

## Specifications VI-4-5000 Machine

**VI -4-5000** is a bi-axial machine with traveling furnace. **VI-4-5000** has two straight arms with capacity to mount two moulds of 2000 liter each straight arm and one offset arm with capacity to mount one mould of 5000 liter.

**VI-4-5000** is a fuel efficient rotational moulding machine with low electrical load, low manpower and hence very low production cost.

**VI-4-5000** includes the following equipments:-

### 1. Traveling Furnace:

The traveling furnace is constructed by using ERW hollow square & rectangular sections; inner structure of furnace is constructed by using stainless steel sheet. To reduce heat losses an insulation of 150 mm is used. The oven is very compact and hence fuel efficient. Furnace doors are electrically operated with geared motor and safety over load protection clutch. For reducing the heating losses pneumatic system are used for door locking. For multilayer tanks top loading system is provided with ladder. For better appearance and long life the oven is painted with Polyurethane paint.

### 2. Turret:

Turret rotates on heavy duty base ring. The base plate of turret is one piece round plate which insure smooth indexing of turret. Rotation of turret is controlled by heavy duty gear motor with over load protection. Uninterrupted electrical supply is given to rotating arms through "Slip Ring Assembly". This slip ring assembly offers trouble free operation for years together.

### 3. Burner:

Italian "REILLO" make burner, which is suitable for **Diesel** is used. The burner is most fuel efficient with low noise and smoke free firing. For higher efficiency and low maintenance a two stage 10 micron filter is used. It has flame failure indication along with safety feature which meets International safety standards. LPG and natural gas burner is optional at extra cost.

### 4. Re-Circulating Blower:

VI-4-5000, impeller is made of stainless steel and is dynamical balanced. It is a high capacity, low R.P.M and low noise blower. The blower shaft is supported on both sides with maintenance free high quality bearing. 10 LHP standard motor is used to run blower..

### 5. Straight Arms:

Heavy duty straight arms can take up two moulds of 2000 liter each and offset arm can take up one mould of 5000 liter . The main shaft of each arm has a diameter of 130mm and is ultrasonically tested. Mould rotates in both X and Y directions with 4 R.P.M max. Variable speed A.C drive duty motors are provided. Heavy duty gear box is used for smooth operation. Chain drive is used for low maintenance. Mould mounting is very easy & fast.

### 6. Control Panel:

A user friendly control panel is provided. Toshiba and Schneider made drives are used for controlling sp major and minor axis motor. For getting uniform thickness auto reversal facility is provided. Digital voltmeter for three phases, digital temperature controller, phase indicator lamp, and cycle timer are provided for easy operation & control. Hooter, flame failure lamp, safety interlocks are provided for safety propose.

## Operating Parameters

- |    |                             |               |
|----|-----------------------------|---------------|
| 1. | Production on straight arm: | 2000 ltr x 2. |
|    | Production on offset arm    | 5000 ltr x 1. |
| 2. | Total Cycle Time:           | 45 min.       |

- |     |                       |  |
|-----|-----------------------|--|
| 3.  | Production Per day:   | 1,60,000 ltr. Max ( 24 hrs).                                     |
| 4.  | Production Capacity:  | 50 tanks/day.  |
| 5.  | Electrical Load:      | 41 Hp( 415 volt 3 phase).  |
| 6.  | Diesel Consumption:   | 28 liter/hr  |
|     | OR                    |  |
|     | Gas Consumption:      | 24 kg/hr   |
| 7.  | Process Temperature:  | 180 degree.  |
| 8.  | Space for Machine:    | L 17.5 Mtr x W 13.2 Mtr x H 7.2 Mtr.                             |
| 9.  | Machine suitable for: | Double layer, Triple layer, Four layer and Foam /Insulated tank. |
| 10. | Manpower:             | 3 Semi skilled persons.  |

**Technical Specifications :**  
**Model No. : VI-4-5000**

|  |         |
|--|---------|
| Spindles.....                            | 3       |
| Maximum Weight on each Straight Arm..... | 700 Kg  |
| Maximum Weight on Offset Arm.....        | 550 Kg  |
| Spider Diameter.....                     | 2400 mm |
| Major Axis R.P.M. (x-axis).....          | 0-4     |
| Minor Axis R.P.M. (y-axis).....          | 0-4     |

**Furnace / Oven**

|                                |        |
|--------------------------------|--------|
| Maximum Kcal / Hr.....         | 456000 |
| Usage Normal (Kcal/cycle)..... | 261800 |
| Maximum Temperature °C.....    | 250.0  |
| Circulating Blower C.F.M.....  | 24000  |

**Electrical**

|  |                              |
|--|------------------------------|
| Supply Voltage. ....                       | 415 V, 50 Hzs 3 Ph & Neutral |
| Oven Circulating Blower H.P (1 Nos.).....  | 10                           |
| Major Axis Drive AC Motor H.P(3 Nos.)..... | 5.0                          |
| Minor Axis Drive AC Motor H.P(3 Nos.)..... | 3.0                          |
| Burner H.P.....                            | 0.5                          |
| Door Motor(2 Nos.).....                    | 1.0                          |
| Furnace traveling motor.....               | 1.0                          |
| Exhaust Blower.....                        | 2.0                          |
| Turret indexing motor.....                 | 1.0                          |
| <b>TOTAL=</b>                              | <b>41 Hp</b>                 |

**Scope Of our Supply :**

Scope of supply includes machine and control panel as specified above.

Customer will have to provide for

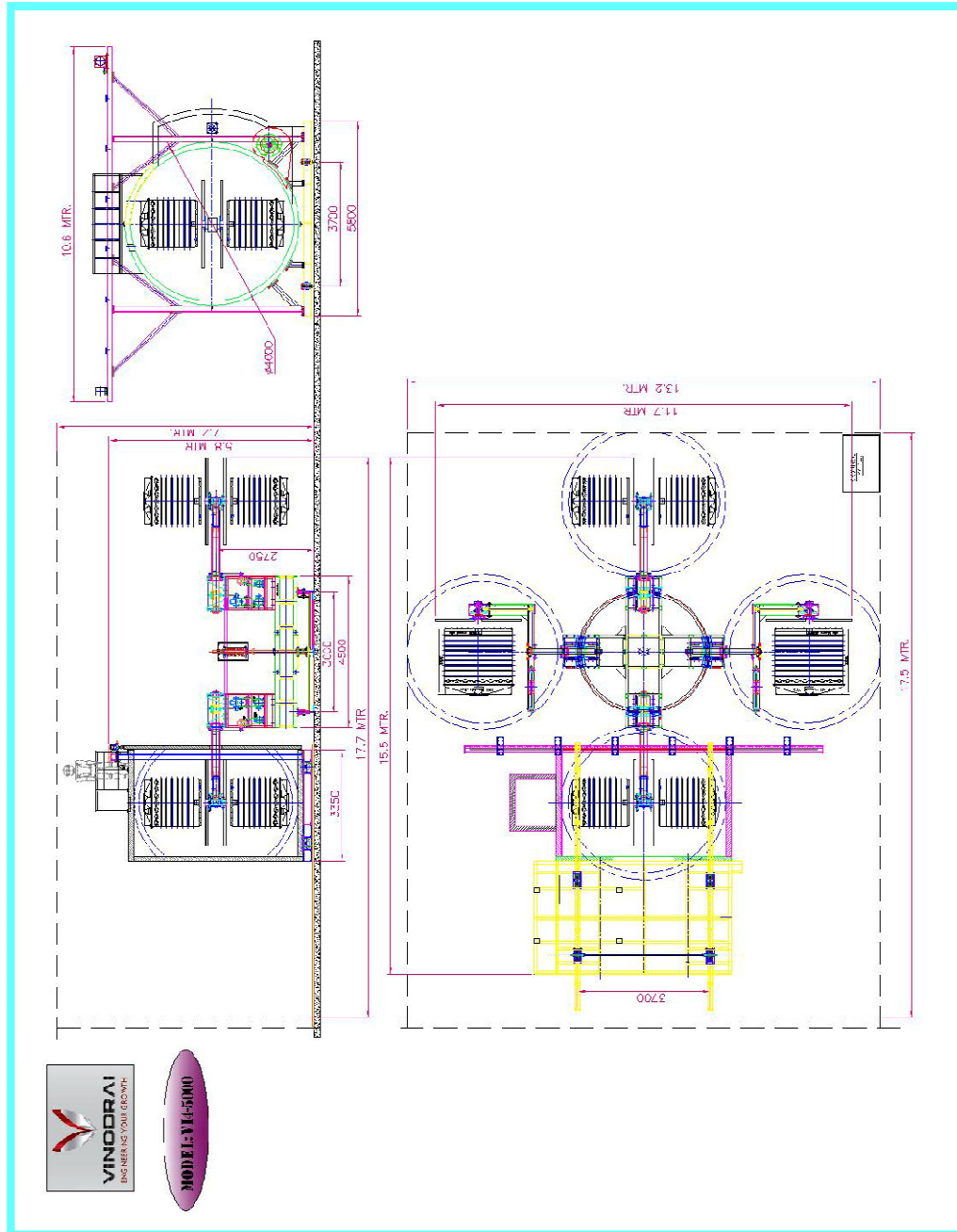
- 1 Foundation and civil work as required.
- 2 Electrical connection up to panel .
- 3 2 T electric hoist for Loading / Unloading of mould and product.
- 4 Erection and commissioning as per agreed terms.
- 5 Diesel Storage Tank.

**Note:**

Vinodrai also manufacture touch screen PLC based control panel on buyer's demand. It's a semi-automatic panel with ALEN BRADLY make PLC.

- ❖ Specification is subjected to improvement and development.

**Vinodrai Engineers Pvt Ltd**



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