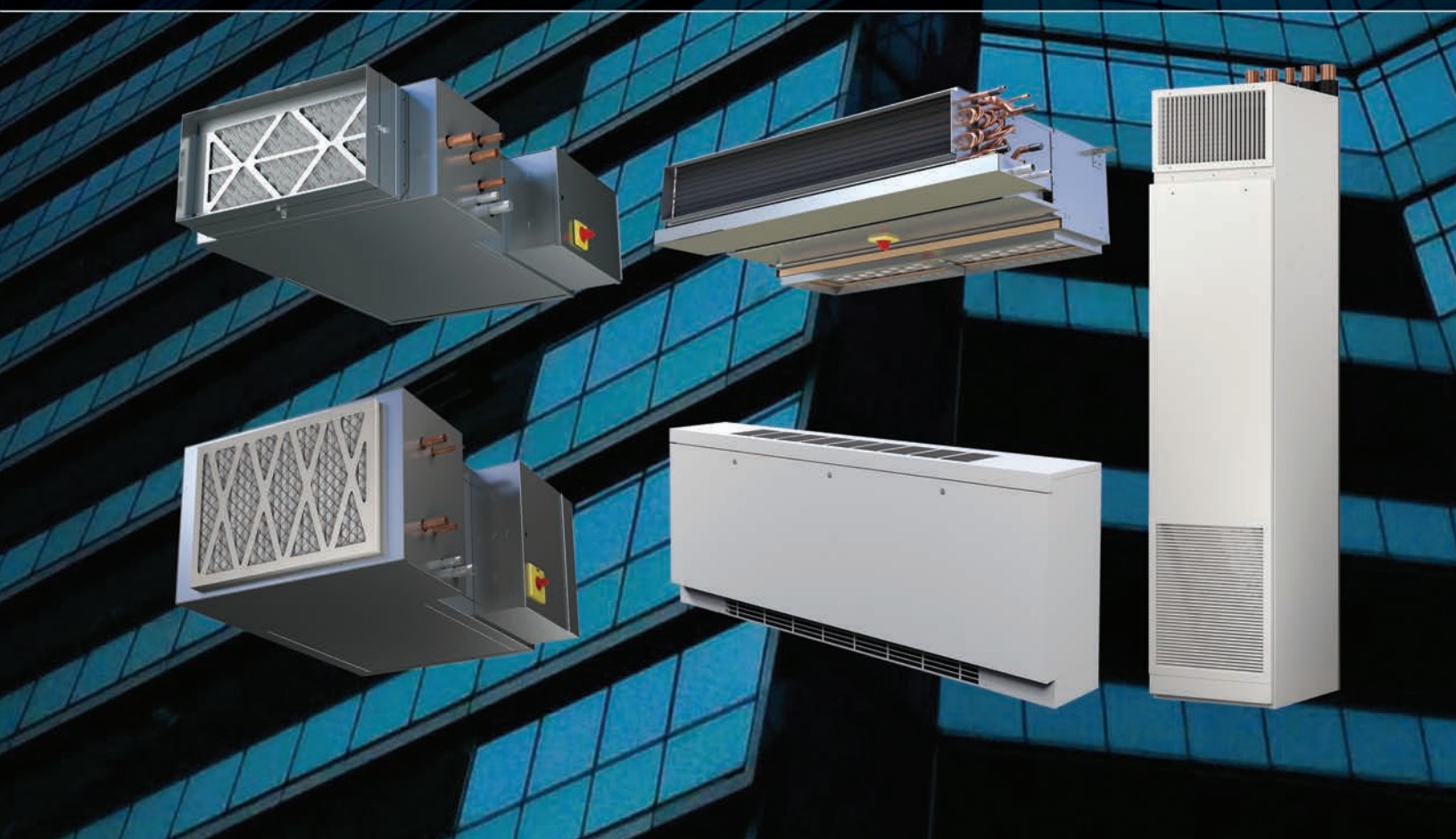
Engineered Comfort

FAN COIL UNITS
PRODUCT OVERVIEW



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WFCPL (5.26)

VERTICAL FAN COIL UNITS

39VH SERIES • VERTICAL HI-RISE UNITS

Designed as a modular unit with integral risers to allow units to be "stacked" one on top of the other in a vertical column rising floor to floor up the building. This allows the use of one set of common risers, significantly reducing the installed cost compared to other fan coil systems.

Product Highlights

- Primary applications include hotels, condominiums and apartment buildings.
- 300 – 2100 cfm (142 – 991 l/s). The largest range in the industry.
- Standard 88" (2235) high unit design.
- Available in any of the following configurations: Concealed, Exposed, Master/Slave and A/B paired. See following sections for more information on these configurations.
- High efficiency EPIC ECM and 3-speed ECM motors available in nine unit sizes. i.e. nine motor/blower combinations in four footprint sizes.
- Industry leading Variable Air Volume (VAV) EPIC Fan Technology® available with ECM motor for performance leading energy savings, quietness and comfort. Available on unit sizes 6, 10, 15 & 19.
- Up to five rows of cooling/heating coils are available.
- Risers (where provided) are factory installed as standard but may be optionally shipped loose upfront to facilitate field installation.
- UV light option.
- Easy access front panel & front supply grille for quick servicing.
- Water-repellent fiberglass insulation standard.
- Slim Profile Vertical Stack Units available, ideal for retrofit applications with a 16" x 16" (406 x 406) foot print (contact factory for unit specifications).
- Insulated drain pan.

Model 39VHZW Type C Cutaway

Model 39VHZ Type C with OAI (Outside Air Inlet)

Model 39VHZ Type C with optional Woodgrain finish

TYPE C CONCEALED UNIT (STAND ALONE)

Designed for stand-alone concealed applications in corners or along room walls. Drywall may be directly attached or the unit framed in. After completion of the finished room walls, only the supply grille and return panel are visible.

Product Highlights

- Stand-alone concealed applications.
- In room corner or along walls.
- Units are furred-in with drywall. Only supply grille and return panel are visible.

TYPE E EXPOSED UNIT

Designed for exposed stand-alone applications on both new and renovation projects where concealed installation is not possible or practical. Units feature an integral riser chase as standard and a full height flush mount removable face panel with supply and return grilles. An optional ceiling shroud extension is available to take the unit casing the full height of the room. The entire unit features an attractive baked enamel paint finish.

Product Highlights

- Entire unit is exposed in room.
- Cabinet is painted.
- Riser chase hides risers.
- Ceiling shroud extension available.

Model 39VHZ Type E

Models 39VHZW Type M/S Master/Slave "Side by Side" Unit

TYPE M/S MASTER/SLAVE UNIT

Designed for those applications where building design prohibits the use of a Paired unit. The units are a pair but the slave is installed remote from the master. Units still share a common set of risers (supplied on the Type M Master unit when provided) but each unit is shipped separately for a field piping connection.

Product Highlights

- Concealed application.
- Each unit shipped and installed separately (remote).
- Share a common set of risers for field connection.

TYPE A/B PAIRED UNIT

Designed for installation in the separation wall between two rooms. This unit is a conjoined pair of FCUs, available in a "piggyback" or "side-by-side" arrangement. They share a single set of common risers (attached to the A unit) but each has its own set of water valves and controls for independent operations. Paired units are shipped completely assembled direct from the factory for additional cost savings and are available with a UL Classified one-hour fire-rated option.

Product Highlights

- Concealed application.
- Factory assembled.
- Riser chase hides risers.

Models 39VHZW Type A/B Paired "Piggy Back" Unit

39L SERIES • LOW PROFILE VERTICAL HI-RISE UNITS

All the same design, unit sizes, features and options as the standard 39VH series model, but in a reduced height casing for easier installation where floor to floor height is restricted.

Product Highlights

- Low profile 80" (2032) high unit design.
- Available in Type C Concealed, Type A/B Paired and Type M/S Master Slave arrangements.

Model 39LZ Type C with OAI (Outside Air Inlet)

Model 39MUZ

39MU SERIES • LOW BOY VERTICAL HIDEAWAY UNIT

Designed for platform or floor mounting in vertical ducted applications. These units are best suited for closets, utility rooms and other concealed locations.

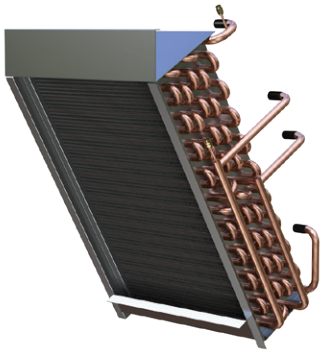
Product Highlights

- 300 – 2100 cfm (142 – 991 l/s).
- Compact footprint with quick installation and easy maintenance
- Bottom Return air entry (standard).
- Flexible hoses allow for quick hook-up of water lines.
- Water-repellent insulation standard.
- 3-Speed ECM or ECM with EPIC Fan Technology® (available on size 6, 10, 15 &19).

39 SERIES • WATER COILS

Engineered Comfort's Fan Coil Units are available with factory-installed water coils with 2-pipe or 4-pipe configurations available. The Coils are custom designed specifically for Fan Coil Units. The number of circuits and header/connection sizes have been selected to optimize performance.

- 5 Row Total in Combination.
  - Cooling – 3 or 4 row chilled water.
  - Heating – 1 or 2 row hot water (reheat position).
- Tubes are ½" (12) O.D. copper.
- Fins are rippled aluminum, 12" – 14".
- Connections: 5/8" (16) or 7/8" (22) O. D. male solder, dependent on size and number of rows.
- Coils are pressure tested to 350 psi (2412 kPa).
- AHRI 410 Certified.



VERTICAL FAN COIL UNITS

41V & 42V SERIES VERTICAL FLOOR FAN COIL UNITS

The 41V & 42V Series are Vertical Fan Coil Units featuring a blow-through design for under-window applications. The vertical up-flow design is ideal for heating and cooling requirements in motels, hotels, office buildings, hospitals, and college dorm rooms.

Features:

- Proportional or 3-Speed ECM.
- Two- or Four- pipe Hydronic connections.
- Electric Heat option.
- MERV 8 pleated filter option.
- AHRI 440 certified and labeled.
- Insulated galvanized auxiliary drain pan.

Concealed Model: 41VC

- Ideal for perimeter heating and cooling applications in hotels, offices, hospitals and other public buildings.
- 6 sizes, 300 –1200 cfm (142 – 566 l/s).
- Top supply air with 1" (25) duct collar.
- Hinged control box opposite of cooling coil connection.

Model 41VC – *Concealed Unit*

Exposed Models: 41VS and 41VX

- Galvanized steel cabinet with an attractive and durable powder coat paint finish.
- One-piece front panel assembly provides easy access to internal components (optional ¼ turn fasteners).
- Supply air is delivered through a stamped face louvered grille (41VX only); double deflection and linear bar grilles (Standard on 41VS) are optional.
- Open toe space with 1” filter (stamped toe kick grille optional)
- Wood grain finishes.

Model 41VS – *Vertical Exposed Sloped Top Cabinet with Woodgrain (Rustic Cherry) finish*

Model 41VX – *Vertical Exposed Flat Top Cabinet*

42V SERIES LOW PROFILE VERTICAL FLOOR MOUNT UNITS

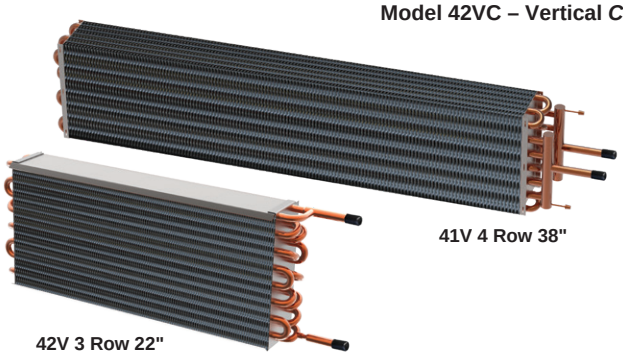
The 42V Low Profile Vertical Floor Mount Series fan coil unit is designed for exposed or concealed under-window applications. The low-profile design of the unit does not interfere with vision through the window, obstruct light or detract from the aesthetics of the room.

Features:

- Airflow ranges from 200 – 600 cfm (94 – 283 l/s).
- 20 ga. (1.00) galvanized steel casing.
- Return Air open toe space.
- AHRI 440 certified and labeled.
- Insulated galvanized auxiliary drain pan.
- Proportional or 3-Speed ECM.
- Two- and Four- Pipe Hydronic connection options.

Model 42VX – Vertical *Exposed Flat Top Cabinet (AW white finish)*

Model 42VC – Vertical *Concealed*



41V 4 Row 38"

42V 3 Row 22"

41V & 42V SERIES • WATER COILS

Coils are custom designed specifically for 41V Series. The number of circuits and header/connection size have been selected to optimize performance.

- 1/2" (12.7) copper tubes with aluminum ripple fins.
- Cooling coils include a foam insulated, galvanized steel sloped main and aux. drain pan with 7/8" (22.2) O.D. drain connection.
- Right Hand unit/ coil connection as shown (standard). Left hand is opposite.
- Coils are pressure tested to 350 psi (2413 kPa).
- Sweat Connections: All 5/8" (15.9) O.D. male solder.
- Manual air vents.

HORIZONTAL FAN COIL UNITS

Draw-Through Design Benefits

- Provides better velocity profile through coil
- Supply air contacts more of the coil face than a blow-through design
- Better heat transfer
- Less air pressure drop
- Lower sound levels

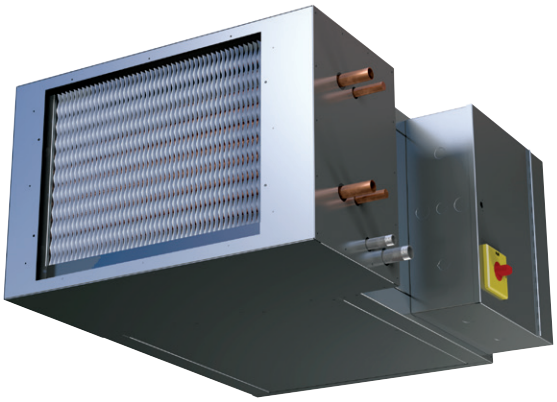
Effective Benefits

- Less air pressure drop allows for higher static and use of MERV 13 filters for LEED credits
- Less pressure drop and better heat transfer lead to better system energy efficiency
- EPIC ECM has wider airflow range with fewer casing sizes

35FH SERIES • HIGH CAPACITY HIDEAWAY HORIZONTAL UNITS

A fully commercial quality unit designed for concealed ceiling applications [17" – 23" (432 – 584) high unit].

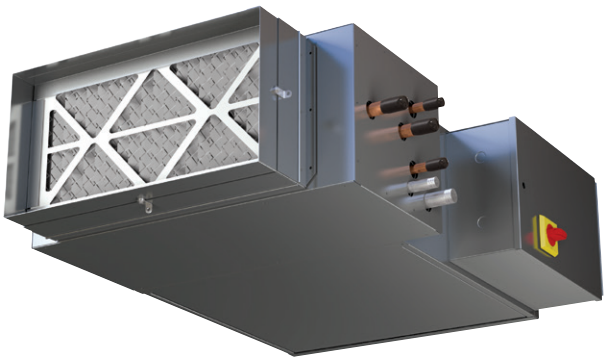
- Draw through maximizes capacity as air contacts more of the coil face area.
- Fully insulated coil casing reduces heat losses.
- Insulated casing reduces radiated sound.
- Airflow range 400 – 4000 cfm (189 – 1888 l/s) (1 – 10 tons cooling)
- 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30 & 40 where size equals approximate max airflow.
- External Static Pressure up to 1.3" w.g. (323 Pa).
- EPIC ECM and 3-speed ECM Motors available.
- Industry leading Variable Air Volume EPIC Fan Technology® available.
- Up to eight rows of cooling/heating coils available.
- Full panel bottom and side access to all components.
- 120, 208, 240, and 277 volts on all motors.
- DOAS flexibility with Outdoor Air Inlet (OAI) option.
- Electric heat option.
- UV light option.



35FHZW

37FH SERIES • LOW PROFILE HIDEAWAY HORIZONTAL UNITS

A fully commercial quality unit designed for concealed ceiling applications where a lower profile is required [11" (279) high unit].

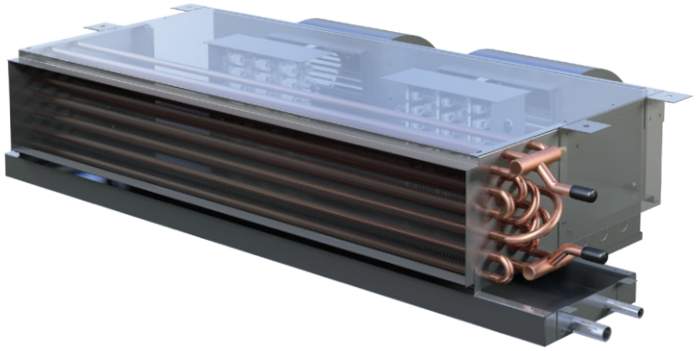


37FHW

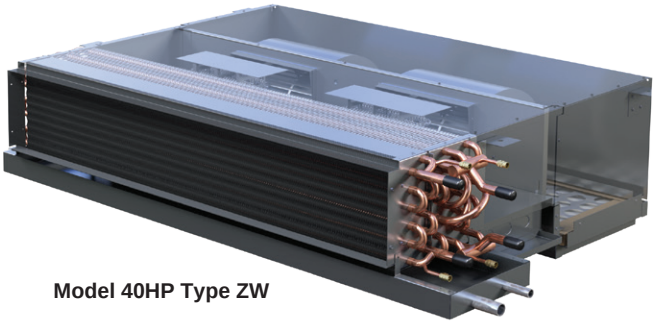
- 100 – 1350 cfm (47 – 637 l/s) capacity in three unit sizes.
- Only 11" (279) in height for tight ceiling applications.
- Ultra-high efficiency EPIC ECM motor standard.
- Industry leading Variable Air Volume EPIC Fan Technology® available for performance leading energy savings, quietness and comfort.
- Fully isolated direct drive blower/motor assembly, with draw-through design.
- Insulated inlet casing reduces radiated sound.
- Easy full panel access to all components.
- Sloped drain pan externally insulated.
- Up to six rows of cooling/heating coils available.
- Various IAQ linings available.
- DOAS flexibility with Outdoor Air Inlet (OAI) option.
- Electric heat option.
- UV light option.

MODEL 40HF • FREE RETURN

- A compact low profile [10" (254) high] design primarily for hotel, condo and apartment applications.
- 200 – 1500 cfm (94 – 708 l/s).
- Compact blow through coil design.
- Hanger brackets.
- Proportional ECM or 3-speed ECM.
- Sloped drain pan with 7/8" (22) primary drain connection, optional 5/8" (16) secondary drain connection.
- Optional removable electric heat.
- Optional bottom mounted control enclosure with hinged door.
- Split coil design with up to six multiple coil row options.
- Air vents and drains accessible on all coils.
- 1" (25) collar allows quick field connection of duct work.



Model 40HF Type ZW



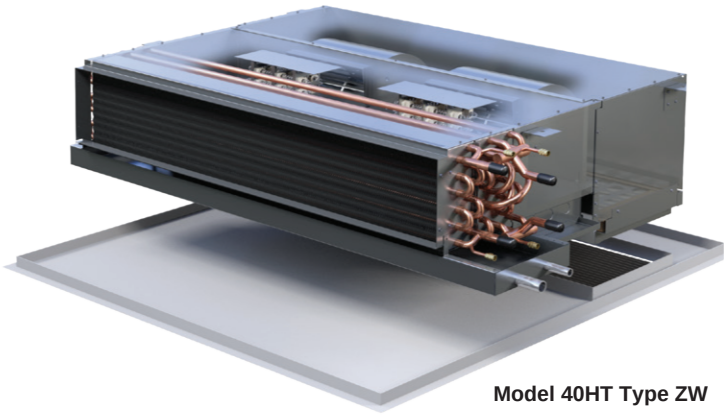
Model 40HP Type ZW

MODEL 40HP • WITH PLENUM

- Plenum section is fully insulated, helps reduce radiated sound.
- Plenum with rear or bottom return option with 1" (25) filter rack.
- Plenum can be field adjusted from rear to bottom return or vice versa.
- 6" (152) outside air inlets available on top, side, or rear of plenum.

MODEL 40HT • TELESCOPING RETURN

- 2" (51) of adjustment in telescopic assembly.
- Ensures return air from the space is conditioned and avoids drawing plenum air into the fan coil unit.
- Ceiling panel is hinged giving access to the entire unit.
- Adjustable telescoping assembly mates with the return air grille.



Model 40HT Type ZW

Model 40HX Type ZW

MODEL 40HX • EXPOSED CABINET

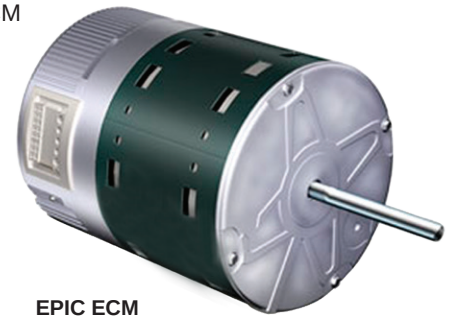
- Galvanized steel cabinet with powder coat paint finish; 12" (305) height.
- Single Blade Return Air Grille with 1" (25) filter.
- Bottom panel is hinged and removable for access to all components.
- Single or double deflection supply grille.
- 3/8" (10) diameter hanger rod holes.
- Knockouts provided for drain and electrical connections.

OPTIONS & ACCESSORIES

MOTORS

Depending on the Unit series, most models are available with the following motor types:

- EPIC ECM
- Proportional ECM
- 3-speed ECM



EPIC ECM

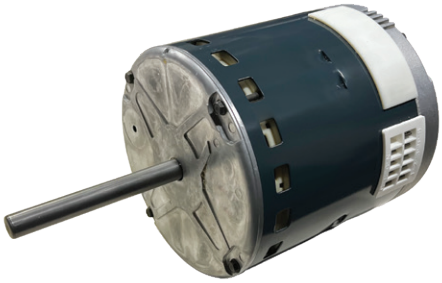
EPIC ECM:

- Variable Air Volume (airflow/variable torque in response to load).
- Pressure independent operation.
- Factory set airflow.
- Ball bearings for improved lubrication and quieter operation
- Ultra high efficiency and energy saving operation.
- Reduced operating temperature, decreases energy to offset motor heat gain.
- When paired with Engineered Comfort valve package and digital control options such as EZstat, offers functionality and flexibility not available with other commercial fan coil manufacturers.

Proportional (Prop) ECM:

- 0 – 10 VDC.
- Pressure dependent operation; constant torque.

Proportional or 3 Speed ECM - 1 or 2 Driveshaft(s) for 40 Series



3 Speed ECM for 39 Series

3-speed ECM:

- 3 distinct speeds, typically H-M-L.
- Factory set airflow.

OUTSIDE AIR INLET (OAI) DAMPER WITH DIAMOND FLOW SENSOR (DOAS CAPABILITY)

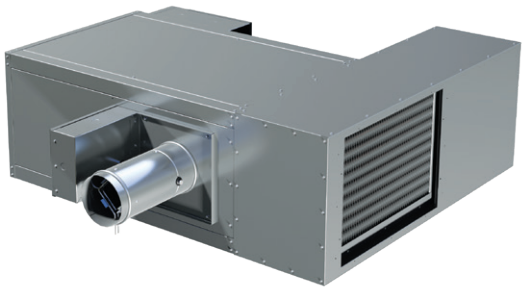
for 35FH and 37FH Series

(Refer to technical catalog for model availability)

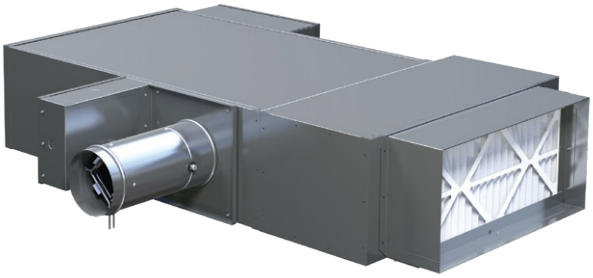
The following types of damper options are available:

1. Motorized damper with 2-position open/closed actuator 4" – 12" (102 – 305) dia. nominal.
2. Manual balancing damper 4" – 12" (102 – 305) dia. nominal.
3. Pressure independent damper with flow sensor and modulating actuator 4" – 12" (102 – 305) dia. nominal.

Notes:
Outside air location may be on the right or left side of the unit (opposite from any side riser on vertical units). Dampers are undersized 1/8" (3) for ducted connection to nominal duct.



35FHZW with Optional Outside Air Inlet (OAI), Optional Controls/ Actuator & Valve Enclosure



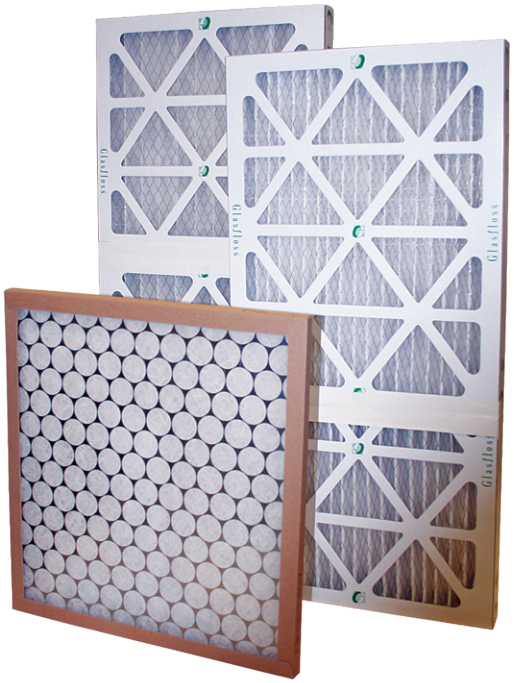
37FHZW with EPIC ECM Motor, Optional Outside Air Inlet (OAI), Optional Controls/Actuator Enclosure and Optional Ducted Filter Rack Connection

FILTERS

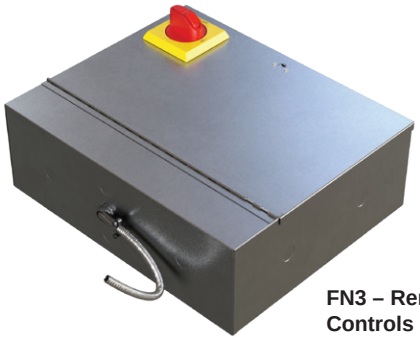
Ducted Filter Rack Option for 35FH and 37FH Series

- The FFR Ducted Return Filter Connection is an optional accessory used for ducted inlet applications where easy accessibility to the filter is required.
- The hinged door flap with latch on the side and bottom of the unit accessory allows for easy removal and replacement of the filter.
- The filter rack accommodates a 1" (25) or 2" (51) optional filter. Factory mounted on the induced air inlet of the draw through water coil section and comes with a duct collar.

FFR – Ducted Return Filter Connection



Front: 1" (25) Throwaway, Mid.: 2" (51) MERV 13, Back: 2" (51) MERV 8



FN3 – Remote Line Voltage Controls Enclosure

FN3 REMOTE LINE VOLTAGE CONTROLS ENCLOSURE

Option for 35FH and 37FH Series

Electric heat coils are available factory mounted on the unit discharge. Nailor Electric Coils are tested with the fan terminal in accordance with CSA 236/UL 1995 and meet all the requirements of the NEC. Units and heaters are listed and labeled by the ETL testing Laboratory as an integrated package. A NEMA 1 enclosure with hinges is placed at the side of the fan coil to provide easy access. All motor and heater wiring terminates in the enclosure for single point electrical connection.

MIXING BOX FOR HIGH PERFORMANCE FAN COIL UNITS

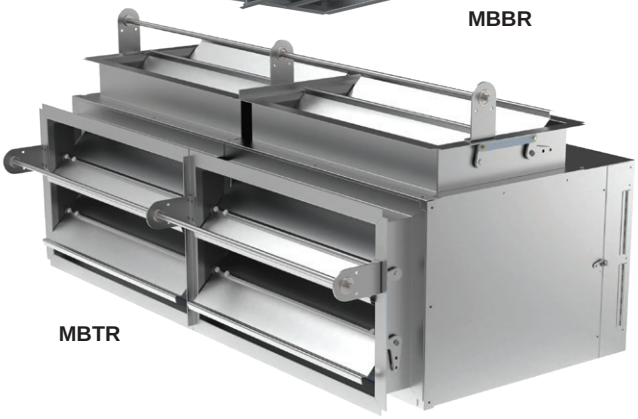
for 35FH Series

The fully insulated mixing box with filter rack and heavy duty dampers provides a mixing capability for control of return air and outside air for economizer operation.

Models: **MBBR** Bottom and Rear Return Dampers.
MBTR Top and Rear Return Dampers.

- 18 ga. (1.3) galvanized steel casing.
- 3/4" (19) dual density insulation, exposed edges coated to prevent air erosion. Meets the requirements of NFPA 90A and UL 181.
- Low leakage parallel blade and jamb control dampers with seals.
- Filter rack to accommodate a 1" (25) standard or 2" (51)
- A piano-hinged door flap with latch on the side and bottom of the mixing box allows for easy removal and replacement of filter.
- 1 5/8" (41) flange on dampers for a flanged duct connection.
- 1/2" (13) dia. driveshaft.
- Crank-arms, swivels and linkage rod provided for damper inter-connection.
- Actuator and controls by others.
- Assembly ships loose.

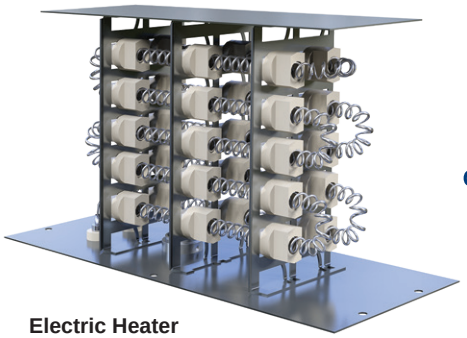
MBBR



MBTR

ELECTRIC HEAT

Electric heat coils are available factory mounted on the unit discharge. Nailor Electric Coils are tested with the fan terminal in accordance with CSA 236/UL 1995 and meet all the requirements of the NEC. Units and heaters are listed and labeled by the ETL testing Laboratory as an integrated package. A NEMA 1 enclosure with hinges is placed at the side of the fan coil to provide easy access. All motor and heater wiring terminates in the enclosure for single point electrical connection.



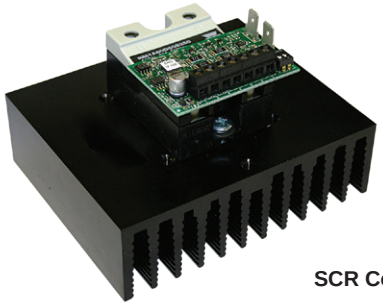
Electric Heater

Standard Features

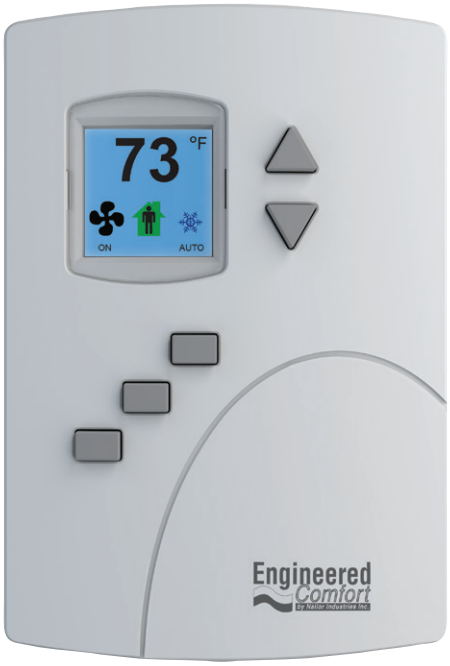
- Automatic reset high limit thermal cut-outs.
- Magnetic contactors per stage w/DDC or Analog electronic controls.
- Control voltage transformer (Class 2) for DDC & Analog controls.

Options

- Toggle Disconnect.
- Door Interlocking disconnect switch.
- Quiet contactors.
- Power circuit fusing.
- Dust tight control enclosure.
- High grade Class A 80/20 nickel/chrome elements.
- Manual reset secondary high limit.
- Airflow Safety Switch, electronic interlock (on EPIC ECM only) or mechanical.
- Positive pressure air flow switch.
- 1 or 2 Stage Electric Heat (model dependent).
- SCR Control for quieter and variable wattage. The SCR (Silicon Controlled Rectifier) option provides infinite heater control using a proportional control. In addition to superior comfort and energy savings, contactor noise is eliminated and life of the electric heater element is extended. This option is normally specified with all analog electronic, or DDC controls. SSR with 4 – 20 ma 0 – 10 Vdc control.



SCR Control



EZstat

EZstat DIRECT DIGITAL CONTROLS

Model Series 35FH, 37FH, 39, 40, 41V and 42V are now available with Engineered Comfort's newest digital control offering, the EZstat.

EZstat replaces the traditional two piece Net Sensor and separate BAC-7303C controller with a single all-in-one thermostat, and offers a unique, cost-effective combination of networking, application, and sensor options along with easy, intuitive installation, configuration, and operation. The EZstat can operate as a standalone device and/or communicate with other BACnet network and remote monitoring devices. In addition, the device contains many improvements ranging from enhanced performance, cost savings and parts consolidation.

Available Sequences (with EPIC ECM)

- N501: Modulating Cooling/Modulating Heating with Automatic Changeover.
- N502: Modulating Cooling/Modulating Heating with Auxiliary Staged Electric Heat.
- N503: Modulating Cooling with Staged Electric Heat.
- N505: Modulating Cooling/Modulating Heating.
- N506: Modulating Cooling with Proportional Electric Heat.
- N507: Modulating Cooling with On/Off Heat.
- N508: Proportional Electric Heat or Modulating Heating*.
- N509: Staged Electric Heat or On/Off Hot Water Heat*.
- N510: Modulating Cooling.

Additional control sequences are available with the 3-speed ECM motor.

* Note: Sequence driven by fan coil selection.

ELECTRONIC CONTROLS

When your fan coil project demands a control solution centered around simplicity and value, Engineered Comfort delivers. All of Engineered Comfort's fan coils are available with industry popular controls ranging from simple on/off functionality to 7 day programmable scheduling.

Product Highlights

- Manual or automatic changeover.
- Low voltage to line voltage options (consult individual T-stat specification for availability).
- 3 discrete speed settings (select units only).
- Available fan ramping (select units only).
- LCD display with programmable setpoints (select units only).
- Fully programmable 7 day schedule with Holiday Override (select units only).

Honeywell Multi-Pro Thermostat

Engineered Comfort Programmable Thermostat

DIGITAL DISPLAY THERMOSTATS FOR 3-SPEED FAN COIL UNITS

Product Highlights

The Engineered Comfort T1070 Series Thermostat represent great value for a wide variety of two and four pipe hydronic fan coil applications. These thermostat controllers are available in both programmable and non-programmable models and are designed for standalone use in commercial buildings such as hotels and schools as well as residential condominium and apartment projects.

Models

T1070	Non-programmable 2 or 4-pipe Normally Closed Chilled and Hot water valves
T1075	Programmable 2 or 4-pipe Normally Closed Chilled and Hot water valves
T1075N	Programmable 4-pipe Cold Climate Normally Closed Chilled water and Normally Open Hot water valves

Features

- 7-day programmable models with self-prompting programming.
- Auto 2-pipe changeover with thermistor sensor.
- 24 Vac low voltage.
- Electric heat ready (1-stage).
- 3-speed fan control (ECM).
- 2 position spring return on-off water valve control.
- Dry contact equipped for remote on-off occupied/unoccupied control.
- Keypad lockout option.
- Large easy to read permanently illuminated digital display (°F or °C).
- Dual set point with adjustable deadband.
- Red / Green LED shows heating / cooling mode.
- All programming and set points stored in non-volatile memory and are never lost in power failure
- Clock chip back up allows time to stay current for up to 48 hours during power loss for programmable models.
- Configurable display can show both heating and cooling set points and room temperature simultaneously.
- Includes exact fit locking cover.
- Optional wall plate for 2" x 4" (51 x 102) or 4" x 4" (102 x 102) electrical box installation.

VALVE PACKAGES

Engineered Comfort Vertical Hi-Rise Fan Coil Units are supplied as standard with a factory-installed valve and piping package for the primary cooling coil, with an optional package available for the heating coil. This factory integration ensures component compatibility with the specific application and accommodates the physical constraints of the cabinet, resulting in simplified installation, maintenance, and serviceability.

Engineered Comfort Horizontal Fan Coil Units are available with standard valve packages offered either factory-installed (with a protective enclosure) or as a "ship-loose" option for field installation and connection.

Valve packages may include a variety of components, with selection dependent upon system requirements and application parameters. The following section provides a general overview of the individual components commonly included in these packages.

NOTE: Images shown are for general reference only. Component vendors and model selections are subject to change without prior notice.

2-WAY, 2-POSITION CONTROL VALVE/ACTUATOR

All valves are piped on the return side of the coil. The valve spring provides the necessary force to hold the stem in the raised or Normally Open (NO) position.

In the open position, water can flow through the coil to heat or cool the space. In the closed position, water cannot flow. Actuators are 2-position spring return operation. The Normally Open (NO) or Normally Closed (NC) valve position (relative to water flow through the coil) on power failure is determined by the actuator model selection. NO/NC action must be compatible with the thermostat/ control package selection.

2-Way, 2 Position Valve/Actuator

3-WAY, 2-POSITION CONTROL VALVE/ACTUATOR

3-Way valves are piped on the return side of the coil as mixing valves. In the open position, water can flow through the coil to heat or cool the space and the bypass port is closed. (Flow is A to AB). In the closed position, water cannot flow through the water coil and is diverted to flow through the bypass line (Flow is B to AB) maintaining full flow through the bypass port. Actuators are 2-position spring return operation. The NO/NC valve position on power failure (relative to water flow through the coil) is determined by the actuator model selection and must be compatible with the thermostat/ control package selection.

Actuators are available for line and 24 Vac low voltage applications.

- Nominal size: 1/2" (13) , 3/4" (19) or 1" (25).
- Body material: Brass.
- Pressure rating: 125 psi maximum.
- Temperature rating: 230ºF maximum.
- Maximum close off pressure: 44 psi.
- Cv: 2.5 (1/2"), 4.1 (3/4"), 7.0 (1").
- Actuator power consumption: 10 VA maximum.

3-Way, 2 Position Valve/Actuator

Modulating Valve/Actuator

2-WAY & 3-WAY MODULATING CONTROL VALVE/ ACTUATOR

Valve operation is similar to 2-Way and 3-Way descriptions in Sections 4.6.1 and 4.6.2 respectively.

Actuators use a 0 – 10 Vdc control signal, are fail-in-place design (non-spring return) and provide proportional control from minimum to maximum water flow through the coil in response to room demand from a compatible controller.

Modulating valves are standard on Nailor analog and digital EPIC control package chilled water valves.

Actuator are 3-wire 24 Vac only (2.5 VA).

REPRESENTATIVE VALVE PACKAGE COMPONENTS

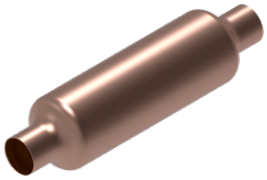
Engineered Comfort offers a variety of valve package components to meet the demands of simple to complex project requirements. Not limited to "standardized" packages or vendors, a solution is often available through the custom design of your job specific project.

Available Factory Components:

- Adjustable circuit setter w/PT ports (AFS)
- Aquastats - 1/4" Bleed Line (ABL)
- Coil air vents
  - Auto 2-pipe (ZWA)
  - Auto 4-pipe (ZWB)
  - Maunal 2-pipe (ZWC)
  - Manual 4-pipe (ZWD)
- Bypass balancing valve (BPV)
- Ball valves (BV)
- Ball valves with P/T ports (BVPT)
- Fixed flow control (FC)
- Fixed cartridge flow control (FCC)
- Flex hoses
  - 1/2" vlve w/ flex hose (CV75/HV50)
  - 3/4" valve w/ flex hose (CV75/HV75)
- Flow control valve
  - Automatic Flow Valve - Hays (HFV)
  - Manual Flow Control Valve (MFV)
- P/T ports (PTO)
- Union (UN)
- Y-Strainer (YS)
- Y-Strainer with hose bib valve (YSB)

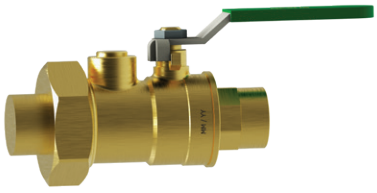
Adjustable circuit setter w/P/T ports

- 1/2" or 3/4" SWT
- Pressure rating: 300 psig max.
- Temp. rating: 200°F max.
- Body & Ball materials: Brass



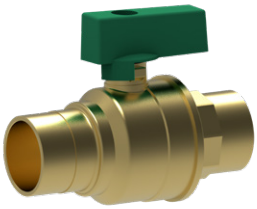
Automatic Balancing Valve

- 1/2" or 3/4" SWT
- 0.5 - 15 GPM
- Adjustable, auto or cartridge
- Blowout-proof shaft
- Double shaft seals
- Valve body suitable for 522 PSIG



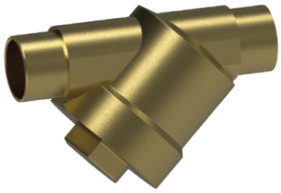
Ball valve and union end

- 1/2" or 3/4" SWT
- Hot forced brass
- 600 WOG, 325°F
- Selection of union ends
- Blowout-proof shafts
- Double shaft seals
- Accuracy ±3%



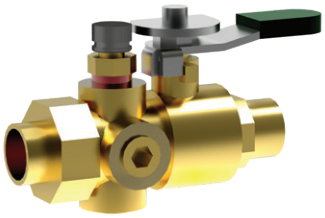
Bypass balancing valve (Nexus NXU)

- 1/2" or 3/4" SWT
- 600 WOG, 325ºF
- Interchangeable union end
- Blowout-proof shaft
- Double shaft seals
- Accuracy ±3%



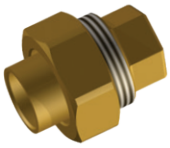
Fixed Cartridge Flow Control

- 1/2" or 3/4" SWT
- 0.5 - 9 GPM
- Y-Body Automatic balancing valve
- FSWT Outlet/Inlet connections
- Changeable GPM flow cartridge
- Valve body suitable for 600 psig
- Accuracy ±3%



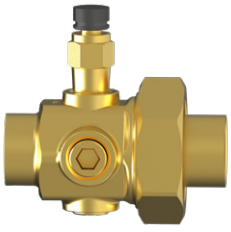
Manual Ball Valve w/ P/T Ports

- 1/2" or 3/4" SWT
- 600 WOG, 325ºF
- Interchangeable union end
- Blowout-proof shaft
- Double shaft seals
- Accuracy ±3%



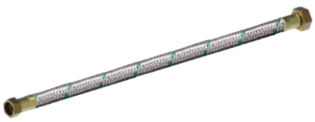
Union

- 1/2" or 3/4" SWT
- 600 WOG, 325°F
- Interchangeable union end



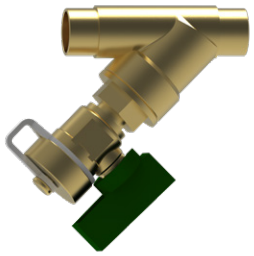
Union with PT port

- 1/2" or 3/4" SWT
- 600 WOG, 325°F
- Forged Brass ASTM B283
- 100% factory tested
- Flowrite valves can be repacked using replacement cartridges without removing the valves from piping
- Certified by UL to UL 873 and cUL certified to CSA C22.2 No. 24-93
- Accuracy ±3%



Flexible Hose

- 1/2" or 3/4" SWT
- 400 PSI, 5° to 248°F (½" thru 1")
- Female NPSH swivel end
- Male NPT Fixed end
- Gasket seal
- Fire rated



Y-Strainer with Hose Bib Valve

- 1/2" or 3/4" SWT
- Body: Hot forged brass ASTM B283 600 WOG, 325ºF
- Cap seal: Viton (green)
- Filter screen: 20 MESH, 304 stainless steel
- Strainer cap: Forged brass ASTM B283 with 1/4" NPT port
- Accuracy ±3%

Y-Strainer

- 1/2" or 3/4" SWT
- Body: Hot forged brass ASTM B283 600 WOG, 325ºF
- Filter screen: 20 MESH, 304 stainless steel
- Strainer cap: Forged brass ASTM B283 with 1/4" NPT port
- Accuracy ±3%

Please visit engineered-comfort.com for additional product information.

AHRI CERTIFICATION

Engineered Comfort is a participating company in the Air Conditioning and Refrigeration Institute's 440 certification program for Fan Coil Units.

To comply with AHRI Standard 440, manufacturers must rate their products at "standard rating conditions" as specified by the standard. This permits direct comparison between manufacturers. In addition to standard ratings, Engineered Comfort also publishes application ratings. These application ratings are based upon tests conducted in accordance with the standard but at other conditions as well in order to provide the design engineer with a wider range of data from which to make his selection.

Participation in the AHRI program provides assurance that manufacturers' equipment will meet the claimed performance ratings. Compliance with AHRI 400 by participants in the certification program is assured by regular testing of random samples by an independent laboratory.

AHRI CERTIFIED™
www.ahridirectory.org
Room Fan-Coils
AHRI Standard 440

A Participating Corporation in the AHRI 440 Certification program.

SEIMIC CERTIFICATION

A fair amount of construction projects require components to be "Seismic Certified." A Seismic Certification ensures the component will withstand and operate after an event such as an earthquake. In addition to requiring structural components to meet specific seismic regulations, most jurisdictions also require non-structural components – including electrical systems – to be "Seismic Certified."

Seismic requirements are defined by the International Building Code 2018 and the California Building Code (2019). ASCE 7-16 is the base standard for many building codes, and is referenced by both IBC and the CBC.

OSHPD, the Office of State-wide Health Planning and Development, requires actual “shake-testing” of products prior to allowing products to be specified for construction or retrofit projects anywhere in the state of California. This testing must be reviewed by a California state certified structural engineer. Without a widespread nationwide approval process, many other jurisdictions require the OSHPD Special Seismic Certification Preapproval (OSP) for projects.

SSI Listed

Engineered Comfort is a participating company in certifications of:

Seismic Source International (Standard)

HCAI (formerly OSHPD, California)

INDEPENDENT LABORATORY CERTIFICATION

ENERGISTICS LABORATORY
AND JACK STEGALL RESEARCH FACILITY

Although AHRI Certification, as explained above, provides some assurance of product performance, the program only verifies a single "standard rating condition" (certification rating point) for each terminal size. This is for valid logistical reasons. However, the correlation of the AHRI rating points with the comprehensive application data is sometimes difficult to reconcile in some manufacturers catalogs.

In order to provide assurance and complete credibility to the engineering community, Nailor tests its product at Energistics Laboratory; one of the foremost North American HVAC laboratories.

Please visit **energisticslab.com** for more information.

Engineered Comfort

Quality Fan Coil Units

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