

Clean Air Solutions

for the Engineered Wood Products Industry



Single Source Supply and Complete Solution

The engineered wood products industry relies on the technologies offered by Dürr Megtec for effective emissions control of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from dryers and press vents. We are a leader in providing proven control technologies for the reduction of VOCs and HAPs, now offering you a more comprehensive suite of emissions control products. We also provide advanced solutions for particulate removal, including wet and dry electrostatic precipitators (ESP), scrubbers and oxidation equipment.

Wet Electrostatic Precipitators

Wet ESPs provide high efficiency removal of particulate matter and “blue haze,” either as a stand-alone device or combined with downstream treatment systems such as the CleanSwitch® regenerative thermal oxidizer (RTO).

The wet ESP system consists of a two-part exhaust gas treatment configuration, including a gas conditioning pre-scrubber and a wet electrostatic precipitator.

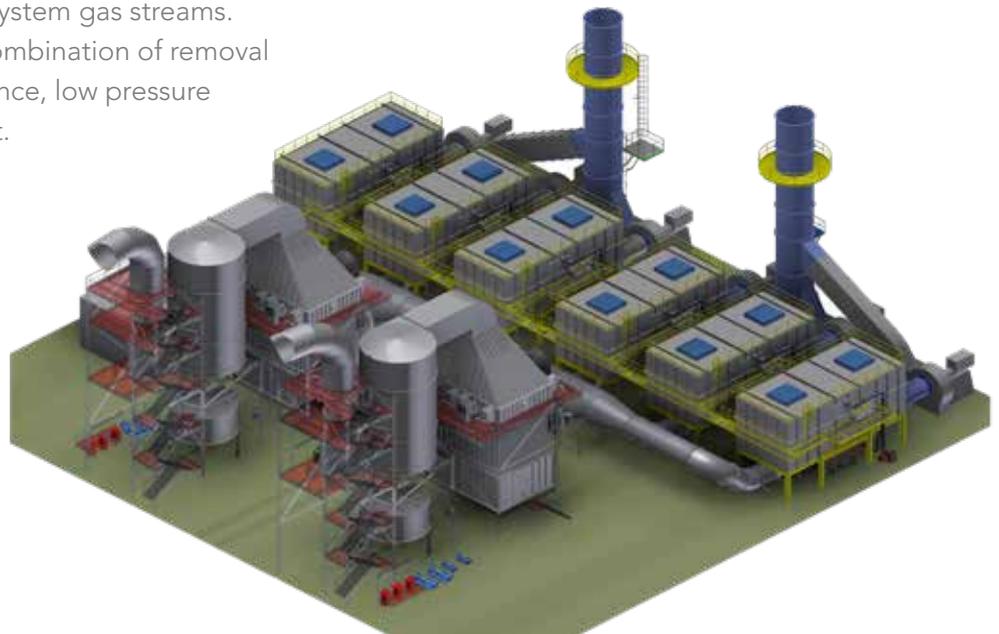
The wet electrostatic precipitator removes sub-micron particulate including back-half salts (protecting the RTO), tar-pitch, ash and fiber from dryer and energy system gas streams. Our design delivers a combination of removal efficiency, low maintenance, low pressure drop and small footprint.



Southern yellow pine OSB dryer venturi scrubber and wet ESP system



Particleboard dryer wet ESP system



Pre-Scrubbers

Dürr Megtec offers both venturi and cyclonic pre-scrubber designs to ensure water saturation of exhaust stream and to achieve considerable removal of coarse filterable particulates. This step is important in many applications to reduce particulate build-up on the connecting ductwork and downstream wet ESP. The wet ESP can therefore operate at a higher corona power for improved capture efficiency. Pre-cleaning of coarse particulates allows for a longer period between washdowns.

Typically the venturi pre-scrubbers are used on higher particulate loading applications, while the cyclonic scrubbers are used on wood dryer applications including OSB, particleboard, pellet plants, MDF, etc.

Dry Electrostatic Precipitators

A dry ESP is used in the control of particulates on biomass-based heat generators for drying of wood and wood products. The Dürr Megtec dry ESP has high reliability and performance, a design utilizing proven collector plate designs, rigid discharge electrodes, and top-mounted electrically driven, externally maintainable collector and discharge electrode rappers.



Southern yellow pine wood dryer venturi



MDF flash tube dryer venturi



Wet electrostatic precipitator

Regenerative Thermal Oxidizers (RTOs) for VOC/HAPs Control

Dürr Megtec is a leader in providing regenerative thermal oxidizers for VOC control for OSB, MDF, plywood, particleboard, wood pelletizing and other engineered wood products, with particular expertise in solving the problems of media plugging and alkali attack associated with wood dryer exhaust.

With thousands of systems installed worldwide in many process industries, we have the knowledge to provide an optimized solution for your specific needs. Our designs are modular, operator-friendly, and cleanable.



MDF flash tube dryer RTOs



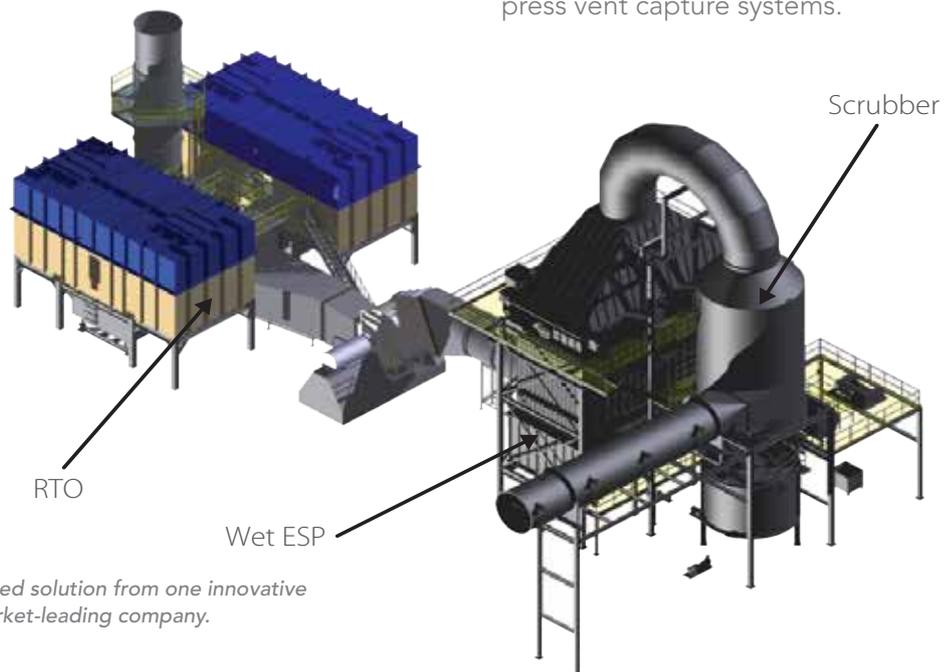
Southern yellow pine OSB dryer RTO

We have the experience to supply alkali-resistant ceramics and corrosion-resistant materials of construction to suit the application.

Dürr Megtec's commitment to the wood products industry is proven with the availability of a pilot unit scrubber/wet ESP/RTO for testing slip-streams of your process to determine the optimal pre-filtration and RTO ceramic bed configuration.

With our extensive air handling experience, we can also provide services to reduce fugitive emissions, control process exhaust flow rates and improve the efficiency of your press vent capture systems.

Scrubber/Wet ESP/RTO System



Total integrated solution from one innovative market-leading company.

CleanSwitch® RTO

The CleanSwitch® regenerative thermal oxidizer (RTO) provides simplicity and cost effectiveness in a 2-chamber, single vessel with up to 99+% VOC removal. With thermal efficiencies of up to 97%, the CleanSwitch RTO provides exceptional operating economy. For many applications, it will run in a self-sustaining mode; that is, no additional fuel is required to destroy VOCs and help achieve a high degree of destruction.



Southern yellow pine biofuel dryer RTO

CleanSwitch RTO Advantages

With more than 300 units installed since 2000, and over 50 in the engineered wood products industry, the CleanSwitch RTO provides many advantages. The non-contacting, non-wearing single valve provides positive sealing and smooth switching using high pressure air.

The engineered ceramic heat recovery beds offer low pressure drop, excellent bed-washing characteristics, and alkali-resistant materials. The electric motor valve drive provides quiet operation and is reliable in virtually all climate conditions. Its modular construction minimizes installation time and can be relocated economically.



Southern yellow pine OSB press RCO

Regenerative Catalytic Oxidizers

For press vent applications, Dürr Megtec offers regenerative catalytic oxidizers (RCOs) to reduce gas consumption and lower operating costs. Engineered catalyst is added to the ceramic bed allowing the combustion process to occur at significantly lower operating temperatures. Typically, gas consumption is lowered by approximately 50% as compared to RTO operation.



Southern yellow pine OSB press RCO

Upgrades and Rebuilds



Southern yellow pine press ceramic bed RTO upgrade

Oxidizer Upgrades

Dürr Megtec can rebuild or upgrade your oxidizer to optimize its efficiency and performance, saving you energy costs. Vintage regenerative thermal oxidizers may contain random-packed heat exchange media. By replacing this media with structured media, you can increase the capacity of your existing RTO, reduce its operating costs or modify it to tolerate inorganic particulate.

Capacity Increase

The pressure drop associated with random-packed heat exchange media originally used in older RTOs is very high when compared to today's structured media. Replacing this media with structured packing reduces the pressure drop across the unit. This not only helps maintain or enhance thermal efficiency, but also increases flow capacity, lowers operating costs, and increases airflow capacity.

Dry and Wet Electrostatic Precipitator Upgrades

Dürr Megtec has considerable expertise and years of experience in electrostatic precipitation equipment. We provide problem-solving insight to troubleshoot and improve the performance of many of the commercial designs in operation, including those supplied by others, worldwide.

We will analyze and assess your ESP operation and physical equipment and compare it to production requirements and emissions reduction goals. Using this information, we can restore the equipment to help achieve regulatory compliance, improve availability, and minimize equipment failure rates. Our services include:

- Upgrade to more advanced power supply designs
- Enhanced performance and reliable discharge and collecting electrodes
- High voltage purge air system upgrades
- Better performance through gas flow distribution improvements
- Optimized upstream process operation to maximize corona power in wet or dry ESPs
- Improved rapper or wash systems to keep precipitators cleaner and performing at a higher level
- Water treatment system upgrades
- Cleanability enhancements

Preventive Maintenance (PM) Services

Preventive maintenance services offer right-from-the-source expertise. Our factory-trained technicians are skilled in maintaining and upgrading your equipment.

Dürr Megtec's PM Program offers reliable protection against equipment breakdown and keeps your equipment running at optimum levels. Our PM service technician will look at ways you can save money by making annual adjustments and balances of dampers that will help reduce your energy costs. Ask us about our Energy Audit Program.



Installations and Relocations

Dürr Megtec engineers and contractors provide professional installation services for your new or existing equipment. Our capabilities range from contractor supervision to complete turnkey installation on projects of all sizes. We work with our clients from the start of the project through commissioning to provide a trouble-free installation that is within your budget.



Technical/Parts Support

When you need immediate answers, you can rely on Dürr Megtec's Customer Care team. We can offer advice on equipment enhancements to keep up with evolving process demands and advancing technologies, and help your operation respond to changing environmental and insurance regulations. We provide fast, accurate service that will help you troubleshoot your process.





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