



CONTROLLED ENVIRONMENTS

For Plant Science Research

EUROPE



REACH-IN CHAMBERS

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



ATC60 Reach-in

A1000 Reach-in

Single chamber uniquely adaptable to four different applications:

- Plant Growth
- Arabidopsis
- Tissue Culture
- Incubation

Precisely designed airflow and lighting configurations for each application

PROVIDING SOLUTIONS

For Your Research

Convion'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:

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



BDW40 Walk-in



Convion Growth House™

WALK-IN ROOMS

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

CONVION GROWTH HOUSE™

For applications that require the capacity of a greenhouse with the precision of a growth chamber.



Custom High Light Xenon Chamber

CUSTOM SOLUTIONS

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

Established in 1964, Convion 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

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



Argus Control System



LED Lighting Solutions

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.



Argus Multi-feed Injectors

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.



Automated Plant Imaging System

EUROPEAN REGION

MAJOR INSTALLATIONS

DENMARK

University of Aarhus
6 Reach-In

UNITED KINGDOM

John Innes Centre
11 Walk-In

Macaulay Institute
6 Reach-In

National Institute of
Agricultural Botany
21 Reach-In

Rothamsted Research
10 Reach-In

Sainsbury Laboratory
6 Reach-In, 37 Walk-In

University of Cambridge
8 Reach-In, 16 Walk-In

University College Dublin
22 Reach-In, 8 Walk-In

University of Hertfordshire
8 Reach-In

University of Sheffield
20 Reach-In, 16 Walk-In

FINLAND

Finnish Forest Research Institute
4 Reach-In, 14 Walk-In

University of Joensuu
13 Chambers

GERMANY

Heinrich-Heine-University
6 Reach-In

Humboldt-University of Berlin
11 Reach-In, 6 Walk-In

Martin-Luther University
12 Reach-In

Max Planck Institutes
18 Reach-In, 3 Walk-In

Ruhr University Bochum
15 Reach-In

Senckenberg Nature Research
Society
6 Reach-In

Technical University of Munich
19 Reach-In, 3 Walk-In

University of Bayreuth
9 Reach-In

University of Bonn
6 Reach-In

University of Heidelberg
25 Reach-In

University of Hohenheim
6 Reach-In

HUNGARY

Agricultural Biotechnology Centre
6 Reach-In

Hungarian Academy of Sciences
8 Reach-In, 8 Walk-In

SPAIN

CIB Biological Research Centre
6 Reach-In

University of Córdoba
6 Reach-In

SWEDEN

Gothenburg University
5 Reach-In, 1 Walk-In

Lund University
6 Reach-In

Swedish University of
Agricultural Sciences
12 Walk-In

University of Stockholm
4 Reach-In, 3 Walk-In

SWITZERLAND

Federal Institute for Forest,
Snow and Landscape Research
12 Reach-In, 2 Walk-In

Swiss Federal Institute of
Technology
14 Reach-In, 18 Walk-In

University of Zurich
6 Reach-In, 5 Walk-In

Zoology Institute
6 Reach-In

OTHER INSTALLATIONS

AUSTRIA

University of Vienna

BELGIUM

Gent University

Katholieke University

University of Liege

DENMARK

University of Copenhagen

UNITED KINGDOM

Alice Holt Research Station

Bournemouth University

Cambridge University

Harper Adams University

Horticulture Research

Liverpool John Moores University

Scottish Agriculture College

Scottish Crop Research Institute

University of Essex

University of Glasgow

University of Wales

University of York

West Scotland College

FRANCE

UMR 211-Bioemco

University of Paris

University of Technology

GERMANY

Bremen University

Federal Ministry for Food
and Agriculture

Fraunhofer Institute

University of Bremen

University of Duesseldorf

University of Rostock

GREECE

University of Thessaloniki

ITALY

University of Milan

POLAND

Adam Mickiewicz University

PORTUGAL

University of Tras-Os-Montes

SPAIN

Spanish National Institute for
Agriculture, Food Research and
Technology

Technical University of Madrid

University of Castilla

University of Navarra

Valencian Institute for Agricultural
Research

SWITZERLAND

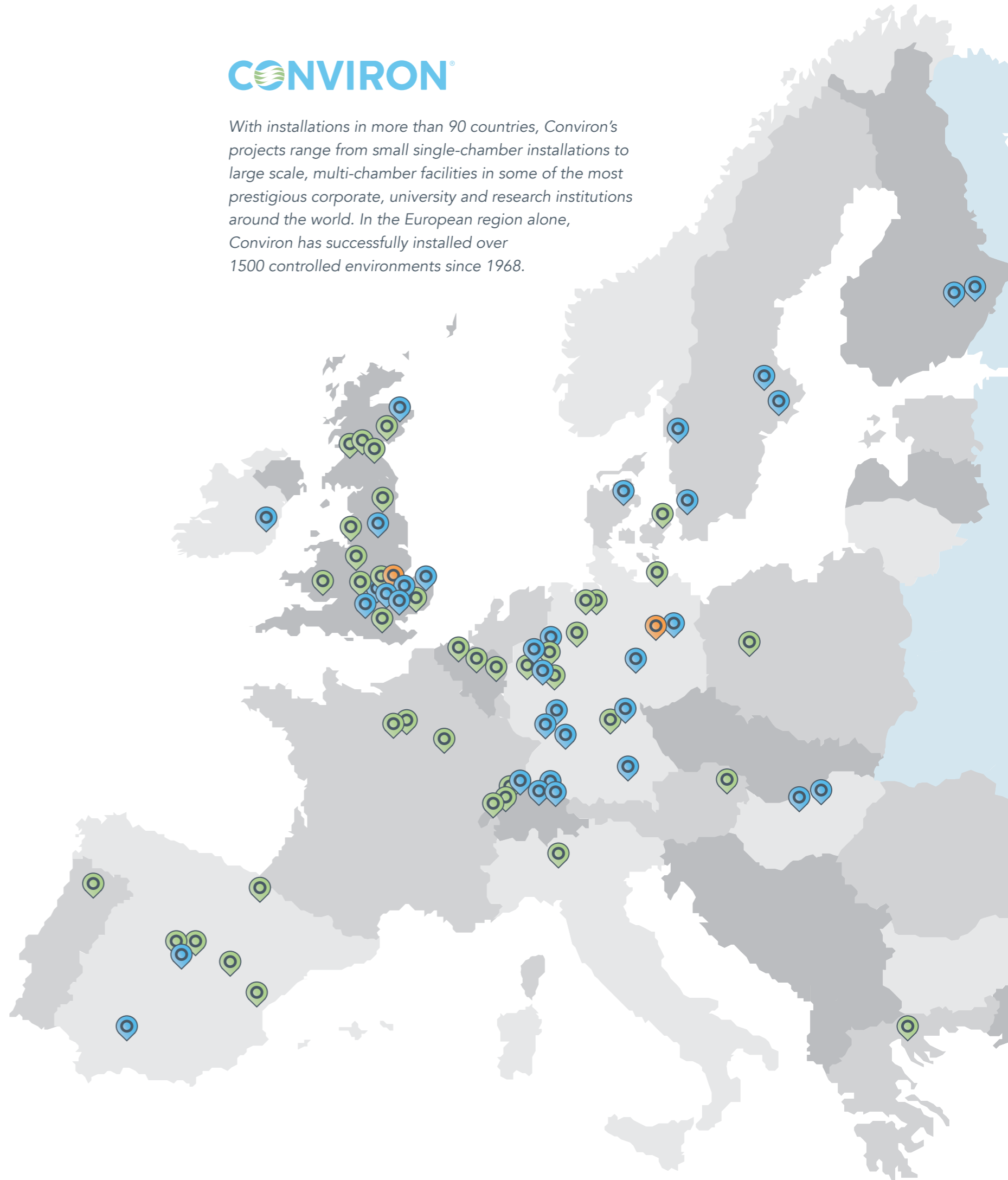
Friedrich Miescher Institute

University of Lausanne

University of Neuchatel



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 European region alone, Conviron has successfully installed over 1500 controlled environments since 1968.



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