

Precision Air Handler

The ThermalWorks Precision Air Handler provides high capacity air cooling with high delta T and energy efficient operation for data centers. Units support hot aisle containment and other data hall configurations.

Each Air Handler features custom micro-channel coils, an efficient ECM fan, variable flow valves and onboard programmable controller that enables direct control of any unit in an array. An optional Air Diffuser provides precision air flow distribution.

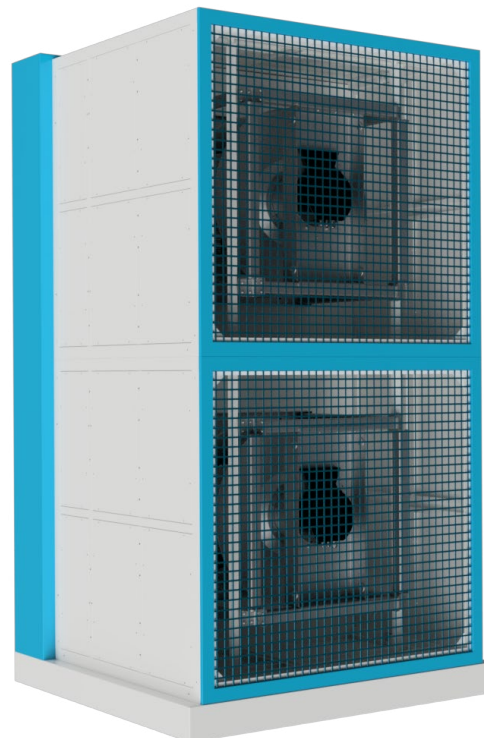
Units can be stacked, rotated or ceiling mounted to support a wide range of data hall configurations and rack densities. The system uses 40% less fan energy than traditional fan walls and can eliminate the need for mechanical equipment within data halls.



A145/A125 Air Handler

Key Features

- **Multi-pass microchannel coils** efficiently transfer data hall heat from air to liquid (glycol-based heat transfer fluid).
- **Variable speed fan** features an electronically commutated motor (ECM) to support high air flow levels while minimizing energy consumption. Radial and axial air flow options support a wide range of data hall configurations.
- **Variable flow control valve** for glycol fluid offers scalability without needing to rebalance the hydronic system (enables the system to self-balance).
- **Programmable logic control (PLC)** panel allows dynamic adjustment of individual setpoints including fan speed, flow valve position.
- **Optional air diffuser** precisely directs airflow to ensure even mixing and avoid hotspots.
- **Redundant A and B power sources** provide for reliable operation (3-phase 400 or 460 VAC, and 50 or 60 Hz).

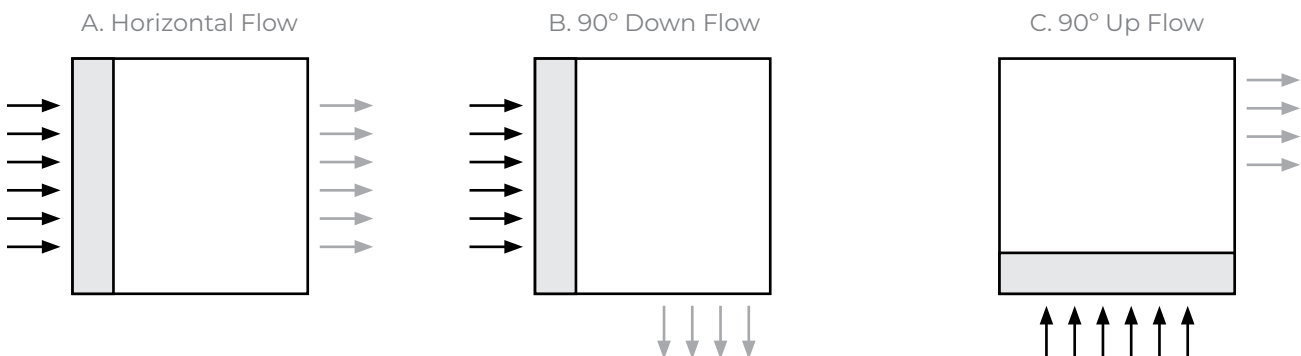


Floor Mount,
Horizontal Flow
(two stacked
units shown)

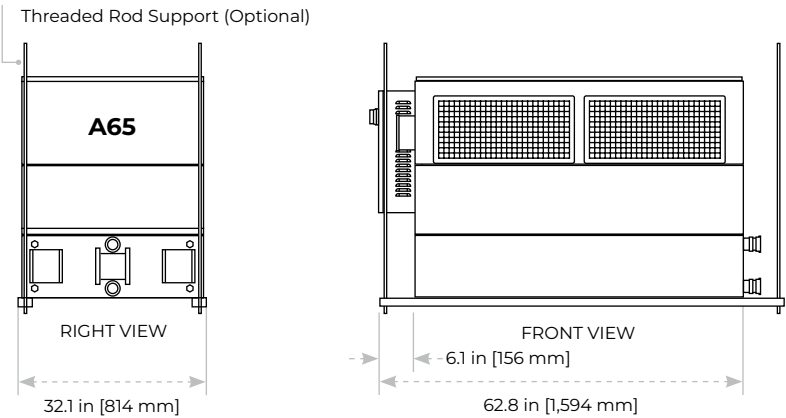
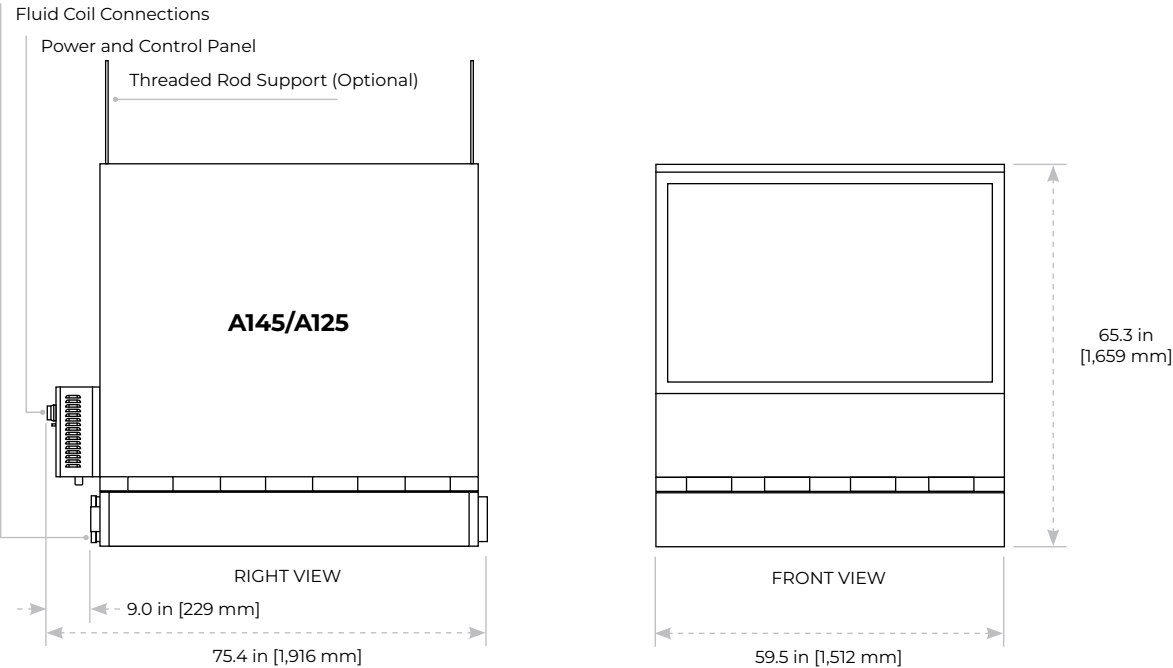
		A145	A125	A65
COOLING CAPACITY	Air Flow	18,850 cfm [8.9 m ³ /s]	21,000 cfm [9.9 m ³ /s]	7,500 cfm [3.5 m ³ /s]
	External Static Pressure	0.5 in. H ₂ O [125 Pa]	0.7 in. H ₂ O [170 Pa]	0.5 in. H ₂ O [125 Pa]
	Cooling (Total)	145 kW	125 kW	35 kW
Fluid	Fluid Type	30% propylene glycol/water by volume		
	Entering Fluid Temperature	62 °F [16.7 °C]	62 °F [16.7 °C]	62 °F [16.7 °C]
	Leaving Fluid Temperature	97 °F [36 °C]	97 °F [36 °C]	81 °F [27.2 °C]
	Fluid Flow Rate	30 gpm [113 L/m]	26 gpm [98 L/m]	13 gpm [49 L/m]
	Fluid Pressure Drop	13 psi [90 kPa]	11 psi [76 kPa]	12.5 psi [86 kPa]
FLUID PIPE SIZES	Supply - NPS	2 in. [50 DN mm]	2 in. [50 DN mm]	1.25 in. [32 DN mm]
	Return - NPS	2 in. [50 DN mm]	2 in. [50 DN mm]	1.25 in. [32 DN mm]
FAN	Type	ECM Centrifugal	ECM Centrifugal	Centrifugal
	Quantity	1	1	2
	FLA	12.3 @ 400 VAC 10.7 @ 460 VAC	17.5 @ 400 VAC 15.2 @ 460 VAC	2.3 @ 400 VAC ea 2.0 @ 460 VAC ea
ELECTRICAL	Volts/Ph/Hz	400/3/50 or 460/3/60	400/3/50 or 460/3/60	400/3/50 or 460/3/60
PHYSICAL DATA	Length x Width x Height	75.4 x 59.5 x 65.3 inches [1,916x1,512x1,659 mm]	75.4 x 59.5 x 65.3 inches [1,916x1,512x1,659 mm]	40.25 x 66.25 x 32 inches [1,025x1,683x814 mm]
	Shipping Weight	1,600 lb. [725 kg]	1,600 lb. [725 kg]	675 lb. [305 kg]
	Operating Weight	1,500 lb. [690 kg]	1,500 lb. [690 kg]	487 lb. [220 kg]

Air Flow Options

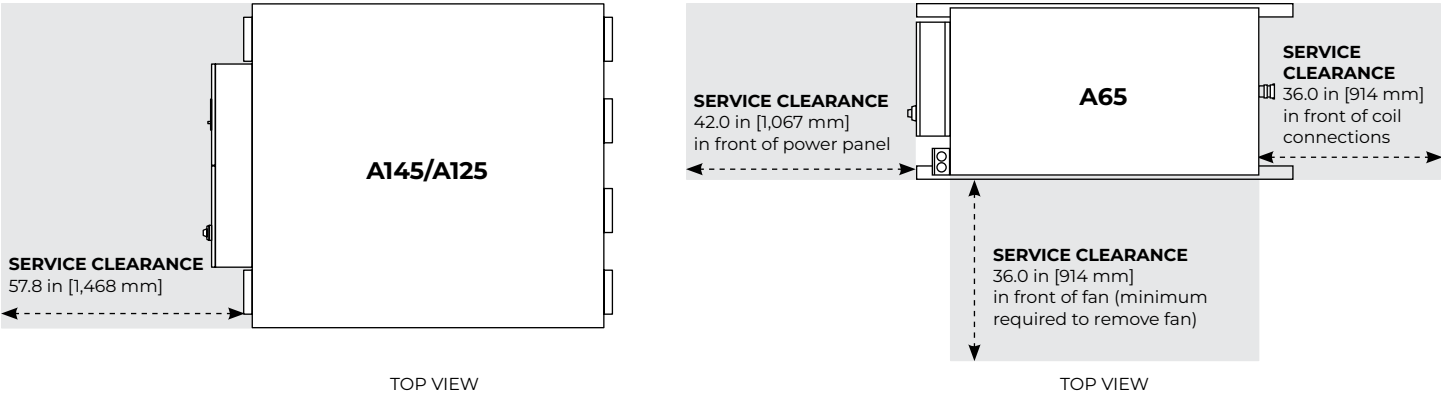
ThermalWorks Air Handlers can be factory-configured to support multiple air flow patterns and varied data center designs.



Dimensional Drawings



Service Clearance



Base Units

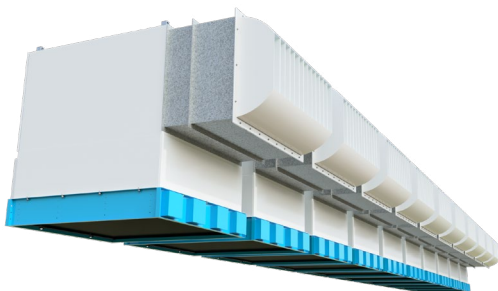


A65
Hanging Unit

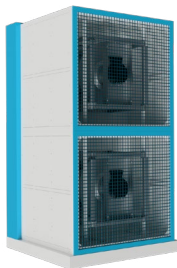


A145 / A125
Hanging Unit
with Drum Diffuser

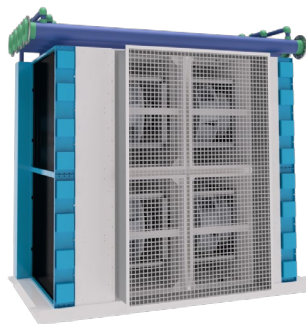
Standard Configurations



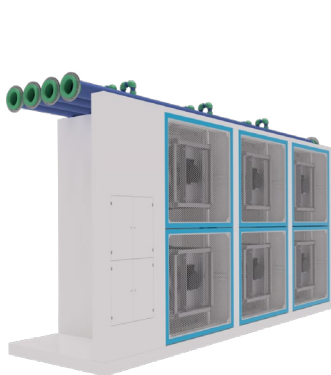
1250kW
Hanging Block



250kW
In-row Skid



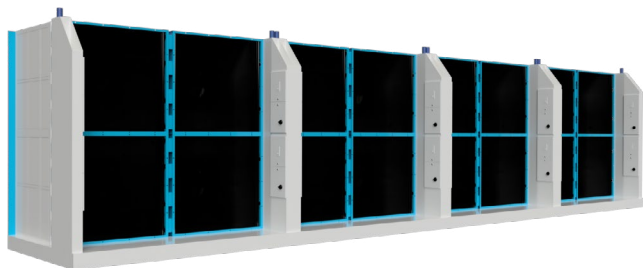
500kW
Fan Wall Skid



750kW
Fan Wall Skid



750kW
Fan Wall Skid



2,000kW
Fan Wall Skid