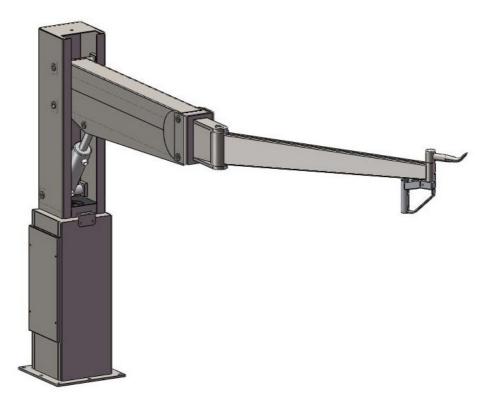


USER'S MANUAL AND MAINTENANCE



FIXED HANDLER MF1

CE



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1. GENERAL INFORMATION

1.1 INFORMATION ABOUT THE MANUFACTURURE



TECNOALIMENTA SRL

Via De Pisis, 11 – 42100 Reggio Emilia – Italy Tel. +39 0522 514807 – Fax +39 0522 231375 www.tecnoalimenta.it E-mail: commerciale@tecnoalimenta.it

1.2 MARKING

The device is manufactured in compliance with the necessary and applicable European Community directives at the time when it was put on the market.

Since it's a machine that isn't included in attachment IV in 98/37/CE regulations a special self-certification CE conformity declaration is issued.

Once the machine is received verify that there is a identification plate that must correspond with what is written below and it must be filled out correctly.

TecnoAlimenta.r.I. TECNOALIMENTA SRL - VIA DE PISIS 11 - 42100 REGGIO EMILA - ITALY TEL. +39 0522 514807 FAX +39 0522 231375 commerciale@tecnoalimenta.it					
TIPO					
MODELLO					
ANNO DI COSTRUZIONE					
MASSA					
PORTATA UTILE					
TARATURA IMP. OLEODINAMICO					
POTENZA INSTALLATA					
TENSIONE D'ALIMENTAZIONE					

The information written here, will be given to our technical assistance department in order to send spare parts or for any information regarding the machine.



It is prohibited for the user to remove, alter or damage the identification plate.



1.3 CE COMPLIANCE DECLARATION

CE COMPLIANCE DECLARATION

According to DPR n. 459/96 (98/37/CE) Attachment II A

The undersigned manufacturer



TECNOALIMENTA SRL

Via De Pisis, 11 – 42100 Reggio Emilia – Italy Tel. +39 0522 514807 – Fax +39 0522 231375 www.tecnoalimenta.it E-mail: commerciale@tecnoalimenta.it

Declares and takes full responsibility that the machine

NAME: MODEL: YEAR BUILT: FIXED HANDLER MF1

Conforms with the following community directives:

98/37/CE - 73/23/CE - 98/336CE

The following standards have been applied:

UNI EN 982:1997 - UNI EN ISO 12100-1-2:2005 - UNI EN ISO 349:1994

Reggio Emilia, on_____

Legal representative Matteo Manghi



1.4 SAFETY PROCEDURES

1.4.1 **DEFINITIONS**

DANGEROUS AREAS

Any area surrounding or near the machine where there is a safety or health risk tor the persons exposed .

EXPOSED PERSONS

Any person that is partially or wholly in the dangerous zone.

OPERATOR

The person or persons that are in charge of installing, turning on, adjusting, carrying out maintenance, and cleaning the machine.

CLASSIFIFICATION OF THE OPERATORS

The operator has two main roles that in some cases can be carried out by one person:

The machine operator has the task of:

- Turning on and checking the automatic functions of the machines
- Carrying out simple regulatory measures
- Eliminating causes of arrest, not broken parts but simple functional anomalies
- Carrying out format changes and cleaning the machine

The maintenance operator is a qualified technician, that is capable of using the machine in a safe way and can intervene on the mechanical and electrical parts and can regulate, maintain and repair them.

<u>USER</u>

The body or person legally responsible for the machine.



1.4.2 WARNINGS FOR OPERATOR SAFETY



Before starting to use the machine, the operators must be perfectly aware o the position and function of all of the controls in the instruction manual.



All of the maintenance that is carried out whether it is ordinary or extraordinary must be carried out by specialized operators that are experts on the subject.



Anytime the machine is cleaned the machine must be turned off.



Be careful not to come into contact with the lifting hook.



Don't place hands on the moving devices (arm parallelogram – central articulation – hydraulic cylinder).



Don't use the machine for something different that what is indicated in the manual. Don't use products that are different from what is indicated. Improper use of the machine can be dangerous for the personnel that use it and can damage the machine as well. Before using it for something different from what is allowed contact the manufacturer for authorization.



To avoid danger of entanglement in the machine's moving parts, don't come close with

- Long hair
- bracelets
- chains
- rings
- ties
- loose fitting clothes



None of the operators can be under the influence of sedatives, drugs or alcohol while on the job.





Always Keep the user's manual near the place where the machine is being used.



Comply with all of the safety warnings and dangers on the machine .

1.4.3 EMPLOYER OBLIGATIONS

The employer is responsible for distributing this document to all of the personnel that will use the machine.

1.4.4 OPERATOR OBLIGATIONS REGARDING THE MACHINE

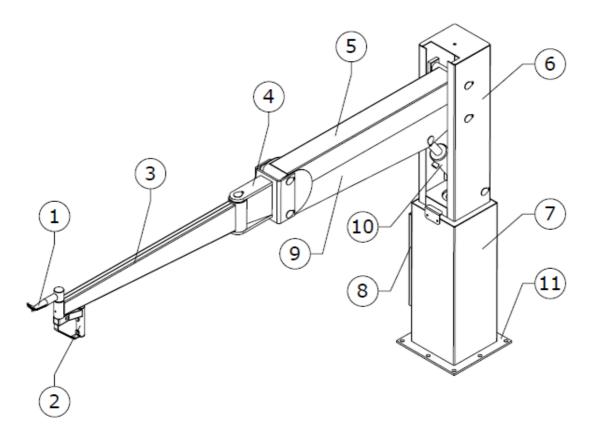
Besides scrupulously following the instructions in this manual, the operators are obliged to let their superiors know about any eventual problems or potential dangerous situations that should occur.



In case the machine malfunctions, verify the procedures in the various chapters.



2. GENERAL DESCRIPTION



- 1. Hook
- 2. Handle with control buttons
- 3. Rotating arm
- 4. Central junction
- 5. Primary arm
- 6. Rotating column
- 7. Base where the hydraulic control unit, the oil tank and the electric motor is placed,
- 8. Power panel
- 9. Secondary arm
- 10. Hydraulic cylinder
- 11. Ground plate



3. HOW TO USE THE MANUAL



Read this manual carefully before proceeding to use the machine.

This manual aims to provide the user all of the necessary information so that they can not only use the machine correctly, but also to run it more independently and safely.

It includes information regarding technical aspects, operation, downtime, maintenance, spare parts and safety.

Before carrying out any operation on the machine, the operators and the qualified technicians must read the instructions carefully that are in this manual.

In case there are doubts on how to interpret the instructions, contact our office to have necessary clarifications.



This manual is an integral part of the machine, and the buyer must be store carefully, it must be positioned in the immediate vicinity of the machine, inside a special container and above all, away from liquids or anything else that can compromise its condition or readability.

In case it deteriorates the manufacturer would be happy to send another copy. If that occurs contact the technical department and give them the data stamped on the identification plate (see chapter on machine identification). The manual should be given to a new user if it changes hands.

The content f this manual conforms with the 98/37/CE directive and it was written following the guide lines of the UNI 10893-2000 regulation.

This manual is 35 pages long including the cover.

The Information and drawings are provided to give an example: the manufacturer having a policy of constantly developing and updating the product, can make changes without warning. It's prohibited to distribute, edit or use the manual for ones own use.



While drafting the manual we chose to use very few, but clear pictograms to bring to one's attention in order to make it easier and quicker to find.



The operations that can be potentially dangerous for the operators <u>are</u> indicated with this symbol.

These operations could cause minor or serious physical injury.



The operations where it's necessary to pay close attention <u>are indicated with</u> this symbol.

These operations must be carried out correctly in order not to damage anything or the surrounding environment. In addition this symbol gives information which needs to be read carefully.



The operations that indicate that the user must read the user's and maintenance manual carefully <u>are indicated with this symbol.</u>

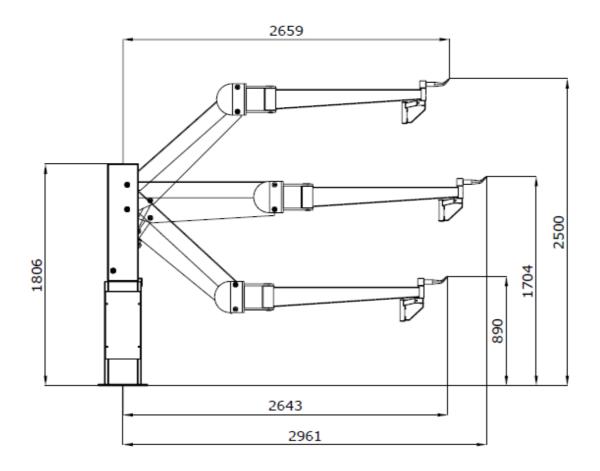


For everything that is not in this manual refer to the attached pamphlets in point 1.3



4. TECHNICAL DATA

4.1 MAIN DIMENSIONS



4.2 CHARACTERISTIC DATA

Weight	_310 kg
Maximum capacity	_300kg
Installed power	_2,5 KW
Supply voltage	_380 V THREE PHASES
Hydraulic system pressure value	_210 bar
Anterior arm rotation	_260°
Head rotation	_270°
Overall rotation	_350°
Hook rise, fall speed	_0,16 m/s



5. INSTALLATION

5.1 RECEPTION AND CONTROL

Once you have received the machine carry out the following inspection:

- Verify that the delivery corresponds to the order specifications and the attached transportation document.
- Verify that the package is complete and that there haven't been any ruined or damaged parts while being shipped
- Check carefully that the machine hasn't been damaged during while being shipped and that some parts have been removed or tampered.
- Verify the presence of the foreseen documentation (preliminary instructions, logical diagrams regarding functions etc. based on the agreement with the manufacturer.



In case they don't comply with the above mentioned specifications immediately contact the manufacturer.

5.2 STORAGE

In case the machine isn't immediately installed, it's necessary to proceed in the following way:

- Store it under cover in an environment that is protected from atmospheric agents,
- The switchgear and the electrical parts in general must be packed to be protected from humidity.
- The temperature of the storage area must be between $+5^{\circ}$ and $+50^{\circ}$ C.
- The hydraulic control unit and in general all of the sliding parts should be protected from dust and oxidation.

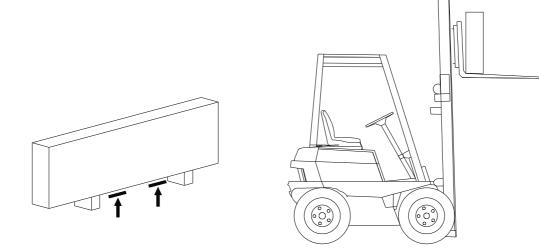


stocking the machine in an environment that doesn't correspond to these criteria, will make the guarantee void for the parts that need to be replaced



5.3 SHIPPING AND HANDLING

When shipping the MF1 handler it is divided into three parts in a wooden crate. The parts are: the machine (which weighs approximately 280kg), the arm (about 25 kg) and the counter plate ground fixing (about 5 kg) .





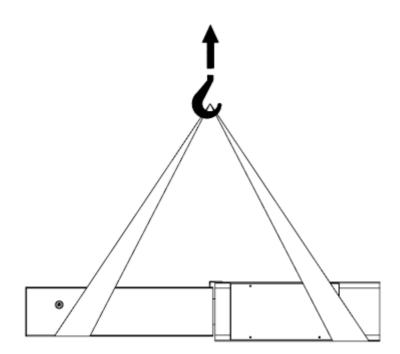
The operators must keep their distance during the phases of shipping and handling.



During the shipping and handling phase use P.P.E. marking CE (gloves and anti slip shoes).

Once it is removed from the wooden crate, the machine can be moved with the help of a fork lift as well as a belt that is correct length (at least 300kg for 1200mm length)







Be careful not to turn the machine upside down before assembly, oil could leak out of the hydraulic control unit tank.



5.4 POSITIONING ANCHORING PLATE

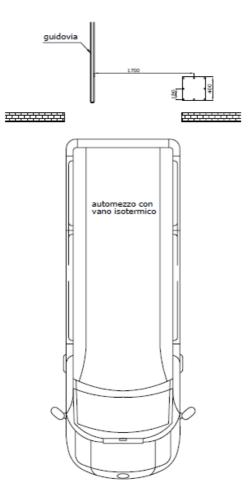
The MF1 portable handler was built and designed for moving carcass halves (beef, pork, ham) inside a factory.



We recommend using special clothing (protective shoes, protective gloves,)when positioning the equipment.

The floor where it will be installed must be level cement with a minimum quality being B25 according to the DIN 1045 regulations

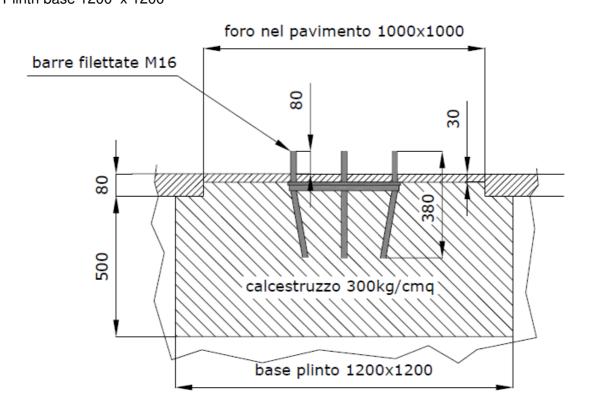
The main distances to take into consideration for positioning the anchor plate will be explained in the following section: guide way - Vehicle with isothermal compartment





The grounded Anchor plate must be placed in cement as seen in the following diagram

Hole in the floor 1000x1000 Threaded bars M16 Concrete 300kg(square cm) Plinth base 1200 x 1200





5.5 INSTALLING THE MACHINE



We recommend the appropriate I.P.D (Protective shoes, protective gloves)

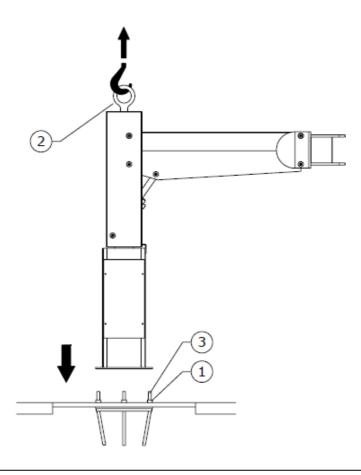
Once the anchoring plate is ready, place the machine in proximity to the plate.

Screw on the first series of anchoring nuts (1) to the threaded bars on the plate so as to create an adjustable support.

Using a davit, connect the predisposed eye bolt (2) on the head of the machine and lift it. Alternatively it's possible to use an overhead travelling crane with a belt or a chain with a 300kg capacity.

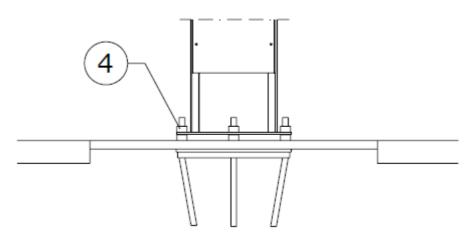
Lift the handler above the striking plate making sure to rotate the machine so that the casing is facing the loading/unloading zone.

With the help of other operators, lay the machine slowly on the striking plate inserting the anchoring bolts (3) in the holes at the base of the machine.



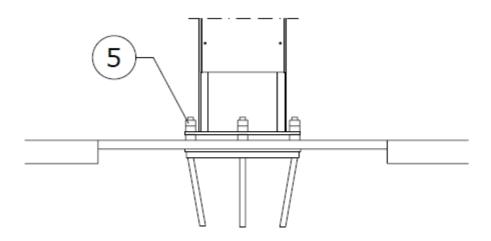


At this point screw on the second series of anchoring nuts (4) so that the machine is blocked.



Regulate the first series of nuts underneath (1) making it lean slightly towards the guide way. This way it prevents any eventual rotations.

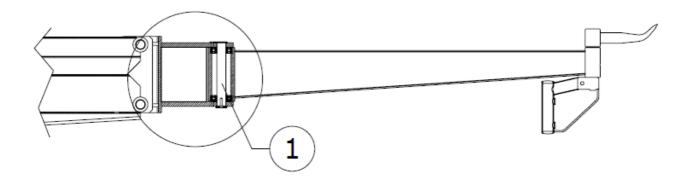
Now tighten the second series of nuts (4) and screw on the third series (5). This last series blocks the handler definitively





5.6 INSTALLING THE ROTATING ARM

The rotating arm must be blocked with a pivot on the central junction. A specialized technician should carry out all of the electrical connections.



5.6 CONNECTION

The electrical panel must be connected to the companies power supply.



This operation must be carried out only by specialized personnel.

The manufacturer is absolved of any responsibility regarding connection and initial start up.



5.7 CLEANING



The machine can be carried out by personnel without technical skills, but who have been previously informed about the main electrical shut off switches, so that they don't run into danger.



Be careful of the lifting hook, danger of perforation. Always put the protective covering after use.



The machine comes in direct contact with food products, so it's necessary to clean it very well in order to avoid contagion and infection.

The parts that come in contact with butchered meat are made with AISI 304 stainless steel materials with a smooth surface for the structure the elements that aren't made of aluminum are protected with a galvanized coating or with decontaminated paints that comply with the sanitary regulations in force.

Metallic protection hasn't been used to avoid build up of meat residues and liquids in difficult areas to clean.

The machine must be cleaned with a high pressure jet washer at the end of every work shift and subsequently every time it is maintained or repaired with appropriate detergents for the food sector.

5.8 DEMOLITION AND DISPOSAL



The machine can be demolished by qualified technicians, mechanics and electricians

There are no particular precautions when disposing the machine, since it isn't made from harmful materials, with the exception of residual oils in the hydraulic control unit.

When disposing oil, it's necessary to follow the laws in force in the country where it was installed.

It's necessary to separate the various components according to homogenous groups.

Such components will be disposed of according to the laws that are in force.



6. FUNCTION AND USE

6.1 EXPECTED USE

The MF1 fixed handler was designed and produced for handling (storage and stacking) butchered meat (sides of beef or pork, ham, etc). It was designed to be placed inside a building near a loading/unloading zone

6.2 UNEXPECTED USE

Everything that isn't indicated in point 6.1 is considered IMPROPER USE.



The manufacturer is absolved from all responsibility for damaged things, people or the machine itself for accidents caused by an unexpected use of the machine.

6.3 ENVIRONMENTAL CONDITIONS

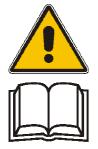
The machine must be used on a vehicle with an isothermal compartment that is prepared for transporting sides of beef and pork or ham.

Temperature -15℃ / +30℃

Humidity 90 % max

Lighting 200 min lux.

6.4 ON THE JOB



Before working on the machine the operators must have read and understood the instructions in this manual, paying careful attention to the safety regulations

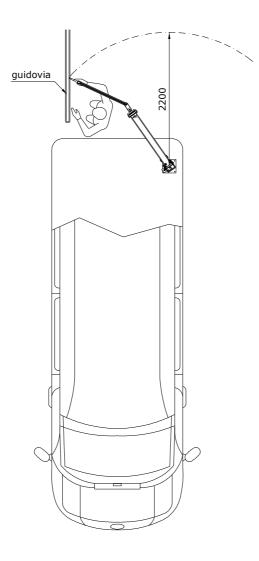
The operator must stand between the guideway and the handler, inside the junction in order to load and unload half animal carcasses. The handler needs a 2000mm range.



MOVIMENTATORE AUTOTRASPORTATO MA1

Guideway

Vehicle with isothermal compartment



Strangers can't be allowed inside the handling machine's range. It can only be used only by personnel who have been trained.

While handling half animal carcasses, since they are dealing with food products, the operators must respect the provisions regarding hygiene. They must therefore wear appropriate clothing. (shoes, gloves and overalls).



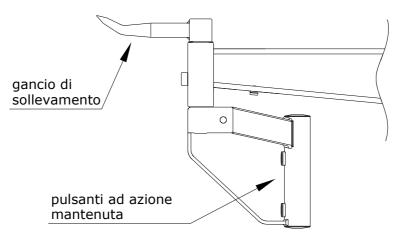


6.5 SAFETY DEVICES

The MF1 fixed handler is provided with a motion switch that stops involuntary activity

Lifting arm

Continuous Motion switch



The position that the operator must keep, during the handling operation, stops the person from accidentally coming in contact with the lifting hook.



During use be careful not to put fingers inside the parallelograms arms, in the central junction and in proximity of the cylinder.

When the machine is turned off for the day, remember to correctly replace the arm by inserting it in the special pivot located in the lower part of the structure. This operation is to be carried out by pressing the down button for a long period of time, this way the arm is blocked in a safe position.

A special PVC protection sheath is provided in the package for the lifting hook.

Under the central juncture there is an emergency switch







The emergency release (turn counter clockwise and pull), which is pressed in a dangerous situation, doesn't allow the machine to be immediately turned back on, but it's necessary to proceed with the phases in order to turn it back on.



On the cabinet there is a general electro switch which removes the power if it is unplugged.

A lock and a key is mounted on the doors of that cabinet. The keys should be kept by specialized personnel who are aware of the risks.



6.6 SAFETY WARNINGS

Where it is necessary there are warning stickers on the machine that say ATTENTION/PROHIBITED.



It's necessary to look at these before every use .



Be careful with your hands. Positioned in proximity of the cylinder, on the rear arm and on the central junction.



Be careful of the lifting hook.



This sign indicates that there could be the risk of electric shocks: Pay attention to the live areas where this symbol is present.



It's prohibited to alter / remove the adhesive plates.



6.7 RESIDUAL RISKS

The machine has a few areas that are dangerous so it's important to pay close attention.



Be careful of the lifting hook.

When the machine is turned off for the night remember to replace the special PVC protective sheath provided in the package.

During downtime, Remember to correctly put the arm in the pivot stop in the lower part of the machine. Incorrectly fixing it could cause it to become unhooked and consequently damage the isothermal compartment surface.



During use, the operator must pay close attention that no strangers come close to the handler.



During use be careful not to put fingers inside the parallelogram arms, in the central junction and in proximity of the cylinder.

These danger zones have been opportunely placed on the machine with special pictograms.



6.8 INDIVIDUAL PROTECTION DEVICES

The individual protection devices (IPD) are equipment that is to be worn by the workers to protect them from specific risks during the tasks that they carry out.

The IPD must:

- Fit each person correctly
- Absolutely be worn
- Be chosen making sure that they are appropriate for preventing specific risks for the task that the worker who wears them is carrying out.
- Be comfortable to wear.
- Be up kept correctly and must be replaced when they are worn out or damaged.



When choosing IDP we recommend those that have the CE marking.

The following devices are expected



Anti-slip shoes.



Protective gloves

Overalls.



6.9 **PRELIMINARY OPERATIONS**

Before connecting the power cord it's necessary to do the following verifications:

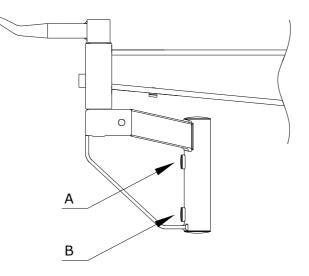
- Verify that the differential protection device functions correctly
- Verify that the machine is grounded.
- Verify that the clamps are tight

Before using the handler with a full load, try going up and down with an empty load with the arm for at least a couple of times in a row in order to get rid of any eventual air that entered in the hydraulic circuit during transportation.

6.10 COMMANDS

The commands are continuous motion. The buttons placed on the handle have a vertical movement:

- Button A: up
- Button **B**: down



The horizontal motion is manually impose by the operator. After hooking and lifting the animal halves, the operator makes a circular motion to the front arm causing the opening and closing and consequently moving the load.



6.11 UTILIZZO

The vehicle must be placed with the doors of the refrigerator cel, near the guide way inside the factory where animal carcasses are loaded/unloaded.

Rotate the general switch in the electrical panel to ON to turn on the handler.

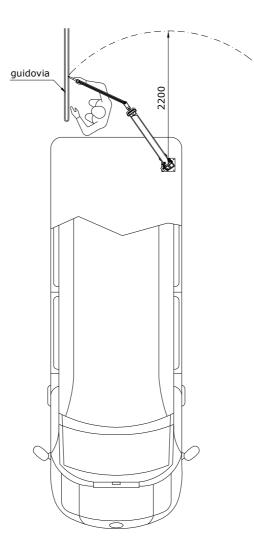
The operator must stand inside the juncture between the guide way and the column base, while gripping the handle with the right arm.

They must then unhook the handling arm from the resting position (with the hook found under the guide way



Remember to remove the special PVC protection from the hook.

guideway

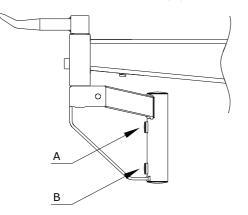




While using the machine, since they are dealing with food products, the operators must respect the provisions regarding hygiene. They must therefore wear appropriate clothing. (shoes, gloves and overalls).



The commands on the handle are intended for making verticle movements, so when pressing the lift button (**A**) the operator will lift the arm whereas button (**B**) is used to lower the arm.



The horizontal movements are carried out directly by the operator by rotating the front arm. This way the entire arm is opened and closed and consequently the load is moved horizontally.



During use, the operator must pay close attention that no strangers come close to the handler.



In case there is a danger, use the emergency button found on the central junction.



The emergency release (turn counter clockwise and pull), which is pressed in a dangerous situation, doesn't allow the machine to be immediately turned back on, but it's necessary to proceed with the phases in order to turn it back on.



Maximum lifting weight: 300 kg.



7. MAINTENANCE

Maintenance must be something that is preventative and planned, since it is a fundamental requirement for safety, with the assumption that the machine is subject to wear which can cause potential break downs.

Therefore the machine's safety also depends on good preventative maintenance, so it's important to substitute the parts that are subject to wear before the machine break downs.



Before maintenance/cleaning unplug the machine by rotating the general switch on the electrical panel to OFF.



Don't make modifications, transformations, or use the machine in a way that could jeopardize the safety, without getting permission from the supplier.



Since it is a machine that handles food products, it's not subject to lubrication. Eventual traces of oil could come in contact with half carcasses.

Ordinary maintenance must be carried out by technically specialized personnel and trained by the user.

Extraordinary maintenance must be carried out by someone appointed by the manufacturer.



7.1 HYDRAULIC SYSTEM

Periodically verify the level of oil in the tank. When removing the lower casing, with the arm completely lowered, the level must be between the two lines shown.

In case you substitute the oil, empty the remaining oil by removing the plastic tank found under the hydraulic control unit.



Dispose of the used oil according to the laws in force.

To insert oil remove the front casing and unscrew the cylinder and remove dampening straps found on the left of the hydraulic control unit.



Use hydraulic oil with ISO VG 46 – quantity 9 liters.

As far as the hydraulic cylinder is concerned, its lifespan is proportionate to the number of hours it is used.

If during downtime, there are slow arm movements or leakage from the stem of the cylinder the gaskets are damaged and need to be changed.



This operation must be carried out by specialized personnel.



7.2 HANDLING ARM STRUCTURE

Verify how warn the junctions are by making short and quick upward movements. If there are oscillations or vibrations substitute the bushing (recommended every 3 years)



. We recommend contacting the manufacturer directly for this task.

7.3 PUSH BUTTONS

The push buttons have been made with IP67 waterproof micro switches, since the work environment and the continuous stress could cause malfunctions.

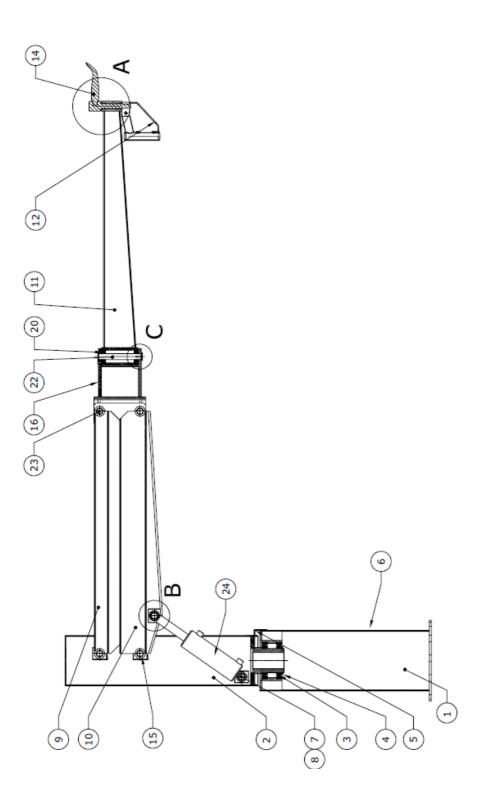
Periodically verify their condition and eventually substitute them.

Also Verify that the connection inside the lower casing: an eventual bad connection could cause problems with the correct functions of the machine (for example pull motion)

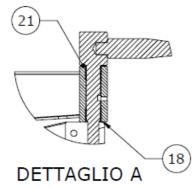


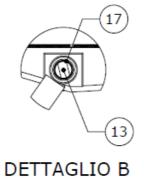
MOVIMENTATORE AUTOTRASPORTATO MA1

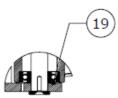
8. SPARE PARTS











DETTAGLIO C

DETAIL		DETAIL	DETAIL	
POS	CODE	DESCRIPTION	MATERIAL	Q.TY
1	01209-01	Base		1
2	01209-03	Rotating column		1
3	01209-0008	6024 bearing		2
4	01209-0010	Seeger est 120		1
5	01209-038	Stationary column		1
6	01209-02	Cover		1
7	01209-04	Pivot L 246		3
8	01209-05	Washer diam 37		7
9	01209-10	Primary arm		1
10	01209-11	Secondary arm		1
11	01209-12	Rotating arm		1
12	01209-06	Complete handle		1
13	01209-13	Pivot I 101		1
14	01209-035	Hook		1
15	01209-0003	Permaglide bushing PAP 3025 P10		10
16	01209-09	juncture		1
17	01209-0004	Permaglide bushing PAP 2525 P10		2
18	01209-0005	Permaglide bushing PAP 2525 P10		2
19	01209-0007	Fifth wheel PAW 32 P10		1
20	01209-0009	Bearing 6306 2RS		2
21	01209-0006	Fifth wheel PAW 32 P10		1
22	01209-07	Pivot L211		1
23	01209-08	Pivot L170		2
24	01209-15	Hydraulic cylinder bore. Diam 80 265 stroke		1