



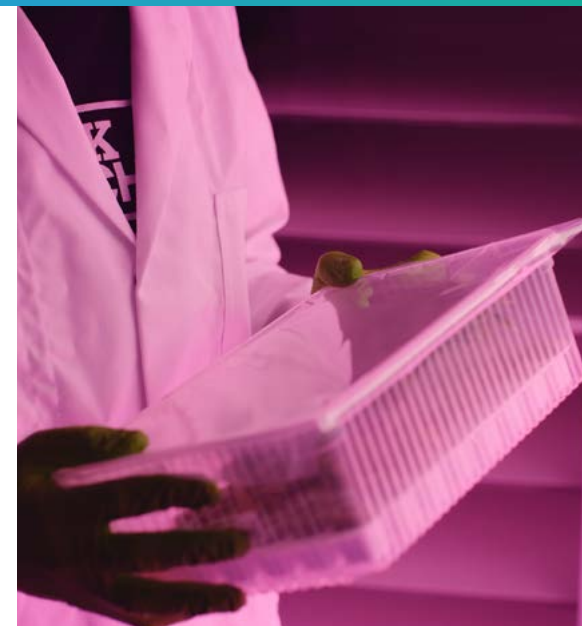
VISCON
plant technology

PLANT TECHNOLOGY

Climate chambers & multilayer LED trolleys



Achieve the best start for your plants



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PLANT TECHNOLOGY

About

Increase plant uniformity and quality, and accelerate production by implementing the latest technology and innovations in your breeding and young plant production process. We offer turnkey tissue culture laboratories and state-of-the-art multilayer propagation solutions.

By reducing the risks associated with conventional propagation methods, we provide a reliable, proven, and scalable way to help you select and develop the best starting material and growing protocol.

Our solutions:

- ✓ Climate chambers
- ✓ LED Trolleys
- ✓ Consumables
- ✓ Layouts



Plant tissue culture
& propagation solutions

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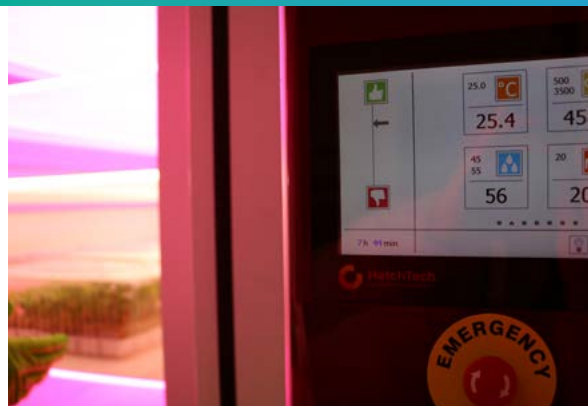
ViCabin

The ViCabin is a climate chamber in which humidity, temperature, and CO2 values can be set to achieve accurate and uniform growing conditions. The climate chambers create the ideal environment for your indoor multilayer production.

Laminar airflow

The ViCabin is a climate room controlled by a patented laminar flow technology. This technique forces air through the large contact surface radiators. This creates a high air velocity that can be fully controlled and allows section-controlled cooling. The ViCabins guarantee uniform growth because the climate differences inside the cabin are controlled to a minimum.

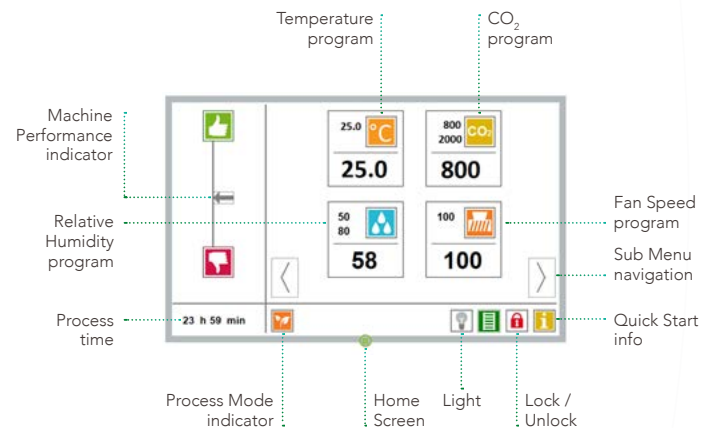
The ViCabins enable optimal conditions for your plants year-round because they are excluded from the influence of external conditions. While also protecting the plants from non-ideal weather conditions, plant diseases, and light pollution. The ViCabins are highly energy-efficient, and micro-adjustments throughout the cultivation process are possible.



Key features:

- ✓ Large growth area per square meter
- ✓ Highly accurate controlled environment
- ✓ Accelerated cultivation process
- ✓ Minimal energy usage
- ✓ Highest hygiene standards

Parameters (Climate program)



Fully controlled environment





Accelerate your
propagation process



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ViTrolley

As a key part of your plant growth facility, our ViTrolleys have a unique design and are fully compatible with our ViCabins. The trolleys with diffused LED panels create the ideal light spectrum, climate, and day-night rhythm for your plants. This helps you achieve uniform, better quality plants and accelerates the cultivation process.

Diffused LED panels

The LED strips are hidden on the sidebars, sending light waves through the panel with the help of a large reflecting panel. A layer of a diffuse panel guides the reflected lights to help the light be distributed better. Since the LED strips are on the sides of the ViTrolleys, the heat generated by these bars is kept to a minimum, creating a stable environment. Light schedules can be set for optimized multilayer production.

Key features

- ✓ Compact multilayer system
- ✓ Large growth area per square meter
- ✓ Diffused LED panels for optimal light distribution
- ✓ Optimal energy transition to light & efficient cooling
- ✓ Available with different light spectrums

Connect & control

The light schedules and intensities can be controlled automatically when the ViTrolleys are used in combination with the climate chambers. The ViTrolleys can also be used as a stand-alone model with a separate power and control box.

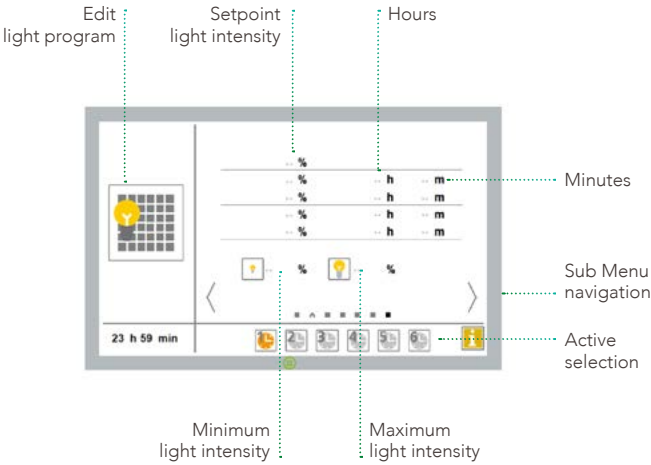
- ✓ Plug and play
- ✓ Easy and reliable connector
- ✓ Possible connection with ViCabin for full management on individual trolley level



Light program

We provide a variety of spectrum combinations that work for different stages of plant growth, and some are crop specific. ViTrolleys are available in standard spectra, but we can tailor-make the LED strips according to your requirements if you already have your preferred light spectrum in mind. Depending on the setup, the ViTrolleys provide an outcome up to 180 µmol/m²/s using only 3,25 µmol/watt.

- ✓ Unique light plex for optimal light distribution
- ✓ Cooling ribs in profile for optimal cooling of the LEDs
- ✓ Ultra-thin layer thickness of 9mm



Cooling

3,9 m2 cooling surface per LED trolley enables the heat transfer of the LEDs to the forced airflow resulting in minimal energy consumption.

Capacity

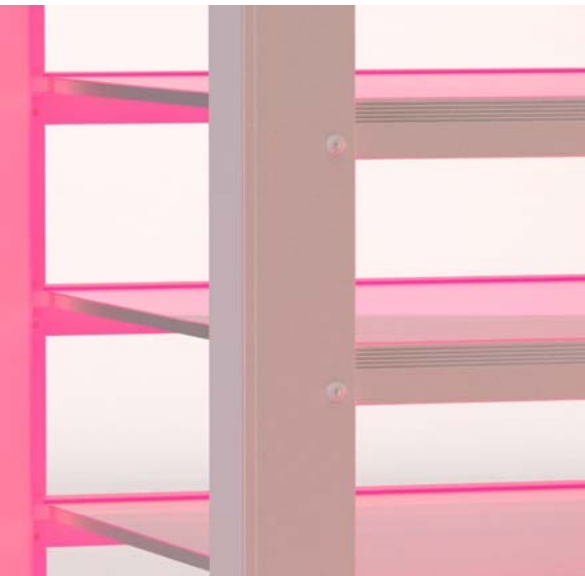
	Required cooling capacity	Cooling surface
1 trolley	1,6 kW	3,9 m²
6 trolleys	4,5 kW	23,4 m²
12 trolleys	9,0 kW	46,8 m²
24 trolleys	17,6 kW	93,6 m²

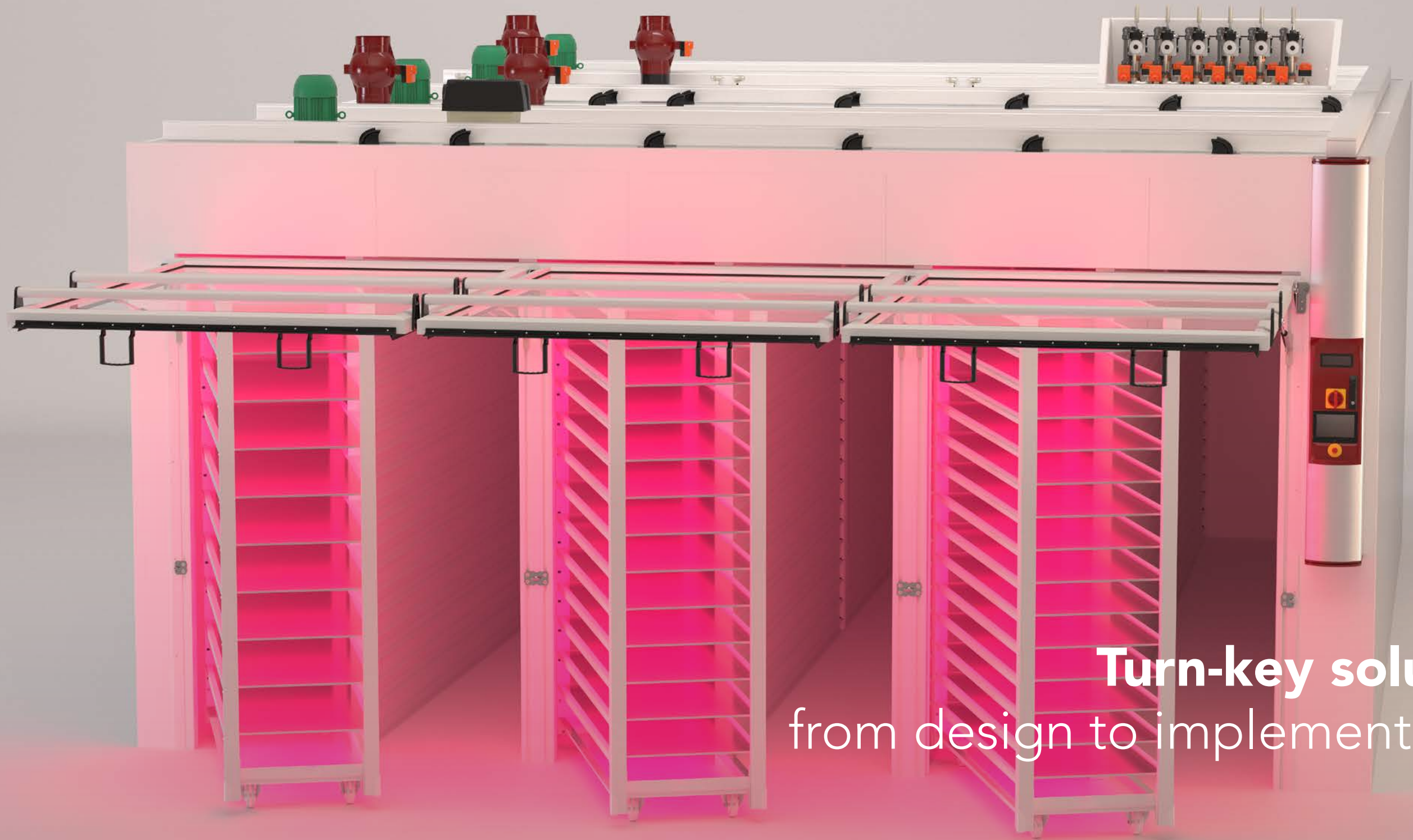
Layers

The ViTrolleys are available with 10 or 15 layers, depending on requirements such as crop type and size of the tray and containers. The 15-layer trolleys have a 13,5m2 growth area with 130mm plateau pitches. The 10 Layer trolley has a 9,0 m2 growth area with a 195mm plateau pitch.

Specifications

	10 Layers	15 Layers
Dimensions (mm)	645 x 1670 x 2100	645 x 1670 x 2100
Weight	175 kg	314 kg
Power	48VDC	48VDC
No. of layers	10	15
Layer pitch	195 mm	130 mm
ViTrays per shelf	16	16





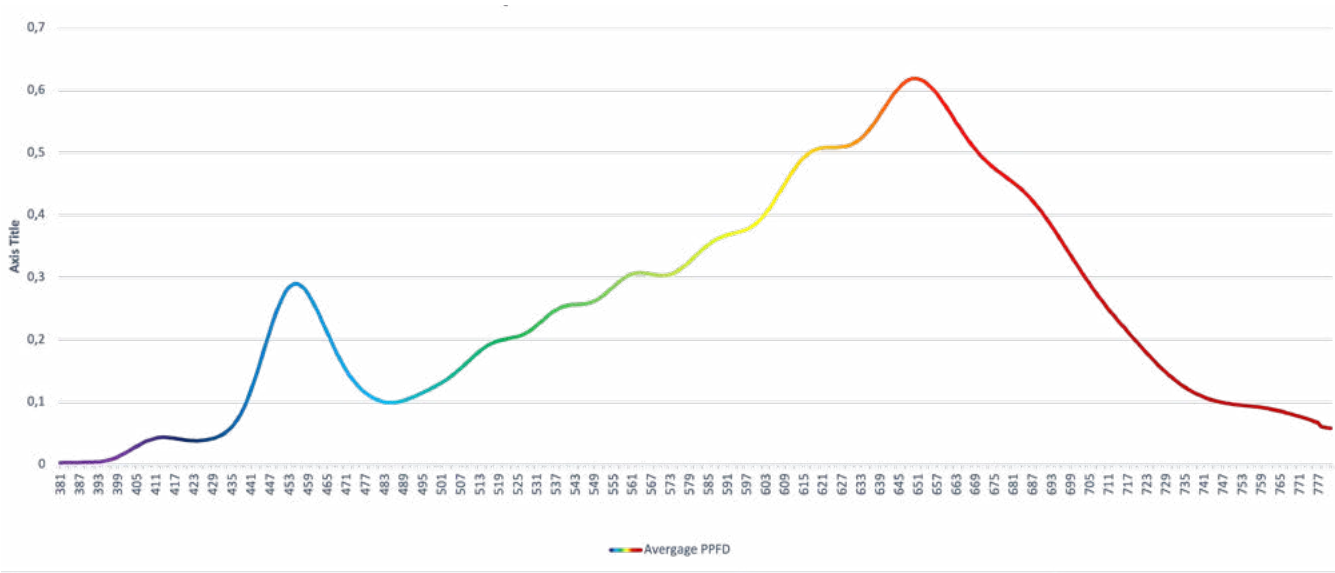
Turn-key solution
from design to implementation

Spectrums

Valoya AP67 NS12

Spectrum	UV	0,1%	Available setups	15-Layer Trolley	10-Layer trolley
	Blue	12,0%	Layer distance	12 centimeter	18,5 centimeter
	Green	26,8%	PPFD (780-380nm)Avg.	126 uMol/m2/s	125,8 uMol/m2/s
	Red	49,6%	PPFD (780-380nm) Max.	159 uMol/m2/s	163,611 uMol/m2/s
	Far-red	11,5%	Power/layer	33,3 Watt	50 Watt
Dimmability	5% to 100%		Efficiency	3,8 uMol/Watt	2,5 uMol/Watt

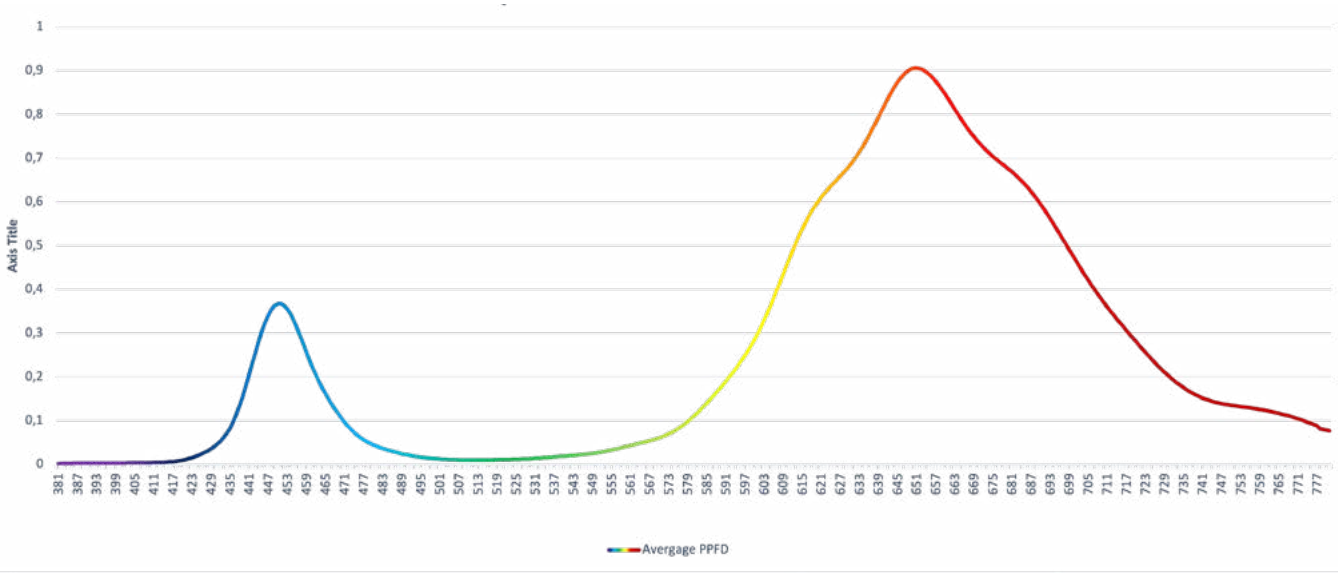
Spectrum PPFD 380-780 nm



ViTrolley

Spectrum	UV	0,1%	Available setups	15-Layer Trolley	10-Layer trolley
	Blue	10,2%	Layer distance	12 centimeter	18,5 centimeter
	Green	6,2%	PPFD (780-380nm)Avg.	113 uMol/m2/s	112,6 uMol/m2/s
	Red	67,2%	PPFD (780-380nm) Max.	144 uMol/m2/s	147,191 uMol/m2/s
	Far-red	16,4%	Power/layer	33,3 Watt	50 Watt
Dimmability	5% to 100%		Efficiency	3,4 uMol/Watt	2,3 uMol/Watt

Spectrum PPFD 380-780 nm





For an **optimal
growth process**

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Cultivation consumables

ViCabins and ViTrolleys are optimized for use with our consumables. These consumables save time and space because rooting and hardening the plants occur simultaneously. The separated growing packaging precludes spreading diseases, and all products can be provided gamma sterile. We deliver a fully controlled cultivation system in which all focus can go out to selecting the best starting material and growing protocol.

The ViCup is a multiplication cup that ensures excellent sealing to protect young crops in their first and most critical growth stage of tissue culture production. The ViCup is known for its accessible automation possibilities and uses a low amount of plastic. We provide this multiplication cup in several different sizes.

Key features

- ✓ Guaranteed sterile production
- ✓ Adjustable gas exchange
- ✓ Automation options
- ✓ Transparent materials
- ✓ Attractive cost price

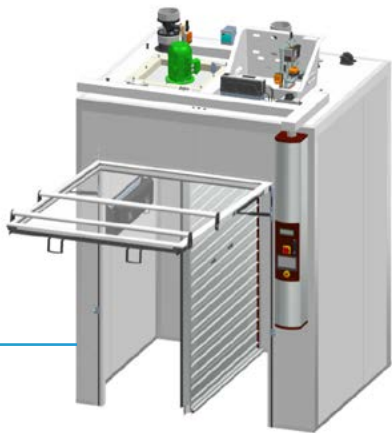


The ViTray is an innovative semi-closed packaging in which the plants are grown. Due to the design of the package, additional watering isn't necessary during the growing process, which reduces the risks of infection. The unique ViTray with its breathable patented foil system has proven to be one of the best rooting and hardening trays on the market. Each year, more than 50 million plants are shipped in our Viscon boxes worldwide.

ViCabin 1 Trolley

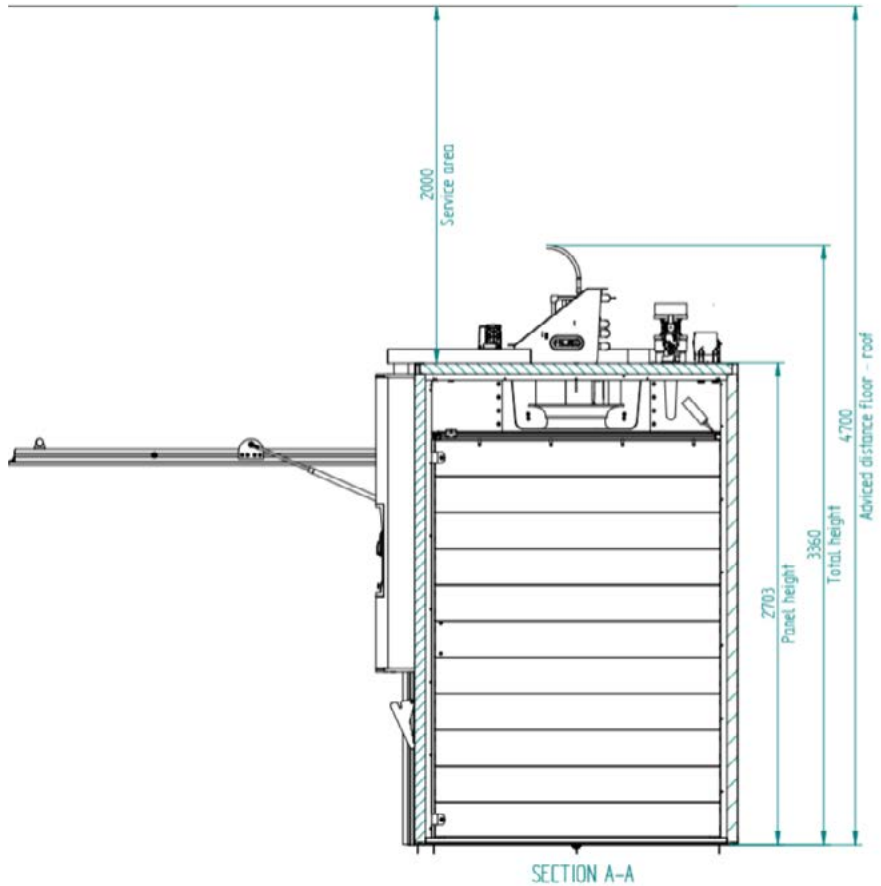
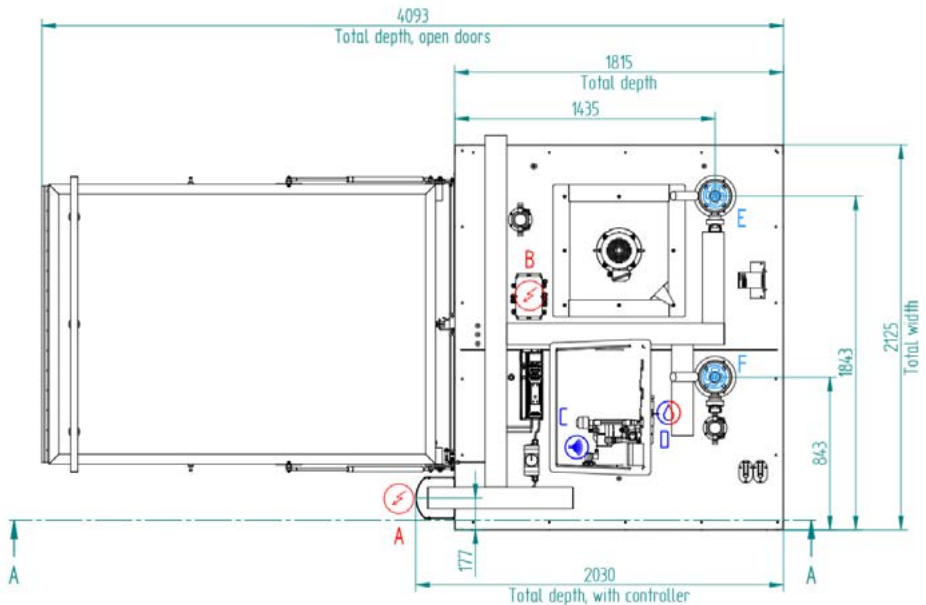
CE configuration

Connection	Requirement
Power in	400V/3Phase/60Hz – 2,52kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 7L/h @ 1,5 Bar
Ø22mm push-in	Cooling water in/out – 1.6kW chilled water cooling
Ø160mm	Inlet clean air – 600m3/h
Ø160mm	Outlet clean air – 600m3/h



UL configuration (North America)

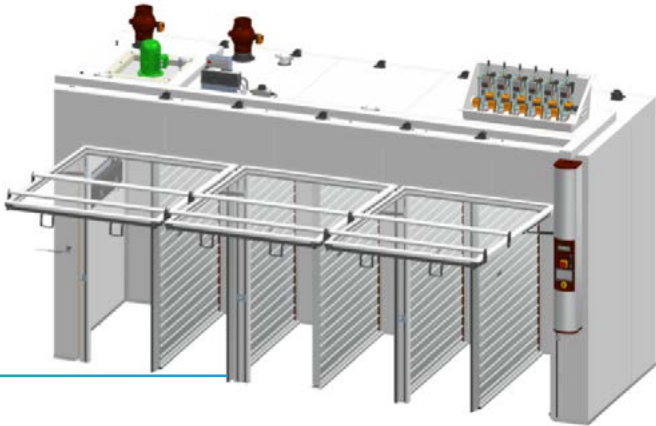
Connection	Requirement
Power in	400V/3Phase/60Hz – 2,52kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 7L/h @ 1,5 Bar
Ø8mm push-in	Humidification Compressed air – 5L/min @ 8 Bar
Ø22mm push-in	Cooling water in/out – 1.6kW chilled water cooling
Ø160mm	Inlet clean air – 600m3/h
Ø160mm	Outlet clean air – 600m3/h



ViCabin 6 Trolley

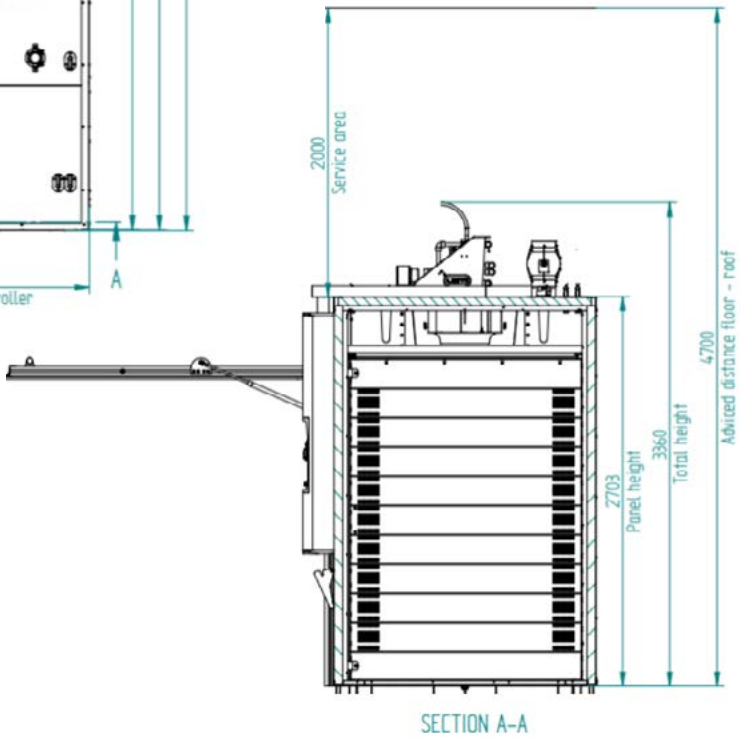
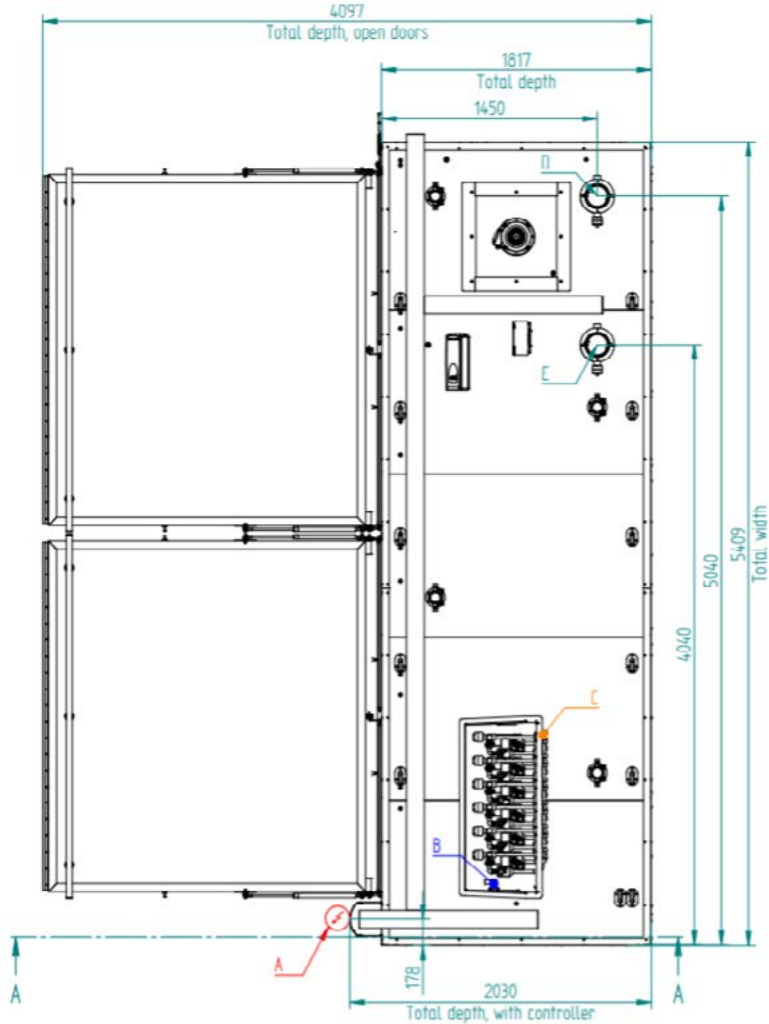
CE configuration

Connection	Requirement
Power in	400V/3Phase/60Hz – 2,87kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 7L/h @ 1,5 Bar
Ø22mm push-in	Cooling water in/out – 4,5kW chilled water cooling
Ø160mm	Inlet clean air – 600m3/h
Ø160mm	Outlet clean air – 600m3/h



UL configuration (North America)

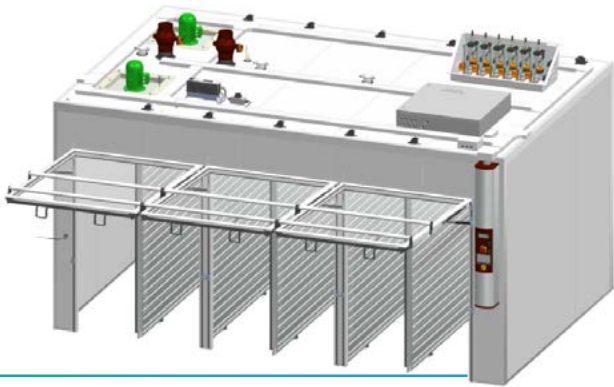
Connection	Requirement
Power in	480V/3Phase/60Hz – 2,87kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 7L/h @ 3 Bar
Ø8mm push-in	Humidification Compressed air – 5L/min @ 8 Bar
Ø22mm push-in	Cooling water in/out – 4,5kW chilled water cooling
Ø160mm	Inlet clean air – 600m3/h
Ø160mm	Outlet clean air – 600m3/h



ViCabin 12 Trolley

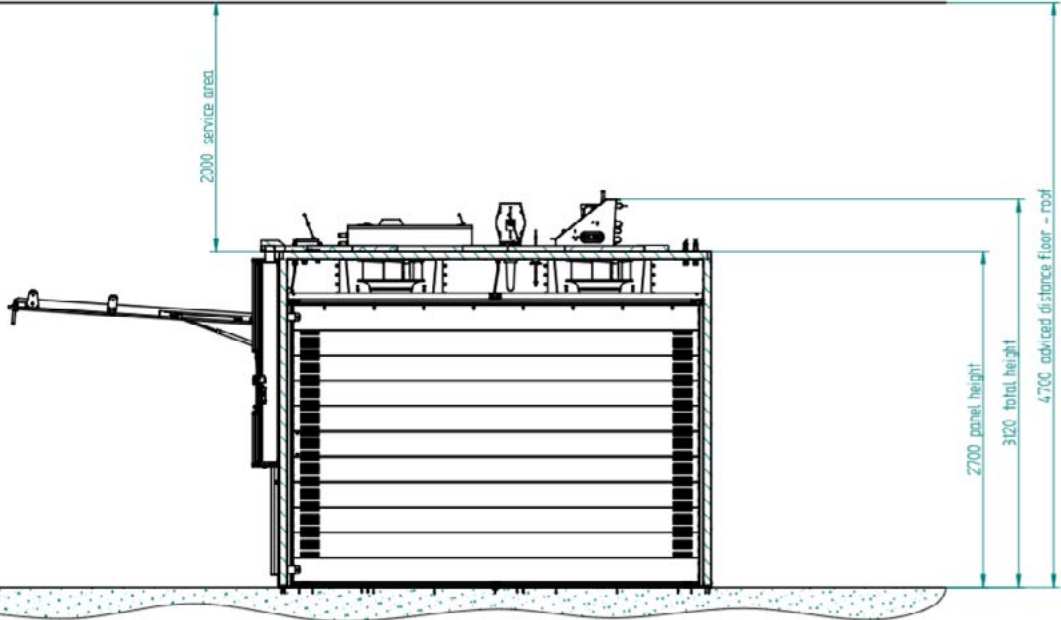
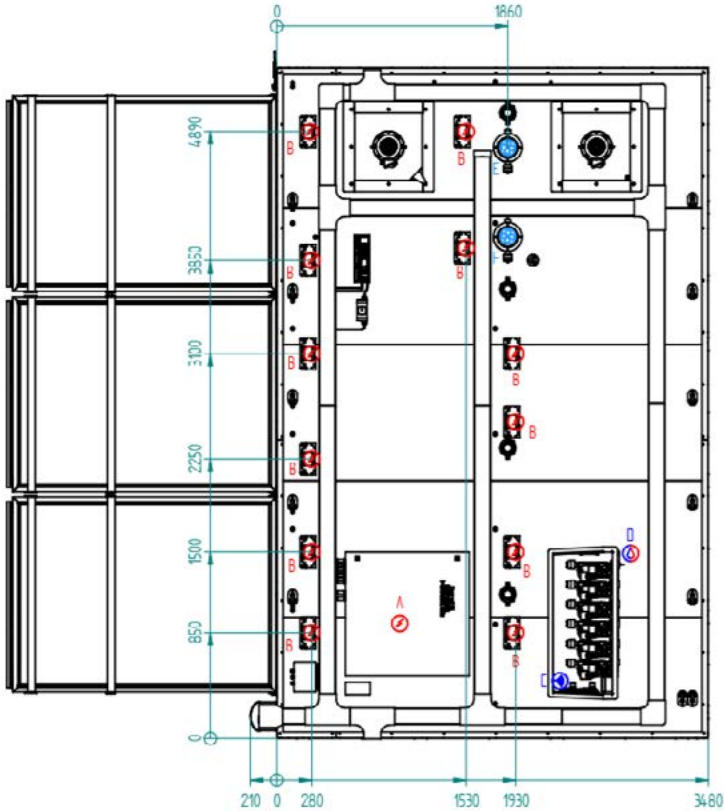
CE configuration

Connection	Requirement
Power in	400V/3Phase/60Hz – 10kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 14L/h @ 1,5 Bar
Ø22mm push-in	Cooling water in/out – 17.6kW chilled water cooling
Ø160mm	Inlet clean air – 1.200m3/h
Ø160mm	Outlet clean air – 1.200m3/h



UL configuration (North America)

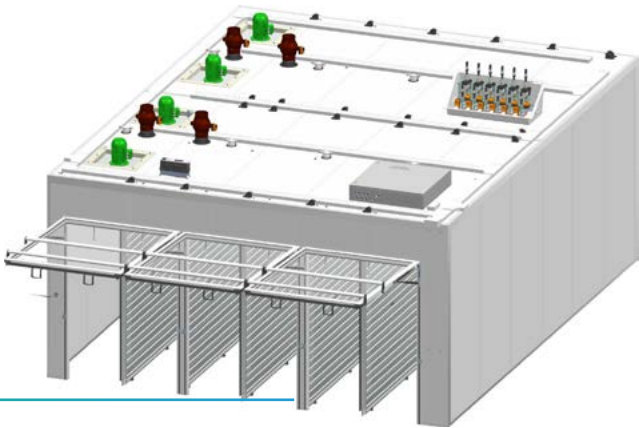
Connection	Requirement
Power in	480V/3Phase/60Hz – 5,07kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 7L/h @ 3 Bar
Ø8mm push-in	Humidification Compressed air – 5L/min @ 8 Bar
Ø22mm push-in	Cooling water in/out – 9kW chilled water cooling
Ø160mm	Inlet clean air – 600m3/h
Ø160mm	Outlet clean air – 600m3/h



ViCabin 24 Trolley

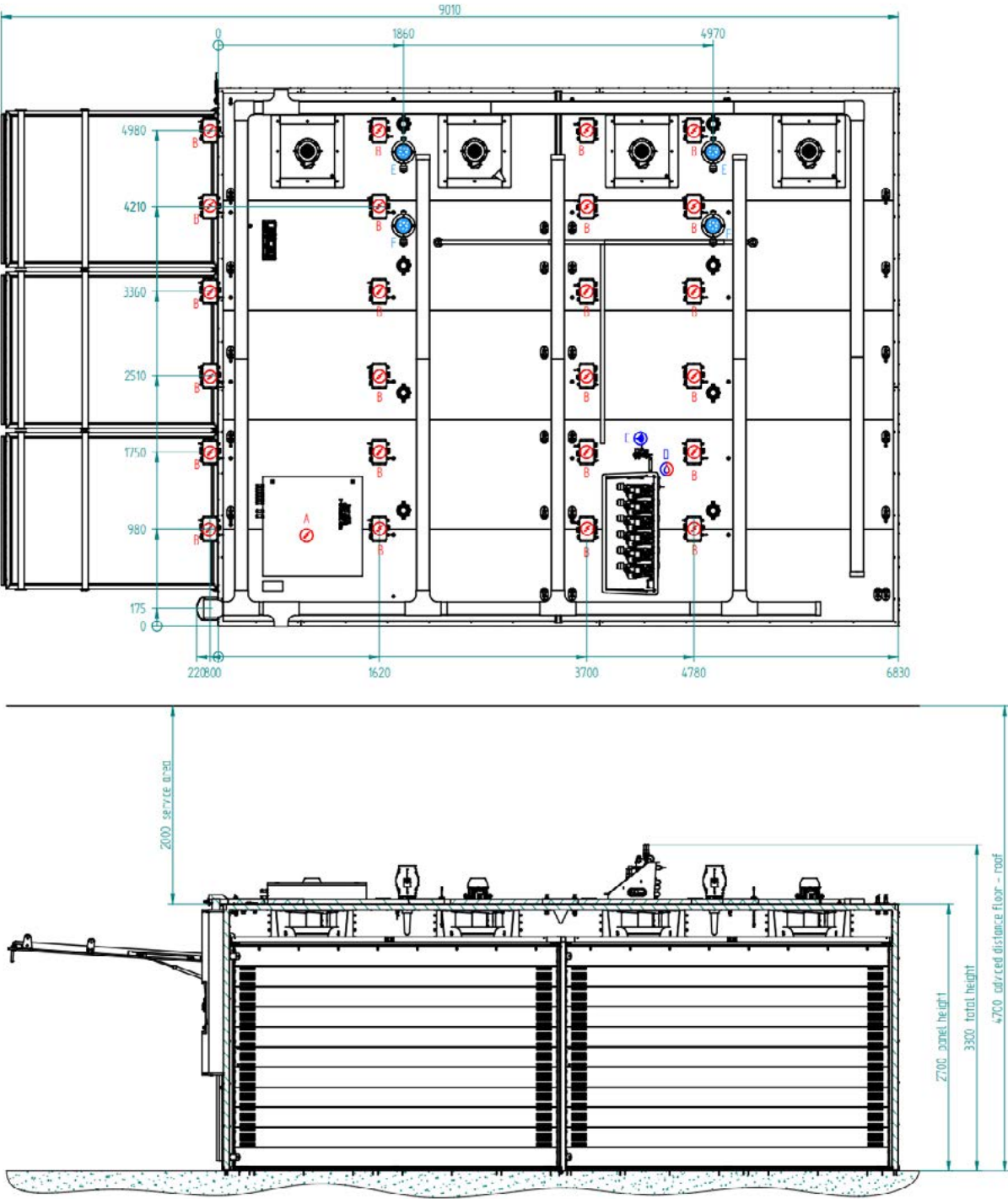
CE configuration

Connection	Requirement
Power in	400V/3Phase/60Hz – 10kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 14L/h @ 1,5 Bar
Ø22mm push-in	Cooling water in/out – 17.6kW chilled water cooling
Ø160mm	Inlet clean air – 1.200m3/h
Ø160mm	Outlet clean air – 1.200m3/h



UL configuration (North America)

Connection	Requirement
Power in	480V/3Phase/60Hz – 10kW
Power trolleys	90-305V/1phase +N/50/60Hz – 600W
Ø8mm push-in	Humidification RO water – 14L/h @ 3 Bar
Ø8mm push-in	Humidification Compressed air – 5L/min @ 8 Bar
Ø22mm push-in	Cooling water in/out – 17.6kW chilled water cooling
Ø160mm	Inlet clean air – 1.200m3/h
Ø160mm	Outlet clean air – 1.200m3/h



Excellence in sustainable plant production



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