



United Technologies

DESIGNING INNOVATIVE SOLUTIONS

AIR CONDITIONING AND HEATING SOLUTIONS

# FULL MODULARITY OR ENERGY EFFICIENCY?

AIROVISION<sup>®</sup>, BECAUSE YOU SHOULD NOT HAVE TO CHOOSE.



Air handling unit  
39CP

**AIROVISION**<sup>®</sup>

# Carrier solutions based on **experience and expertise**

## **Carrier Heritage**

Since Willis Carrier developed the world's first modern air conditioning system in 1902, Carrier teams have been designing 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.



## **Carrier Commitment**

### **Quality**

Carrier quality and reliability are incorporated and guaranteed in all products and systems. Products undergo extensive tests before they are shipped to the customer and are also certified by internal organisations to ensure the highest levels of safety and quality.

### **Sustainability**

Carrier continuously works to improve the environmental performance of its products and services, operations and its culture to help lead the way to environmental sustainability. Sustainability is one of the issues that affects the real-estate value of modern buildings. A high-efficiency air conditioning system with a low carbon footprint is a must to support green building design.

### **Performance**

Carrier strives for continuous growth to reinforce its leadership position, continuously improving the productivity of its assets and resources.

### **Service Excellence**

The Carrier Service delivery model maintains a reputation for high customer satisfaction and delivers service excellence with strong communication channels, the top technicians in the industry, continuous improvement of contracts and a highly experienced management team.

### **Innovation**

Carrier is a company of ideas, committed to research and development, whose founder still inspires the company to reach the next innovative, powerful and marketable idea. Carrier AdvanTE<sup>3</sup>C, a global group of Experts in Efficiency and Environment, supports customers around the world in developing strategic, energy-efficient and custom-engineered building solutions.

### **Expertise**

Carrier delivers global solutions across the broadest range of air conditioning, ventilation and heating applications. With a proven track record of leadership and industry expertise, Carrier provides a portfolio of market-leading products and services.

# FULL MODULARITY

Tailor-made solutions for all applications

## ■ Customised air volume solution

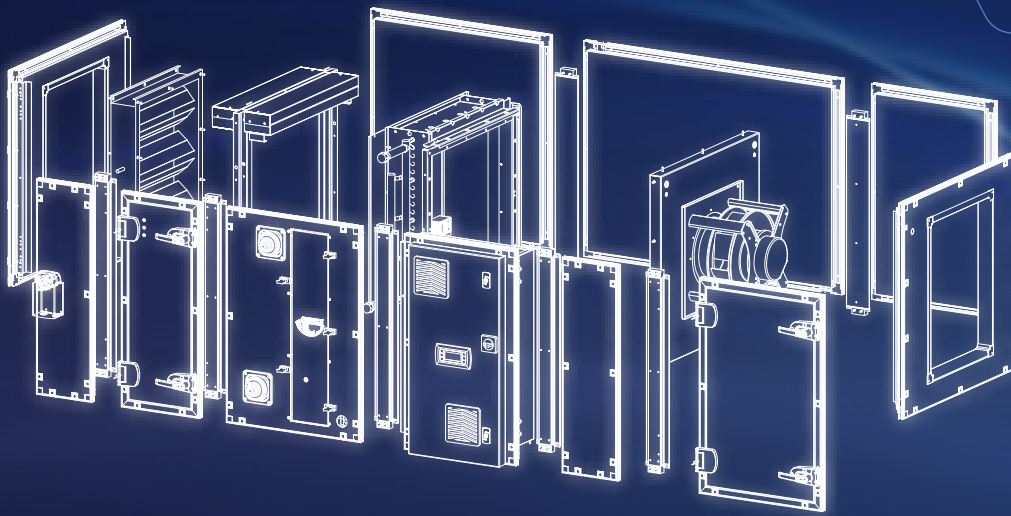
The 39CP offers an extensive range of functions and options for customised solutions, and can handle all types of air volume: offices, industrial installations, residential buildings, shopping centres and many other applications. Carrier designs and manufactures fully modular air handling units that will meet your technical requirements component by component.

## ■ Modular indoor air capacity

The 39CP air handling unit has been designed to enhance control of indoor air quality. Carrier's experts propose a tailor made solution that meets your needs according to your activity or technical and environmental requirements. The versatility of the 39CP air handling unit makes it possible to compose and produce the precise and unique air handling unit with indoor the air quality capacity required for your needs and applications.

## ■ Plug & play solution

Carrier offers comprehensive services to quick and easy installation. Carrier's technicians can handle reception of the equipment and provide assistance for on-site assembly to ensure optimum installation and units start up. Ask your local distributor for further information.



The 39CP range covers, in 9 sizes, an airflow range from 1,000 to 25,000 m<sup>3</sup>/h, and available with two casing construction types as follows:

- 39CP-L : general and comfort applications
- 39CP-H: for low temperature applications requiring an excellent thermal bringing factor

&

# ENERGY EFFICIENCY

Designed for optimum energy performance

## ■ Best-in-class technologies

The 39CP air handling unit offers an extensive choice of heat recovery units to optimise buildings' thermal consumption, as well as filters that are sized to limit air side pressure drops and so guarantee minimum energy consumption.

Carrier integrates best-in-class technologies, such as plate heat exchangers, rotary wheels and run around coils to ensure optimum full time performance.

## ■ Ecodesign compliant

The Aerovision Range is in line with the European Directive 2009/125/EC requirements in terms of energy efficiency and fully complies with the 2018 EcoDesign requirements

All components incorporated in the 39CP range are suitable for recycling.

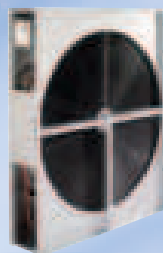


# Technical Insight

## Air Handling unit 39CP-H

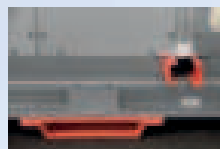


Class 1, 3, 4  
damper and  
ATEX\* solution



### Heat recovery

- Anti-corrosion protection (Optional)
- Enthalpic version (Optional)

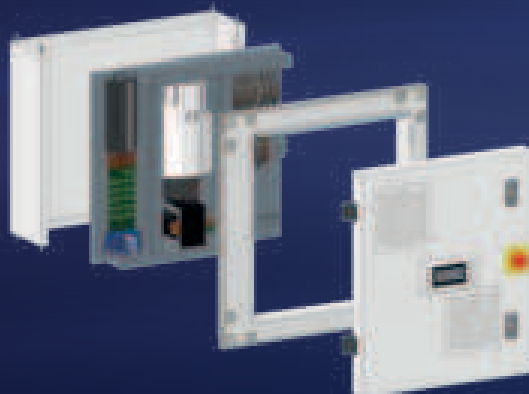


Simplified  
handling and  
positioning



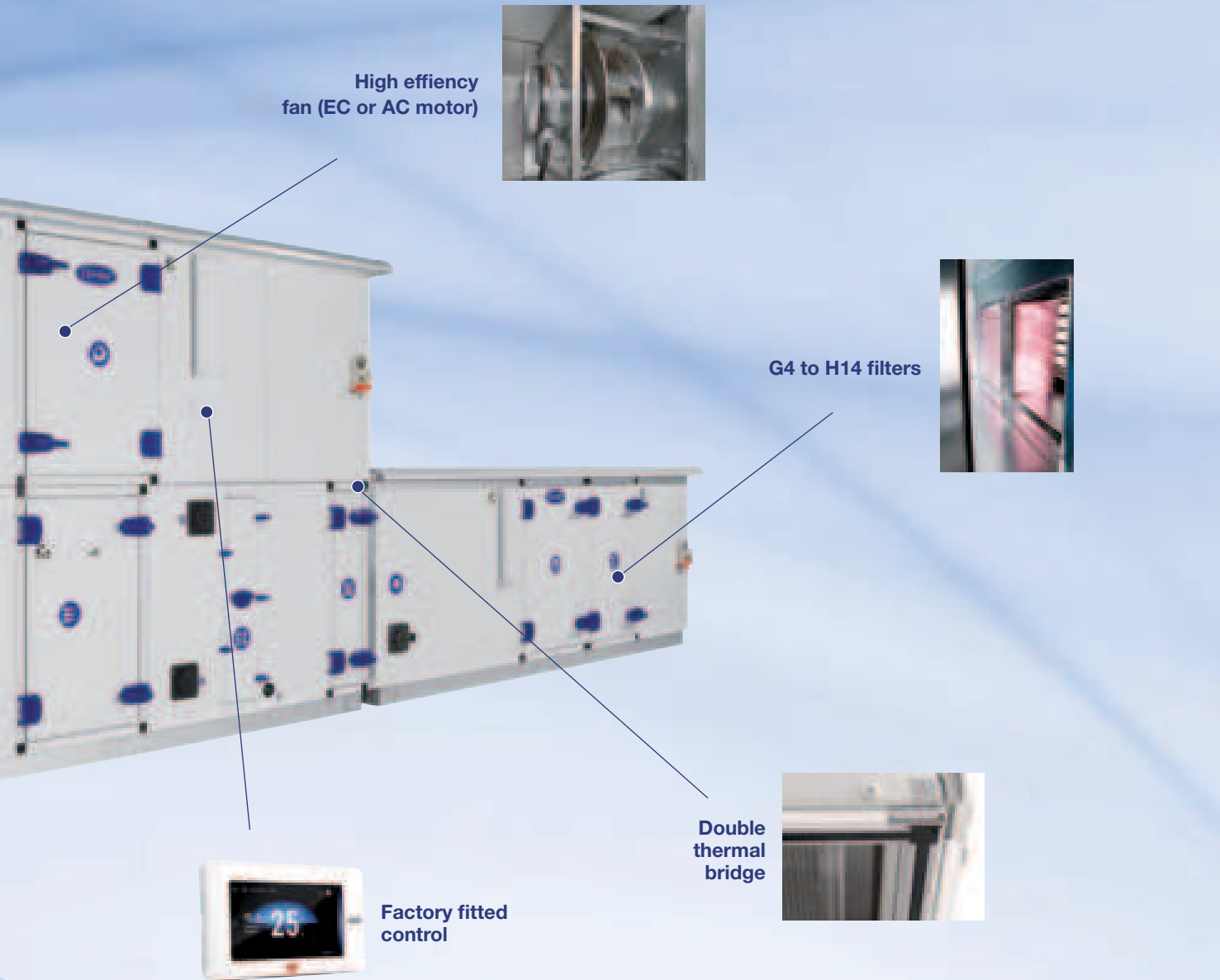
## INTEGRATED CARRIER CONTROLLER

The control panel and electric cables are fully integrated into the unit, factory assembled, configured and tested to ensure reliability and time savings. The control software offers Carrier's expertise in comfort and energy savings.



## KEY FEATURES

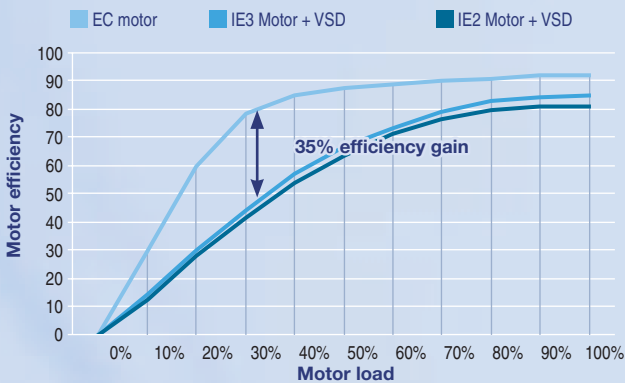
- **Extensive configuration possibilities:** the wide range of functions and options available allow fully customised solutions for all applications and all air volumes.
- **Easy installation:** Carrier's expert technicians ensure quick and easy installation to a high standard.
- **Green building certifications:** designed with a green building approach, the 39CP unit can play a part in achieving green building labels.
- **Heat recovery:** the 39CP offers different heat recovery solutions for all applications and performance levels (heat recovery wheel and plate heat exchanger for office application, run around coils solution for requirements without cross contamination, ...).



\*on request only

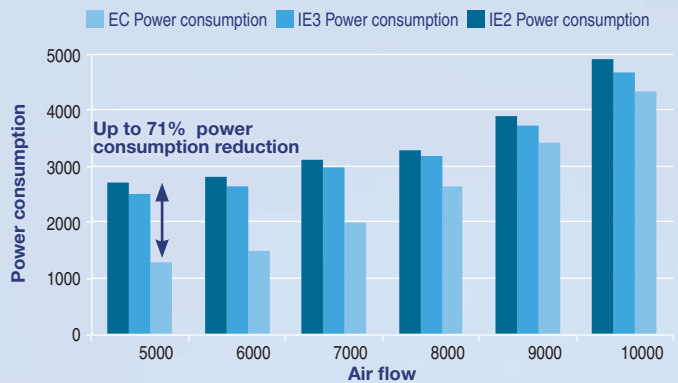
**Energy savings:** Along with equipment performance that complies with the level set by European regulation 1253-2014, the combination of plug fan impeller solutions, efficient AC or EC motors and precise control allows significant savings (see graph below).

**High Efficiency Motors**



E.g.: 4KW 4 pole motorPoles - Change in efficiency according to the motor load.  
 4% efficiency gain at full load (EC vs IE3 motor)  
 35% efficiency gain at 30% load (EC vs IE3 motor)  
 VSD= Variable Speed Drive

**Air flow smart control**

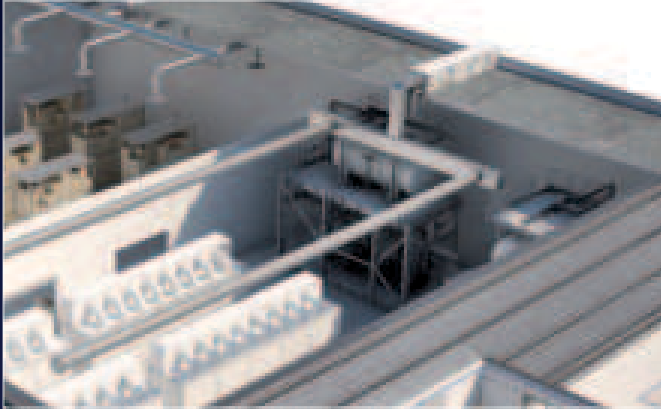


Smart control of the air flow speed allows significant savings: a 50% reduction in speed in unoccupied spaces reduces consumption by 71% in EC motor and 45% in IE2 and IE3 motors  
 Use of EC technology versus IE2 generates savings of -54 % in transient mode at 50%

# Specific solutions for specific needs



## Industry



### ■ Specific needs

- Flexibility
- ATEX solution
- Clean room processes

### ■ Carrier's solutions

- Customised offering with wide range of options
- Integrated explosion-proof features
- Dirty filter measurement system



## Healthcare



### ■ Specific needs

- Easy cleaning
- Compliance with national standards
- Minimum energy consumption

### ■ Carrier's solutions

- Smooth interior
- Cleanable 316L stainless steel drain pan
- Easy accessibility
- Wide Range of options
- High performance components



## Office



### ■ Specific needs

- Minimum energy consumption
- Acoustic and temperature control
- Value for money

### ■ Carrier's solutions

- High performance components: fan, heat recovery systems, smart control
- Low noise fans, sound attenuators, smart control
- High performance solutions which provide excellent value for money



# Carrier Service beyond your expectations

Carrier teams are committed to ensuring your peace of mind while supporting your business objectives throughout the lifecycle of your equipment.

## To meet your expectations, Carrier Service offers:

### ■ Proximity & Responsiveness

Carrier expert technicians are there to take action, quickly. The comprehensive and highly efficient maintenance processes mean your equipment will soon be back in action.

In the meantime you can rely on Carrier Rental Systems and spare parts availability, because downtime is not an option.

### ■ Expertise & Consultancy

Carrier teams' experience, a dense network of branches, top grade logistics and powerful information systems converge to continuously deliver a dedicated service.

Your Carrier experts, based on in-house calculation algorithms, can help you to find the right balance between protecting the planet and maximising your investments.

### ■ Proactivity

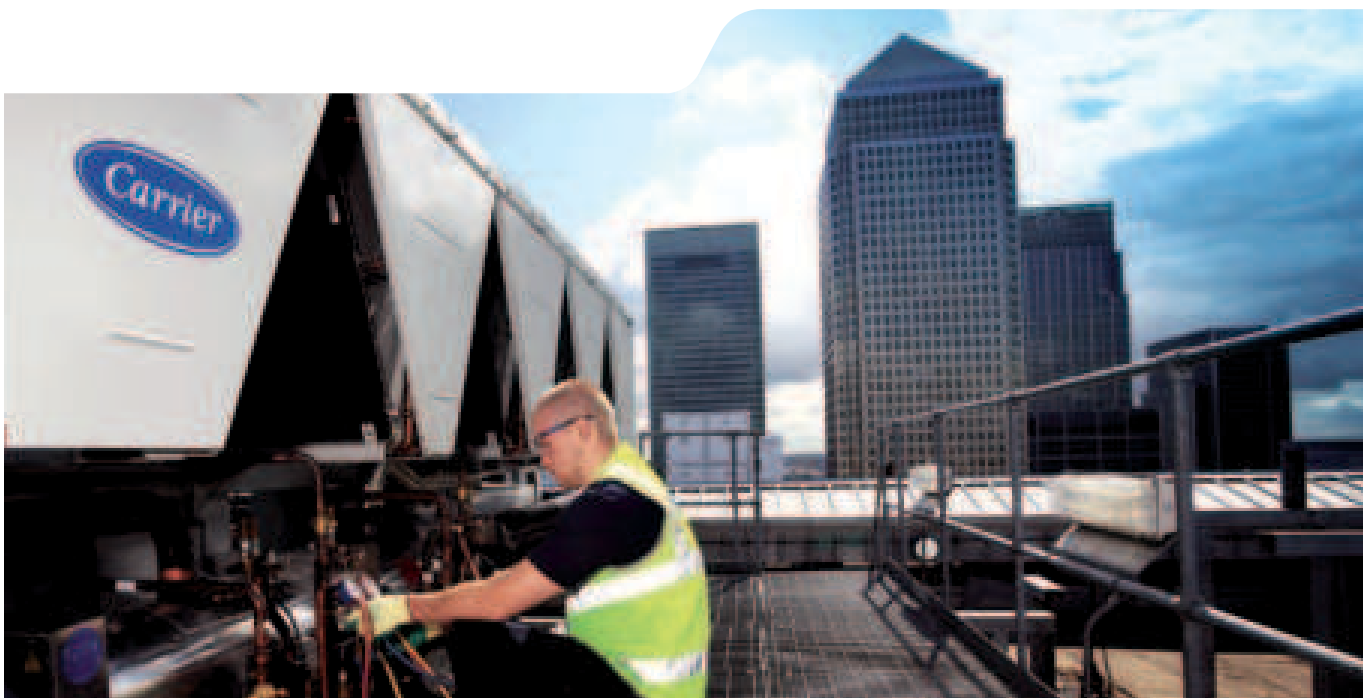
As your preferred partner, Carrier designs tailored maintenance programs to meet your goals and to optimise your business performance.

Present  
in more than  
**60**  
countries

**24/7**  
on-site  
availability

More than  
**110** years  
of experience

**Carrier** proposes an advanced service offer based on secure connectivity, allowing you to monitor your equipment in real time and receive recommendations from Carrier experts.



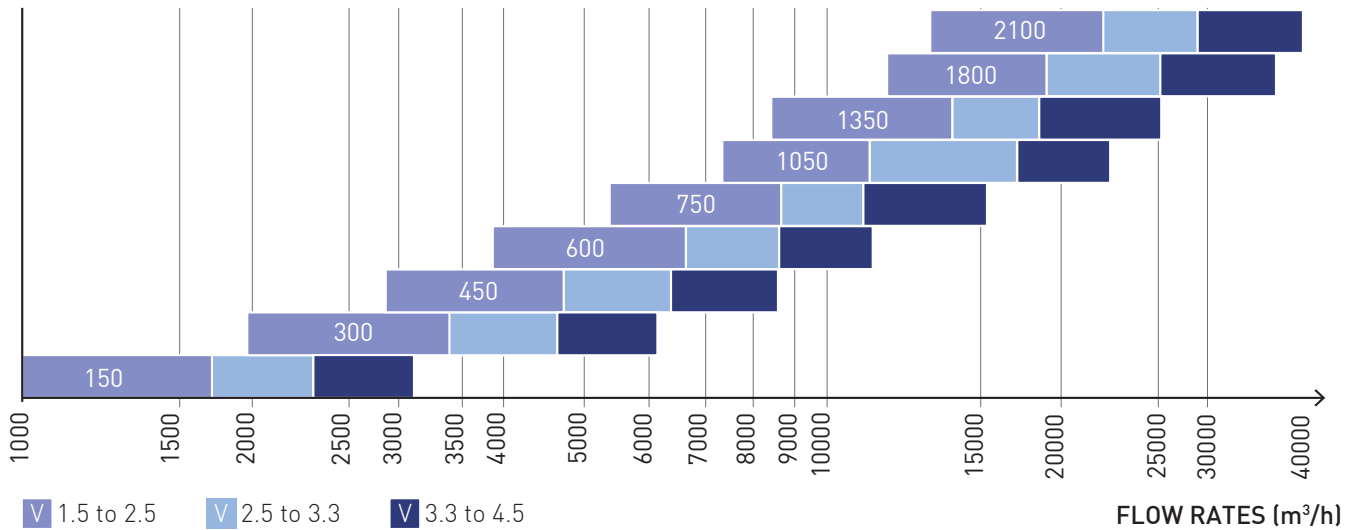
# 39CP Physical data



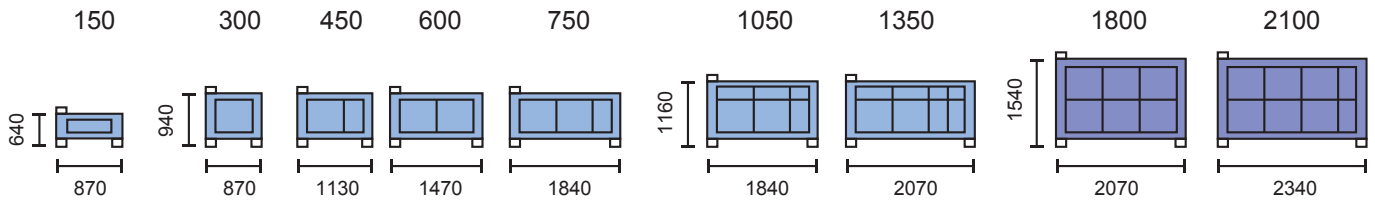
## Selection table

### SIZES

### AIR VELOCITY M/S



## AHU cross section dimensions (mm)



OPTIONS	39CP-L	39CP-H
PLATE HEAT EXCHANGER EFFICIENCY UP TO 85%	•	•
RECOVERY WHEEL EFFICIENCY UP TO 85%	•	•
RUN AROUND COILS EFFICIENCY UP TO 70%	•	•
HEATING AND COOLING COILS	•	•
ELECTRICAL HEATER	•	•
STEAM HUMIDIFIER	•	•
DOUBLE INLET FANS	•	•
PLUG FAN WITH AC MOTORS	•	•
PLUG FAN WITH EC MOTORS	•	•
FILTERS FROM G4 FROM H14	•	•
SOUND ATTENUATOR	•	•
CONTROL	•	•
DX COILS	•	•
SUPERHEATED WATER AND STEAM COILS	N/A	•
EXTERNALLY COATED CASING	STANDARD	STANDARD
INTERNALLY COATED CASING	•	•
STAINLESS STEEL CASING	N/A	•

• : Optional  
N/A : Not Available