

**INSTRUCTIONS HANDBOOK FOR THE INSTALLATION  
USE AND MAINTENANCE OF LIFT TABLES****ASra**  
Rev.6**TRANSLATION OF ORIGINAL INSTRUCTIONS**

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## **1. GENERAL INFORMATION**

### **1.1 PURPOSE AND CONTENTS OF THE HANDBOOK**

This handbook concerns the lift table description, the technical-functional data as well as the instructions for use, assembling and maintenance.

Additionally, the following papers are incorporated in this handbook:

EC Conformity Declaration or declaration of incorporation according to art. 4, paragr. 2 (2006/42/CE).

All the documents are put in a protective transparent envelope and fixed to the table.

### **1.2 HANDBOOK RECEIVERS**

This handbook is addressed to:

- the person responsible for the factory, the workshop and the yard;
- the staff in charge of the assembling;
- the operator;
- the staff charged with the maintenance.

The handbook has to be kept in a suitable place by a responsible person purposely charged, so that it is always available for consultation and in good condition. In case of loss or deterioration, a replacement may be obtained from BOLZONI S.p.A. or the local retailer for substitute documentation by quoting the table serial number. Whoever works with the table, must read and understand the handbook.

It is forbidden to carry out any modification on the handbook without the previous written authorization of the manufacturing Company. The instructions handbook and the declaration of conformity or the Manufacturer's declaration must accompany the machine in case of sale to a third party.

### **1.3 MANUFACTURER'S RESPONSIBILITIES**

The instructions given by this handbook do not replace but rather supplement the obligations for the observance of the laws in force concerning the safety and accident prevention rules.

With reference to the contents of this instructions handbook, BOLZONI S.p.A. refuses all responsibility in case of:

- Table installation that does not comply with the safety national laws and rules in force which are prescribed depending on the table use;
- Table use unadmitted by the safety and accident prevention national laws;
- Wrong or non-observance of the instructions given by the handbook;
- Faults in mains voltage and supply;
- Unauthorized modifications of the mechanism;
- Use by untrained staff.

In order to take advantage of the Manufacturer's warranty according to paragraph 1.4 of this handbook, the Customer has to scrupulously comply with the instructions given by this handbook (paragraph 6.2) and particularly:

- Always work within the use limits of the device;
- Always carry out a careful and constant maintenance;
- Charge operators properly trained and with a proven ability with the table use;
- Use only the spare parts recommended by the Manufacturer.

### **1.4 WARRANTY**

BOLZONI S.p.A. guarantees all tables for 12 months from shipment date when used for 8 hours per working day (and within the number of cycles per hour stated in the offer). If the products are used for more than 8 hours per day the warranty period decreases in proportion.

The warranty is limited to the replacement ex-works BOLZONI S.p.A. of those parts that BOLZONI acknowledges as defective because of a material or processing defect and it excludes the labour and travelling expenses for the replacement of these parts.

It is understood that the warranty is not recognized if the fault results from an inappropriate use of the product, if the setting up was not carried out according to the instructions of BOLZONI S.p.A. or if non-original parts have been assembled on the BOLZONI's product.

The products of BOLZONI S.p.A. are not guaranteed in case of uses exceeding the performances shown in the plates and accompanying documentation.

All BOLZONI S.p.A. devices are covered by insurance against any injury caused to a third party by defective components or by a fault of the device; all injuries caused by an inappropriate or incorrect use of the tables are excluded.

## **1.5 MANUFACTURER'S IDENTIFICATION**

This documentation entitled "INSTRUCTIONS HANDBOOK FOR THE USE AND MAINTENANCE OF LIFT TABLES" is valid only for tables produced by

**BOLZONI S.p.A.**  
**29027 CASONI DI PODENZANO – PIACENZA (ITALY)**

## **1.6 MACHINE IDENTIFICATION**

Every table is equipped with an identifying plate (**Pict. 1A annex 10.2/1**) quoting:

- manufacturer's mark;
- manufacturer's name, corporate name and address;
- table model;
- maximum capacity in Kg;
- production year;
- serial number;
- EC mark;
- working pressure;
- mass (weight) in Kg.
- protection IP.

## **1.7 REQUIREMENTS, RULES AND REGULATIONS**

The lifting platforms BOLZONI are designed and manufactured for ensuring maximum safety, reliability and durability. The lifting platforms BOLZONI are in accordance with the basic requirements of the EN 1570 standard for platform lifts. This European standard defines the safety requisites for elevator platforms used for raising and/or lowering goods and/or persons assigned with moving the material transported by the elevating platform with a maximum vertical travel distance of 3 meters

The lifting platforms can be manually operated or equipped with an electric motor.

Accessories can be installed to improve safety.

## 1.8 USE AND OPERATING AREAS

The product is designed for indoor use in dry, well illuminated areas with a mild climate, unless agreed otherwise with Bolzoni.

Apart from the elevator's own safety devices, further measures may be necessary both for the platform and for the surrounding working area.

We recommend conducting a risk evaluation analysis in conformity with the Machine Directive. See also the section "Risks connected to operation".

These instructions must be made available to the personnel authorized to accompany the product during its entire operating path.

BOLZONI elevator platforms are readily applied in numerous environments.

They are generally used for raising/lowering loads. They are destined for use on a flat and stable base or floor. They can be installed on the ground or in a pit.

The floor/ground must support the joint weight of the platform and the load.

Suitable information concerning usage and loading are shown in this manual and it refers to EN 1570.

During normal operation the noise emission does not exceed 70dB(A), measured at a distance of 1 meter and at a height of 1.6 meters from the greater source of noise.

## 1.9 INSTRUCTIONS FOR RECYCLING

The materials employed to manufacture the elevator platform are suitable for reusing or recycling. Specialized companies must be engaged to dispose of worn out platforms. Such companies will dismantle the platforms and use the recyclable materials.

## 2. TECHNICAL INFORMATION

### 2.1 DESCRIPTION OF THE MAIN COMPONENTS

- Upper load carrying platform fitted with an underside perimeter safety cut-out device to automatically stop descent of lift in down direction when actuated.
- Low voltage push button control station requiring the presence of the operator (up-down-reset-emergency stop).
- Reset button to restore control after operation of safety cut-out device.
- Electro-Hydraulic power unit with a maximum pressure device to prevent overload.
- Single acting hydraulic cylinders incorporating protection device against collapse due to failure of hydraulic pipework.
- Inner and outer scissors legs spaced to avoid shearing during movement.
- Mechanical chocking bars to lock platform in raised position for safety during maintenance.
- Self lubricating bearings on all pivots.
- Eyebolts to lift and position platform during installation.
- Baseframe to support lift and spread load on ground.

### 2.2 OPTIONAL UNITS

- Manually rotating circular surface integrated in the platform.
- Base frame on wheels.
- Automatic Roll-off stop to prevent load from accidental fall fitted on one or more sides.
- Link bridge plate between table and vehicle, manually or power operated.
- Lower frame that can be passed through by the forks of a truck.
- Self-rolling protection curtains in PVC on one or more sides.
- Gates
- Safety handrails.
- Pivots with grease points for bearings.
- Pivots with roller bearings.

## 2.3 TECHNICAL DATA – OVERALL SIZE

All the technical and overall dimensions data are listed in the enclosure 10.1.

## 2.4 CAPACITIES AND LOAD CHARACTERISTICS

The maximum capacity of the table is given on the identification plate and in large figures on the edge of the platform (**Fig 1C annex 10.2/1**).

The load must only be applied in accordance with the design specification and is displayed on the diagram on the platform in the form shown in **Figures 2-3 annex 10.2/1**. Where:

- denotes uniformly distributed loads
- **Picture 2** denotes partially concentrated loads
- **Picture 3** denotes concentrated load

## 2.5 PLATES AND WARNINGS ON THE TABLE

The table has been designed and manufactured in accordance with EN 1570 and to satisfy the essential health and safety requirements to the machinery directive a thorough risk assessment has been made and suitable warning signs have been affixed to warn of any dangers. (see **Pictures annex 10.2/2**)

## 2.6 COMPULSORY SIGNALS (ATTENTION)



**Pay the greatest attention to the instruction coupled with this symbol and follow scrupulously the directions.**

## 3. SAFETY INFORMATION



**Before starting any operational action it is compulsory to read this instructions handbook. Those people who do not follow the directions below can suffer or cause irreparable damages to persons, animals or things.**

**BOLZONI S.p.A. accept no responsibility for damages due to the non-observance of the safety and accident prevention rules mentioned below and of the rules in force concerning the table positioning, characteristics and use.**

### 3.1 SAFE USE

It is absolutely forbidden to operate or to let the table be operated by anyone who has not completely read, understood and perfectly assimilated the contents of this handbook.

The operator charged with the table working must be duly trained, qualified and in good health.

Before using the table it is necessary to check the perfect integrity of all the safety devices and the table structure.

### 3.2 MAINTENANCE RULES

The maintenance and replacement of parts on the table must only be carried out by competent persons following strictly the instruction given in this handbook.

The labels put on the table give the correct directions in an essential form in order to avoid accidents. These pictograms must always be clean and replaced at once if removed, even partially, or damaged.

It is absolutely forbidden to use the table even if only one of these pictograms is not as supplied and fitted by the manufacturer.

Before carrying out the maintenance, when the table is raised, it is necessary to position the safety bars (one for each side of the external moving arms, marked with an adhesive label; see **Fig. 11-12 all.10.2/2**) or, for some models put the props on the frame rods (according to **Fig. 13-14 annex 10.2/3**) to block the table in the raised position.

## **4. TRANSPORT AND UNLOADING**

The table is delivered completely closed and equipped with hooking eyebolts for lifting, transport and installation. The eyebolts position is visible and indicated by suitable labels (**Fig. 8 annex 10.2/2**). Ensure that the lift truck, crane or bridge crane has a capacity proportionate to the table weight which can be obtained from the plate, the technical data of the enclosure 10.1, or the delivery papers.

Keep the eyebolts to transport the lift tables.

## **5. ASSEMBLING**

The table has to be assembled by a competent person complying with the national rules in force with regard to safety and accident prevention as far as the specific use of the table is concerned. Bolzoni S.p.A. can give some advice on the subject, as during the order definition.

The lift tables supplied not finished or in any case as per Safety Machinery Regulations 2006/42/CE art. 4 item 2, must not be put in service until the whole installation or the machine into which it has been incorporated has been completed and declared in conformity with the provision of safety rules in force.

Before assembling the table it is necessary to check the integrity and the wholeness of the equipment.



**All the installation, adjustment and test operations must be carried out by qualified person which can assure to work in compliance with the safety rules.**

**Otherwise it's necessary to apply to BOLZONI S.p.A.**

### **5.1 CONTROLS AT THE FIRST SETTING UP**

1. When assembling, verify that the mains supply voltage characteristics conform to the ones shown by the plate placed on the cover of the electric box.
2. The protected mains electrical supply should incorporate an isolation switch conforming to CEI-EN 60204-1 par. 5.3.2, 5.3.3 and 5.3.4, EN 418, CEI 64-8 (IEC 364, HD384). It should be positioned within clear view of the lift and clearly identified with its function.
3. If the lift table has only a control position on the platform, there must be one additional emergency stop control not on the platform and in a convenient accessible position (according to EN 418). It must be clearly indicated.
4. Verify that the distance between the table (or parts of the table) and the adjoining walls (or other fixed or moving obstacles) is such as to allow a safe working.
5. The floor where the table is installed must be perfectly flat.

### **5.2 LIFT TABLE TO BE POSITIONED IN A PIT with integral power point unit**

1. Verify that the diagonals of the pit are equal and that its sides are straight and are 30 mm greater than those of the table.
2. IT IS IMPORTANT that the lower level of the pit is perfectly flat and parallel to the upper level of the floor to ensure good working of the table. In the case of small differences of level it is possible to adjust the mechanical stops (if fitted) or to pack up with shims.
3. CHECK the presence of the supply cables duct and the drain or sump (if any).
4. Put the push button control box with the cable on the top platform and fix by adhesive tape the cable (from the power pack) on the edge of the top platform so that it is not interfering with the operation.
5. Connect the power unit to the source and fix the cable by adhesive tape so that it is not interfering with the operation.



**Before positioning the table in the pit the operator has to verify that no persons and/or animals are near the pit.**

6. Position the table in the pit by means of the eyebolts; making sure to centre it in the pit.
7. Remove the eyebolts, lift the table and engage safety bars (or safety props).
8. Connect the supply cable to the mains by feeding the cables out through the duct.
9. Disconnect the push button control box from the electric panel, make the cable pass through the duct and reconnect the control.
10. Near the table a warning notice plate with the capacity must be positioned.

### 5.3 LIFT TABLE TO BE POSITIONED IN A PIT with remote power unit cables inspectionable duct

1. Check the pit as per section 5.2.1- 5.2.2 - 5.2.3.
2. Remove the hoses from the power unit by unscrewing the pipe fittings.
3. Disconnect the cables.
4. Put the hoses and cables of the hydraulic board in the duct from the outside towards the table just up to the end of the duct (without leaning out in the pit).
5. Position the table in the pit lifting by means of the eyebolts; make sure to centre it in the pit.
6. Remove the eyebolts.
7. Open the inspection hatch and connect the hoses and cables.
8. Position the hydraulic board in a position appropriate to the IP rating of the unit and protected from heat sources and dust and secure it by screws (and nogs if secured directly on ground).

### 5.4 LIFT TABLE TO BE POSITIONED IN A PIT with remote power unit cables inspectionable duct

1. Same operations as points 5.2.1, 5.2.2, 5.2.3.
2. Take away the covering plate of the feeding hoses and cables duct.
3. Place the hydraulic power unit and control box on the top platform fixing the hoses by adhesive tape to avoid crushings during the installation in the pit.
4. Position the table in the pit (see point 5.3.5).
5. Position the hydraulic board (see point 5.3.7).
6. Position hoses and cables in the duct, if possible fitting some counterlaths from the ground, specially in presence of water.
7. Close the duct by its covering plate.
8. Near the table a warning notice with the maximum capacity must be provided.

### 5.5 INSTALLATION TEST

1. All the table parts have been tested by the manufacturer to check its correspondence of function and performance. The internal test report states the positive result of the tests carried out and it can be supplied on request.
2. Make sure that the eyebolts have been removed.
3. Verify that the installation has been carried out in compliance with the use, the kind of load and operating requirements.
4. Carry out a risk assessment significant for the type of machine and operating specification. The residual hazards have to be pointed out by warning notices installed or on at the lift table.
5. Verify that all the safety regulations in force have been respected taking into consideration the installation (stroke, serving specific levels or not, accessible to the public etc..) and the use specifications (static load, load on wheels, operator and load, persons etc..)
6. Make sure that the noise level emission of the lift table is not amplified by the surroundings; if necessary provide sound absorbent panels.
7. On completion of the installation the test of the lift table is to be carried out by the user and it consists in operate the table through some complete cycles without load and charged with the maximum load admitted (as per identification plate). The final test has to be carried out by the same competent persons that installed the table and responsible for ensuring to operate in compliance with the safety standards

of the Country where the lifting table is installed. In case of problem please apply to the manufacturer directly.

## **6. OPERATING INSTRUCTIONS**

### **6.1 CONTROLS SEQUENCE**

Lift tables are designed for the raising and lowering of goods and materials. The push button station controls the movement. The constant pressure push buttons allow the required function to be operated only if they are held pressed (presence of the operator)

- by pressing the **UP** push button (arrow upward) oil is pumped into the lift cylinders and the platform raises;
- by releasing the **UP** push button the pump stops and the platform halts and maintains its position;
- by pressing the **DOWN** push button (arrow downward) the oil is released from the cylinders and the platform lowers at a controlled speed;
- by releasing the **DOWN** button the flow of oil is stopped and the platform halts immediately and maintains its position;
- if the safety perimeter bar (**Figure 1B point B annex 10.2/1**) is raised during the descent the platform movement will be halted immediately. It may be used also to stop the lowering of the table in emergency conditions without operating the control box. Following operation of the safety perimeter (contact with obstructions) it is necessary **TO PUSH THE "UP" BUTTON** to reset the table. Remove any obstruction and make sure that there are no further dangers before to operate the descent again.

### **6.2 FORESEEN AND ADMITTED USE**

- Check that the load to be handled is not heavier than the capacity data of the plate.
- Check that the load distribution on the table platform complies with the one mentioned on the adhesive plate situated on the table (**Fig. 2-3 annex 10.2/1**).
- It is essential that the table is positioned on a level, smooth and perfectly horizontal plane.
- Make sure that the load is steady.
- Before using the table it is necessary to verify the wholeness of all the safety devices and the structure.
- Verify the correspondence of the table performances in relation to its specific work (working cycles, working time, load to be handled, room temperature, etc.).
- Verify that the table does not work in dangerous environments, such as dusty or salty rooms, or places with presence of inflammables.
- Before operating the lift table it is essential to properly train the personnel charged with the tables use.
- The table must be exclusively used for the lifting within the capacity stated by the technical data and for the handling foreseen when the table was purchased.
- The table has been designed to lift steady loads distributed in accordance with the load distribution label only.
- Make sure that top platform rotating or sliding device when fitted are blocked before operating the lift table.



### **6.3 UNADMITTED USE**

- It is absolutely forbidden to touch or to lean on the moving parts when the table lifts or lowers.

- It is absolutely forbidden to move or to handle the load laterally compared to the direction of the scissor legs when the table is not designed for this.
- It is absolutely forbidden to place objects on the table in such a way that they could cause damage to persons or things by falling off the table.
- It is absolutely forbidden to use the table with a working cycle (lift + down) greater than the admitted one.
- Do not attempt to lift loads heavier than the rated capacity (as the hydraulic system is protected by a maximum pressure valve) and do not increase the valve calibration.
- It is absolutely forbidden to tamper with the table during the lifting and lowering phases.
- It is absolutely forbidden to use the table when it shows a structural deformation, even if very small, or any mechanical or other physical fault.
- Do not let the table structure contact other objects during its movement; in particular, avoid any friction between the electric and the hydraulic systems.
- Do not carry out any welding, flame- or tool-cutting on the table structure.
- It is essential that the table is not used in rooms exposed to the risk of explosion.

## **7. INSTRUCTIONS FOR MAINTENANCE**

### **7.1 SAFE MAINTENANCE**

To ensure a safe maintenance of the table it is absolutely necessary to comply with the following directions:

- Check periodically the tightness of seals of the cylinders and connections.  
Check periodically the tightness of screws and nuts.
- Use the recommended oils to change or replenish the hydraulic system (see the label fitted on the oil tank).
- Check periodically the wholeness and the functionality of the safety devices.



**The table maintenance has to be carried out by a qualified and competent persons only, in compliance with the instructions given by the handbook.**

**Before carrying out any maintenance operation, make sure that the safety bars placed at the base of the sliding scissor legs (Pict. 11-12 annex 10.2/2) are lowered; this warning is quoted on a suitable label.**

**Instead of the safety bars, some models are equipped with studs (placed in the base frame when unused) which have to be put on the depth stops (Pict. 13-14, annex 10.2/3). Attention: before carrying out any maintenance operation on the table, make sure that the load has been removed from the upper platform.**

- During the maintenance of the electric and mechanical parts it is necessary to disconnect the electrical supply at the isolator switch.
- In case of significant repairs the lift table must be tested again according to standard EN 1570 annex C.

### **7.2 MAINTENANCE OPERATIONS EVERY 250 AND 500 HOURS**

These interventions concern the maintenance operations that can be directly carried out by the operator or a competent persons in accordance with the directions of this document.

Perform the following operations every 250 working hours:

- If the platform is equipped with grease points on the fulcrums and sliding rollers, grease with quality grease (SHELL ALVANIA GRASSER 3 or equivalent).
- Keep the roller rolling tracks clean, do not grease them.

Periodically, perform the following operations every 500 hours:

- Check the oil level in the tank (see **annex 10.2/3 Picts. 15-16-17**) and keep it constant by means of topping up (if necessary) with the oil specified on the plate near the plug. The oil level has to be checked while the lifting table is fully lowered. Look at the transparent plug or at the tank if it is in plastic; in this case there will be a low oil quantity (see **Pict. 16, annex 10.2/3**).

- Check the efficiency of the oil filters: clean and replace if necessary.

- Take away the magnetic plug for the oil discharging and remove any existent impurity.

- Check the tightness of the hydraulic connection, if necessary restore it according to the following torques. For tightening on steel:

DaN/m 8 for connections with diam. M10x1,5 M14x1,5 (and 1/4 GAS)

DaN/m 10 for connections with diam. M16x1,5 M20x1,5 (3/8 GAS 1/2 GAS)

For tightening on aluminium blocks:

DaN/m 7 for connections with diam. M10x1,5 M14x1,5 (and 1/4 GAS)

DaN/m 8 for connections with diam. M16x1,5 M20x1,5 (3/8 GAS 1/2 GAS)

- Check the wear of the supply pipes: cuts or other damages due to accidental impacts requiring the pieces replacement.

- Check the cylinders: any leak of oil requires the replacement of seals and a careful verification of the rod (dents or other damages require the replacement)

- Check the tightness of the screws of the main components by considering the following maximum torques:

DaN/m 2,5 for screw M8

DaN/m 5,0 for screw M10

DaN/m 8,6 for screw M12

DaN/m 14,0 for screw M14

DaN/m 21,5 for screw M16

DaN/m 29,5 for screw M18

DaN/m 41,5 for screw M20

- Check the efficiency of the microswitches of the safety perimeter; replace if necessary.

- Check carefully the table through the complete working cycle: in case of extreme vibration, unusual noise or any other uncommon particular it is necessary to carry out a careful inspection on pivots and the whole structure.

- If the table is equipped with grease points in pivots and rollers it is necessary to lubricate with a quality grease (SHELL ALVANIA GRASSER 3 or equivalent).

- Keep rollertracks clean, do not grease.

### 7.3 MAINTENANCE OPERATIONS EVERY 2000 HOURS

These interventions concern the maintenance operations carried out by purposely trained personnel and include replacements, adjustments and greasings.

Every 2000 working hours (~ 1 year) in addition to the previous operations the following ones are necessary:

- Check the wear condition of the bearings in the pivots and slid rollers; when the table does not work, verify the play by means of a suitable narrow gauge: a play higher than 0,4 mm requires the replacement of the bearings. Some quality grease must be applied to the bearings as they are reassembled.

- We suggest you to replace the oil in the system and to clean the inside of the tank; point 7.2 specifies the oil type.

- To control the working pressure it is necessary to use a pressure gauge (0-250 BAR scale) connected by means of a piece of hose with one final revolving elbow fitting (to be able to put it in a visible position and not to interfere with the movement) to the hydraulic unit in the position shown by **Pict. 16-17 of annex 10.2/3**. Connecting threaded hole 1/4 GAS, placed on the tank external body.

- Dispose of the used-up oil in accordance with the instructions of the oil manufacturer (it is necessary to comply with the laws in force about the disposal of the used-up oils).

- Check the seal of the hydraulic connections and the pipes and, in case of need, restore the connections tightening with torques according to point 7.2 and replace the pipes worn or damaged.
- Check the seal of valves and cylinders that must assure a maximum lowering of the table equal to 0,5% of the total stroke in 10 minutes.

## 7.4 TABLE OF MAINTENANCE INTERVENTIONS

	Ordinary maintenance 250 H	Ordinary maintenance 500 H	Extraordinary maintenance 2000 H	Date	Operator	Signature
Check the oil level in the tank		*				
Check the efficiency of the oil filters		*				
Remove the magnetic plug for the oil discharging and clean		*				
Check the tightness of the hydraulic connections		*				
Check the wear of the supply pipes		*				
Check the cylinders		*				
Check the tightness of the screws of the main components		*				
Check the efficiency of the microswitches		*				
Check the complete working phase of the table		*				
Grease the pivots	*					
Check the wear of bearings			*			
Replace the oil in the hydraulic unit			*			
Check the hydraulic connections and the pipes			*			
Check the seal of the valves and cylinders			*			

NOTE: (\*) Frequency of intervention.

## 7.5 PROCEDURES TO ORDER THE SPARE PARTS

The tables are designed and manufactured not to require any parts replacing if they are correctly used and serviced in accordance with this handbook. However if some parts do require a replace a list of spares is here enclosed. It is imperative that only genuine Bolzoni parts are fitted.



**The use of non original spare parts can be an avoidance clause of the warranty and jeopardize as well the good working of the table.**

## 7.6 SCRAP METAL DISPOSAL

Should the table be scrapped, it is necessary to dispose of its components in a differentiated way according to their different natures (ie. metals, oils, lubricants, plastics and rubber, etc.); if possible it is recommended to use to a purposely qualified and specialized company and, anyway, the disposal must comply with the laws concerning the disposal of the solid waste products.

## 8. FAILURES AND CORRECTIVE ACTIONS

Hereafter we highlight the fault conditions which are reasonably predictable with regard to every operational function of a table.

### 8.1 FAULTS, CAUSES AND CORRECTIVE ACTIONS

NOTE: SAFETY BARS MUST BE ALWAYS BE FITTED WHEN WORKING UNDER THE LIFT

Failure	Cause	Corrective action
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The table does not rise motor running	<ul style="list-style-type: none"> <li>-The eyebolts have not been removed.</li> <li>-The power supply phase is wrong.</li> <li>-The non return electric valve is stuck open.</li> <li>- Platform overloaded</li> </ul>	<ul style="list-style-type: none"> <li>- Remove the eyebolts</li> <li>- Reverse the phase</li> <li>-Remove the non return electric valve and clean carefully. Replace if necessary.</li> <li>- Remove the excess of load</li> </ul>
The table does not rise motor not running	<ul style="list-style-type: none"> <li>- The ‘lifting’ limit switch, if any, is damaged</li> <li>-The motor thermistor or overload has tripped</li> </ul>	<ul style="list-style-type: none"> <li>- Check and replace if necessary</li> <li>-Wait for the motor cooling, check the supply and the motor absorption.</li> </ul>
The table doesn’t lower.	<ul style="list-style-type: none"> <li>-The ‘lowering’ limit switch if any or a microswitch of the perimeter is damaged.</li> <li>- The non return electric valve is blocked or solenoid is defective</li> <li>- Control relay is faulty</li> <li>-Pipe-break protection valve hasoperated</li> <li>- The safety perimeter is working</li> <li>- The electric circuit board is damaged</li> </ul>	<ul style="list-style-type: none"> <li>- Replace.</li> <li>-Remove the non return electric valve and clean carefully.Replace if necessary.</li> <li>- Replace</li> <li>-Check pipework for leaks or plataform is overloaded</li> <li>-Restore the working by pressing the button “UP” on the push-button panel.</li> <li>- Replace</li> </ul>
The table continues lowering even in the stop position. N.B. Standard EN 1570 establishes maximum vertical lowering of 5 mm. in 10 min. with the platform completely raised and with maximum load.	<ul style="list-style-type: none"> <li>- There is an oil leak in the non return electric valve</li> <li>- The lifting cylinder sale are worn out.</li> </ul>	<ul style="list-style-type: none"> <li>-Remove the non return electric valve and clean carefully. Replace if necessary.</li> <li>- Check the seals and replace if necessary.</li> </ul>
At the end of its stroke the table stops at a different level from the foreseen one.	<ul style="list-style-type: none"> <li>- The ‘lifting’ limit microswitch, if any, is damaged or out-of-adjustment (the table reaches the mechanical end of stroke with the cylinder).</li> </ul>	<ul style="list-style-type: none"> <li>-Replace or adjust again the microswitch. Clean rubbish from under lift if necessary.</li> </ul>

## 8.2 AUTHORIZED STAFF

The staff being able to act in the most of cases is a competent or qualified assembler who has been trained in the maintenance of lift tables. On the contrary the technical staff from Bolzoni S.p.A. will be necessary in case of difficulties in the correct intervention or when the failure is different from the above mentioned ones.

## 8.3 OUT-OF-SERVICE

If you cannot repair the machine you have to take the necessary steps to remove the lift from service by signalling the failure with a suitable label and isolate the supply. Notify the Bolzoni authorised service provider or AFTER SALES SERVICE of BOLZONI S.p.A.

## 8.4 PERIODICAL MAINTENANCE BOOK

To comply with the rules in force for particular uses (ex. lifting of persons) or for liftings over the standard limits (ex. > 3 mt.) etc. it is necessary to keep a log book in order to note the operations with quarterly (300 hours) and yearly (2000 hours) frequency.

The maintenance person will have to maintain this book by stating the results and the notes (if any) and he should keep this book with the table records.

The log book has to be marked with the table serial no (if there are several tables working in the same place) and it must quote:

- Date (of intervention)
- Intervention (description of the operation carried out)
- Outcome (or other notes concerning the working, plays, noises)
- Signature (of the maintenance man).

## **9. SIGNS, PROHIBITIONS AND REMAINING DANGERS**

**9.1** Do not lift any load heavier than the rated capacity (see the plate with technical data and the capacity enlarged sticker).

**9.2** Do not tamper with the table during the movement (sticker **Pict.5 annex 10.2/2**).

**9.3** Do not put the feet inside the table structure during the movement (sticker **Pict.4 annex 10.2/2**).

**9.4** Do not lift any person if the table is not designed for this purpose and it has therefore no appropriate safety devices (**Pict.6 annex 10.2/2**).

**9.5** Do not stop or walk within the table working range if the table is working and the safety bar is not engaged (**Pict.7 annex 10.2/2**).

**9.6** Sling the table by hooking it to the eyebolts. Put the eyebolts in at the points marked with a sticker showing a simple hook in case of small units (**Pict. 8 annex 10.2/2**).

**9.7** When the table is in service, persons might be endangered due to reasons having nothing to do with the table manufacturer (ex. non observance of the safety rules during the installation phase, etc.) according to the sticker (**Pict. 9 of the annex 15/16**).

**9.8** Greasing points indicated by sticker (**Pict.10 annex 10.2/2**).

**9.9** The oil type for the system label is placed on the tank.

**9.10** Sign indicating the mains voltage is placed on the electric box.





**Pict.4**



**Pict.5**



**Pict.6**



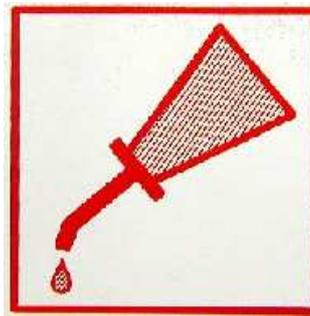
**Pict.7**



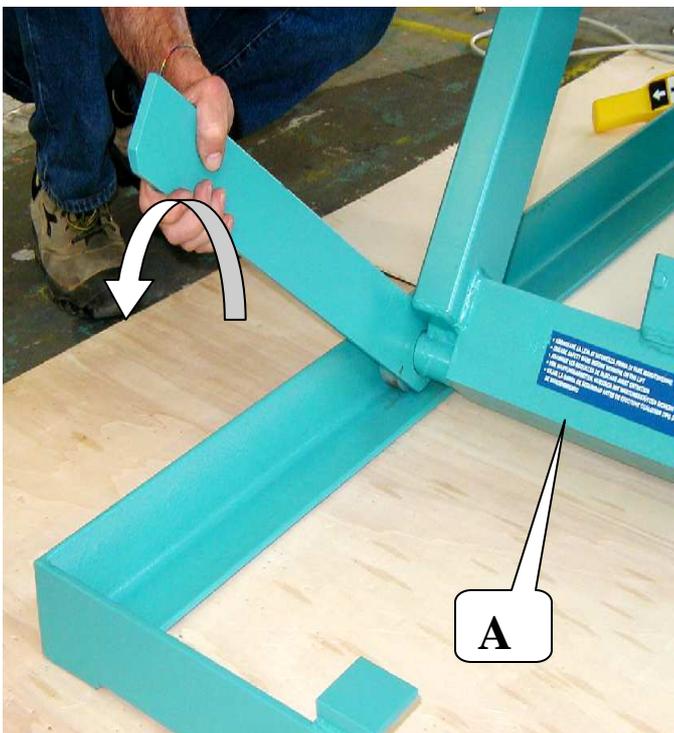
**Pict.8**



**Pict.9**



**Pict.10**



**Pict.11**



**Pict.12**

Annex 10.2/2



Pict.13

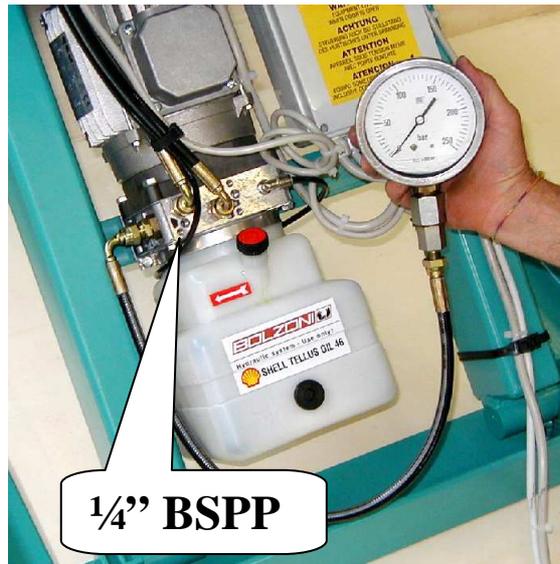


Pict.14



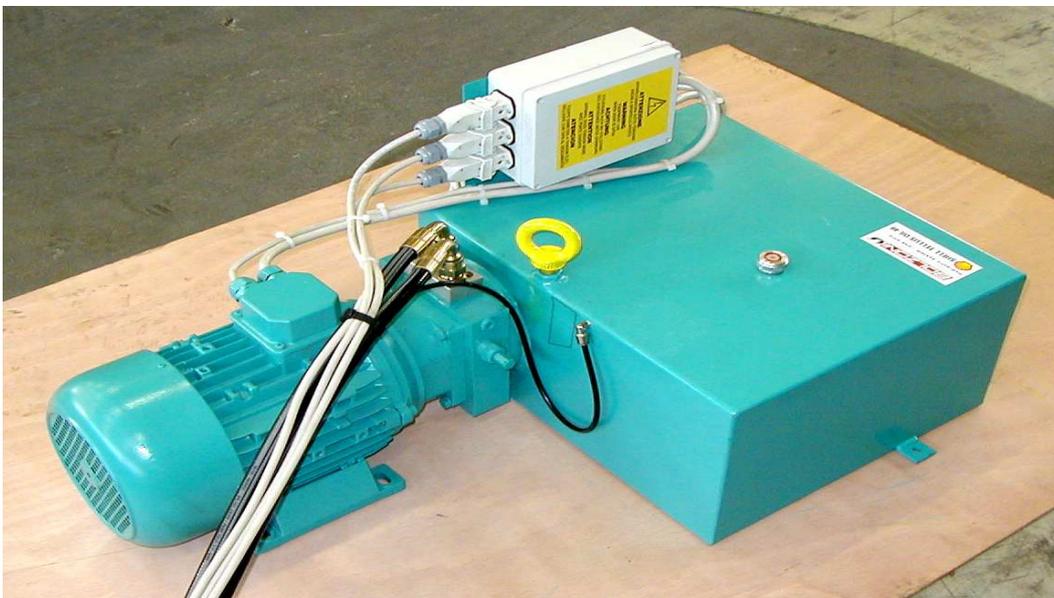
OIL LEVEL

Pict.15



1/4" BSPP

Pict.16



Pict.17