

Technical Specifications

What is a heat recovery unit?

In today's technology, heat recovery air-conditioning units are mechanical air conditioning units designed to produce high quality internal air in closed volumes while providing energy saving.

Advantages

These units work with the principle of adding energy within the air exhausted from the environment to the fresh air given to the environment by using internal air-to-air heat recovery plate exchangers. Thus, they allow for having high amount of energy savings.

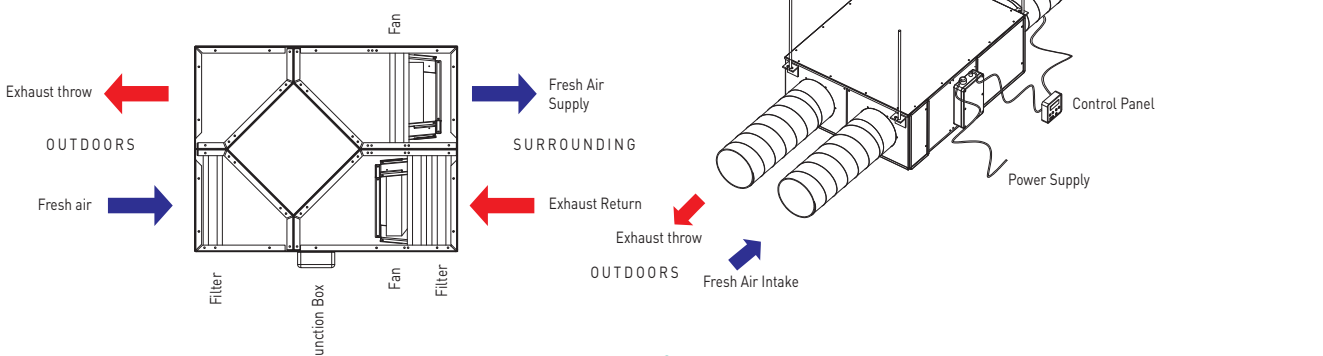
Today, heat recovery air-conditioning units are used in summer, winter and mid-seasons, through 12 months of the year, to meet the fresh air demand required to enhance the internal air quality within closed volumes while saving from energy costs.

Especially in industrial and commercial air-conditioning applications, they provide important conveniences and wide range of deployment options. They contribute a lot to the business economics via highly efficient heat exchangers having high heat transfer capacities.

In terms of deployment areas, they address multi functional buildings. For instance; they can address residence applications, office buildings, financial centres, chain stores, supermarkets, hospitals, shopping malls, schools, sport halls and restaurants.

Features and usage advantages of VENTASTAR heat recovery air conditioning unit:

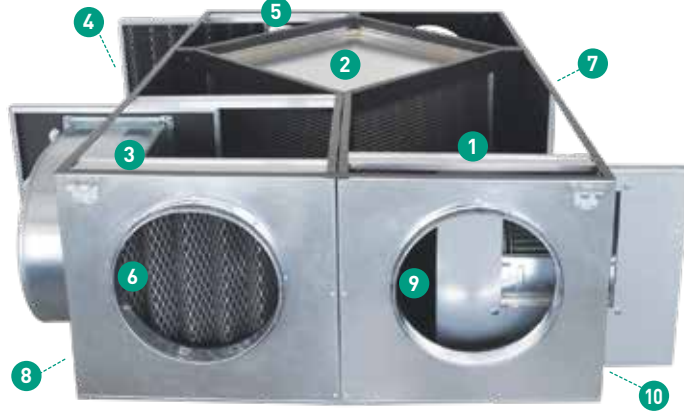
- Provides ease of operation and maintenance due to compact and slim design.
- Provides high quality indoor air with G4-class synthetic fiber.
- Enables excellent heat and sound insulation with specially insulated internal surface.
- In radial-fan types, it offers 3-stage operating capacity with direct coupled fans or proportional operating capacity.
- In plug-fan types, it offers proportional (no stage) operating capacity with direct coupled fans.
- With its specially designed electronic card control, fresh air supply and exhaust fans can be driven independently, hence, VENTASTAR heat recovery air-conditioning unit can provide positive or negative pressure operation in concerned volume.
- It has quality-safety certificates: CE, TSEK, ISO 9001 and GOST-R.
- It provides heat recovery with high efficiency and capacity by using cross-flow aluminium plate heat exchangers with high thermal conductivity and performance.
- With its specially designed electronic card, it allows to be connected to building automation system (BMS).
- Possibility of adding internal air quality sensor and external air sensor.
- In all standard models, it is possible to be delivered from readily available stocks. In case of need, optionally out-of-standard production can be made for different capacities and working principles.



VENTASTAR VHRV-RD Radial-Fan Models AC Plug Fan

Unit Components

- 1 Fresh air fan
- 2 Heat recovery exchanger
- 3 Exhaust fan
- 4 Service gate for fresh air filter
- 5 Fresh air filter
- 6 Exhaust air filter
- 7 Electronic card
- 8 Service gate for exhaust fan/filter
- 9 Duct connection groove
- 10 Service gate for fresh air fan



- High efficiency radial-fan technology
- Supplies fresh air to provide the indoor air quality
- Provides energy savings with a high efficiency aluminium exchanger
- Provides G4 class filtering in both fresh air and exhaust sides.
- Low noise level

- Wide Capacity Range
- 3 stage speed control
- Ergonomic size
- Easy installation and maintenance
- Standard electronic control panel (BASIC/PRO Model)

VENTASTAR Radial Fan VHRV Models	VHRV RD2000	VHRV RD2500	VHRV RD3000	VHRV RD4000	VHRV RD5000	VHRV RD6000	VHRV RD8000
Air Flow (m ³ /h)	2000	2500	3000	4000	5000	6000	8000
External Static Pressure (Pa)	155	150	220	220	220	180	120
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 70% efficiency with Klingenburg Aluminium Recuperator						
Power Supply	230 Volt / 50 Hz / 1-						
Input Power (Watt)	2 x 420	2 x 420	2 x 550	2 x 750	4 x 550	4 x 550	4 x 750
Input Current (Ampere)	2 x 5	2 x 5	2 x 4,9	2 x 7,7	4 x 4,9	4 x 4,9	4 x 7,7
Air Filter	G4-Class Synthetic Fibre Cassette Filters at the entrance of Fresh air and Exhaust air						
Optional Accessory Duct Type Electrical Heater (kW)	6 Ø300	9 Ø355	9 Ø35	12 Ø400	18 Ø400	18 Ø400	24 Ø400
Optional Accessory Duct Type Heater Hydrous Coil 90/70°C (kW)	9	13,5	13,5	18	27	27	36
Optional Accessory Duct Type Cooler Hydrous Coil 7/12°C (kW)	15	18	22	30	35	40	48
Optional Accessory Duct Type Cooler DX Coil - R410A (kW)	15	18	22	30	35	40	48
Length (mm)	1500	1700	1700	1800	2200	2200	2200
Width (mm)	980	1180	1180	1180	2020	2020	2020
Height (mm)	420	540	540	540	640	640	640
Duct Connection Diameter (mm)	Ø300	Ø355	Ø355	Ø400	Ø400	395 x 795	395 x 795
Weight (kg)	90	105	180	180	360	360	360
Service Space (mm)	700	800	800	900	1200	1200	1200
Noise Level db(A)	52,4	53,6	54,1	54,5	54,7	54,1	55,5
D (mm) Duct Connection	Ø300	Ø355	Ø355	Ø400	Ø400	395 x 795	395 x 795

* In VENTASTAR Radial-Fan series, fans are controlled in 3-stage speed.