

## INTRODUCTION

Krueger vertical floor mounted fan coil units are designed to maximize flexibility of selection and installation.

The units are also designed to exceed the stringent quality standards of the institutional market, while remaining cost competitive in the light commercial segment of the market.

Krueger vertical fan coil units set the new standards for quality, flexibility, and competitive pricing.

## MODEL

KVFS - Vertical Fan Coil, Slant Top

KVFF - Vertical Fan Coil, Flat Top

KVFH - Vertical Fan Coil, Concealed Floor



KVFS



KVFF



KVFH

## PRODUCT DESCRIPTION

### DESIGNED FOR MAXIMUM FLEXIBILITY

The extensive variety of standard options available on vertical floor fan coil units are where you find the versatility to fit any HVAC system designer's needs. Models KVFF and KVFS allow for additional height and width dimensions to meet architectural demand.

Options include: single wall stainless steel drain pan; MERV 8 and MERV 13 filters; and electric heat with single point power connection. All electric heat units are listed with ETL as an assembly and carry the cETL label.

All units comply with the latest edition of AHRI Standard 440 for testing and rating fan coil units, are certified, and display the AHRI symbol.

High efficiency motors, fan relays, disconnects and fusing mean easier coordination between mechanical and electrical trades.

Coil options allow for 3 or 4-row chilled water or DX cooling coils, and 1 or 2-row hot water heating coils.

Silent solid state relays are available for fan and electric heat control in sound sensitive environments

### OPTIMUM BUILDING PERFORMANCE

Concealed vertical floor fan coil chassis are built from galvanized steel. This metal surpasses the ASTM 125 hour salt spray test for corrosion and rust. Exposed cabinet models are powder coated galvanized steel.

All units, with or without electric heat, are cETL listed and labeled. All wiring is in compliance with NEC, assuring safety and quality for the owner.

Floor mounted cabinet models feature finned tubular heating elements in the reheat position, protecting room occupants from electrical shock.

Vertical floor fan coil units have a removable fan/drain pan assembly. The entire fan assembly can be easily removed from the unit and serviced on a workbench.

Filters are easily replaceable from the return air toe space without the need for tools or removal of the front panel.

### CONVENIENT INSTALLATION

All vertical floor fan coils are shipped completely assembled, reducing field installation time and labor. All units are thoroughly inspected and tested prior to shipment, eliminating potential problems at startup. Motor wiring is brought to a junction box on the inside of the unit end pocket, reducing electrical hook-up time.

Factory furnished valve packages assure proper fit, operation and performance.

### CONSTRUCTION FEATURES

End Pockets: The 8" end pockets allow for accessibility and service of optional factory piping packages and controls. End panels are removable to allow for even greater access.

Fan Deck: The fan/drain pan assembly is easily removable for service access to motors and blowers at, or away from, the unit.

Fan Deck Removal: KVF units allow for a single technician to service the fan/motor by keeping the fan deck to less than 44". Motors are supplied with quick connectors to allow electrical service without the need for tools.

Drain Pan: The sloped insulated primary drain pan is available in stainless steel construction. Standard drain pan is externally insulated, single wall galvanized steel. The KVF Series fan/drain pan assembly is easily removable for cleaning.

Coils: All fan coils are available in 2 or 4-pipe configurations. The heating coil is standard in the reheat position. Heating and cooling coils are available with the same or opposite end connections. Access for cleaning on the entering air side is available when the drain pan is removed. Coils are removable for service.

Filter: The filter is easily replaceable through the return air toe space without requiring removal of the front panel.

Powder Coated Painted Surface: Exposed cabinet Models KVFF and KVFS, as well as supply and return air grilles and the KVFH wall recessing panel, feature a powder coat finish that resists scuffing, scratching, fading, and fingerprints.

Control Enclosure: The KVF control enclosure provides adequate space for the unit controller and fan coil relay. The fan coil relay is designed to limit diagnostic problems, while allowing for multi-voltage fan power input. The board is designed for factory installed, color coded, plug and play connections designed to ensure accurate wiring.

Piping Packages: Factory installed piping packages come equipped with components specific to the project. Actuators ship with color coded plug and play connections for quick, accurate installations

Lid Removal: Top panel is removable from fan coil without the need to disconnect piping or electrical wires.

## PRODUCT DESCRIPTION

### STANDARD FEATURES

#### Construction

##### All Units

- AHRI 440 certified and labeled
- Galvanized steel construction
- Insulation: elastomeric closed cell foam
- Integral filter rack with 1" throwaway filter

##### Concealed Units

- Top supply with duct collar

##### Exposed Units

- Top stamped louver supply grille
- Durable powder coat paint
- End pockets with removable panels
- 20 gauge exterior panel construction
- Flat top
- Slant top

#### Coils

- Cooling - 3 or 4-row chilled water or DX, heat pump compatible
- Heating - 1 or 2-row hot water - reheat position
- 1/2" O.D. seamless copper tubes
- 0.016" tube wall thickness
- High efficiency aluminum fin surface for optimizing heat transfer, pressure drop and carryover
- Left or right-hand, same or opposite end connections
- Removable for service
- Manual air vents

#### Drain Pans

- Single wall, galvanized steel, externally insulated - fire retardant and antimicrobial
- Positively sloped to drain connection
- 3/4" M.P.T. auxiliary drain pan connection
- Double wall plastic auxiliary drip pan

#### Fan Assemblies

- Forward curved, DWDI centrifugal type
- 115 volt, 1-phase, 3-speed PSC motors
- Quick disconnect motor connections
- Removable for service

#### Electrical

- cETL listed for safety compliance
- Electrical junction box for field wiring terminations
- Terminal block for field connections

#### Electric Heat

- Finned tubular element on all floor mounted units protects against electrical shock
- ETL listed as an assembly for safety compliance
- Integral electric heat assembly with removable elements for easy service
- Automatic reset primary and back-up secondary thermal limits
- Single point power connection

### OPTIONAL FEATURES

#### Construction

##### All Units

- Manual and motorized outside air dampers
- Spare 1" throwaway filters and 1" pleated filters (MERV 8 & 13)
- Wall boxes
- Leveling legs

##### Concealed Units

- Wall recessing panels

##### Exposed Units

- Linear bar discharge grille, powder coated
- 16 gauge front panel
- Return air louver grille
- 2" - 8" falsebacks
- Extended end pockets
- Tamper proof fasteners

#### Coils

- Automatic air vents
- Stainless steel coil casings
- 3/8" O.D. seamless copper tubes (0.012" tube wall thickness)

#### Drain Pans

- Stainless steel construction with external insulation
- Double wall plastic auxiliary drain pan - extended length
- Stainless steel auxiliary drain pan - extended length

#### Fan Assemblies

- 115, 208-230, 220 and 277 volt, 1-phase EC motors

#### Electrical

- SCR fan speed controller
- Fan relay packages
- Silent solid state fan relays
- Toggle disconnect switch
- Condensate overflow switch (auxiliary drain pan)
- 2-10VDC, 3-speed fixed or adjustable ECM control
- Unit and remote mounted 3-speed fan switches

#### Electric Heat

- Door interlocking disconnect switches
- Main fusing
- Silent relay/contactors

#### Piping Packages

- Factory assembled - shipped loose for field installation
- 1/2" and 3/4", 2 and 3-way normally closed, 2-position electric motorized valves
- Isolation ball valves with memory stop
- 4-pipe with 3-way valve
- Fixed and adjustable flow control devices
- Unions and P/T ports
- Modulating control valves
- High pressure close-off actuators (1/2" = 50 PSIG; 3/4" = 25 PSIG)

#### Thermostats

- Digital display; programmable; auto/manual changeover
- Unit and remote mounted with integral 3-speed fan switch
- 2 and 4-pipe control sequences

# KVF SERIES

Vertical | Standard



FAN COIL UNITS | VERTICAL, STANDARD

KVF SERIES

## PRODUCT DESCRIPTION | CONSTRUCTION HIGHLIGHTS

**END POCKETS:** The 8" end pockets allow for accessibility and service of optional factory piping packages and controls. End panels are removable to allow for even greater access.



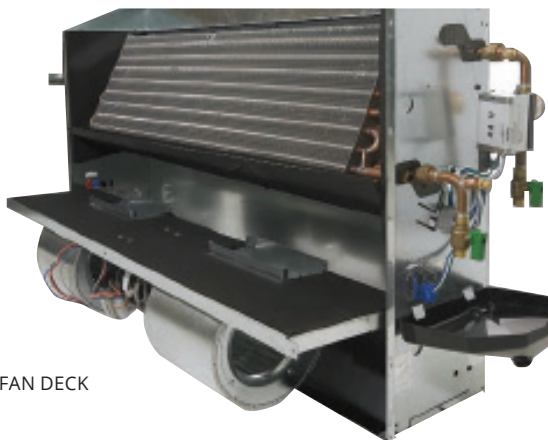
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COILS

**FAN DECK:** The fan/drain pan assembly is easily removable for service access to motors and blowers at, or away from, the unit.



FAN DECK

**FILTER:** The filter is easily replaceable through the return air toe space without requiring removal of the front panel.



FILTER

**DRAIN PAN:** The sloped insulated primary drain pan is available in stainless steel construction. Standard drain pan is externally insulated, single wall galvanized steel. The KVF Series fan/drain pan assembly is easily removable for cleaning.

**POWDER COATED PAINTED SURFACE:** Exposed cabinet Models KVFF and KVFS, as well as supply and return air grilles and the KVFH wall recessing panel, feature a powder coat finish that resists scuffing, scratching, fading, and fingerprints.

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CONTROL ENCLOSURE

**PIPING PACKAGES:** Factory installed piping packages come equipped with components specific to the project. Actuators ship with color coded plug and play connections for quick, accurate installations.



PIPING PACKAGES

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FAN DECK REMOVAL

**LID REMOVAL:** Top panel is removable from fan coil without the need to disconnect piping or electrical wires.



LID REMOVAL



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Vertical | Standard



## PRODUCT DESCRIPTION | FEATURES DETAIL

All units are cETL and AHRI 440 listed and labeled

Baked anodic acrylic powder paint (exposed cabinet models)

Control access door provided with unit mounted t-stat

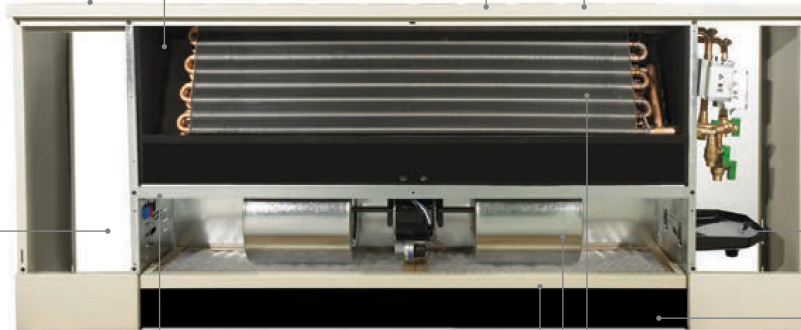
Standard insulation is closed cell foam

Stamped louver or linear bar discharge grilles

Single point power connection on all units with and without electric heat

Double wall plastic auxiliary drain pan, standard or extended length (extended KVF only)

Open toe space or decorative return grille



Electric heat element installed to avoid drips from coil condensate

Single wall galvanized insulated drain pans are double sloped to drain connections

Chilled water or DX cooling coils up to 4 rows

Hot water and steam heating coils up to 2 rows are located in the reheat position

Entire electric heat assembly can be removed for servicing

Fan/drain pan assembly can be easily removed for cleaning and servicing

Permanently lubricated, three tap, PSC fan motors designed for quiet and efficient operation

Optional finned tubular electric resistance heat (not shown) to prevent electrical shock. ETL listed as an assembly for safety compliance.

Integral filter rack with 1" throwaway filter on all units

Optional electronically commutated (brushless DC) motor

FAN COIL UNITS | VERTICAL, STANDARD

KVF SERIES