

# “WALK IN” PLANT GROWTH CHAMBER

Perfect solution for botanical and agricultural applications, plant pathology, plant tissue culture studies, seed germination studies, plant genetic research...

- Custom sizes according to user requirements
- Easy to use fully programmable controller
  - State of the art repeatability
  - Day light simulation control
  - Relative humidity control
    - Temperature control
    - CO2 control (option)
    - PC compatibility







Compressor based refrigeration system.  
External unite mounted on the top of the chamber or remote location

Chamber equipment: Specially designed racks with height adjustable shelves and bottom installed lights

Tailored equipment available

PLC based controller. Simple and effective programming of all day and night simulation conditions. SW pack for PC available

Backup unite (optional)

Optional system for CO2 control

Door observation window

Sealed and extensively heat insulated door

Modular chamber design from insulation panels

Electronics compartment  
Mounted on the chamber or remote location

Access port with both end plugs Ø40, Ø50 or Ø90

Heavy duty closing mechanism with safety unlocking system from interior

Fully stainless steel interior.  
Exterior powder coated RAL 9010 (other colors available on request)

Extensive heat insulation.  
Various insulation panel thicknesses.



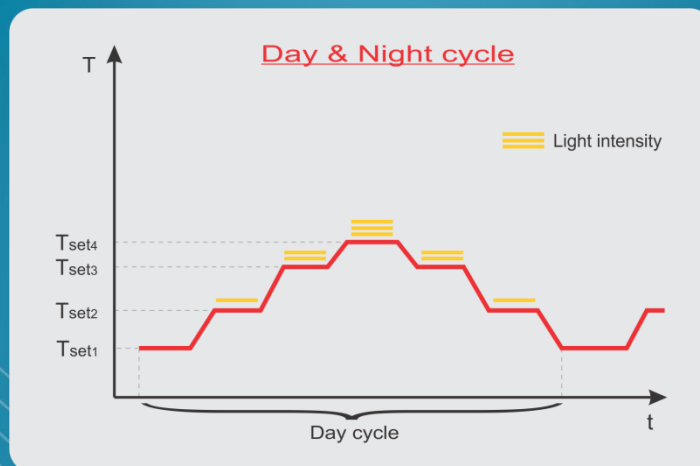
## Controller functions:

### 24 hour day & night cycle control:

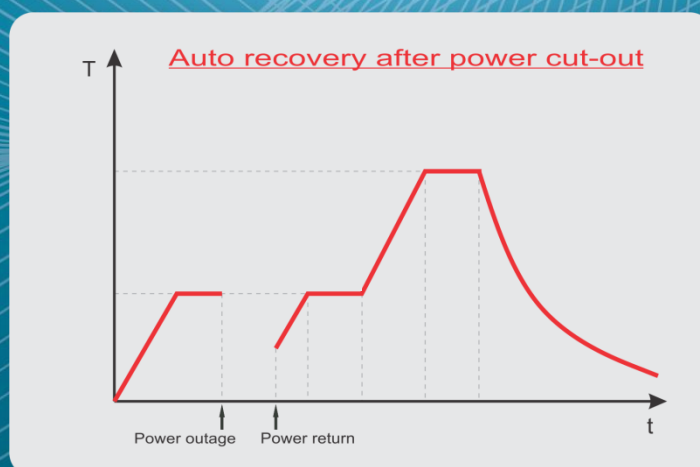
24 hours (one day) can be divided into five phases of day and five phases of night!

Example:

- Phase 1 (day): 07:00 to 10:00,  $T = 15^{\circ}\text{C}$ ,  $R_h = 70\%$ , light intensity 1
- Phase 2 (day): 10:00 to 18:00,  $T = 30^{\circ}\text{C}$ ,  $R_h = 80\%$ , light intensity 3
- Phase 3 (day): 18:00 to 21:00,  $T = 23^{\circ}\text{C}$ ,  $R_h = 75\%$ , light intensity 2
- .....
- Phase 1 (night): 21:00 to 01:00,  $T = 20^{\circ}\text{C}$ ,  $R_h = 70\%$ , no lights
- Phase 2 (night): 01:00 to 05:00,  $T = 18^{\circ}\text{C}$ ,  $R_h = 73\%$ , no lights
- Phase 3 (night): 05:00 to 07:00,  $T = 19^{\circ}\text{C}$ ,  $R_h = 75\%$ , no lights
- .....




### Auto recovery after power cut-out:





## Technical data:

|   | Walk in Plant Growth Chamber   |
|---|--|
|   |  |
| External dimensions (WxHxD) in mm         | According to user preferences  |
| Temperature range (°C) (lights on or off) | -20...+60  |
| Rh range (%)                              | 40...95  |
| Temperature & Rh display resolution       | 0.1°C / 1%   |
| Temperature set resolution (°C)           | 0.1  |
| Rh set resolution (%)                     | 1  |
| Temperature stability (°C) (lights off)   | Better than ±0,3   |
| Temperature uniformity (°C) (lights off)  | < ± 1 @ +37°C  |
| Rh Stability (%) (lights off)             | Better than ±3   |
| Day light simulation                      | FLUORA lights (LED as an option)   |
| Illumination intensity                    | 1/3, 2/3, 3/3  |
| Temperature Control                       | PID  |
| Cooling                                   | Air cooled compressor aggregate  |
| Relative humidity                         | Steam generator / Ultrasonic humidifier / DEW point                                |
| Power supply                              | 3x400 V 50/60 Hz (± 10%)   |
| Access ports (mm)                         | Ø 40 standard,<br>(Ø 50, Ø 90 as an accessory)                                     |
| Interface                                 | RS 232 (USB or Ethernet as an optional)  |

## Accessories:

| Description                                    | Part no. |
|--|----------|
| Evaluation report                              | 1719     |
| Monitoring and data collection software for PC | 104      |
| USB interface                                  | 1466     |
| Ethernet interface                             | 1716     |
| Password protection                            | 1718     |
| CO2 control system                             | 2108     |



## Design solutions:

Open room installation:



Incorporation in to a Clean Room:



Outside installation:



Portable:  
(Incorporated in to 20ft or 40ft  
ship container)

