VariCool EZ-Fit®

- 12 to 90 Tons
- Variable Air Volume
- Water-Cooled
- Water Source Heat Pump
- Chilled Water
- DOAS (Dedicated Outdoor Air System)
- Air-Cooled with Remote Condenser
Modular Floor-by-Floor Air Conditioning Systems

The VariCool EZ-Fit is a self-contained, modular air conditioning system for use with floor-by-floor variable air volume applications. It is engineered and manufactured specifically for installation in renovation and retrofit projects and provides the ultimate All-Indoor Solution for challenging HVAC applications.

The VariCool EZ-Fit design consists of three distinct sections that easily mate to form a system module. The module consists of a fan section, evaporator coil section and condensing section. Single modules are available in 12-15 ton, 20-25 ton, 30-35 ton and 40–45 ton sizes. Dual modules together form systems as large as 90 tons of cooling.

Sections are assembled during manufacturing and evacuated, charged, tested, and then separated for shipment of individual sections. The use of resealable refrigerant fittings allow the unit to be shipped split without losing the charge. All module sections are joined together using innovative 3D-Intelliclamp connectors which ensure perfect component alignment. The result is a lower installed cost without any sacrifice of system reliability.

FEATURES

- 12 to 90 tons
- Water-Cooled
- Chilled Water
- Dual Scroll Compressors/Module
- Interlaced Evaporator Coils
- Premium Efficiency Motors
- Double Sloped Stainless Steel Drain Pan
- Hot Gas Bypass (each circuit)
- Lift Off Hinged Panels
- Belt Drive Airfoil DWDI Blower with Backward Inclined Blades (12-25 Ton Modules)
- Direct-Drive Parallel Fans (30-35 & 40-45 Ton Modules)
- Factory Mounted VFD Controllers
- Microprocessor Control
- 3D-Intelliclamp Cabinet Section Connectors

Individual sections fit through standard 3-0 doors or smaller and into most elevators. They can also be maneuvered down narrow hallways which means no modifications or alterations to the building are needed and installation time is quicker and less costly to accomplish.

As with all United CoolAir systems, a wide variety of features are standard and a host of options allow every system to be tailored to the specific project at hand.
Avoid Requirements that Lead to Extra Expense

**Expensive Equipment, Rigging or Permits**
Our units fit thru standard doors, hallways & elevators eliminating crane rentals, rigging crews & permits.

**Roofcurbs or Roof Penetration**
Removes expensive curb equipment & installation labor cost reducing possible roof water damage.

**Field Piping, Brazing, Evacuation or Charging**
Factory charged & utilizing Resealable Refrigerant Fittings speeds installation & commissioning.

**Equipment Damage Due to Weather**
All indoor installation avoids premature replacement costs & downtime due to weather damage.

**Possibility of Theft or Vandalism**
Eliminates expensive repairs & replacements due to theft & vandalism enhancing building security.

**Field Testing of Installed Product**
Minimizes field-testing as units are tested prior to shipment reducing labor and expediting installation.

**Excessive Downtime when Replacing Old Systems**
Sectional shipments accelerate installation and can be installed off-hours or weekends.

**Outdoor Servicing of Product**
Outdoor/premium service expense in extreme weather completely eliminated, improving reliability while removing roof safety issues.

**Architectural Damage to Building**
Eliminates expenses for code approvals and minimizes any type of building alteration.

**Major Ductwork or Electrical Modifications**
Units ordered to closely match existing duct and utility locations leading to saving labor and time.

**No Compromise in Performance with Built-to-Order Design**
Built to exact requirements with extensive list of configurations and over 100 options.

**Exterior Condensing System**
Eliminates rooftop & pad installation space & cost.

**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. Mating male and female fittings used on the refrigerant lines allow units to be evacuated, charged and leak tested prior to shipment. Modular sections can then be separated for rigging and installation and then reconnected for system operation.
**Ideal for Renovation and Replacement Projects**

The basic VariCool EZ-Fit modular design and standard features provide the ideal retrofit and replacement design for many projects. However, it does not always provide the ideal product solution and that is why United CoolAir offers an extensive list of options to further match each VariCool EZ-Fit unit to the specific application requirements. These options are designed to optimize performance while minimizing installation complexity, time and expense.

### POPULAR OPTIONS

- More than 25 cabinet sizes available
- ECM Fans
- Variable Speed Compressor
- BMS Interface
- High Efficiency Filters
- Double Wall Construction
- Water Side Economizer
- Hot Water, Steam, or Electric Heat
- Lead Circuit Digital Scroll Compressors
- Internally Isolated DDP Fan Systems
- Direct Drive Parallel Fan Systems
- Painted Cabinets

### TYPICAL APPLICATIONS

- Healthcare Facilities
- Universities/Schools
- High Rise Buildings
- Office Buildings
- Commercial/Retail Centers
- Laboratories
- Lobbies
- Conference Rooms
- Churches
Your Choice for Building Management System Interface Options

The VariCool EZ-Fit system is designed to operate using the full-featured Marvel Plus microprocessor control system. The Marvel Plus control system incorporates a Marvel Plus Microprocessor Control and a Marvel Plus Wall Mount display.

The power of the Marvel Plus control system can be put to good use through integration with an existing Building Management System. The system is compatible with most protocols including BACnet™ over MS/TP (RS485 Serial), BACnet over IP (Ethernet/EIA485), ModBus™ RS485 Serial Connection, ModBus™ TCP over IP, LonWorks™ FTT10 (RS485 Serial), or other systems using a Serial interface card.

A large number of analog and digital inputs and outputs come standard which allows most single and multiple-unit projects to control and communicate the most important aspects of operation and alarm status. In addition, up to 16 controllers can be networked to a single wall display.

IoT allows for remote connectivity to provide support from United CoolAir.

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<th>Nominal Tons</th>
<th>Total MBH</th>
<th>Sensible MBH</th>
<th>CFM</th>
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</table>

Contact the factory for Chilled Water and Water Source Heat Pump models.
EmblemHealth Chose the VariCool EZ-Fit System for a Successful Replacement Project

United CoolAir was hired for a project at an EmblemHealth facility located in Manhattan, NY. The building was erected in the early 1970’s and the mechanical systems have been running for over 25 years. The air conditioning system had to be replaced quickly with the least amount of disruption to the patients, service providers and staff.

The EmblemHealth building had four existing units spread out from the basement, main floor and at an upper level. Sizes ranged up to 45 tons and the replacement units would need to be the same size. Many of the systems were installed during the building construction when access was not an issue. It is generally not a problem to remove the old air conditioning system because the units are disassembled and scrapped, but installing the new units can be tricky. This is where we came in to help.

Our distributor, MWSK Equipment, was hired for this project and Fredi Taruc, Sales Engineer at MWSK, immediately thought of United CoolAir’s VariCool EZ-Fit system as the best option for the replacement.

Regardless of the entry method, the installation cost can easily exceed the equipment cost when you measure man hours, permits and special equipment necessary to complete the job. There’s the additional time needed for demolition, installation and final commissioning.

“Often the HVAC contractor has to do a lot of preparation work in order to fit a system through small passageways. Larger units may have to be raised by crane to upper floors and require rigging, permits and building modification. If they take it through the building, the unit may have to be delivered partially disassembled and reassembled on site, or walls and doorways opened to allow access,” said Taruc.

EmblemHealth needed to get the replacement units in quickly and with as little building modification as possible.

Unlike most commercial buildings, healthcare facilities are generally active 24 hours each day. The retrofit was scheduled for two weekends with two units replaced each weekend. John McBride, Design Engineer for JFK & M Consulting Group made sure the replacement work would not interrupt the facility’s busy weekend schedule.

“The old equipment was removed on a Friday and the replacement units were brought in with minimal interference with the hospital’s operations. The modular sections were quickly reassembled and connected to the existing hookups. Since the units were pre-charged at the factory, brazing, evacuation and charging in the field were eliminated saving many hours of valuable labor. The units were operational by Monday morning at the start of the new week,” said McBride.

This came as no surprise to Joe Ptak, Chief Building Engineer for EmblemHealth, who was first introduced to United CoolAir air conditioning systems. The initial units were installed in his building and he has been very satisfied.

“I was very pleased with the performance of their units then and I recommend using United CoolAir systems for all the other EmblemHealth mechanical system replacements,” said Ptak.

Visit www.unitedcoolair.com or call the factory at 717-843-4311 for more information.
## Basic Model Designation

**EXAMPLE:**

```
VZ W R 20 G 3 A T A A 30 - A X
```

### a.

“VZ” = VariCool EZ-Fit

### b.

“W”, “CW” or “A”
- “W” = Water-Cooled
- “CW” = Chilled Water Air Handler
- “A” = Air Cooled w/ Remote Air Cooled Condenser

### c.

“R”, “L” or “D”
- “R” = Right Hand Single Module
- “L” = Left Hand Single Module
- “D” = Dual Module

### d.

“12”, “15”, “20”, “25”, “30”, “35”, “40” or “45” Nominal Cooling Capacity in Tons (Single Module)
- “24”, “30”, “40”, “50”, “60”, “70”, “80” or “90” Nominal Cooling Capacity in Tons (Dual Module)

### e.

“G”
- Common to all

### f.

“3”, “4” or “5” Indicates Power Supply
- “3” = 208/230-3-60
- “4” = 460-3-60
- “5” = 575-3-60

### g.

- “AS” = One Compressor
- “A” = Two Compressors
- “B” = Three Compressors
- “D” = Four Compressors
- “-” = No Compressors / Chilled Water Unit

### h.

“T”
- Traditional Cabinet
- “C”
- Custom Cabinet

### i.

“A” or “-”
- “A” = R410a Refrigerant
- “-” = No Refrigerant / Chilled Water Unit

### j.

“Blower Type”
- “A”, “B”, “C”
- “A” = DWDI Blower
- “B” = Parallel Direct Drive Fan
- “C” = ECM Fans

### k.

Nominal Heat kW

### l.

“X”
- Special Configuration

### EVAPORATOR AIR PATHS

<table>
<thead>
<tr>
<th>Blower Type</th>
<th>Front</th>
<th>Top (Standard)</th>
<th>Rear</th>
<th>Side</th>
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</thead>
<tbody>
<tr>
<td>DWDI Blower</td>
<td>“C”</td>
<td>“A”</td>
<td>“R”</td>
<td>NA</td>
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<tr>
<td>Direct Drive Parallel Fans</td>
<td>Not Available</td>
<td>“A”</td>
<td>“R”</td>
<td>S</td>
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<tr>
<td>ECM Fans</td>
<td>“C”</td>
<td>“A”</td>
<td>“R”</td>
<td>S</td>
</tr>
</tbody>
</table>

Note: For side discharge, single module only. Contact factory for details.

### m.

Not all combinations of Basic Model Designations are valid. Check with the factory for correct model identification.
Unique Solutions for All-Indoor HVAC Projects

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.

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