SLUDGE THERMAL DRYER
IN STAINLESS STEEL 316 L
PIERALISI OFFERS A COMPLETE SYSTEM FOR SLUDGE DRYING

Pieralisi is one of the biggest manufacturers of thermal dryers in the world. The dryer is totally automated and of easy operation. They have been produced for over 20 years in Spain and being successfully marketed in the following countries: Italy, Spain, USA, Turkey, Portugal, Morocco, Greece, Brazil and Argentine. In Brazil the dryers are used for drying dewatered sludge from the WWTP.

ADVANTAGES

- Reduction in 75% of the volume to find a new destine;
- Aggregates value to the residue
- It diminishes the necessity of using landfills
- It generates “A” class sludge that can be used in agriculture;
- Automatic system and easy to operate;
- Self-sustainable in WWTP with biodigesters;
- Low cost for operation and maintenance
- Low cost for assembling and electromechanical installations;
- Sludge temperature in the output around 40°C with no necessity of post-cooling;
- Lower operational complexity;
- Operation with negative pressure in the whole system, avoiding the emission of gases or dust;
- Clean plant, odor free and with low particle emission.

EASY OPERATION

- Low cost for assembling and electromechanical installations;
- Sludge temperature in the output around 40°C with no necessity of post-cooling.
- Lower operational complexity.
- Operational flexibility and security, with dislocation of the combustion chamber.
- Operation with negative pressure in the whole system, avoiding the emission of gases or dust.
- Clean plant, odor free and with no particle emission.
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- Processing sludge from WWTP, physical-chemical treatment, and agricultural residue;
- Smaller area for the implementation of the dryer;
- Totally horizontal construction;
- Low cost of investment and maintenance;
- Combustion chamber for multiple fuels (solid, liquid and gas);
- Use of energy from the waste gas turbine;
- Due to its cylindrical building and to the rotational movement, the dried sludge has a shape similar to spheres with 2 to 4 mm of dimension;
- Due to the outflow of gases in a parallel stream it is possible to dry thermal sensitive material - Retractile system of the combustion chamber.

SLUDGE THERMAL DRYER

SYSTEM CHARACTERISTICS

INTERNAL VIEW OF THE DRYING CHAMBER

DRIED SLUDGE

EXTRACTING SCREW - SILO

ETE - Barra da Tijuca

ETE - Sarapuí

DETAIL OF THE DRYER

DATE DRYERS

<table>
<thead>
<tr>
<th>Model</th>
<th>Water evaporated capacity (kg/h)</th>
<th>Wet cake drying capacity (ton/h)</th>
<th>Power installed (Kw)</th>
<th>Electrical consumption Kwh/m² of sludge</th>
<th>Specific consumption Nm³/kg of sludge</th>
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**Electrical consumption** Kwh/m² of sludge: 45.5, 78, 213.2, 319.8, 447.2

**Specific consumption** Nm³/kg of sludge: 32.5, 27.9, 23.8, 25.4, 28.8