SMARDT

INNOVATION ENGINEERED,
ENERGY OPTIMIZED

AeroMod™

Modular Air-cooled Chiller & Air-source Heat Pump



Introducing the Smardt ECO AeroMod Variable Speed Chiller and AeroMod ASHP, two high-efficiency modular solutions for cooling and heating.

The AeroMod chiller features dual-circuit variable speed compressors and dynamic load balancing to optimize energy use while extending unit life.

The AeroMod ASHP delivers hot water up to 140°F (60°C) with 5% turndown capacity for maximum efficiency.

Both units offer a broad operating range, seamless BAS integration, and scalable, future-ready performance.

Quick Specifications

	Air-cooled Chiller		Air-source Heat Pump
	SMACV030*A	SMACV040*A	SMAHF030*A
Refrigerant	R454B		
Nominal capacity (10x multi-module)	30T (300T)	40T (400T)	30T (300T)
Compressor	Full variable speed		Fixed speed vapor injected
Evaporator type	Dual-circuit BPHE		
Condenser type	Microchannel		Tube & Fin
Fan module	EC fans variable speed		

Features and Benefits

Features	Variable Speed Cooling Units	ASHP Units
Modular design	**Full-fledged modular design** Each module can operate independently or as part of a larger system bank. If the Master (Supervisory) module fails, the other secondary modules continue functioning autonomously, ensuring uninterrupted performance. The system can include up to 10 modules, allowing for flexible capacity configurations and tailored system design based on cooling or heating requirements.	
Redundancy/spare module capacity	**Redundancy/spare modules capability** The chiller bank can have additional standby modules (N+1, N+2, N+3, etc.) minimizing downtime in the event the active/duty modules or compressors fail due to alarms or other issues. Please note redundant/spare modules are included in the banks' time-based and demand-based lead compressor rotation, therefore ensuring wear and tear is evenly distributed across all modules and compressors in the array (redundant modules included).	
User interface and controls	**Single-user interface** With a single touchscreen, all modules in the bank can be easily managed from one central screen, due to the unified user interface.	
BMS communication	**Variety of BMS communication protocols** Control system supports all widely used Building Automation System (BAS) communication protocols: BACnet (MS/TP or IP), Modbus™ (RTU 3-wire or IP), and LonWorks.	
Compressor technology	**Variable-speed compressors** Enables precise unloading capacity and optimal part-load performance, ensuring adaptability to fluctuating cooling demands.	**Vapor injection (VI) compressors** Enhances the operational envelope, enabling higher water temperatures even in colder ambient conditions.
Energy efficiency	Modular operation concept, combined with variable-speed technology, minimizes energy consumption, delivering cost-effective and reliable cooling across diverse applications.	Modular design with VI compressor technology maximizes energy efficiency and cost-effectiveness, ensuring reliable performance with minimal energy consumption.
Operating conditions	**Cooling only:** • **Ambient Dry Bulb**: 40°F to 115°F (4.4°C to 46.1°C) • **LWT:** 42°F to 65°F (5.6°C to 18.3°C) without glycol • **LWT:** 27°F to 65°F (–2.8°C to 18.3°C) with glycol	**Heating Mode:** • **Ambient Dry Bulb**:0°F to 95°F (–18°C to 35°C) • **LWT:** 75°F to 140°F (24°C to 60°C) **Cooling Mode:** Matches the chiller operating range
Hot water production	Optimized for chilled water delivery, this modular chiller is not designed for hot water production.	**Outdoor ambient hot water temperature:** • 130°F (54°C) hot water at 0°F (–18°C) ambient • 140°F (60°C) hot water at ambient temperatures above 10°F (–12°C)

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