

## **EXHAUST SYSTEM**

### **Construction:**

Double skin construction suitable for outdoor installation. The casing panels shall be made of pre-painted steel sheet externally & plain GSS sheet internally injected with CFC free sandwich PUF material 40 kg/m<sup>3</sup> density which is non-combustible in nature. The framework shall be made of GSS Aluminum Anodized hollow sheet-steel profiles and PVC corner connections. Suitable airtight access doors/panel with nylon hinges and lock shall be provided for access to various sections for maintenance. Access door shall be double skin construction. The entire housing shall be mounted on heavy-duty channel base frame with anti vibration mounts.

### **Type of Blower:**

The fan shall be DIDW (Double inlet double width type) centrifugal with forward/backward curved blades. Fan bearings shall be self-aligning, grease lubricated ball bearings of the pillow block type. Fan and motor unit shall be mounted on rail channel motor fixed on adjustable base frame with spring isolators and anti vibration pads.

### **Fan Motor:**

Fan Motors shall be of suitable capacity, 415 +/- 10% volts, 50 cycles, 3 phases, squirrel – cage, totally enclosed fan cooled with class F insulation and IP 55 protection and 65°C temperature ambient. Motor shall be high efficiency type and especially designed for quiet operation and motor speed shall not exceed 1440 RPM. Drive to fan shall be provided through belt drive arrangement.

### **Fan Motor V-belt Drives:**

Drive to fan shall be provided through V-belt drive arrangement. The belts are of the anti-static type suitable for operation in temperatures upto 52°C.

### **Filter Section**

Filter: 20 micron filters EU4

Type: HDPE/ Permanent Aluminum Filter (washable)

Standard: ASHRAE 52-76

Unit shall be provided with a factory assembled filter section containing 20-micron pre filters washable and synthetic having extruded aluminum frame. The filters shall be capable of filtering down to 20 microns with 90% efficiency. The media shall be supported with HDPE mesh on one side and aluminum mesh on other side.

### **Safety Features:**

The fan access door shall be equipped with micro-switch inter locked with fan motors to enable switching off the fan motor automatically in the event of door opening as optional. The access door shall further have wire mesh screen as an added safety feature bolted on to the unit frame as optional. A fan section with see-through type glass window is optional. Fans section shall have weatherproof light for illumination is optional.

### **Exhaust Arrangement:**

The fan outlet shall be connected to a GSS Cowl with bird mesh.