



Growth Capsule (GC) is shipping container based compact cultivation facility with versatile design. GCs are transportable and have simple installation requirements. GCs have range of potential applications with options for high capacity precisely controlled plant cultivation, vertically based production, hydroponic growth and/or for integration of imaging sensors for automated plant phenotyping. GCs integrate unique technical solution including multicolor LED lighting to mimic diurnal and seasonal variations and simulation of extreme and/or dynamic climate events such as heat or cold waves.

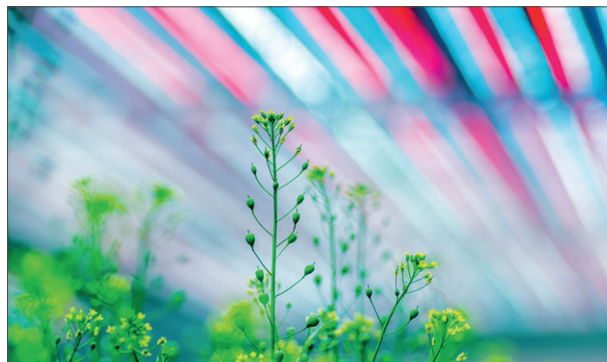
GC installation has minimal requirements for onsite installation as 1. electricity, 2. water, 3. waste water drainage, 4. internet connection flat surface. Our innovative concept provides exceptional construction modularity. Standard models include **GC UNI**, featuring a split solution with a single large-capacity cultivation compartment, and **GC DUAL**, offering two separate, independently controlled compartments.

Customized design options:

- Controlled cultivation environment/s
- Controlled cultivation combined with integrated XY Plantscreen™ phenotyping System
- Controlled cultivation combined with mobile

Key technical features

- Transportable shipping container
- Minimum installation requirements
- Controlled environmental conditions
- Various indoor configurations
- Integration of automated imaging sensors
- Large cultivation capacity
- No requirement for building permit
- Adaptable for various applications
- Chemically resistant washable surfaces
- Remote control
- 24-7 online control
- Automatisation of the processes
- Stacability of the modules





GC UNI

GC UNI features longitudinal compact design for maximum capacity cultivation space. The entire compartment can be utilized as single cultivation space or divided into sterile compartment with preparatory user zone separated by glass partition wall. Layout is optimized for special applications such as:

- Vertical production systems
- Hydroponic system with automated flooding
- Illuminated cultivation shelves
- Robotized production automation
- Sterile cultivation applications
- *In vitro* cultivation with chilled shelves to minimise condensation

GC DUAL Twin/Hybrid

GC DUAL has the container space divided into two independently controlled segments with the main access and operational zone in the middle.

GC DUAL Twin model features two same compartments, e.g. research-grade growth chambers or in build phenotyping systems.

In contrast **GC DUAL Hybrid** model offers two functionally different compartments with unique combinations of following options:

- High precision climate and lighting control to simulate real-world environmental conditions
- Height-adjustable cultivation tables
- Hydroponic system with automated flooding
- Automated phenotyping system
- Mobile laboratory
- Process automation including robotic arm
- Illuminated cultivation shelves

	GC UNI	GC DUAL TWIN/HYBRID
Compartment dimensions	2,20 m (w) x 10,40 m (l) x 2,00 m (h)	1,80 m (w) x 4,20 m (l) x 2,10 m (h)
External dimensions	2,40 m (w) x 12,20 m (l) x 2,90 m (h)	
Temperature control	10 – 40 °C, Optionally up to -4 °C – 40 °C	
Humidity control	40 – 80 %, Optionally 30 – 90 %	
Weight	8000 kg (9000 kg with XY system)	
Light intensity	Up to 2000 $\mu\text{mol}/\text{m}^2/\text{s}$	

