



# Plant Growth Chamber Type M



## Product Datasheet

The size M climate chamber was specially developed for applications that require stable and consistent environmental conditions and has a volume of approx. 1000 liters.

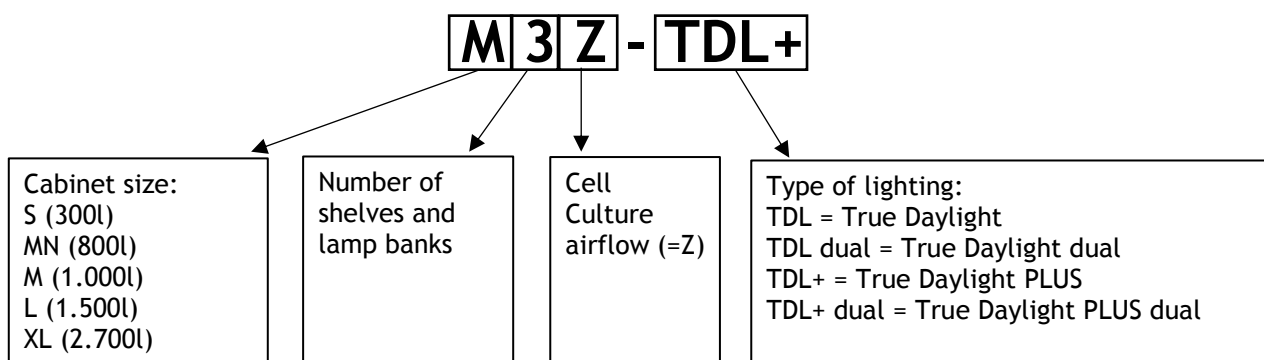
### Overview of sizes



### Nomenclature of the poly klima cabinets

The first letter reflects the model-type. The number after the model letter stands for the number of shelves and lighting levels. Another letter indicates a possible special equipment of the climate chamber (e.g. a "Z" after the number stands for cell culture equipment resulting in a vertical air flow). The last abbreviation provides information about the type of lighting.

A cabinet with the designation M3Z-TDL+ is an M model with a volume of approx. 1,000 liters, 3 levels, 3 lamp banks and cell culture airflow. TDL+ stands for poly klima True Daylight PLUS LED-lighting in this chamber.



## Product Highlights



- **Made in Germany**
- **Lowest energy consumption**
- **Extensive standard equipment:**
  - Lamp banks separate dimmable and switchable
  - Dehumidification
  - 12“ Industry-standard touchpanel.
  - Network connection for remote control and remote diagnosis
  - Lighting levels and shelves can be adjusted in vertical position without the help of tools
  - Shelves on pull-out-rails
  - Power socket inside
  - Elaborated design - modular design for every installation situation
- **Service and maintenance friendly**
- **Min. 15 years availability of spare parts due to the use of industrial components**

## Technical Data

**Outer Dimension:** 1.060 x 940 x 2.100 mm (W x D x H)

**Weight:** from 260 kg

**Volume:** around 1.000 l

### Inner Dimension Variations:

Type	Number of lamp banks	Number of shelves	Grow area total	Growing height	Growing height with cell-culture equipment
M1	1	1	0,6 m <sup>2</sup>	1250 mm	-
M2	2	2	1,2 m <sup>2</sup>	590 mm	-
M3	3	3	1,8 m <sup>2</sup>	380 mm	340 mm
M4	4	4	2,4 m <sup>2</sup>	270 mm	230 mm
M5	5	5	3,0 m <sup>2</sup>	180 mm	140 mm

**Air conditioning:** very energy-efficient refrigeration system, air or water-cooled.

**Temperature:** +7°C until +40°C (maximum temperature variance of 0.5°C) Extended temperature ranges optionally available.

**Dehumidification:** as a standard for rel. humidity values from ambient to 45% r.h.

**Intuitive operation:** 12“ Industry-standard touch-panel directly at the cabinet or via the standard network connection e.g. from your office.

## LED-Lighting solutions

- poly klima True Daylight White-LED
- poly klima True Daylight Dual White LED (2 channel white-LED)
- poly klima True Daylight PLUS White-LED
- poly klima True Daylight Dual PLUS White-LED (2 channel white-LED)
- Multichannel LED-solutions with individually selectable color channels

**Light intensities:** up to 1.500  $\mu\text{mol}/\text{m}^2/\text{s}^{-1}$  per lamp bank.

**Dimming:** Each lamp bank and each light channel is dimmable from 100% to 1 %

**Electrical connection:** 230VAC/1/50, fused with a 16A time-lag fuse (C or K characteristic), average energy consumption of approx. 0,8-1,2 kW/h

## Design

Optimal Light Distribution - the growing compartment is coated with white, reflective and UV-resistant plastic. The LEDs have a radiation angle of  $120^\circ$ , which results in best possible light homogeneity on the shelves.

Clever & Energy efficient - The unique modular design allows installation at any site and still offers the best insulating properties.

Practical - The vertical position of the lamp banks and shelves can be changed easily and without tools. The shelves sit on rails and can be pulled out completely.

Corrosion protection - All metal parts are from aluminum, stainless steel or from galvanized, plastic coated metal.

Mobile - The chamber stands on braked heavy-duty rollers and can be moved without any problems.



## Options

Ultrasonic-Humidification for relative humidity levels up to 85% r.H.

Reservoir-Humidification for Entomology applications

Cell-culture airflow: vertical airflow with special air conduct plates below the shelves to avoid condensate-drops on petri-dish lids or the like.

Entomology-Package: special evaporator filter and coating for working with insects.

Extended Temperature Range from  $0^\circ\text{C}$  up to  $50^\circ\text{C}$ .

Cable Port, resealable opening in the side wall for cables or hoses.

PAR-Sensor for measurement (open loop) or control (closed loop) of the light intensity.

Gas Application of the inner compartment with  $\text{CO}_2$  or  $\text{O}_2$  etc.

This is an excerpt of the available options. Our cabinets can be adapted to almost any experimental requirement. We are looking forward to your challenge!