OXYGEN8

Split DOAS Solutions for

MODERN DATA CENTERS

THE AI ERA IS ACCELERATING DATA CENTER GROWTH – AND WITH IT, THE DEMAND FOR RELIABLE, EFFICIENT VENTILATION.

As rack densities increase and cooling strategies evolve, maintaining compliant, resilient outdoor air delivery has become critical across air cooled, water-cooled, and emerging liquid-cooled data center designs.

At Oxygen8, we deliver high-performance DOAS solutions tailored for modern data centers—whether meeting ASHRAE and IMC ventilation requirements or supporting custom outdoor air strategies for advanced cooling architectures. Our DOAS split systems are designed for both retrofit projects with space constraints and new builds requiring modularity, redundancy, and speed of deployment.

For larger airflow requirements, Ventum+ provides a scalable DOAS platform with high-efficiency energy recovery—ensuring efficient ventilation without compromising reliability.

For More Details and Support
Please contact the Oxygen8 Applications Team or your Regional Sales Manager

THE DECENTRALIZED ADVANTAGE:

Split vs. Packaged Dedicated Outside Air Systems

Scalable & Modular
Add capacity aisle-by-aisle; true N+1 at ventilation level

Retrofit-Friendly
Indoor modules avoid crane lifts and roof penetrations

Faster Lead Times
Modular manufacturing and local VRV availability reduce delivery windows

Serviceability & Resilience
Isolate failures to a zone; ECM fans and easier-access simplify maintenance and reduce MTTR

VRV Integration
High part-load efficiency supports electrification efforts

Hydronic Integration
Seamless integration with chilled water systems

Lower Fan Energy
Shorter duct runs reduce static pressure. High-efficiency EC fans minimize energy usage.

OXYGEN8

Split DOAS Solutions for

MODERN DATA CENTERS

PROJECT SPOTLIGHT

Project Stealth
2 x Ventum+ V50 units installed at liquid cooled data center for global tech giant.

Common Benefits & Commercial Offers

Controls & Commissioning
Packaged controls + BACnet IP and commissioning support available

Lead Times
8 – 12 weeks with quick ship options available

Pricing
Special volume-based discounts for Data Center applications

Split DOAS Advantages for Cold Climates

Reduced Freeze Risk
Indoor placement keeps coils within the conditioned envelope, reducing freeze exposure during extreme cold

Avoids Glycol Penalty
Pure water loops reduce pump energy by 15 – 20% and improve heat transfer by 10 – 15% compared to glycol-based systems

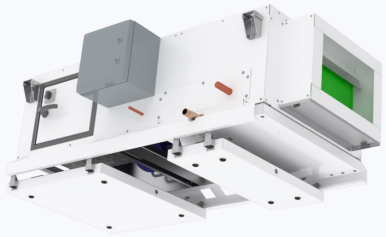
Safer Maintenance
Service is performed from conditioned spaces, avoiding hazardous rooftop access during snow and ice conditions

Reliable Cold-Weather Heating
Inverter-driven heat pumps maintain heating capacity at low ambient temperatures, reducing reliance on electric resistance backup

OXYGEN8 PRODUCT PORTFOLIO | Data Center Applications

Terra H – Horizontal AHU

Model	Dimensions (For standard option)			Airflow
	Length in.	Width in.	Height in.	CFM
T006	60	30	20	600
T009	60	36	20	900
T012	60	44	20	1200
T015	60	50	20	1500
T018	66	50	21	1800
T024	66	62	21	2400
T032	66	54	30	3200
T040	66	62	30	4000
T048	66	72	30	4800



Options: Available with VRV or hydronic coil integration

Applications: Retrofit data halls, low-profile ceiling or mezzanine installations, constrained mechanical rooms

Terra V – Vertical AHU

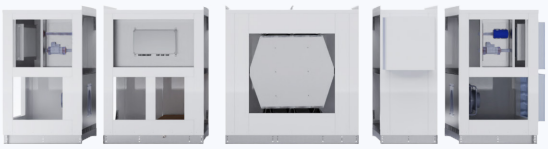
Model	Dimensions (For standard option)			Airflow
	Length in.	Width in.	Height in.	CFM
TV006	32 + 3	30	51	600
TV009	32 + 3	30	51	900
TV012	32 + 3	30	51	1200
TV015	33 + 3	44	62	1500
TV018	33 + 3	44	62	1800
TV024	33 + 3	44	62	2400
TV032	36 + 3	48	78	3200
TV040	36 + 3	48	78	4000
TV048	36 + 3	48	78	4800
TV060	36 + 3	69	78	6000
TV072	36 + 3	69	78	7200
TV084	36 + 3	69	78	8400
TV100	36 + 3	77	80	10000

Options: Available with VRV or hydronic coil integration

Applications: New greenfield builds, mechanical rooms with limited footprint

Ventum+ – High Airflow with Energy Recovery

Model	Dimensions	ERV	HRV	Airflow
	L* x W x H in.	SRE %	SRE %	CFM
V20	117.5 x 56.6 x56	75.7	82.5	1800
V25	117.5 x 56.6 x 62	75.7	82.5	2400
V30	117.5 x 69.8 x 66	74.9	82.2	3200
V40	122 x 69.8 x 74	74.9	82.2	4000
V50	131 x 69.8 x 84	75.8	81.4	4800
V60	131 x 85.9 x 84	75.1	81	6400
V80	138.5 x 85.9 x 100	75.1	81	8000
V100	138.5 x 102.1 x 100	74.7	80.7	10000
V120	135 x 116 x 100	74.3	80.7	12000
V150	135 x 116 x 116	73.9	78.5	15000



Options: HRV/ERV, Indoor/Outdoor, DX/Hydronic Integration, HGRH Coil, Economizer Bypass

Applications: Large data halls and collocation facilities, high airflow zones requiring energy/enthalpy recovery, hot-humid sites with latent load control

*Unit length shown is for the base configuration. Overall unit length increases with added sections (preheat, DX, HGRH, recirculation)