**VW Series Unit Specifications**

**PART 1 GENERAL**

**1.01 SUBMITTALS**

A. Submit shop drawings and product data sheets indicating cross section of cabinets, general assembly, and materials used in fabrication.

B. Submit product data indicating typical catalog of information including arrangement.

C. Indicate mechanical and electrical service locations and requirements, specifically indicating deviations from

indicated products.

D. Submit manufacturer’s installation instructions.

**1.02 OPERATION AND MAINTENANCE DATA:**

A. Submit piping instructions.

B. Include manufacturer’s descriptive installation, operating and maintenance instructions.

**1.03 QUALIFICATIONS:**

A. Manufacturer Company specializing in manufacturing the products specified in this section with minimum 10 years

documented experience.

**1.04 REGULATORY REQUIREMENTS**

A. Units must be UL listed as air handler unit.

B. Unit performance data must be rated in accordance with ARI standard 350 latest versions, and must display the ARI symbol on all standard units. If a manufacturer does not participate in the ARI Certification program, specified equipment must be witnessed by an engineer to meet the criteria of the specifications.

C. Conform to applicable NFPA 70 code for internal wiring of factory wired equipment.

**1.05 WARRANTY:**

A. Provide a full parts warranty for one year from startup or 18 months from shipment, whichever comes first.

**PART II PRODUCTS**

**2.04 VERTICAL FAN COILS:**

**A. Coils:**

1. Coils are 100% underwater pressure-tested at 350 psi with 300 psi working pressure. Steam coils are rated

for up to 15 psi or 250 degrees F.

2. Copper tubes are constructed as ½” O.D. with .017” wall thickness; tubes are staggered for maximum heat

transfer.

3. Evenly spaced aluminum fins are high-efficiency, .0045” thick double-sine with rippled edges spaced at 12-

fins-per-inch.

4. Manual air vent is standard on all hydronic coils.

**B. Cabinet:**

1. Fully cased, soft-white, powder coated epoxy finished cabinet. Heavy 18-20 gauge cold rolled steel. The

vertical fan coil unit is designed for “free-blow” exposed wall mounting. Deluxe unit has a one-piece

wraparound front panel which is easily removed for complete access for servicing. Filters are concealed from

sight and easily removable without the use of tools. The vertical fan coil units have dedicated left or right

hand coil connections providing larger space for valve packages and controls. The Deluxe cabinet is designed

to be mounted on the floor or wall equipped with six ½” mounting holes to secure the unit to the wall.

**C. Cabinet Insulation:**

1. All units have ½ inch thick, over three-pound density neoprene-coated fiberglass. This type of insulation has greater thermal efficiency and lower noise levels.

**D. Drain Pan:**

1. Constructed of 18-gauge galvanized steel with welded seams, powder-coated epoxy with ¼” closed cell

insulation with drain connection. This helps eliminate rust or corrosion and assure sweat-proof operation

under adverse dew-point conditions.

2. Units may be provided with an extended drain pan at the coil connection end to provide control of condensate from valves and piping.

**E. Blowers:**

1. Double-width, double-inlet, forward curved blade and centrifugal wheels are statically and dynamically

balanced to provide a smooth and quiet operation. Blower scrolls and wheels are galvanized for rust-free

operation, and permanently lubricated ball bearings ensure long-service life.

2. Slide-out blowers with quick-connects for easy servicing.

3. Blower assembly wiring is provided enclosed in plastic tubing to further ensure whisper-quiet operation.

**F. Motors:**

1. Provide wiring to junction box for single-point field connection.

2. Direct drive motors have quick-connect plug, permanent split capacitor, thermal overload protection,

oversized bearings and oil reservoirs.

3. Custom motor mounts designed to reduce noise and eliminate vibration.

4. Stators are epoxy-dipped for better motor cooling and increased electrical protection.

5. (OPTIONAL) Brushless DC Motor: Brushless DC or electronically commutated (ECM) DC motor with

permanent magnet rotor. Brushless DC motor shall be furnished with an integral microprocessor based

controller that includes sensorless constant flow operation by automatically adjusting to performance in

response to system pressure changes at the design CFM output based on preset three speed logic; Pre set

residential speed tapped motors are not acceptable.

**G. Filter:**

1. One-inch thick fiberglass, throwaway. Can be easily removed without the use of tools.

**H. Tagging & Crating:**

1. Fan coils are custom tagged by room, floor, riser, etc; Individual cartons are foamed into place and woodencrated to virtually eliminate damage. Units are shipped in the order of installation to eliminate excess

handling and field labor.

2. All fan coils are 100% tested prior to shipment.