



ECO-BLASTER IBIX 9



USE AND MAINTENANCE MANUAL

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1 FOREWORD

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1 FOREWORD



IMPORTANT NOTE

BEFORE CARRYING OUT ANY OPERATION ON THE MACHINE, THE APPOINTED MACHINE OPERATORS AND TECHNICIANS SHOULD CAREFULLY READ THE INSTRUCTIONS CONTAINED IN THIS MANUAL AND COMPLY WITH THEM IN CARRYING OUT THEIR WORK. SHOULD YOU HAVE ANY DOUBTS CONCERNING THE INSTRUCTIONS PROVIDED, PLEASE CONTACT OUR AFTER-SALES SERVICE FOR THE REQUIRED EXPLANATIONS.

1.1 GENERAL INFORMATION

This is the instruction manual for:

MACHINE TYPE: **BLASTER**
SERIES AND TYPE: **IBIX 9**
YEAR OF CONSTRUCTION:

This user manual contains the main information regarding the machine storage, handling, installation, use, supervision, maintenance and disassembly.

This manual makes an integral part of your machine and should be kept with care until the machine dismantling

at the end of its working life, in order to allow future reference and updating.

Should this copy of your user manual become damaged to the point that it can no longer be used, another copy may be requested from

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by specifying the machine type, serial number or job number indicated on the machine data plate.



This manual refers to the machine condition at the time of its supply and may not be considered inadequate only because later updates have been introduced to reflect newly acquired experience. **IBIX** reserves the right to update its products and manuals without any obligation to inform the users of previously supplied machinery.

However, courtesy notification of any proposed manual and/or machine updating can be expected.

Our Customer care service is however always available to supply on request any information regarding machine updates.

IBIX shall not be held responsible for any incorrect use of its supplied machines, including:

- a) wrong use of the machine or use of the machine by poorly trained personnel;
- b) use of the machine not in compliance with the applicable regulations;
- c) wrong installation;
- d) incorrect power supply;
- e) severely incorrect maintenance;
- f) unauthorised intervention or modifications;
- g) use of non-original spare parts or spare parts not suitable for the machine model concerned;
- h) failure to comply with the supplied instructions, wholly or in part;
- i) unexpected events.

1.2 GENERAL INFORMATION ON MACHINE USE

- This manual has been prepared for the purpose of supplying the user with general information regarding the machine and with the maintenance directions judged necessary for its smooth operation.
- Before carrying out any machine installation, maintenance and repairing operations, thoroughly read this Manual as it contains all the necessary information to correctly use the machine by preventing accidents and injuries.
- The inspection and maintenance schedules prescribed by this manual should always be intended as the minimum required to guarantee the machine efficiency, safety and working life under normal operation conditions. However, constant supervision is recommended to be able to take immediate action in the event of a breakdown.
- All scheduled maintenance, checks and general cleaning should be carried out while the machine is stopped and disconnected from the air supply system.
- Warning: any machine modification or alteration not authorised by the machine manufacturer and any safety system modification or alteration shall cancel any manufacturer's guarantee and safety liabilities.

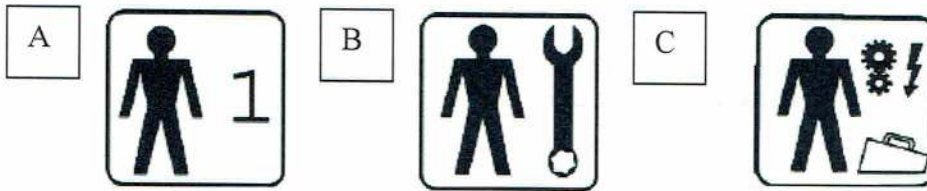
1.3 GENERAL PRECAUTIONS ON MACHINE USE

The following recommendations are part of the normal behaviour that machine workers should adopt during work. Therefore, when designing and building the machines, the machine manufacturer has assumed that these recommendations are known to the machine workers. **It is the user's responsibility to inform and train the machine workers to make sure that these recommendations become known to the personnel in charge of operating the eco-blaster.**



- Do not allow machine servicing by unauthorised personnel.
- **DO NOT START THE MACHINE IF IT IS OUT OF ORDER.**
- Before using the machine, make sure that any condition likely to affect safety has been removed as required.
- Make sure that all the machine guards and other protections are in place and that all the safety devices are present and in working order.
- Make sure that no unauthorised persons are within the work area.
- All the workers involved in any machine work phase must wear safety goggles, mask, headgear and gloves.
- Always comply with all the prescribed obligations, prohibitions and warnings during machine use.
- Never leave the machine unattended.
- Never use the machine under the influence of alcohol, drugs, medicines or extreme tiredness. A clear head is an essential precondition to operate the machine safely and effectively.
- The machine is a pressure equipment and must be submitted to periodical controls and tests while working according to the existing law.

1.4 PICTOGRAMS RELATING TO THE “OPERATOR QUALIFICATION”



[A] Operator: worker trained and authorised to operate the machine. In order to understand the instructions ((text and pictures) supplied, the operator must have (or acquire through suitable education and training) the following characteristics:

- sufficiently good general and technical knowledge to read and understand the parts of the manual concerning his or her tasks and to correctly understand its drawings and diagrams;
- ability to read and understand symbols, pictograms and screen displays;
- knowledge of the main safety, accident prevention and technological rules;
- global knowledge of the machine and its setting on the job-site or in the factory to be able to tackle any emergency situation (ways out, fire-fighting systems etc...);
- specific knowledge of the machine field of application.

The operator's tasks are: machine start, machine operation and machine stop.

[B] Mechanical maintenance engineer: skilled technician able to operate the machine under normal operating conditions, to operate it with a hold-down control when the machine protections are turned off,

and to carry out any required adjustments, maintenance and repairs on mechanical parts.

[C] Manufacturer's technician: skilled technician made available to the manufacturer to carry out complex operations in special situations or according to agreements with the user. The tasks of a manufacturer's technician are of a mechanical nature.

1.5 PICTOGRAMS RELATING TO SAFETY

The safety pictograms used on the machine and/or in this manual are listed here below:



Note: any parts of text preceded by this symbol contain important information/prescriptions.



Caution: any parts of text preceded by this symbol contain important information/prescriptions concerning safety in particular.



Obligation to wear safety shoes: the presence of this symbol means that the operator must wear protective shoes.



Obligation to wear safety gloves: the presence of this symbol means that the operator must wear protective gloves.



Obligation to wear safety goggles: the presence of this symbol means that the operator must wear safety goggles.



Obligation to wear a face mask: the presence of this symbol means that the operator must wear a protective mask.



Obligation to wear ear protectors: the presence of this symbol means that the operator must wear ear protectors against noise.

1.6 APPLIED STANDARDS

The following is a non-exhaustive list of Standards applied to our Eco-Blaster design, manufacturing and testing.

BENCHMARK LEGISLATION: Machinery Directive 2006/42/CE and successive amendments.

ABBREVIATION	TITLE
89/391 CEE:	"Safety of workers at work"
89/392 CEE:	"Machinery Directive"
D.P.R. 459/96:	Transposition into national law of "Machinery Directive"
89/106 CEE:	"Safety of building materials"
93/68 CEE:	"Safety of building materials"
89/686 CEE:	"Personal Prevention Equipment"
D.Lgs 475/92:	Transposition into national law of "Personal Prevention Equipment"
85/374 CEE:	"Liability for Defective Products"
D.P.R. 224/88	Transposition into national law of "Liability for Defective Products"
97/23 CEE:	<i>Pressure Equipment Directive - P.E.D.</i>
D.L. 93/00	Transposition into national law of <i>P.E.D.</i>
UNI EN 292/1:	Safety of machinery – Basic Concepts, design principles – Terminology, basic methodology
UNI EN 292/2:	Safety of machinery – Basic Concepts, design principles – Specification and technical principles
UNI EN 349:	Safety of machinery – Minimum distance for safety-related parts of control systems
PR EN 982:	Safety of machinery – Safety requirements for fluid power systems and their components – Hydraulics
CEN/TC 122/WG 2:	Safety of machinery – Ergonomic design principles <ul style="list-style-type: none">• Part 1: Terminology and general principles• Part 2: Interaction between machine design and end use
AD-2000 MERKBLATT:	Design



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2 PRESENTATION

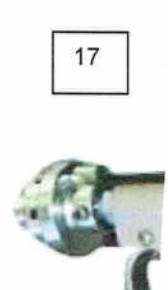
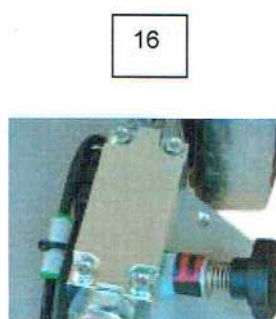
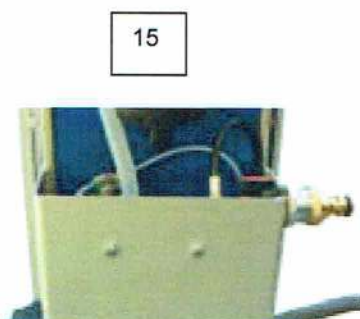
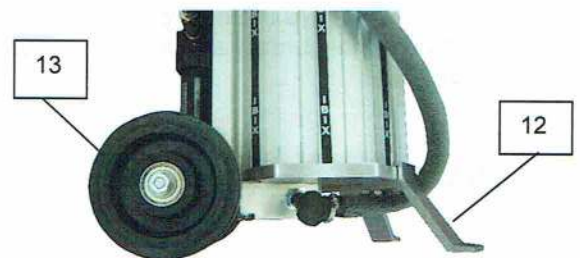
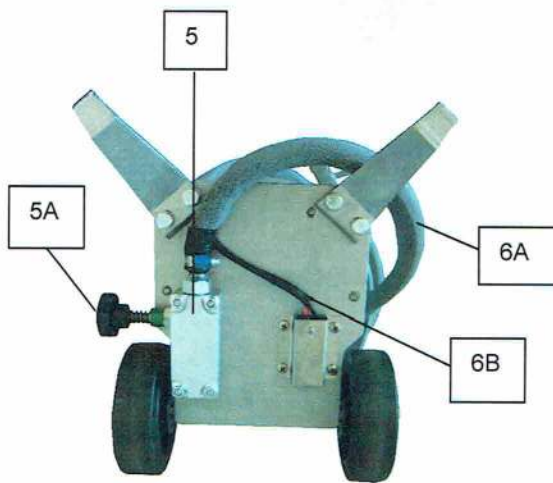
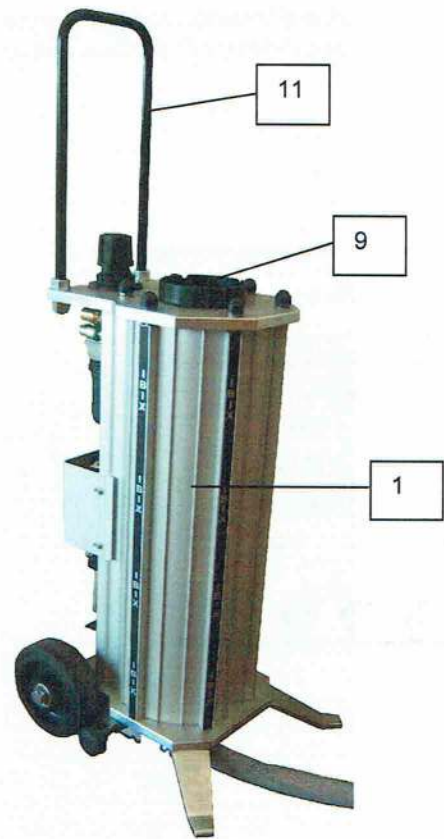
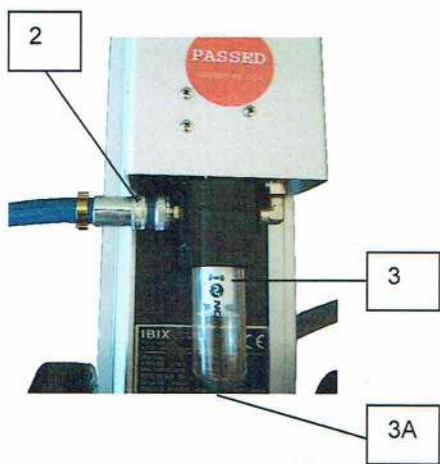
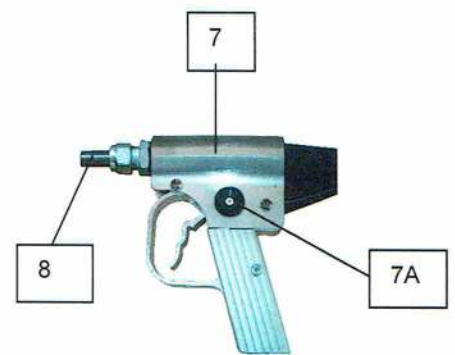
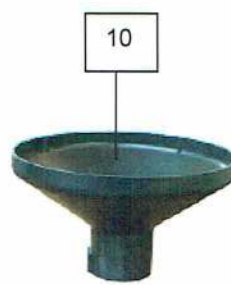
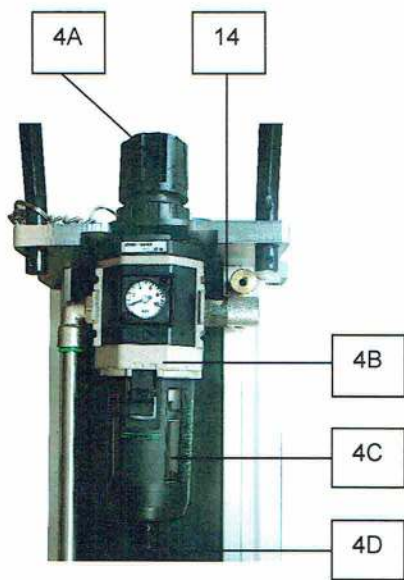
2.1 GENERAL INFORMATION



The IBIX eco-blaster has been designed and built to carry out environment-friendly sand-blasting, micro-blasting and cleaning without generating any dust. This machine is extremely versatile and enables to treat several types of surface. Its low weight (obtained thanks to a structure fully made from aluminium) makes it especially easy to handle.

Main units:

- 1] **Blasting material tank**
- 2] **Compressed air quick connection**
- 3] **Anti-condensate filter** (equipped with a condensate-draining valve [3A])
- 4] **Pressure regulator** (including an adjustment control [4A], pressure gauge [4B], and air filter [4C] with a condensate-draining valve [4D])
- 5] **Blasting material/air mixing valve** (with a screw [5A] to adjust the blasting material out-flow rate)
- 6] **Blasting material hose 3/8" (10x21 mm) [6A] + air twin hose [6B]**
- 7] **Remote-controlled air gun** (equipped with a safety button [7A])
- 8] **Nozzle**
- 9] **Blasting material filler plug**
- 10] **Blasting material filler funnel**
- 11] **Carrying handle**
- 12] **Foot supports**
- 13] **Wheels**
- 14] **Safety valve**
- 15] **Kit H₂O (optional)**
- 16] **Rilsan hose-kit H₂O nozzle fitting (optional)**
- 17] **Mixing nozzle (optional)**



2.2 DATA PLATE

Please exactly quote your machine **Model**, **Serial number** and **Year of Construction** to facilitate our After-Sales Service accurate and prompt response.

Always quote this information whenever you contact our After-Sales Service or whenever you order spare parts.

This information is contained in the data plate installed on your machine.

For no reason should the information indicated in the plate be altered.

 IBIX S.r.l. 	
Via La Viola, 4 48020 S. Maria in Fabriego (RA) - ITALY Tel. +39 (0)545 994588 - www.ibix.it	
Description <input type="text" value="Sabbiatrice - Sandblaster"/>	
S/N <input type="text" value=""/>	Item <input type="text" value="IBIX 9"/>
PS (barg) <input type="text" value="0 / 9"/>	TS (°C) <input type="text" value="-10 / +40"/>
Vol(tz) <input type="text" value="9"/>	Fluid group/state <input type="text" value="2/G"/>
P _{test} (barg) <input type="text" value="13"/>	Year <input type="text" value="2010"/>
SET-PSV (barg) <input type="text" value="9"/>	
	



The figure shows where the data plate is located and what it looks like.

Your machine serial number should be quoted whenever you contact the manufacturer for inquiries or to order spare parts.

2.3 CHARACTERISTICS

It is the designer's duty to fix limits and apply more severe restrictions regarding the presence of personnel and the work area.

The machine should be operated by trained personnel aware of the machine characteristics and of the contents of this manual.

The machine operates in the manual mode and should be worked by a single operator.

2.4 OPERATING PRINCIPLE



The work process can be outlined as follows:

compressed air coming from the air compressor is fed to the eco-blaster after a pneumatic actuator is controlled which enables the main air valve to feed compressed air into the blasting material tank. The pneumatic actuator, receiving air from the twin air hose, is controlled by the remote-controlled gun trigger. Pressure inside the tank will push the blasting material towards the blasting material/air mixing valve. The blasting material/compressed air mix is pushed through the abrasive-proofed hose all the way to the gun, and out of the gun through a tungsten carbide nozzle.

2.5 SPECIFICATIONS

Structure:	fully made from aluminium
Working pressure:	2 ÷ 9 bars
Particle size:	38 µm up to 1,2 mm
Remote control hose length:	6 m
Standard nozzle size:	3 mm
Blasting material tank capacity:	9 l
Installed machine max height:	850 mm
Installed machine max width:	430 mm
Packaging (box) dimensions:	640 x 290 x 300 mm
Machine weight (empty tank):	~15 Kg
Handle vibrations:	1.157 m/s ² (air) and 1.186 m/s ² (water)
Cleaning surfaces:	steel, aluminium, stainless steel, wood, marble, glass concrete, masonry, stone, composite materials, etc.

2.6 INFORMATION ON THE MACHINE WORKING NOISE



The operators in charge of operating the machine must always wear hearing protectors while the machine is running (in addition to all the other mentioned personal protection devices).

The machine noise levels depend on the type of air compressor used and on the selected working pressure.

2.7 AIR CONSUMPTION AT NOZZLE

Air consumption is expressed in litres per minute.

Nozzle	4 bar	5 bar	6 bar	7 bar	8 bar
2.5 mm	255	281	305	327	348
3.0 mm	368	406	440	472	502
3.5 mm	502	553	600	644	684
4.0 mm	657	725	786	843	896
4.5 mm	835	920	786	1070	1137

Calculations performed according to the ISO 5167 standard

The indicated air consumption figures are referred to the maximum theoretical air flow that can be reached. To obtain these figures, a compressor able to deliver these amounts must be used, increased by a precautionary 15-20% usually lost in the passage from the compressor to the nozzle.

For IBIX 9 a minimum 3/8" blasting material hose should be used.

Spot-blasting can be carried out by using much smaller amounts of air than what is indicated in the table here above.

2.8 BLASTING MATERIALS TO USE – TIPS AND SUGGESTIONS

ONLY THE BLASTING MEDIA SOLD BY IBIX SRL ENSURE THE PROPER FUNCTIONING AND ARE THE ONLY RECOMMENDED FOR THEIR SPECIFIC USE.

For most applications, the best results with IBIX machines are obtained by using the natural mineral abrasive material **GARNET**.

Garnet is an Australian natural mineral consisting of extremely hard grains of ALMANDITE which enable the material to be re-used; in addition, this material is not CRUMBLY therefore it will not break up and produce dust, unlike sand.

It undergoes multiple washing cycles to remove any impurities and for this reason it will not produce dust during work (unless it is used on concrete). No special precautions are required during work: oxygen masks are not necessary, although protective masks are useful. This natural mineral does not contain any free silica or ferrite (causing rusting right after iron-blasting). Garnet also offers advantages in the disposal phase as it is compliant with environment protection-regulations and with the ISO 11 626 standard.

Garnet is sold in 25 Kg bags and is available in 6 different particle sizes measured in mesh (from the finest to the coarsest):

Mesh	Grain size
350	(fine)
200	(fine)
120	(medium)
80	(medium)
30/60	(coarse)
20/40	(coarse)



The **GARNET** particle size should be chosen according to the type of work to carry on. Other blasting materials used are sodium bicarbonate and calcium carbonate. To have more information on the characteristics of blasting media and on their suggestions, please refer to the technical sheet of each abrasive, available on our web page www.ibix.it.

Wood - Particle sizes of 80 or 120 mesh are recommended. In certain cases, however, other GARNET particle sizes should be used such as 30/60 or 20/40 mesh or even 200 mesh for restoration and cleaning of very delicate surfaces.

Stone - The particle sizes most commonly recommended for cleaning stone are 120 or 200 mesh to remove graffiti or for soft cleaning. However, other particle sizes (30/60 or 20/40 mesh) can be used for different jobs, such as bush-hammering or polishing of small areas. For the delicate, time-worn stone of statues and other architectural structures, or for polished surfaces which must be left unaltered (e.g. brilliant marble), spherical calcium carbonate (CARBONART®) is recommended.

Marble - GARNET should not be used on polished (brilliant) marble. The recommended products in this case are sodium bicarbonate or spherical calcium carbonate (CARBONART®) to be applied with an optional water sprayer to avoid damaging the treated surface. If the treated surface is naturally matt and graffiti removal is necessary, GARNET can be used in the particle sizes 350/200/120 mesh. GARNET, however, should be used in this case after carrying out low-pressure tests.

Glass - To remove graffiti or dirt from glass surfaces, water-soluble sodium bicarbonate is used, while to opacify a surface and obtain either "positive" or "negative" decorations, the naturally abrasive GARNET mineral can be used. The right particle size should be selected according to the desired type of finish.

Iron - To remove rust or paint, the naturally abrasive GARNET mineral in particle sizes such as 20/40, 30/60 or 80 mesh can be used, to obtain clean surfaces with the ideal degree of roughness to allow good adhesion of the painting product used. The right particle size should be selected according to the desired type of finish.



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3 DANGERS AND PROTECTION



3.1 NOT PERMITTED AND NOT RECOMMENDED USES

The IBIX eco-blaster should be used for the applications recommended by the manufacturer (see chapter 2).

In particular, the system should not be even partially used:

- without its protective guards and/or with cut-off, faulty or missing safety devices;
- if it has not been correctly installed;
- in an explosive atmosphere or wherever there is a fire risk;
- to work materials with characteristics different from the specified ones;
- in dangerous conditions or in the event of machine malfunction;
- for uses not recommended for the machine or by untrained personnel;
- for uses against the applicable standards;
- in case of severely inadequate maintenance;
- after carrying out unauthorised modifications or repairs;
- in total or partial disregard of the given instructions.



A SPECIFIC WRITTEN DECLARATION BY IBIX IS NECESSARY FOR ANY DEROGATION TO THE INDICATIONS ABOVE LISTED.

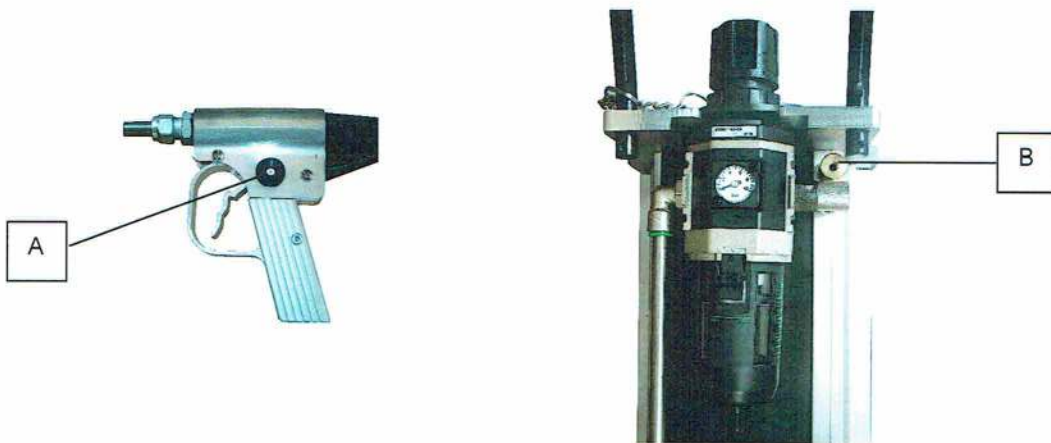


Any modification not explicitly authorised by the manufacturer that modifies the predicted functionality and the risks and/or create additional risk, will be the full responsibility of the person performing.
Any modifications carried out without the manufacturer's authorisation, also imply the loss of validity of any form of guarantee issued by the manufacturer and of the statement of compliance according to the PED Directive 97/23/CE.

3.2 Accident-preventing devices

To ensure the optimal security conditions for the user, the machine is equipped with the following safety devices:

- [A] **Security button:** this is a security button on the gun which prevents the release of air+inert in case of accidentally pressure on the trigger. Therefore, to run the gun, the operator must press first the security button and then the trigger. This procedure allows the release of air+inert by the nozzle on the gun. The release of the trigger causes the prompt return of the button in its security position and stops the inert release.
- [B] **Security valve:** located next to the pressure reducer, it lets air out of the blasting material tank if pressure becomes too high inside the tank (> 8.5 bar).



IMPORTANT NOTE: ALWAYS VERIFY THE CORRECT FUNCTIONING OF SECURITY DEVICES TO PREVENT THE POSSIBLE RISKS RELATED TO THE MACHINE USE. THE SAFETY VALVE IS COMPLIANT WITH CAT. IV – DIRECTIVE 97/23/CE. PERIODIC CHECKS AND SUBSTITUTION OF THE SAFETY VALVE MUST BE DONE IN COMPLIANCE WITH THE DIRECTIVE 97/23/CE



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4 LIFTING, HANDLING AND STORAGE

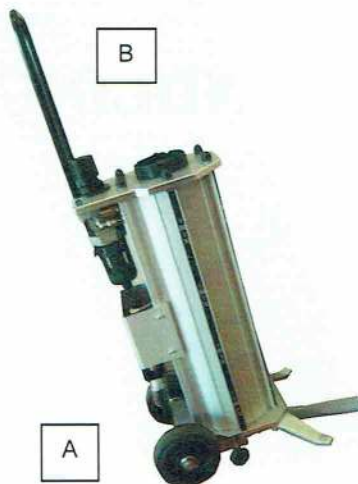
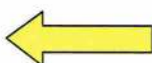


4.1 LIFTING AND HANDLING

Machine lifting and handling must be carried out cautiously to prevent falls or overturning. The machine has been fitted with special wheels **[A]** to allow simple, safe handling. Move the machine by holding it by its special handle **[B]** slightly tilting the machine with caution.



BEFORE MOVING THE MACHINE ON ITS WHEELS, ALWAYS MAKE SURE THAT THE MACHINE IS DISCONNECTED FROM ITS AIR SUPPLY SYSTEM AND THAT THE BLASTING MATERIAL HOSE AND TWIN AIR HOSE HAVE BEEN COILED UP AND ARE SAFELY ANCHORED TO THE MACHINE. IT IS STRICTLY FORBIDDEN TO LET THE BLASTING MATERIAL HOSE AND TWIN AIR HOSE DRAG ON THE FLOOR DURING MACHINE HANDLING.



The machine is purchased by the Customer contained in its special protective packaging (carton). The machine is equipped with a handle for handling purposes which must be fitted by the Customer (see Chapter 5 - paragraph 5.2).

As the machine total weight is lower than 25 Kg, by the terms of the Law Decree 626/94 the machine may be manually handled by a single operator.



In any case, comply with the work place health and safety regulations in force in the machine Country of use!

4.2 STORAGE

If the machine is not used for prolonged periods of time, we recommend to store it at a covered location sheltered from bad weather and aggressive chemicals.

The machine should be stored away with an empty tank and clean hoses and circuit. Make sure that the anti-condensate filter cups and the pressure reducer do not still contain any liquid. Wrap the hoses in plastic sheeting to protect them against external agents.

We recommend to remove the nozzle and keep it in a safe place wrapped in *pluriball* packaging paper. The machine should be stored indoors at suitable temperature (0°C to 60°C).

4.3 PACKAGING DISPOSAL



To dispose of packaging materials, comply with the applicable standards in the machine country of use.

However, follow these general rules:

- any packaging materials should be collected separately and brought to special recycling bins;
- any metal parts contained in the machine must be removed and sent to a foundry for recycling.



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5 INSTALLATION



5.1 INSTALLATION AREA TO BE SET UP BY THE USER

Before starting to work the user should make sure that:

- there aren't any unauthorised persons within the selected work setting;
- there aren't any foreign objects hindering the installation work or making it unsafe.

5.2 IBIX ECO-BLASTER PACKAGE OPENING



The machine is delivered to the Customer contained in its special packaging (carton) [1] with some disassembled parts (lifting handle and filling lid).



PACKAGE OPENING:

- Place the box on the floor [2], use a cutter to cut the tape joining the bottom flaps.
- Stand up the box again with open flaps and remove the packaging by the special handles [3].
- Release the machine from its preformed wrapping [4].



1



2



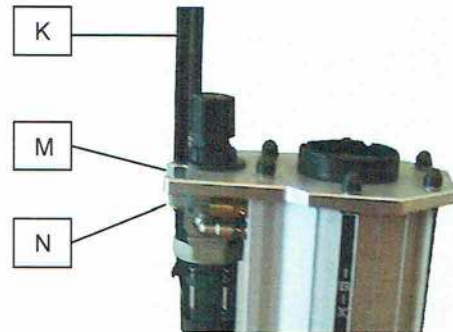
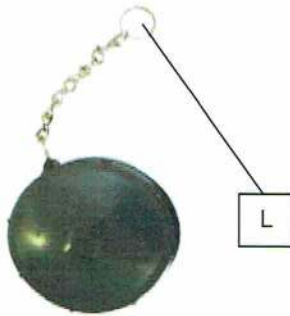
3



4



- *To install the transport handle and plug:* introduce the handle **[K]** into the safety ring **[L]** provided on the plug chain and in the special nuts **[M]**. Introduce the handle into the two holes in the top part of the machine and lock it with the special nuts **[N]**. Use a suitably sized hex nut wrench to tighten.



5.3 WARNINGS AND RECOMMENDATIONS BEFORE STARTING UP

1. Before controlling compressed air supply, make sure that the air hose connection is compatible with the coupling on the anti-condensate filter.
2. To check that your IBIX is operating correctly, start it up for the first time with an empty tank.
3. To operate the machine, make sure that the safety spring is inserted in its special housing below the starter trigger.
4. On starting up the machine, the abrasive material adjustment screw control should be kept turned off and then gradually turned on until the required abrasive delivery flow rate is obtained.
5. After work, it is always advisable to empty the machine tank (for more information check chapter 7 - Maintenance).



ECO-BLASTER IBIX 9

6 START-UP

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6 START-UP



1. Insert the special funnel **[A]** in the hole on top of the machine, open the blasting material bag making sure that there aren't any loose pieces of paper, then fill up the tank until flush with the bottom free edge of the aluminium door kept open by the funnel.



2. Remove the funnel and screw the lid back on **[B]** to stop any air release that could prevent the put on pressure of the tank and to protect the filling hole from any external element entry.



3. Connect the compressed air supply system to the quick coupling **[C]** provided in the anticondensate filter, making sure that the fitting is correctly connected to prevent incidents during the put on pressure of the machine.



4. While keeping the trigger pressed **[D]**, after have pushed the security button **[E]**, adjust your working pressure by lifting the pressure regulator handle **[F]** and cause it to turn clock-wise (to the right) to bring the pressure to the required value. The pressure gauge needle **[G]** will turn to reach that value. To lock the adjuster to the required pressure value, press its control handle **[F]** downwards.



5. Adjust the amount of blast in the mix by adjusting the special control screw **[H]** (turn clockwise to decrease the percentage of blasting material mixed with air; turn counter clockwise to increase the percentage of blasting material mixed with air). A good adjustments of the air/inert mixing is obtained when an continuous and light inert flow comes out from the nozzle.



6. If the optional water kit is installed on the IBIX, engage the water delivery pipe in the quick lock **[W]** installed with the water kit.



7. After reaching the required operating pressure and the required air/blasting material mix, begin operation. If the optional water kit is available, the tap **[Z]** must be turned on.

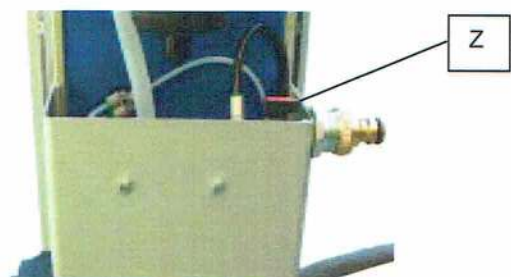
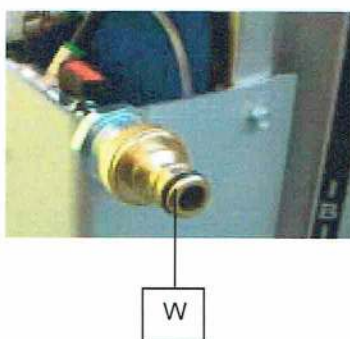
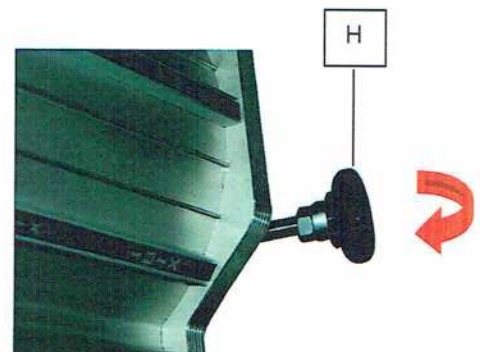
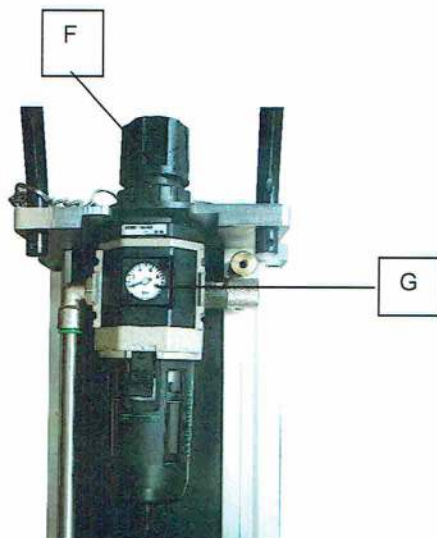
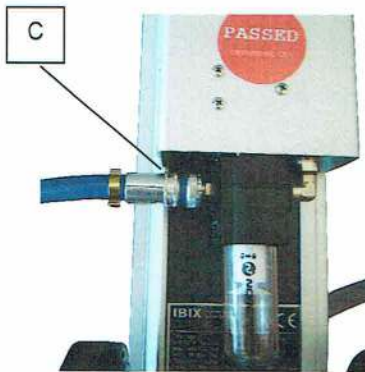
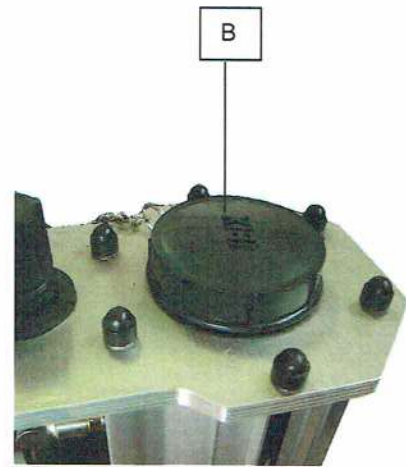


IT IS STRICTLY FORBIDDEN TO WORK WITHOUT THE PRESCRIBED PERSONAL PROTECTION DEVICES.



During work, always keep slightly open the condensate draining valve provided below the anti-condensate filter to eliminate the water in the compressed air collected after filtering.

Do not fill completely the tank to avoid that the inert goes into the pressure regulator, risking to damage it. IBIX suggests to fill the tank at 3/4 of its capacity.





ECO-BLASTER IBIX 9

7 MAINTENANCE

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7 MAINTENANCE



BEFORE CARRYING OUT ANY MAINTENANCE, ALWAYS MAKE SURE THAT THE ECOBLASTER IS UNPLUGGED FROM THE AIR SUPPLY SYSTEM AND DOES NOT STILL CONTAIN COMPRESSED AIR IN ITS CIRCUITS.



Carefully read this section of the manual before carrying out machine maintenance and adjustment operations; this will guarantee better safety conditions for the personnel in charge of maintenance operations and more reliable results.



Please follow our recommendations below during each assembly and disassembly phase.

For safety issues, please refer to chapter 1.

To ensure safe conditions during maintenance, remember that:



1. Machine maintenance should be exclusively carried out by qualified, specially authorised personnel.



2. Any operation should only be carried out after stopping the machine and disconnecting it from the air compressor.



3. Before restarting the machine, make sure that:
- all the replacement spare parts have been installed;
- any foreign objects (cloths, tools etc...) have been removed from the machine;
- all the protection systems have been correctly re-installed.



4. Before restarting the machine, make sure that there aren't any persons within the machine work range.



5. Do not use tools, cleaning equipment etc. while the machine is in operation.

6. Never place any body parts, limbs or fingers in any machine openings or hollow parts while the machine is in operation.

7. Do not alter the machine frame in any way (by drilling holes in it, cutting it etc.) as this might damage mechanical parts which would affect the whole structure.

8. The machine should be regularly inspected and maintained to keep its technical, operating and safety conditions unaltered.

9. It is forbidden to carry out maintenance, cleaning and repairing operations on:

- a machine in operation;
- a machine not correctly positioned on the floor.

10. Before carrying out any maintenance, cleaning and repairing operation, remember to wear the prescribed personal protection devices.

11. The protection and safety devices provided on the machine may only be removed for working purposes (i.e. to carry out maintenance and/or adjustments).

12. If whoever is in charge of carrying out maintenance has doubts as to the correct procedure to follow, even after reading the instructions contained in the manual, he or she should contact the Manufacturer or an authorised After-sales centre to obtain the required information.

7.1 TECHNICAL INFORMATION TO ENSURE GOOD MAINTENANCE

To ensure effective maintenance:

- only use original spare parts;
- comply with the (preventive and routine) maintenance schedule prescribed by the manual: the time recommended between one service and the next is the longest acceptable time. Therefore, it should not be exceeded but can be shortened;
- effective preventive maintenance requires constant machine observation and inspections.

7.2 GENERAL POST-MAINTENANCE TIPS



After carrying out machine maintenance and before restarting the machine, always:



- check that any parts that had been replaced and/or the tools used to carry out maintenance have been removed from the machine;



- check that all the guards and protection devices which may have been removed during maintenance are back in place, in working order and correctly positioned and adjusted;
- check that any pneumatic connections disconnected during maintenance have been reconnected;
- check the efficiency of the safety devices.

Only after maintenance completion and after carrying out all the required replacements may the normal machine operating conditions be restored.

7.3 ROUTINE MAINTENANCE

7.3.1 Daily checks



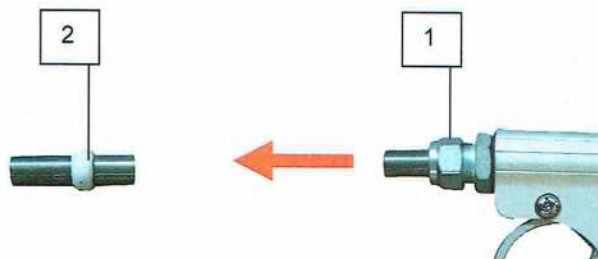
General cleaning: Blow-clean all the machine external parts with compressed air.



Gun cleaning: Blow-clean the trigger section of the gun with compressed air to eliminate any residual grain that could block the mechanism.

Nozzle cleaning: to clean the nozzle, screw out the locking nut [1] at the extremity of the gun or of the lance, extract the nozzle [2], clean it and replace it by making sure that the previously loosened nut is re-tightened hard. To replace the nozzle just repeat the same procedure inserting a new nozzle or a nozzle with a different diameter instead of the other.

Always empty the tank at the end of work and discharge the remaining inert in the gun to avoid blocks in the passages and valves.

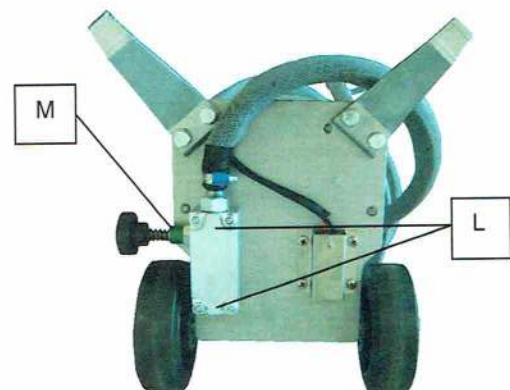
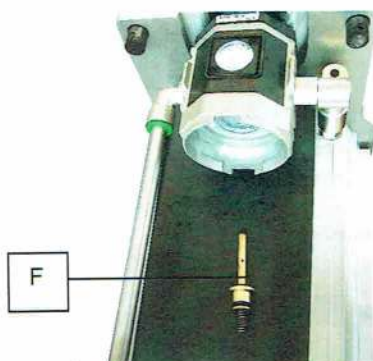
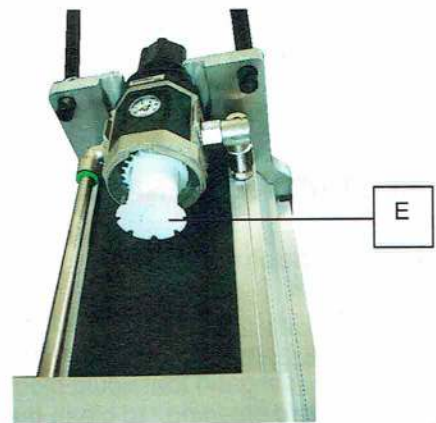
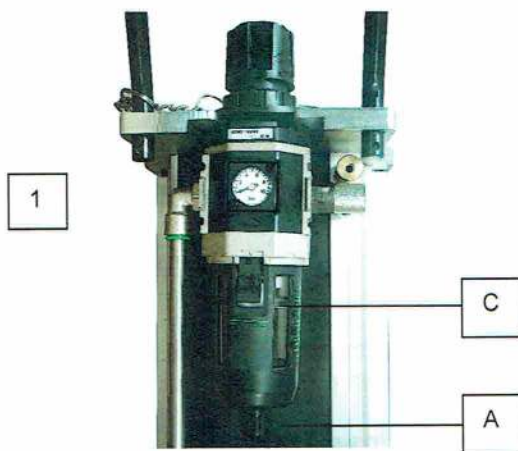


7.3.2 Weekly checks

Anti-condensate filter cleaning: Check for condensate inside the anti-condensate filter [1]. If necessary, open the manual-discharge plug [A] placed underneath the cup [C] of the filter. Blow-clean the filter [E] and the internal pin [F] with compressed air from the inside to the outside.

Blast delivery adjustment screw seat cleaning: To clean the seat of the blasting material adjustment screw, screw out and remove the nut [M] to extract the screw with it. Now clean the removed part and the hole accepting the nut [M] with compressed air. Replace the nut [M] and the adjustment screw.

Blasting material/air mixing valve cleaning: To clean the blasting material/air mixing valve, screw out the 4 Allen screws [L]. Now screw out the nut [M] and blow-clean the removed part with compressed air. After this, replace the galvanised block being careful not to damage the screw and screw seat threads.

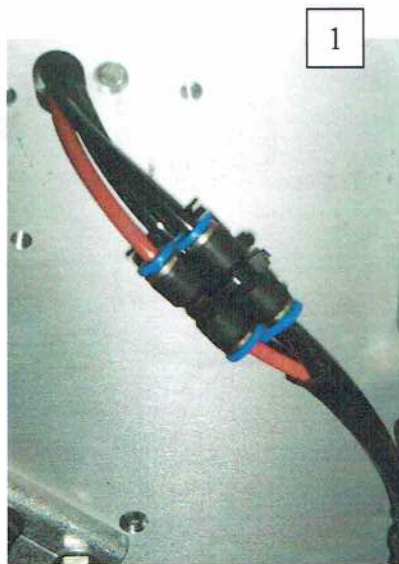


7.3.3 Replacing the twin hose

The twin hose connects the gun to a valve in the lower part of the eco-blaster. Two other hoses, red and black (1), go from this valve to the main air valve, located below the protective guard. If one or more of these hoses have to be replaced, the same arrangement should be maintained.



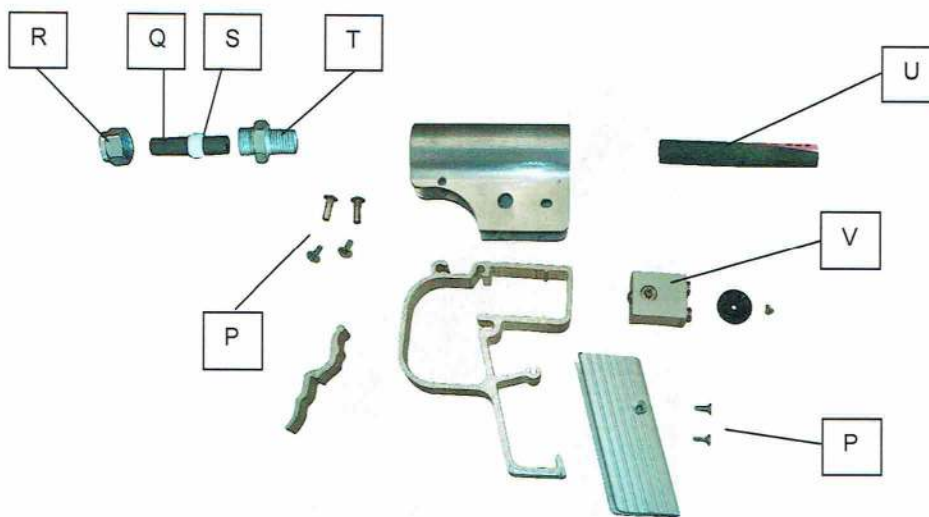
To disconnect the hose without damage the 2 parts, it is necessary to press the valve where the hose enters, then carefully pull the hose.



7.3.4 Gun maintenance

Good maintenance of the gun and all its parts is essentially important to guarantee efficient gun operation.

Disassemble the gun by screwing out its three screws **[P]**. Screw out the nozzle locking nut **[R]**. Extract the nozzle **[Q]**, the teflon ring **[S]**, the nut **[R]** and the nozzle-holder **[T]** from the gun. Check the condition of the inert hose **[U]** and of the valve **[V]**. Replace the pneumatic valve as required.



7.4 UNSCHEDULED MAINTENANCE



UNSCHEDULED MAINTENANCE SHOULD BE EXCLUSIVELY CARRIED OUT BY THE MANUFACTURER OR SKILLED TECHNICIANS OR BY OTHER PERSONNEL AUTHORISED BY THE MANUFACTURER.

1. In normal operating conditions, the machine does not require any maintenance or servicing other than the routine maintenance recommended in the manual.
2. Any other service is considered "unscheduled maintenance".
3. Unscheduled maintenance operations must be carried out by personnel with an in-depth, specialised knowledge of the machine and all its parts. In no case may a routine maintenance engineer carry out unscheduled maintenance, either personally or through his/her appointed persons.
4. In any case, the routine maintenance engineer is bound to promptly inform the Manufacturer that an event has occurred which makes unscheduled maintenance necessary, by indicating its cause and action.

7.5 TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION
No air delivery from the nozzle	Compressor disconnected or turned off	Connect the compressor to the IBIX machine and turn it on
	Pressure reducer control turned fully off	Turn on the control to the required setting
	Nozzle obstructed by foreign matter	Clean nozzle
	Blasting material particle size too	Replace nozzle
The nozzle delivers air only without any blasting material	The machine is empty: no more blasting material in the tank	Full the tank with blasting material
	The adjustment valve on the lower plate is jammed	Remove the blast adjustment screw and clean it
	The blasting material flow adjustment screw is turned off	Turn the adjustment screw until reaching the required amount of blasting material
	Blasting material particle size too coarse	Replace nozzle
	The blasting material is damp or contains foreign matters	Empty and clean the machine and fill it with clean, dry blasting material
Discontinuous blasting material flow	Blasting material flow adjustment screw open too wide	Turn off the adjustment screw until reaching the required amount of blasting material
The required cleaning results cannot be obtained	Incorrect air/blasting material mix	Adjust the pressure reducer to the required pressure
	Blasting material hose punctured or cracked	Replace hose
	Unsuitable nozzle for the chosen application	Replace nozzle with a suitable one
	Unsuitable blasting material or particle size for the chosen application	Replace the blasting material used with another material suitable for the required results
Gun air leaking	The air control hoses on the start/stop control have been exchanged (Red must be connected to Blue and Black to White – see chapter 7.3.3)	Disconnect the air control hoses and exchange their positions
Tank overpressure (> 8.5 bars)	Malfunction of the safety valve	Replace the safety valve (see also par. 3.2)



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La sottoscritta / The undersigned

PADOVAN VALERIO & C. SNCsede legale: via De Nicola 13/a Sede Amm.va e Stab.: Via F. Chemello
12/c Tel. +39 0444/499379 Fax +39 0444/499097Dichiara sotto la propria responsabilità che l'accessorio di sicurezza / Declares with responsibility that the safety accessory
Valvola di sicurezza per aria compressa modello / Safety valve for compressed air model**TA6**

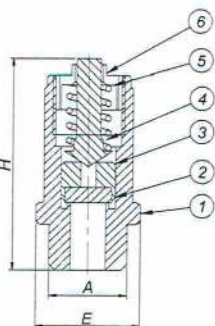
Grandezza Size	N° di serie Serial no.	Quantità nel lotto Quantity in a lot	Taratura Calibration	Tipo guarnizione Gasket type	Categoria class	Anno costruzione Year of const.
1/4" BSP	425814	300	9,00 BAR	NBR -10 +80 °C	IV°	2014

Al quale questa dichiarazione si riferisce è conforme ai requisiti essenziali di sicurezza della direttiva 97/23/CE (ped) Per la verifica della conformità alla direttiva sono state utilizzate le norme e le procedure di seguito indicate: / To which this declaration refers, conforms to the essential safety requirements of directive 97/23/CE (ped) The standards and procedures indicated as follows were used to check conformity to the directive:

Descrizione del prodotto / Product description:	Valvola di sicurezza con molla elicoidale ad azionamento diretto, tipo: TA6 / Safety valve with helicoid spring and direct action, type: TA6
Attestato di esame CE del tipo: / CE examination certificate type:	Modulo B+D Form B+D Formular B+D
N° dell' attestato di certificazione / Certificate no.	1171/03/CE (B) 1836/09/CE (D)
Norme applicate: / Standards applied:	Secondo direttiva 97/23/CE - Raccolta E I.S.P.E.S.L.-1979 (D.M.21/05/1974) - ISO 4126-1 SAFETY VALVES PART.1: GENERAL REQUIREMENTS According to directive 97/23/CE - Raccolta E I.S.P.E.S.L.-1979 (D.M.21/05/1974) - ISO 4126-1 SAFETY VALVES PART.1: GENERAL REQUIREMENTS

Portate di scarico in Kg/h e litri/min. / Discharge flow rates in Kg/h and litres/min. (0°C 1,024 bar)

BAR	0,5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kg/h	19	31	47	63	79	95	111	127	142	158	174	190	206	222	237	253
Lt/m	301	410	616	821	1027	1228	1433	1637	1839	2043	2248	2452	2657	2861	3065	3264



	Denominazione / name	Mat. mat.
1	Corpo valvola / Valve body	EN 12164-98 CW 614N
2	Pastiglia / Pad	NBR - VITON
3	Otturatore / Shutter	EN 12164-98 CW 614N
4	Stelo / Rod	EN 10263-2-4
5	Molla / Spring	EN 10270-1-DH
6	Vite regolazione / Regulation screw	EN 12164-98 CW 614N

Marchio del costruttore / Constructor's mark	PV
Sigla della valvola / Valve code	TA6
Pressione nominale / Nominal pressure	PS 20
Diametro nominale / Nominal diameter	1/8"-1/4"
Diametro dell'orificio / Orifice diameter	5,8mm
Area dell'orificio / Orifice area	26,40mm²
Coefficiente di efflusso / Discharge coefficient	0,7
Variabilità campo di taratura / Calibration field variability	0,5-15 BAR
Sovrapressione / Overpressure 0,5-2 BAR	0,2 BAR
Sovrapressione / Overpressure 2-18 BAR	10%
Scarto di richiusura / Re-closing tripping	20%
Temperatura di esercizio / Operating temperature NBR	-10° C + 80° C
Temperatura di esercizio / Operating temperature VITON	-10° C + 200° C

Identificazione dati marcati sul corpo valvola: / Identification data marked on the valve body: Marcatura CE / CE mark Direttiva di riferimento / Reference directive / Individuazione dell'organismo notificato / Notified authority
identification / Marchio del fabbricante / Constructor's mark / Pressione di taratura in bar / Calibration pressure in bar / Diametro dell'orificio / Orifice diameter / Numero di serie / Serial number

Montecchio 13/11/2014

Nome e indirizzo dell'organismo notificato /
Name and address of the notified authority**0100 I.S.P.E.S.L.**

Via Alessandria N°220/E I - 00198 Roma

Padovan Valerio & C snc

Sig. Valerio

Firma del legale rappresentante / Signature of the legal representative

Informazioni Le valvole di sicurezza sono progettate e costruite per essere impiegate esclusivamente con aria compressa priva d'impurità. I materiali impiegati nella costruzione sono idonei all'esercizio della valvola per le pressioni e le temperature previste. La guarnizione di Viton o NBR conserva le caratteristiche di resistenza anche in prolungato esercizio. La cianfrinatura della valvola impedisce la modifica della taratura: è vietato manomettere la valvola e/o modificare il valore di taratura prefissato dal costruttore.

Installazione L'installazione della valvola deve essere effettuata esclusivamente da persone tecnicamente preparate, responsabili e in buone condizioni di salute. È obbligatorio verificare l'integrità della valvola prima dell'installazione, controllando che la pressione PS della valvola non sia superiore alla pressione di funzionamento del serbatoio o dell'impianto da proteggere. Verificare che la portata di scarico della valvola sia maggiore della quantità d'aria da scaricare. La valvola di sicurezza deve essere collocata direttamente sul serbatoio in posizione verticale, in luogo asciutto, accessibile, protetto da urti, agenti atmosferici, lontana da liquidi o condensati. In posizione tale da avere uno spazio libero tutt'attorno per permettere il corretto scarico dell'aria e non provocare danni a persone e/o cose. Lo stelo della valvola (4) deve quindi essere libero nel suo movimento all'atto dello scarico. Il collegamento tra la valvola e l'organo da proteggere deve essere privo di qualsiasi tipo di strozzamento e il più corto possibile, per non ridurre la portata di scarico alla valvola stessa: l'area di passaggio del collegamento deve essere superiore all'area dell'orificio della valvola. Durante l'installazione avvitare la valvola con chiave dinamometrica, utilizzando la parte esagonale del corpo (1). Applicare una coppia massima di 30Nm prestando attenzione a non provocare deformazioni: è vietato utilizzare pinze, tenaglie, martelli o altri utensili diversi dalla chiave esagonale. Verificare che il foro d'entrata e l'otturatore non siano ostruiti da colle, teflon o simili che possano provocare incollaggio dell'otturatore o d'altri componenti funzionali. In caso di sostituzione della valvola è obbligatorio scaricare preventivamente l'aria compressa contenuta nell'impianto. Si declina ogni responsabilità per danni causati a persone e/o cose dovuti all'inosservanza delle istruzioni riportate nel presente foglietto. Normale usura, logoramento, manomissione, ed usi impropri sollevano il costruttore da qualsiasi tipo di responsabilità.

Manutenzione ispezione La valvola non deve subire urti che ne provochino deformazioni. È obbligatorio far verificare almeno una volta l'anno solo da personale specializzato il funzionamento della valvola di sicurezza, per tale motivo anche l'immagazzinamento non deve superare i sei mesi. Per le valvole dotate di anello, con la pressione tra 80-90% del valore di taratura della valvola tirare l'anello rilasciandolo immediatamente senza ripetere l'operazione. Nella prova la valvola deve aprirsi decisamente scaricando l'aria e richiudersi immediatamente quando viene rilasciato l'anello. È obbligatorio procedere con cautela, perché tali operazioni possono diventare pericolose se non vanno prese le adeguate misure di sicurezza indossando: occhiali, cuffie e quant'altro serva per ripararsi da rumori getti d'aria ecc., scaricati dalla valvola. In caso di dubbio sul testo della traduzione fa fede esclusivamente il testo in lingua italiana.

Information The safety valves are designed and constructed for use exclusively with compressed air, free from impurities. The materials used in construction are suitable for operating the valve at the rated pressures and temperatures. The Viton or NBR gasket conserves the resistance characteristics, even in prolonged use. The valve caulking impedes calibration modification; tampering with the valve and/or changing the constructor's calibration is forbidden.

Installation Valve installation must be performed exclusively by technically prepared persons, who are responsible and in good health. Checking the integrity of the valve before installation is obligatory. Also, check that the valve PS pressure is no greater than the operating pressure of the tank or of the system to protect. Check that the discharge flow rate of the valve is greater than the quantity of air to discharge. The safety valve must be positioned directly on the tank in a vertical position, in a dry, accessible place protected against the weather and far away from liquids or condensation. It must be positioned so as to have sufficient space all around for correct air discharge, without causing damage to persons and/or things. The valve rod (4) must therefore be free in its movement when discharging. The connection between the valve and the part to be protected must be free from all kinds of choking and be as short as possible so as not to reduce the discharge flow rate of the valve itself. The connection passage area must be greater than the valve orifice area. During installation, screw on the valve with a torque spanner using the hexagonal part of the body (1). Apply a maximum torque of 30 Nm, paying attention not to cause any deformation: using pincers, pliers, hammers or tools other than a hexagonal spanner is forbidden. Check that the inlet hole and the shutter are not blocked by glue, Teflon or similar materials that could bind the shutter or other functional components. If the valve is replaced, the compressed air contained in the system must be discharged first. We decline all responsibility for damage caused to persons and/or things due to failure to observe the instructions shown in this sheet. Normal wear, tear, tampering and improper uses relieve the constructor from responsibility of whatever kind.

Maintenance and inspection The valve must not be subjected to knocks which may cause deformities. It is obligatory for qualified technicians to make sure that the safety valve functions correctly at least once a year. For the same reason, the valves must not be warehoused for more than six months. Valves equipped with a ring must be tested while pressurised to between 80-90% of the calibration value. Pull the ring and release immediately. During the test the valve must definitely open and discharge the air and re-close immediately when the ring is released. It is absolutely necessary to carry out this procedure with the utmost caution because this type of job can be dangerous if adequate safety measures are not taken: wear goggles, a head set and anything else necessary to protect against noise, jets of air, etc. which may be discharged from the valve. If there are any doubts regarding the translation of this text, only the Italian version shall be considered valid.



IBIX SRL Iscritto al Registro Imprese di RAVENNA C.F. e n. iscrizione 02006520395 - Iscritto al R.E.A. di Ravenna al n. 163481
Capitale Sociale Euro 119.000,00 - P. IVA: 02006520395 -
Via La Viola 2, 48022 S. Maria in Fabriago (RA) - ITALY- Tel. +39 0545 994589 Fax +39 0545 994567 e-mail: info@ibix.it web: www.ibix.it

Declaration of Conformity

(in conformity to the UE PED 97/23/CE Directive – annex VII)

The Manufacturer IBIX S.r.l., Via La Viola, 2 – I-48022 –Santa Maria in Fabriago (RA)
HEREBY DECLARES THAT:

THE PRODUCT : **ECO-BLASTER IBIX 9 Serial N° 9324**

Composed of :

Description	Serial n°	Vol.	PS	T S	PED Category		
		Lt.	Bar	°C	Ref. PED	Table	Category
Tank	9324	9	0 / 9	-10 / +40	Art. 3 § 1.1, a), first indent	All. II, Tab.1	I
Hose		DN< 25	0 / 9	-10 / +40	Art. 3 § 1.1, a), first indent		Art. 3 § 3
Safety Valve PADOVAN VALERIO & C. SNC Type: TA6	425814		9	0 / +80	Art. 3 § 1.1, a), first indent		IV

Is designed and manufactured in conformity to the UE PED 97/23/CE Directive

1. Procedure applied in compliance with mod. A Category I, Fluid Group n. 2, annex II and III of the 97/23/CE Directive;
2. Inspection test by IBIX SRL

Technical drawing / Documentation n°- id. n°:

- hydraulic layout- Drawing n. SCHEMA-IBIX9 dated 11/2010
- Machine lay-out – Drawing n. IBIX9-TAV.1.01
- Technical Standards: **AD-2000 MERKBLATT;**

Santa Maria in Fabriago (RA) ITALY, 12/03/15

President and C.E.O.
Susanna Giovannini


IBIX S.R.L.
Sede legale: Via La Viola n. 2
48022 – LUGO (RA)
R.I. Ra / C.F. / P. IVA 02006520395
Cap. Soc. € 119.000,00 i.v. – REA n. RA 163481

CONVENTIONAL GUARANTEE CERTIFICATE OF THE PRODUCER
DURATION: 5 - YEARS GUARANTEE

The following terms about the conventional guarantee automatically start after the date of delivery of Eco – Blaster IBIX and they are effective for the purchases from the year 2005.

This certificate is referred only to the terms of conventional guarantee of the producer which are listed below and it is issued by:

IBIX SRL, Via La Viola 2, 48022 S. Maria in Fabriago (RA), Italy

This certificate does not compromise the rights provided for the European Directive 1999/44/CE and the Italian law of implementation, where the consumer remains the owner (D. Lgs. 24/2002).

1. Object

This Eco – Blaster IBIX is guaranteed by IBIX SRL for flaws in the assembly or in components which can compromise the correct functioning of the machine in normal conditions of use.

- damage caused by acts of God, fire, accidents or any other cause not ascribable to assembly or components faults;
- full or partial non-observance of terms of payment.

2. Time of effectiveness

This Eco – Blaster IBIX is guaranteed by IBIX SRL for flaws which could occur during 5 - years after the date of the Sale invoice.

The consumer shall lose the rights resulting from this guarantee when he/she does not report the fault within 2 months from the detection of the fault itself.

4. Limitation of liability of the producer

IBIX SRL decline all responsibility for any damage to people, things or animals as a consequence of non-observance of all instructions and cautions listed in the Instruction and Maintenance Booklet of Eco – Blaster IBIX.

3. Exceptions

This conventional guarantee is not granted in the following cases:

- non-observance of instructions and cautions concerning the use and maintenance listed in the Instruction and Maintenance Booklet supplied with the purchased product;
- incorrect use and handling of the machine;
- negligent and careless use;
- use of abrasives that are not approved by the manufacturer;
- machine supply by means of untreated compressed air (moist or oiled air);
- repairing, replacements or alterations by staff that are not authorised by IBIX SRL;
- use of non-original spare parts;
- careless handling (i.e. dropping) falls or bumps;
- normal wear and tear of the product parts consumables, such as abrasive hose, nozzle holder, nozzles, rubber holder, 5 µm filter for pressure regulator, black knob of the pressure regulator, plastic cover and its base, plastic funnel;
- damage caused during transport;

5. Commitment for the repair of the flaw

If a flaw (see point 1) is proved and acknowledged within the guarantee period of 5 - years, IBIX SRL commits itself to eliminating the flaw through repair or substitution of the damaged components free of charge for the consumer. Product transport costs and labour hourly rates are in any case not included.

Whenever technical servicing on the purchaser's premises is requested, any IBIX SRL staff travelling expenses are equally not included.

All repairs or substitutions of components of Eco – Blaster IBIX do not interrupt the lapse of this guarantee, which will last until the end of the 5 - years (see point 2).

6. Territory extension

This conventional guarantee of the producer is valid in all the countries where **approved direct** selling of Eco – Blasters IBIX is practised.

7. Maturity date

At the end of this 5 - years conventional guarantee, all repairs or substitutions of components of Eco – Blaster IBIX are at purchasers expense.

8. How to be entitled to this guarantee

Fill in the coupon below, cut and send to IBIX SRL along with the corresponding Sale invoice.

IBIX GUARANTEE COUPON

MODEL: IBIX

SERIAL NO:

DATE OF INV. _____ INV. N. _____

STAMP + SIGNATURE

CUSTOMER _____

ADDRESS _____

TEL _____

FAX _____

SEND TO:

IBIX SRL

Via La Viola 2, 48022 S. Maria in Fabriago (RA), Italy

Tel. +39 0545 994589 Fax +39 0545 994567 e-mail: info@ibix.it

