IB 15/80
Ice Blaster

KÄRCHER

Innovative cleaning with dry ice:
No residue, no chemicals.

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 CO_2 (carbon dioxide) under pressure and then allowing it to expand rapidly. In this process part of the CO_2 evaporates and thus cools the remainder to such an extent that it freezes and creates CO_2 snow at a temperature of -110°F.

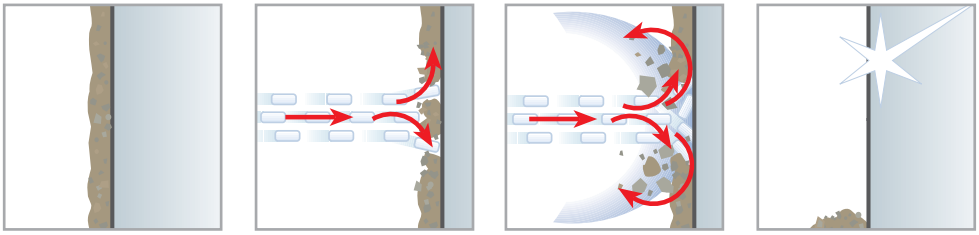
Dry ice pellets with a diameter of 3 mm are obtained by pressing the CO_2 snow through an appropriate die. Such pellets are available almost everywhere in industrialized countries.

Machine is filled with 3 mm dry ice pellets.

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 sublimates immediately upon impact with the surface being cleaned and returns to the atmosphere as CO_2 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.

Optimal cleaning results

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

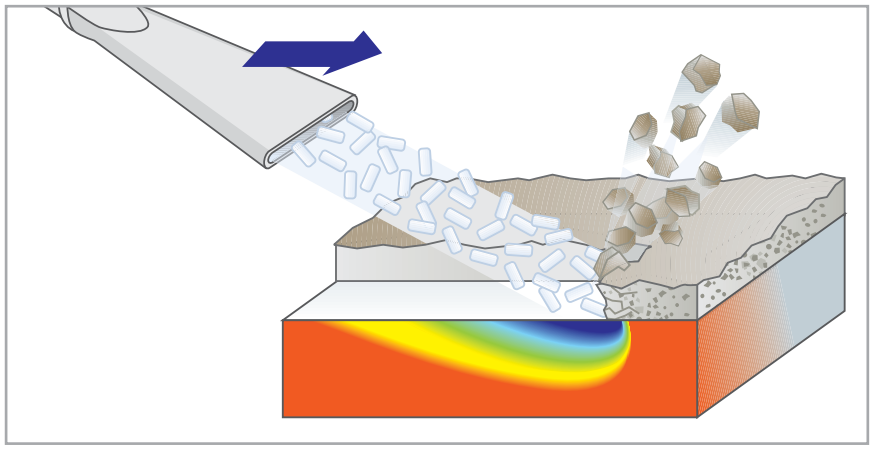
Dry ice pellets impact the surface being cleaned at a speed of more than 492 ft/s.

2 Cleaning with thermal energy

The abrupt cooling of the contaminated surface by the dry ice pellets (-110°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.



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

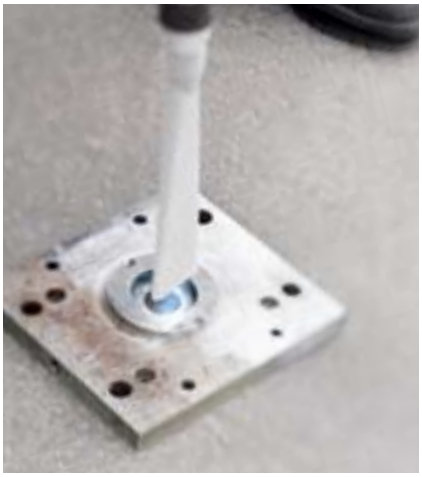
Your benefits

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



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.

Automobile industry, foundries

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.

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:
- Basic and maintenance cleaning of production machines
- Welding robots, conveyors, spraying booths

For contamination caused by:
- Oils, greases, paints

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.

Paper industry

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

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

Wood and electrical industry

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

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

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.

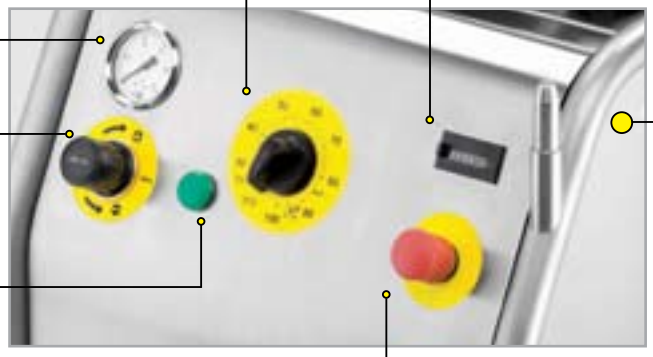
Local governments

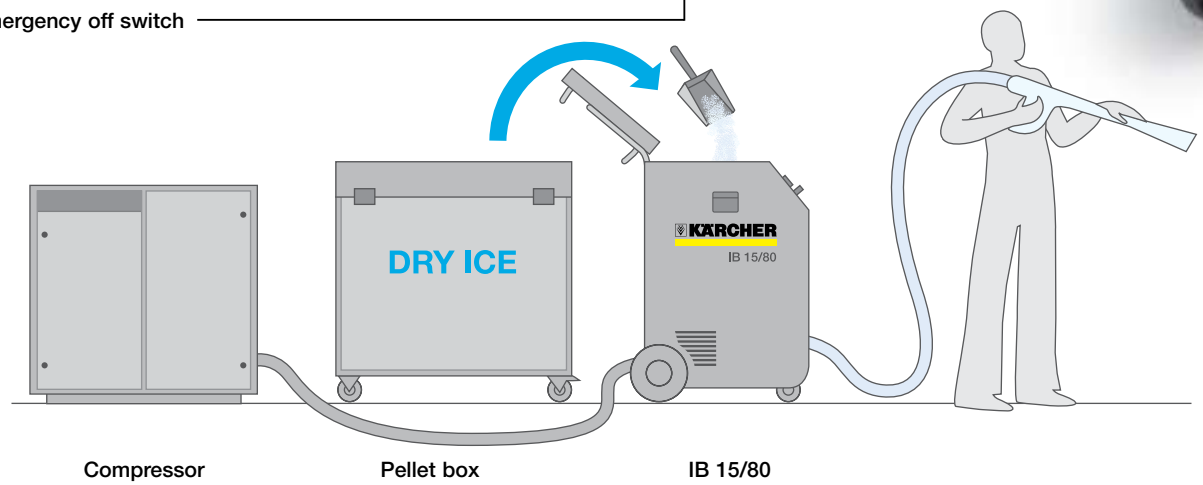
Ideal for:
- Escalators, façades

For contamination caused by:
- Graffiti, chewing gum residue, etc.

Compact and user-friendly

The new Kärcher IB 15/80 Ice Blaster is not only convincing in terms of its versatility, but also because of its user friendliness.





Push handle
For convenient mobility, cart principle

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

Practical holder for blasting hose

Recessed handle for side panel

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

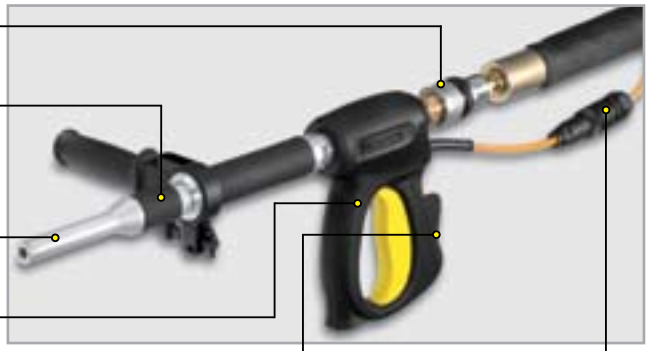
Simple and robust quick-action coupling on blasting hose

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:

Technical data		IB 15/80
Order No.		**1.574-101.0**
Power supply	Ph/V/Hz	1/120/60
Connected load	Amps	5
Dimensions	W x L x H in inches	28 x 33 x 43
Weight (dry)	lbs	198
Sound pressure	dB(A)	max 125
Housing/frame		stainless steel
Compressed air		
Hose coupling		3/4" claw, twist type
Operating pressure	psi	44 - 230
Flow rate	cfm	106 - 388
Air quality		Class 3, ISO 8573-1 (low moisture & oil)
Dry ice blasting		
Blasting pressure	psi	44 - 232
Dry ice pellet	mm	3 (standard blasting size)
Dry ice consumption	lbs/hr	66 - 220
Dry ice tank capacity	lbs	77

Standard accessories	Order No.	Description / function
Blasting gun	4.775-566.0	Ergonomically shaped housing, easy nozzle changeover, selector for compressed air and ice or air only
Blasting hose	4.013-039.0	23 ft. with quick-action coupling and electric connection
Pencil jet nozzle, small	4.130-418.0	For extreme contamination as well as low compressor power
Fan jet nozzle	4.130-423.0	High area coverage with good cleaning power
Fan jet nozzle insert, 10 mm	4.130-422.0	Changes flow rate
Nozzle grease	6.288-072.0	Silicone grease for aluminium threads of nozzles
Nozzle case	6.421-311.0	With foam liner
Mounting kits		
Fan jet nozzle insert, 6 mm	4.130-421.0	Reduces flow rate
Fan jet nozzle insert, 8 mm	4.130-420.0	Reduces flow rate
Scrambler	4.130-416.0	Reduces size of dry ice pellets to fine particles, especially for cleaning highly sensitive surfaces
Nozzle extension	4.130-417.0	Makes operation easier in special applications
Handle	6.321-206.0	For use with nozzle extension
Dry ice shovel	4.321-198.0	Stainless steel with insulated handle
Earmuffs	6.321-207.0	Full cups enclose ears
Goggles	6.321-208.0	With side protection and elastic headband
Protective gloves	6.321-210.0	One size fits all

Please contact us for more information:

Kärcher Industrial Products
www.karcherindustrial.com