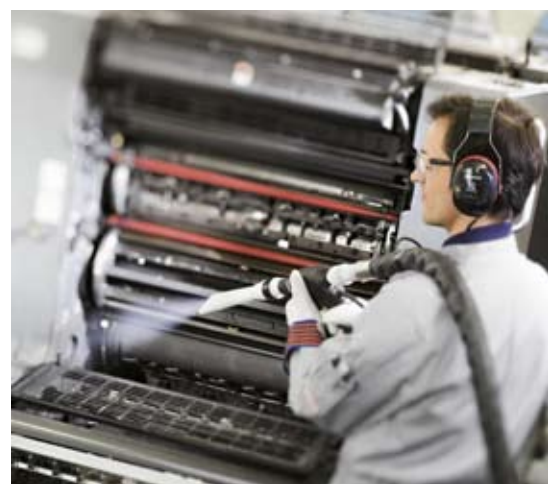


IB 15/80
Ice Blaster



Innovative cleaning with dry ice
No residue, no chemicals.



A superior alternative to traditional cleaning methods.

With its innovative IB 15/80 Kärcher sets new standards in surface cleaning. The ice blasting process eliminates the need for chemicals and solvents as the dry ice pellets (compressed CO₂) are produced as a by product of other manufacturing process. The blasting is also non-abrasive thus eliminates the wear and tear that results from other processes. As dry ice sublimates on contact no wet floors are left behind.



Manufacture of dry ice

Dry ice is created 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 -79°C.

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



Machine is filled with 3 mm dry ice pellets.

The ice blasting process

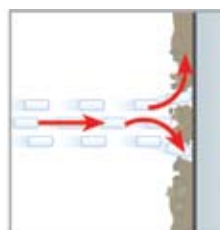
Setting new standards in surface cleaning, the dry ice blasting process is very similar to that of sand blasting. In principle, the pellets are injected into a jet of compressed air, accelerated to speed in excess of 150m/s and fired at the surface. Dry ice pellets impact the contaminated surface, causing the dirt to go brittle and fall from the surface. At this point the pellets change from solid to a gaseous state and blast away the dirt without leaving any residue.

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 cleaning works on the principle of 3mm pellets of dry ice being propelled at great speed onto a contaminated surface.



This causes the contaminated layers to freeze rapidly that the unwanted layer contracts, weakens....



and then breaks from the surface leaving a clean finish.



In the process the dry ice sublimates, leaving only the coating that has been removed behind, which can be simply swept from the floor.

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

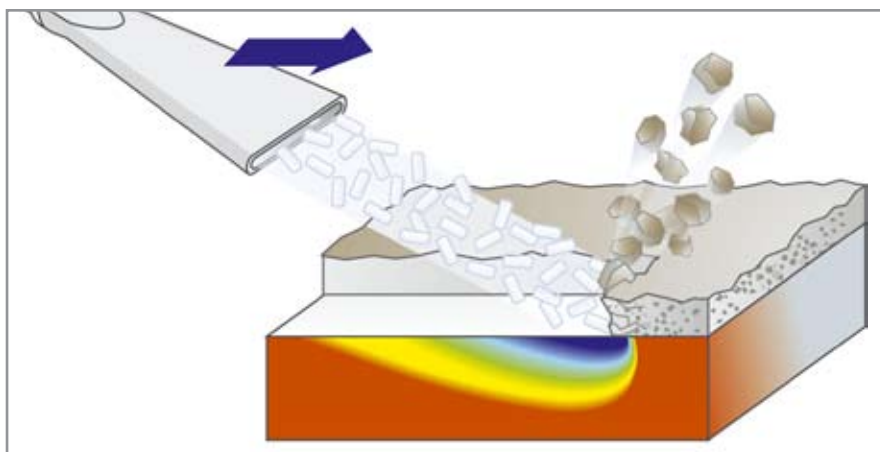
Dry ice pellets impact the surface being cleaned at a speed of more than 150 m/s.

2 Cleaning with thermal energy

The abrupt cooling of the contaminated surface by the dry ice pellets (-79°C) 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 CO₂ gas
- No corrosion
- No waste water disposal necessary

No disassembly necessary

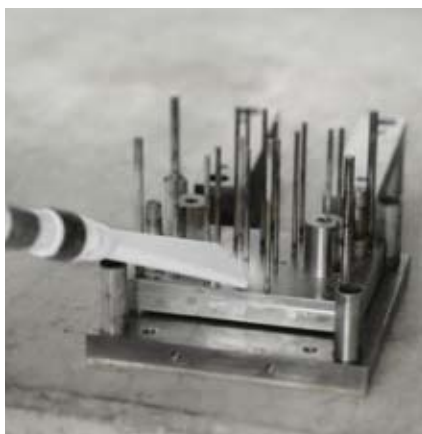
- Machines do not have to be disassembled for cleaning
- Short machine downtimes
- Very economical

No wear, no erosion

- Dry ice pellets are practically non-abrasive
- No damage to surfaces whilst cleaning

Environment friendly

- Cleaning without additional chemicals or blast abrasives
- No waste water



A comprehensive range of cleaning applications

As cleaning with dry ice is performed without detergents and chemicals and leaves no waste water, it is particularly environmentally friendly and can even be used in areas where cleaning with water or sand is prohibited.



Automotive industry



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

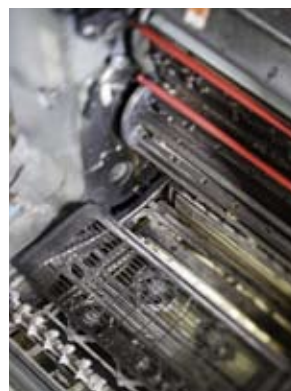


Ideal for:

- 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

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

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, walls

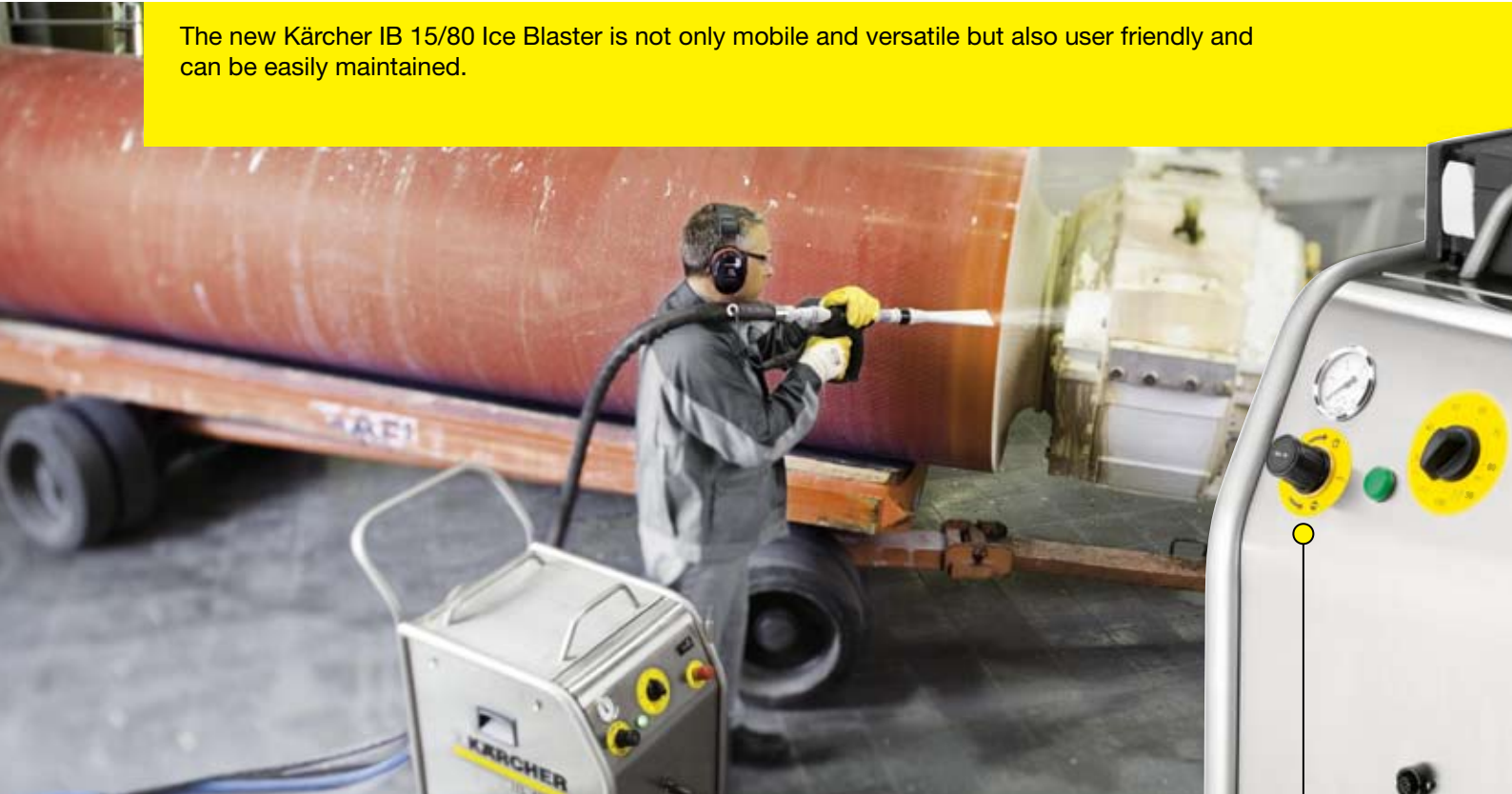
For contamination caused by:

- Graffiti, chewing gum residue, etc.



Compact and user-friendly

The new Kärcher IB 15/80 Ice Blaster is not only mobile and versatile but also user friendly and can be easily maintained.



Dry ice consumption adjustable from 30 to 100 kg/h

Operating hour meter
Reset-able

Pressure gauge
Blasting pressure

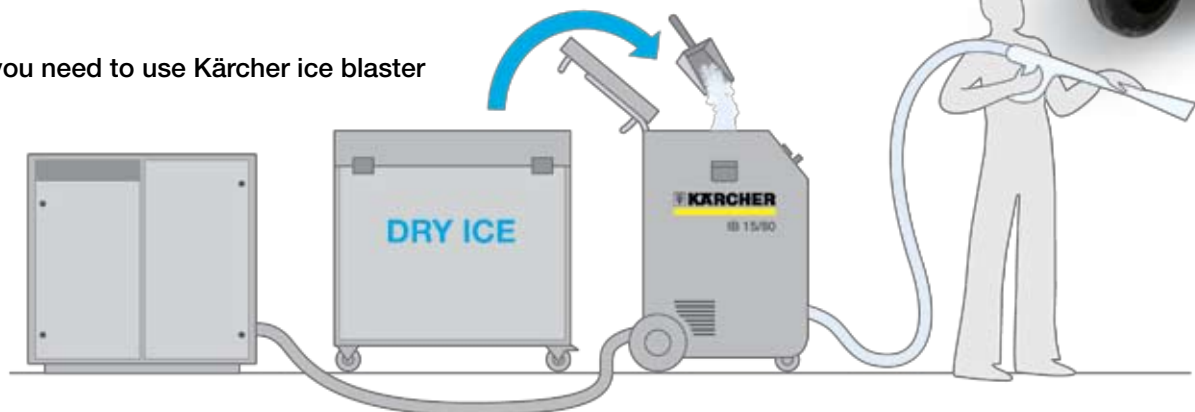
Blasting pressure adjusting knob
Easy to operate, even with gloved hand

Indicator lamp
Ready for operation

Emergency off switch



What you need to use Kärcher ice blaster



1. Compressor

Various industrial units have their own air supply. Kärcher can advise if this is suitable or recommend an alternative.

2. Dry Ice Pellet Box

Kärcher uses dry ice pellets that are 3mm in size, and are available throughout the UK. They are delivered in purpose built containers that require no specialist storage.

3. Kärcher Ice Blaster

The IB 15/80 Kärcher Dry Ice Blaster is available in both 110v and 240v.



- 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

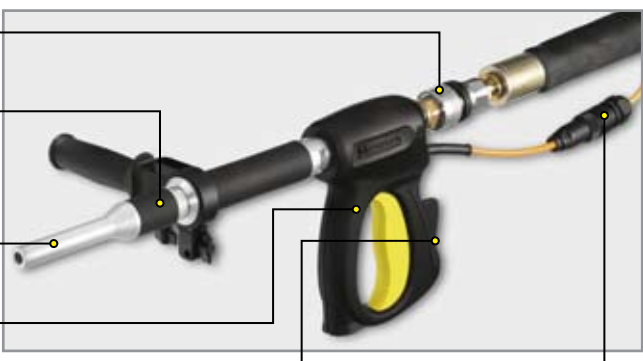


Ergonomically shaped blasting gun
Low weight and robust material of blasting gun guarantee long periods of fatigue-free operation

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 (240v)	IB 15/80 (110v)
Order No.		9.533-644	9.533-643
Power supply	Ph/V/Hz	1/240/50	1/110/50
Connected load	kW	0.8	0.8
Dimensions	B x T x H in mm	780 x 850 x 1100	780 x 850 x 1100
Weight (dry)	kg	90	90
Sound pressure	dB(A) max	185	185
Housing/frame	stainless steel	(1.4301)	(1.4301)
Compressed air			
Hose coupling		Claw coupling (DIN 3838)	Claw coupling (DIN 3838)
Operating pressure	bar/MPa	3-18/0.3-1.8	3-18/0.3-1.8
Flow rate	m ³ /min	3-11	3-11
Air quality		min. Class 3, ISO 8573-1	min. Class 3, ISO 8573-1
Dry ice blasting			
Blasting pressure	bar/MPa	3-18/0.3-1.8	3-18/0.3-1.8
Dry ice pellet	ø in mm	3	3
Dry ice consumption	kg/h	30-100	30-100
Dry ice tank capacity	kg	35	35

Standard accessories	Order No.	Description / function
Water separator	2.641-249	Filters from air-supply
Blasting gun	4.775-545	Ergonomically shaped housing, easy nozzle changeover, selector for compressed air and ice or air only
Blasting hose	4.013-037	7 m, with quick-action coupling and electric connection
Pencil jet nozzle, small	4.130-418	For extreme contamination as well as low compressor power
Fan jet nozzle	4.130-423	High area coverage with good cleaning power
Fan jet nozzle insert, 10 mm	4.130-422	Changes flow rate
Nozzle grease	6.288-072	Silicone grease for aluminium threads of nozzles
Nozzle case	6.421-311	With foam liner
Mounting kits		
Fan jet nozzle insert, 6 mm	4.130-421	Reduces flow rate
Fan jet nozzle insert, 8 mm	4.130-420	Reduces flow rate
Scrambler	4.130-416	Reduces size of dry ice pellets to fine particles, especially for cleaning highly sensitive surfaces
Nozzle extension	4.130-417	Makes operation easier in special applications
Handle	6.321-206	For use with nozzle extension
Dry ice shovel	4.321-198	Stainless steel with insulated handle
Earmuffs	6.321-207	Full cups enclose ears
Goggles	6.321-208	Full cups enclose ears
Protective gloves	6.321-210	One size fits all

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