IB 15/80
Ice Blaster

Innovative cleaning with dry ice:
No residue, no chemicals.
IB 15/80 Ice Blaster

A trendsetting method of cleaning

With its innovative IB 15/80 Ice Blaster Kärcher sets new standards of quality and quantity in surface cleaning.

Manufacture of dry ice

Dry ice is made by liquefying CO₂ (carbon dioxide) under pressure and then allowing it to expand rapidly. In this process part of the CO₂ evaporates and thus cools the remainder to such an extent that it freezes and creates CO₂ snow at a temperature of -110°F.

Dry ice pellets with a diameter of 3 mm are obtained by pressing the CO₂ snow through an appropriate die. Such pellets are available almost everywhere in industrialized countries.

Dry ice blast cleaning process

In principle, the dry ice blasting process is very similar to that of sand blasting. Dry ice pellets are used as the blasting medium which sublimes immediately upon impact with the surface being cleaned and returns to the atmosphere as CO₂ gas. There is, therefore, no residue.

In the Kärcher Ice Blaster the pellets are injected into a jet of compressed air, accelerated to more than 492 ft/s and fired at the surface via the blasting hose with gun and nozzle.

Dry ice blasting is ideal for effortlessly removing adhesives, waxes, binding and parting agents, silicone and rubber residue, paints and lacquers, ink and graffiti, oils and greases, tar, bitumen, resins, chewing gum and many other deposits on a wide variety of surfaces without leaving any residue.

Dry ice pellets impact the contaminated surface, causing the dirt to go brittle, then penetrate the cracks thus created in the dirt. Sublimation of the pellets (the change from a solid to a gaseous state) blasts away the dirt without leaving any residue.
Effective 3-phase cleaning principle

The highly effective and intensive cleaning action achieved in dry ice blasting is basically the result of three processes:

1. **Cleaning with kinetic energy**
   - Dry ice pellets impact the surface being cleaned at a speed of more than 492 ft/s.

2. **Cleaning with thermal energy**
   - The abrupt cooling of the contaminated surface by the dry ice pellets (\(-110^\circ F\)) causes a thermal shock and produces fine cracks in the contaminant.

3. **Cleaning by sublimation**
   - The dry ice pellets penetrate the cracks created in the contaminant and explode on impact (sublimate), i.e. increase in volume to more than 400 times the original mass. The contaminant is literally blown apart and off the surface.

**Your benefits**

**No dampness, no waste water**
- Dry ice sublimates and returns to the atmosphere as CO\(_2\) gas
- No corrosion
- No waste water disposal necessary

**No disassembly necessary**
- Machines do not have to be disassembled for cleaning
- Short machine downtimes
- Very economical

**No wear, no erosion**
- Dry ice pellets are practically non-abrasive
- Surfaces of equipment being cleaned are not damaged

**No detergents**
- Environment friendly cleaning without additional chemicals or blast abrasives
- No waste water

The two thermographic images show the abrupt cooling of the surface. Blue indicates the cold produced by the dry ice pellets.
Comprehensive range of applications

As cleaning with dry ice is performed completely without detergents and chemical additives and leaves no waste water, it is particularly environment friendly and can even be used in areas where cleaning with water or sand is prohibited by law.

Comprehensive range of applications

Ideal for:
• Maintenance work in the automobile industry,
  e.g. for cleaning whole assembly lines,
machines, engines or transmissions
• Drop forging, foundries, welding robots,
  e.g. for cleaning core boxes, injection moulds, tools

For contamination caused by:
• Binding and mould parting agents
• Residue of silicone, rubber, polyurethane,
  thermoplastics, etc.
• Welding splashes, paints and lacquers,
  greases, oils, etc.

Automobile industry, foundries

Printing works

Ideal for:
• Printing presses and their peripheral equipment,
  printing cylinders, pits, tools, etc.
For contamination caused by:
• Dried printing ink
• Oils, greases, etc.
Steel engineering, metalworking, mech. engineering

Ideal for:
• Bottling and mixing plants
• Production lines and mechanical handling systems
• Tank and oven cleaning

For contamination caused by:
• Oils, greases, paints

Wood and electrical industry

Ideal for:
• Woodworking machines
• Generators, fans, switchgear cabinets, etc.

For contamination caused by:
• Fire damage, basic cleaning, glue residue, resin

Food, pharmaceutical, cosmetics industry

Ideal for:
• Bottling and mixing plants
• Production lines and mechanical handling systems
• Tank and oven cleaning

For contamination caused by:
• Carbon deposits
• Baked-on stains and encrustations, greases, starch, etc.

Plastics and packaging industry

Ideal for:
• Injection moulds and production lines

For contamination caused by:
• Silicone, rubber, polyurethane, thermoplastics, etc.
• Paints and lacquers, greases and oils, etc.

Paper industry

Ideal for:
• Production plant and equipment, cylinders, tanks

For contamination caused by:
• Deposits of glue and scale, encrusted dust stains, chemical pulp

Local governments

Ideal for:
• Escalators, façades

For contamination caused by:
• Graffiti, chewing gum residue, etc.
The new Kärcher IB 15/80 Ice Blaster is not only convincing in terms of its versatility, but also because of its user friendliness.

**Compact and user-friendly**

Dry ice consumption: adjustable from 66 to 220 lbs/h

Pressure gauge:
- Blasting pressure

Blasting pressure adjusting knob:
- Easy to operate, even with gloved hand

Indicator lamp:
- Ready for operation

Operating hour meter:
- Resettable

Emergency off switch

Compressor

Pellet box

IB 15/80
Push handle
For convenient mobility, cart principle

Removable nozzle case
For quick access to different blasting nozzles and accessories

Practical holder for blasting hose

Robust stainless steel housing
Service-friendly side panel with 2 practical quick-action locks for easy access

Blasting gun holder
Also helps simplify nozzle changes

Ergonomically shaped blasting gun
Low weight and robust material of blasting gun guarantee long periods of fatigue-free operation

Special nozzles and handles
Kärcher offers accessories to suit all applications

Simple and robust quick-action coupling on blasting hose

Rubber insulator on nozzle
Nozzle can be changed quickly and easily, even when iced up

Aluminium blasting nozzles
Robust and durable

Air/ice selector
Compressed air only or air with ice

Trigger interlock
Mechanical lock helps avoid unintentional operation

Electric drive
Prevents failure as a result of ice build-up
# IB 15/80 Ice Blaster Overview:

<table>
<thead>
<tr>
<th>Technical data</th>
<th>IB 15/80</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order No.</strong></td>
<td>1.574-101.0</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>Ph/V/Hz</td>
</tr>
<tr>
<td><strong>Connected load</strong></td>
<td>1/120/60</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Warranty 120</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>28 x 33 x 43</td>
</tr>
<tr>
<td><strong>Sound pressure</strong></td>
<td>198</td>
</tr>
<tr>
<td><strong>Housing/frame</strong></td>
<td>max 125</td>
</tr>
<tr>
<td><strong>Compressed air</strong></td>
<td>Stainless steel</td>
</tr>
<tr>
<td><strong>Hose coupling</strong></td>
<td>3/4” claw, twist type</td>
</tr>
<tr>
<td><strong>Operating pressure</strong></td>
<td>44 - 230</td>
</tr>
<tr>
<td><strong>Flow rate</strong></td>
<td>106 - 388</td>
</tr>
<tr>
<td><strong>Air quality</strong></td>
<td>Class 3, ISO 8573-1 (low moisture &amp; oil)</td>
</tr>
<tr>
<td><strong>Dry ice blasting</strong></td>
<td>Blasting pressure</td>
</tr>
<tr>
<td><strong>Dry ice pellet</strong></td>
<td>3 (standard blasting size)</td>
</tr>
<tr>
<td><strong>Dry ice consumption</strong></td>
<td>66 - 220</td>
</tr>
<tr>
<td><strong>Dry ice tank capacity</strong></td>
<td>77</td>
</tr>
</tbody>
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<tr>
<th>Standard accessories</th>
<th>Order No.</th>
<th>Description / function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blasting gun</td>
<td>4.775-566.0</td>
<td>Ergonomically shaped housing, easy nozzle changeover, selector for compressed air and ice or air only</td>
</tr>
<tr>
<td>Blasting hose</td>
<td>4.013-039.0</td>
<td>23 ft. with quick-action coupling and electric connection</td>
</tr>
<tr>
<td>Pencil jet nozzle, small</td>
<td>4.130-418.0</td>
<td>For extreme contamination as well as low compressor power</td>
</tr>
<tr>
<td>Fan jet nozzle</td>
<td>4.130-423.0</td>
<td>High area coverage with good cleaning power</td>
</tr>
<tr>
<td>Fan jet nozzle insert, 10 mm</td>
<td>4.130-422.0</td>
<td>Changes flow rate</td>
</tr>
<tr>
<td>Nozzle grease</td>
<td>6.288-072.0</td>
<td>Silicone grease for aluminum threads of nozzles</td>
</tr>
<tr>
<td>Nozzle case</td>
<td>6.421-311.0</td>
<td>With foam liner</td>
</tr>
</tbody>
</table>

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<th>Mounting kits</th>
<th>Order No.</th>
<th>Description / function</th>
</tr>
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<tbody>
<tr>
<td>Fan jet nozzle insert, 6 mm</td>
<td>4.130-421.0</td>
<td>Reduces flow rate</td>
</tr>
<tr>
<td>Fan jet nozzle insert, 8 mm</td>
<td>4.130-420.0</td>
<td>Reduces flow rate</td>
</tr>
<tr>
<td>Scrambler</td>
<td>4.130-416.0</td>
<td>Reduces size of dry ice pellets to fine particles, especially for cleaning highly sensitive surfaces</td>
</tr>
<tr>
<td>Nozzle extension</td>
<td>4.130-417.0</td>
<td>Makes operation easier in special applications</td>
</tr>
<tr>
<td>Handle</td>
<td>6.321-206.0</td>
<td>For use with nozzle extension</td>
</tr>
<tr>
<td>Dry ice shovel</td>
<td>4.321-198.0</td>
<td>Stainless steel with insulated handle</td>
</tr>
<tr>
<td>Earmuffs</td>
<td>6.321-207.0</td>
<td>Full cups enclose ears</td>
</tr>
<tr>
<td>Goggles</td>
<td>6.321-208.0</td>
<td>With side protection and elastic headband</td>
</tr>
<tr>
<td>Protective gloves</td>
<td>6.321-210.0</td>
<td>One size fits all</td>
</tr>
</tbody>
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Please contact us for more information: