

EPSILON[®] S RTO

For Pharmaceutical Plant



Owner

Tablet Manufacturing Plant in Europe

Type of production
Year of completion
Exhaust air capacity

Tablets production
2004
16,000 Nm³/h

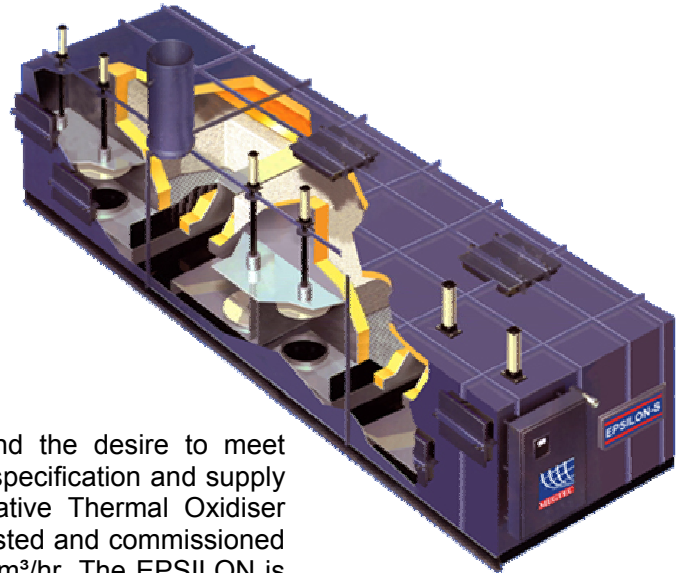
A European tablet manufacturing plant has invested in upgrading their manufacturing plant. One of the largest in Europe, it produces over 3.8 billion tablets a year for distribution all over the world and operates 24 hours a day, 7 days a week. The plant entrusted MEGTEC with responsibility for the supply and installation of its exhaust air cleaning system at this important production site.

MEGTEC SYSTEMS
bottom line is process knowledge

Turnkey order for MEGTEC SYSTEMS

After a preliminary process review of abatement technologies and vendors, MEGTEC SYSTEMS were awarded the contract for the turn key installation of Regenerative Thermal Oxidiser (RTO), with alternative systems excluded due to excessive energy usage.

The pressure sensitive nature of tablet production, which includes precise control of tablet coating thicknesses applied in a pressure controlled spraying environment in a rotating drum tablet coater, as well as the exacting requirements of pharmaceutical production in general, a detailed upfront engineering study was completed by MEGTEC SYSTEMS prior to defining the full project scope. Once the scope had been defined and a HAZOP completed, a defined turnkey order was placed with MEGTEC Systems.



The design peak process VOC emissions and the desire to meet exhaust emissions of 20 mg/m³ C, lead to the specification and supply of a MEGTEC EPSILON Small (S) Regenerative Thermal Oxidiser (RTO). The EPSILON S is a pre-assembled, tested and commissioned RTO system, available in sizes up to 35,000 Nm³/hr. The EPSILON is designed for inlet VOC concentrations of up to 25% LEL, with a 95% thermally efficient heat exchanger and hotside bypass system. This enables low energy usage at both the lowest and highest VOC concentrations, without the compromise of using either a lower thermally efficient heat exchange system, inlet dilution air or a cold side bypass, all which increase total energy consumption.

The EPSILON was delivered pre-assembled and Level III, enabling installation to be kept to minimum and the ability to take exhaust air within 4-5 days of delivery. The testing period at MEGTEC's facility was used for the customer's personnel training and system familiarisation.

Technical Data

VOC	Methanol, Acetone
Exhaust air volume flow	16.000 Nm³/h
Exhaust air temperature	ambient air
Scope of supply	Turn key job, incl. Epsilon, ducting, chimney, installation, commissioning
Solvent concentration	0 - 12 g/Nm³
Emission limit	Corg. < 20 mg/Nm³

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