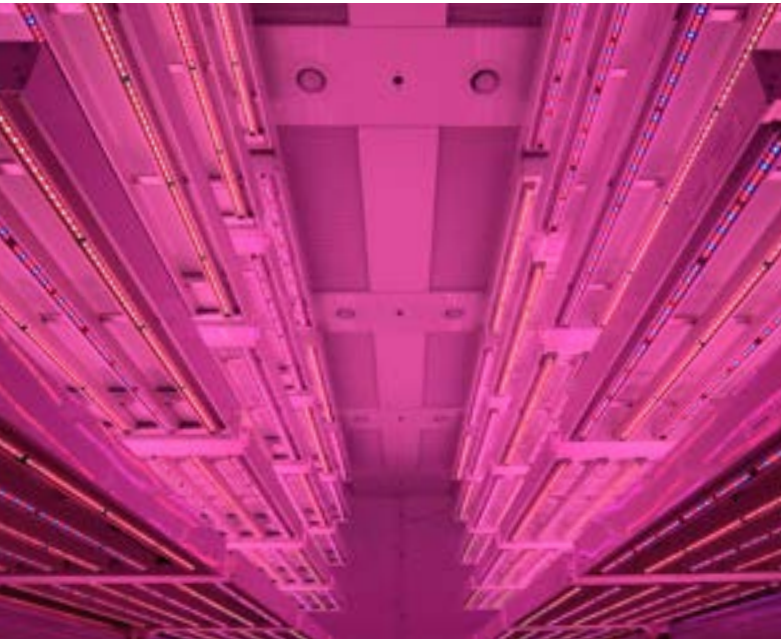


LEDs for Vegetable Seed Testing



Client	Nunhems
Country	USA
Chamber Model	Custom MTPC Vitality chamber
Chamber Type	Walk-In Room
Controller	CMP6050
Application	Vegetable seed testing
Growth Height	12" (0.30 m)
Growth Area	400 ft ³ (11.33 m ³)
Temperature Range	15-30°C Lights OFF; 20-30°C Lights ON
Light Intensity	250-300 μmol/m ² /sec @ 6" from the lamp
Relative Humidity	>85%
LED Solution	Philips LED fixtures, 50% deep red-white and 50% deep red-blue
Results	Energy savings and improved uniformity of seedling growth over fluorescent and incandescent lighting

Overview

Based on Conviron's successful MTPC platform, the chamber features LED lighting, additive humidity control, and five tiers of growth area with horizontal airflow delivered from the rear of each shelving bank. Once installed, the chamber will be equipped with a custom cantilevered multi-tier cart system developed by Nunhems. This cart system will circulate experimental material throughout the growth environment, further leveraging the already excellent performance of the chamber and exposing plants to the most uniform growth conditions possible.

Collaboration

As with all custom projects, Conviron maintained a close relationship with the client throughout the product development phase in order to ensure that all specific needs were accounted for. This culminated in witness testing, which is a feature of Conviron's overall product delivery strategy. It gave representatives from Nunhems the opportunity to personally evaluate the chamber while in operation at Conviron's test facility.

Solution

The standard lighting system offered in the MTPC is a combination of fluorescent and incandescent lamps, however, each tier in the custom Vitality chamber is equipped with Philips LED light bars. These were requested by Nunhems after experimental results showed improved performance over fluorescent lighting. This combined with inherent substantial energy savings made LED lighting an ideal choice.



Nunhems utilizes mixed spectrum in the range of 400-700 nm; 50% deep red-white and 50% deep red-blue.

The MTPC Vitality chamber is further example of how Conviron combines established technology with innovative adaptation to create solutions specifically tailored to the needs of its clients.

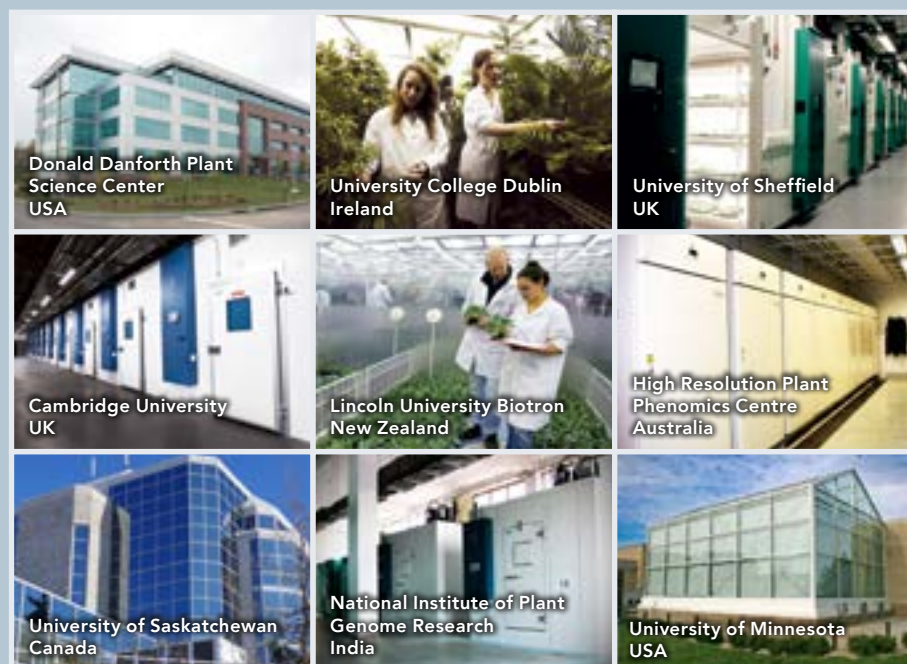


About Conviron

Established in 1964, Conviron is the world's leading supplier of controlled environment systems for plant science and agricultural biotechnology research. From small reach-in chambers to full-scale growth houses, and custom solutions – Conviron systems can be found in small start-up facilities to many of the world's largest and most prestigious research institutions in over 90 countries.

Conviron's global sales, distribution and service network offers a comprehensive suite of value-added services that encompass the entire life-cycle of your project - from early-stage design through to installation, project commissioning, on-going maintenance, support and technology upgrades.

Featured Installations



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