



C-Series

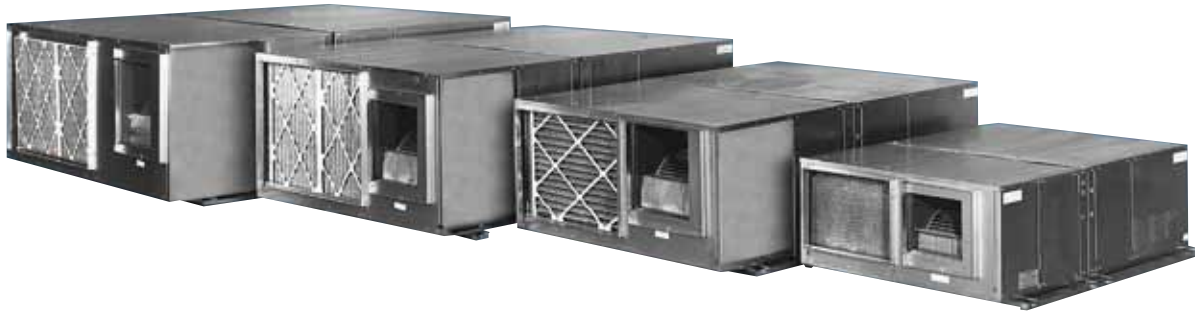
- ≡ Horizontal Self-Contained or Split Systems
- ≡ 1 to 15 Tons
- ≡ Water-Cooled, Water Source Heat Pump or Chilled Water
- ≡ Magna Cool (Air- or Water-Cooled) Systems



United CoolAir

What Makes United CoolAir Unique?

United CoolAir provides alternatives to “commodity” air conditioning systems. The units are located indoors and help to provide the Unique Comfort Solution when you need it. Units are built-to-order, but this does not necessarily mean custom. Units are tailored using standard components and options to meet a specific requirement a “commodity” unit can’t.



Replacement Air Conditioning Simplified

The C-Series indoor horizontal air conditioner from United CoolAir is designed as a flexible ducted cooling system for commercial building installation. It is ideal for replacement or renovation applications offering design engineers and contractors flexible installation options not available on conventional off-the-shelf products. The low profile design is available in multiple cabinet sizes starting at 16” high and with a cooling capacity up to 15 tons.

Out of Sight, Out of Mind

The low profile, horizontal design of the C-Series tucks away easily in ceiling plenum, preserving valuable floor space. With four cabinet sizes available, the unit is mounted on channels to accommodate hanging rods for ceiling installation. C-Series can also be slab mounted.

More than Just a Commodity Air Conditioner

The C-Series is the one air conditioning system that can be truly labeled flexible! It can be used as a packaged unit or as a split system with the evaporator and condensing sections in different locations. Heat rejection options include air or water with the added benefit of chilled water and heat pump configurations. The C-Series can also serve as precision cooling when equipped with the optional MagnaCool package.

Made to Order, Not Custom Built

Mention the word “custom”, and immediately assume expensive. Not with United CoolAir! Our units are built to order making them better than commodity systems but less expensive than custom built. We start with a solid, flexible platform with features added without the high cost of special manufacturing. Each tailor-made unit uses standard components and options to meet a specific operational requirement.

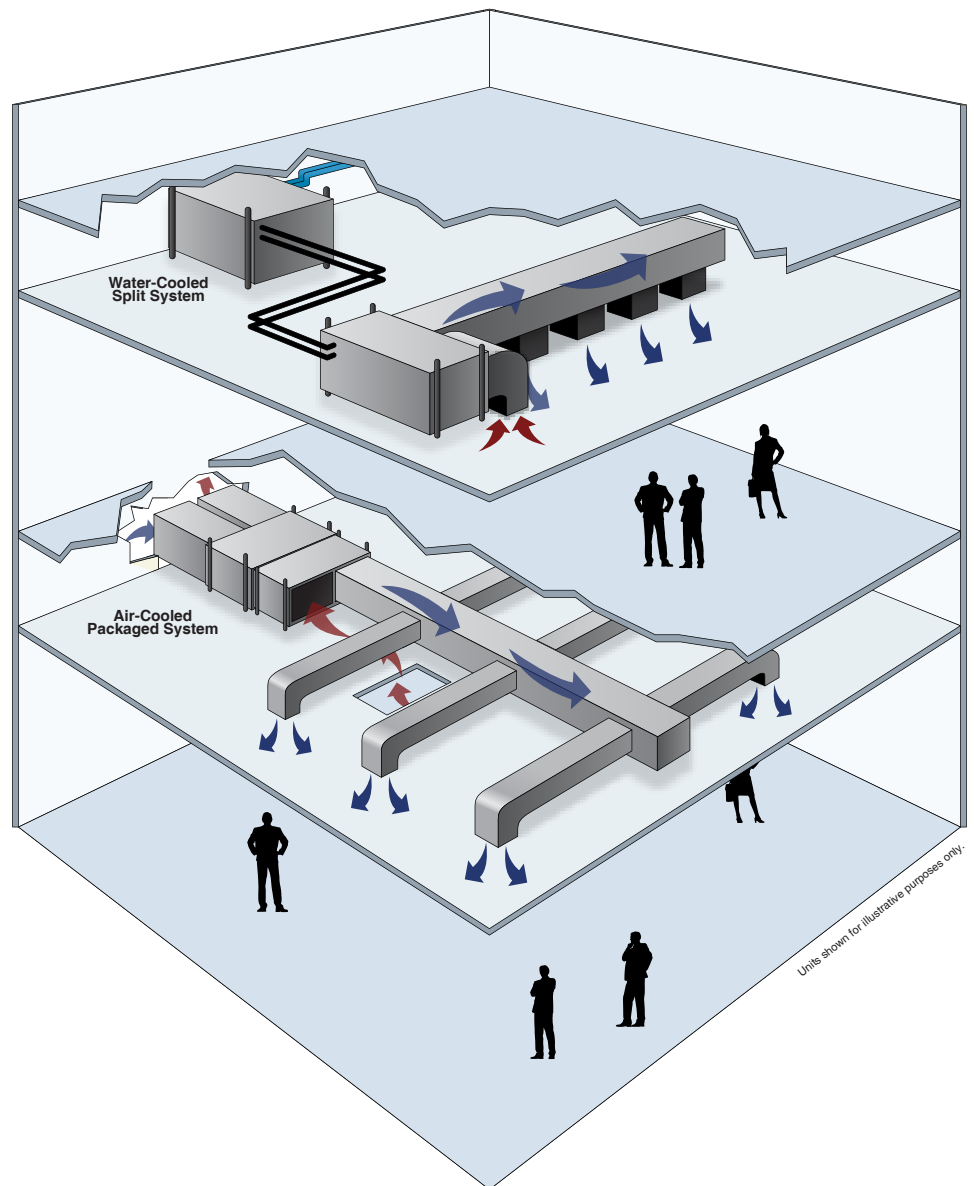
C-Series Indoor Split-Able Air Conditioning System

Split-able Design Allows Greater Installation Flexibility

The C-Series can be used as a packaged unit or as a split system with the evaporator and condensing sections in different locations up to 100 equivalent feet away. Locating the evaporator section closer to the conditioned space minimizes ductwork and reduces cooling loss for more efficient operation. Additionally, locating the condensing section near an outside wall or other suitable location reduces heat gain back to the space while reducing the cost of long duct runs.

Choice of Heat Removal Options

To facilitate efficient heat removal at the installation location, the C-Series can be configured for water cooled, chilled water cooled and air cooled (MagnaCool package only). The standard unit can also be specified as a water source heat pump for space heating.



MagnaCool Precision Cooling Option

United CoolAir provides the MagnaCool package for applications where tighter control of the temperature, humidity and air quality are critical. These applications may include computer rooms, laboratories, telecommunication rooms or manufacturing processes. Features include humidification, electric reheat and multiple alarm switches.

C-Series Features

Multi-Stage Operation

Multi-stage operation is standard on 6 - 15 ton models with optional dual compressors available on 4 and 5 ton models. Multi-stage operation improves efficiency by reducing power at part load conditions.

Corrosion-resistant cabinet

Cabinets are constructed of heavy gauge galvanized steel with a full stainless steel drain pan on the evaporator section.

Evaporator and Condenser

Aluminum fin/copper tube coils are utilized for reliability using draw-through airflow design.

Motors and Blowers

All shafts and pulleys are keyed and use ball bearings for smooth operation. Variable pitch pulleys allow flexibility in meeting external static pressure requirements.

Refrigeration Circuits

Units are equipped with high-efficiency scroll compressors (1 and 1.5 ton reciprocating standard) with R-410a factory refrigerant charge. Circuits also include adjustable expansion valves with external equalizers, sight glass/moisture indicators and filter driers.

Independent Electrical Panels

Evaporator and condensing sections include separate electrical control panels for independent wiring when units are field-split. Single power supply is standard on packaged non-split units. Separate oversized transformers in each section eliminate low voltage control problems over long splits.

Safety Switches

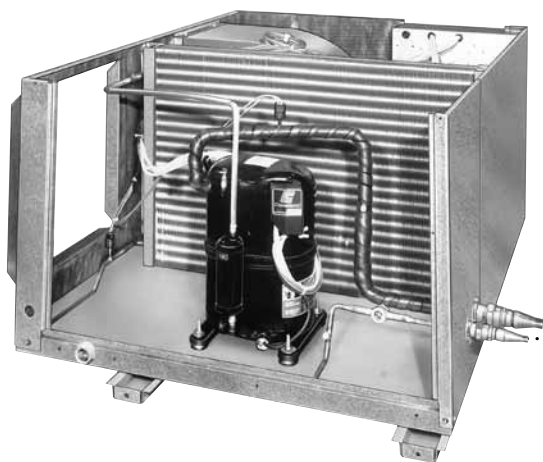
All compressors are protected by high and low pressure safety switches. An air switch on the evaporator blower provides added safety when electric heat is included. Each motor, compressor and stage of heat has its own contactor.

Unit Control

Units can be controlled from a simple thermostat to multi-functional microprocessor. Systems can be linked to Building Management Systems (BMS) for centralized control.

Inter-connect Kit (optional)

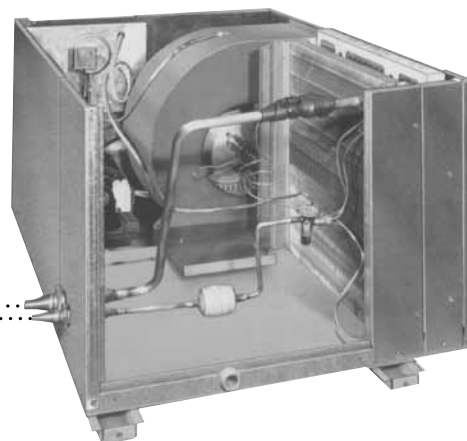
The Inter-connect Kit permits the refrigeration circuit to be field split without the loss of factory charge. Kit includes reusable quick-connect fittings that are used in conjunction with field-supplied tubing to complete the refrigeration lines between the two sections.



Condensing Section

* Contact the factory for refrigerant circuits beyond 100 equivalent feet.

Evaporator Section



C-Series

Beware the High Hidden Cost of Retrofit Installations

When replacing existing air conditioning equipment or supplementing an existing system, equipment price is generally considered the most critical. However, careful consideration must be given to the cost of adapting off-the-shelf systems to the application to determine the more important installation cost.

Installation costs can comprise a variety of forms and are not always easy to determine. They can include designing time required to adapt a new system to an existing application, complications in delivering the equipment to the installation site and the labor needed to complete the installation. Building modifications can be very costly and add unnecessary time, delaying completion of the project.

Specify the Model that Best Fits the Installation

Standardized cooling equipment in many cases requires modification to the unit or building. United CoolAir makes cooling equipment in a variety of styles, sizes and configurations to minimize labor costs. Choices include horizontal and vertical design, unitary or split mounting and a wide choice of sizes.

Make the Best Use of Your Space

Choose the models that fit best. United CoolAir units can be placed in ceilings, closets, spare rooms or even in the open space. Centrally locate your equipment in a single mechanical room or near the area to be conditioned—the choice is yours!

Modular Design Gets You in Faster

All United CoolAir equipment is designed to fit standard access doors, elevators and hallways. This eliminates building modifications and the high cost of rigging and equipment rentals. With United CoolAir systems, you can go from street to site faster and with fewer problems!

No Brazing, No Charging, No Kidding

United CoolAir equipment disassembles and reassembles in minutes. Units are factory charged and tested, and re-sealable refrigeration fittings eliminate evacuation and charging on-site. Startup time is a fraction of traditional units and labor cost is greatly reduced.

Split-able Design Minimizes Ducting

Minimize expensive heat removal options by locating the condensing section where you want it. Splitting the sections reduces expensive ducting runs, while water-cooled and chilled water coils require minimal space in mechanical runs.

Systems are Inexpensive to Maintain

United CoolAir designs its units with easy access to components. Standardized replacement parts and no proprietary controls means local availability should you ever need repairs. You are not locked into a single maintenance or service group.



C-Series Horizontal

1 - 15 tons

- Water-Cooled
- Chilled Water
- Water Source Heat Pump
- Air-Cooled available as MagnaCool Option

The C-Series Horizontal unit is designed as a flexible ducted air conditioning system for commercial cooling applications. The ideal system for replacement or renovation. The low profile design is available in multiple cabinet sizes starting at 16" high and with a cooling capacity up to 15 tons. Units 6 tons and higher come with multiple compressors* for staged operation, greatly reducing power consumption when full tonnage is not required.

* 4 and 5 ton available with single or dual compressors.



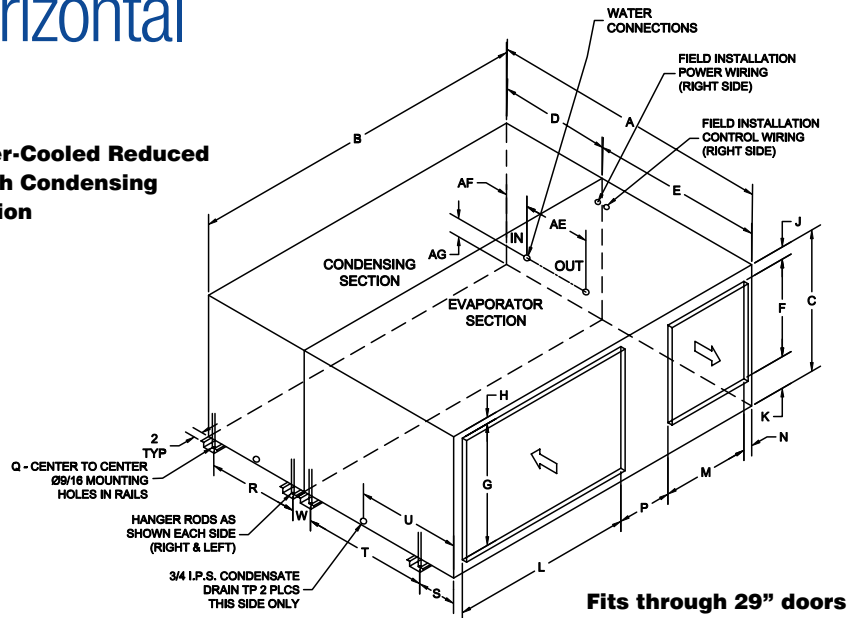
Dimensions - Inches (For Standard Water-Cooled Configuration)

NOMINAL TONS	A	B	C	D	E	F	G	L	M	AH
1 & 1-1/2 Ton Single Compressor	38-1/16	35-15/16	16	16	22-1/16	12	12	16-1/8	12	---
2, 3 & 4 Ton Single Compressor	47-9/16	47-3/8	22	16	31-9/16	16	18	24	16	---
5 Ton Single Compressor	47-3/8	55-3/8	27	16	31-3/8	18	23	32	16	---
4, 5 & 6 Ton Dual Compressors	47-3/8	55-3/8	27	16	31-3/8	18	23	32	16	---
8 Ton Dual Compressors										
(RDC) (1) (2)	51-7/16	70-5/8	29	16	35-7/16	20	25	37-9/16	18	---
(STD)	80-3/4	70-5/8	29	45-5/16	35-7/16	20	25	37-9/16	18	---
10 Ton Dual Compressors										
(RDC) (1) (2) (3)	51-7/16	70-5/8	29	16	35-7/16	20	25	37-9/16	18	---
(STD) (3)	80-3/4	70-5/8	29	45-5/16	35-7/16	20	25	37-9/16	18	---
(ETD)	93-13/16	70-5/8	29	45-5/16	48-1/2	20	25	48	18	83-7/8
12 & 15 Ton Triple Compressors										
(STD) (3)	80-3/4	70-5/8	29	45-5/16	35-7/16	20	25	37-9/16	18	---
(ETD)	93-13/16	70-5/8	29	45-5/16	48-1/2	20	25	48	18	83-7/8

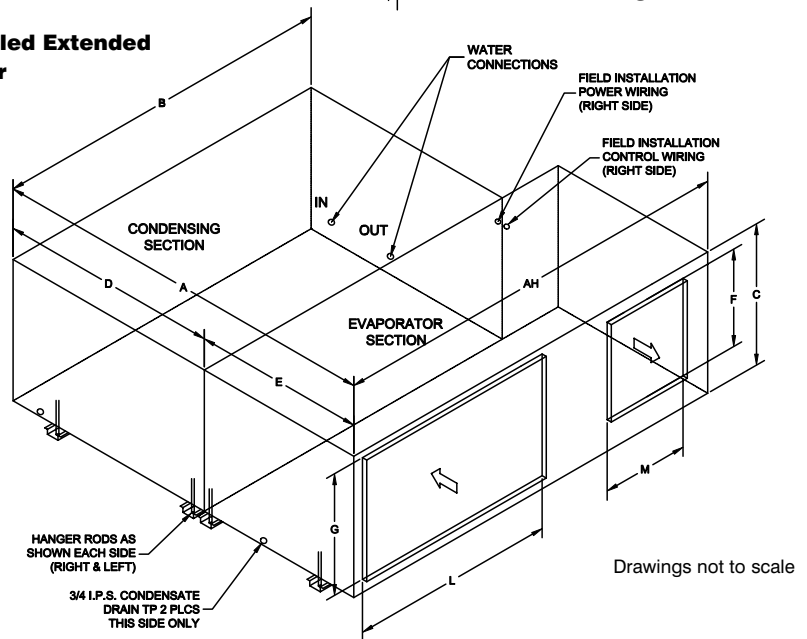
- (1) Must have rear access for service and maintenance.
- (2) Selected refrigerant circuit options may require change in condensing section cabinet size to accommodate all components.
- (3) MagnaCool packages only.

RDC = Reduced Depth Condensing Section
STD = Standard Depth Condensing Section
ETD = Extended Evaporator Section

Water-Cooled Reduced Depth Condensing Section



Water-Cooled Extended Evaporator



C-Series Split System

Circuits	Tons	B	C	D
Split Water-Cooled Condensing Section (Fig. 1)				
Single	1 - 1.5	35-15/16	16	16
	2 - 4	47-3/8	22	16
	5	55-3/8	27	16
Dual	4 - 6	55-3/8	27	16
	8 RDC	70-5/8	29	16
	Std	70-5/8	29	45-5/16
	10 RDC	70-5/8	29	16
Std	70-5/8	29	45-5/16	
Triple	12 - 15 Std	70-5/8	29	45-5/16
Split Air-Cooled MagnaCool Condensing Section (Fig. 2)				
Single	1 - 1.5	35-15/16	16	29-9/16
	2 - 4	47-3/8	22	34-3/4
	5	55-3/8	27	40-3/8
Dual	4 - 6	55-3/8	27	40-3/8
	8	70-5/8	29	45-5/16
	10	70-5/8	29	45-5/16
Triple	12 - 15	70-5/8	29	45-5/16

Circuits	Tons	B	C	E
Split Evaporator Section (Fig. 3)				
Single	1 - 1.5 *	35-15/16	16	22-1/16
	2 - 4	47-3/8	22	31-9/16
	5	55-3/8	27	31-3/8
Dual	4 - 6	55-3/8	27	31-3/8
	8	70-5/8	29	35-7/16
	10 Std	70-5/8	29	35-7/16
	ETD	83-7/8	29	48-1/2
Triple	12 - 15 Std	70-5/8	29	35-7/16
	ETD	83-7/8	29	48-1/2

Circuits	Tons	A	B	C	D	E
Air-Cooled MagnaCool Packaged System (Fig. 4)						
Single	1 - 5	66-5/16	47-3/8	22	34-3/4	31-9/16
Dual	4 - 8	71-3/4	55-3/8	27	40-3/8	31-3/8
	10	80-3/4	70-5/8	29	45-5/16	35-7/16
Triple	12 - 15	80-3/4	70-5/8	29	45-5/16	35-7/16

* MagnaCool in 2-ton cabinet, Optional smaller cabinet available for some applications.

RDC = Reduced Depth Condensing Section
STD = Standard Depth Condensing Section
ETD = Extended Evaporator Section

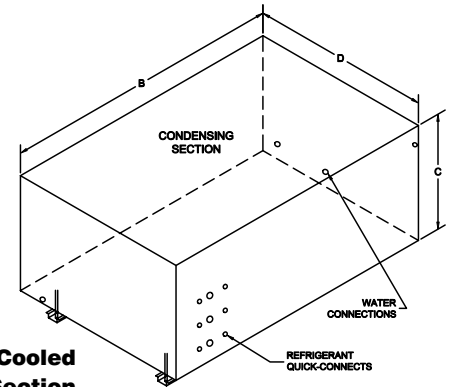


Fig. 1 - Water-Cooled Condensing Section

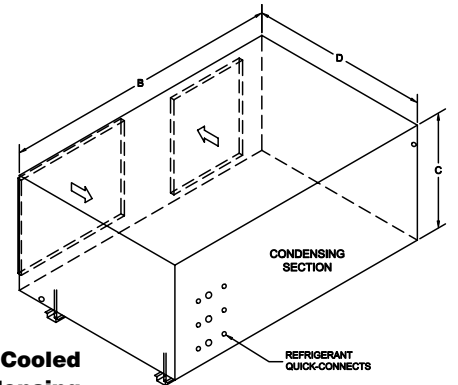


Fig. 2 - Air-Cooled MagnaCool Condensing Section

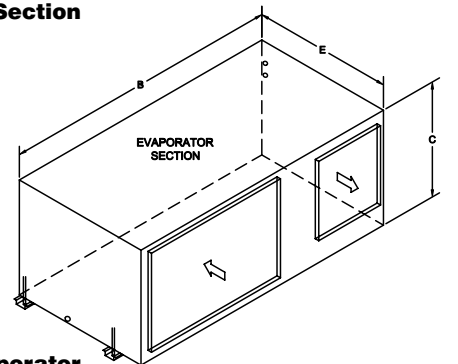


Fig. 3 - Evaporator Section

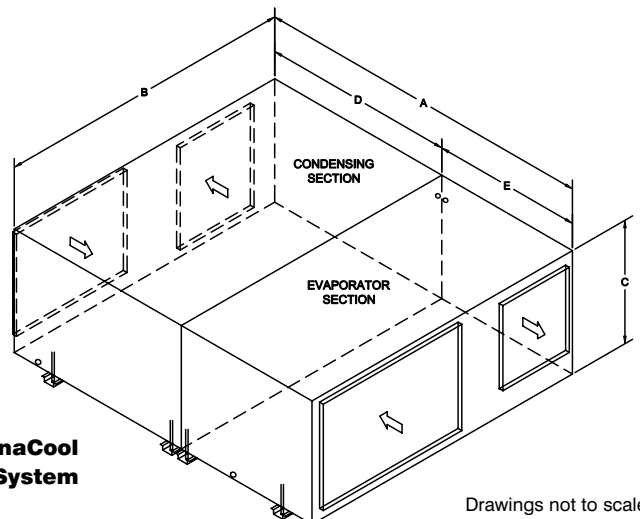


Fig. 4 - Air-Cooled MagnaCool Packaged System

Drawings not to scale

C-Series

Think Inside the Box, Think United CoolAir

The Inside Story on United CoolAir Cooling Equipment

Not all commercial air conditioners are created equal, and United CoolAir's complete line of internally installed cooling systems offer solutions not available on traditional rooftop or split systems. Externally mounted equipment requires space that may not be available on multi-story buildings. Other concerns with traditional units are equipment delivery, space modifications, high installed cost and difficulty to access equipment.

Overcomes Troublesome Architectural Limitations

Sloped roofs, limited mounting space and remote locations no longer present a problem in retrofit and historical building installations. The C-Series gives contractors greater installation options to meet code requirements in the most cost efficient manner. Indoor installation prevents tampering and vandalism in high security installations.

C-Series Partial List of Options

- Heat (Electric, Hot Water or Steam Coil)
- Electric Reheat
- Condensate Pump (Shipped Loose)
- Drain Pan Overflow Switch
- Compressor Short Cycle Timer
- Freezestat
- Dry Contacts
- Steam Canister Humidifier
- Upgraded Motors
- Pillow Block Bearings
- Low Ambient (Flooded Condenser or VFD)
- Outdoor Modification Kit w/TEFC Motor
- Hot Gas Bypass (External, Internal or Modulating)
- Microprocessor Controls
- Water Regulating Valves (Mechanical or Electronic)
- SCR Control
- Quench Valve
- Oil Separator
- Liquid Receivers
- Economizer (Air or Water)
- Mixing Box
- Double Wall
- External Filter Box
- Mirror Image
- Variety of Air Paths
- Chilled Water Coil
- Hot Gas Reheat (On/Off or Modulating)
- Suction Accumulator
- Digital and Variable Speed Compressors Available for Selected Applications

What can we build for you?

FACTORY TESTED - Each unit is functionally run-tested to verify control and component operation.

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



Proudly Made
in the USA

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