Utek

indoor air quality and energy saving

Brochure UTEK 2019

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 materials, to site support, to after-sales service.

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%) andthe air we breathe contains, in suspension, internal pollutants (materials used in construction) and outside,especially in cities and close to industries (smoke, smog, CO_2). **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.

The most efficient CMV systems consist of a **dual-flow heat recovery unit (centralized and automatically managed** expulsion of stale air and introduction of fresh air, **airflows never in contact, energy recovery** from expelled air) and an air distribution system (ducts, plenum, vents, etc.) Some of our units successfully meet the highest standards in terms of Energy Performance Certification of Buildings, included those set forth in the **KlimaHaus** and **PassivHaus** protocol.

CMV: advantages

A Controlled Mechanical Ventilation system provides:

Better living comfort

The human being is looking for a continuous improvement in living comfort: forced ventilation allows to treat the air, filtered and eliminate polluting and harmful substances… avoiding opening the windows (noise and pollution)

Greater value in the long term

A CMV system improves the energy class of the building (energy performance certificate, APE) and preserves its value over time by eliminating moisture, mold, etc.

Lower operating costs

High efficiency of the recovery of the energy contained in the air: lower operating cost of conventional systems and air exchange without having to open the windows (waste energy)

Lower environmental impact

Less dependence on traditional fuels (availability in decrease and increase in costs)

Objective: energy saving

By 2020, all states in the European Union have to comply with climate and energy directives:
. 20 % cut in greenhouse gas emissions from 1990 levels;
. 20 % improvement in energy efficiency;
. 20 % of energy from renewables

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 declar ed 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.

CMV: intended use

CMV units are generally used in single and multi-family housing units, offices and new commercial buildings, schools, wellness centres and gyms, hotels and restaurants, museums, cinemas and theatres, manufacturing premises, supermarkets. The operating principle is the same for all intended uses. The unit can be installed either on the floor, behind the wall, in the suspended ceiling or outdoor; the unit is invisible, except for the air supply and return grilles and vents present in the rooms.

CMV: termic by-pass

Winter: the external cold air is introduced into the living room and bedrooms after being heated inside the exchanger by the warm and stale air sucked up from the service rooms

Winter, warmest hours: the free-heating mode (automatic by-pass) is specifically designed to make the most out of the warmest hours of the day; the external air (warmer than the air inside) is introduced directly into the living room and bedrooms without passing through the heat exchanger

Summer: the external air (warmer) is introduced into the living room and bedrooms after being cooled down inside the exchanger by the stale and cooler air sucked up from service rooms

Summer, night and morning: the external cold air is introduced directly into the living room and bedrooms without passing through the exchanger in free-cooling mode (automatic by-pass), while the warm air is expelled directly without releasing its heat.

With the **termic by-pass**, compulsory from 01-01-2016, the outside air is injected directly into the room avoiding the passage in the heat exchanger, and thus the heat exchange. The drive is automatic thanks to the detection of the external and internal temperature.

In some days of the year the bypass goes into operation when the use of external air allows an energetic advantage, without causing discomfort. The UTEK untis are equipped with total by-pass (100% of outdoor air enters the room), indispensable for passive or high-energy buildings.

Plus UTEK

Easier access for maintenance of filters Classification ISO16890

High efficiency PP or Al counter-flow exchanger, automatic defrosting, also enthalpy version

Dirty filters alarm (differential pressure

Different control systems for a simple or advanced management.

High efficiency motor plug fans

Available with refrigerating unit (series DEH and HRU)

Range

		High efficiency	Medium efficiency	Horizontal	Vertical	On request ent. version	pages
HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS							
FLAT	130 and 220 m³/h	✓		✓	✓	✓	6
HRE-RES	330 and 460 m³/h	✓		✓		✓	6
MICRO-REV	230 m³/h	✓			✓		7
REVERSUS	330 and 460 m³/h	✓			✓	✓	7
MICRO-V	230 m³/h	✓			✓		8
UVD/UVT	690 e 1.200 m³/h	✓			✓	✓	8
JD	from 100 to 800 m³/h	✓		✓		✓	8
AURA	24 and 50 m³/h	✓					9
HEAT RECOVERY VENTILATION UNITS for COMMERCIAL and INDUSTRIAL BUILDINGS							
UVT	1.200 m³/h	✓			✓		8
UTA	8.000 and 13.000 m³/h	✓		✓			10
CRHE-H	from 700 to 3.400 m³/h	✓		✓		✓	10
CRHE-V	from 700 to 5.600 m³/h	✓			✓	✓	10
HRE-TOP EC	from 1.000 to 5.600 m³/h	✓		✓			11
UVR & UVR-TOP	from 900 to 6.200 m³/h	✓		✓	✓	✓	11
FAI-ED & FAI-EC	from 300 to 3.500 m³/h		✓	✓	✓		12
DUE-ED & DUO-EC	from 300 toa 4.200 m³/h		✓	✓	✓		12
HEAT RECOVERY VENTILATION UNITS with INTEGRATED AIR/AIR HEAT PUMP (CLIMATIZATION and DEHUM.)							
HRU-AC, HRU-EC & HRU-EX	from 500 to 5.000 m³/h		✓	✓			13
DEH & DEH HIDRONIC	150-300 and 250-500 m³/h	✓		✓	✓	✓	14
AIR VENTILATION UNITS							
BOX	from 500 to 6.000 m³/h						15
FAR-EC	from 400 to 7.600 m³/h						15
FAN-T	from 800 to 40.000 m³/h						15
UNITÀ DI FILTRAZIONE							
CAFIL	from diam. 200 to 710 mm						15

indoor air quality and energy saving

The **enthalpy heat exchanger recover latent and sensible energy from the extracted air;** i.e. it allows transferring water vapour from one flow to the other: the water vapour of the outgoing moist air condensates and is absorbed on one side of the exchanger porous membrane (nanocomposites); the recovered humidity is transferred to the other side of the membrane to the incoming fresh air. **No transfer of vapours, bad smells, etc.** No need for condensate drain; ordinary maintenance. Ideal for cold climates, because the introduced air is dry and would promotes a dry indoor environment if without enthalpy exchanger; moreover, in summer, it gets rid of the incoming air humidity (warmer and damper than indoor air).

Our units

HEAT RECOVERY VENTILATION UNITS (HRVU) for RESIDENTIAL BUILDINGS

Comply with EU Regulations 1253/2014 (ecodesign) and 1254/2014 (energy labeling) included into the ClimateHouse®/ KlimaHaus list for Energy

FLAT & FLAT Enthalpy

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

CASING
- Self-supporting, sandwich 22 mm injected polyurethane; Internal and external part in Aluzinc®

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

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTOR FANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre (internal) or Post electric post-heating (duct)

RANGE
- Nr. 2 models, airflow: 130 and 220 m³/h

ENERGY CLASS (with control EVO-PH): A

FLAT 1 and 2 are included in the list of the CasaClima / KlimaHaus Energy Agency of the devices for controlled mechanical ventilation with heat recovery.

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

HRE-RES & HRE-RES Enthalpy

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

CASING
- Self-supporting casing, sandwich panels 25 mm injected polyurethane; Internal and external part in Aluzinc®

CONFIGURATION AND INSTALLATION
- Horizontal: suspended ceiling or floor

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTOR FANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre (internal) or Post electric post-heating (duct)

RANGE
- Nr. 2 models; airflow: 330 and 460 m³/h

ENERGY CLASS (with control EVO-PH)
- HRE-RES 1: A ; HRE-RES 2: B

HRE-RES 1 and 2 are included in the list of the CasaClima / KlimaHaus Energy Agency of the devices for controlled mechanical ventilation with heat recovery.

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

NEW ARRIVAL

MICRO-REV & MICRO-REV Enthalpy

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

CASING
- Self-supporting casing, sandwich 23 mm injected polyurethane; gray plasticized exterior, inside Aluzinc®

CONFIGURATION AND INSTALLATION
- Vertical: wall installation

HEAT EXCHANGER
- Counterflow PP height efficency
- Automatic 100% bypass
- Available enthalpy version

MOTOR FANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre (internal) or Post electric post-heating (duct)

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 Enthalpy

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

CASING
- Self-supporting casing, sandwich panels 25 mm injected polyurethane gray plasticized exterior, inside Aluzinc
- 100% recyclable PPE internal frame for size 1 and 2
- internal Aluzinc for size 3

CONFIGURATION AND INSTALLATION
- Vertical: wall installation
- Can be configured on site (air ducts) for size 1 and 2

HEAT EXCHANGER
- Counterflow PP height efficency for size 1 and 2
- Counterflow aluminium height efficency for size 3
- Automatic 100% bypass

MOTOR FANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre (internal) or Post electric post-heating (duct)

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

ENERGY CLASS
- REVERSUS (with EVO-PH control): A
- REVERSUS ENT. (with EVO-PH control): B

REVERSUS 1 e 2 sono inseriti nella lista dell'Agenzia per l'Energia CasaClima/KlimaHaus degli apparecchi di ventilazione meccanica controllata con recupero di calore.

Counterflow heat exchanger manufactured by RECUTECH

MICRO-V

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

CASING
- Self-supporting sandwich panels
  10 mm polyethylene + 2 mm phono and thermal insulating, painted exterior, inside Aluzinc®

CONFIGURATION AND INSTALLATION
- Vertical: wall installation
- Hidden inside the kitchen furniture

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTOR FANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre (internal) or electric post-heating (duct)

RANGE
- Nr.1 model, airflow: 250 m³/h

ENERGY CLASS (with control EVO-PH): A

NOTA: MICRO-V is not in the CasaClima list

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

UVD & UVD Enthalpy & UVT

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

CASING
- Self-supporting sandwich panels
  36 mm injected polyurethane;
  Internal and external part in Aluzinc®

CONFIGURATION AND INSTALLATION
- Vertical: wall
- Attacks on the top

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTORFANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Hot or cold water post-treatment (duct)
- Pre or Post electric heating (duct)

UVD (residential classification)
- 1 model with air flow 690 m³/h
- ENERGETIC CLASS: A

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

JD & JD Enthalpy (size1 and 2)

High efficiency heat recovery module without fans for collective systems
- Passive recovery (exchanger and filters without fans)

CASING
- Self-supporting internally insulated casing internal and external parts in Aluzinc®
- Double condensate drain

CONFIGURATION AND INSTALLATION
- Hrizontal:ceiling installation

HEAT EXCHANGER
- JD1 & 2 : High efficiency PP counterflow heat exchanger
- JD 3 & 4 : High efficiency, Al counterflow heat exchanger

RANGE
- 4 modelli con portate aria da 100 a 800 m³/h

2 centralized ventilation units in the building service (condominium or apartment buildings) or column, combined with passive recovery JD (exchanger and filters), one each apartment.

analogico elettronico

AURA/AURA evo

Heat recovery unit for high efficiency DECENTRALIZED VMC (for single room)

STRUCTURE (high resistance, anti-static, anti UV)
- PVC telescopic tube or insulated
- High efficiency regenerative recovery unit
- Brushless DC fan, low consumption
- Design internal grill, with filter
- External folding or aesthetic grill

ELECTRONIC VERSION
- Electronic board on the 230V machine
- 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 adjustable air 35 ÷ 200 sec.) or manual (IN or OUT)
- Up to 4 units with 1 control / power supply

AVAILABLE OPTIONS
- Preparation for large construction sites
- Kit for corner installation

RANGE
- 2 models with airflow MAX 24 and 50 m³/h

ENERGETIC CLASS: A

UTA

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

CASING
- Casing made up of sandwich panels, internal and external parts in Aluzinc®; 45 mm injected polyurethane
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontale: on floor

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Available also with rotative heat exchanger
- Automatic 100% bypass

MOTORFANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Post water or electric heating, inside
- Electrical pre heating (internal)
- Additional modules: AF/AC or gas coil, silencer

RANGE
- 2 models with airflow 8.000 and 13.000 m³/h

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

CRHE-V

CRHE-H

CRHE & CRHE Enthalpy

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

CASING
- Casing double paneling, internal and external parts in Aluzinc® injected polyurethane
- CRHE-H thickness 25 mm / CRHE-V thickness 36 mm
- Frame made of extruded aluminum profiles

CONFIGURATION AND INSTALLATION
- CRHE-H horizontal, inside or outside
- CRHE-V vertical, outside
- Available the "mirrored" version with inspection panels/

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTOVENTILATORI
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Post-treatment: AF/AC, gas or electric, internal
- PRE electric heater (internal for CRHE-V)

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

H = horizontal layout
V = vertical layout

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

HRE-TOP EC

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

CASING
- Double paneling case, inside and outside in Aluzinc®; 36 mm injected polyurethane
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal: on floor

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

MOTORFANS
- High efficiency EC plug fans

AVAILABLE OPTIONS
- Post-treatment: AF/AC, gas or electric, internal
- Pre electric heater (duct)

RANGE
- 4 models with airflow from 1.000 to 5.600 m³/h

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

UVR Enthalpy & UVR-TOP Enthalpy

High efficiency HRVU
- Plug n' play version (switchboard and prewired control on the machine)
- Rotary Enthalpy exchanger

CASING
- Double paneling case internal and external in Aluzinc® 45 mm injected polyurethane
- Frame made of extruded aluminum profiles
- Standard T3-TB3
- Thermal break T2-TB2 available on request
- Available in monobloc or dividend in 3 parts, in function of the needs

CONFIGURATION AND INSTALLATION
- UVR horizontal (inside and outside)
- UVR-TOP vertical (inside and outside)
- Available the "mirrored" (inside and outside)

HEAT EXCHANGER
- Rotary Enthalpic aluminum high efficiency
- Variable speed heat recovery wheel
- Absorption rotary (SORPION) available
- Automatic 100% bypass

MOTORFANS
- High efficiency EC high efficiency

AVAILABLE OPTIONS
- Electrical Pre-heater

UVR – external module for:
- POST water heating coil
- POST changeover coil
- POST DX coil

UVR-TOP
- Inside the POST water heating coil
- External module for POST changeover coil
- External module for POST changeover coil

RANGE
- 6 models with airflow from 600 to 7.000 m³/h

Advantages:
- ErP2018 on all the working curves
- Adjustable rotation speed 5÷10 R.P.M. optimize the heat exchange
- Low pressure drop and energy consume
- No condensation/ freezing problem ideal for the Nordic climates

Rotary/enthalpic heat exchanger manufactured by KLINGENBURG

FAI ED & FAI-EC

Medium efficiency HRVU
- Satisfy ErP-2018 requirements (efficiency >73 %)

CASING
- Double paneling case, internal and external parts in Aluzinc®; 25 mm injected polyurethane
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal or vertical
- Available the "mirrored" version with inspection panels/-maintenance on the opposite side

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic 100% bypass

H = horizontal layout
V = vertical layout verticale

MOTORFANS
- FAI-ED Centrifughi AC a 3 o 4 velocità
- FAI-EC: elettronici EC ad alta efficienza

AVAILABLE OPTIONS
- Plug n' play versions (switchboard and prewired control on the machine)
- Electrical pre-heater, inside
- Post water or electric heating, inside
- Post treatment: AF / AC or gas, in to the duct

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

Counterflow heat exchanger made of aluminum manufactured by COVENT

DUO-ED & DUO-EC

Medium efficiency HRVU
- Satisfy ErP-2018 requirements (efficiency > 73 %)

CASING
- Double paneling case, internal and external parts in Aluzinc®; 25 mm injected polyurethane
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- DUO-ED: horizontal counter-ceiling or vertical floor
- DUO-EC: horizontal counter-ceiling
- Available the "mirrored" version with inspection panels/ maintenance on the opposite side

HEAT EXCHANGER
- Counterflow aluminium height efficency
- Automatic defrost
- Automatic 100% bypass or manual for freecooling

MOTORFANS
- DUO-ED: AC centrifugal at 3 or 4 speeds
- DUO-EC: high efficiency EC electrical

AVAILABLE OPTIONS
- Plug n' play versions (switchboard and prewired control on the machine) or simplified sheet
- Electric pre-heating, water(AC/AT) or electric post-heating, post treatment AF/AC (to duct)

RANGE
- DUO-ED: 6 models with airflow from 300 to 4.000 m³/h
- DUO-EC: 5 models with airflow from 300 to 4.000 m³/h

Counterflow heat exchanger made of aluminum manufactured by RECUTECH

NEW ARRIVAL

HRU-AD, HRU-EC & HRU-EX

Medium efficiency Air/air conditioning unit with heat recovery unit
- Plug n' play version (switchboard and prewired control on the machine)

CASING
- Casing made up of double panels; internal and external parts in Aluzinc®; 36 mm injected polyurethane
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal: sceiling or floor

HEAT EXCHANGER
- Cross-flow heat exchanger

HRU-ED VERSION
- Rotative or scroll compressor, gas R410A
- multi-speed AC fans
- 5 models:, airflow: from 500 to 5.000 m³/h

HRU-EX VERSION
- Rotative or scroll compressor, gas R410A
- multi-speed EC fans
- 5 models:, airflow: from 500 to 5.000 m³/h

HRU-EC VERSION
- Rotative or scroll compressor with inverter, gas R410A
- EC electronic fans
- 5 models:, airflow: from 500 to 5.000 m³/h

AVAILABLE OPTIONS (into the duct)
- Electrical pre-heater
- Water (AC or AF/AC) or electric post-treatment

Counterflow heat exchanger made of aluminum manufactured by RECUPERATOR

NEW ARRIVAL

DEH & DEH Enthalpy

Conforming to EU Regulations no. 1253/2014 (EcoDesign) and 1254/2014 (energy labeling)

High efficiency Heat recovery dehumidification and air renewal unit
- Plug n' play version (switchgear and prewired control on the machine)

CASING
- Self-supporting structure made in Aluzinc®; internal and external parts; 22 mm injected polyurethane (above and below in single sheet metal isolated)

CONFIGURATION AND INSTALLATION
- Horizontal: suspended ceiling installation
- Vertical: on the wall

CONTROL PANEL (remote)
- Contact for dehumidification start/stop (by external management system)
- R.H probe integrated for management of the dehumidification, you can deactivate it from the control
- Integration sensitive power control summer and winter
- Home automation protocol MODBUS RTU / RS485

ENERGETIC CLASS: B

HEAT EXCHANGER
- Counterflow PP height efficency

MOTORFANS
- High efficiency EC plug fans

DEHUMIDIFY & VERSIONS
- With refrigeration system, R134a
- With hydronic battery (H_2O IN 7 °C / OUT 12 °C)

AVAILABLE OPTIONS
- Sonde CO_2 and VOC/CO_2

RANGE
- DEH 1 airflow 150 (VMC) - 300 m³/h dehumidify
- DEH 1+: airflow 200 VMC - 400 m³/h dehumidify
- DEH 2 airflow 250 m³/h (VMC) - 500 m³/h dehumidify
- DEH 2+: airflow 300 VMC - 600 m³/h dehumidify

DEH is used for combination with radiant cooling even of existing plants. One only unit for high efficiency CMV and CMV + dehumidification when needed. Indeed, if the humidity level is too high, to avoid condensation I can not cool.

The moisture problem must be resolved as quickly as possible; in dehumidification/recirculation mode the air flow can be doubled compared to CMV mode. The air is then treated and dehumidified (ventilation + recirculation from clean rooms).

AIR VENTILATION UNITS

BOX

Ventilation units boxed at high prevalence

CASING

- Self supporting structure made in 1 mm thick. Aluzinc® sheet, with 5 mm thick. adhesive internal insulation
- Anti-vibration joint on fan delivery
- Motor fixed on anti-vibration supports

MOTORFANS

- Centrifugal fans forward blades, double suction, coupled with the impeller, high efficiency (ErP-2015)

RANGE

- Several models, airflow: up to 6.000 m³/h

FAR-EC

High head electronic in-box ventilation units

CASING

- Casing made up of sandwich panels (internal and external parts made of Aluzinc®) with injected polyurethane foam insulation core, thickness 25 mm and density 42 kg/m³
- Frame made up of extruded aluminium profiles
- Motor's support structure made in galvanized steel

For combination with several housing units:
- Collective VMC, with JD recuperators
- Industrial processes

MOTORFANS

- Electronic EC hight efficency (ErP-2015)

AVAILABLE OPTIONS

- Manual speed control CVR
- Pressure operation and constant flow Kit
- Evolved control (CO_2, U.R., T, ...)

RANGE

- Nr.8 models; airflow: from 400 to 7.600 m³/h

FAN-T

Ventilator with belts and pulleys transmission (Belts and pulleys)

CASING

- Casing made up of Aluzinc® panels (internal and external parts)
- Available with 5 mm-tick polyethylene insulation core or double sandwich panel with polyurethane foam, thickness 25 mm and density 42 kg/m³
- Frame made up of extruded aluminium profiles

MOTORFANS

- Forward blades centrifugal fans (ErP-2015)

AVAILABLE OPTIONS

- Manual speed control RVT

RANGE

- Several models; airflow: up to 35.000 m³/h

AIR FILTRATION UNITS

CAFIL

Air-filter plenum for channel installation (Pre-filter or better filtration)

CASING

- 10/10-tick structure made of Aluzinc® sheet
- Circular spigots with rubber sealing ring
- Inspection panel
- Filter holding frame equipped and perimeter tightness sealing

FILTERS - classified according to EN 779

- coarse 65 % (ex G4) pleated filter made of synthetic fibre
- ePM1 70% (ex F7) low-load-loss filter
- ePM1 85% (ex F9) low-load-loss filter

RANGE

- Nr. 10 models, airflow: 200 to 710 mm

Accessories

SENSORS (only for units set on VAV variable air volume)

CO_2/ VOC, CO_2 and U.R. sensor

duct or wall

MANAGEMENT (fans EC)

KIT constant PRESSURE or FLOW CAV

POST and PRE heating coil (duct)

post-heating coil, hot water (80 – 70 °C) – BA-AC

post-heating coil, temperate water (45 – 35 °C) – BA-AT

post-treatment coil, cold (7 – 12 °C) and hot water – BA-AF/AC

post-heating coil, electric – REL-M (1phase) or REL-T (3phases)

Electric heaters (duct) PRE or POST-heating, thermostatic or electronic

VARIOUS

Air distribution Plenum X-AIR, on the unit (for FLAT, HRE RES, JD and DEH)
Protection cowl with net
Roof
Circular or rectangular silencers
Circular dampers
Rectangular grills and dampers
Servomotors

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: fessential 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

CONTROL CTR08-PH

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 machine
. **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

CONTROL EVO-PH

Functions and features like CTR-08, and also:

- Control panel with large coloured and intuitive display, 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 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 fun 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 machine
. 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
. Programable digital out put

* for more information see the control manual

CONTROL EVOD-PH IP

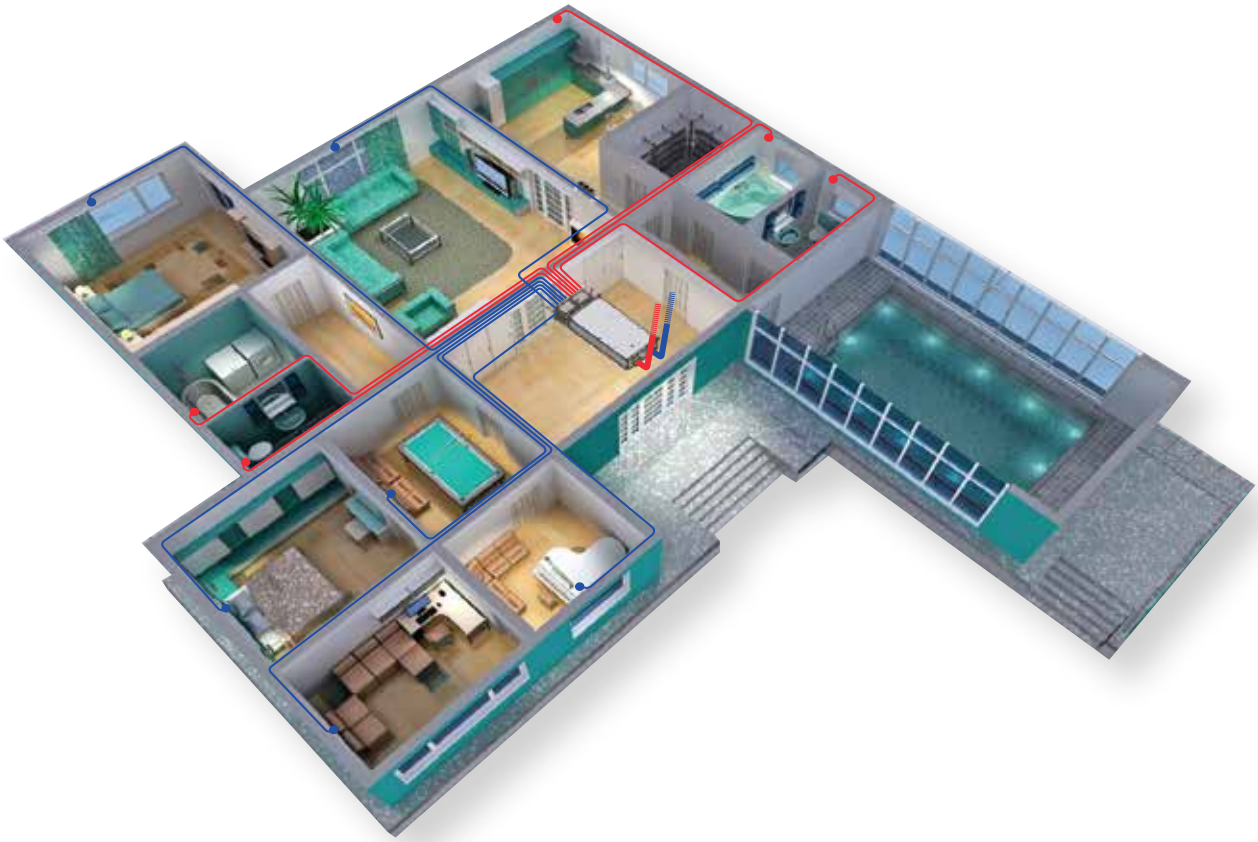
Functions and features such as EVO-PH, and also:

- 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)

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.

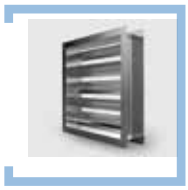


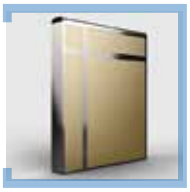


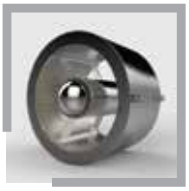



Cla
Air distribution product

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.





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 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

Our business philosophy

Passion

love for what we do

Flexibility

our client is our long-term partner, we listen to his needs and provide effective solutions

Technical innovation

we provide innovative and quality products aimed at saving energy and protecting the environment

Satisfaction of the CUSTOMER

Responsibility

our first promise is for the environment, for our employees,for our customers

Leadership

our employees are the company, they are the heart of all business processes aimed at continuous improvement

indoor air quality and energy saving

BROCHURE_2019_EN

Made in Italy

C.L.A S.r.l. Via Nazionale,132 23036 San Giacomo di Teglio (So) Italy | ☎ +39 0342 786116 | utek-air.it cla-air.it | info@cla-utek.it