



Fact Sheet Growth Chamber PK-520



At a glance

Your benefits

- ✓ **Made in Germany** - parts and construction of high quality for high durability.
- ✓ **Energy efficiency** - refrigeration plant and lighting provide optimal energy efficiency. 270 Wh max. energy consumption.
- ✓ **Non corrosive** - all metal materials are galvanized and durable plastic-coated.
- ✓ **Low operating costs**
 - 270 W/h max. energy consumption.
 - Energy efficient LED-lighting.
- ✓ **Low noise** - the chamber has a max. operating noise of 55 dB and can therefor also be used in laboratory working environments.
- ✓ **Low purchase costs** - fits every budget.

Technical

- ✓ **Overall dimensions** - 730 x 750 x 1.700 mm (D x W x H), around 90 kg.
- ✓ **Inner dimensions** - 1,00 m² working area on 3 tiers, around 35 cm growing height.
- ✓ **Temperature** - from +10°C (without light) or +15°C (full light) up to +35°C, with a maximum temperature variance of ±0,5°C.
- ✓ **Air conditioning** - energy-efficient recirculation refrigeration system, very low noise
- ✓ **Flexible Lighting:** the lamp banks are dimmable in 0,5%-steps and can be fitted with
 - True Daylight Weiß-LED
 - True Daylight PLUS White-LED
- ✓ **Easy Operation** - easy and basic day-/night programs with a 6-lines LCD display.

General

poly klima[®], a young and innovative company, designs and builds custom-made climatic walk-in rooms and growth chambers for environmental simulation for various research fields at universities and institutes.

Our team of experts benefits from many years of experience in conception and manufacturing of climatic- and lighting solutions for plant biological research.

The PK-520 growth chamber from poly klima[®] excels with its instant and easy usability in conjunction with the challenging low price point.

poly klima[®] growth chamber PK-520

Der poly klima[®] growth chamber PK-520 was developed for plant-biological applications that don't require complex parameters and programming. Due to its flexibility this chamber is also good for materials research and other similar fields of application. It provides ideal and stable conditions for scientific research and various other thinkable applications.

Model PK-520 is loaded with 3 lamp banks and 3 shelves, vertical adjustable. The shelf consists of grating and can be drawn out. The lamp banks are fixed below the shelves.

Design

All metal parts used are galvanized and coated with white, reflective durable plastic. Therefore, corrosion is not possible. The inside of the chamber is coated with white, reflective plastic. This guarantees an optimal light distribution.

The chamber walls, the floor, the top cover and the door are made of steel sheet metal which is polyurethane foamed without any thermal bridges.

The shelves consist of white coated grating. Their vertical position can be changed easily without the help of any tools.

The chamber will be delivered fully assembled.

Air conditioning

Recirculation refrigeration plant, extremely energy efficient.

The air inside is moved by a fan inside the chamber. This way an optimal air circulation is being created.

The chamber is designed for ambient temperatures of around 17°C up to 30°C. It is important that the chambers heat load and the heat load of other machines probably also placed in the room can be led away. As an alternative the room can be climatized, because ambient temperatures above 30°C will be critical to the chambers functionality and may result in a chamber shut-down.

Condensation water is being collected in a pan outside the inner compartment and will be evaporated with the compressor-heat.

Temperature

Standard temperature range: +10/+15 °C (without/with light) up to +35° given a maximum temperature variance of ±0,5°C.

De-/Humidification

This model is not designed to be equipped with a humidification and/or dehumidification system.

Lighting

The thorough and equidistant arrangement of the lamps on the light fixtures in conjunction with the white plastic coating inside the compartment ensures excellent light homogeneity over the whole growing area. There is no “fall-off” in the margin areas. You have the choice between two white-LED lighting solutions.

Each lamp bank can also be switched with a separate switch at the electrical compartment.

White-LED-Solutions:

- *True Daylight Standard White-LED*
 - White-LEDs with 3.000 K color-temperature.
 - Up to 400 $\mu\text{mol}/\text{m}^2/\text{s}^{-1}$ intensity (measured at 15 cm distance)
 - Dimmable in 0,5%-steps from 100% to 1%.
 - Color rendering index CRI=94.
 - 120° radiation angle per LED.
- Very harmonic spectral response, ideal for plants like Arabidopsis

- *True Daylight PLUS White-LED*
- White-LEDs with 4.000 K color-temperature.
- Up to 400 $\mu\text{mol}/\text{m}^2/\text{s}^{-1}$ intensity (measured at 15 cm distance)
- Dimmable in 0,5%-steps from 100% to 1%.
- Newest LED-technology
- Color rendering index CRI=96,7.
- 120° radiation angle per LED.
- Very harmonic and full spectral response, ideal for many applications.

Operation

It is operated via a 6-line LCD panel on the control cabinet. A simple day / night program can be created. Upper and lower temperature limits can also be defined. In addition, the cabinet has a safety thermostat in the interior, which is infinitely adjustable and is intended to protect experiments. Programming is simple and intuitive. You will be guided step by step through the parameters to be set.

Optionen

- Cable duct for connecting e.g. shakers etc. Each shelf has a load capacity of max. 60 kg

Contact

We appreciate your interest and your questions!
Just give us a phone call or drop us an email.

We are glad to offer advice and help at any time!

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