

### QUALITY:

» Eurovent-certified casing: T2, TB2, L1, D1, F9

### COMPACT CASING:

- » Casing material Magnelis® (magnesium-zinc coating)
- » Mineral wool insulation panel thickness: 50 mm
- » Mechanically poured gasket

### **HIGH EFFICIENCY:**

- » Rotary heat exchanger: condensing or sorption
- » HEX counterflow heat exchanger: aluminium
- » Highly efficient fan sets with electronically commutated (EC) motors

### **COMPACT SIZE:**

- » Ability to move the unit through a 900 mm door
- » Air handling unit base configuration: heat recovery, fan sets, filters, heater (optional)
- » Number of sections:
  - Sizes VVSA11-22 RRG and HEX one section
  - Sizes VVSA29-56 RRG two sections
  - Sizes VVSA29-40 HEX three sections

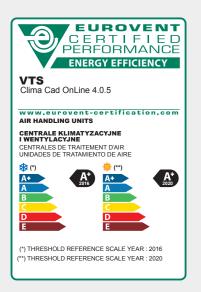
### EASY TO MAINTAIN AND CLEAN:

- » Access to the unit from both sides
- » Easy access for cleaning fan sets and heat exchangers

### **CONTROLS**:

- » Multifunctional controls integrated with the unit
  - configured and ready to operate (Plug&Play)
- » mHMI application available as standard on the unit
- » Possibility of remote management when connected to the VTS cloud

### CERTIFICATES



Casing parameters compliant with EN1886 standard	Class
Thermal bridging	TB2
Thermal transmittance	T2
Casing air tightness	L1
Mechanical properties	D1
Filter tightness	F9



**VENTUS Platinium** AHUs are compliant with the requirements of the **Ecodesign 1253/2014** directive.



### VENTUS Platinium AHUs are manufactured in accordance with:

- » ISO 9001 certificate
- guarantees full repeatability of production of the AHUs
- » ISO 14001 certificate
- confirms effective environmental management



#### **VENTUS Platinium** AHUs are **CE certified**:

» a declaration of conformity with European standards concerning the safety of equipment operation and requirements for electromagnetic compatibility



#### **PANELS**

- » Panels made of mineral wool, double-sided coated with metal sheet with zinc-magnesium coating - Magnelis®
- » Corrosion class: C5
- » Panel thickness: 50 mm
- » Thermal insulation: mineral wool



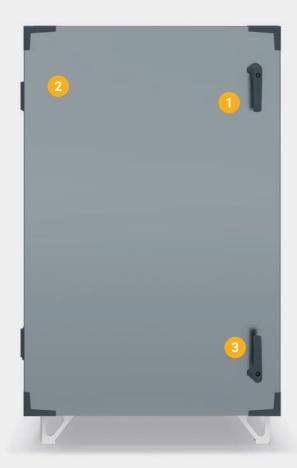
#### **POURED GASKET**

- » High tightness of inspection panels achieved through the use of a poured gasket
- » Continuity of the gasket along the entire length
- » Microbiological neutrality



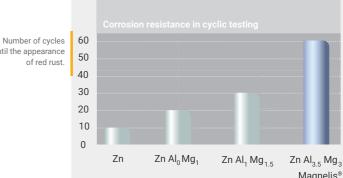
#### **DOOR HANDLES**

- » Easy access to panel components
- » Adjustable roller pressure ensures that the panels remain sealed during the life of the air handling unit



### **BENEFITS of Magnelis**<sup>®</sup>:

- » Exceptional corrosion resistance
- magnesium in the coating forms a stable protective layer on the steel surface, allowing long-term protection in harsh environments
- » Self-repairing properties the presence of magnesium supports coating regeneration
- » Environmentally friendly reduced zinc content

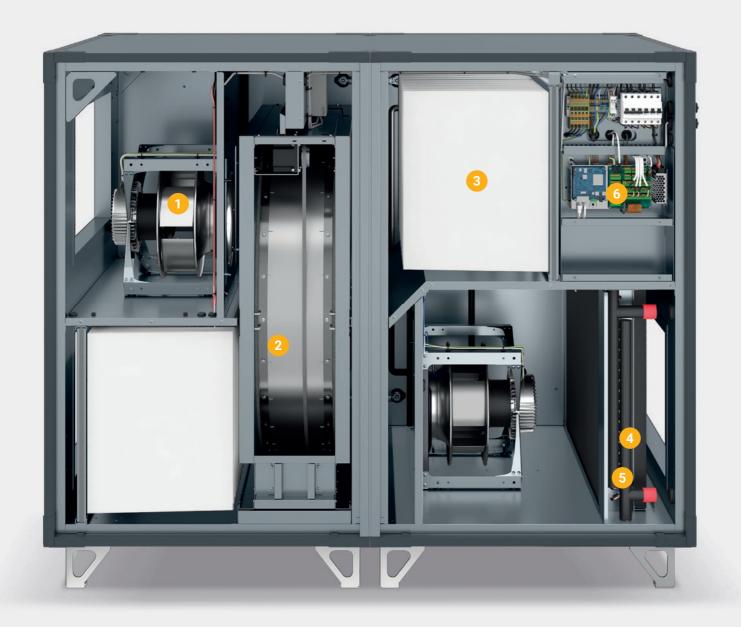


10 µm of coating submitted for an alternated cycling of 8 hours fog cycle (5% NaCl) / dry cycle / humidity cycle.

Source: ArcelorMittal Global R&D

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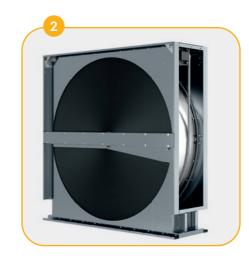
# AIR HANDLING UNITS WITH ROTARY HEAT EXCHANGER





### **FAN SET**

» Efficient, quiet fan with high-efficiency EC motor of IE4 class



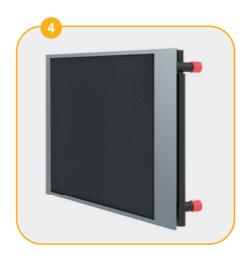
### **ENERGY RECOVERY**

- » Rotary heat exchanger: condensation or sorption
- » Up to 90% heat recovery efficiency
- » Adjustable cleaning sector angle



### **FILTERS**

- » Filter type pocket filters
- » Filtration class: ePM10 50% - ePM1 80%
- Gasket on the frame ensures high level of tightness



## WATER HEATER (BUILT-IN)

- » Number of rows 1 or 2
- » Easy to clean exchanger
- » Easy to service



# ELECTRIC HEATER (BUILT-IN)

- » Heater power from 3 to 21 kW (depending on unit size)
- » Dual protection level in the power circuit
- » Smooth adjustment across the full power range
- » Ease of maintenance



### **CONTROLS**:

- Multifunctional controls integrated with the unit
   configured and ready to operate (Plug&Play)
- » Ability to connect service devices without opening the unit
- » Remote servicing capability via Ethernet, Wi-Fi, Bluetooth, GSM

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# AIR HANDLING UNITS WITH COUNTERFLOW HEAT EXCHANGER





### **FAN SET**

» Efficient, silent fan with high efficiency EC motor of IE4 class



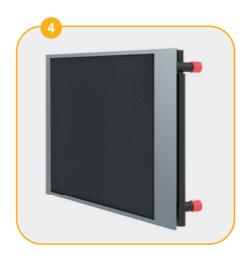
### **ENERGY RECOVERY**

- » High efficiency hexagonal counterflow heat exchanger with bypass
- » Material aluminium
- » Up to 90% efficiency
- » Operating temperature range: -40°C to +90°C



### **FILTERS**

- » Filter type pocket
- » Degree of filtration: ePM10 50% - ePM1 80%
- » Gasket on the frame ensures high level of tightness



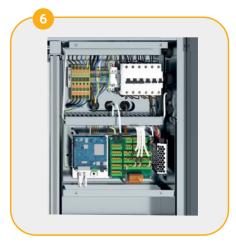
## WATER HEATER (BUILT-IN)

- » Number of rows 1 or 2
- » Easy to clean exchanger
- » Easy to service



# ELECTRIC HEATER (BUILT-IN)

- » Heater power from 3 to 21 kW (depending on unit size)
- » Dual protection level in the power circuit
- » Smooth adjustment across the full power range
- » Ease of maintenance



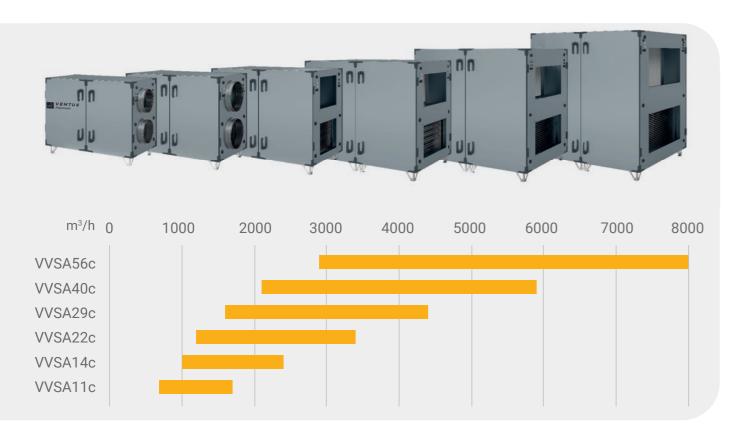
### **CONTROLS**

- Multifunctional controls integrated with the unit
   configured and ready to operate (Plug&Play)
- » Ability to connect service devices without opening the unit
- » Remote servicing capability via Ethernet, Wi-Fi, Bluetooth, GSM

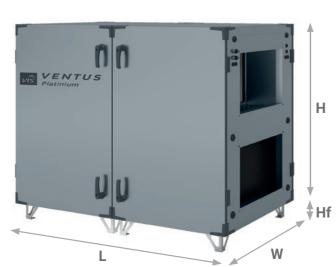
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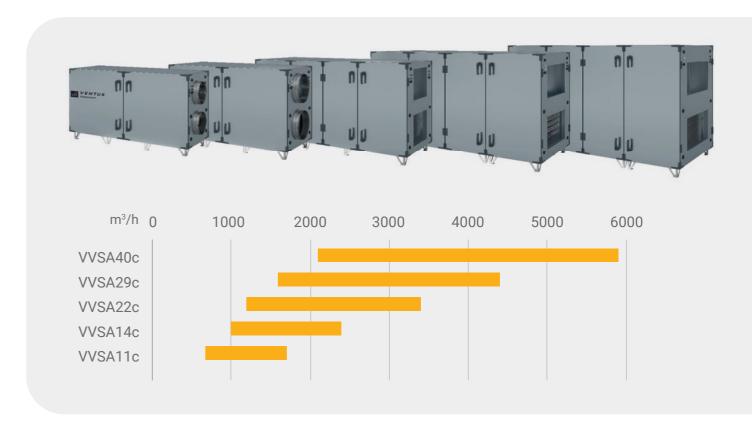
# AIR HANDLING UNITS WITH ROTARY HEAT EXCHANGER

# AIR HANDLING UNITS (WITH COUNTERFLOW HEAT EXCHANGER

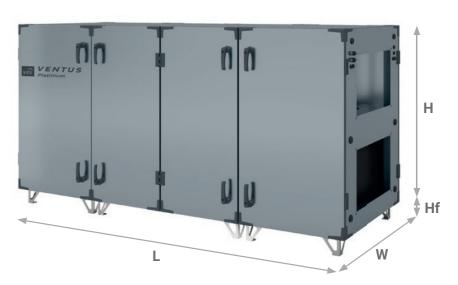


Size	Min. air flow	Max. air flow	Height *	Width	Length	Connection diameter	Connection height	Connection width	Frame height
	m³/h	m³/h	mm	mm	mm	mm	mm	mm	mm
VVSA11c	680	1700	962	750	1385	315	-	-	120
VVSA14c	1000	2400	1062	865	1490	400	-	-	120
VVSA22c	1200	3400	1175	947	1605	-	400	500	120
VVSA29c	1600	4400	1330	1124	1752	-	400	700	120
VVSA40c	2100	5900	1478	1284	1752	-	400	800	120
VVSA56c	2900	8000	1718	1514	1752	-	500	1000	120





Size	Min. air flow	Max. air flow	Height *	Width	Length	Connection diameter	Connection height	Connection width	Frame height
	m³/h	m³/h	mm	mm	mm	mm	mm	mm	mm
VVSA11c	680	1700	962	750	2000	315	-	-	120
VVSA14c	1000	2400	1062	865	2000	400	-	-	120
VVSA22c	1200	3400	1175	947	2540	-	400	500	120
VVSA29c	1600	4400	1330	1124	2811	-	400	700	120
VVSA40c	2100	5900	1478	1284	2811	-	400	800	120



<sup>\*</sup> The height of the unit does not include the height of the frame

### ADDITIONAL AIR HANDLING FUNCTIONS

### » UNITS WITH ROTARY AND COUNTERFLOW HEAT EXCHANGER



#### ADDITIONAL PROTECTION AGAINST EXTERNAL CONDITIONS:

- » roof over base unit and extensions
- » cover on air dampers actuator

### Available additional features: duct silencer, freon cooler, water cooler.

			VVSA11c	VVSA14c	VVSA22c	VVSA29c	VVSA40c	VVSA56c
Silencer	Length	mm	300/1000	300/1000	1065	1065	1065	1065
Freon cooler	External width	mm	630	750	794	910	1070	1300
	External height	mm	410	460	584	662	736	856
	Length	mm	540	540	771	771	771	771
Water cooler	External width	mm	630	750	794	910	1070	1300
	Outside height	mm	410	460	584	662	736	856
	Length	mm	540	540	718	718	718	718

### EQUIPMENT SERVICING

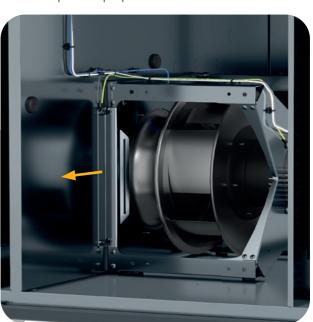
Heat recovery system accessible from both sides for servicing and cleaning.



Connecting service equipment without opening the unit.



Easy disassembly of fan sets assemblies for servicing and inspection purposes.



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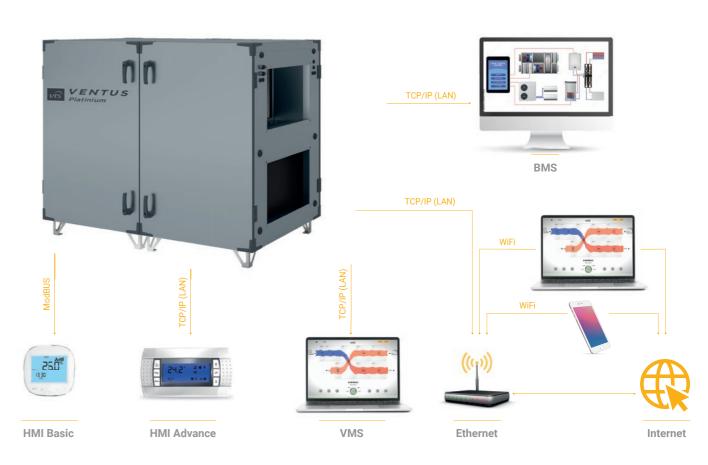
### VMS - VENTUS MANAGEMENT SYSTEM

**VTS** provides control automation with a factory-implemented application enabling remote monitoring and management of the air handling unit's operating parameters in real time using a web browser run on any mobile device.

#### **VENTUS MANAGEMENT SYSTEM:**

- » Display of visualizations on various devices from computers to mobile devices
- Monitoring and management of a larger number of devices from the open visualisation of a single control panel
- » Easy and intuitive change of the device mode via a central button
- » Tools to support easy and quick setup of the device's optimal operating schedule





## ADDITIONAL PROTECTION AGAINST EXTERNAL CONDITIONS

- » Additional protection of the connection point to the main
- » Additional casing for damper actuators



### **3** EXTERNAL COMMUNICATION PORTS

Connecting to the controller without opening the unit



### **CONTROLS**

- » Positioned in the exhaust air path, which prevents condensation on controls components
- » Multifunctional controls integrated with the unit - configured and ready to operate (Plug&Play)
- » Ability to connect service devices without opening the unit
- » Remote servicing capability via Ethernet, Wi-Fi, Bluetooth, GSM



### DEDICATED AIR-HANDLING MEASUREMENT BOARD

- » Optimised connections inside the air handling unit
- » Active filter contamination measurement
- » Continuous air volume (CAV) control
- » Exhaust air temperature and humidity measurement

VTS CLOUD

VTS Group provides the mHMI application, which enables commissioning, monitoring of operation and management of parameters of VENTUS compact and modular air handling units. The application can be downloaded from the Google Play and AppStore.



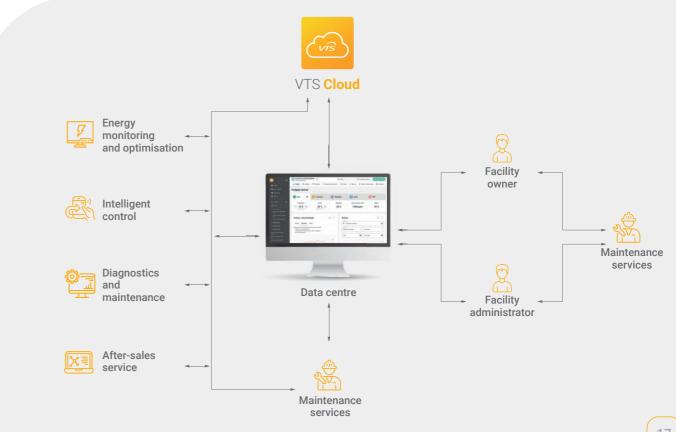
The app connects to the air handling unit using GSM technology (VTS Cloud) or Bluetooth, depending on the user's preference.



Meeting the expectations of its customers, VTS Group has created its own cloud solution called VTS Cloud. It is dedicated to compact and modular units with VTS Group automation

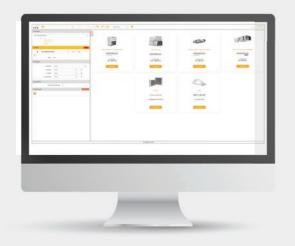
### The most important benefits from using VTS Cloud are:

- » Energy monitoring and optimisation VENTUS AHUs connected to VTS Cloud enable continuous monitoring of energy consumption, allowing trends and areas that can be optimised for energy savings to be identified.
- » Intelligent control With VTS Cloud, the control of VENTUS air handling units can be made more intelligent and adapted to changing conditions. Algorithms process the operating data of the units, allowing them to be adjusted for optimum comfort and efficiency.
- » Diagnostics and maintenance VTS Cloud allows remote diagnostics and monitoring of the health of the air handling unit, enabling a rapid response to failure. Users also receive direct information about the need to replace consumable elements, such as filters, with a redirection to the VTS Group online store.
- » Cooperation with BMS VTS Cloud-supported devices enable the connection to be configured and thus simultaneously connected to the cloud without losing the connection of the control panel to the local BMS. This allows both local use of the control panel data and all remotely offered VTS Cloud services.



### CLIMACAD ONLINE 4.0 (CCOL 4)





- » Free configuration
- » Built-in savings calculator
- » Intuitive step-by-step selection assistant
- » Integration with CRM, ERP, WMA systems

### **CCOL4 OPTIMAL FOR:**

» any browser











» any operating system







» any device



### **DATA EXPORT TO:**

















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