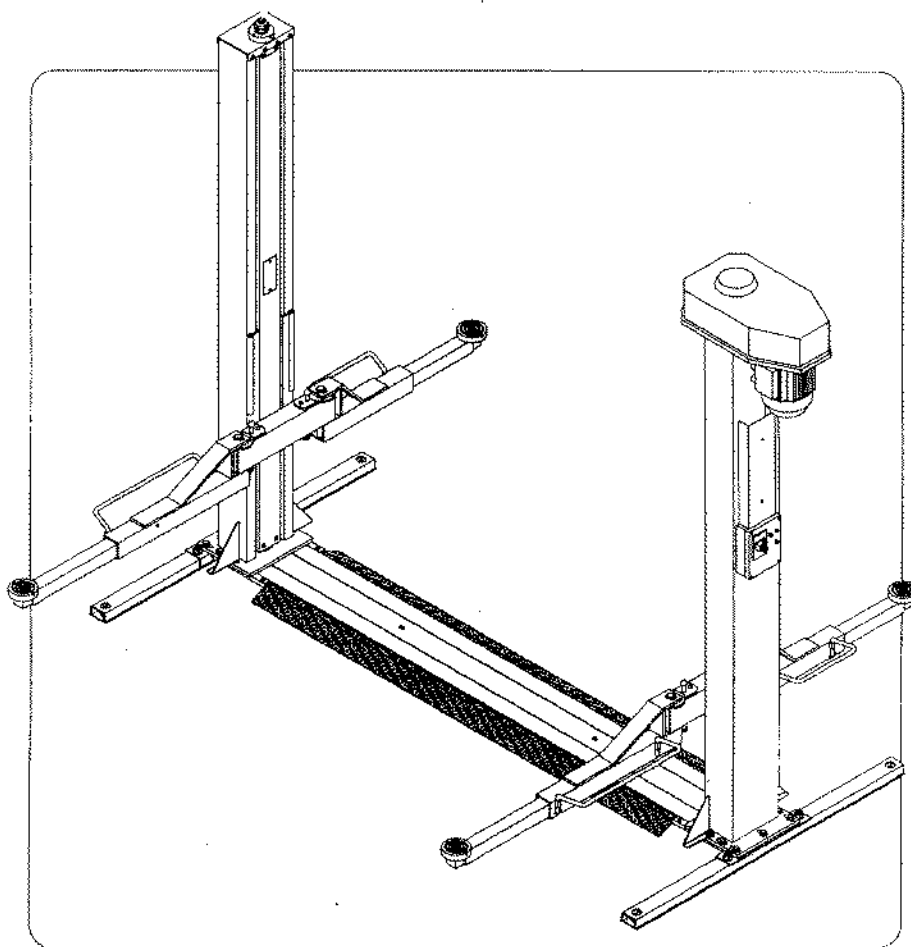




Sollevatori elettromeccanici a due colonne
Two Column Electro-Mechanical Lifts

serie S 25 - S 30
series S 25 - S 30



CE

INSTALLAZIONE, USO, MANUTENZIONE E RICAMBI
INSTALLATION, USE, MAINTENANCE AND SPARE PARTS

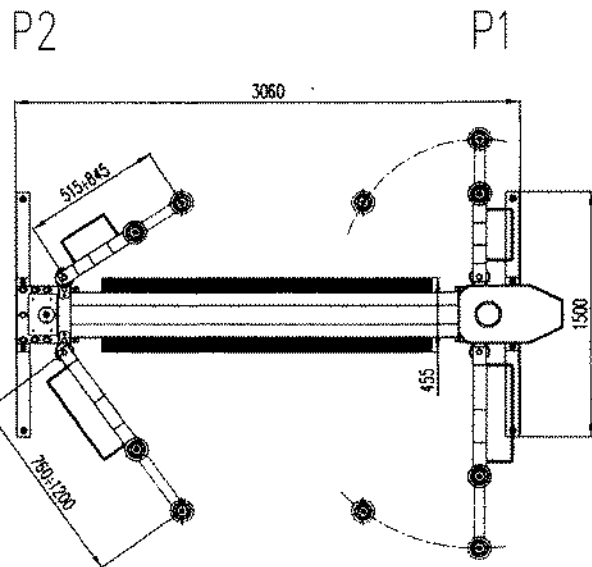
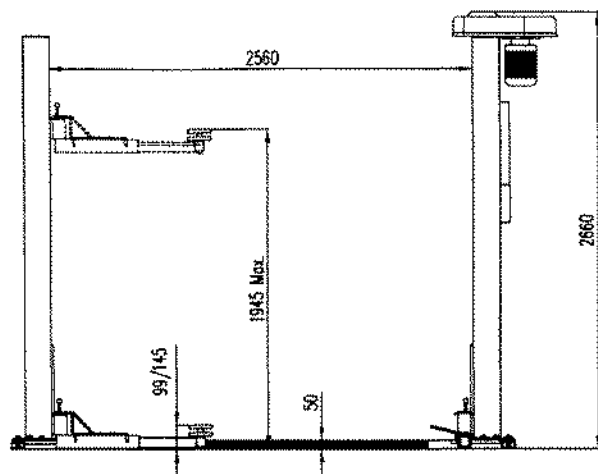


Fig. 1

AGM	A	B	HCE
AGM-COS.MET srl - Almirone di Lonigo (Vicenza) Italy Tel. +39 0444 760622 - Fax +39 0444 760623			
Tipo/Versione	C		
N° Matricola	D	Anno di costruzione	F
Portata max kg	E		

Fig. 2

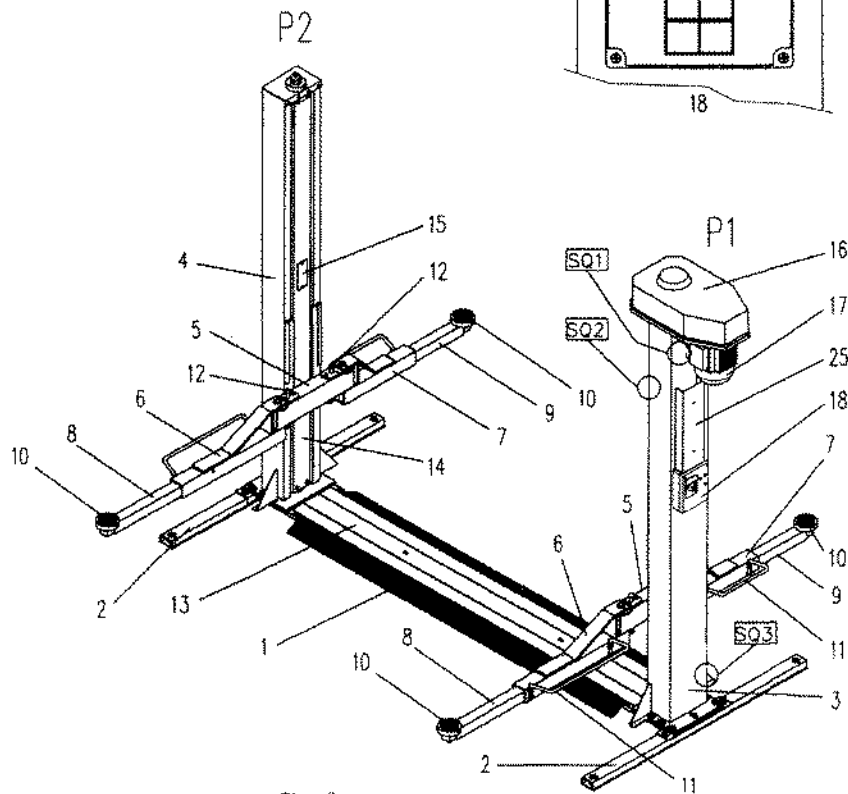
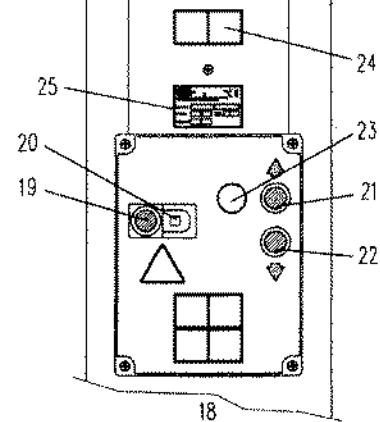


Fig. 3

DESCRIZIONE DEL SOLLEVATORE

- 1) Basamento autoportante
- 2) Traversa basamento
- 3) Colonna P1
- 4) Colonna P2
- 5) Carrello
- 6) Braccio lungo
- 7) Braccio corto
- 8) Prolunga braccio lungo
- 9) Prolunga braccio corto
- 10) Tampone gommato
- 11) Sicurezza salvapiedi
- 12) Sicurezza antirotazione bracci
- 13) Carter protezione catena
- 14) Carter interno colonna
- 15) Chiusura carter interno colonna
- 16) Carter protezione pulegge
- 17) Motore
- 18) Quadro comando
- 19) Pulsante di Emergenza/OFF
- 20) Pulsante di Ripristino/ON
- 21) Pulsante SALITA
- 22) Pulsante DISCESA
- 23) LED presenza tensione
- 24) Targhetta istruzioni per l'uso
- 25) Targhetta identificazione

DESCRIPTION OF THE LIFT

- 1) Self supporting basement
- 2) Basement cross beam
- 3) Column P1
- 4) Column P2
- 5) Saddle
- 6) Long arm
- 7) Short arm
- 8) Long arm extension
- 9) Short arm extension
- 10) Rubber pad
- 11) Toe safety device
- 12) Arm anti-rotation safety
- 13) Chain protection cover
- 14) Column inside cover
- 15) Column inside cover
- 16) Pulley protection cover
- 17) Motor
- 18) Control panel
- 19) Emergency/OFF button
- 20) Reset/ON button
- 21) "UP" button
- 22) "DOWN" button
- 23) Power ON pilot lamp
- 24) Instruction of use label
- 25) Identification plate

DATI TECNICI • TECHNICAL DATA
S 25
S30

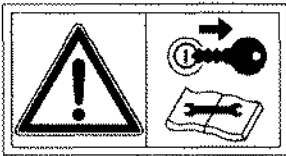
Portata max • <i>Max. capacity</i>	Kg	3000	
Tempo salita a carico • <i>Lifting time, loaded</i>	sec	58	57
Tempo discesa a carico • <i>Lowering time, loaded</i>	sec	50	51
Altezza max utile supporti in gomma •	mm	2000	
<i>Max height, rubber supports</i>			
Regolazione supporti in gomma •	mm	99÷140	
<i>Rubber supports adjustment</i>			
Distanza interna colonne •	mm	2560	
<i>Internal distance between columns</i>			
Altezza max sollevatore • <i>Max. lift height</i>	mm	2660	
Larghezza sollevatore • <i>Width of lift</i>	mm	3060	
Motore elettrico • <i>Electric motor</i>	Volt	230/400	230/400
	Amp	18,3/10,6	21,2/12,3
	Hz	50	50
Potenza motore • <i>Motor power</i>	kW/HP	3,6/5,0	
Tensione circuito comandi • <i>Control circuit voltage</i>	Volt	24	
Peso di una colonna (Max) • <i>Weight of one column</i>	Kg	240	
Peso del basamento (Max) • <i>Weight of the basement</i>	Kg	130	
Peso totale sollevatore (Max) • <i>Total lift weight</i>	Kg	610	
Fissaggio a terra •		N. 4 tasselli ad espansione tipo HILTI HSA-A M16x140 o equivalenti	
		N. 4 tasselli ad espansione tipo HILTI HSA-A M16x190 o equivalenti	
<i>Floor anchorage</i>		No. 4 expansion dowels type HILTI HSA-A M16x140 or equivalent	
		No. 4 expansion dowels type HILTI HSA-A M16x190 or equivalent	
Livello sonoro • <i>Noise level (EN ISO 3746)</i>			
Pressione media acustica ponderata <i>LpAm</i> •	dB(A)	69,0	
<i>Medium level of weighed acoustic pressure LpAm</i>			
Pressione media posto operatore <i>LpA</i> •	dB(A)	71,6	
<i>Medium pressure level at operator position LpA</i>			
Potenza acustica <i>LwA</i> • <i>Acoustic power LwA</i>	dB(A)	88,2	

Le dimensioni riportate nella Fig. 1 e nella tabella "DATI TECNICI" sono indicative e si intendono a sollevatore scarico. Sono pertanto possibili lievi scostamenti delle misure reali da quelle qui riportate.

The dimensions given in figure 1 and in the "TECHNICAL DATA" table are approximate and for an unloaded lift. There may, therefore, be a slight difference between the true measurements and the ones given here.



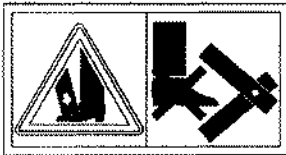
1



2



3



4



5

Fig. 4

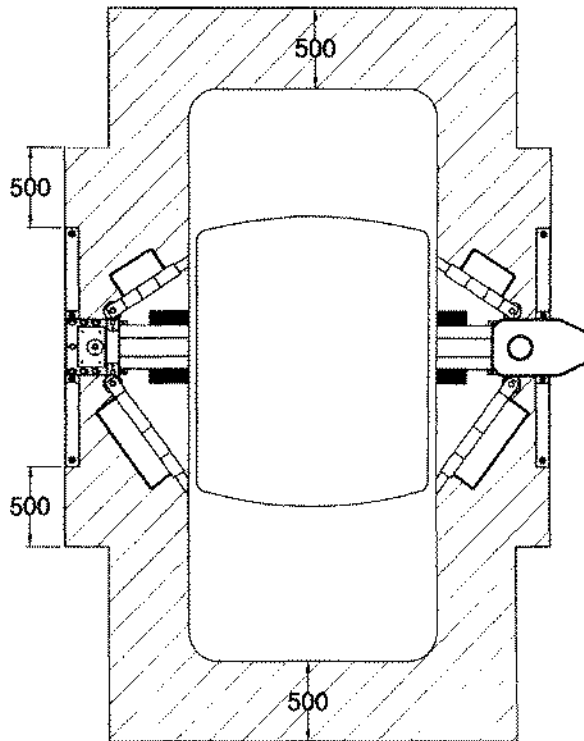


Fig. 5

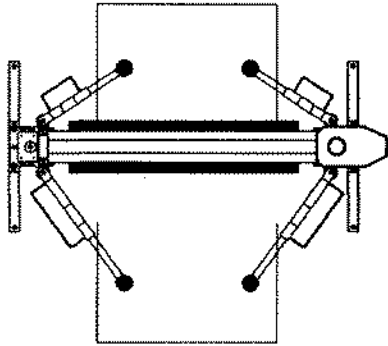
AGM

AGM COSMETeri - Almisano di Lonigo (Vicenza) Italy

S 25

DISTRIBUZIONE CARICHI
LOAD DISTRIBUTION
REPARTITION DE CHARGE
GEWICHT VERTEILUNG

Qmax (Kg)	Q1max (Kg)
2500	1500



AGM

AGM COSMETeri - Almisano di Lonigo (Vicenza) Italy

S 30

DISTRIBUZIONE CARICHI
LOAD DISTRIBUTION
REPARTITION DE CHARGE
GEWICHT VERTEILUNG

Qmax (Kg)	Q1max (Kg)
3000	1800

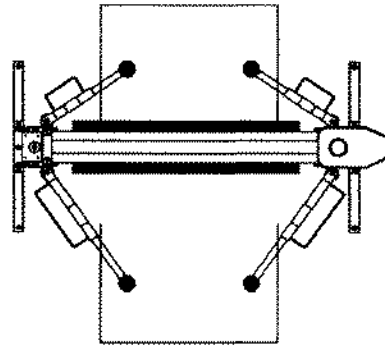
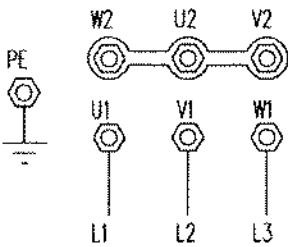


Fig.5A

400V (Y)



230V (Δ)

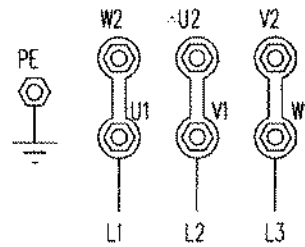


Fig.6

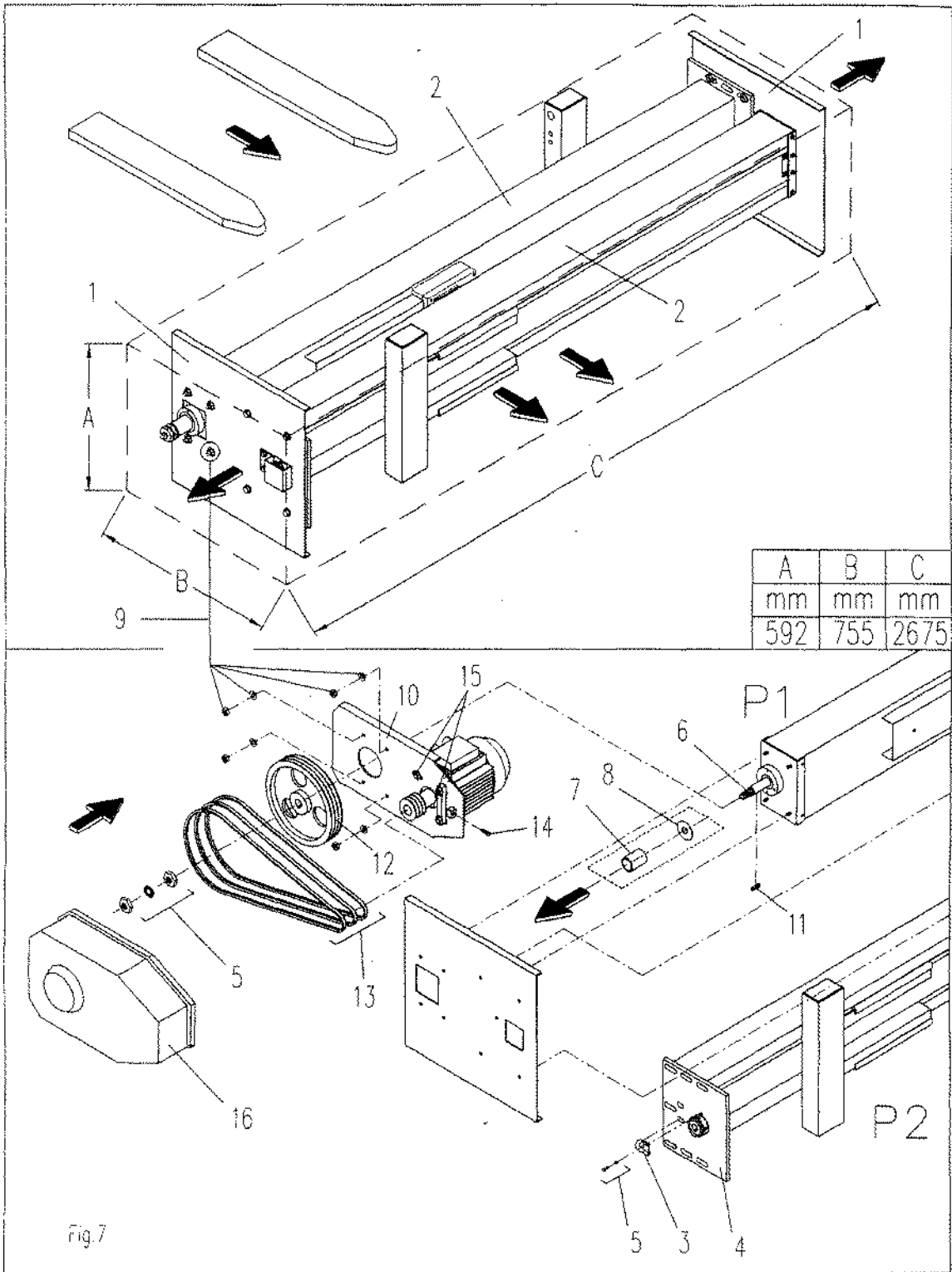
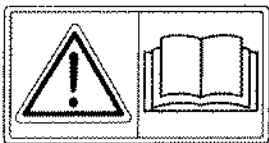


Fig.7

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BEFORE USING THE LIFT, CAREFULLY READ THE INSTRUCTIONS GIVEN IN THIS MANUAL.



1.0 INTRODUCTION

This manual wants to be a practical guide for the safe and correct use of the vehicle lifting system for repair workshops, named "Electro Hydraulic Two Columns Vehicle Lift" type "S 25" and type "S 30", manufactured by **AGM-COS-MET srl**. In the following description the lifting system will be simply referred to as "lift".

The "S 25" and "S 30" series lifts are made up of two symmetrical vertical columns that are solidly anchored to a self-supporting base plate. The columns are equipped with two electro mechanical operated carriages. The lifting carriages are mechanically paired to maintain the same level while working.

The main difference between the two types of lift is the **MAXIMUM LOAD CAPACITY**:

- lift type "S 25", the maximum load capacity is 2500 Kg.
- lift type "S 30", the maximum load capacity is 3000 Kg.

The machine operates through an electric motor which, via pulleys and transmission belts, drives a chain system connecting the screws installed into the columns. The screws rotation lift or lower the carriages through nut screws.

From the strict observance of the instructions contained in this manual depend the correct operation, the economy of use and the lifetime of the lift. The final part of the manual shows the components that can be supplied as spare parts.

The instructions of this handbook must be carefully followed. The manufacturer will refuse any responsibility for damages to people or things due to a lack of compliance with such directions. The warranty of the product is automatically cancelled if the user fails to comply with the regulations in this manual.

1.1 WARRANTY

AGM-COS.MET guarantees the lift and its accessories for a period of 24 months from the purchase date. This guarantee covers the free repair or replacement of those parts which result as having original construction defects after being scrupulously examined by the Constructor's Technical Service Assistance team. All the electric parts are, however, excluded. The guarantee is limited to material defects only and is rendered void should the returned parts result as having been tampered with or dismantled by unauthorised people. Responsibility for direct and indirect damage caused to people, animals or things because of machine faults or malfunctions are excluded from this guarantee. The costs for the replacement of lubricants, the transport costs, any customs taxes, VAT and any cost thing not included in the supply contract are at the purchaser's cost. The replacement or repair of material under guarantee does not lengthen the terms of the guarantee itself. The purchaser can only assert his/her rights if the conditions written in the supply contract regarding the guarantee have been respected. Should the parties not wish to commence arbitration regarding controversies arising from the supply contract or from any other case in which sentencing by an ordinary court is requested, the Vicenza court shall be considered as the only court of competent jurisdiction.

1.1.1. EXCLUSION FROM THE WARRANTY

Upon delivery, it is necessary to check that the product has not been damaged during transportation, that the supply of accessories is integral and that all components are present. Any complaints should be presented within 8 days from the lift delivery date. Apart from the points given in the supply contract, **the guarantee is considered null and void:**

- if there is a manoeuvring error caused by the user;
- if the damage is caused by insufficient maintenance;
- whenever the given capacity has been exceeded;
- if the machine has undergone changes and the damage was caused by these changes, following repairs carried out by the user without the permission of **AGM-COS.MET**, or because non-genuine spare parts were used;
- whenever the instructions given in the instruction manual are not followed.

1.2 CE CERTIFICATION

The 98/37/CE Directive, commonly known as the "Machine Directive", defines the conditions under which a machine can be entered into the market. This Directive states that all machines should only be commercialised and used if they do not endanger the safety and health of people, animals or material goods. To certify that the **auto lift** is in conformity with what is dictated by this Directive, **AGM-COS.MET** made sure that the lift was tested by a notified organisation before putting it on the market.

The lift, built in conformity with the points given in the 98/37/CE Directive, passed the test and therefore entered the market without endangering the user's safety. The lift is therefore delivered to the client equipped with and accompanied by:

- **CE declaration of conformity;**
- **CE marking;**
- **User instruction book.**

1.3 USE

The "S 25" and "S 30" lifts were designed and built only for the purpose of raising vehicles in order to inspect, carry out maintenance or repair them.

- The lift should only be used to raise vehicles. The capacity limits given on the IDENTIFICATION PLATE (Fig. 2) should always be respected.
- The lift is not suitable for being used for vehicle washing, degreasing and cleaning operations.
- The lift is not suitable for raising people.
- The lift should not be used loading only part of the vehicle (front, central or rear part) on one single lifting arm or on one pair of arms, with the other part of the vehicle resting on the floor. The vehicle must be lifted always with its weight uniformly divided between the four lifting arms.



WARNING: the lift should only be used for the purposes it was designed and built for. Any other use not described in this manual is considered improper and therefore totally prohibited. AGM-COS.MET declines any and/or every responsibility for damage caused to people, animals or things because of improper lift use or non-observance of the instructions contained in this manual.

1.4 IDENTIFICATION OF THE LIFT

All lifts are equipped with identification plates (25 Fig. 3 and Fig. 2) containing:

- A) Constructor's marking
- B) Manufacturer's address
- C) Lift type
- D) Machine number
- E) Max capacity Kg
- F) Max. working pressure, bar
- G) Year of production
- H) EC Marking

The data (C), (D) and (E) must always be mentioned when service and spare parts are required.

2.0 GENERAL SAFETY AND ACCIDENT PREVENTION REGULATIONS

2.1 DANGER LEVELS

Always pay attention to the "dangers" signal when it appears of the handbook and follow all safety regulations.



There are three different types of signals:



DANGER: An incorrect performance of the operations described in the manual will lead to serious injuries, death or long-term health risks can occur if the following operations are not properly carried-out.



WARNING: An incorrect performance of the operations may cause serious injuries, death or long-term health risks can occur if the following operations are not properly carried-out.



CAUTION: If the operations are not correctly performed they may damage the lift and/or the person.



WARNING. Please read the instructions carefully: anyone failing to do so may suffer irreparable damages or cause them to people, animals or things. AGM-COSMET Srl refuses any responsibility for damages that may occur due to a lack of compliance with safety and prevention regulations. AGM-COSMET Srl also refuses responsibility for damages due to an improper use or the lift or to unauthorized modifications.

2.2 WARNING SIGNALS

The safety signals (Fig. 4) described in this manual are also placed on the lift; they indicate dangerous and unsafe situations. The labels should be kept clean and should be replaced immediately if they are damaged or begin to peel off. Carefully read the definitions of the safety signals and memorize them well:

- 1) **It is mandatory that you carefully read** the instruction manual before operating the lift.
Before every maintenance operation it is mandatory to disconnect the power supply and carefully read the instruction manual.
- 2) **Danger of falling:** do not get on the lift.
- 3) **Danger of crushing:** do not get near the moving parts.
- 4) **Danger of electrical shocks:** the electrical panel is live; before any intervention, always disconnect the electrical power supply.

2.3 CLOTHING

- Avoid wearing wide or flapping clothes when working, as they may get stuck in the lift moving parts.
- If local regulations require it, operators will have to wear a damage-prevention clothing.

2.4 ENVIRONMENT AND POLLUTION

- Do not use the lift to wash or take the grease off motor vehicles and for any sandblasting or sanding of vehicles.
- As for the use and disposal of lift cleaning and maintenance products, users are required to comply with the regulations in force in their country. They are also advised to follow the indications given by the manufacturers of such products.

2.4.1. LIFT DEMOLITION

When it is necessary to dismantle the lift in order to destroy it or because it is no longer to be used, the following precautions should be followed to avoid environmental pollution risks:

- Dismantle the lift components and divide them into groups of similar materials in order to dispose of them separately.
- The **lubrication oil**, the **rubber parts** and the **scrap iron** are considered as being **special waste**. Dispose of them or store them temporarily in accordance with the current anti-pollution laws of the country where the lift is being used.

2.5 SAFE USE

- **Do not let anyone use the lift** unless they are fully aware of all the instructions contained in this handbook.
- **It is forbidden to allow activation** of the lift by improperly trained or incompetent personnel, or personnel who are not in good health conditions.
- **It is forbidden to touch or lean on the lifts's moving parts**, or to come between the parts during the up or down maneuvers of the lift.
- **It is forbidden to lift persons, animals or objects:** the lift has been built exclusively for raising of motor-vehicles.
- **It is forbidden to lift motor-vehicles** with persons, animals or unstable objects inside.
- Waiting, dwelling or passing of persons or animals under the raised motor-vehicle and around the lift **is forbidden**. This applies also when the motor-vehicle and the lift are moved slightly and when the Emergency/OFF push-button is not pressed down.
- **It is forbidden to place** objects on the lift's arms, especially those objects which can cause harm to person or objects should they fall.
- **It is forbidden to overload** the lift: use of the lift is allowed only and exclusively for lifting weights falling within the load capacity indicated in the IDENTIFICATION PLATE (Fig. 2) and/or on the table TECHNICAL DATA.
- **It is mandatory to place** the motor-vehicles on the lift in a way that the weight is well distributed and centered; the doors must remain closed; no objects shall protrude out of the motor-vehicle's outside dimensions; the motor-vehicle's center of gravity must fall within the four rests; when some of the motor-vehicle's parts are disassembled, the center of gravity may move.

It is forbidden to overload the lift. The use of the lift is permitted only and solely to raise loads within the maximum permissible capacity that is listed in the "LOAD DISTRIBUTION" table (Fig. 5A) and placing the vehicles on the lift in such a way as to comply, at the same time, with following regulations contained in the European norm EN 1493:1998:

1. The weight of the vehicle to be lifted, represented by the addition of the 2 loads Q1 and Q2 (see the symbols in Fig. 5A), must not exceed the maximum lift capacity (Qmax):
 - i.e. $(Q1+Q2) \leq Qmax$ (2500 Kg) for the lift type "S 25"
 - i.e. $(Q1+Q2) \leq Qmax$ (3000 Kg) for the lift type "S 30"
2. The maximum load Q1 (Q1max) placed indifferently on the short or on the long arms, must not exceed:
 - 1500 Kg (Q1max \leq 1500 Kg) as shown in Fig. 5A, for the lift model "S 25"
 - 1800 Kg (Q1max \leq 1800 Kg) as shown in Fig. 5A, for the lift model "S 30"



AGM Srl accepts no liability for injury or damage to persons, animals and belongings as a result of negligence to observe the above instructions and/or for any use of the lift that is not described in this manual.

- It is mandatory to install the lift on a level, smooth and horizontal floor.
- It is mandatory to install the lift close to a power socket and to connect it using a suitable plug in compliance with the country regulations.
- It is mandatory to install the lift in a place protected from water, ice and wind.
- It is mandatory that all the safety devices and the lift itself be thoroughly checked for their integrity before starting-up the lift.
- It is mandatory that the motor-vehicle to be lifted is driven and moved only by personnel suited to driving as regulated by the laws in force in the Country in which the lift is used.
- It is mandatory to check that no foreign persons or animals are within or near the danger areas (Fig. 5) before starting-up the lift.
- We recommend that you familiarize yourself with the control devices and their functions before beginning operation.
- We recommend to pay careful attention when you raise the lift in order not to crush the motor-vehicle against the workshop's ceiling, since motor-vehicles come in different sizes.
- Before you lift the motor-vehicle, it is mandatory that you raise it first only 10 cm. as a test, thereby checking the load's stability.
- We recommend that before lowering the lift, you check that no objects are around or underneath the motor-vehicle; in case, remove them.
- It is mandatory to press-down the Emergency/OFF pushbutton (19 Fig. 3) before entering the work area.
- It is mandatory that you lower the lift and press-down the Emergency/OFF pushbutton (19 Fig. 3) before leaving the work area.
- It is mandatory that no equipment connected to the mains be present in the area above the lift. Electrical discharge could occur should the lift or the motor-vehicle collide with such equipment, causing danger to persons.
- In case of danger to persons, animals or objects, it is mandatory to press-down the Emergency/OFF pushbutton (19 Fig. 3) immediately.
- It is mandatory that you raise the lift high enough so that there is enough space to have access to the motor-vehicle and walk in an up-right position.
- It is mandatory, in case of malfunction of the lift, to stop the operation and to contact the manufacturer or the authorized maintenance workshop.
- It is forbidden to operate with the lift when during the use you notice malfunctions or anomalies.

2.6 SAFE MAINTENANCE

- It is mandatory to periodically inspect the integrity of the safety devices and of the structure of the lift.
- It is mandatory to check periodically the fastening and sealing of screws, nuts and connectors.
- It is mandatory to check periodically that the mobile lifting devices (rollers, pins etc.), are in good condition and well lubricated.
- Spare parts must satisfy the requirements indicated by the manufacturer. **Use original spare parts only.**
- It is mandatory that the lift and its single components may only be moved or lifted by means of ropes, chains, cables and lifting tools that comply with the regulations in force in the country where such operations are performed.
- It is mandatory that the installation is carried out in such a way that the lift or the motor vehicle may not crush, hook or touch other objects, especially electric, water and gas systems.
- **Removing or tampering with safety devices is strictly prohibited.**
- It is mandatory that installation and maintenance of the lift be carried-out only by qualified personnel, following the directions written in this manual.
- It is mandatory to plug out the power supply during all maintenance and repairing operations.
- Carefully follow the maintenance instructions provided in this manual; only allow qualified staff to replace damaged or worn-out parts.
- Do not weld, cut or bore on the lift structure.
- It is mandatory to carry out adjustments or interventions on the lift only after disconnecting the power supply.
- If the instruction labels placed on the lift which indicate the necessary advice to avoid accidents are dirty, it is mandatory to clean them; when they are damaged or have been peeled off they **must be changed** immediately.
- We recommend that you thoroughly clean the floor of oil spills as soon as they occur because they can be very dangerous.



3.0 MOVEMENT AND INSTALLATION

3.1 TRANSPORTATION AND UNLOADING



WARNING: Unloading, transportation and lifting operations of the lift can be dangerous if not carried-out with maximum attention. Therefore, move away any persons unrelated to the task; clean, clear away and delimit the area of installation; check that the means to be used are suitable and complete; do not touch suspended loads and stay away from it within a safe distance; during transportation, the loads should not be raised higher than 20 cm. from the floor; carefully follow the directions below; if you have doubts or uncertainties, stop immediately.

Due to transportation and volume requirements, the lift is supplied partially dismantled into its main parts. The various components of the packaged lift are connected to each other with special rods for easy and safe transportation and handling. The packed lift should be moved using a forklift truck of suitable capacity. While moving, do not let the packed lift or the individual columns undergo knocks or blows. The dimensions and weight of the packed lift are shown on Fig. 7.

3.2 INSTALLATION



WARNING: Only let qualified and authorized technicians perform installation, control and inspection operations. They must be able to guarantee full compliance of these with the safety standards applicable to electronic, mechanic and building technology.



DANGER: Installation, control and inspection of the lift may involve hazardous operations. As a consequence, directions must be followed carefully. Should any doubts persist, contact the manufacturer. AGM-COSMET Srl refuse any responsibility for damage to people or things due to a non-compliance with the safety and accident prevention regulations contained in this manual.

3.3 FOUNDATION

The lift must be placed on a reinforced concrete layer type "Rck 30" (3000 N/cm²) with a min. thickness of 20 cm and an extension of min. 1,5 m from the anchorage points. The cement base plate must be dead-bright, perfectly even and cast on solid ground. The overall dimensions of the plant are indicated in the figure 1.

3.4 POSITIONING AND INSTALLATION OF THE STRUCTURE



WARNING: In this phase of the installation, **DO NOT** connect any electric cables to the lift.

3.4.1 POSITIONING OF THE STRUCTURES

- 1) Open the cardboard protection boxes and lay on the floor the different components of the lift in such a way that you can freely work with the main structures.
- 2) Position the basement (1 Fig. 8) on the selected position and take off the cover (2 Fig. 8).
- 3) Approach the two anti-tilting brackets (3 Fig. 8) to the basement ends as shown in Fig. 8.
- 4) Remove the two packing plates (1 fig. 7) and keep the columns (2 fig. 7) in horizontal position using suitable supports or a forklift. Fix the curved steel pipe (3 fig. 7) to the basement plate (4 fig. 7) of both columns, using the supplied screws (5 fig. 7).
- 5) Unscrew completely and take off the nuts and washer (5 fig. 7) from the lead screw top end (6 fig. 7) of column P1 and remove the spacer (7 fig. 7) and the washer (8 fig. 7). Fix now the support plate with the pre-assembled electric motor (10 fig. 7), using the available bolts (9 fig. 7). After fitting the pulley (12 fig. 7) with its tang (11 fig. 7), fix again the lead screw of column P1 (6 fig. 7) with the nuts and washer (5 fig. 7). Connect the two pulleys with the transmission belts (13 fig. 7), stretch them by means of the adjusting bolt (14 fig. 7) and fix the motor with the preassembled screws (15 fig. 7). Complete the operation by assembling the cover (16 fig. 7).
- 6) Hook one of the columns, using suitable lifting and slinging equipment (Fig. 9) and place it on the basement as shown in Figure 10.
- 7) Fix the column to the basement and to the anti-tilting bracket, without completely locking the screws (1 Fig. 10) and fit on both sides of the column the triangular toe safety device (4 Fig. 10).
- 8) Fix the the other column as well to the basement and to the anti-tilting bracket, without completely locking the screws (1 Fig. 10).

3.4.2 ASSEMBLING OF THE CHAIN AND ANCHORING TO THE FLOOR

- 1) Mount the transmission chain, delivered in two pieces, (5 Fig. 10) on the pinions that are placed at the bottom of the columns and close the chain ring with the provided chain links.
- 2) Stretch the chain using the pulling bolts (6 Fig. 10). The correct chain tension is achieved when, after lifting it from the guide pad seats and by pushing with the hand in the middle of it, the two chains touch each other.
- 3) Lock the column screws (1 Fig. 10)
- 4) Check that the columns, crosswise, are perfectly vertical with the floor. When the lift is not loaded, the distance measured between the two columns top is bigger than the distance measured at the columns bottom. This difference will be compensated when the lift is loaded. To further correct possible differences, adjust the screw (7 Fig. 10).
- 5) Drill the 4 holes diameter 15 mm for the floor anchorage of the anti-tilting brackets (2 Fig. 10).
- 6) Insert the no. 4 expansion bolts M16 (type Hilti HSA-A M16x140 or equivalent) (2 Fig. 10) with light hammer blows.
- 7) Fasten the bolts nuts (2 Fig. 10) with a torque of 100 Nm. If the bolts turn, replace them with larger size ones.
- 8) To reinforce the structure it is possible to add four more anchoring bolts (HSA M16x190) in the holes (3 Fig.10).

3.4.3 INSTALLATION OF THE SAFETY CABLE

- 1) Remove the columns internal covers (14 Fig. 3)
- 2) Take off the clamp (5 Fig. 12) fitted provisionally at the cable end coming out from column P1.
- 3) Take the cable (1 Fig. 12) to the column P2 through the curved pipe (2 Fig. 12) and through the carriage P2 upper rear pad (11 Fig. 12), passing it through the provided guide-pipe (10 Fig. 12). Once the cable is in place, take off and remove completely the guide-pipe..
- 4) Stretch the cable until the mechanism (1 Fig. 15) is in a central position and the limit switch roller (2 Fig. 15) is free; then fix the cable with the clamp (5 Fig. 12)
- 5) Grease the transmission chain and install the basement cover plate (2 Fig. 8).
- 6) **IMPORTANT: before starting the lift, grease the two supporting screws in the columns, with the saddles completely lowered and using the grease included in the supply. After the first UP/DOWN cycle, check that the thread of the two main screws is lubricated uniformly. Repeat the operation whenever necessary.**

3.4.4 CONNECTION TO THE ELECTRIC SYSTEM

3.4.4.1 CONNECTION OF THE ELECTRIC MOTOR

Open the electric motor cover, pass the electric cable that comes out of column P1 through the cable gland and connect the cable terminals as shown on the diagram of Fig. 6.



CAUTION:

- The electric supply voltage must correspond to the one required by the control panel.
- Connect the power supply cable coming out of the column P1 upper end, to the mains in compliance with the regulations of the country where the lift is used.
- The supply system of the electric panel must be in compliance with such regulations too.
- The minimum required power is 5 KW.
- The minimum required electric cables section is 4 mm².

3.4.5 ADJUSTEMENT OF THE SAFETY DEVICES

- 1) Apply voltage to the line and check that the **Emergency/OFF** pushbutton (19 Fig. 3) is not activated (in case turn it as shown by the arrow).
- 2) Press the **Reset/ON** pushbutton (20 Fig. 3).
- 3) Press the **UP** pushbutton (21 Fig. 3). If the motor does not work, check the correct position of the mechanism (1 Fig. 15). If necessary adjust and fasten again the clamp (5 fig. 12) to bring the mechanism to the central position.
- 4) Press the **UP** pushbutton (21 Fig. 3) again, the saddles (3 Fig. 12) must raise. If the saddles do not go up, disconnect the line and reverse two phases on the electric plug of the power supply cable.



WARNING: do not reverse the motor connections. This could modify the correct function of the limit switches.

- 5) Press the **DOWN** pushbutton (22 Fig. 3) and, lowering the saddles completely, check that the lower limit switch (6 Fig. 12) cuts off the motor when the distance between the saddles and the basement is approx. 15 mm.
- 6) Press the **UP** pushbutton (21 Fig. 3) and, lifting the saddles to the maximum height, check that the top limit switch (7 Fig. 12) cuts off the motor when the distance between the saddles and the top column cover is approx. 50 mm.
- 7) Carry out a few **UP** and **DOWN** cycles, so that the main screws are lubricated by the brush with the oil contained in the glasses.
- 8) Fit the columns covers.

3.4.6 ASSEMBLING OF THE ARMS

- 1) Check that the **Emergency/OFF** pushbutton (19 Fig. 3) is not activated, in case turn it as shown by the arrow.
- 2) Press the **Reset/ON** pushbutton (20 Fig. 3)
- 3) Press the **UP** pushbutton (21 Fig. 3) and lift the saddles (3 Fig. 12) to an height of approx. 50 cm.



- 4) Position the arms (1 and 2 Fig. 13) close to the saddles (3 Fig. 12) in such a way that the toe safety devices are turned towards the lift outer side. It must be said that it is possible to reverse the fixing point of the long and the short arms on the carriages of each column, provided that the configuration is the same on both columns and that the toe safety devices are always turned towards the lift outer side.
- 5) Install the relevant arms on the saddles with the pin (5 Fig. 13), fixing it at both ends with the two elastic rings (6 Fig. 13). When assembling, take care to position correctly the arms anti-rotation safety devices (7 Fig. 13). Pulling up the knob (8 Fig. 13), the arms anti-rotation safety devices can be temporarily excluded.
- 6) Press the **DOWN** pushbutton (22 Fig. 3) and lower the saddles to the minimum height. Check that the arms are free to turn without interfering with the basement. In case adjust the column lower limit switch (6 Fig. 12) and the carriages bearing screw (8-9 Fig.12) on the basement.

3.4.7 STICKERS AND PICTOGRAMMES

Install on the lift all stickers that are supplied with this manual, following the layout of scheme 8.0.



WARNING: if the stickers are not installed on the lift, the guarantee conditions are no longer valid and the Manufacturer is relieved of any responsibility for damages caused by the use of the lift.

Damaged, deteriorated and illegible or missing stickers should be replaced immediately. Ask the Seller for replacement stickers, specifying the position number shown on scheme 8.0 and install the new stickers in the correct position on the lift as soon as possible.

4.0 INSTRUCTIONS FOR USE



WARNING. Read carefully the chapters concerning "Safety regulations and accidents preventions"



WARNING. Before touching the control board for any operation, check that nobody is close to the lift.

4.1 CONTROL PANEL

All functions of the control panel can be started only under "attendance". This means that the presence of the operator close to the control panel is required to carry out any lift operation.

The following operations can be carried out from the control panel:

4.1.1 EMERGENCY/OFF BUTTON

- By pressing the **Emergency/OFF** button (19 Fig. 3) the lift stops working completely.
- This operation must always be done before approaching the working area under the lift.
- Turning the **Emergency/OFF** button as indicated by the arrow and so bringing it in raised position, all functions of the **Reset/ON** button are activated.



WARNING: it is compulsory to press the emergency/OFF pushbutton (19 Fig. 13) before entering the working area under the lift.

4.1.2 RESET/ON BUTTON

- The reset/ON button (20 Fig. 3) must be pressed and released after every intervention on the **Emergency/OFF** button. It allows the activation of all functions of the control and therefore of the lift.

4.1.3 "UP" PUSHBUTTON

- See also "4.2 LIFTING OPERATIONS"
- Check that the **Emergency/OFF** pushbutton (19 Fig. 3) is in raised position (if necessary turn it as indicated by the arrow).
- Push the **Reset/ON** button (20 Fig. 3).
- Push the **UP** button (21 Fig. 3) until the desired height is reached.

4.1.4 "DOWN" PUSHBUTTON

- See also "4.3 LOWERING OPERATIONS"
- Press the **DOWN** pushbutton (22 Fig. 3) until you reach the desired height.

4.2 LIFTING OPERATIONS

It is forbidden to overload the lift. The use of the lift is permitted only and solely to raise loads within the maximum permissible capacity that is listed in the "LOAD DISTRIBUTION" table (Fig. 5A) and placing the vehicles on the lift in such a way as to comply, at the same time, with following regulations contained in the european norm EN 1493:1998:

1. The weight of the vehicle to be lifted, represented by the addition of the 2 loads Q1 and Q2 (see the symbols in Fig. 5A), must not exceed the maximum lift capacity (Qmax);
 - i.e. $(Q1+Q2) \leq Qmax$ (2500 Kg) for the lift type "S 25"
 - i.e. $(Q1+Q2) \leq Qmax$ (3000 Kg) for the lift type "S 30"
2. The maximum load Q1 (Q1max) placed indifferently on the short or on the long arms, must not exceed:
 - 1500 Kg (Q1max \leq 1500 Kg) as shown in Fig. 5A, for the lift model "S 25"
 - 1800 Kg (Q1max \leq 1800 Kg) as shown in Fig. 5A, for the lift model "S 30"



AGM Srl accepts no liability for injury or damage to persons, animals and belongings as a result of negligence to observe the above instructions and/or for any use of the lift that is not described in this manual.

For the vehicle lifting follow these points:

- Check that the arms are turned towards the lift outside in order not to hinder the entrance of the vehicle between the columns.
- Place the vehicle between the lift columns.
- Turn the arms and take out the extensions so that the rubber pads are placed at the points provided by the car manufacturer for the vehicle lifting.
- Check that the **Emergency/OFF** pushbutton (19 Fig. 3) is not pressed down, in case turn it as indicated by the arrow and bring it in raised position.
- Push the **Reset/ON** button (20 Fig. 3).
- Press the **UP** pushbutton (21 Fig. 3) and lift the vehicle about 10 cm.
- Check the correct inserting of the rubber pads.
- Check the vehicle stability.
- Press the **UP** pushbutton (21 Fig. 3) and lift the vehicle.
- Push and lock the **Emergency/OFF** button (19 Fig. 3) before entering the lift working area.

4.3 LOWERING OPERATIONS

Follow these instructions:

- Check that the **Emergency/OFF** button (19 Fig. 3) is not activated, in case turn and unlaock it as indicated by the arrow .
- Push the **Reset/ON** button (20 Fig. 3).
- Press the **DOWN** push-button (22 Fig. 3), taking the saddles to the minimum height.
- Push and lock the **Emergency/OFF** button (19 Abb. 3).
- Rotate the arms towards the lift outside so that they do not get in the way of the motor-vehicle as it is leaves the lift .
- Move the vehicle from the lift area.

4.4 SAFETY DEVICES



WARNING: Absolutely do not remove or tamper with these devices. They must be kept in full efficiency all the time:

- **Control panel "attendance required"**: all lift controls require the operator's presence.
- **Emergency/OFF button** (19 Fig. 3): if pressed blocks the lift operation.
- **Toe safety devices** applied to the arms (11 Fig. 3) prevent the squashing of the operators feet during the last phase of arms lowering.
- **Column side protections**: they eliminate the risk of feet crushing during the final lowering phase.
- **Arms anti-rotation mechanical safety devices** with automatic insertion (17 Fig. 3): they do not permit the rotation of the lifting arms with the saddles lifted.
- **Safety die on each saddle**: it can bear the weight in case of breakage of the supporting die.
- **Minimum (6 Fig. 13) and maximum (7 Fig. 12) height limit switches**: they stop the motor and prevent therefore to exceed the correct saddles travel.
- **Safety against the non-alignment of the saddles**: this device (Fig. 12 and 15) ensures the alignment of the saddles by means of a limit switch (Fig. 15) controlled by the cable that stops the lift motor if one saddle does not come down because of a mechanical block,
- **Auxiliary electric circuit in low tension**: this circuit can not cause "electric shock".

5.0 MAINTENANCE

In the continuation are listed the different maintenance operations. A steady compliance with the here included instructions will grant regular performances, working economy and a long lift lifetime.

CAUTION: Regular deadlines to carry out maintenance are only mentioned as an indication and refer to standard conditions of use. Any variations, such as a more or less dusty environment and frequency in use deeply influence such times. If the conditions are more severe, maintenance must be carried out more often.

5.1 CHECKING OF THE SAFETY DEVICES



WARNING. The following operations must be carried out by unloaded lift.

5.1.1 EMERGENCY/OFF BUTTON

- 1) Check that the **emergency/OFF** button (19 Fig. 3) is in raised position, in case turn it indicated by the arrow.
- 2) Push the **reset/ON** pushbutton (20 Fig. 3).
- 3) Press either the **UP** or the **DOWN** pushbutton.
- 4) Simultaneously push the **emergency/OFF** button (19 Fig. 3): the saddles must stop.

5.1.2 CHECKING THE DIE WEAR

- 1) Take the saddles to the half of the columns height.
- 2) Remove the columns lower outer covers closing plates (15 Fig. 3). Through the hole (3 Fig. 14), check that the distance between the supporting upper die (2 Fig. 14) and the safety lower die (1 Fig. 14), of both columns, is between 17 and 18 mm.
- 3) **Should the distance be less than 16 mm, replace immediately the upper supporting dies.**

5.1.3 CHECKING THE SAFETY CABLES AND THE ALIGNEMENT LIMIT SWITCHES

Check the condition and the wear of the cable (1 Fig. 12) and the good function of the assembly (Fig. 15) as follows:

- 1) Lift the saddles at approx. 1 m from the floor.
- 2) Insert under one of the saddles a wood board (9 Fig. 13) in a way that the saddle lowerring is blocked.
- 3) Press the **DOWN** pushbutton (22 Fig. 3). When the saddle rests on the board, the other saddle must stop immediately afterwards.
- 4) Repeat above procedure for the other saddle as well.

5.1.4 CHECKING THE MIN. AND MAX. HEIGHT LIMIT SWITCHES

- 1) Press the **DOWN** pushbutton (22 Fig. 3) and, lowering the saddles completely, check that the lower limit switch (6 Fig. 12) cuts off the motor when the distance between the saddles and the basement is approx. 15 mm.
- 2) Press the **UP** pushbutton (21 Fig. 3) and, lifting the saddles to the maximum height, check that the top limit switch (7 Fig. 12) cuts off the motor when the distance between the saddles and the top column cover is approx. 50 mm.
- 3) If the saddle stops do not correspond to those explained above, adjust the position of the relevant limit switch.

5.1.5 RUBBER PADS

Check their good state and, if worn out or broken, replace them.

5.2 PERIODIC MAINTENANCE

5.2.1 EVERY WEEK

- Weekly inspect the safety devices as indicated in the handbook.
- Check the correct lubrication of the lifting screws (1 Fig.16), if necessary, grease lightly with with standard grease.
- Check the correct lubrication of the chain (1 Fig.11), of the roller bearings (2 Fig.16) mounted on the columns, if necessary lubricate with standard grease.

5.2.2 EVERY MONTH

- Check that the lift screw set is tightly sealed.
- Check that the pivots, screws, supporting and safety dies, rollers, bushings, chain, saddle-arms frame and their extensions are in good conditions; if necessary, replace the damaged parts with original components.

A correct performance of these operations will totally come to the user's advantage. The equipment will indeed be in perfect state when work is resumed.

6.0 TROUBLESHOOTING

TROUBLE	CAUSE	SOLUTIONS
- Lift does not work. No reaction at all	<ul style="list-style-type: none"> - Emergency/OFF button pressed - Limit switch activated - No electric supply - Cable connections - Fusible burnt out 	<ul style="list-style-type: none"> - Turn the emergency button OFF unlock it and restore the contact pressing the reset/ON button - See 3.4.5 - Check the cause - Control connections - Replace
- After pushing the UP button the motor reacts but the lift does not move	<ul style="list-style-type: none"> - Rotation of the motor - Safety cable limit switch - Max. height limit switch 	<ul style="list-style-type: none"> - Change over wires - Check - Check
- By pressing " DOWN " the saddle do not lower	<ul style="list-style-type: none"> - Safety cable limit switch - Min. height limit switch - Mechanically blocked saddle 	<ul style="list-style-type: none"> - Check - Check - Press "UP" and release the saddle



DANGER: It is absolutely forbidden to carry out operations that are not described in this handbook and to tamper with the safety devices or with the electrical system. Such operations could cause heavy damages to the persons involved.
In the case that the technical problem can not be solved, after the suggested controls and interventions, please do not insist and contact the after sale service of AGM-COS.MET S.r.l.

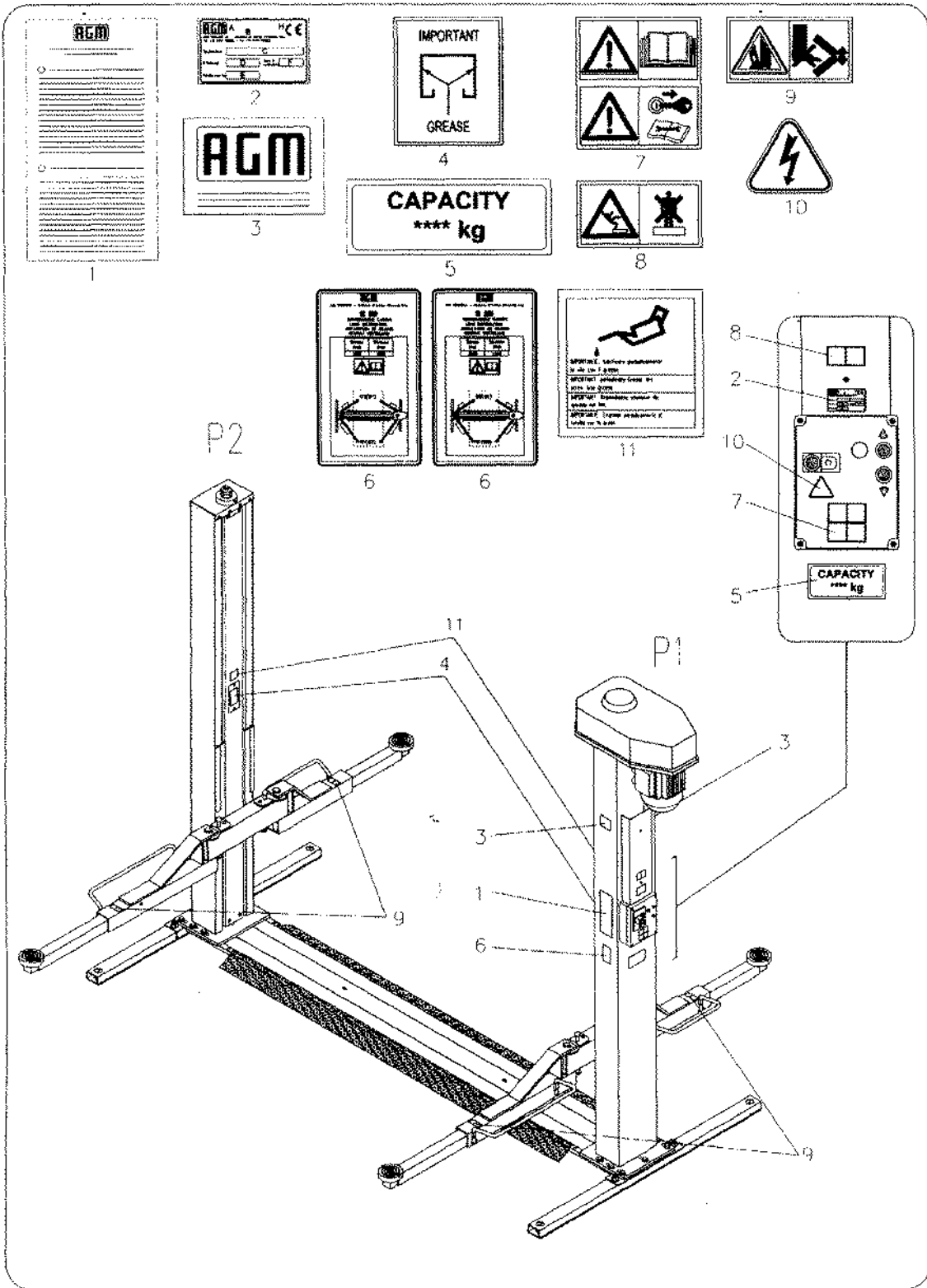
7.0 SPARE PARTS

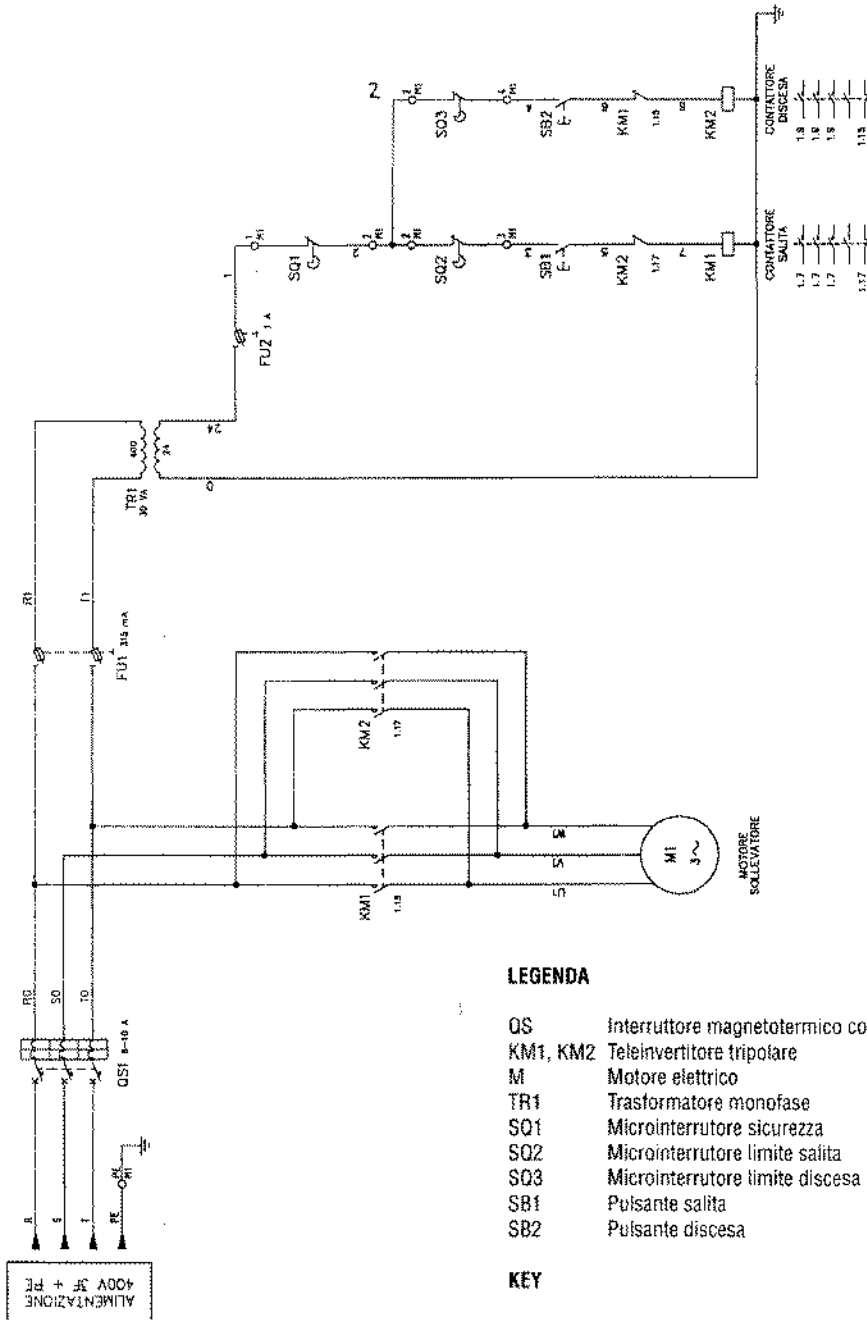
The order for spare parts must be addressed to **AGM-COS.MET S.r.l.** and include following indications:

- **Type, version and machine number of the lift.** These data are written on the **identification plate** of each unit (§1.5)
- **Spare parts tablenumber and part position.**
- **Part description and required quantity.**
- **Way of shipping.** If not specified, AGM-COS.MET S.r.l who is committed to give the best possible service, will not accept responsibility for shipping delays. The goods travel at the risk and responsibility of the purchaser, also if sold free at destination. When placing the order please refer only to the part position number of the relevant spare parts table.

**8.0 SCHEMA POSIZIONE COMPONENTI
E ADESIVE**

**8.0 COMPONENT POSITION DIAGRAM
AND STICKER**



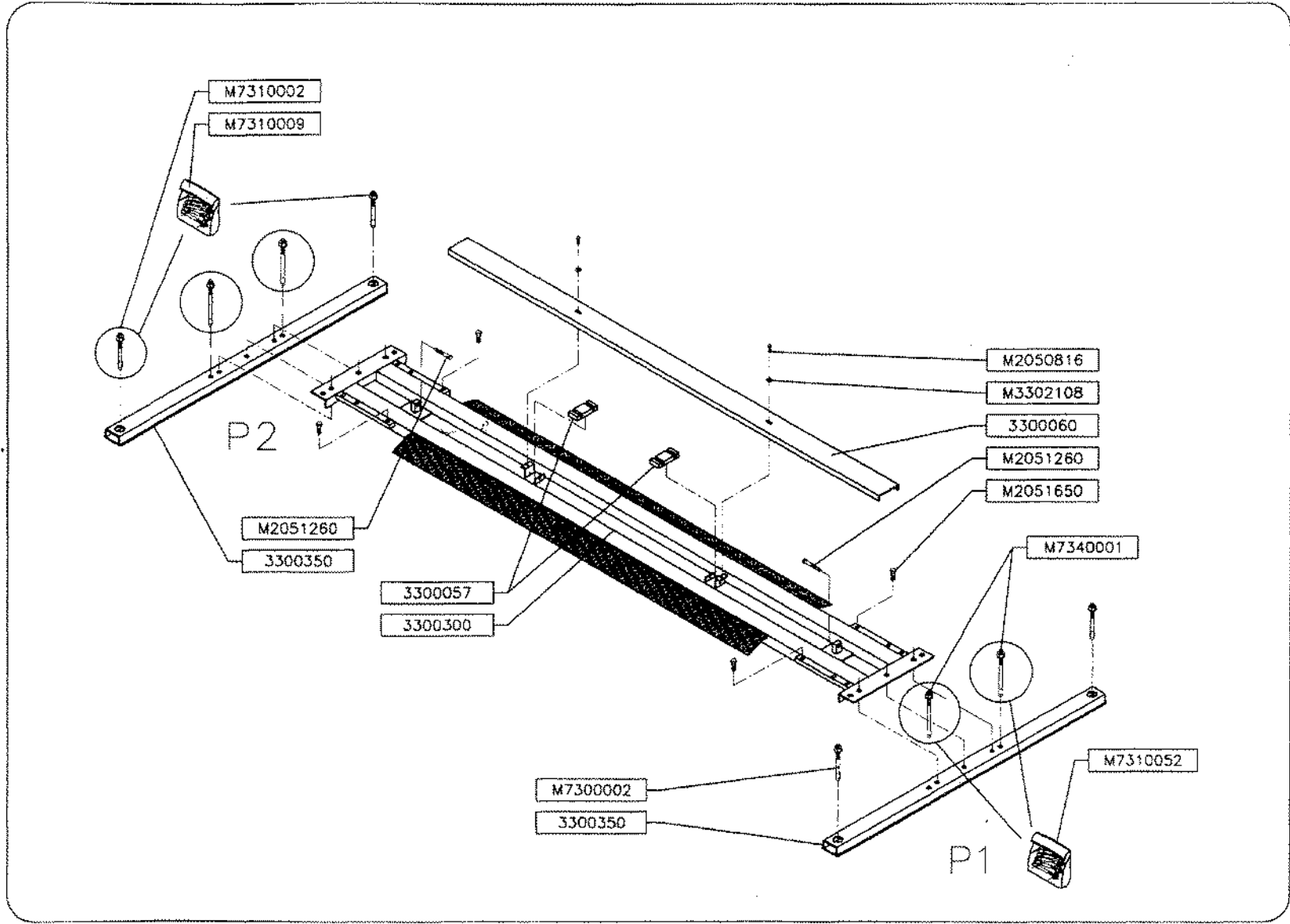


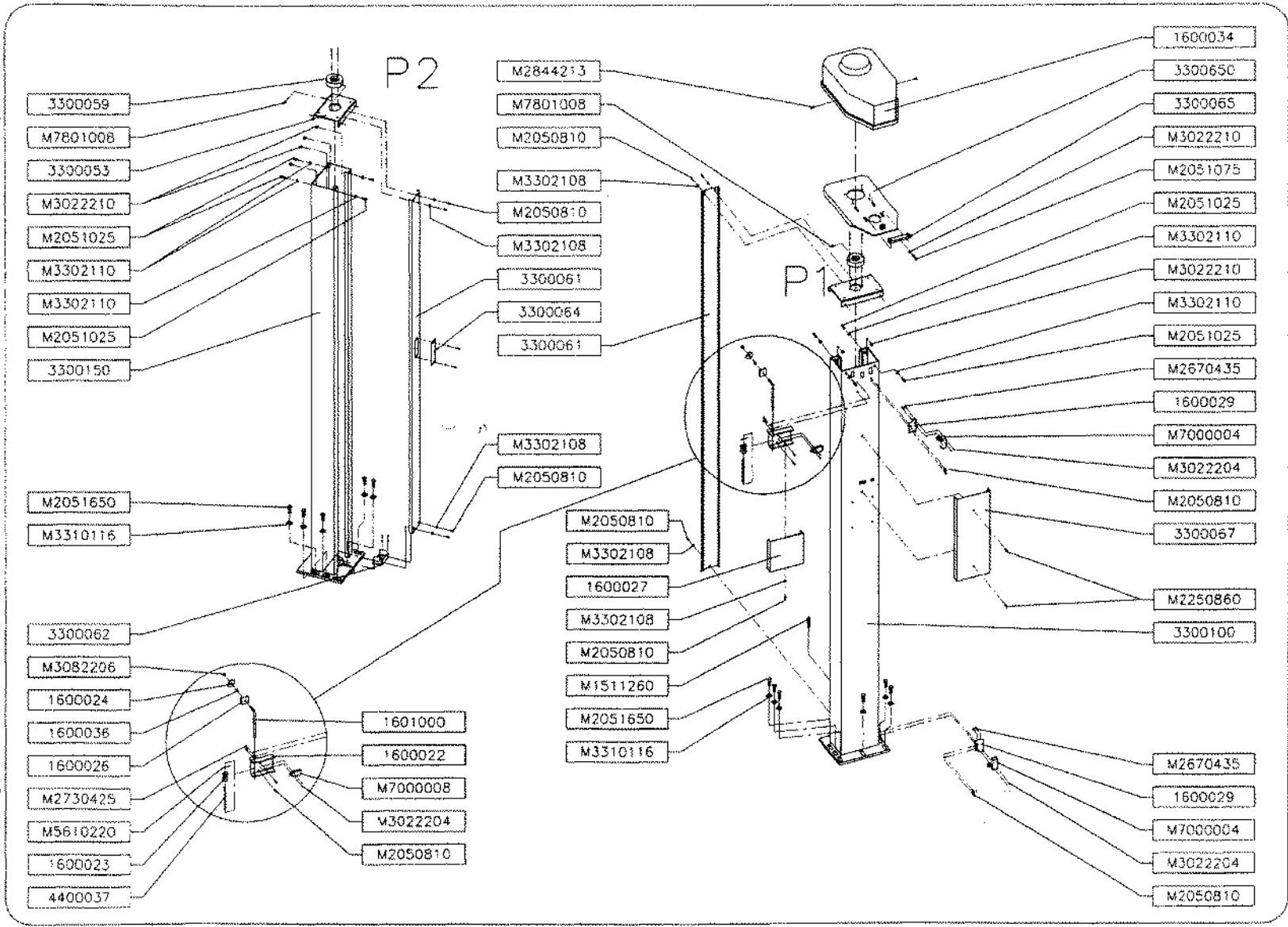
LEGENDA

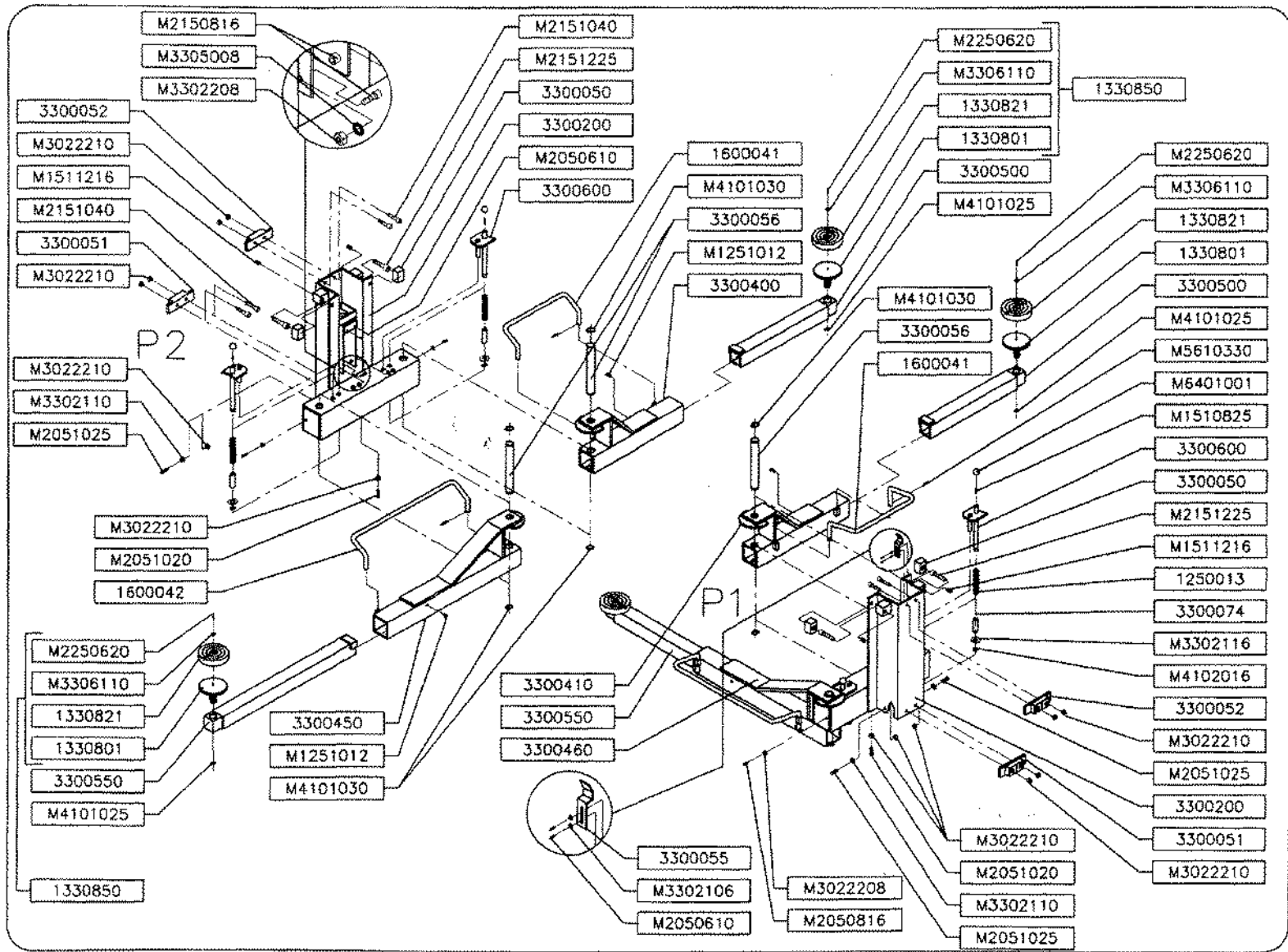
- QS Interruttore magnetotermico con emergenza
- KM1, KM2 Teleinvertitore tripolare
- M Motore elettrico
- TR1 Trasformatore monofase
- SQ1 Microinterruttore sicurezza
- SQ2 Microinterruttore limite salita
- SQ3 Microinterruttore limite discesa
- SB1 Pulsante salita
- SB2 Pulsante discesa

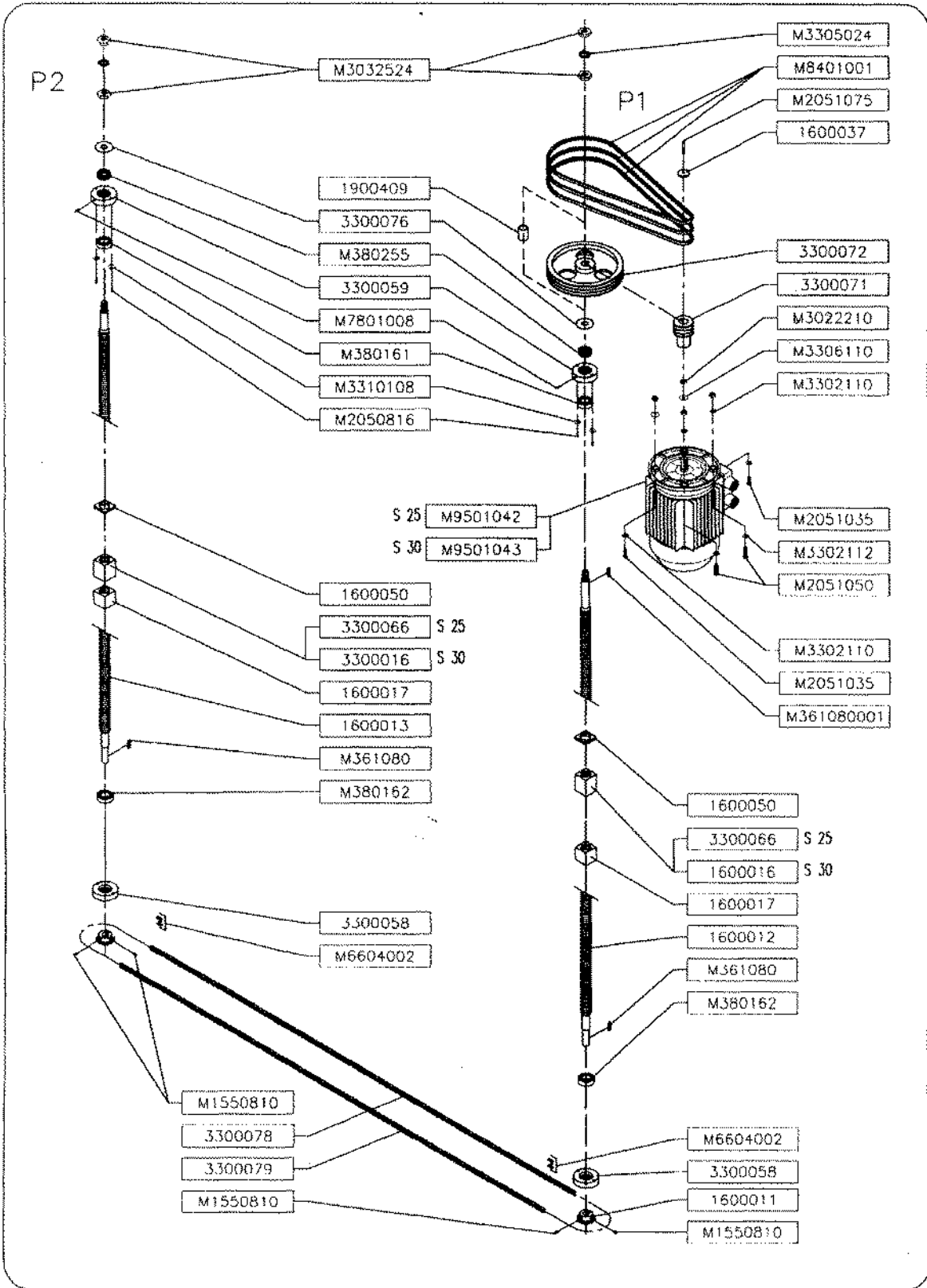
KEY

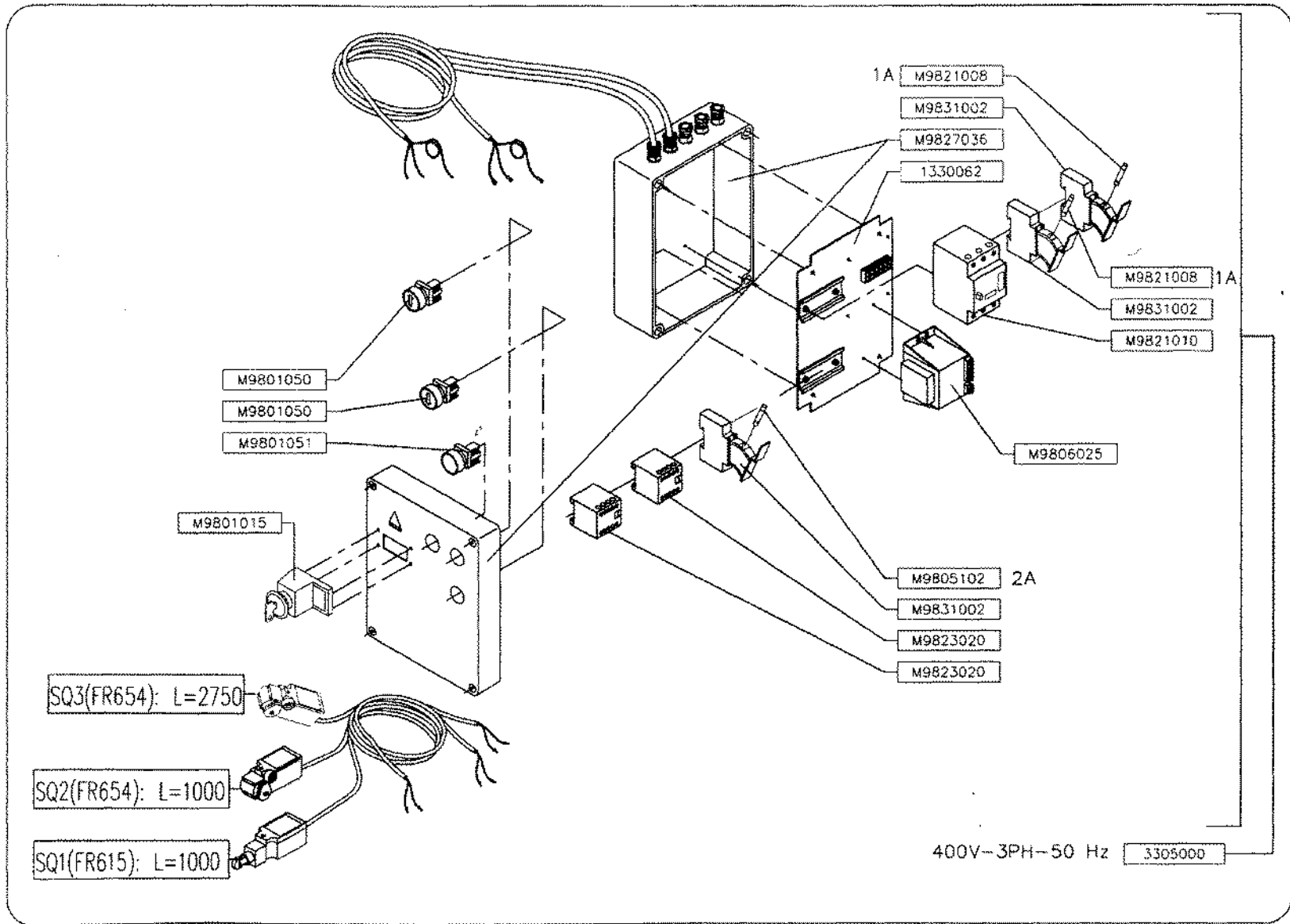
- QS Magneto-thermic switch with emergency
- KM1, KM2 Three poles commutator
- M Electric motor
- TC1 Single phase transformer
- SQ1 Safety microswitch
- SQ2 Raising travel limit switch
- SQ3 Lowering travel limit switch
- SB1 UP pushbutton
- SB2 DOWN pushbutton











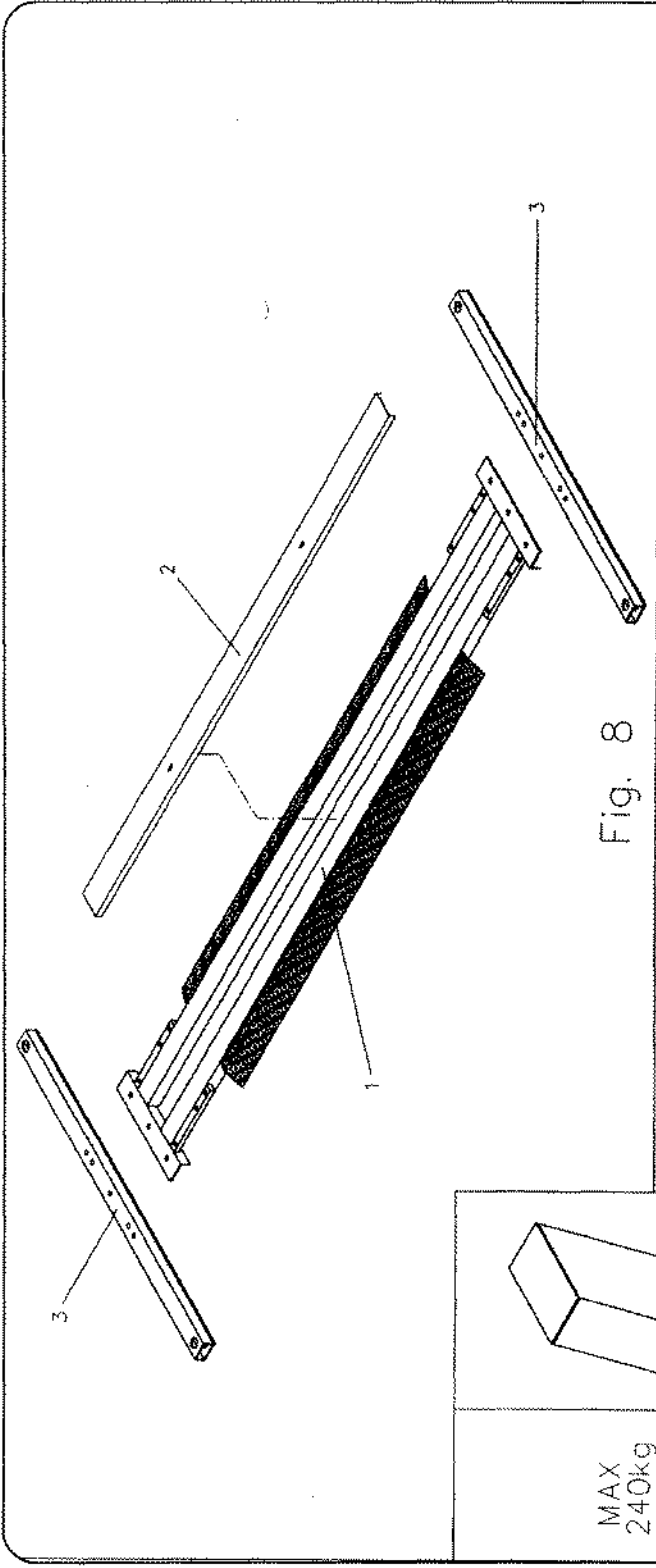


Fig. 8

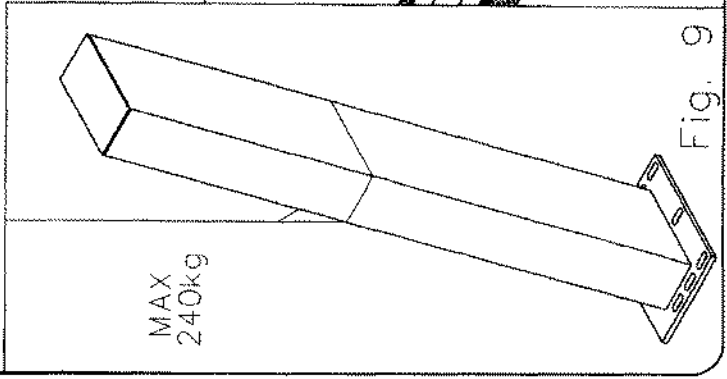


Fig. 9

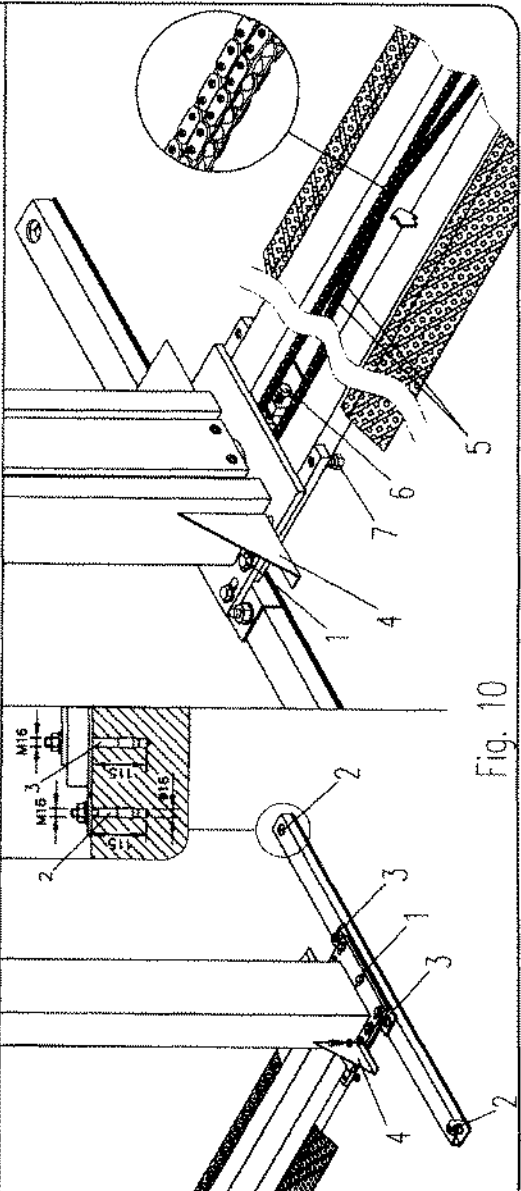


Fig. 10

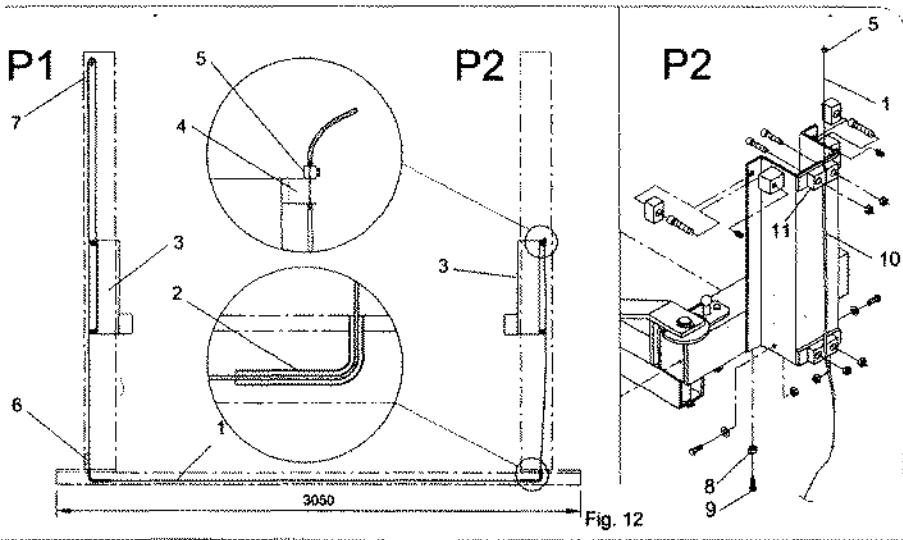


Fig. 12

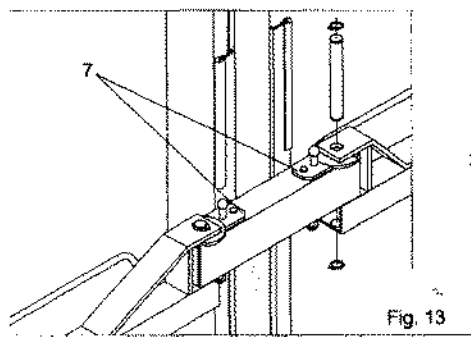


Fig. 13

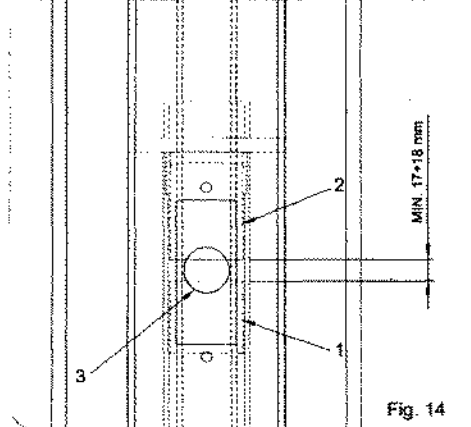
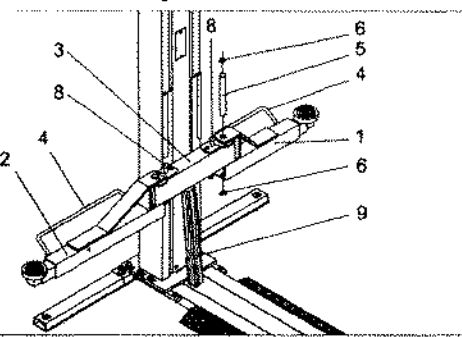


Fig. 14

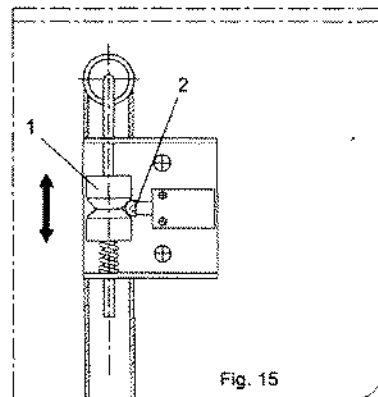


Fig. 15

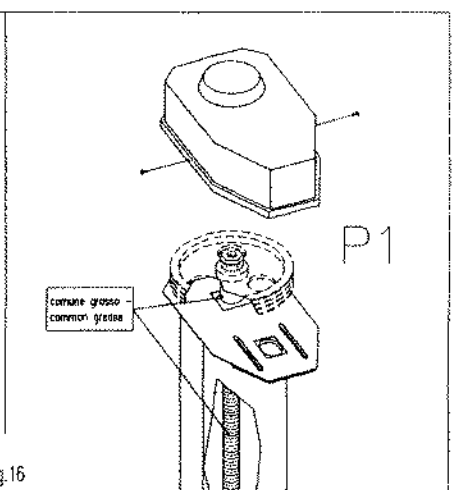
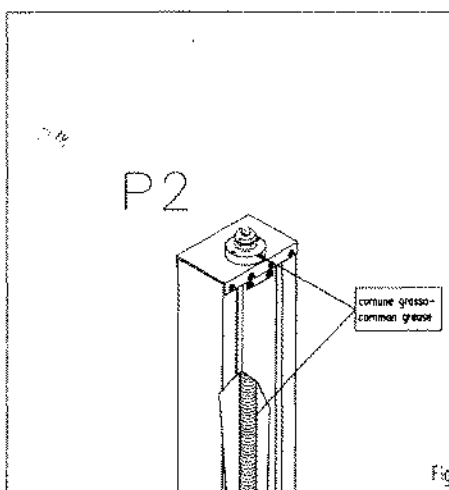


Fig. 16