

ibidi Overview – Company and Products

ibidi is a leading supplier of functional, cell-based assays and advanced products for cellular microscopy. ibidi manufactures high-quality products that are designed and made in Germany, and provides excellent service and support through both - ibidi specialists and a network of local distributors.

The Company

ibidi GmbH was founded in 2001 as a spin-off from the Technische Universität München. ibidi is located in Martinsried, Germany and has in-house R&D and production, as well as a global sales network. ibidi is ISO 9001 and ISO 13485 certified.

The Products

ibidi designs and produces innovative products that combine cell-based assays with microscopy. The ibidi portfolio consists of three main segments:

- Cultureware with unique features for optimal cell growth and high optical quality for high resolution imaging
- Reagents for labeling and modifying living cells and for cell-based assays
- Instruments that provide, measure, and control environmental conditions on the microscope

The ibidi Heating and Incubation Systems

The ibidi Heating and Incubation System is a stage top incubator created for use with inverted microscopes, and is designed for live cell imaging.



ibidi Heating System, Universal Fit

- Fits every inverted microscope that has a frame or holder for 96-well plates
- Suitable for all live cell imaging applications, including high resolution, TIRF, and confocal microscopy

ibidi Heating System, Multi-Well Plates

- Designed for high-through-put imaging of multi-well plates
- Two different models that fit K-Frame stages and Nikon Ti-SE and Ti-S-ER motorized stages

ibidi Gas Incubation System

- Active gas mixer, including patented feedback humidity control that upgrades the ibidi Heating System to a complete stage top incubator for all live-cell imaging
- Allows control of CO₂ and O₂ conditions

ibidi Heating and Incubation Systems – Features

Unique Selling Proposition – The Complete Live Cell System (Heating and Incubation)

- Long-term, stable environmental conditions
- Clear and comprehensible portfolio with a small number of instruments that fit almost all microscopy stages
- High-end technical specifications
- High-quality engineering that is made in Germany
- Designed by experts for cell-based assays
- Easy setup and use
- Compact, modular, and flexible design
- Free software with data log allows tracking of experimental conditions
- Can be integrated into other systems via USB
- Customization possible
- Competent support and service through ibidi specialists and local distributors

ibidi Heating Systems – Overview:

Modular and Flexible Design:



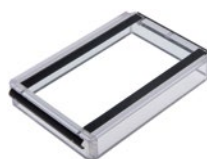
ibidi Temperature Controller

+



Heated Plate for K-Frame (160mm x 110 mm)

+



Heated Glass Lid, Multi-Well Plates

+



Multi-Well Plate



Heated Plate for Nikon Ti-S-E/Ti-S-ER

+



Heated Glass Lid, Multi-Well Plates

ibidi Heating System, Universal Fit

Summary

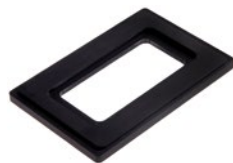
- Fits every inverted microscope that has a frame or holder for 96 well plates; can easily be transported from one microscope to another
- Suitable for all live cell imaging applications, including high resolution, TIRF, and confocal microscopy

System includes:



ibidi Temperature Controller

+



Heated Plate in Multi-Well Format

+



Heated Glass Lid, Universal Fit

+



Heating Insert for ibidi and non-ibidi slide formats

Benefits

- Fits every inverted microscope
- Has exactly the same dimensions as a standardized, 96-well plate
- Flexible and portable system that may be used on different microscopes
- Modular System:
 - 1 Controller can be used simultaneously with 2 heated plates (with or without heated lids)
 - Heated Plate for 1 Insert (Slide or Dish)
 - Heated Plate for 4 Slides
 - Heated Lid (fits on both Heated Plates)
- Can be upgraded with a Gas Incubation System
- Compatible with all slides and dishes
- Provides stable, uniform temperature conditions for exact and reproducible experiments
- Reaches working temperature very fast, allowing for the quick start of experiments
- External Sensor to accurately calibrate sample temperature
- No condensation due to heated lid – undisturbed imaging
- Magnetic holding inserts for improved stability
- Suitable for DIC
- Optimal integration into the workflow of ibidi cell-based assays
- Compatible with perfusion systems

Limitations

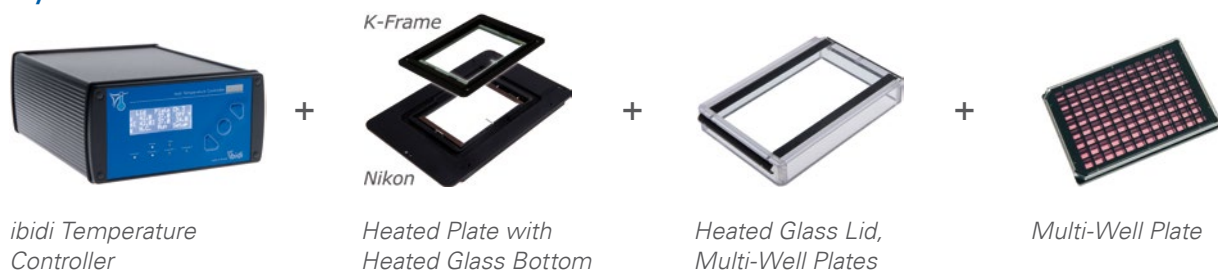
- Restricted compatibility with upright microscopes
- Not compatible with multi-well plates
- Restricted compatibility with Galvo Z stages (due to weight limitations)

ibidi Heating System, Multi-Well Plates

Summary

- Designed for high-throughput imaging of multi-well plates
- Two different models that fit K-Frame Stages and Nikon Ti-SE and Ti-S-ER motorized stages

System includes:



Compatibility to Microscopes

Heated Plate and Heated Lid	For K-Frame Stages (160mm x 110mm)	For the Nikon Ti-S-E and Ti-S-ER Motorized Stage
Nikon	---	Ti-S-E and Ti-S-ER Stages
ASI	MS 2000 Series PZ 2000 Series	---
Leica	K-Frame Opening (160x110mm)	---
LUDL	BioPrecision 2 Inverted Biopoint 2 Series	---
Märzhäuser	Scan IM Series	---
Olympus	K-Frame Opening (160x110mm)	---
Physik Instrumente	M-687 PILine	---
PRIOR	H107 ES107	---
Thorlabs	MLS203-1/MLS203-2	---
Zeiss	Scanning Stage 130 x 85 mot. P K-Frame Opening (160x110mm)	---

Benefits

- Positive features (e.g., uniform temperature distribution) of an XL incubator in a compact design
- K-Frame Model fits into most motorized microscopy stages
- Flexible and portable
- Modular System: 1 Controller can be used with either the Multi-Well Plate System or the Universal Fit System
- Compatible with all ibidi slides, dishes, and multi-well plates, and also with the common, multi-well plates of other brands
- Provides stable and uniform temperature distribution, due to the heated glass plate
- No condensation due to heated lid – undisturbed imaging
- Suitable for DIC
- Optimal integration into the workflow of ibidi cell-based assays
- Upgradable with the ibidi Gas Incubation System: The compact design does not require an additional gas incubation chamber (inside of an XL incubator) and allows you to reach working conditions very fast
- Recommended objectives: 1.25x - 40x

Limitations

- Not compatible with upright microscopes

ibidi Gas Incubation System

Summary

- Active gas mixer, including feedback humidity control that upgrades the ibidi Heating System to a complete stage top incubator for all live-cell imaging applications
- Allows for control of CO₂ and O₂ conditions

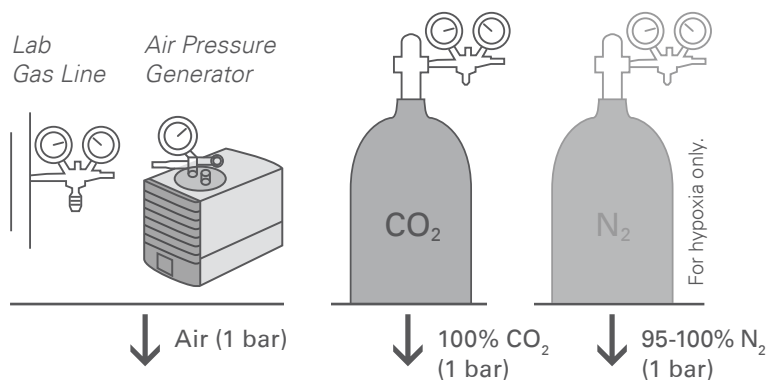
System includes:



Benefits

- Active gas mixer (saves costs compared to a passive gas mixer for premixed gas)
- Patented gas mixing technology of dry and humid air
- Fast regulation and response times of gas flow and humidity
- Stable gas flow and humidity that does not decrease over time
- Feedback humidity control
- Heated, flexible tubing and humidity column ensure the continuous heating of gas until it reaches the sample
- Humidity up to 99%
- Can be combined with incubation systems of other brands and plate readers (approx. 0.5l incubation volume)
- Highly accurate, even at low hypoxia conditions

Requirements



Gas Supply (Input)	
Pressurized Air	1 bar optimum / 14.5 psi (0.8-1.2 bar / 11.6 – 17.4 psi)
CO ₂	1 bar optimum / 14.5 psi (0.8-1.2 bar / 11.6 – 17.4 psi)
N ₂	1 bar optimum / 14.5 psi (0.8-1.2 bar / 11.6 – 17.4 psi)
Tubing for all gasses (Supplied with the system)	PUR/PUN tubing 4 mm inner diameter 6 mm outer diameter 1 mm wall thickness

Specifications ibidi Heating & Incubation Systems

Temperature Controller

Environmental humidity	Relative humidity 0% - 99%
Environmental temperature	+5°C - +40°C (50% rel. humidity)
Dimensions (H x W x D)	90 x 170 x 230 mm
Weight	3.4 kg
Input voltage	230 V / 50 Hz 115 V / 60 Hz

ibidi Heating System, Universal Fit

Heated Plate and Lid	
Dimensions Plate / Lid	127.5 x 85.5 x 8 mm 135 x 85.5 x 20.5 mm
Height of the system	26.5 mm
Weight of incubation chamber with insert	330 g
Gas inlet	Luer connector (M5 thread) with Luer Lock
Restrictions for objective lenses	None
Custom openings	On request

ibidi Heating System, Multi-Well Plates

Heated Plate and Heated Lid	For K-Frame Stages (160mm x 110mm)	For the Nikon Ti-S-E and Ti-S-ER Motorized Stage
Dimensions Heated Plate	160 x 110 x 9 mm	236 x 155 x 8 mm
Dimensions Heated Lid	160 x 108 x 25 mm	160 x 108 x 25 mm
Height of the System	30 mm (25 mm from microscope stage)	30 mm (22 mm from microscope stage)
Weight of Heated Plate	220 g	400 g
Weight of Heated Lid	210 g	210 g
Gas inlet	Luer connector (M5 thread) with Luer Lock	Luer connector (M5 thread) with Luer Lock
Restrictions for Objective Lenses	> 1 mm working distance for coverslip bottom plates, e.g., ibidi μ -Plate 96 Well > 2 mm working distance for thick bottom plates	> 1 mm working distance for coverslip bottom plates, e.g., ibidi μ -Plate 96 Well > 2 mm working distance for thick bottom plates
Custom Openings	On request	On request

Specifications ibidi Heating & Incubation Systems

ibidi Gas Mixer

CO ₂ Control	
CO ₂ Control Range	0.1% - 20%
Accuracy	0.1% - 0.5% (absolute)
O ₂ Control	
O ₂ Control Range	0% - 21%
Accuracy	0.5 % (absolute)
Gas Flow	
Control Range	5 - 20 l/h

Humidifying Column

Humidity Control	
Control Range	20% - 99% (Rel. Humidity)
Accuracy	1% (absolute)
Water Refill	Every 7 days

ibidi Heating and Incubation Systems – Limitations

- No objective heater (one is current under development)
- Restricted compatibility for upright microscopes
- Not compatible with Leica Piezo Super Z Galvo (weight limitations)
- Multi-Well System limited to 1.25x - 40x objectives

Ordering Information:**Heating System, Universal Fit**

Cat. No.	Description
10918	ibidi Heating System, Universal Fit, for 1 Chamber: ibidi Temperature Controller, Heated Plate in Multi-Well Format for 1 Chamber, 1 Heating Insert, with Heated Lid (for use with CO ₂ and humidity)
10915	ibidi Heating System, Universal Fit, for 1 Chamber: ibidi Temperature Controller, Heated Plate in Multi-Well Format for 1 Chamber, 1 Heating Insert, without Heated Lid (Heating only)
10927	ibidi Heating System, Universal Fit, for 4 μ -Slides: ibidi Temperature Controller, Heated Plate in Multi-Well Format for 4 μ -Slides, with Heated Lid (for use with CO ₂ and humidity)
10928	Heated Plate in Multi-Well Format for 4 μ -Slides
10933	Heating Insert μ -Slide for ibidi Heating System, Universal Fit: insert for all ibidi μ -Slides
10932	Heating Insert μ -Dish ^{35 mm, low} for ibidi Heating System, Universal Fit: insert for μ -Dish ^{35 mm, low}
10934	Heating Insert μ -Dish ^{35 mm, high} for ibidi Heating System, Universal Fit: insert for μ -Dish ^{35 mm, high}
10937	Heating Insert LabTek for ibidi Heating System, Universal Fit: insert for Labtek™ / Labtek™ II chambered coverglass
10936	Heating Insert Adapter for perfusion assays

Heating System, Multi-Well Plates

Cat. No.	Description
10926	ibidi Heating System, Multi-Well Plates on a Nikon Ti-S-E or Ti-S-ER Motorized Stage: ibidi Temperature Controller, Heated Plate for Multi-Well Format, Heated Lid, for Nikon TI-S-E and TI-S-ER Motorized Stage
10929	ibidi Heating System, Multi-Well Plates, K-Frame: ibidi Temperature Controller, Heated Plate for Multi-Well Format, Heated Lid, for K-Frame Stage (160mm x 110mm)

Gas Incubation Systems

Cat. No.	Description
11920	ibidi Gas Incubation System for CO ₂ : ibidi CO ₂ Gas Mixer, Humidifying Column
11922	ibidi Gas Incubation System for CO ₂ and O ₂ : ibidi CO ₂ and O ₂ Gas Mixer, Humidifying Column
11929	Air Pressure Generator, 1 bar, ready to use with the ibidi Gas Incubation System