



VertiCool Classic



- 3 to 30 tons
- Vertical Self Contained or Split System
- Air-Cooled, Water-Cooled, Chilled Water and Water Source Heat Pump

Unique Solutions for All-Indoor HVAC Projects

Self-Contained Vertical Air Conditioning Systems

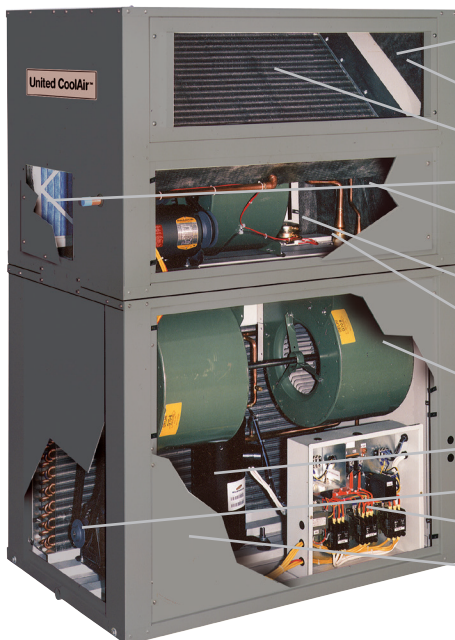
The VertiCool Classic vertical cabinet construction fits neatly along walls, in closet spaces and mechanical rooms venting condenser air easily to and from an outside wall or window. VertiCool Classic units are ideal for renovation and replacement projects, including tenant fit-out or adding area spot cooling. The unit is designed to fit through a standard doorway without any building modifications. The modular cabinet design also helps the units fit neatly along walls or in closet spaces and vents easily to an outside wall.

Outstanding performance is assured with the use of quality components, assembly and factory testing. The desired air path is done at the factory so no field labor is required. Units are built-to-order.



FEATURES

- Ducted to outside wall thru building louver.
- 3 to 30 tons
- Air-Cooled, Water-Cooled, Chilled Water, Water Source Heat Pump or MagnaCool Precision Cooling Package



- Thermal/acoustical insulation (2 lb. density) in both evaporator and condensing sections for quieter operation
- Evaporator discharge air path options (front, top or straight through)
- Copper tube/aluminum fin coils
- Filters: Pleated Throwaway
- Stainless Steel "V" style condensate drain pan ASHRAE Standard 62-1989 compliant
- Air flow proving switch prevents coil freeze up on loss of air flow (option)
- Resealable Refrigerant Fitting prevents refrigerant loss when unit is split (option on 8-10 tons)
- Belt-drive centrifugal blowers
- Scroll compressor (optional phase rotation detection device)
- Static pressure field adjustable (.25" ESP standard and up to 1" ESP optional)
- All power components have individual overcurrent protection
- Front and side service access panels
- Two-way 150 psig water valve standard on Water-Cooled unit

Blow-through model illustrated



Avoid Requirements that Lead to Extra Expense

Expensive Equipment, Rigging or Permits

- Equipment can be shipped in sections
- Fits easily through standard doors, hallways, and into elevators
- Minimizes the need for crane rentals, rigging crews, and municipal permits

Roofcurbs or Roof Penetration

- Eliminates expensive curb equipment cost
- Reduces installation labor
- Eliminates possible roof water damage

Field Piping, Brazing, Evacuation or Charging

- Factory charged and utilizes
- Resealable Refrigerant Fittings
- Reduces installation labor
- Faster installation and commissioning

Excessive Downtime when Replacing Old Systems

- Sectional shipments accelerate installation
- Can be installed off-hours and on weekends
- Shipment can be made to coincide with installation schedules

Architectural Damage to Building

- Eliminates expenses for code approvals
- Requires no rigging holes through building walls
- Minimizes any type of building alteration

Compromise in Performance With Built-to-Order Design

- Units are built to exact requirements
- Avoids purchase of excess capacity from standard product offerings
- Extensive list of configurations and options

Equipment Damage Due to Weather

- All equipment is installed indoors
- Avoids premature replacement costs due to weather wear and/or damage
- Eliminates downtime due to severe storms

Possibility of Theft or Vandalism

- Eliminates expensive repairs and replacements due to theft and vandalism
- Enhances building security by eliminating interruption to service
- Eliminates extra cost for cages and special alarms

Field Testing of Installed Product

- Minimizes field testing as units are functionally tested prior to shipment
- Reduces labor and speeds installation
- Assures trouble-free start-ups

Outdoor Servicing of Product

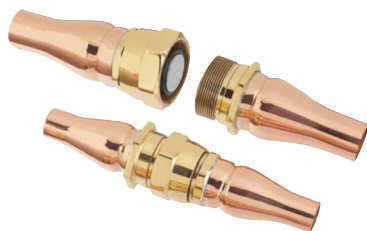
- Outdoor/premium service expense in extreme weather completely eliminated
- Improves reliability
- Eliminates roof safety issues

Major Ductwork or Electrical Modifications

- Units ordered to closely match existing duct and utility locations
- Major installation, labor and time savings

Exterior Condensing System

- Eliminates rooftop and pad installation space and cost
- Water-Cooled and Chilled Water configurations eliminate unsightly equipment outdoors



Resealable Refrigerant Fittings

Most models feature Resealable Refrigerant Fittings. Unit sections can be shipped split or split in the field without losing the factory charge resulting in no field brazing and a total installed cost advantage.

Multiple Air Path Configurations Possible

Evaporator discharge air path can be top, rear or front; ducted or free-blow. Air path is set at the factory so no field modification is required.

Versatile Design

The VertiCool Classic units are built-to-order for specific applications, such as unique refrigerant components or air path configurations. Designed with quality components, each VertiCool Classic ensures reliable performance whether units are matched with air- or water-cooled condensing sections. There is a splittable feature for 3-10 tons (optional) as well as the standard on 12-30 tons to help move the units into place.

Rugged Construction

The structural metal frame of the VertiCool Classic provides unit strength and rigidity. Acoustic Insulation helps to reduce the unit sound levels.

Easy Service

Service panels are easily removed for full access to all components. Evaporator and condenser motors are mounted on the same side of the cabinet for quick access. Other VertiCool Classic features include a sight glass (visible from outside the cabinet), high- and low-pressure switches, filter drier, thermal expansion valve with external equalizer and service ports.

Fast Installation

All VertiCool Classic units are shipped from the factory pre-charged ready to run. All units fit through a standard 32" doorway. Subcooling and superheat are factory adjusted to recommended levels. Easy access to drain and electrical connections is also provided.

Technical Data

Compressor	Single			Dual						
Air-Cooled (Tons)	3	4	5	8	10	12	15	20	25	30
Total Btu/hr	38,700	48,700	58,000	104,000	121,400	159,700	194,400	241,600	309,000	360,200
Sensible Btu/hr	29,100	37,100	44,500	74,500	87,500	113,080	136,260	167,600	222,000	264,700
Water-Cooled (Tons)	3	4	5	8	10	12	15	20	25	30
Total Btu/hr	40,300	51,800	62,500	108,500	131,200	163,000	203,500	270,000	320,000	415,800
Sensible Btu/hr	31,000	40,700	49,850	83,300	102,350	124,950	156,200	207,750	220,000	294,800
Dimensions - Inches										
Depth	29	29	29	32	32	32	32	32	32	42- ⁷ / ₃₂
Width	44	44	44	62	62	88	88	88	88	96- ¹ / ₄
Height without Plenum	60- ¹ / ₂	60- ¹ / ₂	60- ¹ / ₂	73- ⁵ / ₈	73- ⁵ / ₈	79- ¹ / ₄	79- ¹ / ₄	87- ¹ / ₄	87- ¹ / ₄	98- ¹ / ₈
Height with Plenum	76- ¹ / ₂	76- ¹ / ₂	76- ¹ / ₂	92	92	91- ¹ / ₈	91- ¹ / ₈	91- ¹ / ₈	99- ¹ / ₈	110- ¹ / ₈
Basic Unit Weight-lbs.										
Air-Cooled	630	640	650	1250	1275	2475	2475	2500	2650	2875
Water-Cooled	560	580	590	1160	1190	2100	2150	2200	2350	2540

Note: Air-Cooled Units Rated at 95°F Entering Condenser Air; 80°F DB/67°F WB Entering Air Temperature to Evaporator
Water-Cooled Units Rated at 85°F Entering Water Temperature; 80°F DB/67°F WB Entering Air Temperature to Evaporator

Built with the Capabilities You Need



OPTIONS

- Heat and Reheat (electric, hot water or steam)
- Hot Gas Bypass
- Hot Gas Reheat
- Air side or water side economizers
- Blower Motor Upgrades for both
- Low Ambient VFD
- Flooded Condenser
- Discharge Plenum with Bi-Directional Grille or Duct Flange
- Condensate Pump (externally mounted)
- Drain Pan Overflow Switch
- VFD Capable
- Double Wall (Perforated or Solid)
- Smoke Detector
- Firestat
- Dry Contacts
- Head Pressure Control Valves (2-way or 3-way, 150- or 350-psig)
- Protective Coil Coating
- Humidification (electronic canister, steam)
- Chilled Water Coil
- Marvel Microprocessor Controls
- BMS Interface

Ideal for Renovation and Replacement Projects

APPLICATIONS

- Offices
- Retail Spaces
- Schools/ Universities
- Healthcare Buildings
- Historical Buildings
- Industrial/Manufacturing
- Remote or Isolated Areas
- Add-on Spot Cooling
- Electrical Equipment Rooms
- Limited Access Areas
- Restaurants



Control Systems from Simple to Sophisticated

The VertiCool Classic system controls can be as simple as a wall mounted thermostat (programmable or non-programmable) up to a full featured microprocessor. The unit application will typically dictate what type of control is required. If desired, the systems can also be provided with no controls, for a "Controls-By-Others" application.

United CoolAir offers three levels of microprocessor controls – Marvel "J", Marvel "S" and Marvel Plus. Each of these can be interfaced with Building Management Systems (BMS) such as BACnet™, ModBus or LonWorks. If desired or required, up to 16 units can be networked together through a single wall display.

The Marvel "J" provides the entry level of microprocessor control. This is useful where a standard thermostat simply is not

enough, but only a few options need to be controlled or reported.

The Marvel "S" is a medium capacity controller that is full featured. This means it has more abilities to receive inputs from various sensors and to output more signals to control devices within the system. The sophistication is also expanded by providing signals for modulating valves, not just an On / Off signal.

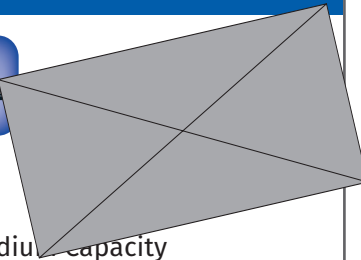
The Marvel Plus takes the microprocessor application to the highest level with increased capacity and more functionality with inputs and outputs. This microprocessor is used for VAV and digital scroll compressors.

MARVEL J



- Entry Level Basic System
- Temp / Humidity Control
- Up to 2 Stages of Heat/Cool
- 2 Temp / Humidity Sensors
- 2 Modulating Analog Outputs
- Can be Password Protected
- Auto Daylight Savings
- Built In Help Menus
- Fan Status, Cooling Stages, and Heating Stages
- Loss of Airflow
- On Screen Displays of Demands

MARVEL S



- Medium Capacity Full-Featured System
- Configurable Inputs / Outputs
- Up to 3 Stages Compressors and 4 Stages Heat
- Suitable for Heat Pump Systems

*Plus All Marvel J Features

MARVEL PLUS



- Largest Capacity Full-Featured System
- Configurable Inputs / Outputs
- Additional Modes of Operation including:
 - *Variable Air Volume
 - *Digital Scroll Compressors

*Plus All Marvel J and S Features

Case Studies

GLATFELTER

CHILLICOTHE, OH

The Challenge

Glatfelter paper mill was seeking equipment that can withstand harsh water conditions within their manufacturing facility. Robust construction was also required for this industrial application.



The Solution

United CoolAir solved their requirements by adding several options to our VertiCool Classic. A CuNi condenser, sea water duty water regulating valves, red brass fittings & CPVC water piping were just a few of the options required to ensure a longer life cycle in this astringent industrial environment.

Notable Clients

- International Paper
- PCA
- Evergreen
- Westvaco Paper
- RockTenn
- Georgia Pacific
- Domtar

GALAXY TOWERS

GUTTENBERG, NJ

The Challenge

Existing condos needed to be retrofitted with 100% outside air units. Key to this retrofit was the need for the equipment to fit through doorways and into space constraint locations.



The Solution

United CoolAir utilized our VertiCool Classic for 100% DOAS units. A 30-ton unit was fit into our smaller 25-ton cabinet allowing the unit to be shipped in 2 sections to rig into place without any costly demolition. A 20-ton unit was placed in a reduced height cabinet to fit a smaller mechanical room. A total of 110 ton of outside air was installed with no demolition, and units arrived with their factory charge ready for installation

Total Installed Cost Advantage

- Eliminates the need for Expensive Equipment, Rigging, or Permits
- Avoids Rooftop or Roof Penetration
- There is no Field Piping, Brazing, Evacuation, or Charging Required
- Lessens Excessive Downtime when Replacing Old Systems

Unique Solutions for All-Indoor HVAC Projects



VertiCool Classic
Vertical, 3 - 30 Ton



VertiCool Aurora
Vertical, 3 - 35 Tons



VariCool®
VAV, 9 - 70 Tons



VariCool® EZ-Fit
VAV, 12 - 90 Tons



Alpha Aire
100 - 500 CFM



Portable Cooling and Heating Units
3-30 Tons



C13-Series Horizontal
2 - 10 Tons



C-Series Horizontal
1 - 15 Tons
Special Configuration
Engineered to Order



OmegaAir Horizontal and Vertical
100% Outside Air
150 - 3000 CFM

Authorized Distributor:



LIMITED WARRANTY

United CoolAir Units are backed by a 1 year limited warranty on parts and a 5 year limited warranty on the compressor (labor not included). Maintenance items such as filters and belts are excluded under this limited warranty.

FACTORY TESTED

All units are functionally run tested before shipment to ensure a trouble-free start-up and unit commissioning. Industry proven components are used throughout to enhance system reliability and peace of mind.



Scan to learn more
about all of our
products!

 **UNITED
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All-Indoor Solutions

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