

Technical Data

Controller Advanced PID with
fuzzy-logic self-tuning

Sensor Pt-100 thin-layer RTD

Range Ambient+5° C to 50°C

Stability ± 0.1°C at sensor location

Precision ± 0.3°C at sensor location

Safety Automatic shut-down at 70°C

Communication RS 232C serial interface

Voltage 220-240 VAC / 110-120 VAC

Consumption 150 W typ. 600 W max.

BOX material Makrolon™(polycarbonate)

Compatibility All inverted and upright
microscopes

Options CO₂ and humidity control

Special features available on request
e.g. light shield, faraday cage

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LIFE IMAGING SERVICES

CUBE & BOX



Temperature
Control System
for
Microscopes

COMPREHENSIVE TEMPERATURE CONTROL

Keeping the sample at its physiological temperature and eliminating focus instabilities caused by temperature fluctuations in the microscope are two key requirements for successful live imaging

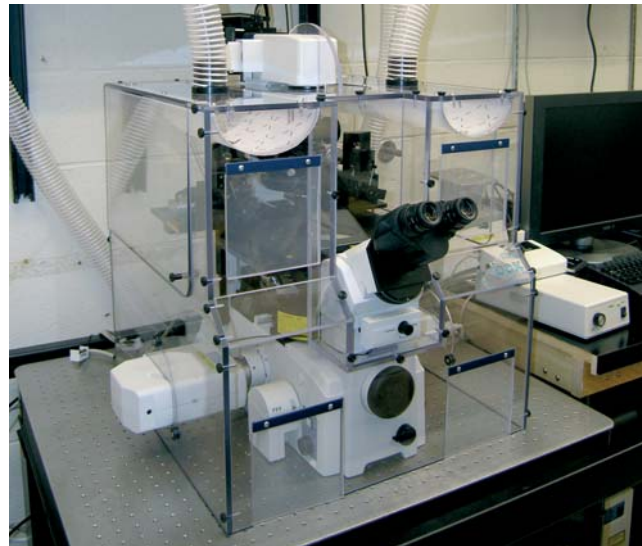
The CUBE & BOX temperature control system is available for any microscope on the market

The CUBE, a recirculating precision air heater with fuzzy-logic control, quickly and reliably compensates for external disturbances

The BOX is custom-designed for you in order to meet your equipment- and application-specific requirements
Our design enables unhindered access to the controls of the microscope and stage area



CUBE
precision air heater



BOX
on a Nikon TE2000U with
C1 confocal scanner

FOR ALL MICROSCOPES

Leica, Nikon, Olympus, Zeiss, upright,
inverted, wide-field, confocal...

Features

- Our BOX (microscope enclosure) is fully custom-designed
 - Optimally fit for complex hardware setups
 - Application-specific and special ergonomic requirements can be taken into account
- Integral design encloses the whole microscope
 - Optimal thermal stabilization and focus stability
 - Allows the usage of table-mounted equipment (e.g. micromanipulators)
- Front access openings with flexible silicon rubber curtains
 - Unhindered access to microscope controls and stage area without opening doors
- Large side wing doors
 - Enhanced large-scale access (e.g. for mounting stage components)
- Lamp pillar is directly tiltable without adjusting any openings etc.
- The BOX is entirely made from flat panels held together with thumb screws
 - Individual panels can be easily modified or replaced
 - Front panels can be removed and remounted in a few seconds
 - Quick assembly and disassembly without tools
 - BOX can be stored in a compact format
- Option: The BOX can be mechanically uncoupled from the microscope standing on an anti-vibration platform
 - Shocks or vibrations (e.g. when touching the BOX) are not transmitted to the microscope
- Air heater is mechanically uncoupled from the microscope and table
- Top-down flow design with diffuser filters
 - Constant defined air flow
 - Stable temperature distribution
 - Dust is continuously removed
- High-throughput recirculating system
 - Faster reaction to disturbances
 - Low heat dissipation
- The BOX is made of Makrolon™ (polycarbonate), not Plexiglas™ (acrylic)
 - 20-30x higher impact strength
 - Higher chemical resistance (e.g. to ethanol)
 - Higher thermal stability (140° C vs. 85° C)
 - Reduced flammability
 - Self-extinguishing (acrylic is fire-sustaining)
 - 50% lower water uptake