

## Guide Specification for TEMSPEC Dual Path Classroom Fan Coil Unit Model VGB

**1. THE CLASSROOM FAN COIL UNIT** shall be model VGB 1600 manufactured by **Temspec Inc.**

### **2. ELECTRIC COIL**

The electric heating coil shall have wire nickel-chrome elements carried in floating ceramic bushings. An auto-reset high limit switch shall be factory installed in the coil frame. The coil shall be rated for \_\_\_ kW at a supply voltage \_\_\_ Volts \_\_\_ phase 60 Hz. Each coil stage shall have an electromagnetic contactor to energize the coil. The coil shall be in the reheat position relative to the primary cooling coil.

### **3. HOT WATER HEATING COIL**

The coil shall have 1/2" copper tube of minimum wall thickness 0.016" and shall have aluminum fins. The coil supply and return headers shall be copper pipe, stubbed out for single point sweat connection. The coil shall be factory pressure tested at not less than 350 p.s.i. A manual air vent shall be factory installed and ball valves fitted. The coil capacity shall be as shown in the schedule. The coil shall be equipped with a drain plug, circuit balancing valve and unions.

### **4. CHILLED WATER COILS (outdoor air and primary cooling coils)**

The coils shall have 1/2" copper tube of minimum wall thickness 0.016" and shall have aluminum fins. The coil supply and return headers shall be copper pipe, stubbed out for single point sweat connection. The coil shall be factory pressure tested at not less than 350 p.s.i. A manual air vent shall be factory installed and ball valves fitted. The coil capacity shall be as shown in the schedule. Stainless steel pitched drain pans and stainless steel coil supports shall be provided. Coils shall be equipped with a drain plug, circuit balancing valve and unions.

### **5. FREEZE PROTECTION COIL (optional)**

The outdoor air chilled water coil shall have a heating coil (electric or one row of hot water) located in the preheat position, of sufficient capacity to ensure a minimum 45°F leaving air temperature.

### **6. DIRECT EXPANSION EVAPORATOR AND HOT GAS REHEAT COILS (outdoor air and primary cooling coils)**

The coils shall have 3/8" copper tube and aluminum fins. Field connections shall be brazed. The mechanical contractor shall charge the refrigeration system after installation and ensure that the cooling system is operating correctly. The coil capacities shall be as shown in the schedule. Stainless steel pitched drain pans and stainless steel coil supports shall be provided. Coils shall be equipped with thermal expansion valves.

### **7. CABINET AND CONFIGURATION**

The unit cabinet shall be 14ga corrosion resistant steel, braced and reinforced for rigidity. The finish shall be textured powder coat, color as per the Architect's instruction. The cabinet shall be fully lined with 1/2" green-back gypsum board and 1" coated glass fiber insulation. The unit shall have an upflow configuration. The return air grille shall be heavy duty steel. Ducted units shall be draw through, non-ducted units shall be blow through.

### **8. OUTDOOR AIR PLENUM (optional)**

A 6" deep plenum assembly shall be provided by the unit manufacturer and shall be color matched to the unit. The plenum shall be lined with 1" foil backed glass fiber insulation.

### **9. TOP SUPPLY AIR PLENUM FOR NON-DUCTED UNITS**

The unit manufacturer shall provide a color matched top supply air plenum with supply air grilles (two or three way discharge). The plenum shall be acoustically lined.

### **10. TOP ACOUSTICAL PLENUM FOR DUCTED UNITS**

The unit manufacturer shall provide a color matched top plenum extension for the cabinet, of size to suit the ceiling height. The plenum shall have an internal perforated elbow and be acoustically lined.

### **11. RAISED BASE (optional)**

The unit manufacturer shall provide a color matched raised base, height as shown on the plans.

### **12. SIDE PIPE COVER (optional)**

The unit manufacturer shall provide a 5" wide pipe cover assembly, color matched to the unit. The cover shall be the depth of the unit, height to suit.

### **13. SUPPLY AIR FAN AND MOTOR**

The fan shall be a direct drive centrifugal fan with forward curved impeller and a three speed split capacitor motor mounted on rubber isolation grommets. The motor supply voltage shall be \_\_\_V/1/60.

### **14. OUTDOOR AIR INTAKE FAN AND MOTOR**

The fan shall be an axial type with an integral single speed motor. The motor supply voltage shall be \_\_\_V/1/60. The motor shall be equipped with a manual variable speed controller.

### **15. MOTORIZED OUTDOOR AIR DAMPER**

The outdoor air damper shall have aluminum extruded blades. The dampers shall have neoprene blade tip seals and be spring return to closed.

### **16. FILTERS FOR OUTDOOR AIR AND RETURN AIR**

The filters shall be 2" pleated MERV 8.

### **17. OUTDOOR AIR INTAKE LOUVER**

The unit manufacturer shall provide a 4" deep external wall louver for the outdoor air intake. The louver shall be of heavy gauge aluminum with 45 degree blades. The blade profile shall be designed to prevent water penetration. The louver shall have a 1/2" birdscreen attached to the inner face. The finish on the louver shall be a color as per the Architect's instruction.

### **18. LINE VOLTAGE WIRING**

All internal line voltage wiring shall be by the unit manufacturer. A suitably rated remote circuit breaker shall be provided and installed by Division 16.

### **19. INSTALLATION**

The unit shall be installed plumb. The outdoor air intake shall be sleeved and foam sealing tape installed around the perimeter of the outdoor air opening in the back of the unit before moving the unit into position against the wall. The exterior louver shall be caulked. Wall openings shall be sleeved.

### **20. DDC CONTROLS**

Control items shall be furnished by the controls contractor for factory mounting and shall function as described in the Controls Specification.

### **21. STAND-ALONE CONTROLS**

The control system shall be Temspec type 'V' incorporating an OC-3 model seven day programmable thermostat with integral "smart occupancy" sensor.