



ESC-SERIES

Indirect Evaporative Cooling Technology



Benefits at a Glance for:

Engineers

- Up to 56,000 CFM
- 30 - 40% of the energy of mechanical cooling
- 12 customizable units; rooftop or pad-mount configurable

Contractors

- Cambridge Factory Start-up
- Ability to win more projects

Building Owners

- Energy Efficient VFD controls
- Provides superior IAQ
- Reduces carbon footprint
- Tempered cooling solution in facilities where a "do not exceed" temperature is the primary goal



The ESC-Series evaporative cooling unit is a semi-custom fabricated air handler that can utilize direct (DEC), indirect (IEC) evaporative cooling, or a combination of both indirect/direct (2-Stage) evaporative cooling to meet specific usage and dimensional requirements. Heating options are also available. The evaporative cooling unit uses 100% outside air to provide tempered makeup air and building cooling. The ESC-Series unit is designed for industrial, commercial, and institutional buildings needing better indoor air quality without the equipment or operating costs associated with mechanical cooling.

Industry Applications

- Warehouse/Distribution
- Aviation
- Sports Arenas
- Greenhouses
- Agriculture
- Call Centers
- Food Processing Plants
- Manufacturing
- Health Care/Labs
- Waste Water Treatment
- Foundries
- Data Centers
- Institutions/Prisons
- Schools

Performance Features

Indirect

- Utilizes indirect plate exchanger
- Compact polymer plate exchanger
- Typical efficiencies 60 - 80%
- Low static pressure drop
- Outside air used for vaporizer air
- Energy recovery
- Built to suit applications

Indirect/Direct

- Sensible cooling with adiabatic cooling
- Uses plate exchanger with waste air stream and direct evaporative media
- Saturation efficiency up to 120%
- In drier climates can achieve discharge temperatures in the mid to high 50's
- EER above 30 in high wet bulb areas
- EER near 100 in drier areas
- No mechanical cooling required



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Specifications – Base Unit

Airflow Ranges: 2,400 - 56,000 CFM

• ESC4L	2,400 – 4,000	CFM
• ESC6L	3,600 – 6,000	CFM
• ESC4	4,200 – 7,000	CFM
• ESC6	6,300 – 10,500	CFM
• ESC8	8,400 – 14,000	CFM
• ESC10	10,500 – 17,500	CFM
• ESC12	12,600 – 21,000	CFM
• ESC14	14,400 – 24,000	CFM
• ESC2-8	16,800 – 28,000	CFM
• ESC2-10	21,000 – 35,000	CFM
• ESC2-12	25,200 – 42,000	CFM
• ESC2-16	33,600 – 56,000	CFM

Mounting:

- Roof Top
- Pad Mount

Discharge:

- Down Blast
- Up Blast
- Horizontal Blast

Voltage:

- 460/3/60
- 230/3/60
- 208/3/60

Casing/Finish:

- Single Wall Galvanized
- Single Wall Stainless
- Double Wall Galvanized
- Double Wall Stainless

Paint: • 1000 hour salt spray

Available Options/Accessories

Direct Evap Section:

- 12" CELdek
- 18" CELdek
- 12" GLASdek

Indirect Evap Section

Energy Recovery:

- Energy Recovery MUA
- Energy Recovery Economizer

Coil Section:

- 4 Row CW or DX Coil
- 6 Row CW or DX Coil

Hot Water Coil Section:

- 2 Row HW Coil

Gas Heating Section:

- Indirect Fired

Mixing Box:

- O/A & R/A Damper with 2-Pos. Actuator
- O/A & R/A Damper with Modulating Actuator

Curb:

- Flat 14" or Flat 24"

Rail/Stand:

- 14" or 24"

Motor Type:

- ODP
- TEFC

NEMA 3R VFD:

- Without Bypass

Fan Type:

- Forward Curved
- Backward Inclined
- Plenum

Drives:

- 1.2 Fixed
- 1.2 Variable
- 1.5 Fixed
- 1.5 Variable
- Direct Drive

Intake:

- Screen
- Louver
- Hood

Filters:

- 2" Aluminum
- 2" MERV 8
- 12" MERV 13

Remote Control Panel

Programmable Room Thermostat

Insulation:

- 2" thick, 2.8# density, mineral wool insulation providing R8 insulating factor (Insulation directly in the airstream is not acceptable)



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