

Munters PFC Polymer Fluid Cooler

Benefits

- Non-corrosive polymer exchanger and pumps
- Uses 50% less energy with built-in redundancy
- Operates in dry mode more hours of the year, no freeze protection required
- Little to no chemical treatment
- All controls are mounted and wired, plug & play
- Small self-cleaning pump
- Low profile and lighter for roof mounting
- Significantly less to maintain and repair

Polymer Fluid Cooler (PFC)

Munters' Polymer Fluid Coolers (PFC) utilize indirect evaporative cooling technology to reject heat from a closed loop fluid system. Unique polymer heat exchangers are flushed with water and air to remove heat in hot ambient conditions. Fluid consistently flows through the polymer tubes effectively removing heat from the liquid. This heat is simultaneously rejected via evaporative cooling in the wet mode during high temperature conditions.

In cooler conditions, the polymer heat exchanger utilizes only ambient air to remove the heat, conserving water while still effectively rejecting heat through natural convection.

The PFC's modular design includes up to five modules per unit and can reject up to 1.65 million BTUs of heat at design conditions.

Polymer vs. Metal

PolyCoil polymer heat exchangers are superior to conventional metal exchangers in that they require less maintenance, little to no chemical water treatment and provide more surface area. Scale does not adhere to the polymer tubes in the exchanger; therefore scale inhibitors are not necessary, eliminating the cost of chemicals and labor necessary for water treatment.



PFC Technical Specifications and Operating Performance Example

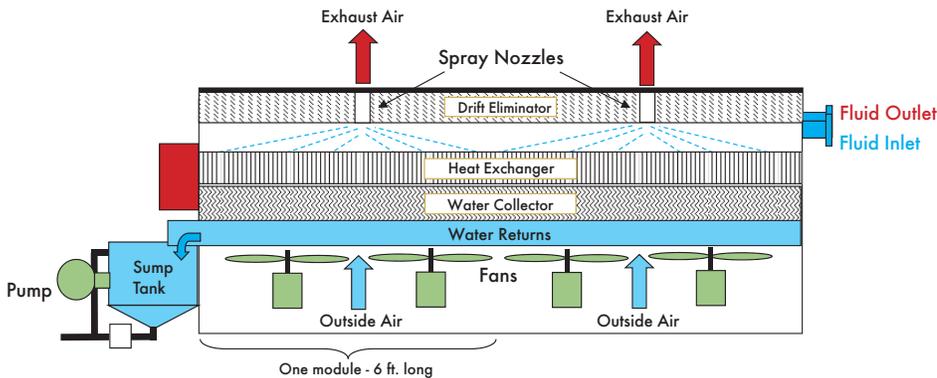
Module (s)	1	2	3	4	5
Dry Weight (lbs.) ± 10%	1,971	3,377	4,783	6,190	7,596
Wet Weight (lbs.) ± 10%	2,972	4,633	6,294	7,956	9,617
Dimensions (LxWxH)	102"x 96"x 83"	174"x 96"x 83"	246"x 96"x 83"	318"x 96"x 83"	390"x96"x84"
GPM Wet	65	130	195	260	325
MBH Heat Rejection—Wet Operation	330	660	990	1320	1650
GPM Dry	62	123	185	274	309
MBH Heat Rejection —Dry Operation	330	660	990	1320	1650

Equipment size and performance based on number of modules selected and operating conditions. Up to five modules are available in one unit.

Wet Operating Conditions: 95 °F DB, 78 °F WB; EWT 95 °F, LWT 85 °F; Approach 7, Range 10, PD 3.2 psi

Dry Operating Conditions: 62 °F DB, 45 °F WB; EWT 95 °F, LWT 85 °F; Approach 23, Range 10, PD 3.2 psi

Two Module PFC System Schematic



PFC Modes of Operation

- 1. Natural Convection**
Fans and pump are off during cold ambient temperature.
- 2. Fans Only, Pump Off**
This mode is used at cooler ambient temperatures. It can be used at higher ambient temperature when load allows.
- 3. Fans and Pump**
Fans and pump are operating. This mode is used whenever load and ambient temperature are higher.



Unique Water Collectors

- Vane water collector allows for small bottom mounted fans
- Reduce water requirements
- Eliminate larger sumps
- Simplify maintenance



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