AIR HANDLING SOLUTIONS
FOR DATA CENTER INFRASTRUCTURES

CRAH

FAN WALL UNITS

NOMINAL AIRFLOW

2 875 – 36 000 CFM

30 000 – 90 000 CFM

COOLING CAPACITY

20 – 250 kW

200 – 600 kW

> CRAH UNITS

VTS CRAH units are compact, downflow-only vertical cooling solutions designed for mission-critical data center environments where reliable performance, precise temperature control, and efficient use of space are essential.
Their compact construction makes them suitable for installations with limited floor area, while still delivering the cooling capacity required for demanding IT infrastructure.

Equipped with EC fan sets, optimized chilled water flow and intelligent Plug & Play controls, the units support stable operating conditions, reduced energy consumption and fast commissioning. This makes VTS CRAH units a flexible and efficient solution for data centers requiring scalable, precise and reliable cooling.

» Air flow: **2,875 CFM – 36,000 CFM**
» Cooling capacity: **20 kW – 250 kW**

> KEY BENEFITS FOR CLIENTS

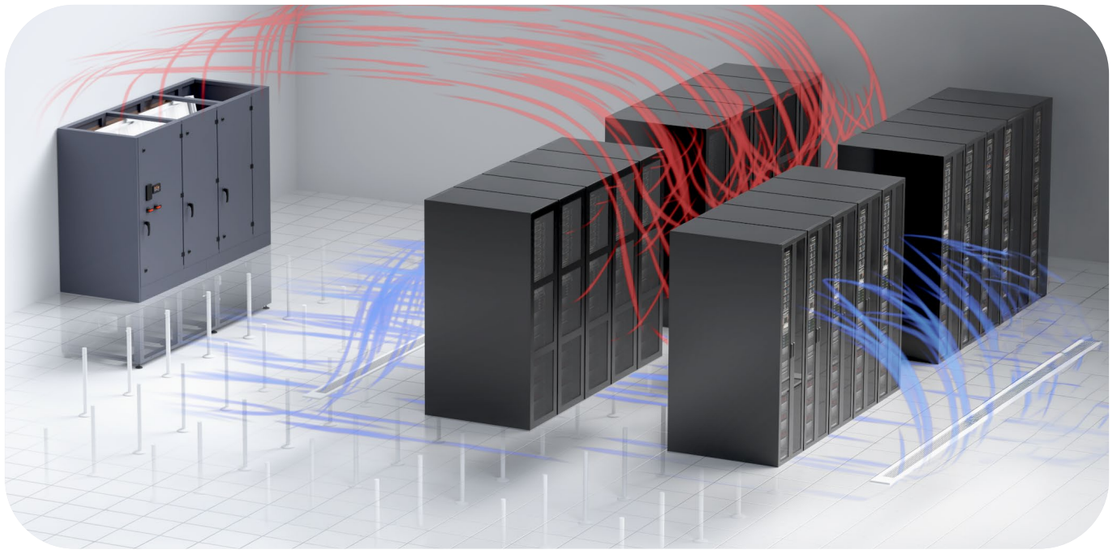
COMPACT FOOTPRINT
Maximum cooling in less space

EFFICIENT EC AIRFLOW
Lower power consumption

EASY TRANSPORT & INSTALLATION
Compact design, easier handling

SMART BUILT-IN CONTROL
Precise, energy-efficient regulation

OPTIMIZED CHILLED WATER FLOW
Pressure-independent Energy Valve



> DESIGNED FOR RELIABILITY. BUILT TO PERFORM.

VTS CRAH units are designed to provide a high level of flexibility, allowing each unit to be precisely adapted to the specific requirements of the facility in terms of installation conditions, available space, unit dimensions and required cooling capacity. This enables an optimal fit for different data center layouts, from compact technical rooms to high-capacity data halls.

Full service access from the front of the unit further simplifies maintenance and minimizes the space required for servicing, making VTS CRAH units particularly suitable for space-constrained mission-critical environments.

> TECHNICAL PARAMETERS

Unit Model	Depth	Width	Height	Fan Power	Fan Size	No. Fans	Cooling Capacity	Airflow Volume
	[in]	[in]	[in]	[kW]	-	-	[kW]	[CFM]
CRVS020	36.9	41.4	81.0	2.9	355	1	20	2,875
CRVS040	36.9	65.9	81.0	2.9	355	2	40	5,750
CRVS060	36.9	90.8	81.0	2.9	355	3	60	8,625
CRVS080	38.5	110.2	99.1	3.7	450	3	80	11,500
CRVS120	38.5	141.4	99.1	3.7	450	4	120	17,250
CRVS160	42.1	122.3	116.0	5.95	560	3	160	23,000
CRVS200	42.1	157.6	116.0	5.95	560	4	200	28,750
CRVS250	42.1	192.8	116.0	5.95	560	5	250	36,000

FAN WALL UNITS

VTS Fan Wall units are modular cooling solutions designed for large data halls, hyperscale facilities and mission-critical environments with high and constantly changing cooling demands. Their horizontal airflow concept supports effective air distribution across long distances, helping to maintain stable operating conditions even in high-density server areas.

The modular design allows the system to be scaled according to project requirements and enables redundancy management for up to 16 units. This ensures reliable operation, flexible capacity planning and high performance in facilities where cooling continuity is essential.

» Air flow: **30,000 CFM – 90,000 CFM**
» Cooling capacity: **200 kW – 600 kW**

KEY BENEFITS FOR CLIENTS

RELIABLE HIGH-LOAD COOLING
Designed for taller racks and demanding heat loads.

BUILT-IN REDUNDANCY
Reliable backup operation.

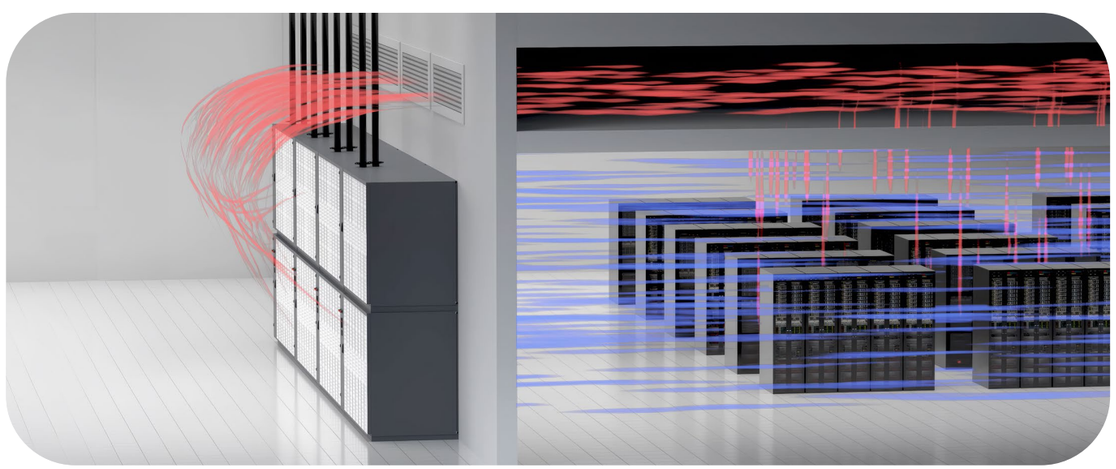
EASY MAINTENANCE ACCESS
Simple service space for faster inspection and maintenance.

HIGH EFFICIENCY
High cooling capacity with minimal power consumption.

ROBUST CONSTRUCTION
Strong base frame and panels for indoor installation.

EFFICIENT TRANSPORT & FAST INSTALLATION
Space- and cost-effective shipping in standard containers. Simple handling and quick on-site setup.

SMART BUILT-IN CONTROL
Precise, energy-efficient regulation



DESIGNED FOR RELIABILITY. BUILT TO PERFORM.

VTS Fan Wall units are designed to provide a high level of flexibility, allowing each unit to be precisely adapted to the specific requirements of the facility in terms of installation conditions, available space, unit dimensions and required cooling capacity. This enables an optimal fit for different data center layouts, from compact technical rooms to high-capacity data halls.

Full service access from the front of the unit simplifies maintenance and minimizes the required service space. A specially designed fan partition provides quick and easy access to the fan assemblies, enabling fast fan replacement and reducing service time in mission-critical applications.

Fan redundancy functionality helps maintain the required airflow and cooling performance in the event of fan failure, supporting continuous and reliable operation in critical data center applications.

DCVS2200

DCVS2300

DCVS2400

DCVS3300

DCVS3450

DCVS3600

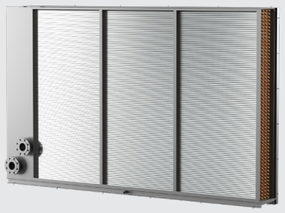
TECHNICAL PARAMETERS

Unit Model	Depth	Width	Height	Fan Power	Fan Size	No. Fans	Cooling Capacity	Airflow Volume
	[in]	[in]	[in]	[kW]	-	-	[kW]	[CFM]
DCVS2200	60.0	130.5	85.0	5.95	560	4	200	30,000
DCVS2300	60.0	130.5	134.5	5.95	560	6	300	45,000
DCVS2400	60.0	130.5	169.8	5.95	560	8	400	60,000
DCVS3300	60.0	146.3	85.0	5.95	560	6	300	45,000
DCVS3450	60.0	146.3	134.5	5.95	560	9	450	67,500
DCVS3600	60.0	146.3	169.8	5.95	560	12	600	90,000

CRAH & FAN WALL **KEY COMPONENTS**

FAN SETS

- High-efficiency impellers for powerful airflow and performance
- Durable construction ensuring long service life
- Easy access to the fan assemblies:
  - CRAH – fan assemblies mounted on slide-out rails
  - FAN WALL – fan assemblies mounted on hinges
- Low total harmonic current distortion, eliminating the need for additional filters or energy-related components
- Optional Power Factor Correction (PFC) filtering



COOLING COIL

- Full-height coil with integral drain pan
- Energy Valve option for optimized water flow and energy measurement
- Condensate drained by an integrated condensate pump

CONTROLS

- Flexible, project-specific software configuration
- 4,3” capacitive touch display with intuitive system graphics
- Plug-and-play installation for quick commissioning
- Supply air–based control using coil-mounted temperature sensors
- Cold-aisle temperature sensors supplied loose
- Features: leakage sensor, ATS, UltraCAP UPS, connectivity interfaces
- Automated airflow and pressure control based on filter condition

PLUG &PLAY CONTROL SYSTEM

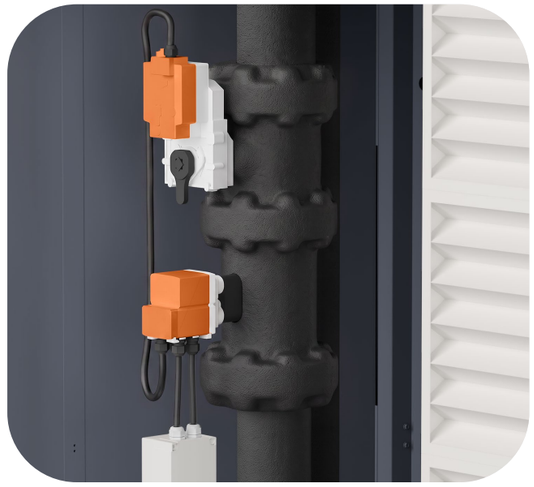
CONTROL FUNCTIONS

- Temperature and humidity control for both cooling and dehumidification
- Delta T regulation between supply and return air
- Precise control of supply air temperature
- Room or return air temperature control based on project requirements
- Coordinated control strategy: the valve regulates supply air temperature, while the EC fan delivers the required airflow
- Filter contamination monitoring for proactive maintenance

OPTIONAL FUNCTIONS

- Redundancy management for up to 16 units
- Integrated standby and emergency operation mode for up to 16 units
- Fire alarm system input for enhanced safety
- ATS - Automatic power transfer to backup generator during a power failure

CRAH & FAN WALL **INTELLIGENT SENSORS AND EXTERNAL COMMUNICATION**



- Energy Valve with pressure - independent control for consistent chilled-water flow and no need for manual hydraulic balancing
- Modbus and external BACnet communication for extended system data, including real-time power consumption and calculated EER/AER values
- Integrated energy measurement for transparent performance monitoring
- Chilled-water inlet and outlet temperature monitoring
- Control valve options: PIC valve or Energy Valven

CRAH & FAN WALL **TRANSPORT**

CRAH

- Design optimized for truck logistics and container
- Delivered in two packages:
  - Package 1: Cube with heat exchanger
  - Package 2: Cube with fans

FAN WALL

- Cube dimensions optimized for standard truck transport and container
- Special base frame enables safe and efficient forklift handling
- No crane lifting eyes required
- Shipped in top and bottom half-modules for simplified on-site handling

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