



**UNITED  
CoolAir**  
All-Indoor Solutions



**C-Series**



- 1 to 15 tons
- Horizontal Self-Contained or Split Systems
- Water-Cooled, Chilled Water, Water Source Heat Pump or MagnaCool Precision Cooling Package

Unique Solutions for All-Indoor HVAC Projects

## Simplified Replacement Air Conditioning

The C-Series indoor horizontal air conditioner from United CoolAir is designed as a flexible indoor ducted cooling system for commercial building installation. It is ideal for replacement or renovation applications offering design engineers and contractors 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 plenums, preserving valuable floor space. Four cabinet sizes are available with the unit mounted on channels to accommodate hanging rods for ceiling installation. C-Series units 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 installed as a packaged unit or as a split system with the evaporator and condensing sections in different locations. A single condensing section can even be used with up to 3 evaporator sections, each with their own

refrigerant circuit! 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.

## Built-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 manufac-

turing. Each tailor-made unit uses standard components and options to meet a specific operational requirement.

### FEATURES

- 1 to 15 tons
- Water-Cooled, Chilled Water, Water Source Heat Pump or MagnaCool Precision Cooling Package
- Single Package or Splittable
- Multiple air path options
- Variable Pitch Drives Allow Adjustable Static Pressure
- Dual Independent Control Panels (split systems)
- Functionally Run Tested Prior to Shipment

## 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

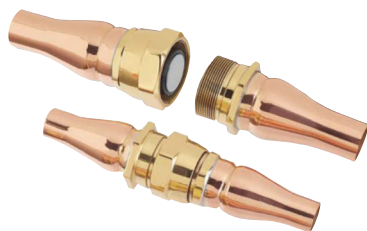
- Outdoor/premium service expense in extreme weather completely eliminated
- Improves reliability
- Eliminates roof safety issues

### 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.

## OPTIONS

- Powder Coated Cabinets
- Electric Heat
- Condensate Pump (externally mounted)
- Upgraded Motors, Evaporator or Condenser
- Hot Gas Bypass
- Steam Canister Humidifier
- Protective Coil Coatings
- Drain Pan Overflow Switch
- Non-Fused Disconnects
- Freezestat
- Air Side or Water Side Economizers
- Double Wall Cabinet Construction (Perforated or Solid)
- Auxiliary Coils (Steam, Hot Water or Chilled Water)
- Hot Gas Reheat
- Head Pressure Control Valves
- Marvel Microprocessor Controls
- BMS Interface

## APPLICATIONS

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



## MagnaCool Precision Cooling Package



The C-Series is available as an Air-Cooled configuration if it has the MagnaCool precision cooling package. United CoolAir provides the MagnaCool precision cooling 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, multiple alarm switches, hot gas bypass and the Marvel S Microprocessor.



### Electronic Steam Canister Humidifier

Electronic steam canister humidifier nominally rated at 2 lbs./hr. per ton of cooling provides pure, particle-free humidity to the conditioned space. The sealed canister complies with ASHRAE recommendations by eliminating open pans with standing water in the air-stream.



### Electric Heat/Reheat

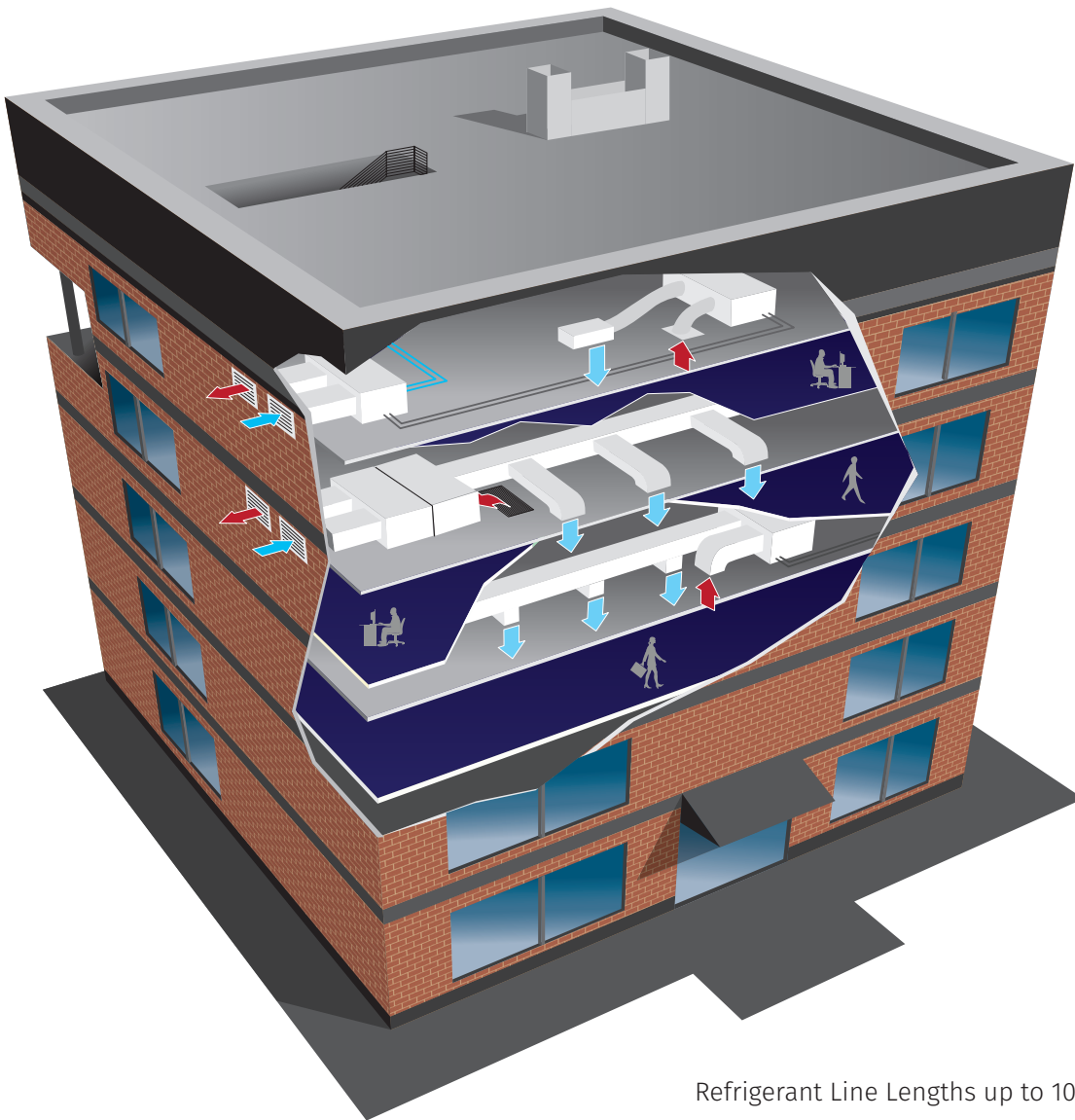
Finned tubular heaters have proven to be reliable. They can be used for heat and/or reheat, and are safer to operate, have a long service life and are ruggedly constructed.

## The All-Indoor Solution

The splittable design of the C-Series allows for easier installation and flexibility. The system 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.

To facilitate efficient heat removal at the installation location, the C-Series can be configured for Water-Cooled or Chilled Water applications. The standard unit can also be specified as a water source heat pump.



Refrigerant Line Lengths up to 100 Equivalent Feet

Units are shown as split and packaged systems and are for illustrative purposes only.

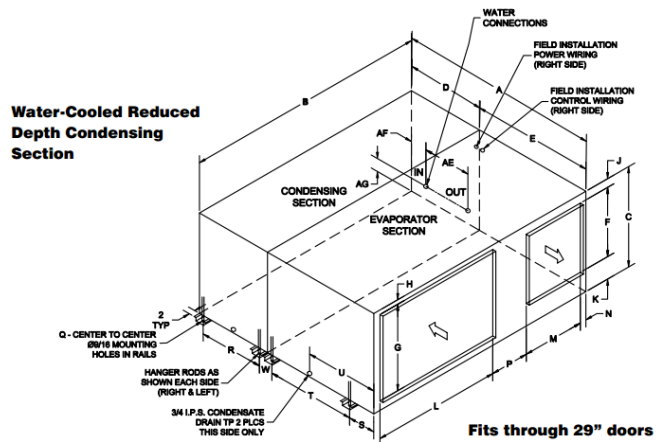
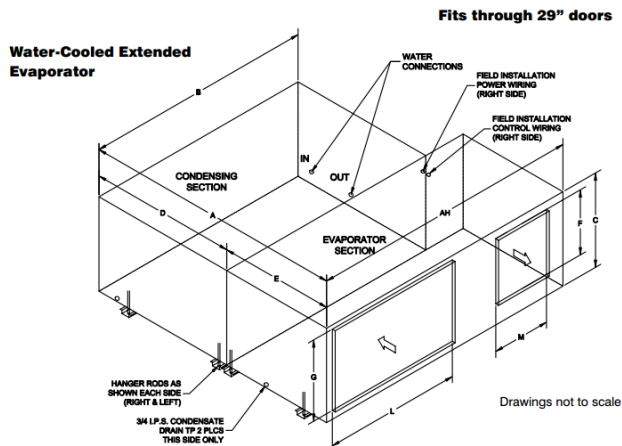
# Horizontal Self-Contained

The C-Series Horizontal unit is designed as a flexible ducted air conditioning system for indoor commercial applications. It is the ideal system for replacement or renovation projects.

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 Compressors	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) (20)	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 requirements
3. MagnaCool packages only.

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

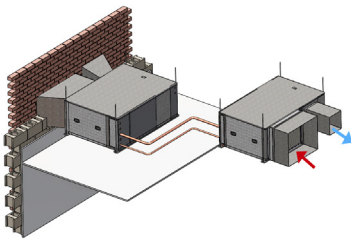
## Case Study

Raritan Bay Medical Center

Old Bridge, NJ

### The Challenge

An engineer was required to do a surgical suite with spaces requiring about 2000 cfm. The application required temperature and humidity control. Problem was they were limited in space, it needed to be DX and there was a significant distance between the evaporator and condenser locations. In addition, final filters required a higher static on the system



### MagnaCool Option

For projects that require precision temperature and humidity control, United CoolAir offers the MagnaCool close tolerance options. This package includes a microprocessor control, clean and efficient electronic steam canister humidifier and electric reheat as standard components. The MagnaCool bundled option sets are available on several product families providing flexibility for your diverse applications.

### The Solution

We solved their requirements with our horizontal MagnaCool unit. This unit offers heating, cooling, reheat dehumidification and an integral humidifier with distributor. The unit was configured with an air foil fan to do up to 3" esp and full DDC controls including a BMS interface card. The long refrigerant lines were addressed with factory installed refrigerant specialties including liquid line solenoid, accumulator, quench valve, oil separator and receiver tank to allow mechanical cooling all year round with the safety of a 200 equivalent feet refrigerant run.

### 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
- Does Not Require Architectural Damage to Building
- Will Not Compromise in Performance with Built-To-Order Design
- Weather will Not Damage Equipment
- Reduces the Possibility of Theft or Vandalism
- Refrain from Field Testing of Installed Product

Visit [www.unitedcoolair.com](http://www.unitedcoolair.com) or call the factory at 717-843-4311 for more information

# 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!



491 East Princess Street, York, PA 17403 Phone: 717-843-4311 Fax: 717-854-4462  
email: [uca@unitedcoolair.com](mailto:uca@unitedcoolair.com) web: [www.unitedcoolair.com](http://www.unitedcoolair.com)



Copyright © by United CoolAir Corporation 2017. All rights reserved.  
Manufacturer reserves the right to make changes without notice.

