



5 Variables to Consider When Choosing a Horizontal Fan Coil

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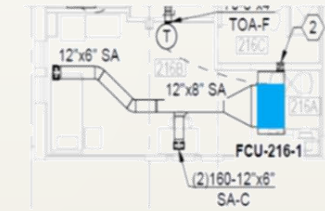
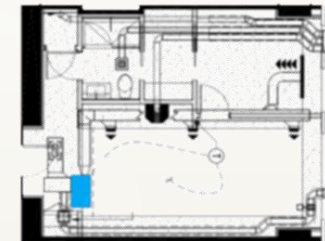
Nailor Industries



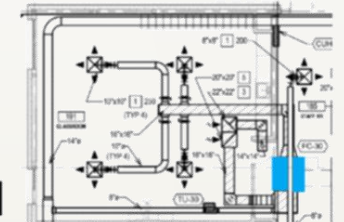
[HTTP://WWW.TECHNICALAIR.COM/NAILOR](http://www.technicalair.com/nailor)

Overview

- Base building blocks of a chilled water fan coil are a fan and a coil
- Options and accessories that supplement the design:
 - Mixing boxes, outside air inlets, hot water/electric heat, silencer/attenuators, filters, etc.
- **Five factors influence which product to choose for a specific application**
 - **Capacity Requirements**
 - **External Static Pressure**
 - **Available Ceiling Space**
 - **Sound Sensitivity**
 - **Outside Air Capabilities**
- Engineered Comfort(a division of Nailor) offers three types of horizontal units:
 - Low profile in-room
 - High-capacity horizontal
 - Low profile high-capacity units
- Selecting one over the other comes down to the five factors listed above



Horizontal Fan Coil Unit Applications



Residential

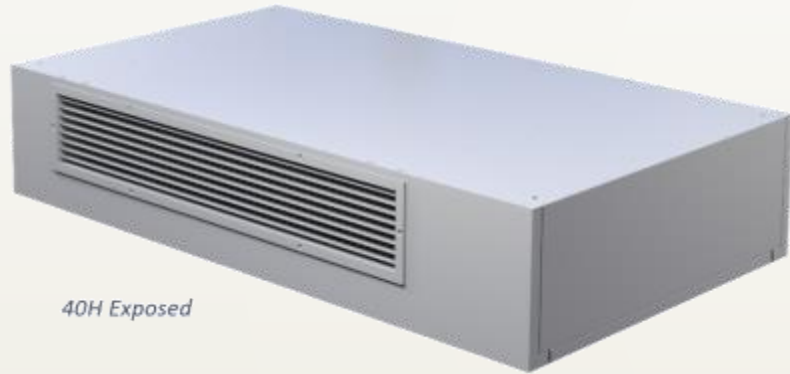


Schools

Hospitality

Office

Low Profile In- Room Horizontal Fan Coils



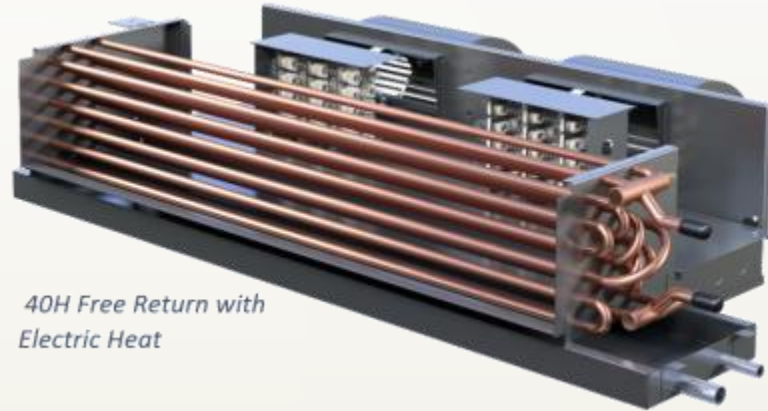
40H Exposed

- Smallest horizontal fan coil offering
- Suited for applications where they supply directly to their intended rooms where there isn't much ceiling space
- Hospitality applications located above the entry corridor of a room.
 - Supplies air directly to the bedroom area
- Four types of these fan coils:
 - Free return
 - Plenum
 - Telescoping
 - Exposed
- Above ceiling units utilize an access panel for easy maintenance
- The unit's small fan(s) cannot handle the static pressure associated with long duct runs or complex air distribution
- The plenum version of these units can accommodate ducted supply/return configurations
 - design cannot exceed the .5" static max pressure

Five Variable Unit Performance : Low Profile In-Room Horizontal Fan Coils



- **Capacity Requirements**
 - 300-1,500 CFM
 - 2/3-3.5 Tons Cooling
 - 9-73 MBH Hot Water Heating
 - 1-10 KW Electric Heating
- **External Static Pressure**
 - Low, up to 0.5" w.g.
 - Motors are pressure dependent
- **Available Ceiling Space**
 - Concealed Units, 10"
 - Exposed Units, 12"
- **Sound Sensitivity**
 - Medium
 - Most are unducted causing them to be slightly louder than other options
- **Outside Air Capabilities**
 - **Low**
 - Limited to 4 rows of cooling coil, limits the fan coils ability to handle the latent loads associated with outside air



40H Free Return with
Electric Heat

High- Capacity Horizontal Fan Coil



35FH High-Capacity Fan Coil

- More options available compared to low-profile in room
- Larger units with higher-powered fans
- Designed to Serve more applications including:
 - Classrooms
 - Office spaces
 - Conference rooms
 - Industrial spaces
 - Gyms, etc.

Five Variable Unit Performance : High- Capacity Horizontal Fan Coil

- **Capacity Requirements**

- 400-4,000 CFM
- 1-10 Tons Cooling
- 20-200 MBH Hot Water Heating
- 1-16 KW Electric Heating

- **External Static Pressure**

- High, up to 0.75" w.g.
 - Pressure independent motors available

- **Available Ceiling Space**

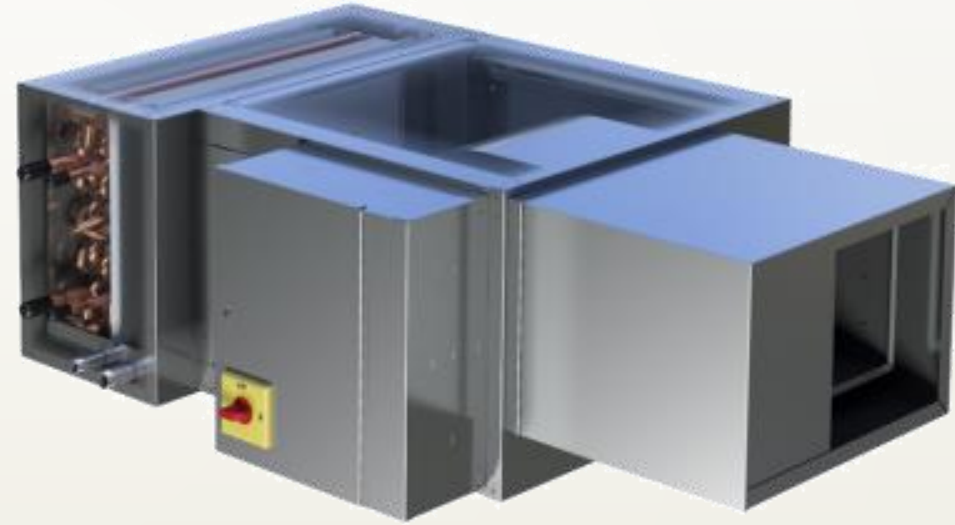
- Sizes 4-24, 17"
- Sizes 30-40, 23"

- **Sound Sensitivity**

- Low
 - Radiated NC 45 and lower

- **Outside Air Capabilities**

- **Medium**
 - Up to 6 rows of cooling
 - Higher latent load capabilities



35FH with Electric Heat

Low Profile High-Capacity Fan Coil



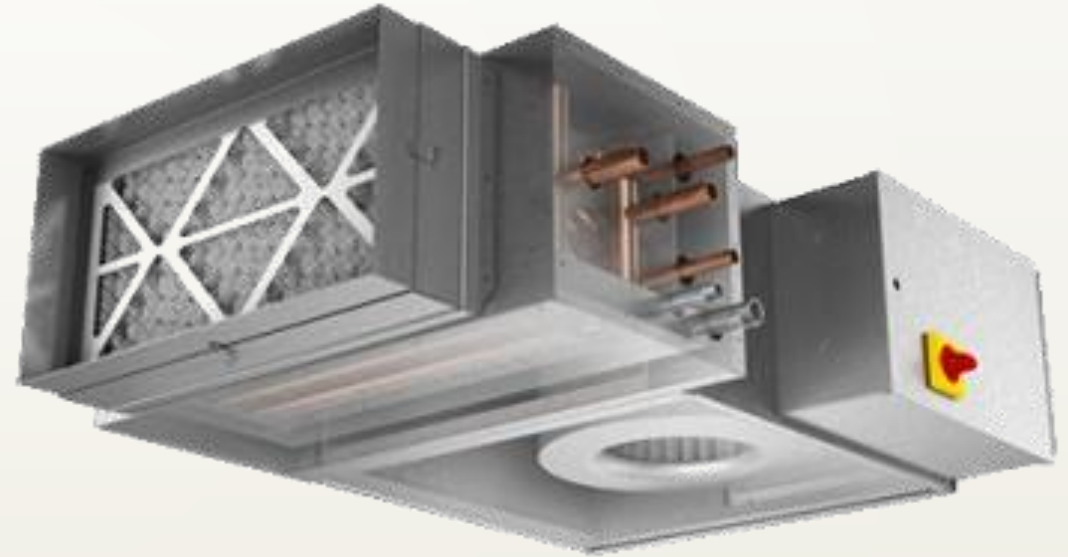
37FH Low Profile High-Capacity Fan Coil Unit

- Special subset of high-capacity horizontal units
- Unique offering by Engineered Comfort
- Provide a mix of each version discussed above
- Ideal for applications with limited ceiling space and higher static pressure or cooling capacity requirements
- Used in high-end hospitality that have a ducted supply to slots along the windows.
- Used in office space where floor to floor height is an issue

Five Variable Unit Performance : Low Profile High- Capacity Horizontal Fan Coil



- **Capacity Requirements**
 - 100-1,400 CFM
 - 2/3-5 Tons Cooling
 - 12-80 MBH Hot Water Heating
 - 1-8 KW Electric Heating
- **External Static Pressure**
 - High, up to 0.75" w.g.
 - Pressure independent motors standard
- **Available Ceiling Space**
 - 11"
- **Sound Sensitivity**
 - Low
 - Radiated NC 45 and lower
- **Outside Air**
 - **Medium**
 - Up to 6 rows of cooling
 - Higher latent load capabilities



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