

FROM DESIGN,
TO REALITY...



VIA CLIMATE[®]

? Why **VIACLIMATE®**

Objective

Our objective is to improve production processes and to become a leading brand in Turkey and in the World with VIACLIMATE.

R&D

We keep researching changing air conditioning requirements and designing our products according to technological advancements with the same ambition and enthusiasm we had on our first day.

Engineering

We utilize all the infrastructure and calculation methods required by engineering principles and standards for our products.

Customer Satisfaction

VIACLIMATE considers the fulfilment of all customer requirements as top priority to ensure customer satisfaction.

Design

We will continue providing you with unique products that are more affordable, more efficient and with less energy consumption.

Quality

We perform quality control, production, testing and design in accordance with the principles stipulated as per the standards issued by accredited international and Turkish organizations.

After Sales Service

We aim to provide unlimited support for after sales services required for the products starting from the installation process.

Our Quality Policy



Air Handling Unit

TSE



Heat Recovery

TSEK 381



Our Production

TSE - HYB



Air Handling Unit
Heat Recovery
Natural Gas Units

CE

(VKS) Air Handling Unit



Quality Management System

ISO 9001:2015



Customs Union Conformity

EAC

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Air Handling Unit content

Why Viaclimate ?
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VKSSstandart Acc. to EN1886
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Components
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Electrical Automation

5-28



2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



High Energy
Efficiency



Smart
Control



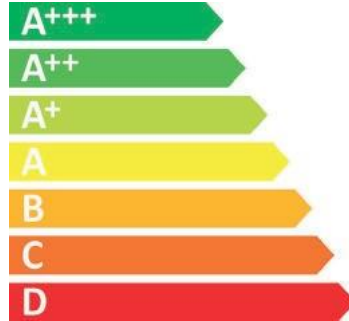
Compliance to
Standards

Why ViaClimate?

High Energy Efficiency



- Aims for maximum energy efficiency with case sections and the variety of the components used.
- Ensures high energy efficiency with optimum energy consumption.
- Air handling unit production meets the objectives and requirements of ERP2018.
- Demonstrating their capability to prevent energy losses in Eurovent air leak, thermal conductivity and thermal transmittance tests, Viaclimate air handling units has certified its production of high-efficiency units.



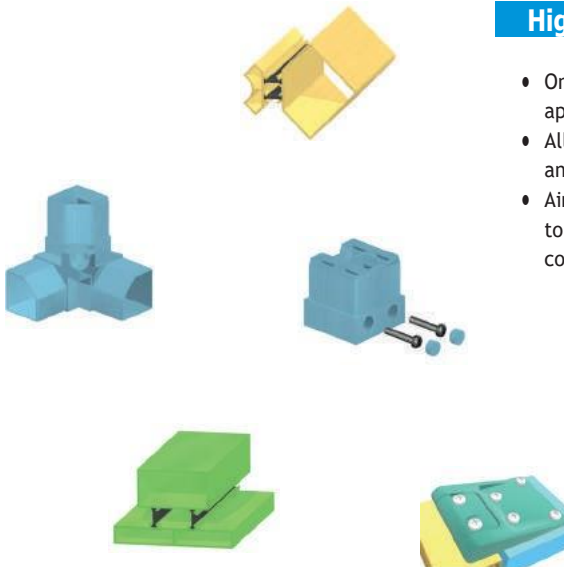
Flexible Design

- With a wide product range and diversity, it meets customer requirements at the highest level.
- Provides easy and smart control services with automation systems that were designed according to customer needs.
- Ensures easy installation with its modular and compact Case.
- Gives you the opportunity to select custom-made designs should you decide that the standard product range is not suitable for your project.



High-Quality Components

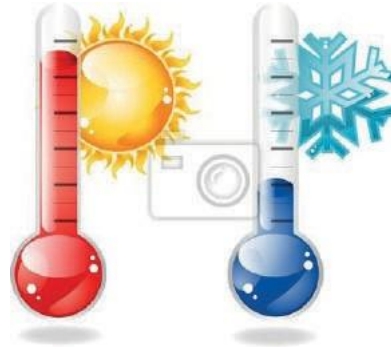
- Only raw materials that meet the specified standards with the approved quality are used during production.
- All materials used in our Products are in accordance with TSE, CE and EN standards.
- Aims to guarantee the quality of the final product that is delivered to the customer, with rigorous and careful preliminary quality control of raw materials and semi-finished products.



Why ViaClimate?

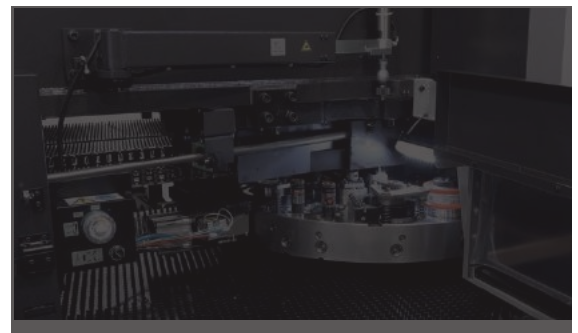
Optimal Air Conditioning

- Manufactures Products that are designed for outdoor climate conditions, capable of easily adapting to climate conditions in order to achieve a comfortable air level.
- Our Products ensure that the indoor air quality is at the optimum level with maximum efficiency.
- Aims to keep the comfort level at stable conditions with the help of correct designs.



Precision Manufacturing

- The Products are manufactured with high precision, using state-of-the-art machinery.
- Following the Kaizen culture, our objective is to achieve zero defects with continuous improvements.



R&D

- We always provide better solutions with the R&D studies carried out by our expert engineering staff.
- We always integrate developing and current technologies to our Products professionally, in order to meet your requirements.
- With R&D, in addition to product development, we are also developing new production designs.



Quality Standards

- The performance values of our Viaclimate air handling units were measured during tests performed by TÜV laboratories according to EN1886, and certified according to Eurovent certification.
- Our entire product range will continue to guarantee compliance with quality standards and customer requirements.



Mechanical Strength Of Casing Deflection [D]

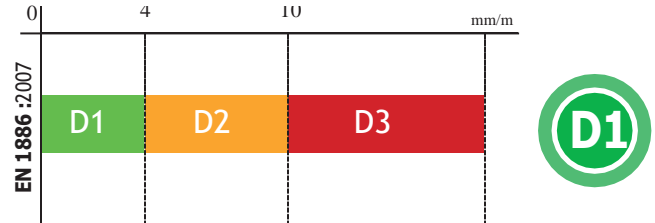
Test pressure: ± 1000 Pa

Maks. bending 4mm \rightarrow D1(M)

Maks. bending 10 mm \rightarrow D2(M)

Maks. bending > 10 mm \rightarrow D3 (M)

Viaclimate VKSTB air handling unit has successfully passed the Mechanical Strength Of Casing Deflection test performed according to EN1886 standards to be included in D1 class



Case Air Leakage Class[L]

Test pressure: -400 Pa

Test pressure: +700 Pa

Maks. leakage Cap. 0,15 l/sm \rightarrow L1(M)

Maks. leakage Cap. 0,22 l/sm \rightarrow L1(M)

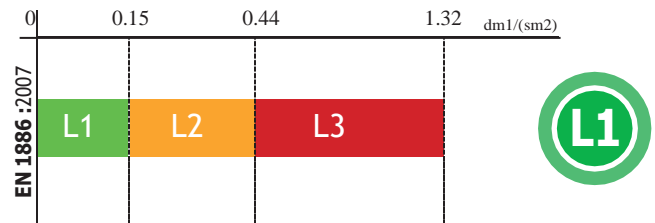
Maks. leakage Cap. 0,44 l/sm \rightarrow L2(M)

Maks. leakage Cap. 0,63 l/sm \rightarrow L2(M)

Maks. leakage Cap. 1,32 l/sm \rightarrow L3(M)

Maks. leakage Cap. 1,90 l/sm \rightarrow L3(M)

Viaclimate VKSTB air handling unit has successfully passed the Case Air Leakage Class test performed according to EN1886 standards to be included in L1 class.



Thermal Transmittance [T]

Thermal transmittance < 0.5 \rightarrow T1

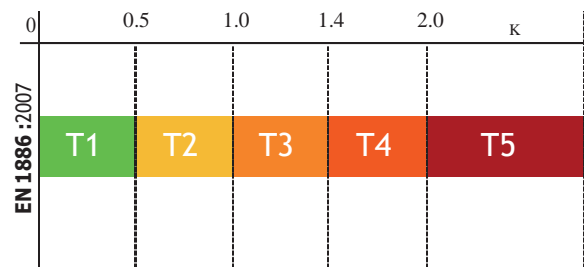
0.5 < Thermal transmittance \leq 1 \rightarrow T2

1 < Thermal transmittance \leq 1.4 \rightarrow T3

1.4 < Thermal transmittance \leq 2 \rightarrow T4



Viaclimate VKSTB air handling unit has successfully passed the Case thermal transmittance test performed according to EN1886 standards to be included in T2 class.



Thermal Bridging of Casing Class [TB]

0.75 < Thermal Bridging < 1 \rightarrow TB1

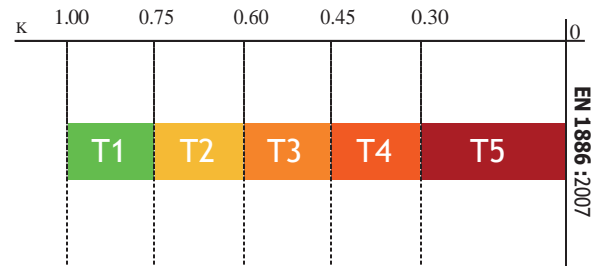
0.6 < Thermal Bridging \leq 0.75 \rightarrow TB2

0.45 < Thermal Bridging \leq 0.6 \rightarrow TB3

0.3 < Thermal Bridging \leq 0.45 \rightarrow TB4



Viaclimate VKSTB air handling unit has successfully passed the Case Thermal Bridging of Casing Class test performed according to EN1886 standards to be included in TB2 class.



Mechanical Strength Of Casing Deflection [D]

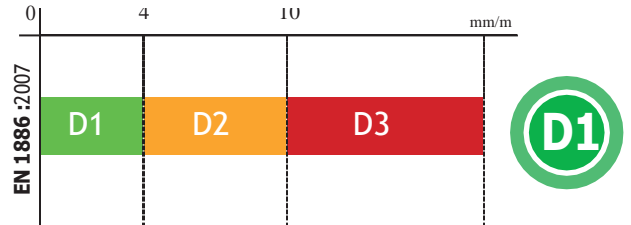
Test pressure: ± 1000 Pa

Maks. bending 4mm \rightarrow D1(M)

Maks. bending 10 mm \rightarrow D2(M)

Maks. bending > 10 mm \rightarrow D3 (M)

Viaclimate VKSTB air handling unit has successfully passed the Mechanical Strength Of Casing Deflection test performed according to EN1886 standards to be included in D1 class



Case Air Leakage Class[L]

Test pressure: -400 Pa

Test pressure: +700 Pa

Maks. leakage Cap. 0,15 l/sm \rightarrow L1(M)

Maks. leakage Cap. 0,22 l/sm \rightarrow L1(M)

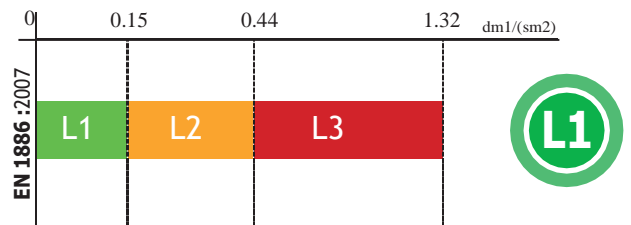
Maks. leakage Cap. 0,44 l/sm \rightarrow L2(M)

Maks. leakage Cap. 0,63 l/sm \rightarrow L2(M)

Maks. leakage Cap. 1,32 l/sm² \rightarrow L3(M)

Maks. leakage Cap. 1,90 l/sm² \rightarrow L3(M)

Viaclimate VKSTB air handling unit has successfully passed the Case Air Leakage Class test performed according to EN1886 standards to be included in L1 class.



Thermal Transmittance [T]

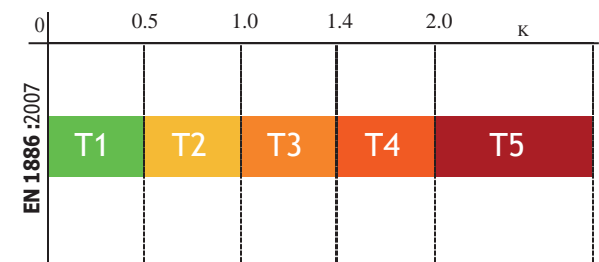
Thermal transmittance < 0.5 \rightarrow T1

0.5 < Thermal transmittance \leq 1 \rightarrow T2

1 < Thermal transmittance \leq 1.4 \rightarrow T3

1.4 < Thermal transmittance \leq 2 \rightarrow T4

Viaclimate VKSTB air handling unit has successfully passed the Case thermal transmittance test performed according to EN1886 standards to be included in T3 class.



Thermal Bridging of Casing Class [TB]

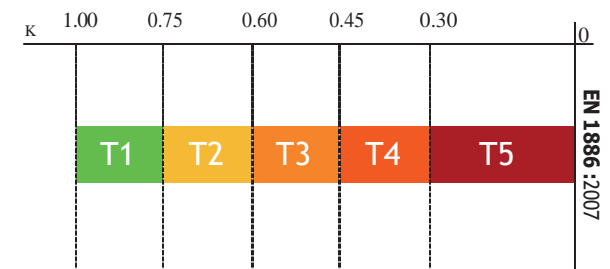
0.75 < Thermal Bridging < 1 \rightarrow TB1

0.6 < Thermal Bridging \leq 0.75 \rightarrow TB2

0.45 < Thermal Bridging \leq 0.6 \rightarrow TB3

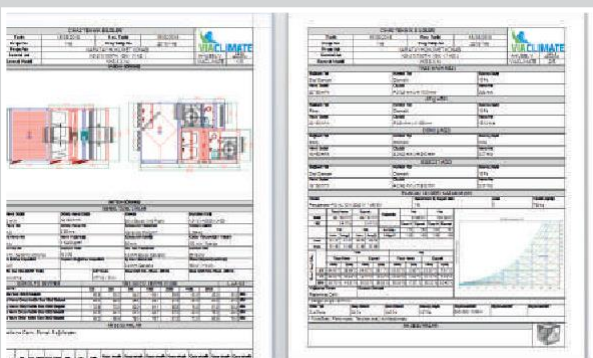
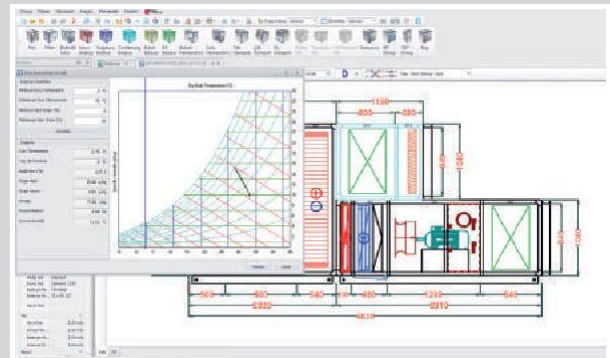
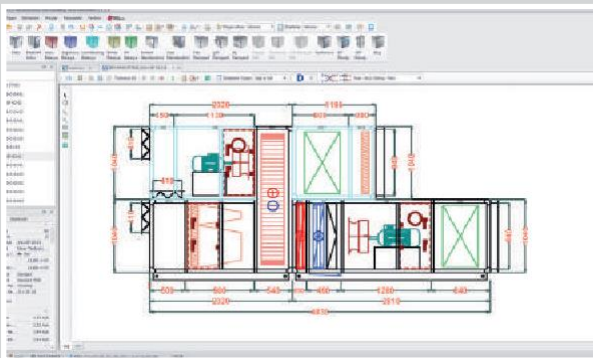
0.3 < Thermal Bridging \leq 0.45 \rightarrow TB4

Viaclimate VKSTB air handling unit has successfully passed the Case Thermal Bridging of Casing Class test performed according to EN1886 standards to be included in TB3 class.



ViaClimate AHU Selection Selection Program

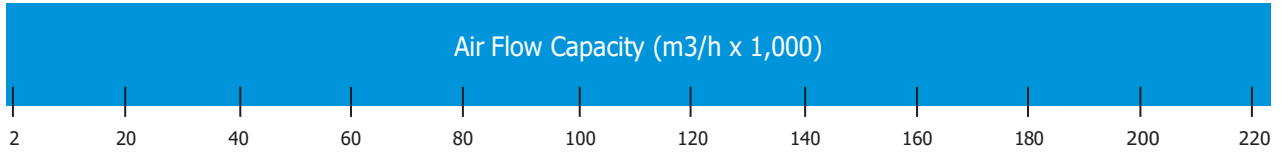
- Based on the Viaclimate AHU selection program which was developed with a customer focus, our VKSTB, VKSStandard air handling units are easily designed by our expert engineers according to your requirements.
- In compliance with ERP2016 and ERP2018.
- Technical reports can be generated after you select the Products that are suitable to your requirements.
- Thanks to the transparency of the selection program, you can easily review and compare the technical specifications of the products you purchase.
- The dll's of the components that are in compliance with Eurovent, which is included in the infrastructure of the selection program, will operate according to the design of the Viaclimate air handling units.
- Provides technical details of the air handling units that were designed according to summer and winter conditions, such as temperature, humidity, efficiency, air flow Capacity, pressure loss etc.



Viaclimate AHU Selection provides;

hundreds of different Eurovent-certified air handling unit designs up to the range of +153 mm starting from the interior dimensions of 610x610 mm (height x width).

Product Overview



↑ **%100 Fresh Air Handling Unit** ↓



%100 Fresh Air Handling Unit with Heat Recovery



%100 Fresh Air Conditioner

↑ **Partial Fresh Air Handling Unit** ↓



Mixed Air Handling Unit



Mixed Air Handling Unit with Heat Recovery

VKSTB

Selection Chart

VIACLIMATE VKSTB Air Handling Unit			Air Flow Capacities Based on Speed Classification Acc. to EN 13053 Standard (m ³ /h)					
			V1	V2	V3	V4	V5	V6
Model	Height	Width	1,6 (m/s)	1,8 (m/s)	2 (m/s)	2,2 (m/s)	2,5 (m/s)	3 (m/s)
4 X 4	772	772	2157	2427	2697	2966	3371	4045
4 X 5	772	925	2697	3034	3371	3708	4214	5056
4 X 6	772	1078	3236	3641	4045	4450	5056	6068
4 X 7	772	1231	3775	4247	4719	5191	5899	7079
4 X 8	772	1384	4315	4854	5393	5933	6742	8090
5 X 5	925	925	3371	3792	4214	4635	5267	6320
5 X 6	925	1078	4045	4551	5056	5562	6320	7585
5 X 7	925	1231	4719	5309	5899	6489	7374	8849
5 X 8	925	1384	5393	6068	6742	7416	8427	10113
5 X 9	925	1537	6068	6826	7585	8343	9481	11377
5 X 10	925	1690	6742	7585	8427	9270	10534	12641

Minimum height - width: 772mm - 772mm
 Step height - width: 153mm - 153mm
 Maximum height - width: 3220mm - 6280mm

Minimum air flow Capacity: 2157 m³/h
 Maximum air flow Capacity: 202254 m³/h
 VKSTB model sections: 629 pcs.

20 X 31	3220	4903	83598	94048	104498	114948	130622	156747
20 X 32	3220	5056	86295	97082	107869	118656	134836	161803
20 X 33	3220	5209	88992	100116	111240	122364	139049	166859
20 X 34	3220	5362	91688	103149	114610	126072	143263	171916
20 X 35	3220	5515	94385	106183	117981	129779	147477	176972
20 X 36	3220	5668	97082	109217	121352	133487	151690	182028
20 X 37	3220	5821	99779	112251	124723	137195	155904	187085
20 X 38	3220	5974	102475	115285	128094	140903	160118	192141
20 X 39	3220	6127	105172	118318	131465	144611	164331	197197
20 X 40	3220	6280	107869	121352	134836	148319	168545	202254

The data on the Viaclimate VKSTB Air Handling Unit Chart only shows a few of the values from our selection chart.
 You can contact us for further information.

VKSStandart

Selection Chart

VIACLIMATE VKSStandart AIR HANDLING UNIT			Air Flow Capacities Based on Speed Classification Acc. to EN 13053 Standard (m3/h)					
			V1	V2	V3	V4	V5	V6
Model	Height	Width	1,6 (m/s)	1,8 (m/s)	2 (m/s)	2,2 (m/s)	2,5 (m/s)	3 (m/s)
4 X 4	732	732	2157	2427	2697	2966	3371	4045
4 X 5	732	885	2697	3034	3371	3708	4214	5056
4 X 6	732	1038	3236	3641	4045	4450	5056	6068
4 X 7	732	1191	3775	4247	4719	5191	5899	7079
4 X 8	732	1344	4315	4854	5393	5933	6742	8090
5 X 5	885	885	3371	3792	4214	4635	5267	6320
5 X 6	885	1038	4045	4551	5056	5562	6320	7585
5 X 7	885	1191	4719	5309	5899	6489	7374	8849
5 X 8	885	1344	5393	6068	6742	7416	8427	10113
5 X 9	885	1497	6068	6826	7585	8343	9481	11377
5 X 10	885	1650	6742	7585	8427	9270	10534	12641

Minimum height - width: 732mm - 732mm
 Step height - width: 153mm - 153mm
 Maximum height - width: 3180mm - 6240mm

Minimum air flow Capacity: 2157 m3/h
 Maximum air flow Capacity: 202254 m3/h
 VKSStandard model sections: 629 pcs.

20 X 31	3180	4863	83598	94048	104498	114948	130622	156747
20 X 32	3180	5016	86295	97082	107869	118656	134836	161803
20 X 33	3180	5169	88992	100116	111240	122364	139049	166859
20 X 34	3180	5322	91688	103149	114610	126072	143263	171916
20 X 35	3180	5475	94385	106183	117981	129779	147477	176972
20 X 36	3180	5628	97082	109217	121352	133487	151690	182028
20 X 37	3180	5781	99779	112251	124723	137195	155904	187085
20 X 38	3180	5934	102475	115285	128094	140903	160118	192141
20 X 39	3180	6087	105172	118318	131465	144611	164331	197197
20 X 40	3180	6240	107869	121352	134836	148319	168545	202254

The data on the Viaclimate VKSStandard Air Handling Unit Chart only shows a few of the values from our selection chart.
 You can contact us for further information.

Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units.
- 60mm panel thickness,
- 110 kg/m³ A1 class rock wool.
- Aluminum Case with no heat bridge
- Hygienic case design

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap
- Drift Eliminator
- ...

Filter

- G2 - G4 Panel
- M5 - F9 Bag
- M5 - F9 Compact
- H10 - 14 Hepa
- Panel Carbon
- Cartridge Carbon

Other Components

- Muffler
- Empty Case
- Mixed Air Damper
- Diffuser

Humidifiers

- Steam Humidifier
- Water Humidifier
- Evaporative



Optional Accessories

- Thermal Pacco Switch
- Internal Lighting
- Door Switch
- Roof Sheet
- MCC, DDC Control Panel
-

Fan

- EC
- Plug
- EC Radial
- Double Inlet
- Double Inlet(Back Sloping)
- Ex-proof varieties

Heat Exchanger

- Water Heater
- Water Cooler
- Powered
- Gas-filled (DX)
- Steam-filled
- Natural gas-filled

Heat Recovery

- Aluminum Plated (Optional By-pass)
- Heat-Pipe
- Rotary (Enthalpy, Condensing, Absorption)
- Double Battery



Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units.
- 60mm panel thickness,
- 90 kg/m3 A1 class rock wool.
- Aluminum Case with heat bridge.
- Straight case design

Filter

- G2 - G4 Panel
- M5 - F9 Bag
- M5 - F9 Compact
- H10 - 14 Hepa
- Panel Carbon
- Cartridge Carbon

Other Components

- Muffler
- Empty Case
- Mixed Air Damper
- Diffuser

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap
- Drift Eliminator
- ...



Humidifiers

- Steam Humidifier
- Water Humidifier
- Evaporative

Optional Accessories

- Thermal Pacco Switch
- Internal Lighting
- Door Switch
- Roof Sheet
- MCC, DDC Control Panel
-



Fan

- EC
- Plug
- EC Radial
- Double Inlet
- Double Inlet(Back Sloping)
- Ex-proof

Heat Exchanger

- Water Heater
- Water Cooler
- Powered
- Gas-filled (DX)
- Steam-filled
- Natural gas-filled

Heat Recovery

- Aluminum Plated (Optional By-pass)
- Heat-Pipe
- Rotary (Enthalpy, Condensing, Absorption)
- Double Battery



EC Fan Mechanism

- Systems to which high-efficiency directly coupled fan and EC motor are connected.
- EC motors of IE4 and higher energy classes are used.
- The motor group can be controlled with 0-10V signal.
- Capable of operating with a lower noise level on high pressures.



Plug Fan Mechanism

- Systems that are comprised of a freely open capacity, back sloping, high-performance, directly coupled fan, a motor and a motor shaft.
- AC motors of IE2 or IE3 energy classes are used.
- Capable of performing precise flow-pressure control with the help of a frequency inverter.



Belt-and-Pulley Drive Mechanism

- Systems where a double suction radial fan and a motor is installed on a chassis, and the motor power is transmitted to the fan with the help of a V-belt.
- 380V 50Hz motors of IE2 or IE3 energy classes are used.
- Manufactured with forward sloping thick-bladed or back sloping thin-bladed fans.



Ex-proof Mechanism

- Systems where an ATEX-certified double suction radial fan and a motor is installed on a chassis, and the motor power is transmitted to the fan with the help of a V-belt, in ventilation systems that are suitable for use in explosive environments.
- Manufactured with forward sloping thick-bladed or back sloping thin-bladed fans with ex-proof feature.
- Non-sparking 380V 50Hz motors of IE2 or IE3 protection classes are used.



Water Cooler Heat Exchanger

- Components that ensure heat transfer from water to air with the movement of cold water running inside the coil.
- Designed for (6°C-10°C), (7°C- 12°C) or other conditions according to water regime.
- Used with a drift eliminator as standard.
- Used with a double sloped insulated condensate tray made of stainless sheet as standard.



Water Heater Heat Exchanger

- Components that ensure heat transfer from water to air with the movement of hot water running inside the coil.
- Designed for (90°C-70°C), (80°C-60°C), (70°C-50°C), (60°C-40°C) or other conditions according to water regime.



Gas Heat Exchanger (Dx)

- Used for air cooling applications with condensing units (external unit).
- External unit is designed according to the pipe inlet and outlet diameters.
- Number of inlets and outlets are increased for more than one VRF external unit.
- Used with a drift eliminator as standard.
- Used with a double sloped insulated condensate tray made of stainless sheet as standard.



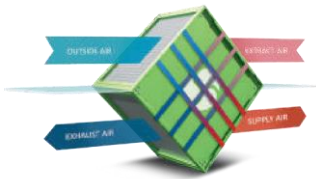
Natural Gas Heat Exchanger

- Components that ensure heat transfer by running air through the heating energy generated by the natural gas-fired unit.
- ON/OFF, gradual or proportional atmospheric burners are used.
- Heat exchanger part is made of aluminum material with high thermal conductivity factor.
- Contains a high-efficiency atmospheric burner and an ignitable unit with aluminum piping.
- Burners and equipment used by Viaclimate are CE certified.



Electric Heater

- Heating equipment where the electrical energy is transmitted to air via heating coils.
- 380V and electric arcs with equal phase distributions come as standard.
- Manufactured according to the required capacity and number of steps.
- Comes standard with a mechanical safety thermostat.



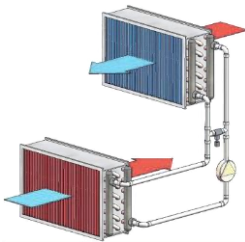
Aluminum-Plated Heat Recovery

- Systems where the thermal energy in the return air is transferred to the air blowing energy without requiring power.
- Comes standard with a condensate tray on the exhaust air outlet.
- Does not have any moving parts and practically does not require any maintenance.
- Has an energy efficiency of approximately up to 70%.



Rotary Heat Recovery

- Used for the purpose of recovering thermal energy in the return air thanks to the material equipped on the Product.
- Has an energy efficiency of approximately up to 80%.
- Comes in 4 different types: heat, cooling, humidity transfer, drying.



Water Type (Run Around) Heat Recovery

- Components that carry out the heat transfer between air and the internal fluid (water).
- Has an energy efficiency of approximately up to 60%.



Heat-Pipe Heat Recovery

- Systems that are capable of transferring the heat that is generated by evaporation through long distances with minimal temperature difference.
- Has an energy efficiency of approximately up to 65%.



Steam Humidifier

- Systems that ensure that the water in the cylinder vaporizes and reaches the air handling unit with the help of a nozzle, in order to generate steam without pressure with electrodes that receive electrical current.
- A double-pitched, insulated condensate tray that is made of stainless steel is used as standard.



Water Type Humidifier

- Used for the purpose of achieving the suitable humidity levels in the environment to be conditioned.
- Ensures a high humidification Capacity.
- These are hygienic systems where return water is not used.
- A double-pitched, insulated condensate tray that is made of stainless steel is used as standard.



Evaporative Humidifier

- With air running through wetted water pads and evaporating the water, air humidity is increased.
- Stainless steel Case.
- Antibacterial caseulosic water pads.
- Automated water refilling system.
- A double-pitched, insulated condensate tray that is made of stainless steel is used as standard.



Mixture Damper

- Component that ensures that exhausted air and fresh air are mixed at the desired ratio.
- Lower air quality compared to systems with heat recovery.
- Ensures thermodynamic heat recovery in air handling units.
- Achieves the required air mixing ratio mechanically or through optional damper motors that have proportional control.

Components



Preliminary and Intermediate Filtration

- Fiber-based materials located at the fresh air inlets of the Products, that hold thick particles in the air that is released to the environment. (G2 - G4 Filter)
- Intermediate filter is a compact type that utilizes filter bags after the preliminary filtering. (M5-F7 Filter)



Final Filtration

- Bag type, compact or rigid filters that hold the finest particles and that are used for hygienic type air handling units.
- Usually, F9 filter is used for air handling units, while H13-H14 class filters are used in the environments.



Muffler

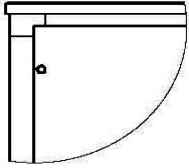
- Sound absorbing cassettes that are designed to minimize the air noise generated by the moving parts of the unit, in order to maintain comfort.
- Rock wool with fiberglass is used as a sound absorbing material.
- The standard product is demountable.
- Special fabrics are used on the muffler surfaces so that the sound absorbing product does not get deformed.



Emergency Stop

- Equipment that stops and shuts the system down in unexpected emergencies.

Optional Components



Roof Sheet

- Mounted on the top panel in order to protect the Products from adverse weather conditions.
- Made from galvanized electrostatic powder painted metal sheets.



Hood

- Placed on the fresh air inlet and exhaust air outlet in air handling units to be operated outdoors, in order to protect the Product from the negative effects of snow and rainwater.
- Made from galvanized electrostatic powder painted metal sheets.



Door Switch

- Located inside the inspection hatches of the Products.
- Component that stops any moving parts and turns the internal lighting on during any intervention.



Lighting

- Helps with visibility for a better intervention to the internal parts of the Product.
- Located on the air handling unit with an ON/OFF switch.

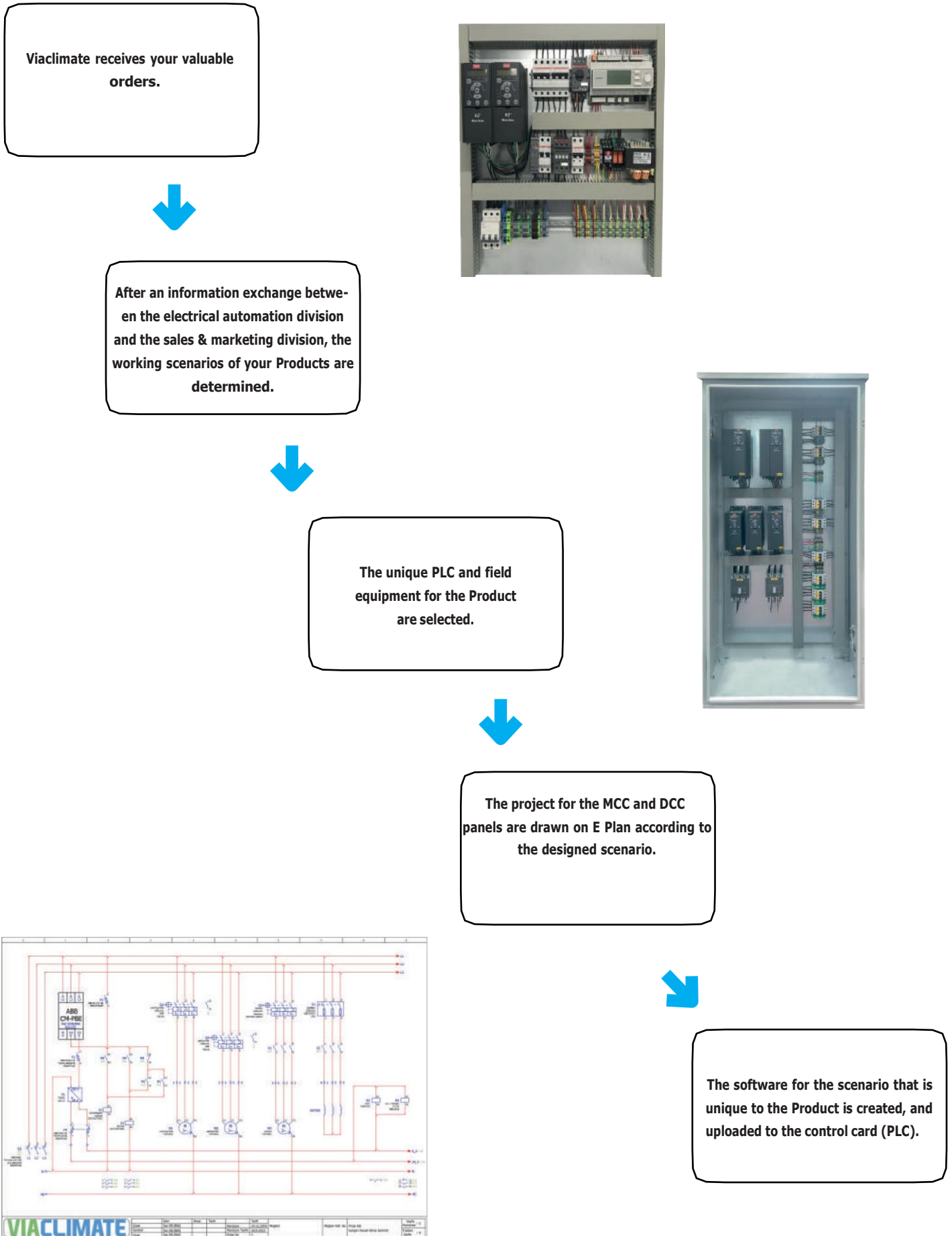


Automation Equipment

- Components that are used to manage the electrical and automation control of the Product.
- See page 28 for further information.

Electrical Automation

Flow Chart



Electrical Automation Flow Chart



The panel production is completed by the expert Viaclimate Electrical Automation team.



Cabling for the field equipment, motor and communication is performed in parallel with mechanical production.



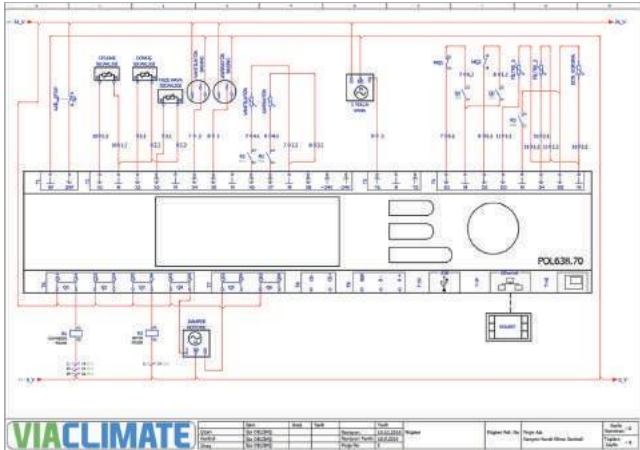
The testing procedure for the manufactured Product begins.



Electrical and automation testing for the capacity, leakage, mode change, withdrawn power, insulation, Lvd, IEC for the Products are completed within one to three days.



After the testing procedure is completed, the Products are ready for shipment.



Electrical Automation

Checkpoints

Analog Inputs

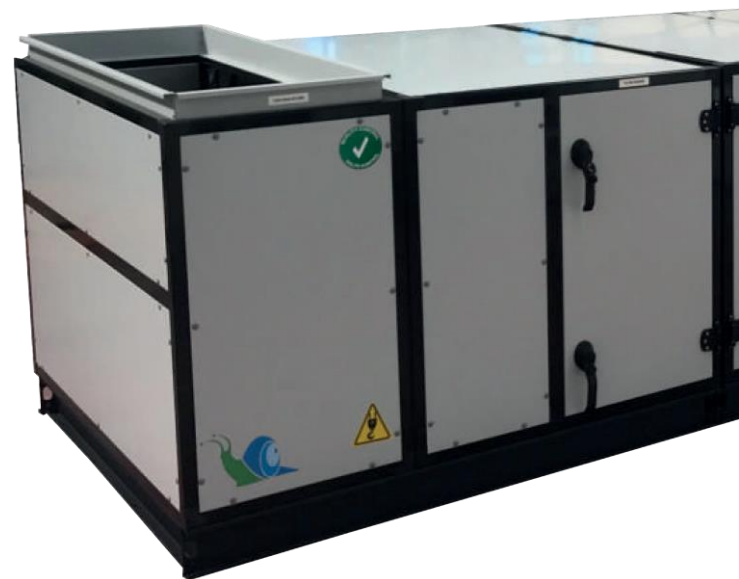
- Temperature sensor
- Humidity sensor
- Pressure sensor
- Frost protection temperature sensor

Analog Outputs

- Valve motor
- Motor frequency
- Damper motor
- Humidifier

Digital Inputs

- Differential pressure switch
- Frost thermostat
- Temperature thermostat



Digital Outputs

- Electric heater step
- Fan start - stop
- Damper motor
- Valve motor

Electrical Automation Checkpoints

Alarms

- Motor thermal failure
- Belt broken
- Filter contamination
- Frost
- Electric heater failure



Checkpoints

- Room thermostat
- Return air
- Fresh air
- Touch screen
- ModBus (RS485)
- BACnet

Other Points

- Time programming
- Summer, winter, mid-season mode change
- VRF external unit integration
- Feed water temperature
- Freecooling, freeheating
- Lighting

Safety Points

- Emergency stop
- Safety thermostat
- By-pass damper
- Rotary speed
- Heat recovery fluid velocity (water type)
- Temperature thermostat
- Motor protection
- Door switch

Electrical Automation Components

MCC Panel Control

- Fixed frequency (With contactor)
- Variable frequency (With frequency inverter)
- Pacco switch
- Warning lights
- Switchgear



DDC Panel Control

- Temperature sensor
- Differential pressure switch
- Differential pressure sensor
- Air quality sensor
- Humidity sensor
- Three or two-way valve motor
- Damper motor
- Frost thermostat
- Frequency inverter
- Emergency Stop
- Frost temperature sensor
- Room thermostat
- Touch screen

Brands of electrical automation equipment may differ from the project and specifications.

Hygienic Air Handling Unit

content

Why Viaclimate ?
HijyenV Acc. to EN1886
Selection Program
Products Overview
HijyenV Selection Chart
General Features
Components
Electrical Automation

29-36



2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



High Energy
Efficiency



Smart
Control



Excelsent
Hygiene



EN 1886
Compliance to
Standards



DIN 1946-4
Compliance to
Standards



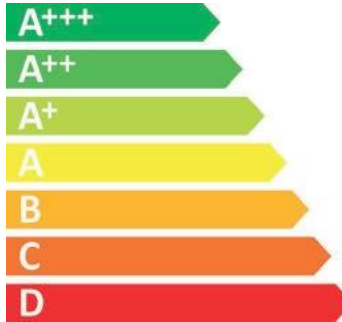
VDI 6022
Compliance to
Standards

Why ViaClimate?

High Energy Efficiency



- Air handling unit production meets the objectives and requirements of ERP2018.
- Low energy consuming, high-pressure mechanism design
- Minimum leak proof panel - Case design



Excellent Hygiene

- Oval hygienic design in the case
- Materials in accordance with ISO846
- Class4 leak proof dampers
- Special opening seals
- Copper collector heat exchangers
- Detachable mufflers covered with special fabric
- Demountable panel design
- F9 tightness class filter
- Double-suction condensate tray
- Stainless metal sheet interior
- Antibacterial silicon



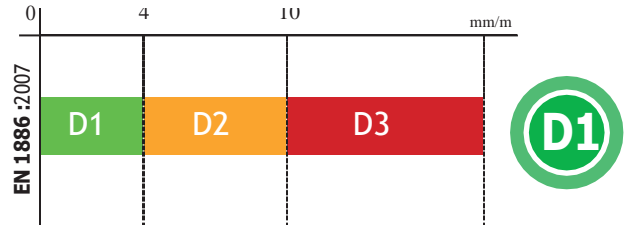
Quality Standards

- The performance values of our Viaclimate air handling units were measured during tests performed by TÜV laboratories according to EN1886, and certified according to Eurovent certification.
- Hygienic Air Handling Units are in accordance with VDI 6022, DIN 1946-4, VDI 3803 and EN 13053 standards.
- Our entire product range will continue to guarantee compliance with quality standards and customer requirements.

Mechanical Strength Of Casing Deflection [D]

Test pressure: ± 1000 Pa
 Maks. bending 4mm \rightarrow D1(M)
 Maks. bending 10 mm \rightarrow D2(M)
 Maks. bending > 10 mm \rightarrow D3 (M)

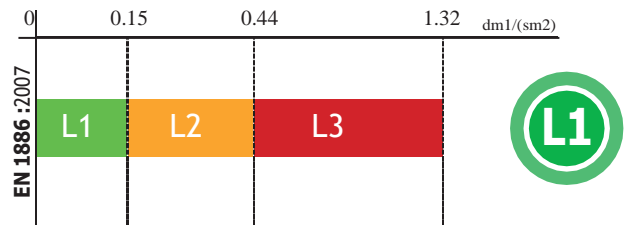
Viaclimate VKSTB air handling unit has successfully passed the Mechanical Strength Of Casing Deflection test performed according to EN1886 standards to be included in D1 class



Case Air Leakage Class[L]

Test pressure: -400 Pa	Test pressure: +700 Pa
Maks. leakage Cap. 0,15 l/sm \rightarrow L1(M)	Maks. leakage Cap. 0,22 l/sm \rightarrow L1(M)
Maks. leakage Cap. 0,44 l/sm \rightarrow L2(M)	Maks. leakage Cap. 0,63 l/sm \rightarrow L2(M)
Maks. leakage Cap. 1,32 l/sm ² \rightarrow L3(M)	Maks. leakage Cap. 1,90 l/sm ² \rightarrow L3(M)

Viaclimate VKSTB air handling unit has successfully passed the Case Air Leakage Class test performed according to EN1886 standards to be included in L1 class.

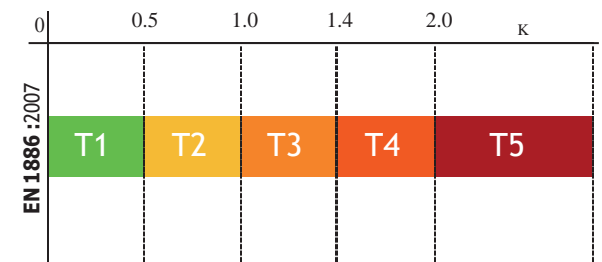


Thermal Transmittance [T]

Thermal transmittance < 0.5 \rightarrow T1
 0.5 < Thermal transmittance \leq 1 \rightarrow T2
 1 < Thermal transmittance \leq 1.4 \rightarrow T3
 1.4 < Thermal transmittance \leq 2 \rightarrow T4



Viaclimate VKSTB air handling unit has successfully passed the Case thermal transmittance test performed according to EN1886 standards to be included in T2 class.

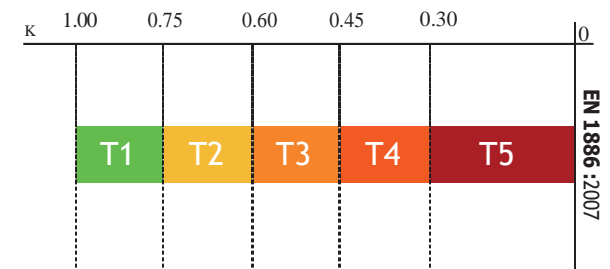


Thermal Bridging of Casing Class [TB]

0.75 < Thermal Bridging < 1 \rightarrow TB1
 0.6 < Thermal Bridging \leq 0.75 \rightarrow TB2
 0.45 < Thermal Bridging \leq 0.6 \rightarrow TB3
 0.3 < Thermal Bridging \leq 0.45 \rightarrow TB4



Viaclimate VKSTB air handling unit has successfully passed the Case Thermal Bridging of Casing Class test performed according to EN1886 standards to be included in TB2 class.



ViaClimate AHU Selection Selection Program

- Based on the Viaclimate AHU selection program which was developed with a customer focus, our VKSTB, VKSStandard air handling units are easily designed by our expert engineers according to your requirements.
- In compliance with ERP2016 and ERP2018.
- Provides technical details of the air handling units that were designed according to summer and winter conditions, such as temperature, humidity, efficiency, air volume, pressure loss etc.
- Selection program enables the placement of cleaning hatches that are in accordance with Hygiene standards.
- Selection program allows the design of a detachable muffler and drift eliminator.
- Internal equipment support is provided in accordance with hygiene standards (epoxy coating, copper collector etc.).

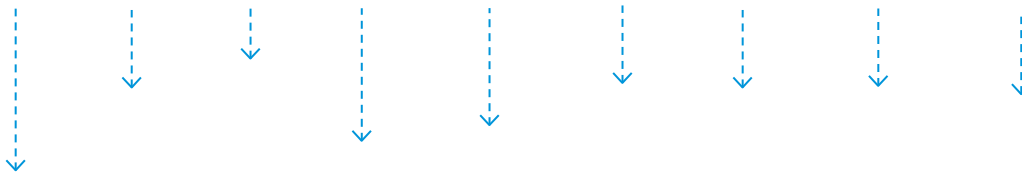
Product Overview



HijyenV

Selection Chart

VIACLIMATE HijyenV Air Handling Unit			Air Flow Capacities Based on Speed Classification Acc. to EN 13053 Standard (m ³ /h)					
			V1	V2	V3	V4	V5	V6
Model	Height	Width	1,6 (m/s)	1,8 (m/s)	2 (m/s)	2,2 (m/s)	2,5 (m/s)	3 (m/s)
4 X 4	772	772	2157	2427	2697	2966	3371	4045
4 X 5	772	925	2697	3034	3371	3708	4214	5056
4 X 6	772	1078	3236	3641	4045	4450	5056	6068
4 X 7	772	1231	3775	4247	4719	5191	5899	7079
4 X 8	772	1384	4315	4854	5393	5933	6742	8090
5 X 5	925	925	3371	3792	4214	4635	5267	6320
5 X 6	925	1078	4045	4551	5056	5562	6320	7585
5 X 7	925	1231	4719	5309	5899	6489	7374	8849
5 X 8	925	1384	5393	6068	6742	7416	8427	10113
5 X 9	925	1537	6068	6826	7585	8343	9481	11377
5 X 10	925	1690	6742	7585	8427	9270	10534	12641



Minimum height - width: 772mm - 772mm
Step height - width: 153mm - 153mm
Maximum height - width: 3220mm - 6280mm

Minimum air flow Capacity: 2157 m³/h
Maximum air flow Capacity: 202254 m³/h
VKSTB model sections: 629 pcs.



20 X 31	3220	4903	83598	94048	104498	114948	130622	156747
20 X 32	3220	5056	86295	97082	107869	118656	134836	161803
20 X 33	3220	5209	88992	100116	111240	122364	139049	166859
20 X 34	3220	5362	91688	103149	114610	126072	143263	171916
20 X 35	3220	5515	94385	106183	117981	129779	147477	176972
20 X 36	3220	5668	97082	109217	121352	133487	151690	182028
20 X 37	3220	5821	99779	112251	124723	137195	155904	187085
20 X 38	3220	5974	102475	115285	128094	140903	160118	192141
20 X 39	3220	6127	105172	118318	131465	144611	164331	197197
20 X 40	3220	6280	107869	121352	134836	148319	168545	202254

The data on the Viacclimate VKSTB Hygienic Air Handling Unit Chart only shows a few of the values from our selection chart.
 You can contact us for further information.

HijyenV

Subjective Features



Moving Mechanism

- Ensures air circulation for hygienic areas.
- Used in accordance with hygiene standards.



Filter

- Holds the particles in the fresh air required for hygienic areas.
- Usually used in conjunction with preliminary filtration and final filtration.
- Easily detachable. Easy-to-clean case and easy installation.



Humidifier

- Meets the humidity requirements of hygienic areas.
- Generally, steam type humidifiers are used.
- A nozzle and a condensate tray that are made of stainless metal sheet are used as standard.



Heat Exchanger

- Components that help the air conditioning of hygienic areas.
- A stainless sheet Case, epoxy coating and a copper collector are used.
- Easily detachable. Easy-to-clean case and easy installation.

HijyenV

Subjective Features



Muffler

- Sound absorbing cassettes that are designed to minimize the air noise in order to maintain comfort in hygienic environments.
- Rock wool with fiberglass is used as a sound absorbing material.
- Special antibacterial fabrics are used to protect muffler chambers against contact with air.
- Easily accessible for cleaning the case and the chambers.
- Chamber Case is made of 304 grade stainless steel sheet.



Drift Eliminator

- Used in all air handling units that feature cooling or humidification as standard.
- Drift eliminators made of raw materials in accordance with ISO 846 are used in Hygienic Air Handling Units.
- Drift eliminator is installed as a slide-in component for easy cleaning (easy access).
- Drift eliminator Case is made of 304 grade stainless steel sheet.



Condensate Tray

- Used in all air handling units that feature cooling or humidification as standard.
- Easily accessible and easy to clean in Hygienic Air Handling Units.
- Insulated and double-pitched as standard.
- Condensate tray is made of 304 grade stainless steel sheet.



Lighting

- In consideration of the 24/7 operation of Hygienic Air Handling Units, it provides the lighting for interventions to be made in dark environments or times of day.
- Equipment are in suitable for Hygienic Air Handling Units.
- Comes mounted on the unit as standard.

Refer to the Air Handling Unit section "components" (page 18-23) for further information regarding Hygienic Air Handling Unit components.

MCC Panel Control

- Fixed frequency (With contactor)
- Variable frequency (With frequency inverter)
- Pacco switch
- Warning lights
- Switchgear




DDC Panel Control


- Temperature sensor
- Differential pressure switch
- Differential-Pressure sensor
- Air quality sensor
- Humidity sensor
- Three or two-way valve motor
- Damper motor
- Frost thermostat
- Frequency inverter
- Emergency Stop
- Frost temperature sensor
- Room thermostat
- Touch screen


Brands of electrical automation equipment may differ from the project and specifications. See pages 24 - 27 for the electrical automation process.


Heat-Pump Air Handling Unit content


Why Viaclimate?	
Products Overview	
General Features	
Selection Chart	
Rotary Heat-Pump Scenarios	
Mixed Air Heat-Pump Scenarios	
Electrical Automation	
	37-48


- 


2 Year Warranty
- 

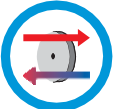
After Sales Service
- 


Quick Service
- 


Easy Installation
- 


High Energy Efficiency
- 


Smart Control
- 


EN 1886
Compliance to Standards
- 


Rotary HR
- 

Scroll Compressor
- 

R-407C
Cooling Fluid
- 

Heat-Pump
- 

Smart Defrost
- 

Thermodynamic IGK
- 

Plug and Play

Why ViaClimate?

High Energy Efficiency

- High efficiency heat recovery exchanger with Rotary
- Compressors with minimum energy consumption
- Energy-efficient moving parts with EC fan
- Automatic free cooling operation

A	A	EER > 3,20	A	COP > 3,60
B	B	3,20 ≥ EER > 3,00	B	3,60 ≥ COP > 3,40
C	C	3,00 ≥ EER > 2,80	C	3,40 ≥ COP > 3,20
D	D	2,80 ≥ EER > 2,60	D	3,20 ≥ COP > 2,80
E	E	2,60 ≥ EER > 2,40	E	2,80 ≥ COP > 2,60
F	F	2,40 ≥ EER > 2,20	F	2,60 ≥ COP > 2,40
G	G	2,20 ≥ EER	G	2,40 ≥ COP



Optimal Air Conditioning Modes

- Cooling mode
- Heat- pump (Heating) mode
- Ventilation mode
- Heat recovery mode
- Sleep mode
- Moisture transfer

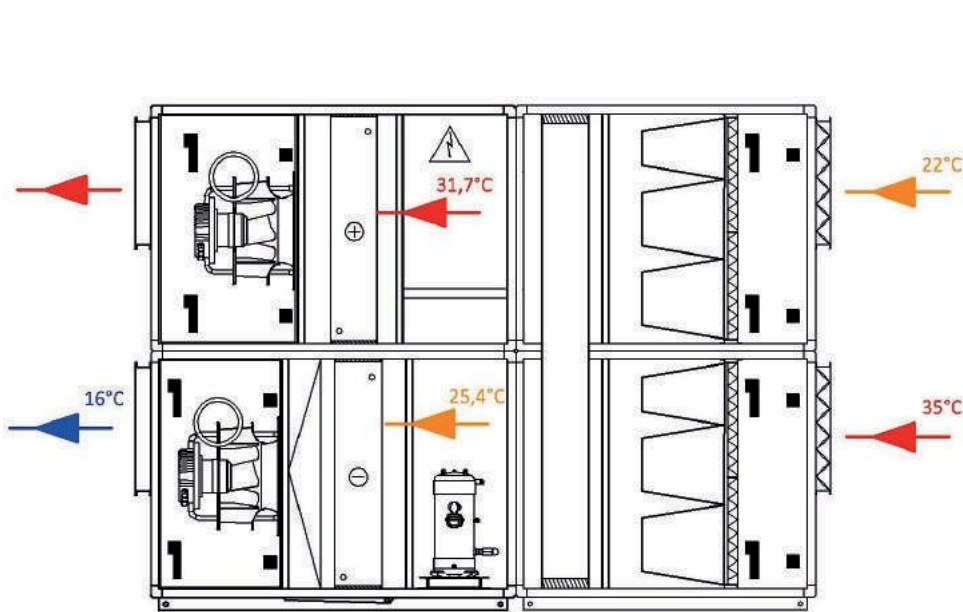
Smart Defrost Mode

- Hot gas by-pass
- Thermodynamic Heat Recovery
- Optional heater circuit
- Optional defrosting electric heater circuit



Why ViaClimate?

Excellent Design

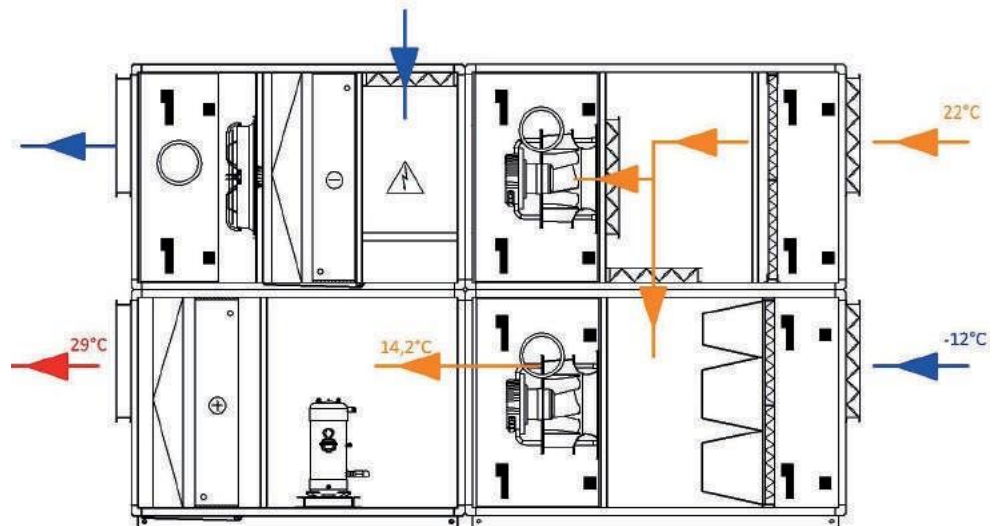


Heat-Pump Rotary Heat Recovery Air Handling Unit was designed by VIACLIMATE in order to meet your heating, cooling, ventilation demands under summer and winter conditions with;

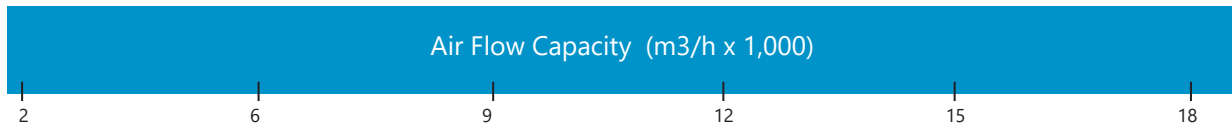
- High performance
- Low energy consumption
- 100 % fresh air

Heat-Pump Mixed Air Heat Recovery Air Handling Unit was designed by VIACLIMATE in order to meet your heating, cooling, ventilation demands under summer and winter conditions with;

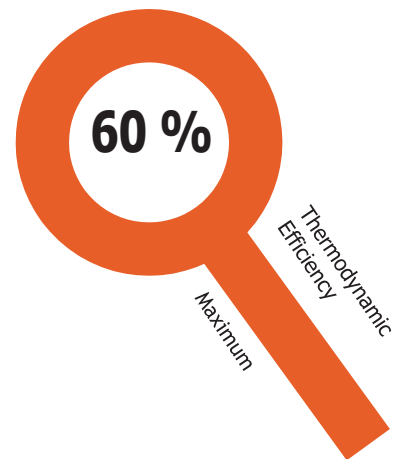
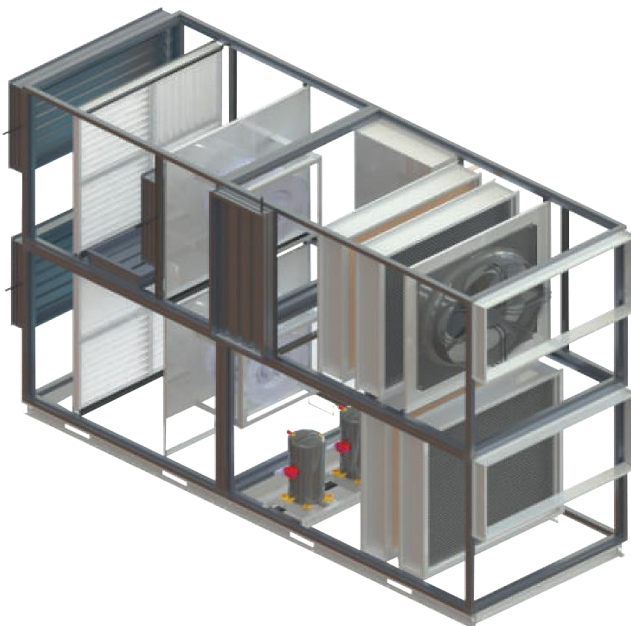
- High performance
- Low energy consumption
- Partial fresh air



Products Overview



Product Name : VIACLIMATE Rotary Heat-Pump Air Handling Unit
Product Code: VIARHP



Product Name : VIACLIMATE Mixed Air Heat-Pump Air Handling Unit
Product Code: VIAKHP

Air flow Capacity chart is intended for visual and informative purposes.

Heat-Pump Air Handling Unit Selection Chart

VIACLIMATE Rotary Heat-Pump Air Handling Unit		RHPVIA7	RHPVIA10	RHPVIA16	RHPVIA20	RHPVIA32	RHPVIA34	RHPVIA40	
Blowing Temperature *	SUMMER °C	16.1	15.92	16.24	16.05	15.78	17.24	16.1	
	WINTER °C	33.8	34.02	34.12	33.85	34	33.12	33.8	
Minimum Air Flow Capacity	m ³ /h	2000	4000	7000	9000	11000	13000	16000	
Nominal Air Flow Capacity	m ³ /h	3000	5000	8000	10000	12000	15000	18000	
Exterior Static Pressure	Pa	300	300	300	300	350	350	350	
Cooling Capacity **	kW	38.69	64.4	104.41	123.42	164.72	192.72	241.6	
Heat-Pump Heating Capacity***	kW	40.32	65	105.57	141.1	208.7	245.62	306.13	
Water Heater Capacity****	kW	15.68	26.13	41.8	52.26	62.71	78.39	94.07	
EER		3.50	4.21	4.93	5.79	4.79	4.40	4.79	
COP		3.65	4.25	4.98	5.74	6.07	5.61	6.07	
Motor Power	kW	5.8	7.8	9.2	9.6	10.4	19.8	20.4	
Compressor Power	kW	5.25	7.5	12	15	24	24	30	
Total Product Power	kW	13.05	17.3	23.2	26.6	36.4	45.8	52.4	
Product Power Input	V/Ph/Hz	400/3/50							
Product External Dimensions	Height	mm	1664	1664	1970	1970	2276	2276	2582
	Depth	mm	1078	1384	1537	1843	1996	2302	2302
	Length	mm	3620	3620	3680	4180	4180	4240	4280

*The blowing temperature calculation does not include any external heater or cooler heat exchanger capacity under external design conditions.

**Cooling capacity calculation is based on reference values of external air: 35 °C, 50% RH.

***Heat-Pump heating capacity calculation is based on reference values of external air: -5 °C., 80% RH.

**** For temperatures below -5 °C, a heat exchanger with a water regime of 80/60 is recommended as an option.

Prefer smart defrost mode options in order to eliminate the effects of frost conditions (below -5 °C).

The defrosting period is between 2-8 min/h thanks to the smart defrost mode.

VIACLIMATE Mixed Air Heat-Pump Air Handling Unit		KHPVIA7	KHPVIA10	KHPVIA16	KHPVIA20	KHPVIA32	KHPVIA34	KHPVIA40	
Blowing Temperature *	SUMMER °C	16	16.2	16.5	16.6	16.8	17.1	16.5	
	WINTER °C	30.1	29.8	29.5	29	29.1	27.8	28.9	
Minimum Air Flow Capacity	m ³ /h	2000	4000	7000	9000	11000	13000	16000	
Nominal Air Flow Capacity	m ³ /h	3000	5000	8000	10000	12000	15000	18000	
Exterior Static Pressure	Pa	300	300	300	300	350	350	350	
Cooling Capacity **	kW	39.13	65.32	104.41	130.65	156.54	192.15	235.36	
Heat-Pump Heating Capacity***	kW	38.4	63.46	105.57	126.9	153.61	186.08	228.78	
Water Heater Capacity****	kW	42.21	70.35	112.56	140.7	168.84	211.05	252.26	
EER		3.54	4.27	4.93	5.31	4.55	4.39	4.67	
COP		3.48	4.15	4.98	5.16	4.47	4.25	4.54	
Motor Power	kW	5.8	7.8	9.2	9.6	10.4	19.8	20.4	
Compressor Power	kW	5.25	7.5	12	15	24	24	30	
Total Product Power	kW	12.05	16.3	22.2	25.6	35.4	44.8	51.4	
Product Power Input	V/Ph/Hz	400/3/50							
Product External Dimensions	Height	mm	892	892	1045	1045	1198	1198	1351
	Depth	mm	1078	1384	1537	1843	1996	2302	2302
	Length	mm	3820	3820	3880	4480	4480	4540	4580

*The blowing temperature calculation does not include any external heater or cooler heat exchanger capacity under external design conditions.

** Cooling capacity calculation is based on reference values of external air: 35 °C, 50% RH.

*** Heat-Pump heating capacity calculation is based on reference values of external air: -12 °C, 50% RH.

**** For temperatures below -12 °C, a heat exchanger with a water regime of 80/60 is recommended as an option.

Prefer smart defrost mode options in order to eliminate the effects of frost conditions (below -12 °C).

The defrosting period is between 2-12 min/h thanks to the smart defrost mode.

Fresh air ratio is 40%.

Heat-Pump Air Handling Unit

General Features

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap
- Drift Eliminator
- Door Switch
- Roof Sheet

Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units with heat bridge.
- 60mm panel thickness,
- 110 kg/m³ A1 class rock wool.
- Aluminum Case with no heat bridge

Filter

- G2 - G4 Panel
- M5 - F7 Bag

Other Components

- Mixed Air Damper
- Compressor
- MCC, DDC Control Panel



Heat-Pump Air Handling Unit

General Features

Heat- Pump Cycle

- Compressor
- Oil Separator
- Filter
- Four-Way Valve
- Expansion Valve
- Solenoid Valve
- Sight Glass
- Compensator

Fan

- EC

Heat Exchanger

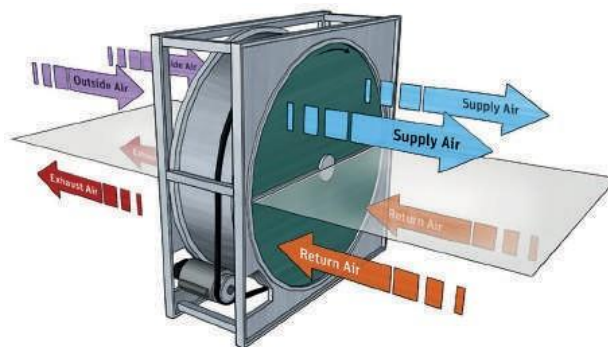
- Water Heater
- Evaporator
- Condenser

Heat Recovery

- Sorption Rotary



Components



Refer to the Air Handling Unit section "components" (page 18-23) for further information regarding Heat-Pump Air Handling Unit components.

Components



Condenser

- Condenser component in the circuit under summer conditions.
- Evaporator component in the circuit under winter conditions.
- Anodized or treated with hydrophilic coating as an option.



Compressor

- High-efficiency scroll compressor
- R407 C coolant usage as standard
- R134A, R410A coolant usage as an option



Thermostatic Expansion Valve

- Reduces the pressure of the high-pressure coolant in liquid form that arrives from the condenser down to the evaporator pressure.
- Expansion valve is a cooling control equipment that starts, stops and modulates the flow of the coolant according to the load requirements of the cooling system.
- Used as standard.



Elektronic Expansion Valve

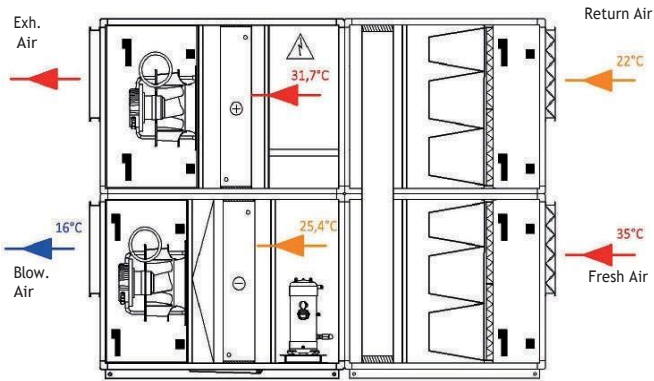
- Plays an important role for the evaporator to receive the sufficient amount of coolant in variable flow Capacity systems (VRF/VRV); where the flow Capacity of the coolant is constantly changing.
- Elektronic expansion valves operate more efficiently as compared to thermostatic expansion valves.
- Used optionally.



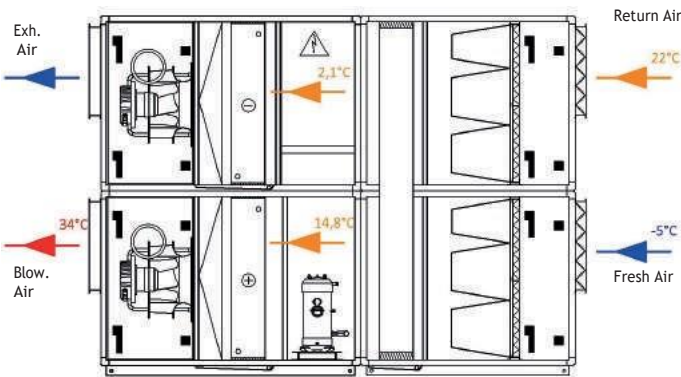
Four-Way Valve

- Ensures that the Heat-Pump coolant system provides heating and cooling.
- Performs hot gas by-pass in case of defrost.
- Directs the fluid to the evaporator or to the condenser according to the operating conditions.

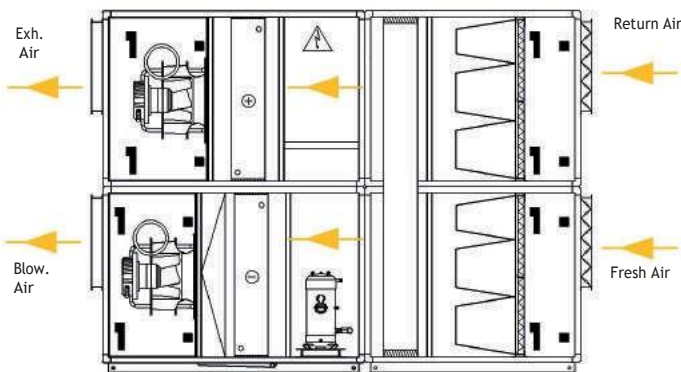
Rotary Heat-Pump Scenarios



Summer Mode



Winter Mode



Air Circulation Mode

In air circulation mode, VIARHP may also perform free-cooling.

Scenario 1

VIARHP Operation	Capacity	Result	Status
Fresh Air	0 - 100 %	Comfort	Active
Evaporator	0 - 100 %	Cooling	As per need
Condenser	0 - 100 %	Heating	As per need
Rotary	0 - 100 %	Heat Recovery	Active
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

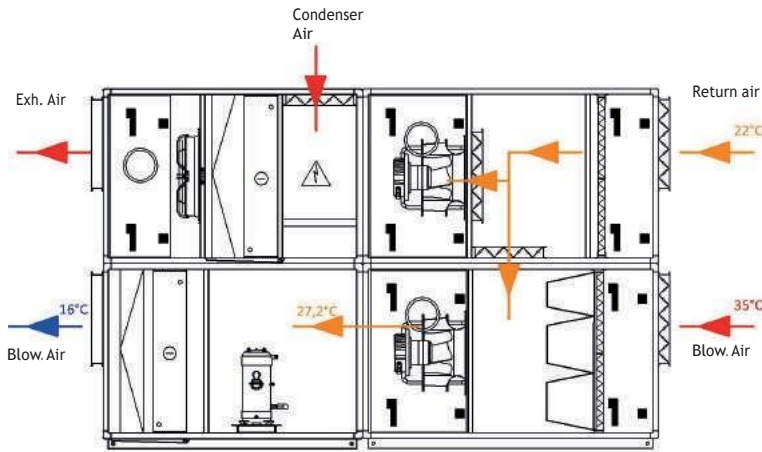
Scenario 2

VIARHP Operation	Capacity	Result	Status
Fresh Air	0 - 100 %	Comfort	Active
Evaporator	0 - 100 %	Heating	As per need
Condenser	0 - 100 %	Cooling	As per need
Rotary	0 - 100 %	Heat Recovery	Active
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

Scenario 3

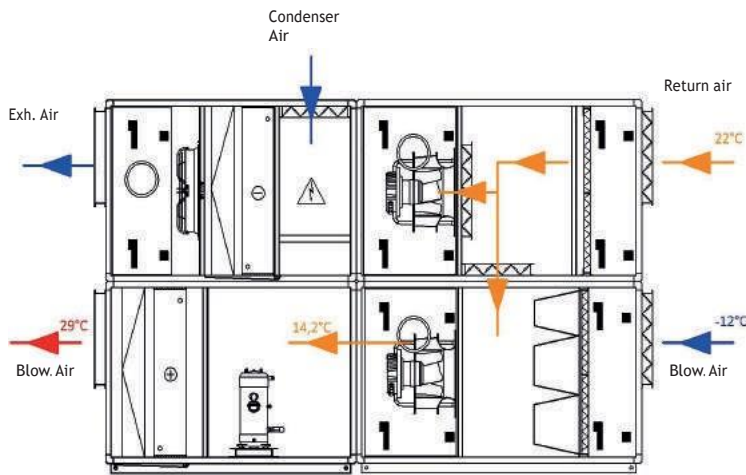
VIARHP Operation	Capacity	Result	Status
Fresh Air	0 - 100 %	Comfort	Active
Evaporator	0 - 100 %	Cooling	Passive
Condenser	0 - 100 %	Heating	Passive
Rotary	0 - 100 %	Heat Recovery	Active
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

Mixed Air Heat-Pump Scenarios



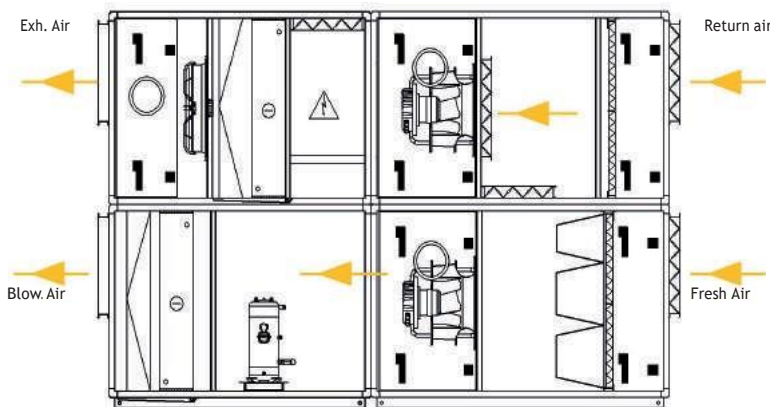
Summer Mode

Scenario 1			
VIAKHP Operation	Capacity	Result	Status
Fresh Air	0 - 40 %	Comfort	Active
Evaporator	0 - 100 %	Cooling	As per need
Condenser	0 - 100 %	Heating	As per need
Mixture	0 - 60 %	Mixture	Active
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active



Winter Mode

Scenario 2			
VIAKHP Operation	Capacity	Result	Status
Fresh Air	0 - 40 %	Comfort	Active
Evaporator	0 - 100 %	Cooling	As per need
Condenser	0 - 100 %	Heating	As per need
Mixture	0 - 60 %	Mixture	Active
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active



Free-cooling Mode

Scenario 3			
VIAKHP Operation	Capacity	Result	Status
Fresh Air	0 - 100 %	Comfort	Active
Evaporator	0 - 100 %	Cooling	Passive
Condenser	0 - 100 %	Heating	Passive
Mixture	0 - 60 %	Mixture	Passive
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

Electrical Automation

Checkpoints

Analog Inputs

- Temperature sensor
- Humidity sensor
- Pressure sensor types
- Frost protection temperature sensor

Alarms

- Motor thermal failure
- Filter contamination
- Frost
- Compressor thermal failure
- Rotary motor
- Low pressure
- High pressure
- Electric heater failure

Checkpoints

- Return air
- Fresh Air
- Room thermostat
- Touch panel
- ModBus (RS485)
- BACnet

Analog Outputs

- Valve motor
- Motor frequency (0 - 10V)
- Damper motor
- Electronic Expansion Valve

Other Points

- Time programming
- Automatic mode change
- Feed water temperature
- Free cooling

Digital Inputs

- Differential pressure switch
- Condenser High pressure
- Compressor High pressure
- Compressor Low pressure
- Frost thermostat

Digital Outputs

- Electric heater step
- Fan start - stop
- Compressor start
- Four-Way Valve
- Valve motor

Safety Points

- Emergency Stop
- Safety thermostat
- High gas pressure
- Low gas pressure
- Condensation pressure
- Motor protection
- Frost thermostat
- Temperature thermostat
- Door Switch



Brands of electrical automation equipment may differ from the project and specifications. See pages 24-27 for the electrical automation process.

Pool Dehumidification Unit

content

Why Viaclimate ?
 Products Overview
 Selection Chart
 General Features
 Components
 Dehumidification Cycle
 VIAPOOL Operation Scenarios
 Electrical Automation

49-64



2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



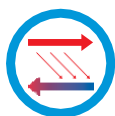
High Energy
Efficiency



Smart
Control



EN 1886
Compliance to
Standards



Rotary
HR



Scroll
Compressor



R-407C
Cooling
Fluid



Dehumidification



VDI 2089
Compliance to
Standards



80°C / 60°C
Water Heating



Plug and Play

Why ViaClimate?

High Energy Efficiency



- High-efficiency plated heat recovery
- High-efficiency heat-pipe heat recovery
- Energy-efficient plug fan mechanism
- Energy-efficient EC fan mechanism
- High level automated control



Human Health

- Negative pressure pool environment
- Suitable ambient temperature
- Fresh air requirement
- Dehumidification process
- Corrosion, humidity etc. prevention

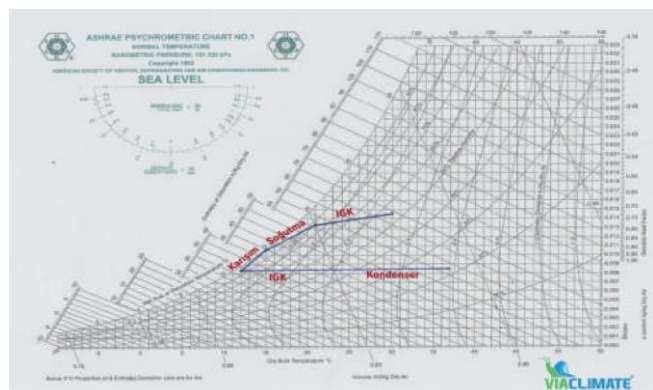


Plug and Play

- IntegCapacityd cooling cycle
- IntegCapacityd MCC and DDC panels
- Automation field equipment installed
- Feeding and signaling cables installed
- An architecture that does not require any external units

Design Criteria

- VDI 2089 (Dehumidification capacity)
- VDI 2089 (Fresh air quantity)
- VDI 2089 (Ambient conditions)
- ERP 2018 (Energy efficiency)
- EN 1886 (Mechanical performance)

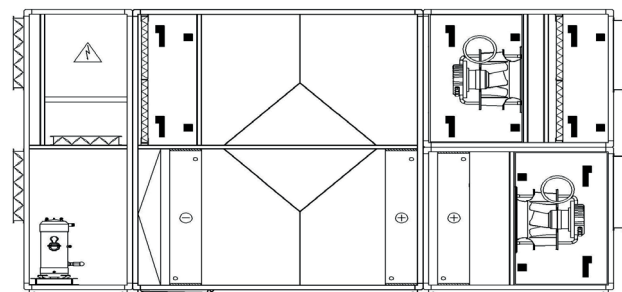
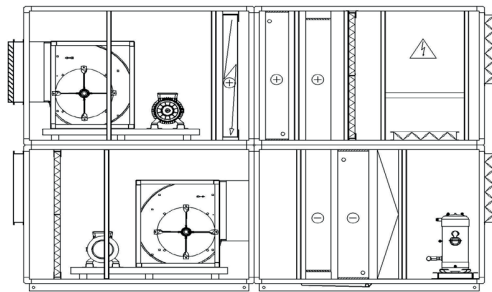
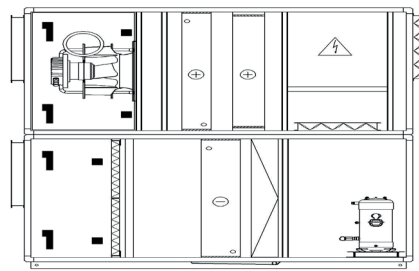
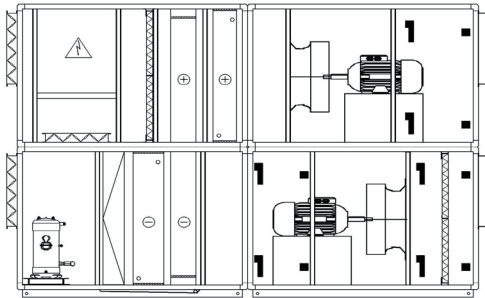
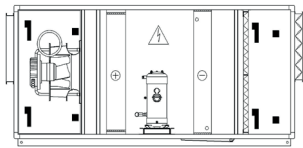


Smart Automation

- Automatic assignment to the most efficient scenario
- High level DDC control
- Free-cooling
- Remote control
- Time programming



Extra Designs



Products Overview

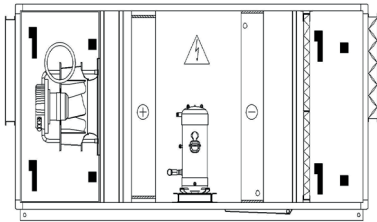
Air Flow Capacity (m³/h)

400

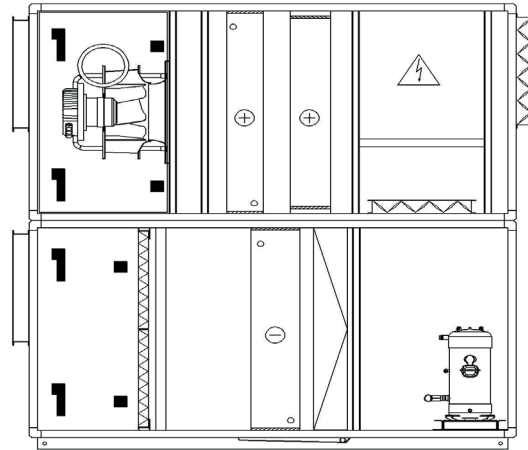
1000

2000

6000



VIAPOOLs



VIAPOOLm

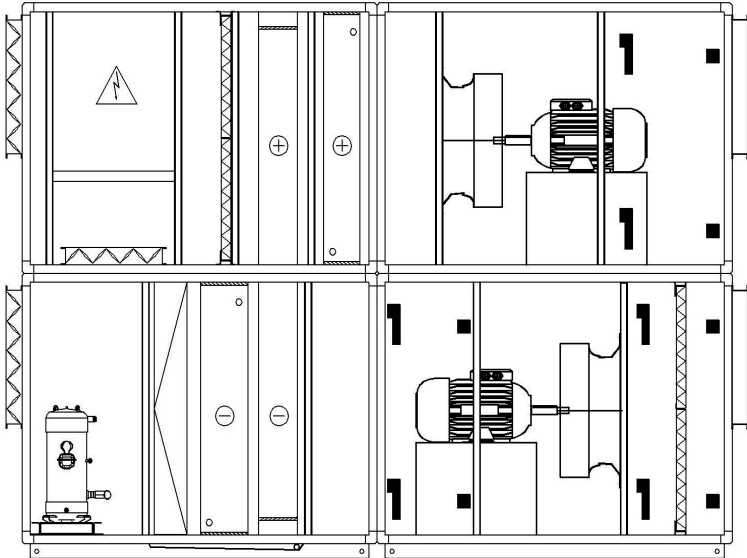
Air flow Capacity chart is intended for visual and informative purposes.

Products Overview

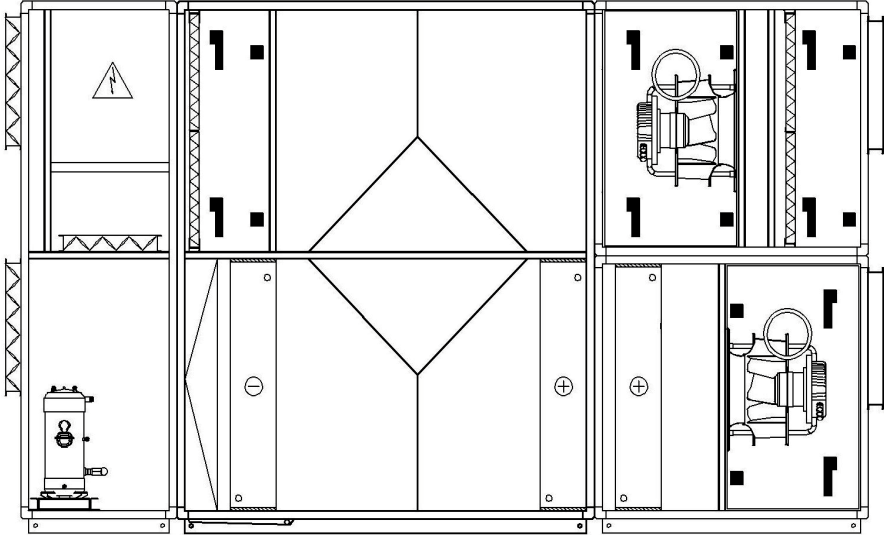
Air Flow Capacity (m3/h)

3000

25000



VIAPOOL



VIAPOOLp

Air flow Capacity chart is intended for visual and informative purposes.

Pool Dehumidification Unit

Selection Chart

VIACLIMATE Pool Dehumidification Unit		VIAPOOls 400	VIAPOOls 750	VIAPOOls 1000	
Pool Surface	m ²	8	15	20	
Dehumidification Capacity*	kg/h	1.77	3.32	4.43	
Air Flow Capacity	m ³ /h	400	750	1000	
Exterior Static Pressure	Pa	100	100	100	
Motor Power	kW	0.17	0.17	0.75	
Compressor Power	kW	0.97	1.46	1.71	
Total Product Power	kW	1.14	1.63	2.46	
Product Power Input	V/Ph/Hz	400/3/50			
Filter Efficiency	ISO16890	ePM10			
Product External Dimensions	Height	mm	400	400	500
	Width	mm	400	400	500
	Length	mm	1200	1200	1200

Tablo 1

* In calculating the dehumidification capacity, the water temperature was taken as 28 °C , ambient temperature 30 °C - 54 % RH and outdoor air absolute humidity 9 g/kg.



VIACLIMATE Pool Dehumidification Unit		VIAPOOlm 2000	VIAPOOlm 3000	VIAPOOlm 4000	VIAPOOlm 5000	VIAPOOlm 6000	
Pool Surface	m ²	40	60	80	100	120	
Dehumidification Capacity*	kg/h	12	15.9	22	30	34	
Air Flow Capacity	m ³ /h	2000	3000	4000	5000	6000	
Exterior Static Pressure**	Pa	200	250	250	250	250	
Water Heater Capacity***	kW	16	23	30	37	44	
Motor Power****	kW	1.05	1.8	2.95	2.95	3.35	
Compressor Power	kW	4.25	4.9	5.91	8.55	9.8	
Total Product Power	kW	5.3	6.7	8.86	11.5	13.15	
Product Power Input	V/Ph/Hz	400/3/50					
Filter Efficiency	ISO16890	ePM10					
Product External Dimensions	Height	mm	1584	1585	1586	1587	1588
	Width	mm	732	885	1038	1191	1344
	Length	mm	1470	1470	1470	1570	1570

Tablo 2

* In calculating the dehumidification capacity as per the VDI 2089 standards; the water temperature was taken as 28 °C , ambient temperature 30 °C - 54 % RH, outdoor air absolute humidity 9 g/kg and pool water depth > 1,35 m for reference.

When dehumidification is on active mode with 30% fresh air, the outdoor air temperature is 5°C - 85 % RH.

**Total exterior static pressure blowing and return lines were calculated sepaCapacityly.

*** In calculating the water heating capacities, for operation with 30% fresh air and dehumidification on passive mode, the outdoor air temperature is -15 °C and the battery outlet temperature is 38 °C

****Motor power is the unit power of the plug fan EC motor.



Pool Dehumidification Unit Selection Chart

VIACLIMATE Pool Dehumidification Unit		VIAPOL 3000	VIAPOL 5000	VIAPOL 8000	VIAPOL 10000	VIAPOL 12000	VIAPOL 15000	VIAPOL 18000	VIAPOL 20000	VIAPOL 25000	
Pool Surface	m ²	60	105	165	210	250	310	380	420	520	
Dehumidification Capacity*	kg/h	19	32	50	63	75	94	113	125	156	
Air Flow Capacity	m ³ /h	3000	5000	8000	10000	12000	15000	18000	20000	25000	
Exterior Static Pressure	Pa	500	500	500	500	500	500	500	500	500	
Water Heating Capacity**	kW	32	51	81	102	122	152	183	203	253	
Motor Power***	kW	2.2	3	4	5.5	7.5	7.5	11	11	15	
Compressor Power	kW	5.8	9.2	12.8	18.4	20.6	27.6	30.9	36.8	41.2	
Total Product Power	kW	10.2	15.2	20.8	29.4	35.6	42.6	52.9	58.8	71.2	
Product Power Input	V/Ph/Hz	400/3/50									
Filter Efficiency	ISO16890	ePM10									
Product External Dimensions	Height	mm	1584	1584	2196	2196	2196	2808	2808	2808	3114
	Width	mm	732	1191	1191	1497	1803	1497	1803	2109	2109
	Length	mm	3340	3340	3440	3440	3490	3590	3640	3890	3890

Tablo 3

*In calculating the dehumidification capacity as per the VDI 2089 standards; the water temperature was taken as 28 °C, ambient temperature 30 °C- 54 % RH, outdoor air absolute humidity 9 g/kg and pool water depth > 1,35 m for reference.

** In calculating the water heating capacities the outdoor air temperature was taken as -15 °C - 90% RH.

*** Motor power is the unit power of the plug fan AC motor. (Can be manufactured with EC fan as an option).

VIACLIMATE Heat Recovery Pool Dehumidification Unit		VIAPOLp 3000	VIAPOLp 5000	VIAPOLp 8000	VIAPOLp 10000	VIAPOLp 12000	VIAPOLp 15000	VIAPOLp 18000	VIAPOLp 20000	VIAPOLp 25000	
Pool Surface	m ²	60	105	165	210	250	310	380	420	520	
Dehumidification Capacity*	kg/h	19	32	50	63	75	94	113	125	156	
Air Flow Capacity	m ³ /h	3000	5000	8000	10000	12000	15000	18000	20000	25000	
Exterior Static Pressure	Pa	500	500	500	500	500	500	500	500	500	
Heat Recovery Capacity	kW	9.8	16.8	25.4	32.4	35.7	48	61.2	65.6	72	
Water Heating Capacity**	kW	34	56	89	112	136	168	204	224	280	
Motor Power***	kW	2.2	4	5.5	7.5	7.5	11	11	15	15	
Compressor Power	kW	2.9	5	7.4	10	11.6	14.8	17	19.5	23.85	
Total Product Power	kW	7.3	13	18.4	25	26.6	36.8	39	49.5	5385	
Product Power Input	V/Ph/Hz	400/3/50									
Filter Efficiency	ISO16890	ePM10									
Product External Dimensions	Height	mm	1584	1584	2196	2196	2196	2808	2808	2808	3114
	Width	mm	732	1191	1191	1497	1803	1497	1803	2109	2109
	Length	mm	4290	4440	4640	4690	4690	5340	5340	5390	5390

Tablo 4

*In calculating the dehumidification capacity as per the VDI 2089 standards; the water temperature was taken as 28°C, ambient temperature 30°C - 54 % RH, outdoor air absolute humidity 9 g/kg and pool water depth > 1,35 m for reference.

** In calculating the water heating capacities the outdoor air temperature was taken as -15°C - 90% RH.

*** Motor power is the unit power of the plug fan AC motor. (Can be manufactured with EC fan as an option)

Heat recovery is manufactured with aluminum plated or heat-pipe options.

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap
- Drift Eliminator

Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units.
- 60mm panel thickness,
- 90 kg/m³ A1 class rock wool.
- Aluminum profile Case.
- Straight case design

Filter

- G2 - G4 Filter
- M5 - F7 Bag

Other Components

- Mixed Air Damper
- Dehumidification Cycle
- MCC, DDC Control Panel



Optional Accessories

- Internal Lighting
- Door Switch
- Roof Sheet
-

Fan

- EC
- Plug
- Double Inlet
- Double Inlet(Back Sloping)

Heat Exchanger

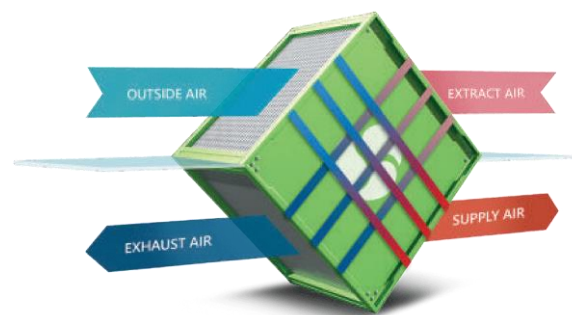
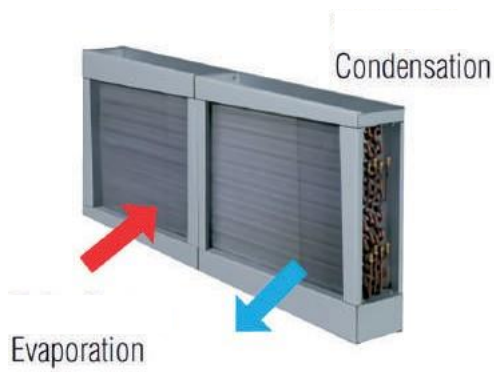
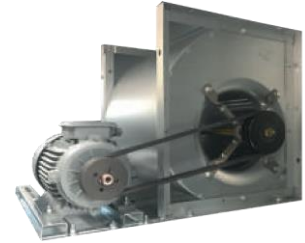
- Water Heater
- Evaporator
- Condenser
- Electric Heater

Heat Recovery

- Aluminum Plated
- Heat-Pipe



Components



Refer to the Air Handling Unit section "components" (page 24-28) for further information regarding Pool Dehumidification Unit components.

Dehumidification Cycle



Evaporator

- Cooling component of the circuit. (Dehumidification)
- Drift eliminator comes as standard
- A double-pitched, insulated condensate tray that is made of stainless sheet comes as standard
- Anodized or treated with hydrophilic coating as an option



Condenser

- Condensing component of the circuit.
- Anodized or treated with hydrophilic coating as an option



Compressor

- High-efficiency scroll compressor
- R407 C coolant usage as standard
- R410A coolant usage as an option



Thermostatic Expansion Valve

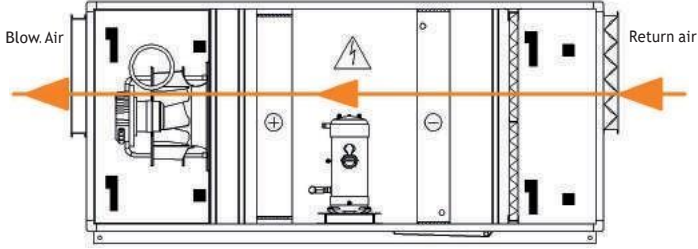
- Reduces the pressure of the high-pressure coolant in liquid form that arrives from the condenser down to the evaporator pressure.
- Expansion valve is a cooling control equipment that starts, stops and modulates the flow of the coolant according to the load requirements of the cooling system.
- Used as standard.



Electronic Expansion Valve

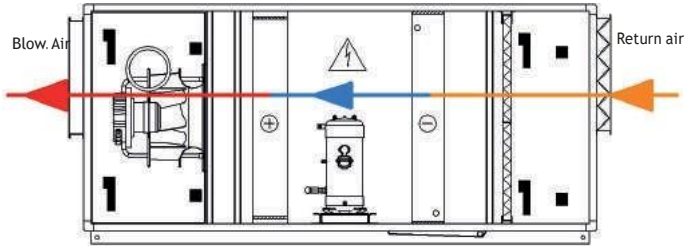
- Plays an important role for the evaporator to receive the sufficient amount of coolant in variable flow Capacity systems (VRF/VRV); where the flow Capacity of the coolant is constantly changing.
- Electronic expansion valves operate Capacity more efficiently as compared to thermostatic expansion valves.
- Used optionally.

VIAPOOls Operating Scenarios



*The pool is not in use.

Scenario 1			
VIAPOOls Operation	Capacity	Result	Status
Cooling	0 - 100 %	Dehumidification	Passive
Condenser	0 - 100 %	Heating	Passive
Ventilator	0 - 100 %	Air Flow	Active

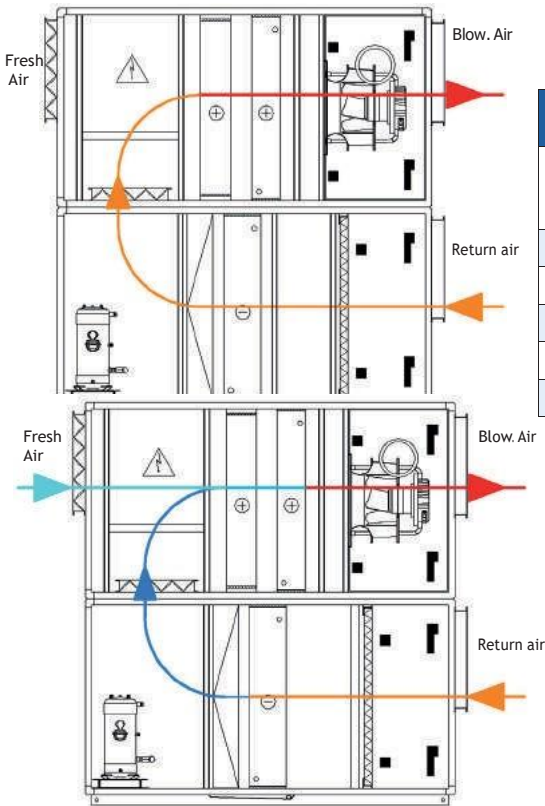


* The pool is in use.

Scenario 2			
VIAPOOls Operation	Capacity	Result	Status
Cooling	0 - 100 %	Dehumidification	Active
Condenser	0 - 100 %	Heating	Active
Ventilator	0 - 100 %	Air Flow	Active

Senaryoları verilen ürünün teknik detayları sayfa 54 Tablo 1 'de yer almaktadır.

VIAPOLm Operating Scenarios



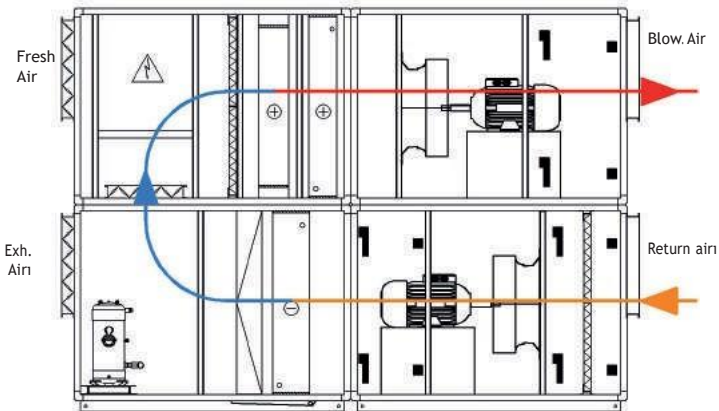
* The pool is in use.

Scenario 1			
VIAPOLm Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Passive
Cooling	0 - 100 %	Dehumidification	Passive
Condenser	0 - 100 %	Heating	Passive
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active

Scenario 2			
VIAPOLm Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Active
Cooling	0 - 100 %	Dehumidification	Active
Condenser	0 - 100 %	Heating	Active
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active

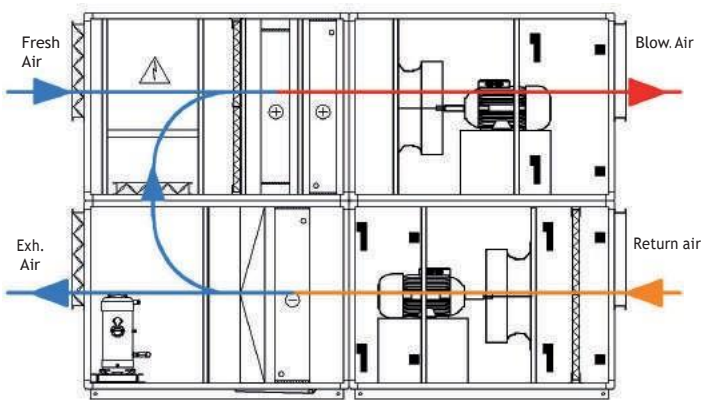
Technical details of the product for which the scenarios are specified are shown on page 54, Table 2.

VIAPOL Operating Scenarios



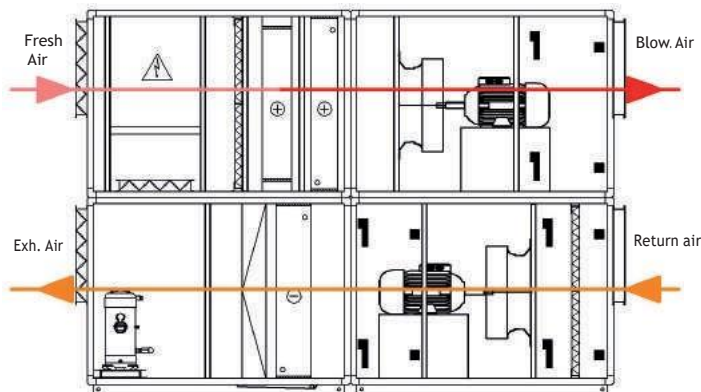
* The pool is not in use.

Scenario 1			
VIAPOOL Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Passive
Cooling	0 - 100 %	Dehumidification	As per need
Condenser	0 - 100 %	Heating	As per need
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Passive



* The pool is in use.

Scenario 2			
VIAPOOL Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Active
Cooling	0 - 100 %	Dehumidification	Active
Condenser	0 - 100 %	Heating	Active
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

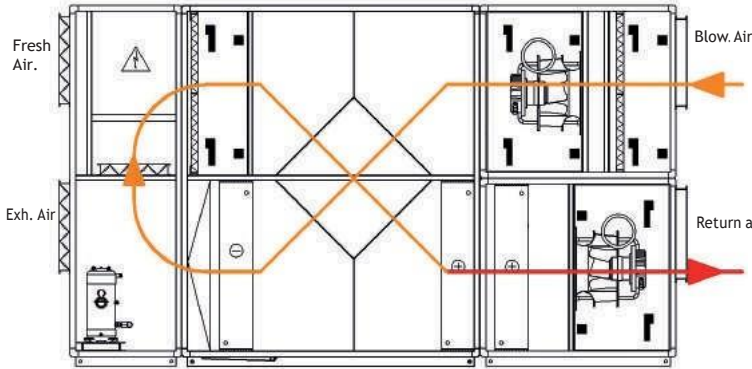


* The pool is in use during the summer and mid season.
*Free-cooling is used in the scenarios for which operation is performed.

Scenario 3			
VIAPOOL Operation	Capacity	Result	Status
Fresh Air	0 - 100 %	Dehumidification	Active
Cooling	0 - 100 %	Dehumidification	Passive
Condenser	0 - 100 %	Heating	Passive
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

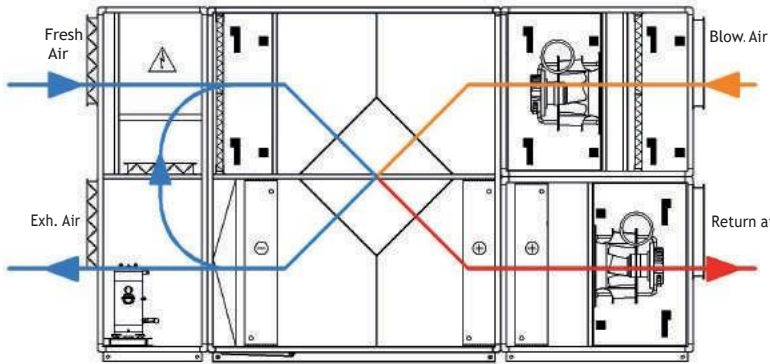
Technical details of the product for which the scenarios are specified are shown on page 55, Table 3.

VIAPOLp Operating Scenarios



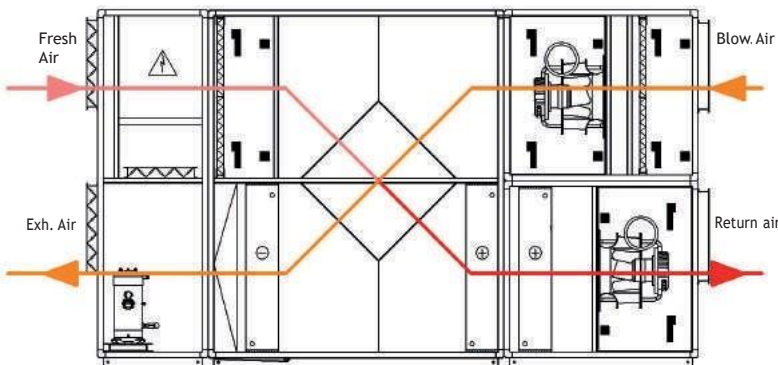
*The pool is not in use by people during the winter season.

Scenario 1			
VIAPOLp Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Passive
Cooling	0 - 100 %	Dehumidification	As per need
Heat Recovery	100 %	Dehumidification	Active
IGK By-pass	100 %	Air Flow	Passive
Condenser	0 - 100 %	Heating	As per need
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Passive



The pool is in use.

Scenario 2			
VIAPOLp Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Active
Cooling	0 - 100 %	Dehumidification	Active
Heat Recovery	100 %	Dehumidification	Active
IGK By-pass	100 %	Air Flow	Passive
Condenser	0 - 100 %	Heating	Active
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active



* The pool is in use during the summer and mid season.
*Free-cooling is used in the scenarios for which operation is performed.

Scenario 3			
VIAPOLp Operation	Capacity	Result	Status
Fresh Air	0 - 30 %	Dehumidification	Active
Cooling	0 - 100 %	Dehumidification	Passive
Heat Recovery	100 %	Dehumidification	Passive
IGK By-pass	100 %	Air Flow	Active
Condenser	0 - 100 %	Heating	Passive
Water Heater	0 - 100 %	Heating	As per need
Ventilator	0 - 100 %	Air Flow	Active
Exhausted Unit	0 - 100 %	Air Flow	Active

Technical details of the product for which the scenarios are specified are shown on page 55, Table 4.

Electrical Automation

Checkpoints

Analog Inputs

- Temperature sensor
- Humidity sensor
- Pressure sensor
- Frost protection temperature sensor

Alarms

- Motor thermal failure
- Belt broken
- Filter contamination
- Frost
- Compressor thermal failure
- Low pressure
- High pressure

Checkpoints

- Return air
- Fresh Air
- Room thermostat
- Touch panel
- ModBus (RS485)
- BACnet

Analog Outputs

- Valve motor
- Motor frequency
- Damper motor



Other Points

- Time programming
- Automatic mode change
- Feed water temperature
- Free cooling

Digital Inputs

- Differential pressure switch
- Condenser High pressure
- Compressor High pressure
- Compressor Low pressure
- Frost thermostat

Digital Outputs

- Electric heater step
- Fan start - stop
- Compressor start
- Valve motor

Safety Points

- Emergency Stop
- Safety thermostat
- By-pass damper
- High gas pressure
- Low gas pressure
- Condensation pressure
- Motor protection
- Door Switch

Brands of electrical automation equipment may differ from the project and specifications. See pages 24-27 for the electrical automation process.

Kitchen Exhaust and Air Handling Unit content

Why Viaclimate ?
Products Overview
Selection Chart
General Features
Components Optional
Components
Electrical Automation

65 - 74



2 Year
Warranty



Suitable for
Outdoor Use



After Sales
Service



Filtering



Advanced
Filtering



Easy
Installation

Why ViaClimate?

High Efficiency (Odor, Oil, Fume)

- Standardization of the equipment and kitchen exhaust systems were ensured by German VDI 2052 and English DW/172.
- High performance with optimum flow speed and minimum energy.
- Minimum energy consumption thanks to low pressure loss.



Eco Friendly

- Extracts the oil, fumes and contaminated air geneCapacityd during the cooking activities in kitchens, and provides fresh air to the atmosphere.
- Minimizes the risk of fire.
- Electrostatic cases with recycled steel Cases and aluminum collectors are used.

A Product Design That Is Suitable to Your Kitchen

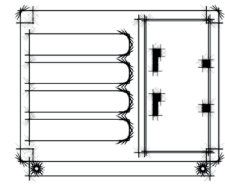
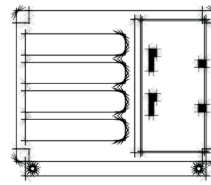
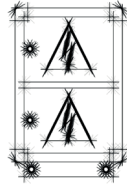
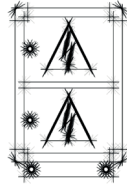
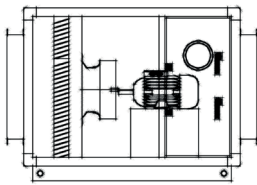
- While selecting a Kitchen Exhaust Unit, you may review reference kitchens and see which product will be the correct solution for your kitchen.
- Odor and oil density is at a low level in environments such as cafeterias.
- Odor and oil density is at a medium level in environments such as natural gas cooking units, stone ovens, wood-fired ovens etc.
- Odor and oil density is at a high level in environments such as wood-fired cooking ovens, natural gas meat grill units etc.
- Odor and oil density is at a very high level in environments such as wood and coal-fired meat grill units, electrical fryers (fast food) etc.



Why ViaClimate?

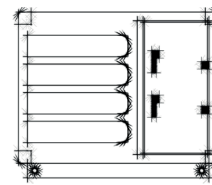
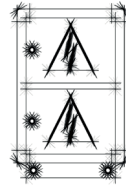
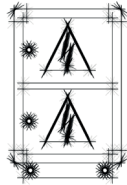
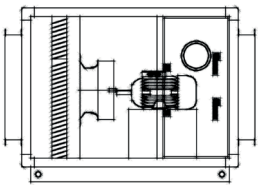
Efficient Filtering

Very High Density



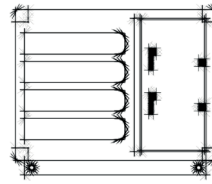
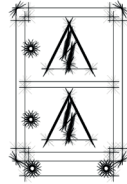
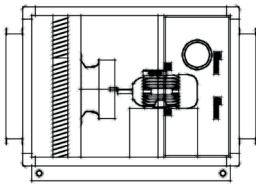
In addition to high-temperature kitchen exhaust fans, two-stage electrostatic filtration and two-stage active carbon filtration is carried out for environments that have a very high density of fumes, odor and oil.

High Density



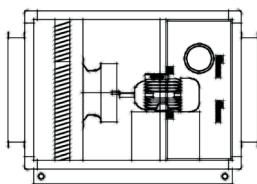
In addition to high-temperature kitchen exhaust fans, two-stage electrostatic filtration and two-stage active carbon filtration is carried out for environments that have a high density of fumes, odor and oil.

Medium Density



In addition to high-temperature kitchen exhaust fans, two-stage electrostatic filtration and two-stage active carbon filtration is carried out for environments that have a medium density of fumes, odor and oil.

Low Density

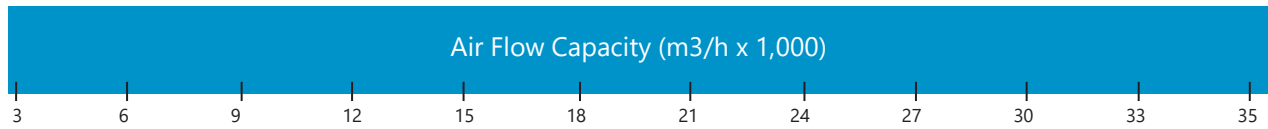


High-temperature kitchen exhaust fans with metal oil filters will meet the requirements of environments that have a low density of fumes, odor and oil.

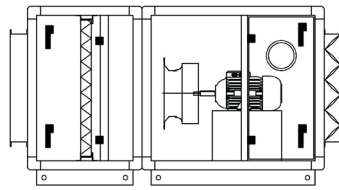


Please contact us to learn about your kitchen density.

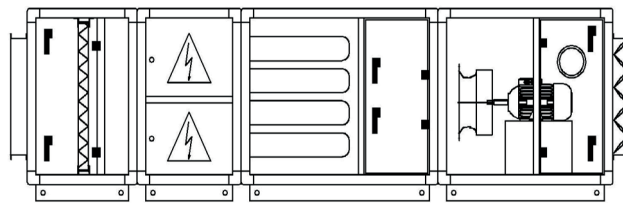
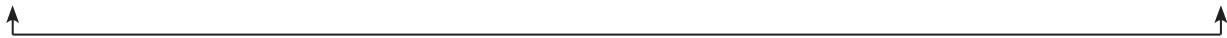
Products Overview



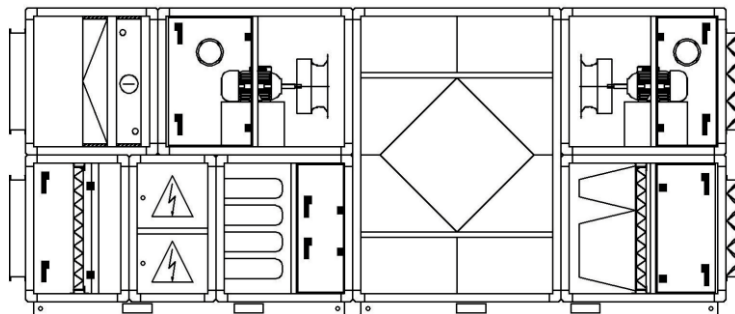
Viaclean Kitchen Exhaust Fan



Viaclean Kitchen Exhaust Units



Viaclean 100% Fresh Air Heat Recovery Kitchen Air Handling and Exhaust Units



Air flow Capacity chart is intended for visual and informative purposes.

Kitchen Exhaust and Air Handling Unit Selection Chart

VIACLIMATE Kitchen Exhaust Fan		ViacleanS										
		4x4	4x6	4x8	8x6	8x9 L	8x9 H	12x9 L	12x9 H	12x12	15x12	
Air Flow Capacity	m ³ /h	3000	5000	7000	10000	13000	15000	19000	22000	28000	35000	
Exterior Static Pressure	Pa	300	300	300	300	500	500	500	500	500	500	
Metal Filter	mm	610x610	610x915	610x1220	1220x915	1220x1220	1220x1220	1830x1220	1830x1220	1830x1830	2135x1830	
Total Product Power	kW	0,75	1,5	2,2	4	7,5	11	11	11	11	15	
Product Power Input	V/Ph/Hz	400 / 3 / 50										
Product External Dimensions	Height	mm	852	852	852	1464	1464	1464	2076	2076	2076	2535
	Width	mm	732	1038	1344	1038	1497	1497	1497	1497	1956	1956
	Length	mm	1250	1250	1250	1400	1550	1700	1700	1850	1850	1900

VIACLIMATE Kitchen Exhaust Unit		ViacleanM										
		4x4	4x6	4x8	8x6	8x9 L	8x9 H	12x9 L	12x9 H	12x12	15x12	
Air Flow Capacity	m ³ /h	3000	5000	7000	10000	13000	15000	19000	22000	28000	35000	
Exterior Static Pressure	Pa	300	300	300	300	500	500	500	500	500	500	
Metal - Active Carbon Filter	mm	610x610	610x915	610x1220	1220x915	1220x1220	1220x1220	1830x1220	1830x1220	1830x1830	2135x1830	
Electrostatic Filter Model		300	500	700	500xx	700xx	700xx	700xxx	700xxx	900xxx	900xxxx	
Electrostatic Power	kW	0.2	0.2	0.2	0.4	0.4	0.4	0.6	0.6	0.8	1	
Total Product Power	kW	1.7	2.4	4.2	5.9	7.9	11.4	11.6	11.6	15.8	19.5	
Product Power Input	V/Ph/Hz	400 / 3 / 50										
Product External Dimensions	Height	mm	852	852	852	1464	1464	1464	2076	2076	2076	2535
	Width	mm	732	1038	1344	1038	1497	1497	1497	1497	1956	1956
	Length	mm	3020	3020	3170	3320	3320	3470	3620	3620	3660	3810

VIACLIMATE Kitchen Air Handling and Exhaust Unit		ViacleanL									
		4x5	4x7	4x9	8x7	8x10 L	8x10 H	12x10 L	12x10 H	12x13	
Air Flow Capacity	m ³ /h	3000	5000	7000	10000	13000	15000	19000	22000	28000	
Blowing Temperature *	°C	15,9	15,6	15,6	15,8	15,7	16,3	15,4	16,1	16,9	
Exterior Static Pressure	Pa	300	300	300	300	500	500	500	500	500	
Dx Capacity	kW	18	32	45	63	83	91	120	133	160	
Metal - Active Carbon Filter	mm	610x610	610x915	610x1220	1220x915	1220x1220	1220x1220	1830x1220	1830x1220	1830x1830	
Roughing - Bag Filter	mm	610x610	610x915	610x1220	915x915	915x1220	915x1220	1220x1525	1220x1525	1220x1830	
Electrostatic Filter Model		300	500	700	500xx	700xx	700xx	700xxx	700xxx	900xxx	
Electrostatic Power	kW	0.2	0.2	0.2	0.4	0.4	0.4	0.6	0.6	0.8	
Total Product Power	kW	3.9	6.2	8.2	13.4	22.4	22.4	26.6	30.6	37.8	
Product Power Input	V/Ph/Hz	400 / 3 / 50									
Product External Dimensions	Height	mm	1584	1584	1584	2808	2808	2808	4032	4032	4032
	Width	mm	882	1188	1494	1188	1647	1647	1647	1647	2106
	Length	mm	3820	3900	3900	4840	4950	5140	5470	5820	5820

*In calculating the blowing temperature, DX Battery air inlet condition was taken as 35 °C. (By-Pass line active)

Viaclean General Features

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap (Comes standard with ViacleanL)
- Drift Eliminator (Comes standard with ViacleanL)

Case Structure

- Designed according to EN1886 standards
- Aluminum profile Case structure
- Straight, easy to clean interior
- 60mm double-walled panels
- 1 mm Electrostatic powder painted exterior sheet; 0,8 mm galvanized interior sheet
- 90 kg/m³ rock wool with A1 fire rating as per DIN4102
- EPDM seal for case tightness
- Double-pitched, insulated oil drain tray that is made of stainless steel
- Aluminum damper on air exhaust
- Roof sheet that provides protection against external weather conditions.



Filter

- G2 Metal Oil Filter
- Active Cartridge Carbon
- Electrostatic

Viaclean General Features **Kitchen Exhaust and Air Handling Unit**

Optional Accessories

- Thermal Pacco Switch
- Internal Lighting
- Door Switch
- Roof Sheet
- MCC, DDC Control Panel
- F7 Filter
- Muffler
- Diffuser



Fan

- EC
- Plug
- Double Inlet(Back Sloping)
- Ex-proof

Heat Exchanger

- Gas-filled (DX) (ViacleanL model)



Plug Fan Mechanism

- Freely open capacity, back sloping, high-performance, directly coupled fan
- High-efficiency system
- AC motors of IE2 or IE3 energy classes
- Operating capacity of up to 2300 Pa Differential Pressure
- 100% velocity control with frequency inverter



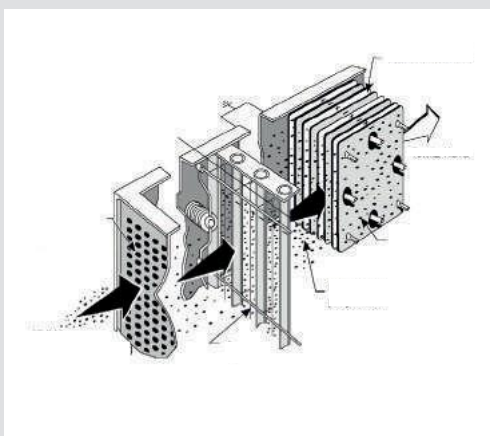
Active Carbon Cartridge Filter

- Capable of holding bad odors and toxic gases.
- Easy replacement of existing carbon granules
- Molecular filtration acc. to EN 779 standard



Metal Filter

- Holds oil particles
- Washable
- Aluminum wire structure
- Class G2 acc. to EN 779 standard
- Operating capability up to 200°C and 80 % rH



Elektrostatik Filter

- Ionizes smoke, odor and oil from the air and destroys the particles
- Aluminum-alloy collector case material
- Washable case material
- Molecular filtration acc. to EN 779 standard

Optional Components



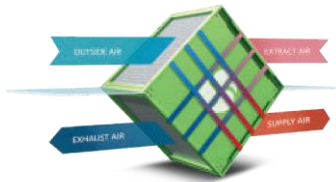
F7 Filter

- High particle holding capacity
- Class M5-F9 acc. to EN 779 standard



EC Fan Mechanism

- Systems to which high-efficiency directly coupled fan and EC motor are connected.
- EC motors of IE4 and higher energy classes are used.
- The motor group can be controlled with 0-10V signal.
- Capable of operating with a lower noise level on high pressures.



Aluminum Plated Heat Recovery

- Systems where the thermal energy in the return air is transferred to the air blowing energy without requiring power.
- Free cooling during mid seasons thanks to the by-pass line
- Comes standard with a condensate tray on the exhaust air outlet.
- Does not have any moving parts and practically does not require any maintenance.
- Has an energy efficiency of approximately up to 50-70% in dry systems.



Gas-filled (DX) Battery

- Used for air cooling and heating applications with condensing units (external unit).
- External unit is designed according to the pipe inlet and outlet diameters.
- Number of inlets and outlets are increased for more than one VRF external unit.
- Used with a drift eliminator as standard
- A double-pitched, insulated condensate tray that is made of stainless sheet is used as standard.



Muffler

- Sound absorbing cassettes that are designed to minimize the air noise generated by the moving parts of the unit, in order to maintain comfort.
- Rock wool with fiberglass is used as a sound absorbing material.
- The standard product is demountable.



Frequency Converter

- Adjusts the motor frequency
- IP20 or IP21 protection class
- Prolongs the service life of the moving parts
- Take-off platform and braking system
- Automated energy optimization
- Electronic thermal relay
- 0-100 V remote control capability with a potentiometer

Electrical Automation

Checkpoints and Features

Alarms

- Motor thermal failure
- Belt broken
- Filter contamination
- Electrostatic failure

Other Points

- Time programming

Analog Outputs

- Motor frequency
- Damper motor



Digital Outputs

- Fan start - stop

Safety Points

- Emergency Stop
- Electrostatic Filter Door Switch
- Electrostatic grounding
- Door Switch
- Motor protection

Digital Inputs

- Differential pressure switch

Viaclean 100% Fresh Air Heat Recovery Kitchen Air Handling Units Electrical Automation control features

- » MCC and DDC panel design from a single control point
- » Blowing and exhaust air flow Capacity adjustment with frequency inverter
- » Capability of operating with an air quality sensor
- » Capability of preventing air flow to indoors with an exhaust air damper while the Product is off
- » Fire extinguishing system
- » Control and alarm for filter level (SepaCapacityly applied for each filter level.)
- » Phase protection
- » Capability of working under summer and winter conditions
- » Ambient temperature control
- » Operation time scheduling
- » Free cooling or Free heating operation
- » Modbus (RS485) communication protocol
- » VRF external unit integration with Heat Recovery Kitchen Exhaust Unit
- » Full inverter VRF External unit

Brands of electrical automation equipment may differ from the project and specifications.
See pages 24-27 for the electrical automation process.

Rooftop Packaged Air Conditioner content

Why Viaclimate?
Products Overview
General Features
Selection Chart
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2 Year Warranty



After Sales Service



Quick Service



Easy Installation



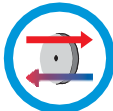
High Energy Efficiency



Smart Control



Compliance to Standards



Rotary HR



Scroll Compressor



Cooling Fluid



Heat-Pump



Smart Defrost



Thermodynamic HR



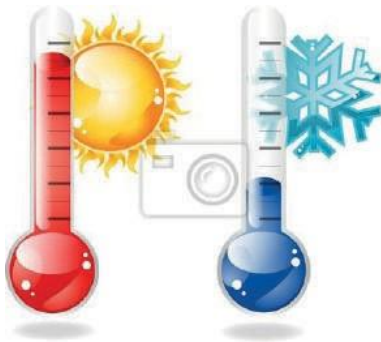
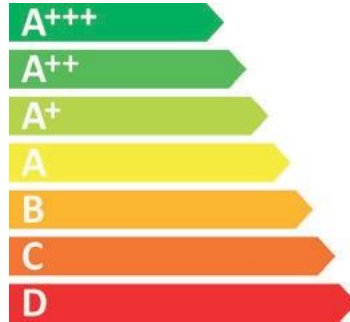
Plug and Play

Why ViaClimate?

High Energy Efficiency



- Ensures high energy efficiency with low energy consumption.
- High-efficiency scroll compressor.
- Design that features an economizer.
- Energy-efficient automated control.
- Free-cooling operation
- Heat recovery option
- Packaged air conditioner production meets the objectives and requirements of ERP2018.



Optimal Air Comfort

- Design according to the ambient comfort level and EN 14511-2013 Standard
- Meeting the heating and cooling requirements of the site in addition to fresh air needs
- Keeping the comfort level at stable conditions
- Meeting fresh air demands according to the air quality sensor
- Affordable heating performance with a natural gas heater
- Capacity to keep the environmental conditions at positive pressure conditions

Plug and Play

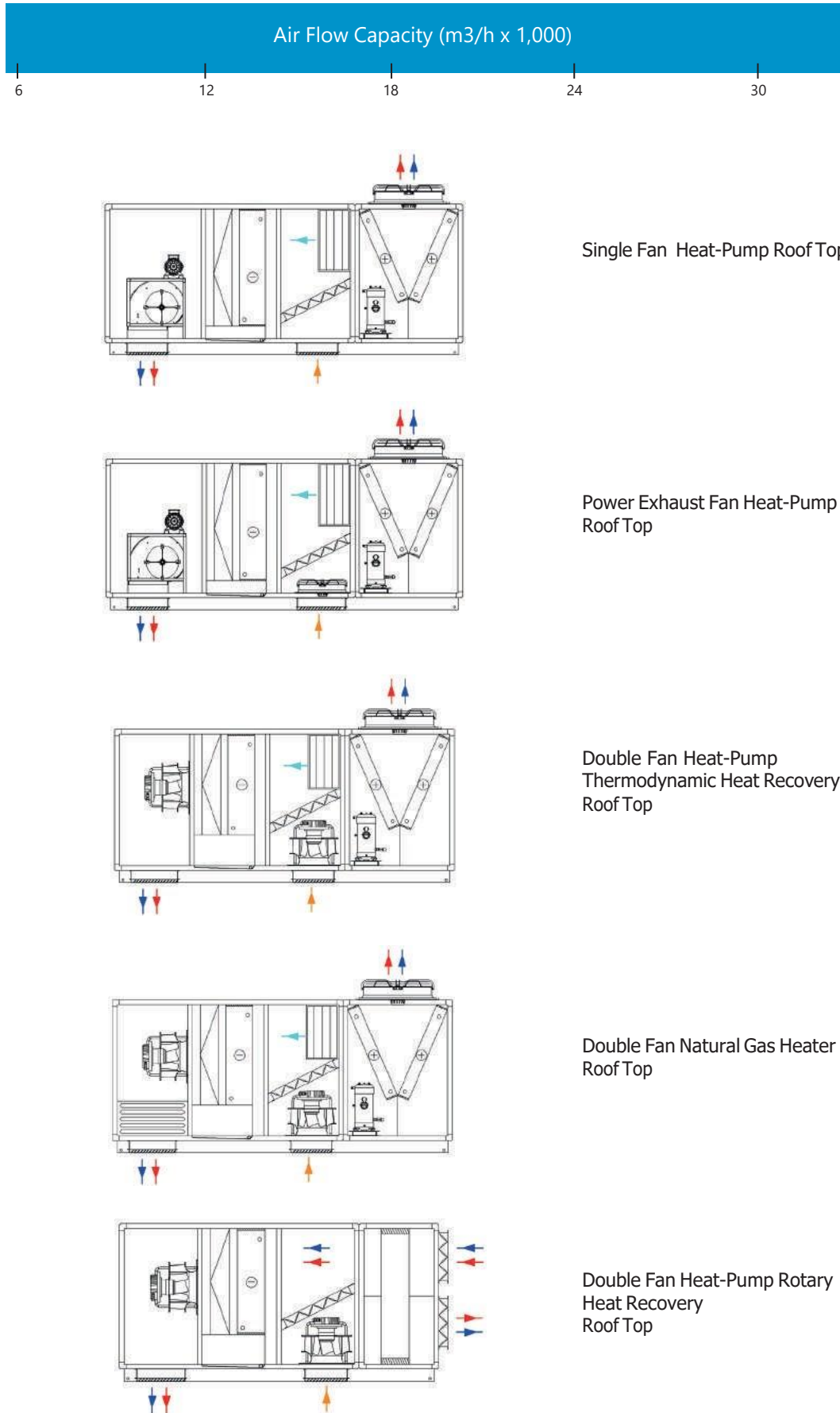
- An architecture that does not require any external units
- IntegCapacityd cooling cycle
- IntegCapacityd MCC and DDC panels
- Easier to install compared to individual systems



Smart Defrost Mode

- Hot gas by-pass
- Thermodynamic Heat Recovery
- Optional heater circuit
- Optional defrosting electric heater circuit

Products Overview



Some configurations of VIACLIMATE Roof Top are given above for illustration purposes.

Rooftop Packaged Air Handling Unit Selection Chart

VIACLIMATE Rooftop Packaged Air Handling Unit		RTV12	RTV16	RTV20	RTV24	RTV26	RTV38	RTV42	RTV50	RTV60
Air Flow Capacity	m ³ /h	6000	8000	10000	12000	15000	18000	20000	25000	30000
Exterior Static Pressure	Pa	300	300	400	400	400	500	500	500	500
Cooling Capacity *	kW	37.02	49.35	61.7	74.04	92.55	111.06	123.4	154.35	185.1
Total Withdrawn Power	kW	10.25	16.38	20.29	24.57	32.73	34.62	40.88	51.1	61.32
EER		3.61	3.01	3.04	3.01	2.83	3.21	3.02	3.02	3.02
Heat-Pump Heating Capacity**	kW	47.13	65.74	81.99	98.61	125.28	145.68	164.28	205.35	246.42
Total Withdrawn Power	kW	11.25	15.96	19.77	23.94	30.64	34.56	39.44	49.3	59.16
COP		4.19	4.12	4.15	4.12	4.09	4.22	4.17	4.17	4.17
Water Heater Capacity	kW	38	50	62	76	90	110	120	152	184
Natural Gas Heater Capacity	kW	40	60	75	100	110	125	150	175	200
Electric Heater 1st Step	kW	18	24	30	36	44	54	60	75	90
Electric Heater 2nd Step	kW	36	48	60	72	88	108	120	150	180
Product Power Input	V/Ph/Hz	400/3/50								
Filter Efficiency	ISO16890	ePM10								

Table of dimensions is not given as it has multiple variations for Rooftop Packaged Air Conditioner configurations (return fan, heat recovery, heater options etc.).

*In calculating the cooling capacity, the outdoor temperature 35 °C , 50 % RH values were taken as reference.

* In calculating the cooling capacity, the evaporator inlet temperature 27 °C, 50 % RH values were taken as reference.

** In calculating the Heat-Pump heating capacity, the outdoor temperature 7 °C , 80 % RH values were taken as reference.

** In calculating the Heat-Pump heating capacity, evaporator inlet temperature 20 °C , 50% RH values were taken as reference.

** In calculating the optional heater capacity, the outdoor temperature 5 °C , 80 % RH values were taken as reference.

In calculating the EER and COP values, the EN 14511 Standard was taken as reference.



Rooftop Packaged Air Handling Unit

General Features

Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units with heat bridge.
- 60mm panel thickness,
- 110 kg/m³ A1 class rock wool.
- Aluminum Case with no heat bridge

Fan

- EC
- Plug
- Double Suction
- Axial Fan

Filter

- G2 - G4 Panel
- M5 - F7 Bag

Heat Exchanger

- Water Heater
- Evaporator
- Condenser

Cooling

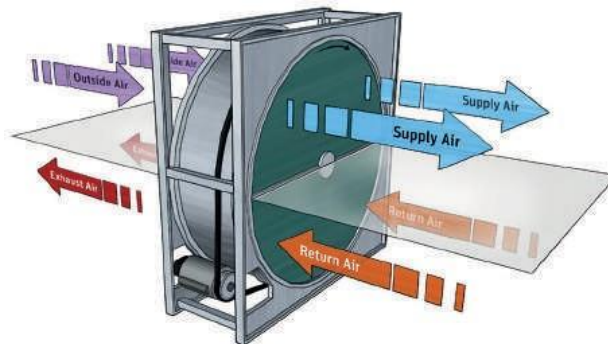
- Compressor
- Oil Separator
- Filter
- Four-Way Valve
- Expansion Valve
- Solenoid Valve
- Sight Glass
- Compensator

Standard Accessories

- Emergency Stop
- Air Damper
- Negative Pressure Trap
- Drift Eliminator
- Door Switch
- Roof Sheet



Components



Refer to the Air Handling Unit section "components" (page 18-23) for further information regarding Rooftop Packaged Air Handling Unit components.

Components



Condenser

- Condenser component in the circuit under summer conditions.
- Evaporator component in the circuit under winter conditions.
- Anodized or treated with hydrophilic coating as an option.



Compressor

- High-efficiency scroll compressor
- R407 C coolant usage as standard
- R134A, R410A coolant usage as an option



Thermostatic Expansion Valve

- Reduces the pressure of the high-pressure coolant in liquid form that arrives from the condenser down to the evaporator pressure.
- Expansion valve is a cooling control equipment that starts, stops and modulates the flow of the coolant according to the load requirements of the cooling system.
- Used as standard.



Electronic Expansion Valve

- Plays an important role for the evaporator to receive the sufficient amount of coolant in variable flow Capacity systems (VRF/VRV); where the flow Capacity of the coolant is constantly changing.
- Electronic expansion valves operate more efficiently as compared to thermostatic expansion valves.
- Used optionally.



Four-Way Valve

- Ensures that the Heat-Pump coolant system provides heating and cooling.
- Performs hot gas by-pass in case of defrost.
- Directs the fluid to the evaporator or to the condenser according to the operating conditions.

Electrical Automation

Checkpoints

Analog Inputs

- Temperature sensor
- Humidity sensor
- Pressure sensor types
- Frost protection temperature sensor

Alarms

- Motor thermal failure
- Belt broken
- Filter contamination
- Frost
- Compressor thermal failure
- Rotary motor
- Low pressure
- High pressure
- Electric heater failure

Checkpoints

- Return air
- Fresh Air
- Room thermostat
- Touch panel
- ModBus (RS485)
- BACnet

Analog Outputs

- Valve motor
- Motor frequency (0 - 10V)
- Damper motor
- Electronic Expansion Valve

Other Points

- Time programming
- Automatic mode change
- Feed water temperature
- Free cooling



Digital Inputs

- Differential pressure switch
- Condenser High pressure
- Compressor High pressure
- Compressor Low pressure
- Frost thermostat

Digital Outputs

- Electric heater step
- Fan start - stop
- Compressor start
- Four-Way Valve
- Valve motor

Safety Points

- Emergency Stop
- Safety thermostat
- High gas pressure
- Low gas pressure
- Condensation pressure
- Motor protection
- Frost thermostat
- Temperature thermostat
- Door Switch

Brands of electrical automation equipment may differ from the project and specifications. See pages 24 - 27 for the electrical automation process.

Ceiling Type Heat Recovery Units

content

Why Viaclimate?
Products Overview
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2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



High Energy
Efficiency



Smart
Control



Air Circulation



Electric
Heating



Wired
Controller



Heat-Pump



Plug and
Play



Compliance to
Standards

Why ViaClimate?

High Energy Efficiency

- Ensures high efficiency with the product structure and the variety of the components used thanks to optimal energy consumption.
- Ceiling type heat recovery unit production meets the objectives and requirements of ERP2018.
- Heat recovery exchangers have min. 52% efficiency.

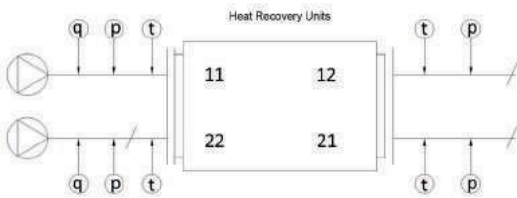


Flexible Areas of Use

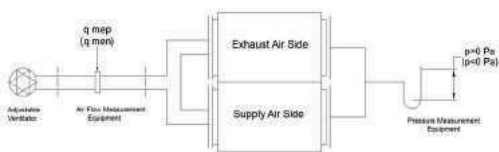
- Educational institutions
- Commercial areas
- Conference halls, theaters and movie theaters
- Accommodation areas
- ...

EN308 Tests

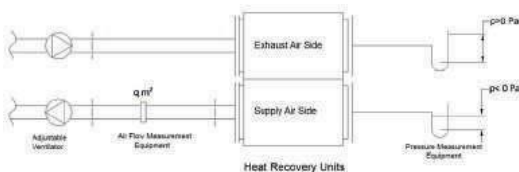
- Viaclimate Quality Management Department carries out EN308 tests at our factory in accordance with TSEK Criteria.
- In addition to EN308 tests, our Products also undergo grounding, continuity, coil insulation and voltage tests. (EN60204)



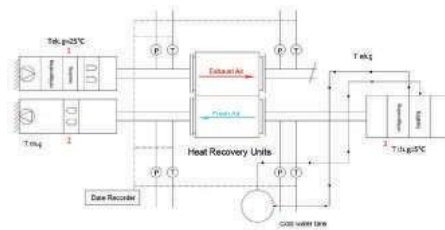
Test 1: Pressure Reduction Capacity



Test 2: External Leak



Test 3: Internal Leak



Test 4: Temperature and Humidity

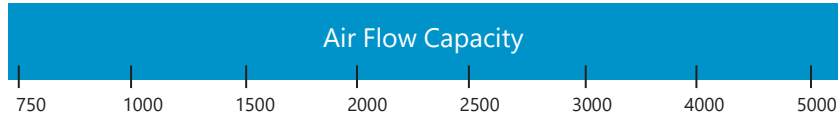


Quality Standards

- The performance values of our Viaclimate ceiling type heat recovery units were measured during tests performed according to TSE Standards, and certified according to TSE criteria. (TSEK 381)



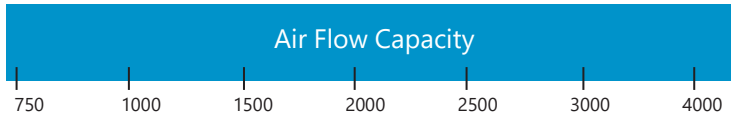
Products Overview



↑ **ViaClimate Heat Recovery Product** ↓



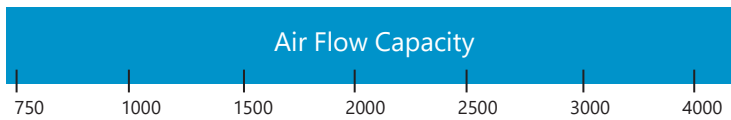
*AC or EC fan option



↑ **ViaClimate Dx Battery Heat Recovery Product** ↓



* AC or EC fan option



↑ **ViaClimate Heat-Pump Heat Recovery Product** ↓



* AC or EC fan option

Ceiling Type Heat Recovery

Selection Chart

Standard VIACLIMATE Ceiling Type Heat Recovery		HRUBOX 1000	HRUBOX 2000	HRUBOX 3000	HRUBOX 4000	HRUBOX 5000	
Air Flow Capacity	m ³ /h	1000	2000	3000	4000	5000	
Exterior Static Pressure	Pa	80	200	210	150	120	
Motor Power*	kW	0.15	0.45	0.55	0.75	1.27	
Total Product Power	kW	0.3	0.9	1.1	1.5	2.54	
Product Power Input	V/Ph/Hz	220/1/50					
Noise Level**	dB	41	48	42	48	48	
Product External Dimensions	Height	mm	420	500	550	615	655
	Width	mm	850	980	1080	1210	1400
	Length	mm	1000	1300	1550	1800	1800

* Manufactured with an AC fan.

** Sound pressure at a distance of 3 meters from the Product, at a frequency of 250 Hz.

Electric heater is provided as an option.

Water heater is provided as an option.

Power input of electric heater models is 400 V.

Standard VIACLIMATE Ceiling Type Heat Recovery		HRUBOX EC 750	HRUBOX EC 1000	HRUBOX EC 1500	HRUBOX EC 2000	HRUBOX EC 2500	HRUBOX EC 3000	HRUBOX EC 4000	HRUBOX EC 5000	
Air Flow Capacity	m ³ /h	750	1000	1500	2000	2500	3000	4000	5000	
Exterior Static Pressure	Pa	200	150	230	290	250	150	180	140	
Motor Power *	kW	0.16	0.17	0.05	0.05	0.05	0.05	0.075	0.075	
Total Product Power	kW	0.33	0.34	0.1	0.1	0.1	0.1	0.15	0.15	
Product Power Input	V/Ph/Hz	220/1/50			400/3/ 50					
Noise Level**	dB	40	40	40	48	49	42	48	50	
Product External Dimensions	Height	mm	390	395	435	435	535	535	615	655
	Width	mm	700	755	760	905	1105	1105	1210	1400
	Length	mm	960	1110	1110	1410	1610	1705	1800	1800

* Manufactured with an EC fan.

** Sound pressure at a distance of 3 meters from the Product, at a frequency of 250 Hz.

Electric heater is provided as an option.

Water heater is provided as an option.

Power input of electric heater models is 400 V.

Ceiling Type Heat Recovery Selection Chart

VIACLIMATE Dx Battery Ceiling Type Heat Recovery		HRUBOX DX 1000	HRUBOX DX 2000	HRUBOX DX 3000	HRUBOX DX 4000	
Air Flow Capacity	m ³ /h	1000	2000	3000	4000	
Exterior Static Pressure***	Pa	80	140	150	120	
Dx Capacity**	kW	6	12	18	24	
Motor Power*	kW	0.375	0.45	0.55	1.27	
Total Product Power	kW	0.75	0.9	1.1	2.54	
Product Power Input	V/Ph/Hz	220/1/50				
Product External Dimensions	Height	mm	420	500	550	615
	Width	mm	850	980	1080	1210
	Length	mm	1300	1600	1850	2100

* Manufactured with an AC fan.

**Dx Battery is installed in the Product during production.

**In calculating the Dx capacities, ambient return air 22 °C, dx battery input temperature 30 °C values were considered.

***Exterior pressure losses were calculated by including the dx battery pressure loss.

A dry contact is provided as standard for integration with the VRF external unit.

Drift eliminator and condensate tray come as standard.

Electric heater is provided as an option.

Power input of electric heater models is 400 V.

VIACLIMATE Dx Battery Ceiling Type Heat Recovery		HRUBOX EC DX 750	HRUBOX EC DX 1000	HRUBOX EC DX 1500	HRUBOX EC DX 2000	HRUBOX EC DX 2500	HRUBOX EC DX 3000	HRUBOX EC DX 4000	
Air Flow Capacity	m ³ /h	750	1000	1500	2000	2500	3000	4000	
Exterior Static Pressure***	Pa	130	90	160	225	180	75	110	
Dx Capacity**	kW	4,5	6	9	12	15	18	24	
Motor Power*	kW	0.169	0.17	0.5	0.5	0.5	0.5	0.75	
Total Product Power	kW	0.338	0.34	1	1	1	1	1.5	
Product Power Input	V/Ph/Hz	220/1/50			400/3/50				
Product External Dimensions	Height	mm	390	395	435	435	535	535	615
	Width	mm	700	755	760	905	1105	1105	1210
	Length	mm	1260	1410	1410	1710	1910	2005	2100

* Manufactured with an EC fan.

**Dx Battery is installed in the Product during production.

**In calculating the Dx capacities, ambient return air 22 °C, dx battery input temperature 30 °C values were considered.

***Exterior pressure losses were calculated by including the dx battery pressure loss.

A dry contact is provided as standard for integration with the VRF external unit.

Drift eliminator and condensate tray come as standard.

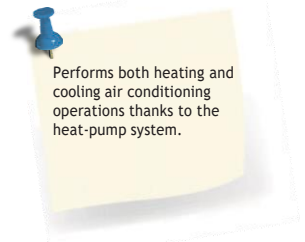
Electric heater is provided as an option.

Power input of electric heater models is 400 V.

Ceiling Type Heat Recovery

Selection Chart

VIACLIMATE Ceiling Type Heat Pump Heat Recovery		HRUBOX HP 1000	HRUBOX HP 2000	HRUBOX HP 3000	HRUBOX HP 4000	
Air Flow Capacity	m ³ /h	1000	2000	3000	4000	
Exterior Static Pressure	Pa(maks.)	80	140	150	50	
Cooling Capacity*	kW	7,9	15,87	23,81	31,74	
Heat-Pump Heating Capacity**	kW	10,1	20	30,26	39,84	
EER		2,68	3,16	3,16	2,99	
COP		3,43	3,98	4,01	3,75	
Compressor Power	kW	2,2	4,13	6,45	8,1	
Motor Power***	kW	0,75	0,9	1,1	2,54	
Total Product Power	kW	2,95	5,03	7,55	10,64	
Product Power Input	V/Ph/Hz	400/3/50				
Product External Dimensions	Height	mm	420	500	550	615
	Width	mm	1150	1280	1380	1510
	Length	mm	1300	1600	1850	2100



*In calculating the cooling capacity, the outdoor temperature 35 °C 40% RH values were taken as reference.

**In calculating the Heat-Pump heating capacity, the outdoor temperature 5 °C 75 % RH values were taken as reference.

*** Manufactured with an AC fan.

Heat recovery exchanger capacity is included in the calculation of Heating, Cooling, EER, COP values. Heat exchanger (electric, water) is recommended as an option for temperatures below 5 °C.

VIACLIMATE Ceiling Type Heat Pump Heat Recovery		HRUBOX EC HP 750	HRUBOX EC HP 1000	HRUBOX EC HP 1500	HRUBOX EC HP 2000	HRUBOX EC HP 2500	HRUBOX EC HP 3000	HRUBOX EC HP 4000	
Air Flow Capacity	m ³ /h	750	1000	1500	2000	2500	3000	4000	
Exterior Static Pressure	Pa	130	90	160	225	180	75	110	
Cooling Capacity*	kW	6.07	7.9	11.9	15.87	20	23.81	31.74	
Heat-Pump Heating Capacity**	kW	7.89	10.1	14.6	20	24.5	30.26	39.84	
EER		2,81	3,11	3,20	3,09	3,64	3,20	3,31	
COP		3,66	3,98	3,92	3,90	4,45	4,06	4,15	
Compressor Power	kW	1,82	2,20	2,72	4,13	4,50	6,45	8,10	
Motor Power***	kW	0,338	0,34	1	1	1	1	1,5	
Total Product Power	kW	2,16	2,54	3,72	5,13	5,50	7,45	9,60	
Product Power Input	V/Ph/Hz	400/3/50							
Product External Dimensions	Height	mm	390	395	435	435	535	535	600
	Width	mm	1000	1055	1060	1205	1405	1405	1535
	Length	mm	1260	1410	1410	1710	1910	2005	2155

* In calculating the cooling capacity, the outdoor temperature 35 °C 40% RH values were taken as reference.

** In calculating the Heat-Pump heating capacity, the outdoor temperature 5 °C 75 % RH values were taken as reference.

*** Manufactured with an EC fan.

Heat recovery exchanger capacity is included in the calculation of Heating, Cooling, EER, COP values. Heat exchanger (electric, water) is recommended as an option for temperatures below 5 °C.

Ceiling Type Heat Recovery Optional Heaters

VIACLIMATE Electric Heater		HRUE 4	HRUE 6	HRUE 8	HRUE 10	HRUE 12	HRUE 14	
Electric Heating Capacity	kW	4	6	8	10	12	14	
Electric Heater Step		1	1	1	1	2	2	
Total Power	kW	4	6	8	10	12	14	
Current	A	9	13	17	20	24	29	
Fuse		3x10	3x16	3x20	3x25	3x32	3x40	
Power Input	V/Ph/Hz	400/3/50						
Heater Dimensions	Height	mm	250	310	330	330	390	390
	Width	mm	270	340	370	370	440	440
	Length	mm	250	300	350	350	400	400

Duct Type Electric Heaters come standard with input fuse installations and contactor assignments completed.
Electric heater coils are manufactured using stainless steel sheets or epoxy-coating as standard.
The installation is packaged together with the heat recovery Product



VIACLIMATE Water Heater		HRUW 8	HRUW 12	HRUW 16	HRUW 20	HRUW 28	
Heating Capacity	kW	8	12	16	20	28	
Water Side Pressure Loss	Pa	22	24	22	28	30	
Water Regime	°C	80/60					
Water Heater Connector Diameter	inç	3/4"	3/4"	3/4"	1"	1"	
Istııcı Ölçüleri	Yükseklik	mm	250	310	330	390	390
	En	mm	270	340	370	440	440
	Boy	mm	150	150	150	150	150

Comes embedded in the ceiling type heat recovery Product as standard.
Motor valve and Case installation is optional.
The control card has a valve motor output as standard.
Electric heater control is provided as an option



Ceiling Type Heat Recovery

General Features

Standard Components

- HRU Standard Control Units

Case Structure

- Rigid design with Galvanized Sheet
- Easily cleaned interior
- Comes standard with electrostatic powder painted exterior surface.
- 10 mm NFAK acousting insulation

Filter

- G4 Panel



Ceiling Type Heat Recovery

General Features



Optional Components

- Water Heater
- Water Cooler
- Electric Heater
- Gas-filled (DX)
- Water Heat Exchanger Control Valve and Motors
- F7 Filter
- HRU Plus Control Unit

- Water Heater
- Water Cooler
- Electric Heater
- Gas-filled (DX)
- Water Heat Exchanger Control Valve and Motors
- F7 Filter
- HRU Plus Control Unit

Fan

- EC
- AC

Heat Recovery

- Cross current Aluminum Plated (Optional By-pass)
- Counter current Aluminum Plated
- Caseulosic Plated

Components



AC Fan

- Double-suction, high-performance and efficiency, self-motorized AC fans
- Capable of operating up to 500 Pa Differential-Pressure in total
- Silent operation
- 5-Step Speed Control



EC Fan

- Back sloping, high-performance and efficiency, self-motorized EC fans
- Capable of operating up to 500 Pa Differential-Pressure in total
- Silent operation
- Proportional control with a 0-10V signal.



Filter

- G4 class filter according to EN 779 standard
- Optional F7 class bag filter



Aluminum Heat Recovery Exchanger

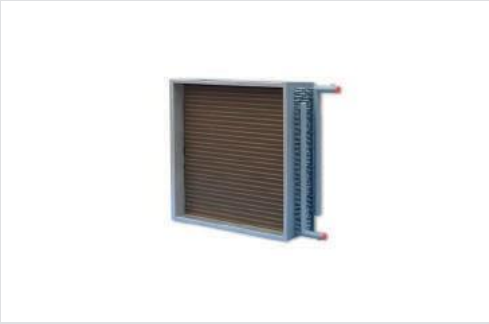
- Air-to-air heat recovery
- Min. 52% heat recovery efficiency
- High heat transfer, low pressure loss



HRU Standard Control Unit

- Manual and automatic fan speed control feature
- Heater control feature
- Failure reporting
- Ambient temperature thermostat.

Optional Components



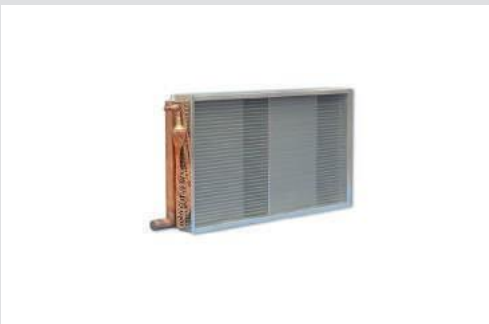
Water Cooler Heat Exchanger

- Components that ensure heat transfer from water to air with the movement of cold water running inside the coil.
- Designed for (6°C-10°C) , (7°C- 12°C) or other conditions according to water regime.
- Used with a drift eliminator as standard.
- Used with a double sloped insulated condensate tray made of stainless sheet as standard.



Water Heater Heat Exchanger

- Components that ensure heat transfer from water to air with the movement of hot water running inside the coil.
- Designed for (90°C-70°C), (80°C-60°C), (70°C-50°C), (60°C-40°C) or other conditions according to water regime.



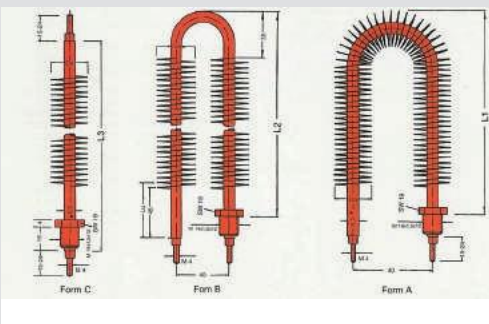
Gas Heat Exchanger (Dx)

- Used for air cooling and heating applications with condensing units (external unit).
- Design compatible with R410 coolant
- Used with a drift eliminator as standard.
- Used with a double sloped insulated condensate tray made of stainless sheet as standard.



Bypass Air Damper

- Plate frost protection
- Free-cooling operation
- IntegCapacityd damper control motor

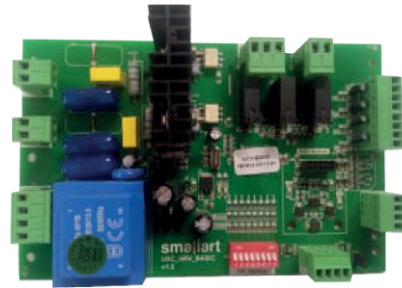


Electric Heater

- Heating equipment where the electrical energy is transmitted to air via heating coils.
- 380V and electric arcs with equal phase distributions come as standard.
- Manufactured according to the required capacity and number of steps.
- Comes standard with a mechanical safety thermostat.

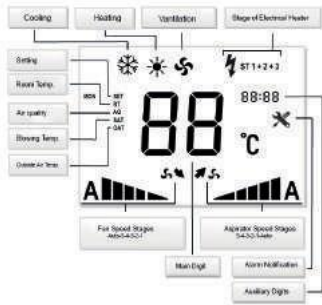
HRU Standard Control Unit

- » Manual and automatic fan speed control in AC motors
- » Capability of operating with an air quality sensor
- » Control and alarm for filter level
- » Heater control
- » Damper control
- » Operating with 7 different scenarios
- » Building automation or central computer connectivity with Modbus (RS485) connection
- » Product deactivation according to the information sent by the fire station
- » Failure reporting
- » Motor technical protection
- » Summer, winter ventilation position
- » Weekly scheduling
- » Temperature control via room control panel



HRU Pro Control Unit

- » Manual and automatic fan speed control in EC and AC motors
- » Capability of operating with an air quality sensor
- » Control and alarm for filter level
- » Compressor input and control
- » Heating and cooling control in Heat-Pump Products with 4-way valve control output
- » Heat recovery Rotary control
- » Temperature sensor input and automatic heater activation option
- » Preliminary heater control with outdoor air temperature sensor
- » Heater or valve control input
- » By-Pass damper control and exchanger frost protection
- » Operating with 13 different scenarios
- » Remote control with Modbus (RS485) connection
- » Product deactivation according to the information sent by the fire station
- » Failure reporting
- » Weekly scheduling
- » Temperature control via room control panel



- ⏻ ON/OFF — On/Off Switch
- ⚙️ MODE — Operation Mode Selection Switch
- 🌀 FAN — Fan Speed Selection Switch
- ▲ ▼ SET — Set Value Setting Switches



Air Unit Heater

content

Why Viacclimate?
Selection Chart

95 - 98



2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



Air
Circulation



Wired
Controller

Why ViaClimate?

Areas of Use

- Factory
- Workshop
- Gym
- Storage
- Garage



Air Unit Heaters increase the ambient temperature during winter and mid season in areas with high ceilings.



Advantages

- Can be integrated to the existing water heating system.
- Can be controlled individually with a room thermostat and a speed switch.
- Ensures air circulation.
- A practical solution that can be easily and quickly installed.
- Air blow direction can be adjusted thanks to the mobile air discharge grill.
- Lower initial investment cost compared to central heating systems.



Air Unit Heater

Selection Chart

VIACLIMATE Air Unit Heater			Air Input Temperature	Air Output Temperature	Air Input Temperature	Air Output Temperature
			10°C	35°C	15°C	38°C
Operating Conditions	Model	Blowing Capacity m ³ /h	Heating Capacity kcal/h		Heating Capacity kcal/h	
90-70°C	VAHA-70	900	5100		6600	
	VAHA-71	950	5400		7000	
	VAHA-72	1000	5650		7400	
	VAHA-73	1250	7100		9200	
	VAHA-74	1500	8500		11000	
	VAHA-75	2000	11400		14700	
	VAHA-76	2500	14200		18350	
	VAHA-77	3000	17000		22000	
	VAHA-78	4000	22700		29400	
	VAHA-79	5000	28400		36700	
80-60°C	VAHA-60	900	6200		7700	
	VAHA-61	950	6600		8200	
	VAHA-62	1000	6900		8600	
	VAHA-63	1250	8700		10700	
	VAHA-64	1500	10400		12900	
	VAHA-65	2000	13800		17200	
	VAHA-66	2500	17300		21400	
	VAHA-67	3000	20700		25700	
	VAHA-68	4000	27600		34300	
	VAHA-69	5000	34500		42800	
70-50°C	VAHA-50	900	7300		7700	
	VAHA-51	950	7700		8200	
	VAHA-52	1000	8200		8600	
	VAHA-53	1250	10200		10700	
	VAHA-54	1500	12200		12900	
	VAHA-55	2000	16300		17200	
	VAHA-56	2500	20300		21400	
	VAHA-57	3000	24400		25700	
	VAHA-58	4000	32500		34300	
	VAHA-59	5000	40600		42800	
60-40°C	VAHA-40	900	8400		9900	
	VAHA-41	950	8900		10500	
	VAHA-42	1000	9400		11000	
	VAHA-43	1250	11700		13800	
	VAHA-44	1500	14000		16500	
	VAHA-45	2000	18700		22000	
	VAHA-46	2500	23400		27500	
	VAHA-47	3000	28000		33000	
	VAHA-48	4000	37400		44000	
	VAHA-49	5000	46700		55000	

*Heating capacities according to the air input and output temperatures are as shown in the table.

* VIACLIMATE Air Unit Heater code VRHA has an Axial Fan.

Air Unit Heater

Selection Chart

VIACLIMATE Air Unit Heater			Air Input Temperature	Air Output Temperature	Air Input Temperature	Air Output Temperature
			10°C	35°C	15°C	38°C
Operating Conditions	Model	Blowing Capacity m ³ /h	Heating Capacity kcal/h		Heating Capacity kcal/h	
90-70°C	VRHA-70	900	5100		6600	
	VRHA-71	950	5400		7000	
	VRHA-72	1000	5650		7400	
	VRHA-73	1250	7100		9200	
	VRHA-74	1500	8500		11000	
	VRHA-75	2000	11400		14700	
	VRHA-76	2500	14200		18350	
	VRHA-77	3000	17000		22000	
	VRHA-78	4000	22700		29400	
	VRHA-79	5000	28400		36700	
80-60°C	VRHA-60	900	6200		7700	
	VRHA-61	950	6600		8200	
	VRHA-62	1000	6900		8600	
	VRHA-63	1250	8700		10700	
	VRHA-64	1500	10400		12900	
	VRHA-65	2000	13800		17200	
	VRHA-66	2500	17300		21400	
	VRHA-67	3000	20700		25700	
	VRHA-68	4000	27600		34300	
		VRHA-69	5000	34500		42800
70-50°C	VRHA-50	900	7300		7700	
	VRHA-51	950	7700		8200	
	VRHA-52	1000	8200		8600	
	VRHA-53	1250	10200		10700	
	VRHA-54	1500	12200		12900	
	VRHA-55	2000	16300		17200	
	VRHA-56	2500	20300		21400	
	VRHA-57	3000	24400		25700	
	VRHA-58	4000	32500		34300	
		VRHA-59	5000	40600		42800
60-40°C	VRHA-40	900	8400		9900	
	VRHA-41	950	8900		10500	
	VRHA-42	1000	9400		11000	
	VRHA-43	1250	11700		13800	
	VRHA-44	1500	14000		16500	
	VRHA-45	2000	18700		22000	
	VRHA-46	2500	23400		27500	
	VRHA-47	3000	28000		33000	
	VRHA-48	4000	37400		44000	
	VRHA-49	5000	46700		55000	

* Heating capacities according to the air input and output temperatures are as shown in the table.

* VIACLIMATE Air Unit Heater code VRHA has a Radial Fan.

Shelter Ventilation System content

Why Viaclimate?
General Features
Selection Chart
Electrical Automation

99-102



2 Year
Warranty



After Sales
Service



Quick
Service



Easy
Installation



Air
Circulation



Wired
Controller

Why ViaClimate?

Effective Filtration

- Under normal conditions, the shelter is provided with filtered fresh air, using a G4 filter, thanks to the By-Pass air damper which comes standard with the Shelter Fresh Air Handling Unit.
- In cases of potential danger; G4, Active Carbon Filter, Nuclear HEPA Filter will be used.
- The air is cleansed of all toxic gases and contaminating particles thanks to the lead separator and lead lining on interior panels, which can be purchased optionally.



Double Mode Operation

- The emergency and regular dampers of the Shelter Unit have spring-loaded return mechanism and ON/OFF control.
- The relevant damper position is opened according to the operating mode of the Product (regular time, danger conditions).
- Viaclimate electrical automation department provides double mode operation control services.



Protection from Nuclear Attacks

- Viaclimate shelter units utilize nuclear-type filters.
- Specially designed by Viaclimate engineers to protect you from the sudden (light, heat, pressure, initial radiation) and residual fallout effects of nuclear weapons and weapons of chemical and biological warfare.

Shelter Ventilation System

General Features

Case Structure

- Unit type according to EN1886 standards
- Two different designs according to air flow Capacity
- 60mm double-walled panels
- 90 kg/m³ A1 class rock wool
- By-Pass aluminum air damper

Radioactive Hepa Filter

- H13 class, resistant against high temperatures
- Filters out even radioactive materials thanks to its superior filtration capabilities
- Galvanized sheet Case

Moving Mechanism

- Back sloping, high-performance, V-belt drive fan
- AC motor of IE2 or IE3 energy class

Lead Separator

- Reduces the effects of harmful X rays, IP20 or IP21 protection class
- Lead separator panels



G4 Filter

- G4 class according to EN 779 standard
- SepaCapacitys coarse and finer particles
- Galvanized sheet Case

Active Carbon Filter

- Molecular filtration according to EN 779 standard
- Holds foul odors and toxic gases
- Galvanized sheet Case

Shelter Ventilation System

Selection Chart

VIACLIMATE Shelter Unit		Duct Type **			Handling Unit Type ***					
		SSV 400	SSV 850	SSV 1700	SSV 3400	SSV 5100	SSV 6800	SSV 7650	SSV 10200	
Air Flow Capacity	m ³ /h	400	850	1700	3400	5100	6800	7650	10200	
Exterior Static Pres-sure	Pa	350	350	400	400	350	350	350	350	
Roughing - Active Carbon - Radioacti-ve Filter	mm	305x305	305x305	305x610	610x610	610x915	610x1220	915x915	915x1220	
Lead Separator *	mm	305x305	305x305	305x610	610x610	610x915	610x1220	915x915	915x1220	
Total Product Power	kW	0,37	0,75	1,5	3	4	5,5	5,5	7,5	
Product Power Input	V/Ph/Hz	400 / 3 / 50								
Product Dimensions	Height	mm	550	550	550	832	832	832	1138	1138
	Width	mm	550	600	650	732	1038	1344	1038	1344
	Length	mm	800	850	900	2500	2610	2610	2760	2950

* Lead separator comes as optional.

** Duct type shelter units are self motorized and have directly coupled fans.

*** Handling Unit type shelter units have double-suction, thin-bladed fans.

Lead plating on the interior surfaces of the Products is optional in Shelter Units.

Electrical Automation

Viaclimate Shelter Ventilation Unit Electrical Automation control features

- » MCC and DDC panel design from a single control point
- » Double mode operation
- » Air flow Capacity adjustment with frequency inverter
- » Filter contamination warnings
- » Capability of operating in conjunction with an air quality sensor
- » Modbus (RS485) communication protocol
- » Operation time scheduling

Exhausted Unit and Ventilator content

Why Viaclimate?
Products Overview
Selection Chart
General Features
Electrical Automation

103 - 108



2 Year Warranty



After Sales Service



Quick Service



Easy Installation



Air Circulation



Wired Controller

Why ViaClimate?

High Energy Efficiency



- Viaclimate Exhausted Units are manufactured using AC or EC motors of IE3 or higher classes, as per the ERP 2018 regulations.
- V-belt drive fans, plug fans or EC motor fans used in our Products ensure high energy efficiency.
- Has a modern Case, structure and static, dynamic balance settings in order to secure high efficiency and energy savings.



Ventilation

- Used for the purpose of meeting the fresh air demands, ensuring air circulation and maintaining the correct ambient pressure in ventilation and air conditioning systems.
- Optional filter groups filter out the air sent indoors by the fresh air line and meet fresh air requirements.



Flexible Areas of Use

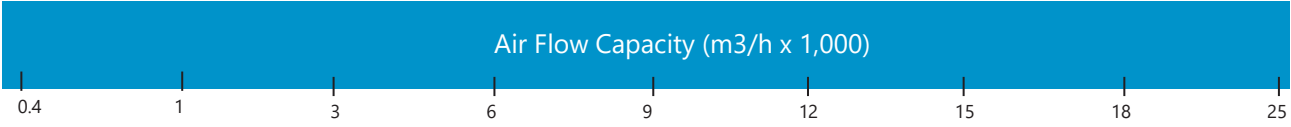
- Areas of use: offices, cafeterias, markets, restaurants, meeting rooms, shopping malls, banks, hospitals, kitchens, industrial facilities etc.
- Wet areas.

Quality Standards

- Featuring low or high suction and blowing capacities in order to clean the environmental air in locations that do not require heating and cooling, according to the physiological features of the environmental air to be used, our Products are manufactured at a high quality level.



Products Overview



Air flow Capacity chart is intended for visual and informative purposes.

Exhausted Units and Ventilators

Selection Chart

VIACLIMATE Caseular Fans		AIRBOX AC 25	AIRBOX AC 40	AIRBOX AC 60	AIRBOX AC 80	AIRBOX AC 100	AIRBOX AC 120	AIRBOX AC 150	AIRBOX AC 180	AIRBOX AC 200	
Air Flow Capacity	m ³ /h	2500	4000	6000	8000	10000	12000	15000	18000	20000	
Exterior Static Pressure	Pa	300	300	350	500	350	750	500	350	350	
Fan Type	Thick/Thin	7-7/225R	9-9/250R	12-9/280R	12-12/315R	15-15/355R	15-15/400R	18-18/450R	500R/500R	500R/500R	
Total Product Power	kW	0,75	1,1	2,2	2,2	3	4	5,5	5,5	7,5	
Product Power Input	V/Ph/Hz	400 / 3 / 50									
Product External Dimensions	Height	mm	832	832	985	1138	1291	1444	1444	1597	1750
	Width	mm	732	732	885	1038	1191	1344	1344	1497	1650
	Length	mm	910	910	1060	1060	1210	1210	1360	1510	1510

VIACLIMATE EC Caseular Fans		AIRBOX EC 25	AIRBOX EC 40	AIRBOX EC 60	AIRBOX EC 80	AIRBOX EC 100	AIRBOX EC 120	AIRBOX EC 150	AIRBOX EC 180	
Air Flow Capacity	m ³ /h	2500	4000	6000	8000	10000	12000	15000	18000	
Exterior Static Pressure	Pa	300	500	450	500	350	750	500	350	
Fan Type	mm	Ø250	Ø310	Ø355	Ø400	Ø400	Ø450	Ø500	Ø560	
Total Product Power	kW	0,5	1,23	1,9	2,5	3,35	5,25	5,7	5	
Product Power Input	V/Ph/Hz	220/1/50		400/3/50						
Product External Dimensions	Height	mm	832	985	985	1138	1291	1444	1444	1597
	Width	mm	732	885	885	1038	1191	1344	1344	1497
	Length	mm	732	885	885	1038	1191	1344	1344	1497

VIACLIMATE Duct Type Fans		VKY 190	VKY 225	VKY 250	VKY 280	VKY 355	VKY 400	VKY 450L	VKY 450H	
Air Flow Capacity	m ³ /h	395	865	1250	1440	1740	3315	4725	6000	
Exterior Static Pressure	Pa	100	100	100	100	100	100	100	100	
Total Product Power	W	60	135	230	230	210	430	800	1100	
Product Power Input	V/Ph/Hz	220/1/50							400/3/50	
Product External Dimensions	Height	mm	150	200	200	250	350	400	500	500
	Width	mm	300	400	400	500	600	700	800	850
	Length	mm	400	400	400	600	700	800	900	900

VIACLIMATE Roof Type Fans		VCY 190	VCY 225	VCY 250	VCY 280	VCY 355	VCY 400	VCY 450L	VCY 450H	
Air Flow Capacity	m ³ /h	405	870	1280	1510	1780	3340	4760	6040	
Exterior Static Pressure	Pa	100	100	100	100	100	100	100	100	
Total Product Power	W	60	135	230	230	210	430	800	1100	
Product Power Input	V/Ph/Hz	220/1/50							400/3/50	
Product External Dimensions	Height	mm	300	300	300	380	380	450	480	480
	Width	mm	300	300	350	350	450	600	700	700
	Length	mm	300	300	350	350	450	600	700	700

The exterior static pressure losses of the Exhausted Unit designs carried out according to air flow Capacities are at the maximum level.

Exhausted Units and Ventilators

General Features

Case Structure

- Designed according to EN1886 standards.
- Double-walled, sound-insulated units. 60mm panel thickness,
- 90 kg/m³ A1 class rock wool.
- Aluminum profile Case with heat bridge.
- Straight case design

Fan

- EC
- Plug
- EC Radial
- Double Inlet
- Double Inlet (Back Sloping)
- Ex-proof



Filter

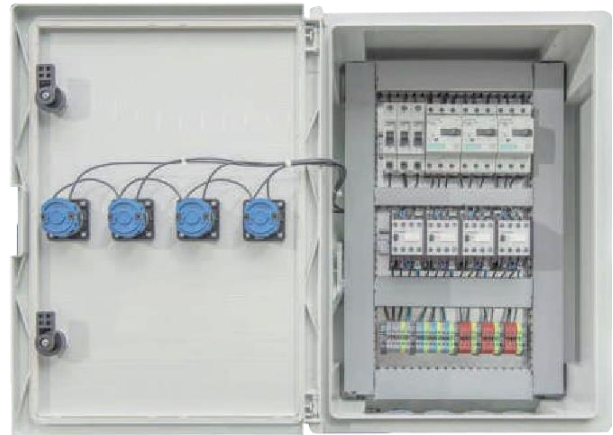
- G2 - G4 Panel
- M5 - F9 Bag
- Panel Carbon

Optional Accessories

- Air Damper
- Thermal Pacco Switch
- Emergency Stop
- Internal Lighting
- Door Switch
- Roof Sheet
- Hood
- MCC Control Panel
- ...

MCC Panel Control

- Fixed frequency (Star)
- Fixed frequency (Delta)
- Fixed frequency (Star-Delta)
- Variable frequency (With frequency inverter)
- Pacco switch
- Warning lights



DDC Panel Control

- Differential pressure switch
- Fark-Pressure sensor
- Air quality sensor
- Damper motor
- Frequency inverter
- Emergency Stop



Technical Service Tracking Chart

TECHNICAL SERVICE TRACKING CHART				
	3-MONTH	4-MONTH	6-MONTH	ANNUAL
Air Handling Unit		✓		
Hygienic Air Handling Unit	✓			
Pool Dehumidification Unit	✓			
Heat-Pump Air Handling Unit	✓			
Rooftop Packaged Air Handling Unit	✓			
Kitchen Exhaust and Air Hand-ling Unit	✓			
Ceiling Type Heat Recovery Units			✓	
Exhausted Unit / Ventilator				✓
Shelter Ventilation System				✓
Air Unit Heater				✓
<p>Periodic maintenance will be performed on the products commissioned by VIACLIMATE Technical Service Personnel in order to ensure continuous system efficiency and to prevent any loss of performance in the long term.</p>				
3-MONTH	<p>Periodic maintenance that encompasses Hygienic Air Handling Units, Pool Dehumidification Units, Packaged Heat-Pump Air Handling Units, Rooftop Packaged Air Handling Units, Kitchen Exhaust and Air Handling Units. Includes the general inspection of the operational mecha-nisms of the product; Filter cleaning and, if necessary, replacement; Inspection of power supplies.</p>			
4-MONTH	<p>Periodic maintenance that encompasses Air Handling Units. Includes the inspection of operational mechanisms that vary according to the moving parts; inspection and, if necessary, the replacement of belt-and-pulley mechanisms; inspection and, if necessary, replacement of air filters; inspection of power supplies.</p>			
6-MONTH	<p>Maintenance that encompasses Ceiling Type Heat Recovery Units. Includes the inspection of exchangers; Filter cleaning and, if necessary, replacement; inspection of moving parts and power supplies.</p>			
ANNUAL	<p>Maintenance that encompasses the Exhausted Unit / Ventilator, Shelter Ventilation System, Air Unit Heaters. Includes the general inspection of the products; inspec-tion and, if necessary, replacement of moving parts; Filter cleaning and, if necessary, replacement.</p>			
<p>*The content of the periodic maintenance procedures to be carried out by VIACLIMATE technical personnel may vary depending on the product</p>				
<p>**Since the products that have not been commissioned by VIACLIMATE technical personnel or products for which periodic maintenance procedures have been omitted will not be covered within the scope of product warranty, we as VIACLIMATE recommend that the periodic maintenance of the products is performed in a timely manner.</p>				



- In performing their service duties, VIACLIMATE Technical Service Teams aim to look out for the safety of the customer, ensure customer satisfaction and continuously expand our service network with our references.
- With our services, we ensure that our Products have longer and more efficient service lives by selecting all spare parts in accordance with the standards.

Your Notes

Your Notes



KERİMLER KLİMA A.Ş.

Factory

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