

Part 1 General

1.1 PRODUCT DATA

- .1 Submit product data in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Indicate the following:
 - .1 Flexible connections.
 - .2 Duct access doors.
 - .3 Turning vanes.
 - .4 Instrument test ports.

1.2 CERTIFICATION OF RATINGS

- .1 Catalogue or published ratings to be those obtained from tests carried out by manufacturer or independent testing agency signifying adherence to codes and standards.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 – Construction / Demolition - Waste Management and Disposal.
- .2 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan

Part 2 Products

2.1 GENERAL

- .1 Manufacture in accordance with SMACNA - HVAC Duct Construction Standards.

2.2 FLEXIBLE CONNECTIONS

- .1 Frame: galvanized sheet metal frame 24 gauge thick with fabric clenched by means of double locked seams.
- .2 Material:
 - .1 Fire resistant, self extinguishing, neoprene coated glass fabric, temperature rated at minus 40deg C to plus 90deg C, density of 1.0 kg/m².

2.3 ACCESS DOORS IN DUCTS

- .1 Non-insulated ducts: sandwich construction of same material as duct, one sheet metal thickness heavier, minimum 0.6 mm thick complete with sheet metal angle frame.
- .2 Insulated ducts: sandwich construction of same material as duct, one sheet metal thickness heavier, minimum 0.6 mm thick complete with sheet metal angle frame and 25 mm thick rigid glass fibre insulation.
- .3 Gaskets: neoprene.
- .4 Hardware:
 - .1 Up to 300 x 300 mm: two sash locks.
 - .2 301 to 450 mm: four sash locks.
 - .3 451 to 1000 mm: piano hinge and minimum two sash locks.

2.4 TURNING VANES

- .1 Factory or shop fabricated single thickness or double thickness, to recommendations of SMACNA and as indicated.

2.5 INSTRUMENT TEST

- .1 1.6 mm thick steel zinc plated after manufacture.
- .2 Cam lock handles with neoprene expansion plug and handle chain.
- .3 28 mm minimum inside diameter. Length to suit insulation thickness.
- .4 Neoprene mounting gasket.
- .5 Acceptable material: DuroDyne IP-2, Cain.

Part 3 Execution

3.1 INSTALLATION

- .1 Flexible connections:
 - .1 Install in following locations:
 - .1 Inlets and outlets to supply air units and fans.
 - .2 Inlets and outlets of exhaust and return air fans.
 - .3 As indicated.
 - .2 Length of flexible connection: 75 mm.
 - .3 Minimum distance between metal parts when system in operation: 50 mm.

- .4 Install in accordance with recommendations of SMACNA.
- .5 When fan is running:
 - .1 Ducting on sides of flexible connection to be in alignment.
 - .2 Ensure slack material in flexible connection.
 - .3 Do not install flexible connection direct to fan inlet. Provide minimum 1 fan diameter straight duct at inlet.
- .2 Access doors and viewing panels:
 - .1 Size:
 - .1 600 x 400 mm for servicing entry.
 - .2 450 x 250 mm for viewing.
 - .3 300 x 150 mm minimum size.
 - .2 Locations:
 - .1 Fire dampers.
 - .2 Control dampers.
 - .3 Devices requiring maintenance.
 - .4 Required by code.
 - .5 Duct coils.
 - .6 Elsewhere as indicated.
- .3 Instrument test ports.
 - .1 General:
 - .1 Install in accordance with recommendations of SMACNA and in accordance with manufacturer's instructions.
 - .2 Locate to permit easy manipulation of instruments.
 - .3 Install insulation port extensions as required.
 - .4 Locations.
 - .1 For traverse readings:
 - .1 Ducted inlets to roof and wall exhausters.
 - .2 Inlets and outlets of other fan systems.
 - .3 Main and sub-main ducts.
 - .4 And as indicated.
 - .2 For temperature readings:
 - .1 At outside air intakes.
 - .2 In mixed air applications in locations as approved by Departmental Representative.
 - .3 At inlet and outlet of coils.
 - .4 Downstream of junctions of two converging air streams of different temperatures.
 - .5 And as indicated.

- .4 Turning vanes:
 - .1 Install in accordance with recommendations of SMACNA and as indicated.

END OF SECTION 23 33 00