

FORCED DRAFT TRAY DRYER (EE-1637)

This is a dryer in which moisture removal takes place by means of forced draft action created by hot air. The set-up consists of an insulated double wall chamber. Inside the chamber a tray is attached directly to a electronic weighing balance, which is fitted on the bottom, outside the chamber. Material for drying is placed in the tray and regular loss of weight is monitored. Air from a blower passes through a heating chamber and is used as drying agent. Arrangement is done to vary the airflow rate.

SCOPE OF EXPERIMENTATION

- To study the drying characteristics of a solid under forced draft condition and determine the critical moisture content
- To correlate the constant drying rate with air mass velocity.

UTILITIES REQUIRED

- Electricity Supply : 1 Phase, 220 V AC, 2.5 kW.
- Wet Solid
- Floor space 0.75 m x 2m.



TECHNICAL DETAILS

- Drying Chamber : Insulated double wall chamber.
Size 20 x 20 x 25cm
- Weighing Balance : Digital, 0-1000gm. of ± 1 gm resolution.
- Hot Air Circulation : By forced draft fan, Arrangement is done to vary the air flow rate.
- Heating Chamber : Compatible capacity.
- Heater : Nichrome wire heater.
- Control panel comprises of :
Standard make on/off switch, Mains Indicator etc.
- The whole set-up is well designed and arranged in a good quality painted structure.