

MaxAir

Fan Wall Units for Large and
Hyperscale Data Centre



Shaping the Future of AI-Driven Data Centre



The ascent of the AI era is transforming the data centre landscape, fuelling exponential demand growth whilst establishing groundbreaking new benchmarks for performance, efficiency, and reliability.

With three decades of engineering heritage, AIRSYS PowerOne – our comprehensive AI thermal management solution (encompassing chillers, fan walls, CDUs, and liquid-cooled DataRacks) – delivers sustainable, high-performance cooling designed to adapt alongside your evolving requirements, both now and in the years to come. As your trusted partner, AIRSYS remains dedicated to collaborating with you on this journey, jointly pioneering innovations to create more intelligent, environmentally conscious, and resilient data centres for the AI-driven future.

**Next-Gen Cooling
Intelligence**

**Hyperscale-Ready
Modularity**

**Rapid Deployment
Architecture**

**Compact & Stackable
Design**

**Pre-Engineered
Blocks**

**Mission-Critical
Redundancy**



Scalable Cooling for Next-Gen Data Centre



As data Centre scale to meet rising AI and cloud demands, efficient and flexible cooling solutions have become critical. Fan wall has emerged as a preferred architecture delivering modularity, uniform airflow, and intelligent space utilization for high-density environments.

MaxAir takes this proven concept to the next level. Whether for new builds or retrofits, it empowers data Centre to achieve energy savings, deployment speed, and operational reliability—meeting today's challenges and tomorrow's demands.

MaxAir

MaxAir is designed to meet evolving cooling needs in high-density data Centre. Starting with a compact 240 kW dual-fan module, it combines high-efficiency EC centrifugal fans, precision hydronic control with EPIV, and intelligent airflow control to deliver strong thermal performance with low energy use.

Built for global deployment, MaxAir supports flexible installation in tight spaces, fast on-site setup, and easy maintenance—bringing simplicity and scalability to data Centre cooling. Certified to CE and UL standards, MaxAir ensures safety, reliability, and seamless integration across international markets.

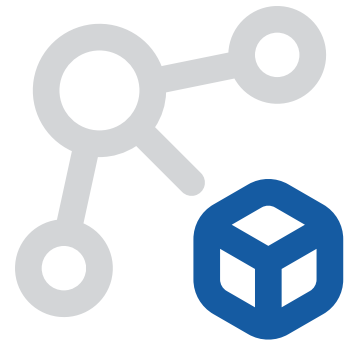
- Cooling capacity from 240 kW
- Airflow volume up to 60,000m³/h
- Scalable modular design for phased expansion
- High energy efficiency
- Maintenance-friendly architecture



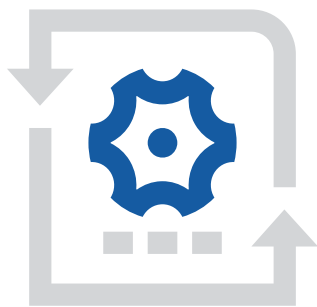
Specifications at A Glance

Modular Scalability & Rapid Deployment

- Deploy only what you need today—and scale effortlessly tomorrow.
- Inline or vertical stacking supports gradual rollout as IT load grows.
- Plug-and-play modules with forklift channels, lifting lugs, and optional casters.
- Quick-connect hoses and terminals simplify onsite installation.



Easy Maintenance & Operational Uptime



Designed for continuous operation—even during component swaps.

- **Filter Maintenance:** Rotary-lock system enables full filter module replacement in under 5 minutes.
- **Fan Swap:** Optional hand winch allows safe fan retrieval from stacked modules by a single technician.
- **Electrical Panel Access:** Clean layout, high visibility, and glove-friendly spacing ensure safe interaction.

Smarter Cooling & Lower Operating Costs

Maxair adapts in real time to THE actual thermal demand, maximizing energy savings without sacrificing performance.

- **IE5 EC Centrifugal Fans:** Ultra-efficient stepless motors deliver high static pressure with minimal power draw.
- **Hydronic Precision with EPIV:** Pressure-independent valves eliminate over-pumping and ensure stable flow, even under partial load.
- **Adaptive Airflow Optimization:** Real-time modulation based on temperature, static pressure, or chilled water input—with dynamic control priority.



Intelligent Control & Predictive Monitoring

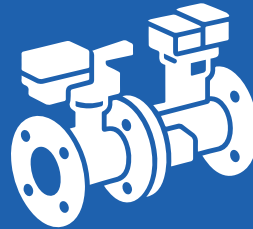
- **Smart Algorithms:** Priority-based logic optimizes temperature and pressure simultaneously.
- **Predictive Fault Diagnosis:** Early warnings for clogged filters, worn fans, or copper line degradation.
- **BMS Integration:** Compatible with Modbus, BACnet/IP, and SNMP protocols—ready for your control stack.
- **Cross-System Sync:** Works in tandem with chillers, CDUs, and liquid cooling systems.

Key Components & Performance Curves



EC Centrifugal Fan

- **IE5 EC Motor** — 90% peak efficiency at part load
- **High Static Pressure** — Delivers stable airflow
- **Stepless Modulation** — Real-time airflow control for thermal and pressure precision



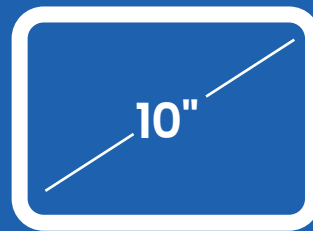
EPIV Valve

- **Automatic Flow Balancing** — Maintains stable hydronic performance under varying pressure conditions
- **Integrated Flow Sensing** — Delivers real-time control without external sensors
- **Zero Maintenance Design** — Factory-calibrated and sealed for long-term operation



Finned Tube Heat Exchanger

- **Optimized Coil Design** — Low pressure drop, fast heat transfer for efficient cooling
- **Hydrophilic Fin Coating** — Accelerates drainage and resists corrosion



Smart Touchscreen HMI

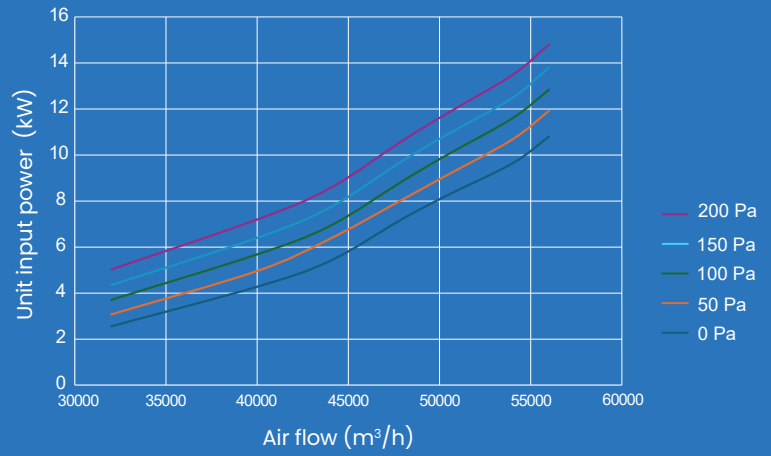
- **10" Touchscreen + Adaptive Software** — Intuitive interface with smart control logic
- **Flexible Connectivity** — multi-port connectivity for reliable BMS integration



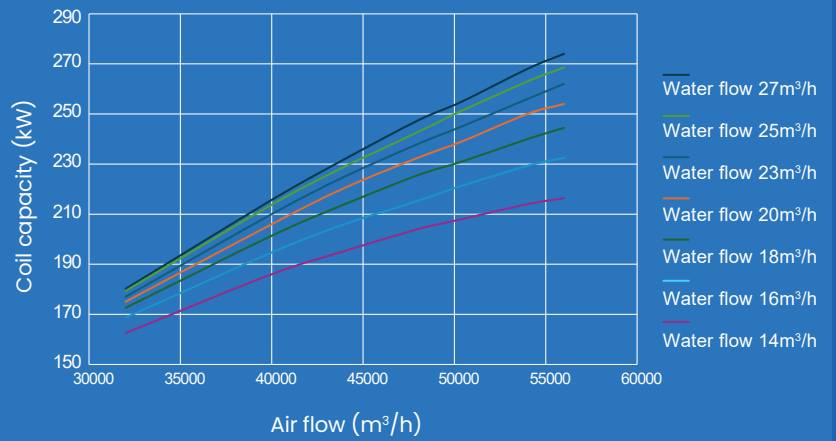
Options

- Electrical heating module
- Humidification module
- Motorized two-way valve
- Motorized air damper with actuator
- APF (Active Power Filter)
- ATS (Automatic Transfer Switch)

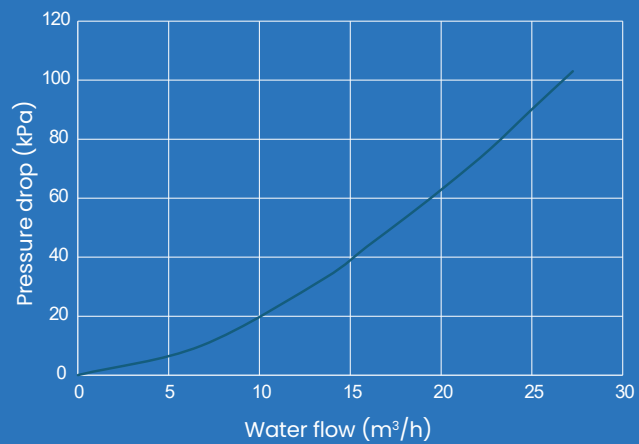
Air volume vs. Fan input power



Air flow vs. Coil capacity



Water flow vs. Pressure drop



Unit Model	MAX.240FS22EBDA	MAX.480FS42EBDA
Supply Scheme	Air front flow	Air front flow
System Type	Chilled water	Chilled water
Cooling Fluid	CW	CW
Power Supply	400V/3PH/50Hz	400V/3PH/50Hz
Cooling Rated Parameters		
Total (kW)	240	480
Sensible (kW)	240	480
Net Sensible (kW)	230	460
Fan Section		
Qty (n.)	4	8
Type	EC fan	EC fan
Air Flow (m ³ /h)	50,400	100,800
Return Air Temperature (DB) (°C)	38	38
Return Air Temperature (WB) (°C)	22	22
Supply Air Temperature (DB) (°C)	24	24
Supply Air Temperature (WB) (°C)	18	18
Input Power (kW)	9.8	19.6
Input Current (A)	14.8	29.6
Filter	G4	G4
Static Pressure (Pa)	75.0	75.0
CW Coil		
Coil of Rows	6	6
Enter Water Temperature (°C)	20	20
Leaving Water Temperature (°C)	28	28
Water Flow Rate (m ³ /h)	23.8	23.8
Coil+Valve Pressure Drop (kPa)	75.0	75
Electrical Data		
Rated Operating Power (kW)	9.8	19.6
Rated Operating Current (A)	14.8	29.6
Max Power (kW)	14.8	29.6
FLA (A)	22.8	45.6
MCA (A)	28.5	57.0
MOP (A)	49.8	99.6
Dimension and Weight		
Width (mm)	2,140	4,280
Depth (mm)	1,615	1,615
Height (mm)	3,515	3,515
Weight (kg)	1,000	2,000

Nomenclature

01	02	03	04	05	06	07	08	09	10	11	12	13	14
MAX.	240	F	S	2	2	E	B	C	A	.	B	X	X

01	MAX.	MaxAir
02	240	Capacity 240: 240kW 480: 480kW
03	F	Airflow Configuration F: Front flow supply S: Side in front supply B: Bottom in front supply
04	S	Installation Type S: Stacked installation C: Ceiling installation F: Floor installation
05	2	Modular Qty. 1: 1 Module 2: 2 Modules 3: 3 Modules 4: 4 Modules
06	2	Fan Qty./Modular 1: Single fan module 2: Dual fan module
07	E	Valve Type E: EPIV P: PICV C: CCV T: Two-way valve N: Energy valve
08	B	Coil Type A: V type B: Plate type C: W type
09	C	Power Supply C: 460V/3Ph/60Hz D: 380~400V/3Ph/50Hz A: 220V/1Ph/60Hz B: 208~230V/3Ph/60Hz E: 575V/3Ph/60Hz F: 380~400V/3Ph/60Hz
10	A	Version Number A: version 1 B: version 2 C: version 3
11	.	
12	B	Color Options B: Airsys Black/omit for default W: White RAL9003 G: Gray RAL428C T: Tan
13	X	HX Coating X: Hydrophilic coating/omit for default B: Blygold coating E: EPOXY fin
14	X	Filter Type X: G4/MERV8/omit for default Y: MERV13



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