

#30VTS

VENTUS S-type

2019



VTS



01

VTS Group

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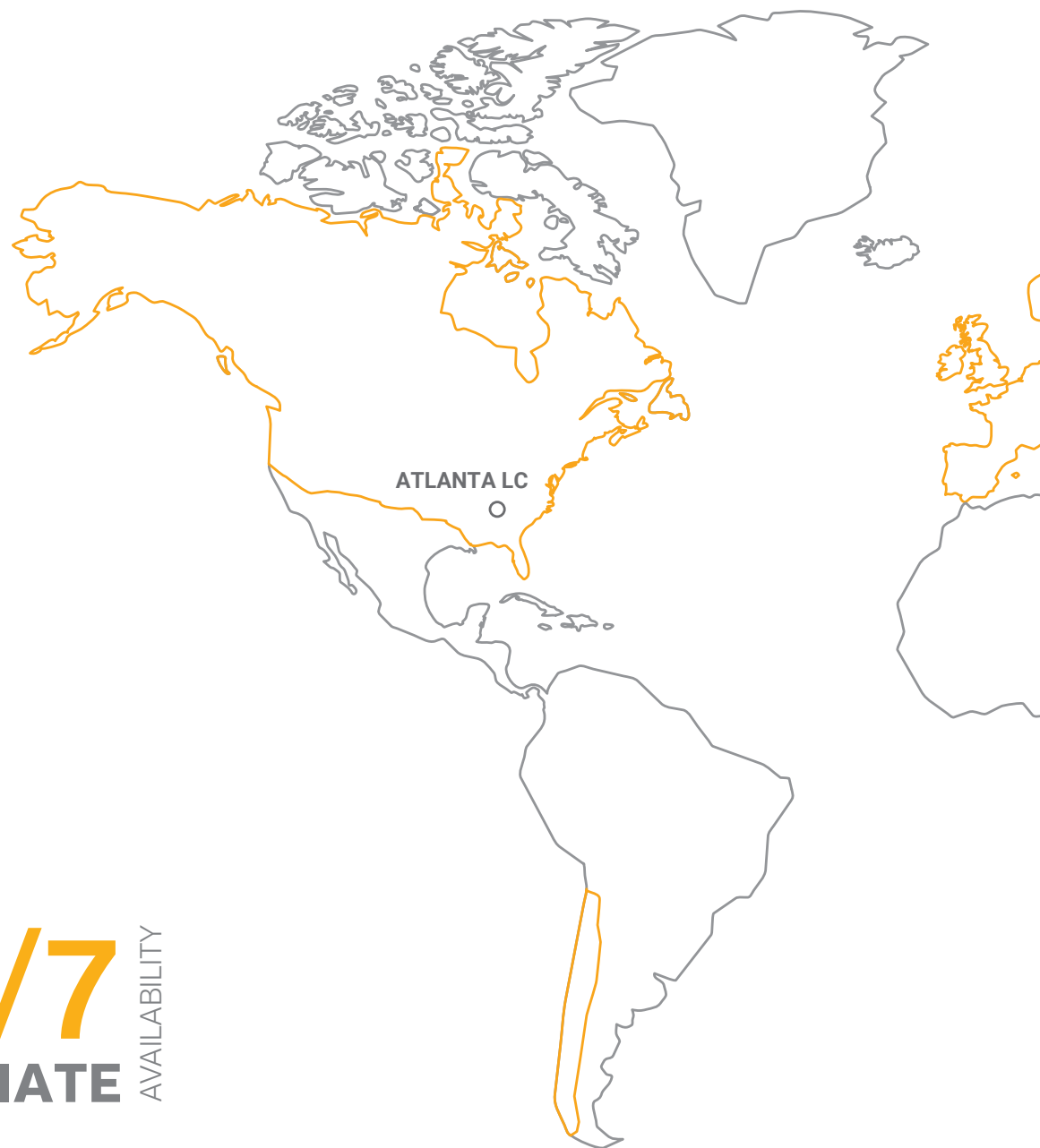


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VENTUS S-TYPE

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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.



24/7
IMMEDIATE AVAILABILITY

* Logistics centre

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 the longest warranty in the market. **Up to 2-years warranty of trouble free equipment operation**.

MARKET'S LEAD
BEST TIME

6 LOGISTICS
CENTERS

\$ competitive
price

110 000
UNITS
SOLD ANNUALLY

Q the highest
quality

UP TO **2** optional warranty
YEARS FOR EACH
UNIT



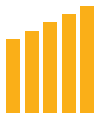
VENTUS S-type is a range of air handling units offered by VTS Group.

The product specification results from the effort of experienced design engineers and reflects Indian and MEA market requirements regarding high cooling performance. The S-type was developed with the use of the state-of-the-art technologies, advanced material engineering and innovative construction solution.

Due to this, the VENTUS S-type offer reliability and energy saving.

ventus S-TYPE

 from **883** to
5621 CFM
INTOTALCAPACITY

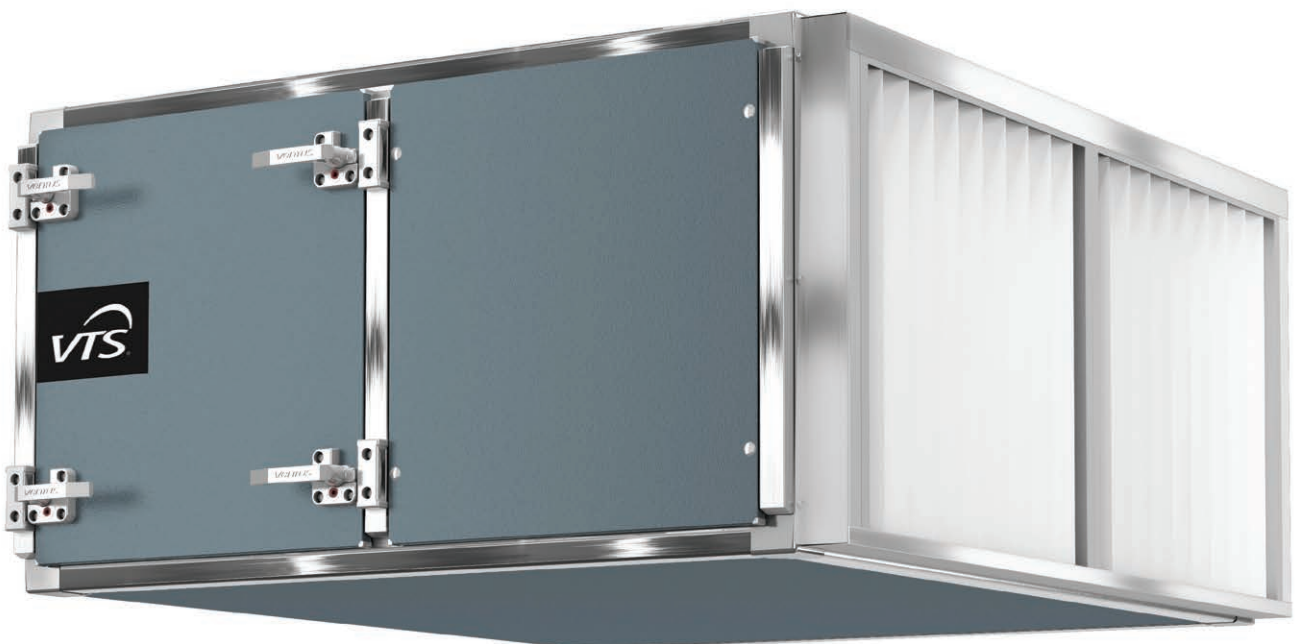
 **5**
SIZES

 **LOW HEIGHT
& WEIGHT**

 **EFFICIENT
AND RELIABLE**
EC MOTORS

 **WATER
TIGHTNESS**

 **ATTRACTIVE
PRICE**





VENTUS S-TYPE

TECHNICAL SPECIFICATIONS

CASING

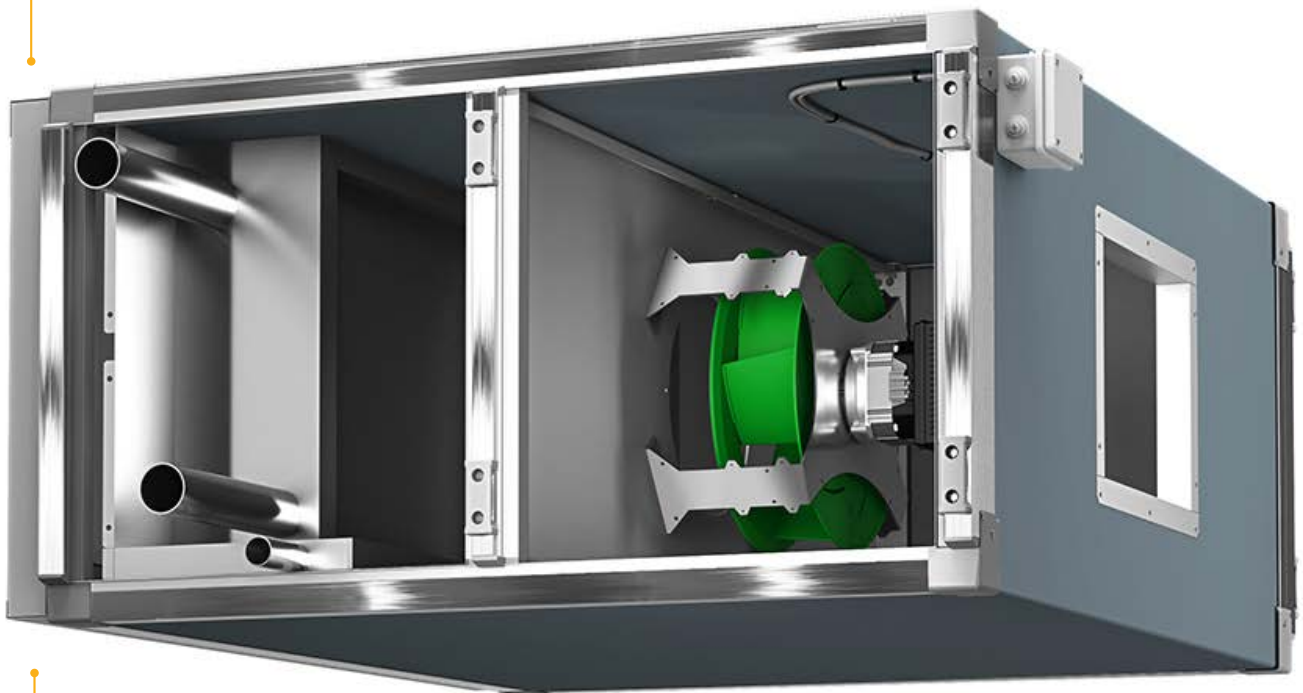
- 40 mm "Sandwich" double skin panels made of rigid polyurethane foam
- Inspection panels mounted on AHU side
- High anticorrosive protection:
 - Galvanized zinc (Zn) coating: 180g/m²
 - External protection coating material thickness: polyester / 25µm
- Inspection panels on both sides

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 75% (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
- Drain tray: stainless steel, water outlet 1"



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

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



UNIT CASING:

Monocoque technology - a self supporting shell structure used in Formula 1 car and aviation. This is exactly how we design our products, therefore our units feature low weight and optimal height, are easy for transportation and further installation. Moreover double skin "sandwich" panels with 40 mm rigid polyurethane foam ensure best thermal insulation.

- » Thermal conductivity: PPU $\lambda = 0,022$ W/mK
- » PPU density: $\rho = 42$ kg/m³.
- » Casing heat transfer coefficient: $K = 0.6$ W/m²K
- » Casing mechanical strength:
+2500 Pa ÷ 2500 Pa < 2 mm
- » Casing tightness: -400 Pa - 0.05 l/sm²
+700 Pa - 0.13 l/sm³
- » Anticorrosive protection:
- Galvanized zinc (Zn) coating: 180g/m²
- » External protection coating material thickness:
polyester 25 μ m
- » Inspection panels mounted on AHU side.

NO THERMAL BRIDGES

Our Monocoque casing is a framework free construction. This eliminates the problem of water condensation on the external AHU side - and therefore - no more of harmful water dripping from the ceiling.

DRAIN TRAY

They are fabricated from heavy stainless steel and are to prevent condensation.

COOLING COILS

Fabricated from copper tubes mechanically bonded with aluminum fins and are leak tested at 305 psig pressure.

Hydronic

- » Copper pipe: dimensions: ½"
- » Fin Type: corrugated fin
- » Row: 4 or 6 rows
- » Max operating pressure: 1,6 MPa
- » Testing pressure: 2,1 MPa
- » Equipped with air discharge valve and water outlet valve

> DX

- » Copper pipe: dimensions: ½"
- » Fin Type: corrugated fin
- » Row: 6 rows , 2 - sections
- » 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.
- » Impeller made of SAN (styrene/ acrylonitrile) construction material with 20% glass fiber.
- » Direct drive – fan impeller installed directly on motor shaft.
- » Fan section consisting of single or twin fans .

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).
- » Motors fitted for IEC standard.
- » Variable Frequency Drive (VFD) – standard part of the fan-set.
- » Available Energy classes: IE2
- » Available voltage: 1x230V/50Hz, 3x380V/50Hz, 3x400V/50Hz, 3x400V/60Hz.
- » Number of poles: 2.
- » Motor winding insulation class: F (fitted for VFD operations).
- » Bearings lifetime: L10= 20000h / L50 = 100000h.
- » Protection degree: IP55.
- » Working conditions: 60°C.

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.
- » EC motors (Electronically Commutated) – where mechanical commutator switching the windings has been replaced with electronic one.
- » Change of revolutions is done by means of changing the frequency rate of windings switching (rate or magnetic field rotating).
- » Highly inductive permanent magnets have applied in EC motors used by VTS, which enabled to achieve high torque at relatively small dimensions.
- » Rated voltage: EC motors of nominal capacity equal or less 0,75kW - 1x230V AC.
- » Motor winding insulation class: F.
- » Protection degree: IP54. » Maximum working ambient temperature: 55°C.
- » Lifespan: - 70 000 hours at load not exceeding 70% of nominal capacity at ambient temperature not exceeding 35°C, - 30 000 hours at 100% capacity load at ambient temperature not exceeding 55°C.

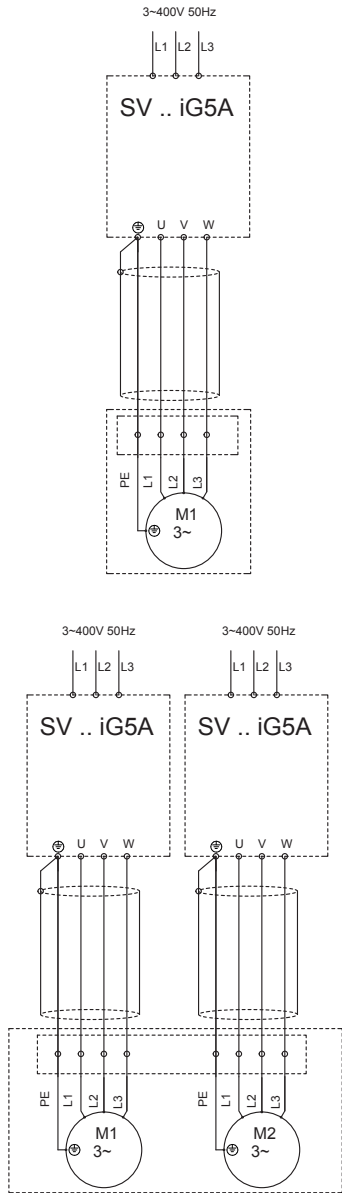
AIR FILTERS

- » All Units are provided with 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 75% (ISO 16890) - G4 (EN779).

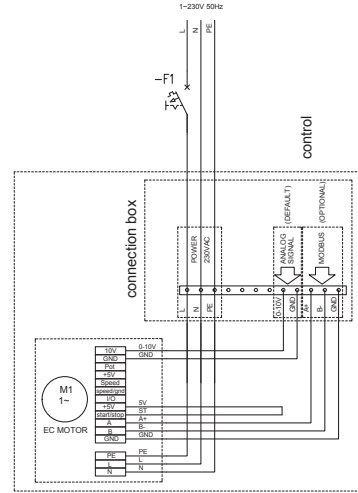


ELECTRICAL WIRING DIAGRAMS

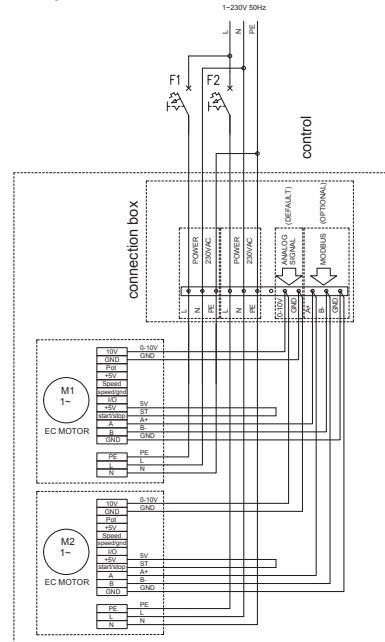
3 phase with VFD



1 phase - 1 EC MOTOR



1 phase - 2 EC MOTOR

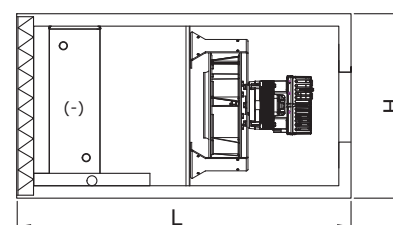
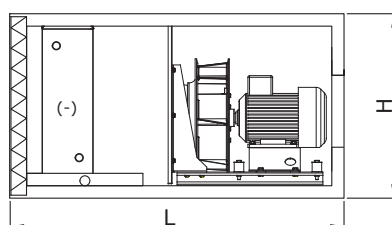
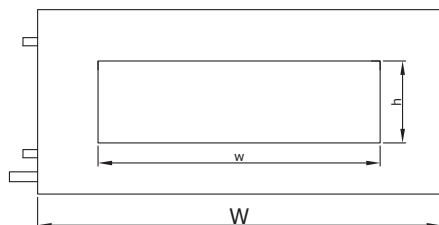


| Unit size | Model | Rated Output | Poles | Efficiency Class | Protection Grade | Fan set with AC Motor | | | | |
|-----------|------------|--------------|-------|------------------|------------------|-----------------------|---------------|---------------|---------------|---------------|
| | | | | | | Rated Current at | | | | |
| | | | | | | 415V/3ph/50Hz | 230V/1ph/50Hz | 380V/3ph/50Hz | 400V/3ph/50Hz | 400V/3ph/60Hz |
| [-] | [kW] | [-] | [-] | [-] | [A] | [A] | [A] | [A] | [A] | |
| SVS-35 | VS 315 | 1,5 | 2 | IE2 | IP55 / F | 3,1 | 5,54 | 3,36 | 3,1 | 3,19 |
| SVS-50 | VS 355 | 1,5 | 2 | IE2 | IP55 / F | 3,1 | 5,54 | 3,36 | 3,1 | 3,19 |
| SVS-70 | VS 315 x 2 | 1,5 x 2 | 2 | IE2 | IP55 / F | 6,2 | 11,08 | 6,72 | 6,2 | 6,38 |
| SVS-85 | VS 400 x 2 | 1,5 x 2 | 2 | IE2 | IP55 / F | 6,2 | 11,08 | 6,72 | 6,2 | 6,38 |
| SVS-100 | VS 400 x 2 | 1,5 x 2 | 2 | IE2 | IP55 / F | 6,2 | 11,08 | 6,72 | 6,2 | 6,38 |

| Unit size | Model | Rated Output | Protection Grade | Rated Current at 230V/1ph/50Hz | | | | |
|-----------|------------|--------------|------------------|--------------------------------|-----------------------|------|-----|-----|
| | | | | | Fan set with EC Motor | | | |
| | | | | | [-] | [kW] | [-] | [A] |
| SVS-35 | VS 315 | 0,75 | IP54 / F | 3,7 | | | | |
| SVS-50 | VS 315 | 0,75 | IP54 / F | 3,7 | | | | |
| SVS-70 | VS 315 x 2 | 0,75 x 2 | IP54 / F | 7,2 | | | | |
| SVS-85 | VS 315 x 2 | 0,75 x 2 | IP54 / F | 7,2 | | | | |
| SVS-100 | VS 315 x 2 | 0,75 x 2 | IP54 / F | 7,2 | | | | |



 **100%**
units
factory tested



| Unit size | Dimensions | | | Duct Connection | FAN | Motor | Weight |
|-----------|------------|------|------|-----------------|------------|--------------|--------|
| | H | W | L | h x w | Model | Rated Output | |
| | [mm] | | | | [-] | [kW] | |
| SVS-35 | 530 | 1130 | 1120 | 210 x 700 | VS 315 | 1,5 | 106 |
| SVS-50 | 595 | 1300 | 1120 | 310x550 | VS 355 | 1,5 | 124 |
| SVS-70 | 530 | 2000 | 1120 | 310x1200 | VS 315 x 2 | 1,5 x 2 | 181 |
| SVS-85 | 655 | 2000 | 1120 | 410x1400 | VS 400 x 2 | 1,5 x 2 | 205 |
| SVS-100 | 655 | 2200 | 1120 | 410x1400 | VS 400 x 2 | 1,5 x 2 | 220 |

| 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 |



Manufacturing & Logistic Centre

VTS TF Air Systems Pvt. Ltd.
Survey # 13/1, Kanekalu, Devanagondhi post,
Hosakote Taluk, Bangalore - 560067
Tel. +91.080-49574632 / 080-48526681
sales-india@vtsgroup.com

India Sales Offices:

Bangalore - Mumbai - Delhi - Chennai - Hyderabad
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Before placing the order, please, confirm all technical specification with VTS sales representative.

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