

A close-up photograph of a King penguin standing in a colony of fluffy brown chicks. The penguin is the central focus, showing its dark blue head, yellow patch on the neck, and long, pointed beak. The chicks are densely packed around it, creating a textured background of brown down.

Cleaning solutions
through dry ice blasting

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dry ice
containers

About us

- › ARTIMPEX nv - 1992
- › Patented dry ice cleaning & production equipment
- › Brand : CRYONOMIC®
- › Almost 30 years experience
- › In-house R&D
- › Quality performance equipment at competitive prices
- › Certified partners (agents or distributors)
- › World-wide team of 60 persons

Our services

- › Worldwide assistance through certified agents
- › Preliminary study & feasibility analysis
- › Test cleaning
- › Start up assistance & staff training

 To watch our
company movie
click [here](#)





What is dry ice?

- › Frozen carbon dioxide (CO₂)
- › Gas commonly added to water to make soda water
- › Captured during industrial processes and recycled to make dry ice

Applications

- › Dry ice blasting
- › Cooled storage and transport (hospitals and laboratories)
- › Technical applications: e.g. removing explosive gases from tanks for maintenance purposes, declamping metal parts etc.
- › Cooling process in automation
- › Winemaking
- › Airline catering
- › Special effects (smoke)
- › Fundamental and applied research



inline machine cleaning

CRYONOMIC
Cryogenic Cleaning Solutions

Principle of dry ice blasting

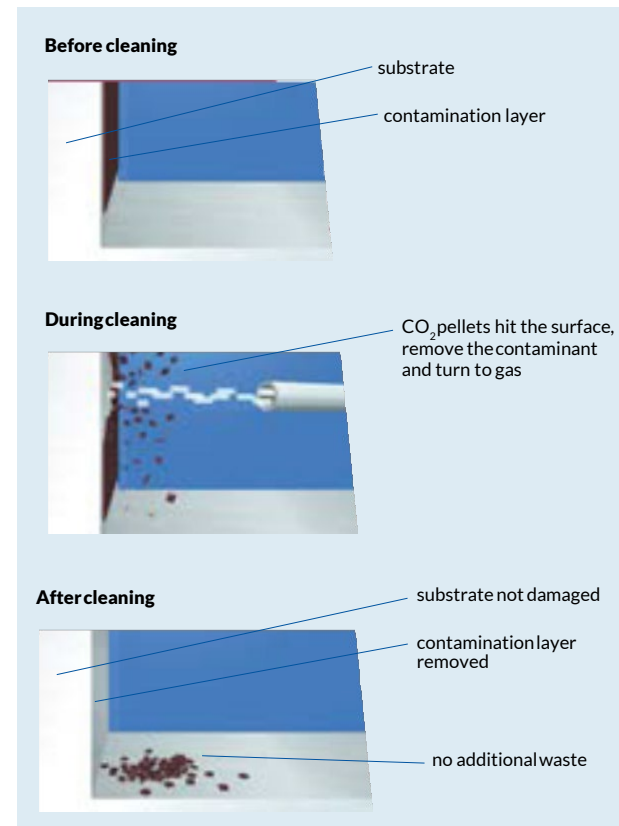
› Dry Ice Cleaning is a blasting technique similar to sand blasting, but makes use of solid CO₂ or dry ice pellets

› Increase in volume by a factor of 700

› The advantage of using dry ice pellets as blasting material is twofold:

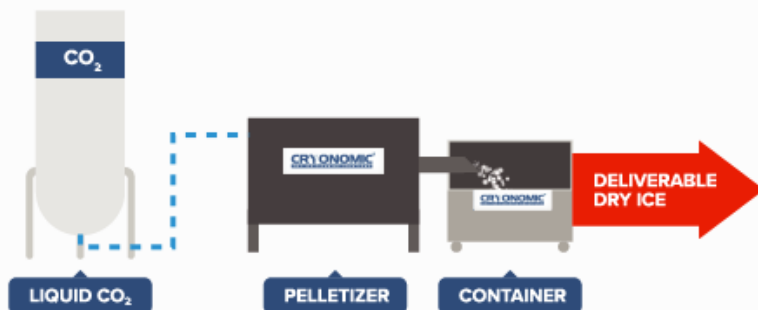
1. Thermal shock (resulting in the **easy detachment** of the contaminant from the substrate)

2. Explosion lifting force (the dry ice pellets vaporize to carbon dioxide gas on impact -> the original contaminant is left for disposal)

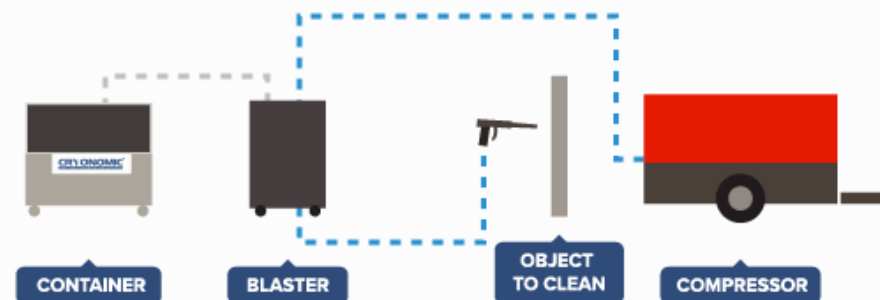


Supply process of dry ice

HOW DRY ICE IS MADE



CLEANING OBJECTS WITH DRY ICE



Principle of dry ice blasting

Comparison between CRYONOMIC® dry ice cleaning and traditional cleaning methods:

	CRYONOMIC®	Sand blasting	Solvent cleaning	High pressure	Manual cleaning
• Time saving:					
Cleaning in the production environment	✓	○	⊙	○	⊙
No need to strip down the production machines	✓	○	○	○	○
Short or no production stop	✓	○	⊙	○	⊙
Fast cleaning method	✓	✓	○	✓	○
• Environmentally friendly:					
Generates no additional waste	✓	○	○	○	○
No use of aggressive or dangerous products	✓	○	○	○	⊙
No noise nuisance	○	○	✓	○	○
• Other advantages:					
Leaves the substrate intact: dry ice is soft as chalk	✓	○	⊙	⊙	○
Suitable in food industry	✓	○	○	✓	⊙
Pellets do not conduct electricity	✓	○	○	○	⊙

✓ Advantage applicable for this technique Advantage sometimes applicable

⊙ for this technique Advantage not applicable for this technique



Environmental

Environmental facts about dry ice blasting:

- › Generate no secondary waste
- › Safe and non-toxic (e.g. food processing equipment)

Other cleaning methods can be toxic:

- › Sand, soda, or water blasting
- › Chemical and solvent cleaning methods



Dry ice blasters

1-hose dry ice blasters

- COB 62
- COB 62+
- COB 71
- COB 71R
- COB71A(R)

1 + 2-hose dry ice blasters

- COMBI 71
- COMBI 71R
- COMBI 72
- COMBI 72R
- COMBI 73
- COMBI 73R



How to choose your CRYNOMIC® dry ice blaster?

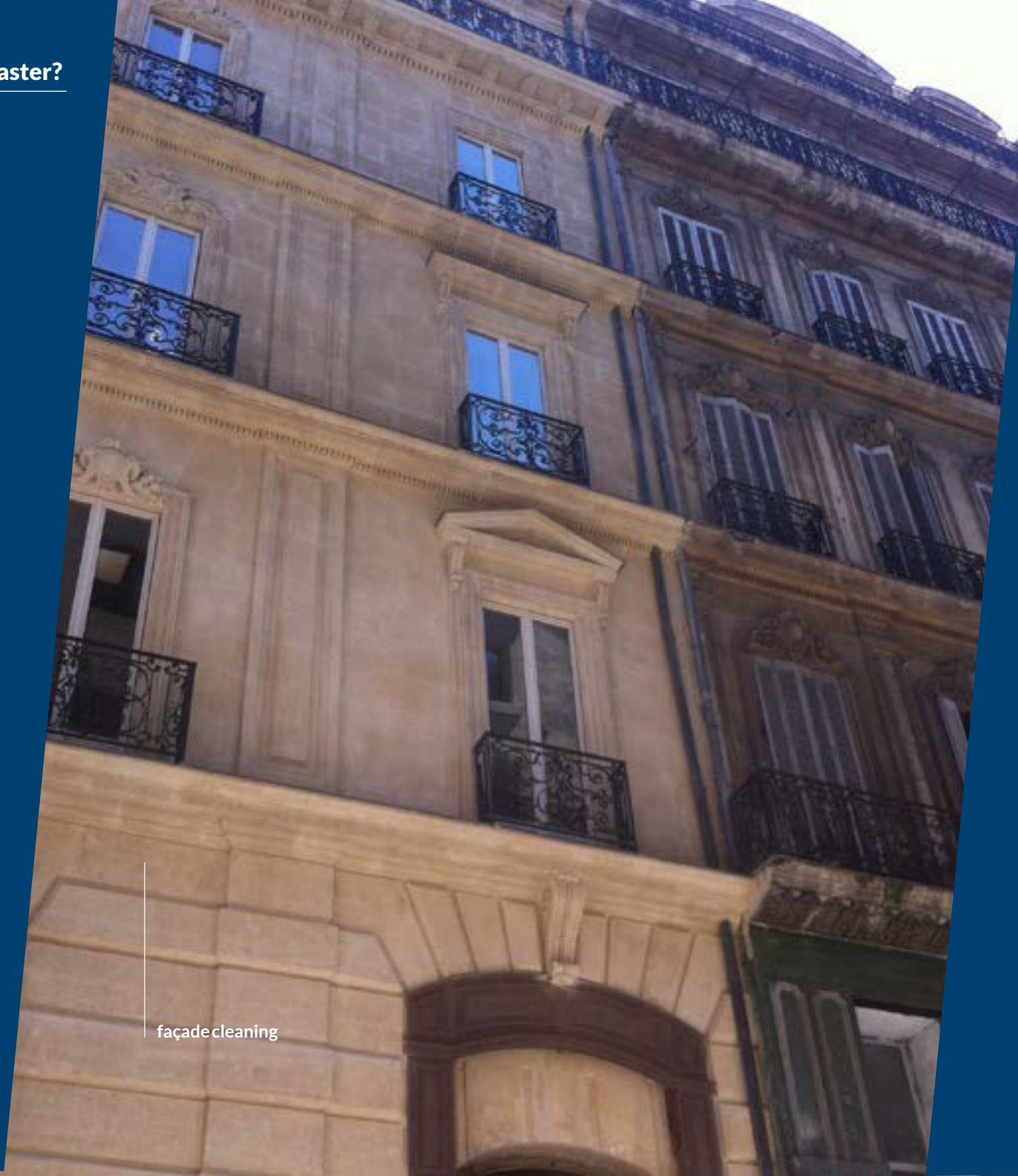
One-hose vs two-hose dry ice blasters

When to use 1-hose system?

- + Smaller jobs
 - + More focused cleaning
 - + **Mostly end-users**
 - + **Light weight & compact machine**
 - + Ergonomical
 - + Less air consumption
 - + Low budget
 - + Smaller compressor
-
- Uses more dry ice at high pressure
 - Mainly focused on in-house blasting
 - Limited hose length (max 25m)

When to use 1-hose + 2-hose system?

- + Bigger jobs / large projects (m²)
 - + More aggressive cleaning power (up to 16 bar)
 - + Faster cleaning (higher impact + wider nozzles)
 - + Pellets stay intact, and flow and at high speed
 - + **Contract cleaners & end-users**
 - + **Long distance blasting (up to 100m)**
 - + **Vertical cleaning up to 30m high**
 - + Less dry ice consumption
-
- Enough compressed air required
 - Heavy and less ergonomical
 - Mainly focused on outdoor blasting
 - Bigger compressor needed



façade cleaning



maintenance

How to choose your CRYONOMIC® dry ice blaster?



CHARACTERISTICS	COB 62 art. P20400	COB 62+ art. P20500	COB 71 art. P20800	COB 71R art. P20850	COMBI 7	COMBI 7R
	1-hose dry ice blaster		1-hose dry ice blaster		1-hose + 2-hose dry ice blaster	
Standard delivered with	<ul style="list-style-type: none"> • MG 1004 gun • Round nozzle Focus 3 • 5m hose set • 5m power cord • Manual + CE certificate 		<ul style="list-style-type: none"> • MG 1004(R) gun • Round nozzle Focus 3 • 5m hose set • 5m power cord • Manual + CE certificate 		<ul style="list-style-type: none"> • Gun & nozzle: see page 21 • Nozzle: see page 21 • Hose set 5m with quickcouplings • 5m power cord • Manual + CE certificate 	
Hopper (capacity)	14 kg dry ice Isolated hopper easily removable		30 kg dry ice Isolated hopper easily removable Advanced pneumatic hopper agitation		30 kg dry ice Isolated hopper easily removable Advanced pneumatic hopper agitation	
Pellet consumption	Adjustable 20 – 80 kg/h Blasting without dry ice possible		Adjustable and displayed 25 – 90 kg/h Blasting without dry ice possible Start-up value programmable		Adjustable and displayed 25 – 90 kg/h Blasting without dry ice possible Start-up value programmable	
Remote controle	No	No	No	Yes	No	Yes
Dimensions (l x w x h)	380x570x890mm		665x570x876mm		665x570x876mm	
Weight	66 kg	68 kg	90 kg	95 kg	100 kg	100 kg
Chassis	2 fixed wheels, 2 pivoting wheels Pusch handle and hose support		2 large wheels, 2 pivoting wheels Foldable push handle and hose support Lifting eyelets and forklng handling slot		2 large wheels, 2 pivoting wheels Foldable push handle and hose support Lifting eyelets and forklng handling slot	

To watch an application video click [here](#)



paint stripping

1-hose dry ice blaster

COB62

Maximal performance for repetitive cleaning jobs!

The CRYONOMIC® COB series is

- a single hose dry ice blaster
- low air consumption
- powerful cleaning performance
- ergonomic design: light and easy to manipulate

Typical applications: maintenance, mould cleaning, foundry, deburring, printing machines, food industry, electrical components cleaning, glue removal, ...



Intuitive control panel: emergency stop and ON/OFF buttons, robust single touch control buttons, blast pressure regulator and manometer

Fast and easy connections: quick coupling, compressed air inlet, ...



rubberindustry

1-hose dry ice blaster

COB 62+

Light weight machine with grit blasting possibilities!

The CRYONOMIC® COB 62+ takes the best of both worlds:

- single hose dry ice blaster
- possibility of adding the CRYONOMIC® Abrasive module to perform dry ice grit blasting cleaning possibilities

Typical applications: façade cleaning, paint stripping, car cleaning, rust removal, machine maintenance, grit blasting, ...



- **Abrasive module:**
in addition to the dry ice blaster, this module allows to take advantage of the abrasive action of grit together with the removal action of dry ice



offsite machine cleaning

1-hose dry ice blaster

COB71(R)

Top notch performance with unbeatable efficiency!

The **CRYNOMIC® COB 71** is

- the most robust single hose dry ice blaster of the COB series
- a bigger hopper
- more blast pressure
- The Remote Control on the COB 71R gun allows you to change blasting conditions (pellet and air consumption) and gun light at distance

Typical applications: construction & renovation, contract cleaning, (Offline) machine maintenance, inline production line cleaning, automotive, rubber, metal processing, (nuclear) decontamination, robotisation,...



Bigger hopper:
the isolated hopper is easily removable, an advanced pneumatic hopper agitation makes the hopper with a capacity of 30 kg perform optimal



foundry

1-hose dry ice blaster

COB71A

Blaster for automated cleaning!

CRYONOMIC® COB 71A :

- Developed for automated cleaning
- Saving time
- Increasing productivity
- Blasting nozzles in various angle directions
- Optional : giving feedback of blast parameters (COB71AR)



Bent round nozzle



Standard round nozzle

Flat nozzle



Abrasive nozzle



To watch robotised
cleaning
click [here](#)

1-hose + 2-hose dry ice blaster

COMBI 7 Series

The perfect all-round machine for every job!

The **CRYNOMIC® COMBI 7 Series** is the only dry ice blaster allowing the:

- Highest cleaning performance for every imaginable application
- Industrial sites
- Single hose as well as dual hose

This blaster can be used in 6 different set-ups, each having specific applications

Typical applications: contract cleaning, bigger jobs / large project cleaning, vertical cleaning, long distance cleaning, faster and more aggressive cleaning at higher impact, ...





mould cleaning

Compose your CRYONOMIC® COMBI 7 blaster according to your needs

One-hose setup

Medium scale applications

COMBI 71(R)

=



COMBI 7

+



One-hose set

+



MG1004(R)

Two-hose setup

Large scale applications
Low pellet consumption
Long distance cleaning

COMBI 72(R)

=



COMBI 7

+



Two-hose set

+



G2001(R)

Both setups

Medium scale applications
Large scale applications
Low pellet consumption
Long distance cleaning
(R) remote controlled gun

COMBI 73(R)

=



COMBI 7

+



One-hose set and two-hose set

+



MG1004(R) and G2001(R)



offline machine maintenance

Abrasive module

Advantages compared to other cleaning techniques:

- Reducing significantly the quantity of abrasive compared to sand blasting
- More ecological abrasive blasting
- Easier and faster cleaning up, reducing the volume of secondary waste
- Extending the scope of general contract cleaning companies significantly with one machine
- No heating up or deforming of the contaminated product



Typical applications: rust removal, asbestos and lead paint removal, façade cleaning, paint stripping, surface roughening before painting, coating, graffiti removal, stubborn material removal, ...




 Suitable for:

COB62+

COB71(R)

COMBI7(R)

 To watch a dry ice grit blasting video click [here](#)

Dry ice production machines

Pelletisers

- CIP 5XS
- CIP 5S
- CIP 5M
- CIP 5L



CIP 5 Series

Production of high density dry ice pellets and dry ice sticks

The CIP 5 Series exist in 4 models:

- CIP 5XS up to 35 kg/h
- CIP 5S up to 100 kg/h
- CIP 5M up to 180 kg/h
- CIP 5L up to 300 kg/h

- Producing 3 mm pellets; 10 or 16 mm sticks
- Quick and easy change of extrusion dies
- Supply Liquid CO₂ Pressure: 16 -21 bar storage tank
- Hydraulic silent motor with fast start-up protocol
- Oil entirely separated from dry ice
- Ergonomic touchscreen control panel

Dry ice can be used for a lot of applications in different industries:

- › Dry ice cleaning
- › Cooled storage and transport (hospitals and laboratories)
- › Process cooling
- › Carbonic maceration
- › Fire extinguisher
- › Declamping of metal parts
- › Smoke generation for show effects



To watch dry ice production on different machines click [here](#)

How to choose your CRYONOMIC® dry ice production machine?



CHARACTERISTICS	CIP 5XS art. P22800	CIP 5S art. P22700	CIP 5M art. P22600	CIP 5L art. P22500
Production capacity ¹	Up to 35 kg/h	Up to 100 kg/h	Up to 180 kg/h	Up to 300 kg/h
Pellet diameter	3 mm, 10 mm or 16 mm			
Weight (excl. hydraulic oil)	115 kg	310 kg	530 kg	800 kg
Oil content	8 l	36 l	54 l	90 l
Power consumption	2 kW	3 kW	7,5 kW	9 kW
Power supply	230V / 50Hz	400V / 50Hz / 3Ph+E		
Supply liquid CO ₂	Liquid CO ₂ moisture: < 65 ppm and completely oil free			
Supply pressure liquid CO ₂	16 – 21 bar			
Inlet connection liquid CO ₂	½" BSP	½" BSP	½" BSP	¾" BSP
Outlet gas CO ₂	1" BSP	2" BSP	2" BSP	2" BSP
Dimensions excl. Outlet (l x w x h)	780 x 310 x 1.000 mm	1.000 x 705 x 1.035 mm	1.380 x 710 x 1.785 mm	1.600 x 830 x 1.805 mm

¹ The production capacity depends on pellet diameter, gas tank pressure and status, liquid CO₂ temperature, atmospheric conditions and user settings.

Dry ice containers

CIC-containers

- CIC 85
- CIC 151
- CIC 370
- CIC 550



Dry ice containers

CIC-containers

Containers for dry ice transportation

- Monobloc structure in polyethylene
- Enlarged wall thickness
- Isolation material: polyurethane
- Frame in stainless steel
- Stackable and accessible at four sides
- Sloping bottom with drain hole and closing dop
- Lid opening assisted by gas springs
- Ergonomic depth and level bottom surface
- Rust proof parts for a unlimited life span
- Metal components in protected positions
- Exchangeable steel feet or 4 pivoting wheels
- Incl. document holder



	CIC 85	CIC 151	CIC 300	CIC 500
Storage capacity	85 litre	150 litre	300 litre	500 litre
Pallet or wheels	non or wheels (trolley)	pallet or wheels	pallet or wheels	pallet



Dry ice containers



hygienic silicone seal, easy to disassemble and reassemble, permits easy cleaning

gas spring assisted lid opening, safe for operators
(not on CIC151)

integrated full length hinge

2 adjustable closures (lockable, stainless steel and mounted in a protected position)

combination lock available to seal the container



reinforced bottom for long life and level (flat) bottom surface to shovel the ice out of the container easily

exchangeable steel feet or 4 pivoting wheels (with 2 brakes)

safety instructions



perfectly stackable: the lid is equipped with "seats" that permit safe stacking of containers

all mechanical parts are screwed onto large threaded inserts built onto plates set in the shell of the product

document holder

inside depth is not too high, allowing every user to empty the dry ice from the bottom safe & easily

a drain hole in the bottom for easy cleaning and drainage

accessible from four sides by pallet truck and fork lift



inline production

THANK YOU FOR YOUR ATTENTION

CRYONOMIC[®]
DRY ICE CLEANING SOLUTIONS

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