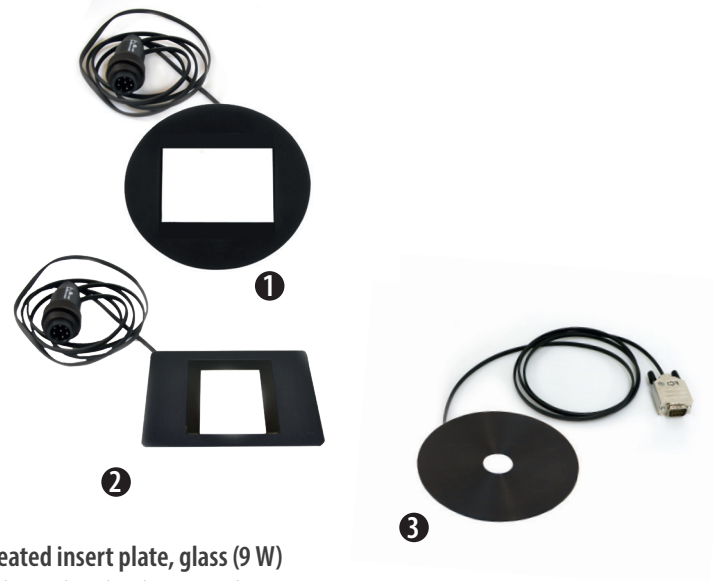
The installation of a Minitube heating system is also available for original stages of inverted microscopes. Additionally, we offer heated aluminium and glass insert plates in various dimensions. These are combined with the original heated stage in order to control the temperature of the area under observation.

Both, the heated stage and the additional insert plate may be controlled by the same control unit, e.g. HT 200 S, with two digital temperature displays. Glass insert plates require a control unit from the SC series.



Heating system for an original stage
of an inverted microscope, incl. installation

REF. : 12055/0004



Heated insert plate, glass (9 W)

to be combined with SC control unit
for Nikon, Ø 108 mm (1)

REF. : 12055/0032

for Nikon, 128 x 86 mm (2)

REF. : 12055/0052

for Olympus, Ø 110 mm (1)

REF. : 12055/0033

Heated insert plate, aluminium (20 W)

to be combined with HT control unit

for Nikon, Ø 108 mm (3)



REF. : 12055/0031

for Olympus, Ø 110 mm (3)

REF. : 12055/0034

The control units - SC series

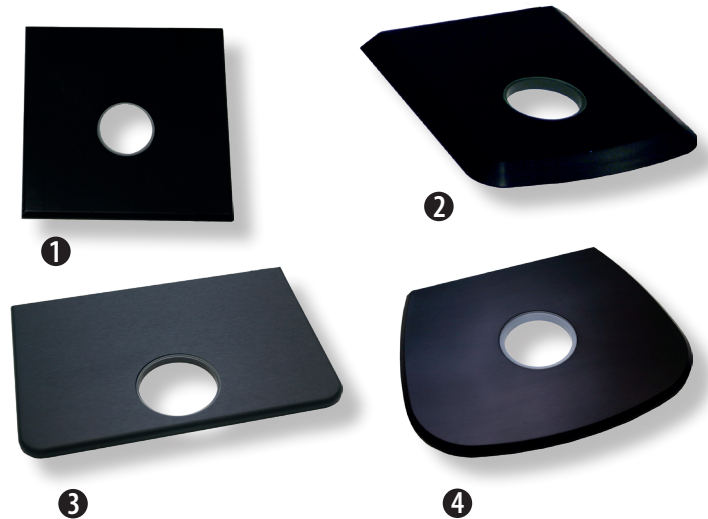
Specifically designed to control the temperature of glass plates, the SC series controllers provide precise control of heated glass inserts through a higher measurement frequency.

Control unit	SC 30	SC 300
		
Ref.	12055/0230	12055/0312
Dimensions (W x H x D)	160 x 75 x 133 mm	245 x 96 x 205 mm
Ambient temperature	+5°C to +40°C	
Control range	Ambient temperature up to +55°C	
Deviation	+/- 0.2°C	
Power supply	230 V/50 Hz - 115 V/60 Hz	
Output jacks	1 output jack	2 output jacks
Power output total	25 W	150 W
Application	Temperature control of a heated glass insert plate	Temperature control of a heated stage for an inverted microscope with heated glass insert



Heating systems for stereo microscopes

Minitube can provide standard or customised heated stages in all dimensions required for installation on top of the transmitted or incident light bases of any stereo microscope. The heating stage must, however, be combined with one of the HT control units. For sole operation, the HT 50 is suitable; If additional consumers are to be connected, the HT 200, HT 300 or HT 400 are suitable depending on the number. Feel free to contact us, we are happy to advise you.



Heated stage for stereo microscope (16 W)

180 x 180 x 10 mm (1)

REF. : 12055/0003

Heated stage for Olympus SZ2-Series (27 W)

153 x 178 x 10 mm (2)

REF. : 12055/0005

Heated stage for Nikon SMZ-U (27 W)

265 x 180 x 10 mm (3)

REF. : 12055/0039

Heated stage for Nikon SMZ 1000 (27 W)

212 x 212 x 10 mm (4)

REF. : 12055/0040

Bead bath

The bead bath is a temperature controlled incubator for sample tubes of varying sizes (up to 25 mm diameter), with steel balls inside for secure fixation. No water is required. The temperature range lies between ambient and +55°C.

The bead bath requires one of the following control units: HT 50 S, HT 200 S, HT 300 or HT 400.

Bead bath (100 W)

REF. : 12055/5000



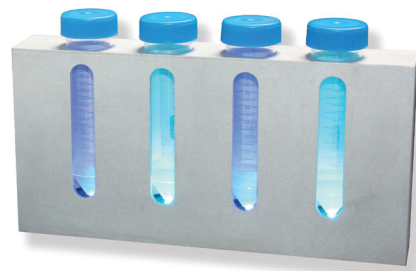
Heated aluminium block

The heated aluminium block for four 50 ml tubes allows the visualization of the contents of the tubes by LED illumination and is mainly used during collection of oocytes (OPU). The control range lies between + 30°C und +50°C.

The heated aluminium block requires one of the following control units: HT 50 S, HT 200 S, HT 300 or HT 400.

Heated aluminium block (100 W)

REF. : 23361/3200



minitube



Warming plates

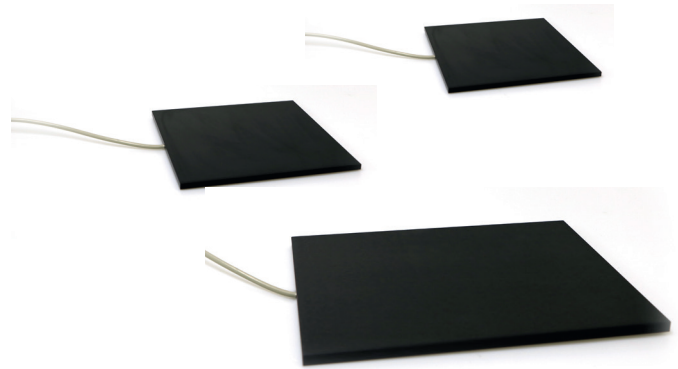
Stand alone warming plates with exact temperature control can be offered in standard and customised sizes. The anode treated aluminium surface is extremely resistant. Small warming plates (≤ 20 W) require a control unit HT 50 or a HT 200 with 2 output jacks, if e.g. additionally a heated microscope stage should be operated. Larger warming plates (> 20 W) require a control unit with higher power output (HT 50 S, HT 300, HT 400), depending on how many consumers (bead bath, microscope stage,...) should additionally be connected. Feel free to contact us, we are happy to advise you.

Small warming plates

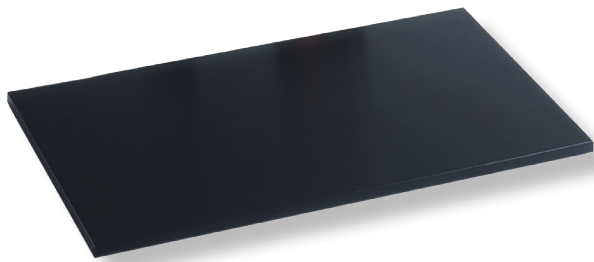
Warming plate (18 W), 120 x 120 x 5 mm [REF. : 12055/0026](#)

Warming plate (10 W), 180 x 180 x 6 mm [REF. : 12055/1200](#)

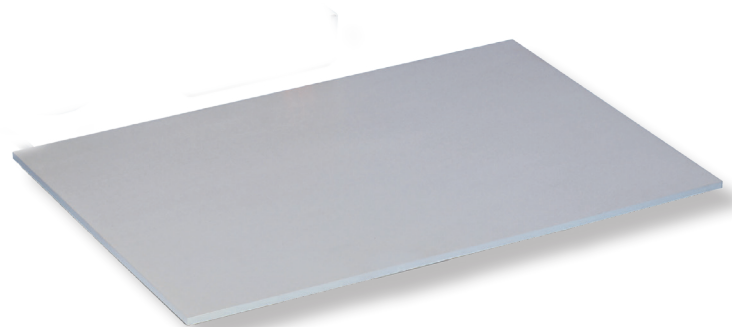
Warming plate (20 W), 245 x 200 x 8 mm [REF. : 12055/0041](#)



Large warming plates



Warming plate (90 W), 470 x 263 x 10 mm [REF. : 12055/0450](#)



Warming plate (150 W), 600 x 400 x 10 mm [REF.: 12055/0009](#)

Warming plate with integrated control unit

Warming plate with integrated control unit,
temperature preset to $+37^{\circ}\text{C}$,
470 x 260 x 10 mm

[REF. : 12055/0010](#)

