# Data Sheet Model: MFSU

Minimum Free Space Oven (ASTM & ISO)



### INTRODUCTION

Minimum Free Space oven (MFSU) is utilized for this drying process which features a compact heated chamber that provides the lowest practical volume, or minimum free space.

A stream of nitrogen or air is utilized to heat a known mass of coal to a temperature between 105 °C and 110 °C. The coal is then kept at this temperature until its mass remains constant. The mass loss of the coal is used to calculate the moisture content.

MFSU is a Universal Minimum free space oven that can work as per ISO, BS & ASTM test methods.

## **SPECIFICATIONS**

Maximum Temperature: 210°C

Maximum Continuous Temperature: 210 °C

Chamber dimensions (mm)- 43 x 195 x 300 (2.5L)

 $(H \times W \times D)$ 

- The ovens have an aluminum chamber that resists oxidation and corrosion, resulting in excellent temperature uniformity over the working volume.
- Before accessing the front of the work chamber, the nitrogen or air flow passes through a preheating chamber and is adjustable via a flow meter mounted on the control panel.
- The MFSU operates with a regulated flow of moisture free nitrogen gas which removes the moisture released by the coal at 105 °C as per BS 1016-104.2:1991, BS ISO 687:2010 & BS ISO 11722:2013.
- The MFSU also operates with a regulated flow of air as per ASTM D3173-11.



- High end Microprocessor PID controller.
- 3 Flow meters are fitted as standard to monitor gas flow of Nitrogen, Air & chamber seal integrity.
- Aluminium loading tray and puller are supplied as standard accessories.
- **External Dimensions (mm):** 210 x 465 x 548 (H x W x D) (Indicative)
- Supply / Power: 230V- 1 Phase 500 Watts.

#### OPTIONS

- Over-temperature protection
- Multi segment, multi program storage Controllers
- Crucibles (Quartz/Alumina/Fused Silica) with well-fitting lids
- Vacuum desiccator with gas inlet & gas outlet

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