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# V-Cube Slim™

Floor-By-Floor Cooling and Heat Pump System  
15 to 70 tons



 **Mammoth®**

*Custom Packaged HVAC Systems™*

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## V-Cube Slim™

The Mammoth V-Cube Slim is a high efficiency, value-driven solution for floor-by-floor air conditioning in medium- to high-rise commercial and institutional buildings. V-Cube Slim combines advanced features such as FANWALL TECHNOLOGY® and a standard, factory-installed variable frequency drive (VFD), with tremendous application flexibility for use in a wide variety of applications, including:

- Water-cooled cooling
- DX cooling only
- DX cooling with waterside economizer
- Standard or geothermal water source heat pump
- Make-up air applications

The knockdown design, compact footprint and quick-connect design of the V-Cube Slim makes units ideal for replacement applications.





### Easy, Low Cost Replacement

The V-Cube Slim is designed to be a quick solution for replacement of existing floor-by-floor units.

- The packaged design, complete with a standard VFD and factory-integrated EPiC™ controller (optional communicating controls), reduces field labor.
- A compact footprint allows easy replacement of existing units manufactured by others.
- Knock-down feature allows units to be disassembled into sections that fit through a standard 3-foot door, with electrical quick-connects between sections. The refrigeration system remains intact for easy re-assembly.
- Built-in electrical disconnects reduce field labor and installation costs.



V-Cube Slim knock-down sections can be navigated through standard 3-foot doors and easily reassembled.

### Maximum Section Dimensions (70 ton, size 840)

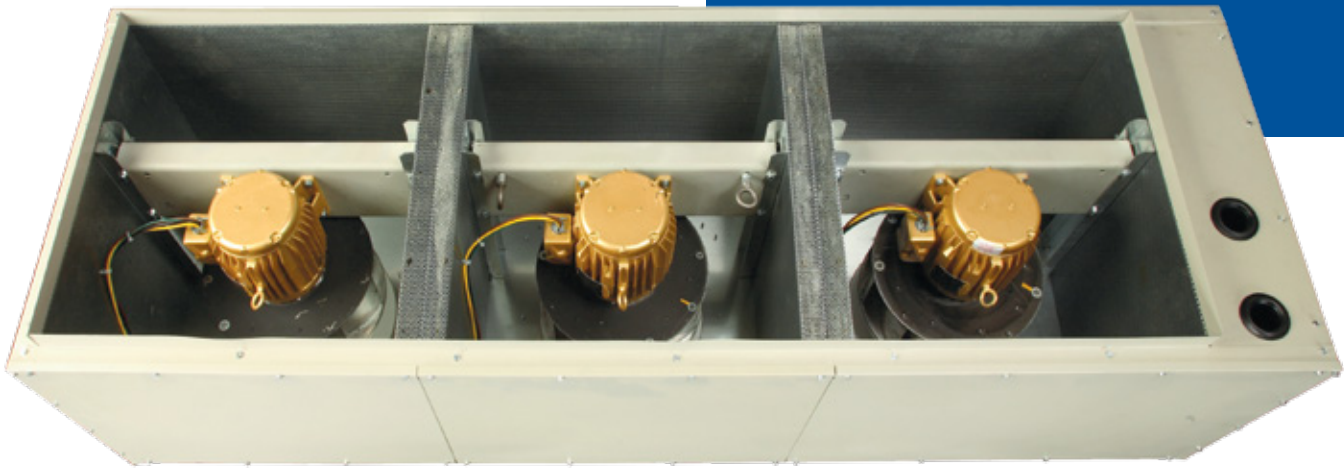
Section	Length (in.)	Width (in.)	Height (in.)
Blower	121.00	34.88	29.50
Mechanical	121.00	34.88	71.38*
Controls	34.88	11.88	87.25
Waterside Economizer**	121.00	25.75**	65.25

\*Includes 6" base rail

\*\*Includes removable 2" pre-filter + 4" filter rack

# V-Cube Slim™ Benefits

FANWALL TECHNOLOGY provides redundancy and ultra quiet operation



## High Efficiency

With a cooling efficiency up to 16.1 EER and heating efficiency up to 4.3 COP, V-Cube Slim units help conserve precious energy and reduce operating costs.

- A factory-mounted VFD is standard with each unit to optimize fan energy consumption
- Premium high efficiency motors reduce amp draw throughout the operation range of the unit.
- Extended range operation allows V-Cube Slim to be incorporated as part of a geothermal heat pump system to achieve higher efficiencies.
- Digital scroll lead compressor (standard for VAV systems and optional for CAV systems) provides superior part load operation (to 10% load) and avoids the need for hot gas bypass.
- Water circuits are designed for minimum pressure drop to reduce pumping power requirement
- A factory-integrated EPiC™ controller provides optimum performance while offering flexibility for standalone operation or optional communication with common, industry-recognized building automation systems.

## Quiet Operation

Extremely quiet operation allows V-Cube Slim units to be placed adjacent to occupied spaces which can increase the available area for lease.

- Heavily attenuated equipment walls may be eliminated, reducing installed costs.
- FANWALL TECHNOLOGY® provides ultra quiet fan operation and can help avoid costly attenuation.
- Scroll compressors operate smoothly and quietly.

## Superior Comfort and Indoor Air Quality

The V-Cube Slim design and a variety of filtration options provide occupants superior comfort and indoor air quality (IAQ).

- Standard double-wall construction and dual sloped stainless steel drain pan help prevent microbial growth and provide a surface easily cleanable during routine maintenance.
- Multiple filter options include optional MERV13, 4-inch final filters with 2-inch pre-filters.
- Quiet fan and compressor operation contributes to comfortable space conditions.



## V-Cube Slim™ Benefits

### Easy Specification and Design

The V-Cube Slim is available in 10 sizes from 15 to 70 tons to match the requirements of a broad range of areas and space loads. Units offer tremendous configuration flexibility to meet the requirements of your project.

- Cooling only with a standard brazed plate or optional shell and tube heat exchanger (cooling only units).
- Cooling only with a standard DX coil and optional waterside economizer and reheat coil.
- Water source heat pump for standard or extended range geothermal applications.
- Air handler unit with a wide variety of coil options (models 185 to 845).
- Make-up air unit.

### Easy Maintenance and Service

- Unit tooled access panels allow easy removal and replacement for routine maintenance and service.
- Factory-installed filter racks enable easy filter replacement and help reduce installed costs.
- FANWALL® system eliminates belt, sheaves, bearing and motor maintenance.
- Double wall construction with dual sloped, stainless steel drain pan and optional cleanable-in-place shell and tube condenser encourage routine maintenance for peak performance.

### Durable and Reliable Operation

V-Cube Slim is designed for long-lasting operation with minimum downtime:

- Multiple refrigerant circuits provide redundancy.
- Fan redundancy provided by the FANWALL system allows the unit to operate at nearly full capacity with one fan down.
- Auto-changeover to optional redundant VFD in lieu of manual bypass.
- Pre-painted cabinet maintains a like-new appearance.
- Factory-packaged and tested solution.



V-cube Slim floor-by-floor units offer tremendous configuration flexibility to meet the requirements of your project.

# V-Cube Slim™ Features

## A Flexible Heating and Cooling Selections

- Standard 3- or 4-row DX coil (optional 6-row DX coil)
- Optional hot water, steam, electric, DX reheat or waterside economizer

## B Independent Refrigerant Circuits

- Provides redundancy

## C Digital Scroll Lead Compressor

- Provides superior part-load operation (10 to 100%)
- Avoids need for hot gas bypass
- Standard for VAV units

## D Scroll Compressors

- R-410A
- Provide quiet operation

## E Dual Sloped, Stainless Steel Drain Pan

- Provides positive drainage for superior IAQ and is ease of cleaning

## F Unit Cabinet

- Durable, double wall cabinet promotes superior IAQ
- 16 and 20 gauge painted exterior and 18 gauge interior galvanized panels
- 1-inch, ½ pound density insulation
- Painted exterior maintains like-new appearance

## G Control Panel

- Factory-installed EPIC™ controller and electrical disconnect with easy-access user interface
- Optional communicating controls with BACnet®, Modbus®, N2 or LonTALK®

## H Access Panels

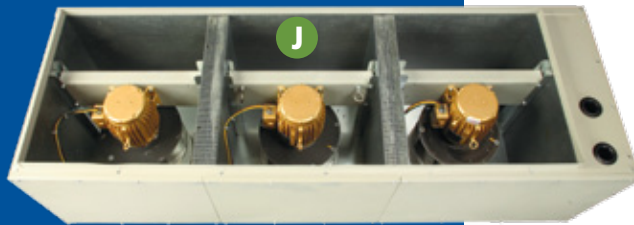
- Tooled access panels can be easily removed and replaced for routine maintenance and service





### I Filter Rack

- Factory-installed to save installation time and cost and provide easy replacement of filters
- 2-inch pleated media filter standard
- Optional MERV 13, 4-inch pleated filter and 2-inch pre-filter



### J FANWALL TECHNOLOGY®

- In addition to ultra-quiet fans, the integral, patented Coplanar Silencer® with 2", 1½ pound density insulation, provides exceptionally quiet operation
- Provides redundancy to help avoid downtime
- Eliminates belt, sheave, bearing and motor maintenance
- Provides high static system capability



### K Variable Frequency Drive

- Factory-installed as standard
- Auto-changeover to optional redundant VFD in lieu of manual bypass



### L Refrigeration Specialties

- Easily accessed
- Brazed plate heat exchanger standard (shell and tube optional)
- Thermal expansion valve
- Reversing valve for water source heat pump units
- Each circuit equipped with a high pressure refrigerant manual reset safety control
- Schrader valves on both the high and low pressure sides
- Liquid line filter drier on each circuit
- Liquid line sight glass (shell and tube heat exchangers only)

# Your Solution is Our Mission

At Mammoth, we make things possible with your HVAC system that would otherwise be unachievable using a commercial solution. Your solution is our mission—whether it involves meeting an impossibly small footprint, extremely low sound or high operating efficiency, high efficiency filtration, multiple levels of redundancy, or you want to make the HVAC system disappear in your building design. If it goes into a building or on top of a roof, it can be incorporated into a Mammoth custom packaged HVAC system.

We believe in fitting the right custom-engineered solution to your application—without the compromise of “cataloged” solutions that only address part of your requirements. Our Representatives listen to your needs and work with our engineering staff to design systems that meet your unique needs. You benefit from:

- Reduced design time and risk
- Lower overall construction costs
- Faster renovation and construction cycles
- Easier coordination of jobsite trades
- Freed-up indoor equipment room space
- Optimized energy efficiency
- Service friendly designs
- Factory-assured quality and reliable operation
- Sole source responsibility

For more information on how we can design a custom solution for you, please contact your local representative. To locate your representative, visit [www.mammoth-inc.com](http://www.mammoth-inc.com).



Chillers and Chiller Plants



Custom Packaged DX Systems



Replacement Rooftop Systems



Vertical Self-Contained



Water Source Heat Pump Systems



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