



# indoor air quality and energy saving

Brochure UTEK 2020



**Utek**

indoor air quality and energy saving



## The Company

For about 20 years we have been designing and producing ventilation, air conditioning and heat recovery units for the residential and tertiary sector. **Over 150 employees**, divided into three factories covering over **15,000 square meters**, using technologically advanced operating machines. The quality of the production process (ISO 9001 from 2006). The sales network – the Dealer – It will support you with competence and professionalism: from design and supply of

## CMV: What it is and how it works



The Controlled Mechanical Ventilation (CMV) technology aims at giving a response to the growing demand for low-energy buildings. If, on one hand, airtight casing, high quality thermal insulation, airtight casing, airtight doors and windows and minimum thermal bridges help you to significantly cut your energy bill, on the other hand, these measures can worsen the salubrity of indoor air (invisible air pollution) because the building "does not breathe". The periodic change of air and evacuation of pollutants are extremely important to avoid condensate, molds on walls, stagnation of gases and bad smells...

Most of our time is spent in closed environments (almost 90%) and the air we breathe contains, in suspension, internal pollutants (materials used in construction) and outside, especially in cities and close to industries (smoke, smog, CO<sub>2</sub>). Opening the windows in air-conditioned environments is a waste of energy and allows noises and pollution to enter

A "Forced" air exchange system, in operation 24 hours a day throughout the year, replaces the manual opening of windows with considerable advantages: the ventilation control, energy wastage avoided and better air quality, thanks to the filtration... in other words, high level of comfort with low energy requirements!

In a traditional residential system, air is sucked up from service rooms (kitchen, bathrooms or laundry) along with its humidity load, noxious substances and bad smells, then it is filtered, pushed through the heat recovery unit and finally expelled outside. Conversely, in a high efficiency heat exchanger, almost all heat is released to the external fresh air which is sucked up, filtered, treated (heated, cooled or dehumidified depending on the season) and finally introduced into the living room and bedrooms.

UTEK residential units are included in the list of the ClimateHouse / KlimaHaus Agency have high energy class and best meet the certification requirements for buildings in high energy class.



## Objective: energy saving

The construction industry accounts for about 40% of total energy consumption; therefore, it represents a priority within the 20-20-20 targets: Directive 2002/91/EC (EPDB Energy Performance of Buildings Directive), replaced by Directive 2010/31/EU (EPDB2) sets the minimum standards for the construction of new buildings and the renovation of existing buildings.

Nearly zero-energy buildings it is already a widespread design standard (private buildings from 01-01- 2021, public buildings from 01 - 01 - 2018) for high energy buildings and passive buildings. Passive buildings cover most of their energy needs (heating, cooling, sanitary hot water, ventilation and lighting) with a minimum of energy requirements, without any "conventional" system, but using alternative sources. Double Flow Controlled Mechanical Ventilation with Heat Recovery is indispensable!

More and more demanding regulations require more and more efficient appliances (Regulations UE nr. 1253/2014 or EcoDesign) and an energy classification of residential ventilation units (Regulations UE nr. 1254/2014). Uniquely declared performance allows Consumers a conscious choice.

An advanced management of heat recovery (air quality probes or time bands) improves air quality and reduces operating costs.



ENERGY SAVING



#ThinkGreenActGreen



### HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS



| Unit       | Air flow                           | High eff. | Medium eff. | Configuration       | Enthalpic | Pag |
|------------|------------------------------------|-----------|-------------|---------------------|-----------|-----|
| FLAT       | from 130 to 580 m <sup>3</sup> /h  | Yes       |             | Horizontal/Vertical | Yes       | 5   |
| FLAT VERT  | 150 and 250 m <sup>3</sup> /h      | Yes       |             | Vertical            | Yes       | 5   |
| MICRO-FLAT | 60 and 110 m <sup>3</sup> /h       | Yes       |             | Horizontal          | Yes       | 5   |
| RC-TOP     | 150 and 250 m <sup>3</sup> /h      | Yes       |             | Vertical            | Yes       | 6   |
| HRE-RES    | 330 and 460 m <sup>3</sup> /h      | Yes       |             | Horizontal          | Yes       | 5   |
| MICRO-REV  | 230 m <sup>3</sup> /h              | Yes       |             | Vertical            | Yes       | 6   |
| REVERSUS   | 330, 460 and 600 m <sup>3</sup> /h | Yes       |             | Vertical            | Yes       | 6   |
| MICRO-V    | 230 m <sup>3</sup> /h              | Yes       |             | Vertical            | Yes       | 7   |
| UVD        | 690 m <sup>3</sup> /h              | Yes       |             | Vertical            | Yes       | 7   |
| JD         | from 100 to 800 m <sup>3</sup> /h  | Yes       |             | Horizontal          | Yes       | 7   |
| AURA       | 24 and 50 m <sup>3</sup> /h        | Yes       |             |                     |           | 8   |

### HEAT RECOVERY VENTILATION UNITS for COMMERCIAL and INDUSTRIAL BUILDINGS



| Unit            | Air flow                              | High eff. | Medium eff. | Configuration       | Enthalpic | Pag |
|-----------------|---------------------------------------|-----------|-------------|---------------------|-----------|-----|
| UTA             | 8.000 and 13.000 m <sup>3</sup> /h    | Yes       |             | Horizontal          |           | 8   |
| CRHE-H          | from 700 to 3.400 m <sup>3</sup> /h   | Yes       |             | Horizontal          | Yes       | 8   |
| CRHE-V          | from 700 to 5.600 m <sup>3</sup> /h   | Yes       |             | Vertical            | Yes       | 8   |
| HRE-TOP EC      | from 1.000 to 5.600 m <sup>3</sup> /h | Yes       |             | Horizontal          |           | 9   |
| UVR & UVR-TOP   | from 900 to 6.200 m <sup>3</sup> /h   | Yes       |             | Horizontal/Vertical | Yes       | 9   |
| FAI-ED & FAI-EC | from 300 to 3.500 m <sup>3</sup> /h   |           | Yes         | Horizontal/Vertical |           | 9   |
| DUE-ED          | from 300 to 4.000 m <sup>3</sup> /h   |           | Yes         | Horizontal/Vertical |           | 10  |
| DUO-EC          | from 300 to 9.000 m <sup>3</sup> /h   |           | Yes         | Horizontal          |           | 10  |

### AIR CONDITIONING & DEHUMIDIFICATION UNIT with HEAT RECOVERY (refrigeration unit or hydronic version)



| Unit               | Air flow                              | High eff. | Medium eff. | Configuration       | Enthalpic | Pag |
|--------------------|---------------------------------------|-----------|-------------|---------------------|-----------|-----|
| HRU tutti          | from 500 to 5.000 m <sup>3</sup> /h   |           | Yes         | Horizontal          |           | 10  |
| DEH & DEH IDRONICO | 150-300 and 250-500 m <sup>3</sup> /h | Yes       |             | Horizontal/Vertical | Yes       | 10  |

### AIR VENTILATION UNITS



| Unit   | Air flow                             | High eff. | Medium eff. | Configuration | Enthalpic | Pag |
|--------|--------------------------------------|-----------|-------------|---------------|-----------|-----|
| BOX    | from 500 to 6.000 m <sup>3</sup> /h  |           |             |               |           | 11  |
| FAR-EC | from 400 to 16.000 m <sup>3</sup> /h |           |             |               |           | 11  |
| FAN-T  | from 800 to 40.000 m <sup>3</sup> /h |           |             |               |           | 11  |

### FILTRATION UNITS



| Unit  | Air flow                             | High eff. | Medium eff. | Configuration | Enthalpic | Pag |
|-------|--------------------------------------|-----------|-------------|---------------|-----------|-----|
| CAFIL | from 200 to 12.000 m <sup>3</sup> /h |           |             |               |           | 11  |

Note - for the exact characteristics of each unit, see the TECHNICAL SHEETS [www.utek-air.it](http://www.utek-air.it)

# Our units



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS

Comply with EU Regulations 1253/2014 (ecodesign) and 1254/2014 (energy labeling)

NEW  
ARRIVAL



## FLAT, FLAT Enthalpic & FLAT vertical

High efficiency HRVU with **high-efficiency heat recovery**  
- Plug n' play version (switchboard and prewired control on the unit)

### CASING

- Self-supporting structure with polyurethane panels; exterior and interior of the unit in Aluzinc®

### CONFIGURATION AND INSTALLATION

- Horizontal: suspended ceiling or floor installation
- Vertical: wall installation (vertical ducts)

### HEAT EXCHANGER

- Counterflow aluminium height efficiency
- Automatic 100% bypass

### RANGE

- FLAT: 4 models with airflow from 130 to 600 m<sup>3</sup>/h
- FLAT VERTICAL: 2 models with airflow 130 and 300 m<sup>3</sup>/h

ENERGY CLASS (with control EVO-PH): **A**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

## HRE-RES & HRE-RES Enthalpic

High efficiency HRVU with **high-efficiency heat recovery**  
- Plug n' play version (switchboard and prewired control on the machine)

### CASING

- Self-supporting structure with polyurethane panels; exterior and interior of the unit in Aluzinc®

### CONFIGURATION AND INSTALLATION

- Horizontal: suspended ceiling or floor

### HEAT EXCHANGER

- Counterflow aluminium height efficiency
- Automatic 100% bypass

### RANGE

- Nr. 2 models; airflow: 330 and 460 m<sup>3</sup>/h

ENERGY CLASS (with control EVO-PH)

- HRE-RES 1: class **A**; HRE-RES 2: class **B**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH



## MICRO-FLAT

High efficiency HRVU with **high-efficiency heat recovery**

### CASING

- PPE case, weight 9 kg

### CONFIGURATION AND INSTALLATION

- Horizontal: in false ceiling or floor

### HEAT EXCHANGER

- Counter current, high efficiency, in PP

### RANGE and FANS

2 models:

- AC, with airflow 60 m<sup>3</sup>/h
- EC, with airflow 110 m<sup>3</sup>/h

ENERGY CLASS

- MICRO-FALT EC: class **A**
- MICRO-FALT AC: class **B**



NEW  
ARRIVAL



## RC-TOP

High efficiency HRVU with **high-efficiency heat recovery**  
 - Plug n' play version (electrical panel and control pre-wired on the unit)

### CASING

- Self-supporting structure with polyurethane panels; gray plastic coated exterior, Aluzinc® interior

### CONFIGURATION AND INSTALLATION

- Vertical: floor or on the wall

### HEAT EXCHANGER

- Counterflow height efficiency
- Automatic 100% bypass

### RANGE

- Nr. 2 models; airflow: 150 and 250 m³/h

### ENERGY CLASS

(with control EVO-PH) **A**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH



## MICRO-REV & MICRO-REV Enthalpic

High efficiency HRVU with **high-efficiency heat recovery**  
 - Plug n' play version (switchboard and prewired control on the unit)

### CASING

- Self-supporting structure with polyurethane panels; gray plastic coated exterior, Aluzinc® interior

### CONFIGURATION AND INSTALLATION

- Vertical: wall installation

### HEAT EXCHANGER

- Counterflow, high efficiency, alluminium
- Automatic 100% bypass

### RANGE

- Nr.1 model, airflow: 230 m³/h

### ENERGY CLASS

MICRO-REV (with EVO-PH control): **A**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH



## REVERSUS & REVERSUS Enthalpic

**High efficiency** HRVU

- Plug n' play version (switchboard and prewired control on the machine)

### CASING

- Self-supporting structure with polyurethane panels; gray plasticized exterior
- Inside 100% recyclable PPE for sizes 1 and 2
- Inside Aluzinc® for size 3

### CONFIGURATION AND INSTALLATION

- Vertical: wall installation
- Can be configured on site: quick change of air ducts (intake and / or recovery) only sizes 1 and 2

### HEAT EXCHANGER

- Counterflow PP height efficiency for size 1 and 2
- Counterflow aluminium height efficiency for size 3
- Automatic 100% bypass

### RANGE

- Nr.3 models, airflow: 330, 460 and 600 m³/h

### ENERGY CLASS

REVERSUS (with control EVO-PH): **A**

REVERSUS ENT. (with control EVO-PH): **B**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

## MICRO-V

High efficiency HRVU with **high-efficiency heat recovery**

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Self-supporting structure, sandwich panels painted exterior, Aluzinc® interior

### CONFIGURATION AND INSTALLATION

- Vertical: wall (very compact)
- In the kitchen furniture, retractable

### HEAT EXCHANGER

- Counterflow height efficiency, alluminium
- Automatic 100% bypass

NOTE: MICRO-V is NOT in the CasaClima list



### RANGE

- Nr. 1 model airflow: 250 m³/h

ENERGY CLASS (with control EVO-PH): **A**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

## UVD & UVD Enthalpic

High efficiency HRVU with **high-efficiency heat recovery**

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Self-supporting structure with polyurethane panels; exterior and interior in Aluzinc®

### CONFIGURATION AND INSTALLATION

- Vertical: wall
- attacks in the upper part

### HEAT EXCHANGER

- Counterflow height efficiency, alluminium
- Automatic 100% bypass



### RANGE

- 1 model airflow 690 m³/h

UVD (residential classification)

- ENERGY CLASS: **A**



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

## JD & JD Enthalpic (size 1 and 2)

**High efficiency** heat recovery module, for collective systems

- Passive recuperator (exchanger and filters, without fans)

### CASING

- Self-supporting structure insulated internally; exterior and interior in Aluzinc®
- Double condensate drain

### CONFIGURATION AND INSTALLATION

- Horizontal: counter-ceiling

2 centralized ventilation units serving the building (condominium or multi-family houses) or the column, combined with passive JD recuperators (exchanger and filters), one for each apartment.



### HEAT EXCHANGER

- JD 1 and 2: in counter current, high efficiency, in PP
- JD 3 and 4: countercurrent, high efficiency, in Al

### RANGE

- 4 models airflow from 100 to 800 m³/h

analogico



elettronico



## AURA/AURA evo

Decentralized high efficiency heat recovery unit for VMC (for single room)

### STRUCTURE (high strength, anti-static, anti UV)

- Telescopic tube in PVC or insulated
- High efficiency regenerative recovery unit
- Brushless DC fan, low consumption
- Internal grill design, with filter
- Folding or aesthetic external grill

### ELECTRONIC VERSION

- Electronic board on the machine 230V
- Master unit (remote control), up to 12 slaves
- 3 speeds + AUTO (T, U.R. and light sensors)

NOTE: CasaClima only size 2

### ANALOGIC VERSION

- Automatic operation (input / extraction air adjustable 35 ÷ 200 sec.) or manual (IN or OUT)
- Up to 4 units with 1 control / power supply

### AVAILABLE OPTIONS

- Predisposition for large construction sites
- Kit for corner installation

### RANGE

- 2 models airflow MAX 24 and 50 m³/h

ENERGY CLASS: **A**



HEAT RECOVERY VENTILATION UNITS for COMMERCIAL and INDUSTRIAL BUILDINGS

Compliant with EU Regulation no. 1253/2014 (EcoDesign)



## UTA

High efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- Horizontal: floor

### HEAT EXCHANGER

- High efficiency counter current, in aluminum
- Rotary exchanger available, also enthalpic
- automatic TOTAL by-pass

### RANGE

- 3 models airflow 8.000, 11.000 and 13.000 m³/h



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

CRHE-H

CRHE-V



## CRHE & CRHE Enthalpic

High efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- CRHE-H horizontal, inside or outside
- CRHE-V vertical, outside

H = horizontal arrangement; V = vertical arrangement

### HEAT EXCHANGER

- High efficiency counter current, in aluminum
- automatic TOTAL by-pass

### RANGE

- CRHE-H: 5 models, airflow from 700 to 3.000 m³/h
- CRHE-V: 7 models, airflow from 700 to 5.300 m³/h



Counterflow heat exchanger made of aluminum manufactured by RECUTECH





## HRE-TOP EC

High efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- Horizontal: floor

### HEAT EXCHANGER

- High efficiency counter current, in aluminum
- automatic TOTAL by-pass

### RANGE

- 4 models airflow from 1.000 to 5.600 m³/h



Counterflow heat exchanger made of aluminum manufactured by RECUTECH



## UVR Enthalpic & UVR-TOP Enthalpic

High efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles
- Without thermal break (T3-TB3) or with (T2-TB2)
- In 1 pc. or (optional) supplied 3 parts (size 3)

### CONFIGURATION AND INSTALLATION

- Horizontal UVR or vertical UVR-TOP, on the floor

### HEAT EXCHANGER

- Rotary, Enthalpic high efficiency aluminum
- ABSORPTION enthalpy exchanger available

### RANGE

- 6 models airflow from 600 to 7.000 m³/h



Aluminum rotary / enthalpy heat exchanger produced by KLINGERBURG



## FAI-ED & FAI-EC

Medium efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)

### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- Horizontal false ceiling or vertical floor

### HEAT EXCHANGER

- High efficiency counter current, in aluminum
- automatic TOTAL by-pass

### RANGE

- FAI-ED: 5 models airflow from 300 to 3.000 m³/h
- FAI-EC: 4 models airflow from 300 to 2.500 m³/h



Counterflow heat exchanger made of aluminum manufactured by RECUTECH

## DUO-ED & DUO-EC

Medium efficiency heat recovery ventilation unit

- Plug n 'play version (electrical panel and control pre-wired on the unit)



### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- Horizontal false ceiling or vertical floor

### HEAT EXCHANGER

- High efficiency counter current, in aluminum
- By-pass for automatic or manual freecooling

### FANS

- DUO-ED: 3 or 4 speed AC centrifugal fans
- DUO-EC: high efficiency EC electronic

### RANGE

- DUO-ED: 6 models, airflow from 300 to 4.000 m³/h
- DUO-EC: 7 models, airflow from 300 to 9.000 m³/h



Counterflow heat exchanger made of aluminum manufactured by RECUTECH



## AIR CONDITIONING AND DEHUMIDIFICATION UNIT

## HRU-ED, HRU-EX e HRU-EC

Air / air conditioning unit with heat recovery

- Plug n 'play version (electrical panel and control pre-wired on the unit)



### CASING

- Double paneled case internal and external in Aluzinc®
- Frame in extruded aluminum profiles

### CONFIGURATION AND INSTALLATION

- Horizontal: ceiling or floor

### HEAT EXCHANGER

- Cross-flow aluminum, passive recovery

### HRU-ED VERSION

- ON-OFF compressor, AC fans

### HRU-EX VERSION

- ON-OFF compressor, EC fans

### HRU-EC VERSION

- INVERTER compressor, EC fans

### RANGE

- 5 models airflow from 500 to 5.000 m³/h
- Powers (active + passive recovery) from 5 to 50 kW
- Rotary or scroll compressor, R410A gas



Counterflow heat exchanger made of aluminum manufactured by RECUPERATOR

Compliant with EU Regulations nr. 1253/2014 (EcoDesign) and 1254/2014 (energy labelling). Heat recovery units included in the list of ClimateHouse Agency of ventilation appliances

## DEH & DEH Enthalpic

Air dehumidification and renewal unit with high efficiency heat recovery

- Plug n 'play version (electrical panel and control pre-wired on the unit)



### CASING

- Self-supporting structure; external and internal Aluzinc®

### CONFIGURATION AND INSTALLATION

- Horizontal: counter-ceiling
- Vertical wall

### HEAT EXCHANGER

- counter-current with high efficiency, in PP

### DEHUMIDIFY & VERSIONS

- With refrigeration unit, gas R134a
- With hydronic coil

### RANGE

- DEH 1 airflow 150 (VMC) - 300 dehumidify m³/h
- DEH 2 airflow 250 (VMC) - 500 dehumidify m³/h

ENERGY CLASS: **B**



### BOX

High prevalence Box ventilation unit

#### CASING

- Self-supporting Aluzinc® structure with internal insulation
- Anti-vibrating joint on fan delivery
- Motors mounted on anti-vibrating supports

#### FANS

- Centrifugal forward blades, double suction coupled to the impeller, (ErP-2015)

#### RANGE

- Different models, air flow up to 6,000 m³ / h



### FAR-EC

Box ventilation unit, EC motors electronically controlled, high prevalence

#### CASING

- Double sandwich paneling case (internal and external parts) in Aluzinc®
- Frame in extruded aluminum profiles

#### FANS

- High efficiency EC electronics (ErP-2015)

#### RANGE

- 10 models airflow from 400 a 16.000 m³/h

For combination with different housing units:

- collective VMC, with JD recuperators
- industrial processes



### FAN-T

Ventilation unit with transmission fan (belt and pulleys)

#### CASING

- Available with simple polyethylene insulation or double sandwich panel on polyurethane foam insulation
- (internal and external parts) in Aluzinc®
- Frame in extruded aluminum profiles

#### FANS

- Centrifugal fans forward blades(ErP-2015)

#### RANGE

- Different models air flow up to 35,000 m³/h



### FILTRATION PLENUM

### CAFIL

Filter holder plenum to be installed in a channel (pre-filter or better filtration)

#### CONSTRUCTION

- Aluzinc® sheet case
- Circular sleeves with seal

#### FILTERS – classification according to ISO 16890

- coarse 65 % (ex G4) pleated synthetic fiber
- ePM1 70% (ex F7) low pressure drop
- ePM1 85% (ex F9) low pressure drop

#### RANGE

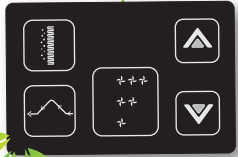
- 10 models with diam. from 200 to 710 mm



## Controls: air quality and savings

The units are supplied complete with control system and connection to the power supply network; Available 3 versions: **Simplified** CTR08-PH: essential functions; **Complete** EVO-PH: color touch screen, management and control of all functions, alarms and parameter settings; **Advanced** EVO D-PH-IP: for home automation protocol

### CTR-S CONTROL



Control panel with command buttons and signaling LEDs, remotable with cable length up to 100 meters (charged to the customer)

- Plug'n play machine completely pre-wired
- **3 speed fan management:**
  - . Range adjustment through management manual fan speed
- **Recovery management:**
  - . Presence of 3 temperature sensors on the 3 openings of the unit (no supply air)
  - . By-pass ON/OFF – Free-cooling/ free- heating
  - . Defrost management with 1 strategies:
  - \* Unbalance of return / delivery air flows

#### - Security features:

- . Filter status alarm by unit timing
- . Faulty probe alarm (bypass led and filter led alternate)
- . By-pass signal open (led on) and closed (led off)

\* For more information, refer to the control manual

### CTR-08 CONTROL



Control panel with control buttons and LED signaling, can be installed remotely - cable length up to 50mt (at customer's charge) - Plug'n play machine - fully pre-wired

- Fan Management: 3/4-speed fans:
  - . Air flow rate adjustment through manual fan speed management:
  - . Booster function – fans run at maximum speed, with a setup time limit given into the factory
- Recovery management:
  - . 4 temperature sensors on the 4 exits of the unit
  - . By-pass ON / OFF - Free-cooling / free-heating
  - . Defrost management with 2 strategies:
  - \* Unbalance of supply and return air flows rates
  - \* Activation of electric pre-heating (if present)

#### - Security functions:

- . Filter status alarm by timing the unit or by reading signal from differential pressure switches
- . Frost risk control – see the defrost strategies above
- . Machine operating status alarm (LED signal)

\* for more information see the control manual

### EVO-PH CONTROL



Functions and features like CTR-08, and also:

- Control panel with large coloured and intuitive display, can be installed remotely - cable length up to 50 mt (at customer's charge)
- Plug'n play machine - fully pre-wired
- Fan Management: 3/4-speed fans or with variable speed fans adjustable with 0-10V signal
- . Air flow rate adj. through fan speed management:
- \*Manual
- \*Automatic:
  - through weekly programming - setting the operating days, the time bands (day / night)
  - or using CO2 (EE80), CO2 / VOC (QPA 2002) or humidity (EE16) air quality sensors
  - or using a pressure/constant volume kit (COP/CAV)
- \*supply and return air flow unbalance - only for electronic fans or double inverters
- . Remote management of fan speed:
  - via a 0-10V signal
  - ON/OFF switch of the unit from remote contact.
- . Booster function – fans run at maximum speed - manageable in 3 different modes:
  - . remote contact with a fixed time (setup into the factory – from 1 up to 240 minutes)
  - . setting a time interval from the user,
  - . PIR proximity sensor, optional
- Fire function: extract fan run at maximum speed; supply fan is turned off
- PIR function (presence detector) with time interval that can be set by the user
- Humidity function: fans run at maximum speed if the humidistat limit set up is exceeded
- Summer function: to change the season one digital input is configured as summer.
- StopExt function: fan extraction turned off; fan supply run at speed set
- Recovery management:
  - . 4 temperature sensors on the 4 exits of the unit
- . By-pass ON / OFF or automatic modulating - Free-cooling / free-heating
- . Defrost management with 4 strategies:
  - \* Unbalance of supply and return air flows rates
  - \* Proportional activation of electric pre-heating (if provided)
  - \* Clean contact closure to allow a customized strategy for the user
  - \* Through by-pass
- . Management of electric or water post-heating (hot / cold)
- \* Automatic and proportional management with control of the supply air temperature and reaching the room temperature set point
- \*automatic ON / OFF management of the electric or water post-heating system
- Security functions:
  - . Filter status alarm by timing the unit or by reading signal from differential pressure switches
  - . Frost risk control – see the defrost strategies above
  - . Fan operation alarm (on DUO ED and FAI ED is required to be added an extra pressure switch)
  - . Temperature probe alarm
  - . Machine operating status alarm
- Other functions
  - . Change the language of the remote-control panel
  - . Management of "master & slave" - up to 4 units
  - . Management of recirculation damper
  - . Programmable digital out put

\* for more information see the control manual

## EVOD-PH IP CONTROL



Functions and features such as EVO-PH, and also:

- Suitable for building automation systems
- ModBus-TCP communication protocol (RJ-45) or optional ModBus-RTU (RS485)
- Publication of all status and alarm signals on the bus line
- Possibility to control the fans separately via modbus
- Receiving all remote management commands from the bus line
- WebServer availability (ModBus-TCP) for remote control programming and management, tramite internet browser without the need to use the keyboard (smartphone or tablet)

## Calculation programs



### Air distribution unit and system, budgeting

UTEK provides an user-friendly and intuitive-to-use software, **specific for CMV design**

- preparation of the house plan or use of an imported CAD (2D or 3D) file
- calculation of the room volume and airflows
- selection of the unit: UTEK or fictitious model (airflow / load-loss estimate) for final choice
- position of the exchanger and air distribution drawing (plenum, pipes, connections, vents, etc.)
- system balancing/load-loss estimate
- assessment/choice of the CMV unit (software [www.AirFactory.it](http://www.AirFactory.it) to assess the performance)
- printing of documents (plans with balancing, aeraulic calculations, specifications)

The list of materials with codes, descriptions, and prices is generated in a customizable XLS file.

### Choice of the unit

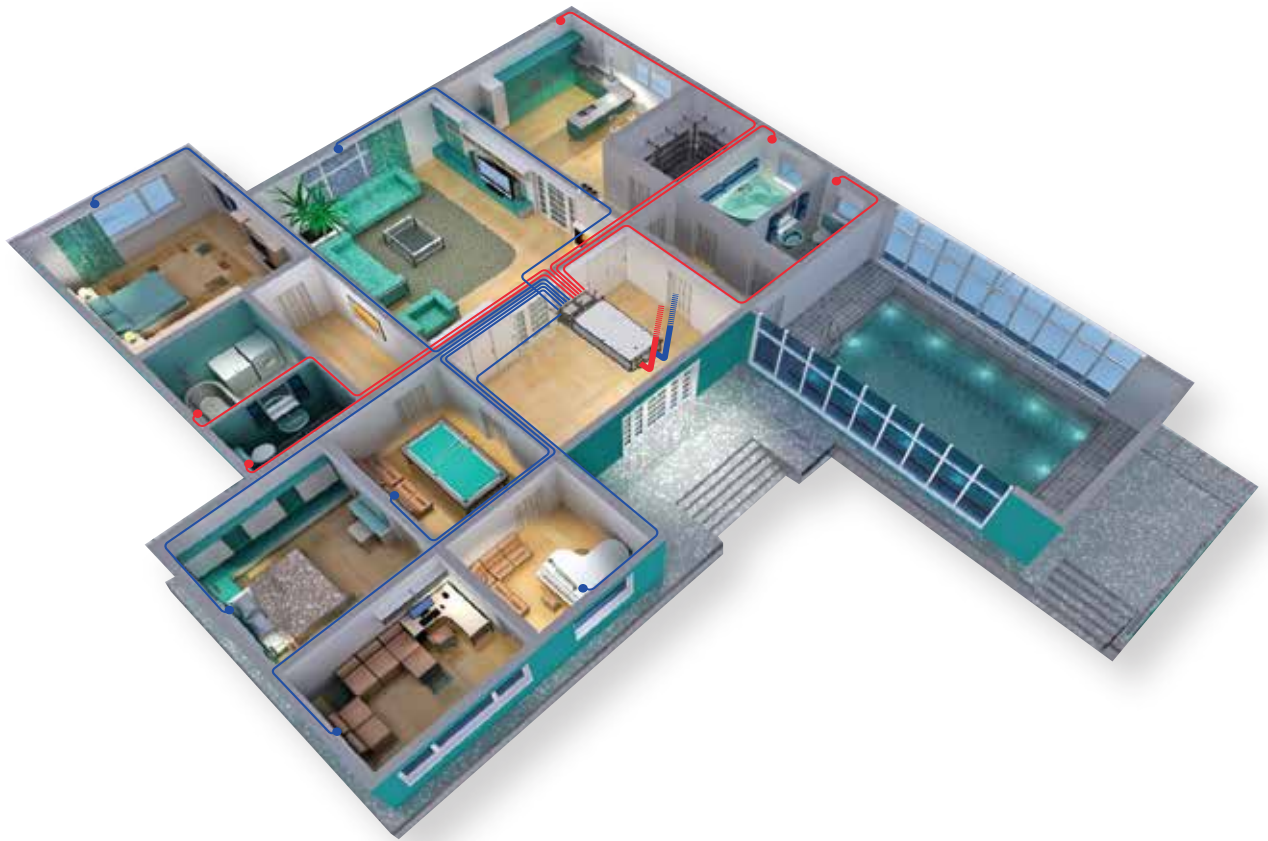
UTEK provides a web software for the selection and configuration of its heat recovery units: **a tool for Distributors and designers.**

- . Starting from project data, the configurator allows you to choose the unit (the system proposes alternatives)
- . you can set T and UR, unbalance the airflow, add the post-treatment, choose control, the accessories... the summary will allow you to check all the features/options of the recuperator and know consumption, efficiency and noise of the working point
- . detailed descriptions; you can store selections, edit them, print them



The AIR + air distribution system is a complete range of accessories – **positioning on site simple and quick, in suspended ceiling or underlay** – for air distribution to individual local (new buildings or to renovate).

Circular and oval sections are available, plenum distribution and air recovery, silencers, various fittings, diaphragms, valve terminals, plenum environment for grilles and valves ventilation, ecc. The product is made of **antibacterial and antimycotic material**.



**Cla**   
Air distribution product

Completion of the proposal – for the tertiary sector – **a wide range of dampers** (calibration, sealing, overpressure), **silencers, grilles, filter boxes, flow regulators...and special performances.**



# New filtration concept



**CLEAN AIR CUBE** best represents what is now needed: filtered, healthy and clean air

CLEAN AIR CUBE has been designed to increase the filtration capacity in the environments: It can be installed in 2 ways:

- Independent unit: can be equipped with different controls; from a simple potentiometer, to manually adjust the fan speed, up to different types of controls to adjust the air flow rate or pressure.
- By integrating an existing VMC system.

CLEAN AIR CUBE is equipped with several levels of filtration:

- **Prefiltration:** the units can house 2 pre-filters used both as prefiltration for a possible final absolute filter or be all existing filtration
- **Additional filter:** after the prefilter section it is possible to install an additional filter; for example a flat activated carbon filter, if you need to eliminate odors or VOC.
- **Final filtration:** after the additional filter, a HEPA or Electrostatic filter can be inserted

CLEAN AIR CUBE can also be equipped with a germicidal UV lamp

*For more information contact the sales representative*

