

# MEGTEC MAGNUM

*Catalytic Oxidation with  
Worldwide Regulatory Compliance*



THE BOTTOM LINE IS PROCESS KNOWLEDGE

# MEGTEC MAGNUM



In designing the MEGTEC MAGNUM we capitalized on more than 30 years of experience in building VOC control systems. We combined proven engineering with innovative design to provide an oxidizer with uncompromising performance and reliability. The MEGTEC MAGNUM easily meets stringent emission control requirements. The system is capable of delivering VOC emissions below 20 mg/Nm<sup>3</sup> or 40 ppmv as C<sub>1</sub> depending on local standards. NO<sub>x</sub> production is very low when compared to thermal oxidizers because of the low operating temperatures. The system also offers long-term savings on gas and electric costs. Plus, the MEGTEC MAGNUM provides these high levels of performance in a compact, cost-effective package.

## Innovative Burner Design

The system's high-efficiency line burner ensures uniform temperature distribution of the air entering the catalyst beds. Uniform temperature profiling results in lower operating costs while maintaining high VOC cleanup.

## Integral Heat Recovery

A stainless steel plate-type heat exchanger maximizes operating efficiency and minimizes fuel costs. Thermal energy is extracted from the purified exhaust after it leaves the catalyst beds. The standard heat exchanger has an efficiency rating of 70% at reduced flow. An optional 75% efficiency heat exchanger is available.

## Proprietary Catalysts

MEGTEC supplies catalyst formulations with superior effectiveness, longevity, and resistance to masking. Our standard bead formulations are the best value in VOC oxidation catalyst available. And we stand behind our catalyst with the longest warranty in the industry.

## Temperature Control System

The MEGTEC MAGNUM maintains optimal temperatures for oxidation and ensures thorough VOC destruction. A comprehensive temperature control system provides automatic adjustments over a wide range of process operations. By limiting temperature extremes, the system lowers thermal stress which reduces maintenance and increases the life of the system. A cold-side bypass is standard. An optional hot-side bypass is available for higher VOC loadings.

## Maintenance-Free Exterior

The MEGTEC MAGNUM's standard embossed aluminum cladding provides durable protection from the weather. A painted exterior is optional.



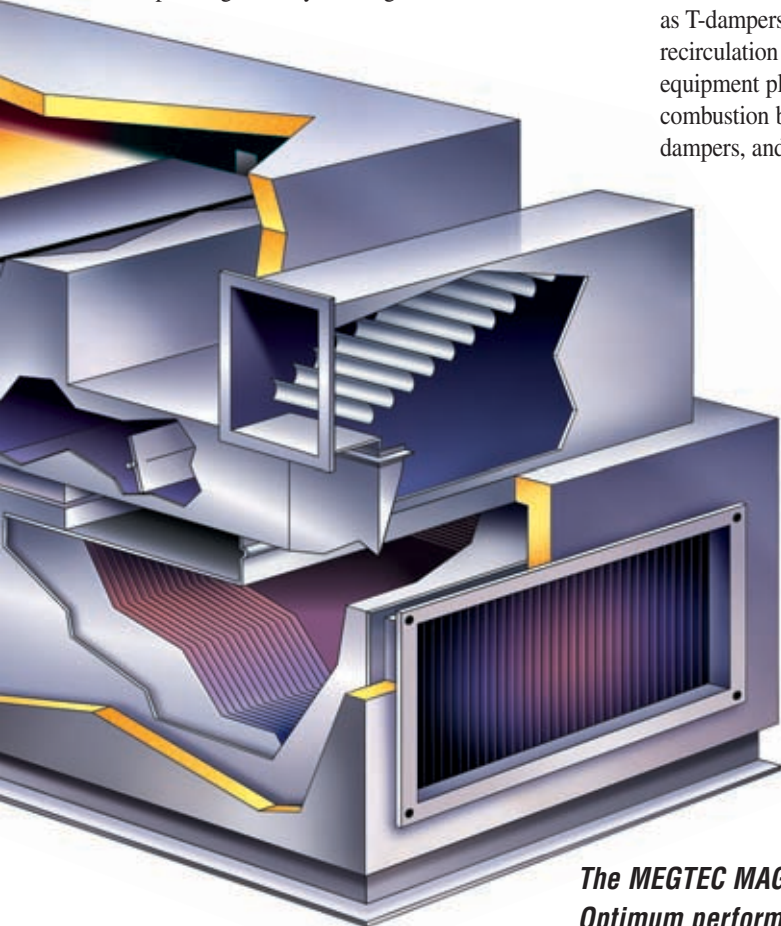
- *Worldwide Regulatory Compliance*
- *Exceptional Reliability and Energy Efficiency*
- *Minimal CO and NO<sub>x</sub> Emissions*
- *Proven Performance*

#### **Electrical Control Package**

The MEGTEC MAGNUM's completely automatic control system requires only a single push of a button for start-up. Programmable logic controllers (PLC) provide operating status data, first-out troubleshooting indications, and a maintenance schedule. Remote panels for each process line include oxidizer status indicators and a key switch that bypasses the oxidizer when running compliant coatings or for non-VOC applications.

#### **Internals and Insulation**

Internal components are manufactured from special alloys that provide superior resistance to embrittlement and stress cracking. The internals and ductwork are welded airtight in the factory to provide years of trouble-free operation. Expansion joints at critical areas control thermal stress. Layers of efficient insulation lower operating costs by limiting radiant heat loss.



#### **Flow Control**

The MEGTEC MAGNUM's standard equipment includes a rugged volume control damper for regulating airflow to the oxidizer. Optional AC variable-speed drives further reduce electrical operating costs on large, multi-process applications.

#### **Easy Maintenance Design**

The system's maintenance-friendly design means faster servicing, less downtime, and lower labor costs. All routine maintenance functions can be performed from the unit's exterior. A comprehensive operator training program covering all routine maintenance requirements is included.

#### **Optional Installation**

MEGTEC can provide a complete turnkey installation package. We can also provide various custom features and options such as T-dampers, remote oxidizer status box, recirculation loops, hot-side bypass, equipment platform, fan outlet ductwork, combustion blower piping, idle purge dampers, and exhaust elbow.



*Multiple MEGTEC MAGNUM units provide the capacity and reliability required by this high-volume flexography operation.*



*Catalyst testing is easy with pre-installed test cores. These provide a convenient cross-sectional evaluation of the catalyst bed for verifying performance.*



*The lightweight MEGTEC MAGNUM offers flexible installation. Roof-mounting saved this plant considerable cost in ductwork.*

***The MEGTEC MAGNUM ...  
Optimum performance, minimum maintenance, maximum value.***



## THE BOTTOM LINE IS PROCESS KNOWLEDGE

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### MEGTEC MAGNUM

<b>Standard VOC Destruction Efficiency (%)</b>	<b>98</b>
<b>Standard Thermal Efficiency (%)</b>	<b>70</b>
<b>Optional Thermal Efficiency (%)</b>	<b>75</b>
<b>Flow Capacity (SCFM)*</b>	<b>30,000</b>
<b>Standard Catalyst</b>	<b>936 (proprietary)</b>
<b>Catalyst Operating Range</b>	<b>500°F–650°F</b>
<b>Heat Exchanger</b>	<b>Stainless steel plate-type</b>

\* Multiple units can be used in tandem for higher flow rates.

## MEGTEC Offers...

### Complete Choice

MEGTEC can provide the optimal equipment for your needs. MEGTEC offers the world's most complete line of VOC oxidation technologies including catalytic, thermal recuperative, and thermal regenerative systems. An experienced engineer will work with you to determine the best equipment for your specific application.

### Expert Industry Knowledge

MEGTEC brings the experience of installing more than 4,000 VOC control systems in a diverse range of industrial applications in countries throughout the world. More than likely, we already have experience in providing VOC emission control for an application like yours.

### Customer-Driven Service

MEGTEC service is the most complete and extensive in the industry. Our worldwide network of strategically placed service centers provides rapid response. **Service is available 24 hours/day through a toll-free Hotline.** We also maintain an extensive inventory of spare parts to ensure the rapid response needed to minimize downtime.