

## N I T ROURKELA

### UPDATED DETAILS FOR KITCHEN EXHAUST / FRESH AIR SYSTEMS

#### Details for Duct:

- Duct design to suit optimum velocity for minimum pressure loss and low sound level
- Ducting shall be fabricated in GI sheet of 22 SWG; material used will be of LFQ Jindal TATA .
- For ducts of greater than 30"x30" the flanges shall be of 35 X35 X 3 mm thk MS angle.
- 8 mm GI rods and painted MS angles of 35x35x3mm thick at an interval of two meters shall be used to suspend the ducting.
- Duct joint to be bolted together with gasket for air tight seals.

#### Details for Blower (Exhaust)

- Centrifugal backward inclined SISW blower with suitable high static pressure to create the required intake velocities and over come the pressure loss at the inlet of filters and ducts.
- Type: SISW Centrifugal blower. (Motor outside the effluent air stream.)
- Impeller: Backward inclined, non over loading type. ( smaller motor)
- Drive: Mounted directly on motor shaft. (slip losses and lesser maintenance)
- Dynamically balanced to provide a vibration free operation.
- Construction:
  - Casing: in 3 mm thick MS sheet with suitable angle reinforcement.
  - Impeller: in 5 mm thick MS sheet
  - Finish: With two coats of red oxide primer and top coat exterior durable paint.
  - Fan Speed: Not exceeding 1000 RPM.
- Control Panel: Wall mounted incorporated with suitable starter of make siemens/L&T with single phase prevention.

**1. C.V. RAMAN PROJECT :**

Exhaust Blowers:

1. Covering Bulk ranges area: **9400 Cfm** with **7.5 Hp/960** rpm motor.
2. Covering idly/ Chapatti Machine / Chapatti plates / Dish wash M/c Tandoor area: **9100 Cfm** with **7.5 Hp/960** rpm motor.

Fresh Air Blowers:

1. Covering Bulk ranges/ Idly / Chapatti M/c and Dish wash area: **5000 Cfm** with **3 Hp/1440** rpm motor.
2. Covering Bulk ranges / Chapatti plates and Tandoor area: **5000 Cfm** with **3 Hp/1440** rpm motor.

**2. VIKRAM SARABHAI PROJECT:**

Exhaust Blowers:

1. Covering Bulk ranges: **13,100 Cfm** with **10 Hp/960** rpm motor.
2. Covering Chapatti Mc / Chapatti plates and Tandoor area: **6300 Cfm** with **5 Hp / 1440** rpm motor.
3. Covering Idly and Dosa plate area: **5300 Cfm** with **3 Hp / 1440** rpm motor.
4. Covering Two burner area (Pantry) : **1200 Cfm** with **1 Hp / 1400** rpm motor.

Fresh Air Blowers:

1. Covering Bulk ranges: **7500 Cfm** with **5 Hp / 960** rpm motor.
2. Covering Two burner (Pantry) range / Chapatti Mc and Chapatti plates: **3500 Cfm** with **2 Hp / 1440** rpm motor.
3. Covering Idly / Dosa plates and Tandoor area: **3500 Cfm** with **2 Hp / 1400** rpm motor.

### **3. G.D BIRLA VISHWESVARAIAH PROJECT:**

Exhaust Blowers:

1. Covering Bulk ranges: **13100 Cfm** with **10 Hp / 960** rpm motor.
2. Covering Tandoor / Chapatti plates and Dosa plate area: **7100 Cfm** with **5 Hp/960** rpm motor.
3. Covering Dish wash Mc and Chapatti Mc area: **2000 Cfm** with **1 Hp / 1440** rpm motor.
4. Covering Idly area: **1600 Cfm** with **1 Hp / 1440** rpm motor.

Fresh Air Blowers:

1. Covering Tandoor / Chapatti plates / Dosa plates and Bulk ranges: **7500 Cfm** with **5 Hp / 960** rpm motor.
2. Covering idly / Steam area / Bulk ranges / Chapatti Mc and Dish wash area: **7500 Cfm** with **5 Hp / 960** rpm motor.

### **4. GDB DIRUBHAI AMBANI PPROJECT:**

Exhaust Blowers:

1. Covering Bulk ranges: **13100 Cfm** with **10 Hp / 960** rpm motor.
2. Covering Tandoor / Chapatti plates / Dosa plate area: **7100 Cfm** with **5Hp / 960** rpm motor.
3. Covering Dish wash Mc and Chapatti Mc area: **2000 Cfm** with **1 Hp / 1440** rpm motor.
4. Covering Idly area: **1600 Cfm** with **1 Hp / 1440** rpm motor.

Fresh Air Blowers:

1. Covering Tandoor / Chapatti plates / Dosa plates and Bulk ranges: **7500 Cfm** with **5 Hp / 960** rpm motor.
2. Covering idly / Bulk ranges / Chapatti Mc and Dish wash area: **7500 Cfm** with **5 Hp / 960** rpm motor.

Sd/-

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