



# *RLF 2000* *Red Lead Furnace*



***For consistent red lead oxide, Eagle is the one you need.***

**Eagle Oxide Services and MAC Engineering are proud to release the newest Red Lead Furnace in their line of Oxide producing equipment - RLF 2000.**

### **SPECIAL DESIGN FEATURES:**

The **RLF 2000** was developed at a leading independent lead oxide manufacturer based in the United States. It is designed to produce a wide range of Red Lead compounds using leady oxide feed material.

Red Lead is ideally suited for use in:

1. Lead acid storage batteries
2. Leaded glass, ceramics, and specialty chemicals

The **RLF 2000** is a perfect balance between the size and production capacity of the RLF 1000 and RLF 3000. The **RLF 2000** has the benefit of a smaller size that allows for easier, less expensive shipping while retaining a substantial 7,000kg to 9,000kg (15,400-19,800 lbs) daily red lead output, an ideal choice for the requirements of many of today's red lead manufacturers.

The **RLF 2000** uses electric heat and an oxygen rich atmosphere to convert leady oxide feed material ( $PbO$ ) to compounds that contain 20 to 98% Red Lead ( $Pb_3O_4$ ); the remaining portions being either tetragonal or orthorhombic  $PbO$ . Red lead is formed by heating  $PbO$  to a temperature of 450 deg. to 500 deg C, then holding within this range until the desired percentage of red lead is formed. The conversion is a controlled reaction of "time-and-temperature".

### **OPERATION:**

The **RLF 2000** is a refractory lined batch oven. It has a vertical drive shaft that supports and turns four agitator arms to stir the batch.

Batch temperature is controlled by electric heating elements located below the reaction chamber and isolated from the batch.

As the batch is converting to red lead, an operator takes samples from the furnace to determine the percentage of red lead, thus tracking the reaction.

The oxygen content of the air in the furnace chamber is monitored while an oxygen feed system automatically supplies oxygen to the furnace to maintain the desired oxygen level in the reaction chamber.

The batch is discharged when the red lead percentage is within specification.

Production rate is dependent on the type of feed material and the percent of red lead desired in the finished product.

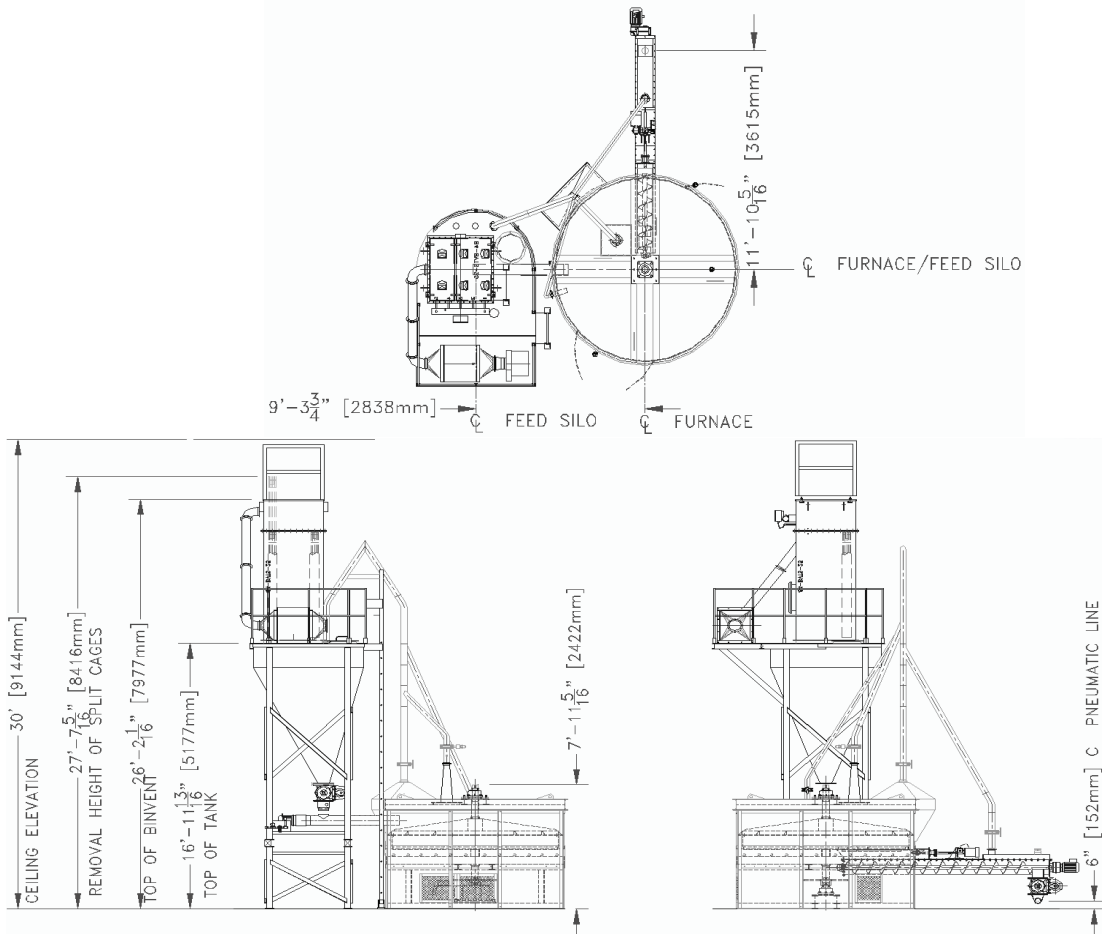
Various types of conveying systems can be used to transport the material to a storage tank. A hammer mill can be used to reduce the material to any desired particle size.



*RLF 3000 shown*

# RLF 2000 RED LEAD FURNACE

## TECHNICAL SPECIFICATIONS



### MANUALS AND INSTRUCTIONS:

- Installation manuals and assembly blueprints
- Operating procedure and trouble guide
- Material testing procedures
- Preventative maintenance procedures
- Repair and maintenance procedures
- Supplier warranties

### CONTAINERIZATION:

- Weight is approximately 10,000 kg.
- Can be shipped domestically and overseas

### TYPICAL PRODUCTION RATE:

(Depending on materials used and manufacturing conditions)

Uses Lead Oxide Feed Material with a Range of 5% to 30% Free Lead

% of Red Lead	Typical Product Range RLF 2000
23 to 28	7,000-9,000 kg. (7.7-9.9 tons) per day
75 to 87	6,000-8,000 kg. (6.6-8.8 tons) per day
95 to 98	up to 3,500 kg. (3.9 tons) per day



System Manufacturers:

Eagle Oxide Services  
Indianapolis, Indiana USA

*Helping to make the best batteries...yours.*

Sales Agent:

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For a preview of our equipment visit: [www.mac-eng.com](http://www.mac-eng.com)

