MICRO CLIMA-SERIES™

PREMIUM ICH INSECT CHAMBER

SNIJDERS
LABS

INSECT INCUBATION
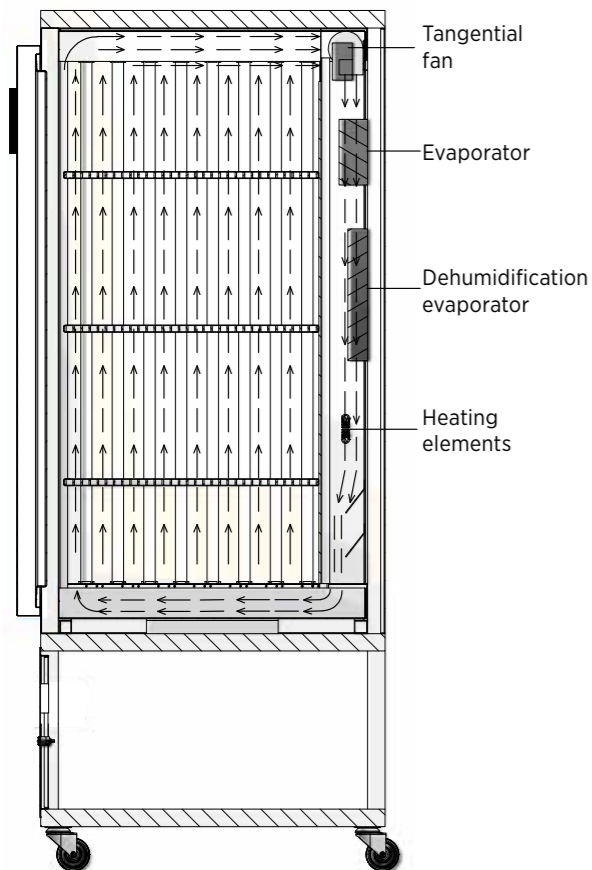
The Climate Chamber for modern insect breeding.

'Snijders Labs, experienced innovators'. The motto, evolved during the design, development and manufacturing of this climate cabinet. THE PREMIUM ICH INSECT CHAMBER has been designed using the latest technology and tested extensively at customer sites. This process resulted in the best design required for insect research in the twenty first century.

All functions like temperature, humidity and lighting can be controlled with the best results and are reproducible. This chamber is the best for research on the Drosophila. It is also used for fungi and algae growth.

FEATURES PREMIUM ICH INSECT CHAMBER

+ A microprocessor web-based controller with 8,4"touch screen, working in real time.
+ Fully programmable with up to 100 programs, each with 100 program steps.
+ Adjustable day and night cycle for temperature, relative humidity and light.
+ A wide temperature range, from -5°C up to +60°C, with a temperature fluctuation of only ± 2°C when the lights are on.
+ A wide humidity range, from 40% to 95%
+ A surface area of 3 x 0.54 m² as standard (maximum of 20 x 0.54 m²) by the 3 delivered platforms.
+ Lighting is located outside the working area, behind thermal glass, on both sides of the chamber.
+ Air-cooled cooling system.
+ Electric heating element.
+ Potential (voltage) free contact for external alarm system.
+ Very accurate with reproducible results.
+ Ethernet connection for online visualization display on PC and/or Android mobile phone
+ Ethernet connection for receiving an alarm on e-mail.

Tangential fan

Evaporator

Dehumidification evaporator

Heating elements

CONSTRUCTION FEATURES

+ The exterior is manufactured in enamelled steel, coloured off-white (RAL 9002).
+ The 'easy to clean' interior is strengthened with stainless steel profiles.
+ To achieve the required accuracy, all heat sources (such as lamps and ballasts) are kept out of the chamber.
+ The fan and the heating element are situated behind a separation panel.
+ The heat exchanger for cooling & dehumidification is mounted near the humidifier.
+ The circulating air makes contact with both systems (as described above) and becomes a homogeneous air stream maintaining the stated control accuracy.
+ A cable entry port is placed on top of the cabinet.
+ The outer door is provided with a key lock.
+ There are 3 height adjustable platforms made of stainless steel and high density Polystyrene as standard (shelving made entirely of stainless steel is an option).
+ Low profile heavy duty casters for mobility.

HOW TO CONTROL?

The PREMIUM ICH INSECT CHAMBER is fitted with the control unit, mTRON T. It controls temperature, light and humidity, in the control sequences required for modern insect research.
The controller has 100 programs, each with 100 program steps controlling in real time. A complete program, or a part of it, can be repeated continuously or for a finite number of times. Coupling programs or even repeating a single step in a program is also possible. Visualizing the display on your PC and/or Android mobile phone is possible after connecting the mTRON T to Intranet / internet. There is also an optional log function for temperature and humidity, showing the daily history for up to approx. 30 days (adjustable) on the TFT 8,4"touch screen. The graphs can be downloaded to a PC if the optional PCA software is purchased. Also programming the climate chamber belongs to the optional possibilities.

HUMIDITY CONTROL

+ The mTRON T controls the set value of the humidification as well as the dehumidification.
+ The controller shows the set value as well as the actual value, in percentages.
+ The use of an ultrasonic humidifier avoids additional heat transference to the working chamber.
+ A capacitive sensor measures the humidity.
+ Water to the unit is either by direct connection to the mains or via a water polishing system. This depends on the regional softness of the mains water.
+ A water tank is available as an option.

ALARM SYSTEM

The PREMIUM ICH INSECT CHAMBER has a temperature and moisture alarm system, which can be set by the controller. Alarming via e-mail and/or texting belongs to the (optional) possibilities. It also has an absolute protection for high and low tempera-tures, which switches off illumination and heating when the high temperature alarm is activated. The cooling is switched off when the low temperature alarm is activated.

OPTIONAL

+ Perspex inner doors.
+ Dimmable lighting.
+ Different types of fluorescent tubes e.g. for sporulation of fungi.
+ Various lighting options, such as LED.
+ A 10 or 20 liter water tank is required when there is no direct connection to the water main or a pretreated water system.
+ Extra shelves.
+ Adjustable airflow.
+ Control by external PC with divers software possibilities.
+ CO_2 injection and measurement.
+ Complete stainless steel (perforated) shelves.
+ Complete stainless steel evaporator system.
+ Viewing window in door.
+ Decontamination cycle.
+ Chamber without light.
+ Chamber without humidity.
+ More options to be discussed with our representative.

ILLUMINATION

Optimizing the design avoids problems and offers solutions. This is why we installed the 16 fluorescent tubes (8 per side) vertically behind double thermal glass. The other electrical components are also separated from the working area for safety reasons and to avoid temperature fluctuations.
This design enables the periodical maintenance to be executed swiftly and easily.
The maximum light intensity is ± 20.000 Lux (measured at an angle of 180° in the middle of the chamber) and ± 28.000 Lux at a distance of 15 cm from the fluorescent tubes. The fluorescent tubes can be switched on or off in 4 steps as standard. Dimming is available as an option.
The standard fluorescent tubes (16x BriteGro 2084) are fully programmable in a day/night cycle via the mTRON T controller. Other types of fluorescent tubes are available on request, e.g. 'black light' for the sporulation of fungi.

PREMIUM ICH INSECT CHAMBER
TECHNICAL INFORMATION

PHYSICAL	PREMIUM ICH INSECT CHAMBER
Total volume	835 liter
Working volume	780 liter
External dimensions (w x d x h)	1240 x 860 x 1960 mm
Internal dimensions (w x d x h)	990 x 630 x 1340 mm
Area per shelf	900 x 600 mm / 0,54 m²
Shelves	3 standard/ 20 max.
Airflow	Vertical

SPECIFICATIONS	
Temperature range (lights off)	-5°C till +60°C
Temperature range (lights on)	0°C till +60°C
Temperature fluctuation	± 0,3°C
Variation (lights on, lights off)	± 2,0°C / ± 1,0°C
Humidity range (depending on temperature and light)	40-95% RH
Light level in the middle of the chamber	0 – 20.000 lux
(measured in an angle of 180°)	0 - 240 μmol m^{-2} s^{-1}
Light level measured at 15 cm distance from lamps	0 – 28.000 lux
(measured in an angle of 180°)	0 - 350 μmol m^{-2} s^{-1}

FACILITIES	
Temperature & humidity controller	mTRON T, microprocessor PID with 8,4" touch screen
Temperature sensor	Capacitive
Humidifier	Stulz, Ultrasonic
Humidity sensor	Capacitive
Lighting	16x Brite Gro 2084, 36W.

GENERAL	
Power supply	220-240V, 11A, 50 Hz.
Weight	365 kg

*Specifications subject to change

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There you'll find all the latest information about:

+ ULT freezers (-86°C) with datasheets of any type, racking systems, boxes and other accessories
+ a variety of climate cabinets for plants, seed germination, fungi, snails and insects research with temperature-, light- and humidity control
+ (cooled) incubators and incubator walls, designed for general microbiological research of among others food, water and medical laboratories.