



poly klima plant growth chambers



poly klima plant growth chambers. Standard sizes type S, M and X (left to right)

The energy saving and flexible plant growth chambers for all kinds of plants, Drosophila and plant cell culture as well as for materials research and document storage.

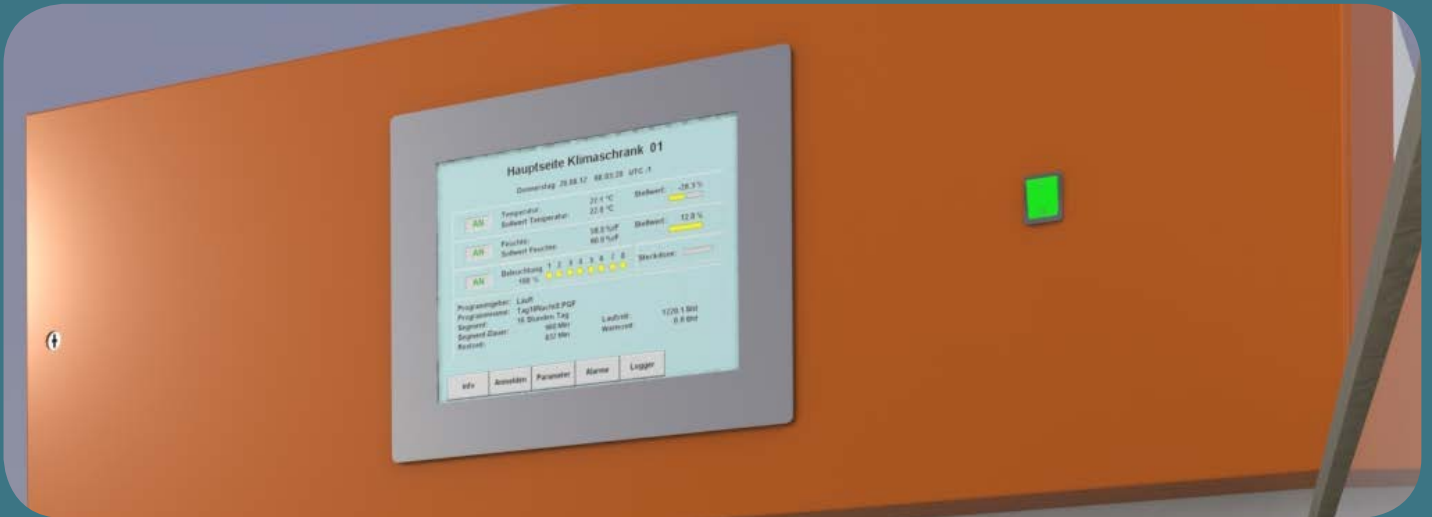
The poly klima® plant growth chambers are designed especially for research application. They offer ideal conditions for almost every application. They also are suitable for every application that needs stable and reproducible climatic conditions like document storage. The thorough arrangement of the lamps ensures excellent light homogeneity over the whole growing area.

Among our 4 standard sizes (S, M, X, XL) we also produce custom-made plant growth chambers. Light intensity, growing height and growing area are customizable with the standard sized chambers as well as with the individually build chambers.

With our intuitively to operate elements you have free choice about light intensity, humidity, temperature and CO₂-level. So you will be able to port any environmental condition into a controllable surrounding.

The shelves and light fixtures are easily adjustable in height without tools, and for easy loading the single shelf-parts can be retracted individually.

Due to thorough engineering and the use of first-class materials we could in significantly lower the energy consumption of our systems in comparison to product of our competitor. We look upon climatic research also as climate protection.



Specifications

- Dimmable fluorescent lamps or CDM-T lamps and optional additional red and infra-red LEDs ensure maximum homogeneity and a rich light spectrum at all chosen intensities.
- Optionally, all light fixtures can be equipped with the most modern LED-technology (see also product sheet polyphoLED <link>)
- A plant growth chamber can be equipped with up to 6 light fixtures (M, X, XL). The shelves and light fixtures are vertically adjustable without any tools.
- A condensation drain is located at the chamber bottom and is equipped with a 3/4" hose fitting. This can be led directly to a floor drain or to a pumping system.
- All parts used are crafted on our doorstep in Germany, Austria or France where we demand and they provide the highest quality. This close component-level scrutiny guarantees a trouble free and long life for the chamber.
- All metal components are galvanized and coated with durable plastic to prevent corrosion.
- We build the chambers at site out of 6 single pieces, therefore low or narrow doors are no issue. All types can be placed without problems in a room with a minimum ceiling height of 230 cm.
- 24 month warranty (excluding lamps).

Our 4 standard-size models and their variations

Typ S-1 & S-2

Dimensions:
73 x 74 x 133 cm (WxDxH)

Growing area:
0,3 m² (1 tier) or 0,6 m² (2 tiers)

Growing height:
22 cm (2 tiers) - 48 cm (2 tier)

Typ M-1 / M-2 / M-3 / M-4 & M-5

Dimensions:
106 x 87 x 210 cm (WxDxH)

Growing area:
0,67 m² (1 tier) - 3,35 m² (5 tiers)

Growing height:
15 cm (5 tiers) - 120 cm (1 tier)

Typ X-1 / X-2 / X-3 / X-4 & X-5

Dimensions:
160 x 97 x 210 cm (WxDxH)

Growing area:
0,8 m² (1 tier) - 4,0 m² (5 tiers)

Growing height:
25 cm (5 tiers) - 160 cm (1 tier)

Typ XL-1 / XL-2 / XL-3 / XL-4 & XL-5

Dimensions:
220 x 99,5 x 208 cm (WxDxH)

Growing area:
1,25 m² (1 tier) - 6,25 m² (5 tiers)

Growing height:
24 cm (5 tiers) - 155 cm (1 tier)



Technical details

Air-conditioning

- We use an air or water cooled energy-efficient cooling-engine. Hot gas control and RPM-regulated fans inside the chamber further reduce energy consumption and wind stress.

Temperature

- We provide a standard temperature range: +10°C up to 44°C (at full light intensity), +7°C up to +44°C (without light), and can extend it if you need more.

Lighting

- The core lighting consists of energy-saving fluorescent lamps, light color 840. They provide ideal light wave length for plant growing and a high light-performance in all temperature-ranges and a very good energy balance.
- Optionally the PAR-spectrum can be enhanced by adding dimmable red and infra-red LEDs to the light fixture
- You can choose from various light intensities. Even with the standard configuration light intensity is dimmable in 0,5%-steps with the touch-panel or remote-PC.
- There are 4 intensity-groups to choose from (measured at 15 cm distance):
a.) 5 – 250 $\mu\text{mol}/\text{m}^2/\text{s}$ **b.)** 8 – 400 $\mu\text{mol}/\text{m}^2/\text{s}$ **c.)** 15 – 650 $\mu\text{mol}/\text{m}^2/\text{s}$ **d.)** 200 – 1.000 $\mu\text{mol}/\text{m}^2/\text{s}$.
- Optional the lamp banks can also be configured with LED-panels or LED-strips. There are up to 20 light channels possible. We just use strictly selected LEDs. Our standard LED-lighting solution is equipped with either two light channels (white and far-red) or 4 channels (blue, white, red and far-red). Each light colour is dimmable separately with each lamp bank.

Humidification

- Optional ultrasonic humidification für relative Humidity from 45% up to 95% r.H (depending on set light level, inside and outside chamber temperature and ambient humidity).
- Additional dehumidification optional possible.

Operation

- Chamber parameters can be controlled and programmed with a high-grade industry-standard touch panel on the chamber or a remote PC. The 12" graphic display ensures a quick and intuitive programming and shows all actual and nominal values.
- All alarm messages will be shown in text-messages on the touch panel and additionally be forwarded via E-Mail or SMS.
- With the visualizing software on every access-authorized windows-based computer in the network all parameters can be displayed, edited and programmed comfortably.

If you are convinced that it is worth exploring further and have questions relating to your specific needs, then we appreciate your interest and would be pleased to personally discuss further at any time.

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