



Ecoflair Air Economizers

Cooling to maximize value for the cloud



schneider-electric.com/ecoflair

Life Is On





Ecoflair takes data
center efficiency to
new heights

Imagine cooling your data center for free

Leveraging the power of evaporation, our next generation of indirect air economizer delivers



Reduced operating costs



Increased data center reliability



Capital investment savings



Enhanced design flexibility



More power for IT equipment

0

White space consumed

60%

Less power used

0

Compressor energy

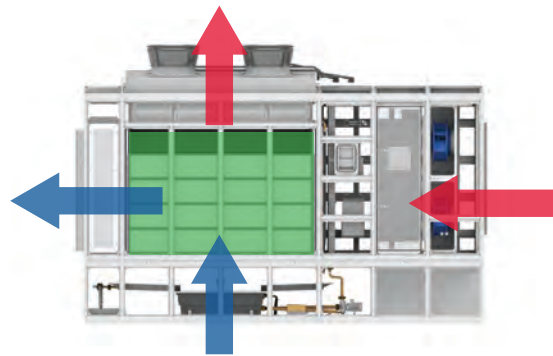


Indirect evaporative air economizer

Ecoflair uses a polymer air-to-air heat exchanger to indirectly cool the data center. Automatically switching between three modes of operation, the unit maximizes the efficiency of the cooling system while protecting the facility from outdoor contaminants.

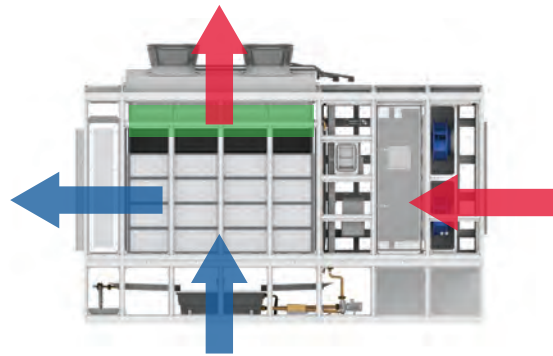
Dry mode

During winter months cold outdoor air passes over the heat exchanger and cools the indoor air without any assistance



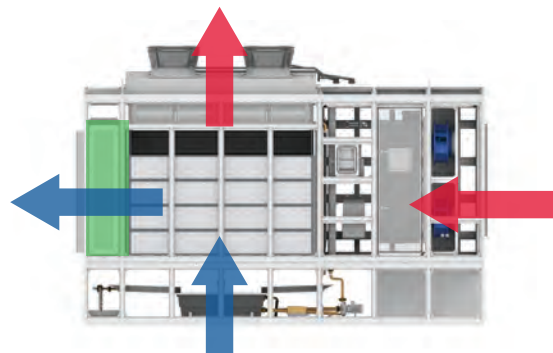
Wet mode

Water sprayed on the heat exchanger boosts the cooling performance when needed



Trim mode

In the summer, the trim cooling coil will supplement the evaporative cooling system to meet cooling requirements



Efficiency around the world

Compared to other architectures, Ecoflair delivers 60% savings on energy costs. That translates to 30% more power available for IT equipment.

Saving energy, water, and white space

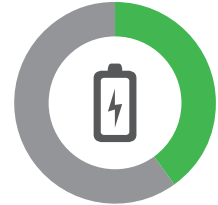
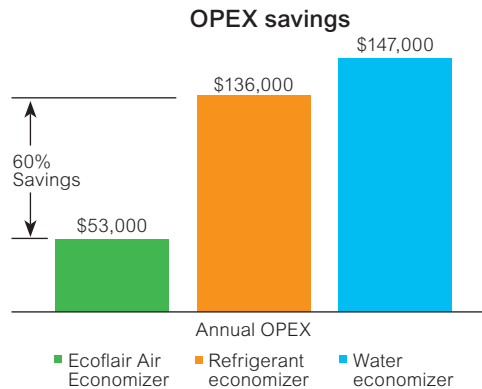
Data centers are huge consumers of power. Cooling accounts for up to 40% of that and represents a big opportunity for total savings.

- Evaporative cooling leverages outside ambient wet bulb temperatures to achieve ultra-efficiency
- Variable speed fans and compressors continuously save energy when at partial load
- Water-saver mode and recirculation reduces usage
- Zero footprint in the white space saves valuable room for IT racks
- Energy recovery features are available to reclaim heat for other processes
- Optimized management system connects all Schneider Electric cooling resources
- Ecoflair is factory tested and easy to assemble at the site, reducing installation and commissioning costs

City	Hours 100% free cooling	pPUE
London	8754	1.053
Frankfurt	8685	1.054
Montreal	8514	1.056
San Francisco	8757	1.054
Dallas	5547	1.084
Shanghai	5862	1.087
Sydney	7781	1.063
Tokyo	6780	1.071
Abu Dhabi	3041	1.118

60% savings on energy costs

30% more power available for IT equipment

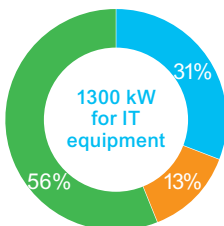


40% Cooling accounts for up to 40% of the data center total power

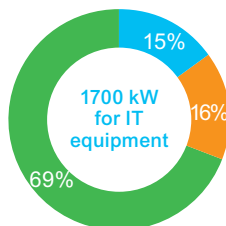
Increase available power for IT – improve use of capital

Example data center with 3000 AMP incoming utility power

Chilled water system with economizer/free cooling



Ecoflair Air Economizer



- Cooling
- UPS, battery, transformer
- Available IT

Reliability is not optional

No air mixing

Ecoflair isolates data center air from the outdoor environment. This prevents humidity swings and contaminants like dust, smoke, and pollution from harming your mission critical equipment.

Factory acceptance testing

Our manufacturing facility offers a complete testing lab for customers to witness their units in operation. We customize test protocols to make sure we meet your requirements.

Uninterrupted operation

- 90+ minutes of water storage to maintain continuous cooling
- Service vestibule allows unit maintenance while in operation
- The unique polymer HX core is field repairable
- Intelligent controls alert owners to trouble





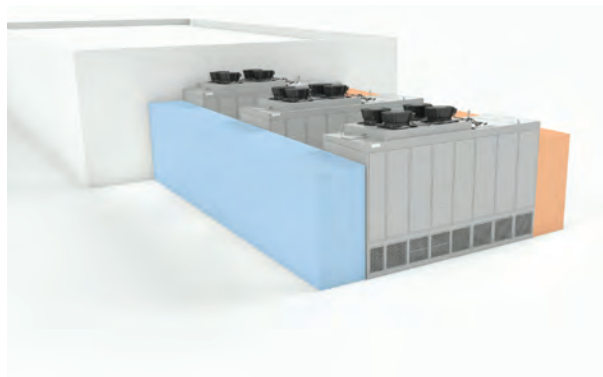
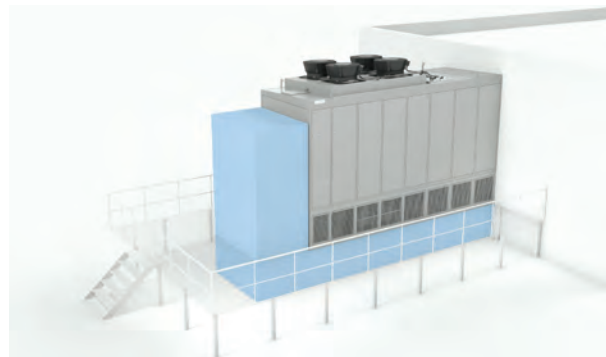
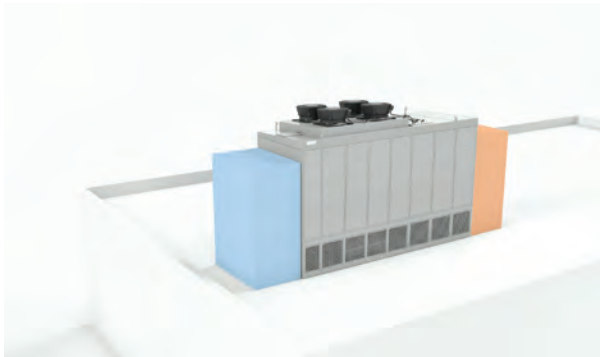
Flexible and customizable to meet your requirements

A simple and flexible infrastructure creates significant advantages

- 250 and 500kW modules can grow as needed
- Zero white space needed, which maximizes flexibility for IT equipment
- Airflow, electrical, and filtration configurations are available to meet your specific data center needs
- Trim cooling maximizes the range of locations suitable for deployment

Installation options

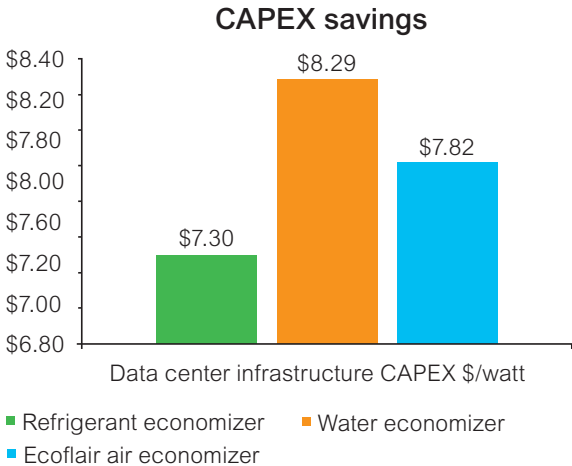
Ecoflair is suitable for perimeter or rooftop installation, and is available with integrated factory supplied ducting, or customize your solution with field provided ducting.



Preserve capital

Ecoflair delivers 6% savings on capital investment

- Total lower energy requirements allow you to reduce your electrical distribution infrastructure
- Zero white space consumed enables you to design a smaller facility



Features and specifications

Standard features

- Variable speed IT air and ambient air fans with electronically commutated motors
- Easy-to-replace high efficiency IT air filters
- Modular self-cleaning air-to-air heat exchanger, fully constructed with corrosion-proof polymer materials
- Evaporative cooling system with integrated water recirculation and water filtering system
- Evaporative water basin with freeze protection and continuous water condition monitoring system
- Fiber reinforced plastic roof panels with skid resistance surface
- Fiber reinforced ambient air supply grilles
- Exterior panels for environmental protection
- Internal air blocks for containment
- Access panels with handles and fast release screws
- Microprocessor controls with adjustable external touchscreen user interface display and network management card

Water system options

- Hydronic system with dual circulation pumps
- Electro-pulse water treatment

Power supply options

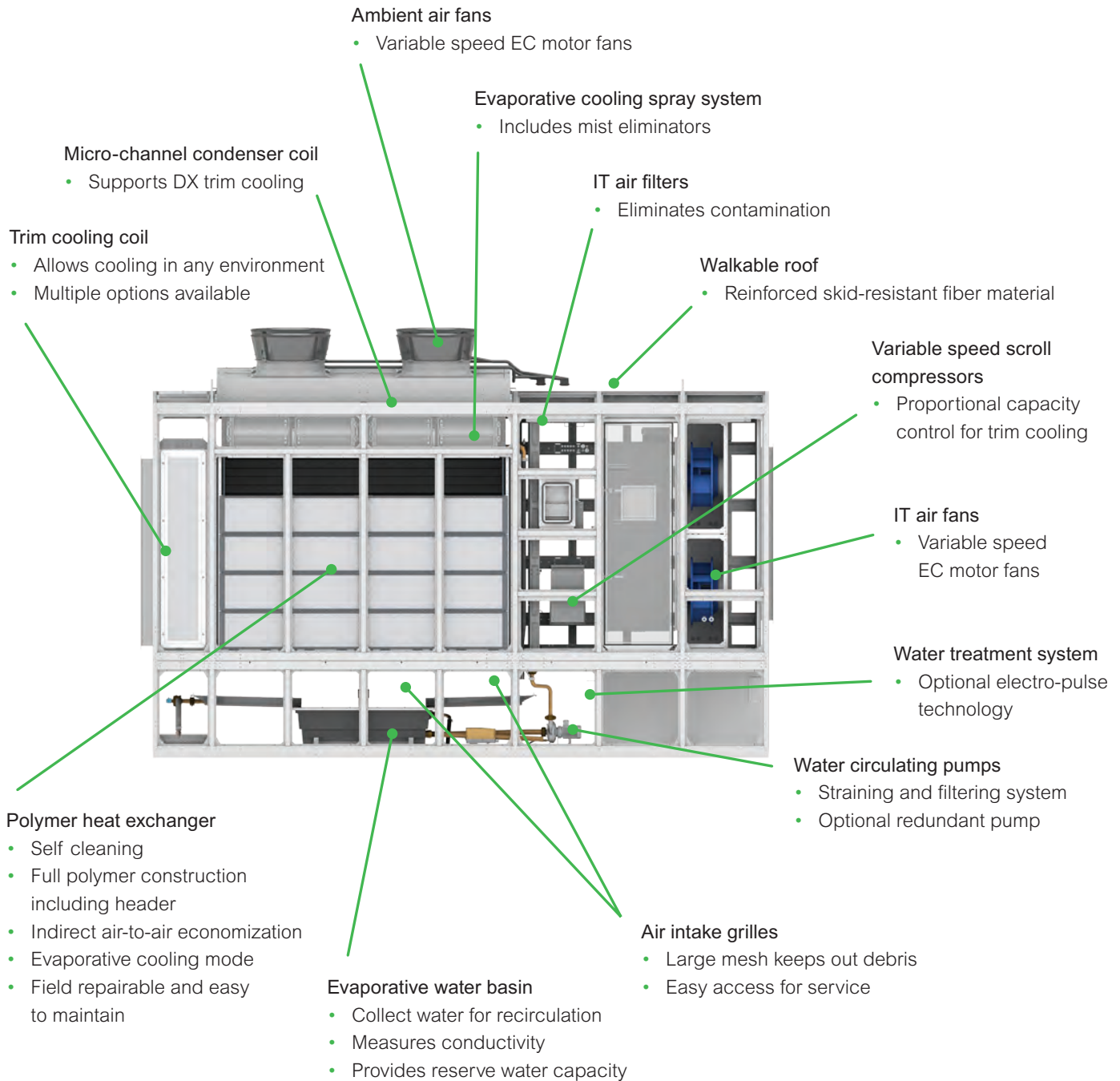
- Dual power supply with automatic source selector
- Separate power supplies for critical and non-critical sub-systems

Trim cooling options

- DX system with brushless variable speed scroll compressors and micro-channel condenser coils
- Chilled water coil with modulating valve
- Return air heat reclaim coil

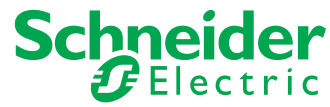
Models		IAEC25	IAEC50
Economizer type		Indirect Evaporative Air-to-Air	
Power supply	V/ph/Hz	400/3/50 or 460/3/60	
IT air fans	nr.	4	8
Max air flow per fan	m3/hr (ACFM)	13864 (8160)	
Outdoor air fans	nr.	4	8
Max air flow per fan	m3/hr (ACFM)	8495 (5000)	
Nominal cooling capacity	kW	250	500
Refrigerant type		R-410A	
Compressors - single circuit	nr.	1	2
Compressors - dual circuit	nr.	2	4
Dry weight - base unit	kg (lb)	6800 (14991)	13600 (29982)
Operating weight - base unit	kg (lb)	7525 (16589)	15050 (33179)

Interior components



The image shown here is for descriptive purposes only. Unit construction details may differ based on specific models and configuration options. Some features described are available only for select models or configurations.

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To learn more visit:
schneider-electric.com/ecoflair

Schneider Electric Industries SAS
35, rue Joseph Monier - CS 30323
F92506 Rueil-Malmaison Cedex