



**UNITED
CoolAir**
All-Indoor Solutions

C13-Series



- 2 to 10 Tons
- Horizontal Self-Contained or Split Systems
- Air-Cooled, Water-Cooled, Chilled Water, Water Source Heat Pump, Air Source Heat Pump

Unique Solutions for All-Indoor HVAC Projects



Ultra-Flexible Splittable Indoor Air Conditioning Systems

United CoolAir has set the standards for splittable units since 1988. The C13-Series builds on that history by being one of the most versatile horizontal indoor air conditioning systems available today! Roofs on buildings have gotten to be very crowded places for equipment. The INDOOR location of the C13-Series provides many freedoms and benefits. Sloped roofs, those with “living roofs” and the general appearance of structures can be improved with the use of an indoor air conditioner. There is no roof loading to contend with and also no vandalism, storm issues, or roof penetrations.

The C13-Series Horizontal air conditioner is designed as a flexible ducted indoor air conditioning system for commercial

cooling applications and is ideal for retrofit and renovation projects. It is available in three cabinet sizes with capacities from 2 to 10 tons. An indoor condensing section is standard along with optional air path configurations. Units are manufactured using readily available components, simplifying life-time maintenance. Other quality features include filter driers, sight glasses and stainless steel sloped evaporator drain pan for positive condensate removal. The splittable design minimizes ductwork by allowing the condensing section installation away from the evaporator (close to an outside wall, air shaft or any location suitable for heat rejection) without the loss of factory charge.

FEATURES

- 2 to 10 tons
- Air-Cooled, Water-Cooled, Chilled Water,
- Water or Air Source Heat Pump
- Single Package or Splittable
- Premium Efficiency Motors
- IAQ-Style Double Sloped SS Drain Pan
- Variable Pitch Drives Allow Adjustable Static Pressure
- Dual Independent Control Panels (split systems)
- Functionally Run-Tested Prior to Shipment

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

Offering a Wide Variety of Options for your Unique Application

- Powder Coated Cabinets
- Electric Heat
- Condensate Pump (externally mounted)
- Upgraded Motors, Evaporator or Condenser
- Flooded Condenser (Down to -30°F)
- Hot Gas Bypass
- Variable Frequency Drive (Low Ambient)
- 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

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

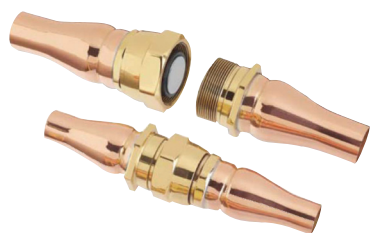
- Outdoor/premium service expense in extreme weather completely eliminated
- Improves reliability
- Eliminates roof safety issues

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.

Flexibility and efficiency are paramount in today's buildings. The ability to split air conditioning units, either for final installation or simply to move the unit into location, are assets that are extremely beneficial for historical sites and for renovation or replacement projects.



Water-Cooled packaged system, Air-Cooled packaged system and Air-Cooled split system shown

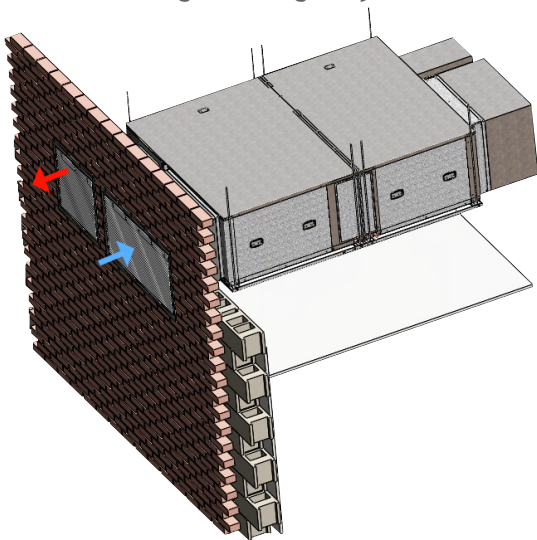
Flexibility and efficiency are paramount in today's buildings. The C13-Series can be installed as a single packaged system or the evaporator and condensing section can be split. The units can be ceiling mounted or slab mounted.

Being able to tailor the units with a wide range of options and different air path configurations provide additional design and installation flexibility. The heat of rejection can be accomplished with air or water as the transfer medium.

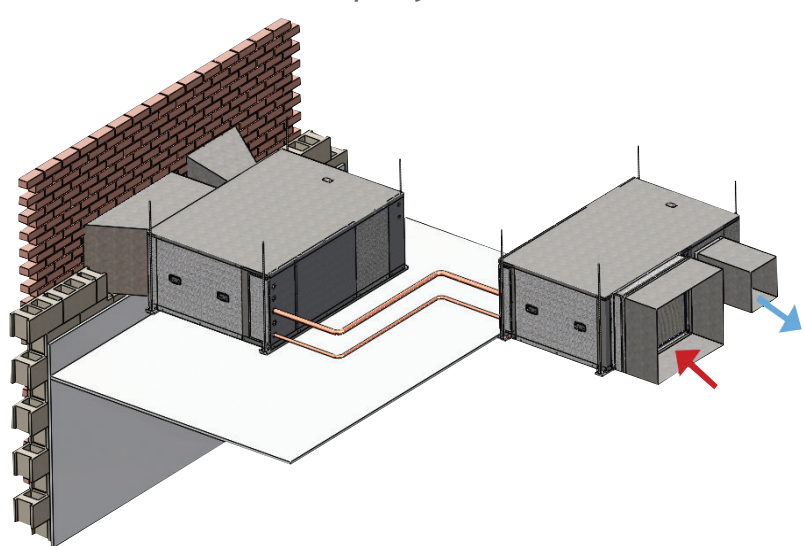
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Not to scale. For illustrative purposes only.

Single Packaged System



Split System



Physical Data

	Tons	2	3	4	5	6	8	10
Air-Cooled Total (a)	BTUH	24,490	36,920	46,280	58,620	75,840	90,395	115,350
Sensible (a)	BTUH	17,460	26,650	34,560	42,550	55,290	67,690	89,400
Heating Capacity	47 DB / 43 WB	23,410	34,200	42,760	57,800	72,055	84,740	106,600
	17 DB / 15 WB	14,940	22,650	27,635	37,345	44,845	55,682	72,320
Condenser Air	CFM	1600	2000	2500	2900	4000	5200	5000
	Std. ESP	0.25						
Evaporator Supply Air (Air- or Water-Cooled)	CFM	800	1200	1600	2000	2400	3200	4,000
	Std. ESP	0.25						
Water Cooled Total (a)	BTUH	25,210	37,910	48,350	61,675	78,260	94,535	128,370
Sensible (a)	BTUH	17,800	27,030	35,465	43,785	56,440	69,335	95,320
Heating Capacity		28,880	44,500	54,665	71,700	89,130	108,845	143,750
Estimated Weights (b)	Air-Cooled	725	730	1,055	1,075	1,575	1,610	1,720
	Water-Cooled	580	590	860	885	1,190	1,260	1,290
Dimensions (Inches) (e)	Length air-cooled	55		61		70-1/2		89
	Length water-cooled (c)	83		91		113-1/2		117
	Width (d)	59		67		73-1/2		83
	Height	23-1/8		26-1/8		33-1/8		
Available Voltages	208/230-1-60	•	•	•	•	•		
	208/230-3-60	•	•	•	•	•	•	•
	460-3-60	•	•	•	•	•	•	•
	575-3-60	•	•	•	•	•	•	•

(a) Capacities are gross values and are not adjusted for motor heat.

(b) Net Operating weight is for basic unit only. Options will add weight.

(c) Length is for basic water-cooled unit. Actual length may be more dependent upon options selected.

(d) Allow 36" clearance on each side.

(e) Refer to United CoolAir's website at www.unitedcoolair.com for specific unit detail drawings.

Reliable State-of-the-Art Control Solutions

The C13-Series 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.

United CoolAir offers two levels of microprocessor controls for this system – Marvel “J” and Marvel “S.” Both 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.

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
- Additional Inputs / Outputs
- Up to 3 Stages Compressors and 4 Stages Heat
- Electronic Modulating Hot Gas Valves
- Suitable for Heat Pump Systems



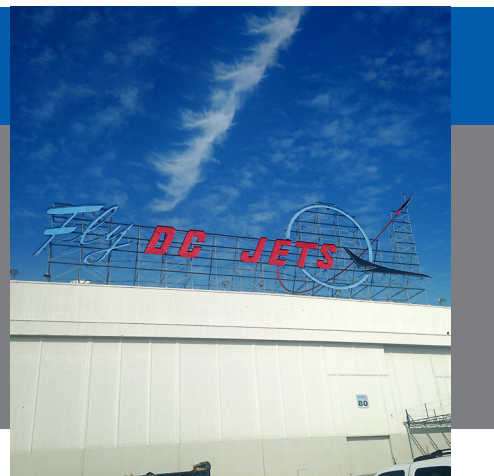
Case Study

Mercedes Benz

Long Beach, CA

United CoolAir's C13 Horizontal Ducted In-Door System Solves Historic Building Requirements.

United CoolAir's C13 versatility for retrofit and renovation projects provides an all indoor solution when there is no option for installation on the roof or ground mounted equipment. Due to zoning restrictions pertaining to alterations of historical structures, no equipment could be mounted on the buildings exterior.



Mercedes Benz had acquired a historical location in Long Beach, CA. Due to unprecedented growth for luxury cars in southern California. The long standing historic DC Jets facility was selected spanning 1.1 million square feet and home to Douglas Aircraft and eventually Boeing who both produced aircraft for the military and commercial industries.

This historic location at Conant Street and Lakewood Boulevard opened in 1941. Mercedes Benz will utilize the facility as a vehicle preparation center, which will be responsible for ensuring Mercedes-Benz cars are ready to be shipped to various dealerships throughout the USA. This is one of only three facilities in the United States. This newly renovated facility including United CoolAir equipment will employ an estimated 200 employees.



The use of the C13 was paramount in the design of the HVAC equipment. Because the city of Long Beach designating this historical site there were certain restrictions on the renovation for Mercedes. First, there was no ability to place equipment on the massive roof. Secondly, the face of the building could not have any equipment on the exterior. It was determined that a C13 ducted horizontal unit

would be installed indoors. The contractor was able to duct the condenser air out the side of the building through a louver. 24 C13 air source heat pumps were installed providing cooling

and heating to a variety of spaces from offices to training bays for factory training for Mercedes technicians. Tonnage ranged from 3 to 8 tons and all had airside economizers as well.

A challenging historic landmark was exactly what the C13 was designed to solve. Not only did the C13 solve the problem presented it will also be easier to service inside the building envelope, be protected from the outdoor environment and provided a complete solution utilizing one product.



NOTABLE CLIENTS

- CVS
- Rite Aid
- Gap Store
- Sirius XM
- TTC (*Canadian Subway*)
- DC Metro
- Sikorsky
- Nordstrum
- PayPal
- Starbucks

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!



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