

# Cold Jet Dry Ice Blasting Technology

COLD JET DRY ICE BLASTING CAN REDUCE WOOD PRESS CLEANING TIME BY AS MUCH AS 85%, REDUCING LABOR COSTS AS WELL. COLD JET DRY ICE BLASTING SYSTEMS ELIMINATE THE MANUAL CLEANING OF PRESSES, DRYERS AND VENTS, WHILE INCREASING EMPLOYEE SAFETY AND HEALTH.



Producing MDF is considered a rough manufacturing process. After all, the wood used in MDF is debarked, chipped, heated, rubbed apart into fiber bundles, injected with wax and resin, baked, compressed, pressed, cut, dried, trimmed and laminated, all before it is shipped to consumers. Like any manufacturing process, there is a point where the equipment needs to be cleaned to preserve the equipment and ensure the quality of the end product. For MDF manufacturers, a high quality and clean process can be the difference between producing cull board for hog fuel, and making Superior MDF, which produces the greatest return.

Traditional manual methods of cleaning the conveyors, wood presses, blades and other equipment used in the manufacturing of MDF can be a disruptive, labour intensive and dangerous processes. Cleaning the hot and dusty residues from the processing equipment usually involves a maintenance crew working a number of hours during a regular scheduled maintenance shift. Often, the cleaning requires the facilities to shut down their operations, while the workers have to disassemble machines and work closely with potentially dangerous residues and equipment. Even then, tough to reach parts of the equipment may not get cleaned.

Dry ice blast cleaning offers MDF manufacturers a fast, efficient and environmentally responsible way to clean equipment. Dry ice blasting was originally developed nearly 40 years ago in the 1970s for the aerospace industry. In those days, the cleaning systems were very large,

cumbersome and expensive, requiring their own tractor trailer for transport. Today, the cleaning systems have been condensed into small, portable machines that now include aerospace technology and allow maintenance workers to spot clean equipment while still online, as well as perform thorough regularly scheduled maintenance.

Dry ice blast cleaning systems use compressed air to accelerate dry ice pellets and particles to remove contaminants from the surface of the equipment being cleaned. The dry ice pellets vaporize upon impact, which eliminates the added cost and inconvenience of secondary waste treatment and disposal. The cleaning process provides six core benefits for MDF manufacturers.

**Reduce costs** – Most cleaning practices today involve a multi-step process that requires production to completely stop, and frequently includes a number of people, a variety of cleaners and secondary waste disposal that adds costs to production. Dry ice blast cleaning reduces labour costs because it can be done quickly by one person and in significantly less time than conventional manual labour. The process also eliminates the need to completely shut-down, cool, disassemble/assemble and relocate equipment for cleaning. A faster, superior clean delivers increased production and reduced scrap.

**Improve Quality** – Dry ice blast cleaning has proven to be a superior cleaning method to remove built-up and baked-on contaminants,

and hardened or sticky resins from conveyors, ovens, presses and saws, as well as other equipment in a wood processing environment. When contaminants are not removed completely from the production line, then product quality suffers and unscheduled downtime is more likely to occur. This downtime delays the entire production process.

**Improve Productivity** – By cleaning equipment in less time, plant managers will be able to get more production cycles from their existing equipment. Dry ice blast cleaning helps to reduce prolonged shut-down times, as equipment can be cleaned while hot and online. Preventive maintenance or spot cleaning can be done more frequently without impacting production.

**Preserve Equipment** – Dry ice blasting is non-abrasive, non-flammable and non-conductive; meaning it won't damage equipment and is safe for most surfaces, including electrical components.

**Improve Worker Safety** – Dry ice blast cleaning eliminates exposure to volatile organic compounds (VOC) and the need to work closely with hot equipment. The process eliminates repetitive motions of hand cleaning or scrubbing, chiseling or activities that require pounding, sanding or

scraping. Cold Jet's systems have ergonomic designs that reduce physical stress on workers, including carpal tunnel and other adverse impacts caused by manual processes.

#### Support Environmental Initiatives

– Dry ice blasting makes productive use of otherwise unproductive CO<sub>2</sub>. The process eliminates the need for VOCs and water in the cleaning process. Traditional cleaning processes require the proper disposal of toxic waste (towels, cleansers, contaminated water, etc.). Dry ice blast cleaning does not produce secondary waste and reduces downstream contamination.

Each of MDF's positive qualities is a result of a constantly perfected manufacturing process that focuses on quality. Dry ice blast cleaning provides MDF manufacturers with a complementary cleaning solution that helps to protect the process, as well as their most expensive (equipment) and valuable (people) assets.

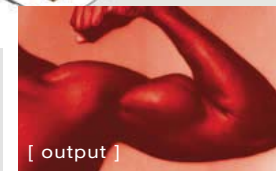
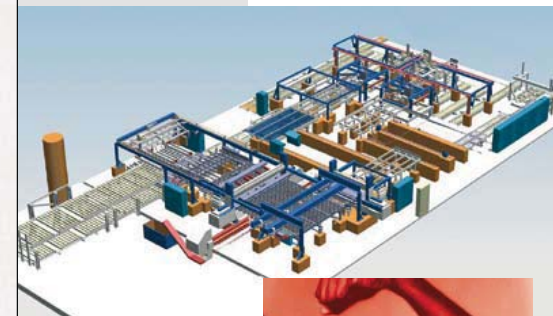
#### Cold Jet, LLC

Cold Jet, LLC is a world leader in dry ice blasting and production technology. Since 1986, Cold Jet has been developing innovative production and cleaning solutions ranging from handheld blasting systems to customized engineered solutions that solve a variety of cleaning challenges around the world. Cold Jet offers the largest selection of environmentally responsible dry ice blasting machines, including the award-winning Aero Series and the revolutionary i3 family of precision cleaning systems, which features the company's patented shaved ice and feeder technologies. In addition to its dry-ice based cleaning systems, the company's dry ice production equipment is used by every major gas company worldwide to produce the highest density dry ice available. Cold Jet is a private company with global headquarters in Loveland, Ohio and international operations in Europe, Asia, Canada and Mexico. For more information, visit [www.coldjet.com](http://www.coldjet.com) or call 1-800-337-9423.



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