

1           **GENERAL**

1.1         **SUMMARY**

1.2         **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.

1.3         **SUBMITTALS**

.1         Product Data:

- .1         Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 00 10 – General Instructions. 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 00 10 – General Instructions.
- .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 00 10 – General Instructions.

- .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.

1.4         **QUALITY ASSURANCE**

- .1         Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 – Health and Safety Requirements.

1.5         **MAINTENANCE**

.1         Extra Materials:

- .1         Provide maintenance materials in accordance with Section 01 00 10 – General Instructions.
- .2         Include:
  - .1         Keys for air flow pattern adjustment.

2 **PRODUCTS**

2.1 **GENERAL**

- .1 To meet capacity, pressure drop, terminal velocity, throw, noise level, neck velocity as indicated.
- .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.
- .4 Colour: Black, or, as directed by Departmental Representative.

2.2 **MANUFACTURED UNITS**

- .1 Grilles, registers and diffusers of same generic type, products of one manufacturer.

2.3 **SUPPLY DIFFUSERS**

- .1 T-bar supply diffusers of sizes and capacities as shown on the drawings diffuser schedule. Diffuser shall have 20 mm slot and be 1 slot model. Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. Diffuser shall feature extruded aluminum "ice tong" pattern controllers and produce 180° control of the air pattern. Pattern controllers and trim to be factory painted black. Diffuser plenum shall be constructed of coated steel.
  - .1 Diffuser length is a custom order.

2.4 **RETURN AIR SLOTS**

- .1 Existing return air slots consist of a slot between double tees. Unused slots are provided with black blank off plates.
- .2 Remove blank off plates where shown to create a new return slot where shown.
- .3 Existing return slots, where not required, shall be provided with blank off plates, to ensure correct air distribution in the spaces. Provide new blank off plates where required, to match existing.

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 Performance of the existing diffusers is not compatible with the design requirements of this contract. All diffusers in all spaces of this contract are new diffusers, unless specifically noted on the drawings. Remove and turn over to Departmental Representative all existing diffusers that are being replaced and are no longer required – do not re-use elsewhere unless shown on the drawings.
- .3 Where new return air slots are required, remove existing blank off plates. Where existing return air slots are relocated or removed, install blank off plates removed from other locations. Where there are insufficient existing blank off plates, provide new to match existing. If there are spare blank off plates at the completion of the work, turn over to Departmental Representative.

**3.3 CLEANING**

- .1 Proceed in accordance with Section 01 00 10 – General Instructions.