

# COATS®

**10,000 lb. (4,535 kg)**

## Dual Scissor Lift

Compact design with overall width of 81" /  
2057mm raised height of 79" / 2007mm

4TS10SSOR1



## Installation Manual Operation Manual Service Parts Manual

READ the manual thoroughly before installing, operating, servicing, or maintaining the lift. SAVE this MANUAL and ALL INSTRUCTIONS.

**HENNESSY  
INDUSTRIES**

1601 J.P. Hennessy Drive, LaVergne, TN 37086 (800) 688-6496 or (615) 641-7533

Hennessy Canada: 2430 Lucknow Drive, Unit 9, Mississauga, Ontario L5S 1V3 (905) 672-9440 [www.coatsgarage.com](http://www.coatsgarage.com)

HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

Manual Part No.: 85611155 00

Revision: 6/17

# INDEX.....ENGLISH



<b>1.</b>	<b>GENERAL INFORMATION .....</b>	<b>1-1</b>
1.1.	MARKING DATA .....	1-1
1.2.	ASSISTANCE .....	1-1
1.3.	DESCRIPTION OF PERSONNEL .....	1-2
1.4.	SAFETY PRECAUTIONS .....	1-2



<b>2.</b>	<b>DESCRIPTION OF THE MACHINE .....</b>	<b>2-1</b>
2.1.	EXPECTED USE .....	2-1
2.2.	TECHNICAL DATA .....	2-1
2.3.	NOMENCLATURE .....	2-1
2.4.	OVERALL DIMENSIONS .....	2-3
2.5.	LOADING CONDITIONS .....	2-1



<b>3.</b>	<b>SAFETY .....</b>	<b>3-1</b>
3.1.	GENERAL SAFETY REGULATIONS .....	3-1
3.2.	PRECAUTION.....	3-3
3.1.	OWNER/EMPLOYER RESPONSIBILITIES .....	3-1
3.2.	IMPROPER USE .....	3-1
3.3.	SAFETY DEVICE FEATURES.....	3-3
3.1.	RESIDUAL RISKS .....	3-4
3.2.	STICKERS AND PLATES.....	3-5



<b>4.</b>	<b>INSTALLATION .....</b>	<b>4-1</b>
4.1.	TRANSPORT AND HANDLING .....	4-1
4.2.	PLACE OF INSTALLATION .....	4-3
4.3.	CONNECTING THE LIFT .....	4-4
4.4.	CONNECTING THE LIFT'S COMMANDS .....	4-5
4.4.1.	Hydraulic connections.....	4-5
4.4.2.	Electric connection.....	4-6

4.5.	FILLING OF THE HYDRAULIC CIRCUIT .....
4.6.	ANCHORAGE CAPSULE INSTALLATION.....
4.7.	CHECKS BEFORE USE .....
4.8.	FINAL TESTING .....
4.9.	LIFT OPERATIONAL TEST .....
4.9.1.	Lift Operation .....
4.9.2.	Caution.....
4.9.3.	To Load a Typical Vehicle.....
4.9.4.	To Raise the Lift.....
4.9.5.	To Lower the Lift .....



<b>5.</b>	<b>USE.....</b>
5.1.	OPERATION COMMANDS.....
5.2.	RESIDUAL RISKS .....



<b>6.</b>	<b>MAINTENANCE .....</b>
6.1.	ROUTINE MAINTENANCE .....
6.1.1.	LUBRICATION POINTS (repeat symmetrically) .....
6.2.	TABLE ADJUSTMENT PROCEDURES .....
6.2.1.	Maximum pressure valve calibration.....
6.2.2.	Parachute valve .....
6.2.3.	Unblocking safety locks .....
6.2.4.	Air bleeding from the volumetric circuit.....
6.2.5.	Lift lockout/tagout procedure.....
6.3.	MANUAL DOWNSTROKE MANOEUVRE .....
6.4.	ABNORMAL OPERATION .....

<b>7.</b>	<b>ACCESSORIES .....</b>
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# 1. GENERAL INFORMATION

## 1.1. *Marking data*

Table identification plate:

	<b>OMER</b> s.p.a. Via Galileo Galilei, 20 30035 MIRANO (VENEZIA) Italy Tel.+39 0415700303 Fax 0415700273 E-mail: info@omerlift.com - www.omerlift.com	Made in Italy	
<b>IPPO 45</b>			
SERIAL NR.	:		
YEAR OF MANUFACTURE	:		
MAX HYDRAULIC PRESS.	:	4130	psi
MAX AIR PRESS.	:	116	psi
MAX CAPACITY	:	10000	Lb
	:	3	HP
RATINGS	:	230	V
	:	1 PH - 60	Hz
	:	15	A

## 1.2. *Assistance*

CALL – 877-799-5438

### 1.3. *Description of personnel*

#### TERMS AND DEFINITIONS

- OPERATOR/SPECIALISED TECHNICIAN:  
the person(s) appointed to:
  - install,
  - set up,
  - adjust
  - perform maintenance on,
  - clean,
  - repair
  - transport the lift.
  - perform certain maintenance operations that require specific preparation and expertise in the mechanics, electrical, electronic, oil-hydraulic and pneumatic fields.

The specialised technician is aware of any risks present on the machine and the procedures to be followed to avoid damage to his/herself or others during such maintenance operations.

- EXPOSED PERSON: any person wholly or partly in a hazardous area.
- HAZARDOUS OR RISKY AREA: any area inside and/or close to a machine in whose presence an exposed person constitutes a risk for his/her health and safety.
- USER: anyone who buys or possesses the lift in any way (on loan, hire, lease, etc.), with the intention of using it as indicated by the manufacturer.
- MAINTENANCE: all activities, which shall be done to keep the system in efficiency and in good condition.
- DPI: (PPE) Personal protection equipment.

## READ ALL INSTRUCTIONS

### 1.4. **SAFETY PRECAUTIONS**

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
4. Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
5. If an extension cord is necessary, a cord with current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
7. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
8. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (e.g. gasoline).
9. Adequate ventilation should be provided when working on or operating internal combustion engines.
10. Keep hair, loose clothing, fingers, and all parts of the body away from moving parts.
11. To reduce the risk of electric shock, do not use on wet surfaces exposed to rain.
12. Use only as described in this manual. Use only manufacturer's recommended attachments.
13. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.



## 2. DESCRIPTION OF THE MACHINE

### Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

### 2.1. Expected use

The function of the vehicle lift is to lift motorized vehicles, which have the distribution of the loading according standard in force.

The vehicle movement has to be done with lift closed.

The accessories indicated in the relating chapter can be used.

### 2.2. Technical data

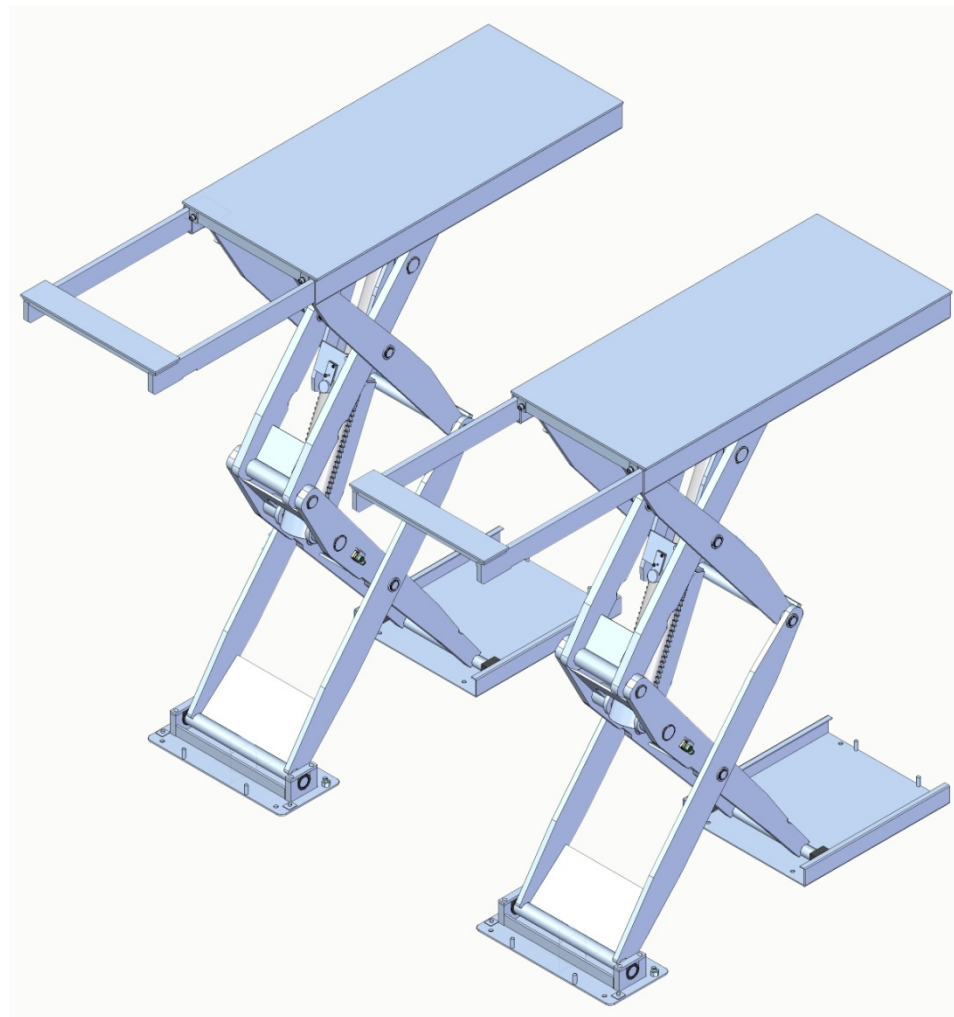
LIFT CAPACITY	Lb	10000	
MOTOR POWER	KW	2,2 MONO-PHASE	
ELECTRIC POWER SUPPLY	V	220 V MONO-PHASE	± 10 %
	Hz	60	± 2 Hz
PNEUMATIC POWER SUPPLY	bar	8	Filtered and lubricated
	psi	116	
MAXIMUM PRESSURE OF HYDRAULIC POWER SUPPLY	bar	285	
	psi	4130	
QUANTITY OF OIL	LT	15	
UPSTROKE/DOWNSTROKE TIME	s	55 / 30	
MIN/MAX OPERATING TEMPERATURE	°C	-10 ÷ +40	
SOUND EMISSION LEVEL	db(A)	< 80	

### 2.3. Nomenclature

#### MODELS LEGEND

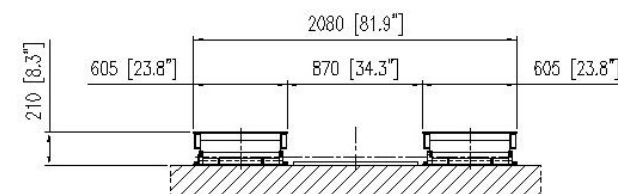
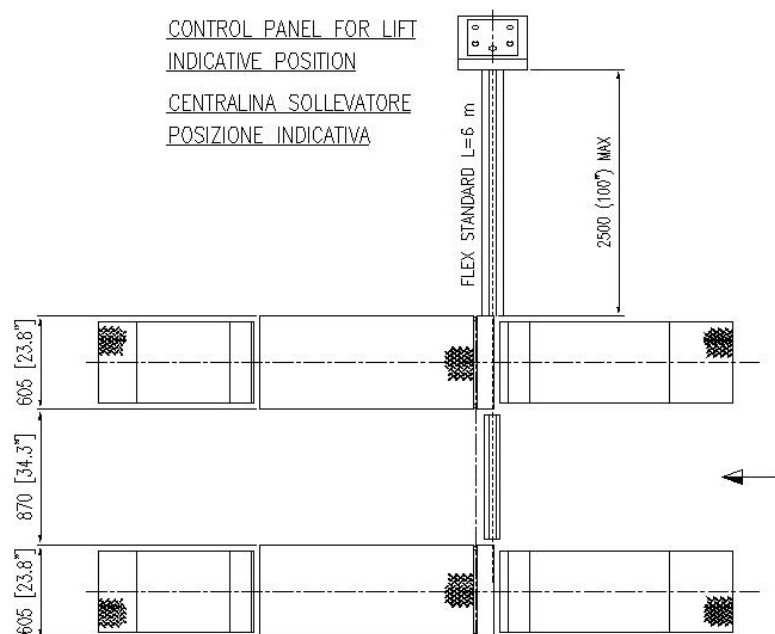
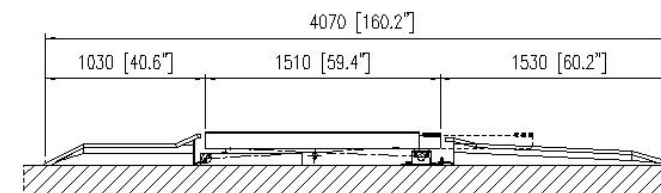
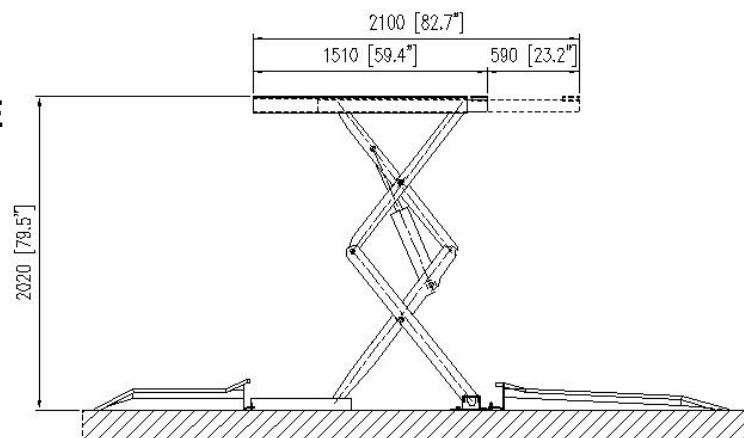
IPPO 45 (i)	RECESS-MOUNTED VERSION
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N°	DESCRIPTION
1	Base
2	Platform
3	Extension platform
4	Divisor cylinder
5	Lifting cylinder
6	Arms
7	Electric box
8	Command control unit



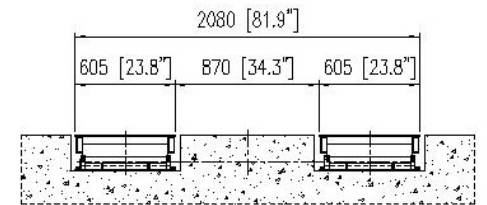
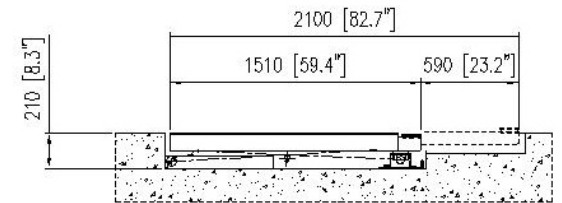
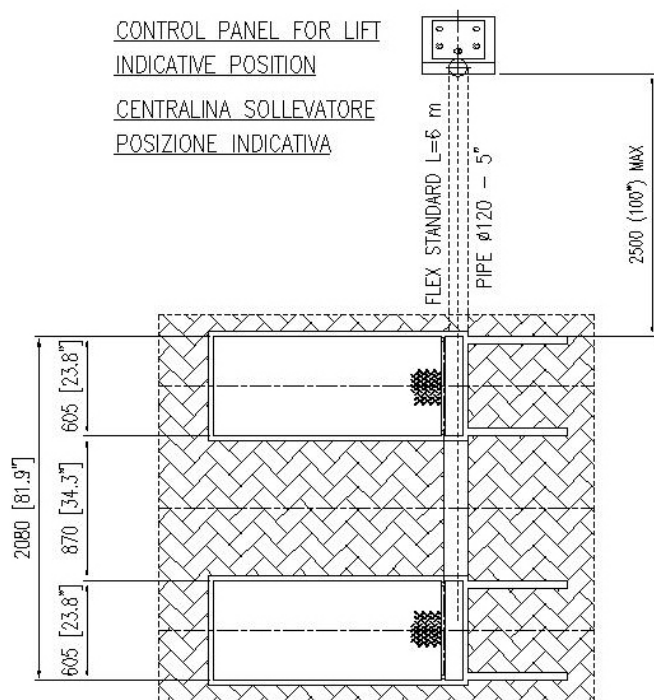
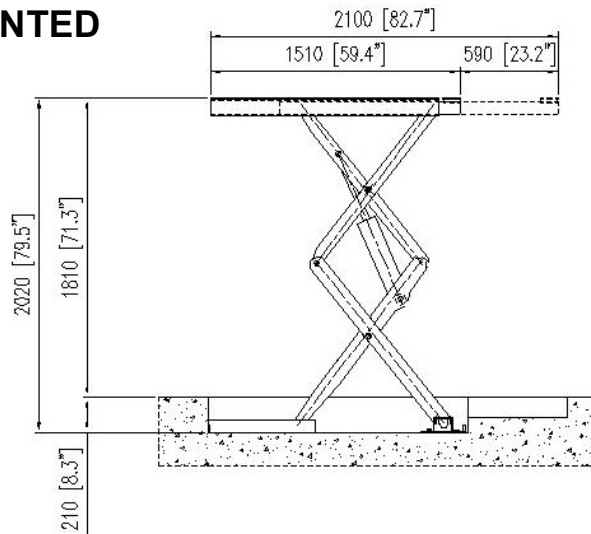
## 2.4. Overall dimensions

### STANDALONE VERSION



cod. FIPPO45000010\_A

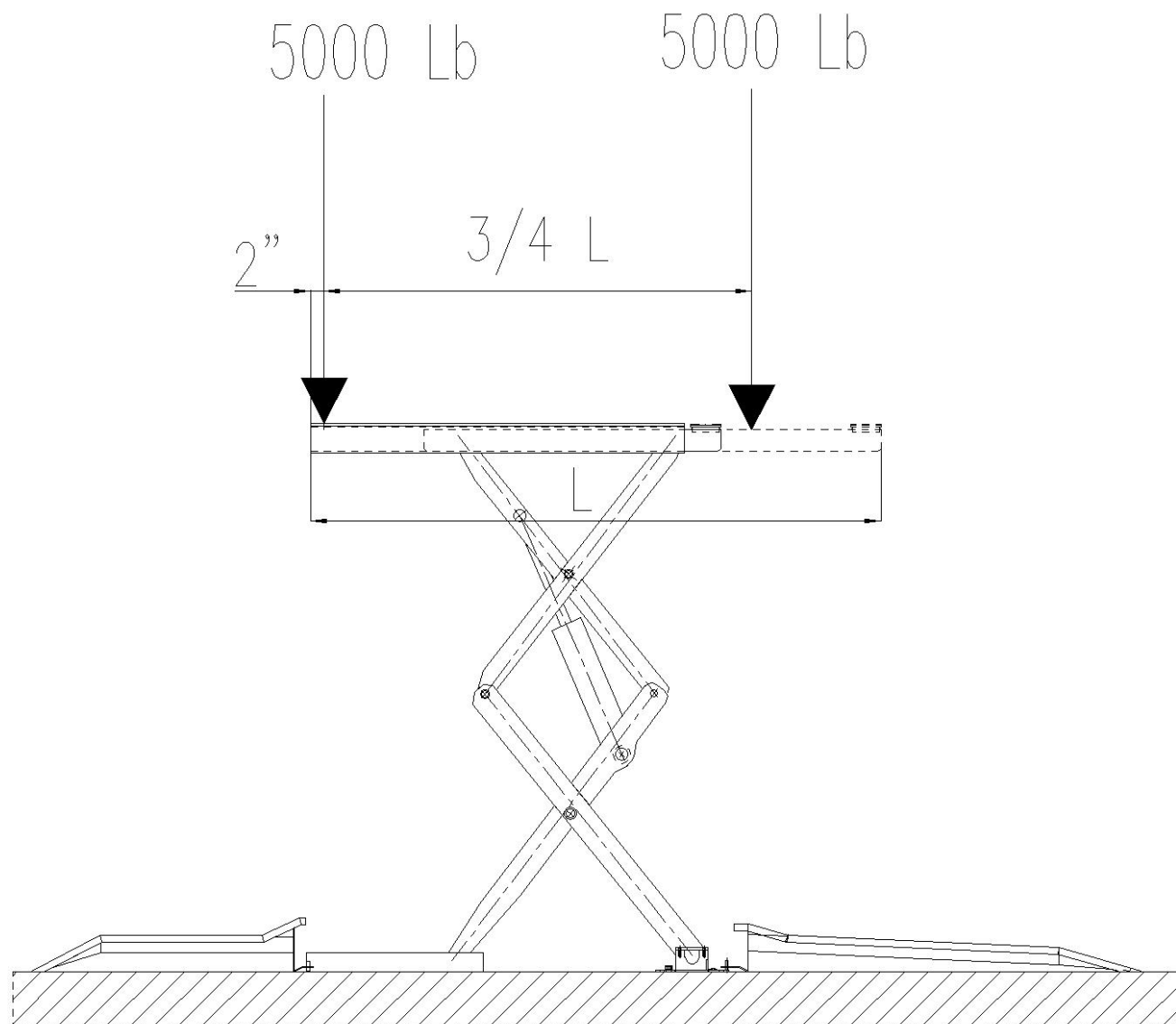
## RECESS-MOUNTED VERSION



cod. FIPP045000050\_A



## 2.5. Loading conditions



### 3. SAFETY

#### Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

#### 3.1. *General safety regulations*



For instant consultation by the operator, this manual must:

- be kept in a well known, easily accessible place
- be kept in good condition

Before proceeding with installation and use of the machine, the user must read the manual carefully, especially the safety rules.



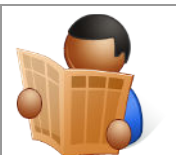
***“Before proceeding with installation, operating, servicing, or maintain the lift, the user must read the manual carefully...”***

The machine should be used by authorised, trained personnel only. The user (owner and/or employee) must make sure that the fitter has provided:






- all accessories
- the spares provided with the lift
- this use and maintenance manual
- 

Use as described in this manual only. Always use the accessories recommended by the manufacturer.  
O.ME.R. S.p.A. declines all responsibility for non-compliance with the indications given in this manual

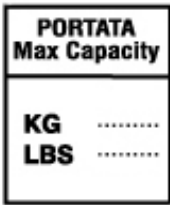





The main safety rules are shown below:











Read all instructions carefully

	Put the main switch to the zero position when the machine is not in use. Never pull the electric cable to remove the plug from the socket.
	To reduce the risk of fires, avoid using the lift close to open drums of inflammable liquid (such as gas oil) and/or in explosive environments.
	Make sure the work area is adequately aired when using internal combustion engines.
	Avoid contact between parts of the body and/or clothing and moving parts.
	Protect the control unit adequately if used outdoors.

### 3.2. *Precaution*

	<p>When loading the lift never exceed the capacity shown on the ID plate on the lift.</p>
	<p> <b>DANGER</b></p> <p>Never lift people.</p>
	<p>Any modifications to the lift must be authorised by the manufacturer.</p>
	<p>The equipment must be used by specifically trained and authorised personnel only.</p>
	<p>Do not tamper with the lift's upstroke and downstroke speeds, which have been adjusted by OMER during factory tests in compliance with applicable legislation.</p>

	<p>Always check the stability of hoisted vehicle.</p>
	<p>In case of “<b>recess-mounted version</b>” before carrying out the final lowering with bypass key please make sure you that people stay at sec distance.</p>
	<p> <b>DANGER</b></p> <p>Do not use the lift in the event of hindrances to operation or hazardous conditions.</p>
	<p> <b>WARNING</b></p> <p>Check the lift carefully after long periods of inactivity before putting it back into service.</p>
	<p>The lift comes complete with an instruction manual and warnings designed to last over time. Ask the manufacturer for a replacement immediately if damaged or destroyed.</p>
	<p>O.M.E.R. N.A. declines responsibility for any inconvenience deriving from non-compliance with the instructions for use.</p>

### 3.1. **Owner/Employer Responsibilities**

The owner/employer:

Shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM, "Lifting It Right" safety manual; ALI/ST, "Safety Tips" card; ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-Guide, "Quick Reference Guide – Vehicle Lifting Points for Frame Engaging Lifts".

Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance.

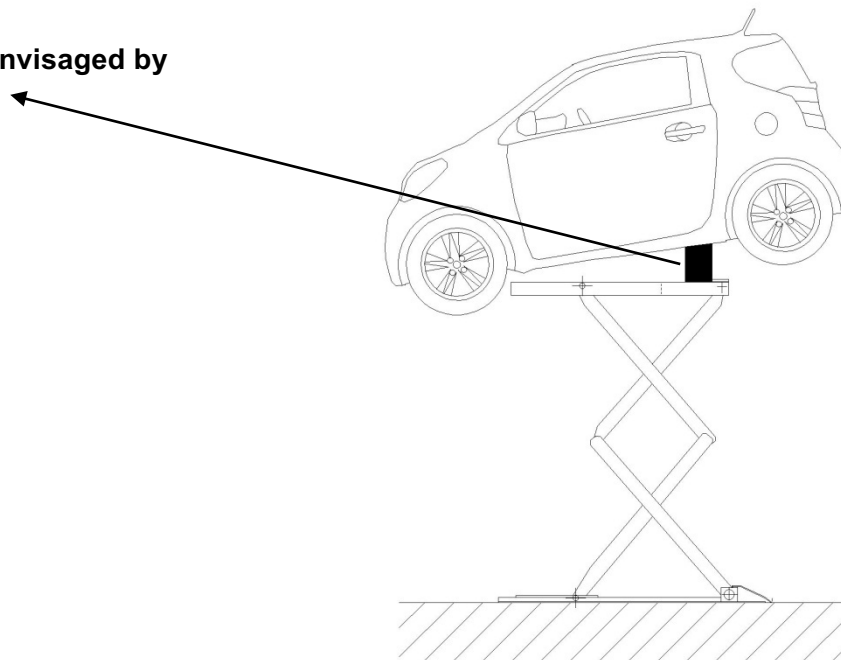
Shall display the lift manufacturer's operating instructions; ALI/SM, "Lifting It Right" safety manual; ALI/ST, "Safety Tips" card; ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-Guide, "Quick Reference Guide – Vehicle Lifting Points for Frame Engaging Lifts"; in a conspicuous location in the lift area convenient to the operator.

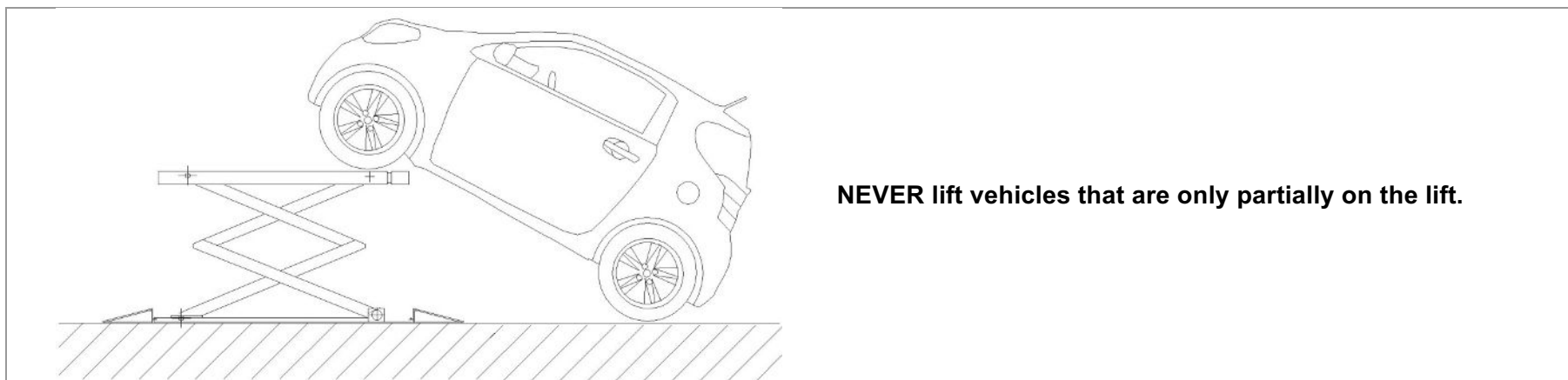
**Shall review and understand the proper requirements outlined ANSI/ALI ALIS, Safety Requirements for Installation and Service of Automotive Lifts.**

### 3.2. **IMPROPER USE**

**⚠ DANGER**

**NEVER** lift vehicles using equipment other than that envisaged by the manufacturer










### 3.3. *Safety device features*

SAFETY DEVICE	COMPOSED OF	POSITION	IN THE EVENT OF ...	EFFECT ON MAIN LIFT
<b>HYDRAULIC PARACHUTE DEVICE</b>	Parachute valve	On each MASTER hydraulic cylinder of the lift.	Breakage of hoses.	The valve blocks descent when the speed reaches a value preset by the Manufacturer.
<b>MECHANICAL ANTI-FALL DEVICE</b>	Rack jack	In both hydraulic cylinders of the lift.	Leakage on the hydraulic circuit or breakage of a component	Accidental descent is blocked with a maximum displacement of 100 mm.
<b>SIGNALS</b>	Stickers and plates	See paragraph: <i>Stickers and plates</i>	-	Draw attention to residual risks and precautions for use.



### 3.1. *Residual risks*



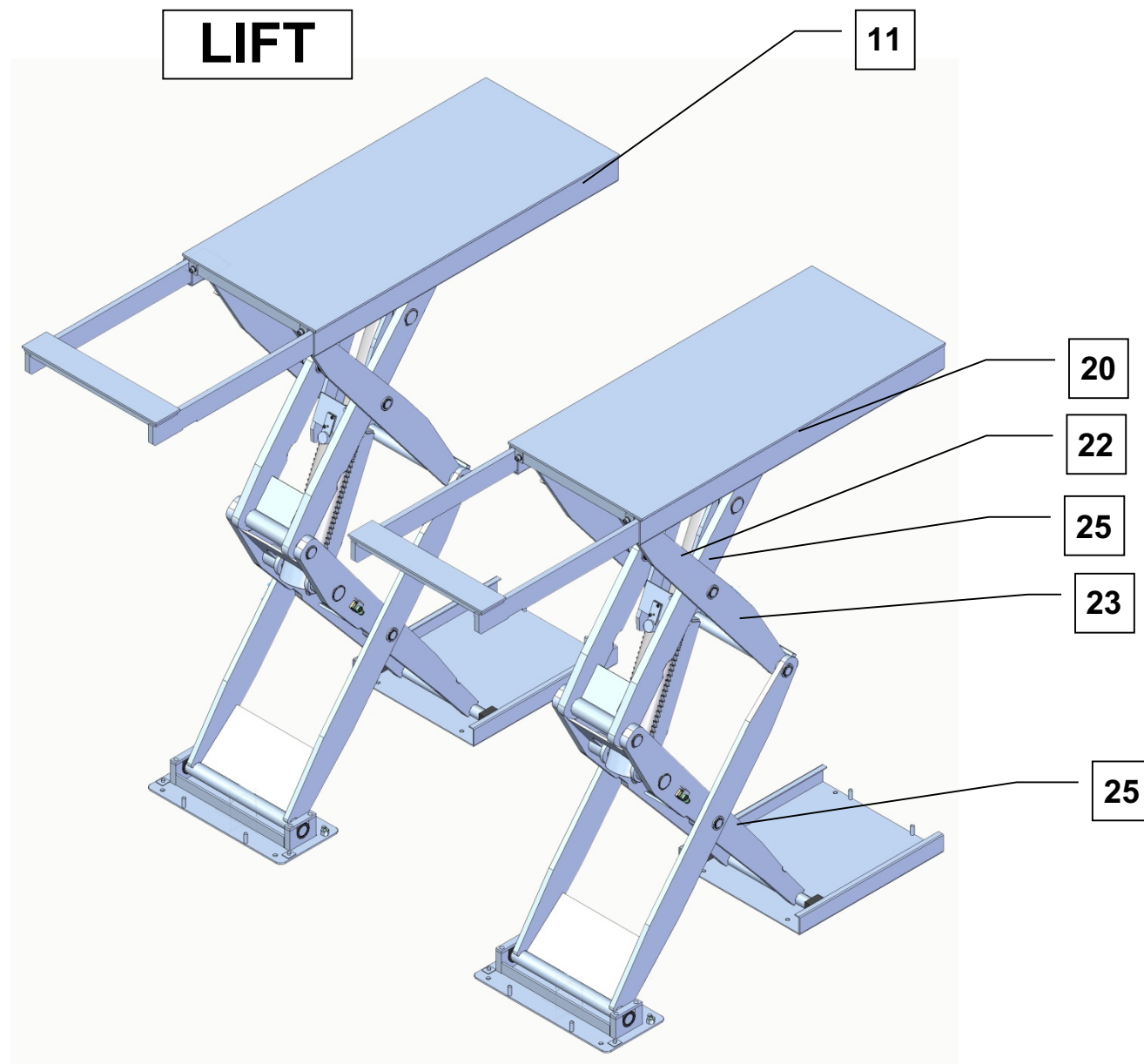
	HAZARD	WHO	CONDITION	RISK
	PIPE BREAKING	Maintenance technician	MAINTENANCE	Contact with squirts of pressurised oil
	AIR ELIMINATION FROM CYLINDERS			
	PIPES LOOSENING			
	ELECTRIC SHOCK	Maintenance technician	MAINTENANCE	Contact with live components
	SHEARING	Maintenance technician	MAINTENANCE	Shearing of hands and feet with lift is in movement.
	TIPPING OVER OF THE LOAD	Maintenance technician	MAINTENANCE	During manual lowering, check that the load moves smoothly, without being thrown out of balance. Operate the valves so that the bridge is realigned step by step.
	REDUCED VISIBILITY	Operator	OPERATING	Possible third-party damage

### 3.2. *Stickers and plates*

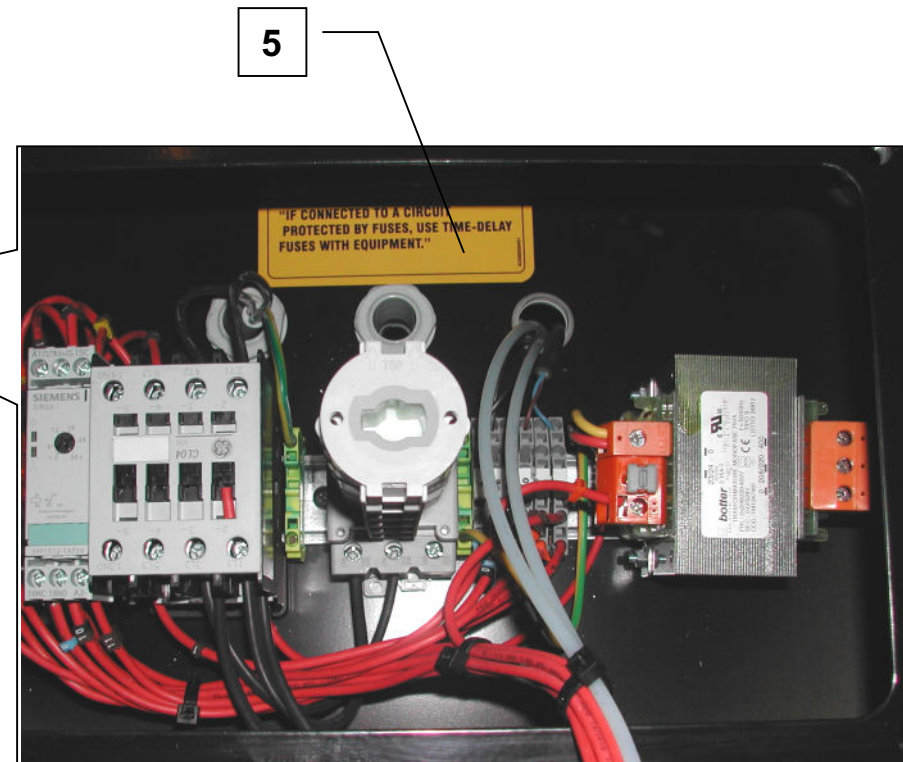
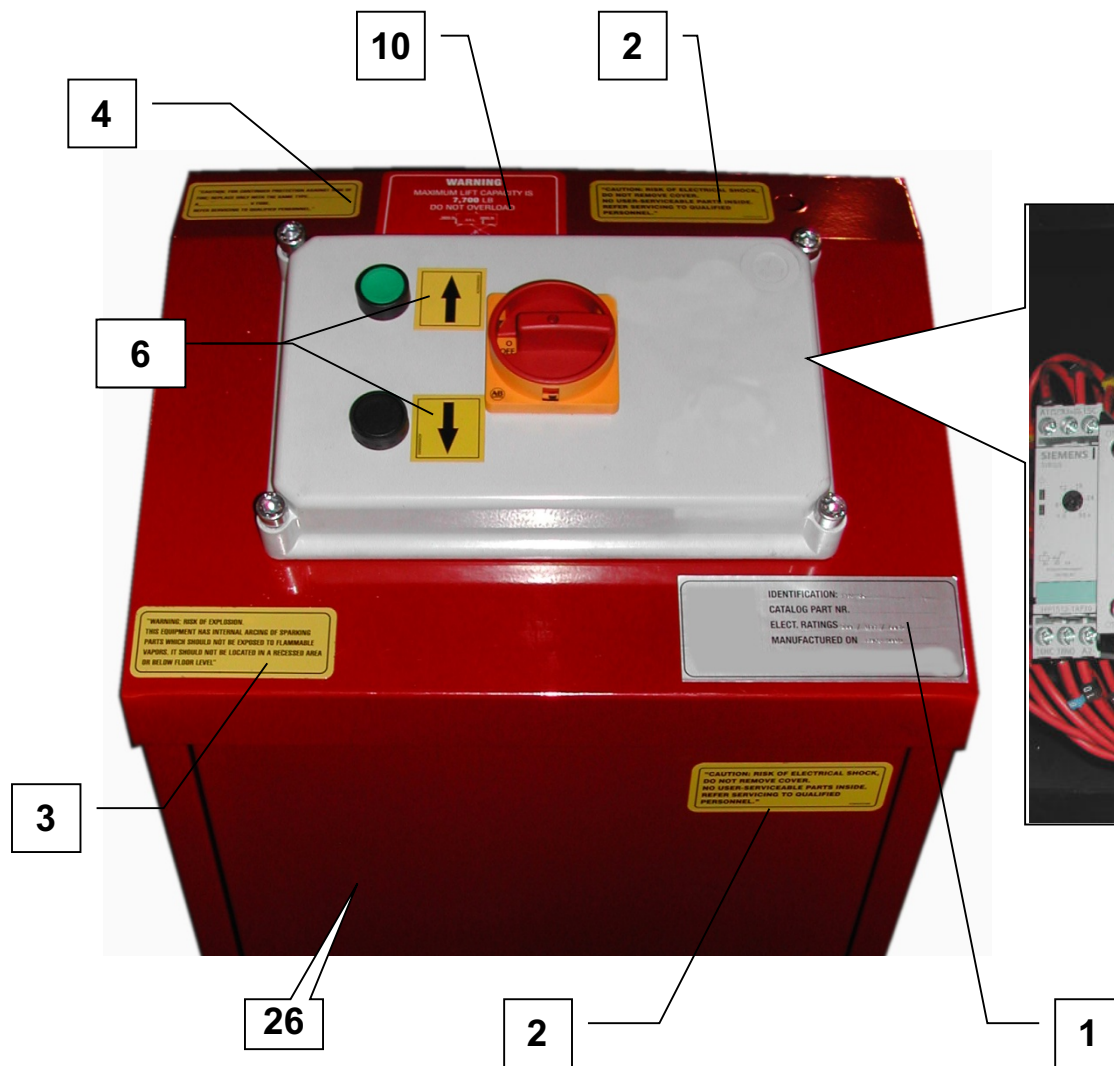
The labels must be readable and permanently attached to the equipment.


The labels that will be furnished with the equipment, together with their relevant positions, listed here below:

N.	Plate description		
1	Control panel identification		
2	Risk of electric shock		
3	Risk of explosion		
4	Risk of fire		
5	Fuses indication		
6	UP-DOWN push button		
8	Air attachment		
10	Load distribution		
11	Serial number plate		
12	<b>GOLD LABEL CODE</b>	<b>LIFT</b>	
		<b>CONTROL UNIT</b>	
14	Notice (GB)		
17	Earth connection		
20	Logo OMER IPPO		
22	LIFT MAX CAPACITY		
23	Do not stay near the lift in movements		
25	PINCH POINT HAZARD		


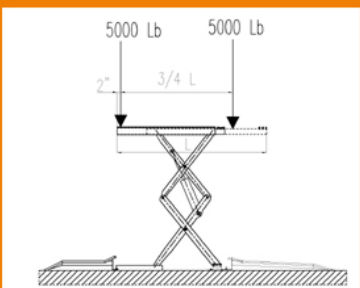





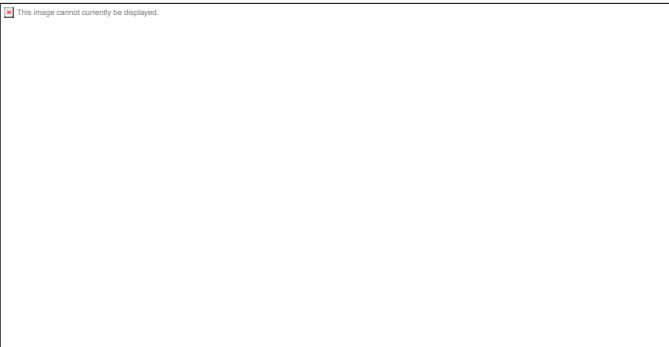

# CONTROL UNIT



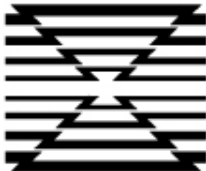

LABEL 1	 <p> IDENTIFICATION _____  CATALOG PART NR. _____  ELECT. RATINGS _____  MANUFACTURED ON _____    <b>MIRANO (VENEZIA) Italy</b>  <b>Tel. 041.5700303 - Fax 041.5700273</b>  <b>www.omerlift.com</b> </p>
LABEL 2	<p><b>“CAUTION: RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.”</b></p> <p>AD00000488</p>
LABEL 2A	<p><b>“ATTENTION: RISQUE DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. PAS DE PARTIES EMPLOYABLES POUR L'OPERATEUR A L'INTERIEUR. DEMANDER ASSISTANCE AU PERSONNEL QUALIFIE.”</b></p> <p>AD00001002</p>

LABEL 3	<p><b>“WARNING: RISK OF EXPLOSION. THIS EQUIPMENT HAS INTERNAL ARCING OF SPARKING PARTS WHICH SHOULD NOT BE EXPOSED TO FLAMMABLE VAPORS. IT SHOULD NOT BE LOCATED IN A RECESSED AREA OR BELOW FLOOR LEVEL.”</b></p>
LABEL 3A	<p><b>“ATTENTION: RISQUE D'EXPLOSION. CE DISPOSITIF CONTIENT DES PARTIES QUI PORRAIENT ETRE EXPOSEES A DES VAPEURS INFLAMMABLES. IL NE DEVRAIT DONC PAS ETRE PLACE DANS UN LIEU FERME OR AU-DESSUS DU NIVEAU DU SOL.”</b></p> <p>AD00001000</p>
LABEL 4	<p><b>“CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE ..... A, ..... V FUSE. REFER SERVICING TO QUALIFIED PERSONNEL.”</b></p>
LABEL 4A	<p><b>“ATTENTION: POUR UNE PROTECTION CONSTANTE CONTRE LE RISQUES D'INCENDIE, REMPLACER SEULEMENT AVEC LE MEME TYPE FUSIBLE ..... A, ..... V. CONTACTER DU PERSONNEL QUALIFIE.”</b></p> <p>AD0000010</p>

LABEL 5	<div> <div> <p><b>“IF CONNECTED TO A CIRCUIT PROTECTED BY FUSES, USE TIME-DELAY FUSES WITH EQUIPMENT.”</b></p> </div> <div>AD00000491</div> </div>
LABEL 6	<div> <div></div> <div>  <div>AD00000850</div> </div> <div></div> </div>
LABEL 10	<div> <div> <p><b>WARNING</b></p> <p>MAXIMUM LIFT CAPACITY IS <b>10000 LBS</b> DO NOT OVERLOAD</p>  <div>AD00000</div> </div> </div>

<p>LABEL 11</p>	<div data-bbox="1369 199 1995 599">  <p><b>OMER</b> S.p.A. Via Galileo Galilei, 20 30035 MIRANO (VENEZIA) Italy Tel. +39 0415700303 Fax 0415700273 E-mail: info@omerlift.com - www.omerlift.com</p> <p>Made in Italy</p>  </div> <div data-bbox="1402 326 1839 586"> <p>IPPO 45</p> <table> <tr> <td>SERIAL NR.</td> <td>:</td> <td></td> </tr> <tr> <td>YEAR OF MANUFACTURE</td> <td>:</td> <td></td> </tr> <tr> <td>MAX HYDRAULIC PRESS.</td> <td>:</td> <td>4130 psi</td> </tr> <tr> <td>MAX AIR PRESS.</td> <td>:</td> <td>116 psi</td> </tr> <tr> <td>MAX CAPACITY</td> <td>:</td> <td>10000 Lb</td> </tr> <tr> <td></td> <td>:</td> <td>3 HP</td> </tr> <tr> <td>RATINGS</td> <td>:</td> <td>230 V</td> </tr> <tr> <td></td> <td>:</td> <td>1 PH - 60 Hz</td> </tr> <tr> <td></td> <td>:</td> <td>15 A</td> </tr> </table> </div>	SERIAL NR.	:		YEAR OF MANUFACTURE	:		MAX HYDRAULIC PRESS.	:	4130 psi	MAX AIR PRESS.	:	116 psi	MAX CAPACITY	:	10000 Lb		:	3 HP	RATINGS	:	230 V		:	1 PH - 60 Hz		:	15 A
SERIAL NR.	:																											
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	:	3 HP																										
RATINGS	:	230 V																										
	:	1 PH - 60 Hz																										
	:	15 A																										
<p>LABEL 12</p>	<div data-bbox="1501 615 1858 966">  <p><b>CERTIFIED AUTOMOTIVE LIFT</b> Automotive Lift Institute ANSI Accredited Certification Program Accreditation Number 0584</p> <p>Verified and Administered by Intertek Testing Services NA Inc.</p> <p>TO THE PROVISIONS OF ANSI/ALI ALCTV-2011 ETL LISTED</p> <p>SAFETY STANDARD FOR GARAGE EQUIPMENT</p> <p>CONFORMS TO ANSI/U.L. STD 201 MOTOR OPERATED APPLIANCES (HOUSEHOLD &amp; COMMERCIAL)</p> <p>US CERTIFIED TO CAN/CSA STD C22.2 NO.68</p> <p>Intertek Testing Services NA Inc. CORTLAND, NEW YORK 13045</p> </div>																											
<p>LABEL 14</p>	<div data-bbox="1348 1000 2013 1344">  </div>																											
<p>LABEL 17</p>	<div data-bbox="1612 1365 1753 1498">  </div>																											



LABEL 20	<div><div><div>00000</div><div></div><div>OMER®</div></div><div><div>IPPO</div></div></div>					
LABEL 22	<div><div>PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT</div><div>MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.</div><div>KG 4536 LBS 10000</div></div>					
LABEL 23	<div><div><div>VIETATO SOSTARE NELLE VICINANZE DEL SOLLEVATORE IN MOVIMENTO</div><div>DEFENSE DE STATIONNER EN PROXIMITÉ DU PONT EN MOUVEMENT</div><div>ES IST VERBOTTEN IN DE NÄHE DER BÜHNE WAHREND DES BETRIEBES ZU BLEIBEN</div><div>DO NOT STAY NEAR THE LIFT IN MOVEMENT</div><div>PROHIBIDO SITUARSE BAJO EL ELEVADOR CUANDO ESTA EN MOVIMIENTO</div><div>PROIBIDO PERMANECER DEBAIXO DO ELEVADOR QUANDO ESTE ESTÁ EM MOVIMENTO</div></div></div>					
LABEL 25	<div><div></div></div>					



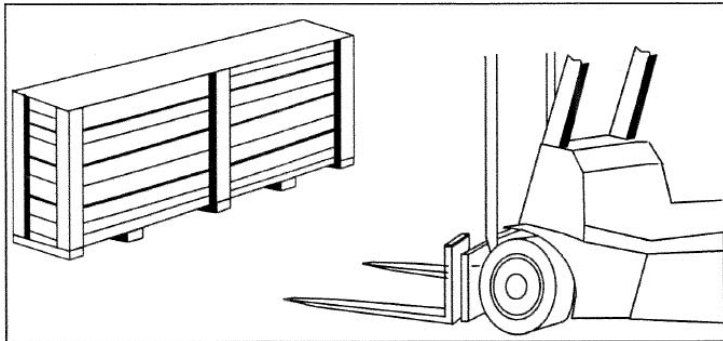
## 4. INSTALLATION

### **Addressees:**

- OPERATOR / SPECIALISED TECHNICIAN.

### **4.1. *Transport and handling***

The packaged lift must only be transported using dedicated hoisting equipment with a greater capacity than the lift to be handled.



The equipment is wrapped in bubble pack to protect the components  
wooden crates or pallets are used in special cases.

#### **PROCEED AS FOLLOWS:**

- protect the electric control panel from exposure to the elements
- protect against blows and do not use the electronic control panel for hoisting
- protect the corners and ends of the piece to be transported with suitable material (Bubble pack - cardboard).
- lift using suitable hoisting equipment
- harness using dedicated straps



## PACKING LIST

VERSION OF LIFT	<p>IPPO 45 is usually sent in 3 packages:</p> <ul style="list-style-type: none"><li>✓ Lift</li><li>✓ Control unit</li><li>✓ Accessories</li></ul>
IPPO 45 (i)	<p>The packages may vary according to:</p> <ul style="list-style-type: none"><li>• the size of the lift;</li><li>• the type of shipment;</li><li>• the packaging used, subject to customer's request;</li><li>• the destination country.</li></ul>

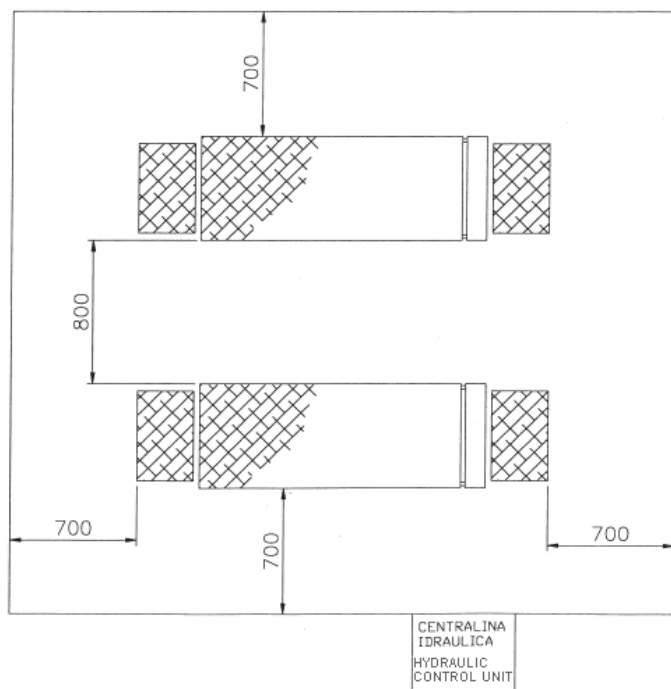


DURING TRANSPORT THE CAGE (OR PACKED LIFT) MUST BE SECURED PROPERLY TO PREVENT IT FROM MOVING AROUND ON THE FLOOR OF THE VEHICLE USED TO TRANSPORT IT.

## 4.2. Place of installation

The free space around the table must satisfy applicable regulations and be no less than 700 mm.

**The control unit must be positioned so that the operator has a full view over the lift area.**

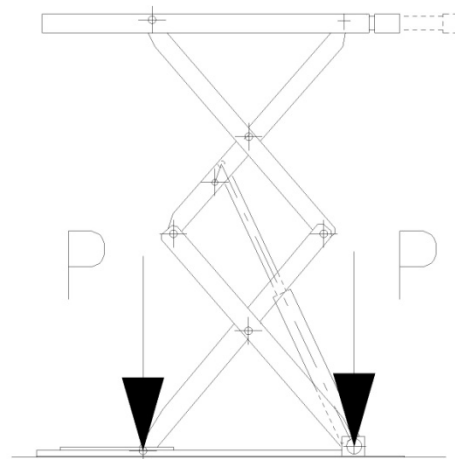


WORK AT A ROOM TEMPERATURE  
OF -10° TO 40 ° C.

To install the anchor capsules, the foundation must have the following characteristics:

FOUNDATION	Tamped
THICKNESS OF CONCRETE	$\geq 14$ cm
CONCRETE RESISTANCE CLASS	$\geq C 25$
IMPROVED ADHERENCE STEEL GIRDERS	Type FeB 44 K
REINFORCEMENT GIRDERS FOR LARGE SURFACES	Electro welded mesh
REINFORCEMENT GIRDERS FOR SMALL SURFACES	Bent irons
FLATNESS	$\pm 1 / 1000$

If the floor characteristics are not available, foundations must be provided underneath the lift's clamping holes.



MAX. PRESSURE (*)	Kg/cm <sup>2</sup>	$\leq 1,5$
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**The lift must in any case be fastened to the floor using dedicated chemical anchor capsules.**

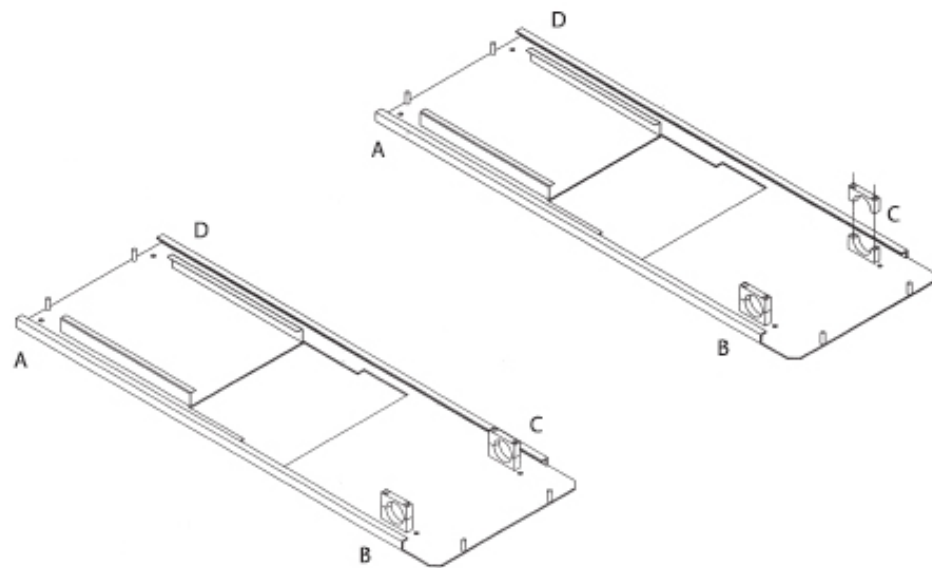
(\*) press calculated under the base plates

### 4.3. Connecting the lift

Follow the sequence of operations given below:

- Position the guides along with their base supports taking care to comply with their internal distance of mm.800
- connect the hoses provided, which lead out of the control unit with their respective inputs to the lift  
(see paragraphs: *Hydraulic, electrical connection*).
- Check it is horizontal and level the lift by introducing spacers in points A, B, C and D, where necessary
- with the aid of a spirit level, check the transverse horizontality of the lifting platforms with the mechanical safety devices activated and, where possible, with the lift laden.
- Once connected, upstroke and downstroke cycles should be performed, with the lift laden, to eliminate any air bubbles in the hydraulic circuit.  
(see paragraph: *How to set in the closed oil system*)
- Fasten to the floor with mechanical screw anchors  
(see paragraph: *Anchorage capsule installation*).

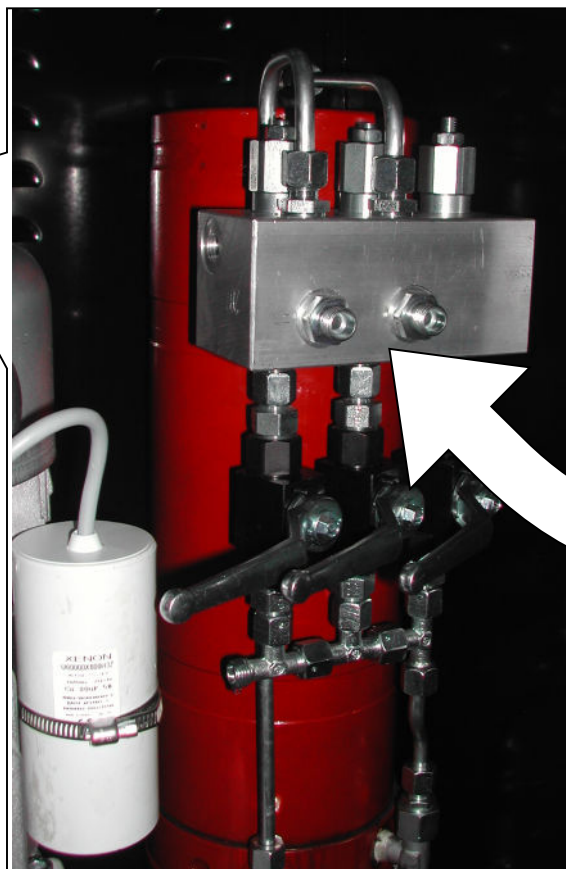
**The control unit must be positioned so that the operator has a full view over the lift area.**



## 4.4. *Connecting the lift's commands*

### 4.4.1. Hydraulic connections

- Screw the hoses from the lift to the hydraulic control unit.



#### 4.4.2. Electric connection

The electric supply system must include:

- a main switch with a circuit breaker;
- fuses or thermal magnet protection suited to the machine's characteristics;
- device against accidental contact, for protection.

The switch must be positioned in the immediate vicinity of the machine in full compliance with local accident prevention regulations.

Power cables must have a suitable section for absorbing current, without deviations for other utilities.

Electric systems must be created according to the state of the art by a qualified electrician who must check the earthing system's efficiency.

The power cable must be locked in the dedicated cable gland and the electric panel must be carefully closed to assure the envisaged IP 54 protection.

Only connect the machine to type approved sockets with an earth cable of proven efficiency.

Periodically have qualified personnel check the correct tightening of the electric cables of the various components.

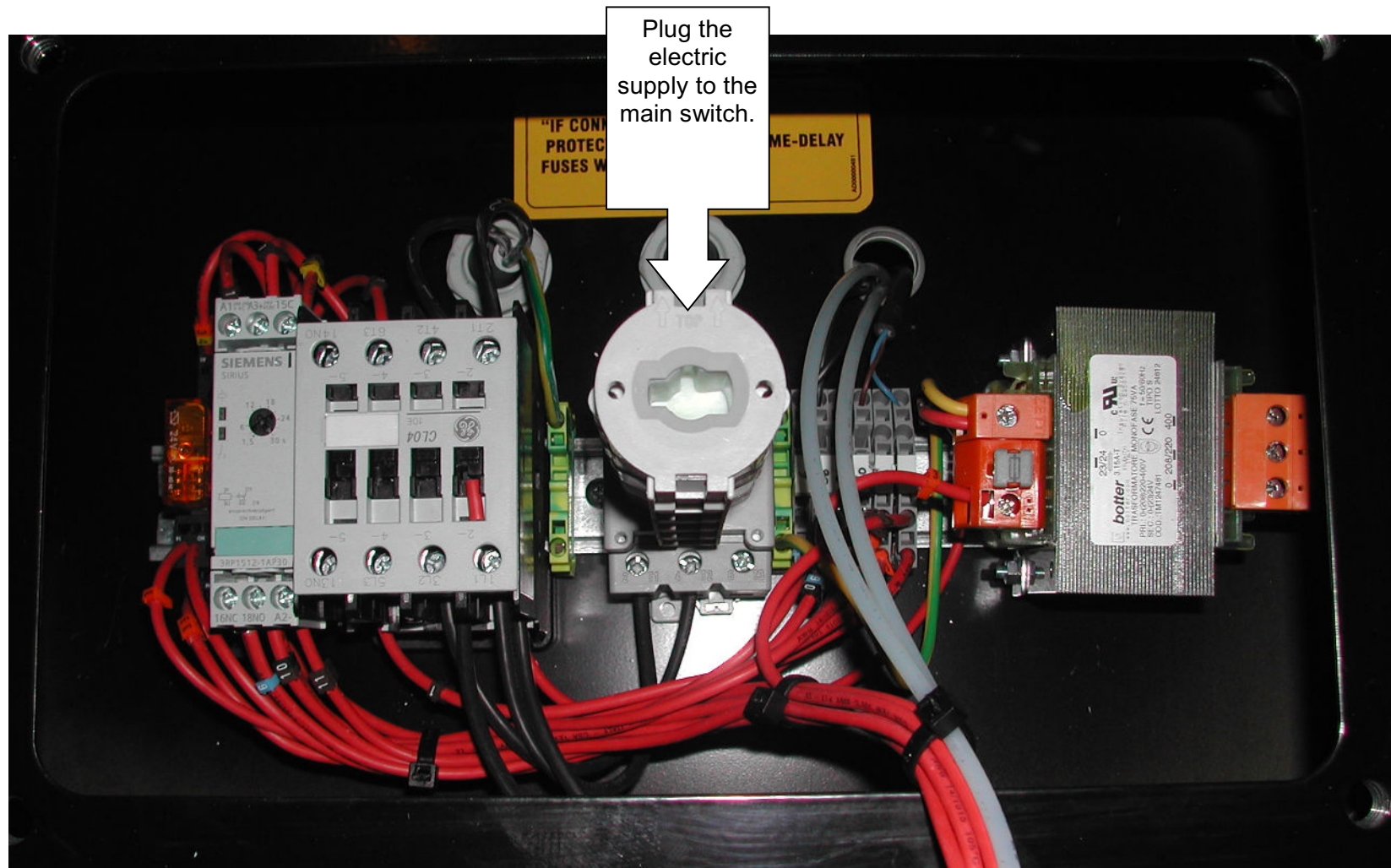
- Power cables must have a suitable section for absorbing current without deviations for other utilities
- Electrical system shall be designed to meet all local / national codes and shall be properly grounded

#### Attention:

- power the lift's electrics system using a line fitted with a mains switch and without any other junctions.
- The devices fitted to provide protection against short circuits must take into account the features of the electrical equipment:

NOMINAL POWER		kW	2,2
VOLTAGE		V	208
No. of phases			1
FREQUENCY		Hz	60
NOMINAL CURRENT		A	23
PICKUP CURRENT		A	126
PROTECTION	FUSE (DELAYED)	A	32
	FUSE (FAST)	A	40
	THERMOMAGNET	A	32

### Warnings for the installation of electric cables between the control unit and lift:





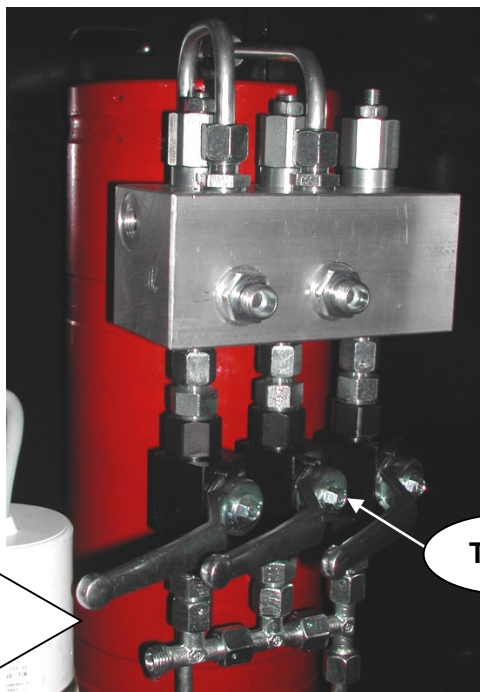
#### 4.5. *Filling of the hydraulic circuit*



PROCEDURE TO BE EXECUTED:

- WITH LIFT COMPLETELY DOWN
- ONLY DURING THE INSTALLATION

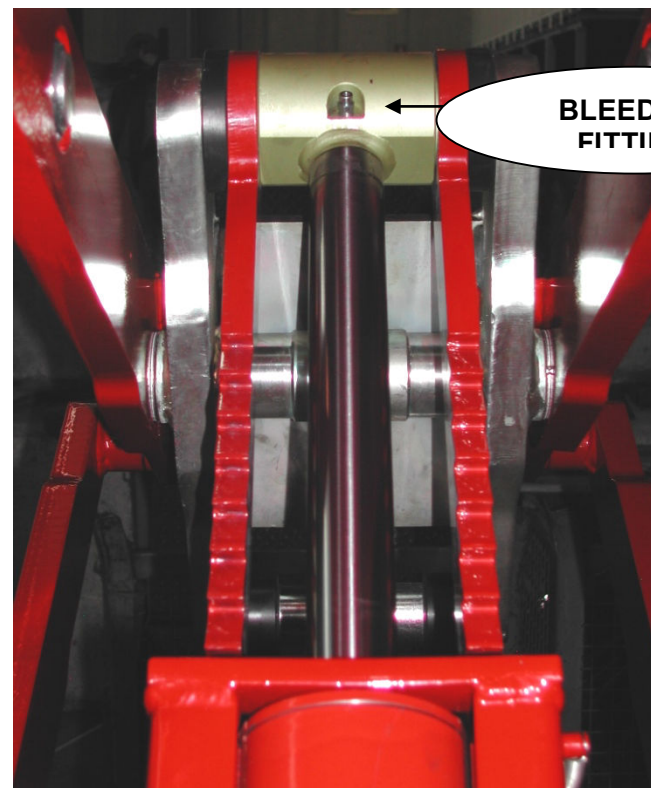
- Fill the oil tank
- Push button PS till the motor and the hydraulic unit change the sound is under stress(it will take 40-50 sec)  
(The oil flows through the overload valve and the master cylinders are filled up)
- Turn the taps on
- Push button PS till max height of the lift.
- Bleed the air from the cylinders by using their fittings, until only oil comes out. Then close the fittings  
Repeat the sequence three times at least.
- Push button PS.
- Turn the taps off



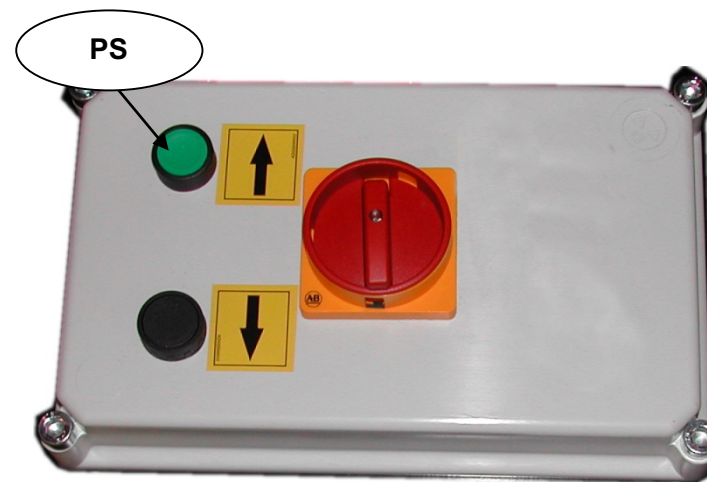
TAPS

CLOSE

OPEN



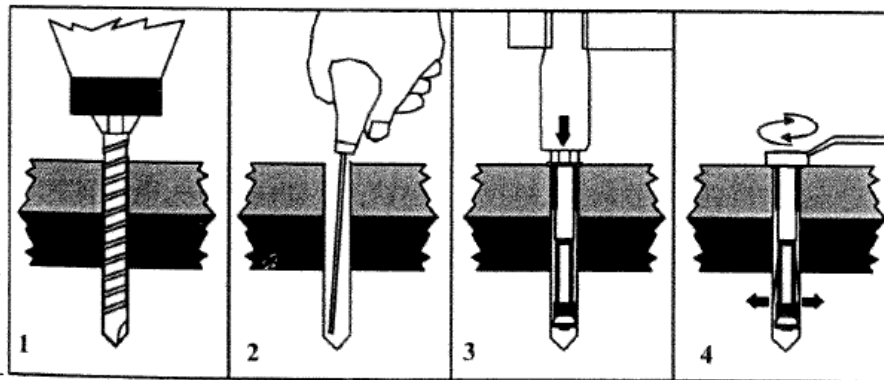
BLEEDING  
FITTING



PS

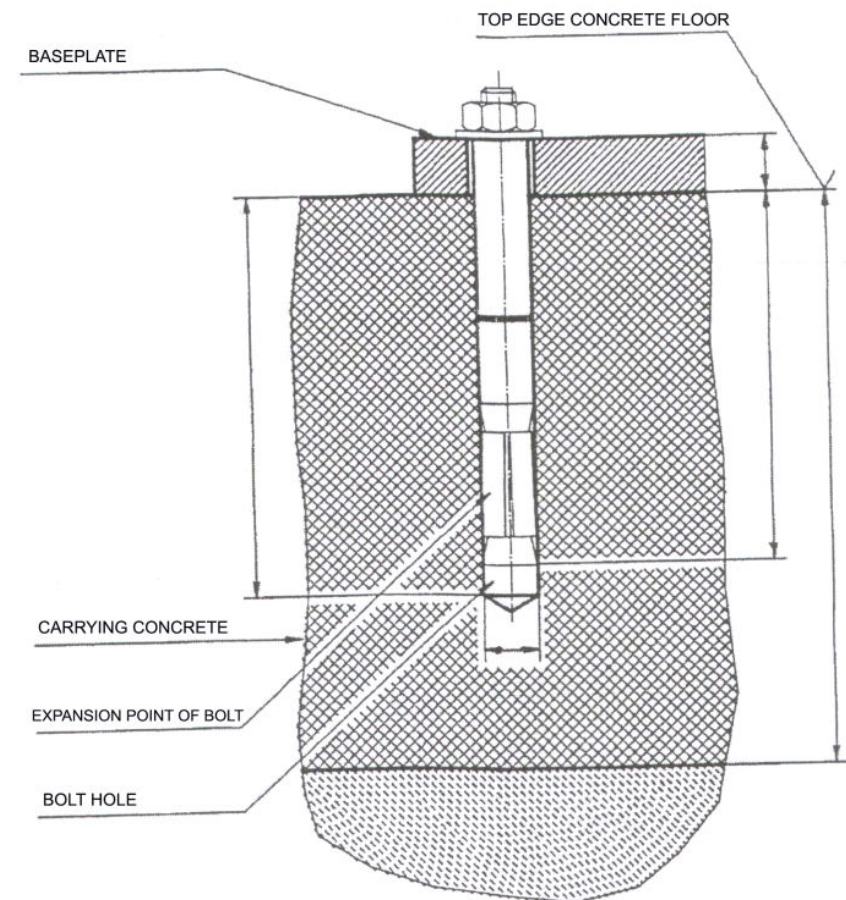
#### 4.6. Anchorage capsule installation

1. Drill hole;
2. Clean the inside of the hole;
3. Insert anchorage capsule into the hole and hammer until it reaches the end;
4. Tighten the pin with a wrench.



TYPE OF ANCHOR CAPSULE			HAS M12X120/25/45
MIN. BORE DEPTH	A	mm	95
MIN. ANCHOR CAPSULE DEPTH	B	mm	80
MIN. THICKNESS OF CONCRETE	C	mm	140
HOLE DIAMETER	D	mm	14
LIFT BASE SPACER	E	mm	15
NUMBER OF PINS		N°	8
START TWISTING MOMENT			To be agreed with manufacturer
DRILL BIT DIAMETER		mm	12
TIGHTENING TORQUE		Nm	50

#### Choosing pin length on untiled floor.





## 4.7. Checks before use

Having completed installation of the table, the following tests must be performed before it can be used for work:

	TESTS	STANDARDS	
1	Table levelling using spirit level.	Max 0.5 mm per meter.	<input type="checkbox"/>
2	Sturdiness of anchors fastening to the floor.	Tightening torque (50 Nm)	<input type="checkbox"/>
3			<input type="checkbox"/>
			<input type="checkbox"/>
4	Hydraulic connections.	Diagram (see: <i>Hydraulic Diagram paragraph</i> )	<input type="checkbox"/>
		Oil leakage	<input type="checkbox"/>
		Pressure	<input type="checkbox"/>
5	Wiring. connections.	Diagram (see: <i>Wiring Diagram</i> )	<input type="checkbox"/>
6	Safety devices.	(See: <i>Safety device features paragraph</i> )	<input type="checkbox"/>
7			<input type="checkbox"/>
8	Oil level.	Oil level rod	<input type="checkbox"/>
9	Direction of rotation of motor.	Arrow on motor	<input type="checkbox"/>
10	Plant cable and piping protection.	Cable and pipe runs provided.	<input type="checkbox"/>
11	Load vehicles with suitable dimension, in agreement with the features of the lift.	Loading conditions (see paragraph: <i>Loading conditions</i> )	<input type="checkbox"/>
12	Never load vehicles weighing more than the lift's nominal capacity.	Capacity indicated on plate.	<input type="checkbox"/>

## 4.8. Final testing

The static and dynamic load tests with overloads are performed at the Manufacturer's premises.

The user may perform nominal load tests (with a  $\pm 10\%$  tolerance admitted for maximum valve calibration) with distribution of the loads as described in the *Loading conditions* paragraph of the installation, use and maintenance manual.

Tests can be carried out with the following "overloading factors"

STATIC TEST	overload	150 %
DINAMIC TEST	overload	115%

With loading distributed according the foreseen scheme of the machine in the charter "*Loading conditions*".

## 4.9. LIFT OPERATIONAL TEST

### 4.9.1. Lift Operation

- ✓ Perform pre-operation check list item by item
- ✓ Ensure lift is completely lowered
- ✓ Position vehicle on the lift

### 4.9.2. Caution

- ✓ Avoid sudden "starts and stops" during loading and unloading of vehicle

### 4.9.3. To Load a Typical Vehicle

- ✓ Position vehicle on the lift runways by using the approaching ramp. Make the center of gravity is located equally between the legs . The individual axle weight should not exceed two-thirds of the lift capacity.
- ✓ Set vehicle parking brake and chock tires.
- ✓ Make sure vehicle is neither front nor rear heavy.

### 4.9.4. To Raise the Lift

- ✓ Push up button (PS) to raise the lift by about 10"
- ✓ Check for the vehicle movement and weight distribution. Raise to desired height if secure.
- ✓ **DO NOT WORK UNDER A LIFT THAT IS NOT IN THE LOCK POSITION**

### 4.9.5. To Lower the Lift

- ✓ Inspect the lifting area to insure all personnel and debris have been cleared away.
- ✓ Push the down button (PDA) and the lift will first disengage the safety lock then start its descent.
- ✓ Once the lift reaches 120mm from (5 inches) the unit will stop, to allow the operator to check for potential pinch problems. Depress both PDA and PDB to lower the lift to the lowered position.
- ✓ Lower lift completely to the floor. Carefully drive off the vehicle from the runways



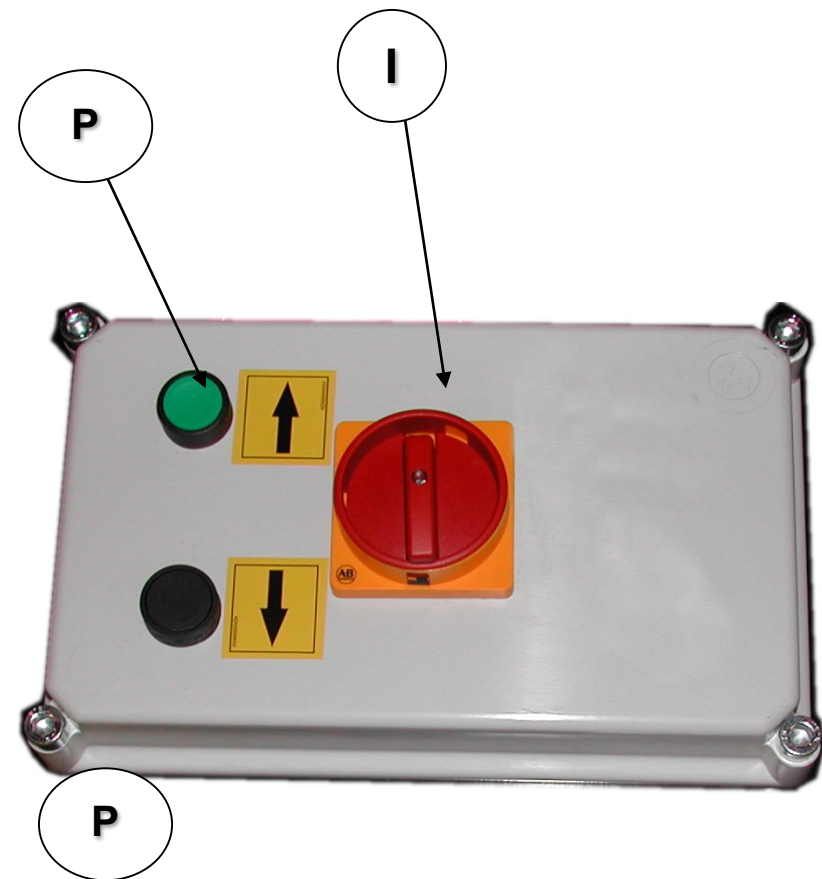
## 5. USE

### Adressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

### 5.1. Operation commands






<b>I</b>	<b>SYSTEM MAIN SWITCH</b> Activating this switch, the control panel is enable.
<b>PS</b>	<b>TABLE UP BUTTON</b> During the first vertical stroke (50 mm), the photocell is hidden by the base. To start the lifting the PEFT and PS buttons have to be pressed together and then after a while the PEFT button can be released.
<b>PD</b>	<b>TABLE DOWN BUTTON:</b> when this button is activated, the lift performs a two-stage descent: a) It rises a few centimetres, to allow the automatic unlocking of the mechanical safety stops b) Descent starts.



**NOTE:** On the single phase motor version the jog of the PS button has been limited by hardware. The PS operation is delayed three seconds about.

## 5.2. Residual risks



	HAZARD	WHO	CONDITION	RISK
	PIPE BREAKING	Maintenance technician	MAINTENANCE	Contact with squirts of pressurised oil
	AIR ELIMINATION FROM CYLINDERS			
	PIPES LOOSENING			
	ELECTRIC SHOCK	Maintenance technician	MAINTENANCE	Contact with live components
	SHEARING	Maintenance technician	MAINTENANCE	Shearing of hands and feet with lift is in movement.
	TIPPING OVER OF THE LOAD	Maintenance technician	MAINTENANCE	During manual lowering, check that the load moves smoothly, without being thrown out of balance. Operate the valves so that the bridge is realigned step by step.
	REDUCED VISIBILITY	Operator	OPERATING	Possible third-party damage



## 6. MAINTENANCE

### Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.



The lift organs, control and safety devices should be checked periodically by the user to assure ongoing efficiency.  
**All routine maintenance operation should be performed by trained staff operating in full safety.**

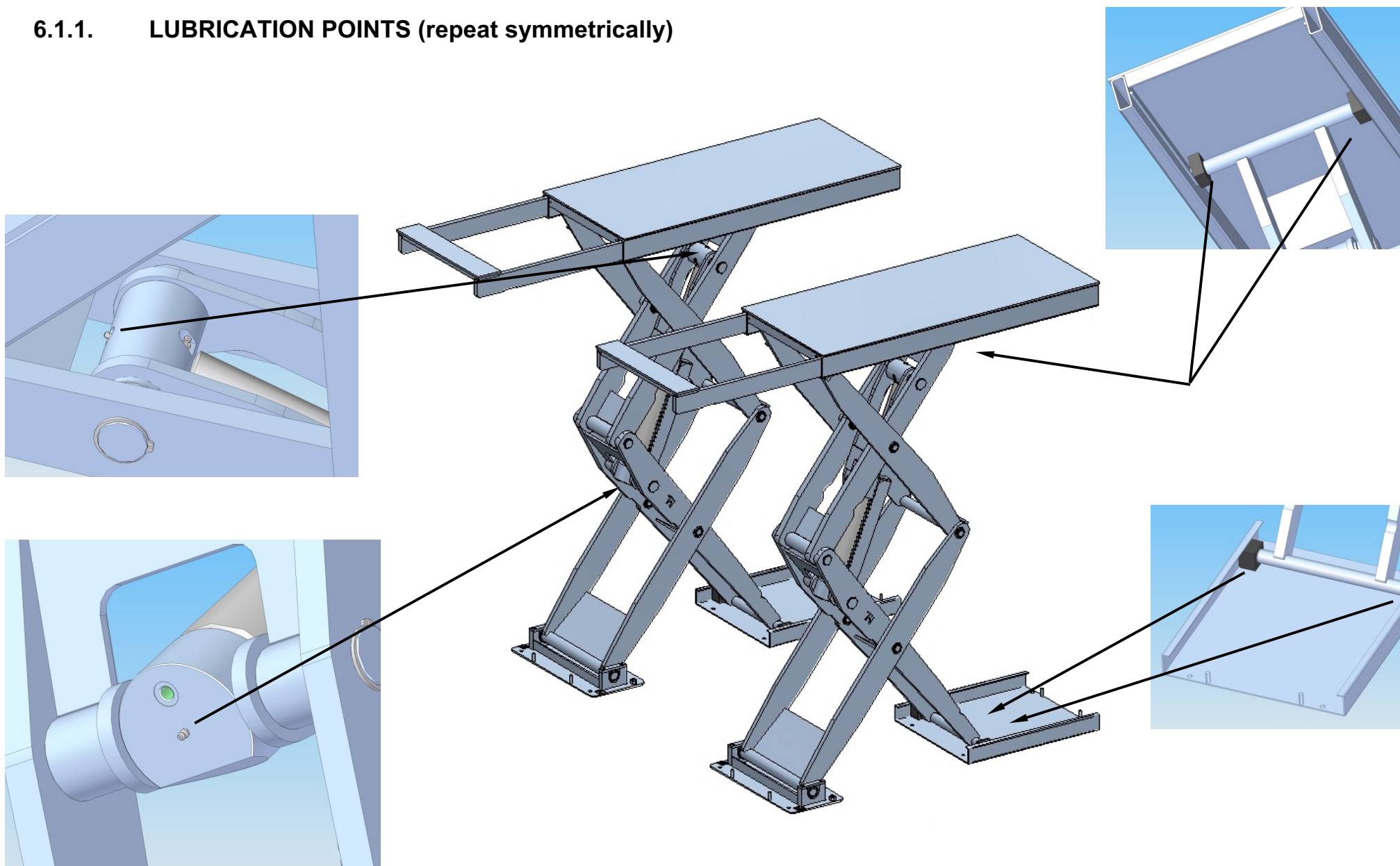
### 6.1. Routine maintenance

We recommend the following ordinary routine maintenance operations

		WHERE	WHAT	MACHINE STATUS	HOW	TYPE OF GREASE	TYPE OF LUBRICANT
ORDINARY	80 h	UNDER BASE PLATFORM BASE	SLIDERS	OFF	GREASE	MOLYCOTE G-4700	
	80 h	BASE	SLIDERS	OFF	CLEAN		
	80 h	STRUCTURE	PINS AND SUPPORTS	OFF	LUBRICATE GREASE	MOLYCOTE G-4700	
	80 h	STRUCTURE	LEVERS AND SUPPORT PLATES	OFF	LUBRICATE GREASE	MOLYCOTE G-4700	
	80 h	HYDRAULIC CIRCUIT	CYLINDER - TUBE UNIONS	IN MOTION	VISUAL INSPECTION		
EXTRAORDINARY	12 mesi	HYDRAULIC UNIT	TANK + FILTER	OFF	CLEAN		
	12 mesi	HYDRAULIC UNIT	TANK	OFF	OIL CHANGE		HYDROIL GF 46
	12 mesi	STRUCTURE	BUSHES	OFF	CHECK OF THE WEAR		

**Periodically check the electrical safety devices and report any faults to the Service Centre.**

### 6.1.1. LUBRICATION POINTS (repeat symmetrically)



## 6.2. *Table adjustment procedures*

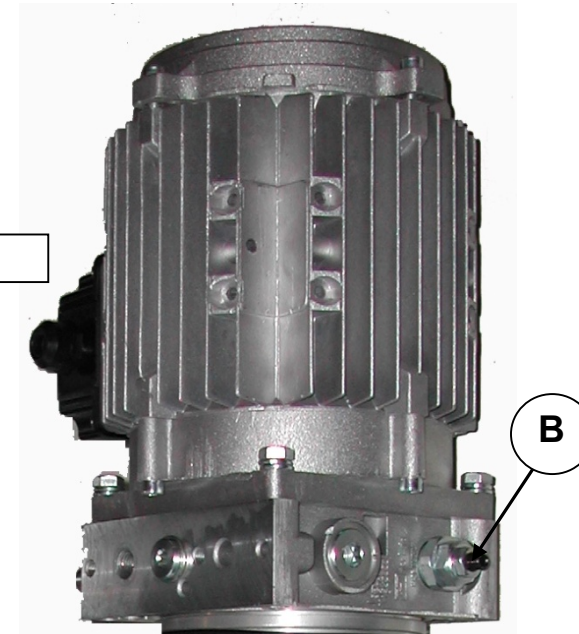
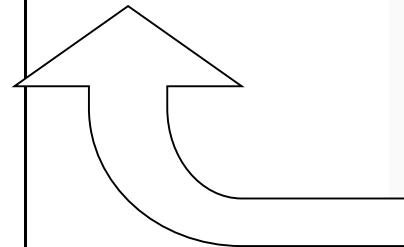
### 6.2.1. **Maximum pressure valve calibration**



The calibration of the valve must be executed by specialized people and authorized by the manufacturer.  
After the calibration the valve must be sealed for example with sealing wax.

- 1) Take the table to maximum height.
- 2) Connect a pressure gauge in line.
- 3) Loosen the nut by turning two revolutions anticlockwise (part. B)
- 4) Adjust pressure with a proper key (screwdriver or wrench):  
Turn clockwise to increase calibration pressure  
Turn anticlockwise to reduce calibration pressure
- 5) Keeping the up command pressed, check the pressure on the pressure gauge.
- 6) If the pressure does not correspond to P, put the table in the nearest mechanical safety position and repeat points 5 and 6
- 7) When the pressure is equal to P, fix the loosened nut at point 3 and reset everything

PRESSURE	P	Bar	250
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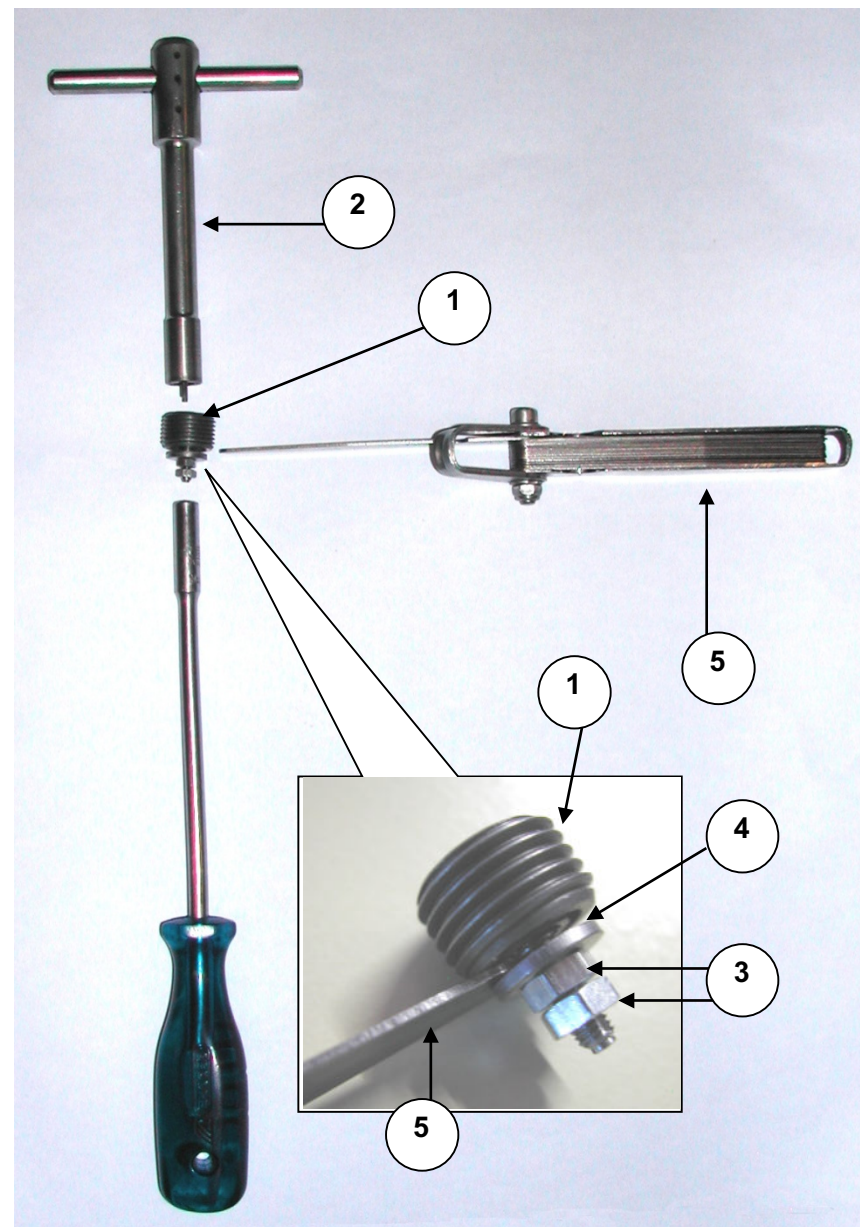
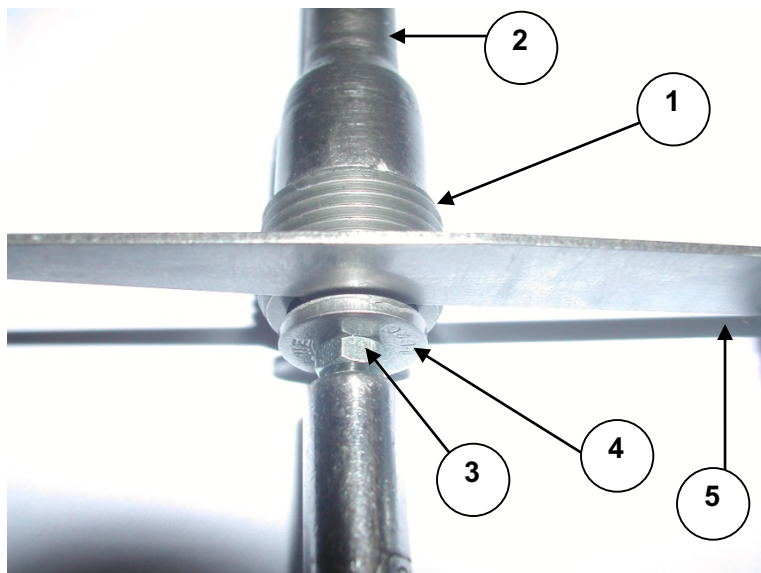
### 6.2.2. Parachute valve



The calibration of the valve must be executed by specialized people and authorized by the manufacturer.

THE CALIBRATION DISTANCES MUST BE ESTABLISHED BY THE MANUFACTURER.

1. Remove the valve (1) on the bottom of the piston using the key provided (2)
2. Loosen the washer and lock nut (3) beneath the valve.
3. Move the plate of the valve (4) closer or further away as desired, checking the height with the dedicated thickness gauge (5).
4. Reassemble and test.



### 6.2.3. Unblocking safety locks



The “unlocking procedure” has to be carried out from specialized people and authorized from the manufacturer.

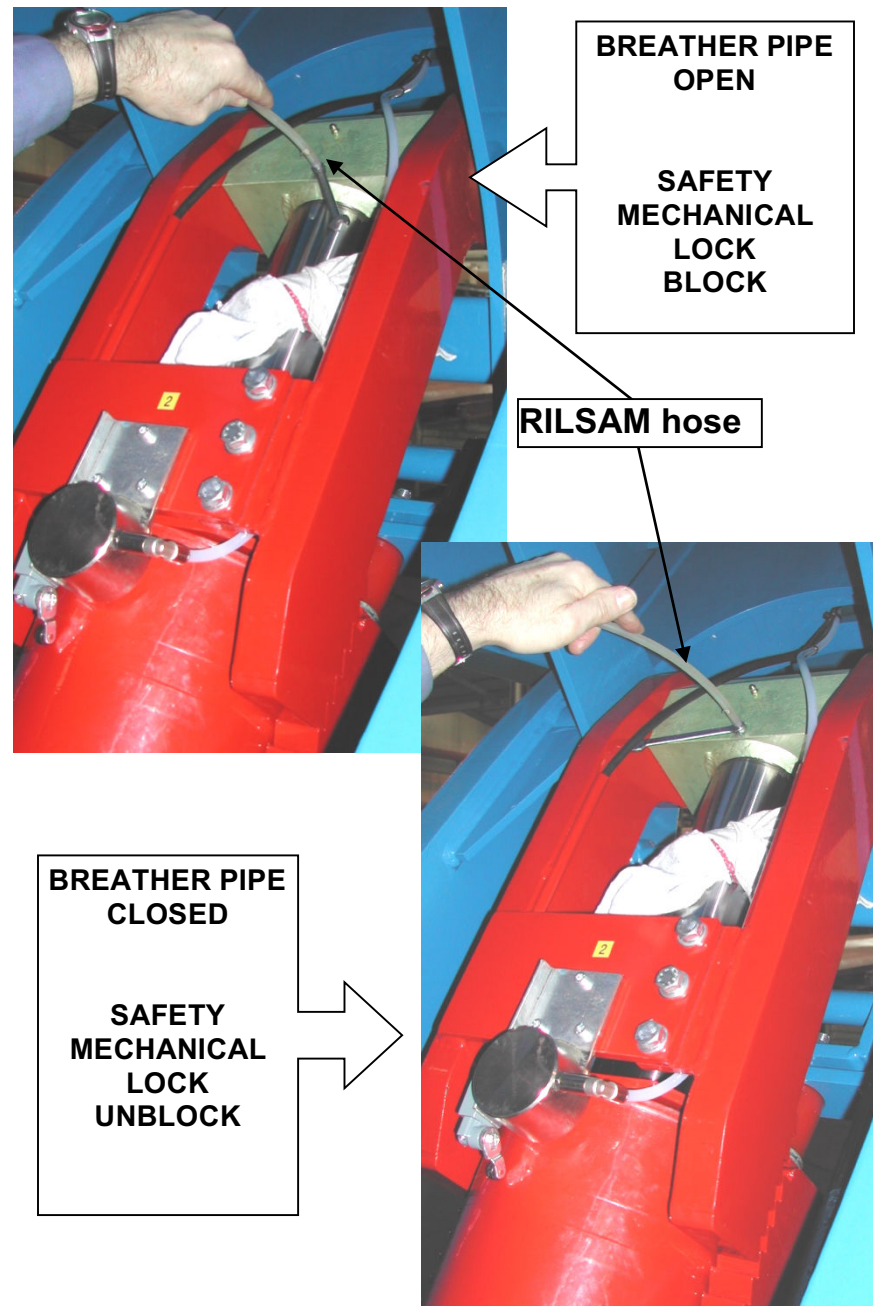
Procedure to be done, when a “safety lock” is in blocking position:

1. Open the feed valve of the slave circuit of the involved cylinder
2. Activate the hand pump till when the “safety lock” is blocked
3. Close the “feed valve” of the slave circuit
4. Low the lift
5. Discharge the loading
6. Fill the slave circuits.

### 6.2.4. Air bleeding from the volumetric circuit

To eliminate the air from the circuit, proceed as follows:

1. Take the lift to its maximum height;
2. Connect breather pipe of the first slave cylinders to a tank using a flexible RILSAM hose;
3. Open the breather pipe a little send oil to the volumetric circuit using the dedicated switch.
4. Repeat the procedure for the other 3 cylinders.
5. Close the breather pipe;
6. Lower by about 0.5 m;
7. Repeat this procedure at least 3 times until all the air has been eliminated from the circuit.



## 6.2.5. Lift lockout/tagout procedure

### Purpose

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of lifts in need of repair or being serviced. All employees shall comply with this procedure.

### Responsibility

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Rotary Installers, contactors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

### Preparation

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in close proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

### Sequence of Lockout Procedure

- 1) Notify all affected employees that a lockout is being performed and the reason for it.
- 2) Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift.
- 3) The authorized lockout person operates the main energy isolation device removing power to the subject lift.

- If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional reactivation. An appropriate tag is applied stating the person's name, at least 3" x 6" in size, an easily noticeable color, and states not to operate device or remove tag.
  - If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
- 4) Attempt to operate lift to assure the lockout is working. Be sure to return any switches to the "OFF" position.
  - 5) The equipment is now locked out and ready for the required maintenance or service.

### Restoring Equipment to Service

- 1) Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.
- 2) At this point, the authorized person can remove the lock (or dummy device) & tag and activate the energy isolating device so that the lift may again be placed into operation.

### Rules for Using Lockout Procedure

Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the lift when the energy isolating device is locked out.

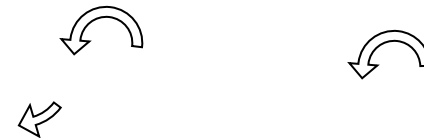
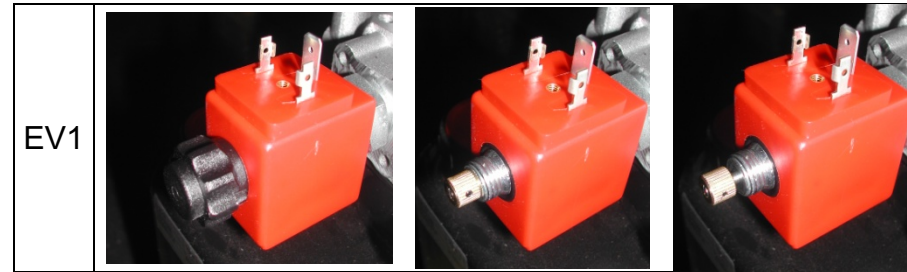
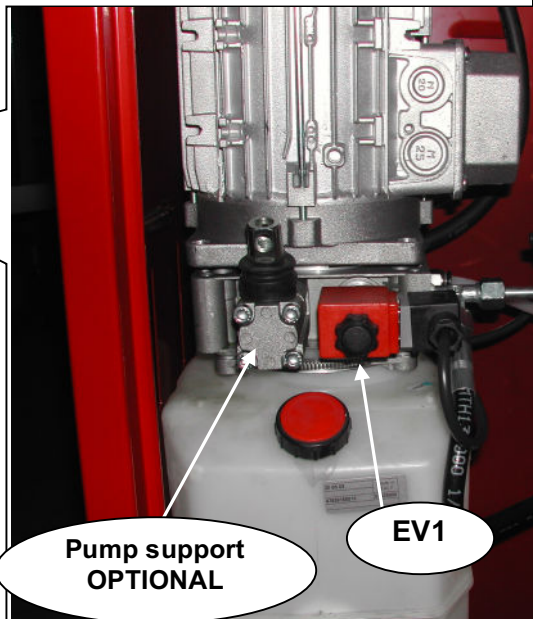


### 6.3. *Manual downstroke manoeuvre* WITH HAND PUMP

(accessory available on request)



Operations to be performed to lower raised platform  
with vehicle on in the case of a blackout:



- pump until the safety jacks move away from the block position;
- push PD until the safety jacks open up and maintain pressed during the next operation.
- unscrew the lock nut on valve EV1, fully unscrew the knurled pin (see photograph) and allow the table to lower;
- to restore tighten the knurled pin.

#### 6.4. *Abnormal operation*

WHAT HAPPENS	WHERE	CHECK
The lift does not rise and the motor does not start	<ul style="list-style-type: none"> <li>a. FUSES</li> <li>b. THERMAL RELAY</li> <li>c. TRANSFORMER</li> <li>d. MOTOR</li> <li>e. CONTACTOR</li> </ul>	<ul style="list-style-type: none"> <li>a.1. line fuse blown.</li> <li>a.2. 24-volt fuse blown.</li> <li>b.1. thermal relay tripped, re-cock.</li> <li>c.1. transformer burnt out, does not emit 24 volt.</li> <li>d.1. motor short-circuited or burnt out.</li> <li>e.1. contactor C1 burnt out</li> </ul>
The lift does not rise and the motor starts.	<ul style="list-style-type: none"> <li>a. HYDRAULIC PUMP</li> <li>b. DISCHARGE VALVE</li> <li>c. LIMIT VALVE</li> <li>d. MOTOR</li> <li>e. TAPS</li> </ul>	<ul style="list-style-type: none"> <li>a.1. o-ring seal broken.</li> <li>a.2. key broken.</li> <li>a.3. aspiration tube broken.</li> <li>a.4. clamping screws loose.</li> <li>a.5. check oil leakage.</li> <li>a.6. check the pressure value</li> <li>b.1. EV1 remains open.</li> <li>c.1. limit valve broken.</li> <li>d.1. Check that the motor turns in the direction shown by the arrow.</li> <li>e.1. Taps open.</li> </ul>
The lift does not lower and the pressure is normal.	<ul style="list-style-type: none"> <li>a. TRANSFORMER</li> <li>b. HYDRAULIC VALVE</li> <li>c. ELECTRIC VALVE</li> <li>d. MECHANICAL SAFETY DEVICES</li> </ul>	<ul style="list-style-type: none"> <li>a.1. transformer burnt out, does not emit 24 volt.</li> <li>b.1. EV1 blocked.</li> <li>b.2. check the parachute valves on the bottom of the dual effect cylinders.</li> <li>c.1. EV1 24 V coil burnt out.</li> <li>d.1. mechanical safety devices mechanically blocked.</li> </ul>
Metallic noise	a. BUSHING	a.1. bushing wear
Raising intermittently	a. PINS	a.1. pins damage



## 7. ACCESSORIES

CODE	DESCRIPTION	PHOTOGRAPH
	LIFT CROSSMEMBERS for light industrial vehicles	
	HAND PUMP	