

Features

- Designed to demonstrate operation Tray Dryer.
- Real Time Data Acquisition System with graphical representation.
- Comprehensive Instrumentation Panel with all necessary measuring instruments & Safety Devices.

Tesca Tray Dryer Unit is designed to demonstrate process of drying using Tray Dryer. The unit resembles the most commonly used industrial method of drying solids in bulk where hot air stream is passed over fixed trays of wet material. Students will be able to vary the operating conditions and collect data to demonstrate both the theoretical and practical aspects of industrial drying practice.

A fan draws air in to the duct where it gets heated as it passes over the Heaters. This hot air then flows over the trays which hold the material to be dried. Measuring instruments record Air Temperature & humidity at different points, Air Flow etc.

Lab VIEW software provides real time data on computer screen along with graphs & tabular results. Detailed Operation & Maintenance Manual is provided along with the trainer.



Specifications

- Drier for investigating convection drying of solids
- Drying on 4 corrosion resistant plates in a drying channel with an airflow adjustment of air velocity via speed of fan
- Air heating with controlled heaters
- Digital balance for measuring the change of weight during drying
- 1 combined sensor for measurement of humidity and temperature before and after the solid sample
- 1 air velocity sensor
- Digital stopwatch, battery operated
- Lab VIEW software for data acquisition via USB under Windows XP or Windows Vista.
- Wheeled AISI 304 stainless steel structure
- AISI 304 stainless steel channel with window (approx. 450x450 mm)
- Fan with digital speed control, 0 to 4 m/s
- 4 aluminium trays of approx. 400x300 mm, total capacity of approx. 3.5 kg of solid.
- Adjustable battery of electric heaters, P max around 2.5kW
- 2 digital thermo-hygrometers
- Digital chronometer
- Digital anemometer for air flow rate measurement
- Electronic balance
- Switchboard IP55, with plant synoptic and ELCB and emergency pushbutton

Experiment Capabilities

- Mass and energy balance
- Drying processes
- Mass and heat transfer
- Air speed and temperature effects on drying process

Services Required

- Electric Supply 220 - 240V AC, 16 A, Single Phase, Earthed.

Note: Specifications are subject to change.

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