SECTION 238125

COMPUTER ROOM AIR CONDITIONING UNITS - UNITARY CEILING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Air Conditioning Units.

B. Controls.

1.2 RELATED SECTIONS

A. Section 26 05 05 - Equipment Wiring Systems: Electrical characteristics and wiring connections.

1.3 REFERENCES

A. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

A. Submit under the provisions of Division 01.

B. Product Data: Provide manufacturers literature and data indicating drain, and electrical characteristics and connection requirements.

C. Submit manufacturer's installation instructions. Indicate procedures required for rigging and making service connections.

D. Manufacturer's Field Reports: Indicate conditions at initial start-up including date, and initial set points.

1.5 SUBMITTALS AT PROJECT CLOSEOUT

A. Submit under the provisions of Division 01.

B. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, and maintenance and repair data.

1.6 QUALITY ASSURANCE

A. Manufacturer’s Qualifications: Company specializing in manufacturing the Products specified in this section with a minimum of five (5) years’ experience.

1.7 REGULATORY REQUIREMENTS

A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc., as suitable for the purpose specified and indicated.

1.8 WARRANTY

A. Division 01 - Contract Closeout.

B. Provide a five-year warranty to include coverage for the entire unit.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Liebert.

B. Division 01 - Materials and Equipment: Product options and substitutions. Substitutions: Permitted.

2.2 AIR CONDITIONING UNITS

A. Description: Self-contained air cooled, factory assembled, pre-wired and pre-piped unit, consisting of cabinet, fan, filters, humidifier, controls.

B. Assembly: For horizontal ceiling mounting to fit 24 x 48 inches (610 x 1220 mm) T-bar ceiling opening.

C. Cabinet: 14 gage welded steel with baked enamel finish and lined with ½ inch thick acoustic duct liner.

D. Evaporator Fan: Forward curved centrifugal, directly driven by two speed motor.

E. Compressor: Hermetic with resilient suspension system, oil strainer, internal motor overload protection, low pressure switch, manual reset high pressure switch.

F. Evaporator Coil: Direct expansion cooling coil of seamless copper tubes expanded into aluminum fins, with thermal expansion valve with external equalizer, liquid line filter-drier, service shut-off valves and charging valves. Mount coil assembly in stainless steel drain pan.

G. Air Cooled Condenser: Integral copper tube aluminum fin coil sized for rated capacity at 95 degrees F with fan driven by double shafted evaporator fan motor.

H. Filter: One-inch-thick disposable glass fiber media.

I. Heating Coils: Nichrome wire electric elements with contactor, dehumidification relay, and high temperature limit switch.

J. Electrode Steam Type: Self-contained type with replaceable cylinder, microprocessor controlled.

2.3 CONTROL SYSTEM

A. Unit Mounted: Main fan contactor, compressor and condenser fan contactor, compressor start capacitor, controls transformer with circuit breaker, solid state temperature and humidity control modules.

B. Controls: Solid state wall mounted with start/stop switch, adjustable humidity setpoint, and adjustable temperature setpoint.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with the manufacturer's instructions.

B. Coordinate installation of air conditioning unit with computer room ceiling installer.

3.2 MANUFACTURER'S FIELD SERVICES

A. Set initial temperature and humidity set points. Instruct operating personnel.

END OF SECTION