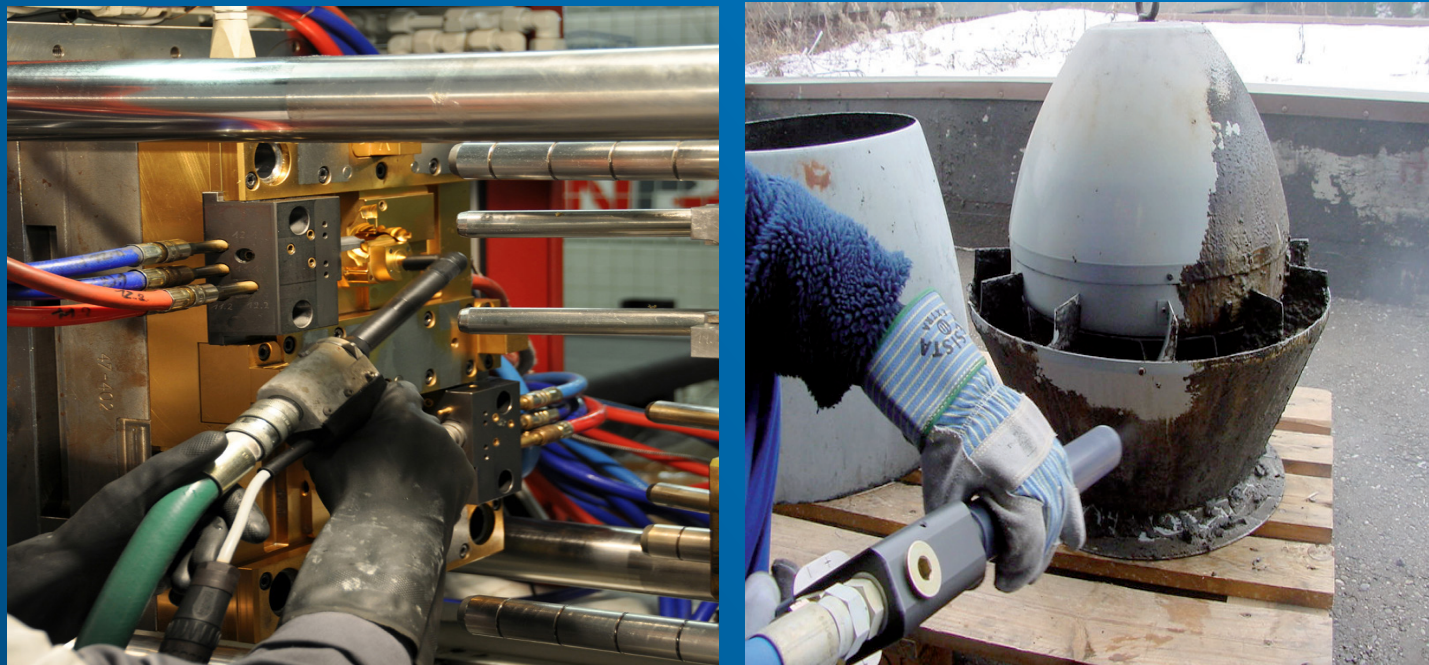


Dry Ice Blasting in Industrial Cleaning

Cleaning of machines, surfaces and infrastructure

ascoco2.com



In the industrial cleaning of machines, surfaces and industrial plants quality is of utmost importance. Dry ice technology significantly increases efficiency and therefore improves productivity and optimizes costs.

ASCO has successfully developed an innovative cleaning process which is perfectly suited for the industrial cleaning industry.

The ASCO dry ice blasting technology offers the following advantages:



POWERFUL & GENTLE

The hardness of dry ice pellets can be compared to the hardness of chalk. As a result, the surface structure of the cleaning surface is not damaged or changed in any way. Dry ice blasting is a gentle yet effective cleaning method. Unlike steel brushes or scrapers, dry ice blasting does not damage materials. ASCO'S unique nozzle technology with sophisticated aerodynamic flow behavior ensures optimum blasting result.



COST SAVING

Downtime of the objects or machines to be cleaned, interruptions of production and expensive disposal of hazardous waste are eliminated.



TIME SAVING

Cleaning of machines, surfaces, industrial plants etc. can be performed during the ongoing production process. Since this cleaning technology is dry and non-abrasive, it can be applied directly onto the object to be cleaned. This way, downtime can be reduced to a minimum. Cooling or, conversely, heating of tools is not necessary. This saves valuable time.



ENVIRONMENT FRIENDLY

The pellets immediately change to a gaseous state on impact. Only the removed contamination remains. There is no need to dispose of the cleaning media. This reduces waste dramatically! No sewage - or cleaning and filtration of wastewater. No contamination by hazardous additives, chemicals etc. No remains of the cleaning media. Dry ice is basically non-toxic.



SAFETY

Cleaning with dry ice is a dry and non-conductive cleaning process. By eliminating the use of solvents and hazardous chemicals the dry ice cleaning technology is safe for people and environment. The equipment is light, mobile, low in maintenance, reliable and easy to operate.



OPTIMIZATION

Advantages of Combi blasting: For strongly adhering contamination on solid metal parts, oil and dust deposits on sensitive electrical parts and sensors, cleaning with our Combi blaster can achieve the greatest effect. **The ASCOJET 1708 Combi Blaster** can dose an additional abrasive into the dry ice stream, providing the optimum combination of gentle cleaning with dry ice pellets and the additional abrasive effect of an additive.

Industrial Cleaning: How dry ice blasting is used

Many industrial cleaners use dry ice blasting as an alternative and supplement to conventional cleaning methods. During the maintenance and repair of plant technology, the optimal cleaning process is becoming increasingly important.

It is necessary to cover the bandwidth between, e.g., strongly adhering contamination on solid metal parts and oil and dust deposits on sensitive electrical parts and sensors.

In addition to the corresponding know-how in application technology, the optimal dry ice blasting technology is the key to success.



Cleaning of lokomotive



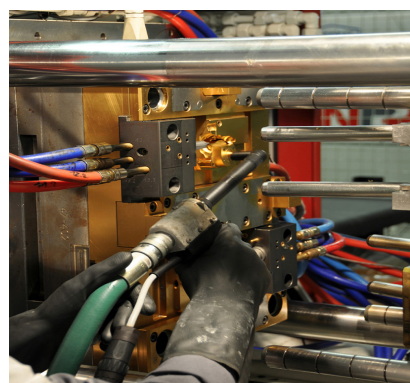
Cleaning of gas turbines



Cleaning of a built-in, hot mould



Cleaning of industrial fan



With the **ASCO Dry Ice Blasting Process** the cleaning of machines, surfaces and industrial plants is easier and faster.

The cleaning time of several hours is reduced to a few minutes.

Our competence - your advantage

- ASCO is one of the first suppliers of dry ice blasting technology in industrial cleaning. Decades of experience in the industrial sector have taught us that dry ice blasting can be used for all cleaning applications.
- Tough operating conditions require solid blasting technology. The modular and maintenance-friendly design of the **ASCOJET blasting units enables industrial cleaners** to carry out maintenance and wear repairs quickly and easily in industrial plants. This saves money and prevents unnecessary downtime.
- Industrial cleaners were the driving force behind the development of this new blasting unit, which is not available a second time on the market: the **ASCOJET 1708 Combi Blaster**. This blaster mixes a fine abrasive medium with the dry ice as required. The abrasive container is integrated in the machine. You do not need a separate container or funnel for the abrasive medium. This means that the blasting unit retains its full mobility.
- **With the ASCOJET 1708 Combi Blaster**, the user acquires a cleaning device with which he can cover all applications in industrial cleaning.



Conclusion: Are you looking for a competent partner for the optimal cleaning solution for industrial applications? Benefit from our decades of experience in industrial cleaning. We are happy to help you find the tailor-made solution for your application.

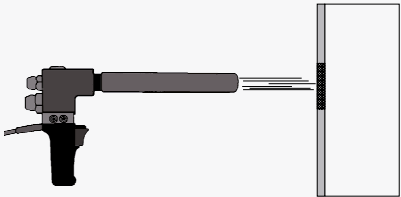


The Process

Dry ice is produced from liquid CO₂. Inside an ASCO dry ice pelletizer, the liquid carbon dioxide is expanded under controlled conditions to form dry ice snow (approx. -79 °C) is pressed into pellets by a corresponding extruder plate.

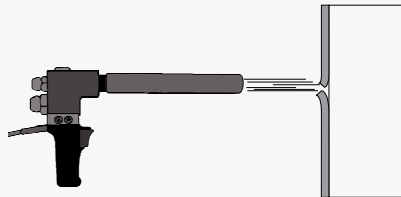
The dry ice pellets are filled into the ASCO dry ice blasting unit and conveyed to the blasting gun. Here the pellets are accelerated with compressed air to a speed of up to 300 m/s and hit the moulds to be cleaned. The impact of the pellets creates a punctual thermal shock and kinetic energy which removes the contamination. The pellets immediately change to a gaseous state on impact, leaving a clean and dry surface. Only the removed contamination remains, and no abrasive needs to be disposed of. Since the pellets only have a hardness of less than 2 Mohs, the surface quality is maintained. Likewise, thermal shock has no adverse effect on the surface structure of the moulds.

Cleaning Method



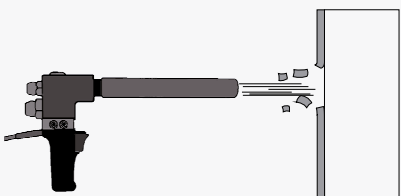
The thermo shock

As a result of the sudden and intense temperature shock on the surface, the coating or impurity contracts.



The cracking

As a result of the contraction the coating cracks and the material becomes brittle due to the cold.



The cleaning

The dry ice pellets hit the surface with great speed and remove the detached coating and clean the surface material



ASCOJET 1208
The Small Industrial



ASCOJET 1701
The Industrial Allrounder



ASCOJET 1708 Combi Blaster
The Flexible Abrasive



ASCO CO₂ Detectors
For your Safety



Dry Ice Box AT126
Storage of Dry Ice Pellets



Dry Ice Pelletizer P15i
Production Capacity
150 kg/hr for 3 mm Pellets

The complete solution

As leading provider of complete dry ice blasting solutions, ASCO's aim is to find tailor-made solutions for individual customer requirements. The extensive ASCO product and service range consists of:

- Dry ice blasting units
- Dry ice pelletizers
- Dry ice containers
- CO₂ gas detectors
- Wide range of accessories
- Specially developed guns or nozzles
- Automated cleaning solutions
- High quality dry ice
- Building up your in-house dry ice production

ASCO not only introduces you to the ASCO dry ice blasting technology but helps also with integrating dry ice cleaning into the production process and continually optimizing it.

In case of an increased demand for dry ice we will be pleased to offer you an economical calculation for your inhouse dry ice production to optimize on cost and quality. Our product range contains dry ice pelletizers with production capacities from 150 to 750 kg/hr.

The **ASCO CAREFREE rental solutions** enable you to have your own dry ice production **without investment costs!** Ask us!