

EXO available in select countries.

**CONVIRON**<sup>®</sup>

# EXO Growth Room

Combining customizable modular designs, ergonomic spaces, advanced LED lighting, and plant-centric HVAC and airflow solutions, EXO provides unmatched uniformity and control that optimizes outcomes and yields for a wide range of crops.



*EXO provides precisely-controlled indoor growing environments in a lab-grade solution for any outdoor location.*

## EXO Research

Ideal for University researchers and leading ag-biotech companies requiring a high specification growth room for rigorous plant science applications such as plant breeding, phytopathology, or paleobotany.

The EXO Research typically employs a full suite of options according to researcher needs - including ultra low temperature, high light intensities, complex ramp/step programming, additive CO<sub>2</sub>, CO<sub>2</sub> scrubbing, connection to broader network of controlled environments/greenhouses, or seasonal adjustments based on location specific climate data from around the world.

## EXO Farm

Ideal for vertical farmers that require minimal footprint and maximum yield to price their products competitively and ensure both freshness and flavor. EXO Farm is ideally suited for a variety of green leafy vegetables, microgreens, herbs and fruit production.

Options to maximize space include additional tiers, extending shelving width, room depth or stacking rooms. Each EXO farm includes broad spectrum LED lighting optimized for maximum plant propagation. Other options include precision-controlled auto watering or connection to nutrient delivery systems for single-element dosing and up to 64 user specified recipes.

## EXO Lab

For those requiring a laboratory-grade plant containment room with all the features of EXO Research and the addition of a lobby for plant and soil preparation, running water for cleanup, sinks, reverse osmosis water and HEPA filtration for ultra purified air.

## EXO Grow

Suitable for small scale farmers that want to support local business and communities 365 days-a-year with freshly grown, nutrient rich green leafy vegetables, microgreens, herbs and fruit – no matter their location.

Based on our high spec and feature rich product variants but with a minimal feature set – EXO GROW ensures you get proven technology with lab-grade precision at a competitive price so that you can get growing fast.

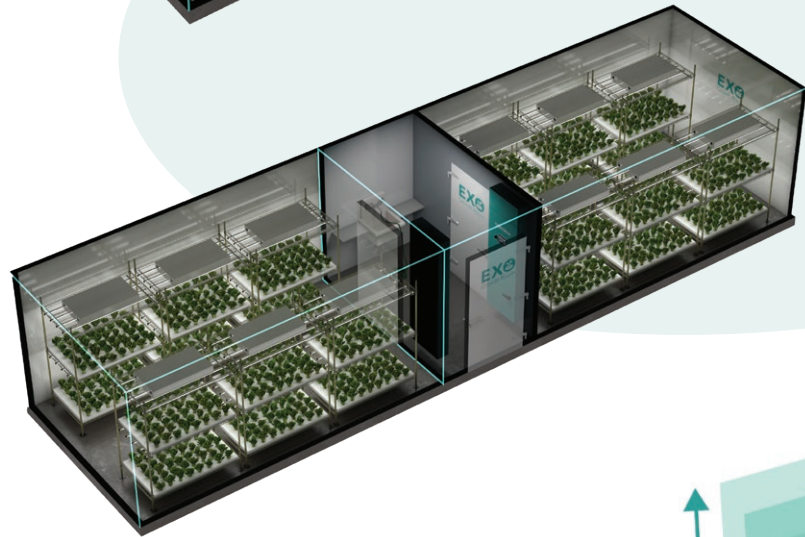
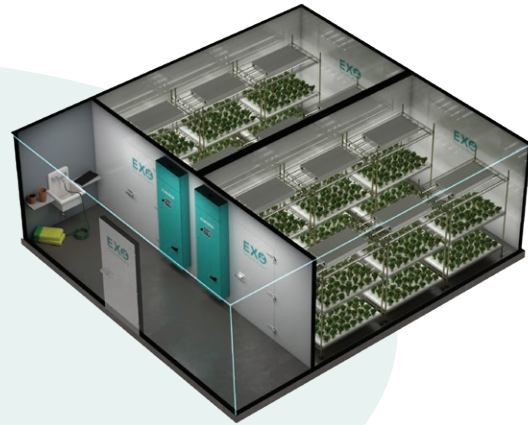
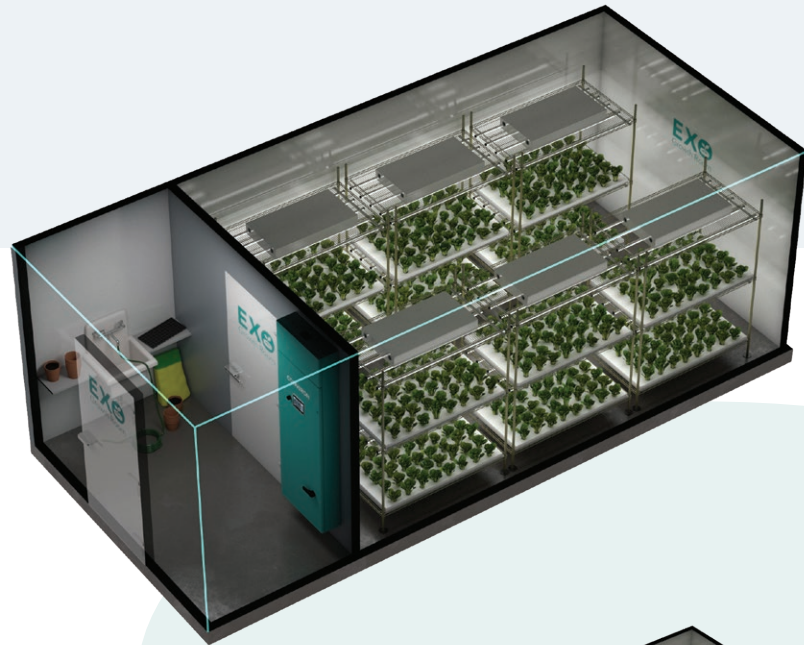
SHORT PLANTS (lettuce, chard, cabbage, rocket, kale, collard greens, berries, herbs)



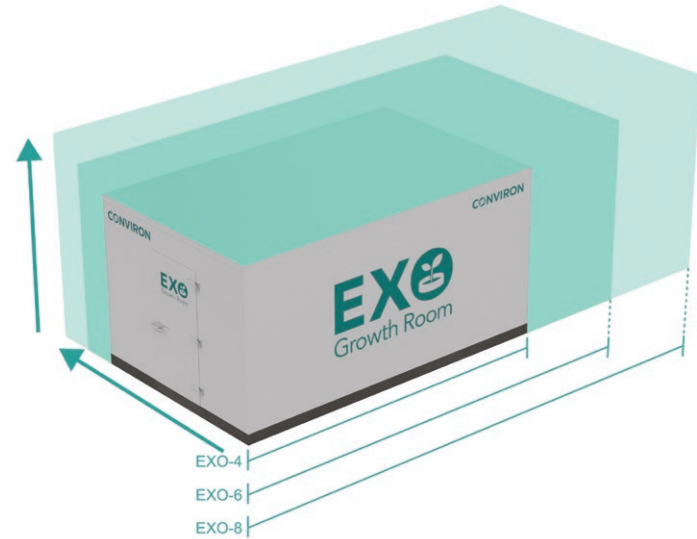
TALL PLANTS (cannabis, cereals, research)



The airflow design directs conditioned air horizontally across the shelving from uniquely designed ducts on the side wall that reach from floor to ceiling. Air returns upward through circulating fans. Filtered fresh air is conditioned prior to entering the growth area.



Unlike containers, EXO is purpose-built to your needs to allow a wider usable walkway, tiers on both sides, and higher ceilings to provide exactly the right dimensions for you, your facility, and your plants.



## Key Specifications

MODEL	TEMPERATURE RANGE (°C)	AREA (ft <sup>2</sup> /m <sup>2</sup> )	STANDARD			OPTIONAL					
			3-TIER			1-TIER			2-TIER		
			Growth Height (inches/mm)	Growth Area (ft <sup>2</sup> /m <sup>2</sup> )	Light Intensity (μmol/m <sup>2</sup> /s)	Growth Height (inches/mm)	Growth Area (ft <sup>2</sup> /m <sup>2</sup> )	Light Intensity (μmol/m <sup>2</sup> /s)	Growth Height (inches/mm)	Growth Area (ft <sup>2</sup> /m <sup>2</sup> )	Light Intensity (μmol/m <sup>2</sup> /s)
EXO-4	+10 to +25 lights OFF +15 to +35 lights ON	123/11.4	19.5/495	144/13.38	92.25/2345	48/4.46	1000	30/760	96/8.92	500	
EXO-6		179/16.6		216/20.07		72/6.69			144/13.39		
EXO-8		223/20.7		288/26.76		96/8.92			192/17.84		

## Extend Your Capabilities with These Options

- Additive humidity
- Dehumidification
- CO<sub>2</sub> control
- Advanced broad-spectrum LEDs
- Far red LED lighting
- Air-cooled DX refrigeration systems
- Glycol refrigeration system
- Surge protection and uninterrupted power supply to controller
- High sensitivity light sensor
- Argus Controls system or CMP Link to connect to your existing Argus System

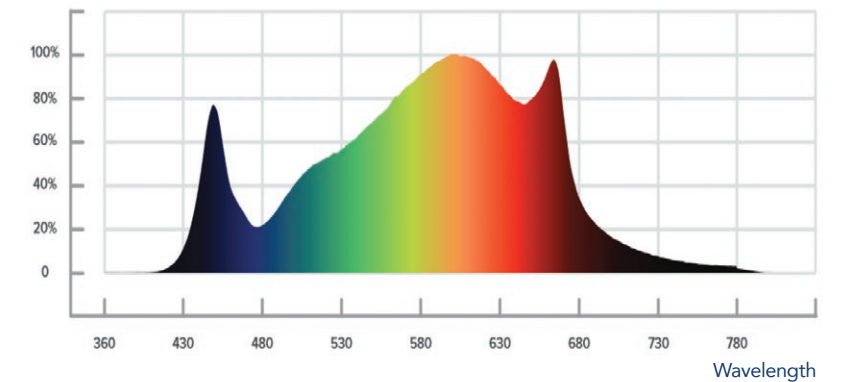
## Lighting

The standard lighting systems for the EXO series uses high efficiency balanced spectrum LEDs, delivering 500 μmol/m<sup>2</sup>/s with 3-levels of intensity in the two and three-tier configuration. With single-tier configuration, intensity becomes 1,000 μmol/m<sup>2</sup>/s.

Using advanced LEDs with dimming controllable directly through the control system, LED combinations have been designed to ensure uniform light distribution throughout the growing area.

### LED Spectrum

Measurements of Normalized Photosynthetic Photon Flux



Energy saving LEDs with broad white spectrum.

## Control & Monitoring

Each EXO comes equipped with Convirion's most advanced controller – the CMP6060. In addition to powerful programming and reporting capabilities, the CMP6060 includes a full-color, high resolution touchscreen with an intuitive graphic interface.

Users can create custom programs for key parameters such as temperature, lighting and humidity and receive audible, visual and email notifications of alarms. Options include connection to your local area network (LAN) and connectivity to a central PC or mobile device with Convirion Central Management™ or anywhere on your laptop or any LAN connected device with ConvirionDirect. CMP Link allows seamless integration with an Argus Control system for broader facility integration such as with your other chambers, rooms, or greenhouses.





GROUP OF  
COMPANIES

CONVIRON®

ARGUS  
CONTROLS

Founded in 1964, the CEL Group of Companies (CEL) comprises Conviron Canada, Conviron USA, Conviron Europe and Conviron Australia together forming the world's leading designer and supplier of controlled environments for plant growth. The CEL Group also includes Argus Controls, the leading supplier of plant-centric environmental controls and automation systems used in greenhouse and indoor growing facilities. Together, Conviron and Argus provide technologies to our clients in the plant science research, commercial horticulture, and plant-derived pharmaceutical industries in over 90 countries around the world.



CONVIRON®

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