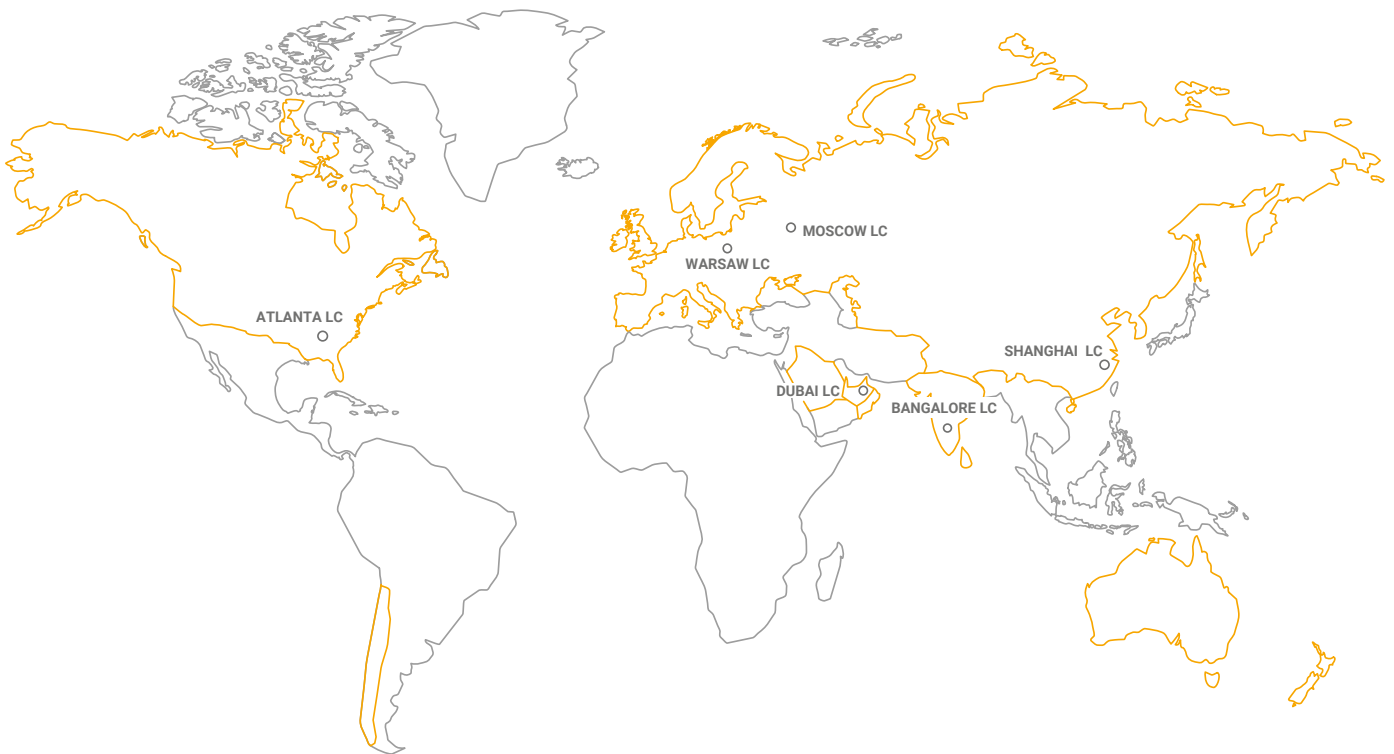




VTG AMERICA COMPANY PROFILE 2019







01

VTG GROUP

- 1.1 VTS: no. 1 worldwide
- 1.2 3 constituents of success



02

DESIGNER SUPPORT

- 2.1 ClimaCAD Online 4.0 [CCOL 4]
- 2.2 VTS BIM



03

PRODUCT

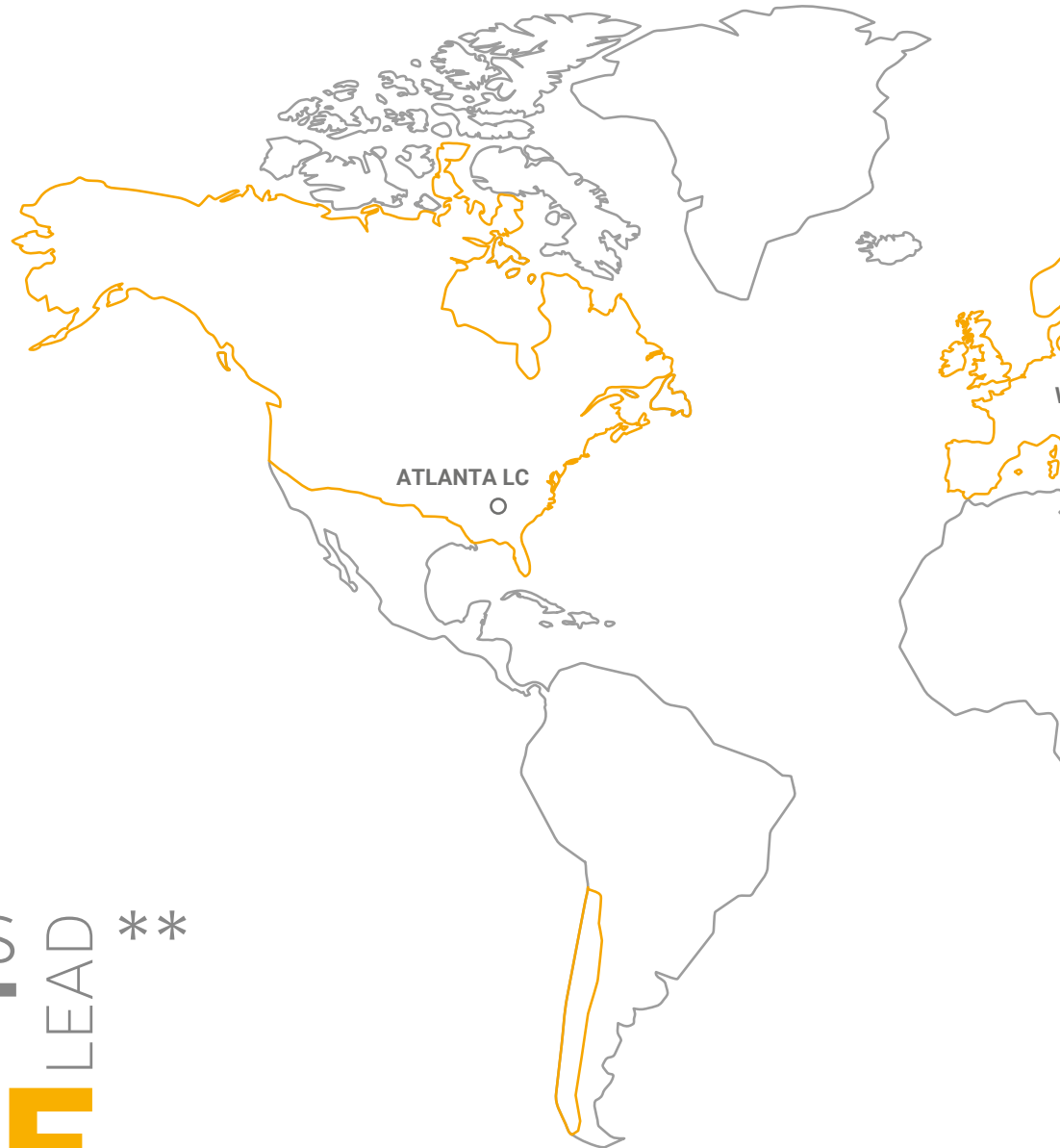
- 3.1 AVS
- 3.2 DESIGN
- 3.3 AIR TIGHTNESS
- 3.4 ROOFTOP APPLICATIONS
- 3.5 VENTUS KEY COMPONENTS
- 3.6 WING
- 3.7 VOLCANO



04

REFERENCE FACILITIES

VTS GROUP – is a manufacturer of technologically advanced equipment for the HVAC Sector; using innovative technologies in the spheres of project research, production and logistics.



MARKET'S **BEST** LEAD **TIME** **

* Logistics center

** Factory will confirm lead time based on the units selected.



OUR MISSION

AHU#1





THE 3 ELEMENTS OF SUCCESS

Consistently superior product quality. Unbeatable market prices. The shortest lead time. These three elements of market policy ensure that VTS is always one step ahead, in every region of the world.

Following the proven assembly method of the automotive Industry, VTS created a network of 6 efficiently functioning logistics centers: **Atlanta, Dubai, Moscow, Shanghai, Warsaw and Bangalore**. Thereby guaranteeing the shortest delivery terms in the market, regardless of the region in the world.

Mass scale production of reproducible devices makes it possible for VTS to offer our product at the **most competitive price while retaining the best quality**.

Multilevel quality control systems enables VTS to offer a **2 year optional warranty for each unit**.

MARKET'S
BEST LEAD
TIME

6 LOGISTICS
CENTERS

\$ competitive
price

110 000
UNITS
SOLD ANNUALLY

Q the highest
quality

2 optional warranty
YEARS FOR EACH
UNIT





ClimaCAD Online 4.0 [CCOL 4]

Customized
configuration

User friendly
interface



Fast&Easy
selection

Integrated with CRM,
ERP, WMA system

CCOL 4 IS ADJUST TO

» all browsers



» all operating system



» all devices



DATA EXPORT TO

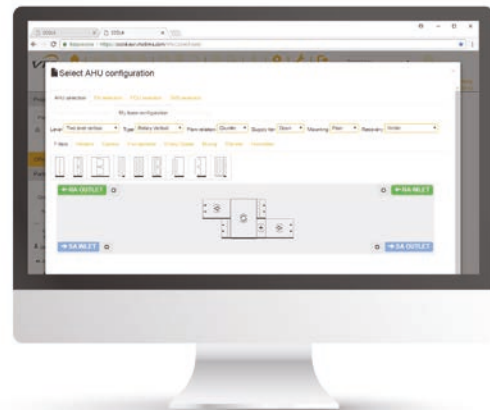




CCOL 4.0 uses the latest technology and development platforms, which will be accessible from anywhere in the world through our software as service models. All you need is a device with a web browser and access to the internet.

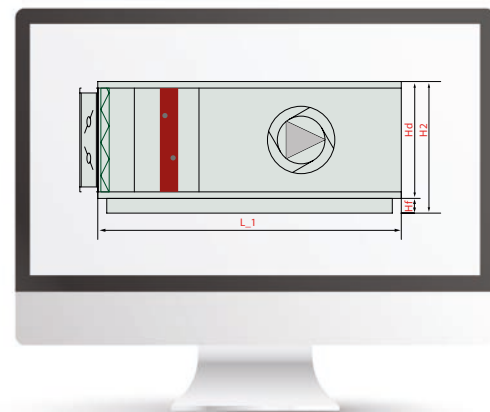
THE VERSATILITY OF DESIGNING

- » unlimited number of device configurations
- » detection of illogical configurations



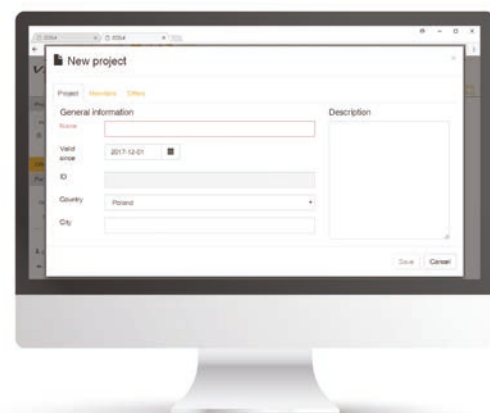
DYNAMIC COUNTING OF DEVICES DIMENSIONS

- » CCOL offers the optimal length of the control panel and the optimal section length adapted to the device functions and device design



MANAGING YOUR OWN DATABASE

- » the possibility of creating your own project database (selection)
- » the possibility of exporting own selections to quotation by VTS technical engineers



VTS BIM - a new approach to digital models of air-handling units

VTS has created the possibility of generating digital models of VENTUS VVS and American VENTUS air-handling models on-line. This is possible thanks to the implementation of a new ClimaCAD OnLine 4.0 selection tool, equipped with .rfa (Revit®) files generator.



The process of model generation comes down to the following **3 steps**:

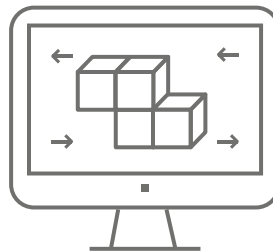


1

Login to CCOL 4.0 website

Login to the CCOL 4.0 using the following web address:

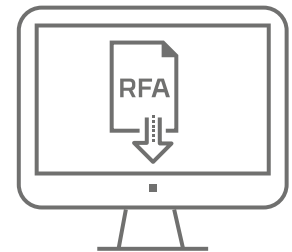
www.ccol4.com



2

Unit configuration

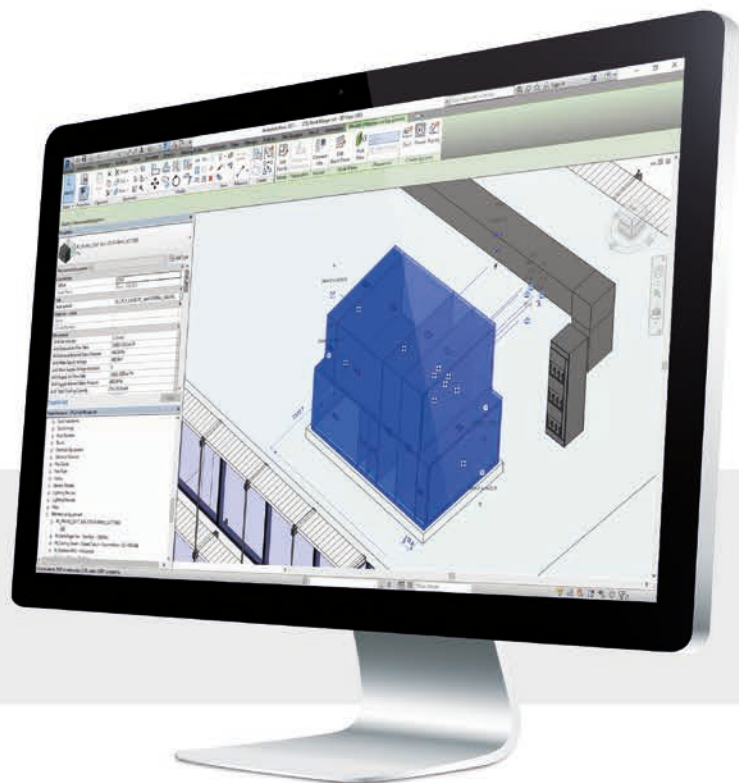
Use the intuitive selection tool to select your Air Handling Unit and set its working parameters to fit the specified project demands.



3

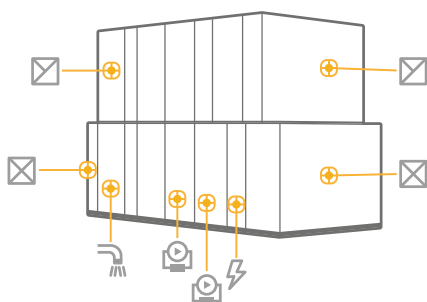
Data export to .rfa file

In order to generate a model in .rfa file, it is enough to enter the name and surname plus the email address of the person dedicated to receive the file. The system will automatically send a link to download the model. The entire process lasts approximately 15 minutes.



The release of families for the Autodesk Revit® environment by VTS makes it easier to design agencies for model the building installations on the basis of using the same platform. At present the on-line generator is a unique solution in BIM environment. It enables the generation of a VENTUS air-handling unit model practically in no time in any configuration and with any parameters.

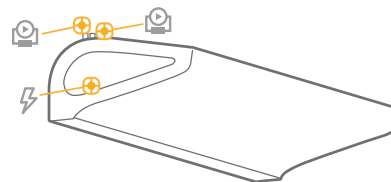
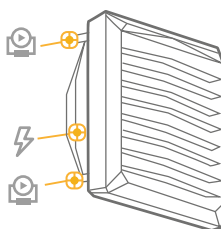
As a result, the client receives:



The generated objects contain detailed parameters connectors:

- » **air systems,**
- » **hydraulic systems,**
- » **sanitary systems,**
- » **electric systems,**

as well as the complete dimensional data, the device **maintenance** zone and the service (**repair**) zone.



VTS also provides digital models of WING air curtains and VOLCANO heating units.

The models contain:

- » **parametrized electric and hydraulic connectors,**
- » **mount options vertically and horizontally,**
- » **presentation of the range of air stream,**
- » **parameter of any inclination angle of a heater in relation to the horizontal plane.**

Models can be downloaded from: <http://vtsgroup.us/vtsbim.html>



American
VENTUS

AVS



from **800 CFM**
to **38 000 CFM**
in total **capacity**



**premium efficiency motors
energy recovery system:**

- cross-flow plate
- energy wheel



2 000 h
salt spray test
resistance
on the external coating

right or left hand
inspection site

fully assembled unit
or delivered by
sections



inlet and outlet
locations

2 inch polyurethane
sandwich panels
which eliminates
thermal bridges





AVS LITE



from **800 CFM**
to **4 000 CFM**
in total **capacity**



premium efficiency motors energy recovery system:

- cross-flow plate
- energy wheel



2 000 h
salt spray test
resistance
on the external coating



from **800 CFM**
to **4 000 CFM**
in total **capacity**



premium efficiency motors



2 000 h
salt spray test
resistance
on the external coating

right or left hand
inspection site

factory
assembled unit

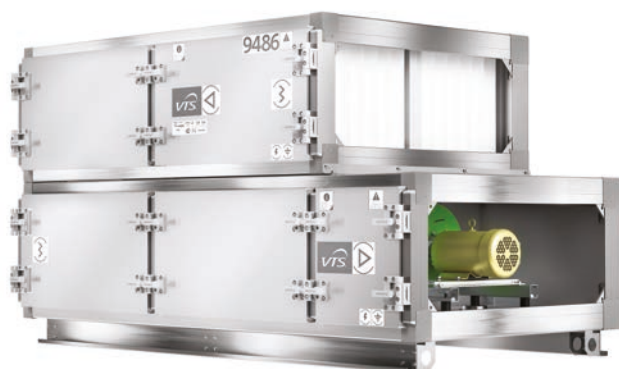
right or left hand
inspection site

inlet and outlet
locations

horizontal
or vertical
configurations.

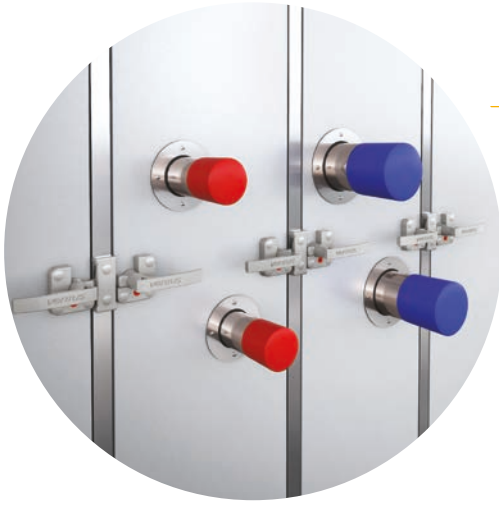
2 inch polyurethane
sandwich panels
which eliminates
thermal bridges

inlet and outlet
locations



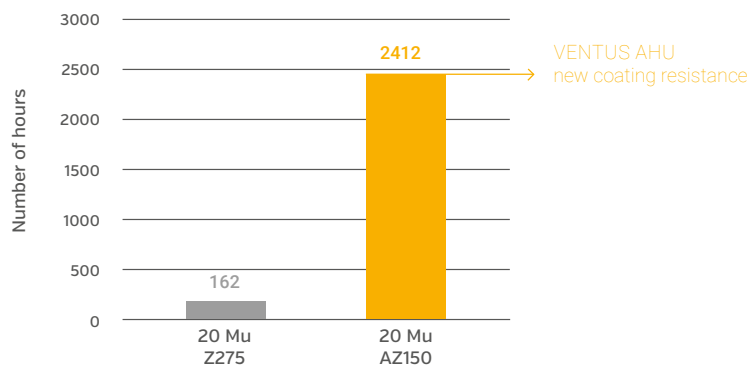


DESIGN



**MORE THAN 2,000
HOURS SALT SPRAY
TEST PROTECTION**

RESISTANCE TO CORROSION



Salt spray test according to ASATMB - 117

CASING SKIN

- » high rigidity and durability of the AHU structure
- » low absorption of heat radiation and UV
- » perfect resistance to weather conditions



FAN SECTION CAGE

- » high longitudinal stiffness of the structure
- » easy section assembly



**ALUMINUM
POSTS**
AS **STANDARD**
FOR ALL TYPES
OF UNITS



Z PROFILE
AVS040-AVS085



C PROFILE
AVS100-AVS380



CURB READY RAILS
AVS040-AVS380

GALVANIZED STEEL SUPPORT
AS **STANDARD**
FOR ALL TYPES OF UNITS

CONVENIENT

- » easy transport
- » great profile resistance to deflection

STRUCTURAL POSTS

- » thermally broken as standard
- » high resistance to weather conditions and UV radiation

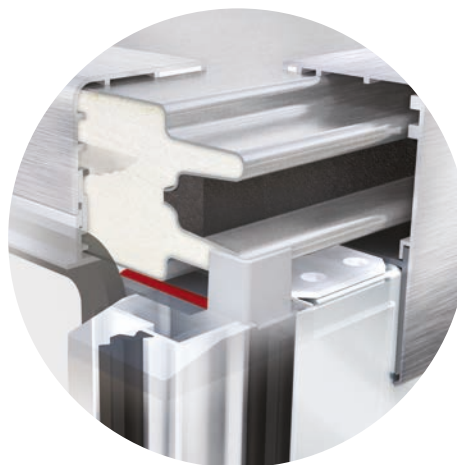


AIR TIGHTNESS

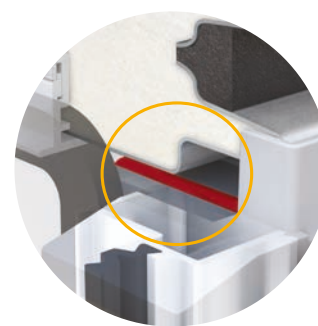


ERGONOMIC INSPECTION PANEL LOCK

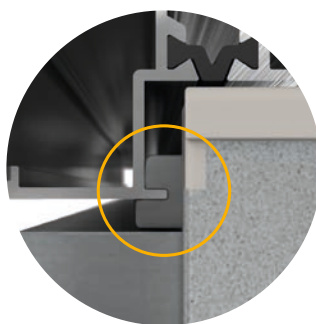
- » All units come with hinged panels
- » VTS utilizes their patented Smart Hinge System with prevents seal damage when the panels are open
- » Perfect ergonomics with integrated handle and hinge function
- » Easy to use with quick opening and closing of inspection panels



**THERMAL
BREAK**



**ADDITIONAL
POST SEALING**



**LABYRINTH
SEALING**



**ADDITIONAL
SEALING EDGE**

ALUMINUM STRUCTURAL POSTS WITH AN ADDITIONAL SEALING FIN AND A THERMAL INSERT

- » thermal break as standard - ensures no condensation outside the AHU
- » the fin ensures labyrinth sealing – currently the most effective solution on the market, mainly used in laboratory equipment
- » original solution consisting in the use of symmetrical channel tension filled with a sealing compound, which provides 100% tightness of the connection between the column and construction structure



ROOFTOP APPLICATIONS



SECTIONAL ROOF

- » prevents water penetration during service
- » additional weather protection

VARIABLE INTAKE CONFIGURATIONS

- » top, bottom and side intake options
- » end – optional full face intake damper available units
- » dampers:
 - gear system for even distribution of the torque
 - extruded aluminum construction
 - low leakage
 - double wall blade construction



CURB READY RAILS

- » design -overhangs the side of the curb to avoid the need of flashing
- » integrated lifting lugs

VARIABLE DISCHARGE CONFIGURATION

- » end, top, bottom and side discharge options
- » optional discharge dampers and full end discharge dampers available

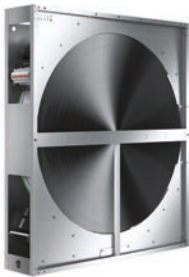
VENTUS KEY COMPONENTS

FAN SECTIONS



- » Depending on unit size, VTS will use either 1, 2, 3, 4, or 5 fans
- » Utilize ABB variable frequency drives
- » Utilize Baldor premium efficient motors (TEFC); Baldor EC Gold Series permanent magnet motors are an option. EC Gold meets the more stringent IE 4 requirements.
- » Motor bearing life is standard L10-400,000 hrs
- » All motors 7.5 HP and larger come standard with shaft grounding rings
- » Backdraft dampers are available
- » Available voltages depending on size: 115/1, 208/1, 230/1, 208/3, 230/3, 460/3
- » Single point power for fans
- » Impeller is made from fiber reinforced polymer
- » Capable of 10" of total static pressure
- » Extremely quiet and energy efficient
- » Fan combination is more efficient than ECM/forward curved fan configurations

ENERGY RECOVERY WHEELS



- » VTS manufactured wheels up from AVS-012 up to AVS-170
- » Class leading efficiencies
- » Silica gel over aluminum foil single wound construction
- » Klingenburg wheels for AVS-230 and up
- » All wheels are total energy wheels
- » All wheels are AHRI 1060 certified
- » All wheels are equipped with VFD speed control

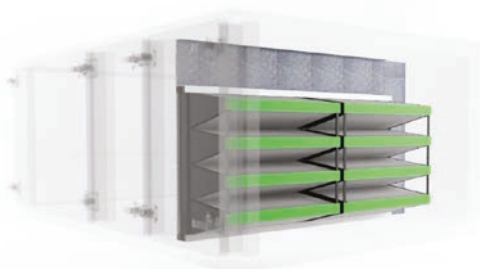
DAMPERS



- » Dampers are manufactured in house by VTS
- » Gears are made with fiber reinforced polymer and infused with nylon for long life and quiet operation
- » AMCA certified for 1", 4" and 8" of pressure.
- » Square shaft preventing actuator slippage
- » Indicator position shown on outside of damper for externally mounted dampers
- » Opposed blade

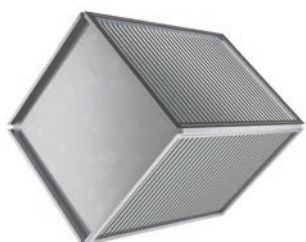


FILTERS



- » 2" MERV 8 or 4" MERV 13 pre filters
- » 12" MERV 13, 14, or 16 final filters
- » Final filters are Camfil Farr Durafil® 4V
- » Final filters have lowest pressure drop of their respective ratings in the industry (initial pressure drops at 500 FPM of 0.33", 0.37", and 0.80")
- » All filters are UL 900 Class 2

ENERGY RECOVERY PLATES



- » Dry efficiencies up to 87%
- » AHRI 1060 certified
- » Sensible only
- » Crossflow configuration
- » The exchanger consists of aluminum plates, the casing of aluminum extrusions, and side walls of Aluzinc sheet steel. The exchangers are silicone free

ULTRA LOW LEAKAGE DAMPERS



- » Dampers are Tamco Series 9000
- » Aluminum construction with polyurethane foam
- » AMCA certified for Class 1A low leakage for 1", Class 1 for 1", 4" and 8" of pressure.
- » Insulated blades with an R-value of 2.29

WATER / REFRIGERANT / STEAM COILS AND DRAIN PANS



- » Hot water, chilled water, refrigerant, and steam
- » All coils are AHRI certified
- » Optional stainless steel coil casing
- » Standard stainless steel drain pans
- » Coils can be swapped out typically in less than one hour
- » Coils can be provided with optional Blygold coating

ELECTRIC HEATER



- » Standard SCR controls
- » Door interlocking disconnect switch
- » 6 kW to 297 kW
- » Air flow switch

WING by VTS

Air Curtain

WING is the new generation device created from a passion for a light and modern design representing characteristics of gliders. A minimal housing with a streamlined form of a wing that seems to float in the air. The diamond style side panels hide the excellent components in an innovative curtain body to set new standards for air curtains. WING combines the unique design and excellent efficiency to redefine the air curtain image.



QUIET
OPERATION



EFFICIENT
AND RELIABLE
EC MOTORS



BIM COMPATIBLE
REVIT® FILES

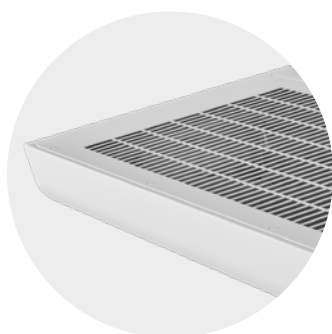
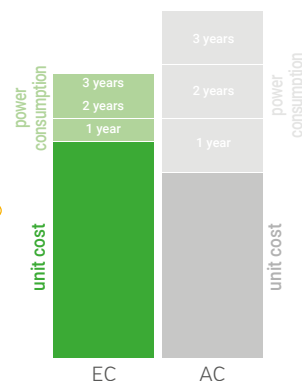


3 YEAR
WARRANTY



ELECTRICITY SAVINGS

Modern design of the EC motor and fan saves up to 40% of energy compared to old generation solutions.



SIMPLE CLEANING

Thanks to the optimized construction of the covers, cleaning the curtain is comfortable and does not require the disassembly of any part, always ensuring hygienic operation.



GALVANIZED STEEL CASING

Double coating (galvanization + powder paint) provides long-term protection against corrosion and consistent aesthetic qualities. Casing colour RAL 9016.



SMART DOOR PROTECTION

Air curtain with advanced WING EC CONTROLLER may perform according to the door opening sensor. Smart Door protection gives you not only permanent temperature comfort but also secure inside environment from dust, pollution, insects and unpleasant scents.



DEVICE TYPE SERIES

WING **W**

WATER HEAT EXCHANGER

HEATING POWER RANGE:
13-160 MBH

EXHAUST FLOW RATE:
1089-2589 CFM

MAXIMUM AIR COVERAGE:
12 ft

WING **E**

ELECTRIC HEATING COIL

HEATING POWER RANGE:
7-51 MBH

EXHAUST FLOW RATE:
1088-2648 CFM

MAXIMUM AIR COVERAGE:
12 ft

WING **C**

AMBIENT (no heat)

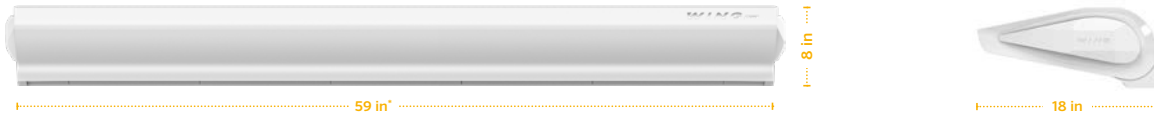
EXHAUST FLOW RATE:
1147-2707 CFM

MAXIMUM AIR COVERAGE:
13 ft

200 W/E/C



150 W/E/C



100 W/E/C

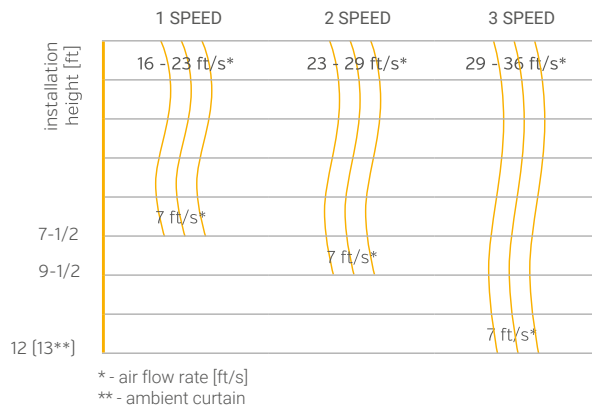


* width does not include side covers

STREAM RANGE

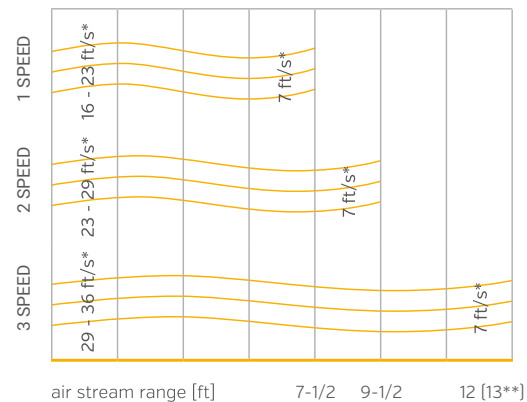
Vertical air stream range

(maximum installation height)



Horizontal air stream range

(for vertical installation)





PARAMETERS OF WING AIR CURTAINS

Parameters	Unit of measure	WING W100-200			WING E100-200			WING C100-200		
		WING W100	WING W150	WING W200	WING E100	WING E150	WING E200	WING C100	WING C150	WING C200
Maximum width of a single door for one device	in	39	59	79	39	59	79	39	59	79
Maximum height of door	ft	12						13		
Heating output range	MBH	13-58	34-109	58-160	7/20 or 14/20	14/41 or 27/41	20/51 or 31/51	-		
Maximum flow rate	CFM	1089	1824	2589	1088	1854	2648	1147	1883	2707
Maximum temperature of heating medium	°F	203			-			-		
Maximum working pressure	psi	232			-			-		
Water volume	in ³	97	158	219	-			-		
Diameter of stub pipe connectors	"	3/4			-			-		
Motor supply voltage	V/ph/Hz	~120/1/60 or ~240/1/60			~120/1/60 or ~240/1/60			~120/1/60 or ~240/1/60		
Electric heater supply voltage	V/ph/Hz	-			~240/1/60 or ~240/3/60 or ~480/3/60	~240/3/60 or ~480/3/60		-		
Power of the electric heater	MBH	-			7 and 14	14 and 27	20 and 31	-		
Rated current of the electric heater	A	-			9/18/26 or 5/10/15 or 3/5/8	10/20/30 or 5/10/15	15/23/38 or 8/11/18	-		
EC Motor power	HP	1/5	1/4	1/3	1/5	1/4	1/3	1/5	1/4	1/3
EC Motor rated current	A	1.1	1.3	1.9	1.1	1.3	1.9	1.1	1.3	1.9
Weight	lbs	47	64	83	49	67	86	42	56	72
IP		44								

FAN SPEED	NOISE LEVEL	WING W100-200			WING E100-200			WING C100-200		
		39 in	59 in	79 in	39 in	59 in	79 in	39 in	59 in	79 in
III	dB(A)***	61	63	66	62	62	64	66	67	67
II		59	62	65	55	60	63	63	66	65
I		56	57	60	53	55	59	57	58	61

* available heating power in the control option configuration: Wing E100 7/20 MBH or 14/20 MBH, for Wing E150 14/41 MBH or 27/41 MBH, for Wing E200 20/51 MBH or 31/51 MBH

** air stream range depends on curtain operation speed

*** measurement conditions: semi-open space, horizontal installation on the wall, measurement performed 10 ft away from the device

CONTROLS



ALL EC AIR CURTAINS ARE CHARACTERIZED BY EASE AND SIMPLICITY OF CONNECTION

Controller WING EC			Valve with actuator (VA-VEH202TA)			Door sensor (reed switch)*	
VTS product number	1-4-0101-0451		VTS product number	1-2-1204-2019		VTS product number	1-4-0101-0454
Power supply voltage	V/ph/Hz	~120/1/60/ ~240/1/60	Power supply voltage	V/ph/Hz	~120/1/60/ ~240/1/60	Contact configuration	NO
Permissible load	A	1A for 110-240V 0,015A for 0-10V	Opening/closing time	min	3/3	Switching current	500 mA
Setting range	°F	41...104	Kvs flow ratio	GPM	19.82	Switching voltage	max 200 V
Protection rating	IP	30	Protection rating	IP	54	Connection	screw

VOLCANO

Hydronic Heater

The Volcano hydronic heaters are a new generation of devices, combining innovative technical solutions with a modern pattern design. Our precisely executed and light housing resembles the beautiful diamond shape; ideal in its simplicity. The character of the device is emphasized by the composition of the selected materials and dynamically shaped air guide vane.



ENERGY-
SAVING
EC MOTORS



THREE-ROW
WATER
EXCHANGERS



BIM COMPATIBLE
REVIT®FILES



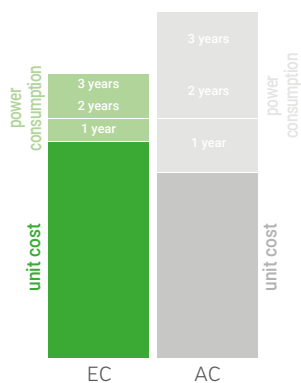
3 YEAR
WARRANTY



MODERNITY

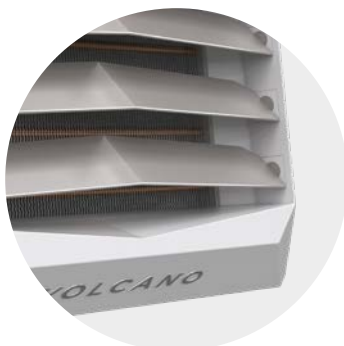
ELECTRICITY SAVINGS

Modern design of the EC motor and fan saves up to 40% of energy compared to old generation solutions.



DESIGN

Highly developed casing form guarantees optimal exchanger surface exposure while hiding all structural elements.



MATERIAL

Made of the highest class ABS with an anti-UV pigment mixture. The casing is characterized by high mechanical strength, durability, and resistance to high temperatures. The material used guarantees unchangeable aesthetics, easy to clean surfaces and long-term durability.



SMART LOCK

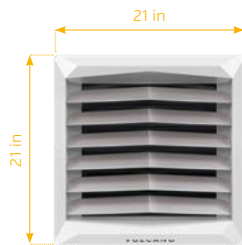
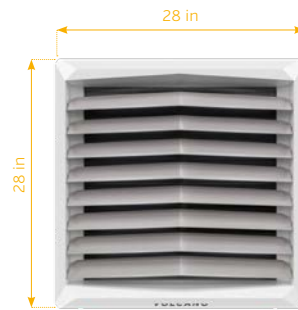
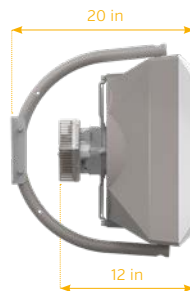
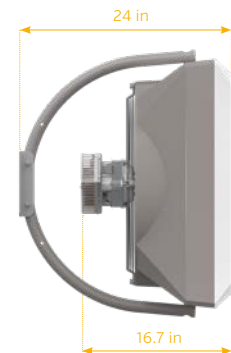
Our patented locking system guarantees a durable and precise fit for all casing elements.



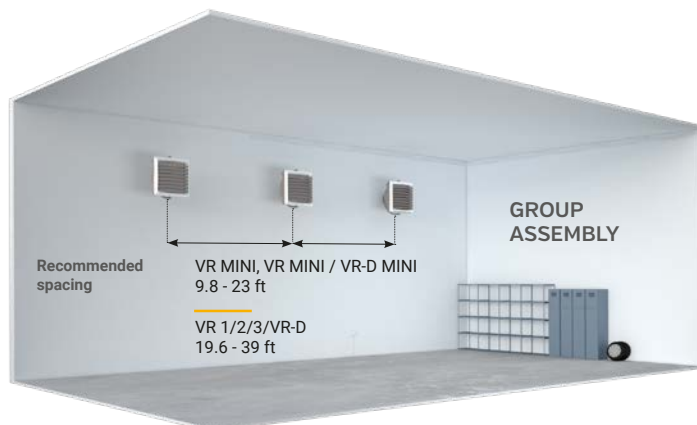
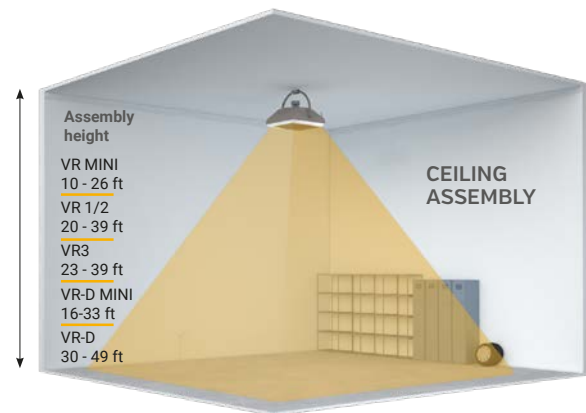
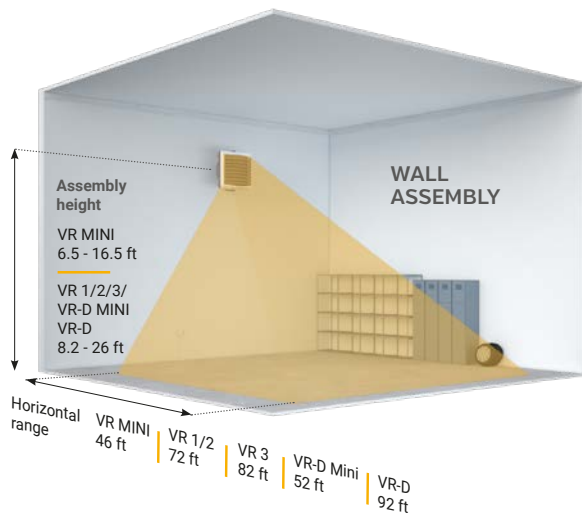
DEVICE TYPE SERIES

VOLCANO	VR Mini EC	VR1 EC	VR2 EC	VR3 EC	VR-D Mini EC	VR-D EC
HEATING POWER RANGE	10-68 MBH	17-102 MBH	27-171 MBH	44-256 MBH	–	–
MAXIMUM AIR OUTPUT*	1236 CFM	3119 CFM	2855 CFM	3355 CFM	1371 CFM	3826 CFM
HORIZONTAL RANGE (MAX.)	46 ft	75 ft	72 ft	82 ft	52 ft	92 ft
VERTICAL RANGE (MAX.)	26 ft	39 ft	36 ft	39 ft	33 ft	49 ft

* maximum speed 1.5 ft/s

**VR MINI EC
VR-D MINI EC****VR1, VR2, VR3, VR-D**

ASSEMBLY



VOLCANO heaters are furnished with a standard assembly console for wall and ceiling mounting of the device.

The maximum vertical range of the devices are 10-39 ft, depending on the type of heater. The maximum horizontal range of the devices are 16-92 ft.


Notice! If the minimum distance of 1.3 ft and 1 ft [VR Mini] is not maintained from the wall or ceiling during assembly, the device may operate incorrectly. The fan may be damaged or the entire device may work louder.




TECHNICAL PARAMETERS

Parameter	Unit	VOLCANO VR MINI	VOLCANO VR1	VOLCANO VR2	VOLCANO VR3	VOLCANO VR-D MIN	VOLCANO VR-D
		EC	EC	EC	EC	EC	EC
VTS product number		1-4-0101-0455	1-4-0101-0442	1-4-0101-0443	1-4-0101-0444	1-4-0101-0498	1-4-0101-0450
Number of heater rows	-	2	1	2	3	---	---
Maximum air output	CFM	1236	3119	2855	3355	1371	3826
Heating power range	MBH	10-68	17-102	27-171	44-256	---	---
Maximum temperature of heating medium	°F	200				---	---
Maximum working pressure	psi	232				---	---
Maximum horizontal air range	ft	46	75	72	82	52	92
Maximum vertical air rage	ft	26	39	36	39	33	49
Water capacity	in³	68	76	131	188	---	---
Connection stub pipe diameter	"	3/4				---	---
Device weight (without water) EC	lbs	30	46	47	54	18	34
Power supply voltage	V/ph/Hz	120/1/60 or 240/1/60					
EC motor power	HP	0.12	0.33		0.49	0.12	0.49
EC motor rated current	A	0.51	1.3		1.7	0.51	1.7
EC motor rotations	rpm	1200	1430		1400	1200	1400
EC motor protection rating	IP	54	44			54	44
Casing color palette		Front: RAL 9016 Traffic White, rear + console: RAL 7036 Platinum Gray, fan (EC): RAL 6038 Green					

CONTROLS

Parameters			
Model	-	Controller Volcano EC	
VTS product number	-	1-4-0101-0457	
Motor support	-	EC	
Power supply voltage	V/ph/Hz	~120/1/60 / ~240/1/60	
Permissible load	A	1A for 110-240V 0,015A for 0-10V	
Setting range	°F	41...104	
Work mode	---	Manual / automatic	
Hourly-weekly calendar	---	Yes	
Clock	---	Yes	
Temperature measurement	---	Integrated in the device	
The possibility of connecting a separate temperature sensor	pcs.	1 or 4	
Output signal	---	0-10V DC	
Protection rating	IP	30	

Parameters			
			Valve with actuator (VA-VEH202TA)
VTS product number		1-2-1204-2019	
Power supply voltage	V/ph/Hz	~120/1/60 / ~240/1/60	
Power consumption	W	1	
Connection	"	3/4	
Kvs flow ratio	gpm	19.82	
Opening/ closing time	min.	3/3	
Protection rating	IP	54	

REFERENCES



Marriott Hotel

USA/ Hilton Head



TESLA Gigafactory

USA/Sparks



Alamodome

USA/ San Antonio



Rollie Johnson Inc

USA/ St. Louis



University of Kentucky Good Samaritan Hospital

USA/ Kentucky



Penn State University - Old Main- State College

USA/ Pennsylvania



Cathedral of the Holy Cross

USA/ Boston, MA



Presbyterian Weill Cornell Medical Center

USA/New York

REFERENCES



Concord Gardens

Canada/Vancouver



Opus Hotel

Canada/Vancouver



Iolani School Campus

USA/ Hawaii



Aruba Renaissance Resort

Aruba/ Oranjestad



The Corners of Brookfield

USA/ Brookfield



Uni Wright Hall

USA/ Iowa



Mallers building – Historic Jewelers Row

USA/ Chicago



Residence Hall University of Notre Dame

USA/ Notre Dame

REFERENCES



**Lutheran Church
of the Good shepherd**

USA/ Moorhead



**Southeastern Kentucky
Community College**

USA/ Kentucky



The Countru Club New England

USA/ Stratham



VTS America, Inc.

3535 Gravel Springs Road Ext

Suite 201

Buford, GA 30519

United States of America

Tel: 470-809-6811

Fax: 470-809-6815

e-mail: america@vtsgroup.com

The features mentioned are subject to continuous upgrade and can change any time.
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