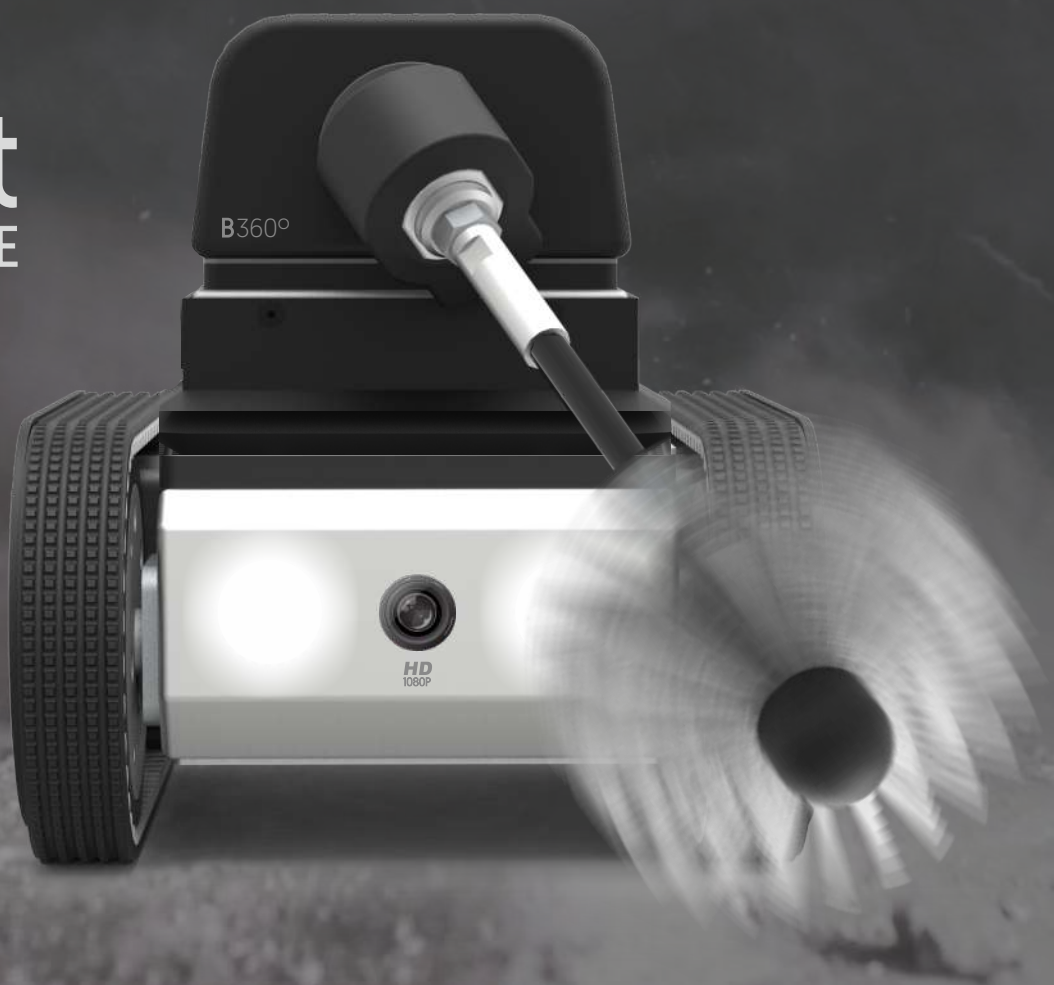


TECAI®

# multibot

LITE



# THE FUTURE OF AIR DUCT CLEANING IS NOW



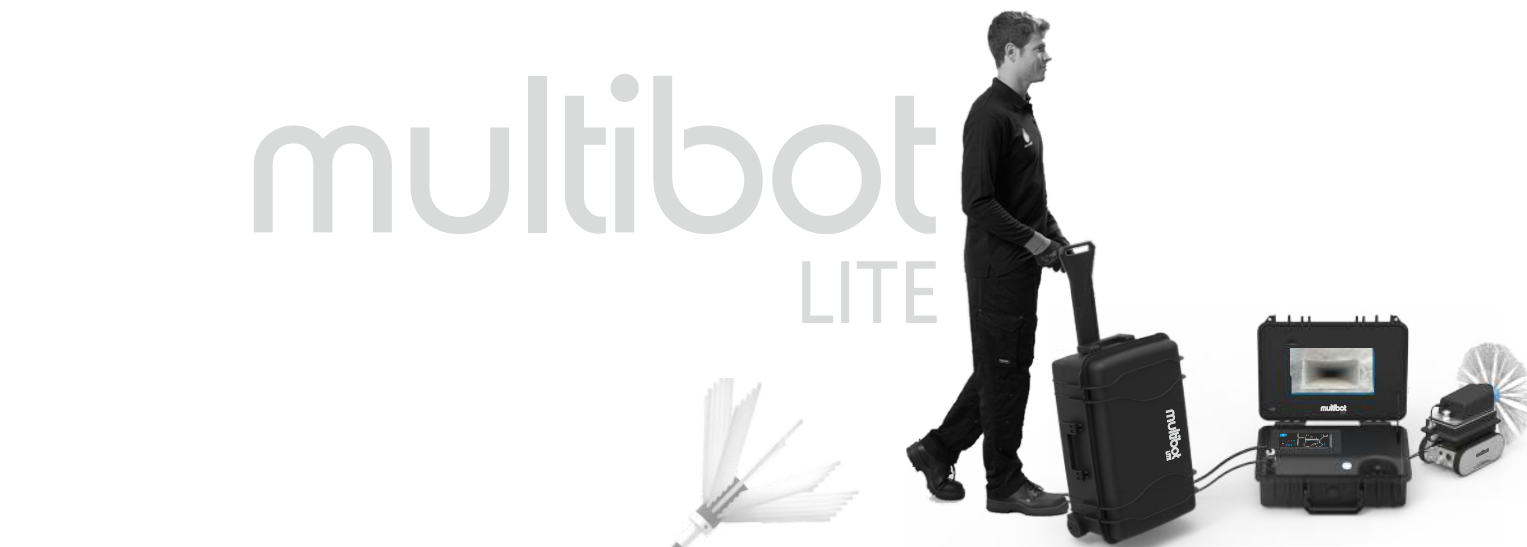
## One robot for multiple tasks

This multitask robot will allow you to carry out multiple applications, coupling different modules for cleaning, disinfection and coating inside the air ducts. It incorporates the latest technologies such as FullHD cameras, HMI touch screen control panel, and HD recording system.



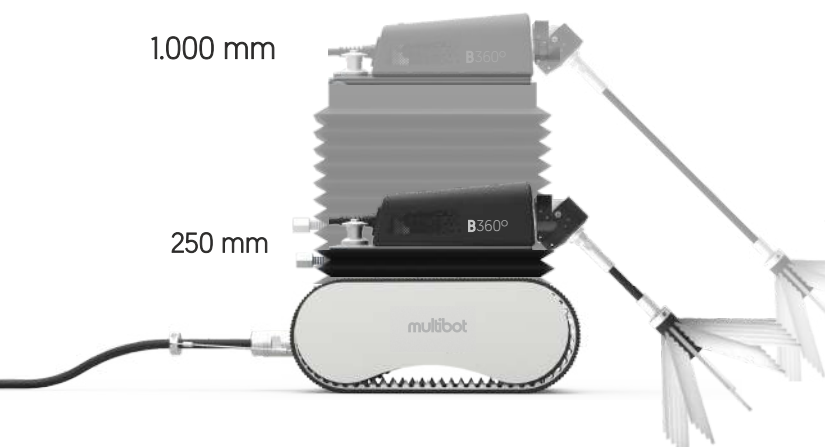
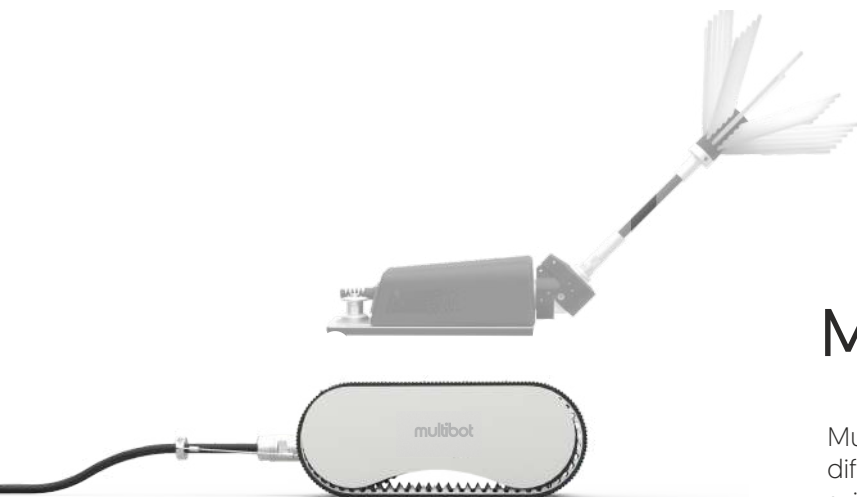
# multibot

## LITE



## Modular design

Multibot Lite makes use of robotised platforms where different modules can be connected, making it suitable for any air duct cleaning task, as well as modules with different cleaning, disinfection and coating settings.



## It reaches the top

Thanks to the automated elevation system offered by the robotised Lite platform, it is possible to clean large air ducts of up to 250 to 1000mm. The height regulation adapts itself from the control unit as the robot moves.

## Versatile

The Multibot's Lite powerful traction crawler allows you to move over any surface and climb slopes of 30° inclination. The robot and the application modules are designed to clean any size of circular or square duct and for any size.



## Robust and reliable

Built with the most resistant materials, such as stainless steel in the structure and the dense polyamide in the casing. The heart of Multibot Lite are its powerful engines of last generation, which assures us a long duration and reliability.



## Nicely-sharp images

The last technology in visualization and recording of the images collected by Multibot Lite in Full HD 1080P. It has a high resolution monitor for recording and storage of videos and photographs, with a touch screen resistant to dust and water.



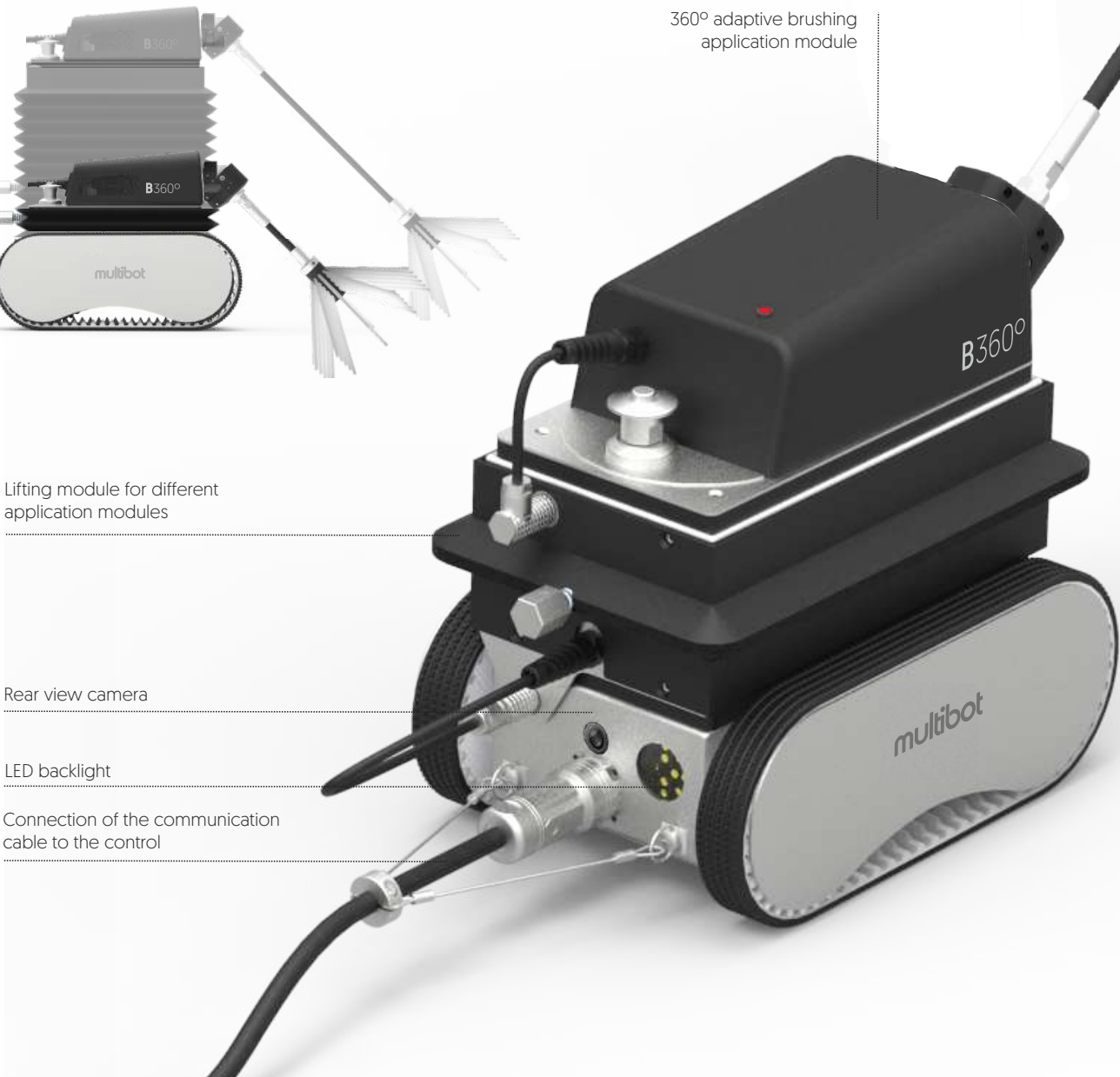


# Modular and reduced design

With the **LITE** robotic platform it is possible to clean, disinfect and coat air conditioning ducts from 250 to 1000 mm. high, the different application modules can be easily coupled to carry out any job, small on the outside and large on the inside, it integrates all the most advanced technology in motorisation and visualisation with Full HD digital cameras.

## TECHNICAL CHARACTERISTICS

Dimensions and weight without modules	L x A x Al : 283 x 198 x 112 mm. / 5,5 Kg L x W x H : 320 x 200 x 250 pulg / 11 lb
Structural material	Stainless steel and polyamide (Pa12)
Cameras (front and back)	Full Colour HD 1080P, 150° aperture
Lighting (front and back)	High intensity LED 4000 K 360°





# CONTROL UNIT

Display monitor  
activation switch

Full HD video display and  
recording touch screen monitor

USB port for downloading videos and  
photos from the unit's internal hard drive

Touchscreen HMI monitor for control  
of all robot functions and app modules

Joystick control for  
steering and speed  
of the tractor unit

Rotation on  
the robot shaft

360°

Speed-adjustable  
rotation, forward  
and reverse by  
joystick

## TECHNICAL CHARACTERISTICS

Display monitor	10" 2048 X 1546 screen, Intel X7, 4 Gb RAM
Control screen	7" 800 x 480 px HDMI - Touch control
Structural material	Polypropylene
Electrical power supply	230V / 50 Hz y 110V / 60 Hz
Dimensions and unladen weight	L x A x Al : 460 x 350 x 170 mm. / 8 Kg L x W x H : 18 x 14 x 6,5 pulg / 18 lb

# TRANSPORT UNIT

Compartment for:  
Communication cable between  
control system and robot

Compartment for:  
Robot LITE + 1 Application Module



Telescopic handle

Foldable handgrip

Compartment for:  
Lifting module E100

Integrated wheels



## TECHNICAL CHARACTERISTICS

Display monitor	10" 2048 X 1546 Screen, Intel X7, 8Gb RAM
Control screen	HMI de 7" 800 X 480 Px control táctil
Suitcase material	High-strength polypropylene
Sealing type	IP 67 waterproof and dustproof
Dimensions and unladen weight	L x A x Al : 600 x 400 x 270 mm. / 6,5 Kg L x W x H : 23 x 16 x 10 pulg / 15 lb

# APPS MODULES

## Quick Connet

Easy and fast connection between the robot's modules without the need for tools, fast connection between cable and plug.



The modular concept of the Multibot Lite system allows different applications inside the ducts through the several modules.

### CLEANING MODULES



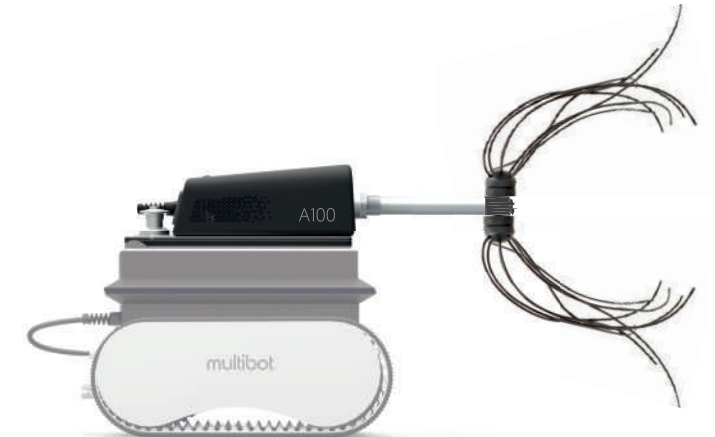
**B360°** 

360° ADAPTIVE BRUSH MODULE



**B100** 

CIRCULAR BRUSH MODULE



**A100** 

AIR WHIP MODULE

### COATING MODULE



**S360°** 

360° COATING MODULE

### DISINFECTION MODULE



**D360°** 

360° DISINFECTION MODULE

### MOD. DRY ICE



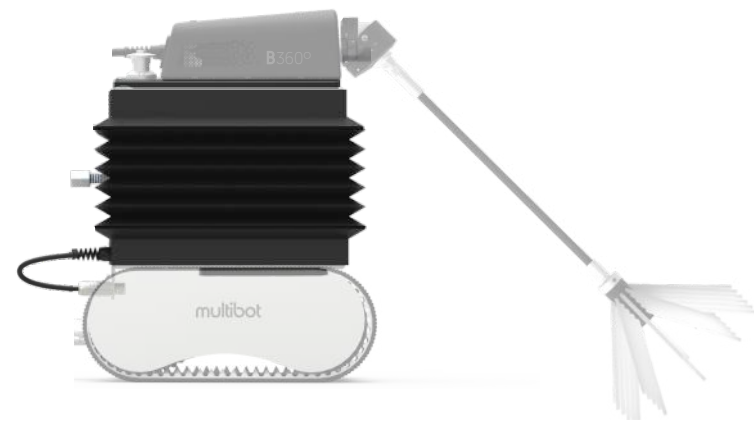
**ICE360°** 

DRY ICE 360° MODULE



# CLEANING MODULE

## E100



### LIFT MODULE

Lifting system that attaches to the LITE robot tractor, keeps the application modules centred in the duct, robust system with dust protection bellows inside the module, communication cable between the LITE robot and the application module.

### TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x A x Al]: 315 x 180 x 185mm. / 6 Kg

LIFTING SYSTEM: Manual knob turning or with electric screwdriver

MINIMUM LIFTING HEIGHT: From 400mm. height in duct.

MAXIMUM LIFTING HEIGHT: Up to 1000mm. in duct height.



Application module docking station

Socket for application modules

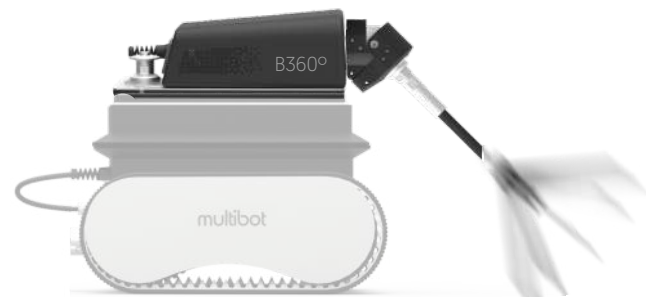
Two-way knob for lifting and lowering

Male connector for LITE robot



# CLEANING MODULE

## B360°



### 360° ADAPTATIVE BRUSH MODULE

App. rotary brush with perimetral movement duct cleaning application module. It moves through the duct adapting to its shape and size. It is very effective for square ducts for deep cleaning of the corners.

#### TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x A x Al]: 270 x 140 x 75mm. / 3 Kg / 11 x 5.5 x 2.95 inch - 6.6 lb

BRUSHING MACHINE: 75 W output, 555 rpm speed.

The PERIMETRAL MOVEMENT: Features a two-way rotation and 3 speeds [4, 8 and 12 rpm].

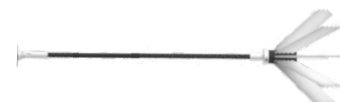
USE IN AIR DUCTS:

Shape: Rectangular, square and circular / Material: Metal / Dimensions: from 250 to 1.000 mm.

#### INCLUDED ACCESSORIES

##### BRUSH EXTENSION RODS

For adjustable perimetral brush made of coated fibreglass and a nylon brush [0.5 mm]  
Fast connection to module B360°



**LONG EXTENSION**  
for air ducts between  
700 mm and 1000 mm



**SHORT EXTENSION**  
for air ducts between  
400 mm and 700 mm



**MICRO EXTENSION**  
for air ducts between  
250 and 500 mm.

B360° COD. AC3120611



SPEED REGULATION  
OF PERIMETRAL ROTATION

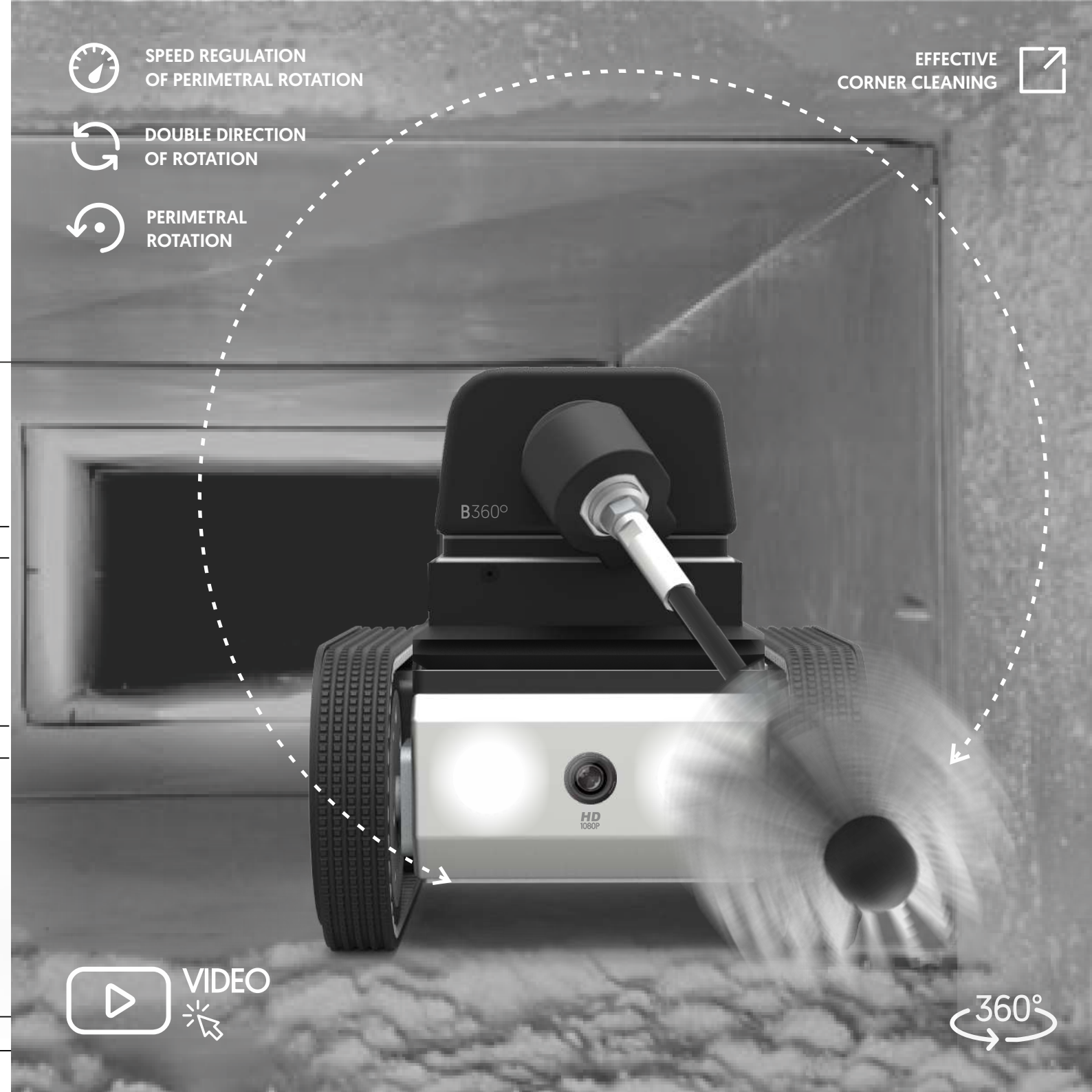


DOUBLE DIRECTION  
OF ROTATION



PERIMETRAL  
ROTATION

EFFECTIVE  
CORNER CLEANING



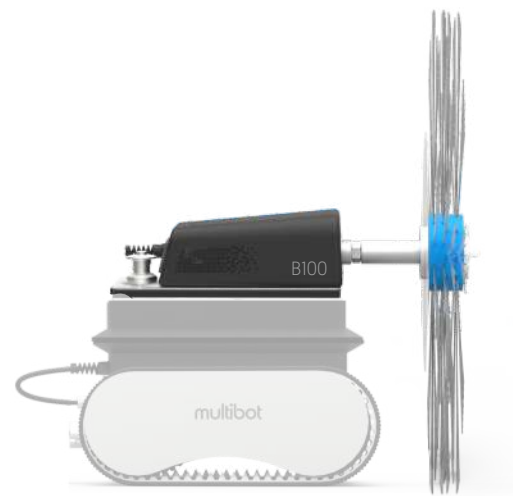
VIDEO

360°



# CLEANING MODULE

## B100



### CIRCULAR BRUSH CLEANING MODULE

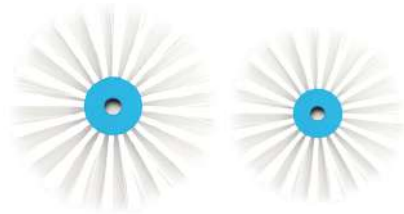
App. rotary brush duct cleaning application module. Total control of the speed and direction and rotation direction of the brush. The best option for the cleaning of circular ducts.

#### TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x W x H]: 270 x 140 x 75 mm - 2 kg // 10.6 x 5.5 x 2.95 inch - 4.4 lb  
BRUSHING MACHINE: 85 W output, 400 rpm speed

USE IN AIR DUCTS:  
Shape: Circular / Material: Metal / Dimensions: from 250 to 1.000 mm

#### OPTIONAL ACCESSORIES



#### PACK 5 BRUSHES

Nylon brushes for circular duct  
Measurements: Ø300, 400, 500, 600 y 700 mm.  
COD. CP2201016

A100 COD. AC3120608



SPEED REGULATION  
OF BRUSH ROTATION



DOUBLE DIRECTION  
OF ROTATION



VIDEO

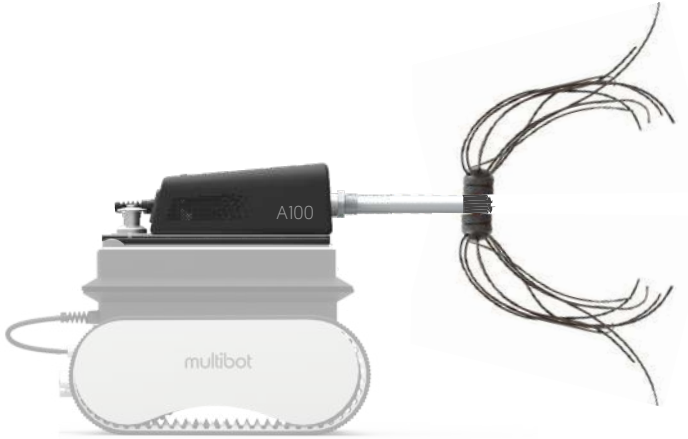
FASTEST CLEANING IN  
CIRCULAR AIR DUCTS





CLEANING MODULE

A100






AIR WHIP MODULE

App. Silicon whips air injection duct cleaning application module. The whips spin all over sweeping the dust forward. This cleaning system is ideal for air ducts with coating made of fibre and other soft materials.

TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x W x H]: 270 x 140 x 75 mm - 3 kg // 10.6 x 5.5 x 2.95 inch - 6.6 lb  
COMPRESSED AIR REQUIREMENTS: Minimum air flow 220 l/min at 6/8 bar  
The ROTATIVE MOVEMENT features a two-way rotation and 3 speeds [4, 8 and 12 rpm].

USE IN AIR DUCTS:  
Shape: Rectangular, square and circular / Material: Metal and fibre / Measures: from 250 to 1.000 mm

ACCESSORIES INCLUDED		OPTIONAL ACCESSORIES	
 20 m hose for pressurised air.		 300 mm, 400 mm and 500 mm silicone tubes.	
 AIR COMPRESSOR AR20 Air compressor.			
A100 COD. AC3120627		COD. CO3330202	



SPEED REGULATION  
OF BRUSH ROTATION



DOUBLE DIRECTION  
OF ROTATION



VIDEO

DISINFECTION MODULE

D360°



360° DISINFECTION MODULE

App. for disinfecting air duct interiors using an injection pump and perimetral nebulisation nozzle at 360°. This system applies disinfectants evenly and quickly.

TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x W x H]: 270 x 140 x 75 mm - 3 kg // 10.6 x 5.5 x 2.95 inch - 6.6 lb  
BOX DIMENSIONS AND WEIGHT: [L x W x H]: 600 x 400 x 270 mm - 12 kg // 23.6 x 15.7 x 10.6 inch - 26.5 lb  
INJECTION PUMP: Flow 5.4 l/min Pressure 7 bar  
INJECTION NOZZLE: Opening angle 160°. Droplet size 20 microns.  
USE IN AIR DUCTS:  
Shape: Rectangular, square and circular / Material: Metal and fibre / Measures: from 250 to 1.000 mm

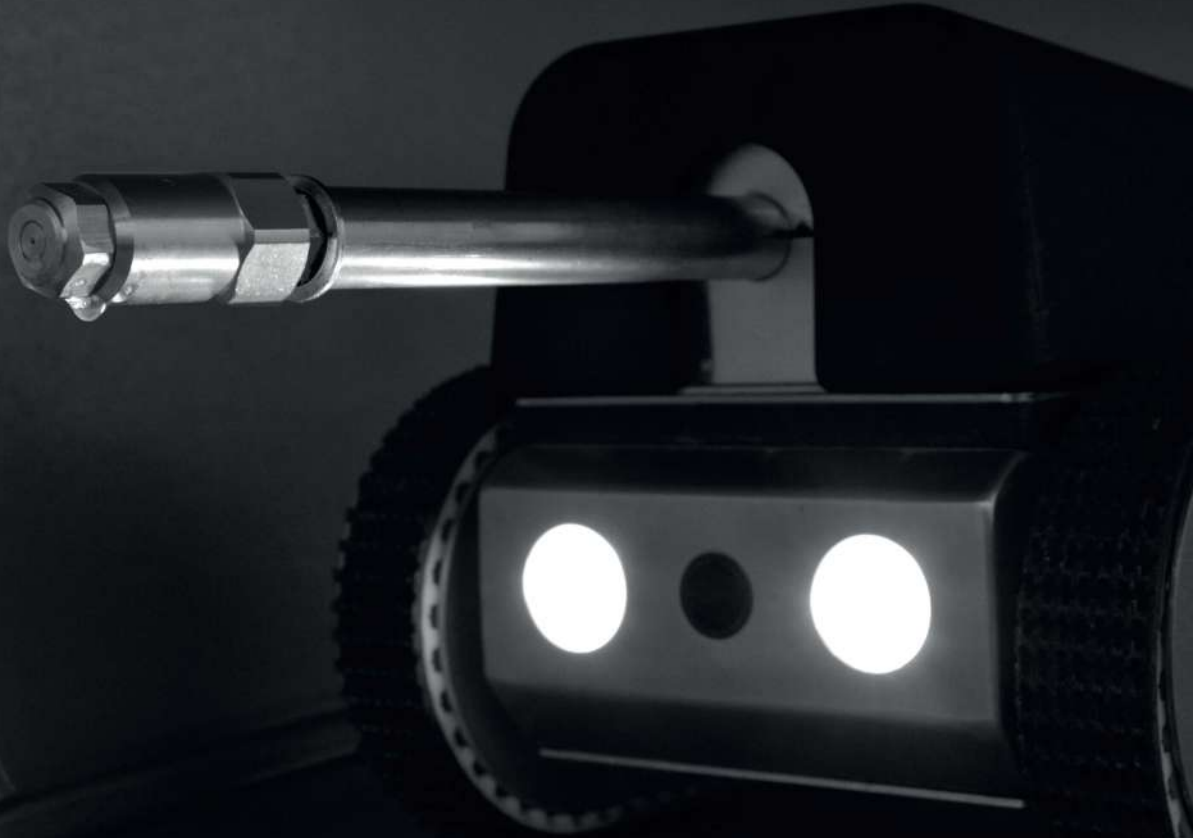
ACCESSORIES INCLUDED	CONSUMABLES
<p>INJECTION SYSTEM BOX Integrates the pump for nebulising chemical products. Compartment for module transportation. 20 m hose.</p> 	 <p>DISINFECTING PRODUCT AK-GERMA 100 Concentrated liquid (anti-viral, anti-bacterial and anti-fungal) for disinfecting surfaces through nebulisation.</p>
A100 COD. AC3120628	COD. PQ8400113



TOTAL AREA OF  
AIR DUCT TO DISINFECT



ULTRAFINE 20 MICRON  
PARTICLES



VIDEO



COATING MODULE

S360°



360° COATING MODULE

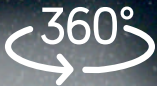
App. Module application for coating the interior of ducts with a double injection nozzle and a 360° perimeter movement. This system applies the sealer homogeneously and quickly.

TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x W x H]: 270 x 140 x 75 mm - 3 kg // 10.6 x 5.5 x 2.95 inch - 6.6 lb  
HIGH PRESSURE PUMP REQUIREMENTS: Minimum flow 15 l/min at 220 bar  
The ROTATIVE MOVEMENT features a two-way rotation and 3 speeds [4, 8 and 12 rpm].

USE IN AIR DUCTS:  
Shape: Rectangular, square and circular / Material: Metal and fibre / Measures: from 250 to 1.000 mm

INCLUDED ACCESSORIES	OPTIONAL ACCESSORIES
 <p>20 m hose for pressurised air.</p>	<div><p><b>AIRLESS PUMP</b> High pressure pumping system of 220 bar and flow of 15 l/min</p></div> <div><p>ELASBIO. chemical sealant. 25 kg cylinder COD. PQ8400110</p></div>
S360° COD. AC3120626	COD. AC3120605



TOTAL COAT  
AREA



DOUBLE DIRECTION  
OF ROTATION



SPEED REGULATION  
OF BRUSH ROTATION



VIDEO





# DRY ICE MODULE

## ICE360°





### DRY-ICE 360° MODULE

App. for the projection of dry ice from inside the ducts by means of an injection lance, it performs a 360° perimeter movement through the duct. This system applies dry ice [Co2] on fatty residues, without using water or chemicals.

### TECHNICAL CHARACTERISTICS

DIMENSIONS AND WEIGHT [L x W x H]:: 270 x 140 x 75mm. / 3 Kg  
ROTARY MOTION: Double direction of rotation, 3 speeds of 4, 8 and 12 rpm.

APPLICATION IN DUCTS:  
Shape: Rectangular, square and circular / Material: Metal / Sizes: 250 to 1,000 mm.

INCLUDED ACCESSORIES	OPTIONAL ACCESSORIES
<p>Co2 injection nozzles Set of 4 easy-to-connect nozzles for application in duct diameters from 500 to 1200 mm.</p> 	<p><b>IBL Mini</b> Equipment for the application of Co2 pellets, tank capacity of 8 Kg, with a consumption of 20 Kg/hour, it has a hose of 10 mts of reach.</p> 



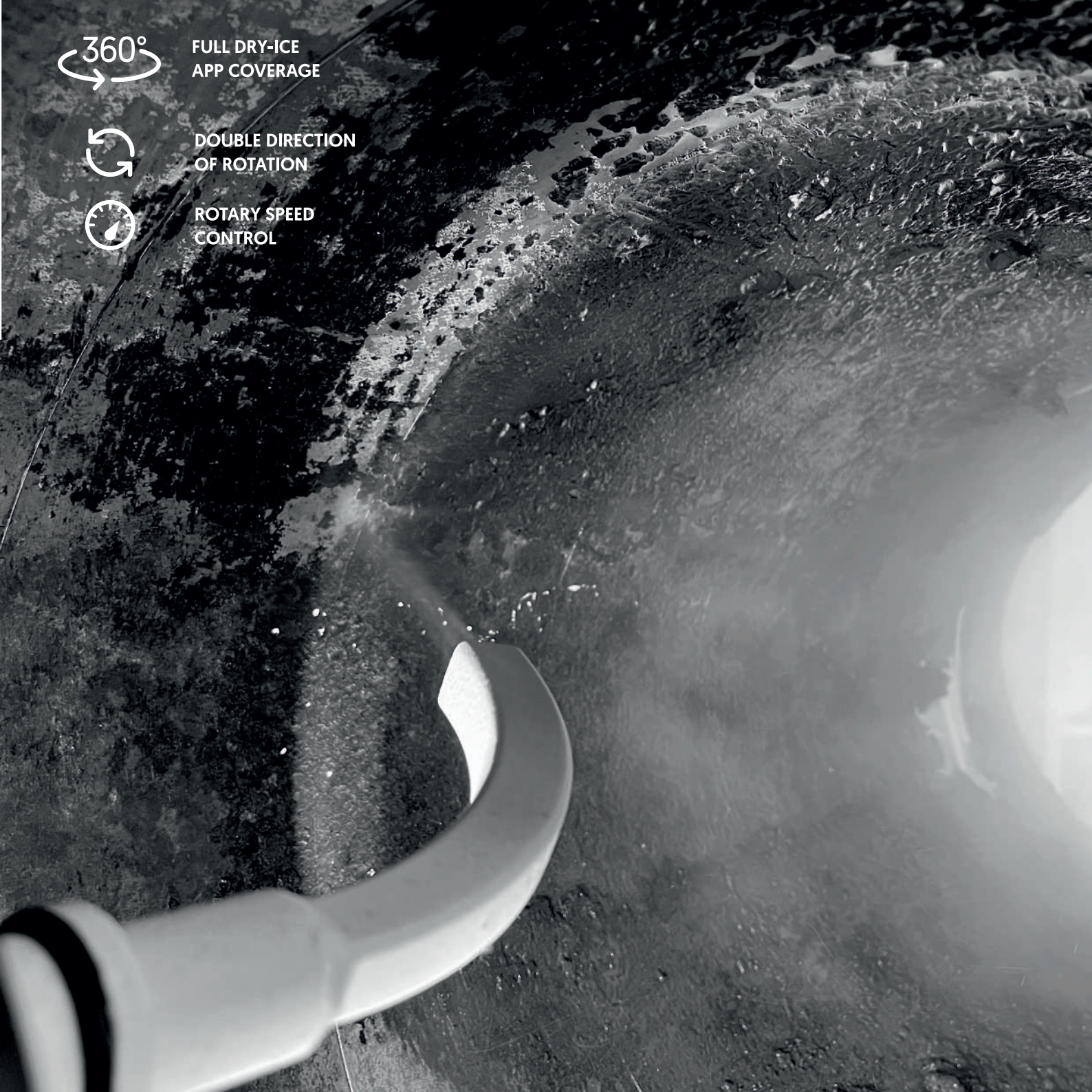
FULL DRY-ICE  
APP COVERAGE



DOUBLE DIRECTION  
OF ROTATION



ROTARY SPEED  
CONTROL



TEINNOVA®