

TOKAI HIT[®]

Thermo Plate

ThermoPlate
MATS-U
Series

for OLYMPUS Microscopes

Microscope-stage Automatic Thermocontrol System



UL approved/Conforming to CE

MATS-U55R30 (For Inverted Microscopes)



(Hoffman modulation device)

The stage surface flush with the plate surface ensures easy handling of the micromanipulator and replacement of the specimens. MATS-U55R30 is specifically useful for observing the specimen in Petri dishes under a high magnification objective or microfertilization utilizing a Hoffman modulation device.

Main applications: Temperature control of the specimen in cell engineering, neuroscience, and genetic engineering areas where handling by a manipulator is required.



[Applicable Microscopes]
Olympus: IX70/50, CK40
IMT2

MATS-U55S (For Upright Microscopes)



Flat plate surface ensures efficient utilization of the whole area (130mm x 100mm) of the heating surface and easy replacement of the specimens.

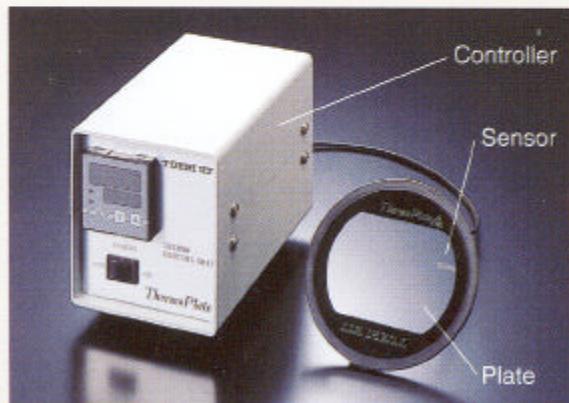
Main applications: Sperm vitality tests, ova collections, observation of tissue culture status.



[Applicable Microscopes]
Olympus: BX50/40,
CH40/30, BH2

For further improvement and enhancement of product quality and performance, the UL and CE standards compliant MATS-U Series will continue to be expanded.

Plate



The THERMOPLATE utilizes a special transparent heating material coated onto the surface of a hard glass plate. The THERMOPLATE can be used for observing or manipulating specimen under phase contrast, differential interference contrast and polarisation. The flat plate surface ensures easy operation of the microscopes and relocation of specimen.

ThermoPlate

ThermoPlate comes with Three Significant Features:

Accurate Temperature Control of Specimens

Wide Efficient Area

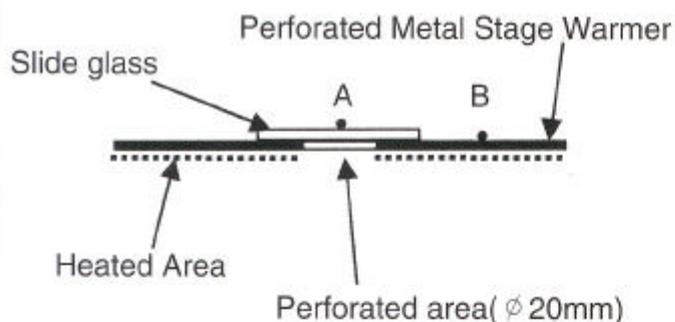
Quick Start Up

TEST REPORT

**Comparison of thermal distribution:
Former type; Metal Perforated Stage Warmer
vs. Tokai Hit Clear Glass Heating Plate.**

Setting both plate temperature at 37.0°C and placed a slide glass on each plate to compare the temperature at the slide glass center. The room temperature was kept at 25.0°C. (Carried out by Tokai Hit,)

Former type : Perforated Metal Stage Warmer

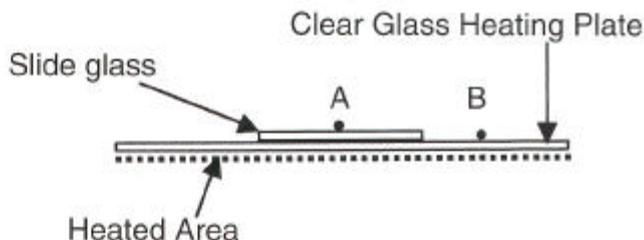


Point A: 32.9°C

Point B: 37.0°C

B - A = 4.1°C

Tokai Hit Clear Glass Heating Plate



Point A: 36.8°C

Point B: 37.0°C

B - A = 0.2°C

To maintain slide glass center at 37.0°C on the former type Metal Perforated Stage Warmer, we had to raise the plate temperature up to 43.3°C.

Meantime, Tokai Hit Clear Glass Heating Plate did not result with any such errors. Furthermore, the same outcome was found in any location on the Heating Plate.

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High-Quality, High-Performance

MATS-SZX (For Stereo Microscopes)



This is an exclusive type made for Olympus SZX12 and Olympus SZX9 (Stereo microscopes), to conform with their specific stage configurations. Uniform heating of almost the entire stage area allows temperature control of multiple specimen simultaneously.

Main applications: Ova selections, pre-treatment of ova by means of the IVF technique, etc.



SZX-XY X-Y Slide Mecha (For MATS-SZX)

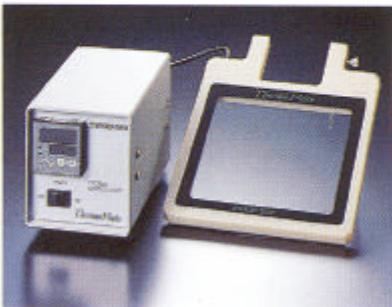
Combining the X-Y Slide Mecha with plate provides easy and smooth handling of specimens.

Stroke length: X ≒ 50mm, Y ≒ 25mm



[Applicable Microscopes]
Olympus: SZX12/9

MATS-OZ (For Stereo Microscopes)



[Applicable Microscopes]
Olympus: SZ30/40/60/11

We also provide MATS-U series MATS-OZ designed for stereo microscopes such as OLYMPUS SZ30/40/60/11 conforming to CE standard only.

Wide range of product types supports biotechnology science and industry.

Controller

The PID control adopted standard for the THERMOPLATE provides ideal temperature control, and ensures quick startup and high stability against disturbance. The PID control also minimizes overshoot so that accurate and stable temperature control can be ensured at all times.

Sensor

The ultra-fine thermocouple embedded between glass plates ensures excellent heat conductivity between the temperature sensor and the middle part of the plate section, thus minimizing overshoot at power up and temperature fluctuation of the plate surface due to disturbance.

Specifications

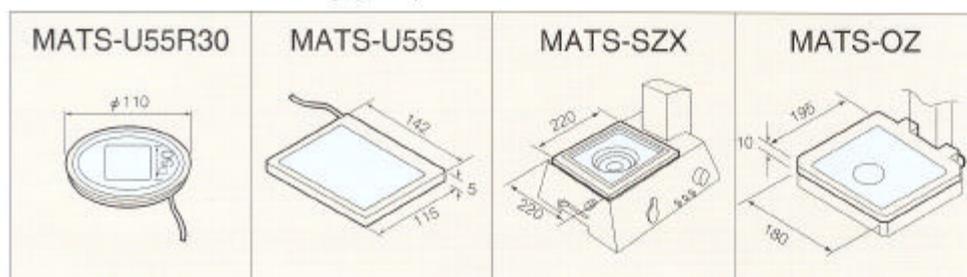
	Model	Preset Temp.	Accuracy of Temp. Indication.	Glass Thickness	Applicable Microscopes
UL approved	MATS-U55R30	Room temp. to 50°C	± 0.3°C	1.0mm Plate center, 50mm square area: 0.5mm	IX70/50, CK40, IMT2
	MATS-U55S			1.0mm	BX50/40, CH40/30, BH2
	MATS-SZX*			1.0mm	SZX12/9
Conforms to CE	MATS-U55R30	Room temp. to 50°C	± 0.3°C	1.0mm Plate center, 50mm square area: 0.5mm	IX70/50, CK40, IMT2
	MATS-U55S			1.0mm	BX50/40, CH40/30, BH2
	MATS-SZX*			1.0mm	SZX12/9
	MATS-OZ			1.0mm	SZ30/40/60/11

*Accessory for MATS-SZX series: SZX-XY (X-Y Slide Mecha)

-Dimensions of controller (mm)-

UL approved/Conforms to CE W100 × D165 × H123

-Dimensional drawing (mm)-



※ Special orders: preset temperature higher than 50°C, isolated sensors, program control, specific plate configuration, hole processing on the heating glass, etc. may be offered.

※ This catalogue was published in September 1998. Specifications and products in the catalogue are subject to change without any obligation on the part of the distributor/manufacturer.

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