

## DEHUMIDIFICATION AND VENTILATION FOR COOLING RADIANT SYSTEMS OFFICES AND LIGHT COMMERCIAL



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 and light commercial.

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

Horizontal dehumidifiers for radiant systems  **RSO** **RSE** P. 4

Vertical dehumidifiers for radiant systems  **RSV** **RSVE** P. 6

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Built-in vertical heat recovery units  **RCE** **RFE** P. 14

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**RSO RSE**

**HORIZONTAL DEHUMIDIFIERS FOR RADIANT SYSTEMS**



**RSE 020**

The fitted vertical dehumidifiers of 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.

R-513a refrigerant gas is used for **RSO / RSE 020, 035, 050** units.

R-410a refrigerant gas is used for **RSE 100** units.

**Technical sheet of the range**

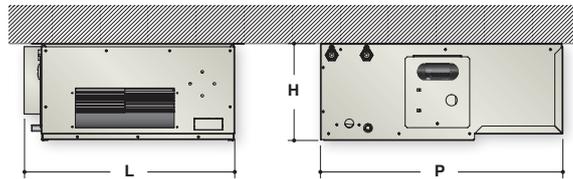
		<b>RSO 020 A</b>	<b>RSO 020 I</b>	<b>RSE 020 A</b>	<b>RSE 020 I</b>	<b>RSO 035 A</b>	<b>RSO 035 I</b>
<b>Dehumidifying capacity</b>	L/Day	20	20	20	20	28	28
<b>Air flow rate</b>	m³/h	250	250	250	250	350	350
<b>Available static prevalence</b>	Pa	40	40	180	180	30	30
<b>Cooling power</b>	W	/	1240	/	1240	/	1740
<b>Sound level</b>	dB(A)	38	38	39	39	39	39
<b>Power supply</b>	V/ph/Hz	230 / 1~ +N / 50					
<b>Dimensions (base x depth x height)</b>	mm	530 x 600 x 242				680 x 600 x 242	

**Technical sheet of the range**

		<b>RSE 035 A</b>	<b>RSE 035 I</b>	<b>RSE 050 A</b>	<b>RSE 050 I</b>	<b>RSE 100 A</b>	<b>RSE 100 I</b>
<b>Dehumidifying capacity</b>	L/Day	28	28	48	48	100	100
<b>Air flow rate</b>	m³/h	350	350	250	600	1000	1000
<b>Available static prevalence</b>	Pa	180	180	150	150	150	150
<b>Cooling power</b>	W	/	1740	/	3360	/	6800
<b>Sound level</b>	dB(A)	40	40	43	43	46	46
<b>Power supply</b>	V/ph/Hz	230 / 1~ +N / 50					
<b>Dimensions (base x depth x height)</b>	mm	680 x 600 x 242		760 x 650 x 350		1000 x 600 x 450	

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

The **RSO** dehumidifiers are provided with 3-speed centrifugal fan, in order to achieve the lowest noise level. In case of higher available pressure is needed, the **RSE** models are provided with EC electronic fan, adjustable air flow by potentiometer. The models 050 and 100 are available only with EC electronic fan.



**The RSO and RSE 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.

**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:**

- Mechanical humidistat
- Mechanical humidistat for in-wall installation
- Two-steps hygrostat
- Chrono-Thermo hygrostat summer/winter
- Supply flange
- Kit frame for suction ducting
- High efficiency filters
- RS485 serial port
- Rubber antivibration
- Supply plenum
- Air distribution: see chapter WMC

**RSV**

**RSVE**

**VERTICAL DEHUMIDIFIERS FOR RADIANT SYSTEMS**



**RSV 020**



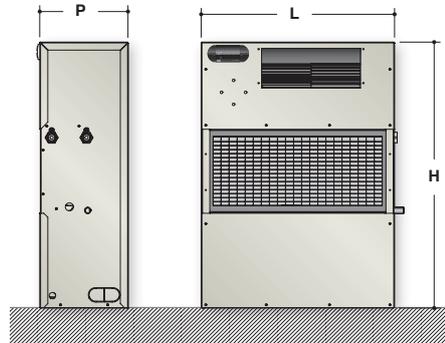
The fitted vertical dehumidifiers of the **RSV / RSVE** range are designed for civil, residential and commercial environments with high latent load that require 24hrs/day operation. These are particularly suitable for buildings cooled by radiant systems, such as flooring, walls or ceiling. HiDew dehumidifiers can be connected and monitored with RS485 serial port. R-513a refrigerant gas is used in **RSV / RSVE** units.

Technical sheet of the range		RSV 020 A	RSV 020 I	RSVE 020 A	RSVE 020 I
Dehumidifying capacity	L/Day	20	20	20	20
Air flow rate	m³/h	250	250	250	250
Available static prevalence	Pa	40	40	180	180
Cooling power	W	/	1240	/	1240
Sound level	dB(A)	38	38	39	39
Power supply	V/ph/Hz	230 / 1~ +N / 50			
Dimensions (base x depth x height)	mm	480 x 220 x 665			

Technical sheet of the range		RSV 035 A	RSV 035 I	RSVE 035 A	RSVE 035 I
Dehumidifying capacity	L/Day	28	28	28	28
Air flow rate	m³/h	350	350	350	350
Available static prevalence	Pa	30	30	180	180
Cooling power	W	/	1740	/	1740
Sound level	dB(A)	39	39	40	40
Power supply	V/ph/Hz	230 / 1~ +N / 50			
Dimensions (base x depth x height)	mm	630 x 220 x 665			

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

The **RSV** dehumidifiers are provided with 3-speed centrifugal fan, in order to achieve the lowest noise level. In case of higher available pressure is needed, the **RSVE** models are provided with EC electronic fan, adjustable air flow by potentiometer.



**The RSV and RSVE 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.

**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

**Optionen:**

- Schalwogk
- Weißlackierte Holzplatte panel
- Rauten aus Rohre, zobelakirren
- Pakierte Blechplatte panel
- Stehgerüstwerk
- Mechanischer Hygrostat an der Wand
- Elektrischer Hygrostat für Hygrostat installation
- Zweistufiger elektronischer Hygrostat
- Chrono-Thermo-Hygrostat Sommer/Winter
- RS485 Modbus Schnittstelle RS485



**RER**

**HORIZONTAL DEHUMIDIFIERS WITH HEAT RECOVERY FOR RADIANT SYSTEMS**



**RER 020**

HEAT RECOVERY

VARIABLE SPEED

FREE COOLING

LOW NOISE

DEHUMIDIFICATION

COOLING

HEATING

ISOTHERMIC

AIR FILTERS

R-513a  
OZONE FRIENDLY

R-410a  
OZONE FRIENDLY

RS485  
PROTOCOL  
CONNECTION LINK

The **RER** range dehumidifiers with high-efficiency heat recovery system are used in radiant cooling buildings together with an air renewal system. The RER dehumidifiers dehumidify, cool, heat and change the air. They recover heat from expelled air. High pressure and minimum electric consumptions are guaranteed by the adjustable electronic fans with permanent magnet brushless motor and cutting-edge incorporated inverter.

The top-quality refrigeration, hydraulic, aeraulic and electrical components make RER units state of the art dehumidifiers in terms of efficiency, reliability and silence. More than 90% yield is guaranteed by the high-efficiency counter-current heat recovery system. The modulating air renewal can be manual or automatic. The humidifier autonomously controls room temperature and humidity through the standard fitted temperature and humidity sensors. The dehumidifier autonomously controls room temperature and humidity through the optional temperature and humidity sensors. The RER dehumidifiers can be connected to a home automation system thanks to the optional RS485 serial port and requested software customization.

R-513a refrigerant gas is used for **RER 015, 020, 035, 050** units.

R-410a refrigerant gas is used for **RER 100** units.

Technical sheet of the range		RER 015			RER 020		
		A	I	W	A	I	W
Dehumidifying capacity	L/Day	16	16	18	24,5	24,5	29
Nominal air flow	m³/h	160	160	160	260	260	260
Fresh air flow	m³/h	0-80	0-80	0-80	0-130	0-130	0-130
Heat recovery efficiency	%	> 90%					
Cooling power	W	Isothermal	800	1170	Isothermal	1300	1920
Sound level	dB(A)	36	36	35	39	39	38
Power supply	V/ph/Hz	230 / 1~ +N / 50					
Dimensions (base x depth x height)	mm	960 x 610 x 245			1125 x 680 x 250		

Technical sheet of the range		RER 035			RER 050			RER 100		
		A	I	W	A	I	W	A	I	W
Dehumidifying capacity	L/Day	34	34	40	48	48	58	100	100	120
Nominal air flow	m³/h	360	360	360	520	520	520	1000	1000	1000
Fresh air flow	m³/h	0-180	0-180	0-180	0-250	0-250	0-250	0-500	0-500	0-500
Heat recovery efficiency	%	> 90%								
Cooling power	W	Isothermal	1790	2650	Isothermal	3230	3650	Isothermal	6800	7700
Sound level	dB(A)	41	41	39	44	44	43	47	47	44
Power supply	V/ph/Hz	230 / 1~ +N / 50								
Dimensions (base x depth x height)	mm	1125 x 680 x 300			1665 x 760 x 375			1500 x 1120 x 450		

All the values refer to the following conditions: Air temperature 26°C, Relative Humidity 65%, Water temperature 15°C W Version: water at 10°C

**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.

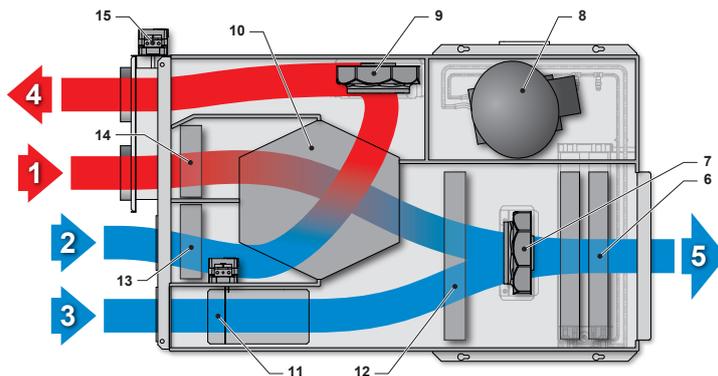
**I = Cold integration version:** The letter “I” represents a dehumidifier that can add cold power to the radiant system. Thanks to the presence of a brazed plate condenser, the “I” models cool the air as a normal air-conditioner, when required. This function is particularly useful, during half seasons, 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
- Free-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
- Free-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:**

- |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Second display</li> <li>- Outdoor air dampers for dew-point control</li> <li>- Free-cooling</li> <li>- High-efficiency air filter set</li> <li>- Cable for display connection</li> <li>- Additional temperature and humidity probes on board</li> <li>- CO2 probe</li> <li>- VOC probe</li> </ul> | <ul style="list-style-type: none"> <li>- Recovery automatic defrost</li> <li>- RS485 serial port</li> <li>- Silent version</li> <li>- Adjustable supply air temperature control</li> <li>- Supply plenum</li> <li>- Recovery plenum</li> <li>- Air distribution: see chapter WMC</li> </ul> |
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**REV**

**VERTICAL DEHUMIDIFIERS WITH HEAT RECOVERY FOR RADIANT SYSTEMS**



REV 020



REV 050



The **REV** range dehumidifiers with high-efficiency heat recovery system are used in radiant cooling buildings together with an air renewal system. The REV dehumidifiers dehumidify, cool, heat and change the air. They recover heat from expelled air. High pressure and minimum electric consumptions are guaranteed by the adjustable electronic fans with permanent magnet brushless motor and cutting-edge incorporated inverter.

The top-quality refrigeration, hydraulic, aeraulic and electrical components make REV units state of the art dehumidifiers in terms of efficiency, reliability and silence. More than 90% yield is guaranteed by the high-efficiency counter-current heat recovery system. The modulating air renewal can be manual or automatic. The humidifier autonomously controls room temperature and humidity through the standard fitted temperature and humidity sensors. The dehumidifier autonomously controls room temperature and humidity through the optional temperature and humidity sensors. The REV dehumidifiers can be connected to a home automation system thanks to the optional RS485 serial port and requested software customization.

R-513a refrigerant gas is used in **REV** units.

Technical sheet of the range		REV 020			REV 035			REV 50		
		A	I	W	A	I	W	A	I	W
Dehumidifying capacity	L/Day	29	24,5	24,5	43	36	36	48	48	58
Nominal air flow	m³/h	260	260	260	380	380	380	520	520	520
Fresh air flow	m³/h	0 - 130	0 - 130	0 - 130	0 - 190	0 - 190	0 - 190	0 - 260	0 - 260	0 - 260
Recovery system efficiency	%	> 90%								
Cooling Power	W	Isothermal	1300	1920	Isothermal	2380	2700	Isothermal	3230	3650
Sound level	dB(A)	39	39	38	41	41	39	44	44	43
Power supply	V/ph/Hz	230 / 1~ +N / 50								
Dimensions (base x depth x height)	mm	600 x 380 x 980			650 x 430 x 1050			700 x 515 x 1430		
Empty weight	kg	60	60	50	65	65	55	90	90	75
type of installation		Wall mounting			Wall mounting			Base mounting		

All the values refer to the following conditions: Air temperature 26°C, Relative Humidity 65%, Water temperature 15°C W Version: water at 10°C

**The REV 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.

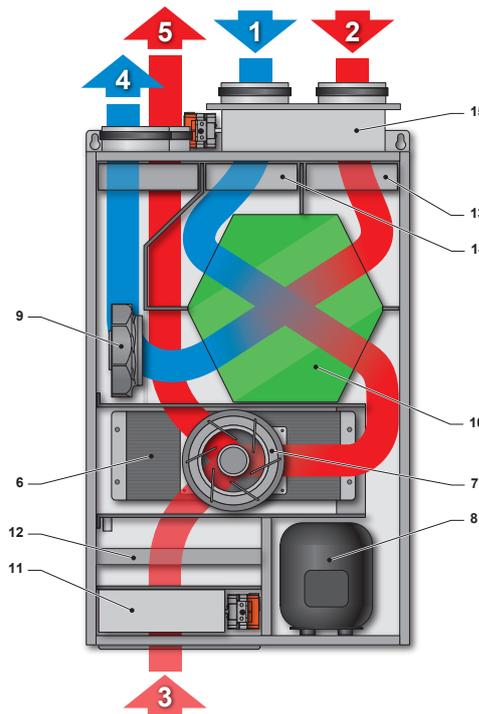
**I = Cold integration version:** The letter “I” represents a dehumidifier that can add cold power to the radiant system. Thanks to the presence of a brazed plate condenser, the “I” models cool the air as a normal air-conditioner, when required. This function is particularly useful, during half seasons, 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
- Free-cooling

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



**Winter functions**

- Renewal
- Renewal + heating
- Heating
- Free-heating

**Included:**

- Remote on-wall graphic display with temperature and humidity probes
- 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
- Dew point control
- Automatic defrost
- Alarm reporting



**Options:**

- Second display
- Outdoor air dampers for dew-point control
- Free-cooling
- High-efficiency air filter set
- Cable for display connection ( 5, 10, 20 m )
- Additional temperature and humidity probes on board
- CO2 probe
- VOC probe
- Recovery automatic defrost
- RS485 serial port
- Silent version
- Adjustable supply air temperature control in heating
- Display mounted on board
- Outdoor installation
- Formwork for indoor installation
- Kit for white lacquered panels
- Formwork for outdoor installation, with frontal panel
- Recirculation plenum
- Kit for recirculation ducting

**RDE**

**HORIZONTAL AND VERTICAL  
POLYPROPYLENE HEAT RECOVERY UNIT**



**RDE 010  
RDE 018**



**RDE 020**



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 RDE 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.

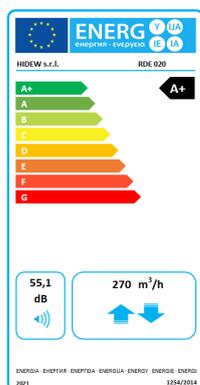
Technical sheet of the range		RDE 010	RDE 018	RDE 020	RDE 035
<b>Efficiency rate</b>		<b>A / A+</b>			
<b>Nomnal air flow</b>	m³/h	100	180	200	350
<b>Heat recovery efficiency</b>	%	90	87	90	90
<b>Recovered heating power in winter (1)</b>	W	760	1320	1520	2576
<b>Recovered heating power in summer (2)</b>	W	240	420	525	533
<b>Maximum power absorbed (3)</b>	W	113	125	136	179
<b>Sound power lwa</b>	dB(A)	43	45	50	50
<b>Power supply</b>	V / Ph / Hz	230 / 1~ +N / 50			
<b>Useful static head maximum speed</b>	Pa	200	200	160	100
<b>Dimensions (base x depth x height)</b>	mm	1090 x 560 x 230	1090 x 560 x 230	870 x 660 x 300	870 x 660 x 300
<b>Empty weight</b>	kg	13	13	19	20
<b>Nozzle diameter</b>	mm	125	125	160	160

(1) The efficiency and thermal power recovered in winter are declared with ambient air + 20 ° C 50% RH and outdoor air -5 ° C 80% RH.

(2) The heat output recovered in summer is declared with ambient air + 26 ° C 50% RH and outdoor air + 35 ° C 70% RH.

(3) Maximum total value, including the two fans and electronics.

	STANDARD CONTROL	ADVANCED CONTROL
Wall-mounted graphic control display with temperature sensor, complete with shielded connection cable L.2 m	-	OPTION
Wall-mounted graphic control display with temperature and humidity sensors, complete with screened connecting cable L.2 m	-	OPTION
3-speed control	INCLUDED	-
Multi-speed control	-	INCLUDED
Turbo mode	-	INCLUDED
Time band programming	-	INCLUDED
Electronic fans with brushless motor and built-in inverter	INCLUDED	INCLUDED
Timed signalling of dirty filters	INCLUDED	INCLUDED
Fault signalling	INCLUDED	INCLUDED
Intelligent automatic defrosting	INCLUDED	INCLUDED
Free-cooling	INCLUDED	INCLUDED
RS485 - Modbus serial card	-	OPTION
High efficiency air filter set	OPTION	OPTION
5, 10 or 20 metre shielded display connection cable	-	OPTION
CO2 probe	-	OPTION
Ioniser control	-	INCLUDED
Duct water battery	OPTION	OPTION
Outlet temperature control kit	-	OPTION



**Lightness**



**Efficiency**



**Quality**



**Installation flexibility**



**Easy maintenance**

### THE HEAT RECOVERY SYSTEMS:

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



**RCE**

**RFE**

**BUILT-IN VERTICAL HEAT RECOVERY UNITS**



**RCE 022**



**RFE 022**



Vertical built-in mechanical ventilation system, with high efficiency heat recovery unit. The **RCE** model provides for the delivery to the ceiling while the **RFE** model provides for the delivery to the floor. Both units guarantee a good air quality in the rooms, in addition to the indispensable air exchange in the building, that allow reducing consumption to a minimum. Free-cooling, which is standard on **RCE** and **RFE**, increases the seasonal efficiency of the system.

Air quality, temperature and humidity are fundamental elements for comfort, especially during the winter period when the opening of windows to change the air involves a considerable dispersion of heat and discomfort for the occupants.

The European Parliament itself has legislated on the matter, citing ventilation as a “need” of the building.

This “need” clashes, however, with the need to improve the energy performance of buildings in order to minimize consumption.

The controlled mechanical ventilation with heat recovery **RCE** and **RFE** of HiDew is the best solution to reduce the energy needs of the house while improving the healthiness of the environment.

The **RCE** and **RFE** series of very high efficiency recessed vertical heat recovery units are designed for use in residential and commercial environments, the latter being small in size. The recessed vertical installation allows to reduce the thickness of the false ceiling, ensuring high performance.

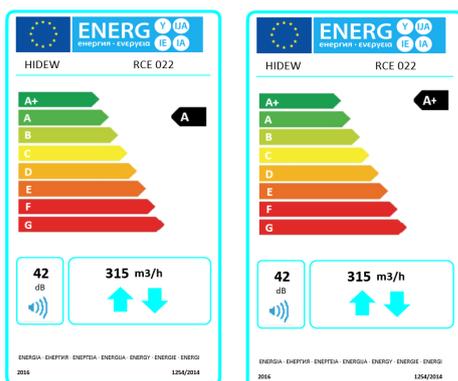
Technical sheet of the range		RCE - RFE	
		016	022
Air flow	m³/h	160	220
Efficiency (1)	%	90	90
Heat output recovered in winter (1)	W	1208	1662
Heat output recovered in summer (2)	W	416	572
Maximum absorbed power (3)	W	74	90
Maximum absorbed current (3)	A	1	1,5
Power supply	V / Ph / Hz	230 / 1~+N / 50	230 / 1~+N / 50
Useful static head maximum speed	Pa	160	160
Storage temperature limit	°C	- 10 / + 43	- 10 / + 43
Storage humidity limit	% UR	90	90
Empty weight	kg	27	33

(1) The efficiency and heat output recovered in winter are indicated with room air +20°C 50% RH and outdoor air -5°C 80% RH.

(2) The heat output recovered in summer is indicated with room air +26°C 50% RH and outdoor air +35°C 70% RH.

(3) Maximum total value, including the two fans and the electronic devices.

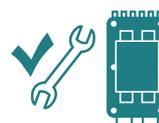
	STANDARD CONTROL	ADVANCED CONTROL
Wall-mounted graphic display with temperature probe	-	OPTIONAL
Wall-mounted graphic display with temperature and humidity probe	-	OPTIONAL
3 speed adjustment	INCLUDED	-
Multi-speed adjustment	-	INCLUDED
Turbo mode	-	INCLUDED
Time slots programming	-	INCLUDED
Electronic fans with brushless motor and built-in inverter	INCLUDED	INCLUDED
Dirty filter timed signal	INCLUDED	INCLUDED
Fault signal	INCLUDED	INCLUDED
Smart automatic defrosting	INCLUDED	INCLUDED
Free-cooling / free-heating	INCLUDED	INCLUDED
RS485 - Modbus serial card	-	INCLUDED
High-efficiency air filters set	OPTIONAL	OPTIONAL
Shielded connection cable for display, 5, 10 or 20 metres long)	-	OPTIONAL
CO2 probe	-	OPTIONAL
Ioniser control	-	INCLUDED



**Efficiency**



**Quality**



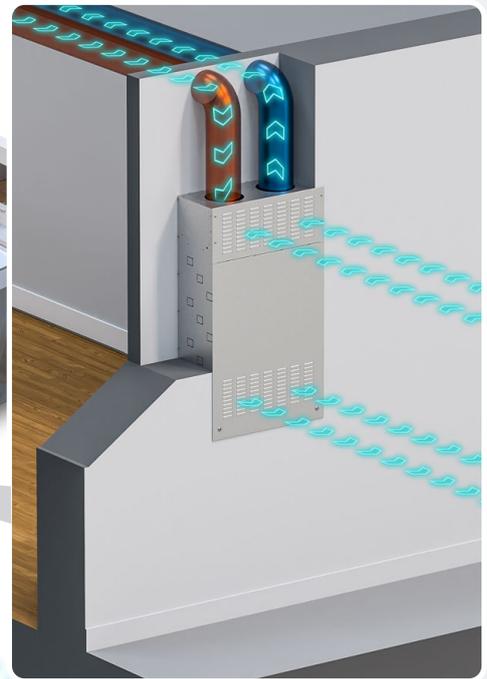
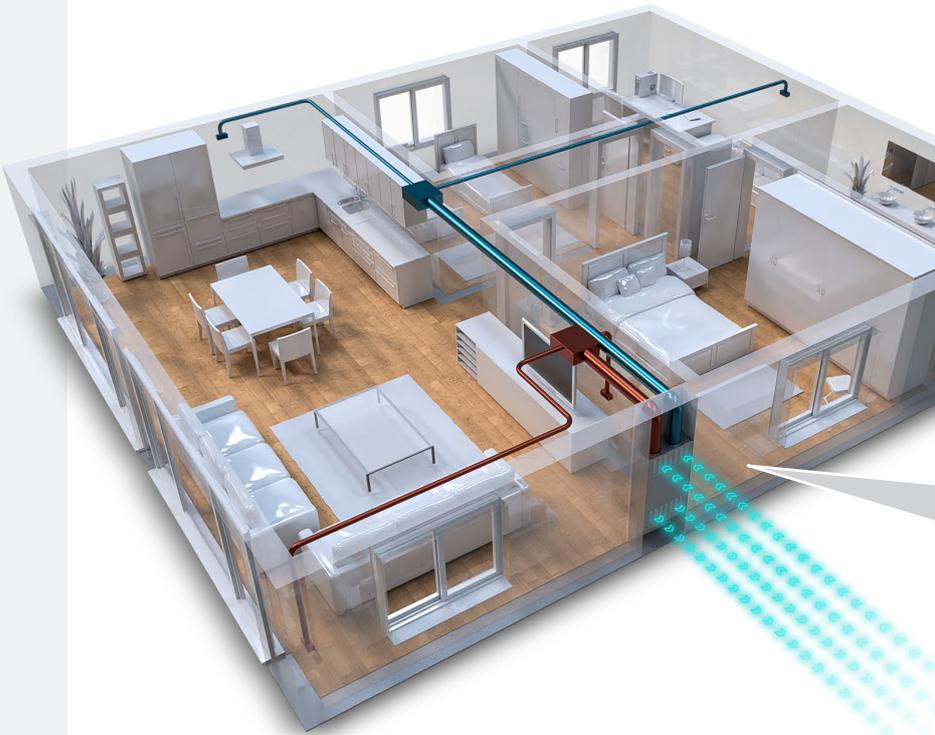
**Ease of installation and maintenance**

**THE HEAT RECOVERY SYSTEMS:**

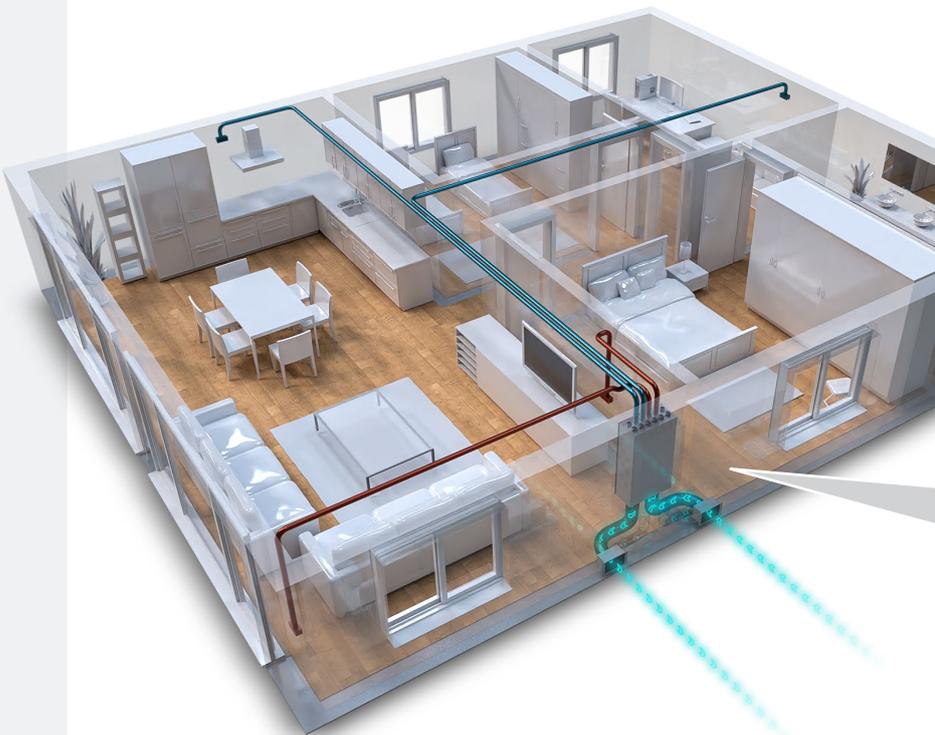
- Increase efficiency class and property value
- Renew air without dispersing heat
- Reduce danger of allergies



**RCE UNIT INSTALLATION EXAMPLES:**

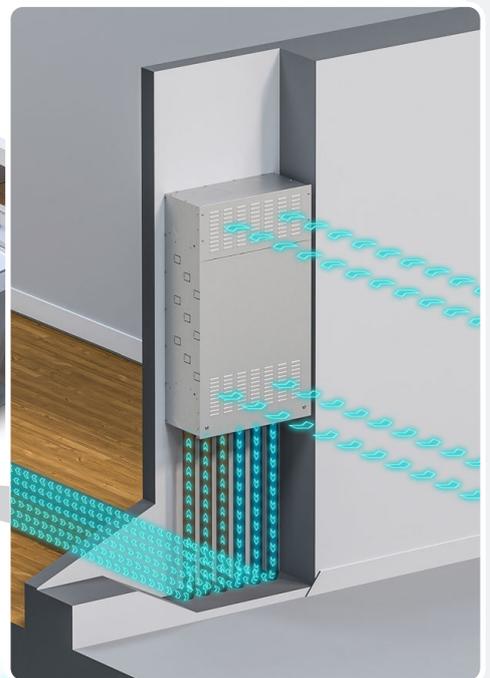
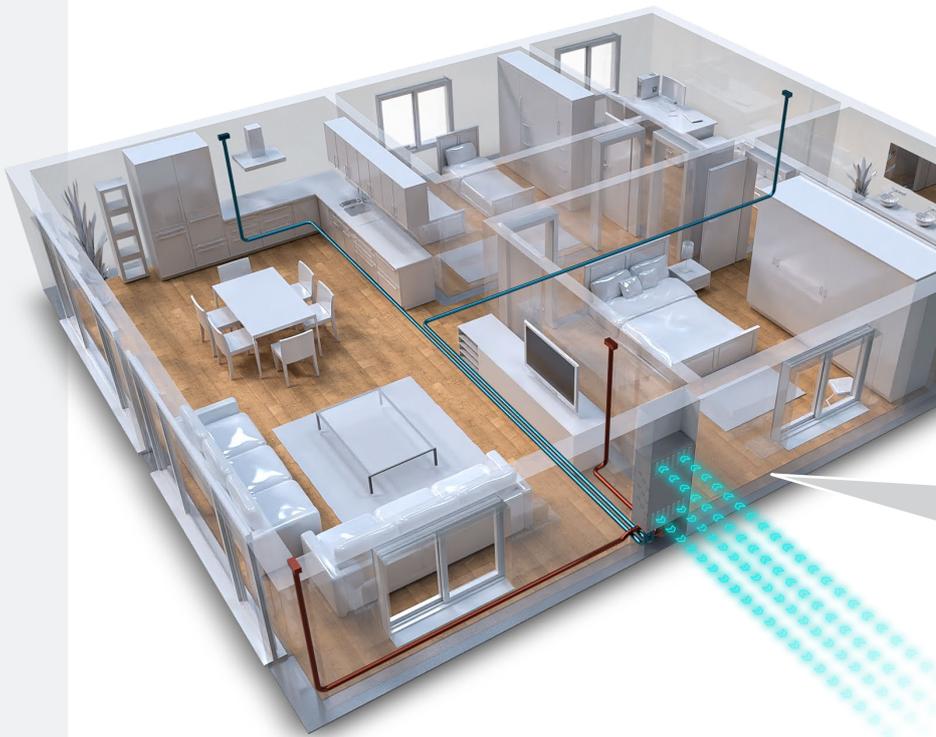


**RCE 022 – CASE WITH GALVANISED GRATING COVER WITHOUT NOZZLES**

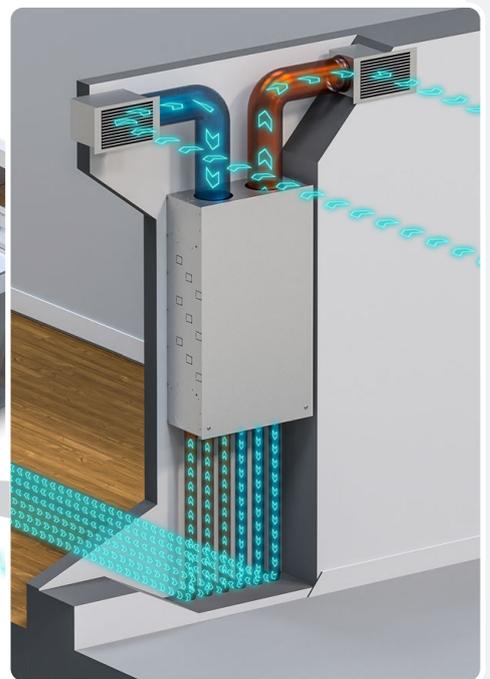
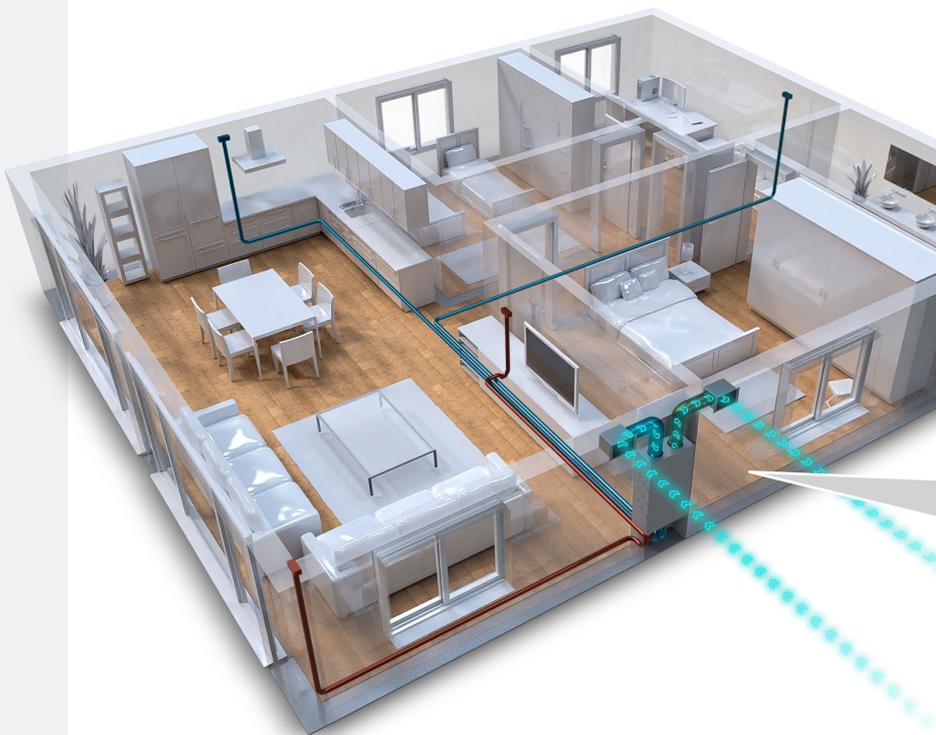


**RCE 022 – CASE WITH WHITE BLANK COVER WITH 6+6 PP NOZZLES**

**RFE UNIT INSTALLATION EXAMPLES:**



**RFE 022 – CASE WITH GALVANISED GRATING COVER WITH 6+6 PP NOZZLES**



**RFE 022 – CASE WITH GALVANISED BLANK COVER WITH 6+6 PP NOZZLES**

**ROE** **RVE**

**HEAT RECOVERY SYSTEMS**



**ROE 050**



**RVE 035**

- HEAT RECOVERY
- FREE COOLING
- VARIABLE SPEED
- AIR FILTERS
- RS485  
PROTOCOL  
CONNECTION LINK

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.

Technical sheet of the range		ROE	RVE	
		050	035	050
Efficiency rate		A / A+		
Nominal air flow rate	m³/h	500	350	500
Heat recovery efficiency	%	88	90	88
Recovered heating power in winter	W	3732	2660	3732
Recovered heating power in summer	W	1280	920	1280
Rated power consumption	W	85	75	85
Sound level	dB(A)	49	50	49
Power supply	V/ph/Hz	230 / 1~ +N / 50		
Available static pressure maximum speed	Pa	160	150	160
Dimensions (base x depth x height)	mm	1000x730x400	510x700x860	510x700x860

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

	STANDARD CONTROL	ADVANCED CONTROL
Wall-mounted graphic control display with temperature sensor, complete with shielded connection cable L.2 m	-	OPTION
Wall-mounted graphic control display with temperature and humidity sensors, complete with screened connecting cable L.2 m	-	OPTION
3-speed control	INCLUDED	-
Multi-speed control	-	INCLUDED
Turbo mode	-	INCLUDED
Time band programming	-	INCLUDED
Electronic fans with brushless motor and built-in inverter	INCLUDED	INCLUDED
Timed signalling of dirty filters	INCLUDED	INCLUDED
Fault signalling	INCLUDED	INCLUDED
Intelligent automatic defrosting	INCLUDED	INCLUDED
Free-cooling	INCLUDED	INCLUDED
RS485 - Modbus serial card	-	OPTION
High efficiency air filter set	OPTION	OPTION
5, 10 or 20 metre shielded display connection cable	-	OPTION
CO2 probe	-	OPTION
Ioniser control	-	INCLUDED
Duct water battery	OPTION	OPTION
Outlet temperature control kit	-	OPTION



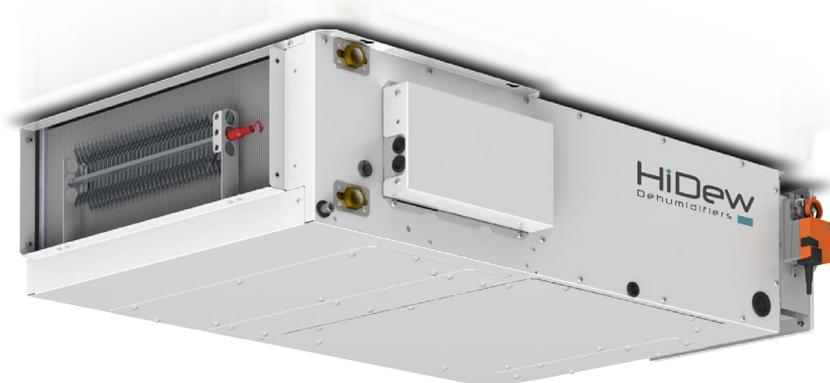
### THE HEAT RECOVERY SYSTEMS:

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



**AER**

**AIR-TO-AIR UNIT FOR PASSIVE HOUSES  
WITH HEAT RECOVERY**



**AER 024**



**AER** units are the solution to the growing demand for heating and cooling systems for passive houses or buildings with limited energy loads. In such contexts, an all-air unit becomes the guarantor of comfort in the rooms, taking charge not only of maintaining the required air temperature but also the relative humidity and air quality.

**AER** units are also perfect for the all-round air conditioning of hotel rooms where individual and precise comfort is required, without any interference between guests.

Typically combined with high-efficiency heat pumps, but not only, the **AER** units are monobloc machines developed horizontally, perfect for installation in false ceilings or in technical rooms. In addition to the water exchanger for heating or cooling the air, they are equipped with a counterflow heat recovery unit with efficiency of over 90% and a mixing chamber with 3 dampers for continuous modulation of the percentage of external air.

The fan sections consist of modern, maintenance-free, directly coupled EC radial fans. Rotation speed control allows the air flow rate to be modulated according to the ambient loads, taking into account the need for quietness at night or peaks in demand due to crowding or particularly harsh external conditions.

Technical sheet of the range		AER 024	AER 036	AER 058
Efficiency rate		A / A+		
Cooling power ( min / nom / max ) (1)	kW	2.24 / 2.89 / 3.50	3.35 / 3.80 / 4.31	4.48 / 5.77 / 7.00
Heating power ( min / nom / max ) (2)	kW	2.27 / 2.92 / 3.52	3.29 / 3.68 / 4.14	4.54 / 5.83 / 7.03
Heat recovery efficiency	%	> 93	> 93	> 93
Nominal power	W	72,5	89	90
Power supply	V / ph / Hz	230 / 1~ +N / 50	230 / 1~ +N / 50	230 / 1~ +N / 50
Nominal flow water coil	l/h	0,5	0,7	1
Nominal air flow	m³/h	400	600	800
Renewal air flow	m³/h	0 - 120	0 - 180	0 - 240
Maximum nominal head pressure	Pa	160	160	160
Sound pressure (3)	dB(A)	40	43	45
Dimensions (base x depth x height)	mm	1125 x 680 x 250	1125 x 680 x 300	1545 x 810 x 350
Empty weight	kg	27	33	33

(1) Winter efficiency is declared with ambient +20°C, 50% RH and with water +45°C

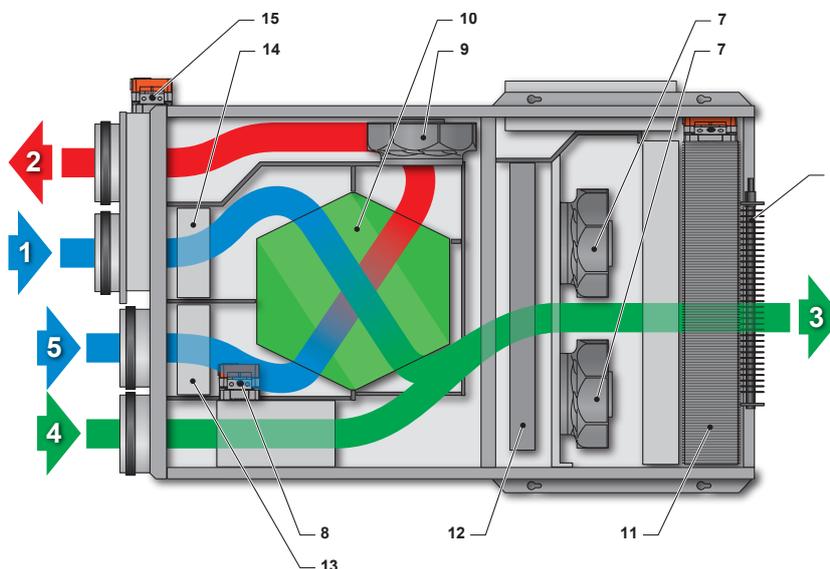
(2) Summer efficiency is declared with ambient +27°C, 47% RH and with water +7°C

(3) Sound pressure level measured in free field, 2 m from the unit, with a correction factor Q=2, according to the ISO 9614 standard, ducted unit with static pressure 50 Pa.

**Functions :**

- Air renewal with heat recovery
- Cooling
- Dehumidification
- Heating
- Free-cooling
- Free-heating

- 1 Fresh air intake
- 2 Exhaust air expulsion
- 3 Room air intake
- 4 Recirculation from environment
- 5 Exhaust air intake
- 6 Electric heaters
- 7 Blower fan
- 8 Recirculation damper
- 9 Exhaust fan
- 10 Heat recovery system
- 11 Heat exchange coil
- 12 Supply air filter
- 13 Recovery system air filter
- 14 Outdoor air filter
- 15 Outdoor air damper



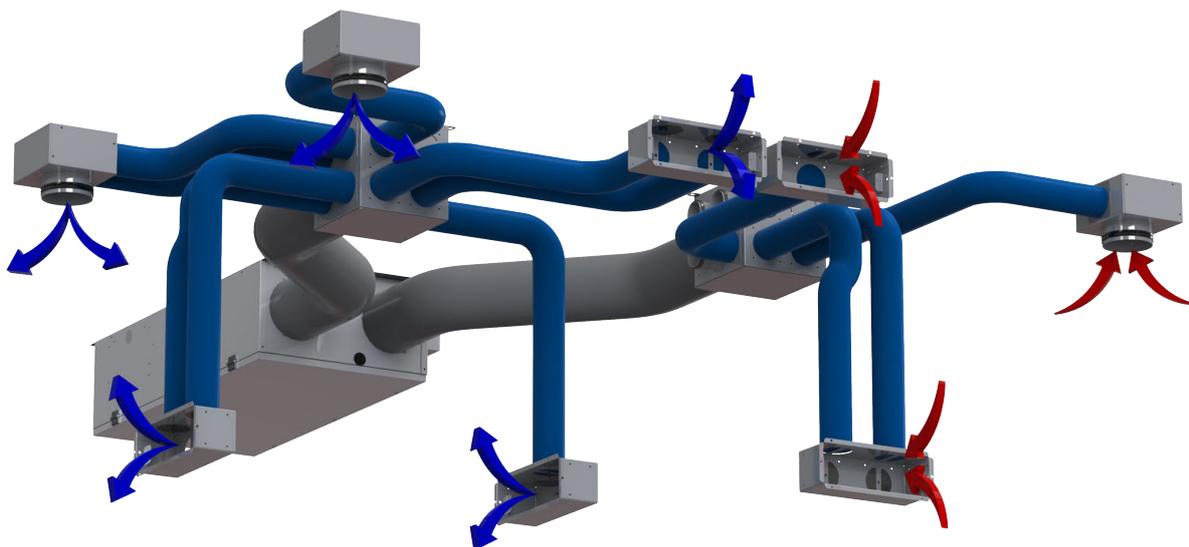
**ADVANCED CONTROL**

Electronic fans with brushless and inverter integrated	<b>INCLUDED</b>
Regulation graphic display with temperature and humidity probes and 2 metres of connecting shielded cable	<b>INCLUDED</b>
5 speeds regulation for fresh air	<b>INCLUDED</b>
Dirty filter timed signal	<b>INCLUDED</b>
Detailed anomaly signal	<b>INCLUDED</b>
Boost mode	<b>INCLUDED</b>
Timer settings programming	<b>INCLUDED</b>
Water anti-frost function	<b>INCLUDED</b>
Free cooling	<b>INCLUDED</b>
Automatic defrost of the heat recovery	<b>INCLUDED</b>
RS485 Modbus serial card	<b>INCLUDED</b>
Connecting shielded cable (display of 5, 10 or 20 metres)	⊙
Temperature and humidity probes mounted on board	<b>INCLUDED</b>
CO2 probe	⊙
Motorised dampers	<b>INCLUDED</b>
High-efficiency air filter set	⊙
Supply plenum	⊙
Electric preheater	⊙
Electric heating elements	⊙

⊙ Option available

## AIR DISTRIBUTION

## DEVICES FOR AIR DUCTING



The new series of devices for air ducting for **AIR DISTRIBUTION**, to be combined with the units of our **RSO, RSE, RSV, RSVE, RER, REV, RDE, RVE, ROE** and **AER** series.

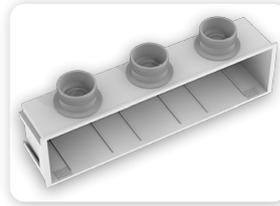
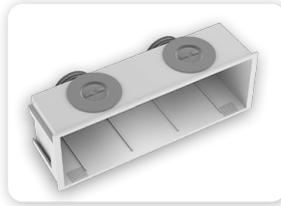
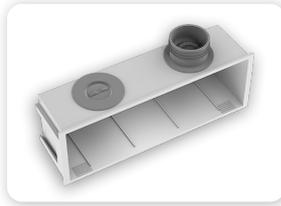
Thanks to the variety and completeness of this line, it is possible to realize the ideal comfort conditions and to give an optimal response to the needs for the different installations and canalizations of the units.

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.



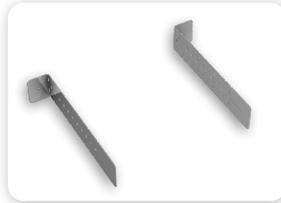
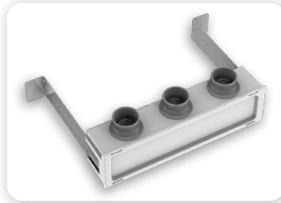
The installation of  
HiDew  
devices for air ducting  
accessories  
is a child's play!

**Accessories**



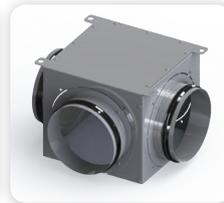
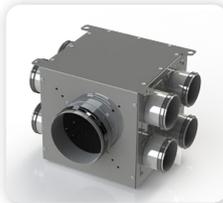
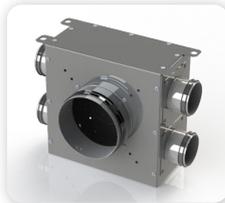
**NEW**

ABS Plenum  
300 mm with 1-2 connections  
and 400 mm with 3  
connections, equipped  
with air calibration valve.



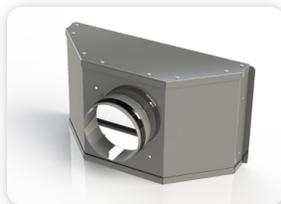
Adjustable metal brackets  
for 90°: 300 mm lengths.

Paintable ABS cover  
300 and 400 mm.



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

"T" splitter plenum



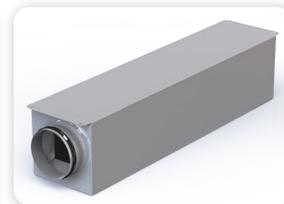
Conical supply plenum in galvanized steel with internal thermal insulation and sound absorber (for RER models).



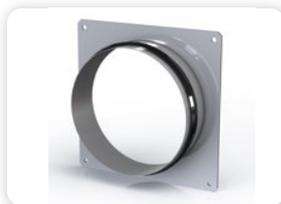
Hot / cold water coil ducted with galvanized steel plenum, internal insulation, sound absorber and steel basin for condensation collection.



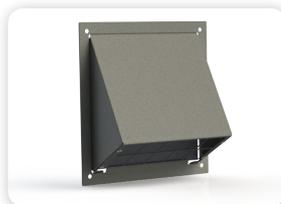
Intake and supply grilles with refined design, available in aluminium or brushed steel.



High performance silencer



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



Outdoor grilles in stainless steel



Flexible pipe diameters mm.  
125 / 160 / 180 / 200 / 250.



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

**HiDew**  
Dehumidifiers 

**HiDew S.r.l.**

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HD-R3EN-2023

MADE IN ITALY



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