

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
- Manifold accessories
- Specially developed guns or nozzles
- Blasting cabins
- Automated cleaning solutions
- Building up your in-house dry ice production



ASCO Nanojet
The Plastics Expert

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

ASCO has a worldwide network of independent **ASCO** partners who can provide you locally with dry ice pellets.

In case of an increased demand for dry ice we will be pleased to offer you an economical calculation for your in-house dry ice production to optimize on cost and quality.

Our product range contains dry ice pelletizers with production capacities from 30 to 700 kg/hr.



Dry Ice Pelletizer
A55P

Production capacity 55 kg/hr
for 3 mm pellets



Dry Ice Container
AT240

Pellets capacity approx. 240 kg
Weight empty approx. 54 kg

ASCO DRY ICE BLASTING TECHNOLOGY

APPLICATION - PLASTICS AND RUBBER INDUSTRY



Plastic injection mould



PU foaming tool

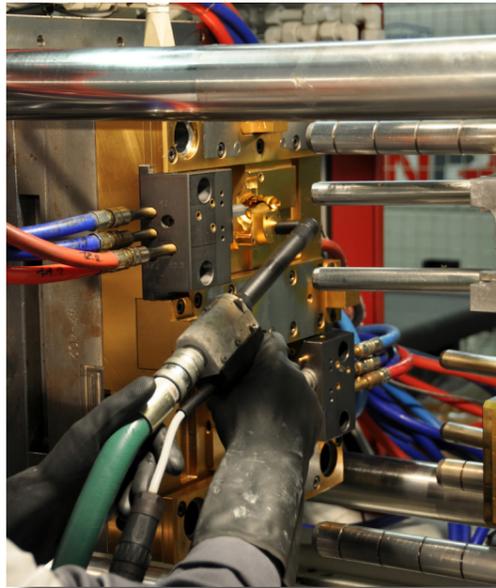
As in most industries, the plastics and rubber industry also finds cleaning of essential equipment and tools of the utmost importance. Cleaning of this equipment, tools and moulds is very important to the overall production process, ensures final product quality at the same time offering the best in productivity and efficiency leading to optimized operating costs.

ASCO has successfully developed an innovative cleaning process which is perfectly suited for the gentle cleaning of moulds and tools (e.g. in the PU industry, injection moulding and tire industry). The **ASCO dry ice blasting technology** offers the following advantages:

- **Gentle:** Moulds and tools are not damaged, the product quality is improved.
- **No dismantling of moulds and tools:** Expensive shut-down time is reduced to a minimum.
- **No secondary waste:** The blasting material, dry ice, turns to gas as soon as it hits the surface. Thus, there is no blasting media or chemical substances to be disposed of.
- **Dry:** No danger of corrosion and that electrical components could be damaged.
- **Environmentally friendly:** No secondary waste, no solvents or other chemical substances.

Therefore, leading companies like Amcor, Continental, Faurecia, Honeywell, Johnson Controls, 3M, Hukla, Parker Hannifin and Recticel put their full trust into the **ASCO dry ice blasting technology**.

How can this cleaning method be used?



Cleaning of an injection mould

Our **ASCO dry ice blasting technology** offers the possibility to clean directly on built-in and hot moulds and tools.

This possibility to achieve a higher quality by more frequent cleaning of the moulds and far less expensive shut-down time is widely applied by many producers of plastic, foam and rubber products. The moulds are neither damaged by the blasting media nor by the temperature difference.

The cleaning quality is decisive for the production quality and the lifetime of the tools.

A very important factor for the production process is the gentle cleaning of surfaces of moulds and tools like the removal of adhering polymere par-

ticles, paraffin residues and carbon combustion residues.

The gentle cleaning is executed on the still built-in moulds, directly on the machine without causing any production stops and set-up time.



Injection mould before ...



... and after cleaning with dry ice

Please contact our application specialists for any further information you may need. They will also be pleased to be at your service for consulting in general, presentations or instructions.

The ASCO Team



PU foaming tool before ...



... and after cleaning with dry ice



Mould for the production of tennis balls



Tyre mould

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), which then is pressed through an extruder plate. The result is dry ice pellets with a diameter of 3 or 1.7 mm.



The dry ice pellets are fed into the **ASCO dry ice blasting unit**, then conveyed to the blasting gun via compressed air to reach a nominal speed of approx. 300 m/s before shot onto the surface to be cleaned. Due to the sudden thermo shock when the dry ice hits the object and the generated kinetic energy the coating to be removed comes off the base material. Immediately after impact, the dry ice pellets sublime into the atmosphere leaving behind a clean, dry surface. The only thing left behind is the coating/dirt removed from the surface and no residual blasting media has to be disposed of. Since the hardness of the pellets is only approx. 2 Mohs, the cleaning is virtually non-abrasive and the surface quality is maintained. Also the thermoshock has no influence on the surface quality of moulds and tools.