Part 1 General

1.1 SECTION INCLUDES

.1 Refrigerant coils.

1.2 RELATED SECTIONS

.1 Section 23 07 19 - Piping Insulation.

.2 Section 23 31 00 - Duct Work: Installation of duct coils.

.3 Section 26 05 80 - Equipment Wiring: Electrical characteristics and wiring connections.

1.3 REFERENCES

.1 ARI 410 - Forced-Circulation Air-Cooling and Air- Heating Coils.

.2 SMACNA - HVAC Duct Construction Standards, Metal and Flexible.

1.4 SUBMITTALS FOR REVIEW

.1 Section 21 05 00: Procedures for submittals.

.2 Product Data: Provide coil and frame configurations, dimensions, materials, rows, connections, and rough-in dimensions.

.3 Shop Drawings: Indicate coil and frame configurations, dimensions, materials, rows, connections, and rough-in dimensions.

1.5 SUBMITTALS FOR INFORMATION

.1 Section 21 05 00: Submittals for information.

.2 Certificates: Certify that coil capacities, pressure drops, and selection procedures meet or exceed specified requirements and that the coils are tested and rated to ARI 410.

1.6 SUBMITTALS AT PROJECT CLOSEOUT

.1 Section 21 05 00: Submittals for project closeout.

.2 Warranty: Submit manufacturer warranty and ensure forms have been completed in Owners name and registered with manufacturer.

1.7 QUALITY ASSURANCE

.1 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years experience.

1.8 REGULATORY REQUIREMENTS

.1 Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., CSA, and/or any testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

1.9 DELIVERY, STORAGE, AND HANDLING

.1 Section 21 05 00: Transport, handle, store, and protect products.

.2 Protect coil fins from crushing and bending by leaving in shipping cases until installation, and by storing indoors.

.3 Protect coils from entry of dirt and debris with pipe caps or plugs.

1.10 WARRANTY

.1 Section 21 05 00: Submittals for project closeout.

.2 Provide five (5) year manufacturer warranty for all coils.

Part 2 Products

2.1 REFRIGERANT COILS

.1 MANUFACTURERS

.1 Carrier
.2 AAON
.3 Daikin
.4 Substitutions: Refer to Section 21 05 00.

.2 Tubes: 16 mm (5/8 inch) OD seamless copper arranged in parallel or staggered pattern, expanded into fins, silver brazed joints.

.3 Fins: Aluminum continuous plate type with full fin collars, or individual helical finned tube type wound under tension.

.4 Casing: Die formed channel frame of 1.6 mm (16 gauge) galvanized steel with mounting holes as required. Provide tube supports for coils longer than 900 mm (36 inches).

.5 Headers: Seamless copper or brass tubes with silver brazed joints.

.6 Testing: Air test under water at 2070 kPa 300 psig) for working pressure of 1720 kPa 250 psig); clean, dehydrate, and seal with dry nitrogen charge.

.1 Fin Spacing: Fin Spacing to meet or exceed performance requirements. Refer to Coil Schedule.

Part 3 Execution

3.1 INSTALLATION

.1 Install to manufacturers written instructions.

.2 Install in ducts and casings to SMACNA HVAC Duct Construction Standards, Metal and Flexible.

.1 Support coil sections independent of piping on steel channel or double angle frames and secure to casings.
.2 Provide frames for maximum three coil sections.

.3 Arrange supports to avoid piercing drain pans.

.4 Provide airtight seal between coil and duct or casing.

.5 Refer to Section 23 31 00.

.3 Protect coils to prevent damage to fins and flanges. Comb out bent fins.

.4 Install coils level.

.5 Make connections to coils with unions and flanges.

.6 Refrigerant Coils: Provide sight glass in liquid line within 300 mm (12 inches) of coil. Refer to Section 23 23 00.

3.2 SCHEDULES

.1 Refer to drawings.

END OF SECTION