



Respiration chamber Maastricht Instruments
Various locations worldwide

HEALTHCARE & LIFE SCIENCE RESEARCH

PROJECT DETAILS

Location

Various locations worldwide

Building type

Universities and research centres

Delivery

An advanced respiration chamber where end users can use the Omnical Indirect Calorimeter to perform research.

Version

New

End user

Universities and research centres

BUILDING AUTOMATION SOLUTION

Hardware:

A custom programmable Optiflex™ BACnet Building Controller, type OF1628, including multiple universal IO modules.



Software:

The web-based WebCTRL® system, including intuitive user interface.



Prepared in the Netherlands and assembled, installed and tested on location within three weeks.

Maastricht Instruments is a high-tech company that is affiliated with the Maastricht University Medical Center. It develops innovative technological solutions for medical and life science applications for customers **worldwide**. One of the most recent innovations is the Omnical Indirect Calorimeter for metabolic research into the energy use of athletes and diabetes patients, so that better insight can be offered into how factors such as nutrition and exercise help to optimise physical performance. An **advanced respiration chamber** helps to create circumstances that allow this instrument to function effectively.

“Maastricht Instruments has developed a unique instrument that can perform very sophisticated measurements when used together with the advanced respiration chamber. We are proud to play a role in this thanks to our innovative and progressive solutions.”

Marcel Maijers, Regional Sales Director Europe at Carrier Building Automation Solutions

Definition of a respiration chamber:



A respiration chamber is a fully-closed circuit for performing accurate metabolic measurements into the level of CO₂ and O₂. This makes it possible to analyse the metabolism and energy use of target groups like patients and athletes, so that advice can be provided in the field of nutrition, exercise and sleep.



Challenge

Maastricht Instruments needed an advanced respiration chamber to ensure that the Omnical Indirect Calorimeter performs effectively, so that researchers at universities, medical centres and sports science centres around the world can perform very **accurate measurements** that lead to detailed results and conclusions.

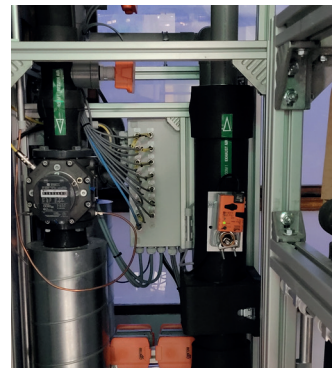
Maastricht Instruments, Viltonen Installaties and Risto Regeltechniek developed the concept needed for this, while being assisted by Carrier Building Automation Solutions. The requirements included a very high level of accuracy in **conditions and measurements**, and the **flexibility** needed to modify software and installations during use.

An extra advantage was our global service and the long-term support that accompanies the supplied hardware and software.

Solution

Automated Logic supplied the WebCTRL® system including OptiFlex™ controls, which Risto Regeltechniek used to achieve the required climatological conditions, such as correct temperature and humidity. An extra advantage was our **global service** and **long-term support** that accompanies WebCTRL system.

The physical respiration chamber, the innovative instrument as well as the required systems will be installed at the site of the end user.



Results & benefits

The **unique** thing about his project is that, partly thanks to our hardware, software and sophisticated concept, the most accurate metabolic measurements and analyses possible can be carried out in a suitable respiration chamber. This means the concept will assist researchers worldwide in their challenging research assignments.

Please contact your local representative for further information.

