

Underfloor Air Distribution Terminal

Model:

UFW - C

DESCRIPTION:

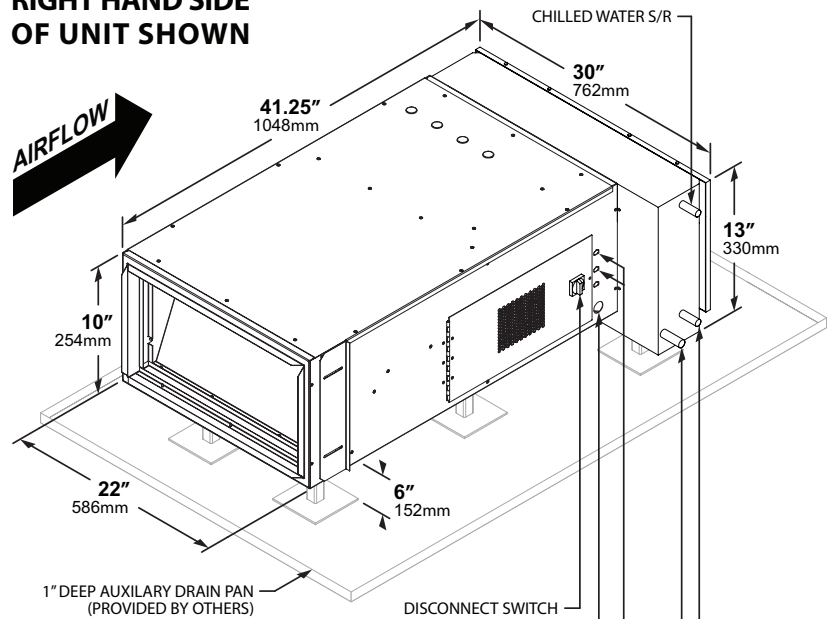
UFW (Underfloor Fan Water) is an under floor chilled water cooling fan terminal unit. Integrated transformers for 24 VAC power will power other devices up to 100 VA.

Hydronic coils are two (2) row configuration. Standard water connections are 1/2"Ø (13mm) straight seamless copper tubing with brazed return bends. Coils are leak tested to 325 psig; design working pressure is 255 psig.

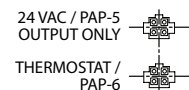
FEATURES:

- 20 Gauge (1mm) galvanized steel casing, powder-coated black
- Removable fan access panel
- Interlocking disconnect switch on controls access panel
- High efficiency ECM motor with thermal overload protection
- Single-point power connection
- Control transformer (100 VA maximum)
- Main supply fusing
- Terminal strip for hot water valve
- Hydronic heating coil (2-Row):
 - 10 aluminum fins per inch
 - Water Connections: 1/2"Ø (13mm) I.D. / 5/8"Ø (16mm) O.D.
- MERV-8 air filter
- Optional inlet mounted mixing box for plenum and room air
- Sides lined with 1" (25mm) dual density insulation
- Insulation meets fungi resistance test standards ASTM C-1071 & ASTM G21
- Insulation meets NFPA 90A, UL181
- Insulation has "A" fire classification of 25/50 per ASTM E-84 & UL723
- Insulation meets bacteriological test standards ASTM C-665 & ASTN G22
- Unit is ETL listed
- Meets all NEC requirements
- Includes NEMA-1 enclosure

RIGHT HAND SIDE OF UNIT SHOWN



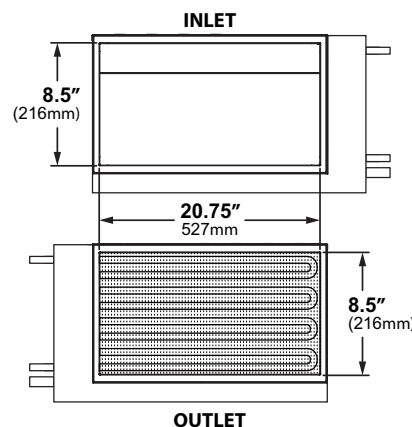
* CONDENSATE TRAP, PIPING AND ALL ASSOCIATED SUPPORTS AND ACCESSORIES PROVIDED BY OTHERS.



NPT PIPE CONNECTION (MALE)
0.75"Ø O.D. (19mm)

WATER S/R CONNECTIONS
0.625"Ø O.D. (15mm)

(RIGHT SIDE PIPE CONNECTIONS SHOWN)



ALL DIMENSIONS
NOMINAL +/- 0.1" (2.5mm)



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SEQUENCE OF OPERATION:

This fan will act as the second stage of cooling, where the first stage will use in-floor VAV diffusers only.

For hydronic cooling, different water valve controls are offered. The standard unit will have controls for 1) normally closed, on/off, 24VAC open with spring return and 2) normally closed 0-10V proportional. Other configurations are available.

When a cooling call between 0-8V is present, the fan will remain inactive and the water valve will be closed. Cooling between 0-8V will be accomplished via in-floor VAV diffusers, working off plenum pressure.

When a cooling call between 8-10V is present, the fan and chilled water valve will be activated. Each fan consists of a single speed AC motor. Fan speed will remain constant between 8-10V cooling call. On/off water control valves will remain open from 8-10V cooling. Modulating control valves will modulate 40-100% based on an 8-10V control signal from the thermostat.

Fans will be ducted to in-floor VAV diffusers. During a 0-8V call for cooling, these diffusers will modulate between 0 and 100%. During an 8-10V call for cooling, the electronic damper on ducted in-floor diffusers will close off to the plenum, allowing only air from the fan powered boxes to be delivered to the space.

Cooling Demand	AC Fan (Fixed Speed, On/Off)	Proportional Water Valve (0-10V, Normally Closed, Direct Acting)	2-Position Water Valve (Normally Closed)	MIT-3G Ducted Airvalve (CB2 Control)	MIT-3C Interior Airvalve (TEC Control)
0% to 80%	Off	Closed (0V)	Closed (0VAC)	Modulate 0% to 100%	Modulate 0% to 80%
80% to 85%	On	Open 40% (4V)	Open (24VAC)	Closed (0V)	Modulate 80% to 85%
85% to 90%	On	Open 60% (6V)	Open (24VAC)	Closed (0V)	Modulate 85% to 90%
90% to 95%	On	Open 80% (8V)	Open (24VAC)	Closed (0V)	Modulate 90% to 95%
95% to 100%	On	Open 100% (10V)	Open (24VAC)	Closed (0V)	Modulate 95% to 100%
Heating Demand					
0% to 100%	Off	Closed (0V)	Closed (0VAC)	Closed (0V)	Closed (0V)

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ELECTRICAL PERFORMANCE:

1. 120V (120/1/60) | 240V (240/1/60) | 277V (277/1/60)
 - Single Phase units require 3 conductors: Line / Neutral / Ground
2. 208V (208/1/60)
 - Single Phase 208V requires 4 conductors: L1 / L2 / Neutral / Ground
3. 208V (208/3/60) | 480V (480/3/60)
 - Triple Phase units require 5 conductors: L1 / L2 / L3 / Neutral / Ground

Additional Voltages / 50Hz capabilities available on request.

SPECIFICATIONS:

Application: Underfloor Heating | Raised Access Floors 10"–17" (254mm–432mm) +
Dimensions: 41.25" x 30" x 13" (1048mm x 762mm x 330mm)
 LxWxH (Nominal)
Construction: Galvanized Steel | 20 Gauge (1mm) | Powder-Coated Black
Supply Press. / Temp.: 0.02–0.1 in. H₂O (5–25 Pa) | 40–120°F (4–49°C)
Air Flow Capacity: 200–800 cfm @ 0.05 in. H₂O (340–1360 m³/hr @ 12.5 Pa)
 (Nominal)

