

Dehumidification and ventilation for residential,  
industrial radiant systems and swimming pools



HiDew is proud to present a complete range of dehumidifiers for radiant cooling systems and high performance heat recovery systems for the residential Controlled Mechanical Ventilation.

Every HiDew dehumidifier and recovery system has been designed to respond to an increasingly demanding market in terms of technology, reliability, design, compactness, efficiency, sound level, simplicity and installation ease.

A wide range of accessories (optional) can fulfil any request and, in the event that installation is especially difficult, HiDew technicians are available to suggest and provide customized solutions.



**QUALITY FOR YOUR WELLBEING**

# HiDew

Dehumidifiers

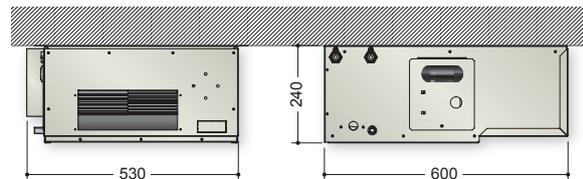
Dehumidifiers for horizontal drop ceiling radiant systems		<b>RSO</b>	P. 4
Dehumidifiers for fitted vertical radiant systems		<b>RSV</b>	P. 5
Dehumidifiers for radiant systems with heat recovery		<b>RER</b>	P. 6
Vertical dehumidifiers for radiant systems with heat recovery		<b>REV</b>	P. 6
Horizontal heat recovery systems with electronic fans		<b>ROE</b>	P. 8
Vertical heat recovery systems with electronic fans		<b>RVE</b>	P. 8
Mechanically controlled ventilation		<b>VMC</b>	P. 10
Air conditioner with heat pump water condensed		<b>HPW</b>	P. 12
Air conditioner for cellars		<b>CCV</b>	P. 14



**RSO**

**RSE**

**DEHUMIDIFIERS FOR HORIZONTAL  
DROP CEILING RADIANT SYSTEMS**



The fitted vertical dehumidifiers of the **RSV** range and the horizontal ductable dehumidifiers for drop ceilings of the **RSO / RSE** range are designed for civil, residential and commercial environments with high latent load that require 24hrs/day operation. These are particularly suitable for buildings cooled by radiant systems, such as flooring, walls or ceiling. HiDew dehumidifiers can be connected and monitored with RS485 serial port.

**The RS range consists of two versions : A – I**

**A = Neutral air version (isothermal):** The letter “A” represents the neutral air isothermal dehumidifier with air condensation, which is supplied with pre and post cooling coils as standard. The outlet air is the same temperature as the inlet air.

**I = Cold integration version:** The letter “I” represents the dehumidifier that can add cold power to the radiant system. Thanks to a brazed plate condenser, the “I” models cool the air when required, just as a normal air-conditioner. This function is particularly useful, during half seasons, due to the high difference in temperature, or when cooking or when guests arrive. The “I” models must always receive water from the radiant system in order to operate.

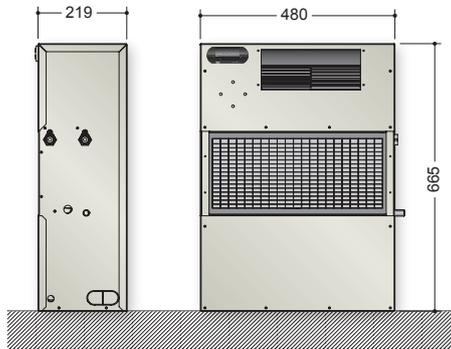
**Technical sheet of the range RS**

		<b>RSO 020 A</b>	<b>RSO 020 I</b>	<b>RSV 020 A</b>	<b>RSV 020 I</b>	<b>RSE 050 A</b>	<b>RSE 050 I</b>
Dehumidifying capacity	L / day	20	20	20	20	48	48
Air flow rate	m³/h	250	250	250	250	600	600
Cooling Power	Watt	isothermal	1240	isothermal	1240	isothermal	3360
Sound level	dB(A)	37	37	37	38	41	41
Power supply	V/ph/Hz	I----- 230/1/50 -----I					
Dimensions L X D X H	mm	I---- 530 x 600 x 242 ----I		I---- 480 x 220 x 665 ----I		I---- 760 x 650 x 350 ----I	

All the values refer to the following conditions: Air temperature 26°C, Relative humidity 65%, Water temperature 15°C

## DEHUMIDIFIERS FOR FITTED VERTICAL RADIANT SYSTEMS

**RSV**



### Options:

- Formwork
- White lacquered wooden panel
- Painted steel sheet panel with plastic grills
- Supply plenum
- Mechanical humidistat
- RS485 serial port
- Supply flange
- Steel case for the out-of-the-wall installation
- 2-steps mechanical humidistat
- Regulation for floor hot / cold / humidity





**The RER range consists of 3 versions : A – I – W**

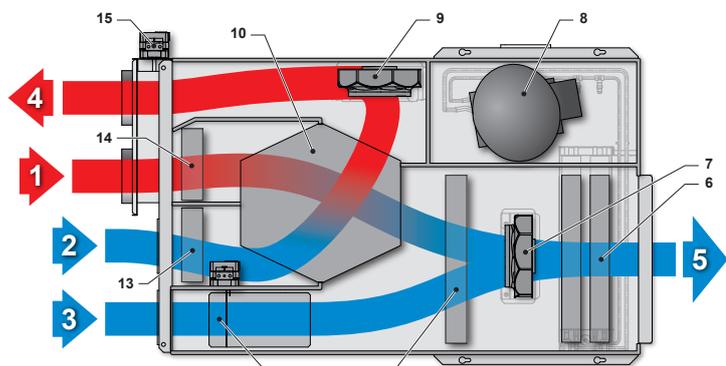
**A = Neutral air version (isothermal):** The letter “A” represents a neutral air isothermal dehumidifier with air condensation, which is supplied as standard with pre and post cooling coils. The outlet air has the same temperature as the inlet air.

**I = Cold integration version:** The letter “I” represents a dehumidifier that can add cold power to the radiant system. Thanks to the presence of a brazed plate condenser, the “I” models cool the air as a normal air-conditioner, when required. This function is particularly useful, during half seasons, due to the high difference in temperature or when cooking or when gusts arrive. In order to operate, the “I” models must always receive water from the radiant system.

**W = Water version:** The letter “W” identifies an especially silent chilled water hydronic dehumidifier without compressor. The outlet air is always cooler than the inlet air. The “W” version supplies conditioned air in summer and heating in winter.

**Summer functions**

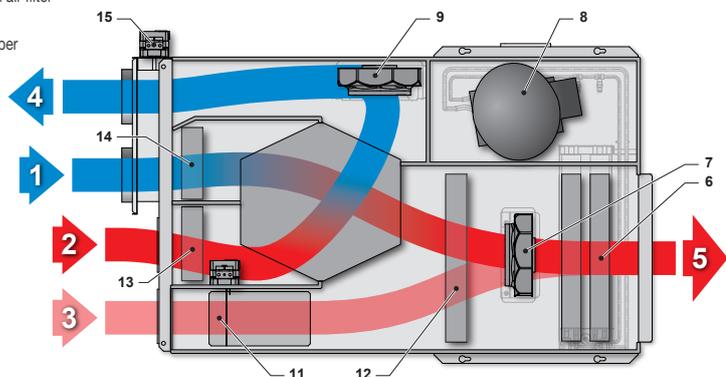
- Renewal
- Renewal + dehumidification
- Renewal + dehumidification + cooling
- Cooling
- Dehumidification
- Dehumidification + Cooling



- |                                       |                               |
|---------------------------------------|-------------------------------|
| 1 Fresh air intake                    | 9 Exhaust fan                 |
| 2 Exhaust air intake                  | 10 Heat recovery system       |
| 3 Room air intake (for recirculation) | 11 Recirculation damper       |
| 4 Exhaust air discharge               | 12 Supply air filter          |
| 5 Room air supply                     | 13 Recovery system air filter |
| 6 Heat exchange coil                  | 14 Outdoor air filter         |
| 7 Blower fan                          | 15 Outdoor air damper         |
| 8 Compressor                          |                               |

**Winter functions**

- Renewal
- Renewal + heating
- Heating



**Included:**

- remote on-wall graphic display
- time bands program
- multi-speed fresh air
- electronic radial fans with brushless engine and inverter integrated
- timed signal for air filters check
- boost mode for fresh air
- supply temperature control



**Options:**

- silent version
- high-efficiency air filter set
- air distribution: see VMC chapter
- formwork for internal or external installation (only REV models)
- outside air dampers for dew-point control
- automatic recovery defrost
- RS 485 serial board
- modulating supply temperature control function
- additional temperature and humidity probes on the unit
- CO2 probe
- cables for display connection
- display mounted on the unit (only REV models)
- outdoor version (only REV models)

## HEAT RECOVERY SYSTEMS

**ROE**



**RVE**



Air quality and purity, temperature and humidity are critical for comfort, especially during the winter when opening the windows for air results in a significant loss of heat and discomfort for the occupants. In this case a system of controlled mechanical ventilation is the best solution to maintain both the levels of energy performance and the quality of the indoor air.

Recent regulations on energy saving in buildings combined with increasingly efficient thermal insulation and ever-better fitting of doors and windows, have definitely made our homes more comfortable both thermally and acoustically. This, however, has also transformed them into potential “hazardous, sealed traps” where pollutants used in the production process (such as formaldehyde) can be spontaneous released. To achieve adequate air renewal in the building and to ensure good indoor air quality, it is essential to install a controlled mechanical ventilation system. Air renewal is essential for clean living air. The European Parliament has legislated on this, citing ventilation as a “need” for the building. This “need” can clash with the need to improve the building’s energy performance to reduce consumption to a minimum. Controlled mechanical ventilation with **ROE** and **RVE** of HiDew heat recovery is the best solution to reduce the energy needs of a building and at the same time improve the healthiness of the spaces.

		ROE				RVE	
		10	20	35	50	35	50
<b>Technical sheet of the range ROE, RVE</b>							
Nominal air flow rate	m <sup>3</sup> /h	100	200	350	500	350	500
Efficiency	%	93	91	90	88	90	88
Recovered heating power in winter	Watt	790	1547	2660	3732	2660	3732
Recovered heating power in summer	Watt	270	538	920	1280	920	1280
Rated power consumption	Watt	21	40	75	85	75	85
Power supply	V/ph/Hz	----- 230/1/50 -----					
Available static pressure maximum speed	Pa	150	160	150	160	150	160
Air connections diameter	mm	4x125	4x160	4x180	4x180	4x180	4x180

The recovered heat power and yield values are stated in the indoor air 20°/50%rh and outdoor air -5°/80%rh points

	<b>STANDARD CONTROL</b>	<b>DEVELOPMENT CONTROL</b>
Electronic fans with brushless motor and built-in inverter	STANDARD	STANDARD
Correct fan rotation control	STANDARD	STANDARD
Intelligent automatic defrost	STANDARD	STANDARD
3 speed setting	STANDARD	--
Multi-speed setting	--	STANDARD
Timed dirty filters signalling	STANDARD	STANDARD
General fault signalling	STANDARD	--
Detailed fault signalling	--	STANDARD
Graphic adjustment display to be placed on the wall	--	STANDARD
Boost mode	--	STANDARD
Programming by time bands	--	STANDARD
RS485 serial port	--	OPTIONAL
Free-cooling	OPTIONAL	OPTIONAL
Humidity sensor	--	OPTIONAL
CO2 sensor	--	OPTIONAL
Air purifier	--	OPTIONAL
Coil water duct	OPTIONAL	OPTIONAL
Supply temperature control kit	--	OPTIONAL
High-efficiency air filtering set	OPTIONAL	OPTIONAL



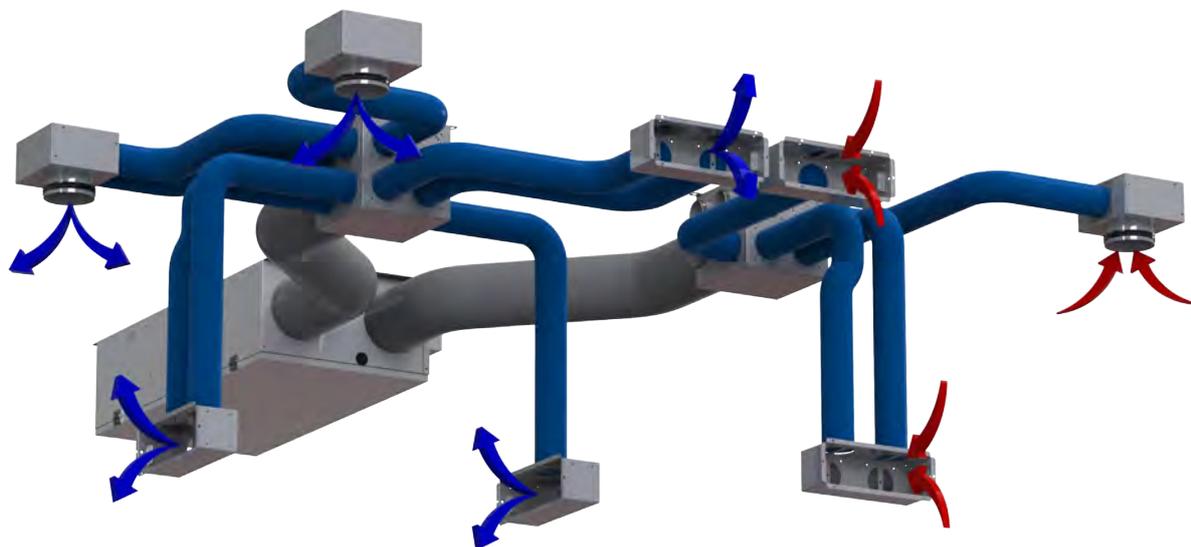
### THE HEAT RECOVERY SYSTEMS:

- Increase efficiency class and property value
- Renew air without dispersing heat
- Reduce danger of allergies



## VMC

## MECHANICALLY CONTROLLED VENTILATION



The new Series of **VMC** accessories for air distribution, to be combined with the units of our **RS, RER** and **ROE / RVE** Series.

Thanks to the variety and completeness of this line, it is possible to realize the ideal comfort conditions and to give an optimal response to the needs for the different installations and canalizations of the units. Our supply and recovery plenums, the coils for ducted installations and the grilles, combined with our machines, grant the realization of flexible, complete and customizable systems for the air distribution, capable of satisfying the needs of each single ambient.



**The installation of  
HiDew VMC  
accessories is a  
child's play!**

**Accessories**



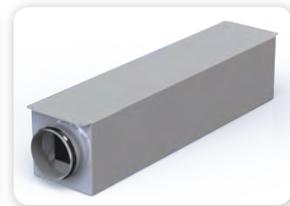
Supply and recover air galvanized steel plenums with internal thermal insulation and sound absorber, with circular connections.

“T” splitter plenum



Supply and recover air galvanized steel plenums with internal thermal insulation and sound absorber, to be combined with design grilles.

All our plenums are equipped with an exclusive system of air flow calibration, to grant the right value of air renewal.



Conical supply plenum in galvanized steel with internal thermal insulation and sound absorber (for RER models).

Hot / cold water coil ducted with galvanized steel plenum, internal insulation, sound absorber and steel basin for condensation collection.

Supply and recover grilles with high design, available in aluminium or galvanized steel.

High performance silencer



Flange for the connection of flexible pipes in / out air renewal.

Ventilation valve for the air recover with adjustable jet.

Flexible pipe diameters mm. 125 / 160 / 180 / 200.

Polyethylene pipes for the canalization and distribution of air, to be combined with supply and recover plenums.

## HPW

### AIR CONDITIONER WITH HEAT PUMP WATER CONDENSED



The range of **HPW** air conditioner with heat pump water condensed, are conceived for ambiances that need a conditioning by heating and/or cooling 24hrs/day. They are typically installed in offices, but the technical characteristics make them perfect also for other ambiances, such as museum, libraries, archives, places of religious worship, warehouses, cellars and other places that require a controlled air conditioning, in order to grant the comfort.

The air conditioners with heat pump water condensed, are completely autonomous and, by standard, they are supplied with temperature probes. Their simple installation requires a condensate drain, water (also from geothermal source) and power supply.

The top-quality refrigeration, hydraulic, aeraulic and electric components, make HPW units the state of the art air conditioners in terms of efficiency and reliability.

Finally, they have been designed to be easily inspected and maintained.

The HPW range consists of 4 models, with air flows from 300 to 650 m<sup>3</sup>/h.

**HPW**

**Technical sheet of the range**

		<b>030</b>	<b>040</b>	<b>050</b>	<b>065</b>
Summer total cooling power (1)	kW	1,9	2,4	3,0	4,2
Absorbed power compressor in summer (1)	kW	0,4	0,5	0,7	1,0
Winter heating power (2)	kW	2,3	2,7	3,3	4,5
Absorbed power compressor in winter (2)	kW	0,5	0,6	0,8	1,1
Nominal air flow	m3/h	300	400	500	650
Available static pressure	Pa	20	20	20	20
Power supply	V/ph/Hz	----- 230/1/50 -----			
Minimum water flow to the exchanger	l/min	5	5	8	8
Water load losses	kPa	22	22	30	28
Functioning limitations air in summer	°C	Min 20 °C / Max 35 °C			
Functioning limitations air in winter	°C	Min 15 °C / Max 28 °C			
Functioning limitations water in summer	°C	Min 15 °C / Max 45 °C			
Functioning limitations water in winter	°C	Min 10 °C / Max 25 °C			
Dimensions L x D x H	mm	----- 1050 x 280 x 720 -----		----- 1250 x 280 x 720 -----	
Weight	Kg	43	44	45	60

(1) Ambience air 27°C / r.h. 50%

(2) Ambience air 20°C / water to evaporator 15°C

**Options:**

- Silent version
- RS 485 serial board
- Faucet for plant calibration
- Water flow switch
- Anti-fire probe



## CCV

## AIR CONDITIONER FOR CELLARS

The new **CCV** air conditioner is studied and developed to grant a fine control of temperature and humidity parameters, especially for small private cellars and other ambiances that need such a fine parameters control.

The compact and elegant design of the unit can satisfy the most exigent requests according to reduced spaces, as often is the case for the ambiances of destination.

The unit is a mono-block direct expansion solution with a high technology degree.

### Functions:

- Heating
- Cooling
- Humidification
- Dehumidification



### Focus on technology:

- Electrical heating
- Refrigerant cooling circuit
- Humidification with distilled water tank
- Recirculation fan: electronic radial with brushless engine and inverter, that can be modulated from 0 up to 100%
- Condensation fan: electronic radial with brushless engine and inverter, that can be modulated from 0 up to 100%
- Temperature and humidity probe on board with close tolerance ( $\pm 0,5$  °C/%)
- Advanced and programmable control with available remote display
- Water sanitization system
- Time-bands program
- Access and unit maintenance from the front

### Advantages:

- Mono-block extremely compact unit
- Elegant design
- Connection with the aeraulic system compatible with the new HiDew VMC Series for air distribution
- Short installation time
- No needs for refrigerator technician neither for refrigerant gas empty or fill in operations
- The risk of installation faults is extremely reduced: higher economy
- Circular connections nr° 6 x 160 mm

**Technical sheet**

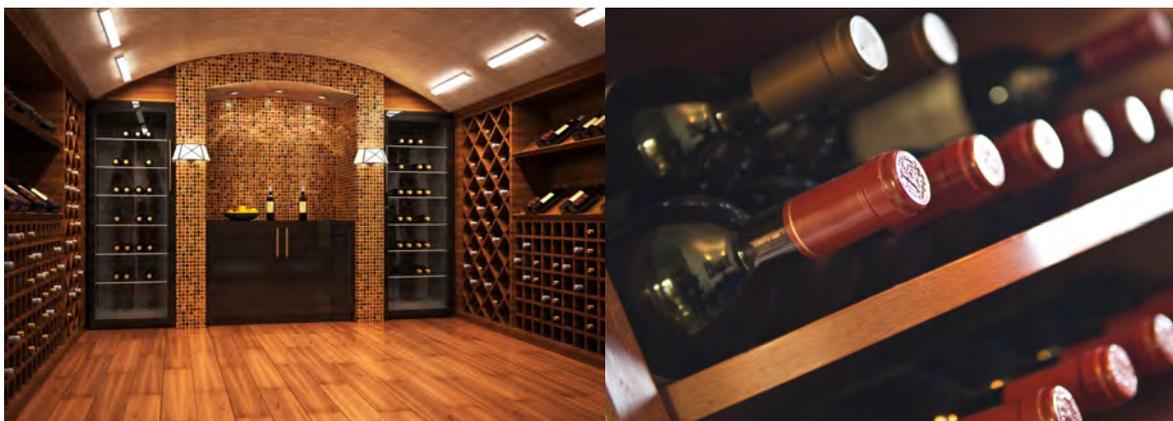
**CCV 450 H**

Cooling power (*)	Watt	2150
Recirculation internal air flow	m³/h	450
Condensation external air flow	m³/h	Modulated from 0 to 450
Recirculation fan pressure	Pa	180
External air fan pressure	Pa	150
Electrical heater capacity	Watt	1600
Nominal power consumption	Watt	910
Maximum power consumption	Watt	1260
Maximum power consumption with electrical heater	Watt	2860
Dimensions L x H x D	mm	650 x 1645 x 450
Refrigerant gas		R 410 A
Power supply	V/ph/Hz	230 / 1 / 50
Internal temperature working range	°C	da 10 a 25
External temperature working range	°C	da -5 + 35
Internal humidity working range	%u.r.	45 - 95

(\*) internal conditions 18°C / 80% R.H, - external air 30°C

**Options:**

- Humidification system
- Humidification water sanitization system
- Electrical heater
- RS485 Serial board
- Remote user terminal
- Silent version





#### **HiDew S.r.l.**

Operational Office: Via dell'artigianato, 1 35020 San Pietro Viminario (PD) - Italy  
Phone: +39 049 9588510

Registered Office: Viale Spagna, 31/33 35020 Tribano (PD) - Italy  
Phone: +39 049 9588511 Fax: +39 049 9588522

[www.hidew.it](http://www.hidew.it) [info@hidew.it](mailto:info@hidew.it)

