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**PART 1 GENERAL**

**1.1 SUMMARY**

.1 Section includes:

- .1 Supply, return and exhaust grilles and registers, diffusers and linear grilles, for commercial and residential use.

**1.2 RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .3 Section 01 78 00 - Closeout Submittals.

**1.3 REFERENCES**

- .1 American Society of Heating Refrigerating and Air-Conditioning Engineers (ASHRAE).
  - .1 ASHRAE 70, Method of Testing for Rating the Performance of Air Ducts and Outlets.

**1.4 SYSTEM DESCRIPTION**

- .1 Performance requirements:
  - .1 Catalogued or published ratings for manufactured items: obtained from tests carried out by manufacturer or those ordered by manufacturer from independent testing agency signifying adherence to codes and standards.

**1.5 SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures. Include product characteristics, performance criteria, and limitations.
    - .1 Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures.
    - .2 Indicate following:
      - .1 Capacity
      - .2 Throw and terminal velocity
      - .3 Noise criteria
      - .4 Pressure drop
      - .5 Neck velocity

.2 Quality assurance submittals: submit following in accordance with Section 01 33 00 - Submittal Procedures.

.1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

.2 Instructions: submit manufacturer's installation instructions.

## **1.6 DELIVERY, STORAGE, AND HANDLING**

.1 Packing, shipping, handling and unloading:

.1 Deliver, store and handle in accordance with Section 01 61 00 - Common Product Requirements.

.2 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.2 Waste Management and Disposal:

.1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **1.7 MAINTENANCE**

.1 Extra Materials:

.1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.

.2 Include:

.1 Keys for volume control adjustment

.2 Keys for air flow pattern adjustment.

## **PART 2 PRODUCTS**

### **2.1 GENERAL**

.1 To meet capacity, pressure drop, terminal velocity, throw, noise level, neck velocity.

.2 Frames:

.1 Full perimeter gaskets.

.2 Plaster frames where set into plaster or gypsum board.

.3 Concealed fasteners.

.3 Concealed manual volume control damper operators as indicated.

.4 Colour: standard or as directed by Owner's Representative.

.5 Acceptable Product: E. H. Price, Titus, Nailor, Carnes, Airvector, Anemostat, Kruger.

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**2.2 MANUFACTURED UNITS**

- .1 Grilles, registers and diffusers of same generic type to be product of one manufacturer.

**2.3 SUPPLY GRILLES AND REGISTERS**

- .1 See Schedule.

**2.4 RETURN AND EXHAUST GRILLES AND REGISTERS**

- .1 See Schedule.

**2.5 DIFFUSERS**

- .1 See Schedule.

**2.6 LINEAR GRILLES**

- .1 See Schedule.

**PART 3 EXECUTION**

**3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

**3.2 INSTALLATION**

- .1 Install in accordance with manufacturers instructions.
- .2 Install with flat head stainless steel or cadmium plated screws in countersunk holes where fastenings are visible.
- .3 Bolt grilles, registers and diffusers, in place, in gymnasium and similar game rooms.
- .4 Provide concealed safety chain on each grille, register and diffuser in gymnasium and similar game rooms and elsewhere.

**3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**