

Heat Recovery Units

VENTAS

VENTAS Isıtma, Sogutma, Enerji Sistemleri, Insaat Sanayi ve Ticaret Anonim Sirketi; has been established in 2011 for production, in heating, cooling, air-conditioning and energy efficiency areas. VENTAS, which is established on top of twenty years of know-how and experience of its founders in the aforementioned sectors, is serving at its Istanbul Catalca production centre.

The product portfolio of VENTAS includes Air Handling Units, Rooftop Package Units, Fancoil Units, Heat Recovery Units, Duct Type Fans, Roof Type Fans, Kitchen Exhaust Systems and Trench Heaters.

Having ISO 9001:2015, CE, EAC and EN 1886 certificates and benefiting all advantages of modern high technology, in VENTAS production centre, high quality and durable products are manufactured by a dynamic and experienced expert team with a meticulous and neat workmanship, and a solution oriented approach.

VENTAS brand's main principles are to serve its customers as a high quality solution partner and to provide excellent service with a dynamic structure both in pre-sales and after-sales. Having reached a fast and continuous growth track since it has been established, VENTAS has managed to become a well-known company in heating, cooling, air-conditioning and energy efficiency sectors throughout the country. Moreover, the Turkish brand VENTAS has penetrated its excellent and high quality products into international markets in a very short time frame, and offered a complete product supply chain to these markets through its wide dealer and service structure.

Paying the utmost attention in its products to energy efficiency, endurance, reliability, sustainable technology and competitive price policy, VENTAS offers to be the corporate solution partner of all investors and mechanical construction companies in Turkey and all over the world, and shares its dynamic vision, renewed and developed continuously, with all its customers.

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VHRV Unit Order Codes

VHRV – P – 500 – PAC – F1 – H

1 2 3 4 5 6

- 1: Type of Unit
- 2: Type of heat recovery
P: Plate type (Cross flow)
C: Counter flow
R: Rotary
- 3: Air flowrate and construction type
500: 500m³/h, single skin unit
501: 500m³/h, double skin unit (without coil)
502: 500m³/h, double skin unit (with integrated coil)
- 4: Type of fans
PAC: AC plug fan
RAC: AC radial fan
PEC: EC plug fan
- 5: Type of filters
F1: G4 / G4
F2: M5+F7 / M5 or G4+F7 / F7
F3: Special
- 6: Type of installation
H: Horizontal
V: Vertical
VT: Vertical, top inlet/outlet
HS: Horizontal, side inlet/outlet

VHRV Unit with DX Heat Pump Order Codes

VHRV – P – 501 – DX – NI – PEC – F1 – H

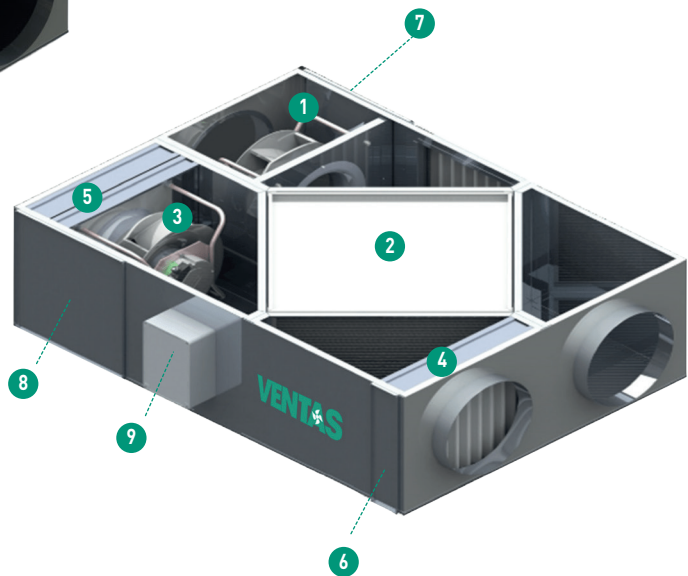
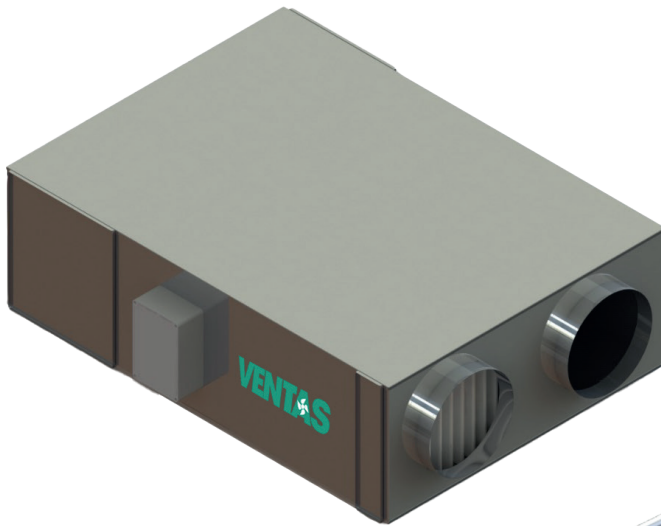
1 2 3 4 5 6 7 8

- 1: Type of Unit
- 2: Type of heat recovery
P: Plate type (Cross flow)
C: Counter flow
R: Rotary
- 3: Air flowrate and construction type
501: 500m³/h, double skin unit
- 4: Cooling circuit detail
DX-NI: DX heat pump with non-inverter compressor
DX-I: DX heat pump with inverter compressor
- 5: Type of fans
PAC: AC plug fan
RAC: AC radial fan
PEC: EC plug fan
- 6: Type of filters
F1: G4 / G4
F2: M5+F7 / M5 or G4+F7 / F7
F3: Special
- 7: Type of installation
H: Horizontal
V: Vertical

Heat Recovery Units

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with AC Fan, Horizontal Type



- 1 Fresh air fan
- 2 Heat exchanger
- 3 Exhaust air fan
- 4 Fresh air filter
- 5 Exhaust air filter
- 6 Service door for fresh air filter
- 7 Service door for fresh air fan
- 8 Service door for exhaust air filter and fan
- 9 Electronic card

General Specifications

- Casing is made of painted galvanized sheets, single skin panel structure with 10 mm nfaf insulation provides heat and noise insulation. Service doors allow easy access to internal components.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- AC plug-fan technology provides stepped speed control (5 steps for plug fans and 3 steps for radial fans).
- G4 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Bypass module is optional.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety
- Equipped with Ventastar Control Unit which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with AC Fan, Horizontal Type

VHRV Units with Cross Flow Recuperator, AC Plug Fan, Horizontal	VHRV-P-500-PAC-F1-H	VHRV-P-750-PAC-F1-H	VHRV-P-1000-PAC-F1-H	VHRV-P-1500-PAC-F1-H	VHRV-P-2000-PAC-F1-H	VHRV-P-3000-PAC-F1-H
Air Flowrate (m³/h)	500	750	1000	1500	2000	3000
External Static Pressure (Pa)	200	100	105	110	135	150
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.					
Power Supply	230 Volt / 50 Hz / 1					
Input Power (Watt)	2 x 102	2 x 155	2 x 210	2 x 225	2 x 515	2 x 680
Input Current (Ampere)	2 x 0,45	2 x 0,68	2 x 0,93	2 x 1	2 x 2,25	2 x 3
Noise Level db(A)	44	46	47	56	49	51

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS (Service doors on left and right side)						
MODEL	VHRV-P-500-PAC-F1-H	VHRV-P-750-PAC-F1-H	VHRV-P-1000-PAC-F1-H	VHRV-P-1500-PAC-F1-H	VHRV-P-2000-PAC-F1-H	VHRV-P-3000-PAC-F1-H
L (mm)	850	850	985	1350	1350	1700
W (mm)	665	665	705	980	980	1180
*W (with bypass) (mm)	895	895	935	1210	1210	1410
*wxh (bypass connection) (mm)	175 x 210	175 x 210	250 x 210	350 x 310	350 x 310	350 x 410
H (mm)	310	310	340	420	420	540
ØD (mm) Duct Connection	Ø200	Ø200	Ø250	Ø300	Ø300	Ø355
Weight (kg)	42	45	48	95	105	180
*Weight - With Bypass (kg)	44	47	52	101	112	190

*Only valid for units with bypass module.

VHRV Units with Cross Flow Recuperator, AC Radial Fan, Horizontal	VHRV-P-2000-RAC-F1-H	VHRV-P-2500-RAC-F1-H	VHRV-P-3000-RAC-F1-H	VHRV-P-4000-RAC-F1-H	VHRV-P-5000-RAC-F1-H	VHRV-P-6000-RAC-F1-H	VHRV-P-8000-RAC-F1-H
Air Flowrate (m³/h)	2000	2500	3000	4000	5000	6000	8000
External Static Pressure (Pa)	165	170	190	210	165	245	360
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.						
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
Noise Level db(A)	52,4	53,6	54,1	54,5	54,7	54,1	55,5

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

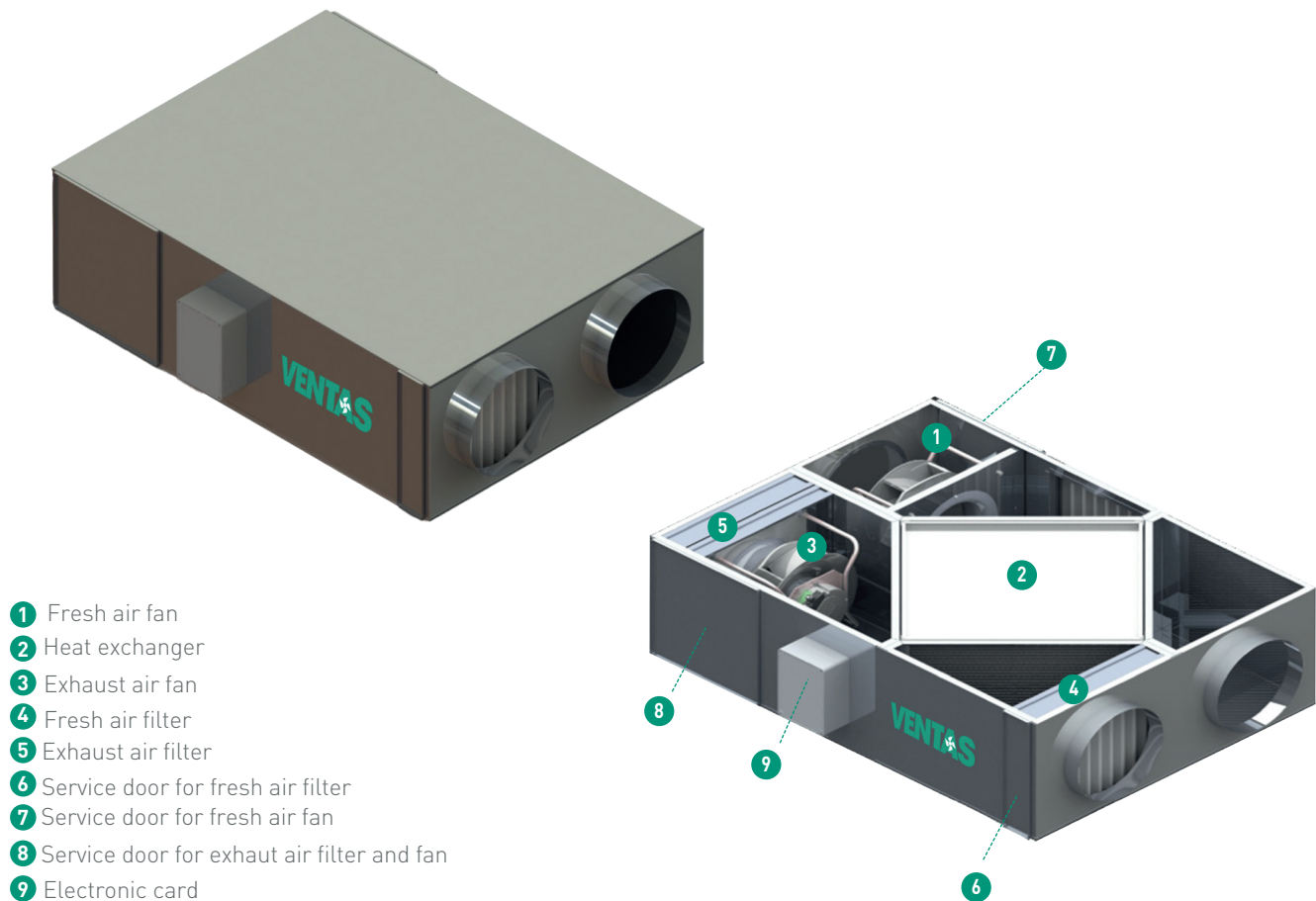
DIMENSIONS (Service doors on left and right side)							
MODEL	VHRV-P-2000-RAC-F1-H	VHRV-P-2500-RAC-F1-H	VHRV-P-3000-RAC-F1-H	VHRV-P-4000-RAC-F1-H	VHRV-P-5000-RAC-F1-H	VHRV-P-6000-RAC-F1-H	VHRV-P-8000-RAC-F1-H
L (mm)	1350	1700	1700	1800	2220	2220	2220
W (mm)	980	1180	1180	1180	2025	2025	2025
*W (with bypass) (mm)	1210	1410	1410	1410	2255	2255	2255
*wxh (bypass connection) (mm)	350 x 310	350 x 410	350 x 410	410 x 410	610 x 510	610 x 510	610 x 510
H (mm)	420	540	540	540	640	640	640
ØD (mm) Duct Connection	300	355	355	400	795*395	795*395	795*395
Weight (kg)	95	170	180	185	305	360	370
*Weight - With Bypass (kg)	98	175	185	192	315	370	380

*Only valid for units with bypass module.

Heat Recovery Units

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with EC Fan, Horizontal Type



General Specifications

- Casing is made of painted galvanized sheets, single skin panel structure with 10 mm nfa insulation provides heat and noise insulation. Service doors allow easy access to internal components.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides proportional speed control.
- G4 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Bypass module is optional.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with EC Fan, Horizontal Type

VHRV Units with Cross Flow Recuperator, EC Plug Fan, Horizontal	VHRV-P-500-PEC-F1-H	VHRV-P-750-PEC-F1-H	VHRV-P-1000-PEC-F1-H	VHRV-P-1500-PEC-F1-H	VHRV-P-2000-PEC-F1-H
Air Flowrate (m³/h)	500	750	1000	1500	2000
External Static Pressure (Pa)	145	140	120	170	250
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.				
Power Supply	230 Volt / 50 Hz / 1				
Input Power (Watt)	2 x 82,5	2 x 141,6	2 x 164,2	2 x 245,3	2 x 338,7
Input Current (Ampere)	2 x 0,77	2 x 1,13	2 x 1,29	2 x 1,08	2 x 1,49

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS (Service doors on left and right side)					
MODEL	VHRV-P-500-PEC-F1-H	VHRV-P-750-PEC-F1-H	VHRV-P-1000-PEC-F1-H	VHRV-P-1500-PEC-F1-H	VHRV-P-2000-PEC-F1-H
L (mm)	850	850	985	1350	1350
W (mm)	665	665	705	980	980
*W (with bypass) (mm)	895	895	935	1210	1210
*wxh (bypass connection) (mm)	175 x 210	175 x 210	250 x 210	350 x 310	350 x 310
H (mm)	310	310	340	420	420
ØD (mm) Duct Connection	Ø200	Ø200	Ø250	Ø300	Ø300
Weight (kg)	42	45	48	95	105
Weight - With Bypass (kg)	44	47	52	101	112

*Only valid for units with bypass module.

VHRV Units with Cross Flow Recuperator, EC Plug Fan, Horizontal	VHRV-P-3000-PEC-F1-H	VHRV-P-4000-PEC-F1-H	VHRV-P-5000-PEC-F1-H	VHRV-P-6000-PEC-F1-H	VHRV-P-8000-PEC-F1-H
Air Flowrate (m³/h)	3000	4000	5000	6000	8000
External Static Pressure (Pa)	160	255	275	260	310
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.				
Power Supply	230 Volt/50 Hz/1	380 Volt / 50 Hz / 3			
Input Power (Watt)	2 x 522,7	2 x 888,1	2 x 1363	2 x 1357	2 x 2600
Input Current (Ampere)	2 x 2,28	2 x 1,7	2 x 2,19	2 x 2,16	2 x 3,36
Noise Level db(A)	50,7	58,7	57,8	52,6	59,5

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

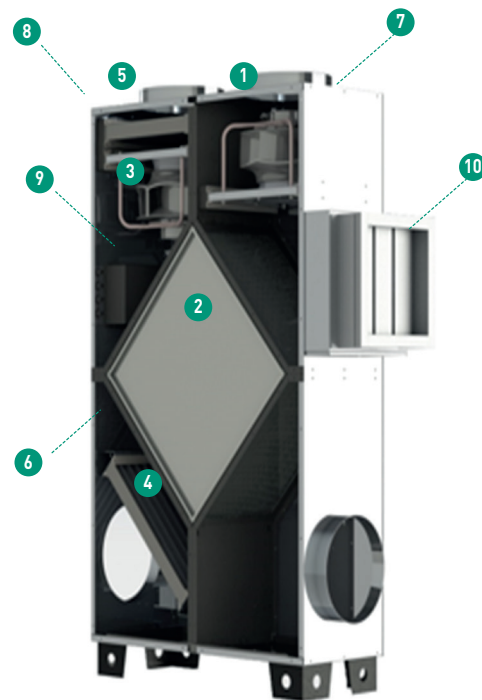
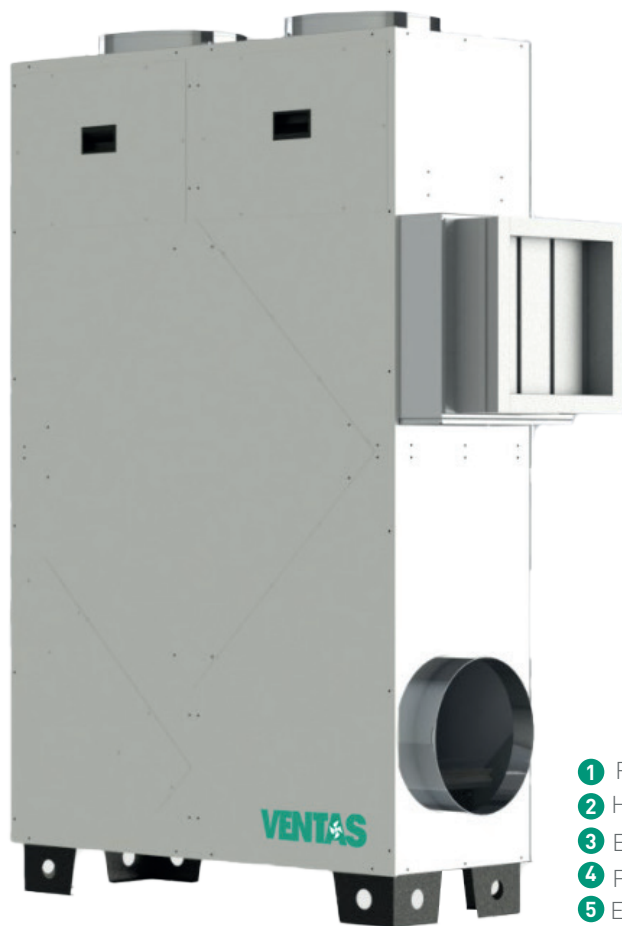
DIMENSIONS (Service doors on left and right side)					
MODEL	VHRV-P-3000-PEC-F1-H	VHRV-P-4000-PEC-F1-H	VHRV-P-5000-PEC-F1-H	VHRV-P-6000-PEC-F1-H	VHRV-P-8000-PEC-F1-H
L (mm)	1700	1800	2020	2220	2220
W (mm)	1180	1180	2025	2025	2025
*W (with bypass) (mm)	1410	1410	2255	2255	2255
*wxh (bypass connection) (mm)	350 x 410	410 x 410	610 x 510	610 x 510	610 x 510
H (mm)	540	540	640	640	640
ØD (mm) Duct Connection	Ø355	Ø400	795*395	795*395	795*395
Weight (kg)	180	185	305	360	370
Weight - With Bypass (kg)	190	195	315	374	384

*Only valid for units with bypass module.

Heat Recovery Units

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with EC Fan, Vertical Type



- | | |
|----------------------|---|
| 1 Fresh air fan | 6 Service door for fresh air filter |
| 2 Heat exchanger | 7 Service door for fresh air fan |
| 3 Exhaust air fan | 8 Service door for exhaust air filter and fan |
| 4 Fresh air filter | 9 Electronic card |
| 5 Exhaust air filter | 10 Bypass damper (optional) |

General Specifications

- Casing is made of painted galvanized sheets, single skin panel structure with 10 mm nfa insulation provides heat and noise insulation. Service doors allow easy access to internal components. Vertical construction is advantageous for limited spaces or where there is no sufficient height in ceilings.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides proportional speed control.
- G4 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Bypass module is optional.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-P Models

Medium Efficient Heat Recovery Units with EC Fan, Vertical Type

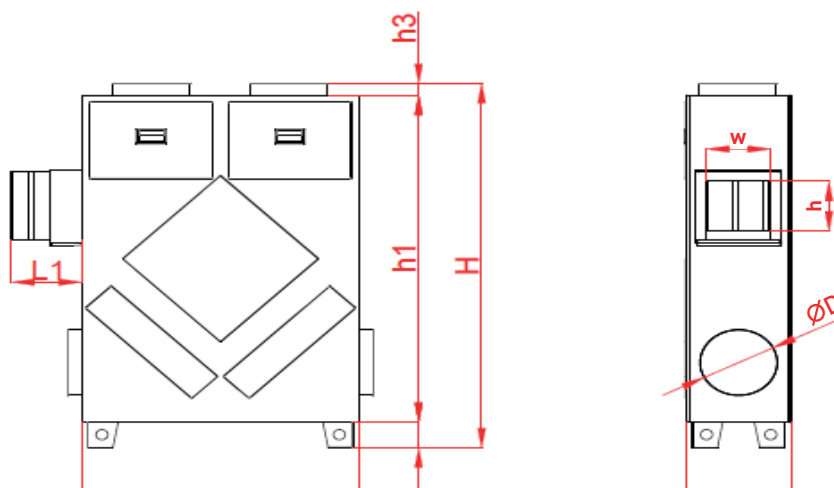
VHRV Units with Cross Flow Recuperator, AC Radial Fan, Horizontal	VHRV-P-500-PEC-F1-V	VHRV-P-750-PEC-F1-V	VHRV-P-1000-PEC-F1-V	VHRV-P-1500-PEC-F1-V	VHRV-P-2000-PEC-F1-V	VHRV-P-3000-PEC-F1-V	VHRV-P-4000-PEC-F1-V
Air Flowrate (m³/h)	500	750	1000	1500	2000	3000	4000
External Static Pressure (Pa)	145	140	120	170	250	160	255
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.						
Power Supply	230 Volt / 50 Hz / 1						380 Volt/50 Hz/3
Input Power (Watt)	2 x 82,5	2 x 141,6	2 x 164,2	2 x 245,3	2 x 338,7	2 x 522,7	2 x 888,1
Input Current (Ampere)	2 x 0,77	2 x 1,13	2 x 1,29	2 x 1,08	2 x 1,49	2 x 2,28	2 x 1,7
Noise Level db(A)	45,1	45,3	42,8	43,6	46,2	50,7	58,7

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS (Service doors on left and right side)							
MODEL	VHRV-P-500-PEC-F1-V	VHRV-P-750-PEC-F1-V	VHRV-P-1000-PEC-F1-V	VHRV-P-1500-PEC-F1-V	VHRV-P-2000-PEC-F1-V	VHRV-P-3000-PEC-F1-V	VHRV-P-4000-PEC-F1-V
L (mm)	810	810	900	1016	1016	1180	1180
*L (with bypass) (mm)	1040	1040	1130	1246	1246	1410	1410
*wxh (bypass connection) (mm)	210 x 210	210 x 210	210 x 210	310 x 310	310 x 310	410 x 410	410 x 410
W (mm)	310	310	340	420	420	540	540
H (mm)	1240	1240	1400	1736	1736	2012	2112
h1 (mm)	1090	1090	1250	1586	1586	1862	1962
h2 (mm)	100	100	100	100	100	100	100
h3 (mm)	50	50	50	50	50	50	50
ØD (mm) Duct Connection	Ø200	Ø200	Ø250	Ø300	Ø300	Ø355	Ø400
Weight (kg)	38	40	47	80	85	140	140

*Only valid for units with bypass module.



Heat Recovery Units

VENTASTAR VHRV-P Models

Accessories

Duct Type Electric Heater

DUCT TYPE ELECTRIC HEATER DETAILS			
MODEL	For VHRV Models with Air Flowrate (m³/h)	Capacity (kW)	Power Supply
VDTEH 1,5	500	1,5	230 Volt / 50 Hz / 1
VDTEH 2,0	750	2,0	230 Volt / 50 Hz / 1
VDTEH 3,0	1000	3,0	230 Volt / 50 Hz / 1
VDTEH 4,5	1500	4,5	380 Volt / 50 Hz / 3
VDTEH 6,0	2000	6,0	380 Volt / 50 Hz / 3
VDTEH 9,0	2500	9,0	380 Volt / 50 Hz / 3
VDTEH 9,0	3000	9,0	380 Volt / 50 Hz / 3
VDTEH 12,0	4000	12,0	380 Volt / 50 Hz / 3
VDTEH 18,0	5000	18,0	380 Volt / 50 Hz / 3
VDTEH 18,0	6000	18,0	380 Volt / 50 Hz / 3
VDTEH 24,0	8000	24	380 Volt / 50 Hz / 3

DUCT TYPE ELECTRIC HEATER DIMENSIONS			
MODEL	Duct Connection (mm)	LTotal (mm)	HTotal (mm)
VDTEH 1,5	Ø 200	565	355
VDTEH 2,0	Ø 200	565	355
VDTEH 3,0	Ø 250	565	410
VDTEH 4,5	Ø 300	565	460
VDTEH 6,0	Ø 300	565	460
VDTEH 9,0	Ø 355	585	535
VDTEH 9,0	Ø 355	585	535
VDTEH 12,0	Ø 400	585	580
VDTEH 18,0	Ø 400	880	580
VDTEH 18,0	Ø 400	880	580
VDTEH 24,0	Ø 400	880	580



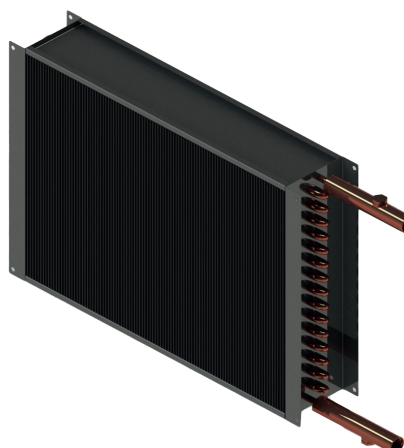
*Advised electric heater capacities are for final heating. Please consult sales representative for suitable pre heater capacity selection according to your outdoor design temperature in winter.

Duct Type Heating Coil

HEATING COIL DETAILS									
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWH-P-500	500	5,24	16	4,39	12	3,53	16	2,40	15
VDTWH-P-750	750	6,79	35	5,69	35	4,59	34	3,16	25
VDTWH-P-1000	1000	9,11	56	7,63	31	6,14	31	4,14	31
VDTWH-P-1500	1500	15,96	37	13,50	20	11,04	20	7,72	20
VDTWH-P-2000	2000	19,19	35	16,26	35	13,32	35	9,39	34
VDTWH-P-2500	2500	24,22	16	20,34	27	26,45	26	11,42	26
VDTWH-P-3000	3000	27,10	38	22,78	38	18,43	37	12,84	37
VDTWH-P-4000	4000	37,89	37	32,08	37	26,26	36	18,51	36
VDTWH-P-5000	5000	45,99	24	38,78	38	31,53	37	22,11	37
VDTWH-P-6000	6000	55,67	39	47,06	38	38,42	38	26,97	38
VDTWH-P-8000	8000	75,12	38	63,60	38	52,04	38	36,72	37

*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

HEATING COIL DIMENSIONS					
MODEL	L (mm)	W (mm)	H (mm)	Coil Connection	Weight (kg)
VDTWH-P-500	180	400	320	1/2"	5
VDTWH-P-750	180	400	320	1/2"	5
VDTWH-P-1000	180	500	320	1/2"	6
VDTWH-P-1500	180	650	420	1/2"	8
VDTWH-P-2000	180	650	420	1/2"	8
VDTWH-P-2500	180	725	520	1/2"	10
VDTWH-P-3000	180	725	520	1/2"	10
VDTWH-P-4000	180	810	620	3/4"	13
VDTWH-P-5000	180	960	620	3/4"	14
VDTWH-P-6000	180	1110	620	3/4"	16
VDTWH-P-8000	180	1440	620	1"	22



VENTASTAR VHRV-P Models

Accessories

Duct Type Cooling/DX Coil

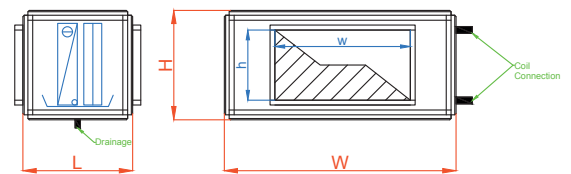
COOLING COIL DETAILS							
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWC-P-500	500	4,63	40	4,36	40	4,09	40
VDTWC-P-750	750	6,06	74	5,71	74	5,35	73
VDTWC-P-1000	1000	8,39	74	7,93	74	7,45	74
VDTWC-P-1500	1500	12,55	53	11,80	53	11,02	52
VDTWC-P-2000	2000	15,22	83	14,31	83	13,38	82
VDTWC-P-2500	2500	20,80	60	19,57	60	20,80	60
VDTWC-P-3000	3000	23,42	79	22,05	79	20,65	79
VDTWC-P-4000	4000	30,48	81	28,66	81	26,79	81
VDTWC-P-5000	5000	39,41	83	37,15	83	34,84	83
VDTWC-P-6000	6000	49,71	79	46,97	79	44,21	78
VDTWC-P-8000	8000	65,26	80	61,68	80	57,97	79

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDTDX-P-500	500	4,14	37	2,58	24
VDTDX-P-750	750	5,29	67	3,28	45
VDTDX-P-1000	1000	7,13	68	4,49	45
VDTDX-P-1500	1500	11,80	49	8,51	32
VDTDX-P-2000	2000	14,06	76	10,23	52
VDTDX-P-2500	2500	18,87	55	13,20	36
VDTDX-P-3000	3000	21,00	73	14,67	49
VDTDX-P-4000	4000	29,93	75	22,54	51
VDTDX-P-5000	5000	35,98	77	26,67	51
VDTDX-P-6000	6000	46,60	73	34,91	49
VDTDX-P-8000	8000	55,84	67	40,88	77

**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

COOLING COIL / DX COIL DIMENSIONS									
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Drainage	Cooling Coil Weight (kg)	DX Coil Weight (kg)
VDTWC/DX-P-500	672	570	450	250	200	1/2"	3/4"	7	6
VDTWC/DX-P-750	672	570	450	250	200	1/2"	3/4"	7	6
VDTWC/DX-P-1000	672	670	450	350	200	3/4"	3/4"	8	7
VDTWC/DX-P-1500	672	770	600	450	350	1"	1"	14	12
VDTWC/DX-P-2000	672	770	600	450	350	1"	1"	14	12
VDTWC/DX-P-2500	672	870	750	550	500	1 1/4"	1"	20	16
VDTWC/DX-P-3000	672	870	750	550	500	1 1/4"	1"	20	16
VDTWC/DX-P-4000	672	1050	750	700	500	1 1/4"	1"	25	20
VDTWC/DX-P-5000	672	1225	750	850	500	1 1/2"	1"	28	25
VDTWC/DX-P-6000	672	1450	750	1050	500	2"	1"	38	30
VDTWC/DX-P-8000	672	1775	750	1325	500	2"	1"	50	41



Duct Type Silencer

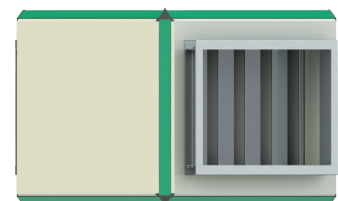
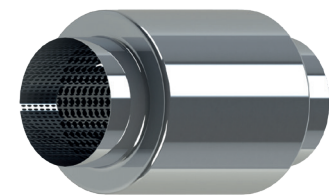
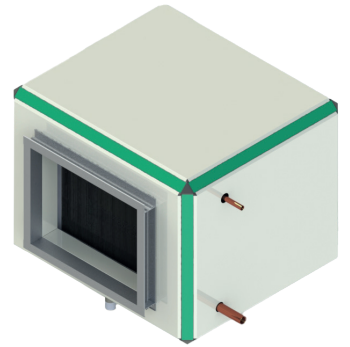
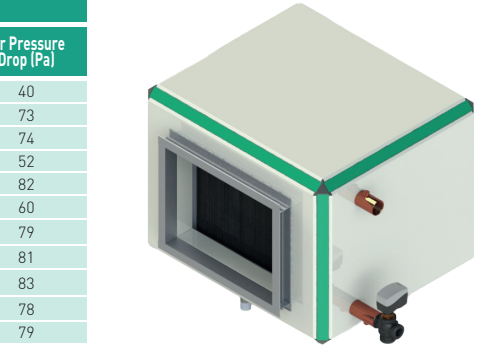
MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	ØD (mm)	Ød (mm)	Weight (kg)
VSA-500	500	12	10	750	300	200	12
VSA-750	750	12	10	750	300	200	12
VSA-1000	1000	14	13	750	350	250	18
VSA-1500	1500	17	16	1000	400	300	28
VSA-2000	2000	17	16	1000	400	300	28
VSA-2500	2500	18	16	1500	455	355	37
VSA-3000	3000	18	16	1500	455	355	37
VSA-4000	4000	23	19	1500	500	400	39

*Sound attenuation in 250 Hz.

MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	W (mm)	H (mm)	Weight (kg)
VSA-5000	5000	26	24	1500	900	600	67
VSA-6000	6000	26	24	1500	900	600	67
VSA-8000	8000	23	27	1500	1200	600	85

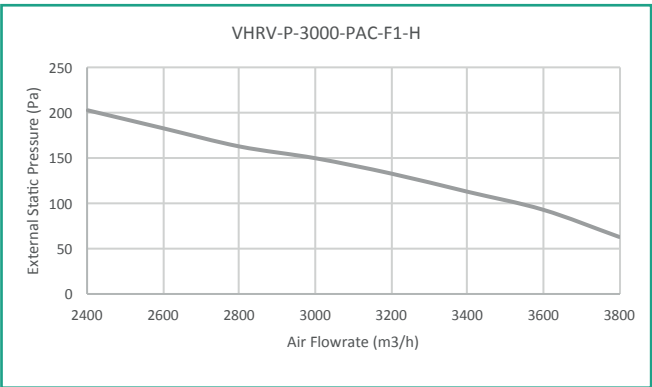
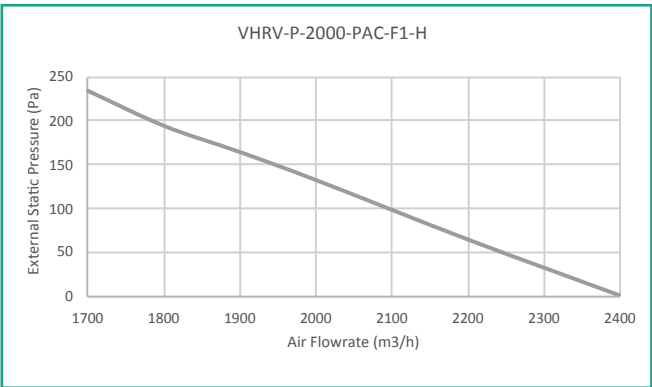
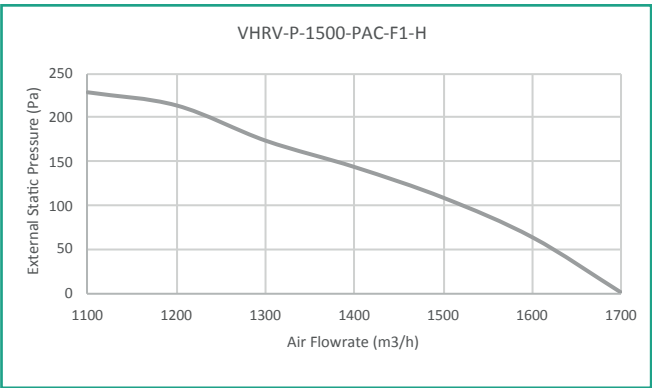
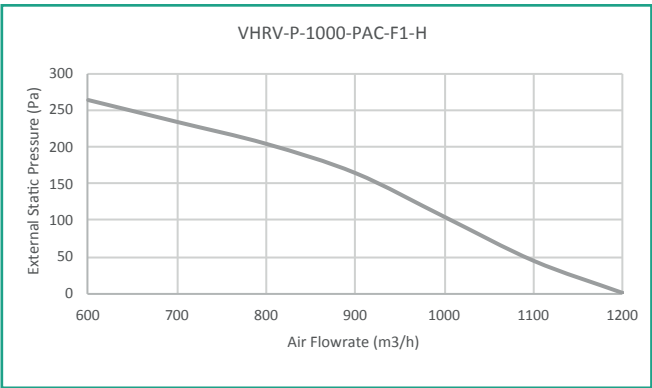
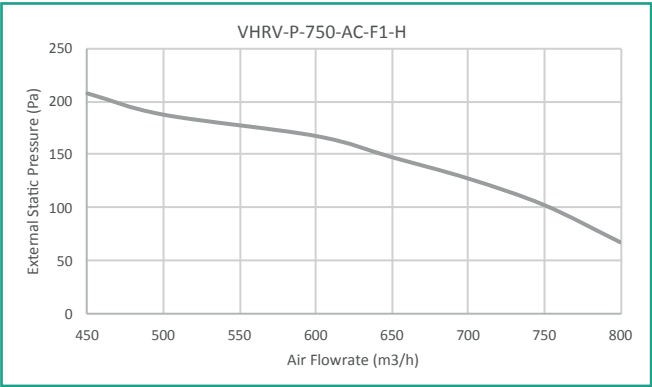
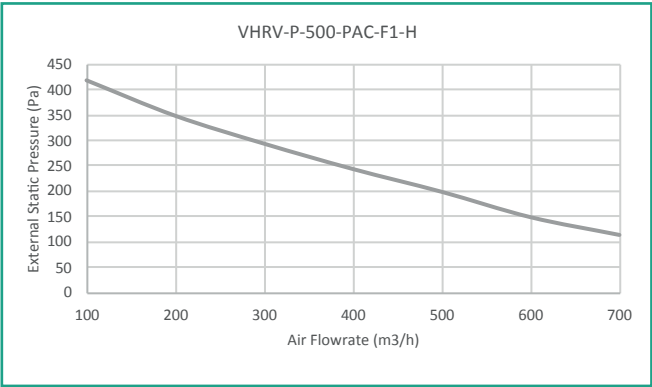
*Sound attenuation in 250 Hz.

*Rectangular.



Heat Recovery Units

VENTASTAR VHRV-P Models Performance Curves VHRV-P Models with AC Plug Fan

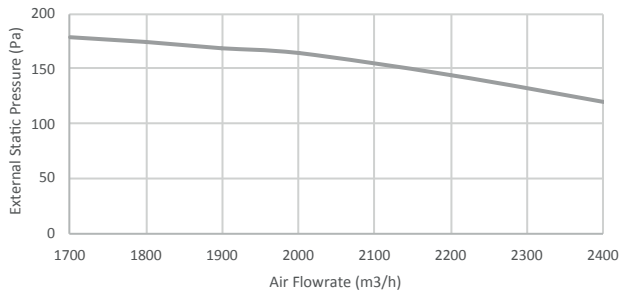


VENTASTAR VHRV-P Models

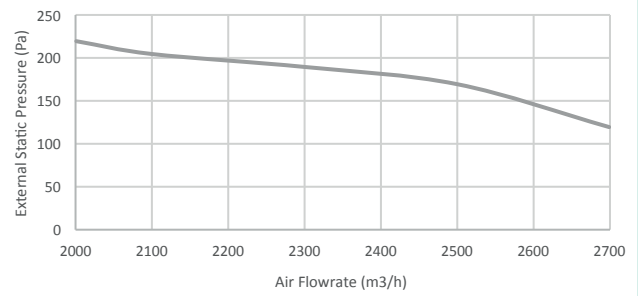
Performance Curves

VHRV-P Models with AC Radial Fan

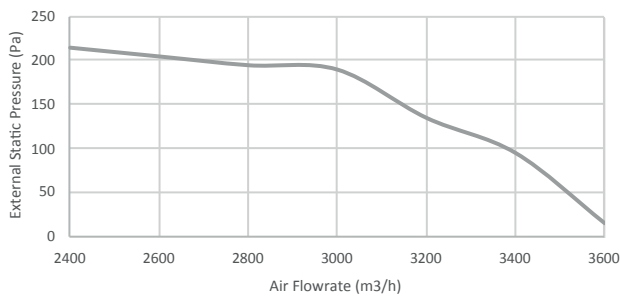
VHRV-P-2000-RAC-F1-H



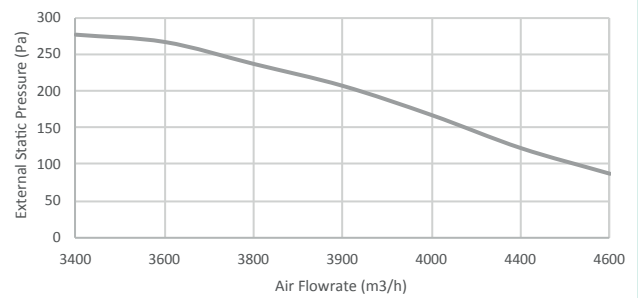
VHRV-P-2500-RAC-F1-H



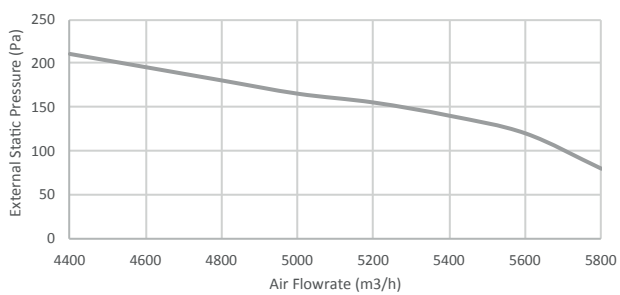
VHRV-P-3000-RAC-F1-H



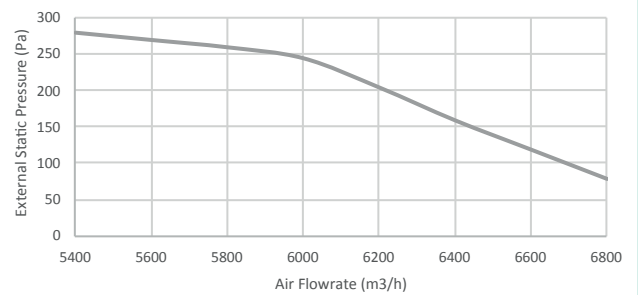
VHRV-P-4000-RAC-F1-H



VHRV-P-5000-RAC-F1-H

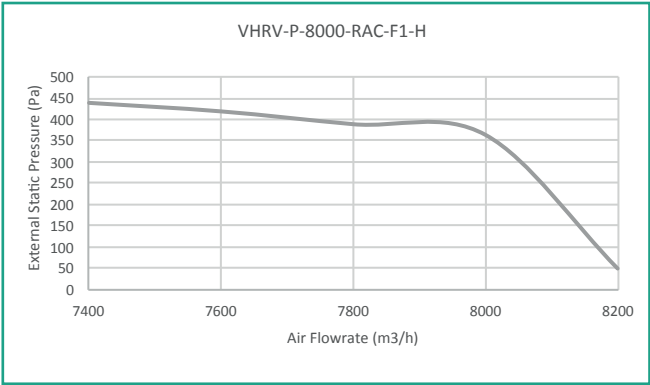


VHRV-P-6000-RAC-F1-H

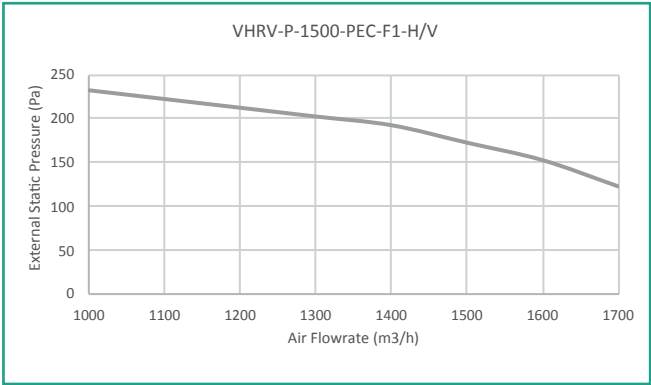
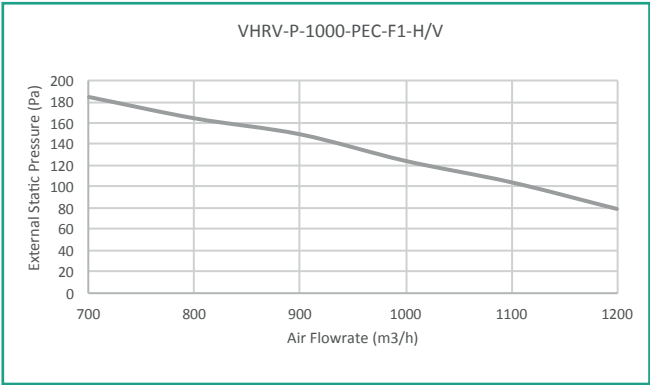
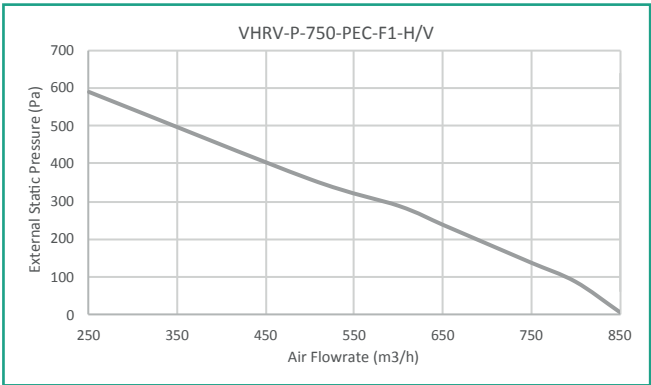
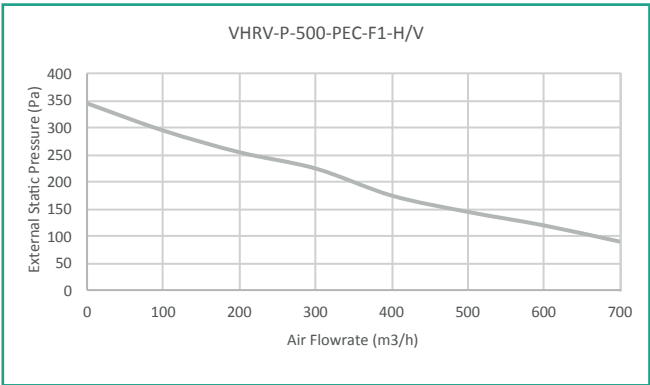


Heat Recovery Units

VENTASTAR VHRV-P Models Performance Curves VHRV-P Models with AC Radial Fan



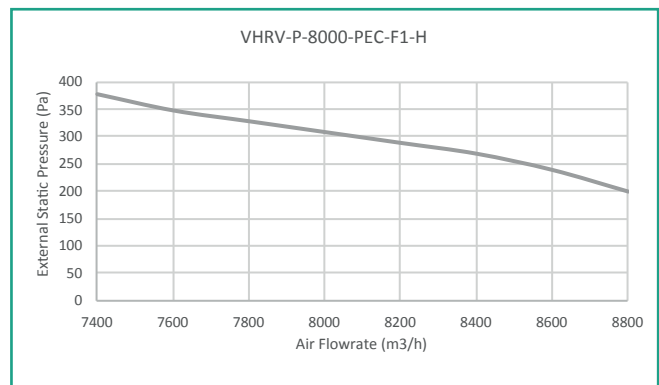
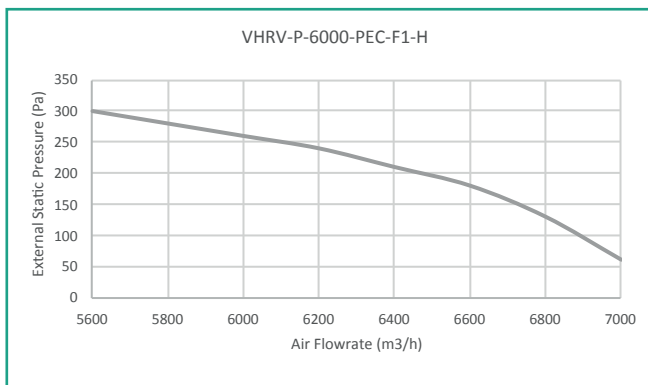
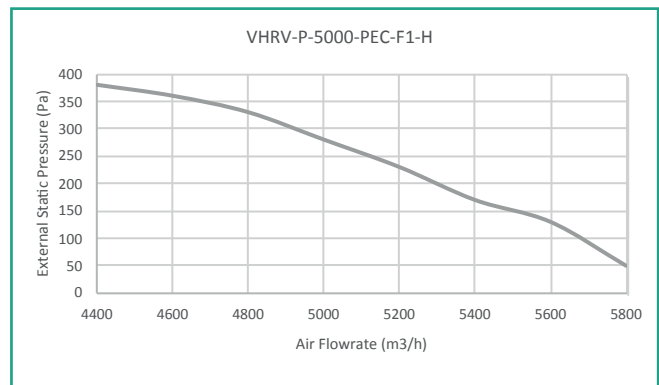
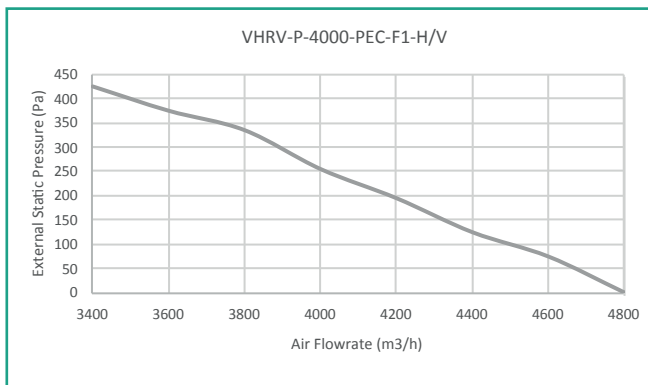
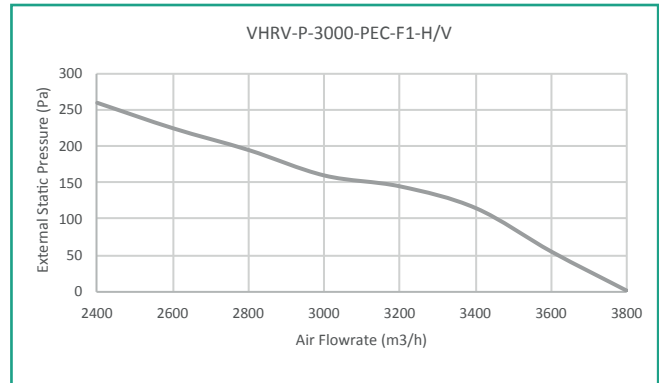
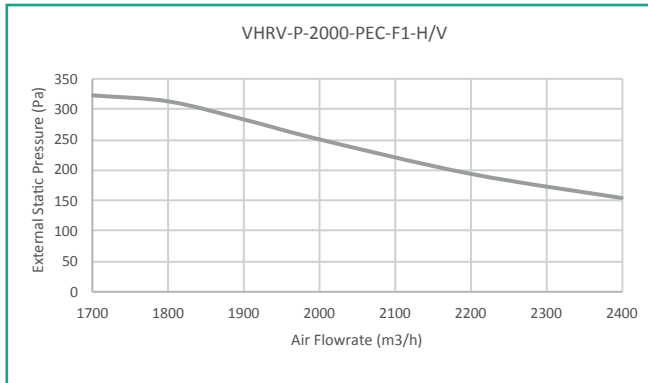
VHRV-P Models with EC Plug Fan



VENTASTAR VHRV-P Models

Performance Curves

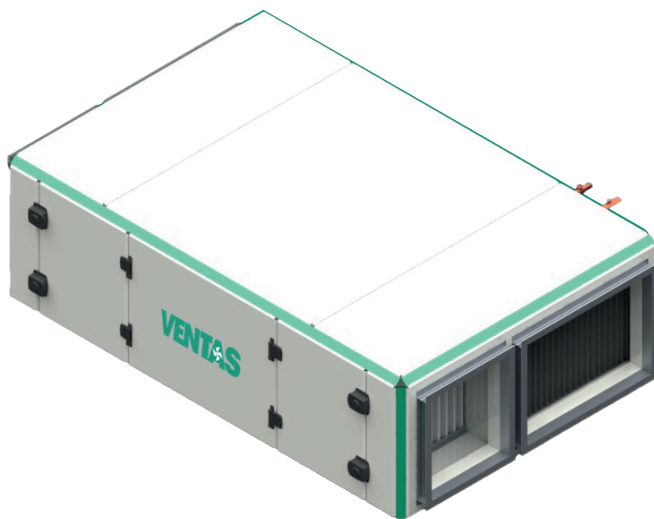
VHRV-P Models with EC Plug Fan



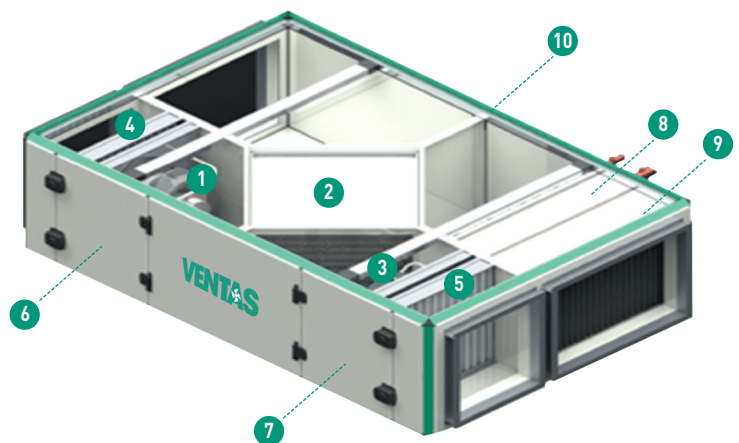
Heat Recovery Units

VENTASTAR VHRV-PLUS Models

Medium Efficient Double Skin Heat Recovery Units with Coils Inside



- 1 Fresh air fan
- 2 Heat exchanger
- 3 Exhaust air fan
- 4 Fresh air filter
- 5 Exhaust air filter
- 6 Service door for fresh air filter and fan
- 7 Service door for exhaust air filter and fan
- 8 Heating coil
- 9 Cooling/DX coil with drop eliminator
- 10 Electronic card



General Specifications

- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density:110 kg/m3) insulation provides heat and noise insulation. Hinged service doors allow easy access to internal components.
- Double skin construction provides ability to locate heating coil and/or cooling coil and/or DX coil inside of the unit.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides proportional speed control.
- G4 miniplateat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-PLUS Models

Medium Efficient Double Skin Heat Recovery Units with Coils Inside

VHRV PLUS Units with Cross Flow Recuperator, EC Plug Fan, Horizontal	VHRV-P-502-PEC-F1-H	VHRV-P-752-PEC-F1-H	VHRV-P-1002-PEC-F1-H	VHRV-P-1502-PEC-F1-H	VHRV-P-2002-PEC-F1-H	VHRV-P-2502-PEC-F1-H
Air Flowrate (m³/h)	500	750	1000	1500	2000	2500
External Static Pressure - Without Any Coil (Pa)	225	235	330	220	295	270
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.					
Power Supply	230 Volt / 50 Hz / 1					
Input Power (Watt)	2 x 105	2 x 175	2 x 262	2 x 360	2 x 490	2 x 535
Input Current (Ampere)	2 x 0,9	2 x 1,4	2 x 1,7	2 x 2,36	2 x 3,2	2 x 2,33
Noise Level db(A)	41,1	41,3	42,3	43,7	45,1	50,8

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

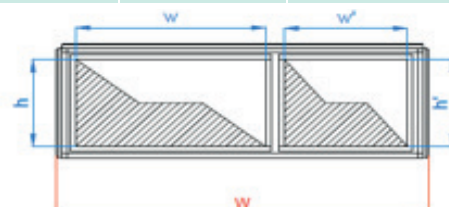
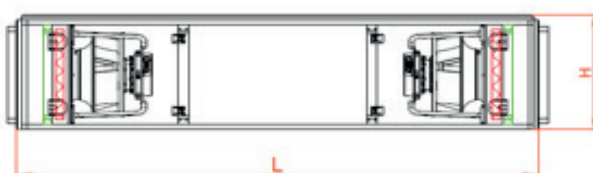
DIMENSIONS						
MODEL	VHRV-P-502-PEC-F1-H	VHRV-P-752-PEC-F1-H	VHRV-P-1002-PEC-F1-H	VHRV-P-1502-PEC-F1-H	VHRV-P-2002-PEC-F1-H	VHRV-P-2502-PEC-F1-H
L (mm)	1284	1284	1590	1896	1896	2202
W (mm)	885	885	1038	1344	1344	1650
H (mm)	420	420	440	620	620	620
w _{xh} (Supply/Exhaust Air) (mm)	250 x 300	250 x 300	270 x 400	450 x 640	450 x 640	450 x 810
w _{xh} ' (Fresh/Return Air) (mm)	250 x 250	250 x 250	270 x 310	450 x 400	450 x 400	450 x 500
Unit Weight - Without Any Coil (kg)	200	205	240	295	305	305
Weight - Heating Coil (kg)	5	6	6	9	9	11
Weight - Cooling Coil (kg)	6	7	8	13	13	18
Weight - DX Coil (kg)	5	6	7	11	11	15

VHRV PLUS Units with Cross Flow Recuperator, EC Plug Fan, Horizontal	VHRV-P-3002-PEC-F1-H	VHRV-P-4002-PEC-F1-H	VHRV-P-5002-PEC-F1-H	VHRV-P-6002-PEC-F1-H	VHRV-P-8002-PEC-F1-H
Air Flowrate (m³/h)	3000	4000	5000	6000	8000
External Static Pressure - Without Any Coil (Pa)	310	385	355	450	450
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.				
Power Supply	230 Volt / 50 Hz / 1		380 Volt / 50 Hz / 3		
Input Power (Watt)	2 x 750	2 x 1080	2 x 1450	2 x 1748	2 x 2655
Input Current (Ampere)	2 x 3,3	2 x 1,66	2 x 4,41	2 x 2,7	2 x 4,31
Noise Level db(A)	51	52,7	55,5	57,4	57,7

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS					
MODEL	VHRV-P-3002-PEC-F1-H	VHRV-P-4002-PEC-F1-H	VHRV-P-5002-PEC-F1-H	VHRV-P-6002-PEC-F1-H	VHRV-P-8002-PEC-F1-H
L (mm)	2202	2508	2508	2967	2967
W (mm)	1650	1956	1956	2109	2109
H (mm)	620	620	620	720	720
w _{xh} (Supply/Exhaust Air) (mm)	450 x 810	450 x 1080	450 x 1080	550 x 1080	550 x 1080
w _{xh} ' (Fresh/Return Air) (mm)	450 x 500	450 x 550	450 x 550	550 x 700	550 x 700
Unit Weight - Without Any Coil (kg)	310	340	550	650	650
Weight - Heating Coil (kg)	11	13	15	18	20
Weight - Cooling Coil (kg)	18	23	31	37	37
Weight - DX Coil (kg)	15	20	25	32	32



Heat Recovery Units

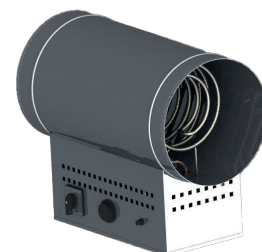
VENTASTAR VHRV-PLUS Models

Accessories

Duct Type Electric Heater

DUCT TYPE ELECTRIC HEATER DETAILS			
MODEL	For VHRV Models with Air Flowrate (m³/h)	Capacity (kW)	Power Supply
VDTEH 1,5	500	1,5	230 Volt / 50 Hz / 1
VDTEH 2,0	750	2,0	230 Volt / 50 Hz / 1
VDTEH 3,0	1000	3,0	230 Volt / 50 Hz / 1
VDTEH 4,5	1500	4,5	380 Volt / 50 Hz / 3
VDTEH 6,0	2000	6,0	380 Volt / 50 Hz / 3
VDTEH 9,0	2500	9,0	380 Volt / 50 Hz / 3
VDTEH 9,0	3000	9,0	380 Volt / 50 Hz / 3
VDTEH 12,0	4000	12,0	380 Volt / 50 Hz / 3
VDTEH 18,0	5000	18,0	380 Volt / 50 Hz / 3
VDTEH 18,0	6000	18,0	380 Volt / 50 Hz / 3
VDTEH 24,0	8000	24	380 Volt / 50 Hz / 3

DUCT TYPE ELECTRIC HEATER DIMENSIONS			
MODEL	Duct Connection (mm)	LTotal (mm)	HTotal (mm)
VDTEH 1,5	Ø 200	565	355
VDTEH 2,0	Ø 200	565	355
VDTEH 3,0	Ø 250	565	410
VDTEH 4,5	Ø 300	565	460
VDTEH 6,0	Ø 300	565	460
VDTEH 9,0	Ø 355	585	535
VDTEH 9,0	Ø 355	585	535
VDTEH 12,0	Ø 400	585	580
VDTEH 18,0	Ø 400	880	580
VDTEH 18,0	Ø 400	880	580
VDTEH 24,0	Ø 400	880	580



*Advised electric heater capacities are for final heating. Please consult sales representative for suitable pre heater capacity selection according to your outdoor design temperature in winter.

Heating Coil

HEATING COIL DETAILS										
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C		Coil Connection
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	
VWH-500	500	4,59	29	3,74	28	3,05	28	20,05	28	3/4"
VWH-750	750	7,09	29	5,82	29	4,80	29	3,24	28	3/4"
VWH-1000	1000	8,79	32	7,14	31	5,77	31	3,85	31	3/4"
VWH-1500	1500	16,61	17	13,72	17	11,51	17	7,86	16	3/4"
VWH-2000	2000	20,01	30	16,62	29	13,92	29	9,62	29	3/4"
VWH-2500	2500	25,98	21	21,41	21	17,85	20	12,07	20	3/4"
VWH-3000	3000	29,14	30	24,08	29	20,04	29	13,63	29	3/4"
VWH-4000	4000	38,95	29	32,17	29	26,66	29	18,55	29	3/4"
VWH-5000	5000	47,18	31	38,74	30	31,71	30	22,35	30	3/4"
VWH-6000	6000	58,76	25	48,20	25	39,57	25	27,52	24	1"
VWH-8000	8000	70,29	43	57,93	43	47,50	43	33,35	42	1"

*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

Cooling Coil

COOLING COIL DETAILS								
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C		Coil Connection
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	
VWC-500	500	4,12	102	3,86	78	3,63	102	3/4"
VWC-750	750	6,32	104	5,92	80	5,58	103	3/4"
VWC-1000	1000	8,59	114	8,09	87	7,62	114	3/4"
VWC-1500	1500	14,71	61	13,86	47	13,10	61	1"
VWC-2000	2000	17,91	103	16,91	79	15,97	102	1"
VWC-2500	2500	24,15	74	22,82	57	21,57	74	1 1/4"
VWC-3000	3000	27,28	105	25,77	80	24,36	105	1 1/4"
VWC-4000	4000	33,64	102	31,49	79	29,69	102	1 1/4"
VWC-5000	5000	42,3	106	39,64	82	37,40	105	1 1/4"
VWC-6000	6000	53,53	88	50,32	68	47,47	88	2"
VWC-8000	8000	64,79	151	60,89	117	57,48	150	2"

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

VENTASTAR VHRV-PLUS Models

Accessories

DX Coil

DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDX-500	500	3,66	92	2,21	59,3
VDX-750	750	5,49	94	3,54	60,5
VDX-1000	1000	7,23	104	4,64	65
VDX-1500	1500	12,33	56	9,56	36
VDX-2000	2000	14,84	93	11,55	61
VDX-2500	2500	19,62	69	15,55	43
VDX-3000	3000	22,19	67	17,51	61
VDX-4000	4000	28,31	92,6	20,93	61
VDX-5000	5000	35,02	95	26,58	63
VDX-6000	6000	43,67	80	33,79	52
VDX-8000	8000	51,80	137	40,13	89

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

Duct Type Silencer

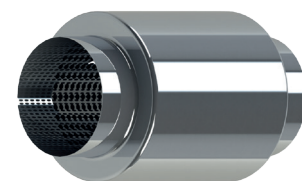
MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	ØD (mm)	Ød (mm)	Weight (kg)
VSA-500	500	12	10	750	300	200	12
VSA-750	750	12	10	750	300	200	12
VSA-1000	1000	14	13	750	350	250	18
VSA-1500	1500	17	16	1000	400	300	28
VSA-2000	2000	17	16	1000	400	300	28
VSA-2500	2500	18	16	1500	455	355	37
VSA-3000	3000	18	16	1500	455	355	37
VSA-4000	4000	23	19	1500	500	400	39

*Sound attenuation in 250 Hz.

MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	W (mm)	H (mm)	Weight (kg)
VSA-5000	5000	26	24	1500	900	600	67
VSA-6000	6000	26	24	1500	900	600	67
VSA-8000	8000	23	27	1500	1200	600	85

*Sound attenuation in 250 Hz.

*Rectangular.

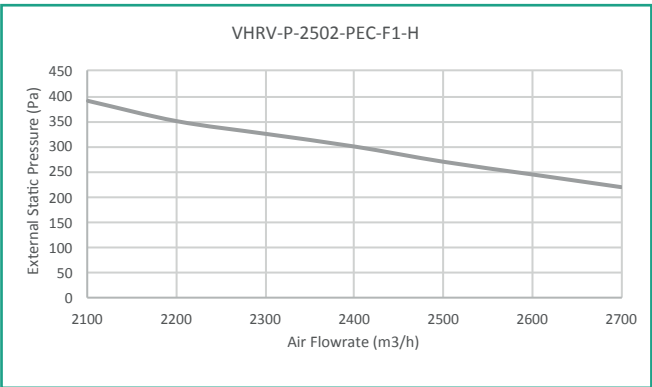
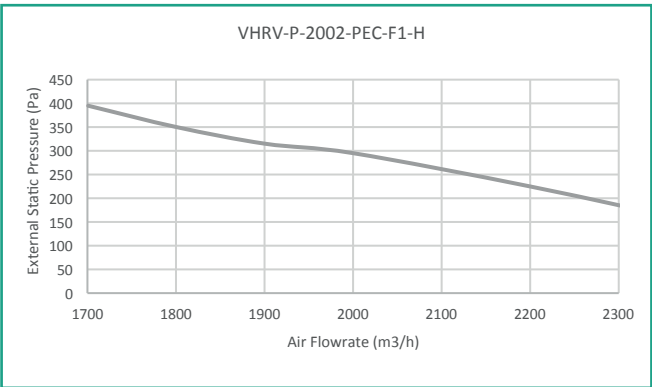
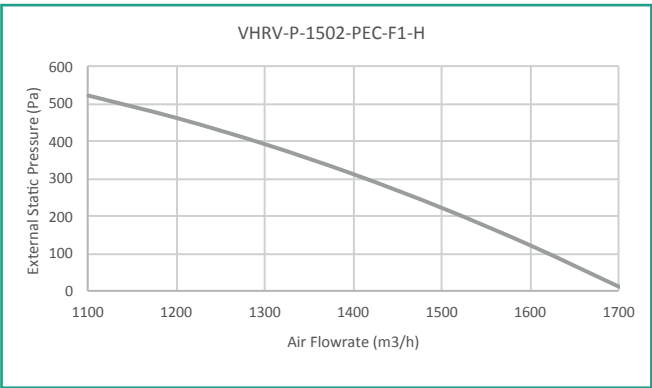
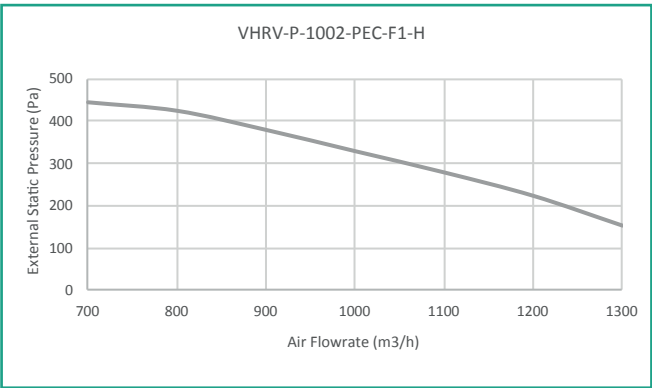
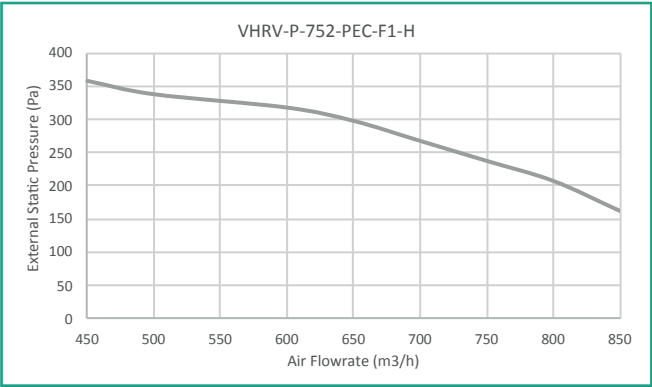
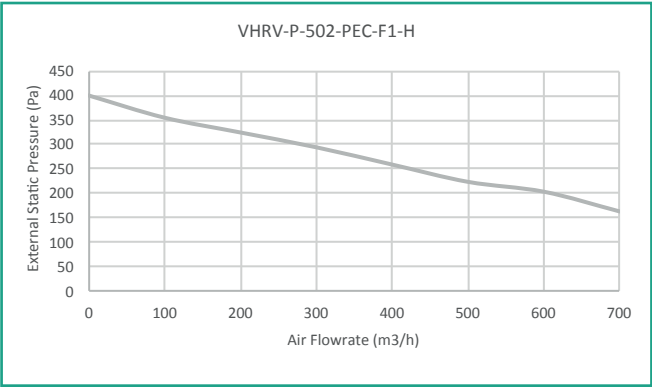


Heat Recovery Units

VENTASTAR VHRV-PLUS Models

Performance Curves

Medium Efficient Double Skin Heat Recovery Units with Coils Inside



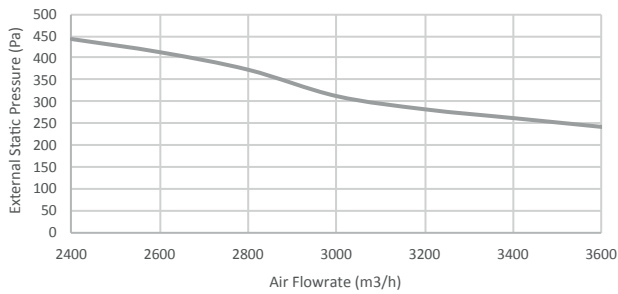
*External static pressure values in performance curves are for units without coils. Please consult your sales representative for coil pressure drop values.

VENTASTAR VHRV-PLUS Models

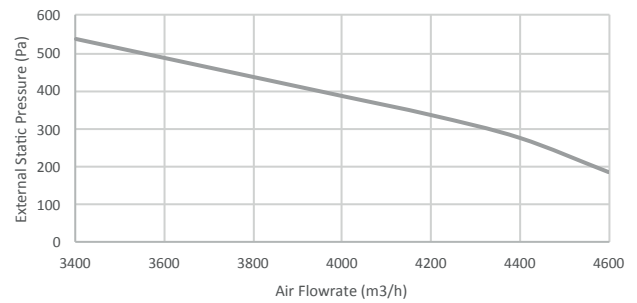
Performance Curves

Medium Efficient Double Skin Heat Recovery Units with Coils Inside

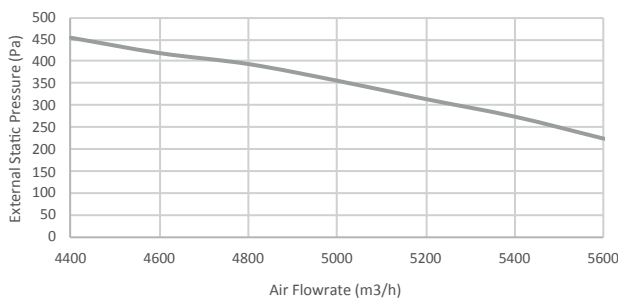
VHRV-P-3002-PEC-F1-H



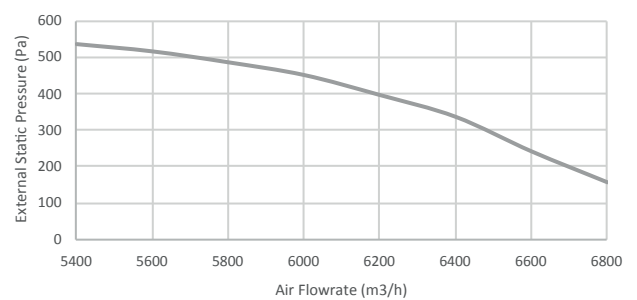
VHRV-P-4002-PEC-F1-H



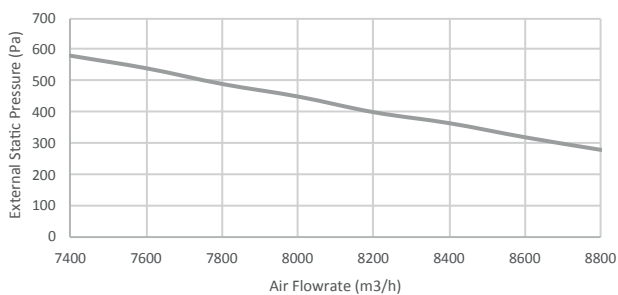
VHRV-P-5002-PEC-F1-H



VHRV-P-6002-PEC-F1-H



VHRV-P-8002-PEC-F1-H

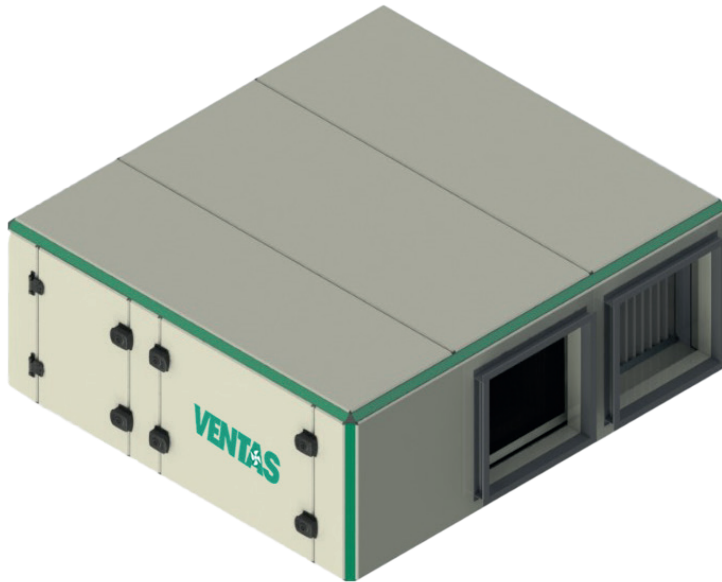


*External static pressure values in performance curves are for units without coils. Please consult your sales representative for coil pressure drop values.

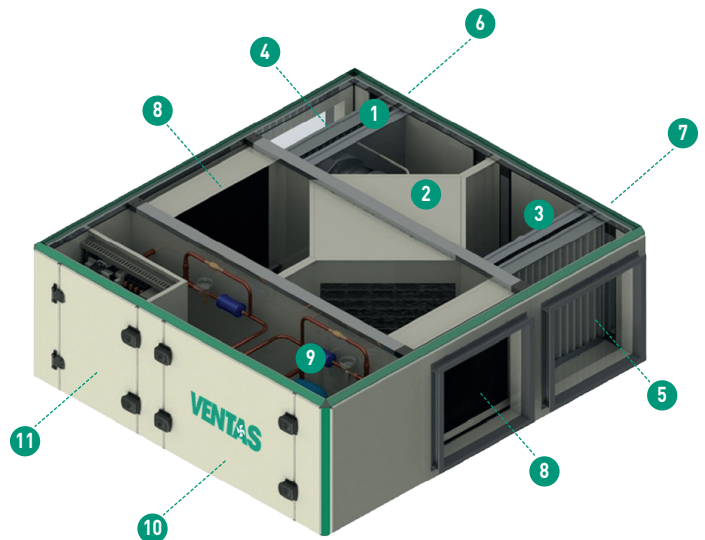
Heat Recovery Units

VENTASTAR VHRV-DX Models

Double Skin Heat Recovery Units with DX Heat Pump, Horizontal Type



- 1 Fresh air fan
- 2 Heat exchanger
- 3 Exhaust air fan
- 4 Fresh air filter
- 5 Exhaust air filter
- 6 Service door for fresh air filter and fan
- 7 Service door for exhaust air filter and fan
- 8 DX coil
- 9 Compressor
- 10 Service door for compressor and cooling circuit
- 11 Automation control panel



General Specifications

- VENTAS Heat Recovery Units with DX Heat Pump models are designed to provide high indoor air quality by saving energy and meeting required comfort conditions. The units include complete cooling circuit and is reversible. Horizontal construction of the units provide advantage to install the unit in ceiling where using outdoor unit is not an option.
- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density: 110 kg/m³) insulation provides heat and noise insulation. Hinged service doors allow easy access to internal components.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides proportional speed control.
- G4 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Units with non inverter compressors allow constant speed control for cooling circuits. Units with inverter compressors allow proportional speed control for cooling circuits.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-DX Models

Double Skin Heat Recovery Units with DX Heat Pump, Horizontal Type

VHRV Units with DX Heat Pump - Horizontal, Non Inverter	VHRV-P-501-DX-NI-PEC-F1-H	VHRV-P-751-DX-NI-PEC-F1-H	VHRV-P-1001-DX-NI-PEC-F1-H	VHRV-P-1501-DX-NI-PEC-F1-H	VHRV-P-2001-DX-NI-PEC-F1-H	VHRV-P-3001-DX-NI-PEC-F1-H	VHRV-P-4001-DX-NI-PEC-F1-H	VHRV-P-5001-DX-NI-PEC-F1-H
Air Flow (m³/h)	500	750	1000	1500	2000	3000	4000	5000
External Static Pressure (Pa)	135	150	170	200	200	200	240	245
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.							
Total Cooling Capacity (kW)	3,92	5,79	7,83	12,49	17,00	24,11	33,08	39,48
Total Heating Capacity (kW)	4,95	7,47	9,82	14,99	22,21	29,15	38,86	49,95
Duct Type Electrical Heater (kW) - Optional	1,5	2	3	4,5	6	9	12	18
Compressor Power Cooling (kW)	1,12	1,72	2,19	3,15	4,10	5,79	7,43	9,43
Compressor Power Heating (kW)	1,01	1,55	1,97	2,72	3,47	4,86	6,32	8,03
Fan Power Consumption (W)	2 x 86,6	2 x 164,1	2 x 226,6	2 x 253,5	2 x 410,2	2 x 649,0	2 x 1033,0	2 x 1357,0
Fan Input Current (Amper)	2 x 0,73	2 x 1,36	2 x 1,48	2 x 1,36	2 x 1,97	2 x 1,24	2 x 1,66	2 x 2,10
Power Supply	380 Volt / 50 Hz / 3							
Total Electric Consumption (kW) Cooling	1,29	2,05	2,64	3,66	4,92	7,09	9,50	12,14
Total Electric Consumption (kW) Heating	1,18	1,88	2,42	3,23	4,29	6,16	3,39	10,74
EER	3,03	2,83	2,96	3,42	3,46	3,40	3,48	3,25
COP	4,19	3,98	4,05	4,65	5,18	4,73	4,63	4,46
Noise Level db(A)	45,7	49,9	51,6	59,2	52,1	56,2	58,5	61,9

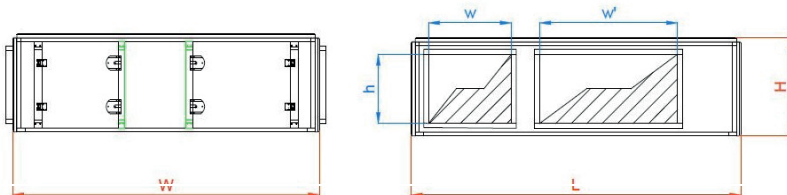
DIMENSIONS

MODEL	VHRV-P-501-DX-NI-PEC-F1-H	VHRV-P-751-DX-NI-PEC-F1-H	VHRV-P-1001-DX-NI-PEC-F1-H	VHRV-P-1501-DX-NI-PEC-F1-H	VHRV-P-2001-DX-NI-PEC-F1-H	VHRV-P-3001-DX-NI-PEC-F1-H	VHRV-P-4001-DX-NI-PEC-F1-H	VHRV-P-5001-DX-NI-PEC-F1-H
L (mm)	1565	1565	1565	1730	1730	1895	2060	2225
W (mm)	1195	1195	1400	1895	1895	2110	2440	2593
H (mm)	545	545	545	710	710	710	710	710
wxh (Supply/Exhaust Air) (mm)	285 x 325	285 x 325	400 x 325	500 x 490	500 x 490	650 x 500	825 x 490	1000 x 500
wxh (Fresh/Return Air) (mm)	270 x 325	270 x 325	300 x 325	500 x 490	500 x 490	550 x 500	800 x 490	800 x 500
Unit Weight (kg)	250	255	290	410	430	580	685	725

VHRV Units with DX Heat Pump - Horizontal, Inverter	VHRV-P-501-DX-I-PEC-F1-H	VHRV-P-751-DX-I-PEC-F1-H	VHRV-P-1001-DX-I-PEC-F1-H	VHRV-P-1501-DX-I-PEC-F1-H	VHRV-P-2001-DX-I-PEC-F1-H	VHRV-P-3001-DX-I-PEC-F1-H	VHRV-P-4001-DX-I-PEC-F1-H	VHRV-P-5001-DX-I-PEC-F1-H
Air Flow (m³/h)	500	750	1000	1500	2000	3000	4000	5000
External Static Pressure (Pa)	135	150	170	200	200	200	240	245
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.							
Total Cooling Capacity (kW)	3,92	5,79	7,83	12,49	17,00	24,11	33,08	39,48
Total Heating Capacity (kW)	4,95	7,47	9,82	14,99	22,21	29,15	38,86	49,95
Duct Type Electrical Heater (kW) - Optional	1,5	2	3	4,5	6	9	12	18
Compressor Power Cooling (kW)	0,83	1,29	1,65	2,98	4,35	5,18	8,19	9,40
Compressor Power Heating (kW)	0,57	0,95	1,04	2,10	3,26	4,05	6,55	7,60
Fan Power Consumption (W)	2 x 86,6	2 x 164,1	2 x 226,6	2 x 253,5	2 x 410,2	2 x 649,0	2 x 1033,0	2 x 1357,0
Fan Input Current (Amper)	2 x 0,73	2 x 1,36	2 x 1,48	2 x 1,36	2 x 1,97	2 x 1,24	2 x 1,66	2 x 2,10
Power Supply	380 Volt / 50 Hz / 3							
Total Electric Consumption (kW) Cooling	1,00	1,62	2,10	3,49	5,17	6,48	10,26	12,11
Total Electric Consumption (kW) Heating	0,74	1,28	1,49	2,61	4,08	5,35	8,62	10,31
EER	3,91	3,58	3,72	3,58	3,29	3,72	3,23	3,26
COP	6,66	5,84	6,58	5,75	5,44	5,45	4,51	4,65
Noise Level db(A)	45,7	49,9	51,6	59,2	52,1	56,2	58,5	61,9

DIMENSIONS

MODEL	VHRV-P-501-DX-I-PEC-F1-H	VHRV-P-751-DX-I-PEC-F1-H	VHRV-P-1001-DX-I-PEC-F1-H	VHRV-P-1501-DX-I-PEC-F1-H	VHRV-P-2001-DX-I-PEC-F1-H	VHRV-P-3001-DX-I-PEC-F1-H	VHRV-P-4001-DX-I-PEC-F1-H	VHRV-P-5001-DX-I-PEC-F1-H
L (mm)	1565	1565	1565	1730	1730	1895	2060	2225
W (mm)	1195	1195	1400	1895	1895	2110	2440	2593
H (mm)	545	545	545	710	710	710	710	710
wxh (Supply/Exhaust Air) (mm)	285 x 325	285 x 325	400 x 325	500 x 490	500 x 490	650 x 500	825 x 490	1000 x 500
wxh (Fresh/Return Air) (mm)	270 x 325	270 x 325	300 x 325	500 x 490	500 x 490	550 x 500	800 x 490	800 x 500
Unit Weight (kg)	255	260	295	415	435	585	690	730



Heat Recovery Units

VENTASTAR VHRV-DX Models

Double Skin Heat Recovery Units with DX Heat Pump, Vertical Type



- 1 Fresh air fan
- 2 Heat exchanger
- 3 Exhaust air fan
- 4 Fresh air filter
- 5 Exhaust air filter
- 6 Service door for fresh air filter and fan

- 7 Service door for exhaust air filter and fan
- 8 DX coil
- 9 Compressor
- 10 Service door for compressor and cooling circuit
- 11 Automation control panel

General Specifications

- VENTAS Heat Recovery Units with DX Heat Pump models are designed to provide high indoor air quality by saving energy and meeting required comfort conditions. The units include complete cooling circuit and is reversible. Vertical construction of the units provide advantage to install the unit where installing unit in the ceiling and using outdoor unit is not an option.
- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density:110 kg/m³) insulation provides heat and noise insulation. Hinged service doors allow easy access to internal components.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides proportional speed control.
- G4 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards, and filters are Eurovent certified.
- Units with non inverter compressors allow constant speed control for cooling circuits. Units with inverter compressors allow proportional speed control for cooling circuits.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-DX Models

Double Skin Heat Recovery Units with DX Heat Pump, Vertical Type

VHRV Units with DX Heat Pump - Vertical, Non Inverter	VHRV-P-501-DX-NI-PEC-F1-V	VHRV-P-751-DX-NI-PEC-F1-V	VHRV-P-1001-DX-NI-PEC-F1-V	VHRV-P-1501-DX-NI-PEC-F1-V	VHRV-P-2001-DX-NI-PEC-F1-V	VHRV-P-3001-DX-NI-PEC-F1-V	VHRV-P-4001-DX-NI-PEC-F1-V	VHRV-P-5001-DX-NI-PEC-F1-V
Air Flow (m ³ /h)	500	750	1000	1500	2000	3000	4000	5000
External Static Pressure (Pa)	200	275	240	190	190	175	270	285
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.							
Total Cooling Capacity (kW)	3,94	5,83	7,82	12,54	17,17	24,18	33,18	39,77
Total Heating Capacity (kW)	5,01	7,61	9,72	15,56	22,88	30,39	39,13	48,21
Duct Type Electrical Heater (kW) - Optional	1,5	2	3	4,5	6	9	12	18
Compressor Power Cooling (kW)	1,12	1,72	2,19	3,15	4,10	5,79	7,43	9,43
Compressor Power Heating (kW)	1,01	1,55	1,97	2,72	3,47	4,86	6,32	8,03
Fan Power Consumption (W)	2 x 86,6	2 x 164,1	2 x 226,6	2 x 253,5	2 x 410,2	2 x 649,0	2 x 1033,0	2 x 1357,0
Fan Input Current (Amper)	2 x 0,73	2 x 1,36	2 x 1,48	2 x 1,36	2 x 1,97	2 x 1,24	2 x 1,66	2 x 2,10
Power Supply	380 Volt / 50 Hz / 3							
Total Electric Consumption (kW) Cooling	1,29	2,05	2,64	3,66	4,92	7,09	9,50	12,14
Total Electric Consumption (kW) Heating	1,18	1,88	2,42	3,23	4,29	6,16	3,39	10,74
EER	3,05	2,85	2,96	3,43	3,49	3,41	3,49	3,27
COP	4,24	4,06	4,01	4,82	5,33	4,94	4,67	4,49
Noise Level db(A)	45,7	49,9	51,6	59,2	52,1	56,2	58,5	61,9

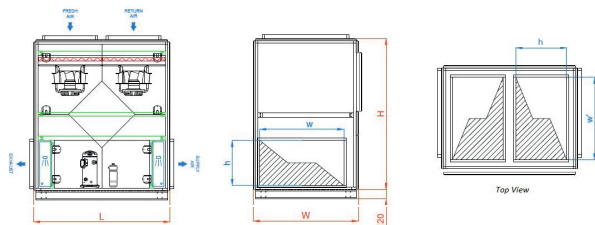
DIMENSIONS

MODEL	VHRV-P-501-DX-NI-PEC-F1-V	VHRV-P-751-DX-NI-PEC-F1-V	VHRV-P-1001-DX-NI-PEC-F1-V	VHRV-P-1501-DX-NI-PEC-F1-V	VHRV-P-2001-DX-NI-PEC-F1-V	VHRV-P-3001-DX-NI-PEC-F1-V	VHRV-P-4001-DX-NI-PEC-F1-V	VHRV-P-5001-DX-NI-PEC-F1-V
L (mm)	1131	1131	1131	1284	1284	1437	1743	1743
W (mm)	732	732	885	1038	1038	1038	1191	1344
H (mm)	1281	1281	1434	1587	1587	1740	2046	2046
wxh (Supply/Exhaust Air) (mm)	375x410	375x410	500 x 410	650 x 575	650 x 575	775 x 575	875 x 575	575 x 1075
wxh (Fresh/Return Air) (mm)	375 x 410	375 x 410	375 x 500	450 x 750	450 x 750	500 x 750	650 x 900	650 x 1050
Unit Weight (kg)	380	385	450	550	610	680	700	770

VHRV Units with DX Heat Pump - Vertical, Inverter	VHRV-P-501-DX-I-PEC-F1-V	VHRV-P-751-DX-I-PEC-F1-V	VHRV-P-1001-DX-I-PEC-F1-V	VHRV-P-1501-DX-I-PEC-F1-V	VHRV-P-2001-DX-I-PEC-F1-V	VHRV-P-3001-DX-I-PEC-F1-V	VHRV-P-4001-DX-I-PEC-F1-V	VHRV-P-5001-DX-I-PEC-F1-V
Air Flow (m ³ /h)	500	750	1000	1500	2000	3000	4000	5000
External Static Pressure (Pa)	200	275	240	190	190	175	270	285
Heat Recovery Efficiency Value (%)	Depending on operational temperature and conditions, up to 60% efficiency.							
Total Cooling Capacity (kW)	3,94	5,83	7,82	12,54	17,17	24,18	33,18	39,77
Total Heating Capacity (kW)	5,01	7,61	9,72	15,56	22,88	30,39	39,13	48,21
Compressor Power Cooling (kW)	0,83	1,29	1,65	2,98	4,35	5,18	8,19	9,40
Compressor Power Heating (kW)	0,57	0,95	1,04	2,10	3,26	4,05	6,55	7,60
Duct Type Electrical Heater (kW) - Optional	1,5	2	3	4,5	6	9	12	18
Fan Power Consumption (W)	2 x 86,6	2 x 164,1	2 x 226,6	2 x 253,5	2 x 410,2	2 x 649,0	2 x 1033,0	2 x 1357,0
Fan Input Current (Amper)	2 x 0,73	2 x 1,36	2 x 1,48	2 x 1,36	2 x 1,97	2 x 1,24	2 x 1,66	2 x 2,10
Power Supply	380 Volt / 50 Hz / 3							
Total Electric Consumption (kW) Cooling	1,00	1,62	2,10	3,49	5,17	6,48	10,26	12,11
Total Electric Consumption (kW) Heating	0,74	1,28	1,49	2,61	4,08	5,35	8,62	10,31
EER	3,93	3,6	3,72	3,6	3,32	3,73	3,24	3,28
COP	6,74	5,95	6,51	5,97	5,61	5,68	4,54	4,67
Noise Level db(A)	45,7	49,9	51,6	59,2	52,1	56,2	58,5	61,9

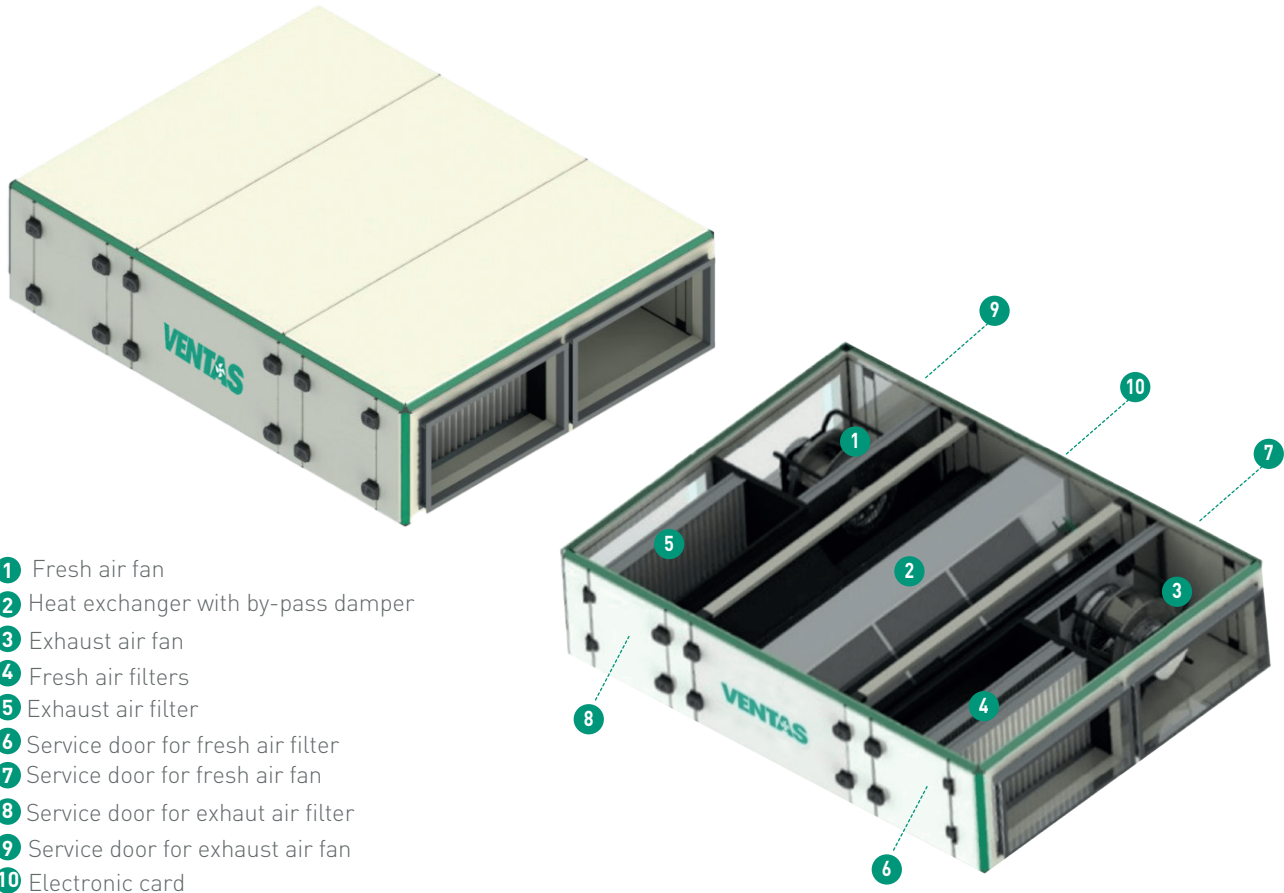
DIMENSIONS

MODEL	VHRV-P-501-DX-I-PEC-F1-V	VHRV-P-751-DX-I-PEC-F1-V	VHRV-P-1001-DX-I-PEC-F1-V	VHRV-P-1501-DX-I-PEC-F1-V	VHRV-P-2001-DX-I-PEC-F1-V	VHRV-P-3001-DX-I-PEC-F1-V	VHRV-P-4001-DX-I-PEC-F1-V	VHRV-P-5001-DX-I-PEC-F1-V
L (mm)	1131	1131	1131	1284	1284	1437	1743	1743
W (mm)	732	732	885	1038	1038	1038	1191	1344
H (mm)	1281	1281	1434	1587	1587	1740	2046	2046
wxh (Supply/Exhaust Air) (mm)	375x410	375x410	500 x 410	650 x 575	650 x 575	775 x 575	875 x 575	575 x 1075
wxh (Fresh/Return Air) (mm)	375x410	375 x 410	375 x 500	450 x 750	450 x 750	500 x 750	650 x 900	650 x 1050
Unit Weight (kg)	385	390	455	555	565	685	705	775



Heat Recovery Units

VENTASTAR VHRV-C Models High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger



General Specifications

- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density:110 kg/m³) insulation provides heat and noise insulation. Service doors allow easy access to internal components.
- Provides energy savings with high efficiency hexagonal aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficiency EC plug-fan technology complies the ErP2018 requirements and provides proportional speed control.
- M5 and F7 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards.
- Bypass module is available.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

VENTASTAR VHRV-C Models

High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger

VHRV Units with Counter Flow Recuperator, EC Plug Fan, Horizontal	VHRV-C-151-PEC-F2-H	VHRV-C-251-PEC-F2-H	VHRV-C-501-PEC-F2-H	VHRV-C-751-PEC-F2-H	VHRV-C-1001-PEC-F2-H	VHRV-C-1501-PEC-F2-H
Air Flowrate (m ³ /h)	150	250	500	750	1000	1500
External Static Pressure (Pa)	105	120	140	140	150	160
Thermal Efficiency (Summer) (%)	81,6	79,2	79,2	79,2	77,8	76,5
Thermal Efficiency (Winter) (%)	80,9	78,5	78,5	78,5	77,2	76,5
SFP	0,66	1,05	0,95	0,83	1,2	0,97
Power Supply	230 Volt / 50 Hz / 1					
Input Power (Watt)	2 x 27	2 x 60,2	2 x 113,7	2 x 148,3	2 x 261,4	2 x 378
Input Current (Ampere)	2 x 0,27	2 x 0,80	2 x 0,90	2 x 1,40	2 x 2,20	2 x 2,20
Noise Level db(A)	39,1	39,4	40,1	40,3	41	42,9

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

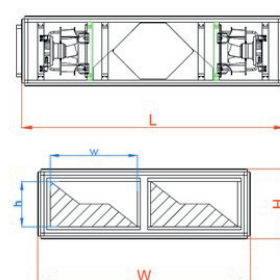
DIMENSIONS						
MODEL	VHRV-C-151-PEC-F2-H	VHRV-C-251-PEC-F2-H	VHRV-C-501-PEC-F2-H	VHRV-C-751-PEC-F2-H	VHRV-C-1001-PEC-F2-H	VHRV-C-1501-PEC-F2-H
L (mm)	1437	1437	1437	1743	1743	2355
W (mm)	538	538	788	1038	1038	1527
H (mm)	410	410	410	490	490	610
wxh (mm)	110x110	110x110	230x110	300x250	300x250	580x370
Weight (kg)	100	105	105	150	165	350

VHRV Units with Counter Flow Recuperator, EC Plug Fan, Horizontal	VHRV-C-2001-PEC-F2-H	VHRV-C-2501-PEC-F2-H	VHRV-C-3001-PEC-F2-H	VHRV-C-4001-PEC-F2-H	VHRV-C-5001-PEC-F2-H
Air Flowrate (m ³ /h)	2000	2500	3000	4000	5000
External Static Pressure (Pa)	165	165	170	175	190
Thermal Efficiency (Summer) (%)	75,2	76	75,2	80,2	75,1
Thermal Efficiency (Winter) (%)	75,2	76	75,2	79,5	75,1
SFP	0,87	0,79	0,93	1,19	1,21
Power Supply	380 Volt / 50 Hz / 3				
Input Power (Watt)	2 x 416,9	2 x 502,8	2 x 661,5	2 x 1050	2 x 1353
Input Current (Ampere)	2 x 2,20	2 x 2,20	2 x 1,70	2 x 2,10	2 x 2,90
Noise Level db(A)	44,8	50,4	50,5	52,2	55,1

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS					
MODEL	VHRV-C-2001-PEC-F2-H	VHRV-C-2501-PEC-F2-H	VHRV-C-3001-PEC-F2-H	VHRV-C-4001-PEC-F2-H	VHRV-C-5001-PEC-F2-H
L (mm)	2355	2355	2355	2508	2508
W (mm)	1527	2027	2027	2027	2027
H (mm)	610	610	610	670	670
wxh (mm)	580x370	830x370	830x370	830x430	830x430
Weight (kg)	370	480	485	600	700



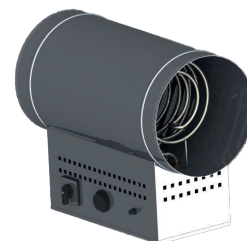
Heat Recovery Units

VENTASTAR VHRV-C Models High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger Duct Type Electric Heater

DUCT TYPE ELECTRIC HEATER DETAILS			
MODEL	For VHRV Models with Air Flowrate (m³/h)	Capacity (kW)	Power Supply
VDTEH 1,5	150	1,0	230 Volt / 50 Hz / 1
VDTEH 1,5	250	1,0	230 Volt / 50 Hz / 1
VDTEH 1,5	500	1,5	230 Volt / 50 Hz / 1
VDTEH 2,0	750	2,0	230 Volt / 50 Hz / 1
VDTEH 3,0	1000	3,0	230 Volt / 50 Hz / 1
VDTEH 4,5	1500	4,5	380 Volt / 50 Hz / 3
VDTEH 6,0	2000	6,0	380 Volt / 50 Hz / 3
VDTEH 9,0	2500	9,0	380 Volt / 50 Hz / 3
VDTEH 9,0	3000	9,0	380 Volt / 50 Hz / 3
VDTEH 12,0	4000	12,0	380 Volt / 50 Hz / 3
VDTEH 18,0	5000	18,0	380 Volt / 50 Hz / 3

DUCT TYPE ELECTRIC HEATER DIMENSIONS			
MODEL	Duct Connection (mm)	LTotal (mm)	HTotal (mm)
VDTEH 1,5	Ø 200	565	355
VDTEH 1,5	Ø 200	565	355
VDTEH 1,5	Ø 200	565	355
VDTEH 2,0	Ø 200	565	355
VDTEH 3,0	Ø 250	565	410
VDTEH 4,5	Ø 300	565	460
VDTEH 6,0	Ø 300	565	460
VDTEH 9,0	Ø 355	585	535
VDTEH 9,0	Ø 355	585	535t
VDTEH 12,0	Ø 400	585	580
VDTEH 18,0	Ø 400	880	580

*Advised electric heater capacities are for final heating. Please consult sales representative for suitable pre heater capacity selection according to your outdoor design temperature in winter.

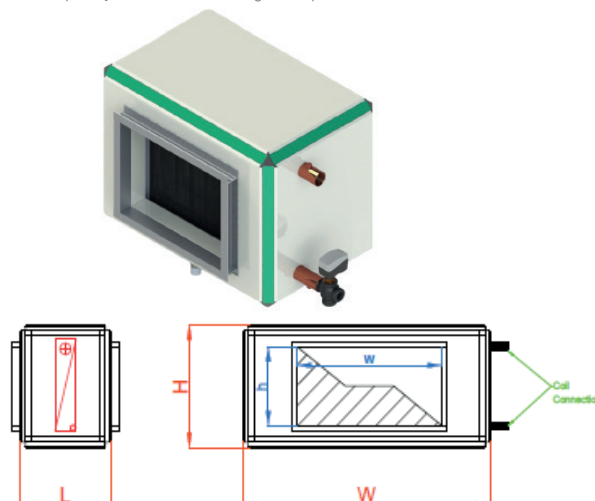


Duct Type Heating Coil

HEATING COIL DETAILS									
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWH-C-150	150	1,41	9	1,12	9	0,79	9	0,49	9
VDTWH-C-250	250	1,96	24	1,56	24	1,13	24	0,70	23
VDTWH-C-500	500	4,19	23	3,4	23	2,61	23	1,61	22
VDTWH-C-750	750	7,07	15	5,8	15	4,52	15	2,78	14
VDTWH-C-1000	1000	8,48	26	6,96	26	5,43	26	3,37	25
VDTWH-C-1500	1500	14,42	12	11,76	12	9,07	12	5,54	11
VDTWH-C-2000	2000	17,35	21	14,15	20	10,93	21	6,72	20
VDTWH-C-2500	2500	22,99	16	18,82	16	14,63	16	8,94	16
VDTWH-C-3000	3000	25,82	23	21,14	23	16,44	23	10,09	22
VDTWH-C-4000	4000	35,93	18	29,36	17	22,74	18	13,86	17
VDTWH-C-5000	5000	41,33	27	33,78	27	26,18	27	16,03	26

*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

HEATING COIL DIMENSIONS							
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Weight (kg)
VDTWH-C-150	519	420	350	110	110	1/2"	4
VDTWH-C-250	519	420	350	110	110	1/2"	4
VDTWH-C-500	519	570	350	230	110	1/2"	5
VDTWH-C-750	519	850	350	300	170	1/2"	6
VDTWH-C-1000	519	850	350	300	170	1/2"	6
VDTWH-C-1500	519	850	610	580	370	1/2"	10
VDTWH-C-2000	519	850	610	580	370	1/2"	10
VDTWH-C-2500	519	1100	610	830	370	1/2"	11
VDTWH-C-3000	519	1100	610	830	370	1/2"	11
VDTWH-C-4000	519	1325	670	830	430	3/4"	16
VDTWH-C-5000	519	1325	670	830	430	3/4"	16



VENTASTAR VHRV-C Models High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger

COOLING COIL DETAILS							
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWC-C-150	150	1,17	31	1,10	31	1,02	31
VDTWC-C-250	250	1,63	72	1,53	73	1,43	72
VDTWC-C-500	500	3,26	70	3,05	71	2,85	70
VDTWC-C-750	750	5,55	47	5,21	47	4,87	47
VDTWC-C-1000	1000	6,61	78	6,22	79	5,81	78
VDTWC-C-1500	1500	11,12	38	10,41	39	9,69	38
VDTWC-C-2000	2000	13,34	62	12,50	62	11,64	61
VDTWC-C-2500	2500	18,54	49	17,45	50	16,33	49
VDTWC-C-3000	3000	20,81	69	19,59	69	18,34	69
VDTWC-C-4000	4000	28,29	54	26,57	55	24,81	54
VDTWC-C-5000	5000	33,03	80	31,06	81	29,02	80

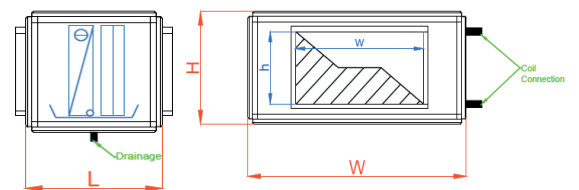
*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDTDX-C-150	150	1,17	34	0,56	21
VDTDX-C-250	250	1,60	72	0,74	44
VDTDX-C-500	500	3,17	71	1,51	43
VDTDX-C-750	750	5,64	50	3,00	30
VDTDX-C-1000	1000	6,76	77	3,57	47
VDTDX-C-1500	1500	10,7	41	4,09	14
VDTDX-C-2000	2000	12,64	64	5,99	32
VDTDX-C-2500	2500	16,9	53	8,75	39
VDTDX-C-3000	3000	18,84	70	9,72	42
VDTDX-C-4000	4000	27,74	57	14,70	34
VDTDX-C-5000	5000	32,73	80	16,76	49

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

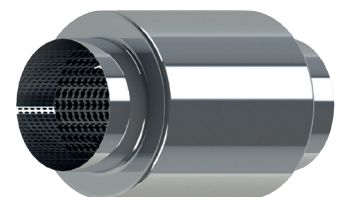
COOLING COIL / DX COIL DIMENSIONS									
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Drainage	Cooling Coil Weight (kg)	DX Coil Weight (kg)
VDTWC/DX-C-150	672	420	350	110	110	1/2"	3/4"	4	4
VDTWC/DX-C-250	672	420	350	110	110	1/2"	3/4"	4	4
VDTWC/DX-C-500	672	570	350	230	110	1/2"	3/4"	6	5
VDTWC/DX-C-750	672	850	350	300	170	3/4"	3/4"	8	8
VDTWC/DX-C-1000	672	850	350	300	170	3/4"	3/4"	8	8
VDTWC/DX-C-1500	672	850	610	580	370	3/4"	1"	15	15
VDTWC/DX-C-2000	672	850	610	580	370	3/4"	1"	15	15
VDTWC/DX-C-2500	672	1100	610	830	370	1"	1"	18	19
VDTWC/DX-C-3000	672	1100	610	830	370	1"	1"	18	19
VDTWC/DX-C-4000	672	1325	670	830	430	1 1/4"	1"	26	27
VDTWC/DX-C-5000	672	1325	670	830	430	1 1/4"	1"	26	27



Duct Type Silencer

MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	ØD (mm)	Ød (mm)	Weight (kg)
VSA-150	150	11	65 Pa	600	260	160	6
VSA-250	250	8	70 Pa	600	315	200	7
VSA-500	500	9	75 Pa	600	355	250	9
VSA-750	750	5	72 Pa	600	500	315	12
VSA-1000	1000	6	75 Pa	600	600	400	16
VSA-1500	1500	8	76 Pa	900	710	500	26
VSA-2000	5000	8	80 Pa	900	710	500	26
VSA-2500	2500	7	84 Pa	900	800	630	44
VSA-3000	3000	7	88 Pa	900	800	630	44
VSA-4000	4000	5	90 Pa	1200	1000	800	69
VSA-5000	5000	5	100 Pa	1200	1000	800	69

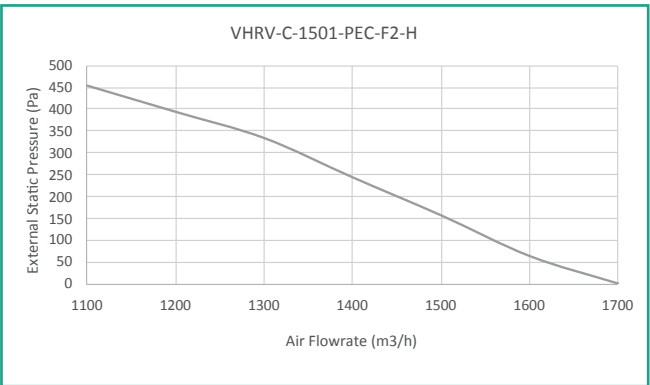
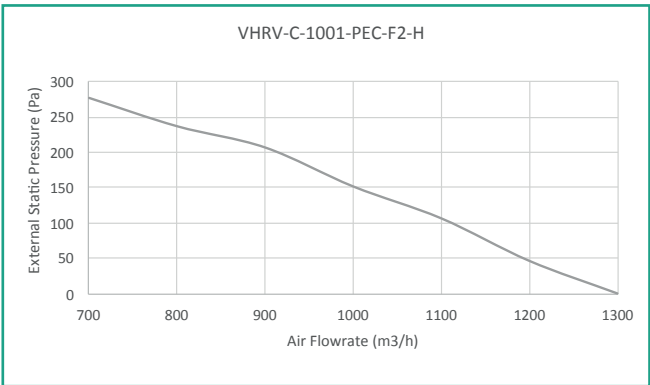
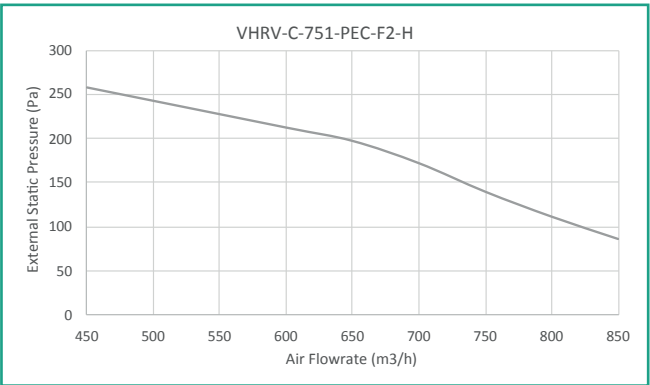
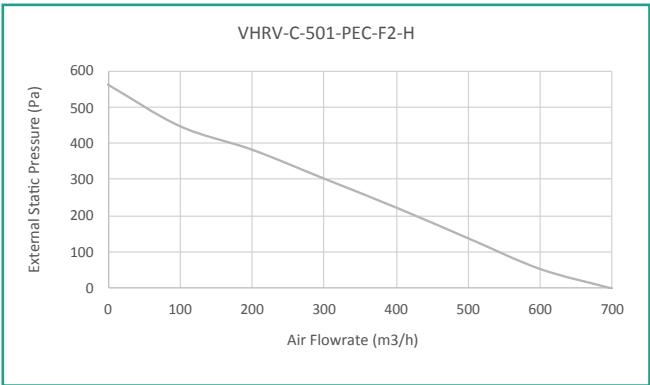
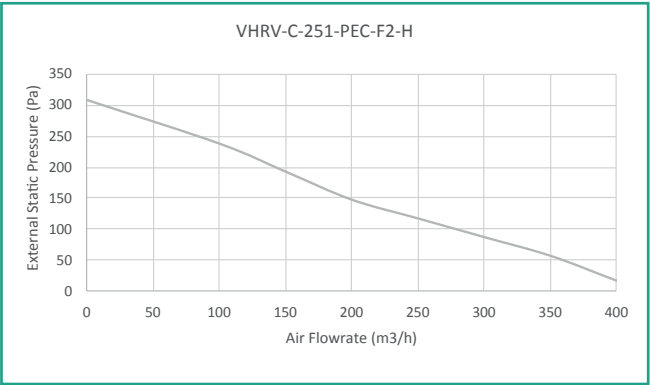
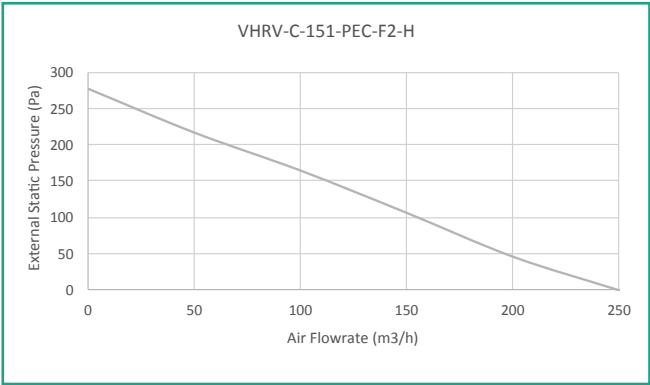
*Sound attenuation in 250 Hz.



Heat Recovery Units

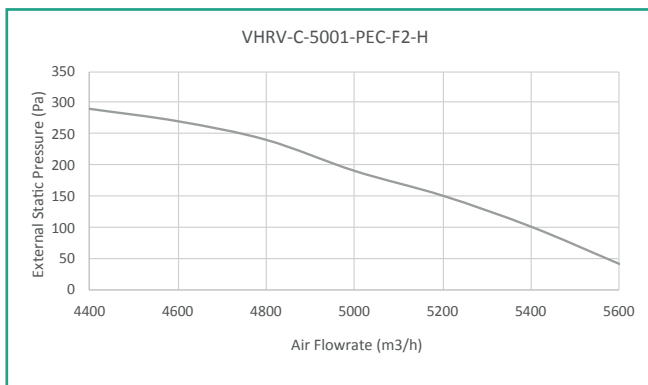
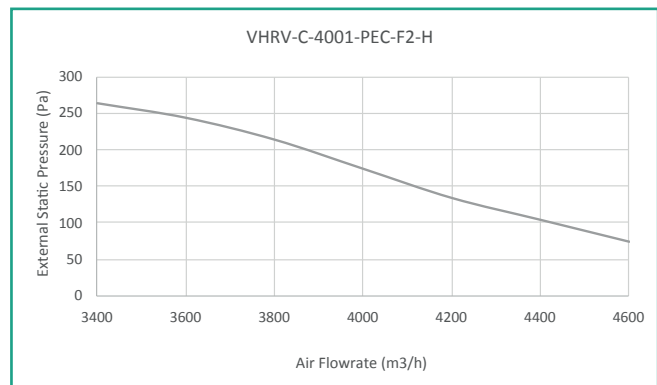
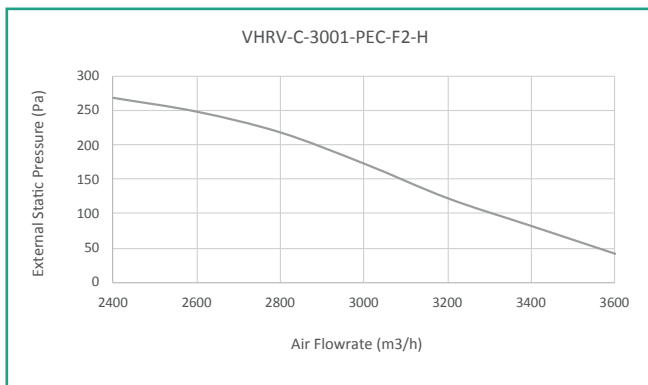
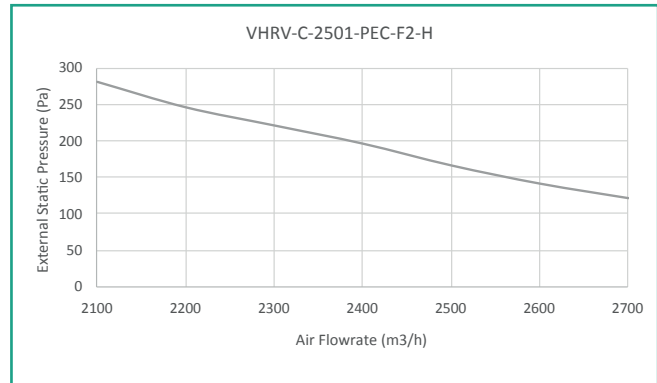
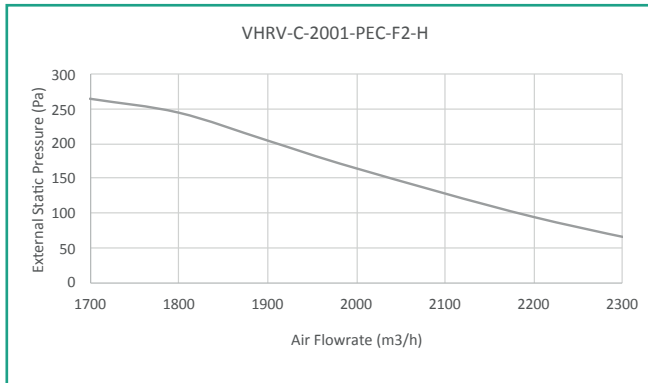
VENTASTAR VHRV-C Models Performance Curves

High Efficient Double Skin Heat Recovery Units with
Counterflow Heat Exchanger



VENTASTAR VHRV-C Models Performance Curves

High Efficient Double Skin Heat Recovery Units with
Counterflow Heat Exchanger



Heat Recovery Units

VENTASTAR VHRV-C Models High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger



- | | |
|---------------------|-------------------------|
| 1 Fresh air fan | 5 Exhaust air filter |
| 2 Heat exchanger | 6 By-pass damper |
| 3 Exhaust air fan | 7 Service door for unit |
| 4 Fresh air filters | 8 Electronic card |



General Specifications

- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool(density: 110 kg/m³) insulation provides heat and noise insulation.
- Provides energy savings with high efficiency hexagonal aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficiency EC plug-fan technology complies the ErP2018 requirements and provides proportional speed control.
- M5 and F7 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards.
- Bypass module is available.
- Condensation pan is available and drain connection is on the bottom of the units.
- Capacity range allows design variety for small areas.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels are favourable for domestic and other applications such as offices and meeting rooms.

VENTASTAR VHRV-C Models

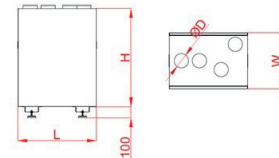
High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger

VHRV Units with Counter Flow Recuperator, EC Plug Fan, Vertical	VHRV-C-151-PEC-F2-V	VHRV-C-221-PEC-F2-V	VHRV-C-351-PEC-F2-V	VHRV-C-451-PEC-F2-V	VHRV-C-601-PEC-F2-V	VHRV-C-801-PEC-F2-V	VHRV-C-1001-PEC-F2-V
Air Flowrate (m³/h)	150	220	350	450	600	800	1000
External Static Pressure (Pa)	105	115	145	160	170	185	200
Thermal Efficiency (Summer) (%)	81,6	79,8	84,4	83,1	81,7	82,7	81,6
Thermal Efficiency (Winter) (%)	80,9	79,1	83,7	82,4	81,0	82,0	80,9
SFP	0,66	0,95	0,54	0,61	0,67	0,72	0,96
Power Supply	230 V AC / 50 Hz						
Input Power (Watt)	2 x 85	2 x 85	2 x 85	2 x 115	2 x 170	2 x 165	2 x 500
Input Current (Ampere)	2 x 0,75	2 x 0,75	2 x 0,75	2 x 1,00	2 x 1,35	2 x 1,40	2 x 2,20
Noise Level db(A)	45	49	48	49	50	52	52

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

Dimensions							
MODEL	VHRV-C-151-PEC-F2-V	VHRV-C-221-PEC-F2-V	VHRV-C-351-PEC-F2-V	VHRV-C-451-PEC-F2-V	VHRV-C-601-PEC-F2-V	VHRV-C-801-PEC-F2-V	VHRV-C-1001-PEC-F2-V
L (mm)	780	780	1130	1130	1130	1330	1330
W (mm)	470	470	770	770	770	800	800
H (mm)	1000	1000	1150	1150	1150	1350	1350
ØD (mm)	90	90	130	130	130	180	180
Weight (kg)	75	80	125	135	150	165	185



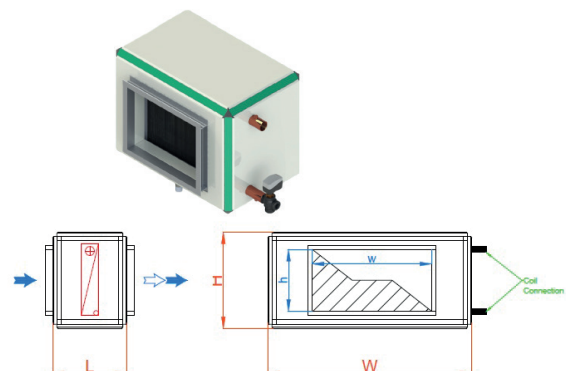
Accessories

Duct Type Heating Coil

HEATING COIL DETAILS									
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWH-CS-150	150	1,41	9	1,12	9	0,79	9	0,49	9
VDTWH-CS-220	220	1,81	19	1,44	18	1,04	18	0,65	18
VDTWH-CS-350	350	3,00	17	2,41	17	1,81	17	1,10	16
VDTWH-CS-450	450	4,22	13	3,43	12	2,63	12	1,60	12
VDTWH-CS-600	600	5,06	22	4,12	22	3,16	22	1,93	21
VDTWH-CS-800	800	7,32	15	5,98	15	4,63	15	2,79	15
VDTWH-CS-1000	1000	8,43	24	6,89	24	5,33	23	3,23	23

*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

HEATING COIL DIMENSIONS							
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Weight (kg)
VDTWH-CS-150	672	420	350	110	110	1/2"	4
VDTWH-CS-220	672	420	350	110	110	1/2"	4
VDTWH-CS-350	672	520	350	210	110	1/2"	4
VDTWH-CS-450	672	520	450	310	210	1/2"	5
VDTWH-CS-600	672	520	450	310	210	1/2"	5
VDTWH-CS-800	672	675	450	450	210	1/2"	6
VDTWH-CS-1000	672	675	450	450	210	1/2"	6

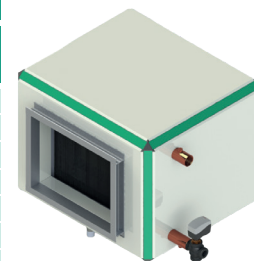


Heat Recovery Units

VENTASTAR VHRV-C Models High Efficient Double Skin Heat Recovery Units with Counterflow Heat Exchanger Duct Type Cooling/DX Coil

COOLING COIL DETAILS							
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWC-CS-150	150	1,17	31	1,10	31	1,02	31
VDTWC-CS-220	220	1,50	52	1,41	57	1,31	57
VDTWC-CS-350	350	2,25	53	2,10	53	1,94	53
VDTWC-CS-450	450	3,11	41	2,90	41	2,68	41
VDTWC-CS-600	600	3,72	68	3,47	67	3,22	67
VDTWC-CS-800	800	5,82	49	5,47	49	5,11	49
VDTWC-CS-1000	1000	6,68	73	6,28	73	5,87	73

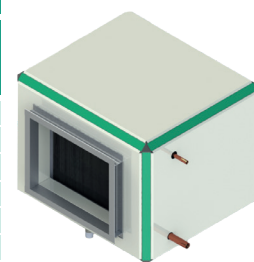
*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.



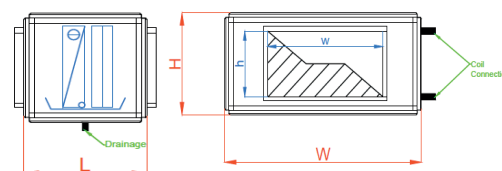
DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDTDX-CS-150	150	1,17	34	0,56	20
VDTDX-CS-220	220	1,48	59	0,70	36
VDTDX-CS-350	350	2,37	56	1,21	33
VDTDX-CS-450	450	3,23	44	1,61	26
VDTDX-CS-600	600	3,24	44	1,86	41
VDTDX-CS-800	800	5,84	51	2,98	31
VDTDX-CS-1000	1000	6,20	73	3,06	44

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.



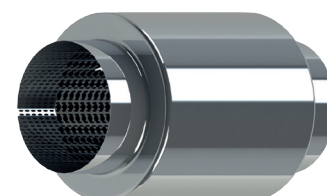
COOLING COIL / DX COIL DIMENSIONS									
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Drainage	Cooling Coil Weight (kg)	DX Coil Weight (kg)
VDTWC/DX-CS-150	672	420	350	110	110	1/2"	3/4"	5	4
VDTWC/DX-CS-220	672	420	350	110	110	1/2"	3/4"	5	4
VDTWC/DX-CS-350	672	520	350	210	110	1/2"	3/4"	6	5
VDTWC/DX-CS-450	672	520	450	310	210	1/2"	3/4"	7	6
VDTWC/DX-CS-600	672	520	450	310	210	1/2"	3/4"	7	6
VDTWC/DX-CS-800	672	675	450	450	210	3/4"	3/4"	9	8
VDTWC/DX-CS-1000	672	675	450	450	210	3/4"	3/4"	9	8



Duct Type Silencer

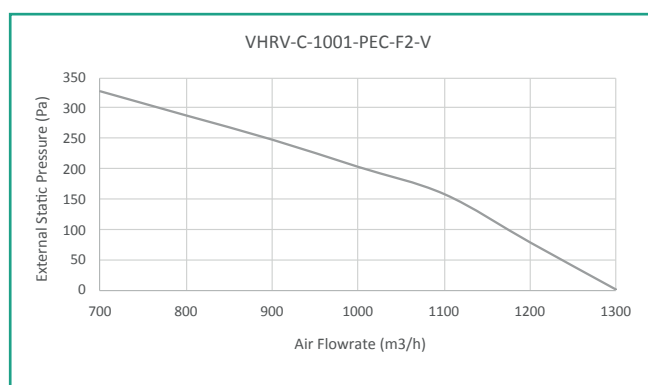
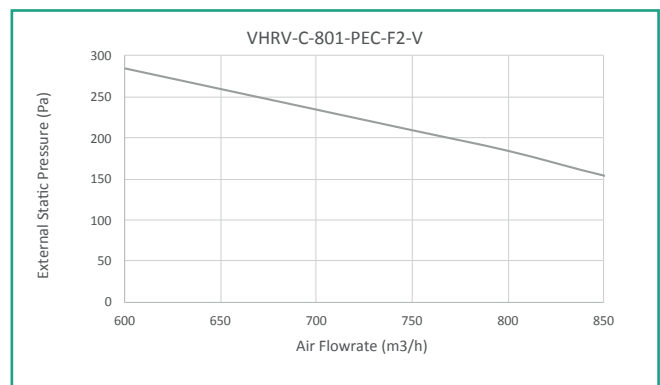
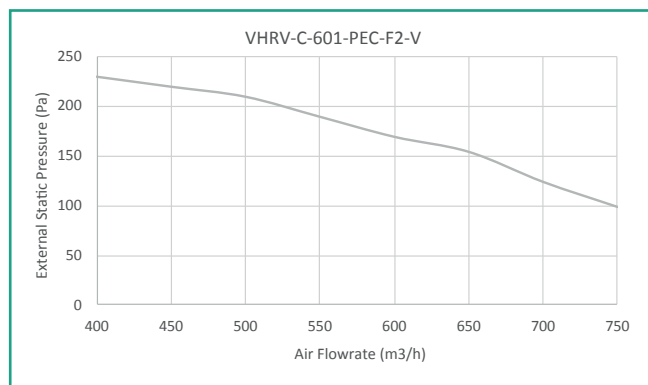
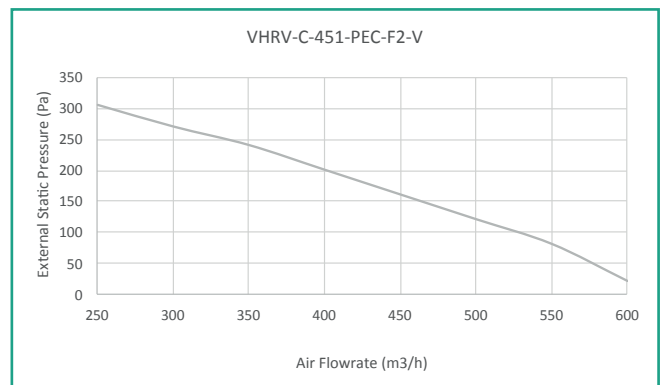
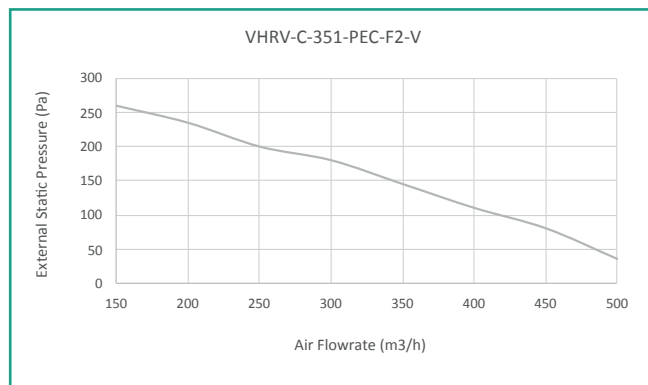
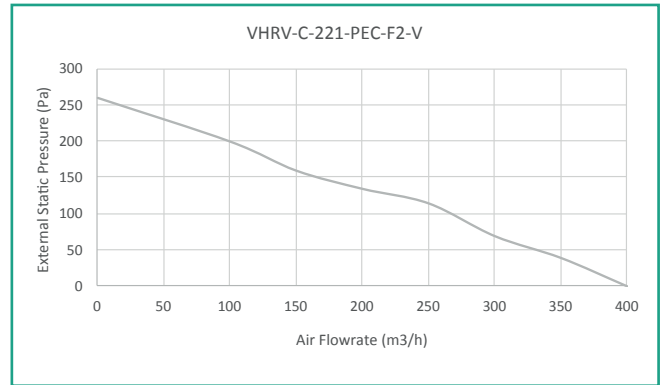
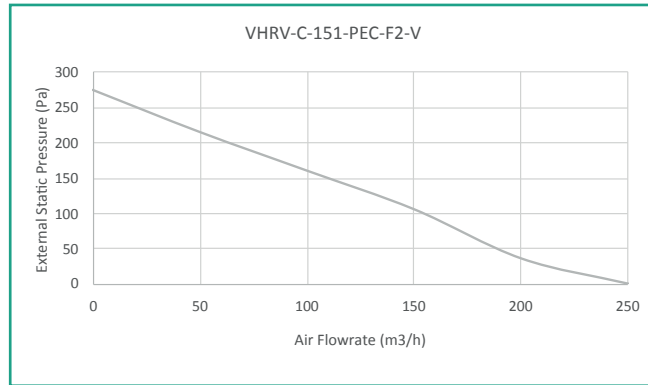
MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	L (mm)	d (mm)	D (mm)	Weight (kg)
VSA-150	150	11	600	160	260	6
VSA-220	220	8	600	200	315	7
VSA-350	350	9	600	250	355	9
VSA-450	450	9	600	250	355	9
VSA-600	600	5	600	315	500	12
VSA-800	800	5	600	315	500	12
VSA-1000	1000	6	600	400	600	16

*Sound attenuation in 250 Hz.



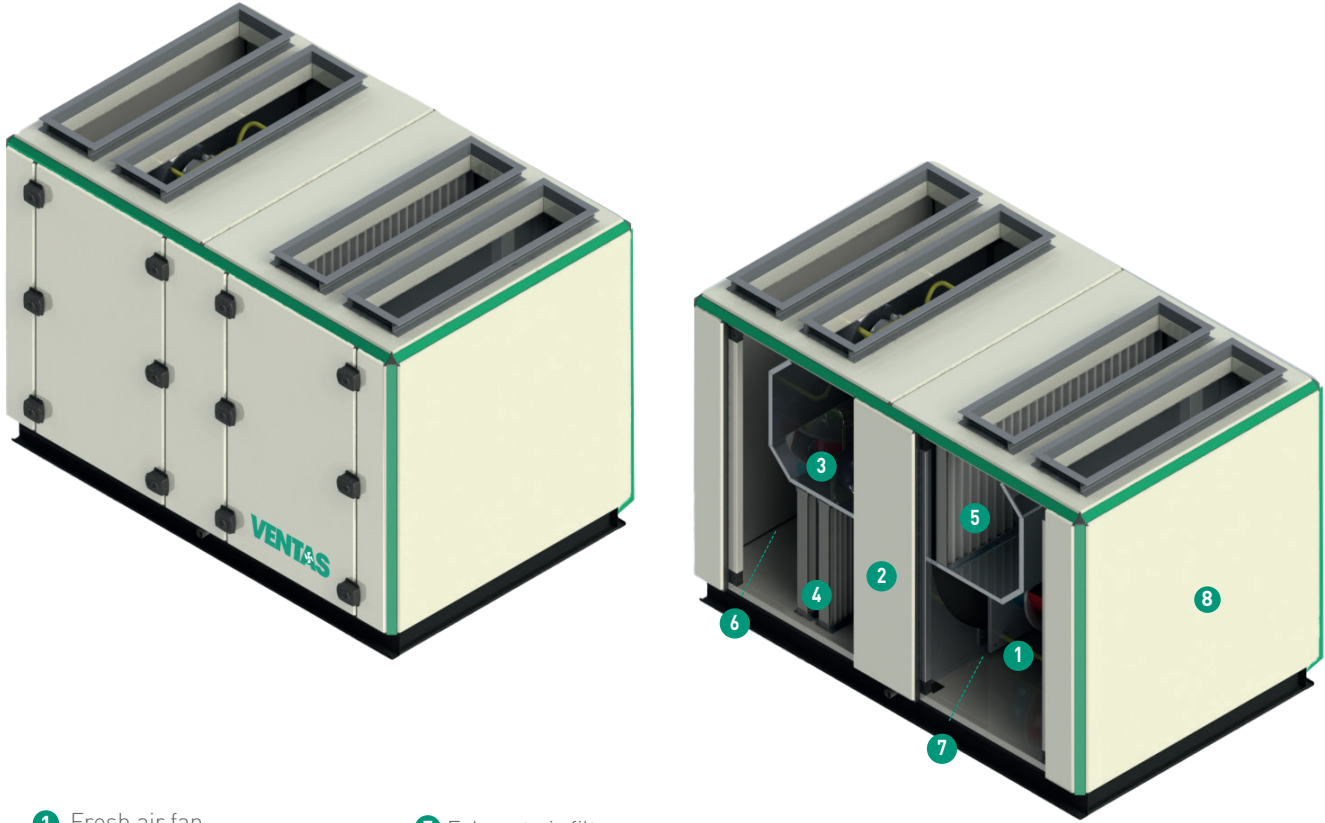
VENTASTAR VHRV-C Models Performance Curves

High Efficient Double Skin Heat Recovery Units with
Counterflow Heat Exchanger



VENTASTAR VHRV-R Models

High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Top Inlet/Outlet



- | | |
|-------------------------|---|
| 1 Fresh air fan | 5 Exhaust air filter |
| 2 Rotary heat exchanger | 6 Service door for fresh air filter and fan |
| 3 Exhaust air fan | 7 Service door for exhaust air filter and fan |
| 4 Fresh air filters | 8 Electronic card (Internally mounted) |

General Specifications

- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool(density:70 kg/m3) insulation provides heat and noise insulation.
- Provides energy savings with high efficiency hexagonal aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficiency EC plug-fan technology complies the ErP2018 requirements and provides proportional speed control.
- M5 and F7 filter class performances are according to EN 779:2012 and ISO 16890 standards.
- Bypass module is available.
- Condensation pan is available and drain connection is on the bottom of the units.
- Capacity range allows design variety for small areas.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels are favourable for domestic and other applications such as offices and meeting rooms.

Heat Recovery Units

VENTASTAR VHRV-R Models

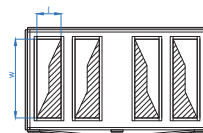
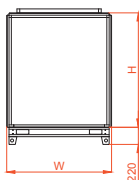
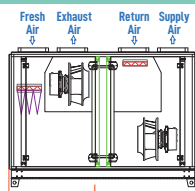
High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Top Inlet/Outlet

VENTAS Vertical Type Rotary Heat Recovery Ventilation Unit Models	VHRV-R-1201-PEC-F2-VT	VHRV-R-2001-PEC-F2-VT	VHRV-R-3001-PEC-F2-VT	VHRV-R-4001-PEC-F2-VT	VHRV-R-5001-PEC-F2-VT	VHRV-R-6001-PEC-F2-VT
Air Flowrate (m³/h)	1200	2000	3000	4000	5000	6000
External Static Pressure (Pa)	205	260	300	300	300	300
Thermal Efficiency (Summer) [%]	0,76	0,73	0,75	0,74	0,73	0,75
Thermal Efficiency (Winter) [%]	0,82	0,78	0,81	0,79	0,78	0,81
SFP	0,75	0,94	1,07	1,15	1,07	1,17
Power Supply	230 Volt / 50 Hz / 1		380 Volt / 50 Hz / 3			
Input Power (Watt)	2 x 250,5	2 x 524,1	2 x 892	2 x 1274	2 x 1480	2 x 1945
Input Current (Ampere)	2 x 1,64	2 x 2,28	2 x 1,37	2 x 2,05	2 x 2,26	2 x 3,00
Noise Level db(A)	61	64	64,9	65,4	68,5	69,5

Selection Criterias

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.
- 3) Noise levels are measured at 1 mt distance.

DIMENSIONS						
MODEL	VHRV-R-1201-PEC-F2-VT	VHRV-R-2001-PEC-F2-VT	VHRV-R-3001-PEC-F2-VT	VHRV-R-4001-PEC-F2-VT	VHRV-R-5001-PEC-F2-VT	VHRV-R-6001-PEC-F2-VT
L (mm)	1437	1590	1896	2049	2355	2355
W (mm)	885	885	1191	1191	1344	1497
H (mm)	1008	1161	1161	1314	1467	1620
h' (mm)	220	220	220	220	220	220
lxw (mm)	110 x 610	210 x 610	210 x 910	310 x 910	310 x 1010	310 x 1210
Minimum Service Space Needed (mm)	750	750	750	900	1200	1200
Weight (kg)	250	300	385	450	570	670



Accessories

Duct Type Electric Heater

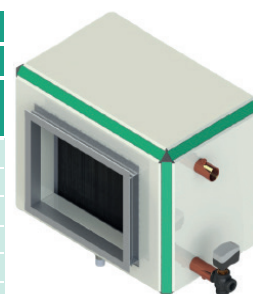
DUCT TYPE ELECTRIC HEATER DETAILS				DUCT TYPE ELECTRIC HEATER DIMENSIONS			
MODEL	For VHRV Models with Air Flowrate (m³/h)	Capacity (kW)	Power Supply	MODEL	Duct Connection (mm)	LTotal (mm)	HTotal (mm)
VDTEH 3,0	1200	3,0	230 Volt / 50 Hz / 1	VDTEH 3,0	Ø 250	565	410
VDTEH 6,0	2000	6,0	380 Volt / 50 Hz / 3	VDTEH 6,0	Ø 300	565	460
VDTEH 9,0	3000	9,0	380 Volt / 50 Hz / 3	VDTEH 9,0	Ø 355	585	535
VDTEH 12,0	4000	12,0	380 Volt / 50 Hz / 3	VDTEH 12,0	Ø 400	585	580
VDTEH 18,0	5000	18,0	380 Volt / 50 Hz / 3	VDTEH 18,0	Ø 400	880	580
VDTEH 18,0	6000	18,0	380 Volt / 50 Hz / 3	VDTEH 18,0	Ø 400	880	580



*Advised electric heater capacities are for final heating. Please consult sales representative for suitable pre heater capacity selection according to your outdoor design temperature in winter.

Duct Type Heating Coil

HEATING COIL DETAILS									
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWH-RVT-1200	1200	13,49	8	11,17	8	8,84	8	5,73	8
VDTWH-RVT-2000	2000	18,87	21	15,66	21	12,42	10	8,17	20
VDTWH-RVT-3000	3000	27,81	23	23,11	23	18,39	23	11,99	22
VDTWH-RVT-4000	4000	39,23	18	32,62	17	25,97	17	16,99	17
VDTWH-RVT-5000	5000	44,11	27	36,48	27	28,78	27	18,98	26
VDTWH-RVT-6000	6000	53,78	27	44,69	27	35,55	27	23,11	26

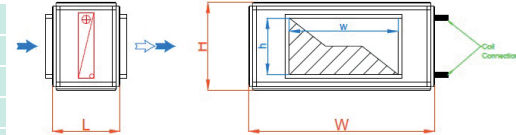


*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

VENTASTAR VHRV-R Models

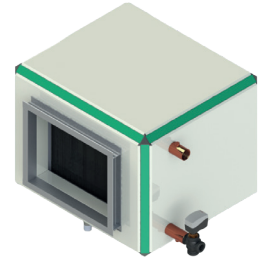
High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Top Inlet/Outlet

HEATING COIL DIMENSIONS							
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Weight (kg)
VDTWH-RVT-1200	519	850	610	580	370	1/2"	9
VDTWH-RVT-2000	519	850	610	580	370	1/2"	10
VDTWH-RVT-3000	519	1100	610	830	370	1/2"	11
VDTWH-RVT-4000	519	1325	570	830	430	3/4"	16
VDTWH-RVT-5000	519	1325	670	830	430	1"	16
VDTWH-RVT-6000	519	1635	670	1025	430	1"	19



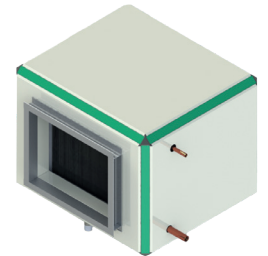
Duct Type Cooling/DX Coil

COOLING COIL DETAILS							
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWC-RVT-1200	1200	6,80	20	6,12	19	5,43	19
VDTWC-RVT-2000	2000	10,29	47	9,39	46	8,46	44
VDTWC-RVT-3000	3000	16,10	52	14,82	51	13,50	50
VDTWC-RVT-4000	4000	22,44	41	20,65	40	18,78	39
VDTWC-RVT-5000	5000	26,20	62	24,14	61	22,01	59
VDTWC-RVT-6000	6000	31,67	61	29,21	60	26,67	59



*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

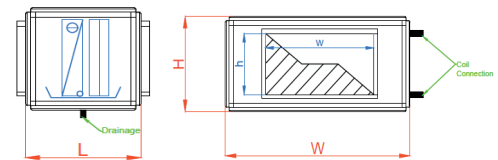
DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDTDX-RVT-1200	1200	6,98	22	5,62	18
VDTDX-RVT-2000	2000	9,97	48	7,59	39
VDTDX-RVT-3000	3000	14,74	52	12,02	43
VDTDX-RVT-4000	4000	21,52	44	18,97	34
VDTDX-RVT-5000	5000	25,73	63	21,76	50
VDTDX-RVT-6000	6000	32,53	63	26,54	50



*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

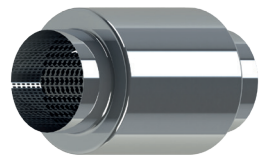
**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

COOLING COIL / DX COIL DIMENSIONS									
MODEL	L (mm)	W (mm)	H (mm)	w (mm)	h (mm)	Coil Connection	Drainage	Cooling Coil Weight (kg)	DX Coil Weight (kg)
VDTWC/DX-RVT-1200	672	850	610	580	370	1"	1"	15	15
VDTWC/DX-RVT-2000	672	850	610	580	370	1"	1"	15	15
VDTWC/DX-RVT-3000	672	1100	610	830	370	1"	1"	18	19
VDTWC/DX-RVT-4000	672	1325	670	830	430	1 1/4"	1"	26	27
VDTWC/DX-RVT-5000	672	1325	670	830	430	1 1/4"	1"	26	27
VDTWC/DX-RVT-6000	672	1635	670	1025	430	1 1/4"	1"	32	33



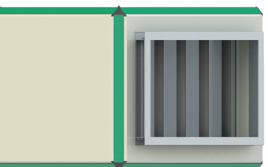
Duct Type Silencer

MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	ØD (mm)	Ød (mm)	Weight (kg)
VSA-1000	1200	14	13	750	350	250	18
VSA-2000	2000	17	16	1000	400	300	28
VSA-3000	3000	18	16	1500	450	350	37
VSA-4000	4000	23	19	1500	500	400	39



*Sound attenuation in 250 Hz.

MODEL	For VHRV Models with Air Flowrate (m³/h)	Sound Attenuation (dB)	Pressure Drop (Pa)	L (mm)	W (mm)	H (mm)	Weight (kg)
VSA-5000	5000	26	24	1500	900	600	67
VSA-6000	6000	26	24	1500	900	600	67

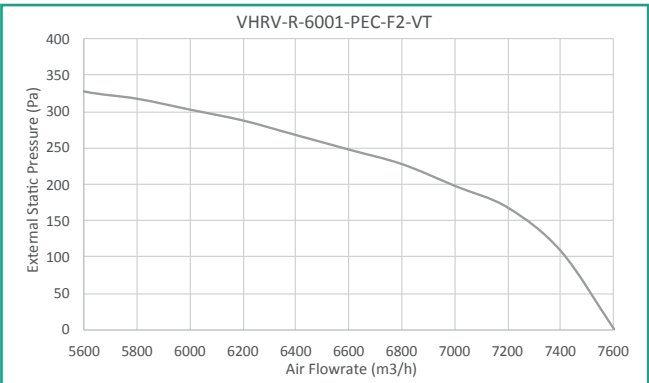
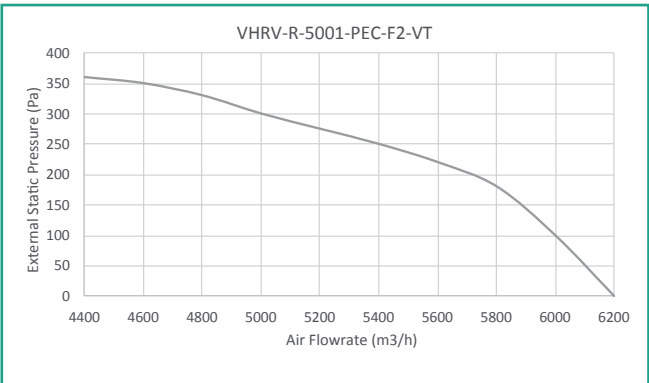
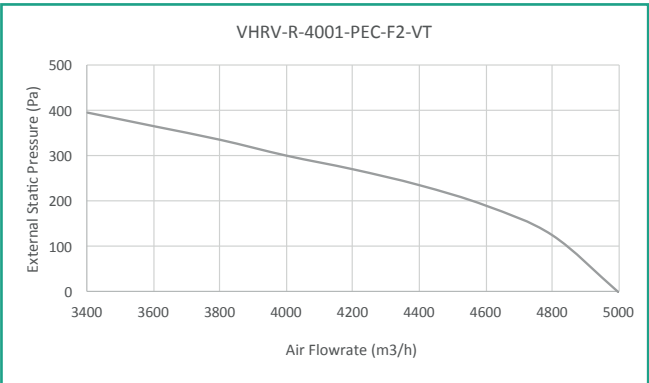
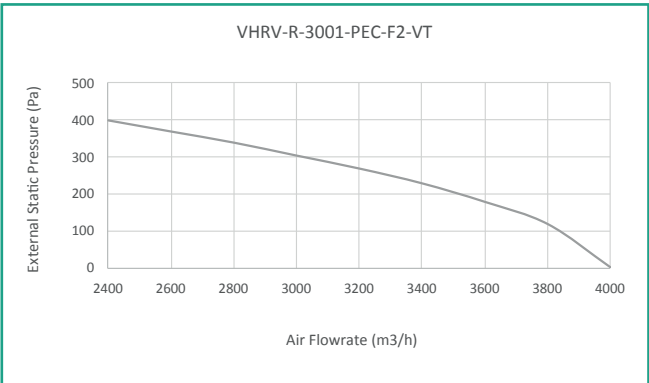
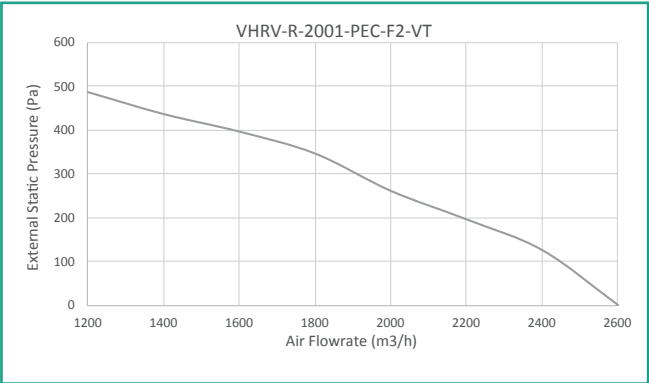
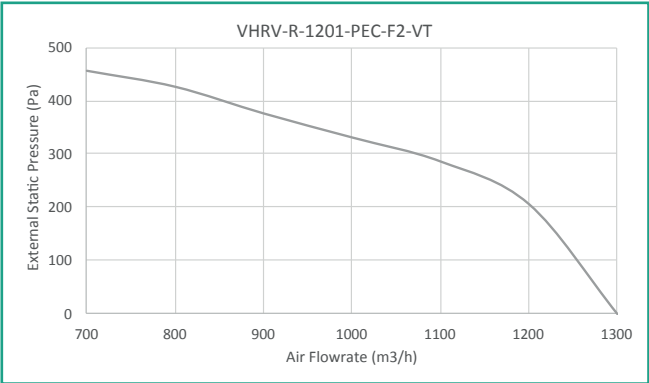


*Sound attenuation in 250 Hz.

*Rectangular.

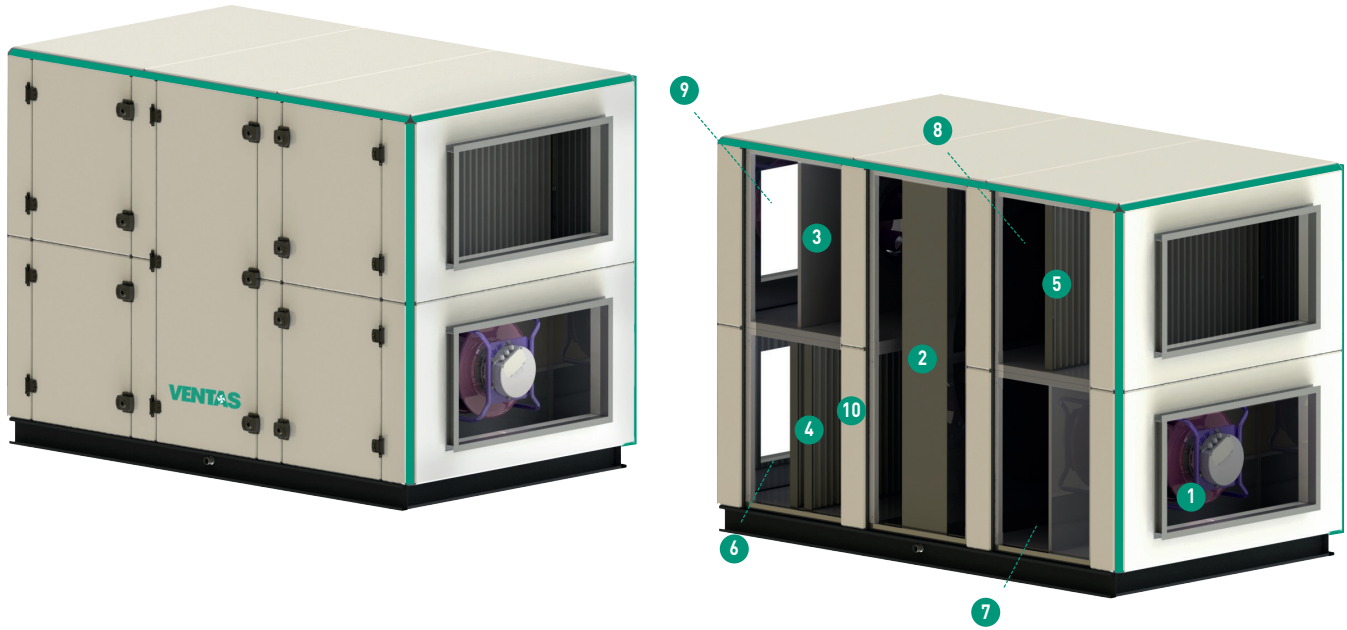
Heat Recovery Units

VENTASTAR VHRV-R Models High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Top Inlet/Outlet Performance Curves



VENTASTAR VHRV-R Models

High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Side Inlet/Outlet



- | | |
|-------------------------|---|
| 1 Fresh air fan | 6 Service door for fresh air filter |
| 2 Rotary heat exchanger | 7 Service door for fresh air fan |
| 3 Exhaust air fan | 8 Service door for exhaust air filter |
| 4 Fresh air filters | 9 Service door for exhaust air fan |
| 5 Exhaust air filter | 10 Electronic card (Internally mounted) |

General Specifications

- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density:110 kg/m3) insulation provides heat and noise insulation. Hinged service doors allow easy access to internal components.
- Double skin construction provides ability to locate heating coil and/or cooling coil and/or DX coil inside of the unit.
- Provides energy savings with cross flow aluminium air to air heat exchangers comply with standard EN 308 and are Eurovent certified.
- High efficient EC plug-fan technology provides propotional speed control.
- M5 and F7 filter class performances are according to EN 779:2012 and ISO 16890 standards.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

Heat Recovery Units

VENTASTAR VHRV-R Models

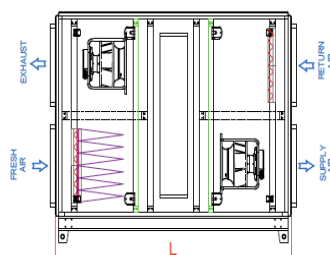
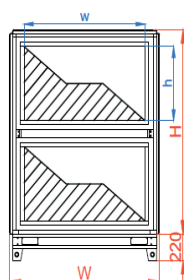
High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Side Inlet/Outlet

VENTAS Horizontal Type Rotary Heat Recovery Ventilation Unit Models	VHRV-R-1801-PEC-F2-HS	VHRV-R-2501-PEC-F2-HS	VHRV-R-4501-PEC-F2-HS	VHRV-R-5801-PEC-F2-HS	VHRV-R-7501-PEC-F2-HS
Air Flowrate (m³/h)	1800	2500	4500	5800	7500
External Static Pressure (Pa)	300	300	300	300	300
Thermal Efficiency (Summer) (%)	79,46	81,5	80,43	80,17	80,57
Thermal Efficiency (Winter) (%)	77,70	80,05	78,90	78,51	78,97
SFP	0,85	0,74	0,79	0,80	0,79
Power Supply	380 Volt / 50 Hz / 3				
Power Consumption (kW)	1,125	1,44	2,7	3,28	4,35
Input Current (Ampere)	4,91	2,22	4,06	4,9	6,54
Noise Level db(A)	54,8	55,4	56,7	58,5	59

DIMENSIONS					
MODEL	VHRV-R-1801-PEC-F2-HS	VHRV-R-2501-PEC-F2-HS	VHRV-R-4501-PEC-F2-HS	VHRV-R-5801-PEC-F2-HS	VHRV-R-7501-PEC-F2-HS
L (mm)	2049	2049	2355	2355	2355
W (mm)	1191	1191	1497	1497	1803
H (mm)	1068	1374	1680	1680	1680
h'	220	220	220	220	220
wxh (mm)	610 x 310	910 x 510	1210 x 610	1210 x 610	1510 x 610
Minimum Service Space Needed (mm)	750	750	750	750	1000
Weight (kg)	350	450	550	700	780

VENTAS Horizontal Type Rotary Heat Recovery Ventilation Unit Models	VHRV-R-9501-PEC-F2-HS	VHRV-R-11001-PEC-F2-HS	VHRV-R-14501-PEC-F2-HS	VHRV-R-20001-PEC-F2-HS
Air Flowrate (m³/h)	9500	11000	14500	20000
External Static Pressure (Pa)	300	300	300	300
Thermal Efficiency (Summer) (%)	79,79	79,76	81,13	79,21
Thermal Efficiency (Winter) (%)	78,08	78,04	79,62	77,41
SFP	0,77	0,79	0,70	0,81
Power Supply	380 Volt / 50 Hz / 3			
Power Consumption (kW)	1,125	1,44	2,7	3,28
Input Current (Ampere)	4,91	2,22	4,06	4,9
Noise Level db(A)	54,8	55,4	56,7	58,5

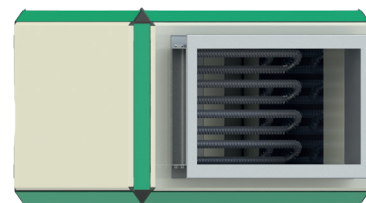
DIMENSIONS				
MODEL	VHRV-R-9501-PEC-F2-HS	VHRV-R-11001-PEC-F2-HS	VHRV-R-14501-PEC-F2-HS	VHRV-R-20001-PEC-F2-HS
L (mm)	2661	2661	2967	2967
W (mm)	2109	2109	2415	2415
H (mm)	1986	1986	2598	2598
h'	220	220	220	220
wxh (mm)	1810 x 810	1810 x 810	2110 x 1110	2110 x 1110
Minimum Service Space Needed (mm)	1000	1000	1200	1200
Weight (kg)	975	1075	1300	1440



VENTASTAR VHRV-R Models High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Side Inlet/Outlet Accessories

Duct Type Electric Heater

- Ventastar duct type electric heaters are used for pre heating and final heating purposes.
- There are two overheating protection thermostat; one on the inlet of electric heater (60°C) and one in the resistances (90°C) for safety.
- Duct type electric heaters can be controlled proportionally until 24 kW. For bigger capacities, multiple stage control is available.
- Duct type electric heaters can be operated by Ventastar electronic card automatically.
- Please consult your sales representative for suitable capacity selection for pre heater and final heater according to your outdoor/indoor design temperatures.

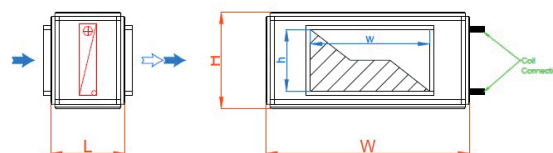


Duct Type Heating Coil

HEATING COIL DETAILS									
Water Temperature		90 / 70 °C		80 / 60 °C		70 / 50 °C		50 / 40 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)	Heating Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWH-RVS-1800	1800	10,24	4	8,33	4	6,38	4	5,73	4
VDTWH-RVS-2500	2500	13,68	5	11,17	5	8,62	5	8,17	5
VDTWH-RVS-4500	4500	24,78	5	20,26	5	15,68	5	11,99	5
VDTWH-RVS-5800	5800	24,83	5	20,30	5	15,72	5	16,99	5
VDTWH-RVS-7500	7500	37,34	9	30,65	9	23,90	9	18,98	9
VDTWH-RVS-9500	9500	46,69	7	37,63	7	28,32	7	23,11	7
VDTWH-RVS-11000	11000	50,52	10	40,71	10	30,66	10	16,99	10
VDTWH-RVS-14500	14500	75,92	7	62,04	7	48,02	7	18,98	7
VDTWH-RVS-20000	20000	91,24	13	74,71	13	58,03	13	23,11	13

*Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

HEATING COIL DIMENSIONS							
MODEL	L (mm)	W (mm)	H (mm)	h' (mm)	w (mm)	h (mm)	Coil Connection
VDTWH-RVS-1800	519	1191	549	220	610	310	3/4"
VDTWH-RVS-2500	519	1497	855	220	1210	610	3/4"
VDTWH-RVS-4500	519	1497	855	220	1210	610	1"
VDTWH-RVS-5800	519	1497	855	220	1210	610	1"
VDTWH-RVS-7500	519	1803	855	220	1510	610	1"
VDTWH-RVS-9500	519	2109	1008	220	1810	810	1 1/2"
VDTWH-RVS-11000	519	2109	1008	220	1810	810	1 1/2"
VDTWH-RVS-14500	672	2415	1314	220	2110	1110	1 1/2"
VDTWH-RVS-20000	672	2415	1314	220	2110	1110	1 1/2"



Heat Recovery Units

VENTASTAR VHRV-R Models High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger - Side Inlet/Outlet Accessories Duct Type Cooling/DX Coil

COOLING COIL DETAILS							
Water Temperature		6 / 11 °C		7 / 12 °C		8 / 13 °C	
MODEL	For VHRV Models with Air Flowrate (m³/h)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)	Cooling Coil Capacity (kW)	Air Pressure Drop (Pa)
VDTWC-RVS-1800	1800	8,90	18	8,09	18	7,26	18
VDTWC-RVS-2500	2500	11,32	21	10,23	20	9,15	20
VDTWC-RVS-4500	4500	22,46	22	20,58	21	18,63	21
VDTWC-RVS-5800	5800	26,54	32	24,36	31	22,09	31
VDTWC-RVS-7500	7500	35,50	33	32,73	32	29,85	32
VDTWC-RVS-9500	9500	46,00	29	42,31	29	38,48	28
VDTWC-RVS-11000	11000	50,22	36	46,23	36	42,07	35
VDTWC-RVS-14500	14500	58,72	26	52,94	25	47,41	24
VDTWC-RVS-20000	20000	104,41	59	96,09	57	87,47	56

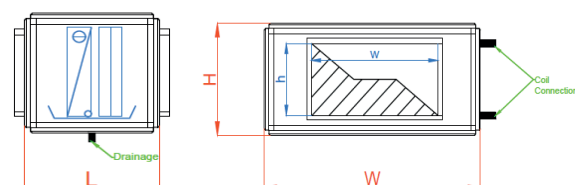
*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

DX COIL DETAILS					
MODEL	For VHRV Models with Air Flowrate (m³/h)	DX Coil Cooling Capacity (kW)	Air Pressure Drop (Pa)	DX Coil Heating Capacity (kW)	Air Pressure Drop (Pa)
VDTDX-RVS-1800	1800	8,62	17	7,20	13
VDTDX-RVS-2500	2500	11,02	19	9,24	15
VDTDX-RVS-4500	4500	22,10	20	17,9	15
VDTDX-RVS-5800	5800	26,05	30	20,81	23
VDTDX-RVS-7500	7500	34,15	30	23,53	23
VDTDX-RVS-9500	9500	41,64	24	29,52	29
VDTDX-RVS-11000	11000	44,67	30	31,81	38
VDTDX-RVS-14500	14500	62,79	23	47,02	27
VDTDX-RVS-20000	20000	88,26	60	78,49	60

*Cooling capacities are according to heat exchanger outlet temperature for outdoor design temperature in summer: 35°C, 50% RH; indoor design temperature in summer: 25°C, 50% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

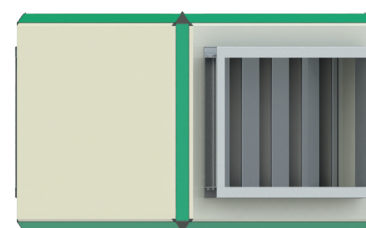
**Heating capacities are according to heat exchanger outlet temperature for outdoor design temperature in winter: -3°C, 90% RH; indoor design temperature in winter: 25°C, 60% RH. Please consult your sales representative to determine actual capacity for different design temperature values.

COOLING COIL / DX COIL DIMENSIONS								
MODEL	L (mm)	W (mm)	H (mm)	h' (mm)	w (mm)	h (mm)	Coil Connection	Drainage Connection
VDTWH-RVS-1800	672	1191	549	220	610	310	1"	1"
VDTWH-RVS-2500	672	1497	855	220	1210	610	1 1/4"	
VDTWH-RVS-4500	672	1497	855	220	1210	610	1 1/4"	
VDTWH-RVS-5800	672	1497	855	220	1210	610	1 1/4"	
VDTWH-RVS-7500	672	1803	855	220	1510	610	1 1/2"	
VDTWH-RVS-9500	672	2109	1008	220	1810	810	1 1/2"	
VDTWH-RVS-11000	672	2109	1008	220	1810	810	2"	
VDTWH-RVS-14500	672	2415	1314	220	2110	1110	2 1/2"	
VDTWH-RVS-20000	672	2415	1314	220	2110	1110	2 1/2"	



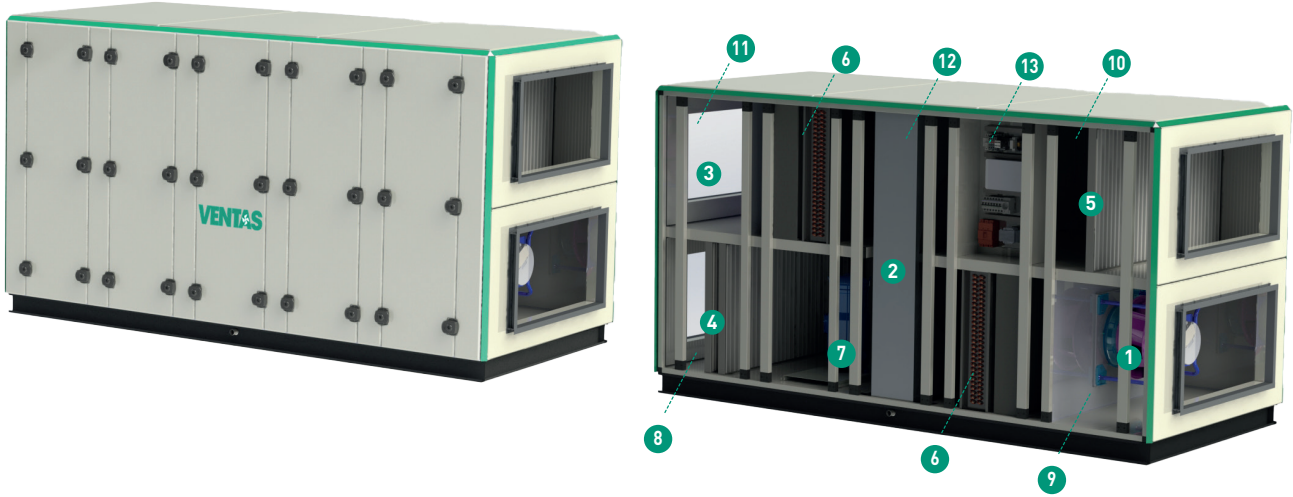
Silencer

- VENTAS silencers are sized individually in accordance with the required attenuation.
- In order to provide sound isolation, glass wool is used for the standard production.
- Silencers can be duct type or located in the unit.
- Please consult your sales representative for suitable silencer selection according to required sound absorption levels and air flowrate.



VENTASTAR VHRV-R Models

High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger and DX Heat Pump



- | | |
|-------------------------|---------------------------------------|
| ➊ Fresh air fan | ➋ Service door for fresh air filter |
| ➌ Rotary heat exchanger | ➍ Service door for fresh air fan |
| ➎ Exhaust air fan | ➏ Service door for exhaust air filter |
| ➐ Fresh air filters | ➑ Service door for exhaust air fan |
| ➒ Exhaust air filter | ➓ Service door for rotor |
| ➔ DX Coil | ➕ Control Panel |
| ➗ Compressor | |

General Specifications

- VENTAS High Efficient Heat Recovery Units with DX Heat Pump models are designed to provide high indoor air quality by saving energy and meeting required comfort conditions. The units include complete cooling circuit and is reversible.
- Casing is made of steel and painted steel sheets are used. Double skin panel structure with 60 mm Rockwool (density: 110 kg/m³) insulation provides heat and noise insulation. Service doors allow easy access to internal components.
- Provides energy savings with high efficiency sorption rotor comply with standard EN 308 and are Eurovent certified.
- High efficiency EC plug-fan technology complies the ErP2018 requirements and provides proportional speed control.
- M5 and F7 minipleat filter class performances are according to EN 779:2012 and ISO 16890 standards.
- Units with non inverter compressors allow constant speed control for cooling circuits. Units with inverter compressors allow proportional speed control for cooling circuits.
- Bypass scenario is available.
- Duct connections are on the sides of units.
- Condensation pan is available and drain connection is on the bottom of the units.
- Wide capacity range allows design variety.
- Equipped with Ventastar Controller which allows operation with various scenarios and is compatible with BMS.
- Low noise levels allow comfortable operation in indoor zones.

Heat Recovery Units

VENTASTAR VHRV-R Models

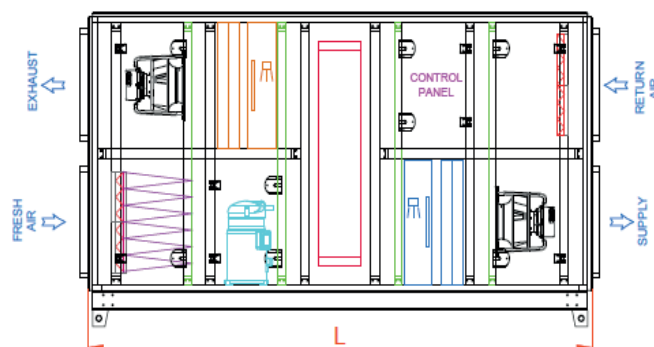
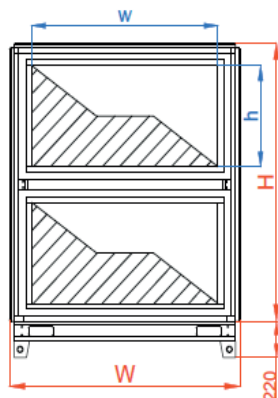
High Efficient Double Skin Heat Recovery Unit with Rotary Heat Exchanger and DX Heat Pump/Non Inverter

VENTAS Vertical Type Heat Pump Rotary Heat Recovery Ventilation Unit Models - Non Inverter	VHRV-R-1801-DX-NI-PEC-F2-H	VHRV-R-2501-DX-NI-PEC-F2-H	VHRV-R-4501-DX-NI-PEC-F2-H	VHRV-R-5801-DX-NI-PEC-F2-H	VHRV-R-7501-DX-NI-PEC-F2-H	VHRV-R-9501-DX-NI-PEC-F2-H	VHRV-C-11001-DX-NI-PEC-F1-H
Air Flow (m³/h)	1800	2500	4500	5800	7500	9500	11000
External Static Pressure (Pa)	300	300	300	300	300	300	300
Thermal Efficiency (Summer) (%)	79,46	81,50	80,43	80,17	80,57	79,79	79,76
Thermal Efficiency (Winter) (%)	77,70	80,05	78,90	78,51	78,97	78,08	78,04
SFP (kW/m³/s)	1,32	1,17	1,27	1,31	1,29	1,13	1,25
Total Cooling Capacity (kW)	20,91	28,90	50,97	65,88	84,15	107,35	121,97
Total Heating Capacity (kW)	32,17	44,56	79,47	101,94	131,95	167,17	191,10
Compressor Power Cooling (kW)	3,00	3,47	5,78	7,76	9,65	12,58	14,72
Compressor Power Heating (kW)	2,38	2,79	4,82	6,19	7,74	10,05	11,77
Fan Power Consumption (kW)	1,16	1,56	2,84	3,70	4,76	5,35	6,55
Power Supply	380 Volt / 50 Hz / 3						
Total Electric Consumption (kW) Cooling	4,18	5,07	8,66	11,50	14,50	18,11	21,45
Total Electric Consumption (kW) Heating	3,56	4,39	7,70	9,93	12,59	15,58	18,50
EER	4,99	5,69	5,88	5,73	5,80	5,92	5,68
COP	9,01	10,15	10,31	10,26	10,47	10,72	10,33
Noise Level db(A)	62,7	63,1	65,6	68	69,1	69,9	71,9

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
- 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.

Dimensions							
MODEL	VHRV-R-1801-DX-NI-PEC-F2-H	VHRV-R-2501-DX-NI-PEC-F2-H	VHRV-R-4501-DX-NI-PEC-F2-H	VHRV-R-5801-DX-NI-PEC-F2-H	VHRV-R-7501-DX-NI-PEC-F2-H	VHRV-R-9501-DX-NI-PEC-F2-H	VHRV-C-11001-DX-NI-PEC-F1-H
L (mm)	3273	3273	3273	3273	3579	3885	3885
W (mm)	1191	1191	1497	1497	1803	2109	2109
H (mm)	1068	1374	1680	1680	1680	1986	1986
h' (mm)	220	220	220	220	220	220	220
wxh (mm)	610 x 310	910 x 510	1210 x 610	1210 x 610	1510 x 610	1810 x 810	1810 x 810
Minimum Service Space Needed (mm)	750	750	750	750	1000	1000	1000
Unit Weight (kg)	600	790	850	1050	1150	1250	1600



VENTASTAR VHRV-R Models

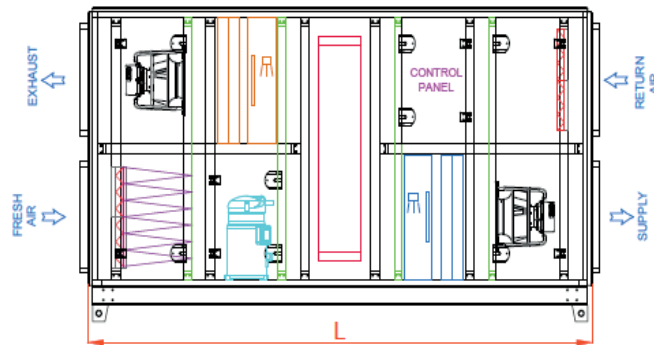
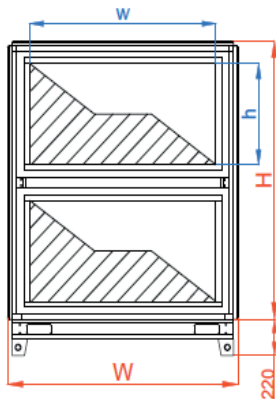
High Efficient Double Skin Heat Recovery Unit with Rotary Heat Exchanger and DX Heat Pump/ Inverter

VENTAS Vertical Type Heat Pump Rotary Heat Recovery Ventilation Unit Models - Inverter	VHRV-R-1801-DX-I-PEC-F2-H	VHRV-R-2501-DX-I-PEC-F2-H	VHRV-R-4501-DX-I-PEC-F2-H	VHRV-R-5801-DX-I-PEC-F2-H	VHRV-R-7501-DX-I-PEC-F2-H	VHRV-R-9501-DX-I-PEC-F2-H	VHRV-C-11001-DX-I-PEC-F1-H
Air Flow (m³/h)	1800	2500	4500	5800	7500	9500	11000
External Static Pressure (Pa)	300	300	300	300	300	300	300
Thermal Efficiency (Summer) (%)	79,46	81,50	80,43	80,17	80,57	79,79	79,76
Thermal Efficiency (Winter) (%)	77,70	80,05	78,9	78,51	78,97	78,08	78,04
SFP (kW/m³/s)	1,32	1,17	1,27	1,31	1,29	1,13	1,25
Total Cooling Capacity (kW)	20,91	28,90	50,97	65,88	84,15	107,35	121,97
Total Heating Capacity (kW)	32,17	44,56	79,47	101,94	131,95	167,17	191,10
Compressor Power Cooling (kW)	2,78	3,55	6,23	8,49	9,48	13,37	14,73
Compressor Power Heating (kW)	1,86	2,28	3,85	5,51	7,19	9,08	9,67
Fan Power Consumption (kW)	1,16	1,56	2,84	3,70	4,76	5,35	6,55
Power Supply	380 Volt/50 Hz/3						
Total Electric Consumption (kW) Cooling	3,96	5,15	9,11	12,23	14,33	18,90	21,46
Total Electric Consumption (kW) Heating	3,04	3,88	6,73	9,25	12,04	14,61	16,40
EER	5,27	5,61	5,59	5,38	5,87	5,68	5,69
COP	10,54	11,47	11,79	11,01	10,95	11,43	11,65
Noise Level db(A)	62,7	63,1	65,6	68	69,1	69,9	71,9

Selection Criteria

- 1) Outdoor design temperature in summer: 35°C, 50% RH; Indoor design temperature in summer: 25°C, 50% RH.
 2) Outdoor design temperature in winter: -3°C, 90% RH; Indoor design temperature in winter: 25°C, 60% RH.

Dimensions							
MODEL	VHRV-R-1801-DX-I-PEC-F2-H	VHRV-R-2501-DX-I-PEC-F2-H	VHRV-R-4501-DX-I-PEC-F2-H	VHRV-R-5801-DX-I-PEC-F2-H	VHRV-R-7501-DX-I-PEC-F2-H	VHRV-R-9501-DX-I-PEC-F2-H	VHRV-C-11001-DX-I-PEC-F1-H
L (mm)	3273	3273	3273	3273	3579	3885	3885
W (mm)	1191	1191	1497	1497	1803	2109	2109
H (mm)	1068	1374	1680	1680	1680	1986	1986
h' (mm)	220	220	220	220	220	220	220
wxh (mm)	610 x 310	910 x 510	1210 x 610	1210 x 610	1510 x 610	1810 x 810	1810 x 810
Minimum Service Space Needed (mm)	750	750	750	750	1000	1000	1000
Unit Weight (kg)	600	790	850	1050	1150	1250	1600



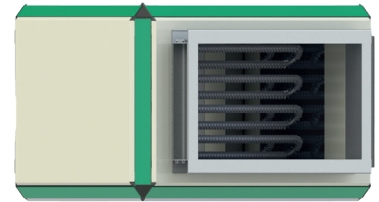
Heat Recovery Units

VENTASTAR VHRV-R Models

High Efficient Double Skin Heat Recovery Units with Rotary Heat Exchanger and DX Heat Pump Accessories

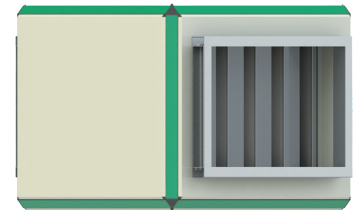
Electric Heater

- Ventas electric heaters are used for pre heating and final heating purposes.
- Electric heaters can be duct type or located in the unit.
- There are two overheating protection thermostat; one on the inlet of electric heater (60°C) and one in the resistances (90°C) for safety.
- Duct type electric heaters can be controlled proportionally until 24 kW. For bigger capacities, multiple stage control is available.
- Duct type electric heaters can be operated by Ventastar electronic card automatically.
- Please consult your sales representative for suitable capacity selection for pre heater and final heater according to your outdoor/indoor design temperatures.



Silencer

- VENTAS silencers are sized individually in accordance with the required attenuation.
- In order to provide sound isolation, glass wool is used for the standard production.
- Silencers can be duct type or located in the unit.
- Please consult your sales representative for suitable silencer selection according to required sound absorption levels and air flowrate.



VENTASTAR Controller

VENTASTAR Heat Recovery Units are produced as plug and play units with Ventastar electronic card and Ventastar indoor controller. The basic configurations are installed at the factory. Once the wirings between electronic card and indoor controller are completed, units can be configured and parameters can be changed if needed.

VENTASTAR ELECTRONIC CARD FEATURES	Heat Recovery Units with AC Plug Fan	Heat Recovery Units with AC Radial Fan	Heat Recovery Units with EC Plug Fan	Heat Recovery Units with Coils Inside
Models	VHRV-P-...-PAC-...	VHRV-P-...-RAC-...	VHRV-P-...-PEC-...	VHRV-P-...-PEC-...
Supply/Exhaust Fan Stepped Speed Control	S	S	N/A	N/A
Supply/Exhaust Fan Proportional Speed Control	N/A	N/A	S	S
Electric Pre Heater Control (On/Off)	S	S	S	S
Electric Final Heater Control (Proportional)	S	S	S	S
Heating Coil Valve Control (On/Off or Proportional)	S	S	S	S
Cooling Coil Valve Control (On/Off or Proportional)	S	S	S	S
Outdoor Unit Control (On/Off or Proportional)	S	S	S	S
Supply/Exhaust Damper Motor Control (On/Off)	P	P	P	P
Bypass Damper Control (On/Off)	S	S	S	S
Frost Protection	S	S	S	S
Pump Control	P	P	P	P
Sensor Connection Inputs				
Fresh Air Sensor	S	S	S	S
Supply Air Sensor	S	S	S	S
Room Sensor	S	S	S	S
Exhaust Air Sensor	S	S	S	S
Humidity Sensor	S	S	S	S
CO2 Sensor	S	S	S	S
DPS For Filters	S	S	S	S
DPS For Fans	S	S	S	S
BMS Connection				
Modbus	S	S	S	S
Bacnet	P	P	P	P
KNX	0	0	0	0

VENTASTAR INDOOR CONTROLLER FEATURES	Heat Recovery Units with AC Plug Fan	Heat Recovery Units with AC Radial Fan	Heat Recovery Units with EC Plug Fan	Heat Recovery Units with Coils Inside
Models	VHRV-P-...-PAC-...	VHRV-P-...-RAC-...	VHRV-P-...-PEC-...	VHRV-P-...-PEC-...
Advanced User and Service Menu	S	S	S	S
Room Temperature Sensor	S	S	S	S
Mode Settings	S	S	S	S
Set Point Settings	S	S	S	S
Hourly/Daily/Weekly Program Settings	S	S	S	S
Fan Speed Display	S	S	S	S
Temperature Measurement Display	S	S	S	S
CO2 ppm Value Display	S*	S*	S*	S*
Alarm Notification				
Supply/Exhaust Thermic Alarm	S	S	S	S
Frost Alarm	S*	S*	S*	S*
Defrost Alarm	S*	S*	S*	S*
Electric Heater Overheating Alarm	S	S	S	S
Filter Dirty Alarm	S*	S*	S*	S*
Outdoor Air Temperature Sensor Alarm	S*	S*	S*	S*
Supply Air Temperature Sensor Alarm	S*	S*	S*	S*
Compressor Thermic Contact Alarm	N/A	N/A	N/A	N/A
Compressor High/Low Pressure Alarm	N/A	N/A	N/A	N/A
Compressor Overheating Alarm	N/A	N/A	N/A	N/A
Air Flow DPS Alarm	S*	S*	S*	S*

S : Standard Settings
 0 : Optional Settings
 P : Possible Settings
 N/A : Not Applicable

S* : Necessary sensors are needed for these features.

VENTASTAR Controller

VENTASTAR ELECTRONIC CARD FEATURES	High Efficient Heat Recovery Units with Counter Flow Heat Exchanger	Heat Recovery Units with DX Heat Pump (Non Inverter /Inverter)	High Efficient Heat Recovery Units with Rotary Heat Exchanger	High Efficient Heat Recovery Units with DX Heat Pump (Non Inverter/Inverter)
Models	VHRV-C-...-PEC-...	VHRV-P-...-DX-NI/I-...	VHRV-R-...-VT/HS	VHRV-R-...-DX-NI/I-...
Supply/Exhaust Fan Stepped Speed Control	N/A	N/A	N/A	N/A
Supply/Exhaust Fan Proportional Speed Control	S	S	S	S
Electric Pre Heater Control (On/Off)	S	S	S	S
Electric Final Heater Control (Proportional)	S	S	S	S
Heating Coil Valve Control (On/Off or Proportional)	S	S	S	S
Cooling Coil Valve Control (On/Off or Proportional)	S	S	S	S
Outdoor Unit Control (On/Off or Proportional)	S	S	S	S
Supply/Exhaust Damper Motor Control (On/Off)	P	P	P	P
Bypass Damper Control (On/Off)	S	S	S	S
Frost Protection	S	S	S	S
Pump Control	P	P	P	P
Sensor Connection Inputs				
Fresh Air Sensor	S	S	S	S
Supply Air Sensor	S	S	S	S
Room Sensor	S	S	S	S
Exhaust Air Sensor	S	S	S	S
Humidity Sensor	S	S	S	S
CO2 Sensor	S	S	S	S
DPS For Filters	S	S	S	S
DPS For Fans	S	S	S	S
BMS Connection				
Modbus	S	S	S	S
Bacnet	P	P	P	P
KNX	O	O	O	O

VENTASTAR INDOOR CONTROLLER FEATURES	High Efficient Heat Recovery Units with Counter Flow Heat Exchanger	Heat Recovery Units with DX Heat Pump (Non Inverter /Inverter)	High Efficient Heat Recovery Units with Rotary Heat Exchanger	High Efficient Heat Recovery Units with DX Heat Pump (Non Inverter/Inverter)
Models	VHRV-C-...-PEC-...	VHRV-P-...-DX-NI/I-...	VHRV-R-...-VT/HS	VHRV-R-...-DX-NI/I-...
Advanced User and Service Menu	S	S	S	S
Room Temperature Sensor	S	S	S	S
Mode Settings	S	S	S	S
Set Point Settings	S	S	S	S
Hourly/Daily/Weekly Program Settings	S	S	S	S
Fan Speed Display	S	S	S	S
Temperature Measurement Display	S	S	S	S
CO2 ppm Value Display	S*	S*	S*	S*
Alarm Notification				
Supply/Exhaust Thermic Alarm	S	S	S	S
Frost Alarm	S*	S*	S*	S*
Defrost Alarm	S*	S	S*	S
Electric Heater Overheating Alarm	S	S	S	S
Filter Dirty Alarm	S*	S	S*	S
Outdoor Air Temperature Sensor Alarm	S*	S	S*	S
Supply Air Temperature Sensor Alarm	S*	S	S*	S
Compressor Thermic Contact Alarm	N/A	S	N/A	S
Compressor High/Low Pressure Alarm	N/A	S	N/A	S
Compressor Overheating Alarm	N/A	S	N/A	S
Air Flow DPS Alarm	S*	S*	S*	S*

S : Standard Settings
O : Optional Settings
P : Possible Settings
N/A : Not Applicable

S* : Necessary sensors are needed for these features.

Heat Recovery Units

Additional Accessories

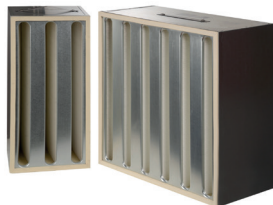
F7 Filter



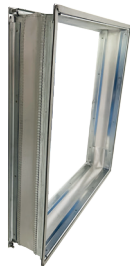
Active Carbon Cartridge Filter



Hepa Filter



Flexible Connection



Motorized Damper



Differential Pressure Switch



CO2 / VOC Sensor



Door Switch



Frost Thermostat



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