
Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 23 05 00 - Common Work Results for HVAC
- .2 Section 23 05 49.01 - Seismic Protection Systems

1.2 REFERENCES

- .1 American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)
 - .1 ASHRAE 84, Method of Testing Air-to-Air Heat/Energy Exchangers (ANSI approved).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for energy recovery equipment and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Canada, member of OIQ.
- .4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .5 Test Reports:
 - .1 Catalogued or published ratings: obtained from tests carried out by manufacturer or those ordered from independent testing agency signifying adherence to codes and standards in force.
 - .2 Provide confirmation of testing.
- .6 Manufacturers' Instructions: submit manufacturer's installation instructions.
 - .1 Departmental Representative will make available one (1) copy of systems supplier's installation instructions.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- .1 Where materials or products are specified by their trademark, consult the Instructions to Tenderers document for the procedures to follow regarding the request for approval for materials or product replacement.
- .2 Replacement Materials
 - .1 Submit maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.

- .2 Furnish list of individual manufacturer's recommended spare parts for equipment, addresses of suppliers, list of specialized tools necessary for adjusting, repairing or replacing, for inclusion into operation and maintenance manual.
- .3 Provide following: one complete set of renewable evaporator media.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect energy recovery equipment from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 GENERAL

- .1 Comply with ASHRAE 84.

2.2 ENTHALPY TYPE AIR TO AIR ROTARY HEAT EXCHANGER

- .1 Capacity: as indicated.
- .2 Casing: welded structural steel, galvanized after manufacture, with removable side panels.
- .3 Seals: adjustable at periphery of rotor, on duct divider and on purge sections.
- .4 Motor: variable speed, with belt drive.
- .5 Media: non-metallic and bacteriostatic with desiccant and coated with silicate.
- .6 Purge section, maximum cross contamination of particulates: 0.2% of supply air volume and 0.04% of exhaust air volume.
- .7 Performance characteristics: as indicated in tables.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for energy recovery equipment installation in accordance with manufacturer's written instructions.

- .1 Visually inspect substrate in presence of Departmental Representative.
- .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
- .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 INSTALLATION

- .1 Install in accordance with manufacturers recommendations.
- .2 Install access doors in accordance with Section 23 33 00 - Air Duct Accessories for access to coils, dampers.

3.3 FIELD QUALITY CONTROL

- .1 Tests:
 - .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION