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Version: 24-01

# Original Operating Manual

## Blasting machine

# IC-030



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# 1 Introduction and copyright

This operating manual explains safe and defect-free usage of the IC-030 dry ice blasting equipment. Every person operating this equipment must fully read and understand the instructions given in this manual before putting the equipment into operation. Please keep this manual safe and always at hand.

Failure to observe the procedures specified herein may lead to serious consequences both on the equipment and on its operators. The operator has to strictly observe the working procedures described herein. Any changes made to these work procedures have to be approved in writing by ICS Ice Cleaning Systems s.r.o.

The manufacturer of the equipment is not held responsible for damages caused to the system or generated by the system in the following cases:

- Improper handling.
- Failure to follow the operating instructions.
- Repairs by unauthorized personnel.
- Installation and replacement of non-original ICS parts.
- Inappropriate use.
- Operation by non-instructed personnel.

Any change in the operating procedure requires the written consent of the manufacturer of the IC-030:

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## Copyright

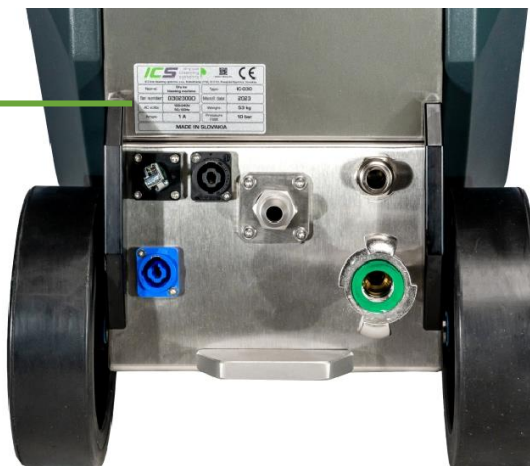
The copyright to this operating instructions manual belongs to ICS Ice Cleaning Systems s.r.o.

This operating manual is intended for the operating and supervisory personnel. It contains regulations, illustrations and instructions, usage of which, either full or partial, by third parties is completely prohibited without an express written permission in this respect.



The illustrations display different equipment variants.

## 1.1 System identification

Machine identification plate location



Identification plate

		web: <a href="http://www.ics-dryice.com">www.ics-dryice.com</a> tel: +421 42 4261 135 email: <a href="mailto:info@ics-dryice.com">info@ics-dryice.com</a>		
ICS ice cleaning systems, s.r.o., Robotnícka 2192, 017 01, Považská Bystrica, Slovakia				
Name:	Dry ice blasting machine	Type:	IC-030	
Ser. number:		Manuf. date:		
AC volts:	100-230V AC 50 Hz/60 Hz	Weight:	53 kg	
Amps:	1,5 A	Pressure max:	10 bar	
SSCP:	10 kA	El. drawing number:	030-01	

## 2 Safety instructions

The safety guidelines specified below are critical for ensuring safety of operators and other involved individuals, as well as secure operation of the equipment.

### Security and Risk

The IC-030 is designed to comply with the EC Declaration of Conformity for Machinery. Therefore, using the machine does not pose a risk to the operator when the instructions in this manual are followed.

It is important that the operator follows the safety signs attached to the machine and the safety regulations described in this manual and that the operator reads and understands the contents of this manual before starting up the machine.

The user is obligated to operate the IC-030 only when the machine is in perfect condition.

Unauthorized modifications and alterations affecting safety of the IC-030 are not permitted.

## 2.1 Definitions of Responsible Persons

### Operator

An operator is an individual or a legal entity operating the blasting machine, or on whose premises the blasting machine is being operated. The operator must ensure that the device is utilised solely for the intended purpose, and in adherence with all safety guidelines provided in this operating manual. The operator must ensure that all users of the machine have read and understood the safety guidelines. The operator is responsible for scheduling and proper execution of regular safety checks. Adherence to national performance standards is strongly advised.

### Qualified Professional

A qualified professional is an individual who is employed by the manufacturer, or an individual who meets the following criteria:

- Possesses a completed professional qualification that demonstrably proves their professional competence, such as an apprenticeship certificate or an equivalent credential.
- Has demonstrable work experience proving that the qualified professional possesses the necessary expertise. The qualified professional should be familiar with various potential indicators requiring further examination, based e.g. on risk assessments or routine inspections.
- The qualified professional must have experience in performing the aforementioned tests, or similar tests. In addition, the qualified professional shall stay updated on the current technological advances pertinent to the tested equipment and assessed risks.

### Operating Personnel

The dry ice blasting machine can only be operated by personnel who have completed the necessary operating training and proved their competence to operate the equipment to the designated representative of the operator. The operating personnel shall at all times use suitable PPE (protective clothing, safety shoes, safety glasses, gloves). Safety shoes must be worn at all times for safety reasons. The operating personnel must be familiarised with the operating instructions, which should be readily accessible to them at all times.

The operating personnel must:

- Read and understand the operating instructions.
- Be familiar with safe operation of the blasting machine.
- Be physically and mentally fit to use the blasting machine.

#### WARNING

The consumption of drugs or alcohol impairing reaction time renders an individual unsuitable for operating the blasting machine! Individuals under the influence of the aforementioned substances are strictly prohibited from interacting with the blasting machine!

## 2.2 General safety guidelines

### Danger

- Intentional misuse of dry ice may be harmful or fatal.
- Dry ice is a skin and eye irritant. Avoid contact with skin, mouth, eyes, and clothing. It may cause severe frostbite or burns.
- Dry ice is harmful if eaten or swallowed. If eaten, seek medical help immediately.
- Dry ice changes to CO<sub>2</sub> gas as it sublimates (melts). Do not use or store in a confined space.
- Do not place dry ice in airtight containers. Airtight containers may explode as dry ice converts to CO<sub>2</sub> gas.

### CO<sub>2</sub> concentration

Risk of suffocation on account of carbon dioxide. Dry ice pellets are CO<sub>2</sub> in a solid form. At normal atmospheric pressure, CO<sub>2</sub> can only exist in a solid form at a temperature of -79°C/-110°F or lower. When CO<sub>2</sub> is used as a blasting medium, it becomes heated and changes into a gaseous form. As CO<sub>2</sub> has a higher specific gravity than ordinary atmospheric air, inhaled air will contain CO<sub>2</sub> – especially if the blasting process takes place in small or partly closed rooms. In such conditions, there is a risk of oxygen content of inhaled air being replaced by CO<sub>2</sub>. Therefore, it is essential to make sure the room is well ventilated when dry ice blasting!

- low CO<sub>2</sub> concentrations of 3-5% result in headaches and rapid breathing,
- CO<sub>2</sub> concentrations of 7-10% produce headaches and nausea, and may lead to unconsciousness,
- higher CO<sub>2</sub> concentrations lead to unconsciousness and in the worst case – suffocation.

As stated above, high CO<sub>2</sub> concentrations can displace oxygen and result in unconsciousness. Therefore, avoid using the dry ice blasting machine in spaces/rooms where ventilation is limited.

### CO<sub>2</sub> detector

The presence of a CO<sub>2</sub> detector is recommended in areas of limited ventilation such as rooms, closed tanks, etc. The CO<sub>2</sub> detector must be installed to interrupt blasting process before the CO<sub>2</sub> concentration exceeds a prescribed limit.

### Improper application

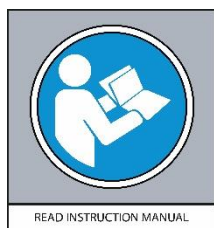
The manufacturer disclaims any liability for risks arising from improper use of the blasting machine. Such risks are solely in the responsibility of the operator or operating personnel.

#### CAUTION:

Use of this device for purposes other than those outlined in the manual is strictly forbidden.

- The blasting machine must not be used in environments with an increased risk of fire or explosion, corrosive environments, or environments with increased presence of dust.
- The specified performance parameters of the device must be adhered to at all times.
- The device must not be used if the intake hoses or blasting hoses are damaged.
- The blasting machine must not be used if there is a possibility of unintended movement.

## 2.3 Symbols on the machine



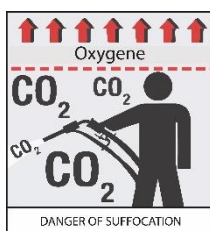
READ INSTRUCTION MANUAL



DANGER OF INJURY THROUGH CO<sub>2</sub>



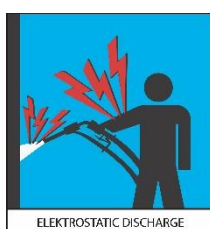
USE EYE AND EAR PROTECTION



DANGER OF SUFFOCATION



WEAR GLOVES



ELECTROSTATIC DISCHARGE



WEAR LONG SLEEVED INDUSTRIAL CLOTHES



DANGER OF INJURY ICE TEMPERATURE -79 °C

### Note

In case of an emergency requiring immediate interruption of blasting, activate the

**EMERGENCY stop button.**





## 2.4 Static Electricity

Dry ice can cause electrostatic discharges. However, the equipment is bonded to the ground to minimize electrostatic discharge, and the warning sign is meant to instruct the operator to avoid placing the equipment in rooms containing explosive gasses. It is recommended to use a plastic shovel in the dry ice container.



Serious discharge of static electricity can occur. Always make sure that objects to be cleaned are adequately earthed/grounded and that this earthing/grounding remains stable throughout the whole cleaning process. The dry ice blasting machine is earthed/grounded, from the machine cabinet to the blasting gun, and through the main electricity connection on the rear side of the machine – provided that the machine has been set up and connected as described in STARTING MACHINE chapter.

The user should always wear safety footwear class S2 or higher in order to protect himself from the static discharge.

Dangers can arise from the machine if it is used improperly by untrained personnel. All users must be aware of these safety points. Improper handling of the machine and/or dry ice can threaten health and life, or at least cause serious damage.

Persons having a pacemaker are **not allowed** to work with the dry ice blasting machine.



## 2.5 Explosive Hazard

Attention!

The machine must never be used in environments where there is a **danger of explosion**. Despite optimum earthing/grounding of both machine and cleaning object, static electricity can be generated and create a spark.

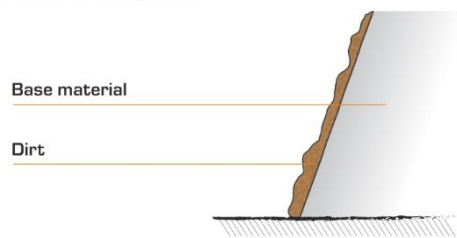


## 2.6 Process description

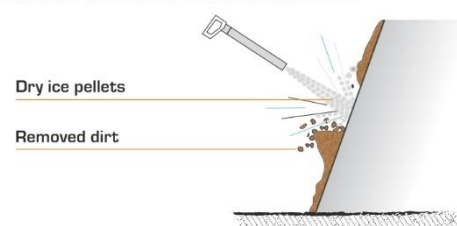
The dry ice blasting equipment IC-030 operates with granules of dry ice pellets ( $\varnothing$  3 mm), produced through pressing of CO<sub>2</sub> snow. The pellets are blasted on the surface to be cleaned. The dirt from the surface is frozen through thermal shock and it breaks because of the different expansion coefficients. The CO<sub>2</sub> granulate sublimates in the moment of impact from solid to gaseous state. Only the initial dirt remains behind.

The dry ice pellets in the hopper ( $\varnothing$  3 mm) will be mixed using a compressed air operated dosing system, transported through the hose and accelerated through the blasting nozzle, the pellets can reach the speed of sound (depending on pressure and blasting nozzle).

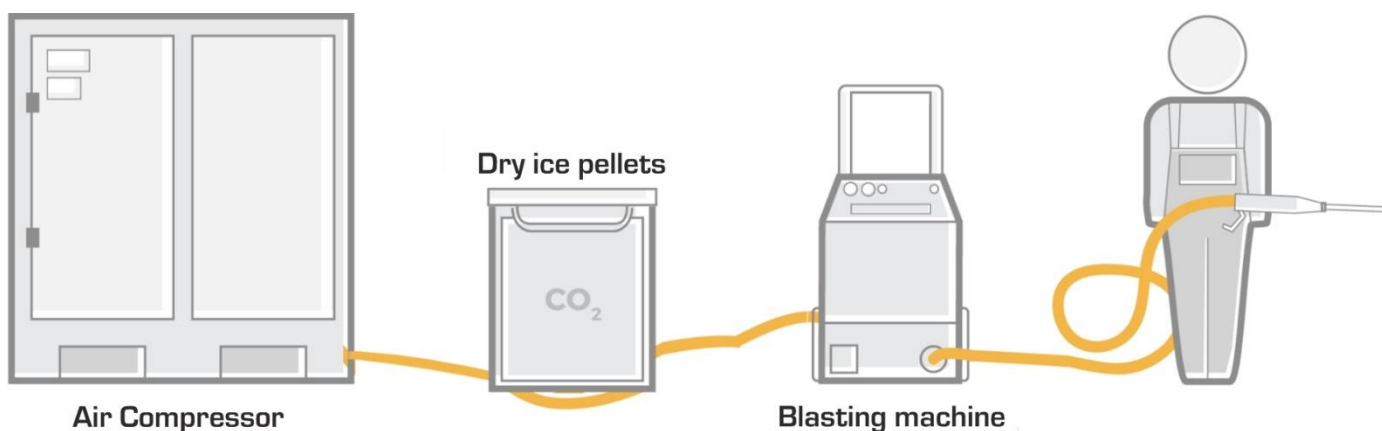
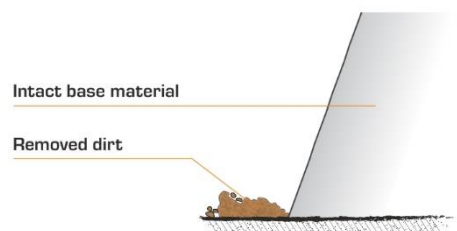
### BEFORE CLEANING



### DURING THE CLEANING PROCESS



### AFTER CLEANING



### 3 Machine technical data

#### Technical data

Electrical connection		
Supply voltage	V	110- 230 VAC /N/PE
Nominal apparent power	W	160
Frequency	Hz	50-60
Cos φ		0,94
Short-Circuit Current Rating (SSCR)	kA	10
Leakage current, typ.	mA	7,5
Residual current device (RCD)	mA	30
Dimensions IC-030		
Width	mm /inch	332 /13
Depth	mm /inch	723 /28,5
Height	mm /inch	966 /38
Weight	kg /lb	53 / 117
Contents of dry ice container	kg /lb	6,2 /14
Dry ice consumption	kg /h / lb /h	max 53 / 116
Sound pressure level (EN 60704-1)	dB(A)	70 to 105
Compressed air		
Pressure supply min. - max.	bar /Psi	1-10 / 15- 145
Compressed air consumption	m <sup>3</sup> /min:	Up to 15 m <sup>3</sup> /h Depends on a nozzle

### 4 Setup and function

#### 4.1 Unpacking the machine

The standard machine package will include:

- Blasting hose 3/8" with the gun IG-31-E + LED light
- Nozzle RN-13-05
- Set of protective equipment ICS
- Earthing kit 5 m
- Connecting hose for compressed air 3/4", length – 10 m
- Shovel for ice (bearing capacity 1 kg / 2,2 lb)

This machine has been assembled and tested as one unit prior to shipment. Follow the steps below to inspect and unpack the machine from the shipping container:

1. Examine the shipping container for any damages that may have occurred during transport.
2. Remove the machine. Recycle boxes and packaging.
3. Examine the machine for any external damage that may have occurred during transport.

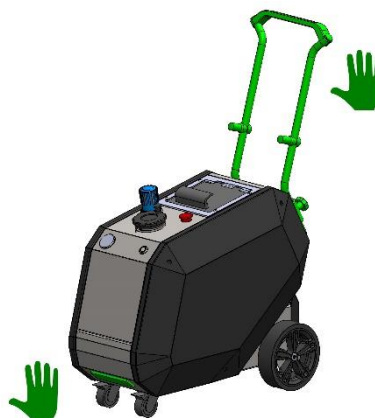
Refer to the packing list for a list of the components shipped with the machine. Contact ICS ice cleaning systems s.r.o. if any damage has occurred to the shipping container or the machine.

Only trained and /or certified personnel should operate or rig the machine for shipment or move.

## 4.2 Transport and storage

The following instructions relate to the correct transport of the machine. Follow all instructions as shown in the figures to prevent damage to the machine or injury to the operating personnel.

Handles on the machine designed for manual handling are marked with green colour.



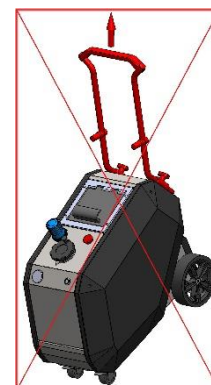
Manual lifting of the device is only allowed in pairs!!

- Lifting of the machine is only allowed according to the figure shown.



It is forbidden to lift the device other than as shown in the figure.

Do not lift the machine using the front handle or the top handle as it will not have stability, which could cause damage to the equipment or injury to personnel.



### 4.3 Machine illustrations and labels

#### Front view



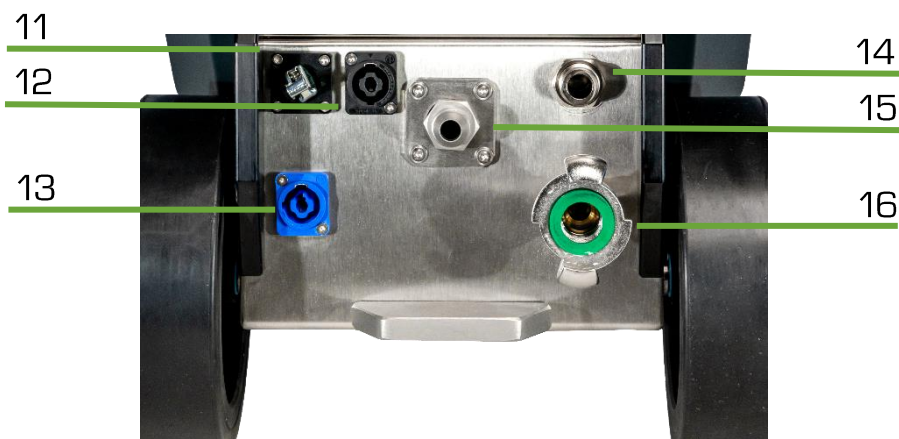
No.	Name
1	Manipulation handle
2	Blasting gun with LED lighting
3	Electric cable holder
4	Control panel
5	Manipulation front handle
6	Front lockable wheels

#### Rear view



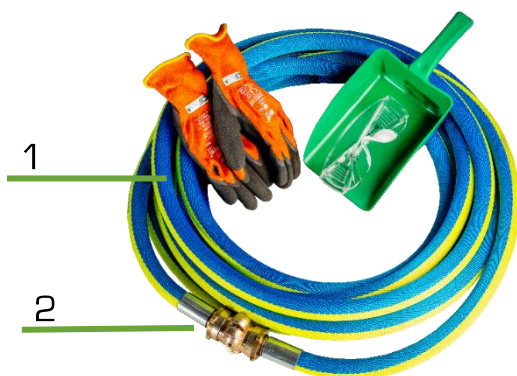
No.	Name
7	Safety pictograms
8	Holder for nozzles
9	Connecting panel
10	Step

## Rear connection plate



No.	Name
11	Static earthing kit
12	LED light connection
13	Connector for power cable connection
14	Connector for connecting the control air for the gun
15	Hose connection point for blasting
16	Air supply hose connection

## 4.4 Connection hoses



No.	Name
1	Hose for connecting the compressed air inlet
2	Hose couplings
3	Blasting hose
4	Connector for connecting the gun control air
5	Connector for power supply of LED light
6	Threaded connector for connecting the hose to the machine

## Dry ice blasting gun



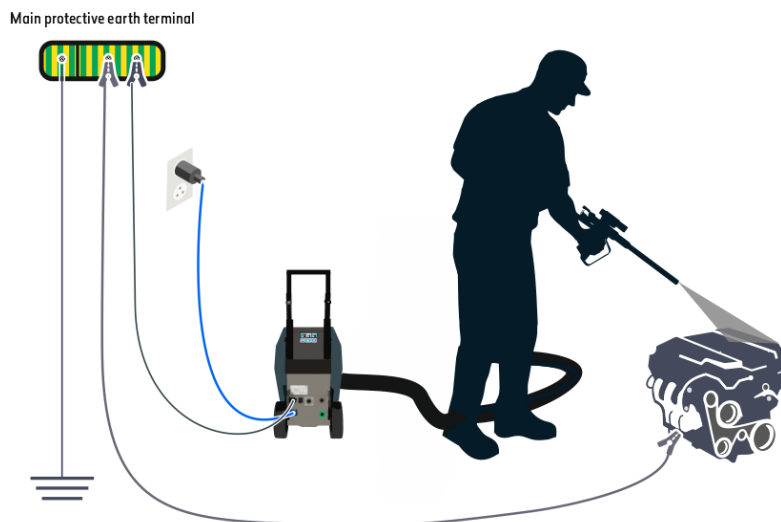
No.	Name
7	Blasting nozzle
8	LED light switch
9	Blast trigger
10	Connecting point for blasting hose, control, LED light

## 4.5 Control panel



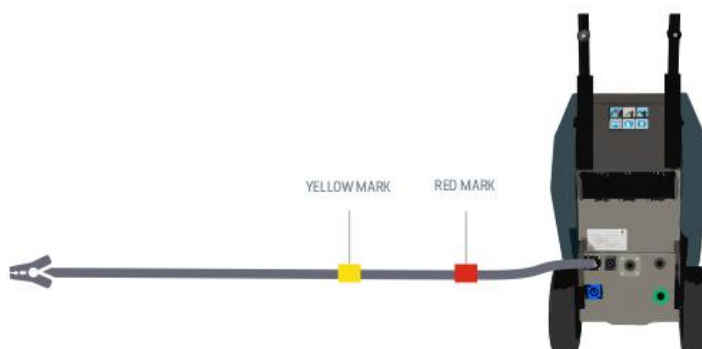
No	Name
1	Blasting pressure regulator
2	Emergency stop
3	Adjustment of dry ice consumption /grinding coarseness
4	Blasting pressure manometer
5	Dry ice dosing on /off

## 4.6 Correct earthing of the machine



1. Connect IC-030 to the main earthing terminal of the building by means the earthing kit on the machine.
2. Connect blasted object by means of the supplied earthing kit to the main earthing terminal.

The earthing kit on the machine is marked with marks:  
 Yellow mark = 2 m from the end of the cable /red mark = 1 m from the end of the cable.  
 There is a risk of damage to the earthing kit if the personnel pull the rope beyond the red mark!!!





## 4.7 Starting the machine

1. Check that the machine is on a straight, level surface and that the wheel brakes are applied.
2. Connect the compressed air hose using the coupling by turning the hose coupling clockwise until it clicks into place twice.
3. Insert the power cord plug and twist it to the right until it locks itself in place. Insert the earthed plug into a suitable socket.
4. Connect the signal connector and tighten the nut.
5. Connect the blasting hose and tighten the nut.

**CORRECT ORDER IS IMPORTANT!**

Connect the blasting hose couplings first, then the signal air connector.

6. Open the external supply of compressed air (slowly).
7. The machine is equipped with a static earthing cable. For correct earthing of the machine and the blasting object, see chap. 5.6



8. Control panel procedure:

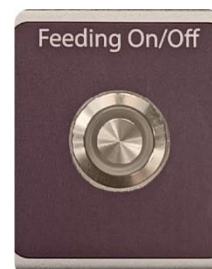
Unlock the emergency stop button.



Set the desired blasting pressure by means of the manometer  
"Pressure regulation"

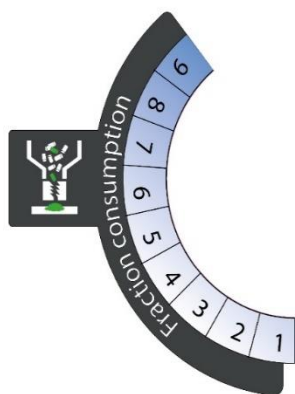


Press the button "Feeding On/Off"  
You will select the option of blowing with air only or also with dry ice.



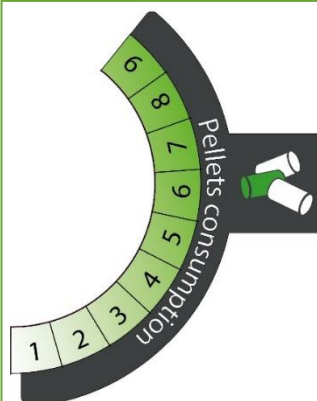
### Consumption of fraction:

The user has an option to set consumption of **ground** dry ice in the range of 1-9. Where 1 is the lowest consumption and 9 is the highest possible hourly consumption of ice.



### Consumption of pellets:

The user has an option to set consumption of dry ice **pellets** in the range of 1-9. Where 1 is the lowest consumption and 9 is the highest hourly consumption of ice.



Hourly dry ice consumption depends on the blasting pressure and dry ice quality.

9. Lift the lock pin and activate the trigger on the blasting gun for a few seconds to allow air to flow through the system. The system checks for moisture in the airstream and proper operation of the dosing disc, vibrator, and regulator.

Please note:

Before activating the blasting gun trigger; the operator must be in a safe and stable working position. Depending on the jet pressure, the recoil on the jet gun also changes. At the highest jet pressure with the largest nozzle diameter, the recoil force can amount to 10 kg / 22 lbs, which is why it must be ensured that the operator does not lose balance.

10. Place dry ice into the hopper and start the dry ice cleaning process.

## 4.8 Switching off the machine

1. Empty the dry ice from the hopper.
2. Close the compressed air supply.
3. Activate the gun to release the remaining compressed air.
4. Disconnect the power cord from the power supply.
5. Disconnect the air supply hose from the machine.
6. Disconnect the blasting hose and the signal connector.

## 5 Troubleshooting and maintenance

### 5.1 Preventive maintenance

Thanks to its practical structure, the IC-030 equipment only requires a very low maintenance.

For the IC-030, maintenance works should be performed on a regular basis after every 1,000 operating hours, and at least once a year. See the yearly control sticker.

We recommend concluding a maintenance contract with ICS Ice Cleaning Systems or with an ICS authorised partner.

#### 5.1.1 Daily maintenance

1. Check the power supply cable and signal cable.
2. Pay special attention to places on the blasting hoses where kinks may have occurred during operation.

If any kind of damage to the blasting hose or the machine itself is noted, such damage must be repaired either by an ICS technician or by the owner's qualified personnel who has been trained by ICS in the repair and maintenance of dry ice blasting machines and accessories. Beyond the necessary knowledge, the person concerned must have appropriate tools and equipment, as well as the auxiliary materials required, at his disposal.

#### 5.1.2 1,000 hours maintenance

1. General visual inspection of the machine body, welded joints, chassis, tyres, bolt seat.
2. Complete exterior and interior cleaning if necessary.
3. Functional check of inlet pressure regulator and pilot pressure regulator.
4. Cleaning of the regulating air filter; replacement of the filter.
5. Complete electrical inspection, check of voltage converter, electric motor; fixed mounting of elements and terminals.
6. Inspection of the whole ice dosing system for signs of wear; to see if it is functional and tight.
7. Check vibrator for functionality and firm mounting.
8. Inspection of the hose cover to see if it shows signs of wear; if it is functional and leak-proof (press fit).
9. Inspection of fasteners, connectors and pneumatic couplings for signs of damage, whether they are functional and safe to use.
10. Inspection of the blasting gun to see if it is functional and safe to use.
11. Inspection of existing blasting nozzles for signs of wear and cracks.
12. Pressure and safety test.
13. Blasting test.
14. Replacement of inspection and maintenance labels.

## 5.2 Faults

Problem	Description	Corrective action
The equipment does not start	Nothing happens after the gun has been actuated.	Check whether the control line is blocked.
No air comes out from the gun	The equipment is running, but it does not blow out air.	Check the compressed air supply and the connection of the equipment and adjust desired blasting pressure of the equipment.
The equipment is running, but no ice comes out	Ice is falling down on the lower part of the equipment	Blasting pressure, amount of ice and the blasting tube are not optimally combined with one another and adjusted to each other.

## 6 Repair and Warranty

Please bear in mind that all works, including inspection and maintenance works, especially at the safety devices, can be carried out only by an ICS technician or by a person who received special training for equipment and accessories of ICS Ice Cleaning Systems s.r.o. and who can present evidence in this respect.

Potential repairs that are necessary during the warranty period have to be agreed upon beforehand with ICS Ice Cleaning Systems.

Spare parts, which fail in the warranty period, are replaced either at our location or they are sent to you. Transportation costs, travel costs and costs related to a stay, as well as those for disassembly and reassembly shall be borne by the client.

For evaluation of the warranty, a component or the equipment shall be sent to ICS Ice Cleaning Systems.

### Warranty conditions

The warranty becomes void in the following cases:

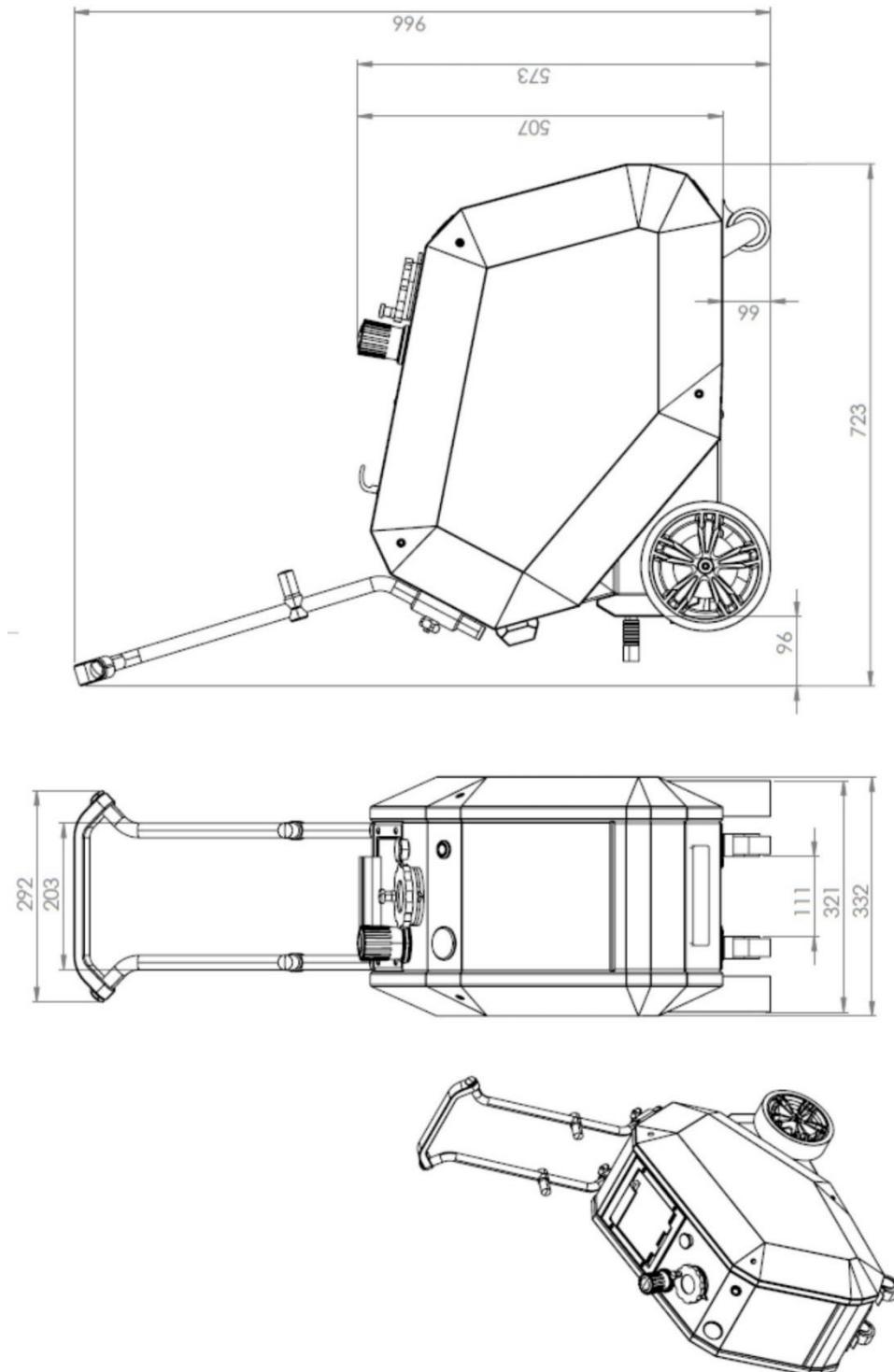
- incorrect handling of the IC-030 equipment.
- using non-original spare parts.
- works at the IC-030 equipment carried out by unauthorised persons.
- using materials different than dry ice.
- noncompliance with the requirements regarding compressed air quality.

Carrying out unauthorised changes to the IC-030 equipment is prohibited!




**The warranty is subject to the GTC of ICS ice cleaning systems s.r.o.**

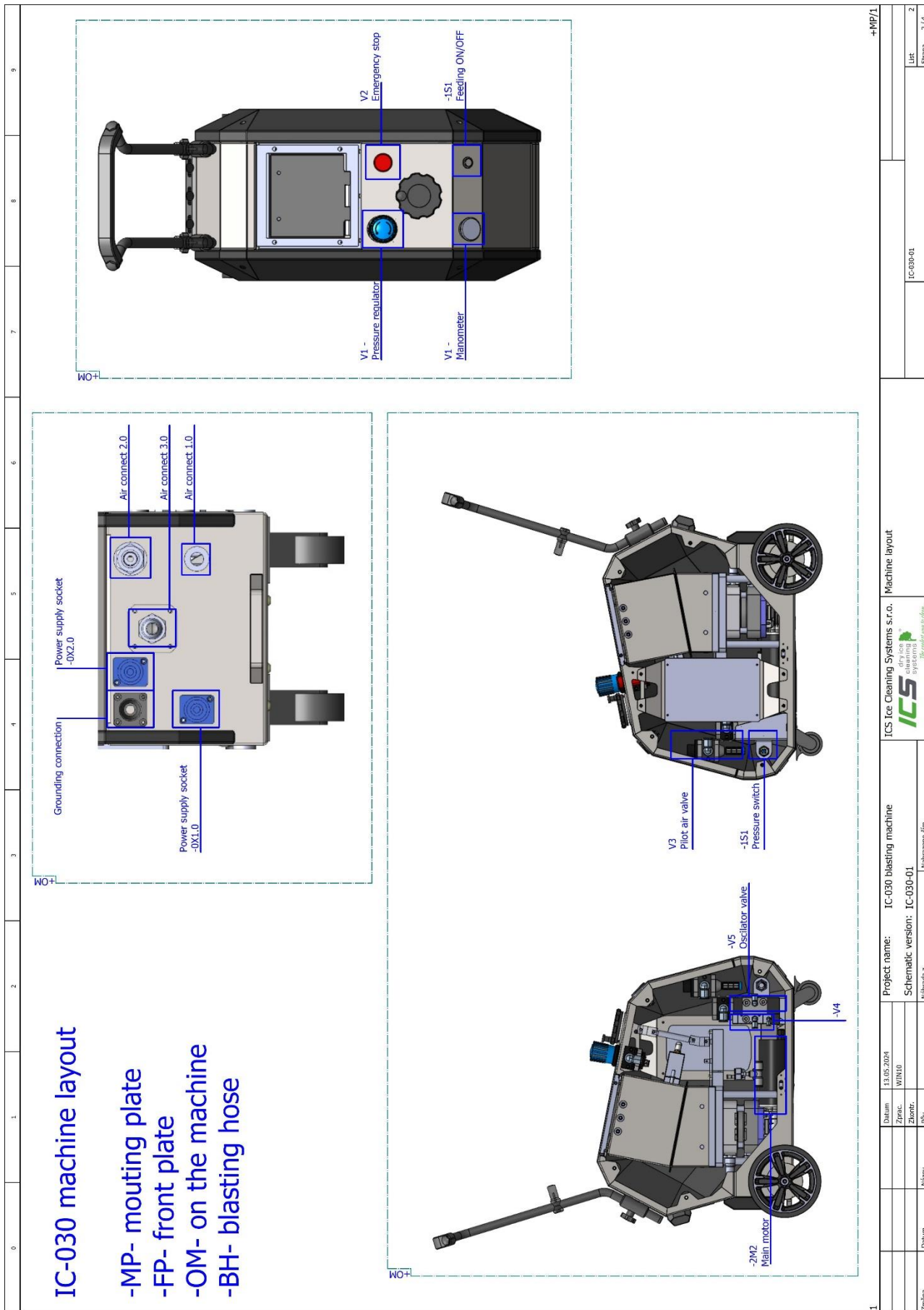
## 7 Technical diagrams

### 7.1 Dimensional drawing



## 7.2 Electrical diagram

0	1	2	3	4	5	6	7	8	9
ICSform_IC-030									
 <p><b>ICS Ice Cleaning Systems s.r.o.</b></p> <p>Tel. +421 (0)42 42 61 135</p>									
<p>Popis projektu Číslo výkresu</p>		<p>Dry ice blasting machines IC-030-01</p>							
		<p>- Main voltage : 110-230 VAC L1 = black N = light blue PE = yellow-green</p> <p>- Control voltage : 24VDC 24VDC = dark blue 0VDC = dark blue/white</p> <p>- Electrical schematic number : IC-030-01</p>							
<p>Vytvořeno dne Zpracováno dne</p>		<p>31.03.2022 13.05.2024</p> <p>Počet stran 4</p>							
		<p>ICS Ice Cleaning Systems s.r.o.  <b>ICS</b> dry ice cleaning systems ... Převládá bezpečnost ...</p>							
		<p>Datum Zprac. Zhotov. Přev.</p>		<p>13.05.2024 WIKID</p>		<p>Project name: IC-030 blasting machine Schematic version: IC-030-01 Název z</p>		<p>ICS Ice Cleaning Systems s.r.o.  <b>ICS</b> dry ice cleaning systems ... Převládá bezpečnost ...</p>	
<p>Změna Datum Název</p>						<p>IC-030-01</p>		<p>Titulek Strana</p>	
								<p>1 1/4</p>	



**IC-030 machine layout**

- MP- mouting plate
- FP- front plate
- OM- on the machine
- BH- blasting hose

+MP/1

IC-030-01  
Machine layout

Project name: IC-030 blasting machine  
Schematic version: IC-030-01

Datum: 13.05.2024  
Zprac.: WIN10

Zkontr.:  
Přiz.:

Změna Datum Název

IC-030-01		Machine layout	
Let:	Strana:	2 / 4	
IC-030-01		Návrhová část	

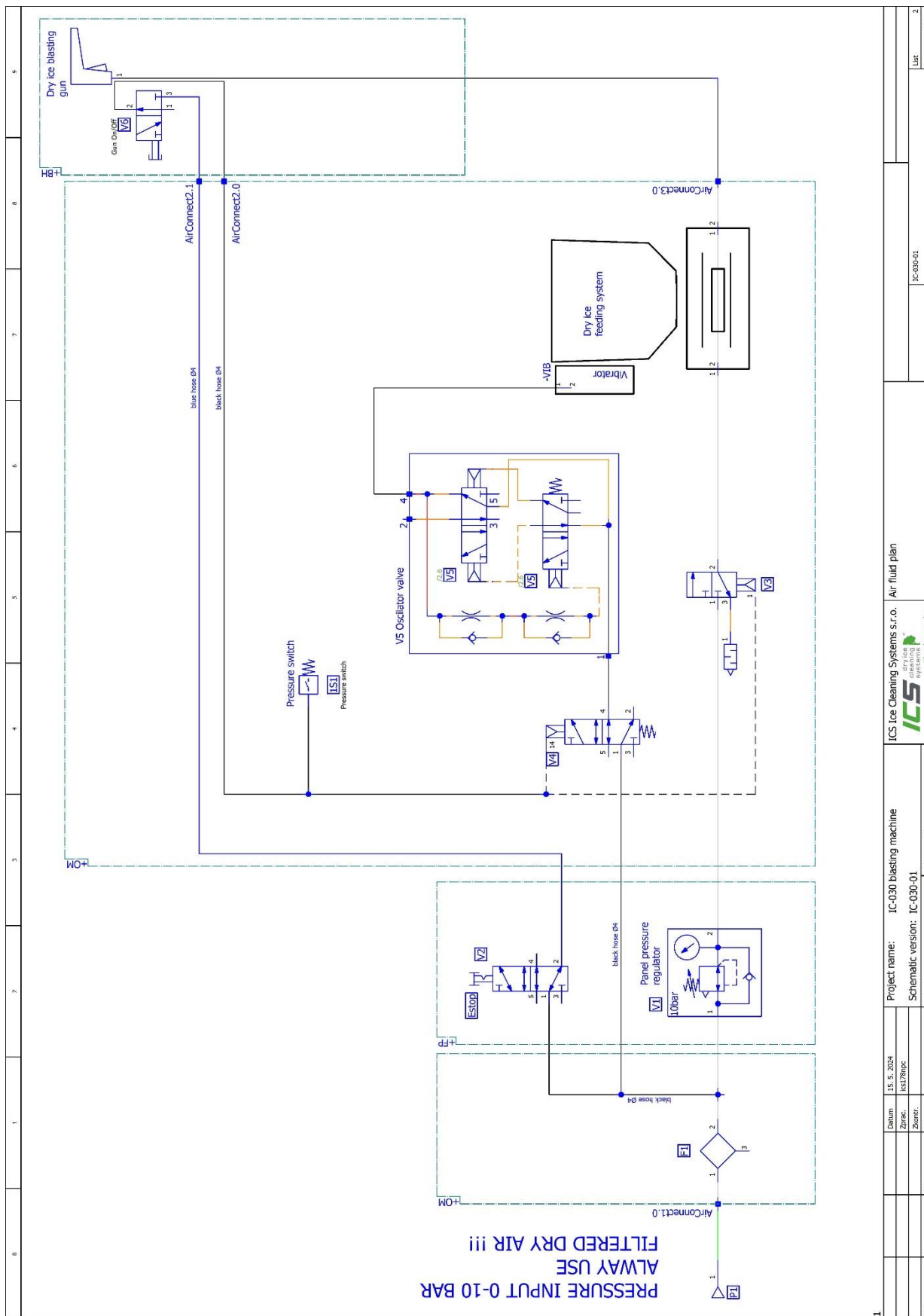




### Electrical spare parts list

No.:	Name	Par No.	Diagram position
-OX1.1	Supply connector – cable	52025	1.1
-OX1.0	Supply connector – machine panel	52027	1.1
-1S1	Switch On/Off	52061	1.1
-1G1	24V DC power supply	52178	1.4
-1F1	5x20mm fuse 5A	N/A	1.1
-1F2	5x20mm fuse T10A	N/A	1.3
-1F3	5x20mm fuse T5A	N/A	1.4
-OX2.0	Led light connector - machine panel	52050	1.4
-OX2.1	Led light connector – cable	52049	1.4
-1H1	LED light	52177	1.4
-1U1	DC controller of the engine	52112	1.5
-1P1	Pressure switch	51116	1.5
-1M1	24VDC motor	52159	1.9

### 7.3 Pneumatics diagram



## Pneumatic spare parts list

No:	Name	Part No.	Diagram position
-F1	Air filter	51115	2.1
-V1	Pressure regulator	51118	2.1
	Manometer	51079	2.1
-V2	Emergency switch - button	51009	2.1
	Emergency switch - valve	51000	2.1
-V3	Control solenoid of blasting	51117	2.5
-V4	Control solenoid of oscillator	51073	2.4
-V5	Oscillating valve	51074	2.5
-VIB	Air controlled vibrator	51018	2.7
-V6	Micro switch blasting gun	51026	2.8

## 8 Disposal

### Disposal of the machine

Dispose of the machine at an authorized disposal centre or at collection centre. Before disposing of the machine, it is necessary to remove and recycle the following materials and send them to recycling centre in accordance with applicable regulations on environmental protection:

- stainless steel parts
- plastic parts
- electrical and electronic components\*

[\*] Mainly for the disposal of electrical and electronic components, please contact local dealer.



## 9 Certificates

### 9.1 Certificates STN EN ISO 9001:2016

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ CERTIFIKAT ◆ CERTIFICADO ◆ CERTIFICAT





# CERTIFICATE

**TÜV SÜD Slovakia s.r.o.**  
**Certification Body for Management Systems**  
 Accredited by SNAS  
 Certificate on accreditation No. Q-011  
 certifies that



**ICS ice cleaning systems s. r. o.**  
 Robotnícka 2192  
 SK – 017 01 Považská Bystrica  
 IČO: 45 570 370

has established and applies  
a Quality Management System for

**Development, manufacture, sale and service of machines for dry ice blasting. Development, manufacture, sale and service of machines for the production of dry ice. Production of dry ice. Industrial cleaning with dry ice.**

An audit was performed, Report No. **1587/30/22/Q/AS/R2**  
 Proof has been furnished that the requirements  
 according to

**STN EN ISO 9001:2016**

are fulfilled. The certificate is valid from **2022-07-28** until **2025-05-18**  
 Certificate Registration No. **Q 1587-3**  
 Date of recertification audit: **13.06.2022**

Bratislava, 2022-07-28





TÜV SÜD Slovakia s.r.o.  
 Certification Body for Management Systems  
 Member of Group TÜV SÜD  
 Jašíkova 6, 821 03 Bratislava

F-Q-019/2/5

## 9.2 EC-DECLARATION OF CONFORMITY

in compliance with the Machine Directive 2006/42/EC dated 17 May 2006, Annex II A

We hereby declare that the machine specified below complies in its design and construction and in the version marketed by us with the basic safety and health requirements of the EC Directive 2006/42/EC. Any changes to the machine unauthorized by us shall invalidate this declaration.

**Product:** Dry Ice Blasting Machine

**Manuf. Date:**

**Type:** IC-030

**Serial number:**

**Manufacture:**

ICS ice cleaning systems, s.r.o.

Robotnícka 2192

Považská Bystrica, Slovakia

Tel.: +421 42 4261 135

Email: info@ics-dryice.sk

Web: www.ics-dryice.sk

**It is declared the compliance with other directives /regulations applicable to the product:**

- ✓ DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on machinery, and amending Directive 95/16/EC.
- ✓ DIRECTIVE 2014/35/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.
- ✓ DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the harmonization of the laws of the Member States relating to electromagnetic compatibility.

**Applied harmonized standards in particular:**

- ✓ ISO 12 100-1:2011 Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology
- ✓ EN ISO 13849-1:2016 Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2015)
- ✓ EN 60204-1:2019 Safety of machinery. Electrical equipment of machines. Part 1: General requirements
- ✓ EN 61439-1:2012 Low-voltage switchgear and control-gear assemblies. Part 1: General rules
- ✓ EN ISO 4414:2011. Pneumatic fluid power – General rules and safety requirements for systems and their components

**Representative for the technical documentation:** Ing. Ľudovít Bakala PhD., Robotnícka 2192, Považská Bystrica, Slovakia

**Place:** Považská Bystrica, Slovakia,

**Date:** 31.01.2024



\_\_\_\_\_  
Peter Gabriš  
Executive manager

