Technology - The patented TORBED process suspends a rotating bed of free flowing mineral particles above a ring of static vanes through which high velocity hot air is directed. A rapid heat transfer is achieved from air to the fluidised solid particles resulting in uniform processed product.

Application - The TORBED provides a new approach to the exfoliation of screened, crude vermiculite ores of up to 2 Tonne per hour. The raw material is continuously fed into the Reactor operating at 1100 - 1300°C. As soon as exfoliation occurs, the product is transported out of the Reactor within the exhaust stream for separation and further product handling as required.

Unexpandable material contained within the crude ore is continually removed from the Reactor during the process thus providing a grit free finished product. The grit can be added back to the finished product if required.

Advantages - Compared with conventional rotary or vertical type furnaces:
- Hot air exfoliation - not flame impingement
- Uniform and consistent processed product
- Controllable process & exhaust temperatures
- Automatic compensation for moisture content
- Continuous grit removal
- Energy efficient
- Compact size
- Simple installation
- Environmentally clean

TORBED Reactor - The TORBED 1000 is a fully automatic, continuous process and will operate for extended periods of time with the minimum of operator attendance.

The TORBED 1000 is supplied complete with:
- Light oil or gas fired burner systems
- PLC automatic control system
- Process air system
- Grit removal system

The on-board PLC computer is interfaced by an interactive “touch screen” control panel designed for ease of operation providing the operator with variable and independent control of all operating systems.

The feed rate of the raw material is automatically controlled by the PLC system.

This unique system will maintain a uniform quality of the finished product whilst compensating for the fluctuating moisture content and the particle plate thickness of the crude ore.

As there are no moving parts within the Reactor, servicing and maintenance are simple.

Extract and dust filtration equipment are required.
**Data**

- Electrical Supply: 60 A at 380/415 V at 50 Hz
- Burner Fuel Supply: Natural Gas 65 - 70 m³/h
- Light Fuel Oil: 15 - 17 gall./h
- Extract Air Required: 10,000 m³/h at 450°C at –12mm WG

- Feed Rate:
  - G3 – Medium: 1700 kg/h
  - G2 – Fine: 1800 kg/h
  - G1 – Superfine: 2000 kg/h
  - G0 – Micron: 2000 kg/h

**Optional Equipment**

- Feeder Unit and Control System
- Cooler Unit and Control System
- Separator Units
- Dust Filtration Equipment
- Extract Air System
- Transfer Ducting
- Extra I/O for remote equipment
- Alternative electrical supplies
- Service and Spare Parts

**Dimensions**

(Dimensions in mm)

**Contact Details**

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