

weisstechnik®

Test it. Heat it. Cool it.

Our solutions are deployed around the world in research, development, production and quality assurance of numerous products. Our experts from 21 companies are at your service in 14 countries, ready to provide support to ensure high operational reliability of your systems.

Weiss Umwelttechnik is one of the most innovative and significant manufacturers of environmental simulation systems. With these testing systems, we can simulate all climatic conditions around the globe and beyond, under accelerated conditions. Whether temperature, climate, corrosion, dust or combined shock testing: We have the proper solution. We supply systems in all sizes, from standard versions up to customised, process-integrated facilities - for high reproducibility and precise test results.

Weiss Technik UK, a subsidiary of Weiss Umwelttechnik, has been one of the leading global suppliers of plant growth chambers and rooms for more than 50 years. We can supply, install and support our products in virtually every country in the world. **fitotron®**, our premier product brand, ranges from standard chambers to custom solutions including applications in plant growth, Arabidopsis, tissue culture, seed germination and storage, entomology and other specialist storage and test. We have a particularly successful track record in managing large multi-room installation projects and in finding workable solutions for customer needs, whether that be in lighting, containment, airflow, shelving and racking, gas control or remote monitoring and control software.

Vötsch Industrietechnik, another subsidiary of Weiss Umwelttechnik, offers a wide product portfolio in the field of heating technology. With an experienced team of engineers and designers, we develop, plan and produce high-quality and reliable heating technology systems for virtually any field of application. Products include heating/drying ovens, clean room drying ovens, hot-air sterilisers, microwave systems and industrial ovens. The portfolio reaches from technologically sophisticated standard versions to customised solutions for individual production operations.

A further Weiss Technik company, Weiss Klimatechnik, also offers reliable climate solutions wherever people and machinery are challenged: in industrial production processes, hospitals, mobile operating tents or in the area of IT and telecommunications technology. As one of the leading providers of professional clean room and climate solutions, we deliver effective and energy-saving solutions. Our experts will guide you from the planning to the implementation of your projects.

Weiss Pharmatechnik, a subsidiary of Weiss Klimatechnik, is a competent provider of sophisticated clean room and containment solutions. The product range includes barrier systems, laminar flow facilities, security workbenches, isolators and double door systems. The company emerged from Weiss GWE and BDK Luft- und Reinraumtechnik and has decade-long experience in clean room technology.

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CGR Crop Growth Rooms



fitotron® CGR Crop Growth Rooms

fitotron® CGR Crop Growth Rooms are based on a modular design with very high performance. They are available with five growing areas for plants that require a high level of light intensity with a balanced spectrum, from 4m² to 18m².

The innovative design of the **fitotron®** CGR Crop Growth Rooms incorporates growing heights of up to 2.5 m. Very high light intensities are available up to 1200 $\mu\text{mol m}^{-2} \text{s}^{-1}$ utilising the latest ceramic metal halide technology. The lamps are separated from the growing space by a transparent barrier and are independently cooled for optimum performance and excellent control of growing conditions.

The user is able to individually control temperature, humidity and very high levels of light intensity.

Our range of Crop Growth Rooms enables the researcher to maintain controlled growing conditions of temperature and humidity in a 24h period with independent selection of photo-periods. A full range of 'day/night' cycles with 'dawn/dusk' effects can be programmed.

fitotron® CGR Crop Growth Rooms are ideal for researching taller plants from seedling through to maturity. The rooms are also suitable for growing and developing maize, tobacco plants, cotton, legumes, shrubs and horticultural plants which all require a higher light intensity.

Features and Benefits:

- Designed for plants requiring high light levels (e.g. C4 plants) and extended growing heights up to 2500 mm
- Variable high light intensity up to 1200 $\mu\text{mol m}^{-2} \text{s}^{-1}$ at 1000 mm
- Modular and custom sizes - flexible installation possibilities
- Full humidity control with both additive and dehumidification as standard

Global Service and Support

The training undertaken by our agents and engineers is state-of-the-art in the industry, ensuring that our customers are supported by high-level technical expertise. Our customers can be assured that their equipment will perform to the required standard.

Options

- LED-lighting technology
- Water-cooled refrigeration
- CO₂ control
- Mobile, multi-tiered light racks and growing benches
- Biological containment filtration

Room Specifications

fitotron® Model	CGR4025	CGR6025	CGR8025	CGR12025	CGR18025
Growth area (in m ²)	4.14	6.21	8.14	12.10	18.04
Growth height (maximum in mm)	2500 (all models)				
Exterior (wxdxh in mm)	2350 x 3060 x 3180	2350 x 4325 x 3180	2910 x 4325 x 3180	2910 x 6300 x 3180	4080 x 6300 x 3180
Interior (wxd in mm) ^{1,2}	1800, 2190 x 2300	1800, 2190 x 3450	2360, 2750 x 3450	2360, 2750 x 5125	3520, 3920 x 5125
Temperature range: Lights off Lights on	+4 °C to +45 °C (all models) +4 °C to +45 °C (all models)				
Temperature fluctuation with time	±0.5 °C (all models)				
Humidity range: Lights off Lights on	40% RH to 90% RH (all models) 40% RH to 85% RH (all models)				
Dewpoint range	+8 °C to +28 °C (all models)				
Humidity fluctuation with time	±5% RH (all models)				
Maximum lighting intensity ³	1200 $\mu\text{mol m}^{-2} \text{s}^{-1}$ (all models)				
Electrical connection ⁴	3 Ph/N/E 380 V-440 V 50 Hz (all models)				

¹Minimum width at floor level

²Maximum width at bench level (growing benches - optional)

³Measured at 1000 mm from the transparent lamp barrier

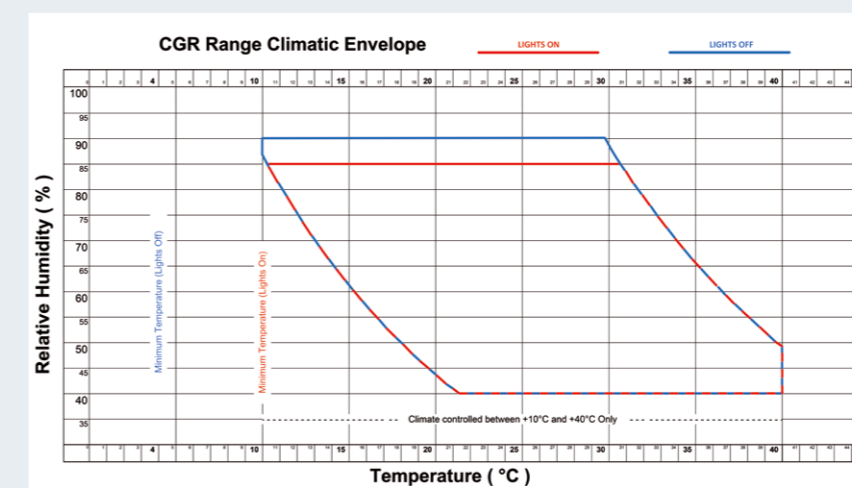
⁴60 Hz also available, dependent on installation country

Humidification

Humidification is maintained by injection of sterile steam at ambient pressure, preventing harmful bacteria (including legionella) from entering the room, creating a safe working environment. The system benefits from extended periods between maintenance and does not require a compressed air supply.

Airflow

Airflow is vertically downwards to ensure even temperature across the whole plant canopy. The conditioned air is delivered via high-level ducting running along the centre of the room and returned to the air-handling unit via ducting at low level alongside each side wall.



Information subject to change without written notice.