

# Translating Ideas into ..... ..... SUSTAINABLE Solutions



ENGINEERED SYSTEMS & SERVICES



## AMERICAS

◆ MEGTEC Systems, Inc.  
Global Headquarters  
De Pere, WI, USA

Solvent Recovery Division  
MEGTEC Systems, Inc.  
Columbus, OH, USA

Solvent Recovery Division  
MEGTEC Systems, Inc.  
Vero Beach, FL, USA

MEGTEC TurboSonic, Inc.  
Waterloo, ON, Canada

## EUROPE

MEGTEC Systems SAS  
Lisses, France

MEGTEC Systems Ltd.  
Maidenhead  
Berkshire, England

MEGTEC Environmental Ltd.  
Standish, Wigan, England

MTS Environmental GmbH  
Maintal, Germany

MEGTEC Systems AMAL AB  
Åmål, Sweden

MEGTEC Systems AB  
Göteborg, Sweden

MEGTEC TurboSonic, Inc.  
Italian Branch  
Bollate, Milan, Italy

## ASIA

MEGTEC Systems Shanghai Ltd.  
Shanghai, P.R. China

MEGTEC Systems  
India Pvt., Ltd.  
Pune, India

## AUSTRALIA

MEGTEC Systems Australia Inc.  
Glen Waverley  
Victoria, Australia

# The Core of our Success

MEGTEC is a privately held, leading global design, engineering and manufacturing company providing industrial products and services to a diverse customer base serving a wide variety of market sectors. Our customers tell us that their highest priority when selecting industrial equipment is to have the lowest lifetime total cost of ownership. Delivering this total lifetime performance is our No. 1 priority, while our dedication to sustainability and the environment underscores everything we do.

Since the company's inception, significant research and development efforts have led to more than 100 patents, with many innovations helping to create cleaner energy and sustainable solutions for our clients. Today, our equipment not only delivers the specified processing requirements, quality and reliability, but minimizes waste of raw materials and energy.

At the same time, our highly-trained staff works with the right tools and technologies in an environment that fosters innovation – and results in a passion for developing technologies at our global engineering solution centers. The synergy between people, their experience and the needs of our customers has allowed us to successfully support our customers for more than 40 years.

Our financial stability ensures continued investments that will sustain the company's future growth as well as ensure our leadership position in the global marketplace.



*We believe that our success can only be measured by the success of our customers!*

*Mohit Uberoi  
President and CEO*



*Headquartered in a 365,000 square foot manufacturing facility in De Pere, Wisconsin, USA, MEGTEC employs approximately 350 people in the U.S. and approximately 600 globally.*



# Oxidizers & Heat Recovery

MEGTEC is the technology leader in supplying equipment for environmental compliance and sustainability. Our technical staff has a complete understanding of and experience with environmental issues, regulations and technologies concerning compliance, sustainability and energy reduction. MEGTEC engineers are devoted to identifying and delivering cost-effective solutions for total energy and environmental performance while improving bottom line results. Our broad range of environmental compliance technologies across thousands of installations demonstrates proven performance in diverse process applications worldwide.

When solvents are used in the manufacturing process, HAPs (Hazardous Air Pollutants), VOCs (Volatile Organic Compounds) or odorous emissions are discharged, requiring a regulatory compliance solution. This is where MEGTEC's knowledge and thorough understanding of their customers' processes provide un-paralleled benefit.

MEGTEC provides ultra energy-efficient Regenerative Thermal Oxidizers (RTO). RTOs offer superior heat recovery characteristics versus any other oxidation system. Thermal oxidizers use recovered energy to pre-heat incoming process air to oxidation temperatures. This significantly lowers overall operating costs. A regenerative thermal oxidizer is particularly effective for process streams with low solvent loading.

Secondary heat recovery systems can also dramatically reduce operating costs for many processes. MEGTEC's process heat recovery system uses clean heated air from the process or oxidizer and returns it for use as supplemental building heat, or return to the process, for new and existing production lines. MEGTEC also offers pre-packaged, stand-alone systems for air-to-air process heating, steam production through waste heat boilers, and make-up air systems.



*Secondary heat recovery system on an oxidizer.*

## **Product offerings include:**

- Regenerative thermal oxidizers (RTO)
- Recuperative Thermal Oxidizers
- Regenerative Catalytic Oxidizers (RCO)
- Recuperative Catalytic Oxidizers
- Secondary heat recovery systems
- Pre-packaged, stand-alone heat recovery systems

*pictured: CLEANSWITCH® RTO units. MEGTEC offers single and multiple can regenerative thermal oxidizers. Each model has its own optimum operational features depending on the region and process.*



# Solvent Recovery, Distillation & Purification Systems

MEGTEC is a sustainability-focused company – we provide systems that can help our customers to not only meet or exceed environmental regulations, but also reduce their energy consumption and waste.

MEGTEC supplies solvent recovery systems that utilize regenerative activated carbon adsorption, condensation and scrubbing technologies to control Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) vapor emissions from solvent-based manufacturing processes. Carbon adsorption technology from MEGTEC is a simple and effective method for removing volatile organic compounds, solvents and odors from manufacturing process emissions. MEGTEC uses activated carbon because it is the most versatile of all adsorbents due to its broad pore size distribution and pore volume, which makes it suitable for virtually any process generating solvent-laden air.

In addition to environmental compliance capabilities, MEGTEC's vapor-phase carbon adsorption systems, coupled with distillation technology, can recover up to 99% of the solvent emissions for re-use, virtually eliminating solvent expense. Distillation systems separate water soluble solvents from the water and/or separate a solvent mixture into its individual components prior to recycle or re-use. The recovered and purified solvents are suitable for re-use in the manufacturing process of the fine chemical, pharmaceutical and specialty chemical industries.



*Distillation system at a pharmaceutical plant.*

**System offerings include:**

- Solvent recovery / carbon adsorption
- Distillation & purification
- Steam stripping
- Rectification
- Liquid-liquid extraction
- Extractive distillation
- Scrubbing

*pictured: Solvent Recovery & Distillation System for treating N-Methylpyrrolidone (NMP) solvent streams. Our systems treat streams containing a multitude of solvents such as chlorinated, fluorinated, brominated, aromatic, and aliphatic hydrocarbons, ketones, esters, alcohols, and aprotic solvents (DMF, DMAC and NMP).*



# Wet Electrostatic Precipitators & Evaporative Gas Cooling Systems

There is a tremendous need to reduce emissions of harmful pollutants to protect the environment. MEGTEC is a leader in providing air emission control technologies related to control of volatile organic compounds (VOC). To further expand our business, we have acquired TurboSonic (now MEGTEC TurboSonic) to add particulate emission control technologies to our portfolio including Wet Electrostatic Precipitator (WESP) systems and scrubbers. TurboSonic is also a leader in supplying evaporative gas cooling and DeNOx systems. With the strong market presence that TurboSonic has in industries such as iron and steel, cement, power generation and waste-to-energy markets, we can now offer an expanded portfolio of products and services to existing and new markets.

The SonicKleen™ WESP removes sub-micron particulate, heavy metals, dioxins, furans, mists and fumes from process gas streams. The vertical down-flow, hexagonal tube design delivers the best combination of removal efficiency, low maintenance, low-pressure drop and small footprint. The TurboVenturi Scrubber provides gas stream saturation and high efficiency particulate removal as a stand-alone or in front of the WESP.

SoniCool™ Evaporative Gas Cooling provides accurate temperature and humidity control to condition high-temperature process gas streams protecting downstream equipment, reducing gas volumes, and increasing capacity while improving air pollution control.



*Evaporative gas cooling systems are commonly used in the metallurgical and cement industries.*

## **Product offerings include:**

- Wet electrostatic precipitators
- Semi-dry and wet scrubbers
- Evaporative gas cooling & conditioning systems
- SNCR DeNOx systems
- Atomizing nozzles

*pictured: SonicKleen™ Wet Electrostatic Precipitator (WESP). Patented Turbotak atomizing nozzles (opt.) provide an ultra-fine conditioning spray at the inlet to the WESP depending on the nature of the particulate and the gas stream's degree of saturation.*



# Dryers, Ovens & Specialty Coating Lines

MEGTEC's core competencies in industrial web drying and curing have made us the recognized leader in designing and manufacturing state-of-the-art flotation drying and curing systems for advanced materials applications. Using patented nozzle designs, proven configurations, and our experience with drying rates, MEGTEC matches these technologies to the customer's process requirements, while balancing heat transfer with web handling characteristics. Our extensive roll-to-roll experience with a wide range of substrates including ultra-thin films, foils, laminates, membranes, fabrics and other flexible web materials is unparalleled.

MEGTEC offers a wide range of infrared (IR) configurations to meet the demands of a variety of products and applications. These include systems designed for complete drying, pre-heating, pre-drying, fusing, curing and profiling of continuous materials.

For certain specialty manufacturing processes such as the production of lithium-ion battery electrodes and other energy storage applications, MEGTEC works with industry suppliers to offer turnkey coating lines. In addition, we offer a lab-scale coater for short production runs.



*MEGTEC customers can take their product concepts to full-scale production by developing, testing or improving their advanced materials in our R&D Center.*

## **Product offerings include:**

- Complete coating lines for specialized applications
- Non-contact air flotation dryers and ovens
- IR or combination IR/convection dryers
- Roll support dryers
- Clean room dryers
- Festoon dryers
- Tenting ovens
- Inert ovens
- UV curing systems
- Non-contact air turning devices

*pictured: Legend ®-style convection air flotation dryer, over 200 ft long. MEGTEC industrial dryers and ovens handle flexible substrates including paper, ultra-thin films, foils, laminates, fabrics and heavy coil stock steel.*



# Dryers, Splicers & Rewinders

The digital world surrounds us all, and Digital Printing is certainly growing through aggressive technical adaptations within the printing industry. As presses run at faster speeds, as webs get wider, and as the need for higher quality print increases, MEGTEC offers high productivity equipment and systems – ready to help launch customers into the world of digital printing.

MEGTEC's 40+ years of experience in traditional newspaper and commercial printing markets has led MEGTEC to a leadership position in the digital printing world. MEGTEC is able to deliver digital press manufacturers proven product approaches in web handling, splicing and rewinding as well as drying and curing, blended with unique and innovative technologies to form leading-edge solutions. MEGTEC's capabilities span the entire digital press line, enabling complete integration possibilities. As digital presses are designed to produce higher levels of throughput – running wider and faster – the need for MEGTEC's expertise has come increasingly clear to the marketplace.

MEGTEC offers zero-speed splicers for the digital printing market. Our zero-speed splicers have the benefit of changing the running roll of different diameters, loading new rolls of a different diameter and changing paper type while maintaining full production, thereby reducing paper waste and improving efficiency.

The MEGTEC automatic turret rewinder is specifically designed for digital presses. As web speeds and paper widths increase, automated roll changes are widely accepted. Our automatic splicing rewinder increases productivity by allowing continuous operation.



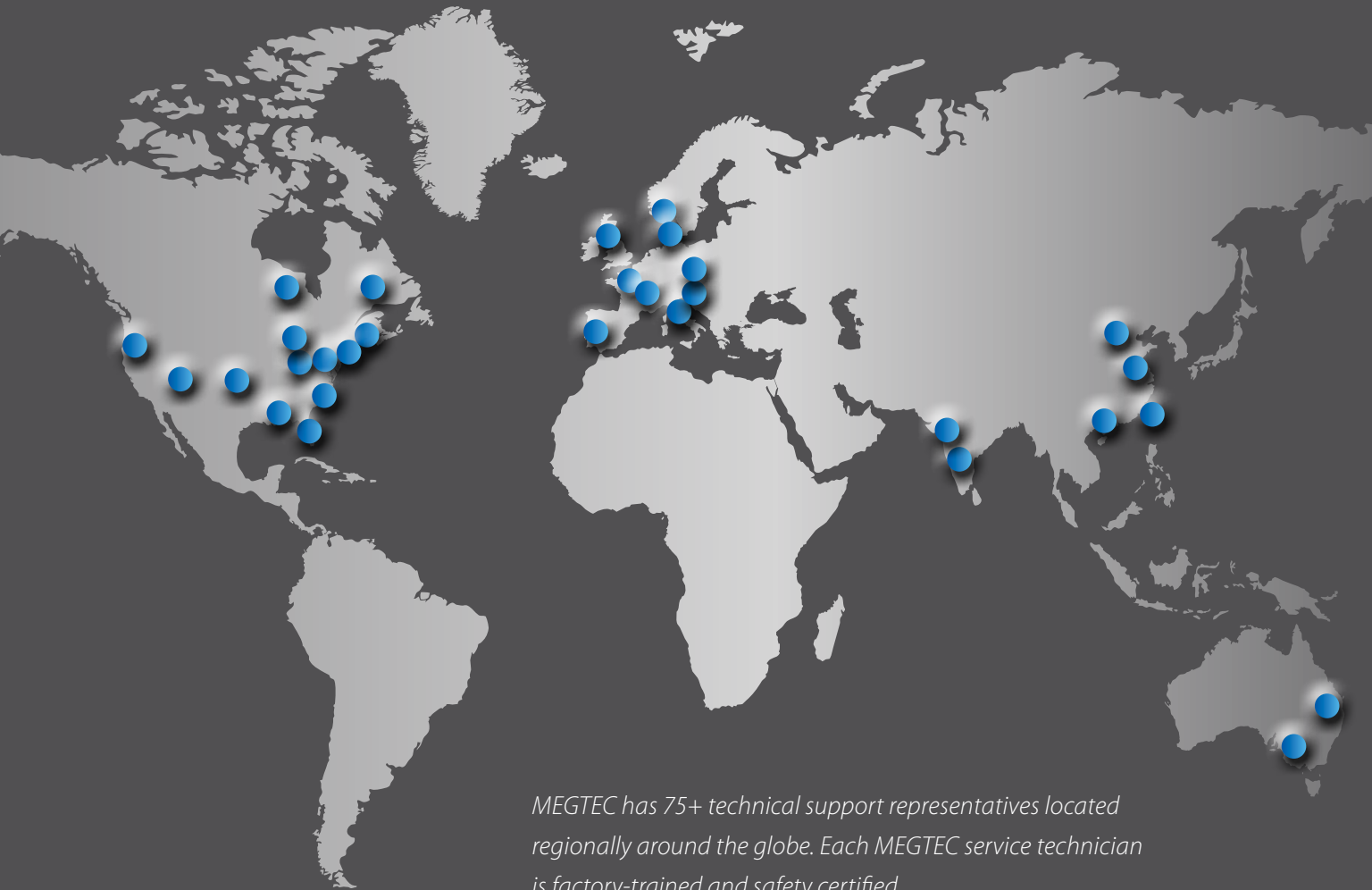
*MEGTEC's Dual-Dry® dryers incorporate the patented and proven Dual-Dry® air nozzle system, ensuring heat and mass transfer performance and web stability - even with heavy ink coverage on lightweight papers at low web tension..*

## **Product offerings include:**

- Non-contact air flotation dryers
- UV curing systems
- Chill stands
- Zero and match-speed splicers
- Rewinders
- Web guides
- Infeeds
- Silicone coaters
- Non-contact air turning devices

*pictured: With over 40 years of experience in traditional newspaper and commercial printing markets, MEGTEC is the technology leader in the digital printing market with its splicing, rewinding and drying technologies.*

# GLOBAL SERVICE & PARTS SUPPORT



*MEGTEC has 75+ technical support representatives located regionally around the globe. Each MEGTEC service technician is factory-trained and safety certified.*

REGIONAL PARTS DISTRIBUTION NETWORK LOCATED IN:

Australia | Canada | China | France | Germany | Sweden | United Kingdom | United States

# Services

When our customers consider their Total Cost of Ownership, they look to MEGTEC for after-sale support. We continue our sustainability focus in our services business where we provide refurbishment and upgrade opportunities to help our customers extend the life of their existing equipment. Many times, product changes and customer requirements can make existing equipment obsolete for its originally intended purpose; however, it may be possible to modify existing equipment to meet new demands. Often, vintage equipment can be repaired, upgraded, retrofitted or even relocated to provide continuous service at a fraction of the cost of new. In addition, we can help our customers extend the life of their equipment by providing technical bulletins and upgrade kits for replacement of obsolete or inefficient components.

Our energy optimization team of experts bring decades of engineering, manufacturing, process and service experience to our customers in a broad range of industries. We are the experts in air handling, drying, heating, cooling, process and combustion control, and can help to improve the operating efficiency and maximize equipment performance. Of particular value to our customers is our energy audit service where our engineers analyze current process energy usage and offer solutions to reduce energy consumption.

The MEGTEC family of companies provides us with a large installed base – and we support our equipment with an extensive spare and replacement parts distribution network with regional parts inventory for urgent or non-urgent shipment, 24 hours a day, 7 days a week. Because we have the equipment files and drawings in house, our parts technicians can search the specific equipment records and determine what replacement or spare parts are available or what upgrades and retrofits have been developed for the machine.



*MEGTEC's Preventive Maintenance (PM) Services gives you right-from-the-source expertise. Our factory-trained technicians are skilled in maintaining and upgrading equipment.*

**Services offered:**

- Parts & technical support, 24/7
- Preventive maintenance programs
- Turnkey installation & relocation services
- Equipment Rebuilds
- Engineering studies
- Process energy audits
- On-site project supervision
- On-site or in-house training programs

