

Minimum Free Space Oven (ASTM & ISO)/MFSU

Measuring a sample's weight loss upon drying is one way to determine the amount of moisture in coal. As needed by the test criteria, the MFSU, which is utilized for this drying process, features a compact heated chamber that provides the lowest practical volume, or minimum free space.

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

Standard Features:

- | Maximum operating temperature: up to 210°C.
- | The ovens have an aluminium 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 bottled nitrogen 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.
- | 3 Flow meters to monitor gas flow of Nitrogen, Air & Chamber seal integrity.
- | Aluminium loading tray is supplied as standard accessory.

Optional Features & Accessories:

- | Over temperature protection.
- | Multi segment, multi program storage Controllers.
- | Silica crucibles with well-fitted lids.
- | Vacuum desiccator with gas inlet & gas outlet.



Sample loading tray



MFSU

Volatile Matter Furnace, VMF /ASTM

The VM furnace is a bench mounted furnace specially designed for determination of volatile matter in coal and coke samples as per ASTM D3175.

The VM vertical furnace has a working bore of 50mm diameter and heated zone height of 190mm.

Specification:

- | Maximum temperature: up to 1000°C.
- | Continuous operating temperature: up to 1000°C.
- | Top opening furnace with 50 mm diameter and 150 mm deep.
- | RCD (Residual current device) is fitted to provide enhanced operator safety.
- | High grade resistance wire wound heating elements.
- | Energy efficient, high quality, low thermal mass insulation.
- | A rugged metal sheathed control thermocouple is protected from accidental damage and allows full use of work tube bore.
- | Temperature measurement by using with 'N' type thermocouple
- | High end microprocessor PID temperature controller to maintain the required temperature as per ASTM D3175.
- | Wire crucible holder along with Inconel crucible & lid are supplied as standard.



VMF/ASTM
(N2 gas port with flow meter option)

Optional Features:

- | N2 gas port with a flow meter.
- | Over temperature protection controller.
- | Metal cooling block for cooling the crucibles.
- | Analytical balance.



Inconel crucible with lid



Inconel crucible wire