



# TORBED® 1000 REACTOR

*Superior technology for Exfoliation of Vermiculite...*

**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.



TORBED 1000 Assembled Module



Feed System

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.



Replaceable Combustion Chamber Module

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

Extract and dust filtration equipment are required.

## Data

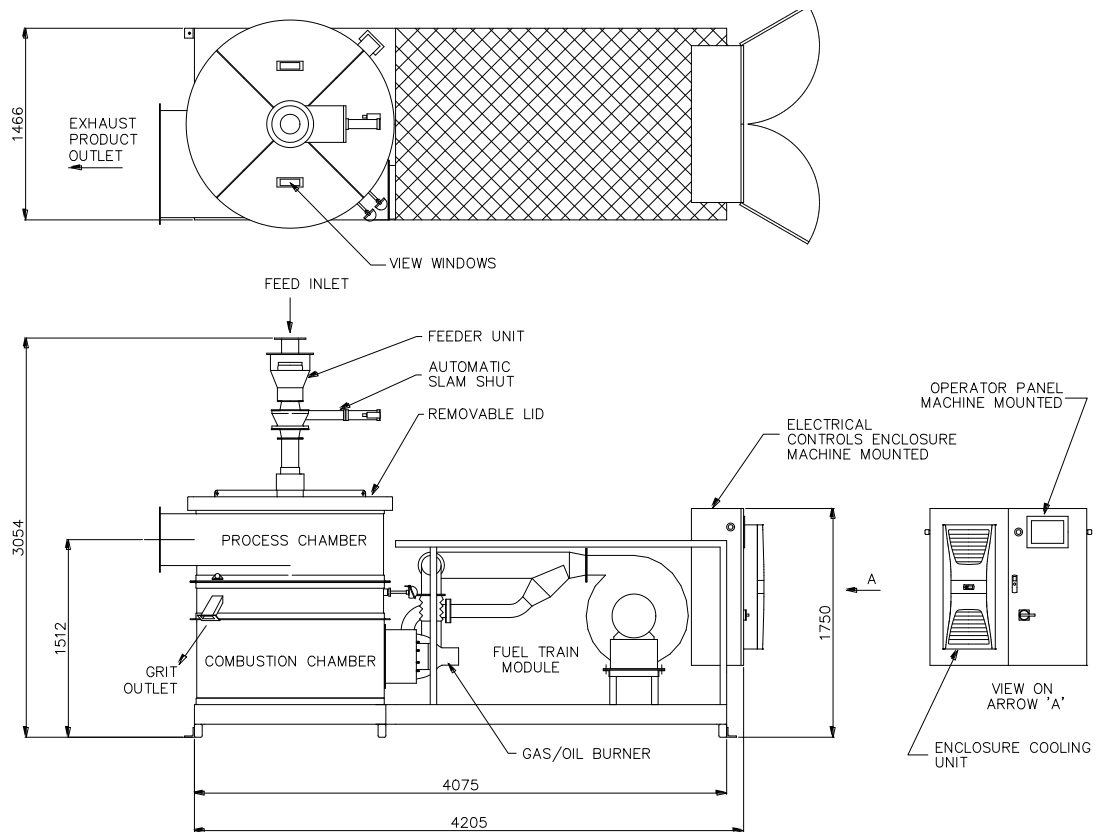
- |                        |   |                           |                |           |
|------------------------|---|---------------------------|----------------|-----------|
| ■ Electrical Supply    | - 60 A at 380/415 V at 50 Hz                    | ■ Feed Rate               | G3 – Medium    | 1700 kg/h |
| ■ Burner Fuel Supply   | - Natural Gas                                   | 65 - 70 m <sup>3</sup> /h | G2 – Fine      | 1800 kg/h |
|                        | - Light Fuel Oil                                | 15 - 17 gall /h           | G1 – Superfine | 2000 kg/h |
| ■ Extract Air Required | - 10,000 m <sup>3</sup> /h at 450°C at -12mm WG |                           | G0 – Micron    | 2000 kg/h |

## Optional Equipment

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

## Dimensions

(Dimensions in mm)



TORBED is a registered Trade Mark of Mortimer Technology Holdings Limited

## Contact Details

### United Kingdom

**contact** **Martin Groszek**  
**address** Torftech Ltd  
 188 Greenham Business Park  
 Thatcham RG19 6HW  
 United Kingdom  
  
**tel** +44 (0)1635 898754 #1022  
**fax** +44 (0)1635 36470  
**email** martin.groszek@torftech.com

### Canada

**contact** **Bob Laughlin**  
**address** Torftech (Canada) Inc  
 Unit 11, 1155 North Service Road  
 Oakville, Ontario L6M 3E3  
 Canada  
  
**tel** +1 289 291 3847  
**fax** +1 905 829 1343  
**email** bob.laughlin@torftech.com