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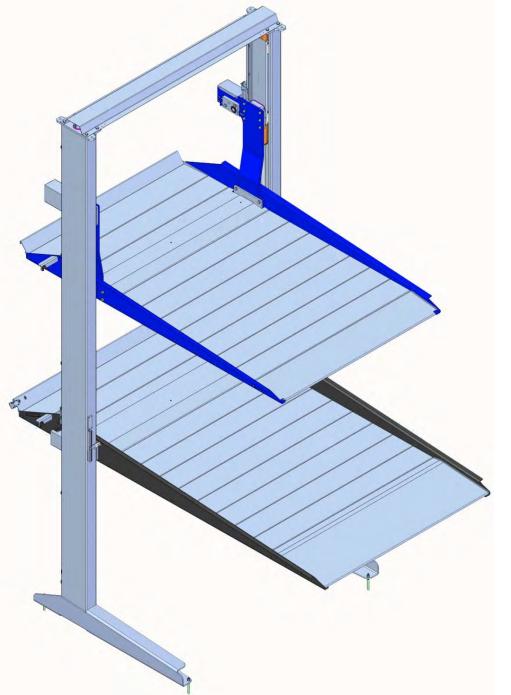




Capacity 2500 Kg for each platform

Noise emission 70dB(A)

INSTALLATION MANUAL



(6

EN: TRANSLATION OF THE ORIGINAL INSTRUCTIONS



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1. Symbols used in the manual

The signage (ISO) indicated below is used within this manual to focus attention on those operations that must be performed carefully in order to guarantee safety during installation.

	GENERAL DANGER	Indicates that, when performing the operation, great care must be taken to prevent the onset of events that could cause serious injury or damage.
4	ELECTRICAL DANGER	Indicates that, when performing the operation, an event (of an electrical nature) could arise leading to injury or damage.
-in	DANGER OF PINCHING	Indicates that, during installation or transport of system components, suitable lift equipment must be used and utmost attention applied.
	DANGER OF FALLING	Indicates that, during installation, the operator crosses zones where there is high risk of falling; always be particularly careful.
	IMPORTANT	Indicates that the indications or instructions described in the text must be followed to the letter. Non- compliance with the indications can be dangerous for the operator and can damage the system.
0	PROHIBITION	Indicates that the specific activity or operating sequence must be avoided



2. Introduction

Target:

- OPERATORS/SKILLED TECHNICIANS.

	 Before starting installation, always check that: the installation site has the required characteristics the necessary utilities are available adequate guards have been installed as described in the chapter "Safety - Customer requirements" in the User's Manual. The platform complies with the certification issued by O.ME.R. only if the installation site meets the indicated requirements.
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3. Scope and content

This manual describes the operations needed to install and start up the triple car stacker system.

During the various phases of activity, the installer must follow all national standards regarding safety in the workplace.

If particular situations not described in this manual are encountered, interrupt the work and notify the manufacturer.



4. Safety

Before starting installation, make certain that all necessary P.P.E. (personal protection equipment) is available. We recommend using the P.P.E. required by current law.

4.1. Safety signage

Below is an indication of the yard standard safety signage

	WORK GLOVES	Must always be worn while in the yard.
	SAFETY SHOES	Must always be worn while in the yard.
	SAFETY HARNESS	Must always be worn when working inside the shaft and on scaffolding higher than 2 m.
	HELMET WITH CHIN STRAP	Must always be worn while in the yard.
	EAR PROTECTION	Must always be worn while using noisy equipment.
000	SAFETY GOGGLES/GLASSES	Must always be worn while in the yard.

5. Preparation of the yard

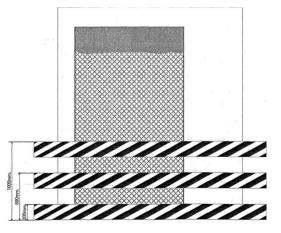
5.1. Work to be performed before starting installation

Before starting installation, perform the following operations:

- 1 Check that the safety guards are properly installed on all doors at all floors, as indicated in the drawing below, and that the pertinent danger signs have been posted.
- 2 Check availability of an electrical power supply line with ground and protected upstream by a magnetothermal differential switch set to cut in at 30mA in compliance with CEI 64/8



Apply net or other form of protection at all doors to prevent objects from falling.





5.2. Building scaffolding

	WARNING:	The scaffoldings must be built in compliance with the following decrees:	
		-It. Pres. Decree 164/1956;	
		-It. Pres. Decree 547/1955;	
1	IMPORTANT:	The supervisor must also check that the shaft complies with the available drawings.	

5m	PIN DRIVE. MASON'S PENCILS. PLUMB LINE WITH MAGNET. METER
	STEEL SAW
kg 2000	No. 3 SAFETY CHAINS CERTIFIED FOR 2000 KG.
tirfor kg 800	TIRFOR WINCH RATED 1500 kg. WITH CABLE AND ACTUATING LEVER
8.06	INSULATED PLIERS. INSULATED SCISSORS. HAMMER
0	SPIRIT LEVEL
	DRILL
	GRINDER

6. Equipment

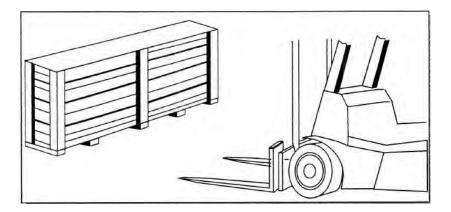
In addition to the standard equipment, the following are required for installation:

SERIES OF SOCKET WRENCHES
SERIES OF FLAT AND PHILIPS- HEAD SCREWDRIVERS
OIL PIPE WRENCHES



7. Transport and handling

- The lift is wrapped in nylon..
- It must be transported with special equipment rated to handle weights higher than that of the part being moved.



When a wooden create is not used, the unit is packaged in plasticized Pluriboll sheet to protect the components.

FOLLOW THE INSTRUCTIONS BELOW:

- protect the electrical control box from the weather.
- protect the electrical box from impacts.
- protect the corners and ends of the piece being transported with suitable material (Pluriboll cardboard).
- harness the unit to the lifting points using special slings



7.1. Weight and dimensions of the packaged lift

	DESCRIPTION	No. OF PACKA GES	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
Α	COLUMNS + SHOULDER + CILINDER	1	5900	600	2000	1200
В	PLATFORM CONNECTION SHOULDER + TORSION BAR + UPPER OMEGA CONNECTION	1	2700	800	500	400
С	SLATS - UPPER PLATFORM	1	2100	600	300	150
D	SLATS - LOWER PLATFORM	1	2200	600	300	150
E	LOWER SHOULDER PLATFORM	1	3500	200	400	150
F	UPPER SHOULDER PLATFORM	1	4200	300	1100	250
G	CONTROL UNIT + ELECTRIC BOX + PUSH BUTTON PANEL	1	500	300	750	50
Н	SCREWS + REGULATIONS' NOTICEBOARD + DOCUMENTS + CABLE (MICRO)	1	600	400	400	50
	ТОТ	8				2400

The packages can vary depending on: - size of the lift

- type of shipment _
- package used, according to customer request _
- country of shipment. _



FOR TRANSPORT, THE CAGE (OR PACKAGED LIFT) MUST BE ADEQUATELY SECURED TO PREVENT IT FROM SHIFTING ON THE DECK OF THE TRANSPORT VEHICLE.



8. Place of installation

8.1. Shaft

Choose an adequate installation site large enough to suit the size of the lift and the chosen hoisting equipment.

The installation site must be fitted with all the plant connections needed to start up the lift.

MAX PRESSURE ON THE FOUNDATION PLATE	Kg/cm ²	≤ 1
1	PROVIDE WATER DRAINAGE AND IMMERSION PUMP	

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

FOUNDATION	Tamped
THICKNESS OF CONCRETE	≥ 20 cm
CONCRETE RESISTANCE CLASS	≥ C 25
IMPROVED ADHERENCE STEEL GIRDERS	Type FeB 44 K
REINFORCEMENT GIRDERS FOR LARGE SURFACES	Electrowelded mesh
REINFORCEMENT GIRDERS FOR SMALL SURFACES	Bent irons
FLATNESS	± 1 / 1000



WORKING TEMPERATURE: DA -10 A + 40 ° C.

When the floor characteristics are not avalaible, a suitabel foundation has to be done below the supporting plates of the platform.

The lift must in any case be fastened to the floor using dedicated chemical anchor capsules.



8.2. Electric supply system

The electric supply system must include:

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

The switch must be positioned in the immediate vicinity of the machine in 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 will 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.

8.2.1. Connection Instructions



The supply electrical cable comply with the standard and is made by four wires of adequate section.

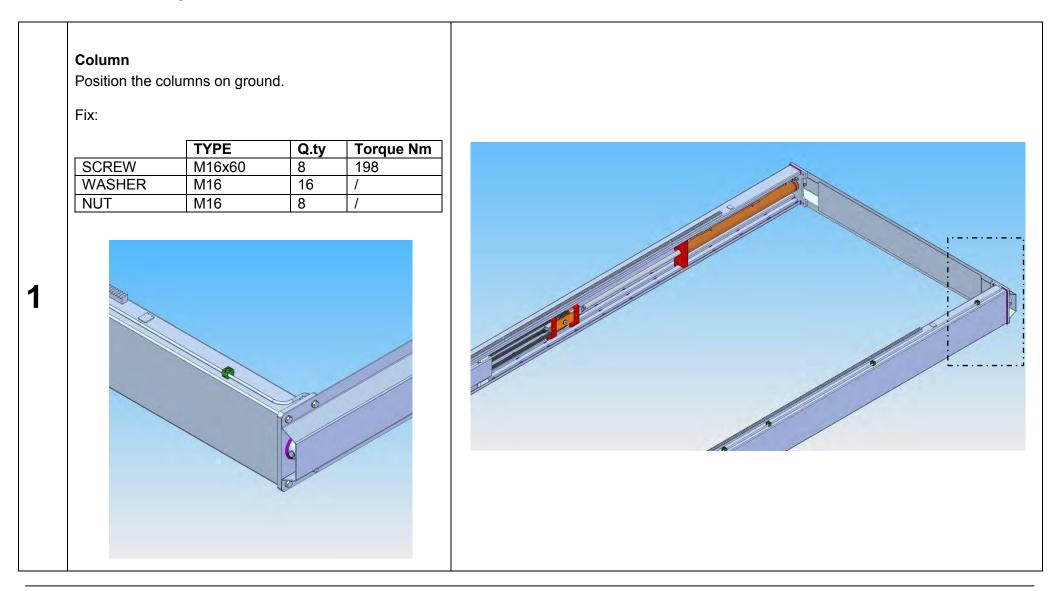
Attention:

- 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:

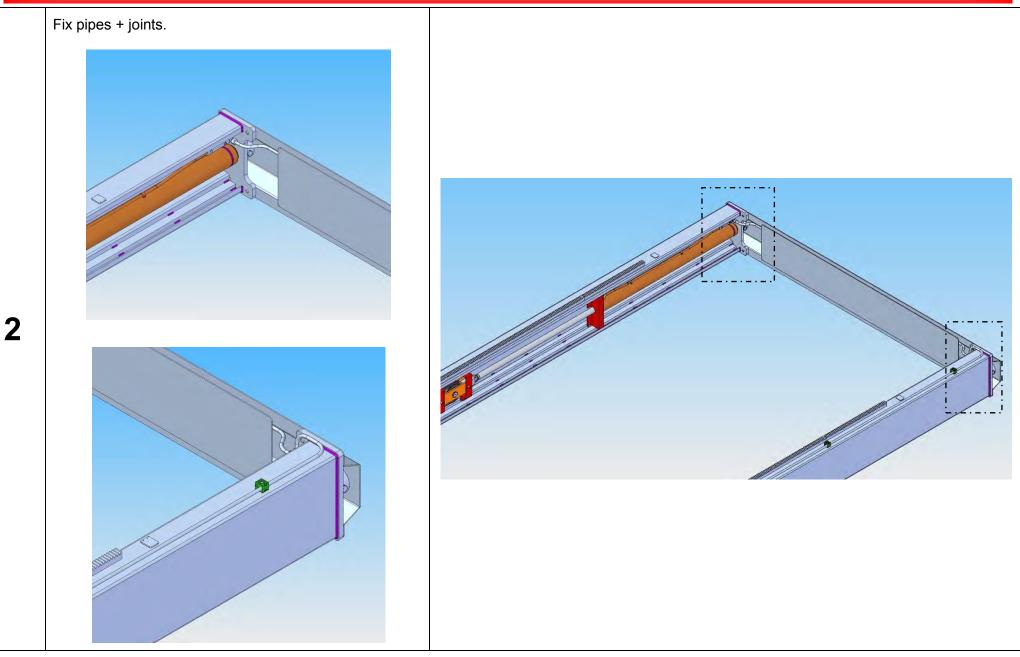
NON	/INAL POWER	kW	2,5	2,5
VOL	TAGE	V	230	400
No.	of phases		3	3
FRE	QUENCY	Hz	50	50
NON	/INAL CURRENT	Α	13	6,4
PIC	KUP CURRENT	Α	91	35,8
NO	FUSE (DELAYED)	А	20	10
PROTECTION	FUSE (FAST)	А	25	20
PRO'	THERMOMAGNET	А	25	25
CAB	LE SECTION	mm ²	2.5	2.5



9. Installation procedure





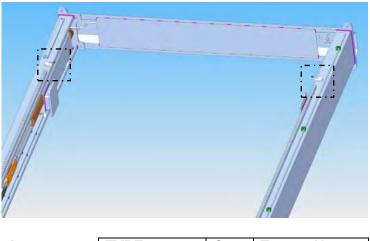




Install

3

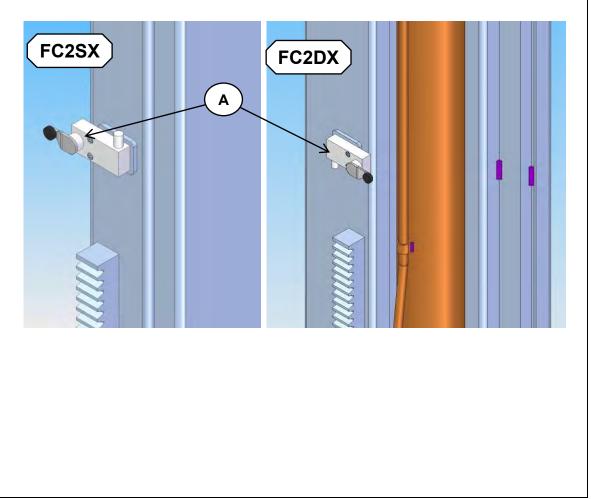
STOP microswitches(FC2SX,FC2DX)



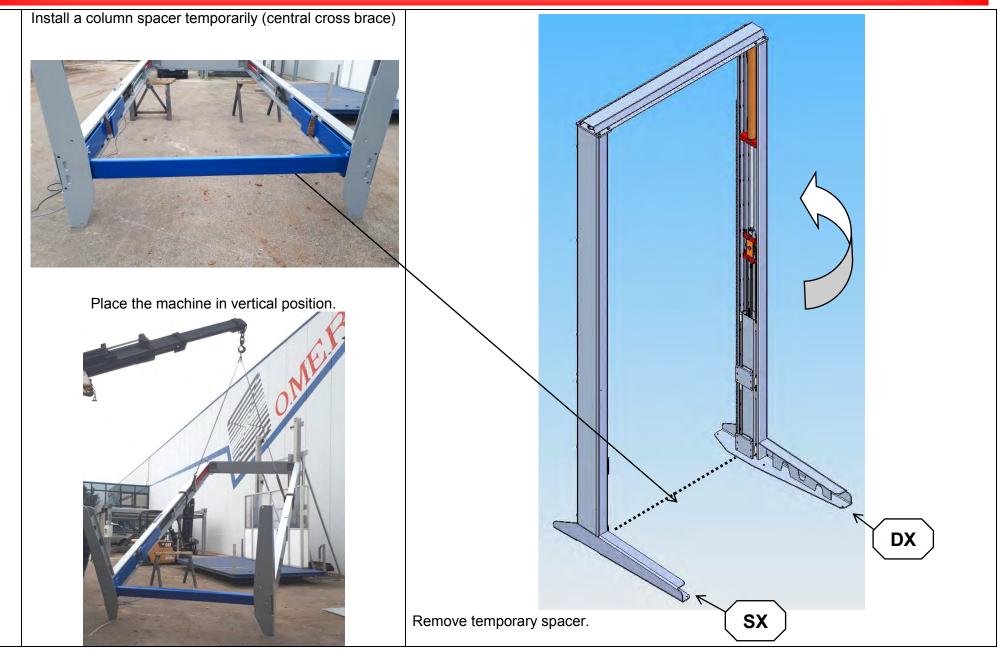
		Qity	Torque Nm
SCREWS TC	EI M4x16	2x2	2,78

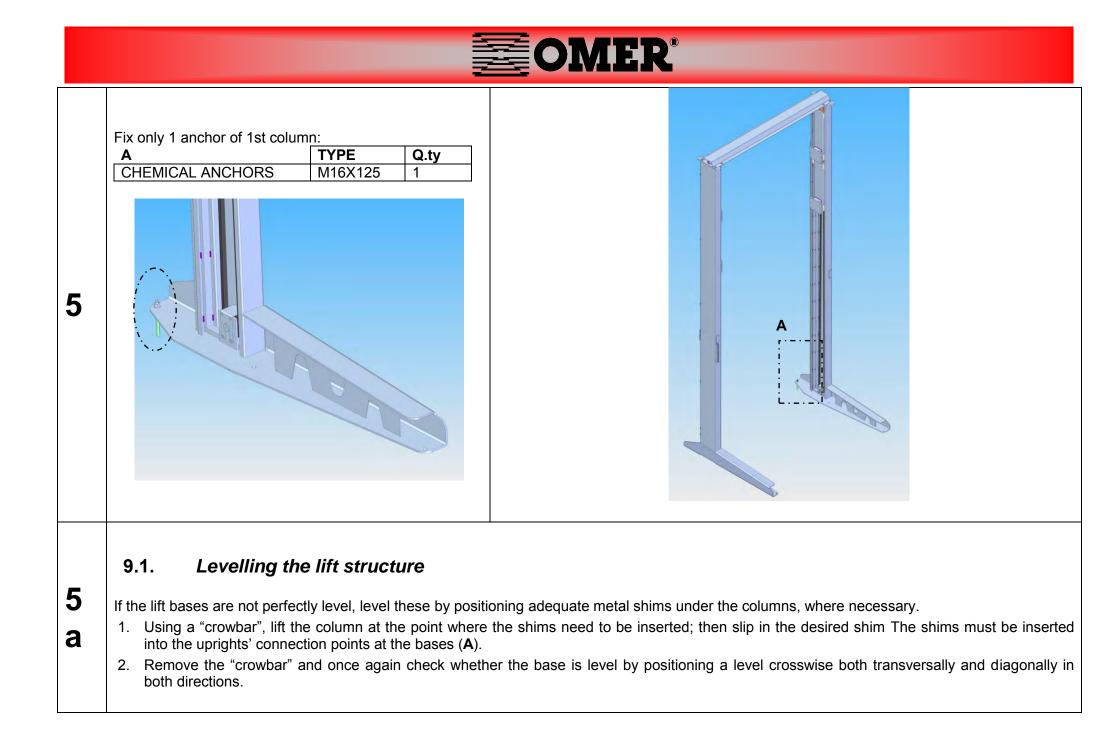
Run the cable through the upper cross brace.



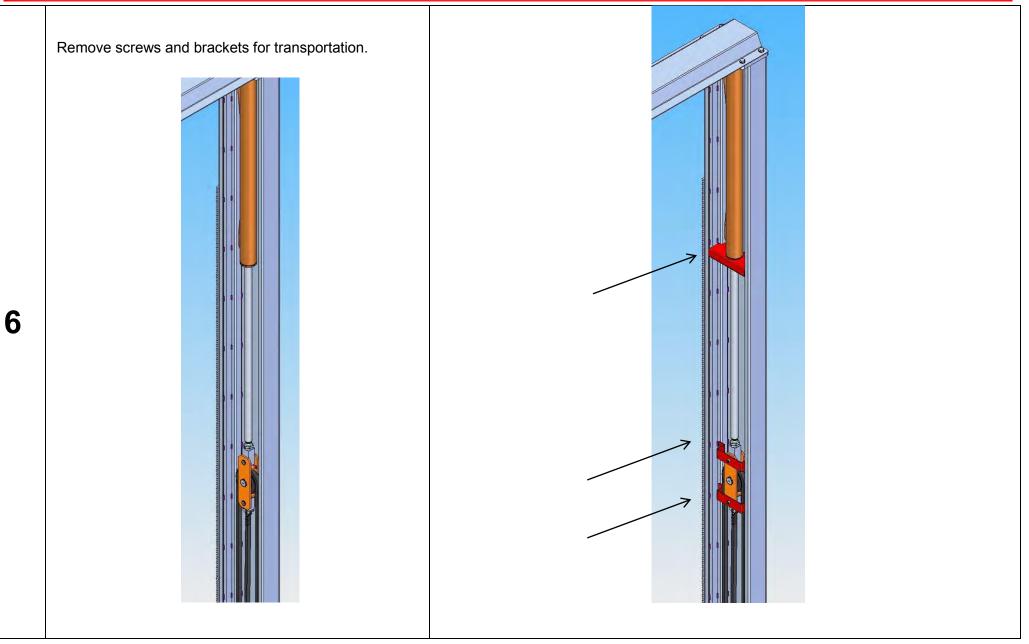








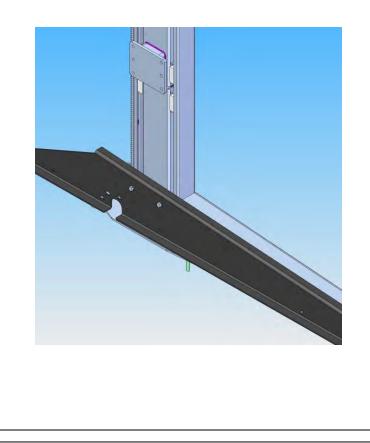


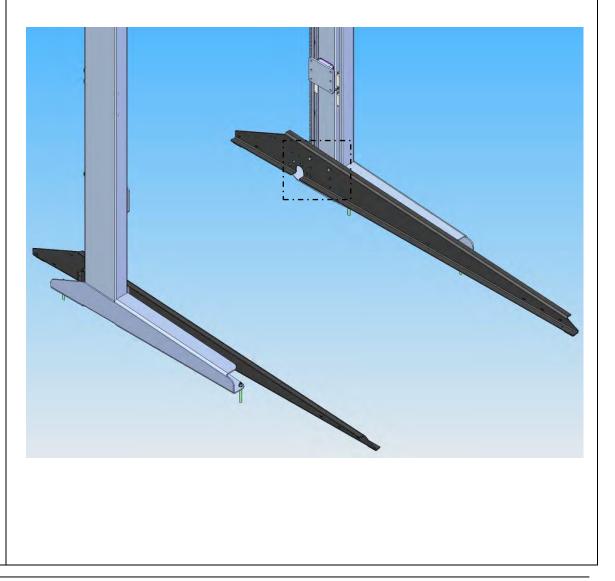




Lower platform guides

	TYPE		Q.ty	Torque Nm
SCREW	M16x6	60	4	198
WASHER	M16		8	1
NUT	M16	Selflocking	4	1



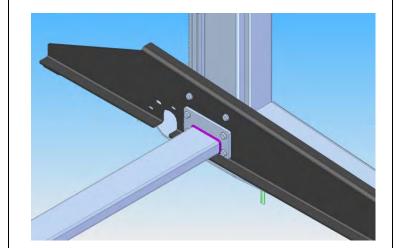


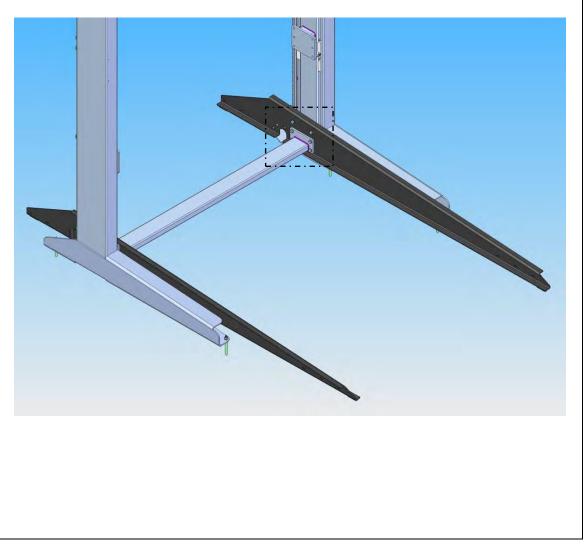


Central lower cross brace

Insert and fix:

_	TYPE		Q.ty	Torque Nm
SCREW	TE M1	l6x70	8	198
WASHER	M16		16	1
NUT	M16	Selflocking	8	1



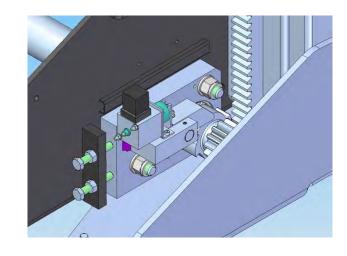


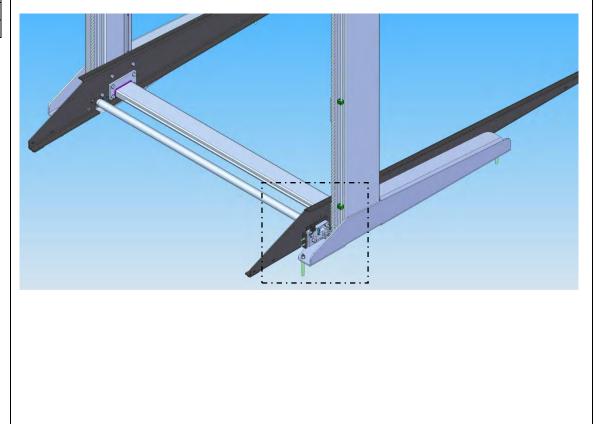


Torsion bar

- Insert torsion bar
- Insert right and left safety locks

	TYPE		Q.ty	Torque Nm
SCREW	M16x70		4	198
NUT	M16 Selflocking		4	1









Lower platform (nr.1)

Install following the order below:

- 1 central cover
- 2 slats (7+1)
- 3 rear head

	TYP	E	Q.ty	Torque Nm
SCREW	TEN	18x35	4	23
WASHER	M8		8	1
NUT	M8	Selflocking	4	/

4 front tip

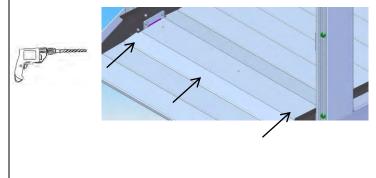
	۳P			
	TYP	E	Q.ty	Torque Nm
SCREW	TEN	/l8x35	6	23
WASHER	M8		12	1
NUT	M8	Selflocking	6	1

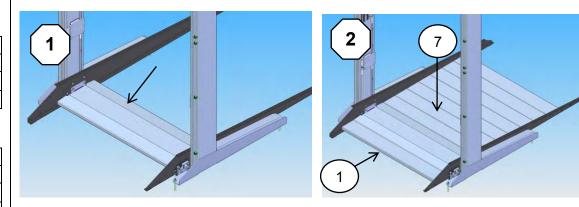
5 the cables protection

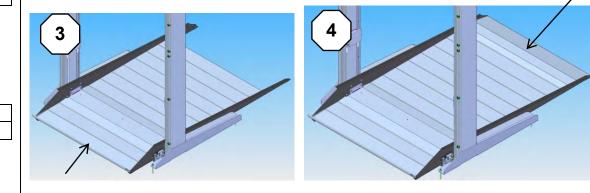
10

- Compact the slats before fixing them
- Drill the central cover
- Fix

	TYPE	Q.ty	Ø Hole
SCREW	ST 4,8x16	3	4,25 mm





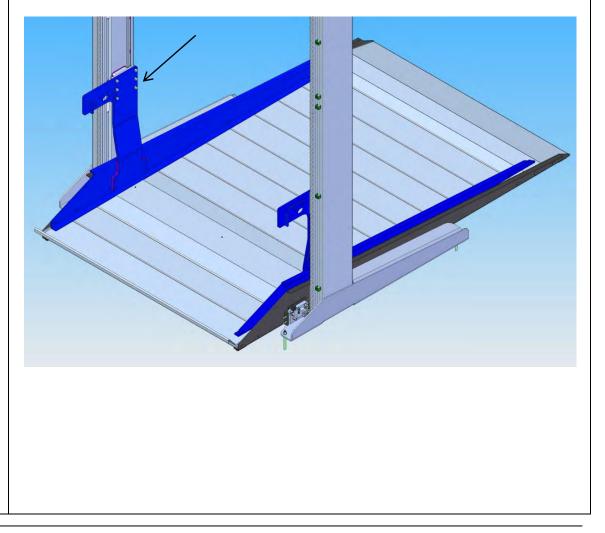




Upper platform guides

Insert right and left guides:

11		TYPE		Q.ty	Torque Nm
	SCREW	M16x70		12	198
	WASHER	M16		24	1
	NUT	M16	Selflocking	12	1

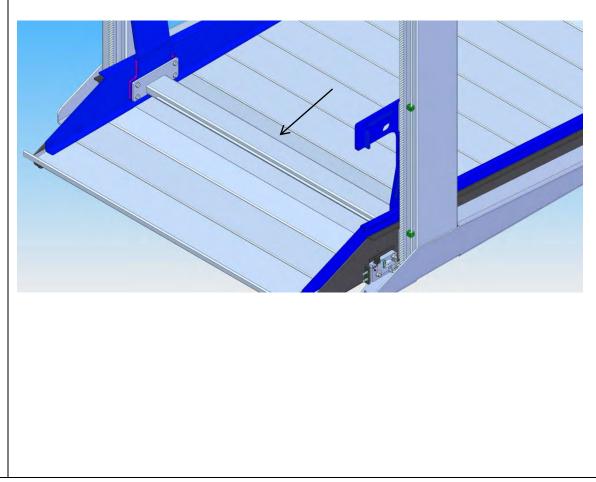




Upper central cross brace

		TYPE		Q.ty	Torque Nm
12	SCREW	TE M'	16x70	8	198
	WASHER	M16		16	1
	NUT	M16	Selflocking	16	1

Move up and down the platform.





Upper platform (nr.2)

Install following the order below:

- 1 cover (**C**)
- 2 6 slats (**D**) +2 with bar (**DB**)
- 3

a. Rear head (T)

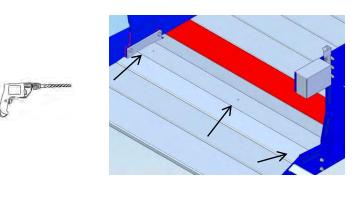
	TYP	E	Q.ty	Torque Nm
SCREW	M8x35		4	23
WASHER	M8		8	/
NUT	M8	Selflocking	4	/

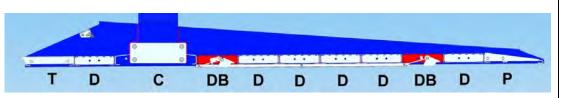
b. Front tip (**P**)

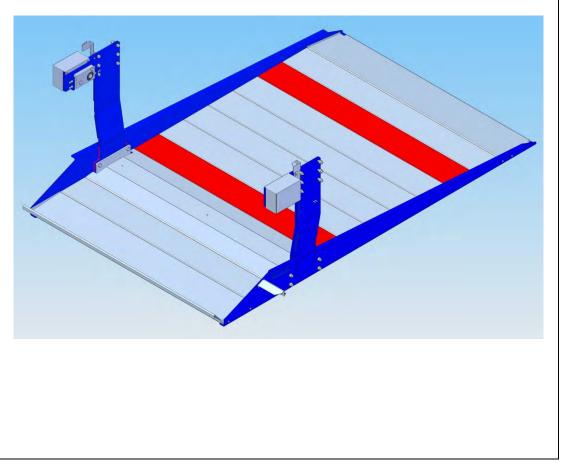
	TYP	E	Q.ty	Torque Nm
SCREW	M8x	35	6	23
WASHER	M8		12	1
NUT	M8	Selflocking	6	1

- Compact the slats before fixing them
- Drill the central cover
- Fix

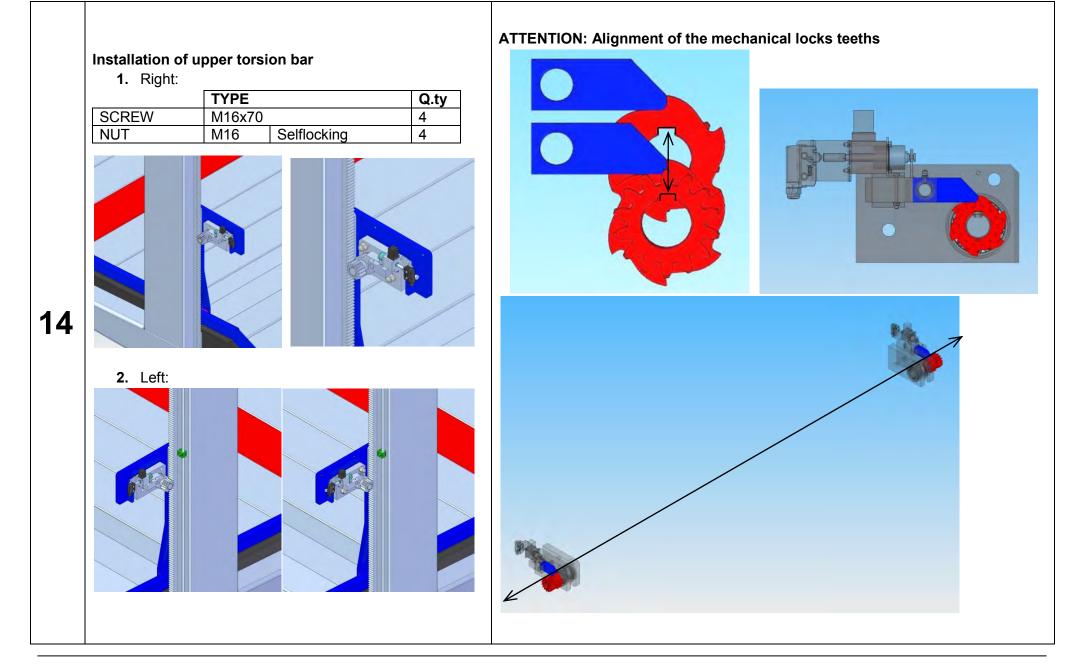
	TYPE	Q.ty	Ø Hole
SCREW	ST 4,8x16	3	4,25 mm











24 cod.ITRIP250092G

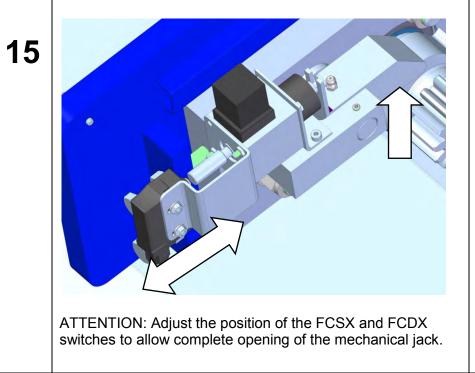


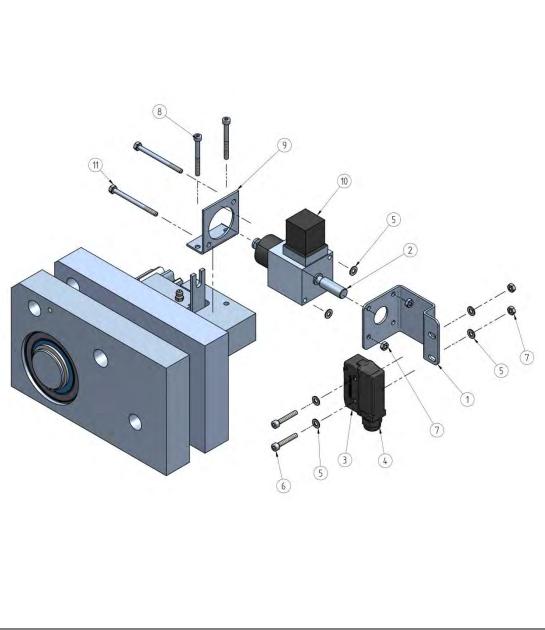
Install:

Magnet check microswitch (FCSX e FCDX) and

Magnets (M2)

_		TYPE	Q.ty	Torque Nm
5	WASHER	M4	6	/
6	SCREW	M4X25	2	2,78
7	NUT	M4	4	1
8	SCREW	M4X40	2	2,78
11	SCREW	M4X55	2	2,78

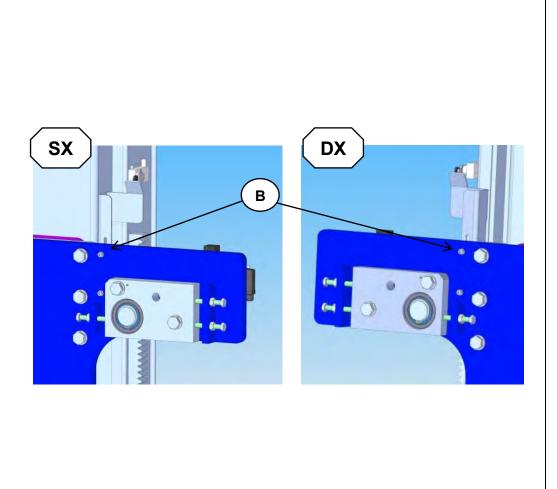






Install brackets

	В	TYPE		Q.ty	Torque Nm
	SCREW	M6x40	M6x40		2,78
16	WASHER	M6		4x2	/
••	NUT	M6	Selflocking	2x2	1





STOP microswitch (FCI1)

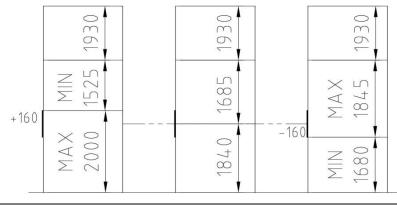
В

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Α	TYPE	Q.ty	Torque Nm
SCREW	TCEI M4x16	2	2,78
В	TYPE	Q.ty	Torque Nm
SCREW	TCEI M5x16	2	5,5

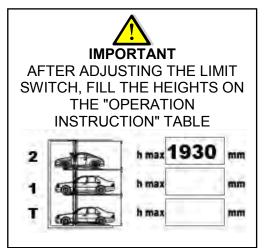
17

Fix the position of the limit switch by adjusting the desired height of the lower platform according to the following diagram:

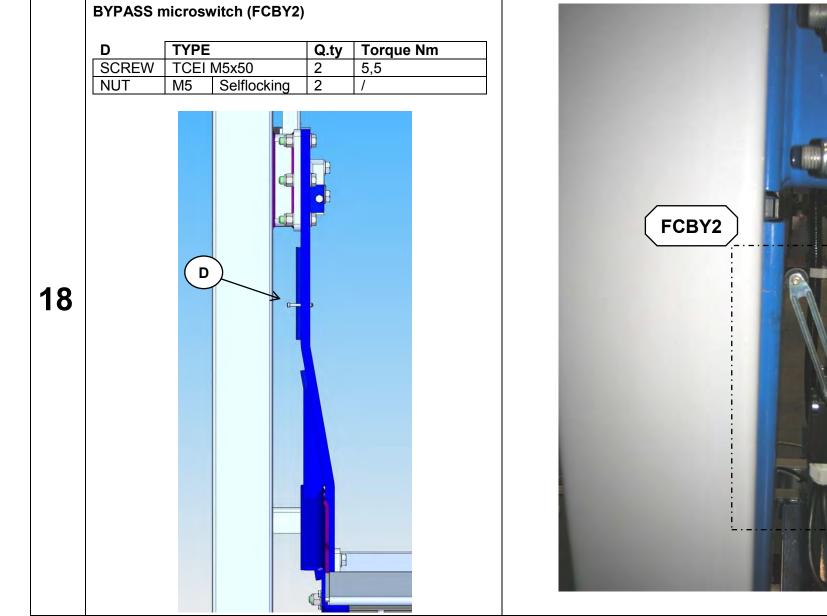


Adjust the bracket **B** so that the bracket **D** have 1 mm GAP between the teeth tip of the pinion and the bottom of the rack



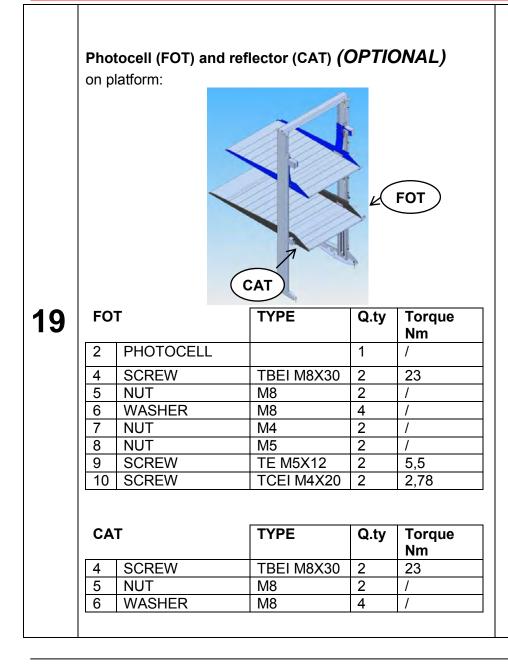


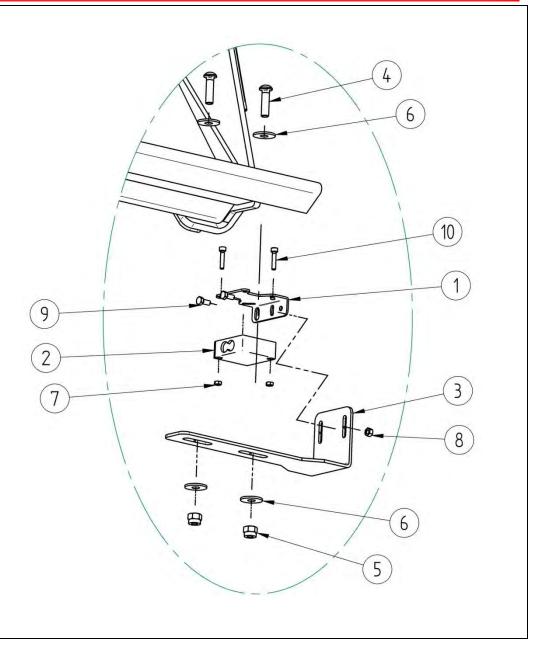














	Installation of	lower platform's p	plastic chair	n bracket:	
	SCREW WASHER NUT	TYPE TSPEI M4x20 M4 M4	Q.ty To 2x2 2,7 4x2 2 2x2 2	78	
20					
	Install the pla A SCREW B SCREW	stic chain: TYPE TSPEI M4x1 TYPE TSPEI M4x2	Q.ty	Torque Nm 2,78 Torque Nm 2,78	
21		B			



9.2. *Wiring connections*

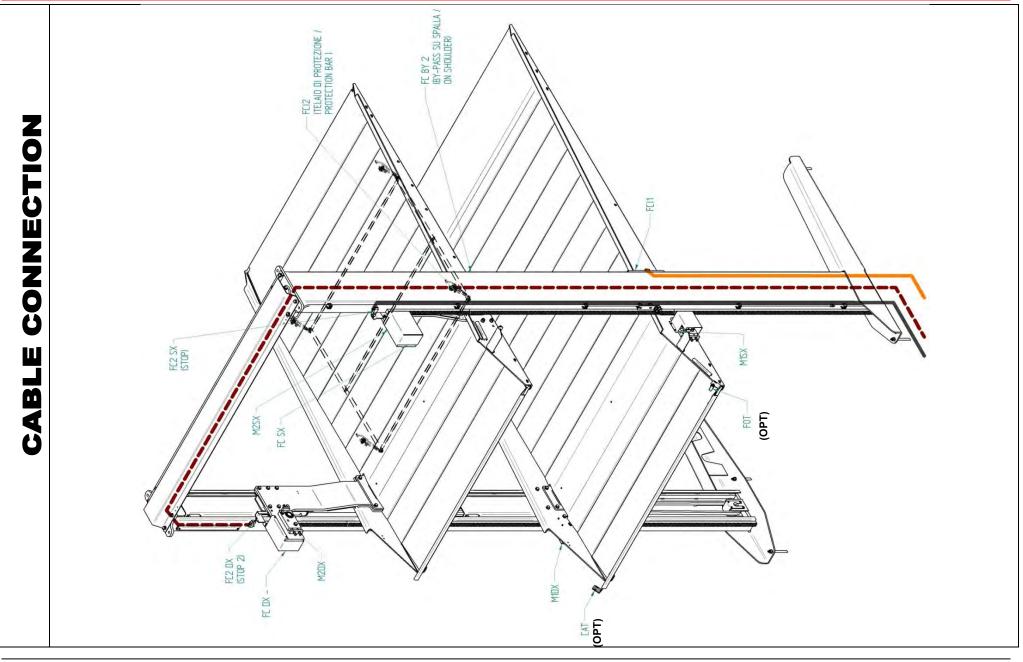
Warnings for the installation of electric cables between the control unit and lift

Wire as follows:

- a) Connect to relevant numbers on the terminal board (A) inside the electrics box
 - Cables from lift (microswitch)
- b) Connect the power cable to the electrics system.









23	9.3. Hydraulic connections Connect hoses with corresponding connectors to the hydraulic unit. (See: Connection of hydraulic unions)	
24	Ower the system and refill the oil tank.	

Tipo di olio/Marca Oil Type/Brand Name	Viscosità Viscosity mm²/s	Temp. C°	Q.tà Q.ty It	Grasso Lubricating Grease
HYDROIL GF 46	44	40	18	GREASE LC2



9.3.1. Connection of hydraulic unions

The union locking procedure is as follows:

А	On THE BENCH			
A1	Fit the nut manually on the ogive using the manual pre-assembly tool provided.			
A2	Furn the wrench through 1.5 turns to compress the ogive and fasten it to the hydraulic tube.			
A3	Remove the nut.			
	Check that the ogive can turn but does not slide.			

В	ON SITE OF INSTALLATION		
B1	Vanually fit the nut.		
B2	Close with wrench as follows:		
	- 0.5 TURNS for DIAMETER < 16 MM		
	- 0.75 TURNS for DIAMETER >= 16 MM		

C After these operations the union is closed correctly.

Tightening the nut more than indicated causes excessive deformation of the ogive and can compromise the hold of the hydraulic union.

N.B :

The hydraulic pipe must have the following characteristics:

- It must be cut perpendicular to the axis
- It must be burr-free.



9.4. Levelling the complete stacker

If the lift bases are not perfectly level, level these by positioning adequate metal shims under the columns, where necessary.



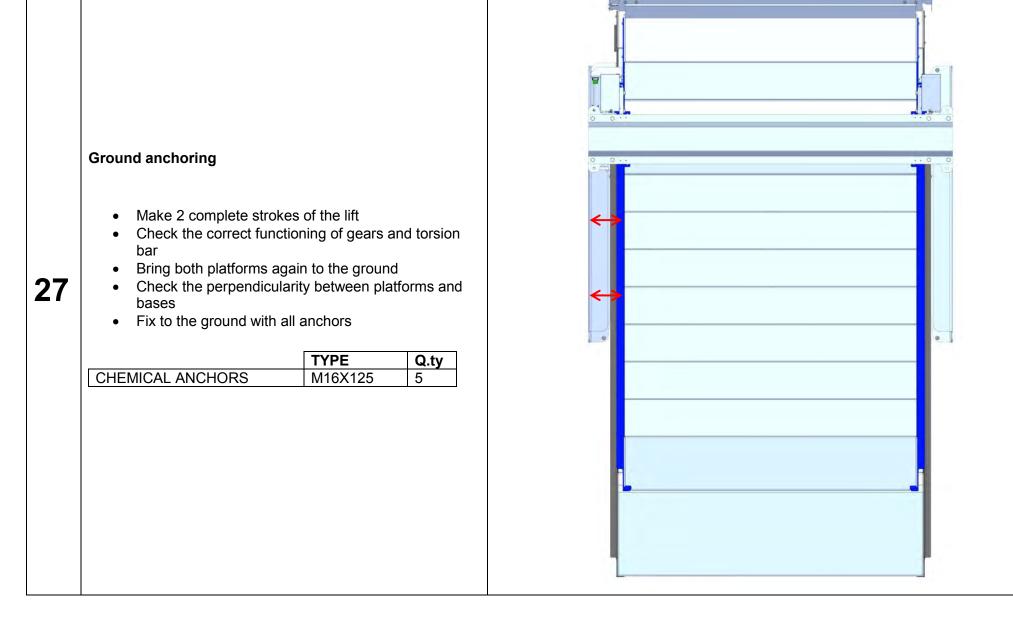
Lift levelling operations has to be rechecked after the machine's wiring and hydraulic connections have been made.

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Perform the following operations in the order indicated:

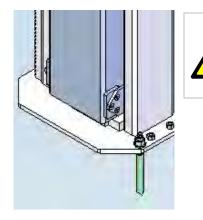
- 3. Access the lift and proceed with the upstroke phase in order to facilitate the levelling process.
- 4. Stop the lift when it reaches a suitable height to be able to work comfortably, by locking the mushroom head emergency button and the main switch in the closed position.
- 5. Using a "crowbar", lift the column at the point where the shims need to be inserted; then slip in the desired shim The shims must be inserted into the uprights' connection points at the bases (**A**).
- 6. Remove the "crowbar" and once again check whether the base is level by positioning a level crosswise both transversally and diagonally in both directions.







9.5. Installing chemical anchors



Lift levelling operations may only be performed after the machine's wiring and hydraulic connections have been made.

After having correctly positioned the lift and after having checked that the support bases are level, lock the lift to the floor of the shaft performing the following operations in the order indicated:

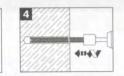
- 1. Drill holes in the floor of the shaft using the holes in the base of the lift as point of reference.
- 2. Fix the bars to the floor using chemical screw anchors, follow the instructions provided by the screw anchor manufacturer for their installation.

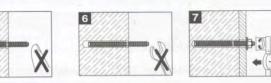
The installation sequence is as follows:

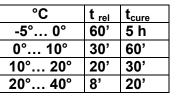
- 1. Drill a hole
- 2. Blow out all dust and fragments with compressed air
- 3. Insert the vial
- 4. Insert the anchoring substance
- 5. Wait until gelling has set in (t_{rel})
- 6. Wait for the compound to harden (t_{cure})
- 7. Tighten to set torque (T inst)

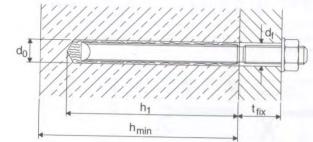












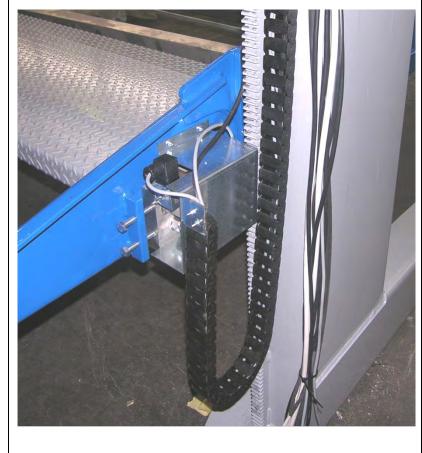
ANCHOR DIMENSIONS	M16			
PLASTIC LAMINATE VIAL	M16X125			
THREADED BAR		M16X1	90	
DIAMETER OF DRILL BIT	d ₀ mm 18			
HOLE DEPTH	h ₁ (=h _{nom})	mm	125	
MIN. THICKNESS OF BASE MATERIAL	h(min)	mm 170		
MAX. THICKNESS TO BE SECURED	t _{fix} (max)	mm	38	
DIAMETER OF HOLE IN	d.	mm	cons.	18
PLATE	d _f		max.	19
TORQUE	T _{inst} Nm 10		100	
PINS NUMBER	n°		6	

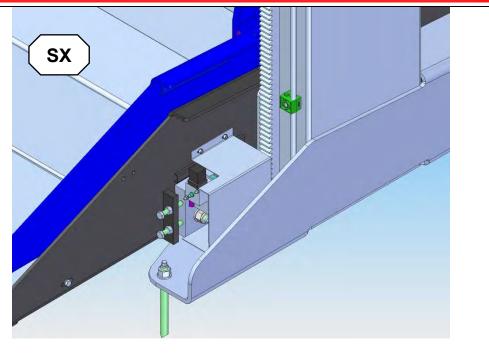


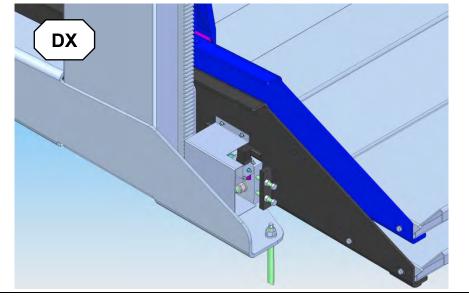
Covers

Insert the protection covers on the lower platform:

	TYPE	Q.ty	Torque Nm
SCREW	TCEI M5x20	2x2	5,5
WASHER	M5	4x2	
NUT	M5	2x2	



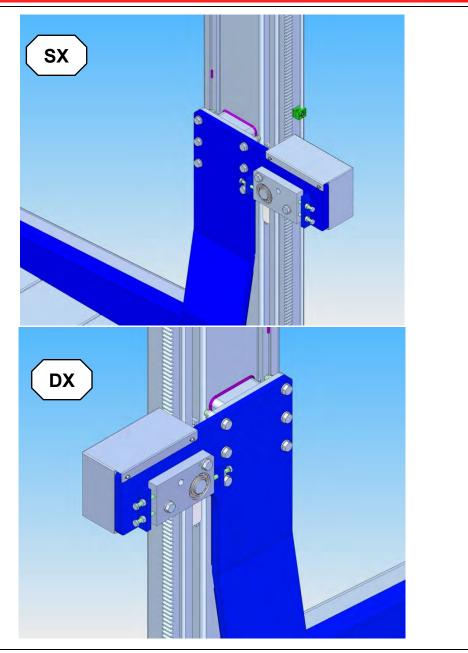




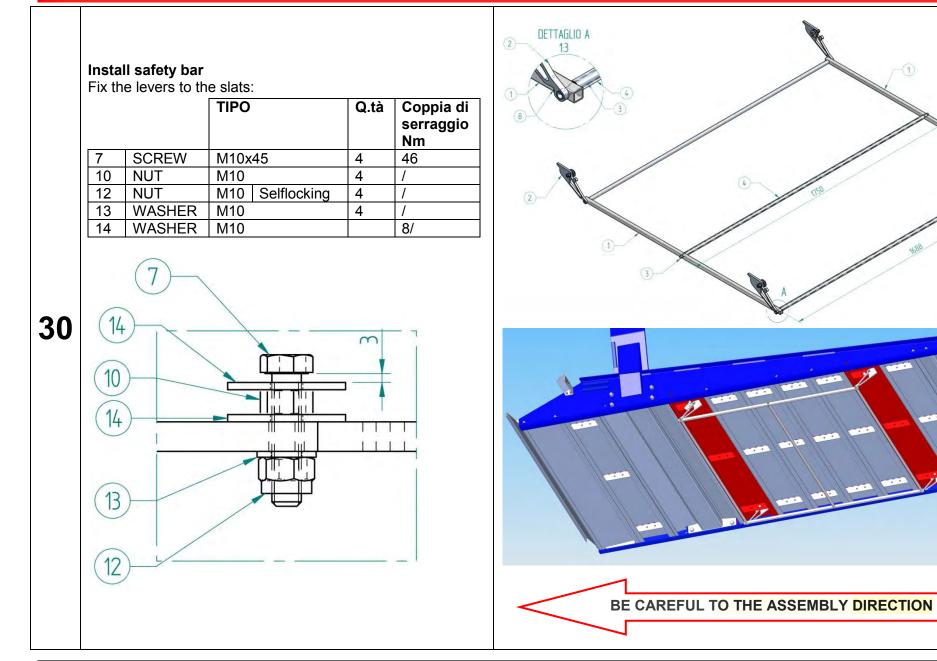
28



29		TYPE	Q.ty	Torque Nm
	SCREW	TCEI M5x25	2x2	5,5
	WASHER	M5	4x2	

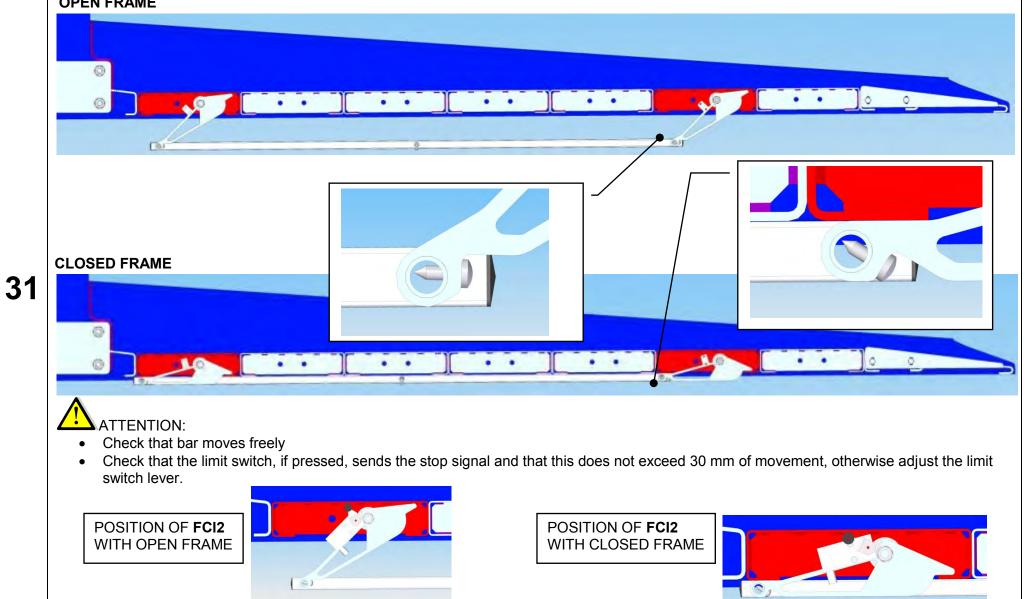








Fix the frame to the levers with the self-drilling screws (ST 4.8x16, q.ty 4 pieces): **OPEN FRAME**







Lubricate the columns along the entire sliding of pads.

OPTIONAL:

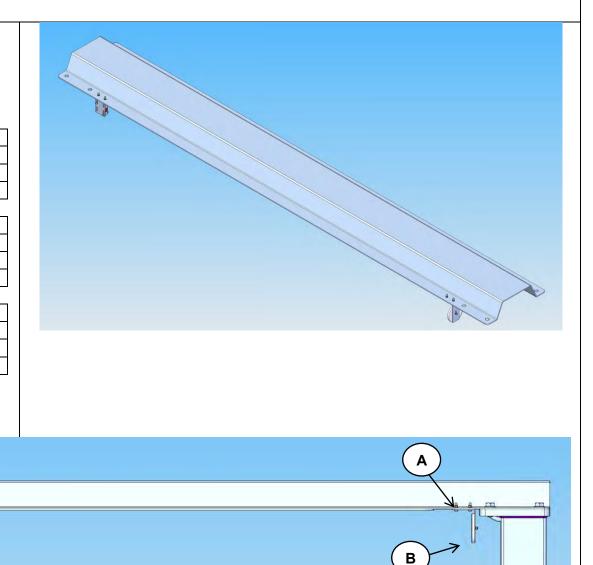
Photocell for height control upper platform

Α	TYPE		Q.ty	Torque Nm
SCREW	M5x20		5	5,5
WASHER	M5		4	1
NUT	M5	selflocking	2	/

В	TYPE		Q.ty	Torque Nm	
SCREW	M4x12		1	2,78	
WASHER	M4		1	1	
NUT	M4	selflocking	1	1	

С	TYPE	Q.ty	Torque Nm
SCREW	M4x30	2	2,78
WASHER	M4	2	1
NUT	M4 selflocking	2	/
		SCREW M4x30 WASHER M4	SCREWM4x302WASHERM42

С



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10. Check before using

The first time the lift started up it is essential to:

- Clean and start up the system
- Check that the limit switches are functioning properly.
- Check the position of the limit switches to stop at the desired floors
- Check floor leveling of the platforms and stopping precision
- Check floor levelling and stopping precision
- Check that the floor push-buttons are functioning properly
- Check installation of warning signs see chapter on Safety in the User's Manual
- Check that documentation is on hand see chapter on Safety in the User's Manual

After having performed all adjustments and controls, run a lift test running it all the way up and down; this operation serves to check that the entire machine is functioning properly and that there are no hydraulic system leaks.

10.1. Final testing

Static and dynamic overload tests are performed at the manufacturer's premises.

The user can run checks with the rated load (a \pm 10% variation due maximum valve calibration is admissible) and with the loads distributed as indicated in the paragraph on *Load conditions* in the User's Manual.

10.2. Handing over the platform

The platform is handed over after having completed all the checks indicated in the start-up report



11. Dismantling the machine

Before dismantling the machine, contact OMER S.p.A. technical services.

If parts or the entire machine need to be dismantled, remember:

- 1) bring the platform to the lowest floor and take the machine OUT OF SERVICE;
- carefully empty all oil from the cylinders and ducts, preventing spillage in the area. The oil recovered must be disposed of in compliance with current law;
- 3) dismantle the machine following the operations indicated in the chapter on *"Positioning the lift"* but in the opposite order
- 4) sort the material derived from demolition by type and/or class to facilitate disposal and any reuse

