All you need for dry ice blasting
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The DIS Dry Ice Systems GmbH & Co. KG, based to the south of Munich, focus on in the potential of dry ice cleaning; a technology which is not only kind to the environment, but also boosts production and reduces cost.

We have decades of experience, our qualified specialists have a wealth of know-how and we use state-of-the-art manufacturing methods, making us your contact when it comes to futuristic and economical solutions for your cleaning tasks. The focus of our company policy is service to the customers and the environment.

At DIS Dry Ice Systems GmbH & Co. KG you receive every thing from a single source, from production, servicing and sales of modern dry ice blasting systems to the production of dry ice - Your single source provider! -

Compared with other conventional cleaning methods, dry ice blasting is a particularly effective, environmentally friendly cleaning technique which is not abrasiv to the materials to be cleaned.

At our training centre you can learn all you need to know about the dry ice cleaning method and its numerous areas of applications. The blasting room gives you the opportun- ity to experience the method in use.
The method in brief

Blasting methods, such as sand blasting to remove paint, dirt, grease and similar coatings from surfaces, are well known. The Industry is using dry ice pellets for many years as an effective blasting agent. The main advantage of this cleaning method is that the dry ice pellets sublime completely after blasting. Only the removed soiling remains. This makes dry ice blasting a particularly effective, environmentally friendly cleaning method, which is not abrasive to the materials to be cleaned.

What is dry ice?

The blasting agent which consists of dry ice is the solid form of CO₂ (carbon dioxide) at a temperature of -79°C. The carbon dioxide is an odourless, non-toxic gas which is used in the drinks industry as an additive in beer and mineral water, for instance. The addition of carbon dioxide means the fresh taste and the shelf life of the drinks can be guaranteed for longer. It is also used in the food industry for cooling meat and sausages.

How is dry ice produced?

Liquid carbon dioxide is directed from a low-pressure storage tank (figure 1) into a special machine the pelletizer (figure 2), and depressurised using a dispenser valve. This procedure forms dry ice snow at a temperature of -79°C. The interactive piston in the pelletizer presses the dry ice snow through a die (figure 3) to form, dense dry ice pellets (figure 4) the size of grains of rice (3 mm).

Where do you get dry ice pellets from?

The easiest way is to produce dry ice pellets yourself with the DIS Dry Ice Systems pelletizer. If your requirement is low, dry ice is available from gas suppliers nationwide and can be stored for around seven days in special insulated boxes. Simply request our list of suppliers.
How does dry ice cleaning work?

The dry ice pellets drop from the blasting system ice hopper into a dispensing device and are then accelerated by compressed air. The blasting medium is blasted through precise high-performance nozzles onto the surface being cleaned by compressed air.

The sudden cooling (-79 °C) on the surface renders the layer of soiling brittle, releases it from the subsurface (thermal effect), and it will then be completely removed by the subsequent dry ice pellets (mechanical effect). Unlike the familiar sand blasting method, this cleaning method does not damage the surface. The pellets collide with the surface being cleaned at -79°C and sublimate completely, only the removed soilings to be disposed of. There is no need for costly and time-consuming disposal of the blasting agent.

The DIS Dry Ice Systems high-tech blasting systems are either operated pneumatically or electropneumatically.
The advantages of dry ice cleaning compare to other cleaning methods

- Low disposal costs
- No damage to the parts being cleaned
- Avoidance of cleaning chemicals
- Abrasion-free use
- Short cleaning times
- Thorough cleaning
- Reduction of downtimes
- Simultaneous disinfection

Save costs – increase returns

The illustration shows how incidental costs for conventional cleaning are considerably higher than for cleaning with dry ice pellets.

<table>
<thead>
<tr>
<th>Incidental costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage of cleaning agent</td>
</tr>
<tr>
<td>Costs of cleaning agent</td>
</tr>
<tr>
<td>Total transportation</td>
</tr>
<tr>
<td>Heating, ventilation</td>
</tr>
<tr>
<td>Filter, MAC value</td>
</tr>
<tr>
<td>Tool costs</td>
</tr>
<tr>
<td>Follow-up work</td>
</tr>
<tr>
<td>Treatment, disposal</td>
</tr>
<tr>
<td>Loss of production</td>
</tr>
</tbody>
</table>

Conventional cleaning | CO₂ cleaning

What do you need for dry ice cleaning?

Compressor
- From 1.5 m³/min delivery rate and 6 bar operating pressure
- Stationary or mobile

Dry ice pellets
- Produced by DIS pelletizer or available from technical gas suppliers
- Thermobox for storage of the dry ice (3 mm pellets)

DIS cleaning unit
- DIS Dry ice blasting system

Safety measures
- Ear protection
- Protective goggles
- Work gloves
- Work clothing
- Sufficient fresh air
Conventional methods, such as cleaning with chemicals, water, steam, sand or glass grain are being used more and more frequently by innovative methods. Cleaning with dry ice meets with the demands of stricter environmental constraints and increased requirements for economy and productivity.

**Cleaning with toxic solvents**

Solvents have to be disposed of separately and often need to be treated. Cleaning additives, such as halogenated hydrocarbons, are a health hazard and a danger to the environment. **Please note:** The legislator is in the process of outlawing their use step-by-step!

**Blasting with glass pearls or plastic granulate**

Glass or granulate elements have an abrasive effect and damage the surface of the parts being cleaned. The residual blasting agent can remain and have a lasting effect on the production procedure. With this method too, the residue and the blasting medium have to be disposed of, or treated separately, which is costly.

**High-pressure water jet**

The high pressure damages both the surfaces and the materials. Electrical systems have to be provided with water-tight protection. It is imperative to dispose of the water and the removed residue it contains. This cleaning method causes long drying times for the area and devices after cleaning.
The versatility of dry ice cleaning

**Asbestos removal**
Removal of bitumen-based tack coats

**Aviation**
Landing gear components, aeroplane parts, motors, machine cleaning, electronic components, tarmac

**Building and street cleaning**
Facades, walls, timber framework, streets, floors, tiles, stones, underground car parks, escalators, graffiti removal and much more

**Car industry / accessories sector**
Removal of separating agent, removal of welding splashes, cleaning grease and paint residue, removal of separating agent in foam seat production, cleaning the conveyor belt

**Ceramics industry**
Ceramic diving figures, machine parts

**Chemical industry / semi-conductor industry**
Immersion baths, all types of systems

**Construction firms**
Gravel and mobile concrete factories, building protection, facade cleaning, monument maintenance, building cleaning, bridge sanitation, fountain cleaning

**Electrical industry**
Electrical cabinet cleaning, transformer cleaning, chip cleaning

**Fire damage restoration**
Restoration of objects to original condition, cleaning sensitive components, soot removal, surface treatment for fresh paint

**Forgeries**
Removal of separating and binding agent

**Foundries**
Separating and binding agents from moulds and die casts

**Luxury food industry**
Breweries, bakeries, cheese dairies, butchers, slaughter houses, cleaning ovens, conveyor belt systems, tanks, machinery, malt stirring systems and the entire production area

**Mineral oil concerns / refineries**
Tank cleaning, machinery, cable and pipe systems

**Rail companies**
Graffiti removal, track cleaning

**Painting and decorating firm**
Degreasing walls, removing paint

**Plastics industry**
Cleaning moulds, deburring parts, cleaning tools

**Polystyrene industry**
Plugged holes can be cleaned particularly well

**Printing shops**
Cleaning rotary systems, developing baths, gravure printing machines, gravure printing cylinders, ink baths, printing accessories, anilox rollers, coating embossing foils, textile printing systems

**Public utility companies**
Electric power stations, generators, turbines, underground train shafts, escalator cleaning, removal of chewing gum

**Ships & boats**
Ship hulls, paint removal, osmosis treatment, removal of moss, descaling, removal of rust bloom

**Shoe manufacturing**
Removal of separating agents from shoe sole moulds

**Steel, metal and mechanical engineering**
Cleaning in all product areas

**Tyre production**
Removal of residue from vulcanisation from tyre presses

**Individual areas of technology:**
Nuclear power station: turbine cleaning
Photo sensors: removing silicone from lenses
Generators: cleaning the coils
Forestry: removal of vermin from trees
Freight forwarders: cleaning tanks and containers
Ski manufacturers: removal of grease and similar substances during production
Electro motors: cleaning motors and removal of paint
General: stone staircases, floors, removal of chewing gum, urine scale removal and much more
Anwendungen

Car production
Cleaning with dry ice has already become a permanent part of the production process for both car manufacturers and industry suppliers. Almost all production plants can be cleaned problem free. This method is also used successfully for paintwork preparation.

Chemical industry
Tanks, conveying systems, dispensing systems or mixers can be freed of deposits of bitumen, resins, adhesive or other substrates.

Fire damage restoration
This cleaning method is particularly suited for restoration after fire damage to objects which are not fully destroyed by fire and where restoration is feasible. Through the gentle method more of the structure can be saved. Because of the considerably lower costs of restoration it is becoming more and more common for insurance companies to stipulate the dry ice blasting method as the restoration method.
Cleaning air conditioning and kitchen extractor ducts

In order to be able to guarantee the safe operation of ambient air systems the air ducts still have to be cleaned of any soiling whether the filter systems are intact or not. Soiled ventilation systems are of course critical with regard to aspects of hygiene. The deposited soiling represents the ideal breeding ground for pathogens and microorganisms of all types. These are then distributed throughout the ventilation systems.

Plastics industry

Effective removal of separating agents and residue without heating or the use of chemicals, substitution for the powerwash cleaning process for plastic parts in preparation for paintwork (no need for the use of elaborate and expensive washing systems), cleaning plastic extruders, parts and moulds.

Facade cleaning

Facade cleaning with dry ice always makes sense if cleaning is to be performed at short notice and without scaffolding the building, and water poses another problem. The area coverage depends on the type of soiling and the subsurface.
**Vehicle treatment**

The dry ice blasting method is very versatile for the field of vehicle treatment. The classic applications include cleaning motors, gear boxes, wheel rims, the vehicle interior etc.

**Internal pipe cleaning**

The areas of use are above all in the field of smaller-sized pipelines, e.g. product lines in the areas of DN 12 to DN 200. The avoidance of additional waste in the form of flushing masses or blasting agent saves costs. The pipelines can also be cleaned at high temperatures using the CO₂ blasting method. Because cleaning can be performed at operating temperature without causing damage, e.g. from moisture, downtimes for plants and systems can be reduced considerably. This makes for appreciable cost benefits in comparison to other cleaning methods.

**Foundries**

Foundries have a large potential for application in the field of mould cleaning. These moulds have to be cleaned of separating agent at regular intervals.

- Moulds can be cleaned without removal
- Reduced downtimes
- No loss of time for removal and installation or cooling and heating
- No damage to the mould as dry ice cleaning has no abrasive effect
- No more costs for treating expensive moulds and for production waste

**CLEANING EFFECTS**

BEFORE - AFTER
### Tyre production - Tyre mould

<table>
<thead>
<tr>
<th>Surface</th>
<th>Tool steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Vulcanisation residue (rubber)</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approximately 10 minutes per mould</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Sand blasting</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to the base material, cleaning performed when hot, mould accuracy remains intact, removal not necessary</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 500 %</td>
</tr>
</tbody>
</table>

### Paper processing machine

<table>
<thead>
<tr>
<th>Surface</th>
<th>Steel (partially painted) copper cables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Cellulose, grease</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approx. 3 minutes</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Chemical pre-cleaning, manual scraping</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to seals and bearings, removal not necessary, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 500 %</td>
</tr>
</tbody>
</table>

### Packing machine

<table>
<thead>
<tr>
<th>Surface</th>
<th>Aluminium, pneumatic cables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Adhesive, paper dust, grease</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approx. 3 minutes</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Chemical pre-cleaning, manual scraping</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to seals and bearings, removal not necessary, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 300 %</td>
</tr>
</tbody>
</table>
Welding robots

Surface: Die-cast aluminium, painted
Soiling: Powder deposits, welding beads, burn residue
Blasting time: Approx. 5 minutes
Conventional cleaning: Chisel, wire brush, chemical pre-cleaning
Benefits: No damage to the surface, system can remain energized, no removal required, first-class cleaning results
Time saving: Approx. 1000 %

Printing machine

Surface: Painted cast iron, tool steel, print rollers
Soiling: Printing ink, grease
Blasting time: Approx. 30 minutes
Conventional cleaning: Manual cleaning with chemicals
Benefits: No damage to the material, no damage to seals and bearings, no removal necessary, first-class cleaning results
Time saving: Approx. 500 %

Valve on a PU foaming system

Surface: Die-cast aluminium, partially painted
Soiling: Resin, adhesive
Blasting time: Approx. 1 minutes
Conventional cleaning: Chemical pre-cleaning, wire brush
Benefits: No damage to seals and bearings, removal not necessary, first-class cleaning results
Time saving: Approx. 500 %
### Paint rack

<table>
<thead>
<tr>
<th>Surface</th>
<th>Stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Burnt-in 2K paint, approximately 88 layers</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approx. 5 minutes</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Sand blasting, thermal paint removal</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to the base material, no chemicals, no removal required, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 300 %</td>
</tr>
</tbody>
</table>

### Machine for production of credit cards

<table>
<thead>
<tr>
<th>Surface</th>
<th>Cast iron, print rollers etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Plastic, screen printing ink, grease</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approx. 10 minutes</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Chemical pre-cleaning, manual cleaning</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to seals and bearings, removal not necessary, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 500 %</td>
</tr>
</tbody>
</table>

### Welding tongs

<table>
<thead>
<tr>
<th>Surface</th>
<th>Copper, rubber, aluminium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling</td>
<td>Cinder</td>
</tr>
<tr>
<td>Blasting time</td>
<td>Approx. 10 - 15 minutes</td>
</tr>
<tr>
<td>Conventional cleaning</td>
<td>Manual, with brush and scraper</td>
</tr>
<tr>
<td>Benefits</td>
<td>No damage to the surface, minimal removal, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving</td>
<td>Approx. 500 %</td>
</tr>
</tbody>
</table>

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BEFORE - AFTER CLEANING EXAMPLES

- 13 -

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## Graffiti

<table>
<thead>
<tr>
<th>Surface:</th>
<th>Aluminium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling:</td>
<td>Acrylic lacquer</td>
</tr>
<tr>
<td>Blasting time:</td>
<td>Approx. 2 minutes/m²</td>
</tr>
<tr>
<td>Conventional cleaning:</td>
<td>High-pressure water jet with chemicals</td>
</tr>
<tr>
<td>Benefits:</td>
<td>No damage to the base material, simple disposal as not contaminated by water and chemicals</td>
</tr>
</tbody>
</table>

## Motors

<table>
<thead>
<tr>
<th>Surface:</th>
<th>Cast aluminium, plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling:</td>
<td>Oil, grease</td>
</tr>
<tr>
<td>Blasting time:</td>
<td>Approx. 15 minutes</td>
</tr>
<tr>
<td>Conventional cleaning:</td>
<td>High-pressure water jet, cold cleaning agents</td>
</tr>
<tr>
<td>Benefits:</td>
<td>No damage to seals, bearings or plastic parts</td>
</tr>
</tbody>
</table>

## Machinery

<table>
<thead>
<tr>
<th>Surface:</th>
<th>Copper, rubber, aluminium, stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling:</td>
<td>Adhesive, paper dust, grease</td>
</tr>
<tr>
<td>Blasting time:</td>
<td>Approx. 2 minutes</td>
</tr>
<tr>
<td>Conventional cleaning:</td>
<td>Manual, chemical solvents</td>
</tr>
<tr>
<td>Benefits:</td>
<td>No removal necessary, first-class cleaning results</td>
</tr>
<tr>
<td>Time saving:</td>
<td>Approx. 300 %</td>
</tr>
</tbody>
</table>

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**BEFORE - AFTER**

**CLEANING EXAMPLES**
Control cabinet cleaning
Surface: Electrical cables, plastic, relays
Soiling: Dust, dirt, soot and oil particles
Blasting time: Approx. 15 minutes
Conventional cleaning: Water and chemicals
Benefits: No damage to the surface, no housing necessary, short downtimes, immediate commissioning after cleaning

Facade cleaning
Surface: Concrete
Soiling: Moss, lichen, environmental contamination
Blasting time: Approx. 1 minute/m²
Conventional cleaning: High-pressure water jet with chemicals, sand blasting
Benefits: Simple disposal as not contaminated with water and chemicals, no waste water problem, not soaking of the masonry, immediate coating possible

Petrochemistry
Surface: Painted sheet metal sign
Soiling: Bitumen
Blasting time: Approx. 30 seconds
Conventional cleaning: Manual, chemical solvents
Benefits: No removal necessary, first-class cleaning results
Time saving: Approx. 500 %
### Motor cleaning

| Surface:    | Aluminium          |
| Soiling:    | Oil, grease, environmental damage |
| Blasting time: | Approx. 3 minutes |
| Conventional cleaning: | High-pressure water jet with chemicals, cold cleaning agents manual |
| Benefits:   | Simple disposal as not contaminated with water and chemicals, no waste water problem, no damage to the seals and bearings |

### Baking mould cleaning

| Surface:    | Stainless steel    |
| Soiling:    | Burn residue       |
| Blasting time: | Approx. 2 minutes |
| Conventional cleaning: | High-pressure water jet with chemicals |
| Benefits:   | Simple disposal as not contaminated with water and chemicals, no waste water problem |

### Paper gripper

| Surface:    | Metal, plastic    |
| Soiling:    | Paper, powder, grease, oil |
| Blasting time: | Approx. 1 minute |
| Conventional cleaning: | Manual cleaning with chemicals |
| Benefits:   | Simple disposal, no waste water problem |
Blast machines overview

- **Mini-Jet Basic**
  - The universal

- **Micro-Jet Basic**
  - The price breaker

- **Nano-Jet Basic**
  - The starter

- **E-Jet**
  - The all-rounder

- **Nano-Jet Evolution**
  - The economic

- **Micro-Jet Evolution**
  - The small and powerful

- **Mini E-Jet**
  - The powerful

- **Mini Jet Basic Silent**
  - The low noise
  - < 85 dB/6 bar

- **Mini Jet Evolution**
  - The durable

- **Micro-Jet Tornado**
  - Tornado power
**ONE HOSE SYSTEM**

**One hose system**

The dry ice pellets in the storage hopper are dispensed into the current of compressed air through a rotating perforated disc. The dry ice pellets are then conveyed into a hose, to the blasting gun, together with the compressed air.

**Benefits:**

- Stubborn soiling, incrustation and paint can be removed more easily due to the high discharge speed.
- The one hose system makes it possible to use a number of different nozzles, in particular 90° nozzles.
ELECTRIC BLASTING SYSTEM

ONE HOSE SYSTEM

E-Jet

The all-rounder
- easy to use
- ideal for all users
- unique cleaning spectrum, from cleaning the most delicate modules to difficult applications, e.g. paint removal
- Scrambler (Dry Ice Mill) for gentle cleaning of delicate parts /optional
- simple activation of the Scrambler /optional

Standard equipment:
- basic and functional equipment
- blast pressure and pellet control
- digital ice usage display
- Tornado Plus blast gun with RD 8 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:
Net weight: 75 kg (165 lbs), stainless steel housing
Dimensions: (W x L x H) 400 x 600 x 1000 mm (16 x 24 x 40 inch)
Dry ice filling capacity: 10 kg (22 lbs)
Dry ice consumption: max. 100 kg/h (220 lbs), four-step regulation (continuously variable /optional)
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: 0,5 bar (7,25 psi) - 16 bar (232 psi), continuously variable
Compressed air consumption: 1 m³/min - 8,5 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: 100 V - 240 V, 6.9 A - 3.3 A, 50/60 Hz, CEE 17 grounding
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted

Article number: 250 000 - without Scrambler (Dry Ice Mill)
Article number: 250 001 - with Scrambler (Dry Ice Mill)

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PNEUMATIC BLASTING SYSTEM

ONE HOSE SYSTEM

Nano-Jet Basic

The starter

- small and compact
- easy to use
- low pellet and compressed air consumption

Standard equipment:

- basic and functional equipment
- compressed air treatment
- GAP 3 S blast gun with RD 5 nozzle
- blast hose package 5 meter with PVC sleeve

Technical specification:

- Net weight: 30 kg (66 lbs), stainless steel housing
- 35 kg (77 lbs) with pellet regulation and blast pressure regulation (OPTIONALLY)
- Dimensions: (W x L x H) 340 x 430 x 655 mm (13 x 17 x 26 inch)
- Dry ice filling capacity: 10 kg (22 lbs)
- Dry ice consumption: max. 7.5 kg/h (165 lbs)
- Operating pressure: max. 10 bar (145 psi)
- Blasting pressure: max. 10 bar (145 psi)
- Compressed air consumption: 2.5 m³/min - 6.5 m³/min, depending on the selected nozzle combination
- Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
- Compressed air connection: DIN 3489 claw coupling
- Power connection: not necessary, system works purely pneumatically
- Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted

Article number: 260 000

OPTIONALLY

Article number: PELLETREG - with pellet regulation
Article number: STRAHLDRUCKNANO - with blast pressure regulation
Nano-Jet Evolution

The economic
- small and compact
- easy to use
- flexible application

Standard equipment:
- basic and functional equipment
- compressed air treatment
- blast pressure and pellet control
- Tornado Plus blast gun with RD 7 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:
Net weight: 35 kg (77 lbs), stainless steel housing
Dimensions: (W x L x H) 340 x 430 x 655 mm (13 x 17 x 26 inch)
Dry ice filling capacity: 10 kg (22 lbs)
Dry ice consumption: max. 75 kg/h (165 lbs), continuously variable
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: 1 bar (14.5 lbs) - 16 bar (232 psi), continuously variable
Compressed air consumption: 2.5 m³/min - 8.5 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted
Article number: 260 000 EVO
The price breaker

- small and compact
- easy to use
- low pellet and compressed air consumption

Standard equipment:

- basic and functional equipment
- compressed air treatment
- automatic ground roll
- GAP 3 S blast gun with RD 6 nozzle
- blast hose package 5 meter with PVC sleeve

Technical specification:

Net weight: 45 kg (99 lbs), stainless steel housing
Dimensions: (W x L x H) 365 x 575 x 940 mm (14 x 23 x 40 inch)
Dry ice filling capacity: max. 10 kg (22 lbs)
Dry ice consumption: max. 75 kg/h (165 lbs)
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: max. 16 bar (232 psi)
Compressed air consumption: 2.5 m³/min - 8.5 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted
Article number: 210 000
Micro-Jet Evolution

The small and powerful

- easy to use
- flexible application
- the integrated membrane filter makes it also suitable for compressors with poor quality of compressed air

Standard equipment:
- basic and functional equipment
- membrane filter
- sub micro filter
- compressed air treatment
- blast pressure and pellet control
- automatic ground roll
- Tornado Plus blast gun with RD 7 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:

Net weight: 55 kg (122 lbs), stainless steel housing
Dimensions: (W x L x H) 365 x 575 x 940 mm (14 x 23 x 40 inch)
Dry ice filling capacity: 10 kg (22 lbs)
Dry ice consumption: max. 75 kg/h (165 lbs), continuously variable
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: 1 bar (14.5 psi) - 16 bar (232 psi), continuously variable
Compressed air consumption: 2.5 m³/min - 8.5 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted

Article number: 220 000
The low noise < 85 dB/6 bar

- small and compact
- easy to use
- low pellet and compressed air consumption
- no damage to delicate components
- increase of efficiency
- clean delicate with dry ice powder (Scrambler)

Standard equipment:
- basic and functional equipment
- integrated Scrambler (Dry Ice Mill)
- compressed air treatment
- automatic ground roll
- GAP 3 S blast gun with RD 5 nozzle
- blast hose package 5 meter with PVC sleeve
- flat nozzle L

Technical specification:

- Net weight: 50 kg (110 lbs), stainless steel housing
- Dimensions: (W x L x H) 365 x 575 x 940 mm (14 x 23 x 40 inch)
- Dry ice filling capacity: 5 kg (11 lbs)
- Dry ice consumption: max. 75 kg/h (165 lbs)
- Operating pressure: max. 16 bar (232 psi)
- Blasting pressure: max. 16 bar (232 psi)
- Compressed air consumption: 2.5 m³/min - 8.5 m³/min, depending on the selected nozzle combination
- Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
- Compressed air connection: DIN 3489 claw coupling
- Power connection: not necessary, system works purely pneumatically
- Noise: 85 dB (A) at 6 bar - 120 dB (A), depending on nozzle combination and surface of the object being blasted
- Article number: 230 000
PNEUMATIC BLASTING SYSTEM

ONE HOSE SYSTEM

Micro-Jet Tornado

Tornado power
- maximum blasting power
- high area coverage
- for the most stubborn of soiling
- ideal for pipe cleaning and paint removal

Standard equipment:
- basic and functional equipment
- hopper attachment for 20 kg more dry ice filling capacity
- membrane filter
- sub micro filter
- compressed air treatment
- automatic ground roll
- Tornado Plus blast gun with RD 8 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:
Net weight: 60 kg (132 lbs), stainless steel housing
Dimensions: (W x L x H) 365 x 575 x 1340 mm (14 x 23 x 53 inch)
Dry ice capacity: 35 kg (77 lbs)
Dry ice consumption: 90 kg/h (199 lbs)
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: max. 16 bar (232 psi)
Compressed air consumption: 3 m³/min - 12 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted
Article number: 240 000

www.disystems.de
**ONE HOSE SYSTEM**

### Tornado Professional nozzle case

- **Weight:** 21 kg (46 lbs)
- **Dimensions:** (W x L x H) 783 x 493 x 126 mm (31 x 19 x 5 inch)
- **Consisting of:**
  - 1x Adapter
  - 1x Short Adapter
  - 1x 200 mm extension
  - 1x 400 mm extension
  - 1x Straight blast pipe
  - 1x 45° blast pipe
  - 1x 90° blast pipe
  - 1x Flat nozzle K (50 mm)
  - 1x Flat nozzle L (200 mm)
  - 1x Handle with clamping device, round / oval
  - 1x Low temperature grease
- **Flat nozzles:**
  - 1x FD 400-38-2
  - 1x FD 400-25-3
  - 1x FD 400-25-4
  - 1x FD 400-25-5
  - 1x FD 400-25-6
  - 1x FD 700-Silent
- **Round nozzles:**
  - 1x RD 5
  - 1x RD 6
  - 1x RD 7
  - 1x RD 8
  - 1x RD 100
- **Article number:** 706 001

### Vario Set 2000 Plus nozzle case

- **Weight:** 10 kg (22 lbs)
- **Dimensions:** (W x L x H) 578 x 398 x 121 mm (23 x 16 x 5 inch)
- **Consisting of:**
  - 1x Adapter
  - 1x Short Adapter
  - 1x 200 mm extension
  - 1x 400 mm extension
  - 1x Straight blast pipe
  - 1x 45° blast pipe
  - 1x 90° blast pipe
  - 1x Flat nozzle K (50 mm)
  - 1x Flat nozzle L (200 mm)
  - 1x Handle with clamping device, round
  - 1x Low temperature grease
- **Round nozzles:**
  - 1x RD 100
  - 1x Balancer nozzle
  - 1x Scrambler attachment
- **Article number:** 706 002

### Vario Set 2000

- Ideal for use for frequently changing applications, in particular for complicated geometries or places which are hard to reach.
- **Weight:** 2.2 kg (4.8 lbs)
- **Consisting of:**
  - Adapter
  - Short Adapter
  - RD 100 round nozzle
  - Flat nozzle K (50 mm)
  - Flat nozzle L (200 mm)
  - Straight blast pipe
  - 90° blast pipe
  - 45° blast pipe
  - 200 mm extension
  - 400 mm extension
  - Handle with clamping device, round
  - Article number: 736 001
  - Article number: 716 005
  - Article number: 726 060-100
  - Article number: 716 060-50
  - Article number: 716 060-200
  - Article number: 730 001
  - Article number: 730 002
  - Article number: 730 003
  - Article number: 730 004
  - Article number: 706 101
  - Article number: 706 000

1x adapter is also required when ordering individually from the Vario Set 2000.
- **Article number:** 706 000
Blast guns

**SP 1 blast gun**
Super lightweight blast gun, ideal for stationary applications.

*Weight:* 0.3 kg (0.66 lbs)
*Article number:* 660 100

**GAP 3 S blast gun**
Light, ergonomic blast pistol with vertical hose feed. Particularly suitable for mould cleaning.

*Weight:* 0.9 kg (2 lbs)
*Article number:* 620 100

**Tornado Plus blast gun**
This blast gun with horizontal hose feed can be used flexibly.

*Weight:* 1.1 kg (2.4 lbs)
*Article number:* 630 100 - pneumatic
*Article number:* 630 100 E - electric
**FD2 MOD flat nozzle**
-Aluminium nozzle, inclusive handle suitable for cleaning large objects.
- **Length:** 380 mm (15 inch)
- **Weight:** 0.9 kg (2 lbs)
- **Outlet opening:** 50 x 5 mm (2 x 0.2 inch)
- **Air consumption:** 4.5 m³/min at 8 bar
- **Article number:** 716 350-00

**FD 700 Silent flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning large areas whilst generating low noise (< 90 dB (A) at 6 bar).
- **Length:** 560 mm (22 inch)
- **Weight:** 1.5 kg (3.3 lbs)
- **Outlet opening:** 75 x 3 mm (3 x 0.12 inch)
- **Air consumption:** 4 m³/min at 8 bar
- **Article number:** 716 080-700

**FD 400-38-2 flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning light soiling.
- **Length:** 560 mm (22 inch)
- **Weight:** 1 kg (2.2 lbs)
- **Outlet opening:** 38 x 2 mm (1.5 x 0.08 inch)
- **Air consumption:** 2 m³/min at 8 bar
- **Article number:** 716 038-402

**FD 400-25-3 flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning stubborn soiling and removing layers of paint.
- **Length:** 560 mm (22 inch)
- **Weight:** 1 kg (2.2 lbs)
- **Outlet opening:** 25 x 3 mm (1 x 0.12 inch)
- **Air consumption:** 3 m³/min at 8 bar
- **Article number:** 716 025-403

**FD 400-25-4 flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning stubborn soiling and removing layers of paint.
- **Length:** 560 mm (22 inch)
- **Weight:** 1 kg (2.2 lbs)
- **Outlet opening:** 25 x 4 mm (1 x 0.16 inch)
- **Air consumption:** 5 m³/min at 8 bar
- **Article number:** 716 025-404

**FD 400-25-5 flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning stubborn soiling and removing layers of paint.
- **Length:** 560 mm (22 inch)
- **Weight:** 1 kg (2.2 lbs)
- **Outlet opening:** 25 x 5 mm (1 x 0.2 inch)
- **Air consumption:** 7 m³/min at 8 bar
- **Article number:** 716 025-405

**FD 400-25-6 flat nozzle**
-Fibre-reinforced plastic flat nozzle for cleaning stubborn soiling and removing layers of paint.
- **Length:** 560 mm (22 inch)
- **Weight:** 1 kg (2.2 lbs)
- **Outlet opening:** 25 x 6 mm (1 x 0.24 inch)
- **Air consumption:** 9 m³/min at 8 bar
- **Article number:** 716 025-406
### RD 5 - RD 8 POM / ALU round nozzles

POM (Polyacetal) / ALU (Aluminium) Round blasting nozzle for the punctual cleaning of medium-sized surfaces.

**RD 5 POM / ALU round nozzles**
- **Outlet opening:** Ø 5 mm (0,2 inch)
- **Air consumption:** 2,3 m³/min at 8 bar
- **Article number - POM:** 726 020-5
- **Article number - ALU:** 726 221-5

**RD 6 POM / ALU round nozzles**
- **Outlet opening:** Ø 6 mm (0,24 inch)
- **Air consumption:** 3,5 m³/min at 8 bar
- **Article number - POM:** 726 020-6
- **Article number - ALU:** 726 221-6

**RD 7 POM / ALU round nozzles**
- **Outlet opening:** Ø 7 mm (0,28 inch)
- **Air consumption:** 5,3 m³/min at 8 bar
- **Article number - POM:** 726 020-7
- **Article number - ALU:** 726 221-7

**RD 8 POM / ALU round nozzles**
- **Outlet opening:** Ø 8 mm (0,35 inch)
- **Air consumption:** 7,5 m³/min at 8 bar
- **Article number - POM:** 726 020-8
- **Article number - ALU:** 726 221-8

### Balancer 90° angle nozzle

A fine current of air flows through the geometric shape of this special nozzle in the opposite direction to the nozzle of dry ice which prevents tilting and thus balances the nozzle.

- **Length:** 270 mm (11 inch)
- **Outlet opening:** 5 mm (0,2 inch)
- **Weight:** 1 kg (2,2 lbs)
- **Air consumption:** 8 m³/min at 8 bar
- **Article number:** 740 001

### Scrambler nozzle insert

This device is fitted between the blasting gun and the nozzle which reduces the usual 3 mm dry ice pellets to a fine powder. Ideal for use to clean delicate components, e.g. control cabinets.

- **Length:** 130 mm (5 inch)
- **Weight:** 0,4 kg (0,9 lbs)
- **Article number:** 910 001

### Nozzles for pipe cleaning

For use for cleaning the internal surfaces of pipes and pipe bundle heat exchangers. When ordering please specify inner diameter. The nozzles are custom made for your application.

- **Available diameters:** Ø DN 10 to Ø DN 100
- **Article number:** 790 001 - Pipe nozzle Ø 55
- **Article number:** 790 002 - Pipe nozzle Ø 97
Hose packages / GAP 3 S and Tornado Plus extensions

Special low-temperature CO₂ hose, pneumatic control cables and breathable protective sleeve.

<table>
<thead>
<tr>
<th>Length</th>
<th>Article number: 510 003</th>
<th>- pneumatic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Article number: 510 003 E</td>
<td>- electric</td>
</tr>
<tr>
<td>per meter</td>
<td>Article number: 510 001</td>
<td>- pneumatic</td>
</tr>
<tr>
<td>5 meter</td>
<td>Article number: 510 001 E</td>
<td>- electric</td>
</tr>
<tr>
<td>7 meter</td>
<td>Article number: 510 002</td>
<td>- pneumatic</td>
</tr>
<tr>
<td>10 meter</td>
<td>Article number: 510 006</td>
<td>- pneumatic</td>
</tr>
<tr>
<td></td>
<td>Article number: 510 006 E</td>
<td>- electric</td>
</tr>
</tbody>
</table>

- Other length on request! -

GAP 3 S spare hose package

- GAP 3 S blast gun
- blast hose package 5 meter (with PVC sleeve inclusive bent protection spring)

| Article number: 510 004 GAP3S | - pneumatic |
| Article number: 510 004 E GAP3S | - electric |

GAP 3 S service hose package

2. hose package with order of blast machine

- GAP 3 S blast gun
- blast hose package 5 meter (with PVC sleeve inclusive bent protection spring)

| Article number: 510 005 GAP3S | - pneumatic |
| Article number: 510 005 E GAP3S | - electric |

Tornado Plus spare hose package

- Tornado Plus blast gun
- blast hose package 7 meter (with PVC sleeve inclusive bent protection spring)

| Article number: 510 004 | - pneumatic |
| Article number: 510 004 E | - electric |

Tornado Plus service hose package

2. hose package with order of blast machine

- Tornado Plus blast gun
- blast hose package 7 meter (with PVC sleeve inclusive bent protection spring)

| Article number: 510 005 | - pneumatic |
| Article number: 510 005 E | - electric |
Hopper extension

**TYP 40 hopper extension (standard)**

To increasing the capacity of the dry ice hopper another 20 kg. Ideal for cleaning large-surface objects.

*Weight*: 10 kg (22 lbs)

*Article number*: 200 002

- *Other types available on request!*

---

**Example of use - Micro-Jet Tornado**

The hopper extension is part of the Micro-Jet Tornado standard equipment.

To retrofit other blasting equipment of the one hose system with the hopper extension is possible at any time.
Internal pipe cleaner

- for vertical and horizontal pipes and ducts from DN 250 - DN 400
- small and compact
- easy to use
- self-adjusting with spring mechanism
- high cleaning performance in spite of compact design

Standard equipment:

- ST 120 blast splitter with electronic speed regulation and
  Control box
- 2 x 40 mm (1.6 inch) nozzles
- 2 x 40 mm (1.6 inch) nozzles extensions
- 2 x 50 mm (2 inch) nozzles extensions
- control cable 10 meter
- ice hose 10 meter

Technical specification:

| Net weight Control box: | 5.7 kg (12.6 lbs) |
| Dimensions Control box: | (W x L x H) 295 x 80 x 195 mm (12 x 3 ice hose x 8 inch) |
| Net weight Pipe robot: | 6.8 kg (15 lbs), stainless steel |
| Dimensions Pipe robot: | (W x L x H) 400 x 650 x 400 mm (16 x 26 x 16 inch) |
| Operating pressure: | 6 bar (90 psi) - 16 bar (232 psi) |
| Compressed air consumption: | 1 m³/min - 7 m³/min, depending on the selected nozzle combination |
| Compressed air requirements: | clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C) |
| Compressed air connection: | DIN 3489 claw coupling |
| Power connection: | 100 V - 240 V, 2,8 A - 1,2 A, 50/60 Hz, CEE 17 grounding |
| Noise: | 90 dB (A) at 6 bar |
| Article number: | 940 100 |
**Two hose system**

The dry ice pellets in the hopper are dispensed into the dry ice pellets hose by a screw conveyor. The second hose (compressed air hose) feeds the compressed air to the blast gun. A vacuum is generated and the negative pressure in the dry ice pellets hose sucks the granulate gently towards the gun. The dry ice pellets are then mixed with the compressed air in the blast gun, accelerated and blasted onto the object through a precise jet nozzle.

**Benefits:**

- Low pellet consumption because the pellets are conveyed through the separate pellet hose to the gun without being destroyed.
- The two hose system can be used for 80% of all applications.
**TWO HOSE SYSTEM**

**Mini E-Jet**

**The powerful**
- small and compact, easy to use, high performance
- electrical controller for increased efficiency
- Scrambler (Dry Ice Mill) for gentle cleaning of delicate parts /optional
- simple activation of the Scrambler /optional

**Standard equipment:**
- basic and functional equipment
- blast pressure and pellet control
- digital ice usage display
- empty control
- electrical vibrator interval function
- high-performance direct current motor with high level of efficiency
- SX Micro Plus blast gun with power control
- G6 compressed air nozzle / RD 290 POM SX #7 nozzle
- blast hose package 7 meter with PVC sleeve

**Technical specification:**
- Net weight: 75 kg (165 lbs), stainless steel housing
- Dimensions: (W x L x H) 570 x 930 x 880 mm (22 x 37 x 35 inch)
- Dry ice filling capacity: 35 kg (77 lbs)
- Dry ice consumption: max. 100 kg/h (220 lbs), continuously variable
- Operating pressure: max. 16 bar (232 psi)
- Blasting pressure: 1 bar (14.5 psi) - 16 bar (232 psi), continuously variable
- Compressed air consumption: 1 m³/min - 12 m³/min, depending on the selected nozzle combination
- Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
- Compressed air connection: DIN 3489 claw coupling
- Power connection: 100 V - 240 V, 3.1 A - 1.4 A, 50/60 Hz, CEE 17 grounding
- Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted

**Article number:**
- 330 000 - without Scrambler (Dry Ice Mill)
- 330 001 - with Scrambler (Dry Ice Mill)
The universal

- small and compact, easy to use, high performance
- low pellet and compressed air consumption
- Scrambler (Dry Ice Mill) for gentle cleaning of delicate parts /optional
- simple activation of the Scrambler /optional

Standard equipment:

- basic and functional equipment
- blast pressure and pellet control
- gauge for dry ice consumption
- compressed air treatment
- digital blast time recording
- empty control
- vibrator interval function
- automatic ground roll
- SX Micro Plus blast gun with power control
- G6 compressed air nozzle / RD 290 POM SX #7 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:

Net weight: 75 kg (165 lbs), stainless steel housing
Dimensions: (W x L x H) 570 x 930 x 880 mm (22 x 37 x 35 inch)
Dry ice filling capacity: 35 kg (77 lbs)
Dry ice consumption: max. 60 kg/h (132 lbs), continuously variable
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: 1 bar (14.5 psi) - 16 bar (232 psi), continuously variable
Compressed air consumption: 2,8 m³/min - 12 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted

Article number: 310 000 - without Scrambler (Dry Ice Mill), pneumatic controller and backlash function
The durable

- small and compact, easy to use, high performance
- low pellet and compressed air consumption
- the integrated membrane filter makes it also suitable for compressors with poor quality of compressed air

Standard equipment:

- basic and functional equipment
- blast pressure and pellet control
- pressure gauge for dry ice consumption
- compressed air treatment
- digital blast time recording
- empty control
- vibrator interval function
- membrane filter, sub micro filter
- automatic ground roll
- SX Micro Plus blast gun with control
- GA 6 GAP 3 compressed air nozzle / RD 290 POM SX #7 nozzle
- blast hose package 7 meter with PVC sleeve

Technical specification:

Net weight: 80 kg (176 lbs), stainless steel housing
Dimensions: (W x L x H) 570 x 930 x 880 mm (22 x 37 x 35 inch)
Dry ice filling capacity: 35 kg (77 lbs)
Dry ice consumption: max. 60 kg/h (132 lbs), continuously variable
Operating pressure: max. 16 bar (232 psi)
Blasting pressure: 1 bar (14.5 psi) - 16 bar (232 psi), continuously variable
Compressed air consumption: 2,8 m³/min - 12 m³/min, depending on the selected nozzle combination
Compressed air requirements: clean, oil-free, free of foreign bodies and dry (pressure dew point below 10°C)
Compressed air connection: DIN 3489 claw coupling
Power connection: not necessary, system works purely pneumatically
Noise: 60 dB (A) - 120 dB (A), depending on nozzle combination and surface of the object being blasted
Article number: 320 000
**ACCESSORIES**

**TWO HOSE SYSTEM**

**Nozzle cases - Blast gun**

---

**GAP 3 nozzle case**

- **Weight:** 12 kg (26 lbs)
- **Dimensions:** (W x L x H) 730 x 460 x 150 mm (29 x 18 x 6 inch)

Consisting of:

**Flat nozzles:**
1x FD2 MOD GAP 3
1x FD 360° K MOD GAP 3

**Angular nozzles:**
1x WD 45°/360° K MOD GAP 3
1x WD 45°/360° L MOD GAP 3

**Round nozzles:**
1x RD 180 POM #2 and #7
1x RD 180 ALU #2 and #7
1x RD 290 POM #2 and #7
1x RD 290 ALU #2 and #7

1x Additional handle
1x Holder for additional handle
1x Low temperature grease

**Article number:** 706 100

---

**SX Micro Plus nozzle case**

- **Weight:** 14.5 kg (32 lbs)
- **Dimensions:** (W x L x H) 790 x 600 x 150 mm (31 x 24 x 6 inch)

Consisting of:

**Flat nozzles:**
1x FD2 MOD SX

**Angular nozzles:**
WD 45°/360° K SX

**Round nozzles:**
1x RD 290 SX ALU #2
1x RD 290 SX POM #3
1x RD 290 SX ALU #4
1x RD 290 SX POM #5
1x RD 290 SX ALU #7
1x RD 290 SX POM #8

5x Spare O-rings
1x Additional handle
1x Holder for additional handle
1x Low temperature grease

**Article number:** 706 400

---

**GAP 3 blust gun**

Robust and heat-resistant blast gun with integrated blast pressure control and vertical hose feed. Particularly suitable for use in the extreme temperature range and for places which are hard to reach. (with power control)

- **Weight:** 0.8 kg (1.8 lbs)

**Article number:**
- pneumatic: 610 100
- electric: 610 100 E

---
LPG 1000 blast gun

The model which has been constructed based on the GAP 3 blasting pistol and has an integrated blast pressure control and vertical hose feed is particularly suited for cleaning places which are hard to reach, e.g. shapes with undercuts.

Weight: 0.9 kg (2 lbs)
Article number: 615 000

SX Micro Plus blast gun

The ergonomic design of this blasting pistol with integrated blast pressure control and horizontal hose feed makes for effortless work, even above the head. (with power control)

Weight: 1.2 kg (2.6 lbs)
Article number: 640 100 - pneumatic
Article number: 640 100 E - electric

SX Micro R blast gun

Blast gun with mounting plate for automated use, e.g. robot. (with power control)

Weight: 0.4 kg (0.9 lbs)
Article number: 650 100
### GAP 3 compressed air nozzles

Optimum exploitation of the available compressed air source, combinable with all GAP 3 blast nozzles.

<table>
<thead>
<tr>
<th>GAP</th>
<th>Operating range</th>
<th>Flow rate</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA 6</td>
<td>5 - 9 bar</td>
<td>6 m³/min</td>
<td>756 100-GA6</td>
</tr>
<tr>
<td>GA 9</td>
<td>7 - 12 bar</td>
<td>3.8 m³/min</td>
<td>756 100-GA9</td>
</tr>
</tbody>
</table>

### SX compressed air nozzles

**Standard**

The Mini-Jet is fitted with a universal nozzle in the factory which can be used for the whole range of applications.

<table>
<thead>
<tr>
<th>Operating range</th>
<th>Flow rate</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 8 bar</td>
<td>2.8 m³/min</td>
<td>756 400-0</td>
</tr>
</tbody>
</table>

**Power Set**

The blast nozzles are combined with the compressed air nozzles (#2 - #8) depending on the compressed air source.

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Operating range</th>
<th>Flow rate</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A9</td>
<td>7 - 12 bar</td>
<td>3.8 m³/min</td>
<td>756 401-9</td>
</tr>
<tr>
<td>B14</td>
<td>10 - 17 bar</td>
<td>5.6 m³/min</td>
<td>756 402-14</td>
</tr>
<tr>
<td>C21</td>
<td>17 - 21 bar</td>
<td>8.5 m³/min</td>
<td>756 403-21</td>
</tr>
<tr>
<td>D6</td>
<td>5 - 9 bar</td>
<td>4 m³/min</td>
<td>756 404-6</td>
</tr>
<tr>
<td>E9</td>
<td>7 - 12 bar</td>
<td>5.6 m³/min</td>
<td>756 405-9</td>
</tr>
<tr>
<td>F14</td>
<td>10 - 17 bar</td>
<td>8.5 m³/min</td>
<td>756 406-14</td>
</tr>
<tr>
<td>G6</td>
<td>5 - 9 bar</td>
<td>6 m³/min</td>
<td>756 407-6</td>
</tr>
<tr>
<td>H9</td>
<td>7 - 12 bar</td>
<td>8.5 m³/min</td>
<td>756 408-9</td>
</tr>
<tr>
<td>I14</td>
<td>10 - 17 bar</td>
<td>12.8 m³/min</td>
<td>756 409-14</td>
</tr>
</tbody>
</table>
**FD2 MOD GAP 3 flat nozzle**
Aluminium nozzle, including handle, suitable for cleaning large surface objects. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzles GAP 3!

- **Length:** 380 mm (15 inch)
- **Weight:** 0.9 kg (2 lbs)
- **Outlet opening:** 60 x 5 mm (2.4 x 0.2 inch)
- **Air consumption:** 3.8 m³/min - 6 m³/min
- **Article number:** 716 130-00

---

**FD 360° K MOD GAP 3 flat nozzle**
Short aluminium nozzle 360° rotatable, for cleaning larger surfaces. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzle GA 9 GAP 3!

- **Length:** 240 mm (9.5 inch)
- **Weight:** 0.5 kg (1.1 lbs)
- **Outlet opening:** 48 x 5 mm (1.9 x 0.2 inch)
- **Air consumption:** 3.8 m³/min - 6 m³/min
- **Article number:** 716 140-360

---

**WD 45°/360° K GAP 3 angled nozzle**
For places which are difficult to reach, e.g. shapes with undercuts. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzle GA 9 GAP 3!

- **Length:** 160 mm (6.3 inch)
- **Weight:** 0.4 kg (0.9 lbs)
- **Diameter:** ø 12.5 mm (0.5 inch)
- **Air consumption:** 3.8 m³/min
- **Article number:** 746 163

---

**WD 45°/360° L GAP 3 angled nozzle**
For places which are difficult to reach or cramped spaces. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzle GA 9 GAP 3!

- **Length:** 260 mm (10.2 inch)
- **Weight:** 0.5 kg (1.1 lbs)
- **Diameter:** ø 12.5 mm (0.5 inch)
- **Air consumption:** 3.8 m³/min
- **Article number:** 746 164

---

**RD 180 POM / ALU GAP 3 round nozzles**
High-performance round nozzle for removing stubborn incrustation. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzle GA 9 GAP 3!

- **Diameter:** #2 ø 16 mm (0.63 inch)
- **Weight - POM:** 0.1 kg (0.22 lbs)
- **Air consumption:** #2 3 m³/min at 6 bar
- **Article number - POM:**
  - #2: 726 122-180
  - #7: 746 127-180

- **Diameter:** #7 ø 18.8 mm (0.74 inch)
- **Weight - ALU:** 0.15 kg (0.33 lbs)
- **Air consumption:** #7 6 m³/min at 6 bar
- **Article number - ALU:**
  - #2: 726 142-180
  - #7: 726 147-180

---

**RD 290 POM / ALU GAP 3 round nozzles**
High-performance round nozzle for removing stubborn incrustation. Can be combined with blast gun GAP 3 and LPG 1000 as well as air nozzle GA 9 GAP 3!

- **Diameter:** #2 ø 16 mm (0.63 inch)
- **Weight - POM:** 0.15 kg (0.33 lbs)
- **Air consumption:** #2 3 m³/min at 6 bar
- **Article number - POM:**
  - #2: 726 122-290
  - #7: 746 127-290

- **Diameter:** #7 ø 18.8 mm (0.74 inch)
- **Weight - ALU:** 0.25 kg (0.55 lbs)
- **Air consumption:** #7 6 m³/min at 6 bar
- **Article number - ALU:**
  - #2: 726 142-290
  - #7: 726 147-290
**TWO HOSE SYSTEM**

**Nozzles**

**SX round nozzles**

- **Diameter:** 
  - #2 ø 16 mm (0.63 inch), #3 ø 16.7 mm (0.66 inch), #4 ø 17.4 mm (0.69 inch), #5 ø 18.1 mm (0.71 inch), 
  - #7 ø 18.8 mm (0.74 inch), #8 ø 19.5 mm (0.77 inch)
- **Air consumption:** 2.8 m³/min - 12.8 m³/min at 6 bar (90 psi), depending on the compressed air nozzle used.
- **POM (Polyacetal) / ALU (Aluminum) round blast nozzle for punctual cleaning**
  - Can be combined with blast gun SX!

**RD 200 POM / ALU SX round nozzles**

- **Length:** 200 mm (7.9 inch) 
- **Weight - POM:** 0.18 kg (0.4 lbs)  
- **Weight - ALU:** 0.35 kg (0.8 lbs)
- **Article number - POM:** 726 422-200 - #2, 726 423-200 - #3, 726 424-200 - #4, 726 425-200 - #5, 726 427-200 - #7, 726 428-200 - #8
- **Article number - ALU:** 726 442-200 - #2, 726 443-200 - #3, 726 444-200 - #4, 726 445-200 - #5, 726 447-200 - #7, 726 448-200 - #8

**RD 290 POM / ALU SX round nozzles**

- **Length:** 290 mm (11.4 inch) 
- **Weight - POM:** 0.26 kg (0.6 lbs)  
- **Weight - ALU:** 0.5 kg (1.1 lbs)
- **Article number - POM:** 726 422-290 - #2, 726 423-290 - #3, 726 424-290 - #4, 726 425-290 - #5, 726 427-290 - #7, 726 428-290 - #8
- **Article number - ALU:** 726 442-290 - #2, 726 443-290 - #3, 726 444-290 - #4, 726 445-290 - #5, 726 447-290 - #7, 726 448-290 - #8

**RD 600 POM / ALU SX round nozzles**

- **Length:** 600 mm (23.6 inch) 
- **Weight - POM:** 0.54 kg (1.2 lbs)  
- **Weight - ALU:** 1 kg (2.2 lbs)
- **Article number - POM:** 726 422-600 - #2, 726 423-600 - #3, 726 424-600 - #4, 726 425-600 - #5, 726 427-600 - #7, 726 428-600 - #8
- **Article number - ALU:** 726 442-600 - #2, 726 443-600 - #3, 726 444-600 - #4, 726 445-600 - #5, 726 447-600 - #7, 726 448-600 - #8

**RD 1000 POM / ALU SX round nozzles**

- **Length:** 1000 mm (39.4 inch) 
- **Weight - POM:** 0.9 kg (2 lbs)  
- **Weight - ALU:** 1.7 kg (3.7 lbs)
- **Article number - POM:** 726 422-1000 - #2, 726 423-1000 - #3, 726 424-1000 - #4, 726 425-1000 - #5, 726 427-1000 - #7, 726 428-1000 - #8
- **Article number - ALU:** 726 442-1000 - #2, 726 443-1000 - #3, 726 444-1000 - #4, 726 445-1000 - #5, 726 447-1000 - #7, 726 448-1000 - #8
TWO HOSE SYSTEM

Nozzles

FD2 MOD SX flat nozzle
Aluminium nozzle, including handle, suitable for cleaning large surface objects. Can be combined with blast guns SX as well as air nozzles SX!

Length: 380 mm (15 inch)
Weights: 1 kg (2.2 lbs)
Outlet opening: 60 x 5 mm (2.4 x 0.2 inch)
Air consumption: 3.8 m³/min - 6 m³/min
Article number: 716 440-00

FD 360° K MOD SX flat nozzle
Short aluminium nozzle 360° rotatable, for cleaning larger surfaces. Can be combined with blast guns SX as well as air nozzle standard!

Length: 240 mm (9.5 inch)
Weights: 0.6 kg (1.3 lbs)
Outlet opening: 48 x 5 mm (1.9 x 0.2 inch)
Air consumption: 3.8 m³/min - 6 m³/min
Article number: 716 440-360

WD 45°/360° K SX angled nozzle
For places which are difficult to reach, e.g. shapes with undercuts. Can be combined with blast guns SX as well as air nozzle standard!

Length: 160 mm (6.3 inch)
Weights: 0.33 kg (0.7 lbs)
Diameter: ø 12.5 mm (0.5 inch)
Air consumption: 3.8 m³/min
Article number: 746 162

WD 45°/360° L SX angled nozzle
For places which are difficult to reach or cramped spaces. Can be combined with blast guns SX as well as air nozzle standard!

Length: 260 mm (10.2 inch)
Weights: 0.4 kg (0.9 lbs)
Diameter: ø 12.5 mm (0.5 inch)
Air consumption: 3.8 m³/min
Article number: 746 165

SX special wrench
Special wrench for quickly changing the compressed air nozzle in the blast gun.

Weights: 0.9 kg (2 lbs)
Article number: 706 401

GAP 3 special wrench
Special wrench for quickly changing the compressed air nozzle in the blast gun.

Weights: 0.16 kg (0.4 lbs)
Article number: 706 101

ACCESSORIES
Hose package / GAP 3 extension

Special low-temperature CO₂ hose, pneumatic control cables and breathable protective sleeve.

<table>
<thead>
<tr>
<th>Length</th>
<th>Article number: 520 002</th>
<th>pneumatic</th>
<th>Article number: 520 002 E</th>
<th>electric</th>
</tr>
</thead>
<tbody>
<tr>
<td>per meter</td>
<td>Article number: 520 002</td>
<td>pneumatic</td>
<td>Article number: 520 002 E</td>
<td>electric</td>
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<tr>
<td>5 meter</td>
<td>Article number: 520 006</td>
<td>pneumatic</td>
<td>Article number: 520 006 E</td>
<td>electric</td>
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<td>7 meter</td>
<td>Article number: 520 001</td>
<td>pneumatic</td>
<td>Article number: 520 001 E</td>
<td>electric</td>
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<tr>
<td>10 meter</td>
<td>Article number: 520 003</td>
<td>pneumatic</td>
<td>Article number: 520 003 E</td>
<td>electric</td>
</tr>
</tbody>
</table>

- Other length on request!

GAP 3 spare hose package

consisting of:
- GAP 3 blast gun with power control
- blast hose package 7 meter
  (with PVC sleeve inclusive bent protection spring)

Article number: 520 004 GAP - pneumatic
Article number: 520 004 E GAP - electric

GAP 3 service hose package

2. hose package with order of blast machine

consisting of:
- GAP 3 blast gun with power control
- blast hose package 7 meter
  (with PVC sleeve inclusive bent protection spring)

Article number: 520 005 GAP - pneumatic
Article number: 520 005 E GAP - electric
TWO HOSE SYSTEM

Hose package

Hose package / SX Micro Plus extension
Special low-temperature CO₂ hose, pneumatic control cables and breathable protective sleeve.

per meter

- pneumatic
Article number: 520 012
Article number: 520 012 E - electric

5 meter

- pneumatic
Article number: 520 013
Article number: 520 013 E - electric

7 meter

- pneumatic
Article number: 520 011
Article number: 520 011 E - electric

10 meter

- pneumatic
Article number: 520 014
Article number: 520 014 E - electric

- Other length on request!

SX Micro Plus spare hose package
consisting of:

- SX Micro Plus blast gun with power control, inclusive hand grip
- blast hose package 7 meter
  (with PVC sleeve inclusive bent protection spring)

Article number: 520 004 - pneumatic
Article number: 520 004 E - electric

SX Micro Plus service hose package
2. hose package with order of blast machine
consisting of:

- SX Micro Plus blast gun with power control, inclusive hand grip
- blast hose package 7 meter
  (with PVC sleeve inclusive bent protection spring)

Article number: 520 005 - pneumatic
Article number: 520 005 E - electric
TYP MJ 20 hopper extension (standard)

To increasing the capacity of the dry ice hopper another 50 kg. Ideal for cleaning large-surface objects.

**Weight:** 15 kg (33 lbs)

**Article number:** 300 001

- Other types available on request! -

Example of use - **Mini E-Jet**

To retrofit other blasting equipment of the two hose system with the hopper extension is possible at any time.
Reduce costs!

- high-performance heat exchanger for maximum conversion rate
- simple to install and use
- high pellet density

Dry ice production

The DIS Dry Ice Systems DP 160 Pelletizer produces high density dry ice pellets from liquid CO₂ (carbon dioxide). Liquid CO₂ is fed into the Pelletizer from a low pressure storage tank and released through a dispensing valve to form dry ice snow. The interactive piston in the pelletizer presses the snow through a die to form high-density pellets.

Technical specification:

- Weight: 600 kg (1323 lbs), steel housing
- Dimensions: (W x L x H) 700 x 1700 x 1500 mm (28 x 67 x 60 inch)
- Production quantity: 160 kg/h (353 lbs) - 200 kg/h (441 lbs)
- Pellet size: cylindrical, 3 mm diameter (standard die), other sizes optional
- Pressure for CO₂ inlet: 16 bar (232 psi) - 20 bar (290 psi)
- CO₂ consumption: 320 kg/h (705 lbs)
- CO₂ tank requirement: cold storage with liquid and gaseous removal max. 20 bar (290 psi)
- Dryness of CO₂: min. 66 ppm or equivalent of a dew point min. -45°C (-49°F)
- Feed pipe for CO₂: DN 20 (3/4''), maximum continuous
- Power consumption: 4 kW
- Voltage: 400 V / 50 Hz
- No. of poles: 3
- Protection class: IP 54
- Drive type: V-belt
- External fuse: 16 A
- Winch housing oil capacity: 5 liter
- Article number: 420 000
Pelletizer HP 250

Hydraulic Pelletizer
- high-performance heat exchanger for maximum conversion rate
- simple to install and use
- high pellet density

Dry ice production
The DIS Dry Ice Systems HP 250 Pelletizer produces high density dry ice pellets from liquid CO₂ (carbon dioxide). Liquid CO₂ is fed into the Pelletizer from a low pressure storage tank and released through a dispensing valve to form dry ice snow. The interactive piston in the Pelletizer presses the snow through a die to form high-density dry ice pellets.

Technical specification:
- Weight: 700 kg (1543 lbs), steel housing
- Dimensions: (W x L x H) 800 x 1850 x 1550 mm (32 x 73 x 61 inch)
- Production quantity: up to 250 kg/h (551 lbs)
- Pellet size: cylindrical, 3 mm diameter (standard die), other sizes optional
- Pressure for CO₂ inlet: 16 bar (232 psi) - 20 bar (290 psi)
- CO₂ consumption: approximately 400 kg/h (882 lbs)
- CO₂ tank requirement: cold storage with liquid and gaseous removal max. 20 bar (290 psi)
- Dryness of CO₂: min. 66 ppm or equivalent of a dew point min. -45°C (-49°F)
- Feed pipe for CO₂: DN 20 (3/4’’), maximum continuous
- Motor output: 16 kW
- Voltage: 400 V / 50 Hz
- No. of poles: 3
- Protection class: IP 54
- External fuse: 32 A
- Oil tank capacity: 60 liter
- Article number: 430 000
Hält die Trockeneispellets frisch!

- doppelwandige Thermisolierung
- einfacher Transport
- robust und langlebig
- Temperaturbeständig bis -80°C
- lebensmittelecht, Physiologisch einwandfrei und alterungsbeständig
- TÜV geprüft

Standardausstattung:
- 2 klappbare Tragegriffe
- stapelbar
- Deckelöffnung oben

Technische Daten:

ISO BOX 100
Material: HD-Polyäthylenkunststoff
Abmessungen: (B x L x H) 660 x 810 x 630 mm
Gewicht: ca. 30 kg
Fassungsvermögen: 180 Liter (3 mm Trockeneispellets)
Haltbarkeit der Pellets: 5 - 7 Tage
Artikelnummer: 450 101

ISO BOX 200
Material: HD-Polyäthylenkunststoff
Abmessungen: (B x L x H) 660 x 810 x 830 mm
Gewicht: ca. 35 kg
Fassungsvermögen: 250 Liter (3 mm Trockeneispellets)
Haltbarkeit der Pellets: 5 - 7 Tage
Artikelnummer: 450 102

Rollgestell für ISO BOX 100 und 200 / optional
Material: feuerverzinkter Stahl, Kühlhausrollen aus Polyamid (PA)
Abmessungen: (B x L x H) 660 x 790 x 170 mm
Gewicht: 8,5 kg
Artikelnummer: 450 105
Compressed air heater

The blasting air is heated to approximately 70°C using the compressed air heater. This prevents condensation forming on the object being cleaned which is indispensible when cleaning control cabinets or delicate components. The compressed air heater is placed between the source of compressed air (compressor) and blasting system.

**Weight:** 15 kg (33 lbs), aluminium frame

**Dimensions:** (W x L x H) 470 x 400 x 665 mm

(W x 16 x 26 inch)

**Power connection:** 100 V - 240 V, 6.9 A - 3.3 A, 50/60 Hz, CEE 17 grounding

**Power:** 1300 W

**Compressed air connection:** DIN 3489 claw coupling

**Maximum operating pressure:** 16 bar

Article number: DL 050 19

---

Ultra light compressed air hose 1.5”

The compressed air hose is the connection between the compressor and the blasting system with an inner diameter of 38 mm, including a stainless steel claw coupling (as per DIN 3489).

Available in the following lengths:

- 3 meter Article number: 530 003
- 5 meter Article number: 530 005
- 10 meter Article number: 530 010
- 15 meter Article number: 530 015
- 20 meter Article number: 530 020
- 40 meter Article number: 530 040
- 60 meter Article number: 530 060

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Compressed air connection kit

**consisting of:**

1” i+a DIN 3489 claw coupling (internal and external thread)

3/4” i+a DIN 3489 claw coupling (internal and external thread)

1/2” i+a DIN 3489 claw coupling (internal and external thread)

1 1/4” i+a DIN 3489 claw coupling (internal and external thread)

1” ball valve

PTFE sealing tape

Article number: DL 050 06

---

Pressure regulator - external

The pressure regulator is an external controller (1”) for compressed air between the compressor and the blasting system with DIN 3489 stainless steel claw coupling on both sides. Also available for internal compressed air regulation!

Article number: DL 050 10 - external

Article number: DL 050 11 - internal
**Soft hose**

The highly flexible, cold-proof corrugated stainless steel tube hose is used to reduce the size of the pellets in the hose. This produces a finer blast result. The 100% silicone free hose is also suitable for cleaning delicate components.

- **5 meter** Article number: 103 33
- **7 meter** Article number: 103 37
- **10 meter** Article number: 103 38

**Alutex protective sleeve**

Particularly suitable for foundries because of its guaranteed heat resistance to temperatures of up to 350°C.

- **7 meter** Article number: 110 44
- **10 meter** Article number: 112 21

- Other length on request! -

**Quick Fit**

The stainless steel Quick Fit is a coupling system for plugs and couplings for the quick release of the blast hoses.

Pressure range to max. 16 bar (90 psi)

Article number: NZ 000 01

**Flex Fit**

Articulated coupling system made of anodised aluminium for easy blasting above the head.

Pressure range to max. 16 bar (90 psi)

Article number: 520 000
Low temperature grease
Use of this grease makes it easy to change the compressed air nozzles and blast nozzles.
Article number: 105 98

Membrane filter incl. sub micro filter
To protect the pneumatic components and to dry the control air of the blasting units. Especially suitable, if the compressed air used doesn’t comply with the specification requirements (to moist). In combination it ensures optimum protection.
Article number: DL 050 07

- Can be retrofitted at any time! -

SQS CO₂-control gas warning system basic package
If the CO₂ concentration around the sensor unit gets to high, an optical and an acoustical alarm will be activated. Optionally, additional warning and ventilation systems can be activated.
consisting of:
sensor unit, warn unit and connection splitter (insert)
Article number: SA 060 01
Ear protection - Peltor
Reliable hearing protection from the noise development while blasting.
Peltor Optime II up to 110 dB (L Aeq8)
Article number: AS 070 01
Peltor Optime III up to 120 dB (L Aeq8)
Article number: AS 070 15

Protective goggles
Dependable eye protection against blasted off particles.
Article number: AS 070 13

Ear protection with face guard
Reliable hearing and face protection while blasting.
Article number: AS 070 02

Dust mask
Dependable air way protection against blasted off particles.
Article number: VM 110 04
Vision 2000 super respiratory protection set
Protective helmet with integrated respiratory protection, recommended when blasting in confined spaces.
Article number: AS 070 04

One way coverall with hood
The protective suit will protect your clothing from blasted of particles. It complies with the European norm for personal protective clothing.
Article number: AS 070 11 (size XL)
Article number: AS 070 12 (size XXL)

Work cloves
Robust work gloves to protect your hands while blasting with dry ice.
Article number: AS 070 07

Ice shovel
For comfort when filling the hopper on the blasting system with dry ice pellets.
Article number: AS 070 05
GENERAL ACCESSORIES

Scrambler

Undreamt of possibilities!

- no damage to delicate components
- cleaning open grooves and undercuts
- even blasting pattern
- increased efficiency
- clean delicate parts sparingly with dry ice powder

Scrambler (Dry Ice Mill)

Device for grinding dry ice pellets

The blasting system is filled with conventional 3 mm dry ice pellets. The pellets enter the Scrambler where they are compressed and reduced to crystalline particles of approximately 0.5 mm in size between two rollers working in opposite directions. The particles accelerate the cooling of the workpiece and thus increase the removal effect without having an abrasive effect. This mechanism is particularly suitable for cleaning control cabinets, printed circuit boards, generators, welding lines, printing machines, casting moulds, facades, glass etc.

Technical specification:

Scrambler (Dry Ice Mill)

<table>
<thead>
<tr>
<th>Material:</th>
<th>brass chrome-plated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions:</td>
<td>(W x L x H) 144 x 200 x 110 mm (6 x 8 x 4 inch)</td>
</tr>
<tr>
<td>Weight:</td>
<td>5.2 kg (5 lbs)</td>
</tr>
<tr>
<td>Operating pressure:</td>
<td>min. 1 bar (14.5 psi)</td>
</tr>
<tr>
<td>Compressed air consumption:</td>
<td>270 l/min</td>
</tr>
<tr>
<td>Power connection:</td>
<td>pneumatic or electric depending on the equipment of the blasting system</td>
</tr>
<tr>
<td>Article number:</td>
<td>910 000 - pneumatic</td>
</tr>
<tr>
<td>Article number:</td>
<td>910 003 - electric</td>
</tr>
</tbody>
</table>

Pneumatic controller and backlash function for the use of the Scrambler

consisting of:

- tank
- 3/2 way valve
- switch with base valve
- oiler

Article number: 910 002
Production, service and sales of dry ice blasting systems and dry ice

We supply:
- A range of tried-and-tested products
- Unique technological advances
- Know how
- Demonstrations
- Sales support
- Training
- Leasing
- Rental
- Cleaning services

Demonstrations
Get to know DIS Dry Ice Systems GmbH & Co. KG and convince yourself of the innovative Dry Ice Systems dry ice blasting technology. Make an appointment for a demonstration in Taufkirchen or on your own premises. This will give you a firm basis for your decision to purchase a "tailor-made" system for your application. The option of a finance plan with variable duration or leasing make your introduction to the world of dry ice technology easier.

Training
- The effective use of a dry ice blasting system depends on factors such as the right accessories, compressed air and the object being blasted.
- Learn all you need to know about dry ice blasting using practical examples at our training centre.
- We are of course also happy to carry out training courses on your own company premises.
For optimum blasting results

Compressed air quality
In order to ensure that Dry Ice Systems dry ice blasting systems operate perfectly, the supply of compressed air must be clean, oil-free and dry, i.e. free of foreign bodies.

Production locations with a modern, permanently installed compressed air compressor normally have the suitable quality of compressed air available.

Refer to the data sheets for the exact requirements for each specific dry ice blasting system. If the compressed air does not meet with the requirements, we recommend that you use an appropriate compressed air treatment unit to clean the compressed air.

Air rate
Most industrial consumers have a compressed air supply available which guarantees pressure of approximately 6 - 8 bar and an air rate of 5 - 7 m³/min. This air rate is sufficient for most applications.

HINWEIS:
- The minimum compressed air requirements must be available permanently and continually whilst dry ice blasting!
- For extremely stubborn soilings we recommend an operating pressure of approximately 12 - 15 bar at approximately 7,5 - 10 m³/min!
- Refer to the data sheets for the exact requirements for each specific dry ice blasting system!

Air compressors:
We are offering a variety of well known compressor manufacture companys.

- Please contact us! -
How to find us - Hofolding
FUTURE ORIENTED CLEANING METHOD

WHY FAVOUR US?

Future oriented cleaning method

Development, production, service and sales to the topic dry ice blasting

Your single source provider!

- Decades of experience
- Safe costs through efficiency
- Customer specific solutions
- Professional consulting
- 24h service
- Environmentally safe
- Optimal price-performance ratio

Please visit us also at

www.disystems.de