TVB
FAN COIL UNITS
FLOOR-MOUNTED, VERTICAL

- TVBA
- TVBC
- TVBF
Model TVB:
LOW POWER CONSUMPTION, ACCESSIBLE AND FLEXIBLE

Owners
Owners can choose between a standard height (TVB) vertical floor-mounted fan coil unit. Both are AHRI certified to ensure exact performance. Either unit utilizes a 3-speed, direct-drive motor to optimize cabinet airflow and sound performance. Enhanced sound levels are achieved through an electronic fan-speed controller (SCR) which allows further motor-speed tuning. Vertical floor mounted concealed model fan-coil units are constructed of galvanized steel, surpassing the ASTM 125-hour, salt-spray test for corrosion and rust. Exposed-cabinet models TVBF and TVBA feature durable, powder-coated, galvanized steel that resists fading, scratches and fingerprints.

Concerned about Indoor Air Quality? Sloped drain pans are standard on all vertical floor mounted units, and are easily removed to provide access to the coils for cleaning. Optional stainless-steel drain pans and coil casings are available. Elastomeric closed-cell-foam insulation is used to promote IAQ.

Designers
The vertical floor mounted unit’s impressive list of standard features provides unparalleled design flexibility. With the variable aspect ratio’s the standard cabinet size can be increased in width or height up to 12” (TVBF & TVBA only). The return air space on exposed cabinet models, TVBF & TVBA, is provided with a stamped-louver or grille having same powder coat finish as the cabinet. Outside air can be introduced with manual or motorized dampers, or a wall-box assembly (TVB only).

Available with chilled-water or DX cooling coils, and hotwater, steam or electric heating coils, Vertical floor mounted units produce the ultimate in comfort and flexibility.

Contractors
Vertical floor mounted fan coil units provide maximum performance while reducing installed cost to the contractor. Motor wiring is brought to a junction box on the inside of the unit end pocket, reducing electrical hook-up time. Singlepoint-power connection is standard on all vertical floor mounted fan coil units. Motor connections are shipped with quick connectors for ease of replacement.

For fast-track jobs, the vertical floor mounted Quick Ship unit is available in 5, 10 or 15 days with an impressive list of unit options and controls.

Low Power Consumption
The TVB fan coil has raised the bar by lowering the power consumption required. This industry leading power consumption is accomplished with permanent split capacitor (PSC) motors, but can be supplied with an electronically commutated. See Airflow and Power Data table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Airflow (SCFW)</th>
<th>Cooling Capacity Total TMBH</th>
<th>Power Consumption at High Speed (Watts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVB</td>
<td>02</td>
<td>233</td>
<td>7.3</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>03</td>
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<tr>
<td></td>
<td>04</td>
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<td></td>
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<tr>
<td></td>
<td>12</td>
<td>970</td>
<td>30.3</td>
<td>142</td>
</tr>
</tbody>
</table>

All Cooling performance with 0” ESP, 80 db /67 wb entering air, 45°F, PSC motors

Factory-Mounted Control Packages
A wide variety of control options and unit mounted thermostats are offered on vertical floor mounted fan-coil units. Factory-mounting and wiring of DDC controls by others is also available. Wireless factory supplied control options can be provided to minimize retrofit costs and provide BAS communication to the front end.

Optional thermostats can maximize up to 30% energy savings in high-energy usage light commercial buildings, such as schools and hotels during occupied times by using additional standby set-points.

Factory-Furnished Valve Packages
Valve packages provided by the factory ensure proper fit, operation and performance. Factory supplied actuators are shipped with quick connects to allow fast and accurate connection.

Optional factory installed piping packages arrive at the job site installed, tested and ready for startup.

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Model TVB:
TVBF / TVBA / TVBC ACCESSIBILITY FEATURES

End Pockets
The 7.5” 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.

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 TVB 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 TVBF and TVBA, as well as supply and return air grilles and the TVBC wall recessing panel, feature a powder coat finish that resists scuffing, scratching, fading, and fingerprints.
Model TVB:
TVBF / TVBA / TVBC CONSTRUCTION FEATURES

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

Control Enclosure
The TVB 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.

Fan Deck Removal
TVB 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 electric service without the need for tools.
Model TVB:

**PIPING PACKAGES FACTORY INSTALLED**

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.

Factory installed valve packs can ship factory installed on the unit reducing job site labor and project time.

Factory installed valve packs ship wired, and tested.

Valve packs come standard with unions and manual ball valves which can be used to separate the coil from the water loop allowing the coil to be serviced or replaced without the need to cut or braze the piping.

**RETOFITTING MADE EASY**

**Parametrically Designed Cabinets**

TVBF (Exposed) and TVBA (Sloped) are designed to accommodate existing architectural features. Parametric cabinets permit extending the cabinet heights and widths in 1” increments up to 12”, such as when additional height is needed to reach a window sill without the use of a sub-base. Thanks to parametric cabinet design, unattractive sub-bases are no longer required.

Parametric designed cabinet will enable the extension of end pockets. Parametric cabinets give designers a greater degree of flexibility.
Model TVB:
**CONCEALED, EXPOSED OR PARAMETRIC CABINET OPTIONS**

### Model TVBC Concealed Dimensional Data

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>02</td>
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<td>27 7/16&quot; [691]</td>
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<tr>
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<td>43 7/16&quot; [1097]</td>
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<td>59 7/16&quot; [1503]</td>
</tr>
<tr>
<td>12</td>
<td>67 7/16&quot; [1707]</td>
</tr>
</tbody>
</table>

Notes:
1. All dimensions are inches [mm] and are +/- 1/8" [0.3mm]. Metric values are soft conversions.
2. Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
3. Right-hand unit shown, left-hand unit similar, but opposite.
4. Auxiliary drain pan ships loose for field installation.
5. Standard TVBF and TVBA cabinet finish is “Pearl White Satin”.

### Model TVBF Parametric Increments

<table>
<thead>
<tr>
<th>Size</th>
<th>Dimensions A (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
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<td>X=5  Y=0</td>
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<tr>
<td>12</td>
<td>X=6  Y=0</td>
</tr>
</tbody>
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### Model TVBA Parametric Increments

<table>
<thead>
<tr>
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<th>Dimensions A (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>X=0  Y=0</td>
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<td>03</td>
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3. Right-hand unit shown, left-hand unit similar, but opposite.
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Note: All data and dimensions are subject to change without notice.

Contact your Titus representative for current submittal drawings and other unit arrangements, including Model TVBA Sloped Top.
Model TVB:  
**FAN COIL UNIT FEATURES**

**Standard Features:**

**Construction**

*All Units*
- AHRI Standard 440-certified and labeled
- Galvanized-steel construction
- Insulation, TVB: 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
- 18 gauge exterior panel construction
- Flat top
- Sloped top

**Coils**
- Cooling: 3 or 4-row chilled water or DX, heat-pump compatible
- Heating: 1 or 2-row hot water - reheat or preheat position
- 6 total rows of cooling and heating coils maximum
- ½” O.D. seamless copper tubes
- 0.016” tube wall thickness
- High-efficiency, aluminum fin surface for optimizing heat transfer, pressure drop and carryover
- Left-hand or right-hand, same or opposite end connections
- Access to entering and leaving air sides for cleaning
- Removable for service
- Manual air vents

**Drain Pans**
- Single-wall, galvanized-steel, externally insulated
- Positively sloped to drain connection
- ¼” M.P.T. auxiliary drain pan connection
- Double wall plastic auxiliary drip pan

**Fan Assemblies**
- Forward-curved, DWDI, centrifugal type
- 115-volt, single-phase, three 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

**Electrical 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
- 1” pleated filters (MERV 8)
- 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

**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**
- 208-230 & 277 volt, 60 Hz and 220 volt, 50 Hz motors
Model TVB:
FAN COIL UNIT FEATURES

Electrical
» SCR fan speed controller (High Speed Only)
» Fan relay packages
» Silent solid state fan relays
» Toggle disconnect switch
» Condensate overflow switch (auxiliary drain pan)
» Main fusing
» Unit and remote mounted three speed fan switches

Electric Heat
» Door interlocking disconnect switches
» Main fusing
» Silent relay/contactors

Piping Packages
» Factory-assembled - shipped loose for field installation
» ½” and ¾”, 2-way and 3-way, normally closed, two-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 (½” = 50 PSIG; ¾” = 25 PSIG)

Thermostats
» Analog, digital display, or programmable
» Unit and remote mounted, with integral three-speed, fan switch
» 2-pipe and 4-pipe control sequences
» Automatic and manual changeover
Model TVB:

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