

# VB/VR Blower-Coil Units Reduced-Footprint, Vertical



# Models VB/VR:

## Big on Features, Small in Size

### Contractors

All VB/VR model blower-coil units 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 and terminated. The junction box is located on the outside of the unit casing, reducing electrical hook-up time.



A wide variety of fan-discharge configurations allow for increased flexibility and easier installation on the jobsite, resulting in cost reductions by eliminating expensive elbows, etc.

### Designers

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

Options include: Mixing boxes with standard low-leak dampers, blow-thru electric heat with single-point power connection. All electric heat units are listed with ETL as an assembly and carry the cETL label.

High-efficiency motors, starters, disconnects and fusing mean easier coordination between mechanical and electrical trades. Coil options allow for 4 or 6-row cooling coils.

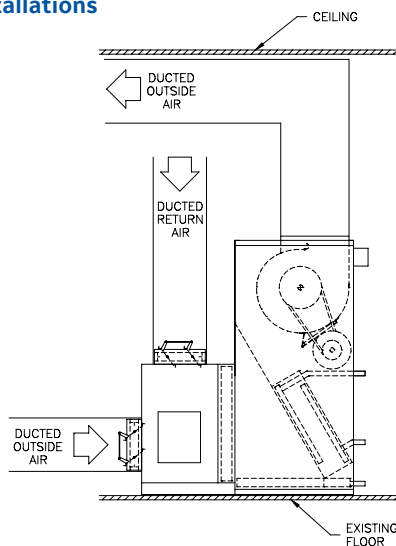
### Owners

VB/VR model blower coils are constructed from galvanized steel, surpassing the ASTM 125-hour, salt-spray test for corrosion and rust. Insulation, which is 1-inch thick, scrim-reinforced, and foil-faced, is glued, pinned and taped for maximum adhesion. Insulation complies with UL 181, ASTM-C1071, NFPA 90A and 90B and meets bacteriological standard ASTM-C665 and C1136 for mold, mildew and humidity resistance.

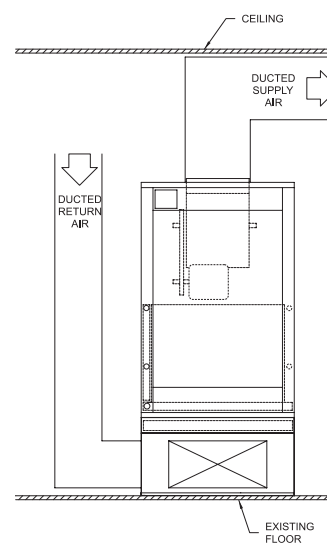
All units, with or without electric heat, are cETL-listed and labeled. All wiring is in compliance with NEC, assuring safety and quality for the owner.



### Typical Installations

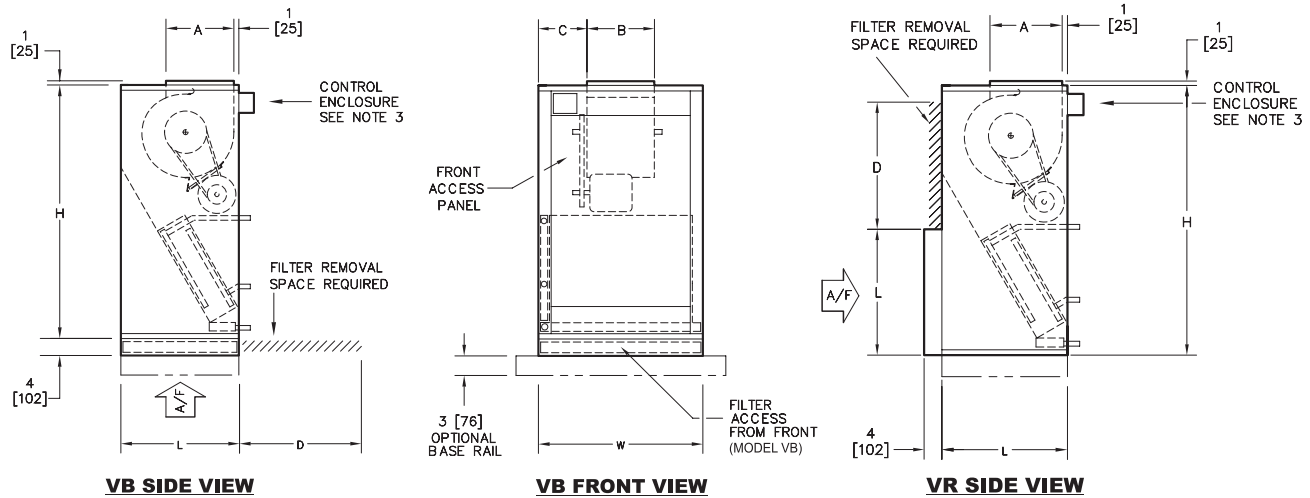


**Model VR, Rear Return with Mixing Box  
Mechanical Room Layout**



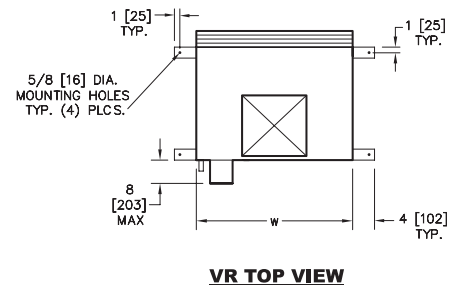
**Model VB, Bottom Return with Return Plenum  
Closet or Confined Space Layout**

# VB/VR Unit Dimensions, Coil and Filter Data



**DIMENSIONS - In [mm]**

UNIT SIZE	H	W	L	A	B	C	D
08	46 [1168]	26 [660]	19 [483]	6-1/2 [165]	6-7/8 [175]	9-9/16 [243]	16 [406]
12	46 [1168]	26 [660]	21 [533]	7-1/2 [190]	8-1/4 [210]	8-7/8 [225]	20 [508]
16	54 [1372]	29 [737]	25 [635]	7-1/2 [190]	10-1/4 [260]	9-3/8 [238]	24 [610]
20	54 [1372]	29 [737]	28 [711]	11-3/8 [289]	13-1/4 [337]	7-7/8 [200]	24 [610]
25	60 [1524]	39 [991]	28 [711]	16 [406]	12-7/8 [327]	13-1/16 [332]	24 [610]
30	60 [1524]	39 [991]	28 [711]	16 [406]	15 [381]	12 [305]	24 [610]



## Coil Face Area and Filter Data

Unit Size	Nominal CFM	Internal Cooling And Heating Coils	Discharge Section Heating Coils	2" Filters (Quantity) And Size	Filter Face Area
08	800	2.1 [0.20]	2.1 [0.20]	(1) 16" x 20" x 2" [406 x 508 x 51]	2.2 [0.20]
12	1200	2.8 [0.26]	2.1 [0.20]	(1) 20" x 20" x 2" [508 x 508 x 51]	2.8 [0.26]
16	1600	3.6 [0.33]	3.2 [0.30]	(1) 24" x 24" x 2" [610 x 610 x 51]	4.0 [0.37]
20	2000	4.8 [0.45]	3.2 [0.30]	(1) 24" x 24" x 2" [610 x 610 x 51]	4.0 [0.37]
25	2500	5.7 [0.53]	4.6 [0.43]	(1) 24" x 24" x 2" [610 x 610 x 51] (1) 12" x 24" x 2" [305 x 610 x 51]	6.0 [0.56]
30	3000	6.8 [0.63]	5.7 [0.53]	(1) 24" x 24" x 2" [610 x 610 x 51] (1) 12" x 24" x 2" [305 x 610 x 51]	6.0 [0.56]

### NOTES:

- Standard filters are 2" throwaway; optional filters are 2" pleated.
- Filter sizes are nominal and standard size, measured in inches [mm].
- Coil and filter face areas are measured in square feet [square meters].

### NOTES:

- All dimensions are inches [mm] and are +/- 1/4" [6mm]. Metric values are soft conversions.
- Motor/drive location may be specified Left or Right Hand. Standard control-enclosure location matches motor/drive position.
- Provide sufficient clearance to access electrical controls and comply with all applicable codes and ordinances.
- Maximum total internal coil rows: 6.
- Left-hand unit shown; right-hand unit has CW and HW piping connections mirrored.
- Filter assembly runs the full length of the unit size.
- Drawings not for installation purposes.

**Note:** Drawings are not to scale and are not for installation purposes. Refer to [www.enviro-tec.com](http://www.enviro-tec.com) for current submittal drawings. All data and dimensions are subject to change without notice.

# VB/VR Blower-Coil Unit Features

## STANDARD FEATURES:

### Construction

- Galvanized-steel cabinet construction, minimum 18 gauge
- 1"-thick, 1.6-lb/ft<sup>3</sup> scrim-reinforced, foil-faced insulation, glued, taped and pinned in place
- 1" supply duct collars
- Gasketed, removable access panel sized for easy handling
- Galvanized-steel drain pan with 1-1/8" ODM copper pipe outlet
- Left- and right-hand arrangement

### Fan Assembly

- Forward-curved (double-width, double-inlet) fans
- Statically and dynamically balanced
- Solid steel shafting
- Ball bearings with a minimum design-average life (L<sub>50</sub>) of 100,000 hours

### Fan Motor and Drive

- NEMA-design ODP motors
- 1750 RPM, single-speed, 60 Hertz
- Single-phase motors with inherent thermal protection
- Three-phase motors
- Rigid-mount, adjustable, motor base
- Standard cross-section "V-belt" drive with 1.2 service factor
- Adjustable-pitch motor pulley and fixed-pitch blower pulley

### Coils

- AHRI Standard 410-certified and labeled
- 1/2" O.D. seamless copper tubes
- Collared and corrugated aluminum fins
- Manual air-vent plug on all water coils
- 450 PSIG working pressure at 200°F
- Steam coils rated at 15 PSIG maximum
- Copper sweat connections
- 0.016" tube wall on water and evaporator coils
- 0.025" tube wall on steam coils
- High-efficiency, aluminum-fin surface for optimizing heat transfer, pressure drop, and carryover

### Filters and Filter Rack

- Top-access, flat-filter rack (VR only)
- Front-access filter rack (VB only)
- Standard-size, 2" nominal, throwaway filters

### Electrical

- Fan motor wired and terminated to J-box
- All units ETL-listed in compliance with UL/ANSI Standard 1995

## OPTIONAL FEATURES:

### Construction

- Stainless-steel drain pan with 1" MPT galvanized pipe outlet
- External rubber-in-shear or spring-type vibration isolators, floor mount
- Fan-discharge arrangements
- Discharge plenum w/dbl.-deflection discharge grille
- Access panel with lift-and-turn fasteners
- Double wall access panel w/lift-and-turn fasteners
- Return plenum with removable panels (VB only)
- Base rails with rigging slots, factory-assembled and installed

### Fan Motor and Drive

- TEFC motors
- High-efficiency motors

### Coils

- 4 and 6-row chilled-water or R-22 DX coils
- 1 and 2-row hot-water coils
- 1 and 2-row hot-water or standard-steam coils in discharge-coil section only
- Hot-water coil in preheat or reheat position
- Stainless-steel coil casings
- 0.025" tube wall on water and evaporator coils
- Auto air vents on water coils

### Filters and Filter Rack

- Side-access filter rack (VR only)
- 2" pleated filter (MERV 6)
- Spare throwaway or pleated filters

### Inlet-Damper Section (VR rear-return unit)

- Factory-assembled and installed
- Heavy-gauge, galvanized-steel, formed blade dampers
- Low-leak dampers with extruded-vinyl blade seals and flexible-metal jamb seals
- Parallel-blade operation
- Interconnecting damper linkage

### Electrical

- Motor wiring in conduit
- Motor starter (contactor with overload for three-phase; contactor for single-phase), factory-installed (mounted and wired)
- Door-interlocking disconnect switch (non-fused) (with main fusing)
- Hand-off-auto switch (HOA)
- Main fusing

### Electric-Heat Section

- Factory-mounted electric heater with single-point power connection, ETL-listed as an assembly



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