MKAR055UL920

O.ME.R. S.p.A.
Via Galileo Galilei, 20
30035 MIRANO (VENEZIA) Italy
Tel.+39 041.5700303
Fax +39 041.5700273
Numero verde 800 017745
E-Mail: info@omerlift.com
www.omerlift.com

KAR 72

KAR 82

Versions:
N
CT
CA
LTS OVERSIZE

Noiselevels 70dB(A)

OPERATION AND MAINTENANCE MANUAL

IMPORTANT SAFETY INSTRUCTIONS
(SAVE THESE INSTRUCTIONS)

⚠CAUTION

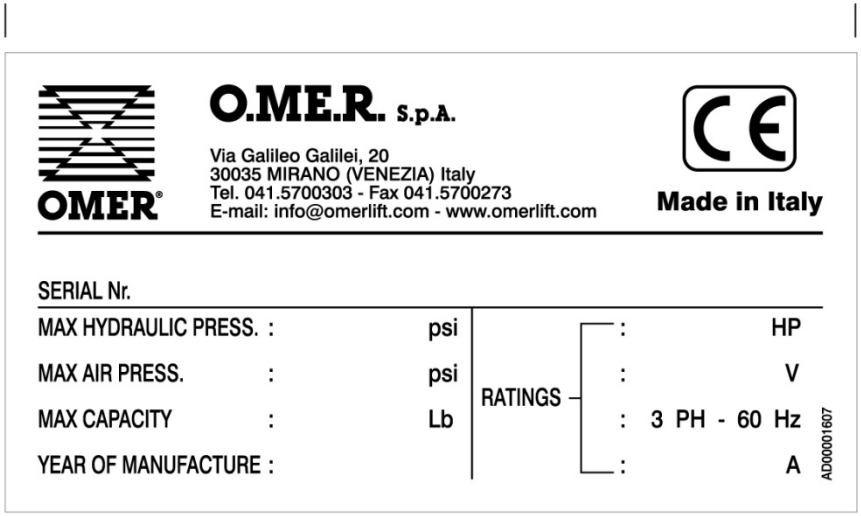
"Before proceeding with installation, operating, servicing, or maintain the lift, the user must read the manual carefully..."

INDEX.....ENGLISH

1. GENERAL INFORMATION

1.1. *Marking data*

Table identification plate:



1.2. *Assistance*

Please use the following contact details for assistance requests :

TEL. +39 041/5700303
(O.ME.R. switchboard)

FAX. +39 041/5700273
(specify FAO LIFT ASSISTANCE)

TOLL-FREE NUMBER : 800 017745
(direct lift assistance line)

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.

SAVE THESE INSTRUCTIONS

2. DESCRIPTION OF THE MACHINE

Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

2.1. *Technical data*

LIFT CAPACITY	**KAR 72**	KG	7257
		LB	16000
	KAR 82	KG	8172
		LB	18000
LT OVERSIZE CAPACITY		KG	4086
		LB	9000

MOTOR POWER	KW	2,2
	HP	3,0

ELECTRIC POWER SUPPLY	V	208 V 1PH	V
	Hz	60	Hz
TOTAL ABSORBED CURRENT MAX	A	20	

PNEUMATIC POWER SUPPLY	bar	8	Filtered and lubricated
	psi	116	

MAXIMUM PRESSURE OF HYDRAULIC POWER SUPPLY	**KAR 72**	bar	240
		psi	3481
	KAR 82	bar	260
		psi	3771

QUANTITY OF OIL	LT	30
UPSTROKE/DOWNSTROKE TIME	S	70 / 80
MIN/MAX OPERATING TEMPERATURE	°C	-10° ÷ +40
SOUND EMISSION LEVEL	db(A)	< 80

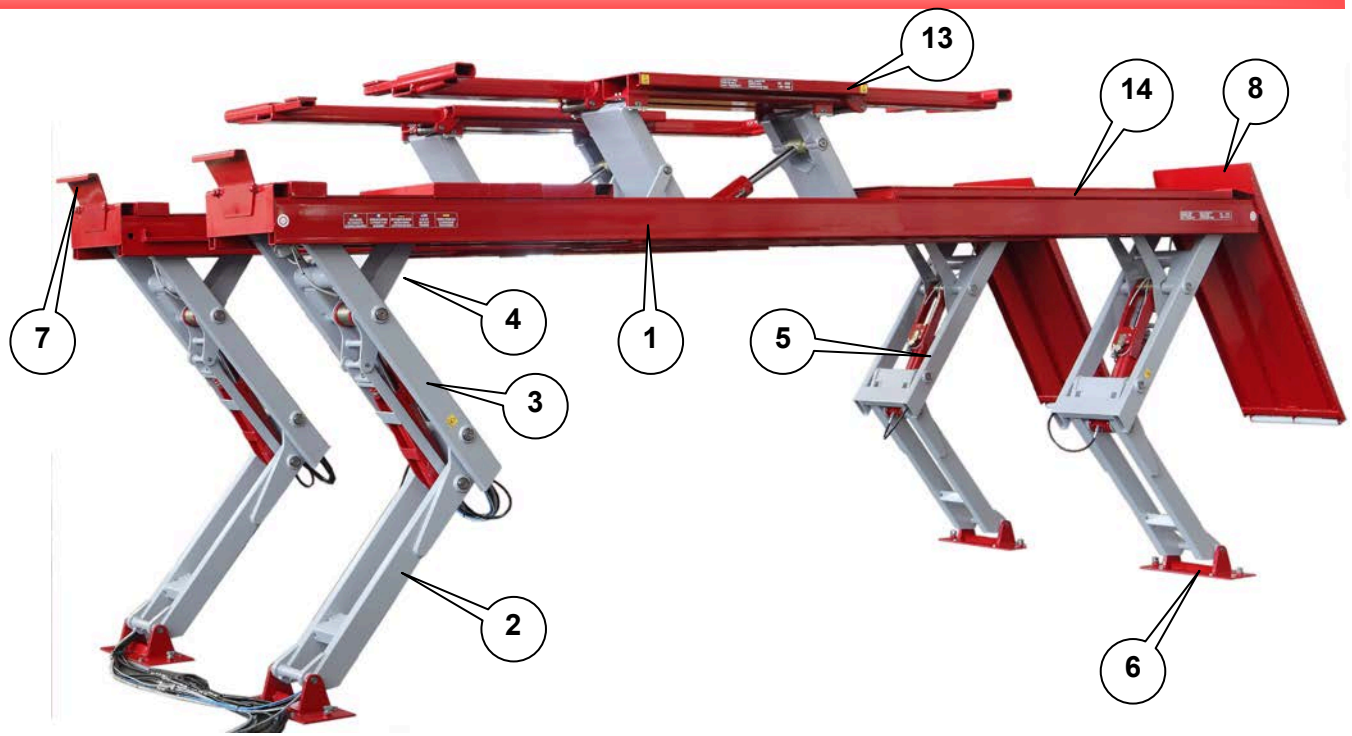
2.2. *Nomenclature*

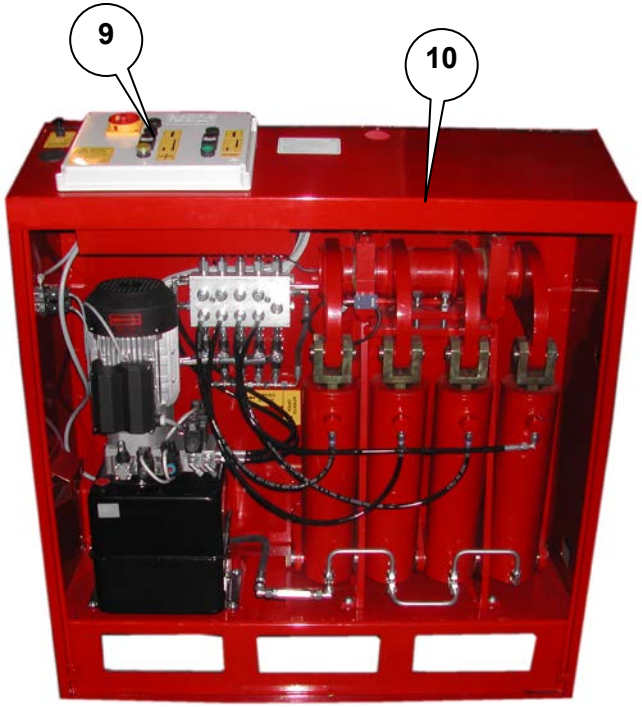
MODELS LEGEND

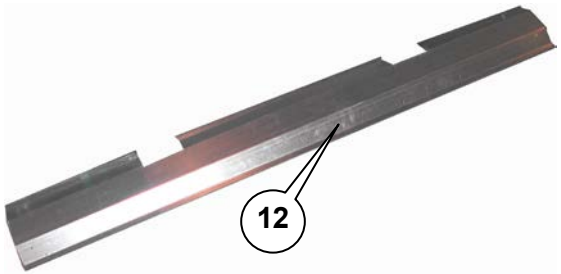
N	STANDALONE VERSION (SMOOTH TRAVEL)
I	RECESS-MOUNTED VERSION
CT	TOTAL CONVERGENCE FRONT RECESS PLUS REAR OSCILLATING PLATES
CA	FRONT RECESS HOUSING ROTATING PLATES AND/OR GIVE DETECTOR PLATES
LT	MODEL WITH AUXILIARY WHEEL RELEASE LIFT

NOTE: UNITS ARE FOR INDOOR USE ONLY

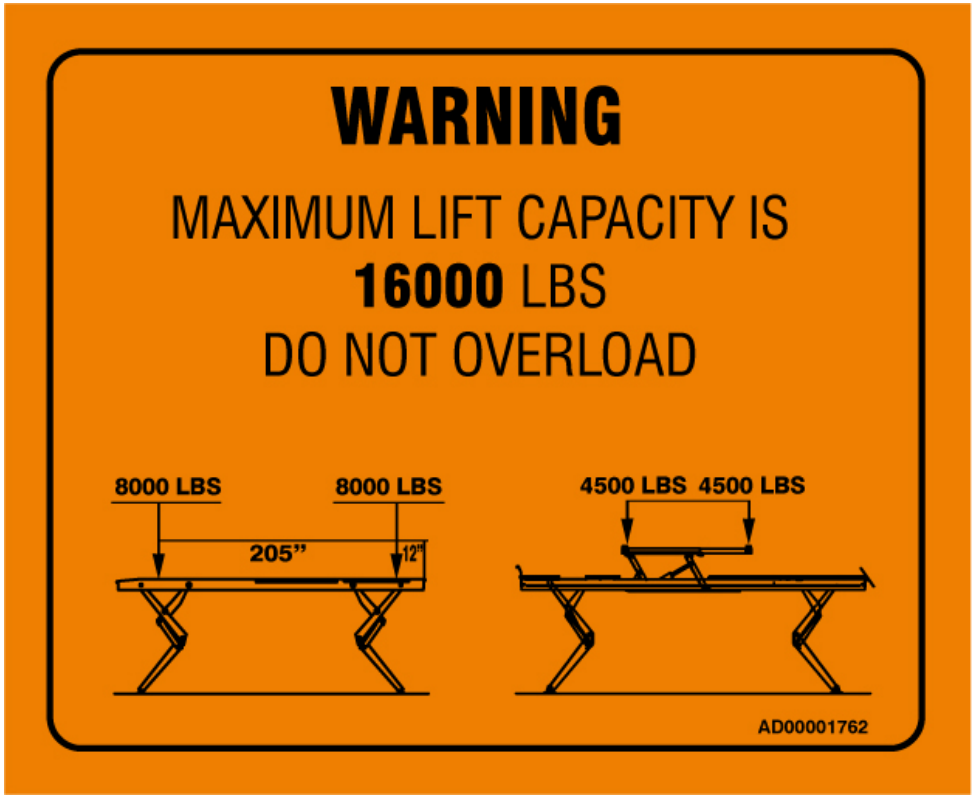
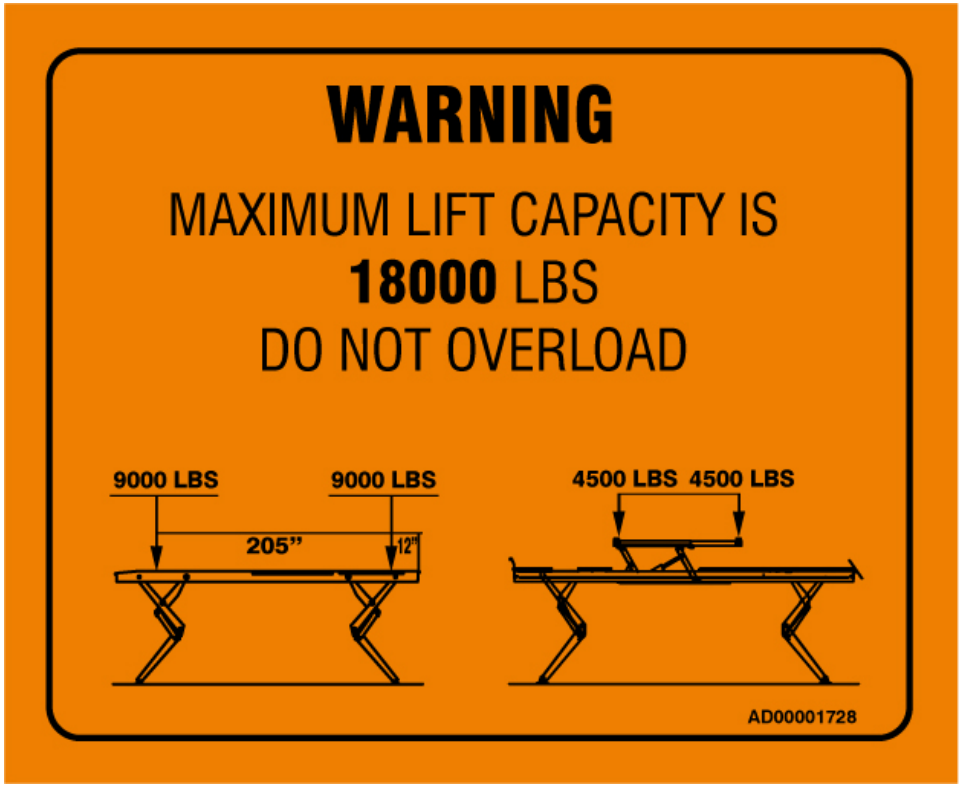
N°	DESCRIPTION
1	Platform
2	Lower leg
3	Upper lever
4	Tension rod
5	Hydraulic cylinder (main lift)
6	Base plate
7	Wheel stop
8	Access ramps
9	Electric box
10	Command control unit
11	Flow divider
12	Protective pipe ducts
13	LT – auxiliary lift
14	Oscillating plates







2.3. *Loading conditions*

KAR 72		KAR 82	
LIFT	**LT**	**LIFT**	**LT**
Capacity 16,000 lb	Capacity 9,000 lb	Capacity 18,000 lb	Capacity 9,000 lb
			

3. SAFETY

Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

3.1. *Expected use*

The function of the vehicle lift is to lift motorized vehicles, which have the distribution of the loading according norms in force.
The vehicle movement has to be done with lift closed.
The accessories indicated in the relating chapter can be used.

3.2. *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.

CAUTION

"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 installer must make sure to provide to the lift owner:

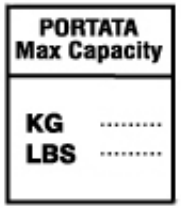
- all accessories
- the spares provided with the lift
- this use and maintenance manual

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.

3.3. *Precaution*

	When loading the lift never exceed the capacity shown on the ID plate on the lift.
	**DANGER** Never lift people.
	Any modifications to the lift must be authorised by the manufacturer.
	The equipment must be used by specifically trained and authorised personnel only.
	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.

	Always check the stability of hoisted vehicle.
	In case of “**recess-mounted version**” before carring out the final lowering with bypass key, please censure you that people stay at security distance.
	**DANGER** Do not use the lift in the event of hindrances to operation or hazardous conditions.
	**WARNING** Check the lift carefully after long periods of inactivity before putting it back into service.
	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.
	O.ME.R. N.A. declines responsibility for any inconvenience deriving from non-compliance with the instructions for use.

3.4. *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.

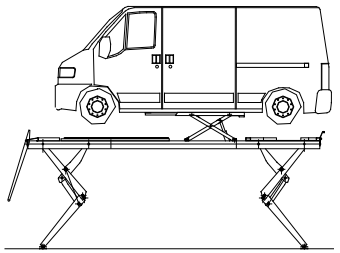
Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance.

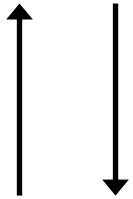
Shall display the lift manufacturer's operating instructions; ALI/SM, "Lifting It Right" safety manual; ALI/ST, "Safety Tips" card; ANSI/ALI ALOIM, Standard for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label
Decals/Placards; 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 in ANSI/ALI ALIS, Safety Requirements for Installation and Service of Automotive Lifts.

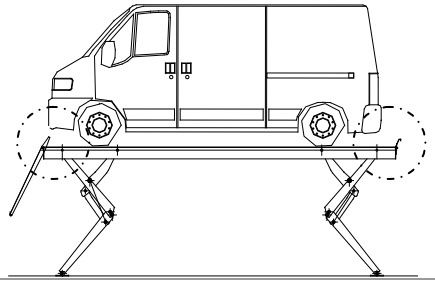
3.5. *IMPROPER USE*

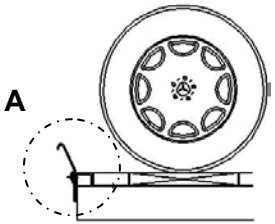
DANGER

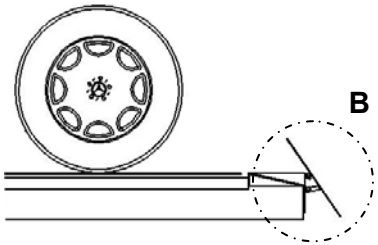




DO NOT PERFORM upstroke or downstroke operations with the auxiliary lift raised



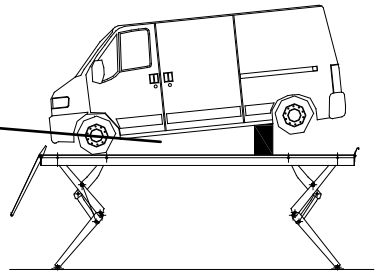


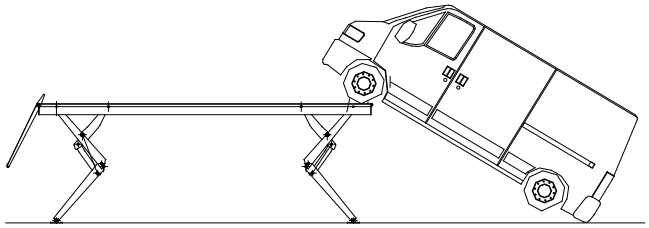


NEVER remove the wheel stop (A) and the union platform (B).

They prevent the vehicle from coming off the platform.

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





NEVER lift vehicles that are only partially on the lift.

3.6. *Safety device features*

SAFETY DEVICE	COMPOSED OF	POSITION	IN THE EVENT OF ...	EFFECT ON MAIN LIFT	EFFECT ON AUX. LIFT
MECHANICAL ANTI-FALL DEVICE	Rack jack	On each hydraulic cylinder of the lift. On each hydraulic cylinder of the LTS (auxiliary lift)	Leakage on the hydraulic circuit or breakage of a component	Accidental descent is blocked with a maximum displacement of 100 mm.	
ANTI-SHEARING DEVICE	Limit switch and buzzer	On the mechanical divisor in the control unit.	Descent on last stretch	Platform descent stops at 500 mm off the ground To complete descent: ✓ turn the PEFT key switch. ✓ Hold down the Down Button PD 1. Final descent is confirmed by the buzzer.	LT descent stops at a height of 120 mm from the platforms. The buzzer is activated for the whole descent. To complete descent: ✓ turn the PEFT key switch. ✓ Hold down the Down Button PD2.
PLATFORM ALIGNMENT CONTROL DEVICE	Photocell and reflective adhesives	Photocells on a platform and catadiopters on the other platform, at the double-ended of the lift.	Maximum misalignment of 50 mm between the platforms of the main or auxiliary lift.	The lift stops moving.	
HYDRAULIC PARACHUTE DEVICE	Parachute valve	On each hydraulic cylinder of the lift and on MASTER cylinder supply. On each hydraulic cylinder of the LTS (auxiliary lift)	Breakage of hoses.	The valve blocks descent when the speed reaches a value preset by the Manufacturer.	
SAFETY DEVICE	Microswitch	On each mechanical safety device.	Mechanical safety position.	Guarantees the insertion of the mechanical safety devices on the same tooth (geometrical position).	
WHEEL STOP DEVICES	Chock and union platform	Front and rear in both lift platforms.	-	They prevent the vehicle from coming off the platforms.	
SIGNALS	Stickers and plates	See paragraph: *Stickers and plates*	-	Draw attention to residual risks and precautions for use.	

3.7. *Residual risks*

DANGER

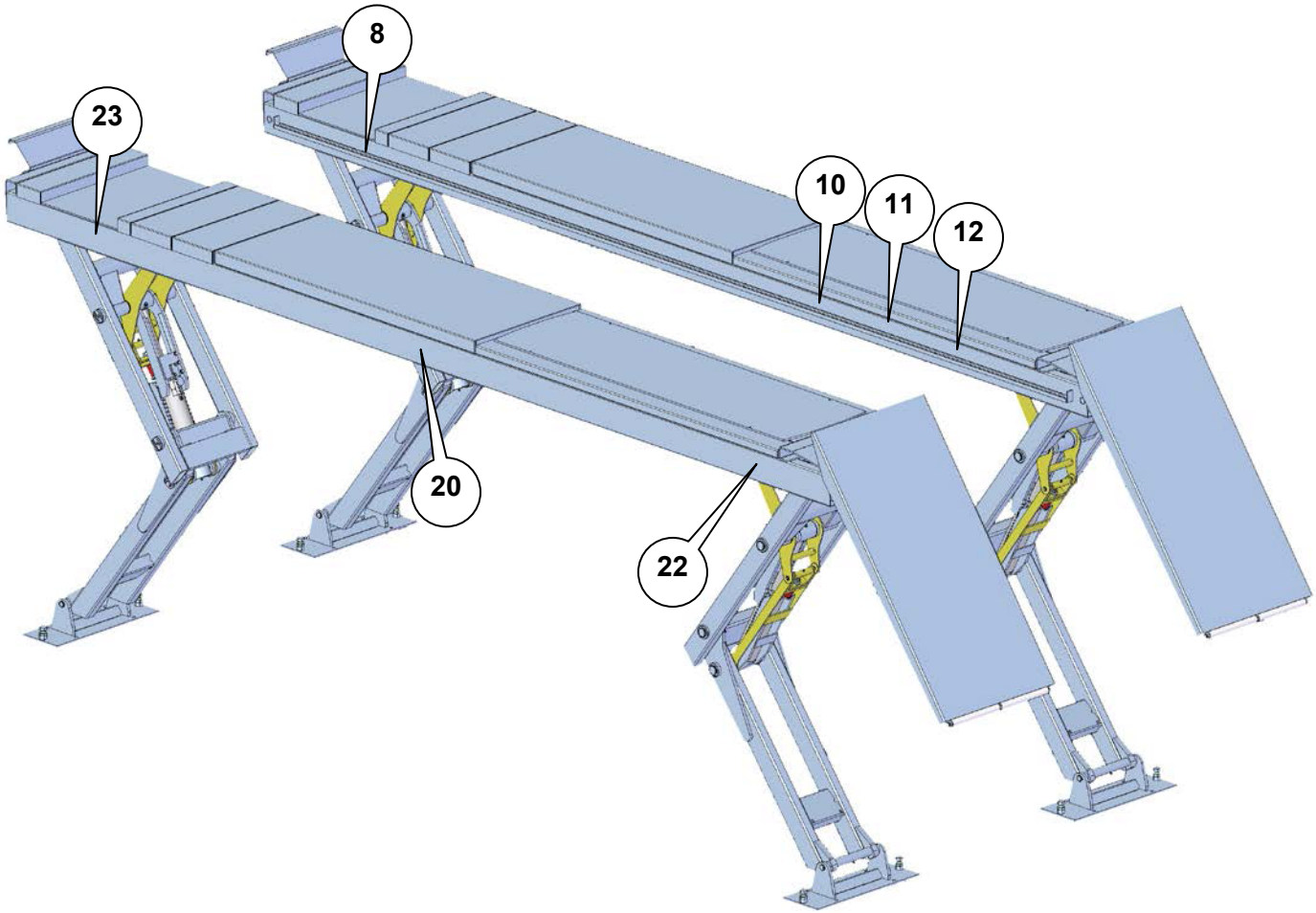
	HAZARD	WHO	CONDITION	RISK
	PIPE BREAKING AIR ELIMINATION FROM CYLINDERS PIPES LOOSENING	Maintenance technician	MAINTENANCE	Contact with squirts of pressurised oil
	ELECTRIC SHOCK	Maintenance technician	MAINTENANCE	Contact with live components
	SHEARING	Maintenance technician	MAINTENANCE	Shearing of hands 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

3.8. *Stickers and plates*

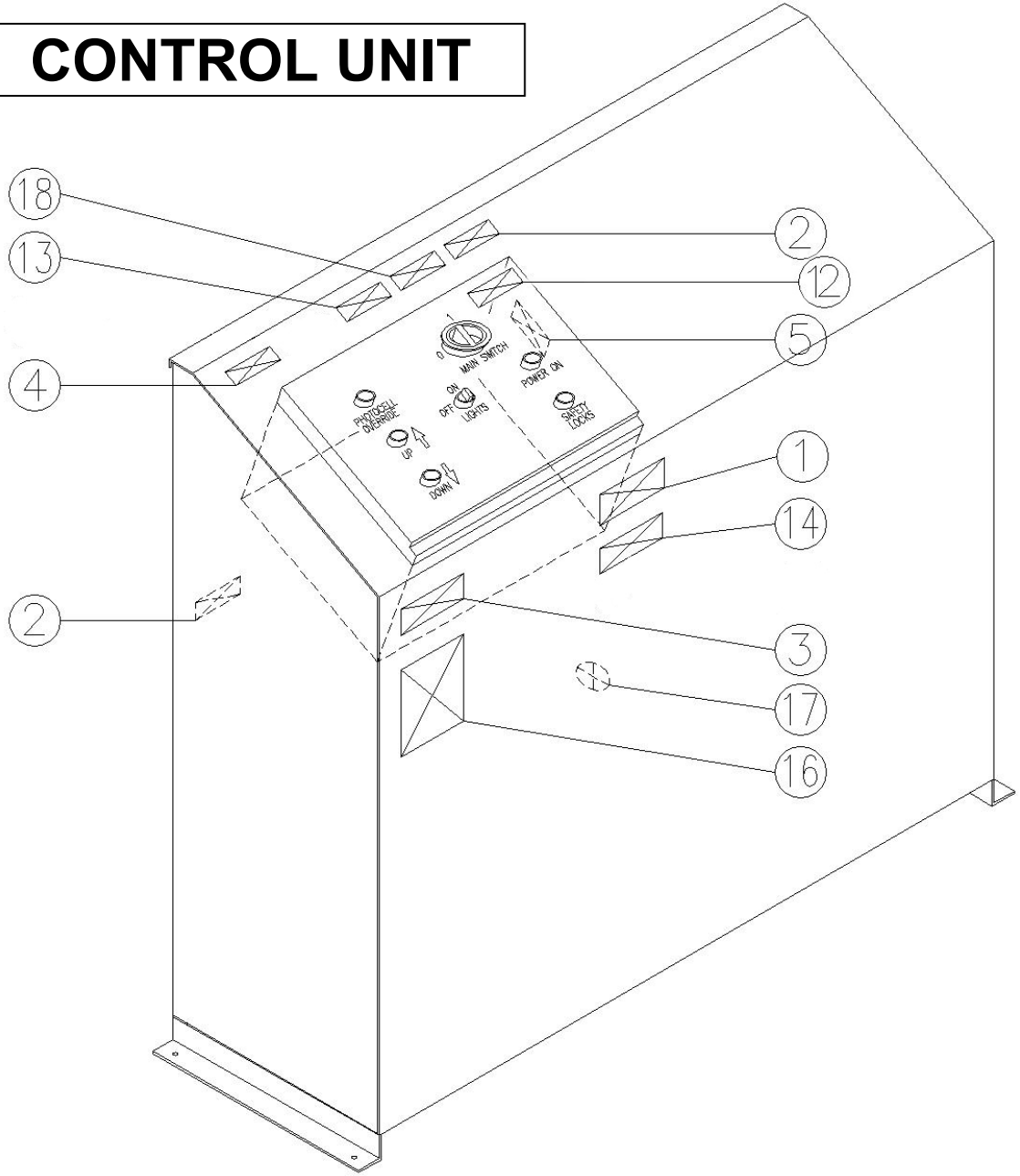
The labels must be readable and permanently attached to the equipment.
The labels that will be furnished with the equipment, together with their relevant positions, listed below:

N.	Plate description		
1	Control panel identification		
2	Risk of electric shock		
3	Risk of explosion		
4	Risk of fire		
5	Fuses indication		
8	Air attachment		
10	Load distribution		
11	Serial number plate		
12	**GOLD LABEL CODE**	**LIFT**	
		CONTROL UNIT	
13	Operating time		
14	Safety instruction (GB)		
16	Warning		
17	Earth connection		
18	Duty cycle time (GB)		
20	Logo OMER-KAR		
22	LIFT MAX CAPACITY		
23	Do not stay near the lift in movements		
24	LT MAX CAPACITY		

LIFT

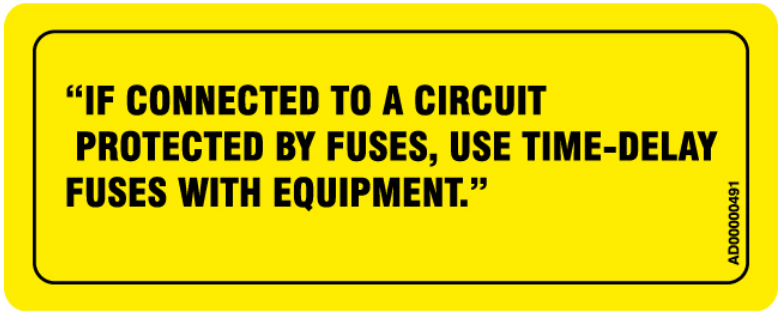
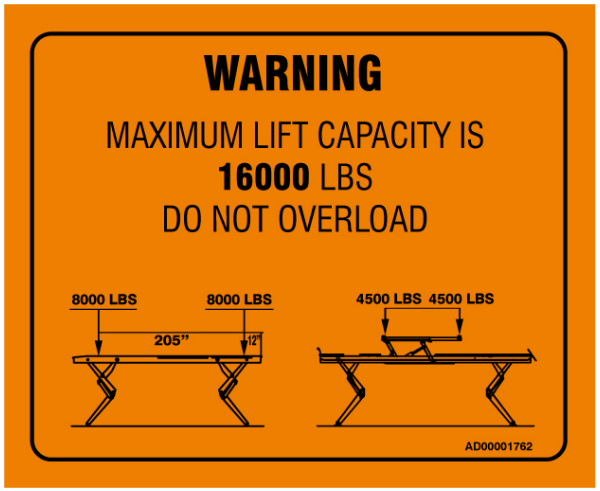


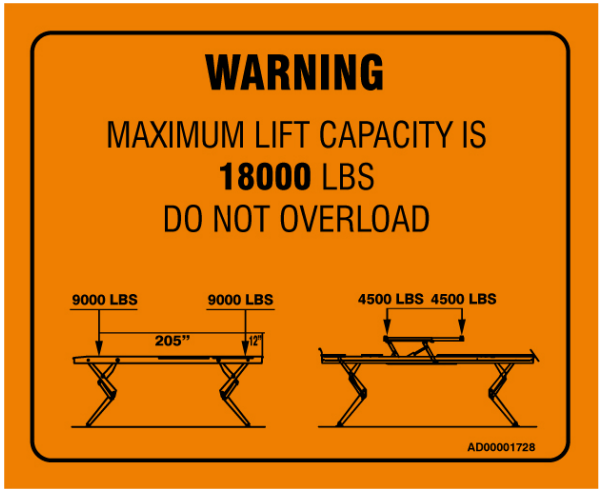
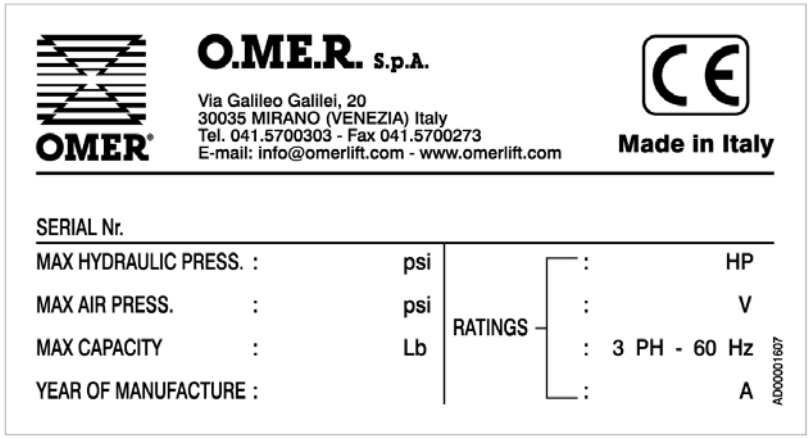
CONTROL UNIT



LABEL 1	OMER® IDENTIFICATION _____ CATALOG PART NR. _____ ELECT. RATINGS _____ MANUFACTURED ON _____ MIRANO (VENEZIA) Italy Tel. 041.5700303 - Fax 041.5700273 www.omerlift.com
LABEL 2	"CAUTION: RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL." AD00000488
LABEL 2A	"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." AD00001002

LABEL 3	"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." AD00000490
LABEL 3A	"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." AD00001003
LABEL 4	"CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE ..... A, ... V FUSE. REFER SERVICING TO QUALIFIED PERSONNEL." AD00000489
LABEL 4A	"ATTENTION: POUR UNE PROTECTION CONSTANTE CONTRE LES RISQUES D'INCENDIE, REMPLACER SEULEMENT AVEC LE MEME TYPE FUSIBLE ..... A, ...V. CONTACTER DU PERSONNEL QUALIFIE." AD00001004

LABEL 5		
LABEL 8		
LABEL 10	KAR 72	

LABEL 10	KAR 82	
LABEL 11		

LABEL 12	
LABEL 13	KAR OPERATING TIME: 80 SECONDS DUTY CYCLE TIME: 10 MINUTES AD00001754
LABEL 14	SAFETY INSTRUCTIONS: GB IF ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS THAT ARE LOCATED IN THE LOAD PATH, AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL LISTING, OR AFFECT INTENDED VEHICLE ACCOMMODATION ARE USED ON THIS LIFT AND, IF THEY ARE NOT CERTIFIED FOR USE ON THIS LIFT, THEN THE CERTIFICATION OF THIS LIT SHALL BECOME NULL AND VOID. CONTACT THE PARTICIPANT FOR INFORMATION PERTAINING TO CERTIFIED ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS. AD00000949

LABEL 16	
LABEL 17	
LABEL 18	DUTY CYCLE TIME 10 MINUTES AD00000946

LABEL 20		
LABEL 22	KAR 72	
	KAR 82	
LABEL 23		
LABEL 24	LT	

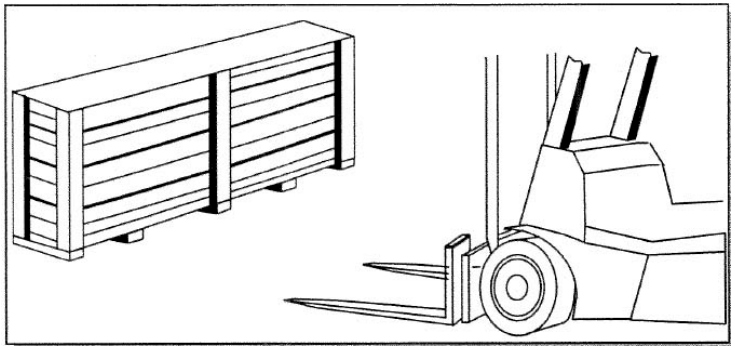
4. INSTALLATION

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).
- harness using dedicated straps

PACKING LIST

VERSION OF LIFT	WEIGHT	
	Table kg	Control unit kg
KAR N	~ 2000	~ 400
KAR CT		
KAR CA		
KAR N-LT	~ 2600	~ 400
KAR CT-LT		
KAR CA-LT		

KAR is usually sent in 4 packages:

- ✓ Right platform
- ✓ Left platform
- ✓ Control unit
- ✓ Accessories

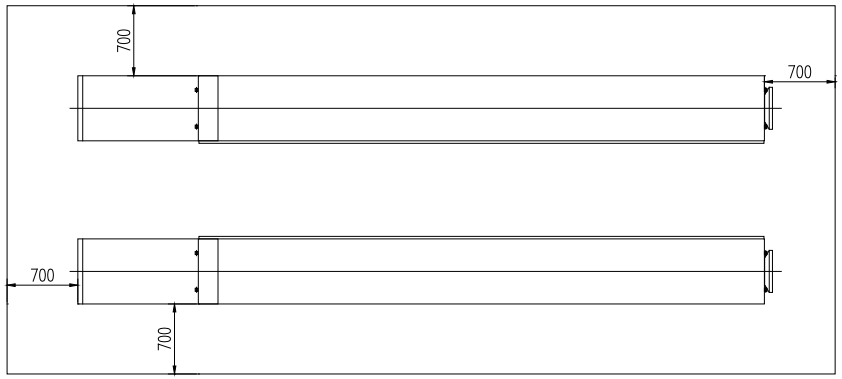
The packages may vary according to:

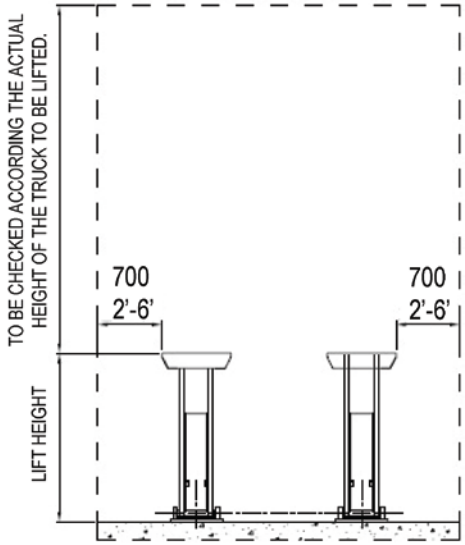
- the size of the lift;
- the type of shipment;
- the packaging used, subject to customer's request;
- the destination country.

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 or 27,5 inches.
The control unit must be positioned so that the operator has a full view over the lift area.



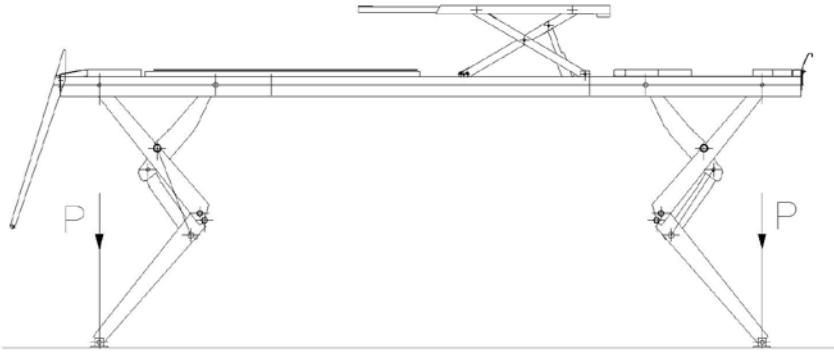


WORK AT A ROOM TEMPERATURE OF
-10 TO 40 ° C.
14 TO 104 °F
(Indoor use only)
(Not approved for outdoor use)

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

FOUNDATION	Tamped
THICKNESS OF CONCRETE	≥ 14 cm / 5.5 inches
CONCRETE RESISTANCE CLASS	≥ C 25 / 4000 psi
IMPROVED ADHERENCE STEEL GIRDERS	Type FeB 44 K
REINFORCEMENT GIRDERS FOR LARGE SURFACES	Electro welded mesh
REINFORCEMENT GIRDERS FOR SMALL SURFACES	Bent irons
FLATNESS	± 1 / 1000

If the floor characteristics are not available, foundations must be provided underneath the lift's clamping holes.
“Ensure a qualified person should be consulted to address seismic loads and other local or state requirements”.



MAX. PRESSURE (*)	Kg/cm^2	≤ 2,5
	psi	≤ 35,6

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:

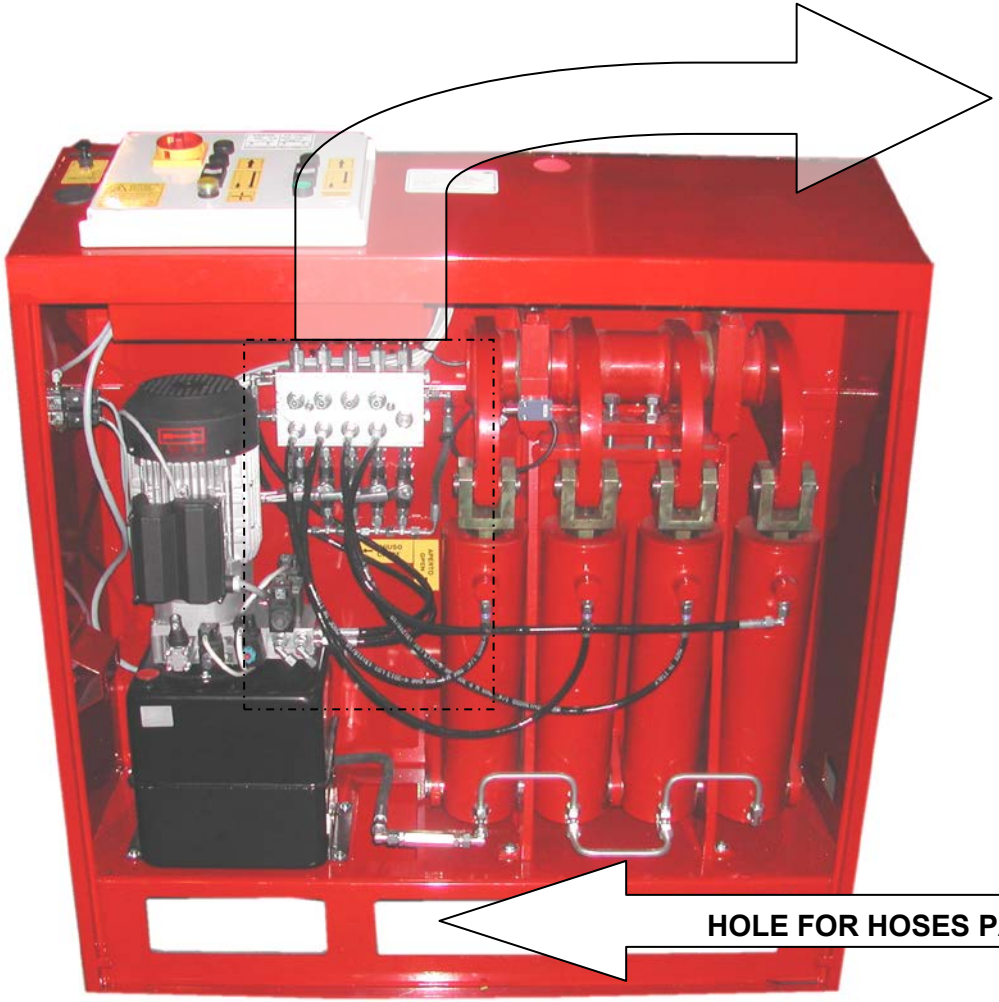
1. connect the hoses provided, which lead out of the control unit with their respective inputs to the lift
   (see paragraphs: *Hydraulic, pneumatic, electrical connection).*
2. Fill the circuit MASTER/SLAVE and remove air from the same circuit.
   (see paragraphs: *Filling of the circuit Master-Slave*)
3. Fix the legs of the lift with the raw plugs at the correct distance and perfectly levelled.
   (see paragraphs: *Lift position* and *Anchorage capsule installation*)
4. Carry out all due tests before using the lift.
   (see paragraphs: *Check* and *Checks before use*)

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*

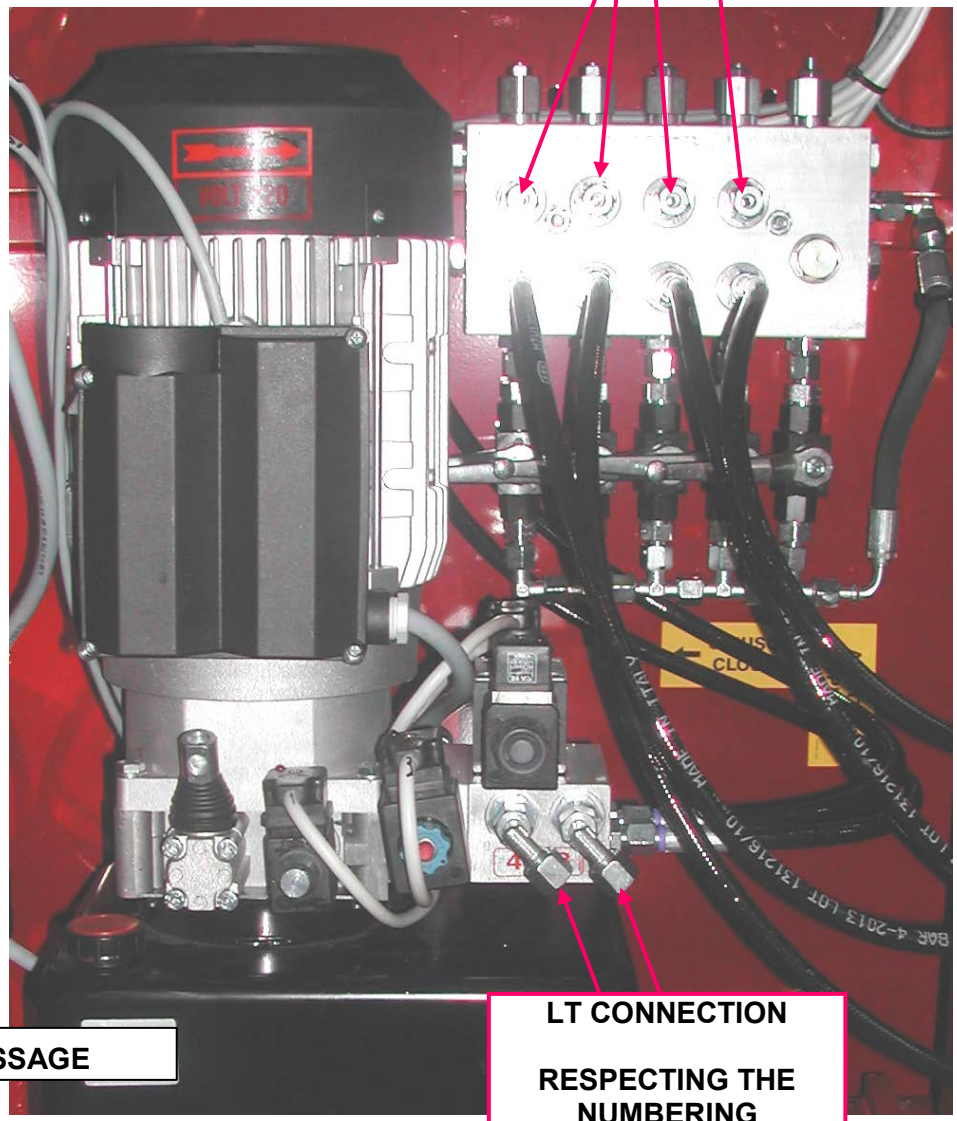
4.4.1. Hydraulic connections

- Open the control unit door
- Bring the hydraulic hoses from the lift to the control unit, through the hole at the base of the control unit.
- Join the hoses to the hydraulic blocks (see photo).



HOLE FOR HOSES PASSAGE

JOIN THE HOSES



LT CONNECTION

RESPECTING THE NUMBERING
4-3

4.4.2. Pneumatic connection

- Uncoil the pneumatic hose connected to EV2 and EV6 (for LTS optional).
- Bring the pneumatic hose from the control unit to the lift, through the hole at the base of the control unit.
- Join the hoses from the platform with the hose from the control unit with a tee-piece joint.

4.4.3. 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.

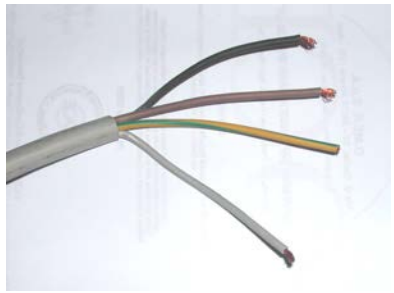
Power cables must have a suitable section for absorbing current, without deviations for other utilities.

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.



The electric power cable should be AWG12 wire at least.

The supply line must be sized to avoid voltage drop larger than 2% of the main supply voltage.

Attention:

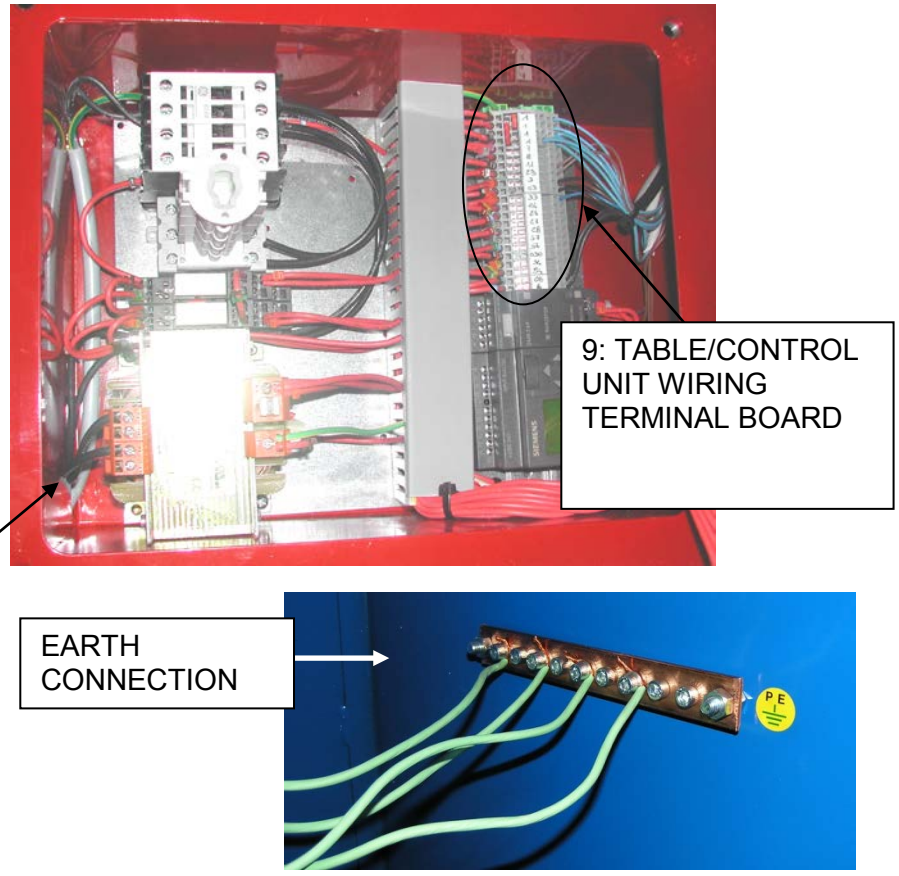
- power the lift's electrics system using a line fitted with a mains switch and without any other junctions.
- The devices fitted to provide protection against short circuits must take into account the features of the electrical equipment:

NOMINAL POWER		kW	2,2
		HP	3,0
VOLTAGE		V	208
No. of phases			1
FREQUENCY		Hz	60
NOMINAL CURRENT		A	20
PICKUP CURRENT		A	120
PROTECTION	FUSE (DELAYED)	A	2,2
	FUSE (FAST)	A	3,0
	THERMOMAGNET	A	208

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

the connecting cable that powers the safety limits switches on the lift must:

- be adequately protected against the mechanical actions it may be exposed to during use.
- Be passed through the dedicated cable glands (8) and connected to the terminal board (9) inside the electric panel, respecting the numbering of the cable.



4.5. *Filling of the circuit Master-Slave*

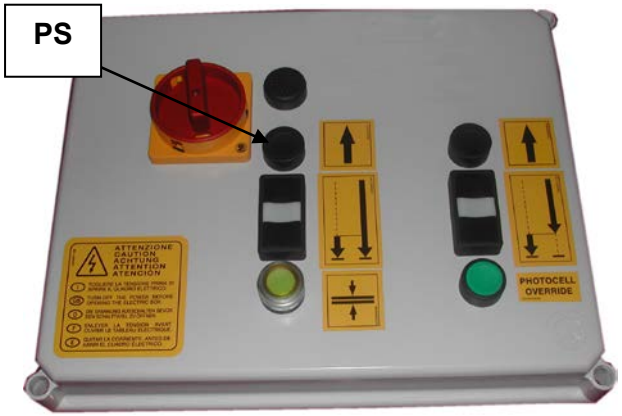
⚠CAUTION

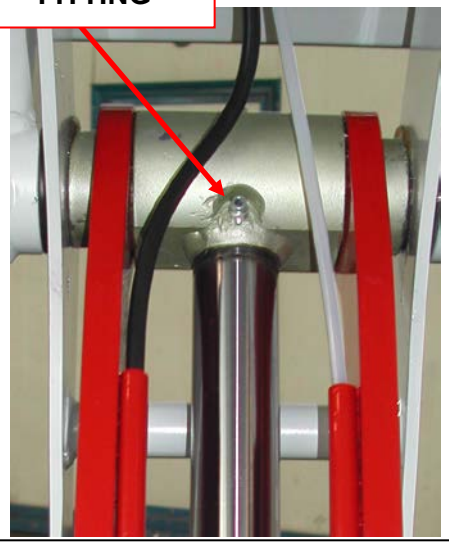
PROCEDURE TO BE EXECUTED:
- WITH LIFT COMPLETLY DOWN
- ONLY DURING THE INSTALLATION

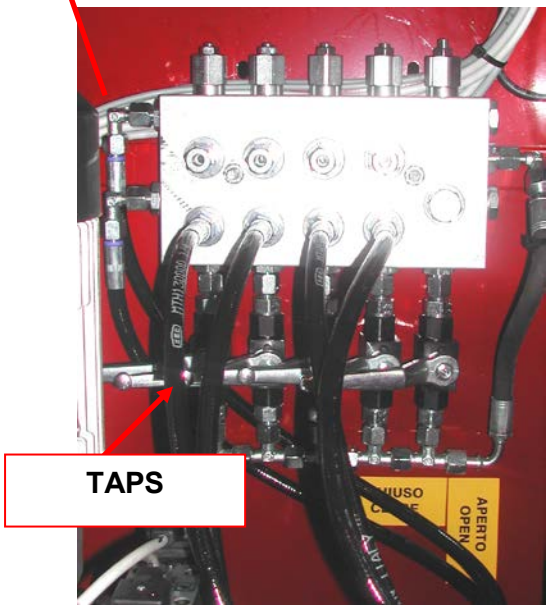
1. Open the taps
2. Push button PS /UP till when the lift starts lifting (about 15/20')
3. Maintain pushed the button PDA and PDB for 15/20 seconds after the complete lowering of the lift
4. Repeat points 2 and 3 for the second time
5. Close the taps
6. Push PS till complete opening of the dividor
7. Open the taps
8. Push PS till when the lift reaches the max heigh (the unlevelling of the platforms shouldn't be more than 20 cm)
   a) For each cylinder: allow air to escape from the air valve till when it comes out only oil

Repeat point 8a for all cylinders

9. Push PS till when the lift reaches the max height
10. Close the taps







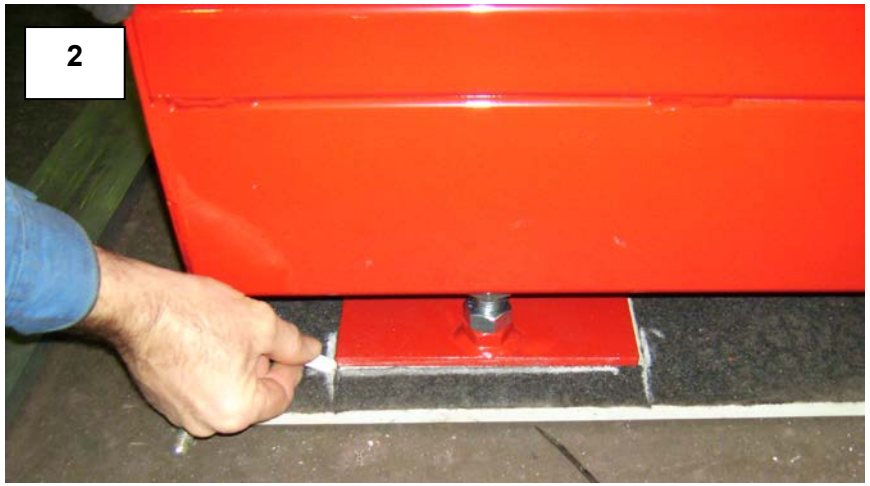
4.6. *Lift position*

1. Place the lift on floor
   a. aligned
   b. in parallel
2. Mark on floor the position of the base frames
3. Lifting

Note: normally the plates move out.

4. For each platform:

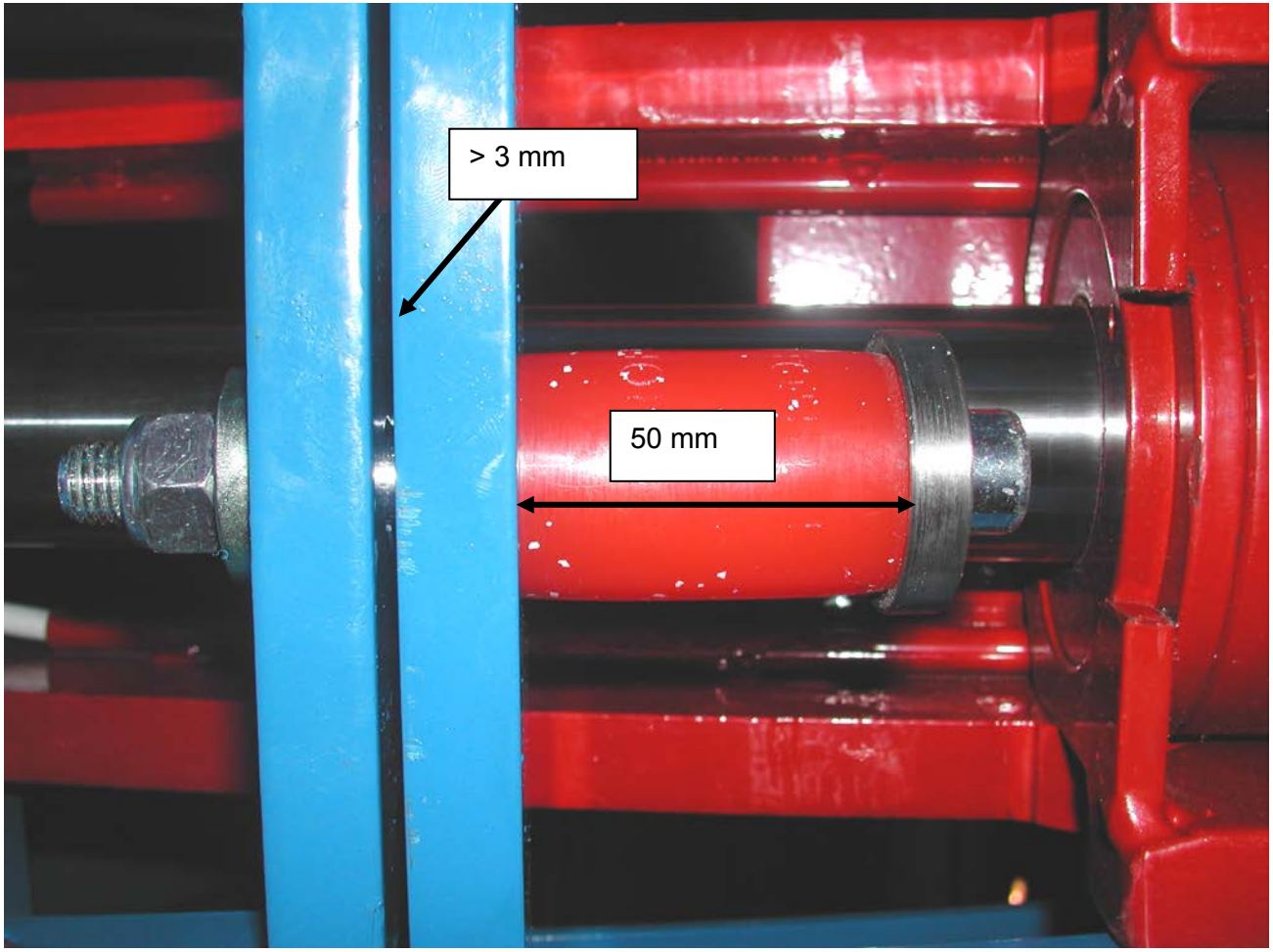
- Put the base frames again in the position alongside the realized line on floor.
- Fix the frames in the position.
- Repeat the above-said steps for the other plate



4.7. *Check*

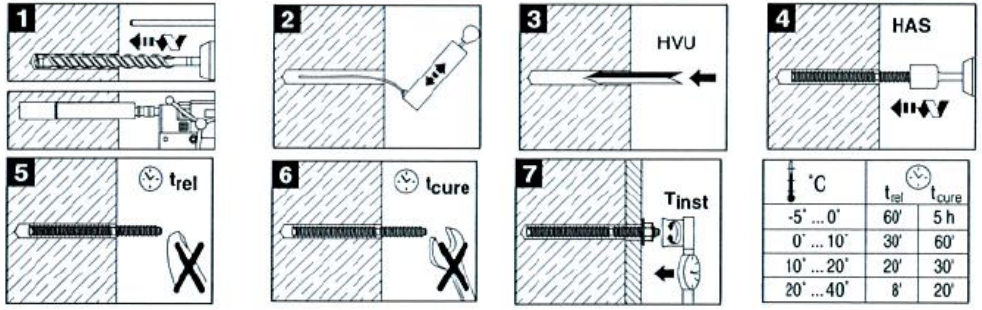
1. Check that the gap is of > 3 mm
2. Screw the nut up to the time that the high of the spring is of 50 mm.

The springs of the legs are adjusted in the factory for the use

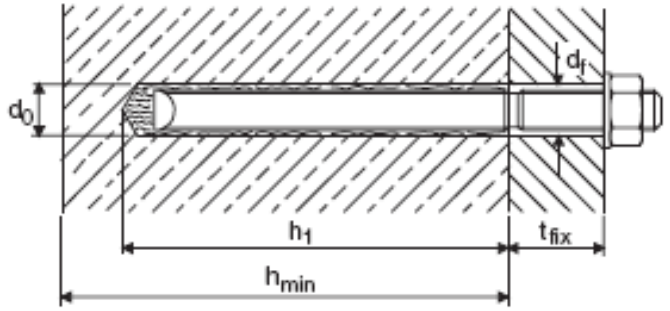


4.8. *Anchorage capsule installation*

1. Drilling the hole;
2. Clean the inside of the hole;
3. Push the anchor capsule into the drilled hole;
4. Driving the anchor rod into the hole;
5. Waiting for the solidification time (t_{rel})
6. Waiting for the hardening of the compound (t_{cure});
7. Close with the prescribed tightening torque(T_{inst}).



TYPE OF ANCHOR CAPSULE			HVU M12X110
TYPE OF ANCHOR ROD			HAS M12X160
DRILL BIT DIAMETER	d0	mm	14
MIN. BORE DEPTH	h1	mm	110
MIN. THICKNESS OF CONCRETE	h	mm	140
LIFT BASE SPACER		mm	28
HOLE DIAMETER		mm	14
TIGHTENING TORQUE	T_{inst}	Nm	50
DRILL BIT	TE-T		14/22
NUMBER OF PINS		N°	16



ANCHORAGE CAPSULE POSITION

KAR 72-82 BASE

A = OBLIGATORY ANCHORAGE CAPSULE

4.9. *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.	☐
2	GAP between the plates and the height of the spring.	*(see: Check)*	
3	Sturdiness of anchors fastening to the floor.	Tightening torque (50 Nm)	☐
4	Pneumatic connections.	Diagram *(*see: *Pneumatic diagram paragraph)*	☐
		Air leakage	☐
5	Hydraulic connections.	Diagram *(*see: *Hydraulic Diagram paragraph)*	☐
		Oil leakage	☐
		Pressure	☐
6	Wiring.	Diagram *(*see: *Wiring Diagram)*	☐
7	Safety devices.	*(See: Safety device features paragraph)*	☐
8	The compressed air system must be powered by filtered and lubricated air	Presence of a filtering system.	☐
9	Oil level.	Oil level rod	☐
10	Direction of rotation of motor.	Arrow on motor	☐
11	Plant cable and piping protection.	Cable and pipe runs provided.	☐
12	In case of upstroke from opposite side to the torsion bar.	Presence of up ramp (optional).	☐
13	Never load vehicles whose overall dimensions exceed those of the lift.	Loading conditions *(*see paragraph: *Loading conditions)*	☐
14	Never load vehicles weighing more than the lift's nominal capacity.	Capacity indicated on plate.	☐
DATE		**SIGNATURE**	

4.10. *LIFT OPERATIONAL TEST*

4.10.1. Lift Operation

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

4.10.2. Caution

✓ Avoid sudden “starts and stops” during loading and unloading of vehicle

4.10.3. To Load a Typical Vehicle

✓ Position vehicle on the lift runways by using the approaching ramp. Make sure 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.

4.10.4. 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.**

4.10.5. 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 locks, 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 final lowered position.
✓ Lower lift completely to the floor. Carefully drive off the vehicle from the lift runways

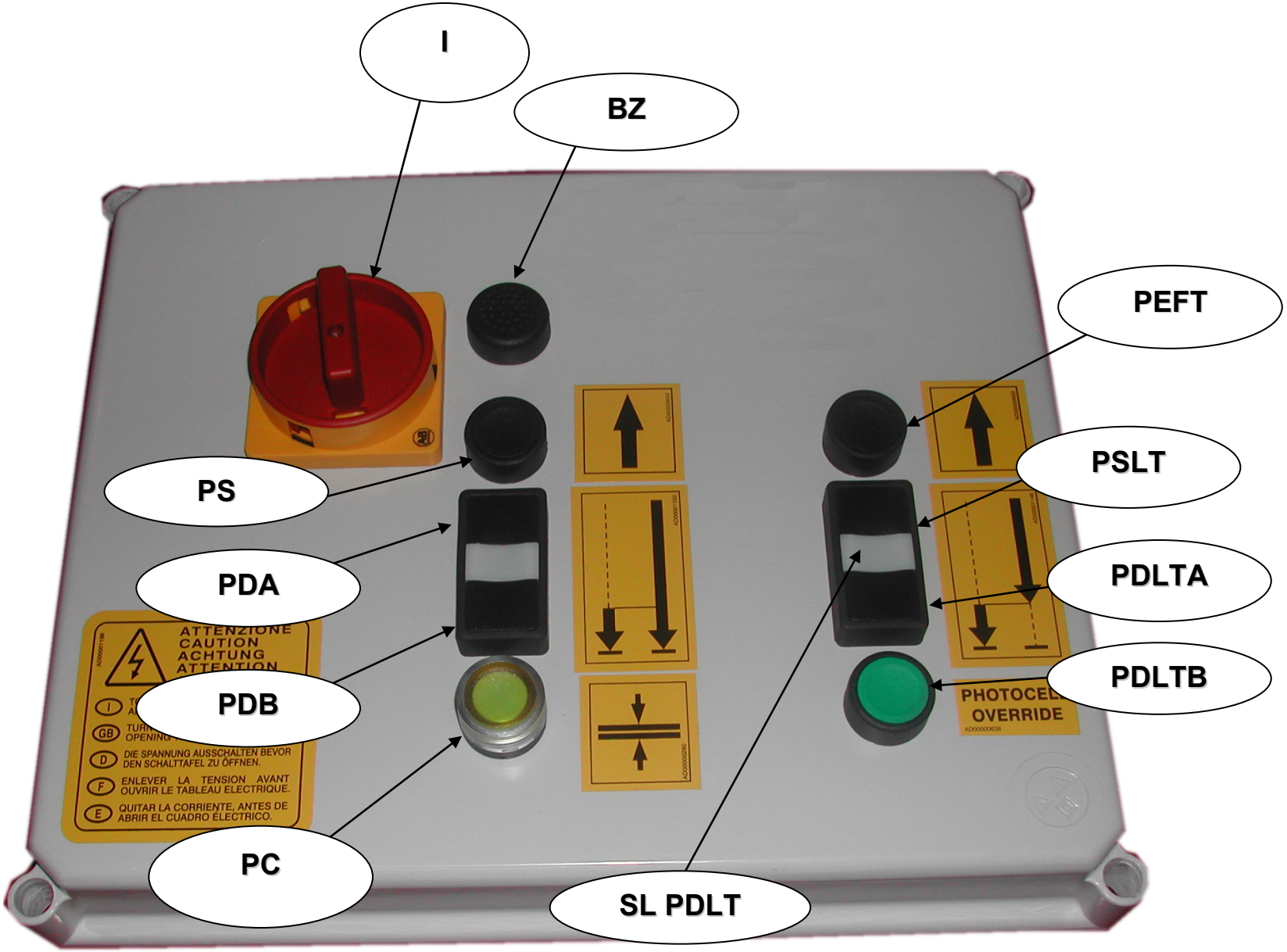
5. USE

Adressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

5.1. *Operation commands*

I	***SYSTEM MAIN SWITCH:*** Activating this switch, the control panel in enable.
PS	***TABLE UP BUTTON***: Activating this switch, the vehicle lift begins lifting.
PC	***PLACE IN MECHANICAL SAFETY CONDITIONS BUTTON:*** having been raised to the desired height using the button PS, if the command is given, the lift automatically locks in the nearest mechanical safety position
PDA **PDB**	***TABLE DOWN BUTTON:*** 1 By pressing the button **PDA**, the lift: a) Rises a little bit in order to unlock the mechanical locks. b) Starts the lowering. c) Stops when the platform height is about 500 mm from the ground. 2 Press together the buttons **PDA** e **PDB** in order to end the last lowering phase ; the buzzer sounds (BZ).
PDLTA **PDLTB**	***LT DOWN BUTTON:*** 1 By pressing the button **PDLTA**, the auxiliary lift LT: a) Starts the lowering. b) Stops when the LT platform is about 120 mm from the lift platform. 2 The lamp **SL PDLT turns on** 3 Press together the buttons **PDLTA** e **PDLTB**, in order to end the last lowering phase ; the buzzer sounds (**BZ**).
SL PDLT	***LOWERING LT LAMP:*** the lamp informs that: • Both the LT platforms are at the same level before the final lowering will be completed • The last LT lowering phase can be done
BZ	***BUZZER***
PEFT	***CUT-OFF KEY SWITCH PHOTOCELLS:*** the tables are provided with photocells to check platform synchronisation. If there is a difference in height of more than 50 mm, the photocells interrupt the electric circuit that powers the control unit (24 Volts). Use the PEFT key to exclude the photocells; in this case, by keeping the PEFT button turned it is also possible to perform the upstroke (PS) and downstroke operations (PD).


I
BZ
PEFT
PS
PSLT
PDA
PDLTA
PDB
PDLTB
PC
SL PDLT
ATTENZIONE
CAUTION
ACHTUNG
DIE SPANNUNG AUSSCHALTEN BEVOR DEN SCHALTTAFEL ZU ÖFFNEN.
ENLEVER LA TENSION AVANT OUVRIR LE TABLEAU ELECTRIQUE.
QUITAR LA CORRIENTE, ANTES DE ABRIR EL CUADRO ELECTRICO.
OVERRIDE

5.2. *Use advice*

We suggest to carry out the following procedure:

PROCEDURE	WHEN	PURPOSE	SEE YOU	
			CHAPTER	***PARAGRAPH***
Platforms levelling.	Once a week.	To replace the normal outflow of the hydraulic components.	*Maintenance*	*Platforms levelling.*
Manual check of the photocells	Once a day	To check the correct functioning of the photocells.	*Maintenance*	*Photocells - (Functioning test)*

6. MAINTENANCE

Addressees:

- 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. *Ordinary/extraordinary maintenance*

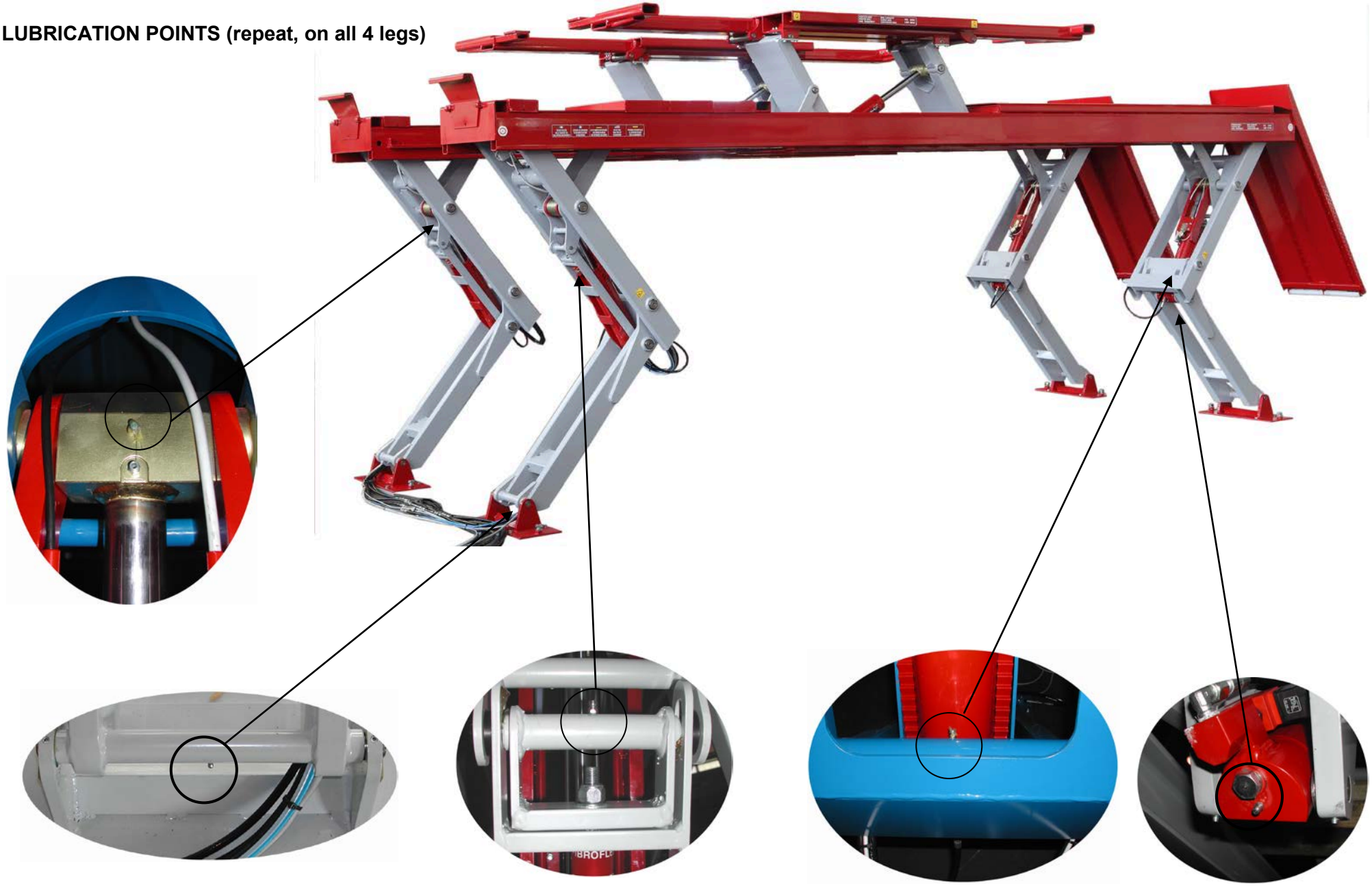
We recommend the following ordinary and extraordinary routine maintenance operations

CAUTION **Note: Before starting any maintenance on the lift, please ensure the lift system has been "lockout / tagout" as per ANSI Z244.1**

		WHERE	WHAT	MACHINE STATUS	HOW	TYPE OF GREASE	TYPE OF LUBRICANT
ORDINARY	80 h	UNDER BASE PLATFORM	SLIDERS	OFF	GREASE	MOLYCOTE G-4700	
	80 h	PNEUMATIC CIRCUIT	CYLINDER - TUBE UNIONS	IN MOTION	VISUAL INSPECTION		
	80 h	STRUCTURE	PINS AND SUPPORTS	OFF	LUBRICATE GREASE	MOLYCOTE G-4700	
	80 h	HYDRAULIC CIRCUIT	CYLINDER - TUBE UNIONS	IN MOTION	VISUAL INSPECTION		
	3 months	STRUCTURE	PHOTOCELLS	IN MOTION	CHECK OF THE CORRECT WORKING		
EXTRAORDINARY	12 months	HYDRAULIC UNIT	TANK + FILTER	OFF	CLEAN		
	12 months	HYDRAULIC UNIT	TANK	OFF	OIL CHANGE (if required by the oil dirt)		HYDROIL GF 46
	12 months	STRUCTURE	BUSHES	OFF	CHECK OF THE WEAR		
	12 months	ELECTRIC CIRCUIT	ELECTRIC SECURITIES	IN MOTION	CHECK OF THE CORRECT WORKING		
	12 months	STRUCTURE	SAFETY LOCKS	OFF	INTEGRITY CHECK		

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

LUBRICATION POINTS (repeat, on all 4 legs)



LUBRICATION POINTS: LT OVERSIZE

6.2. *Table adjustment procedures*

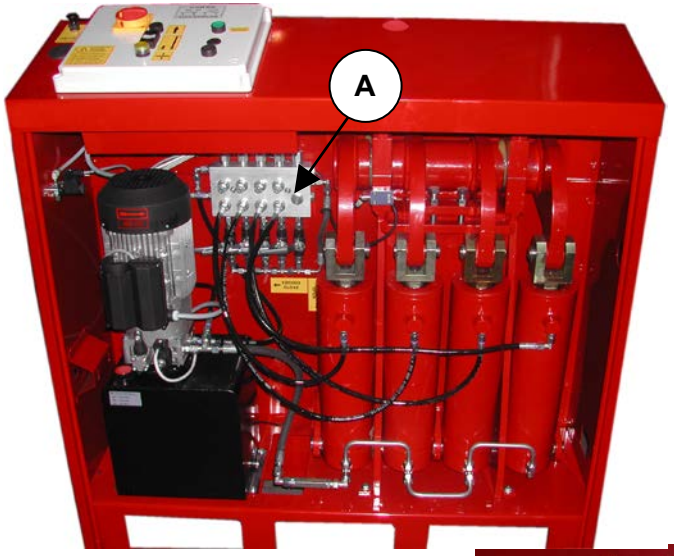
6.2.1. Maximum pressure valve calibration

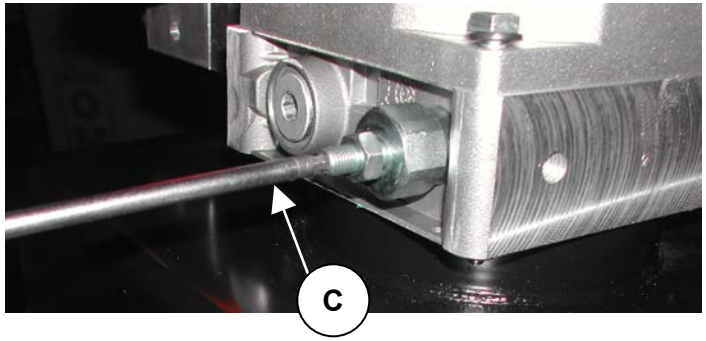
WARNING

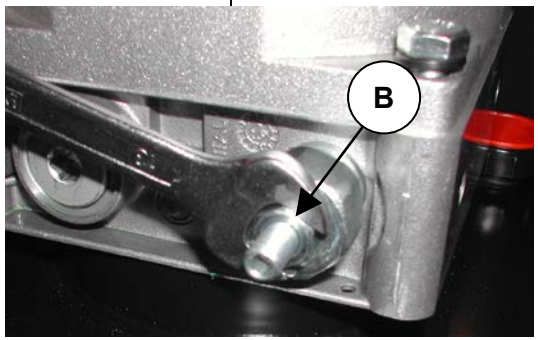
The calibration of the valve must be execute by specialized people and authorized by the manufacturer. After the calibration the valve must be sealed for example with sealing wax.

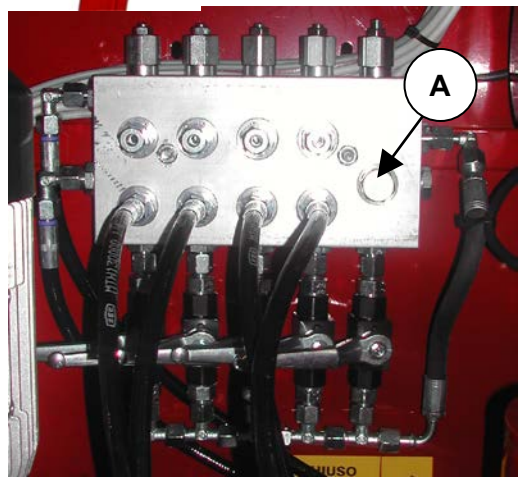
1) Take the table to maximum height.
2) Connect a pressure gauge to the output (part. A)
3) Loosen the nut by turning two revolutions anticlockwise (part. B)
4) Keeping the up command pressed, check the pressure on the pressure gauge.
5) Adjust pressure with a screwdriver: (part. C)
   Turn clockwise to increase calibration pressure
   Turn anticlockwise to reduce calibration pressure
6) When the pressure is equal to P, fix the loosened nut at point 3.

PRESSURE	**P**	**KAR 72**	bar	240
			psi	3481
		KAR 82	bar	260
			psi	3771







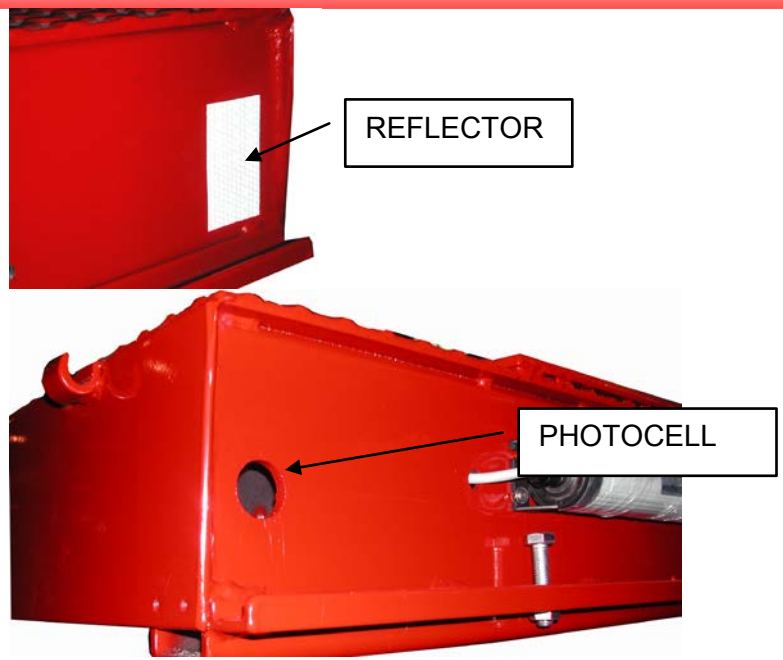


6.2.2. Photocell

6.2.2.1. Alignment

WARNING

The alignment procedure of the photocells has to be carried out from specialized people and authorized from the manufacturer.



NORMAL STATUS	• RED LED ON
STOP STATUS	• RED LED OFF
POSITIONING CHECK	• with a sheet parallel to the reflector move downwards • check when the RED LED is switched off. • mark the position
	• with a sheet parallel to the reflector move upwards • check when the RED LED is switched off. • mark the position
	• the work field is between the two marks
	• the lift's permitted operating field must be ±50mm.

6.2.2.2. Functioning test

Interrupt "photocells beam" using a matt object and check:

A	With vehicle lift stopped	The lift can be not activated from the control panel
B	With vehicle lift on the go	The lift movement has to stop

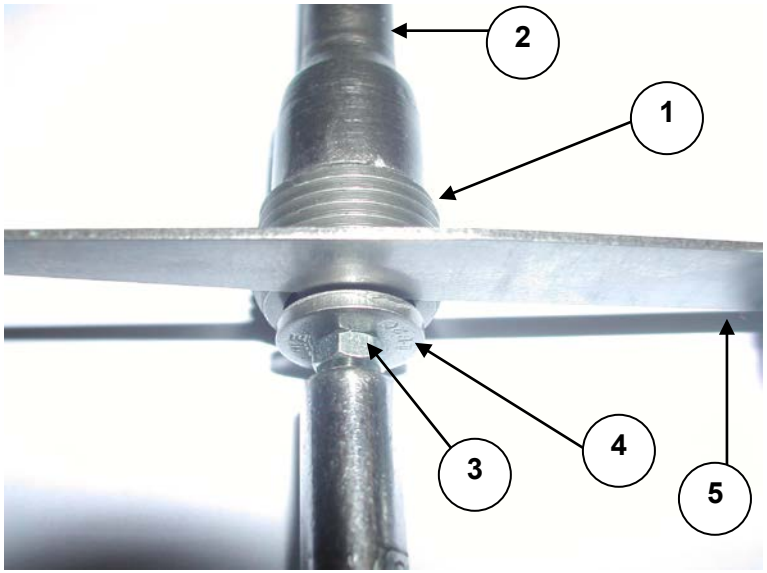
6.2.3. Parachute valve

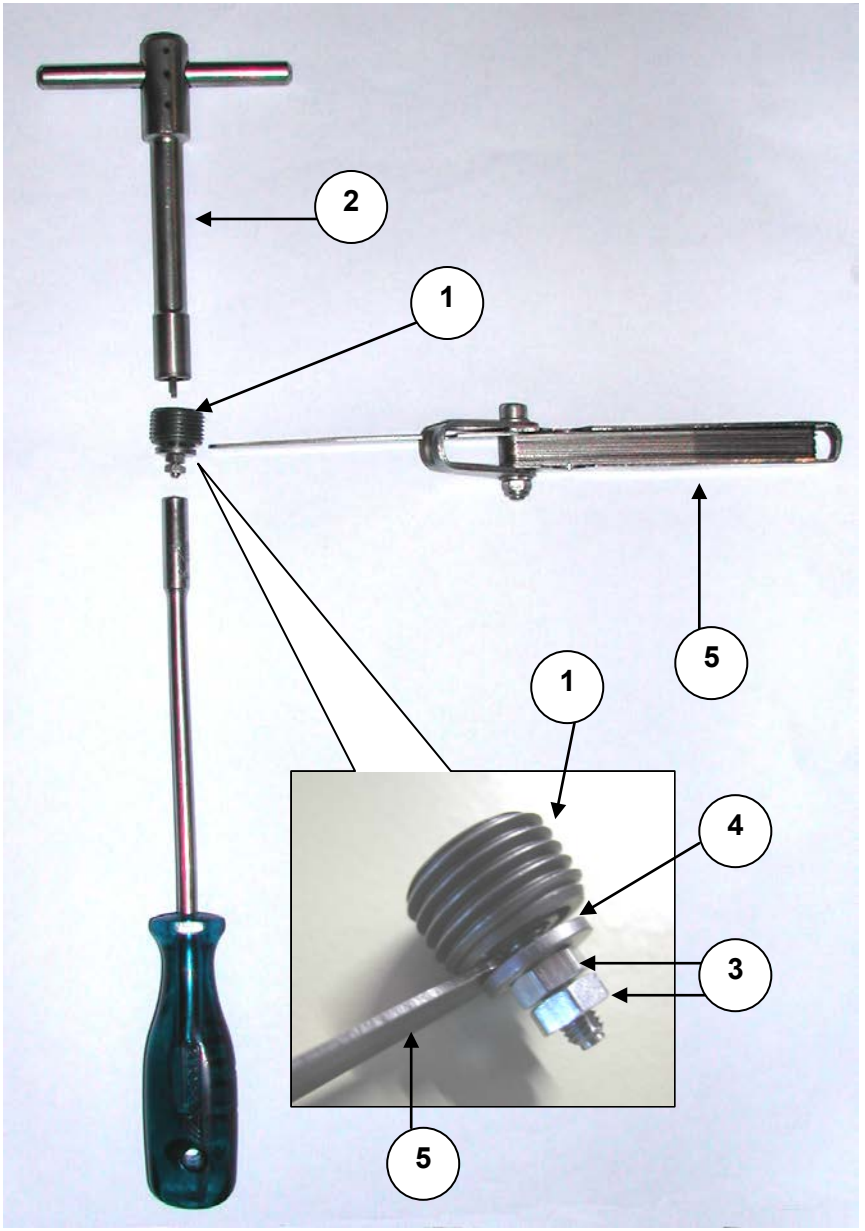
WARNING

The calibration of the valve must be execute 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.



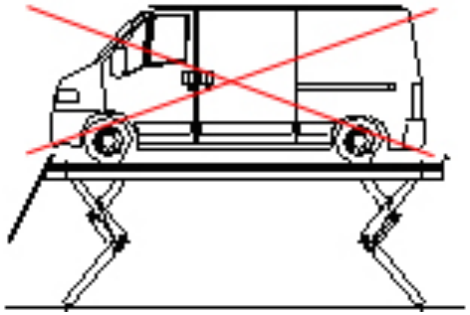


6.2.4. Platforms levelling

YES

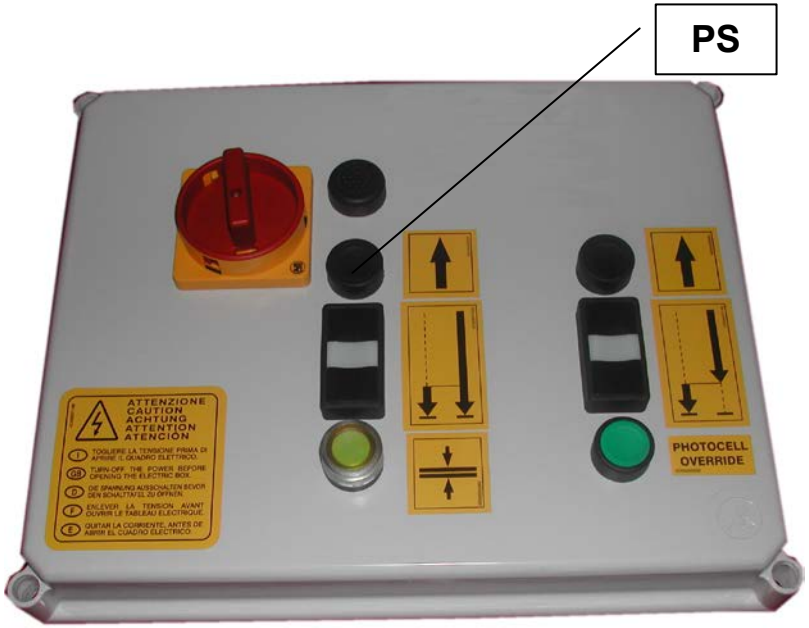
DANGER

NO



THE PROCEDURE OF PLATFORM LEVELLING MUST BE EXECUTE STRICTLY **WITHOUT THE CAR ON THE LIFT**.

1. Lift using the bottom of " upward " PS till the max high.
2. Turn the taps on.
3. Push PS/UP
4. Turn the taps off



6.2.5. Unblocking safety locks

WARNING

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

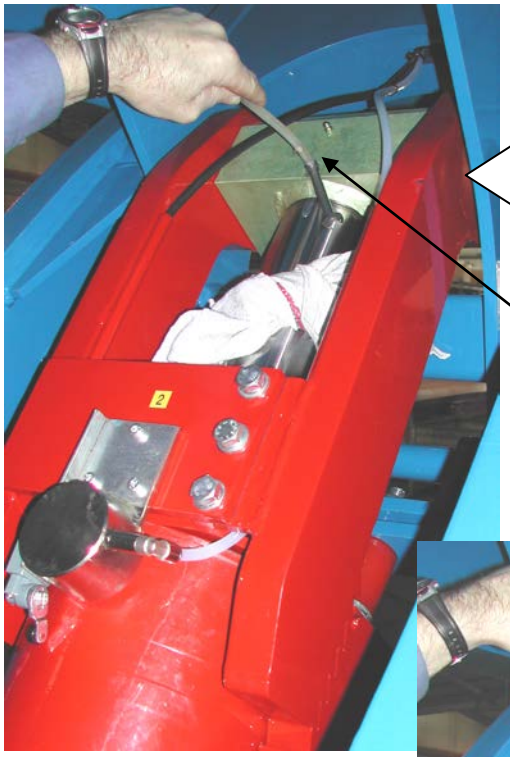
Procedure to be done, when a “safety lock” is in blocking position:

1. Open the feed valve of the slave circuirt 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.

6.2.6. 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.



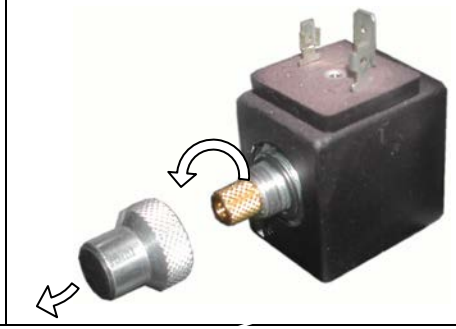
6.3. *Safety manoeuvres*

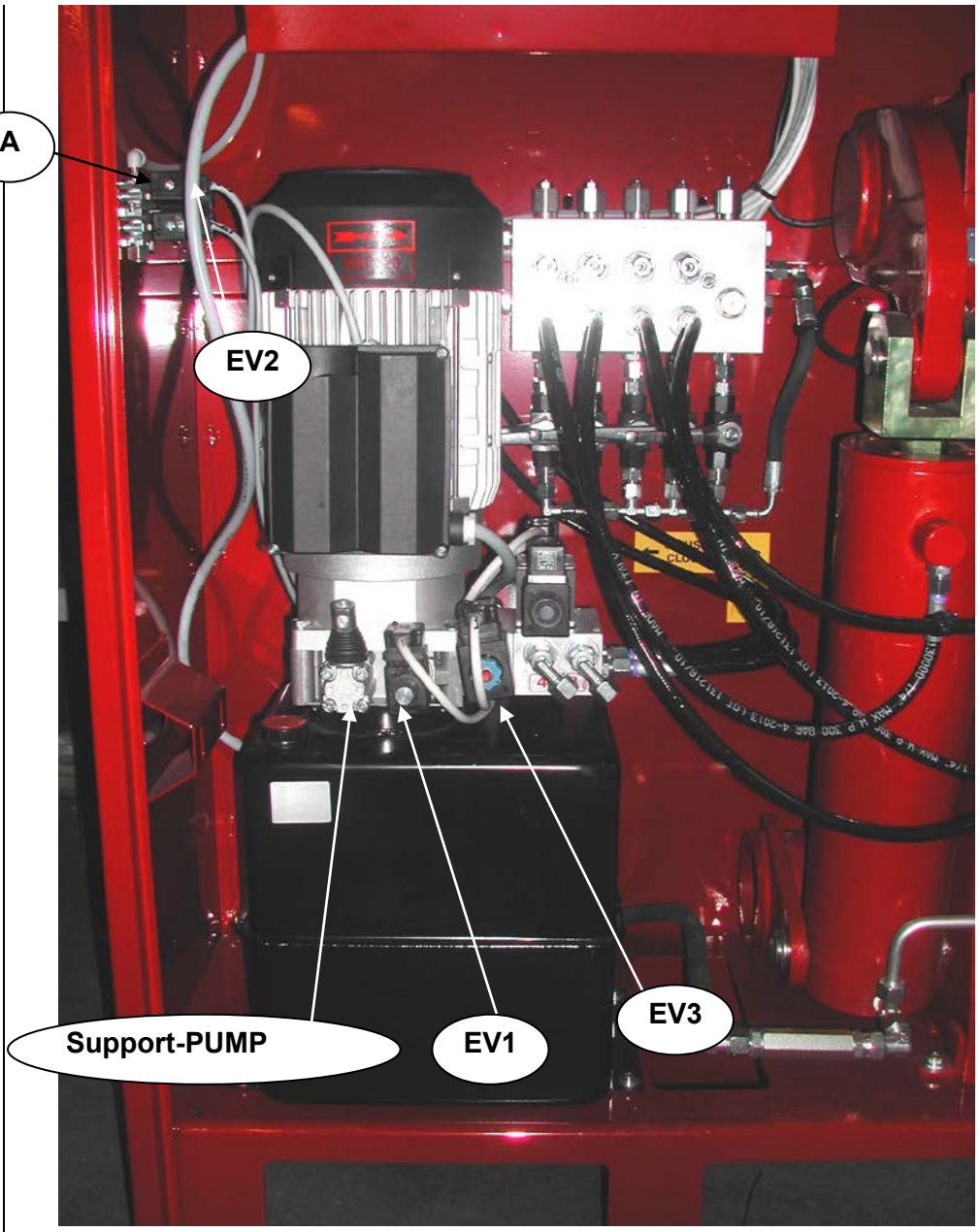
MANUAL DOWNSTROKE MANOEUVRE
WITH HAND PUMP
(accessory available on request)

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

- insert the lever on the dedicated pump support;
- unscrew the lock nut on valve EV3, fully unscrew the knurled pin (see photograph) and allow the table to lower;
- pump until the safety jacks move away from the block position;
- activate jack opening using the dedicated manual valve on solenoid valve EV2 (turn screw **A** through 90°);

  ENSURE THAT THE ALL 4 MECHANICAL SAFETY DEVICES ARE OPEN.
- unscrew the lock nut on valve EV1, fully unscrew the knurled pin (see photograph) and allow the table to lower;
- to restore, return the manual command of valve EV2 to its position and tighten the knurled pins.

EV1 EV3	 



6.4. *Abnormal operation*

WHAT HAPPENS	WHERE	CHECK
The lift does not rise and the motor does not start	a. FUSES b. THERMAL RELAY c. TRANSFORMER d. MOTOR e. CONTACTOR f. PHOTOCELLS	a.1. line fuse blown. a.2. 24-volt fuse blown. b.1. thermal relay tripped, re-cock. c.1. transformer burnt out, does not emit 24 volt. d.1. motor short-circuited or burnt out. e.1. contactor C1 burnt out f.1. photocell fault. f.2. photocells out of reading range
The lift does not rise and the motor starts.	a. HYDRAULIC PUMP b. DISCHARGE VALVE c. LIMIT VALVE d. MOTOR	a.1. o-ring seal broken. a.2. key broken. a.3. aspiration tube broken. a.4. clamping screws loose. a.5. check oil leakage. a.6. check the pressure value b.1. EV1 remains open. c.1.limit valve broken. d.1. Check that the motor turns in the direction shown by the arrow.
The lift does not lower and the pressure is normal.	a. PHOTOCELLS b. TRANSFORMER c. HYDRAULIC VALVE d. ELECTRIC VALVE e. MECHANICAL SAFETY DEVICES f. AIR VALVE	a.1. photocell fault. a.2. photocells out of reading range b.1. transformer burnt out, does not emit 24 volt. c.1. EV1 blocked. c.2. check the parachute valves on the bottom of the dual effect cylinders. d.1. EV1 24 V coil burnt out. e.1. mechanical safety devices mechanically blocked. f.1. EV2 air blocked (does not open the mechanical safety devices). f.2. EV2 requires power.
The lift rise not levelled	a. CYLINDERS b. VALVES	a.1. air in the circuit. a.2. seal wear: SLAVE and/or MASTER b.1. oil leak from the filling valves
Metallic noise	a. BUSHING	a.1. bushing wear
Raising intermittently	a. PINS	a.1. pins damage

CAUTION

Replace worn, damaged or broken parts with parts approved by the original equipment manufacturer or with parts meeting original manufacturer specifications

7. ACCESSORIES

CODE	DESCRIPTION	PHOTOGRAPH
	LIFT CROSSMEMBERS for light industrial vehicles	 
4033043100	LED LIGHTING SYSTEM	
	P.P.G. for motor vehicles with 2 rectangular movements	 
	P.P.G. for motor vehicles with 4 rectangular movements	
3036803520	KIT REFLECTOR / PROTECTION FOR CAR WASH	