



ENVIRONMENTAL CLEANING AND SURFACE PREPARATION ENVIRONMENTAL CLEANING AND SURFACE PREPARATION





INDUSTRIES INDUSTRIES INDUSTRIES INDUSTRIES INDUSTRIES INDUSTRIES INDUSTRIES INDUSTRIES PLASTICS ELECTRONICS PACKAGING MOLDS AEROSPACE MEDICAL HISTORICAL RESTORATION AUTOMOTIVE





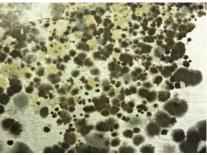




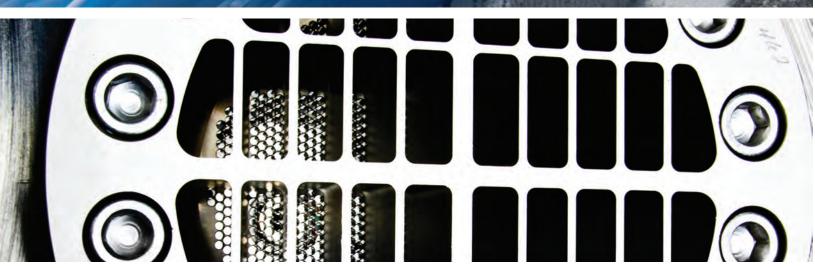
MOLD REMEDIATION FOUNDRY FOOD & BEVERAGE CHEMICAL FIRE & SMOKE RESTORATION POWER











DRY ICE MANUFACTURING DRY ICE MANUFACTURING DRY ICE MANUFACTURING



Cold Jet. A global leader.

Cold Jet is the global leader in environmental cleaning and surface preparation systems, dry ice manufacturing technology and custom solutions. Our superior innovations increase productivity and profits while also saving companies time, money and resources.

We are Cold Jet.

At Cold Jet we design, manufacture and support dry ice cleaning and production systems that meet or exceed industry and regulatory requirements, increase productivity and worker safety, and minimize solid/water waste streams.

Experience that counts.

We have more than 25 years of experience dedicated to environmental responsibility and providing costadvantages for our global customers. Cold Jet offers the most reliable dry ice blast cleaning systems and nozzles, dry ice manufacturing equipment and custom solutions on the market. This, combined with our unparalleled expertise, allows us to recommend the best configuration for your application and budget.

Dedication to innovation.

Cold Jet is committed to developing dry ice solutions for the betterment of industry and the environment through a relentless pursuit of technology that puts us years ahead of the competition. We are able to offer dependable dry ice cleaning and dry ice manufacturing systems at a lower cost of ownership



Cold Jet's 14,600 square foot high-tech manufacturing facility in Cincinnati, Ohio ensures unsurpassed quality and reliability in all Cold Jet products.

than any other system of its kind. With thousands of installed customers worldwide, Cold Jet's success has been the result of our superior technology, dedication to customer service and the establishment of a global infrastructure for product support.

Commitment to satisfaction.

We have more than 135 direct employees and a global network of hundreds of business partners, making Cold Jet the largest dry ice technology company in the world. Our talented staff of manufacturing, production and support personnel, technical sales people, and aerospace and mechanical engineers all work together to ensure the best product design, implementation and reliability in the business.





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DRY ICE CLEANING & SURFACE PREPARATION

A faster, greener cleaning process.

Our environmentally responsible cleaning and product finishing systems eliminate the use of harmful solvents and other waste-generating cleaning processes.

Dry ice cleaning.

Dry ice cleaning utilizes a unique combination of forces to powerfully lift surface contaminants without causing damage or creating harmful secondary waste. Similar to sand, bead and soda blasting, dry ice cleaning prepares and cleans surfaces using a medium accelerated in a pressurized air stream. But that's where the similarities end.

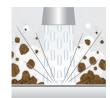
Instead of abrasive media to grind surfaces (and sometimes damage them), Cold Jet uses dry ice (solid CO₂ with a low temperature of -109°F), a medium that is natural and non-additive, accelerated at

supersonic speeds to create thermal impact that lifts contaminants from substrates. The CO₂ then sublimates (vanishing into thin air), leaving no secondary waste. This method cleans items that previously seemed impossible, in a very environmentally friendly way.

From gently restoring smoke damaged books, to cleaning multi-million dollar production equipment in place, Cold Jet's range of dry ice cleaning systems, nozzles and accessories offer robust solutions to meet your toughest cleaning challenges head on.









Instead of abrasive media to grind surfaces (and damage them), Cold Jet uses dry ice (Solid CO₂) accelerated at supersonic speeds that sublimate upon impact and lift contaminants from substrates.

Clean, green and lean.

Cold Jet's dry ice cleaning equipment provides a superior clean using the dry ice made from reclaimed CO_2 —the same food-grade media as found in carbonated beverages. Dry ice has been recognized by the EPA, FDA and USDA as an acceptable material in cleaning methods. Completely safe and non-toxic, dry ice does not produce or add CO_2 to the atmosphere – which is why using dry ice is considered to be "carbon neutral" and environmentally responsible. It produces no secondary waste stream, eliminating the added cost of secondary waste collection, treatment and disposal. Dry ice cleaning also eliminates harmful ozone depleting chemicals, providing a healthier work environment by eliminating exposure to Volatile Organic Compounds. It's completely green from start to finish.

As the industry experts in dry ice technology solutions, Cold Jet can provide guidance on the best methods to address site characteristics and safety concerns. Our commitment to customer satisfaction keeps us on the leading edge, always delivering a clean like you've never seen before.

"Using dry ice blasting reduces harmful air emissions and generally creates no addition to the volume of the cleaning process waste stream. . . in-process machinery can be cleaned on-line, resulting in decreased labor costs and less downtime." – EPA technical fact sheet for TCA hazards and alternatives. EPA 905-F-00-026

"We've been able to cut back on our use of chemical solvents. We use about 25% of what we used to, which makes us a much more environmentally friendly company." – Matt Schrift, Engineer – Robotworx

"It's better for the people and better for the environment. This technology has saved time, and allowed us to reduce our use of chemicals." – Bob Hawkey – Versa-Trim

Less time. Less effort. Less money.

Traditional cleaning methods usually require a hammer, chisel, hazardous chemicals and significant labor—turning a minor preventative maintenance effort into a major disruption. Dry ice cleaning from Cold Jet offers comprehensive cleaning benefits over traditional methods, and can save up to 80 percent over current cleaning costs and provide a return on investment (ROI) in as few as three months. Our method improves productivity and profit as cleanup that was once managed in hours or days can now be done in minutes. Most equipment can be cleaned in-place with no disassembly or cool down required. We are able to produce custom solutions for any budget.

Cleaning Method	No Secondary Waste	Non- Conductive	Non-Toxic*	Non- Abrasive
Dry Ice Blast Cleaning	•	•	•	• PA
Sand Blasting		•	*	
Soda Blasting		•	*	
Water Blasting			• *	•
Hand Tools	•			
Chemicals				•

Upon contact, traditional blasting materials become contaminated when used to clean hazardous substances and objects. These blasting materials are also then classified as toxic waste and require appropriate safe disposal.

Improved processes. More power. Less man.

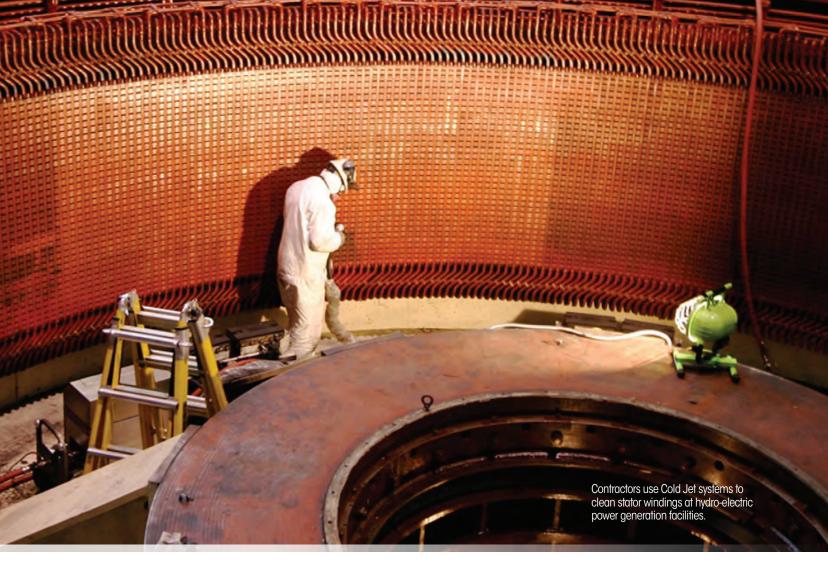
By integrating a Cold Jet Solution into your production environment you can realize marked improvements in process and efficiency at a compelling ROI:

- Improve production quality and reduce scrap rate.
- Avoid health and safety issues due to toxic solvents and provide a healthier work environment.
- Reduce time-consuming cleanup.
- Reduce labor costs, preventative maintenance and equipment repair costs.
- Accelerate maintenance timeline and reduce production downtime.
- Eliminate starting and stopping of critical production processes by cleaning hot and in place.
- Prolong equipment life by minimizing surface erosion.
- Eliminate secondary waste and cost of disposal.
- Standardize configuration, setup and operation.

Cold Jet technologies complement many process improvement initiatives such as 5S, Six Sigma and Total Productive Management (TPM).

Two U.S. Air Force Bases – one in Oklahoma and one in Utah – combined efforts to eliminate over 4,500 gallons of chemicals annually by using dry ice in their cleaning process. Dry ice cleaning also reduced labor and material costs by over 75 percent.

A service contractor in the petroleum industry reported that when they used sand blasting for cleaning their equipment, they measured their waste by the train car. Upon switching to dry ice cleaning, they now measure their waste by the barrel.



Thousands of customers worldwide.

Join the industry leaders already taking advantage of Cold Jet's innovative technologies to improve their bottom line.















Cold Jet dry ice cleaning systems are used in over 30 industries and in hundreds of applications globally. Our customer list includes numerous Fortune 500 companies, all branches of the military and public utilities. But despite the presence of familiar names, a substantial portion of our customer list is comprised of smaller companies who are known primarily to their customers or in their industry, but who also enjoy the substantial benefits of dry ice cleaning.

There are a broad range of industries and applications effectively served by dry ice cleaning and surface preparation, including:

- Aerospace
- Automotive
- Contract Cleaning Services
- Disaster / Fire Remediation
- Electronics
- Facility Maintenance
- Food and Beverage **Processing**
- Foundry and **Forging**
- Historical Restoration
- Manufacturing
- Medical
- Mold Remediation
- · Packaging
- Paint and Ink Removal
- Power Generation
- Printing
- Rubber and **Plastics**
- · Textiles and Wood







When traditional methods don't work, dry ice cleaning provides a non-abrasive, non-chemical, water-free process for an environmentally responsible clean. And, Cold Jet provides the best return on investment in the industry.

Join the thousands of satisfied customers around the globe that have made dry ice cleaning a critical component of their manufacturing processes. To find out if dry ice cleaning is an appropriate solution for your needs, a Cold Jet representative can visit your site for a demonstration. Or, your contaminated component can be sent to our test cell for cleaning. For those applications that haven't been explored, Cold Jet's research and development department is available to provide testing and technology expertise.





Hallmark enjoys cost savings and downtime reduction.

"Since implementing the Cold Jet dry ice cleaning process, we are seeing the benefits of this process on cleaning water-base inks off our presses. We have reduced our downtime as well as cost in our cleaning process."

Gary Johnson, Section Manager Hallmark Cards



Ghirardelli discovered a sweet solution.

"We tried different models of dry ice blasters, but eventually all agreed that the units from Cold Jet were easier to use and more effective."

Tony Tai, Production Supervisor Ghirardelli Chocolate Company



Silgan saves time with dry ice blasting.

"The time savings alone have been phenomenal as we have been able to clean our equipment better and faster while they are still online."

Joe Pond, Setup Supervisor Silgan Plastics



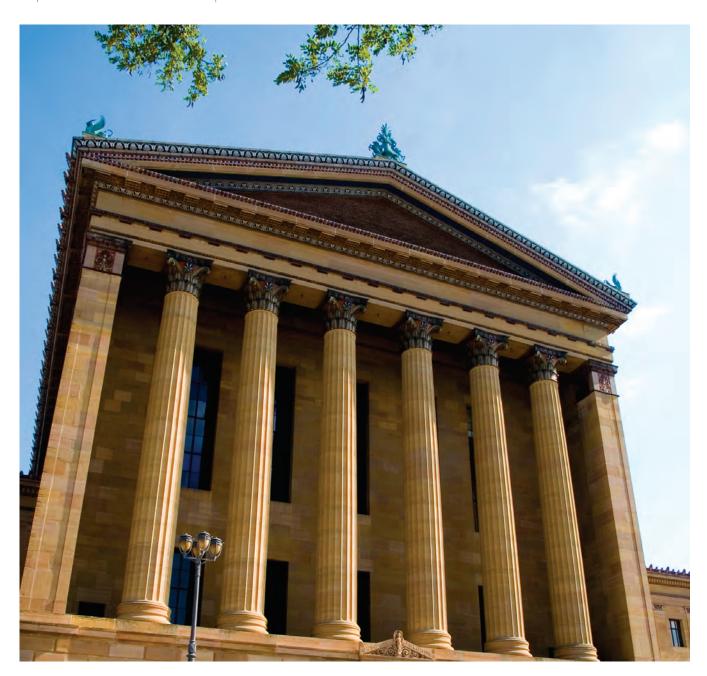
Ball Corporation cleans their PET Molds with great success.

"Every application is different but I would be surprised if there was a manufacturing facility that could not benefit from the use of a Cold Jet unit."

Dave Westbrook, Department Manager *Ball Corporation*

Cold Jet makes history beautiful again.

Cold Jet dry ice cleaning was the only approved method capable of fully restoring irreplaceable roof tiles on the Philadelphia Museum of Art.



Historical restoration done right.

The Philadelphia Museum of Art building has over four acres of cobalt and seagreen roof tiles that had to be removed and cleaned.

Dry ice blast cleaning was chosen as the optimal solution to remove the tar and weatherproofing adhesive from these tiles. The dry ice cleaning process left an even appearance without damaging the ceramic finish or the overlay on the tiles.

A superior process.

Using the dry ice cleaning process, contractors were able to effectively clean the 90-year-old historical terra cotta tiles that had not been touched since they were originally installed.

Like many restoration projects, these priceless tiles required a cleaning method that was non-abrasive and chemical-free. Dry ice cleaning met both criteria, in addition to being a dry process that created no secondary waste streams.

A faster more productive clean.

Dry ice cleaning allows safe, effective and fast restoration of historical items, allowing you to save time, labor, clean-up and disposal costs.

Dry ice cleaning with Cold Jet's patented shaved technology.

We are the only company capable of using any form of dry ice in our cleaning systems – blocks, nuggets or pellets. While pellets are most suitable when removing heavy, thick contaminants, shaved ice is ideal for cleaning delicate substrates, intricate geometries or tiny openings. More thorough than cleaning by hand, our technology allows us to get into tight spaces, leaving no area untouched. Dry ice cleaning can even be used safely around electrical wiring.



Aero Series	i ³ Series
To Diese	Cacam Cacam
	30,838

- The versatile i³ Series features our patented dry ice block shaving and feeder technology, providing a gentle and precise clean.
- The revolutionary Aero Series features our SureFlow System, ensuring a reliable flow (with no clumping) of dry ice pellets for a powerful and efficient clean.
- Our nozzles are designed for advanced performance, offering the most flexibility for any application. They won't clog, and can be adjusted to aggressively remove the toughest slag from robotic welding equipment, or to be sensitive enough for delicate cleaning jobs like removing heavy metal from silicon chips.

Set-up in a snap.

Connect your air supply to the machine, add dry ice and select your nozzle – it's that simple. Our portable and rugged systems are designed for both industrial applications and contract cleaning. Optimize your system's performance by adjusting compressed air pressure, nozzle type, and dry ice pellet size, density and feed rate.





DRY ICE MANUFACTURING EQUIPMENT High Quality. High Density. High Satisfaction.

Our dry ice manufacturing equipment has been engineered over 25 years to produce the highest density extruded dry ice available. Cold Jet dry ice has a longer shelf life, better transportability and cooling and offers better blasting aggression.









P325 — P750 — P1500 — P3000

Making dry ice.

Dry ice is made by taking pressurized Liquid CO_2 (LCO $_2$) and allowing it to expand into the natural atmosphere. This causes the LCO $_2$ to expand into both a gas vapor and solid snow. The snow is then either compressed to form blocks or compressed and extruded to form pellets or nuggets. The equipment required to make dry ice includes a Liquid CO_2 tank, and a Pelletizer/Reformer or Block Press.

Maximum flexibility.

Cold Jet's Dry Ice Pelletizers and Block Reformers can be equipped with multiple extrusion dies to produce precision extrusion sizes in just the right amount. From pellets as small as 1-3 mm, ideal for dry ice cleaning applications, to nuggets as large as 19 mm, perfect for shipping and storage, Cold Jet offers a broad range of flexible solutions. With an expansive made-to-order and customizable product line, Cold Jet continues to set the standard for worldwide dry ice manufacturing, customer support and product innovation.

Superior quality. Absolute reliability.

Cold Jet dry ice manufacturing equipment produces the purest dry ice available—made to UL, USDA, FDA and CE standards. Our machines are designed for non-stop operation in the most demanding environments, and we offer the highest output per floor footprint. Cold Jet's full line of dry ice pelletizers and reformers produce consistent, highdensity dry ice exhibiting superior physical

properties. Less breakage and greater cooling capacity mean lower cost and more satisfaction for you.

Simple, worry-free production.

Cold Jet's line of pelletizers are simple to operate, offering one-button start-up and shut down with no nurturing or adjusting. They are the only systems in the world that produce dry ice via a true extrusion method, combining high pressure and a patented die design with individually machined holes and contoured extrusion nozzles. Every Pelletizer can be equipped with our touch-screen Human-Machine Interface (HMI) diagnostic system, giving you control to make real-time adjustments with minimal downtime. All of our machines undergo a rigorous 21-point quality inspection, giving you worry-free production and peace of mind.

Providing dry ice manufacturing solutions for your industry.

Cold Jet is a leading provider of dry ice manufacturing solutions to companies globally. Our dry ice manufacturing and handling systems are preferred by the world's largest industrial gas companies and heavy dry ice users.

Our high-density dry ice products are optimized for all industrial and commercial applications including food and medical freezing and shipment, metal fitting, composite materials production, dry ice cleaning and many other uses. To ensure optimum results, Cold Jet developed patented technology that produces high-quality, high-density dry ice products.



Cleaning and Surface Preparation

The dry ice media used for cleaning comes in two forms: pellets (3 mm or smaller) or blocks. The standard 3 mm pellet allows for a more aggressive clean as the particles blasted tend to be larger and more irregularly sized. Shaved block dry ice produces much finer and more consistently sized particles allowing for more delicate surfaces to be cleaned without damage.



Food Processing

Dry ice is a yeast retardant. It is also bacteriostatic and fungistatic and is excellent for removing biofilm.

Meat processors and bakers use large quantities of dry ice for these properties. The dry ice is mixed in calculated doses into the mixers to keep the mixes cool, preventing the growth of bacteria and fungi and, in the case of baking mixes, to slow the leavening process. When used in cleaning food equipment, it eliminates waste water streams.



Shipping

Dry ice nuggets, block, pellets and slabs are used for shipping (food products, aluminum parts or biological products). Dry ice slabs are predominantly used by airline caterers. Pellets are typically used for smaller packages over shorter distances whereas nuggets are used to ship larger packages over longer distances.



Pharmaceutical and Biomedical Distribution

Dry ice is used for shipping vaccines, organs, blood, serum and plasma over land or by air cargo. Dry ice is also used in the mortuary science industry.

Our dry ice manufacturing and handling systems are designed for non-stop operation in the most demanding environments and represent the culmination of over 25 years experience servicing the largest global industrial gas and heavy dry ice users.











Benefits of making versus buying dry ice.

Dry ice represents one of the largest consumable costs for companies using dry ice in their day-today cold chain operations. The amount of dry ice likely to be used for a given period of time must be ordered from a supplier in advance. Dry ice sublimates at a rate of 5-10 percent per 24 hours in an ice chest, so care is taken not to over order (increasing waste), or to under order (increasing risk and liability). For organizations where an uninterrupted supply of dry ice is an integral part of their cold chain, just-in-time dry ice manufacturing can eliminate the middleman while better meeting dry ice needs. With liquid CO₂ and a dry ice manufacturing system from Cold Jet, companies can make dry ice on site and reduce the cost per pound by as much as 30 - 35 percent. Some of the benefits of doing this include: better waste control, improved quality of ice, better managed consumable costs, reduced risk of under ordering. Our team can help you select the right dry ice manufacturing system for your application.

LSG Sky Chefs is the global leader in airline catering and is a large consumer of dry ice to keep food cold or frozen until it is heated and served on aircraft. Dry ice is one of their largest consumable costs and they typically order more than they need, assuring they have it when they need it despite airline delays or cancellations.

Wanting to maintain their cold chain in this ever-changing environment, they looked to Cold Jet for assistance to install a dry ice manufacturing facility at the Brussels airport. On most days, the Cold Jet machines produce an uninterrupted supply of dry ice on demand, meeting their needs. When a winter storm hit Europe causing several days of cancellations, LSG Sky Chefs was pleased that they did not have dry ice sitting unused, as they would have in the past.









CUSTOM SOLUTIONS Simple customization to full automation.

Our customer-centric solutions are built upon our reliable, innovative proprietary technologies. We have the most advanced dry ice cleaning systems and dry ice manufacturing systems. The result is the capability to make your operation more efficient.

Experience that counts.

From custom nozzles to fully automated robotic cleaning systems, our experienced engineers can solve your toughest cleaning and decontamination challenges. With more worldwide system integration and automation experience than any other dry ice blast cleaning manufacturer, we pride ourselves on ingenuity and innovation. Each solution is custom-engineered from proven, reliable components and subsystems. Whether the system is needed at your plant or moving from job site to job site, we have a system for you.

Simply provide us with specifications and Cold Jet will design, deliver, and deploy a custom solution to meet your needs – from minor modifications to full customization. We will begin by meeting your team to gather your requirements. Our consultants will assist you in calculating your ROI, determining your budget and creating a system proposal. Next the system is designed and assembled. Finally, we will install the system and make sure your staff is trained to use it effectively.

Customized Accessories.

Our proprietary blast cleaning, coupled with our advanced production technologies and engineering know-how, means Cold Jet is capable of designing innovative accessories that efficiently solve your specific cleaning needs. These systems are fully customizable, reliable, dependable and easy to maintain. From spinning blast nozzles that clean ducts, to proprietary radiation decontamination systems, we design and build quality products to your requirements.

Equipment Modification.

Customized solutions utilizing our standard, off-the-shelf equipment typically require minimal reengineering to achieve your desired result.

System Integration.

We can create automated cleaning stations within a continuous manufacturing process (either existing or new) for applications requiring repetitive dry ice cleaning. Only minimal customizing may be needed to interface a Cold Jet solution into your production environment.

Industry leaders look to Cold Jet.

For over 25 years, Cold Jet has provided custom-engineered dry ice cleaning and decontamination systems to world-class companies in the Tire & Rubber, Food Processing, Semiconductor, Aerospace, Defense, Automotive, Printing, Foundry, and Plastics industries.

Worldwide customer service.

Whether answering your technical support questions, helping you find the right accessories for your unique cleaning application or providing extended warranty and maintenance options, Cold Jet's customer support provides the personal service your business demands.

Accessories and Spare Parts.

The Cold Jet customer service team is always available to answer your questions and assess your unique cleaning needs. We will recommend the appropriate accessories to complement your system. Each application is different, and often a specialized configuration will maximize your system's performance. Cold Jet's support team can also help you with any necessary spare parts to keep your equipment performing at its best.

Purchase options that work for you.

Cold Jet understands that a dry ice cleaning system is a significant investment. We have developed partnerships with commercial lenders for capital equipment in order to make purchasing and financing your Cold Jet system as straightforward as possible. Our lending partners have streamlined their application process so you are able to focus on growing your business with Cold Jet solutions as soon as possible.

Rental and Leasing Programs.

Cold Jet offers rental and leasing options to help companies around the world experience the benefits of dry ice cleaning.

Cold Jet is pleased to offer rental and Rent-to-Own programs through Red-D-Arc Welder Rentals in North America and other locations worldwide.*

* Rental and leasing programs will vary based on geographic location.





Service and Maintenance Programs.

Extended Service Plan

- Regularly scheduled maintenance for maximum system efficiency
- Additional Support when regular troubleshooting tips are not sufficient
- Site surveys for proper installation and recommendations
- A temporary replacement system, should your system need to be repaired at our facility

Product Upgrades

Our Upgrade Program allows you to upgrade your competitive brand, older model or a dual-hose cleaning system. We want you to grow with Cold Jet and utilize the latest technology advancements in dry ice cleaning.

Used Blasting Equipment

Cold Jet sells slightly used equipment from our fleet. This equipment may have come from customers who have upgraded older dry ice cleaning systems or from salesperson demo units. Cold Jet's used equipment has been fully inspected, cleaned and repaired (if necessary) to ensure it meets the quality and reliability that our customers have come to expect.

- All Cold Jet dry ice cleaning machines come complete with blast hose, air hose, standard applicator and nozzle
- All used equipment comes with a 90-day warranty

Equipment Training

Our equipment comes with a detailed training video covering proper start up, shut down, operation, safety issues and basic troubleshooting tips. We have state-of-the-art training centers in Cincinnati, OH (USA), Rancho Cucamonga, CA (USA), and Heusden-Zolder, Belgium. These centers are set up to provide training seminars to both large and small groups. Periodically, we also offer training seminars on specific cleaning applications as well as on individual dry ice cleaning systems. We can also provide on-site training programs upon request.

24 Hour Technical support.

As a full service company, the Cold Jet customer support team of technicians are available 24 hours a day, 7 days a week.

When you need technical support, you can expect:

- Prompt, courteous service from a qualified technician to solve your problem
- Assistance by telephone, fax, or e-mail for information related to product use, configuration, and troubleshooting
- Cold Jet to continue working with you until you are completely satisfied and the performance level of your equipment meets equipment design performance expectations
- A comprehensive solution to your problem

- · Our service professionals to:
 - Recommend appropriate accessories to maximize performance
 - Fulfill orders for high-quality,
 Cold Jet authorized parts

Additional services

- Installation services
- Maintenance or repair at a Cold Jet Service Center or at your site

To learn more about our Extended Warranty, Used Blasting Equipment, Accessories and Spare Parts, or Rental and Leasing Programs visit:

www.coldjet.com or call 800-777-9101.

For product upgrade information call:

513-576-8981

800-777-9101 (toll free)

To find out more about our training seminars, call:

513-831-3211

800-337-9423 (toll free)

+32 (0) 13 53 95 47 (Europe)





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Applications/Results/Testimonials

All product claims, applications, results, and testimonials represented herein are accurate under conditions at the time of performance, or as reported to Cold Jet by the parties referenced, and do not guarantee results or fitness for applications under all operating conditions. Please discuss all intended applications with your Cold Jet representative.

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