

# KHF - SERIES A

Horizontal Fan Coil Units | Low Profile



## PRODUCT DESCRIPTION | GENERAL INFORMATION

### DESIGNED FOR MAXIMUM FLEXIBILITY

The extensive variety of standard options available on the KHF Series units are where you find the versatility to fit any HVAC system designer's needs.

Options include rear or bottom return, rear ducted return, solid or telescoping bottom panels for unit recessing, single wall stainless steel drain pans, electric heat and condensate pumps with single point power connection. All electric heat units are listed with cETLus as an assembly and carry the cETLus label.

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 2 through 6-row chilled water or 2 through 5-row DX cooling coils. 1 or 2-row hot water or standard steam coils may be placed in the preheat or reheat position.

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

High static ECM option provides versatility and adjusts for applications that exceed .25" of external static pressure.

### QUALITY PRODUCT

Concealed model (KHF Series) fan coil units are built from galvanized steel. Exposed model (KHFE) cabinetry is powder coated galvanized steel.

Standard insulation is 3/8" elastomeric closed cell foam, complying with UL 181 and NFPA 90A.

Units with or without electric heat are cETLus listed and labeled. All wiring is in compliance with NEC.

KHF Series fan coil units have a removable fan assembly. The entire fan assembly can be removed from the unit and serviced easily on a workbench.

### CONVENIENT INSTALLATION

KHF Series fan coil units are shipped completely assembled, reducing field installation time and labor.

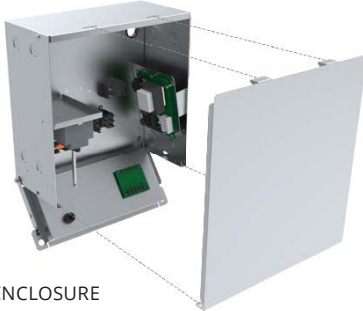
All units are thoroughly inspected and tested prior to shipment, reducing potential problems at startup. Motor wiring is brought to a junction box on the outside of the unit casing, reducing electrical hook-up time.

KHF Series fan coil units have an electrical enclosure on the side of the unit. The expansive compartment allows for easy access to electrical components, terminal blocks and wiring.

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

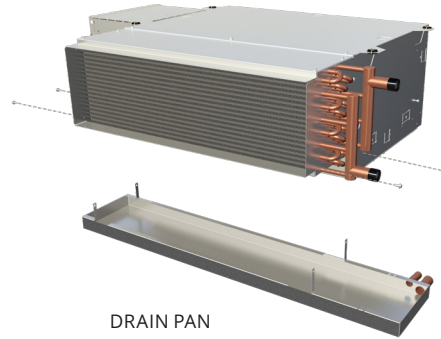
## PRODUCT DESCRIPTION | CONSTRUCTION HIGHLIGHTS

**ELECTRICAL ENCLOSURE:** The bottom access electrical enclosure with additional side access provides access to a spacious electrical compartment. This compartment houses electric heat and control components. Terminal strips are furnished for simple power and control wiring connections. Multiple knockouts allow wiring entries from either side of the compartment.



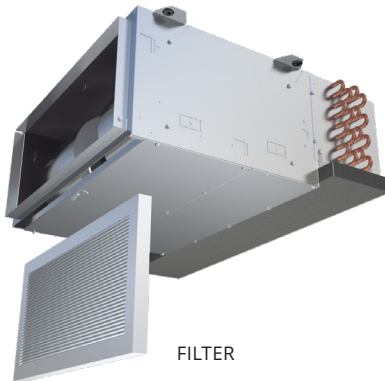
CONTROL ENCLOSURE

**DRAIN PAN:** The KHF Series drain pan is easily removable for cleaning, utilizing a patent-pending tool-free design. Standard drain pans are single wall galvanized steel with an option for stainless steel. Drain pans are available with a secondary drain connection. All drain pans are externally insulated with closed cell foam.



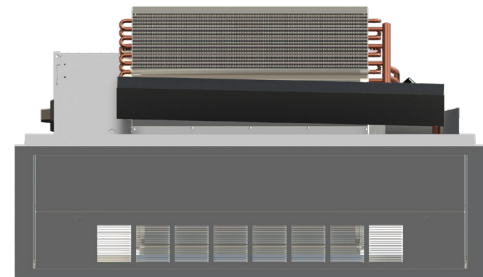
DRAIN PAN

**FILTERS:** 1" throwaway filters are tight fitting to prevent air bypass. Filters are easily removable from the bottom of the unit.



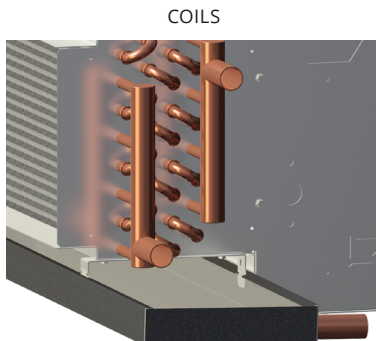
FILTER

**TELESCOPING BOTTOM PANEL:** The telescoping bottom panel allows for fully recessing the unit while permitting service access into the ceiling plenum. The architectural ceiling panel is finished with a durable powder coat paint.



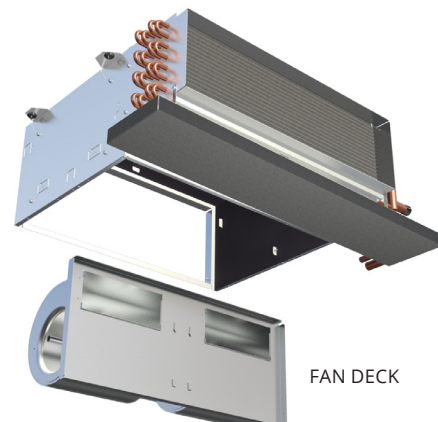
TELESCOPING BOTTOM PANEL

**COILS:** All fan coils are available in 2 or 4-pipe configurations. The heating coil may be placed in the reheat or preheat position. Heating and cooling coils are available with right, left or opposite side connections.



COILS

**FAN DECK:** The fan assembly is easily removed without disconnecting the duct work for service access to motors and blowers at, or away from, the unit.



FAN DECK

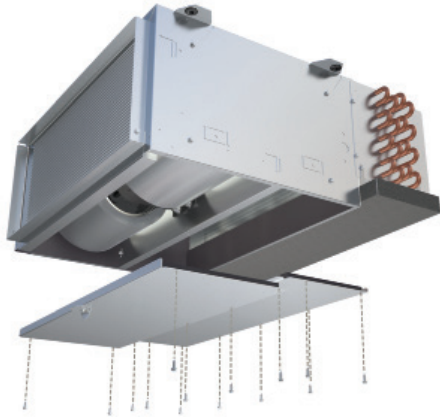
# KHF - SERIES A

Horizontal Fan Coil Units | Low Profile



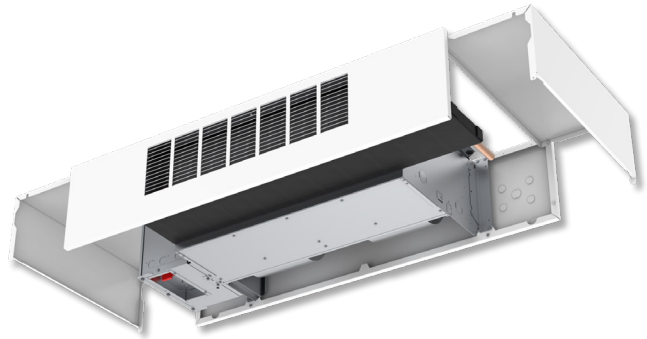
## PRODUCT DESCRIPTION | CONSTRUCTION HIGHLIGHTS (CONTINUED)

**REMOVABLE BOTTOM PANELS:** Bottom panels can be removed easily from underneath the unit to provide quick access to service motors, blowers, and electric heat.



REMOVABLE BOTTOM PANEL

**GULL WING DESIGN:** Both KHFE side panels are hinged and can swing open to provide spacious access to service the valve package and electrical enclosure. For width restricted applications, the side panels can be completely removed while maintaining structural integrity of the unit.



GULL WINGS (OPEN)

## PRODUCT DESCRIPTION | FEATURES

### STANDARD FEATURES

#### Construction

##### All Units

- AHRI 440 certified and labeled
- 3/8" elastomeric closed cell foam insulation
- Galvanized steel construction
- 1 1/2" duct discharge collar
- Four point hanger mounting brackets

##### Plenum Units

- Integral filter rack with 1" throwaway filter
- Integral rear return

##### Exposed Units

- Stamped louver supply and return air grilles
- Durable powder coat paint
- 18 gauge bottom panel construction

#### Coils

- Cooling - 2 to 6-row chilled water or 2 to 5-row DX, heat pump compatible
- Heating - 1 or 2-row hot water or steam - reheat or preheat position
- 6 total rows of cooling and heating coils maximum
- 3/8" coil tube diameter
- 10, 12 or 14 fins per inch
- High efficiency aluminum fin surface for optimizing heat transfer and air pressure drop
- Left or right-hand, same or opposite side connections on 4-pipe systems
- Access to entering and leaving air sides for cleaning
- Removable for service
- Manual air vents

#### Drain Pans

- Single wall, galvanized steel, externally insulated fire retardant and antimicrobial
- Double sloped to drain connection
- Tool-free removal
- 7/8" primary drain connection

#### Fan Assemblies

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

#### Electrical

- cETLus listed for safety compliance
- Electrical junction box for field wiring terminations

#### Electric Heat

- cETLus 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

## PRODUCT DESCRIPTION | FEATURES (CONTINUED)

### OPTIONAL FEATURES

#### Construction

##### All Units

- Rubber isolated hanger brackets

##### Plenum Units

- Bottom return
- Rear ducted return
- 1" pleated filters (MERV 8 & 13)
- Spare 1" throwaway filters
- Telescoping bottom access panels

##### Exposed Units

- 1" pleated filters (MERV 8 & 13)
- Double deflection discharge grille
- Ducted supply and/or return

#### Coils

- 1/2" coil tube diameter
- Automatic air vents
- Stainless steel coil casings

#### Drain Pans

- Stainless steel construction with external insulation
- 5/8" secondary drain connection
- Auxiliary drip pans, galvanized or stainless steel

#### Condensate Pump

- Single point power
- Plenum rated
- Maintenance free
- Quiet operation

#### Fan Assemblies

- 277 volt, 1-phase, 3-speed PSC motors
- 115, 208-230 & 277V, 1-phase, 3-speed EC motors
- 115, 208-230 & 277V, 1-phase, high static 3-speed EC motors
- 115, 208-230 & 277V, 1-phase, variable speed EC motors

#### Electrical

- SCR fan speed controller (high speed only)
- Integrated circuit board with fan relays and on board transformer
- Toggle disconnect switch
- Condensate overflow switch (drain pan)
- Main fusing
- Unit and remote mounted 3-speed fan switches
- Freezestat
- Dirty filter switch
- Discharge air temperature sensor

#### Electric Heat

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

#### Piping Packages

- Factory assembled – shipped loose for field installation
- Unit mounted - shipped from factory with structural supports
- 1/2" and 3/4", 2 and 3-way normally closed, 2-position electric motorized valves
- Floating point modulating control valves
- 0-10V proportional control valves
- High pressure close-off actuators (125 PSIG)
- Isolation ball valves with memory stop
- Fixed flow control devices
- Unions and P/T ports
- Y strainer with blowdown

#### Thermostats

- Remote mounted analog, digital display or programmable
- 2 and 4-pipe control sequences
- Automatic and manual changeover
- Integral 3-speed fan switches
- 24V floating point control
- 0-10V proportional control

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## PRODUCT DESCRIPTION | FEATURES DETAIL

FAN COIL UNITS | HORIZONTAL, LOW PROFILE

KHF - SERIES A

Permanently lubricated, 3-tap, PSC fan motors designed for quiet and efficient operation

Optional ECM with standard and high static options

Single point power connection on all units including electric heat

Integral filter rack with 1" filter and integral rear (shown) or bottom return on all plenum units

1-1/2" duct collar allows quick field connection of duct work

Galvanized steel casing

3/8" elastomeric closed cell foam liner

cETLus and AHRI 440 listed and labeled

Drain pans can be easily removed for cleaning without the use of tools

Single wall galvanized or optional stainless steel drain pans are double sloped to drain connections

Optional secondary drain connection for added security (not shown)

Maximum 6 total rows of cooling

Bottom access to both entering and leaving sides of all coils for cleaning

Valve packages parallel to air flow for a more compact unit

Optional factory mounted valve packages

Optional factory mounted condensate pumps with single point power

