

### PRODUCT SELECTION DATA

# AIR HANDLING UNIT



AHU for multiple applications

Designed to conform to standards EN 13053 and EN 1886

For all service sector, industry and healthcare environments

**39CP C hygienic version** 

39CP D hygienic version DIN 1946-4 compliant.

VDI 6022 option.

# 39CP

#### Air flow: 1000 to 30,000m3/h

#### Air handling unit: 39CP

The new range of 39CP air handling units is the latest generation of AHUs developed to meet the EN 1886 and EN13053 standards, integrating the most innovative components (high efficiency filters, heat recovery systems, EC fans, variable speed controllers, etc.).

This range has been designed to meet rigorous and stringent environmental requirements. As confirmation of its quality processes, the production facility has received certifications in the following standards: ISO 9001, ISO14001, ISO18001.

The 39CP range has EUROVENT AHU programme certification. This generation has been designed to meet these criteria, providing a high level of thermal classification, and ensuring it is suited for every application.

The range was developed by the European Air Side research and test center. It was designed using cutting edge digital resources, and all steps were confirmed by testing in climatic test and acoustic chambers.

The test center also enables CARRIER to offer its customers performance tests on manufactured products before they leave the facility in certain cases.

The painting, machining, panelwork, frame, fitting of gaskets, welding, and control tests are performed on production lines devoted entirely to the 39CP range.

The facility also produces air-water or refrigerant exchangers. Carrier uses its own calculating and sizing tools.

These factors give Carrier complete control of both its performances and its procurement cycles.

All of the above aspects combine to help create a high quality product which gives you complete satisfaction in a diverse range of applications, from offices and service sector administration to industrial processes and controlled environments in industry, satisfying also the healthcare requirements.



CARRIER participates in the ECP programme for 39CP range Check ongoing validity of certificate: www.eurovent-certification.com The 39CP range is designed for the service, industry and healthcare sector to meet different requirements in terms of air mixing, filtration, heating, refrigeration, dehumidification, humidification, ventilation, recovery and sound attenuation. It is available as a horizontally-mounted version for installation indoors or outdoors with a roof and accessories to protect it from the weather. The range is available in a single or dual-flow version.

Thanks to the broad spectrum of solutions on offer, and the product's excellent modularity, the specifications for this product always comply with the EN 13053 and EN 1886 standards, whatever its configuration.

#### **39CP L: tertiary sector applications**



- Casing resistance: class D2
- Casing airtightness: class L1 (-400 Pa)/ L2 (+700 Pa)
- Thermal transmission: class T3 (option T2)
- Thermal bridging factor: class TB3 (option TB2) - Filter bypass: class F9

#### 39CP H and 39CP C: multiple applications



- Casing resistance: class D1
- Casing airtightness: class L1
- Thermal transmission: class T2
- Thermal bridging factor: class TB1
- Filter bypass: class F9

The standard EN-1886, define the main construction features for Air Handling units.

Among most important features we have :

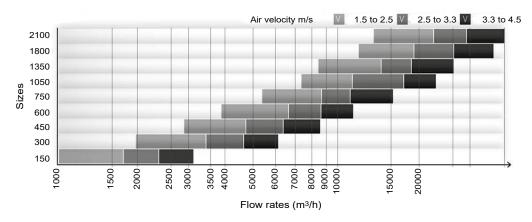
**Thermal transmittance** [W.m-2.K-1]: The heat flow per area and temperature difference through the casing of the air handling unit. **Thermal bridging factor** [-]: The ratio between the lowest temperature difference between any point on the external surface and the mean internal air temperature and the mean air-to-air temperature difference

Carrier 39CP range can be upgraded from T3/TB3 to T2/TB2 offering improved technical features and significant energy savings.

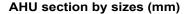
### RANGE

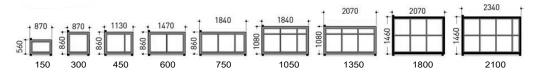
The 39CP segment 1 range consists of 9 sizes to handle air flow rates from 1000 to 30,000 m<sup>3</sup>/h.

- The diagram below is used to pre-select the required size according to:
  - The air velocity in the front active section of the heat exchange coils
  - The air flow rate to be handled.



#### Selection table





## **GENERAL DESCRIPTION OF THE 39CP RANGES**

### Casing

- Self-supporting panel construction up to size 2100
- Double-skin panels with 50 mm mineral wool insulation with long fibres with a high insulation coefficient.
- Moulded high strength bi-component polyurethane gaskets for the casing and door, guaranteeing a perfect seal.
- Inside of the AHU is perfectly smooth and even, with no protruding screws, as per the specifications in European standard EN 13053 (no internal handles).
- Doors hung on high quality frames, guaranteeing durability, performance and easy access for maintenance with adjustable hinges, external twist-lock handles and decompression system.
- AHUs delivered in several units are equipped with specific factory-fitted assembly pieces, which ensure perfect alignment to simplify assembly.
- Each component unit of the AHU is equipped with an 80 mm ground insulation frame and multifunction ergonomic supports (handling, assembly).
- Each component is fitted with its own service panels. This allows independent removal for each function.

### Standard:

- 39CP L
  - Conventional double-skin panelsExternal wall made from sheet metal with RAL 7035
  - lacquer coating - Internal wall made from Z275 galvanised steel

#### 39CP H

- Highly-insulated panels, with thermal bridge break profiles
- External wall made from sheet metal with RAL 7035 lacquer coating
- Internal wall made from Z275 galvanised steel

#### 39CP C

- Highly-insulated panels, with thermal bridge break profiles
- External wall made from galvanised steel with RAL 7035 lacquer coating
- Internal wall made from galvanised steel with RAL 7035 lacquer coating

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Textured RAL 7035 paintwork on external panels	Standard	Standard	Standard
Textured RAL 7035 paintwork on internal panels	Х	Х	Standard
Internal and/or external panels in 304 L or Z3CN 18.10 stainless steel	NA	Х	Х
Internal and/or external panels in 316 L or Z3CND 17.11.02 stainless steel	NA	Х	Х
Stainless steel indoor baseframe	Х	Х	Х
Sloped stainless steel indoor baseframe with drainage	NA	Х	Х
Galvanised ground insulation frame (h = 80mm)	Standard	Standard	Standard
Painted frame	Х	Х	Х
Stainless steel frame	NA	Х	Х
Factory-assembled AHU on common rack : max size 1350 or maximum length 6 m	Х	Х	Х
Container kit (for assembled air handling unit)	Х	Х	Х
Adjustable support feet with 60 mm extension	Х	Х	Х
Fixed extension feet up to 400 mm	Х	Х	Х
Sloped roof for outdoor mounting	Х	Х	Х
Louvres with grilles to match external casing finish	Х	Х	Х
Protective cover for external components to match external casing finish	Х	Х	Х
Factory-fitted cable raceway	Х	Х	Х
_ateral technical unit	NA	Х	Х
DIN 1946-4 hygienic option	NA	NA	Х

X Option

NA Not applicable

### Mixing and air intakes

The air inlet and mixing section may be installed at the intake, inserted between the functions or installed at the device outlet.

These functions are equipped with dampers formed of counterrotating profiled blades, with lateral gaskets, and driven by conrods.

These dampers are installed outside of or inside the casing, depending on the solution chosen.

Independent control of the louvres: manual, motorised or ready to be motorised

The functions provided depend on the selection:

- Isolation damper
- Two-way mixing with air intake
- Two-way flow distributions: top, front or lateral
- Three-way mixing: aligned, stacked or juxtaposed

Depending on the finishes:

#### 39CP L

- Class 1 galvanised steel blades and frame compliant with EN1751

#### 39CP H / 39CP C

- Class 3 aluminium blades and frame compliant with EN1751

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Servomotor operated damper	Kit	Kit	Kit
Manual operated damper	Х	X	Х
Class 3 damper with defrosting system	Х	Х	Х
Class 4 airtightness damper compliant with EN 1751	NA	Х	Х
Polyester coated face and bypass dampers (frame and blades)	Х	Х	Х
Stainless steel 304L damper	NA	Х	Х
Stainless steel drain pan	Х	Х	Х
Hinged access door	X(1)	X(1)	X(1)
Lift-off door	Х	X(1)	X(1)
Porthole on door	Х	Х	Х
230V bulkhead light	Х	Х	Х
Door contact switch	NA	Х	Х

(1) Availability depends on the configuration

X Option

#### **Filters**

To meet the requirements of all the applications, a very wide range of filter efficiencies, technologies and dimensions is available.

Across the entire range, and for each type of filter, cells with international dimensions of 24" x 24" and 12" x 24" are available.

On sizes 150 to 1350, compact filters which are 50mm thick are available in full section (FS) to optimise energy consumption.

Different types of filter assembly are available, depending on the efficiency level, technology and location within the AHU.

There are 6 specific assembly systems:

- Traditional tracks designed for efficiency levels G1 to M6: For Compact cells, 50 mm thick, side door Assembly B available for filters with international dimensions and Assembly B FS for filters with a full section

- Compressible tracks designed for efficiency levels G4 to F9 or Activated Carbon (urban pollution) for Compact cells and flexible or rigid bag with side door.

Assembly C for filters with international dimensions:

- Universal frames designed for efficiency levels G4 to F9, E10 or Activated Carbon (urban pollution) for Compact cells and flexible or rigid bag with access section and side door
- Assembly D for Absolute filters with international dimensions - Absolute large-media frames for EPA and HEPA Absolute cubic cells
- Assembly E for Absolute filters with international dimensions - Absolute plate for EPA and HEPA Absolute cubic cells for industrial applications (e.g. pharmaceuticals).

Assembly F for Cubic carbon filters with international dimensions

- Large-media frames for Activated Carbon cubic cells.

Description	Construction Code	Assembly	Efficiency <sup>(1)</sup>	Cell descriptive code
50mm flat metal filter	С	A or C	G1	Galvanised steel metal medium and frame
			G4	
50mm flat filter	С	A, B or C	M5	Galvanised steel metal frame and synthetic medium
Somm hat litter	U	A, D 01 C	M6	
			F7	
			G4	
50mm flat filter (full section) up to size	C FS	A FS or B FS	M5	Galvanised steel metal frame and synthetic medium
1350	010	ATO GIBTO	M6	
			F7	
			M6	
			F7	
292mm rigid bag filter	RBHHE	B or C	F8	Polypropylene frame and fibreglass medium
			F9	
			E10	
			G4	
380mm short flexible bag filter	SB	B or C	M5	Galvanised steel metal frame and synthetic medium
5			M6	
			F7	
	. –		M6	
600mm long flexible bag filter	LB	B or C	F7	Galvanised steel metal frame and synthetic medium
			F9	
	CUBIC		E10	
292mm Absolute filter	610x610	D or E	H13	Polypropylene frame and fibreglass medium
			H14	
292 mm rigid bag carbon filter + fine filter, std universal frame	RBHHE	B or C	Carbon+F7	Polypropylene frame, synthetic + carbon medium
Flexible carbon bag filter + 600mm long bag fine filter	LB	B or C	Carbon + F7	ABS frame, synthetic + carbon medium
292mm rigid bag carbon filter	RBHHE	B or C	Carbon	Carbon polypropylene frame
Cubic carbon filter	CUBIC 595x595	F	Carbon	Metal frame + carbon panel

C: 50 mm compact filter

C FS: 50 mm compact filter, full section

RBHHE: 290mm rigid bag filter

SB: 380mm short flexible bag filter LB: 600 mm long flexible bag filter

CUBIC: 292 mm cubic

(1) Carrier 39CP software offers the equivalent classifiation of the filters according the ISO 16890

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Lift-off door	Standard	Standard	Standard
Filter pressure tapping	Standard	Standard	Standard
Pressure tapping per filter stage	Standard	Standard	Standard
Additional filter set	X	X	Х
Galvanized steel driptray	X	X	Х
Stainless steel drip tray	X	X	Х
Liquid manometer (supplied loosely in a kit)	X	X	Х
Differential pressure switch	X	X	Х
Magnehelic pressure gauge (supplied loosely in a kit)	X	X	Х
Double glass porthole	X	X	Х
230V bulkhead light (supplied loosely)	X	X	Х
230V bulkhead light and wired to external switch	X	X	Х
Door contact switch	X	X	Х
Filter slide rails painted	X	X	Standard
Filter frame painted	X	X	Standard
304 L or 316 L stainless steel slide rails	X	X	Х
Stainless steel frontal access filter frame (fine filters •F")	X	Х	Х
Painted filter frame (EPA/HEPA filters)	X	X	Standard
Stainless steel filter frame (HEPA filters •H")	X	X	Х
Hatch for pressure measurement	NA	Х	Х

X Option

NA Not applicable

#### Plate heat recovery system

Three efficiency levels available: from 60% to 85% The plate heat exchangers are always equipped with a total bypass on fresh air and access door to the servomotor

Condensate drain pan on exhaust air side, made from galvanised steel with condensate drain piping as standard

Available in a stacked configuration for all sizes

Access door to the condensate drain pan(s)

In the standard construction, the heat exchanger has aluminium plates, and can be used routinely up to an air temperature of 90°C (if the plate heat exchanger is a component of an AHU, the standard limit temperature is  $80^{\circ}$ C). The leakage flow rate is 0.1%, the nominal flow rate for a pressure difference of 400 Pa between the 2 air streams.

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Pre-painted aluminium plates	X	X	Х
Condensate drain pan (exhaust air side) stainless steel	Х	Х	Х
Condensate drain pan (fresh air side) galvanised	Х	Х	Х
Condensate drain pan (fresh air side) stainless steel	Х	Х	Х
Paint on baffle, partition and support	Х	Х	Х
Plate exchangers components made of 304 L or 316 L stainless steel	NA	Х	Х
Painted bypass damper	Х	Х	Х
Stainless steel bypass damper	NA	Х	Х
Servomotor or manual damper operation	Х	Х	Х
Pressure tappings in intake and exhaust	Standard	Standard	Standard
Additional access door	Х	Х	Х
Door inspection window	x	x	x

X Option

NA Not applicable General description of the 39CP ranges

### **Rotary heat recovery system**

Three efficiency levels available: from 75% to 85%

- Corrugated aluminium fins
- Adjustable peripheral gasket to guarantee a minimum leak flow rate
- Lateral inspection panel

- Constant speed gear motor (230 / 400 V three-phase power supply)
- Maintenance-free ball bearing

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Gear motor and variable frequency drive for variable speeds from 0 to 10 rpm – 230 V single-phase	Х	х	х
Coated aluminium heat recovery wheel	Х	X	X
Hygroscopic heat recovery wheel (for humidity exchange)	Х	X	X
Enthalpic heat recovery wheel (for total power exchange)	Х	Х	X
Condensates drain pan	NA	Х	X
316 stainless steel drain pan	NA	Х	X
Indoor panels polyester coated	NA	Х	X
Indoor panels in 304 L or 316 L stainless steel	NA	Х	X
Pressure tappings	Х	Х	X
Purge sector	Х	Х	X
Door porthole	Х	Х	Х

X Option

NA Not applicable

### **Heating coil**

Fluids:

- Hot water
- Construction with copper tubes and aluminium fins.
- Maximum primary fluid temperature = 120 °C.
- Operating pressure for water: 8 bar as standard Higher pressures on consultation.
- Removable sealing flanges between the casing and manifolds (up to 3" diameter prevent damage to the sealing system during connection operations).

Depending on the type of coil and the diameters required, the manifolds and supply tubes are:

- Copper tubes with unions up to a diam. of 2"1/2.
- Grooved steel tubes for larger diameters.

#### - Superheated water

- Construction with steel tubes and aluminium fins.
- Maximum primary fluid temperature = 200 °C.
- Operating pressure for water: 30 bar max.
- Supply manifolds and tubes made from steel with smooth ends.
- Refrigerant
- Construction with copper tubes and aluminium fins.
- Supply tubes made from copper with smooth ends.
- Steam
- Max pressure 2 to 8 bar stainless steel tubes, aluminium fins.
- Manifolds and supply tubes are stainless steel tubes with smooth ends

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Smooth pipe coil (without fins)	Х	Х	Х
Superheated water coil	Х	Х	Х
Steam coil	Х	Х	X
Condensation coil	Х	X	X
Pressure tapping, upstream and downstream	X	X	Х
Precoated fins/ max. primary fluid temperature 110°C	Х	Х	X
Stainless steel water coil	Х	X	X
ALTENA treatment, max. temperature 160°C	X	X	X
HERESITE treatment, max. temperature 180°C	Х	Х	X
Copper fins coil	X	X	X
304 L or 316 L stainless steel tracks	X	X	X
304 L or 316 L stainless steel slide rails	Х	Х	X
Standard screw flanges	Kit	Kit	Kit
Stainless steel screw flanges	Kit	Kit	Kit
Quick connections kit (copper tubes) (victaulic type)	Kit	Kit	Kit
Threaded connections (steel tubes)	Kit	Kit	Kit
Frost protection thermostat (manual reset)	Х	Х	Х
Frost protection thermostat with automatic reset (supplied loose item)	Х	Х	X
Frost protection thermostat with automatic reset (factory fitted)	Х	Х	Х

#### **Electric heater**

- Shielded resistors in stainless steel scrolled finned tubes
- Connected to copper strips.
- Double insulation assembly.

- Equipped with two safety thermostats: first with manual reset, second with automatic reset.

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Slide rails painted	Х	Х	Х
304 L or 316 L stainless steel slide rails	Х	Х	X
304 L or 316 L stainless steel coil casing	Х	Х	Х
Single- or three-phase connection	Х	Х	Х

X Option

NA Not applicable

#### **Cooling coil**

- Chilled water / direct expansion coil
- · Construction with copper tubes and aluminium fins.
- Operating pressure for water: 8 bar as standard Higher pressures on consultation.
- Inclined condensate drain pan with drain pipes to be connected to a siphon on site.
- Droplet separator as standard if necessary, as an option on request.
- Removable sealing flanges between the casing and manifolds up to 3" diameter, preventing damage to the sealing system during connection operations.

Depending on the type of coil and the diameters required, the manifolds and supply tubes are:

- Copper tubes with unions up to a diam. of 2"1/2.
- Grooved steel tubes for larger diameters.
- Direct expansion evaporation
- Construction with copper tubes and aluminium fins.
- Inclined condensate drain pan with drain pipes to be connected to a siphon on site.
- Droplet separator as standard if necessary, as an option on request.
- Standard smooth copper refrigerant supply tubes (supplied capped)
- Manifold on fluid intake as standard.

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Chilled water coil	Х	Х	X
Direct expansion evaporation coil	Х	Х	X
Access panel on droplet separator	as	standard if compu	sory
Precoated fins/ max. primary fluid temperature 110°C	X	X	X
Stainless steel tubes coil	Х	X	X
Copper fins coil	X	Х	X
ALTENA treatment, max. temperature 160°C	X	X	X
HERESITE treatment, max. temperature 180°C	Х	X	Х
Slide rails painted	Х	Х	Х
Stainless steel slide rails	X	Х	Х
304 L or 316 L stainless steel coil casing	Х	Х	X
316 L stainless steel condensate drain pan	X	X	X
316L stainless steel hygienic drain pan	NA	Х	X
Insulated drain pan (cell foam)	Х	X	Х
Headers/elbows insulation	Х	X	X
All stainless steel droplet separator (frame and medium)	X	Х	X
Polypropylene blade droplet separator, galvanised frame	Х	X	Х
Polypropylene blade droplet separator, stainless steel frame	NA	X	X
Aluminium blade droplet separator, galvanised frame	NA	Х	X
Aluminium blade droplet separator, stainless steel frame	NA	X	Х
Pressure tapping, upstream and downstream	X	X	X
Standard screw flanges	Kit	Kit	Kit
Stainless steel screw flanges	Kit	Kit	Kit
Tubes with quick connections (copper tubes) (victaulic type)	Kit	Kit	Kit
Threaded connections (steel tubes)	Kit	Kit	Kit
Frost protection sensor support	Х	Х	Х

X Option

#### Fans

- Forward-curved dual-inlet fan.
- Backward-curved dual-inlet fan.
  Steel scroll and impeller.
  Belt and pulley transmission on the dual-inlet fans.
  Assembly on anti-vibration frame with flexible internal sleeve and damper mounts.
- Metal impeller plug fan turbine with AC motor Assembly on anti-vibration frame with flexible internal sleeve and damper mounts.
- Standard motor: asynchronous three-phase, 230 / 400 V
  50 Hz up to 3 kW 400 V 50 Hz from 4 kW, IP 55 protection, class F with PTC
- Steel plug fan with EC motor with integrated variator, three-phase 400 V n- 50 Hz
- Inspection hatch with bolts in compliance with the "MECHANICAL SAFETY" specification in the EN 1886 standard and the machinery directive.

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Forward curved centrifugal fan with pulley belt transmission	X	Х	Х
Backward curved centrifugal fan with pulley belt transmission	X	X	X
Plug fan with asynchronous motor	X	Х	X
EC plug fan	X	Х	X
Flush mounted panel	X	Х	X
Access panel mounted on hinges	Standard	Standard	Standard
Pressure tappings	X	Х	X
Door contact switch	Х	Х	X
Panel window	X	Х	X
Smoke detector (NF S61961)	X	Х	X
230V Bulkhead light (supplied loose item)	Х	Х	X
230V Bulkhead light fitted and wired to an external switch	Х	Х	Х
Anticorrosion painting for wheel and motor assembly (centrifugal and AC plug fan motor)	X	Х	Х
Stainless steel wheel and motor assembly (centrifugal and AC motor plug fan)	NA	Х	X
Anticorrosion painting for EC fan wheel	NA	Х	Х
Protection grill for centrifugal fan	Х	Х	X
Screened door protection	Х	Х	X
Housing for belt - pulley transmission	Х	Х	X
2 motors set in parallel	Х	Х	Х
Motor support on rails	Х	Х	Х
Variable frequency drive (supplied loose item)	Х	Х	Х
Variable frequency drive factory fitted	Х	Х	Х
Door switch factory fitted	Х	Х	X
Door switch ( supplied loose item)	X	Х	Х
Anti recirculation damper for fan	Х	Х	X

X Option

NA Not applicable

#### Sound attenuator

- Different lengths of baffle depending on the required attenuation.
- Mineral wool of different densities, the faces are covered with an anti-erosion shield.
- Galvanised panels.

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Baffle lengths (in mm)	600 - 900 - 1200 - 1500		
Anti schredding glass cloth	NA	Х	X
Polyester coated slide rails	X	Х	Х
Epoxy painted sheet metal baffles	X	Х	Х
304 L or 316 L stainless steel rails	X	Х	Х

X Option

### Standalone production steam humidifier

With steam production (standalone with electrodes)

The supply includes

- Aluminium steam distributor.
- Steamer with electrical cabinet and controller (IP20).
- Proportional or on/off control.

- Duct/cylinder connection.

- Condensate return tubes and connections.
- Three-phase 400 V 415 V supply voltage depending on capacity
- Min and max supply water conductivity limits 125 1250 microsiemens/cm (8000 800 ohm).
- Hardness of supply water 15 30 degrees (French).

OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Stainless steel	Х	Х	Х
Galvanised droplet separator	Х	Х	Х
Stainless steel droplet separator	Х	Х	Х
Double glass porthole	Х	Х	Х
230V Bulkhead light factory fitted and wired to an external switch	Х	Х	Х
Flush mounted panel	Х	Х	Х
Door contact switch	Х	Х	Х

X Option

NA Not applicable

### Control

The electrical box is integrated into the unit and the electrical cables are protected by an enclosed cable raceway, factory-fitted.

The unit can be supplied as a single unit, equipped with a control which is fully assembled and tested in the factory if it is formed of one block, or a multi-block assembled on the optional multi-block frame.

Plug & Play solution: the electrics box is powered by a 400 V + earth power supply

The control software for the 39CP range enables the following:

- Temperature regulation\*: sensor on supply air / return air / room air
- Humidification and dehumidification regulation\*: sensor on return or room air
- Fan management: constant flow / constant pressure
- Filter fouling management (4-stage filtration as maximum)
  Single-zone air quality management (CO<sub>2</sub>) sensor on return air or room air
- Water coils: cooling/heating/mixed/direct expansion (3 maximum)
- 2-way valve

- Three-way valve.
- Electric heater (4-stage heaters as maximum)
- Proportional and On/Off control
- 1 TRIAC type proportional stage (compulsory)
- Independent power supply, control by the AHU PLC.
- Steam humidifier with electrode:
- Independent power supply, control by the AHU PLC. Management of cooling modes: Free cooling / Night cooling
- Management of frost protection faults
- Fire protection
- Communication board available:
  - Modbus RTU RS485 / Modbus TCP IP / KNX / BACNET IP

The control does not enable the following elements to be managed:

- Steam coil / Superheated water coil / Glycol/water mix coils / Condenser coil
- Make-up / gas burner
- Adiabatic humidifier
- \* availability depends on options; see specific control document

#### Extra accessories:

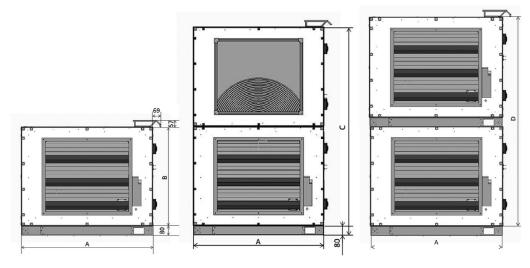
OPTIONS AVAILABLE PER RANGE	39CP L	39CP H	39CP C
Flexible sleeves	Х	Х	Х
Insulated flexible sleeves for the outside of the casing	Х	Х	Х
Rain protection hood (supplied with grill)	Х	X	Х
Additional protection grill	Х	Х	Х
Factory-assembled AHU on common rack : max size 1350 or maximum length 6 m	Х	X	X

X Option

# **DIMENSIONS**

### External dimensions and raceway details\*

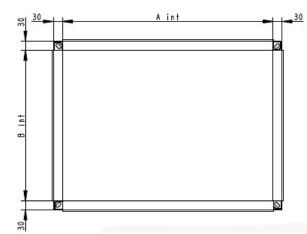
\* raceway optional



Sizes		Casing external dimension						
	Α	В	С	D	Block length <sup>(1)</sup>			
150	870	560	1122		250 < L < 2800			
300	870	860	1722		250 < L < 2800			
450	1130	860	1722		250 < L < 2800			
600	1470	860	1722		250 < L < 2800			
750	1840	860	1722		250 < L < 2800			
1050	1840	1080	2162		250 < L < 2800			
1350	2070	1080	2162		250 < L < 2800			
1800	2070	1460		3000	250 < L < 2800			
2100	2340	1460		3000	250 < L < 2300			

(1) Length excluding the unit end panel

### **Connection flanges**



- Reference 00: Lateral air intake

Reference 1: Air intake, small sectionReference 2: Air intake, large section

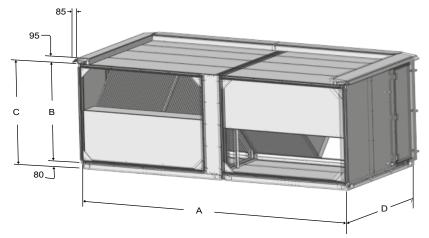
- Reference 3: Scroll fan discharge air intake

39CP L 39CP H		150	300	450	600	750	1050	1350	1800	2100
39CP C										
Reference 00 - LATERAL	Α	320	320	470	620	720	770	970	870	970
Relefence 00 - LATERAL	В	370	670	670	670	670	870	870	1270	1270
Reference 1 - SMALL SECTION	Α	515	515	775	1115	1485	1485	1715	1715	1985
	В	220	370	370	370	370	470	470	670	670
Reference 2 - LARGE SECTION	Α	515	515	775	1115	1485	1485	1715	1715	1985
Relefence 2 - LARGE SECTION	В	370	670	670	670	670	870	870	1270	1270
Reference 3: FAN DISCHARGE	Α	-	520	520	520	520	620	620	920	920
Relefence 5. FAN DISCHARGE	В	-	520	520	520	520	620	620	920	920

### DIMENSIONS

SIDE-BY-SIDE CONFIGURATION is available for 39 CP L , 39 CP H ,39 CP C in sizes 1800 and 2100.

This configuration is available in T2/TB2 39CP configurations and with PLATES HEAT EXCHANGER heat recovery.



Sizes	Casing external dimension						
	Α	В	С	<b>D</b> <sup>(1)</sup>			
60	4390	1460	1540	2000			
70	4930	1460	1540	2000			

(1) Length excluding the 23 mm unit end panel at each end

This configuration is useful for indoor and outdoor installations, as it has reduced dimensions, that makes it ideal for refurbishment jobs and also for outdoor installation as it can be easily hidden by an aesthetical structure.

Component's accessibility is improved, and weight / load distribution is more equilibrated, which makes easier for transport and maintenance operations.