



VENTUS

VVS/S-type



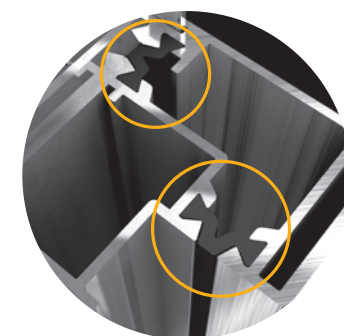
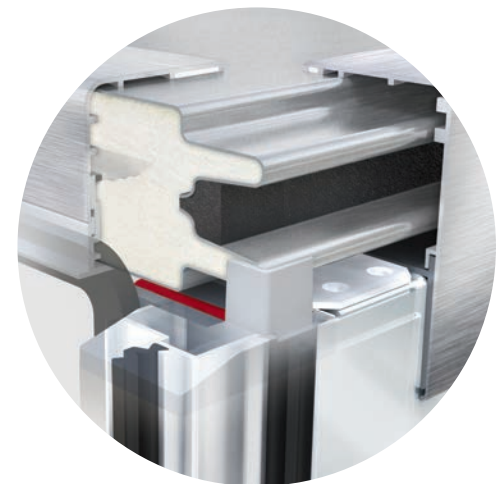


TIGHTNESS

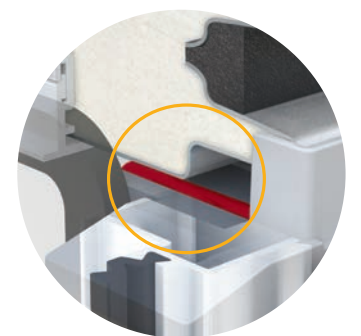


ERGONOMIC INSPECTION PANEL LOCK

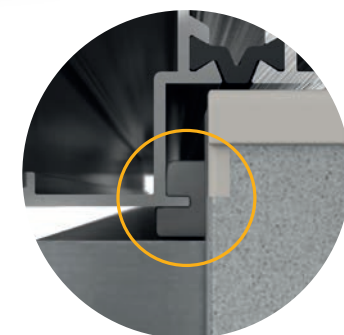
- » Highly aesthetic and ergonomic handles securing perfect tightness of inspection panels.



THERMAL BREAK



LABIRYNTH TIGHTENING



ADDITIONAL POST SEALING



ADDITIONAL SEALING BLADE

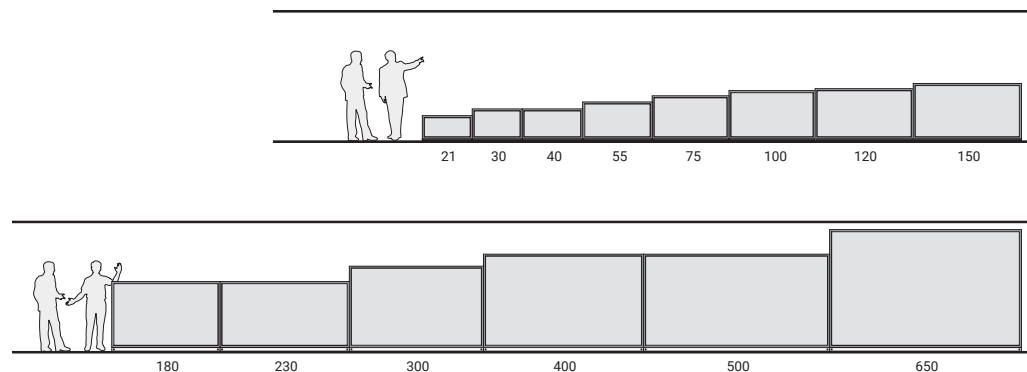
ALUMINUM STRUCTURAL POSTS WITH ADDITIONAL SEALING BLADE AND THERMAL BREAK

- » Broken thermal bridge as standard – eliminates humidity condensation on units structural elements.
- » Blade along the inspection window ensures labyrinth tightening between panel and AHU body – currently the most effective solution on the market, mainly applied to laboratory equipment.
- » Symmetrical groove in the vertical post's mounting feet secures its 100% tightness with the AHU casing structure.

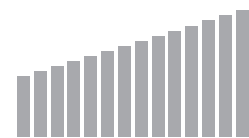


WIDE PERFORMANCE RANGE - VS 21÷650

from **1 100** m³/h
to **100 000** m³/h
capacity ranges

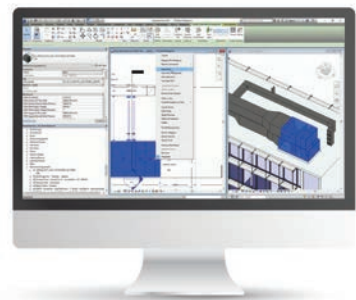


Up to **87%**
of energy recovery
efficiency



14 sizes
available

WE DESIGN FOR YOU



VTS BIM

- » VTS Group has created a possibility of dynamic online generation of digital models of the units VENTUS VVS, VENTUS Compact and American VENTUS AVS. This is possible due to the launch of the new ClimaCAD OnLine 4 product selection program that features an .rfa [Revit®] file generator.



ClimaCAD On-Line

- » Our Clients can design an AHU themselves using a tool available at www.vtsgroup.com.
- » Designing an AHU involves 4 steps of selection and 10 seconds of calculation.
- » Calculations in the analytical module – alternative results + indicating an optimum solution

TYPICAL APPLICATION



school



offices



hotels



hospitals

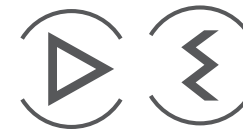


stores



sports facilities

AIR TREATMENT FUNCTION



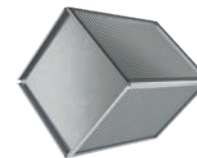
- » Adjustment of air treatment functions to a required microclimate.
- » Air filtration – bag and flat filter Filters' classes from G4 up to H14.
- » Air Heating – water coil heaters, electric heaters.
- » Air cooling – water coil coolers, direct expansion coolers.
- » Energy recovery systems. Recovery efficiency up to 87%
- » Wide choice of optional functions.

ENERGY RECOVERY



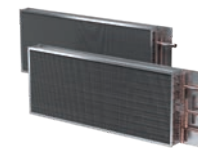
Rotary exchanger:

- » Indirect energy recovery (sensible heat) accumulated in the exhaust air flow and its transfer to the counter current supply air flow.
- » Indirect recovery of latent heat (moisture) when the rotor surface temperature on the side of the exhaust air is lower than the supply air dew-point temperature.



Cross-flow exchanger:

- » Indirect energy recovery (sensible heat) accumulated in the stream of exhaust air and its transfer to the ventilation air supplied to the rooms.



Glycol system:

- » (Run-around coil): Indirect energy recovery (sensible heat) with a total (100%) separation of supply and exhaust air flow.

ENERGY SAVING DIRECT DRIVEN PLUG FAN SETS



Silent operation of AHUs:

- » The „PLUG“ fan set with frequency converter.
- » Various fan sizes for one AHU size.

Multi-fan sets:

- » More even air flow through coil exchangers.
- » Cheaper and easier service.
- » Shorter AHUs.
- » EC fan set as option



Direct driven PLUG fan sets:

- » Electric power consumption lower by 10-20%.
- » High durability of fan sets.
- » Easiness of adjusting the fan working parameters to the real duct pressure lost.

FRAMELESS CASING



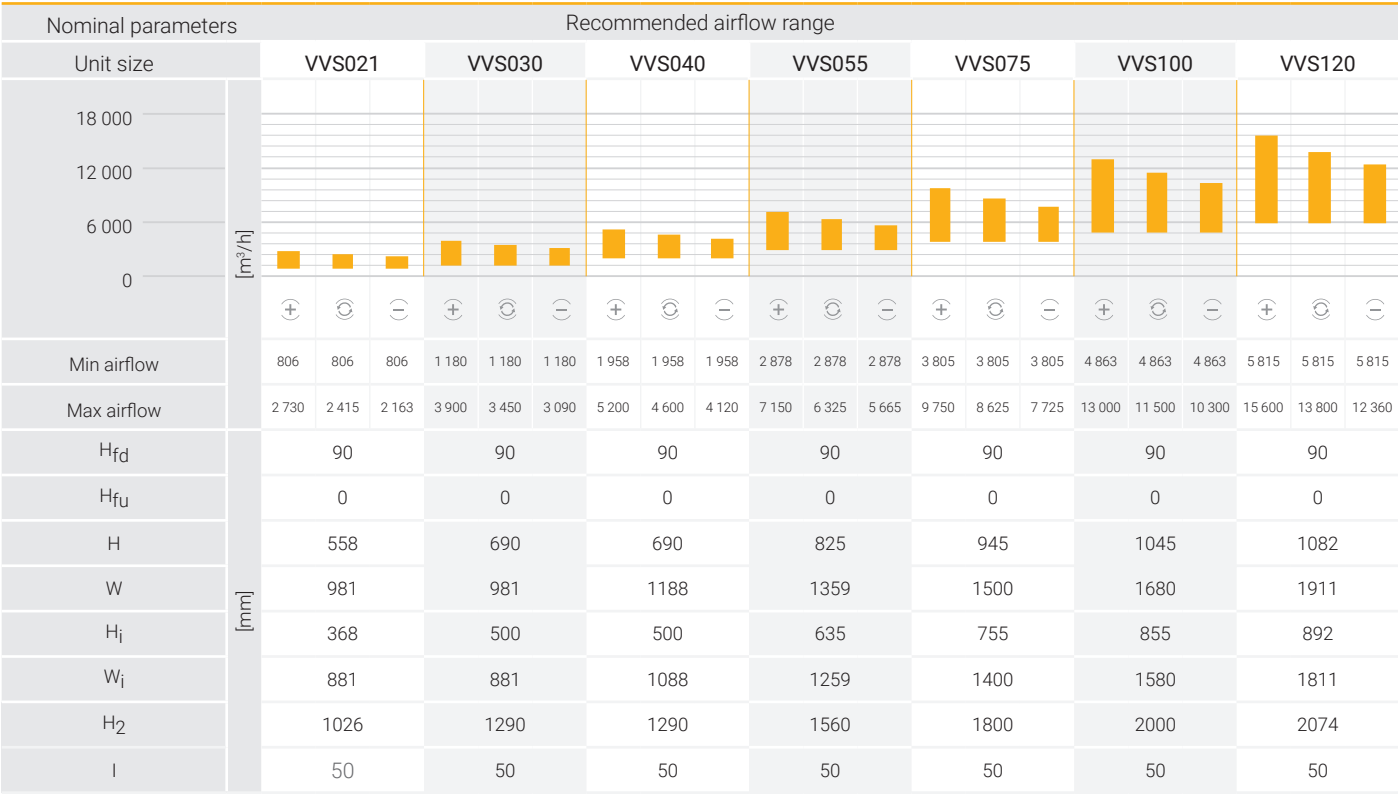
- » Operation in different climatic zones (-40 to +90°C).
- » Lack of thermal bridges – elimination of moist condensation
- » Durability for years – 'sandwich' type panels with polyurethane foam
- » thermal conductivity PPU $\lambda = 0,023$ W/mK.

Excellent mechanical and thermal characteristics:

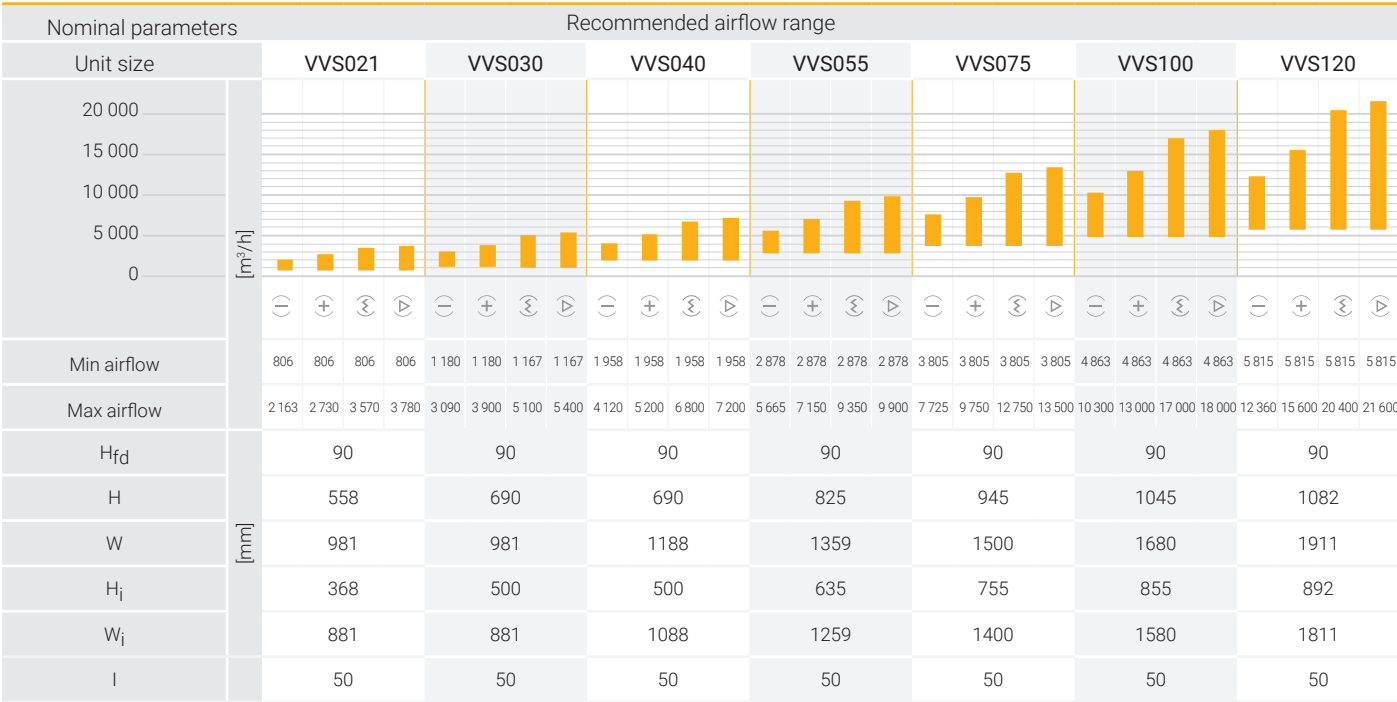
- » casing heat transfer coefficient: $k = 0,6$ W/m²K CLASS T2 Acc. EN 1886:2007
- » thermal bridges coefficient: $K_b = 0,62$ CLASS TB2 Acc. EN 1886:2007
- » mechanical strength of casing: -2500 Pa ÷ 2500 Pa < 2mm CLASS D1 Acc. EN 1886:2007
- » casing tightness: - 400 Pa - 0,1 l/sm² CLASS L1 Acc. EN 1886:2007
- » +700 Pa - 0,17 l/sm² CLASS L1 Acc. EN 1886:2007



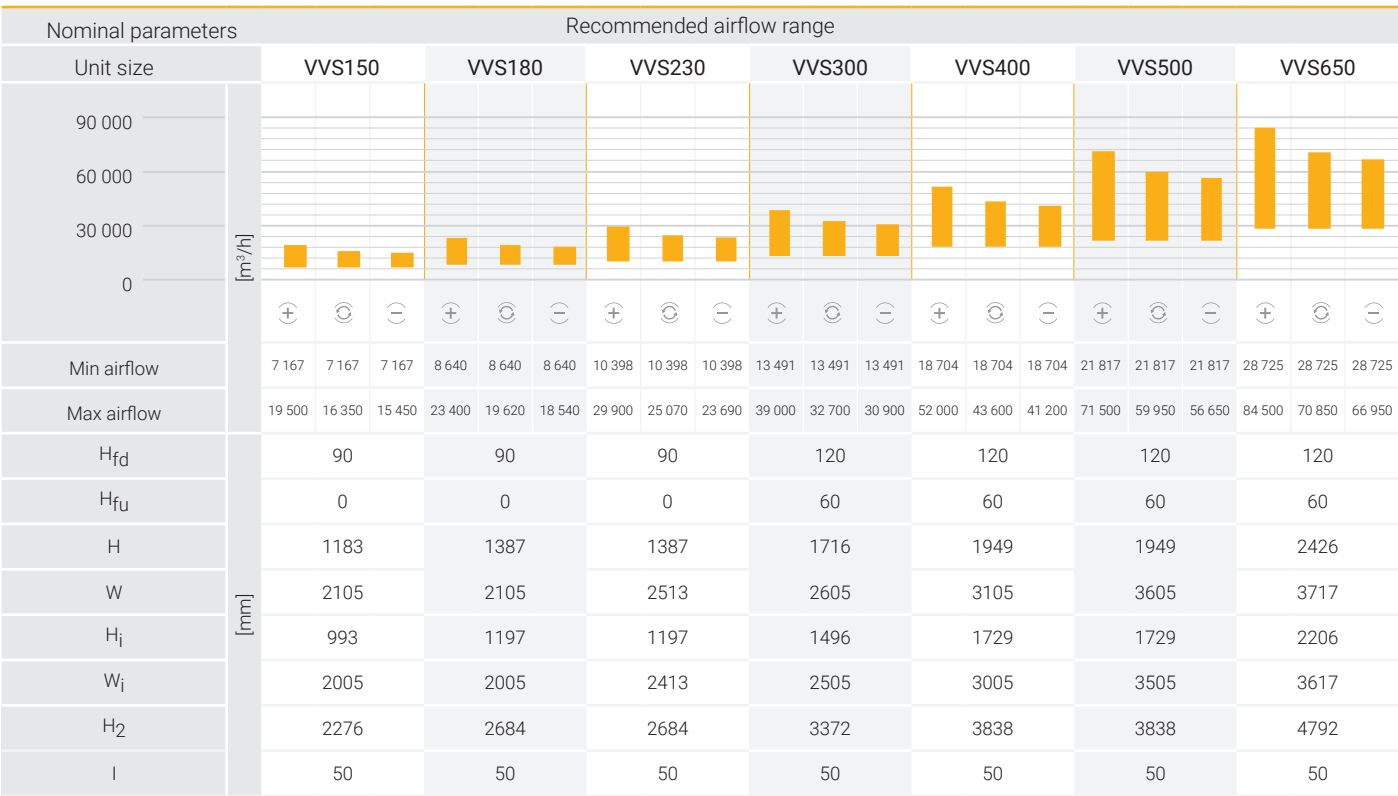
VVS 021-120 - ROTARY HEAT WHEEL



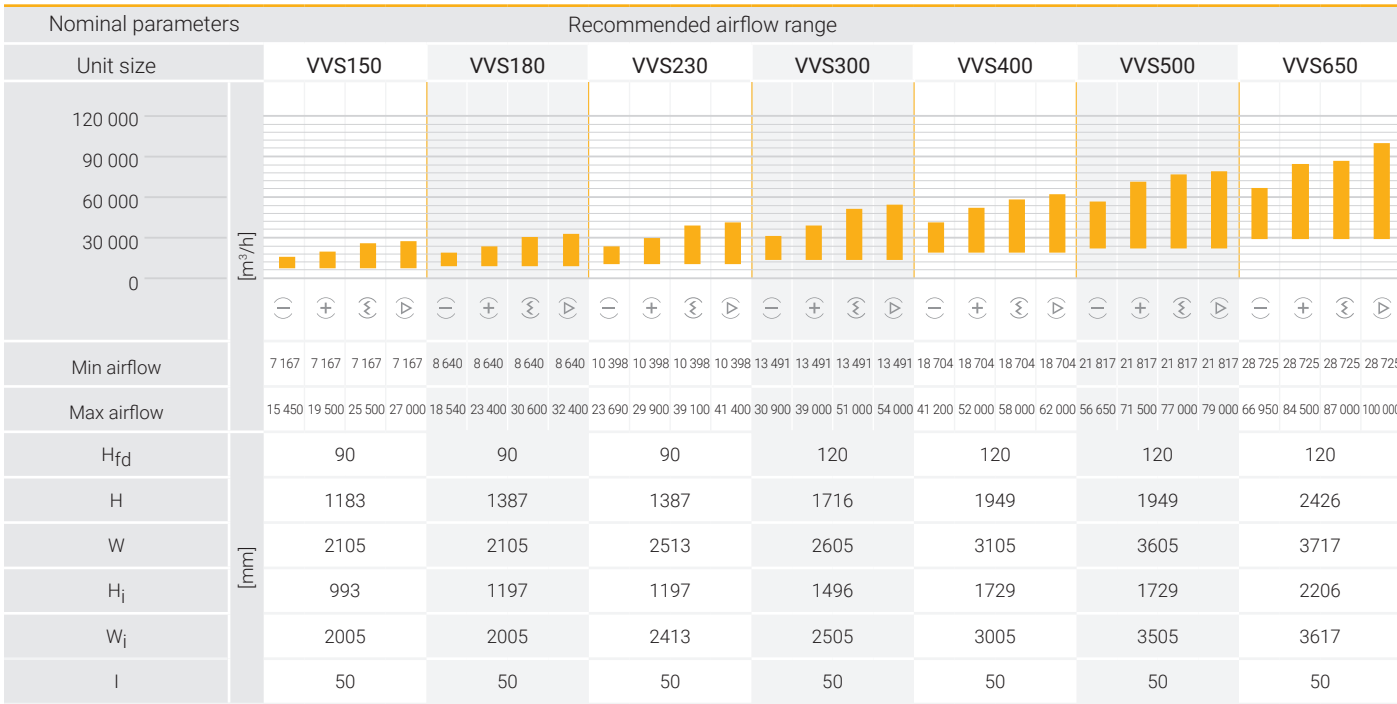
VVS021-120 - SUPPLY & EXHAUST



VVS 150-650- ROTARY HEAT WHEEL



VVS 150-650 - SUPPLY & EXHAUST

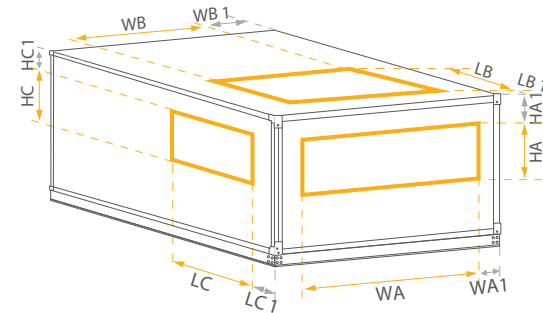
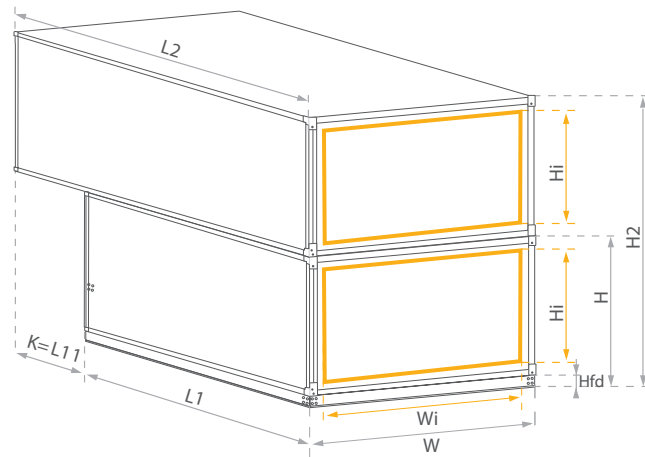


General:
* If 8RD with eliminator, length will increase by 366mm
** If RA is required on top, length will increase by 366mm

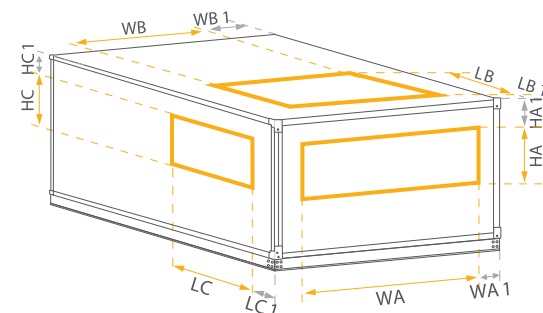
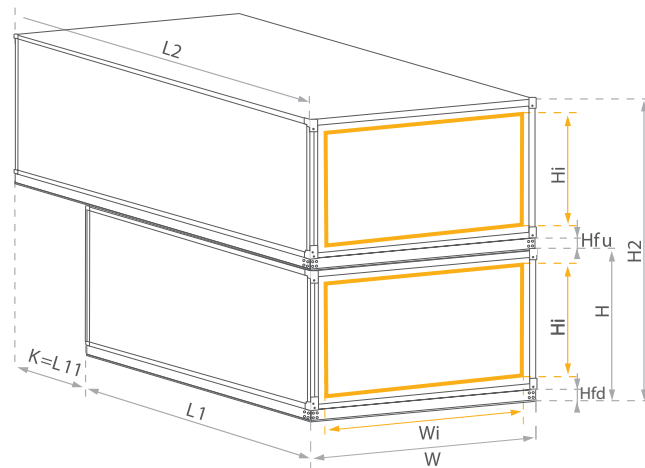


DIMENSIONS

» VVS 021-120 - ROTARY HEAT WHEEL

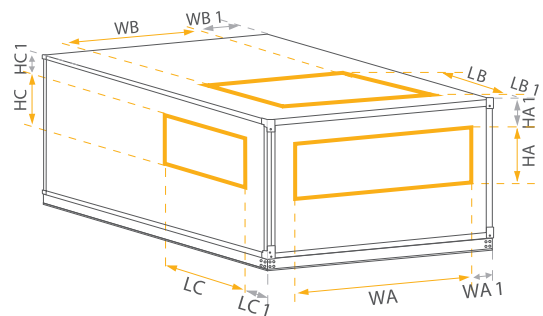
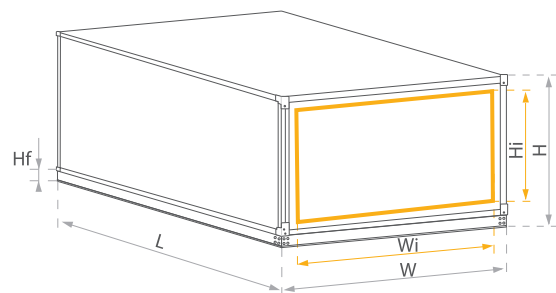


» VVS 150-650 - ROTARY HEAT WHEEL



» VVS021-150 - SUPPLY & EXHAUST

» VVS 150-650 - SUPPLY & EXHAUST





TECHNICAL SPECIFICATIONS

CASING

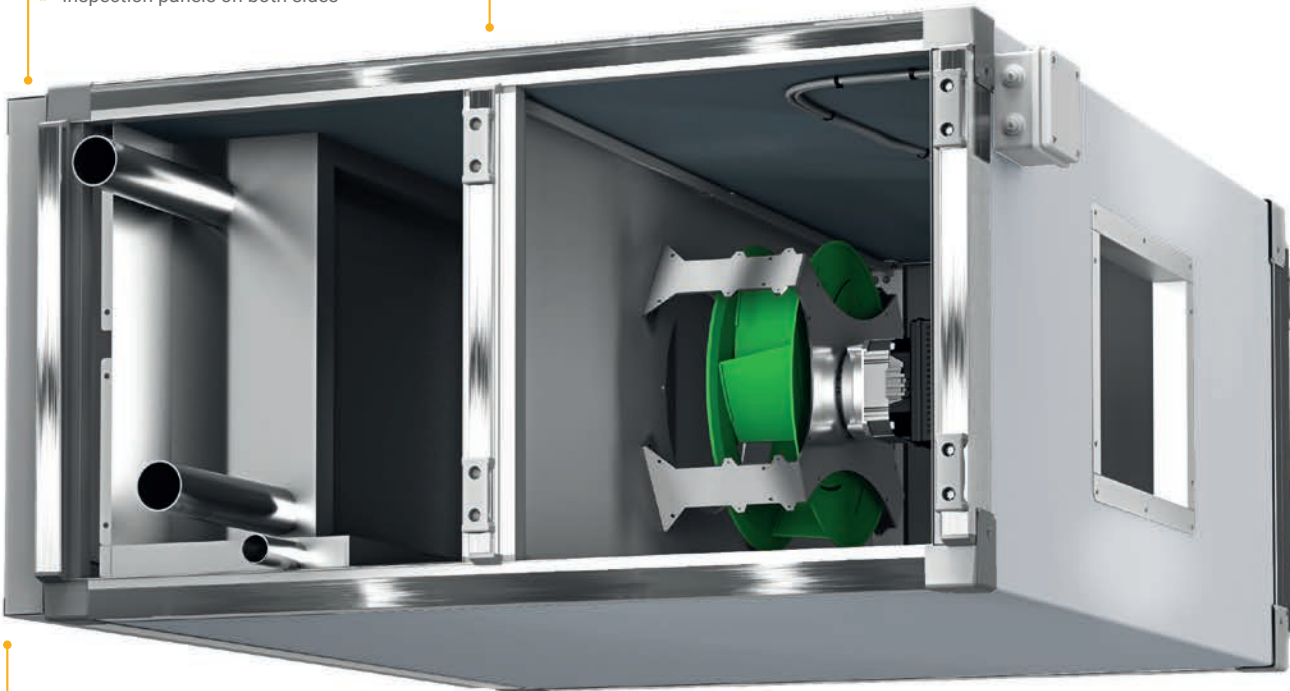
- » 50 mm "Sandwich" double skin panels made of rigid polyurethane foam
- » Inspection panels mounted on AHU side
- » High anticorrosive protection:
 - Galvanized zinc (Zn) coating: 180g/m²
 - External protection coating material thickness: polyester / 25µm
- » Inspection panels on both sides

AIR FILTERS

- » Pleated filtration fabric shielded by steel net, installed in 50 mm thick frame
- » Filtration fabric made of polyester fibres
- » Working max parameters: max temperature (+70)°C, max. RH100%
- » ISO Coarse 80% (ISO 16890) - G4 (EN779)

COOLING COIL

- » Hydronic coils - 4, 6 rows available
- » DX - 6 rows, 2 sections available
- » Max operating pressure 1,6 MPa
- » Testing pressure 2,1 MPa



DIRECT DRIVE PLUG FAN SET > BLOWER

- » Single inlet, radial, backward curved, free running fan
- » Direct drive – fan impeller installed directly on motor shaft
- » Fan section consisting of single or twin fans
- » Smooth regulation

DIRECT DRIVE PLUG FAN SET > AC MOTORS

- » Fan and motor mounted on common housing, separated from AHU casing by set of rubber vibration absorbing mounts
- » Motors of TEFS (Totally Enclosed, Fan-Cooled)
- » Variable Frequency Drive (VFD) – standard part of the fan-set
- » Available Energy classes: IE2
- » Junction box on casing

DRAIN TRAY

- » Material: Stainless steel
- » Water outlet: 1"

DIRECT DRIVE PLUG FAN SET > EC MOTORS

- » Set of fan and motor mounted on common rail, fixed to the AHU fan diaphragm.
- » EC motors are Permanent Magnet motor, characterised by much higher efficiency vs traditional inductive AC motors.
- » Required regulation with 0-10V regulator or ModBus signal
- » Junction box on casing

TYPICAL APPLICATION



residential buildings



industrial buildings



small businesses



sports facilities



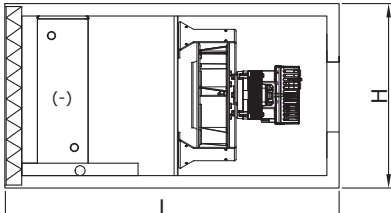
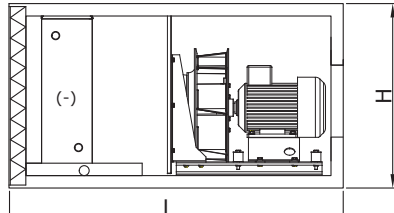
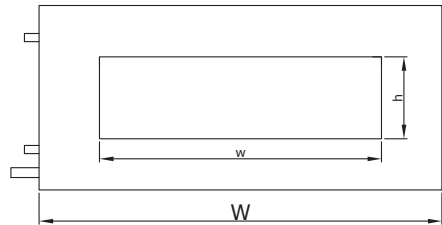
retail and warehouses



garages and workshops



100%
units
factory tested



Unit size	Dimensions			Duct Connection	FAN	AC motor	Weight *
	H	W	L	h x w	Model	Rated Output	
	[mm]				[]	[kW]	
SVS-35	550	1171	1125	210 x 700	VS 315	1,5	162
SVS-50	615	1325	1125	310x550	VS 355	1,5	220
SVS-70	550	2025	1125	310x1300	VS 315 x 2	1,5 x 2	266
SVS-85	675	2025	1125	410x1400	VS 400 x 2	1,5 x 2	249
SVS-100	675	2225	1125	410x1400	VS 400 x 2	1,5 x 2	322

Unit size	Min Air Flow		Max Air Flow		Air Flow						
	CMH	CFM	CMH	CFM	CFM						
					0	1000	2000	3000	4000	5000	6000
SVS-35	1500	883	3500	2060							
SVS-50	2100	1236	4500	2660							
SVS-70	3000	1766	7000	4120							
SVS-85	3400	2001	8500	5003							
SVS-100	4200	2472	9500	5621							

Unit size	Coil Volume			Coil Connections			
	WCL4R	WCL6R	DX6R	WCL4R, WCL6R		DX6R	
	[Liters]			φD _{in}	φD _{out}	φD _{in}	φD _{out}
SVS-35	6,33	9,5	9,5	DN32	DN32	2x5/8"	2xØ28
SVS-50	8,24	12,36	12,36	DN50	DN50	2xØ22	2xØ35
SVS-70	12,08	18,13	18,13	DN50	DN50	2xØ22	2xØ35
SVS-85	15,44	23,16	23,16	DN50	DN50	2xØ22	2xØ35
SVS-100	17,23	25,84	25,84	DN50	DN50	2xØ22	2xØ42

* Weight present for units with integrated 6 rows water coil and fan section with AC motor



Manufacturing & Logistic Centre:

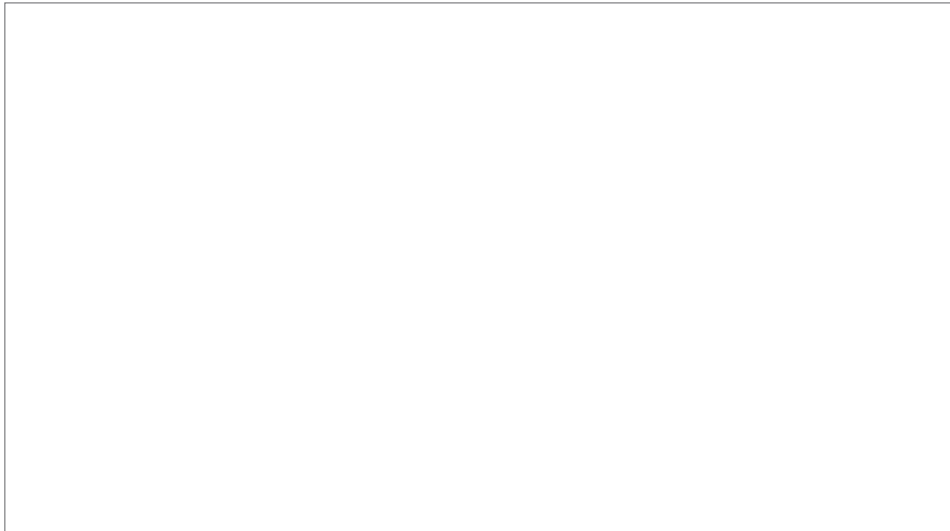
VTS TF AIR SYSTEM PVT LTD.

Survey # 13/1: Devanagondhi post, Hosakote Taluk
Bangalore - 560117

Sales Office:

VTS CLIMA INDIA PVT. LTD.

#520, B-Wing,
Carlton Towers Old Airport Road Bangalore 560008



www.vtsgroup.com
india@vtsgroup.com

India Sales Offices: Bangalore - Mumbai - Delhi - Chennai - Hyderabad - Kochi - Ahmedabad - Pune - Kolkata

Due to continuous improvement of the products, VTS reserves right to implement modifications.
Some of technical data and descriptions may vary from the actual products specification.
Before placing the order, please, confirm all technical specification with VTS sales representative.