ErP 2016

ErP 2018

Utek

indoor air quality and energy saving

HEAT RECOVERY VENTILATION UNITS
for RESIDENTIAL BUILDINGS

HEAT RECOVERY VENTILATION UNITS
for COMMERCIAL and INDUSTRIAL BUILDINGS

HEAT RECOVERY VENTILATION UNITS with
INTEGRATED AIR/AIR HEAT PUMP
(CLIMATIZATION and DEHUMIDIFICATION)

AIR FILTRATION UNITS

AIR VENTILATION UNITS

AIR+

AIR DISTRIBUTION SYSTEM

The company

UTEK has been committed to designing and manufacturing high energy-efficient air ventilation, treatment and conditioning units for residential, commercial and industrial buildings since 1999; special focus is given to heat-recovery, achieving high values of energy efficiency. The actual **quality** of the whole production process (ISO 9001 since 2006) is recognized at European level and is key to our growth and to the success of new partnerships.

Values such as respect for our final users and employees and **attention to the health and environmental impacts** (ISO 14001 since 2008) of our products are at the heart of our daily activities.

A **professional and qualified sales network** – the Distributor – will support you: design and selection of units, supply of material, after-sales support ... we help our Customers make their projects come true!

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...

We spend more and more time inside closed rooms (an estimated 90% of our time) and the air we breathe contains internal (such as building materials) and external pollutants (such as smoke, smog, CO_2), especially in metropolitan areas or close to factories. A low-ventilated room causes a higher level of humidity, which in turn leads to the formation and concentration of molds, dust mites, fungi, bacteria and pollutants. **Opening the windows in an air conditioned room is not only a waste of energy, but it also let noises and pollution come in...**

The solution consists of a 24h, year-round "forced" air change system to replace manual window opening. This system gives you the possibility to control air volumes by restricting the change of air and, therefore, the waste of energy to a minimum for better indoor air quality (impossible if you open the windows)...in other words, **a high level of comfort with lower energy consumption!**

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.); in the event of more than one flat, the system can come with INDIVIDUAL (each flat is totally independent), COLLECTIVE (passive self-recovery and centralized fans) or CENTRALIZED recovery unit (a single unit serving the entire building). Heat recovery helps to slightly reduce the dimensioning of other devices destined to the production of warm and cool air.

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

A "forced" ventilation system allows you to constantly introduce filtered air inside the rooms, while getting rid of polluting and harmful substances, molds and bad smells...- moreover, there is no need to open the windows (external noises and pollution): living comfort goes hand in hand with progress (technology, materials, regulations).

Lower operating costs

Almost insignificant operating costs throughout the useful life of the property; recovery of the energy contained in the expelled air (air thrown away by opening the windows) and introduce adequate air change volume (impossible when you open the windows)

Greater value in the long term

A CMV system helps you not only to upscale your building energy class, but also to protect its value in the long term by getting rid of humidity, molds, etc. The Energy Performance Certification is becoming more and more important in sales and rental activities alike. (new construction or renovation).

Lower environmental impact

Less dependent on expensive, cost growing and non-re-newable fuels

Objective: "nearly zero-energy buildings"

The European Union has set a number of ambitious targets, known as the "20-20-20" targets concerning a range of climate and energy policies that the EU Member States must meet by 2020:
. 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, known as nZEB will be the standard of new construction by 31st December 2020 (for buildings occupied or owned by public authorities the deadline is 31st December 2018): high energy class and passive buildings. Passive buildings – a concept that affects all types of buildings – require a very little energy source to cover most of their energy needs (heating, cooling, domestic hot water (DHW), ventilation and lighting): i.e. without any "conventional" system and using alternative sources. **The dual-flow Controlled Mechanical Ventilation technology is critical for new buildings.**

Stricter requirements require increasingly efficient equipment (EU Regulation no. 1253/2014 or EcoDesign) and energy rating of ventilation units (EU Regulation no. 1254/2014 or Energy Labelling), with label (compulsory from 1st January 2016 for Residential Ventilation Units): the label will contain the following information: exchanger efficiency values, fan consumption and sound level.

An automatic management of the fans speed is key to boost efficiency; an advanced control such as UTEK EVO-PH is the right choice. This control collects indoor air quality values such as relative humidity, concentration of CO_2 (as indicator of the presence of people) and volatile organic components (VOC as indicator of bad smells and irritant materials).

The control analyses all values and gives specific orders to the ventilation unit to guarantee the **optimal operation in terms of air quality and operating costs**, i.e. a better energy class. EVO-PH control is available on request.

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: modes

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

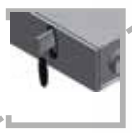
Summer, night and morning: the external cold air is introduced directly into the living room and bedrooms without passing through the exchanger in free-cooling mode (automatic by-pass), while the warm air is expelled directly without releasing its heat.

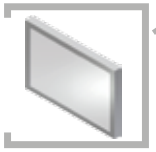
By means of the BY-PASS device, air is placed directly into the rooms, avoiding the passage in the exchanger, and therefore the heat exchange. The operation takes place automatically by detecting the temperatures outside and inside; it occurs on certain days of the year when the external conditions are favorable. From 1 January 2016 is mandatoryCon il dispositivo di **BY-PASS** l'aria esterna viene immessa direttamente in ambiente, evitando il passaggio nello scambiatore, e quindi lo scambio termico. L'azionamento è automatico grazie alla rilevazione delle temperatura esterna ed interna; si verifica in alcuni giorni dell'anno quando le condizioni esterne sono favorevoli. Dal 1° gennaio 2016 è obbligatorio.

Plus UTEK

Different control systems for a simple or advanced management.

Panels made of Aluzinc® with injected polyurethane foam insulation core





Easier access for maintenance of G4, F7 or F9 filters

High efficiency motor plug fans

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

Dirty filters alarm (differential pressure switch)

Available with refrigerating unit (series DEH and HRU)

Range

High efficiency | Medium efficiency | Horizontal | Vertical | MIN - MAX airflow (m³/h) | pagine

HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS

		High efficiency	Medium efficiency	Horizontal	Vertical	pagine
AURA	24 e 50 m³/h	●				6
FLAT	130 e 220 m³/h	●		●	●	6
HRE-RES	330 e 460 m³/h	●		●		6
JD	100 e 200 m³/h	●		●		6
JD-ENTHALPIC	100 e 200 m³/h	●		●	●	6
MICRO-V	250 m³/h	●			●	7
REVERSUS	330 e 460 m³/h	●			●	7
REVERSUS-ENTHALPIC	330 e 460 m³/h	●			●	7

50 100 150 200 250 300 350 400 450 500 550 600 650 700 750

200 300 400 600 800 1.000 2.000 3.000 4.000 5.000 6.000 8.000 10.000 12.000 14.000

HEAT RECOVERY VENTILATION UNITS for COMMERCIAL and INDUSTRIAL BUILDINGS

UTA	8.000 e 13.000 m³/h	●		●		8
CRHE-H	da 700 a 3.400 m³/h	●		●		8
CRHE-V	da 700 a 5.600 m³/h	●			●	8
HRE-TOP EC	da 1.000 a 6.000 m³/h	●		●		8
ROTOR-H EC	da 900 a 6.200 m³/h	●		●		9
FAI ED-H/V	da 300 a 3.500 m³/h		●	●	●	9

50 100 150 200 250 300 400 500 1.000 1.500 2.000 2.500 3.000 3.500

HEAT RECOVERY VENTILATION UNITS with INTEGRATED AIR/AIR HEAT PUMP (CLIMATIZATION and DEHUMIDIFICATION)

				pagine
HRU	da 1.500 a 3.500 m³/h	●	●	10
DEH and HYDRONIC DEH	150-300 e 250-500 m³/h	●	●	10
DEH-ENT and ENT. HYDRONIC DEH	150-300 e 250-500 m³/h	●	●	10

100 200 400 600 800 1.000 2.000 3.000 4.000 5.000 6.000 8.000 10.000 12.000 14.000

AIR FILTRATION UNITS

		pagine
CAFIL	from diam. 200 to 710 mm	11

100 200 400 600 800 1.000 2.000 3.000 4.000 6.000 8.000 10.000 20.000 30.000 40.000

AIR VENTILATION UNITS

BOX	da 500 a 6.000 m³/h		
FAR-EC	da 400 a 7.600 m³/h		11
FAN-T	da 800 a 40.000 m³/h		11

N.B. – for further information on each unit, please refer to the TECHNICAL SPECIFICATIONS at www.utek-air.it

Products

HEAT RECOVERY VENTILATION UNITS (HRVU) for RESIDENTIAL BUILDINGS

Comply to UE Regulations for EcoDesign 1253/2014 and 1254/2014
Indoor installation with ambient temperature between 0 and + 45 °C

FLAT

High efficiency HRVU with high-efficiency heat recovery
-Plug n' play version (switchboard and prewired control on the machine)
-Total by-pass for automatic free-cooling
-Included in the KlimaHaus® list (FLAT 2)

NEW

CASING
- Self-supporting casing made up of sandwich panels with injected polyurethane foam insulation core, external structure and internal parts made in Aluzinc® thickness 22 mm and density 42 kg/m³;

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

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- G4 exhaust air/ F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
-Water or electric post-treatment (duct)
-Electric pre-heating (internal)

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

ENERGY CLASS (with control EVO-PH)
- class A

HRE-RES

High efficiency HRVU with high-efficiency heat recovery
-Plug n' play version (switchboard and prewired control on the machine)
-Total by-pass for automatic free-cooling

NEW

CASING
- Self-supporting casing made up of sandwich panels with injected polyurethane foam insulation core, external structure and internal parts made in Aluzinc® thickness 25 mm and density 42 kg/m³;

CONFIGURATION AND INSTALLATION
- Horizontal: suspended ceiling or floor installation

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- M5 exhaust air/ F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water or electric post-treatment (duct)
- Electric pre-heating (duct)

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

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

JD

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

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

CONFIGURATION AND INSTALLATION
- Horizontal: ceiling installation

HEAT EXCHANGER
-High efficiency PP counterflow heat exchanger

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air

RANGE
- Nr. 2 models; airflow:100 and 200 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.

JD-ENT

High efficiency heat recovery module without fans for collective systems
- ENTHALPIC Exchanger

NEW

RANGE
- Nr. 2 models; airflow:100 and 200 m³/h

OTHER CHARACTERISTICS
- Same a JD

MICRO-V

High efficiency HRVU
- Plug n' play version (switchboard and prewired control on the machine)
- Total by-pass for automatic free-cooling

CASING
- Self-supporting casing made up of white lacquered sheet sandwich panels for the external and Aluzinc® for internal parts with polyethylene insulation sheet 10 mm tick and 2 mm-tick sound proofing and heat insulating sheet

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

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air
- Dirty filters alert: by hours counter

AVAILABLE OPTIONS
- Electric pre-heating (internal)
- Sound attenuator module

RANGE
- Nr.1 model, airflow: 250 m³/h

ENERGY CLASS (with control EVO-PH): A

REVERSUS

High efficiency HRVU
- Configurable on site (supply/return ducts can be connected to the top and to the bottom of the unit)
- Plug n' play version (switchboard and prewired control on the machine)
- Total by-pass for automatic free-cooling

CASING
- Self-supporting casing made up of grey plasticized sheet sandwich panels with injected polyurethane foam insulation core, thickness 25 mm and density 42 kg/m³
- 100% recyclable PPE internal frame

CONFIGURATION AND INSTALLATION
- Vertical: wall installation
- Can be configured on site (air ducts)

HEAT EXCHANGER
- High efficiency PP counterflow heat exchanger
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water or electric post-treatment (duct)

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

ENERGY CLASS (with control EVO-PH): A

REVERSUS - ENT

High efficiency HRVU with ENTHALPY heat exchanger

NEW

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

OTHER CHARACTERISTICS
- Same as REVERSUS

ENERGY CLASS (with control EVO-PH): B

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).

AURA

High efficiency heat recovery unit for DECENTRALIZED CMV (for individual room)
-Included in the KlimaHaus® list

NEW

CASING (high resistance, anti-static, anti UV)
- PVC telescopic pipe or insulated
- High efficiency rigenerative recuperator
- DC brushless fan, low consumption
- Internal grid, with filter
- Folding external grid, or aesthetic
- Easy maintenance

ELECTRONIC VERSION
- On-board electronic 230Volt
- Controls and status display on front side
- The master unit (remote control), 12 slaves
- Operation: Manual (IN or OUT) or AUTO (input / Air extraction managed by T sensor) + R.H. sensors and light

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

AVAILABLE OPTIONS
- Preparation for large projects
- APP (IOS, Android, Microsoft)
- Set for corner installation

RANGE
- Nr. 2 models MAX airflow: 24 and 50 m³/h

ENERGY CLASS (with control EVO-PH) : A

HEAT RECOVERY VENTILATION UNITS (HRVU) for COMMERCIAL AND INDUSTRIAL BUILDINGS

Comply to UE Regulations for EcoDesign 1253/2014
OUTDOOR installation with ambient temperature between -15° and + 50°C

UTA

NEW

High efficiency HRVU
- Plug n' play version (switchboard and prewired control on the machine)
- Total by-pass for automatic free-cooling

CASING
- Casing made up of sandwich panels with injected polyurethane foam insulation core, thickness 45 mm and density 42 kg/m³ (internal and external parts made of Aluzinc®)
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal: floor installation

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- M5 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water or electric post-heating (internal)
- Electric pre-heating (internal)
- Extra modules: cold water or gas batteries, sound attenuators
- Grilles, dampers, silencers and valves H_2O

RANGE
- Nr.2 models, airflow: 8,000 and 13,000 m³/h

CRHE

High efficiency HRVU
- Plug n' play version (switchboard and prewired control on the machine)
- By-pass for automatic free-cooling

CRHE-H

CRHE-V

CASING
- Casing made up of sandwich panels (internal and external parts made of Aluzinc®) with injected polyurethane foam insulation core, density 42 kg/m³
-CRHE-H 25 mm-tick
-CRHE-V 36 mm-tick
-Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
-CRHE-H horizontal
-CRHE-V vertical

HEAT EXCHANGER
- High efficiency aluminium counterflow heat
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water (HW/CW), gas or electric post-treatment (internal)
- Grilles, dampers, silencers and valves H_2O

RANGE
- CRHE-H: 4 models airflow from 700 to 3,000 m³/h
- CRHE-V: 6 models, airflow from 700 to 5,300 m³/h

H = horizontal installation
V = vertical installation

HRE-TOP EC

High efficiency HRVU
-Plug n'play version (switchboard and prewired control on the machine)
-Total by-pass for automatic free-cooling

CASING
- Casing made up of sandwich panels (internal and external parts made of Aluzinc®) with injected polyurethane foam insulation core, thickness 36 mm and density 42 kg/m³
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal: floor installation

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- M5 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water (HW/CW), gas or electric post-treatment (internal)
- Grilles, dampers, silencers and valves H_2O

RANGE
- Nr. 5 models, airflow: from 1.000 to 5.600 m³/h

ROTOR-H EC

High efficiency HRVU

- Plug n' play version (switchboard and prewired control on the machine)
- Total by-pass for automatic free-cooling
- Rotary heat exchanger

CASING
- Casing made up of sandwich panels (internal and external parts made of Aluzinc®)with injected polyurethane foam insulation core, thickness 36 mm and density 42 kg/m³
- Frame made up of extruded aluminium profiles

CONFIGURATION AND INSTALLATION
- Horizontal: floor installation

HEAT EXCHANGER
- High efficiency aluminium wheel heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- M5 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Water (HW/CW), gas or electric post-treatment (internal)
- Grilles, dampers, silencers and valves H_2O

RANGE
- Nr. 5 models, airflow: from 900 to 6,000 m³/h

FAI-ED

Medium efficiency HRVU

- Satisfy ErP-2018 requirements

NEW

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

CONFIGURATION AND INSTALLATION
- Horizontal or Vertical

HEAT EXCHANGER
- High efficiency aluminium counterflow heat exchanger, Eurovent certified
- Automatic defrosting

MOTOR FANS -230V-1-50/60Hz
- 3 or 4-speed electric centrifugal fans

FILTERS - classified according to EN 779
- M5 exhaust air / F7 fresh air
- Dirty filters alert: by differential pressure switches

AVAILABLE OPTIONS
- Plug n' play versions (switchboard and prewired control on the machine)
- Electric pre-heating (internal)
- Water (HW) or electric post-heating (internal)
- Post treatment (AF / AC or gas) duct
- Grilles, dampers, silencers and valves H_2O

RANGE
- Nr. 6 models, airflow: 300 and 3.500 m³/h

HRVU with INTEGRATED AIR/AIR HEAT PUMP (CLIMATIZATION and DEHUMIDIFICATION)

- Indoor installation with ambient temperature between + 7 and + 34°C (HRU)
- Indoor installation with ambient temperature between 0 and + 45°C (DEH)

HRU

Medium efficiency Air/air conditioning unit with heat recovery unit

- With heat pump thermodynamic circuit
- Plug n' play version (switchboard and prewired control on the machine)

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
- Stainless steel drain pan

CONFIGURATION AND INSTALLATION
- Horizontal: ceiling or floor installation

HEAT EXCHANGER
- Cross-flow aluminium heat exchanger, Eurovent certified
- Anti-frosting strategy

MOTOR FANS
- High efficiency centrifugal fans
-1 or 2-speed fans

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air

AVAILABLE OPTIONS
- Dirty filters alert: by differential pressure switches
- Grilles, dampers, silencers and valves H_2O

REFRIGERATOR COMPRESSOR
- R407C hermetic scroll gas compressor

RANGE
- Nr.3 models, airflow: 1.500, 2.500 and 3.500 m³/h

With the heat pump, for changing the air with neutralization of external thermal loads.

DEH

High efficiency Heat recovery dehumidification and air renewal unit

- Coupled with radiant cooling systems
- Plug n' play version (switchgear and prewired control on the machine)

CASING
-Self-supporting structure made in Aluzinc® (internal and external parts) up and down in single insulated sheet, side in double panels thickness 22 mm and density 42 kg/m³

CONFIGURATION AND INSTALLATION
- Horizontal: suspended ceiling installation

CONTROL PANEL (remote)
- Contact for dehumidification start/stop (by external management system)
- Internal R.H. probe, for dehumidification management, switched off by panel
- Integration sensitive power control summer and winter

ENERGY CLASS (with control EVO-PH): B

HEAT EXCHANGER
- High efficiency PP counterflow heat exchanger
- Automatic defrosting

MOTOR FANS
- High efficiency EC plug fans

FILTERS - classified according to EN 779
- G4 exhaust air / F7 fresh air/ F7 recirculation
- Dirty filters alert: hourmeter

AVAILABLE OPTIONS
- CO_2 and VOC/ CO_2 probe
- Hydronic version

COMPRESSOR REFRIGERATOR
- Hermetic, R134a

RANGE
- DEH-1 airflows 150 (CMV) - 300 dehumidifies m³/h
- DEH-2 airflows 250 (CMV) - 500 dehumidifies m³/h

For combination with radiant cooling; if the humidity level is too high, to avoid condensation can not cooling; Winter: VMC, summer: VMC + dehumidification. The DEH units can be installed also in existing installations service or used independently (no radiation).

The humidity problem should be solved as quickly as possible: dehumidification mode, the air flow is twice the VMC mode up to the maximum set value; There is an additional attack for recirculation (compared to the VMC unit): all the air (VMC + recirculation) is destined to dehumidify.

DEH-ENTHALPIC

Udehumidification units and renewal of air with high efficiency heat recovery

- Exchanger ENTHALPIC

RANGE
- Nr.2 models, airflow: 150 / 300 and 250 / 500 m³/h

ENERGY CLASS
- Class B

In enthalpy version, the control of umidity is quicker than the action of the dehumidifier decreasing the load of the compressor.

AIR FILTRATION UNITS

CAFIL Air-filter plenum for channel installation

CASING
-10/10-tick structure made of Aluzinc® sheet,
- Circular spigots with rubber sealing ring for connection to air channelling
- Inspection panel
- Filter holding frame equipped with tongs and perimeter tightness sealing

FILTERS - classified according to EN 779
Matching filters (48 mm-tick galvanized steel frame)
-G4 pleated filter made of synthetic fibre
-F7 low-load-loss filter
-F9 low-load-loss filter

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

Plant filtration systems, to improve the filtration standard

AIR VENTILATION UNITS

BOX High head electronic in-box ventilation units

CASING
- Self supporting structure made in 1 mm thickness Aluzinc® sheet, with 5 mm thick adhesive internal insulation
- Anti-vibration joint on fan delivery
- Motor fixed on anti-vibration supports
- Side panels drillable for aspiration
- Access by two side doors

MOTOR FANS
- Centrifugal fans forward blades, double suction, coupled with the impeller, high efficiency (ErP-2015)
- Access to the fan by two side doors

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 holding frame made of galvanized steel (15/10)
- Circular spigot for aspiration
- Drillable side panels for supply air

MOTOR FANS
- Electronic EC plug fans,
- Centrifugal backward blades (ErP-2015)

OPTIONS AVAILABLE
- Manual speed control
- Pressure operation and constant flow Kit

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

High pressures available for the ducting. matching with different units (collective VMC, with regenerators JD) or industrial processes

FAN-T Ventilator with belts and pulleys transmission

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
- Motors support structure in steel with anti-vibration mounts

MOTOR FANS
- Centrifugal forward curved (ErP-2015) double aspiration

OPTIONS AVAILABLE
- Manual speed control

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

Accessories

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

CO_2 /VOC sensor

CO_2 sensor

Relative Humidity sensor

REGULATORS & PANELS

Constant air volume transformation KIT - CAV (1)

Constant pressure transformation KIT - COP (1)

Speed switch - CV3 and 4 (2)

(1) – only for units WITH regulation and EC fans

(2) – only for units WITHOUT regulation

Channel PRE and POST-heating BATTERIES

Hot water post-heating coil (80 – 70 °C) – WB-HW
Temperate water post-heating coil (45 – 35 °C) – WB-TW
Cold/hot water post-treatment coil – WB-CHW
Electrical post-heater– REL-M (1phase) or REL-T (3 phases)

Electrical pre- heater RCF (anti-frost)

MISCELLANEOUS ITEMS

Distribution plenum on X-AIR machine (for FLAT, HRE and JD)

Protection hood with grille (leaves, birds, rain)

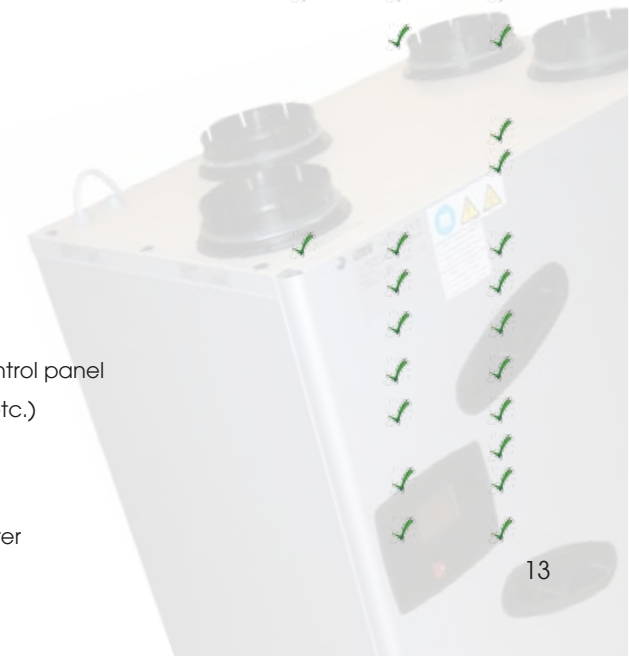
Rain roof

Siphon

HRVU Control Systems

All of our HRVU units (excepted HRU and DEH with specific controls) could be equipped with EVO-PH or EVOD-PH-IP control system. Only for residential HRVU it's also available CTR08-PH control system. It is possible to change from one system to the other included after installation (easy and quick) by simply replacing the remote panel:

	CTR-08	EVO-PH	EVO D-PH-IP
FAN MANAGEMENT			
1 Manual selection of the fan speed			
a) OFF + 3 speed levels	✓	✓	✓
b) OFF + adjustment between (MIN-MAX)	✓	✓	✓
2 Imbalance between supply and return airflows: for electronic or dual-inverter fans		✓	✓
3 Unit power reduction: reduction of the fan maximum speed (not available for units equipped with 3-speed fans)		✓	✓
4 Automatic fan speed selection, if coupled to a CO_2 , CO_2 /VOC, UR sensor or to a 0-10V remote signal		✓	✓
5 Booster function (fans at maximum speed); time can be set by the User	✓	✓	✓
6 PIR function (presence detector), time can be set by the User		✓	✓
7 Humidity function: fans at maximum speed if the humidistat exceeds the threshold		✓	✓
8 Fire function: return fan at maximum speed, supply fan turned off		✓	✓
9 Independent control of the single fans			✓
10 Fan automatic speed selection if coupled with a pressure/constant volume Kit		✓	✓
AIR DEFROSTING AND/OR POST-TREATMENT MANAGEMENT			
11 Prevention of heat exchanger freezing			
a) Imbalance between airflows (MAX extraction/ MIN introduction)	✓	✓	✓
b) Air flow balance (progressive, then MAX)	✓	✓	✓
c) On-off electric pre-heating		✓	✓
12 Control of supply airflow temperature			
a) On-off or proportional electric post-heating		✓	✓
b) On-off or proportional water pre-heating		✓	✓
c) On-off or proportional water post-cooling		✓	✓
ALARMS (DIAGNOSTICS)			
13 Visualization of the machine operation status			
a) Simplified (LED)	✓		
b) Detailed (digital display)		✓	✓
14 Remote signal of the unit operation status			
Closed contact = fans ON; open contact = fans OFF		✓	✓
15 Check the status of the filters through the unit maintenance timer or by reading the signal from the differential pressure switches	✓	✓	✓
16 Check the status of the fans through direct tachometric signal or differential pressure switches	✓	✓	✓
17 Remote signalling of general alarm or clogged filters Closed contact = no alarms; open contact = ongoing alarm		✓	✓
HOME AUTOMATION			
18 Publishing of all status and alarm signals on the bus line			✓
19 Receipt of all remote management controls from the bus line			✓
OTHER FUNCTIONS			
20 By-pass management	✓	✓	✓
21 Remote fan switch ON/OFF		✓	✓
22 Weekly chrono-programming		✓	✓
23 "Master & slave" management of more identical units (up to 4) with a single control panel		✓	✓
24 Possibility to change the language of the remote control panel (English, Italian etc.)		✓	✓
25 Web server			✓
26 Management recirculation dampers		✓	✓
27 Management of two water coils or an electrical resistance + Battery to cold water		✓	✓



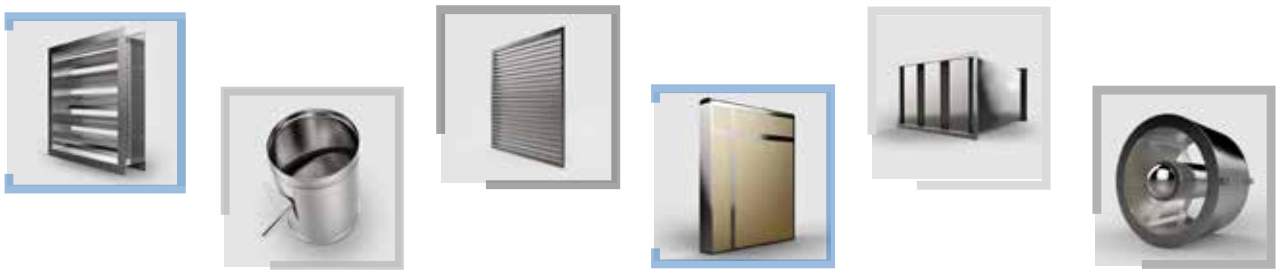
AIR+ AIR DISTRIBUTION SYSTEM

UTEK AIR+ air distribution system consists of a complete range of accessories – **easy and quick on-site chased or suspended ceiling installation** – designed to allow air distribution to single rooms in new or renovated buildings. Available accessories: round and oval ducts, air distribution and return plenum also in isolated version, plenum on the machine, sound attenuators, different connections, 90° elbow, clamps, baffles, valve terminals, plenum for grids, ventilation valves and grids

UTEK heat recovery ventilator provides fresh air, while the AIR+ system ensures the optimal air distribution inside the rooms: as for residential buildings, air is introduced into the living room and bedrooms through supply valves and grids, while stale air from service rooms (kitchen, bathrooms, laundry) is expelled through the intake valves. The system guarantees the optimal distribution of the air inside the apartment. The little space under the doors (mm) allows the air to flow correctly through rooms, avoiding stagnation of bad smells and polluting substances inside the rooms.

UTEK heat recovery unit coupled with the AIR+ distribution system helps you to keep sound levels low for a comfortable and continuous ventilation of the premises; the use of a single duct for each premise prevents the transmission of noise between a room and the other (known as the cross-talk effect). The product is made of antibacterial and antifungal material. We recommend you to properly clean the unit and sanitize the ducts: a few simple and costless operations will help you keep the ventilation system clean for better indoor air quality.

Our proposal includes – especially for commercial and industrial buildings – a wide range of dampers (calibration, tightness, fire, over-pressure), sound attenuators, return grilles, filtering boxes, airflow controls…and special performances.



Calculation programs: professional competence and expertise

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 (codes, descriptions, prices) is generated in a XLS file.

The perfect combination of accurate design - carried out through the DuctCMV© calculation program - and installation expertise makes UTEK the CMV Provider of Choice: our technicians will install a high efficient system to meet User's needs.

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.**

The AirFactory configurator allows you to select the unit (the system offers different alternatives of equal performance) based on the project data (airflow, pressure available, efficiency level)

-once you have chosen the machine, it is possible to change the T and UR values, select the filter class, add the post-heating function, choose the control, select the operation mode (variable or constant air volume, constant pressure) and add the accessories…a recap will enable you to check all characteristics/options of the heat recovery unit and find out the energy consumption and sound power levels in the selected working point
-configuration with detailed description of the specifications; it is possible to save, change and print the selected choices
-user-friendly, assisted browsing, 3D colour graphics

For support to your designer, please do not hesitate to contact our Technical Office.

Dear Customer

Thanks for your attention to the product UTEK , designed and manufactured to ensure the real values to the User: Quality, Safety and Savings on working.

UTEK S.r.l.

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL
ISO 9001

COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV GL
ISO 14001

UTEK reserves the right to at any time the necessary changes to improve products without prior notice .

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