CONTROLLED ENVIRONMENTS
For Plant Science Research
AUSTRALASIA
Established in 1964, Conviron is the world’s largest supplier of controlled environment systems for plant science and agricultural biotechnology research.

• Tall and short plants
• Incubation, germination
• Arabidopsis
• Seed storage
• Tissue culture
• Entomology

WALK-IN ROOMS
For larger scale, higher throughput applications that demand uniformity of environmental conditions throughout a larger growth space.

• Extended temperature range
• Increased growth height
• Air and water cooled refrigeration
• Fluorescent, HID and LED lighting
• Dehumidification
• HEPA filtration

CONVIRON GROWTH HOUSE™
For applications that require the capacity of a greenhouse with the precision of a growth chamber.

REACH-IN CHAMBERS
For research applications requiring precise control of environmental parameters provided within flexible and space-efficient chamber designs.

CUSTOM SOLUTIONS
With a team of over 50 designers and engineers, we specialize in custom designing controlled environments to meet unique research requirements.

Conviron’s controlled environments provide precise, uniform, and repeatable control of critical environmental parameters including temperature, light, humidity, CO₂, and other gases. All environmental conditions can be remotely programmed, monitored and analyzed with both accuracy and convenience. Numerous other options are available to meet research requirements, such as:

- Custom High Light Xenon Chamber
- PGC Flex Reach-In
- A1000 Reach-in
- BDW40 Walk-in
- Custom Solutions
- Conviron Growth House™
INTEGRATING TECHNOLOGIES
For High Performance Facilities

ADVANCED CONTROL SYSTEMS BY ARGUS

An advanced control system is critical to translate the researchers’ expertise into action accurately and reliably. Acquired by Conviron in 2013, Argus (Canada) has over thirty years’ experience specializing in the design and manufacture of integrated control systems for greenhouses and plant growth chambers and rooms.

Argus offers proven solutions for comprehensive central management of entire research and production facilities, including growth rooms and building systems. In addition to precision temperature and humidity control, Argus offers:

- Sophisticated programs for managing light intensity, photoperiods and CO₂
- Precision hydroponic feed recipes tailored for each plant using advanced irrigation scheduling and the Argus Multi-Feed nutrient injection system
- 24/7 monitoring of all equipment and facility conditions with local, remote alarm annunciation and custom email alerts to allow rapid response to alarms
- Monitoring of crop conditions and development with integrated camera imagery
- Tracking of all production parameters over time with extensive data acquisition and graphing capabilities
- Secure remote system access via LAN/Internet
- Comprehensive remote service and support
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- Tracking of all production parameters over time with extensive data acquisition and graphing capabilities
- Secure remote system access via LAN/Internet
- Comprehensive remote service and support

LIGHTING SOLUTIONS
Optimizing Spectrum and Energy-Savings
The selection of lighting depends on your requirements for light spectrum and energy-usage. Most Conviron plant growth rooms and chambers have primary and secondary lighting or a mix of types – fluorescent, halogen incandescent, high pressure sodium, metal halide and ceramic metal halide, and LED – to deliver a range of intensity from 100 to 1,400 μmol.

As an exclusive distributor for Valoya (Finland), Conviron offers continuous wide spectrum LEDs that have been developed specifically for high volume plant growth applications and can reduce energy consumption by nearly 40% compared to fluorescent T5. Conviron also integrates LEDs from other manufacturers to provide researchers with LEDs most suited to their application.

STREAMLINING WORKFLOW AND IMPROVING CONTROL

Controlled Irrigation
Conviron’s automated irrigation systems eliminate the inaccuracies of manual watering of plants. “Flood and drain” systems for trays or drip systems for individual plants are available depending on the plant requirements and size of growth room.

Automated Nutrient Supply
Argus Multi-Feed injectors offer advanced fertigation capabilities including full single-element dosing options and on-the-fly delivery of multiple stock concentrates regardless of the system flow rate. The same dosing equipment is capable of delivering numerous recipes, which can be modified to suit changing environmental conditions. Fully integrated with the Argus control system, Multi-Feed injection systems enable researchers to simply dial in a precision feeding program for every crop.

Space-Efficient Benching
Conviron provides various shelving and benching solutions, including rolling benches with integrated irrigation trays, expanded metal tops, or solid tops mounted on the bench.

Plant Imaging
The Conviron Growth House™ is easily configured to work seamlessly with commercially available imaging and automated plant handling systems.
With installations in more than 90 countries, Conviron’s projects range from small single-chamber installations to large scale, multi-chamber facilities in some of the most prestigious corporate, university and research institutions around the world. In the Australasia region alone, Conviron has successfully installed over 500 controlled environments since 1974.

AUSTRALASIA REGION

MAJOR INSTALLATIONS

AUSTRALIA
Australian National University
CSIRO Black Mountain
CSIRO Perth
Curtin University

Department of Fisheries and Forestry
8 Reach-In, 2 Walk-In
Flinders University
2 Walk-In
Queensland University of Technology
10 Reach-In, 3 Walk-In
University of Adelaide
7 Reach-In, 6 Walk-In
University of Newcastle
11 Reach-In
University of Western Australia
19 Reach-In, 12 Walk-In

MALAYSIA
Crops for the Future Research Centre
12 Reach-In, 11 Walk-In
University of Nottingham
9 Reach-In, 13 Walk-In

NEW ZEALAND
Lincoln University
9 Walk-In

PHILIPPINES
International Rice Research Institute (IRRI)
25 Reach-In, 5 Walk-In

OTHER INSTALLATIONS

AUSTRALIA
BSES
CSIRO-Adelaide
CSIRO-Brisbane
CSIRO-Narrabri
CSIRO-Parrt
DAFF
Deakin University
DPI-Bundamba
EcoCatalysts
Enza Zaden
Intergrain
Jardine
La Trobe University
Murdoch University
Nusseed
RMIT
Royal Botanic Gardens
Seasoal
Southern Cross University
University of Melbourne-Dookie
University of New South Wales
University of Queensland
University of Sydney
University of Tasmania
NIAA-Hamilton Plant & Food Research

PHILIPPINES
BASF
Philippine Atomic Energy Commission
Philippine Tobacco Administration
San Miguel Corporation
U.P. Los Banos Institute of Plant Breeding

SINGAPORE
Institute of Molecular and Cell Biology
Sembang Field Research Centre
National University of Singapore

THAILAND
Monsanto
University of Thai Botanical Gardens
Ubon Ratthathani University

VIETNAM
Hanoi Agricultural University
Hanoi National University
Hanoi Department of Standardization
Metrology & Quality Control
Ho Chi Minh City Vegetable Project
Institute of Agricultural Genetics
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www.its-interscience.com

Malaysia
Interscience Sdn Bhd
www.its-interscience.com

New Zealand
Thermo Fisher Scientific
www.thermofisher.co.nz

Philippines
ITS Science (Phil.) Inc
www.its-intersciencephils.com

Singapore
ITS Science and Medical
www.its-sciencemedical.com

Vietnam
VN ITS Co., Ltd &
Hanoi Branch
www.its-vietnam.com

Advancing Research Through Partnership

Cambridge University, UK
Biotron, New Zealand
University of California, Davis - USA

National Institute of Plant Genome Research, India
Australian National University, Australia
Donald Danforth Plant Science Center - USA

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