



United Technologies

DESIGNING INNOVATIVE SOLUTIONS

AIR CONDITIONING & HEATING SOLUTIONS

# ADAPTABILITY **OR** ENERGY EFFICIENCY?

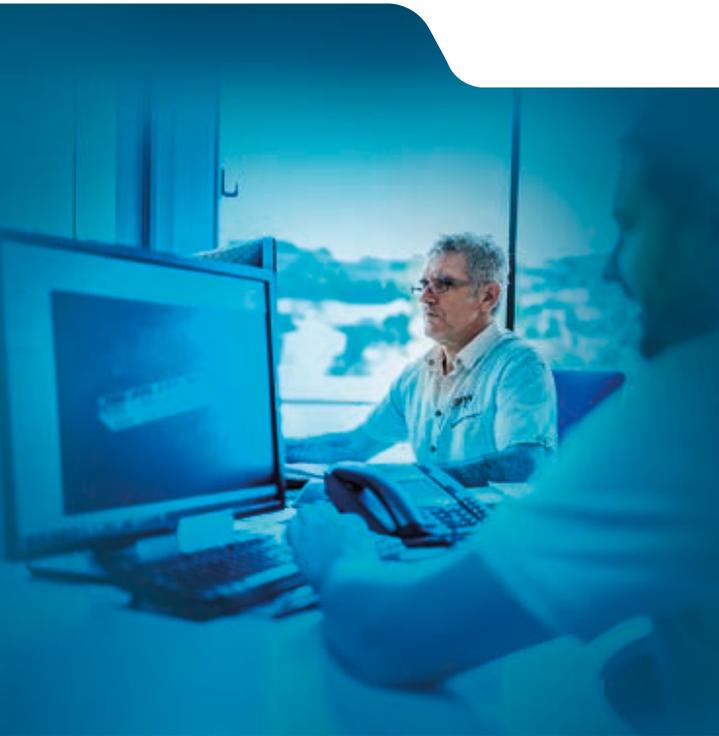
AIROVISION® 39HX, BECAUSE YOU SHOULD NOT HAVE TO CHOOSE.



Air handling unit  
39HX

**AIROVISION**®

# Carrier designing innovative solutions



## Innovation is in our DNA

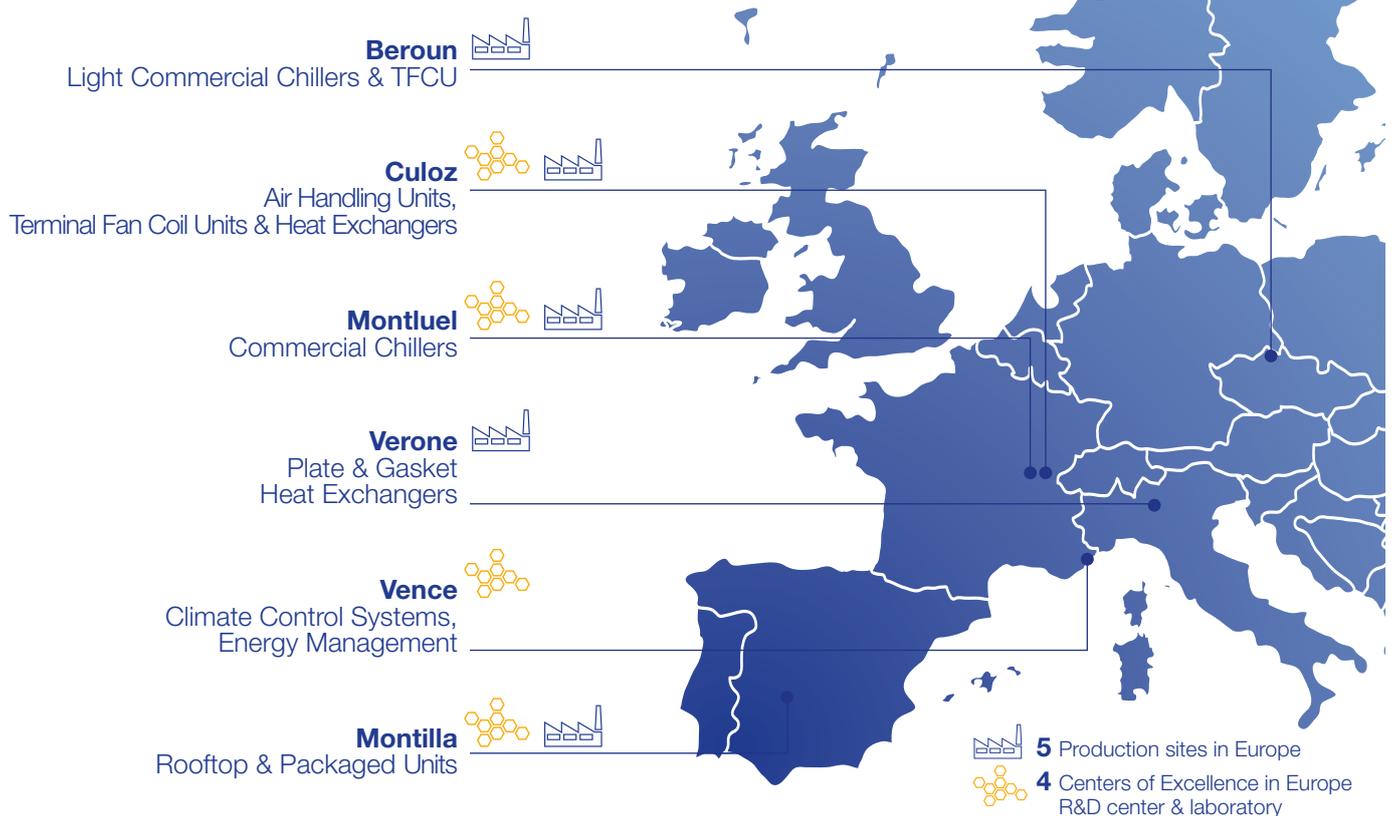
Since Willis Carrier developed the world's first modern air conditioning system in 1902, Carrier teams have been designing innovative solutions tailored to each customer's requirements. Over time, Carrier has been recognised as a pioneer in the design and manufacture of heating, ventilation and air conditioning (HVAC) solutions with sustainable performance, and equally important, for its commitment to first class service.

## Our Commitments

- Innovation
- Expertise
- Performance
- Quality
- Sustainability
- Service Excellence

## World-class operations to bring best-in-class solutions

Our European Centers of Excellence and HVAC production sites are all world-class facilities in their own right. Each site focuses on its specific field of expertise.



# ADAPTABILITY

## Easy to use by design

### ■ Multi-casing offering

The AiroVision 39HX range covers airflows ranging from **300 to 18.000 m<sup>3</sup>/h**, and is available in no fewer than **5 types of casing** to adapt to the configuration of each building.

### ■ Plug & Play

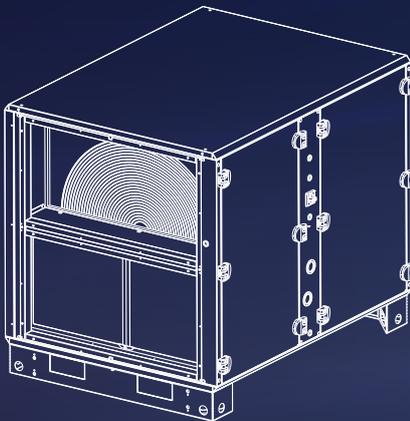
The AiroVision 39HX range has been designed to **save time during installation and reduce maintenance**.

The unit itself and its peripherals are fully operational right after installation.

### ■ Compactness

**Optimized integration of components** in its casing makes the range particularly compact. With its control system and valves fitted internally, the unit's footprint is reduced further, while ensuring optimum protection for outdoor installations.

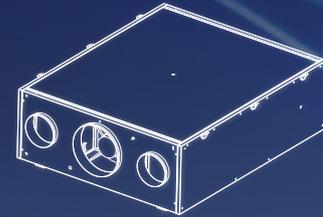
The 39HX range covers airflows ranging from 300 to 18.000 m<sup>3</sup>/h and is available in 3 configurations:



**Horizontal :**  
39HXA - 39HXE - 39HXC



**Vertical:**  
39HXV



**Ceiling:**  
39HXH

&

# ENERGY EFFICIENCY

## Future-ready performance

### ■ Heat recovery

The AiroVision 39HX range offers **two types of heat exchanger unit**, covering diverse heat recovery requirements. Applications needing airtight flows of fresh and extracted air can select a counter-flow plate, while a rotary heat exchanger (RHE), with its optional mixing section feature, ensures excellent year-round heat recovery.

### ■ Ecodesign compliant

The AiroVision 39HX range complies fully with the EU's 2016 Ecodesign Directive 2009/125/EC on energy efficiency requirements for air handling units equipped with filters, heat recovery units, fans and motors. **In line with Carrier's commitment to environmental responsibility, it is already compliant with new regulations on energy savings and reduced carbon that will come into force in 2018.**



### ■ Eurovent certified

Carrier supports the stringent requirements of the independent Eurovent Certification Programs in addition to assessing its products and their performance in its own laboratories. **Both the 39HX air handling unit itself, and the heat recovery module, are certified by Eurovent.**



# Technical Insight

## Air handling unit **39HXV** Vertical configuration



HIGH EFFICIENCY  
EC PLUG FANS



BUILT-IN CONTROL



REMOVABLE  
HINGED DOOR  
FOR EASY ACCESS

### COMFORT AND ENERGY MANAGEMENT

To supervise control of the air handling unit, a user-friendly interface ensures easy management of all elements:

- Supply and return airflow, air temperature, free cooling, night cooling.
- Single or multiple zones airflow modulation.
- Timer/schedule.
- CO<sub>2</sub> sensor or duct pressure control.
- Safety and alarm features.
- A wide range of CMS communication protocols.

For remote control of the air handling unit, the Carrier Webservice, accessible via an Internet browser, offers the same functions, along with synoptics, setpoints and events.



### KEY FEATURES

- **High quality filtration**  
Both air and heat exchanger are kept clean and dust-free thanks to supply and return air filters. The optional second-stage filtration on 39XV, 39HXE and 39HXA models offers enhanced indoor air quality for sensitive environments.
- **Acoustic comfort**  
Thick panel insulation guarantees quiet operation for optimal acoustic comfort.
- **High efficiency motor**  
The range meets the most rigorous demands in terms of energy consumption thanks to its brushless motor technology and high efficiency plug fan. These allow for a wide airflow modulation range and result in **motor efficiency exceeding 90%**.

# Air Handling unit **39HXA** Horizontal configuration



LOW PRESSURE  
DROP FILTERS



ACTUATORS  
MOUNTED  
(OPTIONAL)



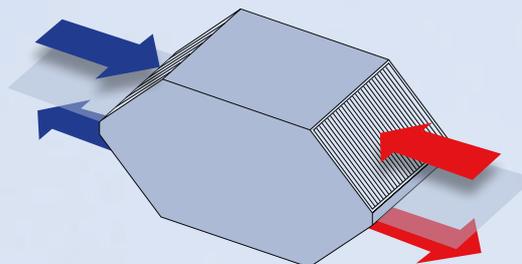
BUILT-IN VALVE

## Heat recovery

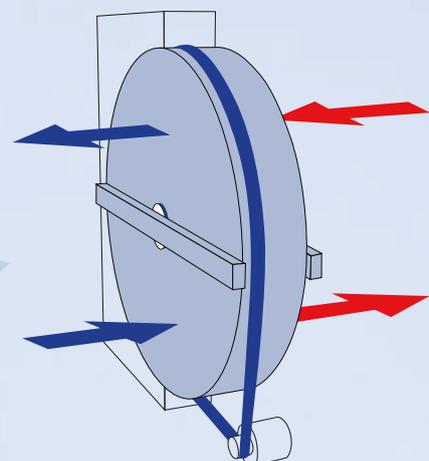
A **counter-flow plate heat exchanger** is perfectly adapted to environments where flows of fresh and extracted air must be airtight.

A **rotary heat exchanger** provides optimal heat recovery throughout the year, and includes an optional mixing section.

At its nominal flow rate, 39HX has **80% dry efficiency in heat recovery.**



COUNTER-FLOW  
HEAT EXCHANGER



ROTARY HEAT EXCHANGER

# Specific solutions for specific needs



## Office



### ■ Customers' requirements

- Low energy consumption
- Compact units to optimise floor surface use
- Zone control

### ■ Carrier's solutions

- Carrier's smart software with integrated timer adjusts the unit operations to the building's requirements and is compatible with a wide range of BMS
- Choice of 3 compact air handling unit configurations for a perfect fit in technical areas
- Control software able to control duct pressure for VAV (Variable Air Volume)



## Administration / Education



### ■ Customers' requirements

- Acoustic comfort
- Controlled energy consumption
- Indoor Air Quality

### ■ Carrier's solutions

- Low noise EC plug fan with smart control
- Built in Carrier control compatible with CO<sub>2</sub> detection and external occupancy detection
- 2 fresh air filter stages available with efficiency of up to F9



## Hotel



### ■ Customers' requirements

- Acoustic comfort
- Thermal comfort
- Ease of use
- Reliability

### ■ Carrier's solutions

- Low noise EC plug fans and a wide range of built-in and external coils
- Webserver interface for remote monitoring

# Carrier Service beyond your expectations

Your daily challenge is a complex balance between maintaining optimal comfort levels, maximising system uptimes and minimising cost of ownership. Carrier teams are committed to ensuring your peace of mind and supporting your business objectives throughout the lifecycle of your equipment.

## Customer needs come first

### ■ Proximity & Responsiveness

Carrier's expert technicians are there to take action, quickly. Comprehensive and highly efficient maintenance processes mean your equipment works at peak performance level

If necessary, you can rely on Carrier Rental Systems and readily available spare parts to avoid extended downtime.

### ■ Expertise & Consultancy

Carrier has experienced teams, an extensive network of branches, top grade logistics and powerful information systems. These industry-leading resources come together to deliver a best-in-class service.

Your Carrier experts will help you to find the right balance between enhancing energy efficiency and maximising your investments.

### ■ Proactivity

As your preferred partner, Carrier designs tailored maintenance programs to meet your goals and optimize your business performance.

## Experts recognized worldwide

### ■ Asset Management

- Advise on fast-moving regulatory environment.
- Guidance for energy optimization solution.
- Information on EH&S guidance.
- Providing educational sessions.

### ■ Technical expertise

Carrier technicians benefit from a multifaceted training program based on 110 years of industry experience to bring you top level, up-to-date service.

- Technical training to ensure its teams remain familiar with all equipment types.
- Environmental, Health and Safety (EH&S) training to ensure the highest standards of ongoing safety.

Present  
in more than

**60**

countries

**24/7**

on-site  
availability

More than  
**110**

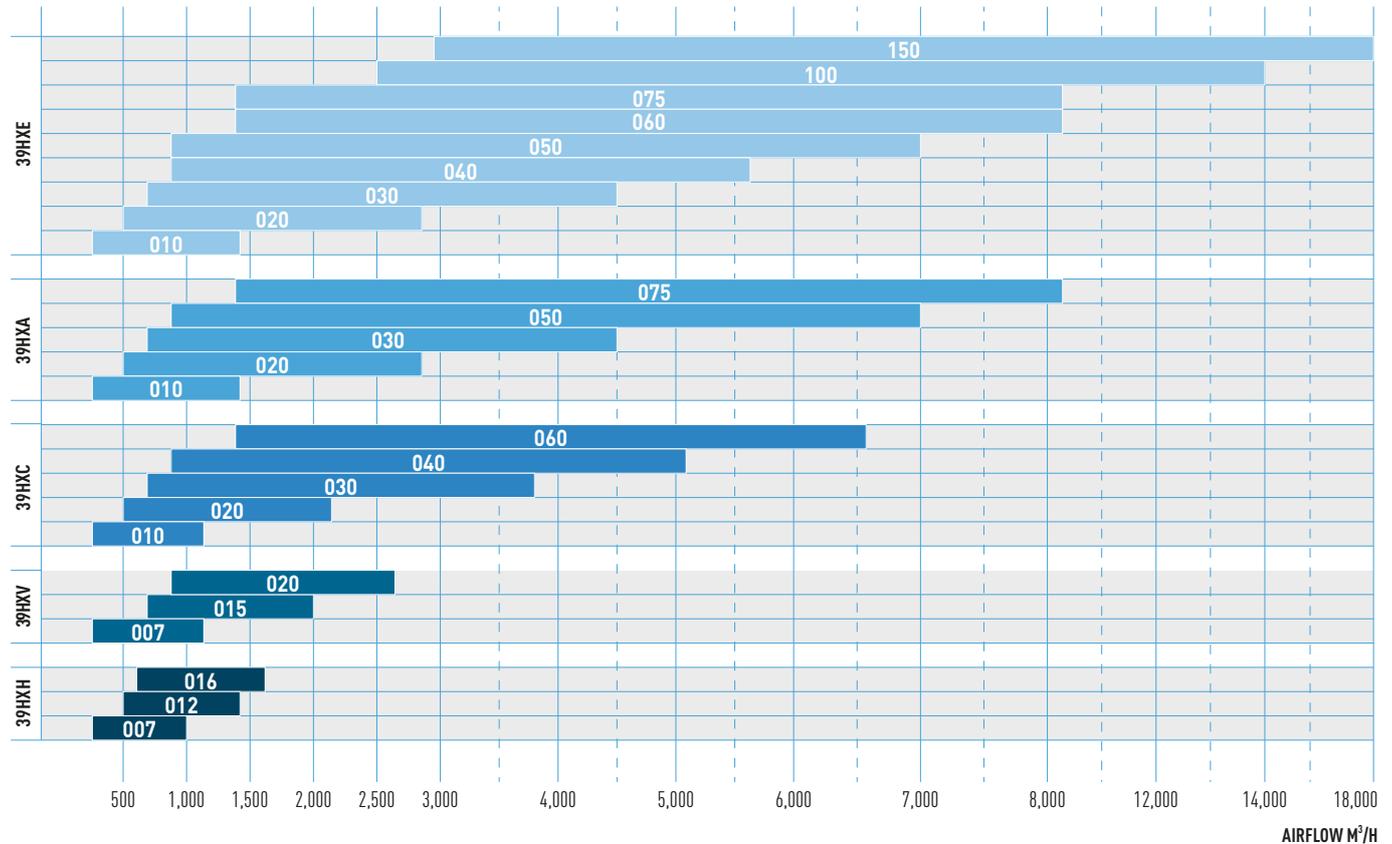
years  
of experience



# Physical data



## AIRFLOW RATES



OPTIONS	39HXC	39HXE	39HXA	39HXV	39HXH
LOW PRESSURE DROP PLEATED FILTER: M5 / F7 / F9	•	•	•	•	•
DOUBLE FILTER STAGE ON THE FRESH AIR	•	•	•	•	
BUILT-IN HEATING COIL + VALVE + VALVE ACTUATOR MOUNTED & WIRED	•	•	•	•	
BUILT-IN COOLING / CHANGE-OVER COIL + VALVE + VALVE ACTUATOR MOUNTED & WIRED	•	•	•		
BUILT-IN ELECTRICAL HEATER	•	•	•	•	
BUILT-IN REVERSIBLE DX COIL			•		
RECYCLING SECTION WITH ACTUATOR		•			
SHUT OFF DAMPER WITH ACTUATOR	•	•	•	•	•
FLEXIBLE SLEEVES KIT	•	•	•	•	•
WEATHERPROOF ROOF	•	•	•		
SUCTION / DISCHARGE HOODS	•	•	•		
ADDITIONAL CASED WATER COIL (HEATING, COOLING, OR CHANGE-OVER) + VALVE + ACTUATOR	•	•		•	•
ADDITIONAL CASED ELECTRICAL HEATER (HEATING OR PRE-HEATING)	•	•		•	•

• Available

[www.carrier.com](http://www.carrier.com)

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