

CE

BOSCARO

**PATENTED
EQUIPMENT
FOR THE BUILDING INDUSTRY**

USE AND MAINTENANCE MANUAL CONCRETE BUCKETS

This use and maintenance manual was edited according to the standard **UNI ISO 12100-2:2009**
Compliant with machinery directive **2006/42/EC**

Standards of reference

- UNI EN ISO 12100-1 Safety of machinery – basic concepts, general principles for design – Part 1: basic terminology, methodology
- EN 10204:2005 Metallic products - Types of inspection documents – Also applicable to non-metallic products
- UNI ISO 8686-1 Cranes - Design principles for loads and load combinations

- ISO International standard
- EN European standard
- UNI National standard

- CEN European standardisation committee
- ISO International standardisation organisation
- UNI Italian national unification body

- ASME American Society of Mechanical Engineers
- ANSI American National Standards Institute

In compliance with Common CEN/CENELEC Regulations, the national standardisation bodies of the following countries are obliged to transpose European standards:

Austria, Belgium, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, the Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and Hungary.

Introduction

In compliance with accident-prevention standards, the company BOSCARO S.r.l. has written this instruction booklet to inform users concerning the most correct use of its concrete buckets.

It is therefore recommended to read and abide by all that is prescribed before using the equipment.

For any other loading situations not included in this booklet, abide by common safety standards.

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1. USING AND KEEPING THE USE AND MAINTENANCE MANUAL

- The use and maintenance manual is intended for the attention of installers, maintenance technicians and all operators who succeed one another in operating the equipment, above all the parts regarding occupational safety.
- The information contained in the manual indicates the correct use of the equipment according to the intended design and construction purposes.
- It also contains information regarding handling, installation, maintenance and overhauls, all within the limits established by the manufacturer inside the manual.
- The use and maintenance manual is an integral part of the equipment. It must be kept until its final dismantling. It must be kept in a protected place, in the vicinity of the equipment and fully available for consultation.
- Should the manual be damaged or lost, the user must request a copy from the manufacturer.
- The manufacturer reserves the right to modify the equipment and the manuals without being obliged to update previous editions.
- The user can request information and updates which, when issued, also become an integral part of the user manual.
- Should ownership of the equipment be transferred, this manual must be transferred as well, as prescribed in the machinery directive 2006/42/EC.

1.1 Cases which release the manufacturer from liability.

The manufacturer is released from all liability in the following cases:

- improper use of the equipment or use by personnel not trained for professional operation;
- use contrary to specific regulations;
- incorrect installation;
- serious shortcomings in intended maintenance and overhauls;
- modifications, interventions or tampering of any type performed by unauthorised personnel.

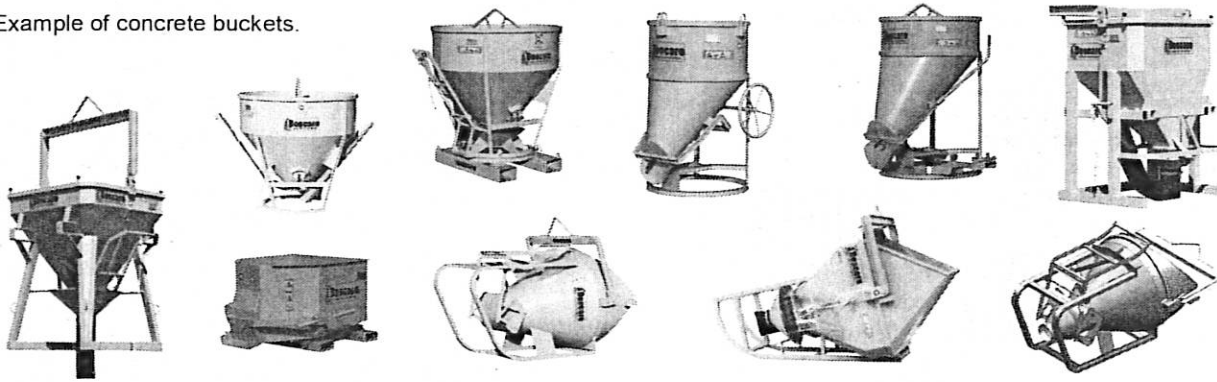
The manufacturer declines all liability when the concrete buckets are used without fully respecting safety standards.

2. DESCRIPTION OF CONCRETE BUCKETS

The concrete buckets are devices intended for loading, lifting and high-level handling of cement mixtures (concrete, mortar and/or similar material). They are used on construction sites in general.

The structure of the buckets for debris has been inspected for loads of these materials with a specific maximum weight of 2200 Kg/Mc.

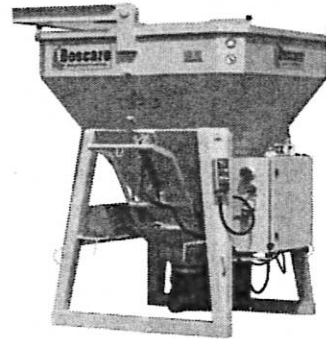
Example of concrete buckets.



In the electric opening bucket, the valve is opened and closed by remote control, thus avoiding contact between the operator and the bucket, making it safer and providing better working time management.

This bucket is equipped with an acoustic indicator device to warn people that the machine and equipment are in operation.

Example of concrete buckets with electric opening.



3. USE

LOADING

Proceed as follows:

1. With the bucket resting stably on the ground, hitch the hook of the crane to the appropriate attachments for lifting;
2. Transfer the bucket to the working zone to be filled;
3. Lift it and carry it to the unloading zone.

UNLOADING

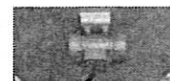
Proceed as follows:

1. Position the bucket above the unloading zone.
2. Shift the lever as much as needed to unload the concrete, being careful to proportionally empty the material.

For the bucket with the electric valve opening, material is unloaded by operating the controls on the control panel. It is closed by slightly pressing the specific control (see photo).



The bucket is equipped with an electric vibrator which detaches material from the walls of the bucket.



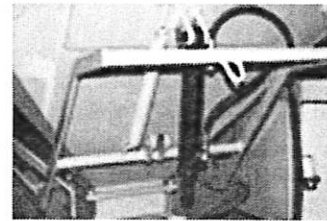
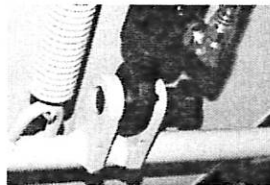
4. After it has been unloaded, just move the bucket back to the working zone and place it on the ground, ready to be reused.

INFORMATION CONCERNING THE ELECTRIC OPENING BUCKET

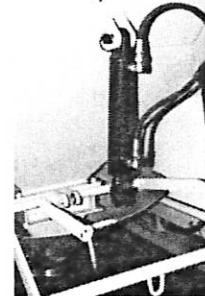
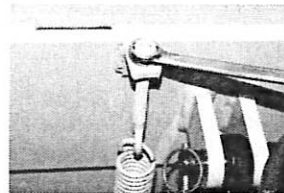
1. Every morning before using the equipment, check the electric control board and verify the charging status of the battery;
2. Every morning before using the equipment, check the hydraulic system and make sure there are no oil leaks;
3. The hydraulic control unit is powered by a 12 volt battery;
4. The electric control board is equipped with an EEC socket to charge the 230 volt battery;
5. Charge the battery before use on the worksite, making sure to disconnect the power cable when charging is over;
6. It is strictly forbidden to use the bucket with the power cable connected;
7. This bucket is equipped with an acoustic and visual indicator device to warn people that it is in operation;
8. If the unloading valve of the bucket remains open without any button being pressed for a certain amount of time, it will close automatically (default safety setting);
9. The bucket valve will close automatically when the battery is about to run out (default safety setting);
10. The unloading valve will also close automatically when the receiver of the bucket receives no signal from the pushbutton control panel because the remote control and the receiver are too far apart or the batteries of the remote control are flat (default safety setting);



11. If needed, the bucket can be used manually by disconnecting the hydraulic piston from its housing in the lower part (see explanatory photo);



12. When performing maintenance on moving parts, it is mandatory to disconnect the hydraulic piston from its housing in the lower part (see explanatory photo) and the extension spring by loosening the bolt from its seat (see explanatory photo);



13. It is strictly forbidden to perform any type of maintenance or to use liquids for cleaning with the electric power on;
14. The layout of the system and the declaration of conformity of the electric control board are issued by the supplier.

4. GENERAL SAFETY PRESCRIPTIONS

- ◆ The crane used must comply with standards concerning its specific use and receive the intended maintenance.
- ◆ Equipment must be chosen which is compatible with one's machines; the overall weight of the suspended load must be within the nominal capacity of the crane at normal operating conditions.
- ◆ The combination of the crane with non-fixed load lifting attachments must only be activated by trained personnel in safe conditions.
- ◆ Lifting and support must be carried out in controlled conditions and under the direction of a specifically designated person.
- ◆ Operations concerning use of cranes with non-fixed load lifting attachments must be suspended in the presence of wind which exceeds a maximum speed (not allowing full control of the machine), storms, ice, snow, fog or other adverse weather conditions which can endanger the safety of personnel.
- ◆ If more than one machine is used simultaneously at the same place, the crane operators must communicate via two-way radios, one held by the crane operator and another by the operator on the ground who performs harnessing.
- ◆ Measures must be taken to prevent workers from stopping below suspended loads.
- ◆ It is not allowed to have the loads pass over unprotected workplaces normally occupied by workers.
- ◆ It is strictly forbidden to use the equipment before having prevented access to persons and/or animals to the work area. To this purpose, the area must be fenced off and any type of measure considered appropriate must be taken to make the activity safer.
- ◆ Make sure that the signs indicating access of unauthorised personnel to the working area forbidden and the suspended loads hazard are well visible.

It is strictly forbidden to pass within the range of action of the equipment.

Danger of falling material.

Danger of crushing.

Danger of collision.

It is strictly forbidden to pass with the load outside of the work area.

Any work on the equipment must be performed on the ground and in a stable position.

The safety of the equipment is linked to the efficiency of the safety systems of the machine upon which it is installed.

This machine must be equipped with an acoustic indicator device to warn people that the machine and equipment are in operation.

INSTRUCTIONS

For personnel

The operators must use the PPE (personal protective equipment) made available in compliance with the information and training received.

The individual contracting companies must inform, form and train workers (crane, loading and unloading operators) concerning the correct actions to be taken for lifting and high-level handling of loads. Without prejudice to the obligations of training workers as crane operators, as provided for in the Legislative Decree 81/08.

Lifting loads on high must be performed by specialised and instructed personnel according to the standard UNI ISO 9926-1. They must also be in possession of the physical and aptitude requirements. The use of productive or temporary personnel in general must be excluded.

It is forbidden to abandon the workplace with the equipment running.

The crane operator must not modify the bucket for any reason whatsoever. The manufacturer declines all liability for accidents and/or damage which should occur for this reason.

The crane operator must not perform operations or interventions upon his own initiative for which he does not have the required skills.

The crane operator must immediately report any faults or problems found on the bucket to the safety manager or foreman.

For transportation and deposit in warehouse

When lifting and transporting the equipment, means suitable to the weight and clearance must be used.

To lift the equipment, use the hook of the crane or a chain firmly connected to it to hitch to the attachment above the arch of the bucket.

The bucket must be stored carefully, making sure it is stable.

In all cases, the employer shall undertake so that his personnel is equipped with all the personal protective equipment before using the bucket.

For use

Use the equipment exclusively to lift and handle material with the characteristics described in point 2.

Make sure that the weight of the material to be handled is within the capacity indicated on the bucket's identification plate and, obviously, that the material and the equipment are within the capacity of the crane.

Important The operator must make sure that the bucket is securely fastened to the crane. To correctly use the bucket, a chain with welded links must be placed between the hook of the crane and the bucket, with the top and bottom link provided with a hook with a closing clamp. Make sure that this chain is suitable for the weight of the supported load, bucket plus material, (standard UNI EN 818-4).

The buckets must be used while respecting the rules which this operation requires: free clearance space, **no one inside the area of action**, acoustic alarm at the start of the manoeuvre, installation of danger signs.

Failure to comply with the instructions described above can cause dangerous situations and/or damage to the equipment, making it insecure.

MAINTENANCE

Inspections must be made by personnel previously commissioned, formed and trained concerning use of the equipment, without prejudice to the obligations of training workers as crane operators, as provided for in the Legislative Decree 81/08.

The verification that such information, formation and training has been provided must be proven by a training record, kept by the contracting company.

- All maintenance and overhauls must be carried out with the equipment resting stably on the ground.

DPR 547/55 recommends that the efficiency and proper maintenance of the materials making up these accessories be checked at least every three months.

We also recall that, based on that shown above, if a reduction of over 10% in the cross-section of the elements making up the accessories is detected, that accessory must be replaced. It must also be replaced in the presence of straining effects, which have permanently caused the elastic limit of the material to be exceeded.

6.1. Routine maintenance

It is mandatory that the bucket be inspected:

- every time it is removed from the warehouse and every day before operating it on the worksite;
- after a repair has been performed with the intervention noted in the use and maintenance manual;
- during the service lifetime of the equipment, every three months, noting the results in the use and maintenance manual.

The equipment must be checked to make sure it is efficient; this check consists in:

- checking that there are no cracks in the welding;
- checking the play of the joint pins;
- checking that the metallic structure has no breakage and/or deformations;
- verifying the conditions of the screws and the correct tightening of the nuts where present.

In the buckets with electric valve opening, when the battery is replaced, it must be disposed of as special waste in compliance with standards in force in the country where used.

Should any faults be found, contact the manufacturing company to overhaul the equipment. Operations performed incorrectly make the equipment dangerous. The forks must be repaired and overhauled by our specialised personnel on our site. The use of non-original spare parts can endanger the safety of the equipment, as well as invalidate the EC conformity of the equipment and the manufacturer warranty.

7. OPERATING LIMITS

The equipment has been designed and dimensioned to perform 20,000 lifting cycles. When this limit has been reached, it must be overhauled at our workshop and replaced if necessary.

The wear of the bucket is subject to various situations (such as storage, careful use, etc.) and therefore the lifting cycles also depend on the circumstances mentioned above.

8. WARRANTY

The Boscaro company guarantees its device for a maximum period of 12 months from the date of delivery regarding material or construction defects.

Upon receiving the goods, check:

- The data provided on the packing slip (addressee, type of goods, number of packages);
- That the goods received are without any type of damage.

IN THE EVENT OF FAULTS, IMMEDIATELY NOTIFY THE CARRIER, WRITING A CLAIM ON THE PACKING SLIP, AND NOTIFY BOSCARO S.R.L. WITHIN EIGHT DAYS FROM RECEPTION OF THE GOODS.

Should manufacturing defects be found, the purchaser has the obligation of reporting this to Boscaro s.r.l. within 8 days from the date of reception. Boscaro s.r.l. shall take care of resolving the problem as quickly as possible free of charge.

Parts damaged due to carelessness or negligence in use, inappropriate maintenance, improper use or normal wear, defects caused by tampering, damage caused by transportation, by failure to comply with the information contained in this manual and by any other circumstance which cannot be blamed on manufacturing defects are excluded from the warranty.

The bucket, subject to be repaired under warranty or not, must be accompanied by a copy of the invoice and by the use and maintenance manual.



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