

SUBMITTAL DATA - HVAC EQUIPMENT PACKAGE

Project: Commercial Office Building HVAC Installation
Manufacturer: AirTech Systems Model ATS-5000

SYSTEM OVERVIEW

This submittal covers the complete HVAC system including air handling unit, ductwork, controls, and accessories. The system is designed to provide comfort conditioning for office spaces in accordance with current ASHRAE standards.

PERFORMANCE CHARACTERISTICS

Operating Temperature Range: The system maintains indoor conditions between 70°F and 74°F during normal operation with outdoor conditions from -10°F to 105°F.

Airflow Specifications: The main air handling unit delivers 1250 CFM at rated conditions with variable speed control. Outdoor air intake provides 18 CFM per person based on occupancy sensors.

Acoustic Performance: Sound levels measured at 5 feet distance are 43 dB(A) for the indoor unit and 48 dB(A) for the outdoor unit under full load conditions.

AIR HANDLING UNIT SPECIFICATIONS

Model: ATS-5000-DX

Cooling Capacity: 50,000 BTU/hr at 95°F outdoor, 75°F indoor

Heating Capacity: 40,000 BTU/hr with electric resistance heaters

Supply Fan: 7.5 HP motor, 3-phase 460V, electronically commutated

Filter Section: MERV 14 pleated filters, 12" deep

Static Pressure: Unit tested to 1.8 in. w.g. external static pressure

Cabinet Construction: Double-wall insulated steel panels, G90 coating

DUCTWORK SYSTEM

Material: Galvanized steel conforming to SMACNA standards

Gauge: 20 gauge for main trunks, 22 gauge for branches

Sealing: All longitudinal and transverse joints sealed with water-based mastic meeting UL 181-M standard

Insulation: R-8 fiberglass duct wrap with foil-scrim-kraft facing vapor barrier

Leakage Testing: Factory tested to demonstrate less than 3% leakage at operating pressure

CONTROL SYSTEM

System Type: Direct Digital Control (DDC) with BACnet/IP communication

Temperature Control: Precision thermistors with $\pm 0.4^{\circ}\text{F}$ accuracy over operating range

Pressure Monitoring: Differential pressure sensors with $\pm 1.5\%$ accuracy

Control Valves: Modulating ball valves with 0-10VDC actuators and spring return

INSTALLATION DETAILS

All major equipment supplied with factory-installed vibration isolators rated for 90% isolation efficiency. Recommended service clearance is 42 inches on the service side and 24 inches on other sides.

Refrigerant Lines: Copper piping, Type L, with factory pressure test to 500 psi using dry nitrogen. Brazed connections throughout.

TESTING PROCEDURES

Air balance performed by AABC certified technicians. All terminal devices balanced to within $\pm 8\%$ of design values. System operated continuously for 80 hours during commissioning phase without faults.

Sound testing completed per AHRI Standard 260. Results documented in attached test reports showing compliance in all occupied zones.

WARRANTY INFORMATION

Compressor: 5 year parts and labor warranty

Other Components: 2 year parts warranty, 1 year labor

Extended warranty options available

DOCUMENTATION

Complete operation and maintenance manuals provided in PDF format with parts lists, wiring diagrams, and troubleshooting guides. Training for facility personnel included with installation.