**Specifications of FDD**

**1. Description and physical characteristics**

1.1 High induction flexible air diffuser FDD shall be made with PVC permeated polyester (Polyvinyl Chloride).

1.2 The polyester shall be made to the ASTM-D 2136 standard “Standard test method for coated fabrics-low-temperature bend test”.

1.3 The polyester used in the manufacture of the FDD shall be resistant to mechanical friction of 400 X 375 Lbp/po. shall be manufactured to conform to the ASTM-D 2136 standard.

1.4 The polyester shall be classified to NFPA 701, ASTM E-84 class 1 and CAN/ULC S102-10 standards, “Standard method of test for surface burning characteristics of building materials and assemblies”.

1.5 The diffuser shall be treated for resistance to dust, UV rays, salty environments, condensation, fungi and mold.

1.6 The diffuser shall have a weight of 542g/m2 (16 oz / rod2).

1.7 The FDD diffuser shall have a diameter between 203mm and 1524 mm.

1.8 The perforation of the diffuser shall be designed with the help of software.

1.9 For air equalizing reasons, the returns shall be in polyester fabric and shall be installed at the center of the diffuser if it exceeds 15m (50 feet).

1.10 The diffusers shall have modern, smooth surfaces which are architecturally attractive and can be easily cleaned with a feather duster.

**2. Installation and method of suspension**

2.1 The flexible diffuser shall be slid into a suspended aluminium rail, offering a solution for varied types of ceilings. The rail can be painted the colour chosen by architect or customer according to the RAL colour chart.

2.2 The suspension of the rail of the FDD diffuser shall be supported by threaded rods (3/8’’) supplied by the installer.

2.3 The threaded rods can be covered by tubes supplied by the manufacturer of the diffuser and shall be the same color as the diffuser.

**3. Performances**

 The manufacturer shall demonstrate for approval :

3.1 A diagram of the air flow, illustrating the trajectory of the air jets.

3.2 The pressure loss generated by the system and flexible diffusers supplied by the manufacturer.

**4. Balancing**

4.1 The balancing of the diffusers shall be done by a ventilation balancing technician, accredited as a qualified professionnal.

**5. Required quality: NAD Klima model FDD.**