

INSTRUCTIONS AND WARNINGS MANUAL



## **LOADING SYSTEMS IN ALUMINIUM ALLOY**



**METALMEC**





## **ORIGINAL INSTRUCTIONS**

All rights reserved in all countries

While the texts and images have been prepared with the utmost care, Metalmec S.r.l. reserves the right to modify and/or update the information contained herein for the purpose of correcting any typographical errors and/or inaccuracies, without prior notice and without any bearing obligations.

The content of this manual is of a strictly technical nature, and is the property of Metalmec S.r.l..

This manual is furnished in paper format.

No part of this manual may be translated into another language and/or adapted and/or reproduced in any other form and/or means, whether mechanical or electronic, by photocopying, recording or otherwise, without prior written authorization from Metalmec S.r.l..

Any requests for additional copies of this document must be addressed to Metalmec S.r.l..

The prohibition on the copying and/or dissemination of this document also applies to the electronic version.

The rights of the proprietor are enforced by law.

Metalmec S.r.l. recommends reading this manual and all the documents relating to the product, including the general catalogue, which contains the specific technical data regarding the product purchased.

Inside you will find all the information necessary for proper management of the product purchased.

The user is therefore advised to read the manual in all of its parts and to carefully follow the warnings contained therein.

It is also recommended to contact Metalmec S.r.l. directly for any spare parts required, for advice on the selection of special equipment, and for any other indications that may be required regarding the product purchased.

The consultation of this manual has been facilitated by the inclusion of a table of contents on the first page.

The instructions contained in this manual are the following: ORIGINAL INSTRUCTIONS

## **1. GENERAL INFORMATION**

1.1	GENERAL WARNINGS	4
1.2	INTRODUCTION	6
1.3	MANUFACTURER'S DATA AND INFORMATION REQUESTS	6
1.4	SAFETY STANDARDS REFERENCED IN THE MANUAL	7
1.5	GLOSSARY AND TERMINOLOGY UTILIZED	7
1.6	PERSONNEL QUALIFICATIONS	8
1.7	SYMBOLS USED IN THIS MANUAL	9
1.8	DESCRIPTIONS OF THE DANGER, PROHIBITION, AND OBLIGATION SIGNS	10
1.9	DESCRIPTIONS OF THE PERSONAL PROTECTIVE EQUIPMENT (PPE)	11
1.10	WARRANTY CONDITIONS	13

## **2. AVAILABLE MODELS AND INTENDED USE**

2.1	AVAILABLE MODELS	13
2.2	INTENDED USE	14
2.3	INCORRECT USE PROHIBITED BY THE MANUFACTURER (IMPROPER USE)	14

## **3. TECHNICAL DESCRIPTION FOR USE**

3.1	REQUIREMENTS FOR DETERMINING THE RAMP OR EVENT & REMOVAL RAMP MODEL BASED ON THE SPECIFICATIONS USAGE REQUIREMENTS	15
3.2	SPECIFIC WARNINGS AND USAGE LIMITATIONS FOR RAMPS AND EVENT & REMOVAL RAMPS	17
3.3	LOADING BED ANCHORING SYSTEMS FOR RAMPS AND EVENT & REMOVAL RAMPS	18
3.4	SPECIFIC WARNINGS AND USAGE LIMITATIONS FOR DRIVEWAYS AND WALKWAYS	20
3.5	SPECIFIC WARNINGS AND USAGE LIMITATIONS FOR LOADING BRIDGES AND TAIL LIFTS	20

## **4. SAFETY**

4.1	GENERAL INFORMATION	21
4.1.1	APPLIED TECHNICAL STANDARDS	21
4.1.2	PRODUCT CERTIFICATION	22
4.1.3	ENVIRONMENTAL OPERATING CONDITIONS	34
4.2	DISPOSAL OF WASTE MATERIALS	34
4.3	RESIDUAL RISKS	35
4.3.1	IMPACT AND CRUSHING	35
4.3.2	SHEARING	35
4.3.3	FALLING	36
4.3.4	SLIPPING	36
4.3.5	TRIPPING	36
4.4	WARNING PLATES	37

**5. INSTALLATION**

5.1	GENERAL INFORMATION	38
5.2	SUPPLY CONDITIONS	38
5.2.1	PACKAGING AND TRANSPORT	38
5.3	PREPARATION OF THE WORK ENVIRONMENT	40
5.3.1	GENERAL INFORMATION	40
5.3.2	SELECTING THE LOCATION AND VERIFYING THE INSTALLATION REQUIREMENTS	40
5.3.3	LIFTING AND HANDLING PROCEDURES	41
5.3.4	SIGNS TO BE PLACED IN THE WORK AREA	42
5.3.5	RESIDUES AND ENVIRONMENTAL CONTAMINATION	42
5.3.6	LIFTING ACCESSORIES	43
5.4	STORAGE	44
5.5	UNPACKING	44
5.6	ASSEMBLY AND POSITIONING	44
5.7	PREPARATIONS TO BE CARRIED OUT BY THE USER	45
5.8	GENERAL INSPECTIONS	45
5.9	DECOMMISSIONING	45

**6. MAINTENANCE**

6.1	GENERAL CONSIDERATIONS	47
6.2	GENERAL SAFETY PRECAUTIONS	48
6.2.1	MAINTENANCE INDICATIONS TO ALWAYS BE RESPECTED	49
6.2.2	SCREW TIGHTENING TORQUE VALUES FOR MS040-B/BF SERIES ARTICULATED / COUNTER-BALANCED LOADING BRIDGES	49
6.2.3	INSPECTION FREQUENCY CHART	49
6.2.4	PREVENTIVE MAINTENANCE PLAN	50

# 1. GENERAL INFORMATION

## 1.1 General warnings

*Like the manufacturer's declaration, the manual also constitutes an integral part of the purchased product, and must accompany it throughout its service life, even it is transferred or resold. The user is responsible for keeping this documentation in tact, in order to allow it to be consulted throughout the product's entire service life.*

In the case of loss or damage, an additional copy can be requested from Metalmec S.r.l., by specifying the exact model, serial number, and date of manufacture.

The supplied product manual reflects the state of the art at the time of delivery, and the manufacturer reserves the right to make any changes to its products deemed to be useful, with no obligation to update the manuals for the previous production batches.

The manufacturer shall bear no responsibility for any loss of production and/or damage caused to property, people and/or animals by the product in the following cases:

- The improper use of the product purchased, or any use for purposes other than those for which it has been designed.
- The use of the product purchased in conjunction with equipment or materials that exceed its specified maximum capacity.
- The use of the product under environmental operating conditions other than those indicated in chap.4 (Safety).
- The incorrect installation of the product at the site or location for which it is intended.
- Insufficient or lack of periodic maintenance.
- Modifications or interventions not agreed and/or authorized in writing by the manufacturer's technical department.
- The use of the product in environments other than those for which it has been designed.
- The use of non-original spare parts or parts not specifically designed for the model in question.
- The use of the product by unsuitable, unauthorized and/or improperly trained personnel.
- The use of the product by people under 18 years of age.
- The use of the product by personnel who have not been properly trained and/or educated, as required by Italian Legislative Decree 81/2008, as amended (Directive 89/391/EC or Directive 2009/104/EC) concerning safety at the workplace.
- Any use of the product that does not comply with the safety laws and/or regulations foreseen by the specific European and/or national legislation in force.
- The total or partial failure to respect the contents of these instructions.
- Extraordinary events.

The user is responsible for ensuring the application of the safety requirements indicated hereafter, and must ensure that the authorized personnel:

- is qualified to perform the activities required;
- understands and scrupulously respects the requirements contained in this document;
- understands and applies the general safety standards applicable to these types of products, as well as those currently in force in the country and at the location where the product is utilized;
- understands the safety standards relating to the risks arising from the use of the ramps, event & removal ramps, bridges or gangways in order to close the "gap" between a loading dock or other similar loading areas, and the loading bed of a vehicle that can be positioned at different levels.

**The maintenance technicians must have read and fully understood this manual and the technical data, as well as the affixed data plate containing the product's specific technical information, and the documentation indicated in section 4.1.2. (Product Certification), which constitutes an integral part of the same, and must also have a full understanding of the basic principles of mechanics.**



### **ATTENTION**

IT SHOULD BE NOTED THAT THE DOCUMENTATION FURNISHED BY METALMEC S.R.L. ONLY REGARDS THE PRODUCT PURCHASED BY THE END USER.



### **DANGER**

DEPENDING ON THE USAGE CHARACTERISTICS, THE IMPROPER USE AND/OR INSTALLATION OF THE PURCHASED PRODUCT COULD RESULT IN CONSIDERABLE RISKS, AND ARE THEREFORE STRICTLY PROHIBITED.



### **ATTENTION**

IT SHOULD BE NOTED THAT THE USER IS RESPONSIBLE FOR SUPPLEMENTING THE INSTRUCTIONS CONTAINED HEREIN WITH ANY OPERATING PROCEDURES PRESENT AT THE PURCHASED PRODUCT'S PLACE OF USE, AS WELL AS FOR PROVIDING ALL THE ADDITIONAL INFORMATION TO THE PERSONNEL IN CHARGE OF USING AND MAINTAINING THE PRODUCT.

This manual constitutes an integral part of the product to which it refers, and contains all the information necessary to ensure:

- The operators' awareness of the relative safety issues;
- The safe handling and use of the purchased product;
- An in-depth knowledge of the product's use and limitations;
- A proper understanding of how to perform the maintenance operations safely and correctly;
- A proper understanding of how to safely decommission the product in accordance with the current environmental protection and workplace health and safety regulations.



### **DANGER**

THE PRODUCT MUST ONLY BE USED EXCLUSIVELY BY QUALIFIED OPERATORS WHO HAVE RECEIVED PROPER TRAINING ON THE SAFETY PROCEDURES, IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED HEREIN.

The purchased product must only be used to meet the requirements for which it has been specifically designed; any other type of use is to be considered dangerous and is expressly forbidden by the manufacturer. Any intervention that alters the structure and the intended use of the purchased product must be expressly authorized in writing by the manufacturer's technical department. The manufacturer reserves the right to modify the design and to make marketable improvements to the product without notifying the customers already in possession of similar models.

#### **■ Prohibition on modifying the product**

It is forbidden to make any changes to the product that could compromise its safety. In particular, it is forbidden to remove any of the product's components or to modify its structure or constituent elements. It is forbidden to perform interventions of any kind upon the purchased product (even if performed by qualified personnel); in fact, even interventions of this type could have serious consequences for the safety of the operators and the integrity of the purchased product.

It should be noted that the manufacturer cannot be held civilly or criminally liable in relation to any parts of the product that have been modified by the buyer without the express written authorization of the manufacturer's technical department.

## 1.2 Introduction

In order to ensure maximum reliability, Metalmecc S.r.l. carefully selects the materials/components to be utilized for the product's construction, subjects the products to a regular inspection prior to delivery, and manages the production processes according to stringent technological standards. In order to ensure excellent efficiency over time, the product must be used properly and must be subjected to adequate preventive maintenance, in accordance with the instructions contained in this documentation.

All the structural and connection elements have been designed and manufactured with a safety rating that ensures their resistance to any abnormal stresses, or, regardless, stress levels greater than those indicated.

The materials from which the product is made are of the best quality, and are inspected upon receipt (prior to being stored) in order to guarantee the necessary mechanical characteristics and the absence of any damage, deterioration, or malfunctions.

Despite the precautions taken during the design and manufacturing stages, in order to guarantee the product's proper use, safety, durability, and reliability over time, the manufacturer's indications must be scrupulously followed, and the product purchased must be installed and utilized in accordance with these indications, as well as the current legal requirements in the product's country of use.

The purpose of this manual is to provide technical information to the personnel in charge of using and maintaining the product purchased from Metalmecc S.r.l.

The instructions and warnings manual contains the information necessary to gain a full understanding of the purchased product's correct installation and usage methods. Namely: the technical description of the product, its safe usage conditions, and information on the necessary maintenance interventions.

In order to ensure the proper use of the purchased product, the work environment/usage location must be compliant with the current safety and hygiene regulations.



### **ATTENTION**

**PRIOR TO INSTALLING THE PURCHASED PRODUCT, RENDERING IT OPERATIONAL, USING IT, OR PERFORMING ANY MAINTENANCE OPERATIONS UPON IT, THIS MANUAL MUST BE READ CAREFULLY, AND THE INSTRUCTIONS AND INDICATIONS CONTAINED HEREIN MUST BE SCRUPULOUSLY FOLLOWED.**

## 1.3 Manufacturer's data and information requests

The purchased product has support services available worldwide, which are directly coordinated by the manufacturer's technical support department.

The manufacturer is always at the user's disposal for any types of information/clarifications that may be required regarding the product's installation, use and maintenance.

In order to request information or clarifications regarding the product, or technical support interventions to be carried out at the customer's facilities, Metalmecc S.r.l. can be contacted directly via:

telephone: +39 035 4945858

fax: +39 035 4945149

e-mail: [info@metalmeccsrl.it](mailto:info@metalmeccsrl.it)

All inquiries must always be made in a clear manner, making specific reference to this manual, and indicating the information contained on the product's identification plate. In particular the following information will be required:

- model, serial number, and date of manufacture;
- any defects encountered;
- the exact address of the location/facility where the product is installed and/or utilized;
- the person to be contacted.



## 1.4 Safety standards referenced in the manual

The requirements, indications, standards, and relative safety notes described in the various chapters of this manual serve to define a series of behaviours and obligations to be respected when performing the various activities, in order to ensure the necessary safety conditions for the personnel, the equipment itself, and the surrounding environment.

The indicated safety standards are intended for all the personnel who have been authorized, trained, and delegated to perform the various activities and operations, including:

- transport
  - installation
  - use
  - management
  - maintenance
  - cleaning
  - decommissioning and dismantling
- which constitute the intended usage methods for the product in question.

## 1.5 Glossary and terminology utilized

The terms and any abbreviations utilized in this manual are described in detail below:

**Risk:** a combination of the probability and the seriousness of the potential injury or damage to human health that may result from a hazardous situation;

**Danger:** a potential source of personal injury or damage to human health;

**Danger zone:** any area in and/or near a machine in which the presence of an exposed person constitutes a risk to the safety and health of said person;

**Exposed person:** any person wholly or partially present within a danger zone;

**Intended use:** The use of the purchased product in accordance with the information provided in the instructions for use;

**Improper use:** The use of the purchased product in a manner not indicated in the instructions for use, but which may result from easily predictable human behaviour;

**Residual danger:** a hazard that could not be reduced or entirely eliminated during the design phase, in relation to which the protection devices are either partially or wholly ineffective;

**Event & removal ramp/loading bridge:** an adjustable loading ramp comprised of a manually-operated plate, either suspended or detached.

**Adjustable loading ramp:** an adjustable loading ramp that's maintained in a certain position using a directly engaged locking device (fixed or mobile device) in order to cover the gap between the loading dock or similar loading areas, and the loading bed of a vehicle that can be positioned at different levels.

**Platform:** the plate-shaped component of the loading ramp that's used as a passageway by people and/or means of transport, excluding the lip.

**Bearer (strut):** The beam-shaped supporting element(s) of an adjustable loading ramp mounted on the bottom of the platform.

**Support device:** The part of an adjustable loading ramp (in the shape of a block, bar, or bolt, for example) that supports the adjustable loading ramp and keeps it in its horizontal resting position.

**Personal protective equipment (PPE):** the term personal protective equipment refers to any piece of equipment intended to be worn and/or utilized by the worker in order to protect them against one or more safety or health risks during the course of their work activities, as well as any other elements or accessories having the same purpose.

**User:** the term user refers to the individual who utilizes the purchased product for its intended use, or else entrusts its use to competent and properly trained personnel.





In this manual, the terms operator or personnel in charge refer to the individual(s) authorized to carry out the purchased product's installation, as well as those in charge of using and maintaining the product in accordance with the classification described below.

The terms *purchased product*, *loading ramp*, *loading bridge* and *tail lift* are used as synonyms in this manual.

Chapter 4 of the Manual ( Safety) describes the residual risks and the information, instructions, and warnings/requirements for the management of the Residual Risks posed to the user.

## 1.6 Personnel qualifications

The symbols listed in the table are used in the Manuals next to the notes in bold print to indicate important information or requirements relating to the necessary professional qualifications.




Symbol	Description
	<p><b>OPERATOR:</b> Personnel employed by the user who have been trained and qualified to use the purchased product for its intended purposes, according to the indications contained within this manual. The operator must be capable of performing all the operations necessary to ensure the proper use of the purchased product, as well as to ensure safe working conditions for themselves and their co-workers. He/she must have experience in the proper use of these types of products, and must have been properly trained and educated for this purpose.</p> <p>If any doubts or anomalies should arise, the operator must immediately report these to his/her superior.</p> <p>The operator is not authorized to perform any maintenance activities.</p>
	<p><b>DRIVER OF LIFTING AND HANDLING EQUIPMENT:</b> Personnel qualified to use equipment for lifting and handling materials (scrupulously following the instructions provided by Metalmec S.r.l.), in accordance with the current laws in the product's country of use.</p>
	<p><b>MAINTENANCE MECHANIC:</b> A qualified technician who knows how to use the product like the operator, is able to perform adjustments and repair operations on the mechanical parts, and is capable of reading and understanding the technical diagrams and spare parts list.</p> <p>Must be capable of providing the operator with instructions for the product's proper use for production purposes, whenever necessary.</p>
	<p><b>MANUFACTURER'S TECHNICIAN:</b> A qualified technician with a full knowledge of the purchased product's construction cycle, who is employed by the manufacturer and/or one of its distributors, and/or has been authorized by the same to perform complex operations. This figure performs interventions based on the user's requests.</p>

PROFESSIONAL FIGURES

## 1.7 Symbols used in this manual

A number of symbols are used within the manual to draw the reader's attention and to highlight certain aspects of the text that are particularly important.

The following table indicates the meanings of the various symbols utilized.

Symbol	Meaning	Notes
	<b>DANGER</b>	Indicates a hazard that poses a risk of injury (even potentially fatal) to the user. Pay maximum attention to the blocks of text indicated by this symbol.
	<b>ATTENTION</b>	Indicates a warning of potential deterioration or damage to the product, the equipment, or other property belonging to the buyer/user. Pay attention to the blocks of text indicated by this symbol.
	<b>WARNING NOTE</b>	Indicates a warning or note regarding important functions or useful information. Pay attention to the blocks of text indicated by this symbol.

## 1.8 Descriptions of the danger, prohibition, and obligation signs

Symbol	Meaning	Notes	Code
	Danger: Crushing of hands	Indicates a hazard that poses a risk of injury for the assigned personnel/user. Pay maximum attention to the signs and areas where this symbol is present.	W024
	Danger: Sharp elements	Indicates a hazard that poses a risk of injury for the assigned personnel/user. The use of suitable clothing is mandatory, including protective gloves, shoes, coveralls, etc. Pay maximum attention to the signs and areas where this symbol is present.	W022
	Danger: Drop (fall)	Indicates a hazard that poses a risk of injury for the assigned personnel/user. Pay maximum attention to the signs and areas where this symbol is present.	W008
	Danger: impact	Indicates a hazard that poses a risk of injury for the assigned personnel/user. The use of suitable clothing is mandatory, including shoes, coveralls, helmet, gloves, etc. Pay maximum attention to the signs and areas where this symbol is present.	
	Prohibition to approach and surpass the barrier	Indicates the prohibition for the personnel/user to approach and surpass the area or zone where this sign is present. Pay maximum attention to the signs and areas where this symbol is present.	Directive 92/58/EEC
	Obligation to read the manual	Indicates the obligation for the product's users and maintenance personnel to read and fully understand the supplied instruction manual prior to performing any use and maintenance activities.	M002
	Obligation to use straps made from fabric	Indicates a requirement regarding the equipment to be utilized. The straps must be subjected to regular checks, and must always be checked immediately prior to use.	

## 1.9 Descriptions of the personal protective equipment (PPE)

The personnel in charge of using and maintaining the product, who perform the various activities permitted upon the purchased product, must use appropriate personal protective equipment to reduce the potential risks associated with the various activities.



### **ATTENTION**

THE PRODUCT'S OPERATORS AND MAINTENANCE PERSONNEL MUST WEAR CLOTHING THAT IS COMPLIANT WITH THE ESSENTIAL SAFETY REQUIREMENTS IMPOSED BY THE EUROPEAN DIRECTIVES 89/656/EC AND 89/686/EC AND THE CURRENT LAWS IN THE PRODUCT'S COUNTRY OF INSTALLATION.







### **ATTENTION**

THE END USER IS RESPONSIBLE FOR ENSURING THAT THE PERSONNEL ASSIGNED TO THE PRODUCT HAS BEEN PROPERLY INFORMED OF THE RESIDUAL RISKS ASSOCIATED WITH THE PROCESS IN QUESTION AND USES THE REQUIRED PPE, AND MUST ALSO EVALUATE ANY SUPPLEMENTARY EQUIPMENT THAT MAY BE REQUIRED.



### **DANGER**

WHEN PERFORMING WORK ACTIVITIES THAT MAY RESULT IN FRAGMENTS OR HAZARDOUS MATERIALS BEING THROWN IN THE DIRECTION OF THE OPERATOR OR OTHER INDIVIDUALS WORKING IN THE VICINITY, THE OPERATOR MUST ARRANGE APPROPRIATE SCREENS OR OTHER SUITABLE SAFETY MEASURES, OR ELSE MUST ASK A SUPERVISOR TO PROVIDE THEM.

Symbol	Meaning	Notes	Code
	Obligation to use a protective visor	Indicates the requirement for the personnel to use protective eyewear. These types of PPE must always be utilized whenever performing maintenance and/or cleaning operations. Protective eyewear must always be worn whenever a risk of flying objects or materials is present.	M013
	Obligation to use protective and insulating gloves	Indicates the requirement for the personnel to use protective and insulating gloves. These types of PPE must always be worn when using the product and/or during maintenance activities.	M009
	Obligation to wear safety shoes	Indicates the requirement for the personnel to wear protective shoes. These types of PPE must always be worn when using the product and/or during maintenance activities.	M008
	Obligation to wear suitable work clothing	Indicates the requirement for the personnel to wear suitable protective work clothing. These types of PPE must always be worn when using the product and/or during maintenance activities.	M010



**NOTE**

THE PPE INDICATED HEREIN MUST BE SUPPLEMENTED BY THE USER BASED ON THE WORK SITE (TYPE OF WORK SITE AND MATERIALS BEING PROCESSED, ETC.), THE FORESEEN REQUIREMENTS, AND THE CURRENT PROVISIONS IN THE PRODUCT'S COUNTRY OF USE.



**ADDITIONAL INFORMATION**

THE DETAILED DESCRIPTIONS OF THE "PICTOGRAMS" AND THE SPECIFIC "PPE" REQUIRED FOR THE PURCHASED PRODUCT CAN BE FOUND IN CHAPTER 4.4 OF THIS MANUAL. THIS SECTION ONLY LISTS AND EXPLAINS THE MEANINGS OF THE "PICTOGRAMS" AND THE "PPE".



**DANGER**

UNAUTHORIZED PERSONNEL MUST NOT HAVE ACCESS TO THE OPERATING AREA WHERE THE PRODUCT IS UTILIZED.



## ATTENTION

THE BUYER AGREES TO INSTALL AND USE THE PURCHASED EQUIPMENT PROPERLY, IN ACCORDANCE WITH THE CURRENT ACCIDENT PREVENTION REGULATIONS, AND FOR ITS INTENDED PURPOSE, GUARANTEES THAT IT WILL BE PROPERLY STORED AND MAINTAINED, AND ASSUMES ALL RESPONSIBILITY IN THE CASE OF IMPROPER USE, AS WELL AS ALL THE RISKS AND HAZARDS THAT MAY ARISE BY CHANCE AND DUE TO UNFORESEEN CIRCUMSTANCES.

### 1.10 Warranty conditions

All the information relating to the manufacturer's warranty conditions can be found in the General Conditions of Sale published on the website [www.metalmecsrl.it](http://www.metalmecsrl.it).

## 2. AVAILABLE MODELS AND INTENDED USE

### 2.1 Available models

The products designed and manufactured by Metalmec S.r.l. are listed below:

#### Commercial denomination: Loading ramps and event & removal ramps in aluminium alloy

HLS	HS	M030	M040	M050
M060	M070	M075	M080	M090
M100	M115A	M125	M140	M150
M165	M170	M185	M200	M230
M120S	M105F	M120F	M130F	MPC
M070P	SH			

#### Commercial denomination: Driveways and Walkways in aluminium alloy

MP12	MP16	MP22	MP26	MP32
MP40	MP50	MP60	MPP12	MPP16
MPP22	MPP26	MPP32	MPP40	MPP50
MPP60				

#### Commercial denomination: Loading Bridges / Tail Lifts in aluminium alloy

MPL	MS030	MS040
-----	-------	-------

#### Commercial denomination: Access ramps in aluminium alloy

MBAP	MBAC
------	------

## 2.2 Intended use

The purchased product must only be used exclusively by people and/or manual or motorized means of transport (e.g. forklifts) as a passageway between a cargo vehicle (including road vehicles and agricultural equipment) and a portion of a building or work site, in order to overcome any differences in height with respect to the reference surface, such as a loading dock.

## 2.3 Incorrect use prohibited by the manufacturer (improper use)

The purchased product must only be utilized for the purposes expressly indicated by the manufacturer. In particular:

- always respect the requirements/indications contained in this manual;
- do not utilize the product if it has not been correctly installed and positioned for proper use;
- do not strike or impact the ramps with equipment or vehicles that could compromise the integrity of its structure and/or its individual components;
- do not use ramps, bridges, or gangways whose capacities are not suitable for the vehicles that will be transiting upon them and/or under conditions that are not consistent with those indicated in chapter 3 below. Technical description for use;
- do not overload the ramps, bridges and/or driveways beyond the loading capacity limits indicated by the manufacturer;
- do not use the product under environmental conditions that do not fall within the necessary parameters (see chapter 4. Safety);
- do not use the product under conditions that are expressly forbidden, and are indicated in this manual with hazard notices and/or warnings;
- do not automate the ramps, bridges, and gangways using control systems that have not been authorized by the manufacturer. All the products furnished by the manufacturer are manual, and do not come equipped with any automation devices;
- do not use the purchased product as a table or chair, or as a means for climbing or overcoming vertical barriers;
- do not use the gangways without having first properly positioned the supplied containment edges in a secure manner (if present).
- any type of use other than those indicated in section 2.2 is strictly prohibited.

*Any modifications that alter the risks, if performed without the written authorization of the manufacturer's technical department, shall nullify any form of applicable warranty, and shall relieve the manufacturer of any direct or indirect responsibility (see the manufacturer's General Conditions of Sale).*



### **NOTE**

**IN ORDER TO ENSURE PROPER USE, IT SHOULD BE NOTED THAT THE PURCHASED PRODUCT'S TECHNICAL DATA ARE LISTED ON THE DATA PLATE AFFIXED TO THE PRODUCT ITSELF. INFORMATION ON THE PRODUCT'S PROPER USE CAN ALSO BE FOUND IN CHAPTER 3.**



### 3. TECHNICAL DESCRIPTION FOR USE

#### 3.1 Requirements for determining the ramp or event & removal ramp model based on the specific usage requirements

Below are a series of technical and behavioural requirements that must be taking into consideration by the buyer in order to select the model best suited to the specific usage requirements.



#### ATTENTION

**IN ORDER TO REDUCE THE RISK PERSONAL INJURIES OR PROPERTY DAMAGE, THE BUYER MUST UNDERSTAND AND RESPECT THE INDICATIONS PROVIDED BELOW. IF THE INDICATIONS ARE UNCLEAR OR IF ANY DOUBTS SHOULD ARISE, IMMEDIATELY DISCONTINUE THE SELECTION AND/OR USE OF THE PRODUCT AND CONTACT THE MANUFACTURER METALMEC S.R.L.**

#### Ramp length

The slope of the ramps during use may not exceed a maximum of 30%, which is equal to 16.5°. In order to determine the minimum length of the ramps, apply the following formula:

$$\text{RAMP LENGTH IN METRES (L)} = \frac{\text{HEIGHT DIFFERENCE IN METRES (H)} \times 100}{\% \text{ MAXIMUM SLOPE } (\alpha)}$$

#### Example

Let's assume we need to overcome a height distance H equal to 1.20 metres.

(In most cases the letter H indicates the height of the loading bed with respect to the ground).

By applying the formula indicated above, we obtain:

$$\text{RAMP LENGTH IN METRES (L)} = \frac{1.20 \text{ metres} \times 100}{30} = 4 \text{ metres}$$

This shows that 4 metre long ramps will need to be utilized, and the most suitable model will also need to be selected based on the weight (P) of the vehicle that will be transiting upon them.



#### ATTENTION

**THE FORMULA INDICATED ABOVE CAN BE USED TO DETERMINE THE CORRECT LENGTH OF THE RAMP BASED ON THE OPTIMAL SLOPE OF 30%.**

**IN CASES IN WHICH IT IS NECESSARY TO WORK WITH A SLOPE OF LESS THAN 30%, THE POSSIBILITY OF ADAPTING THE RAMP FOR THE REQUIRED TYPE OF USE MUST BE VERIFIED IN ADVANCE WITH THE MANUFACTURER METALMEC S.R.L.**

## ■ Capacity

The term capacity indicates the maximum load that the purchased product (e.g. the ramp or pair of ramps) can support.



### **ATTENTION**

**NEVER EXCEED THE CAPACITY DECLARED BY THE MANUFACTURER.**

The identification plate indicates the capacities in relation to the wheelbase of the vehicle that will be transiting upon the product.

Therefore, as the vehicle's wheelbase changes, so does the ramp capacity.

Whatever the case, as the wheelbase of the vehicle decreases, so does the ramp capacity.

If a vehicle with a wheelbase different than those indicated on the purchased product's identification plate is to be employed, the product may not be utilized, and the user must contact the distributor and/or manufacturer in order to obtain the capacities of the ramps in their possession in relation to the wheelbase of the vehicle that will be transiting upon them.

The capacity indicated on the data plate is intended for evenly distributed loads in relation to the various wheelbases, and the vehicle's minimum track/wheel width.

If the ramps are to be used for the transit of vehicles with unevenly distributed loads (e.g. skid-steer loaders, forklifts, etc.), the capacity indicated on the data plate decreases; it is therefore necessary to contact the manufacturer or distributor in order to obtain the capacity of the ramps in relation to the vehicle to be utilized.

*In order to determine the capacity of the ramps when loading vehicles with steel tracks, the actual weight of the vehicle must be increased by 15%.*

## ■ Track or wheel width

The track or wheel width for the vehicle that will be transiting on the ramps must not be less than that which is indicated on the data plate.

## ■ Transit using steel tracked vehicles and compactor rollers

Steel tracked vehicles and compactor rollers may only transit upon ramp models without edges that have been properly prepared (e.g. application of rubber strips).



### **ATTENTION**


**THE COMPACTOR ROLLERS MUST BE FOUR-WHEEL DRIVE.**

### 3.2 Specific warnings and usage limitations for ramps and event & removal ramps

Only use ramps of a length, capacity, and type that is suitable for the vehicles that will be transiting upon them, in accordance with the manufacturer's indications. It is forbidden to use the ramps under any circumstances in which the usage requirements are not consistent with the manufacturer's indications.

The wheelbase (X) and the weight (P) of the vehicle that will be transiting on the purchased product must be known.





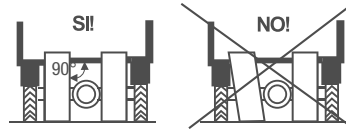
**DANGER**

**IT IS NOT PERMITTED TO USE THE PURCHASED PRODUCT IF THE WHEELBASE (X) AND THE WEIGHT (P) OF THE VEHICLE TO BE UTILIZED AND THE CAPACITY OF THE PURCHASED PRODUCT ARE NOT KNOWN.**

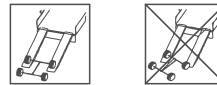
In order to position the ramp safely and correctly, the loading bed must be parallel with the ground and neither must be sloping. The vehicle upon which the material is to be loaded must have the engine off, the gear engaged, the parking brake engaged, and the wheels blocked with wedges or other effective means.



Position the ramps parallel with one another and perpendicular to the loading bed. Check to make sure that the wheelbase between the ramps corresponds to the wheelbase between the vehicle's wheels



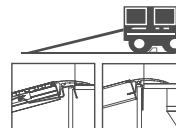
That the ascent trajectory properly before initiating the actual ascent. Do not correct the trajectory during the ascent, as this could lead to instability, with the consequent risk of slipping, falling and/or tipping, as well as potential personal injuries or property damage.



The vehicle's wheels or tracks must always remain at the centre of the ramps, and never on the edges.



Secure the ramps to the loading bed using one of the recommended anchoring systems (see the dedicated section of the manual in chapter 3.3). Make sure that the head connections of the ramps are resting entirely on the loading bed.



It is strictly forbidden to shore up the products (ramps, bridges, gangways etc.) with various types of supports in order to increase their load-bearing capacities.



It is forbidden to perform any sudden braking or acceleration manoeuvres that could lead to instability during use, as this could result in personal injuries or property damage.

It is forbidden to transit upon the products (ramps, bridges, driveways, etc.) at speeds greater than 0.12 km/h.

It is forbidden to transit upon the ramps with steel tracks and compactor rollers if the ramps themselves have not been properly outfitted by the manufacturer with special applications (e.g. rubber strips).

For ramps that have been outfitted with rubber strips, and have therefore been properly prepared for the transit of compactor rollers or vehicles with steel tracks, it is recommended to always keep the rollers or the tracks of the transiting vehicle as clean as possible in order to ensure greater adherence between the vehicle transiting upon the ramps and the ramps themselves.

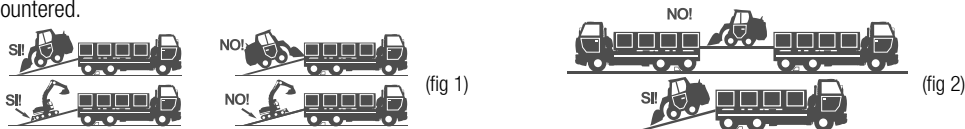
In order to prevent damage to the ramp's drivable surface, it is forbidden for vehicles with dirty tracks or wheels to transit upon the ramp itself. In particular, never allow vehicles with rocks or debris stuck in their tread or tracks to transit on the ramp. It is forbidden to transit upon the ramps whenever oil and/or grease is present on their driving surfaces.

The ramps must be used taking into account the distribution of the weights on the axles of the vehicle that will be transiting upon them. The heaviest axle must always be the one at the highest point. In the case of equipment capable of stabilizing the machine, this must be kept on the lowermost part (fig. 1).

Always traverse the ramps with loaders or other similar types of equipment empty, even if the total weight does not exceed the ramp's capacity.

Do not use the ramps as gangways and/or bridges unless they have been properly outfitted by the manufacturer (fig. 2).

As indicated in the maintenance section, the operator must always visually check the integrity of the structural components and welds prior to using the product. It is strictly forbidden to use the product if any anomalies and/or damaged parts are encountered.



**DANGER**

THE INDICATIONS AND REQUIREMENTS INDICATED ABOVE ARE MANDATORY, AND THE MANUFACTURER SHALL BEAR NO RESPONSIBILITY IN THE EVENT OF ANY PERSONAL INJURIES OR PROPERTY DAMAGE.



**DANGER**

THE PURCHASED PRODUCT MAY NOT BE USED WITH VEHICLES WHOSE WEIGHTS (P) EXCEED THE CAPACITY OF THE PURCHASED PRODUCT ITSELF.

**3.3 Loading bed anchoring systems for ramps and event & removal ramps**



**ATTENTION**

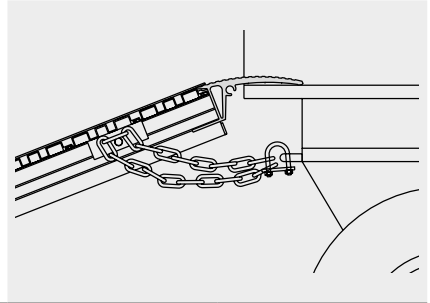
THE ANCHORING SYSTEMS ARE MANDATORY DEVICES FURNISHED ALONG WITH THE PRODUCT THAT ALLOW THE RAMPS TO BE SECURED TO THE LOADING BED IN ORDER TO ENSURE GREATER SAFETY AND STABILITY DURING USE. ONLY THE RAMPS WITH HEADS WITH TUBES ARE FURNISHED WITHOUT ANCHORING SYSTEMS, SINCE THEIR STRUCTURAL CHARACTERISTICS AND APPLICATIONS DO NOT REQUIRE THE USE OF ANY ADDITIONAL ANCHORING SYSTEMS.

The anchoring systems illustrated below are furnished based on the relative product model, and must be utilized in accordance with the indications provided:

■ **Carabiner clip with steel chain**

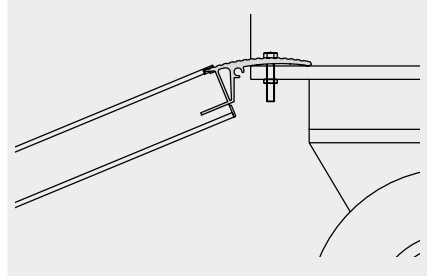
The steel chain must be hooked to the loading bed using the carabiner clip, and must be inserted into the appropriate attachment system beneath the ramp's driving surface, which may consist of the following (for example):

- a ring
- a small rod fastened by plates
- a pipe welded beneath the driving surface
- a rod welded beneath the head connection of the ramp (the end part of the ramp that rests upon the loading bed).



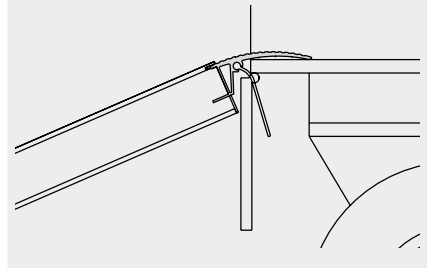
■ **Steel pin**

A steel pin with a diameter of 14 mm, with a 24 mm diameter head, must be inserted into the holes in the head connection of the ramp and the loading bed.



■ **Aluminium tab**

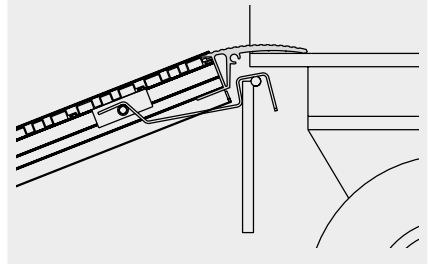
The aluminium tab previously inserted into the head connection of the ramp must be subsequently inserted between the loading bed and the edge of the same so that the ramp is perfectly anchored. The advantage of this anchoring system lies in the fact that the tab can be positioned along a large portion of the ramp's width, and can turn inside the head connection into which it has been inserted.



■ **Steel bracket**

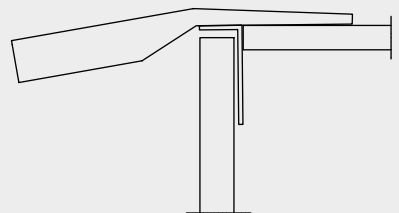
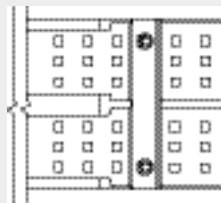
This anchoring system must be assembled or disassembled based on the specific usage requirements.

In order to ensure proper anchoring, the upper part of the bracket must be inserted between the loading bed and the edge of the same. The advantage of this system lies in the fact that the bracket can be positioned along a large portion of the ramp's width, and can be turned via the pin that connects it to the same.



■ **Aluminium bracket**

Upon the customer's request, the manufacturer can furnish this type of anchoring system for the HLS and HS models, which consists of an aluminium bracket to be fastened to the ramp using the appropriate bolts and washers.



### 3.4 Specific warnings and usage limitations for driveways and walkways

- Driveways and walkways respectively allow for the transit of wheeled or tracked vehicles and people.
- Whatever the case, as the wheelbase of the vehicle decreases, so does the capacity of the driveway.
- It is recommended to transit upon the driveways at a speed no greater than 0.3 metres/second, and to avoid any sudden braking or acceleration manoeuvres.
- It is strictly forbidden to shore up the driveway, to transit upon it with steel tracks if the driveway has not been properly outfitted, and to transit upon the edges with wheels and tracks.
- In order to allow for the transit of vehicles with steel tracks, driveways with special applications must be utilized.
- The use of driveways and walkways allows for any gaps in the road surface (including trenches, canals, architectural barriers, etc.), with height differences of up to 8%, to be overcome.
- There must be at least 0.33 m of support available on each end of the driveway or walkway.
- The driveways and walkways come equipped with folding railings (folded to reduce their encumbrance during transport), which must be brought to their vertical position prior to use, and locked in place using the appropriate supplied stoppers.
- Always keep the surface clean and dry in order to ensure greater adherence during transit (for both vehicles and pedestrians).
- Use the driveways for tracked vehicles whose tracks are at least 0.2 m wide.
- Use the driveways for wheeled vehicles whose wheels have a minimum width of 0.2 x 0.2 m.
- For the driveways, the maximum distribution permitted on the vehicle's front and rear axles is respectively equal to 40%-60% (50%-50% is considered ideal).
- It is forbidden to use the driveways and walkways with loads greater than those indicated by the manufacturer on the relative identification plate.
- If the characteristics of the vehicle that will be transiting upon the product are not consistent with those indicated in the manufacturer's catalogue (e.g. wheelbase, uneven load distribution, carriageway), the distributor and/or manufacturer must be contacted in order to obtain the capacity of the driveway in your position, thus avoiding the risk of improper use.

### 3.5 Specific warnings and usage limitations for loading bridges and tail lifts

- The loading bridges have been designed to allow for the passage of forklifts and other similar vehicles, industrial trolleys operated by drivers on foot, and pedestrians.
- The height difference between the two surfaces must not exceed a maximum slope of 12.5% (approximately 7°).
- In order to render a minimum safety distance available on each side of the means of transport, the width of the bridge must be at least 0.70 m greater than the carriageway for transit/transport, and, regardless, must not be less than 1.25 m. In order to ensure greater safety conditions for the operators, it is recommended to use a bridge with a width equal to that of the vehicle's loading bed.
- Transit is only permitted for vehicles with rubber wheels.
- Transit is strictly prohibited to any vehicles with metal tracks or metallic parts that could come into contact with the bridge's structure.
- It is forbidden to use the bridges with loads greater than those indicated by the manufacturer on the relative identification plate.
- It is forbidden to use the loading bridges in conjunction with any tail lifts that may be present on the vehicles, unless the tail lifts themselves have been specifically designed for this purpose.
- In order to ensure the safe and proper positioning of the bridge, the vehicle upon which it must be placed must always be parallel to the edge of the loading/unloading dock.
- The supporting "ends" of the bridge must be resting upon the loading/unloading dock and the bed of the vehicle itself (when not hinged to the same) by at least 0.10 m.
- Make sure that the stoppers under the bridge are properly resting on the bed of the truck and/or the dock in order to avoid any possibility of movement during the vehicles' transit.
- Once the transit/transport operations have been completed, always check to make sure that the bridge has been removed before allowing the vehicle to depart.



#### **DANGER**

**THE MANUFACTURER REQUIRES THE ABOVE INDICATIONS AND INSTRUCTIONS TO BE RESPECTED, AND ANY FAILURE TO DO SO COULD RESULT IN PERSONAL INJURIES AND PROPERTY DAMAGE.**

## 4. SAFETY

### 4.1 General information

The user is responsible for educating the personnel about the risks of injury, the safety devices, and the general accident-prevention regulations required by the European directives and the current legislation in the country where the purchased product is installed and/or utilized.

*The user's personnel must have read and fully understood this manual in its entirety. If any doubts should arise regarding the proper interpretation of the instructions, please contact the manufacturer Metalmec S.r.l. to obtain the necessary clarifications.*



**ANYONE WHO INTENDS TO USE THIS PRODUCT MUST CAREFULLY READ AND FULLY UNDERSTAND THE INFORMATION CONTAINED IN THIS MANUAL, WITH PARTICULAR ATTENTION BEING PAID TO THE SAFETY PRECAUTIONS CONTAINED IN THIS CHAPTER.**



**THE MAINTENANCE PERSONNEL MUST READ THIS MANUAL BEFORE PERFORMING ANY MAINTENANCE ACTIVITIES.**



#### **DANGER**

**THE FOLLOWING ACTIVITIES COULD LEAD TO RISKS OF INJURY AND ARE STRICTLY PROHIBITED: TAMPERING WITH THE PRODUCT, REPLACING ANY OF THE PRODUCT'S PARTS WITHOUT AUTHORIZATION, INSTALLING ACCESSORIES THAT ALTER THE PRODUCT'S USE, AND USING SPARE PARTS OTHER THAN THOSE WHICH ARE RECOMMENDED.**



#### **NOTE**

**THE REGULATIONS CONTAINED IN THIS MANUAL MAY NOT TAKE INTO ACCOUNT CERTAIN SITUATIONS THAT MAY ARISE DURING THE VARIOUS STAGES OF INSTALLATION AND/OR USE.**

#### 4.1.1 Applied technical standards

The purchased product has been designed, built, and tested in accordance with the following regulatory requirements:

- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.

#### 4.1.2 Product certification

Metalmecc S.r.l. has arranged for the product to be placed on the market complete with:







- The product marking (Identification Plate affixed to the product's structure);
- The Manufacturer's Declaration of Conformity;
- The instructions and warnings manual.

#### ■ Description of the marking:



Every product supplied and marketed by Metalmecc S.r.l. comes with an identification plate, which indicates the following information in a clear and permanent manner:



1. The Manufacturer's name and address
2. Commercial denomination
3. Model
4. Individual product weight
5. Single capacity and/or pair capacity and relative wheelbases (where applicable)
6. Minimum track/wheel width (where applicable)
7. Date of manufacture
8. Serial number


A Fax-Simile of the identification plate for the various products supplied is provided below.


	<p><b>LOADING RAMP</b> <span style="float: right;"><b>MODEL:</b></span></p> <p><b>RAMP WEIGHT:</b>  <b>INDIVIDUAL CAPACITY:</b>  <b>PAIR CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b> <span style="float: right;"><b>SERIAL NR.:</b></span>  <b>MANUFACTURER:</b> METALMECC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p> 
	<p><b>LOADING RAMP</b> <span style="float: right;"><b>MODEL:</b></span></p> <p><b>RAMP WEIGHT:</b>  <b>INDIVIDUAL CAPACITY:</b>  <b>PAIR CAPACITY:</b>  <b>MINIMUM WIDTH OF THE TRACK / WHEEL:</b>  <b>DATE OF MANUFACTURE:</b> <span style="float: right;"><b>SERIAL NR.:</b></span>  <b>MANUFACTURER:</b> METALMECC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p> 
	<p><b>EVENT &amp; REMOVAL RAMP</b> <span style="float: right;"><b>MODEL:</b></span></p> <p><b>RAMP WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b> <span style="float: right;"><b>SERIAL NR.:</b></span>  <b>MANUFACTURER:</b> METALMECC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p> 




	<p><b>DRIVEWAY</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b>  <b>LOADING CAPACITY FOR 750 mm WIDE VEHICLES WITH RUBBER-TRACKS:</b>  <b>LOADING CAPACITY FOR 900 mm WIDE VEHICLES WITH TYRES:</b>  <b>DATE OF MANUFACTURE:</b>                      <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p> 
---	--

	<p><b>WALKWAY</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>  <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p> 
---	---

	<p><b>LOADING BRIDGE</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>  <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p>
---	--

	<p><b>TAIL LIFT</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>  <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p>
--	---

	<p><b>ACCESS RAMP</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>  <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p> <p style="text-align: right; font-size: 2em; opacity: 0.5;">Fac-Simile</p>
---	---

■ **Manufacturer's declaration of conformity:** the following pages contain the declarations furnished by the manufacturer for the various commercial denominations and product models.



---

## MANUFACTURER'S DECLARATION OF CONFORMITY

(pursuant to UNI CEI EN ISO/IEC 17050-1)

The Undersigned company **METALMEC S.r.l.** with registered offices at:  
Via San Cassiano, 6 – 24030 Mapello (BG) - Italy

**HEREBY DECLARES, IN ITS CAPACITY AS THE MANUFACTURER, AND UNDER ITS OWN RESPONSIBILITY, THAT THE FOLLOWING PRODUCT:**

---

**Commercial denomination:** Loading Ramps and Event & Removal Ramps in aluminium alloy 6005A

---

**Models:** M030, M040, M050, M070, M075, M080, M100, M115A, M120S, M125, M140, M150, M165, M170, M185, M200, M230, SH, M070P, MPC

---

**has been designed, built and tested in accordance with the following technical standards applied by the manufacturer:**

- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.



**the manufacturer also DECLARES**



That the buyer is responsible for the proper use of the product purchased in accordance with its intended use and the indications contained in the instructions and warnings manual furnished along with the product itself.



It is forbidden to make changes of any kind and/or in any measure to the product purchased.

The manufacturer shall bear no direct and/or indirect responsibility for the improper use of the product or any use of the product for purposes other than those expressly indicated by the manufacturer.

The model, capacity, date of manufacture, and serial number are indicated on the manufacturer's identification plate affixed to the product, which contains the data listed below based on the type of ramp or platform purchased.

	<p><b>LOADING RAMP</b>                      <b>MODEL:</b></p>
	<p><b>RAMP WEIGHT:</b>  <b>INDIVIDUAL CAPACITY:</b>  <b>PAIR CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>                      <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p>
	

	<p><b>LOADING RAMP</b>                      <b>MODEL:</b></p>
	<p><b>RAMP WEIGHT:</b>  <b>INDIVIDUAL CAPACITY:</b>  <b>PAIR CAPACITY:</b>  <b>MINIMUM WIDTH OF THE TRACK / WHEEL:</b>  <b>DATE OF MANUFACTURE:</b>                      <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p>
	

	<p><b>EVENT &amp; REMOVAL RAMP</b>                      <b>MODEL:</b></p>
	<p><b>RAMP WEIGHT:</b>  <b>CAPACITY:</b>  <b>DATE OF MANUFACTURE:</b>                      <b>SERIAL NR.:</b>  <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b></p>
	

All the products furnished by Metalmec S.r.l. are inspected and tested according to the safety coefficients required by the reference standard.

These products were inspected by technicians employed by TÜV (an international notified body), after which the manufacturer was issued certificate no. R 60098489.

The technical documentation regarding the product is held by **Metalmec S.r.l.** in its capacity as a legal entity - Via San Cassiano, 6 – 24030 Mapello (BG) - Italy.

Technical Director  
 Luca Benigni

Mapello, 16/02/2016



---

## MANUFACTURER'S DECLARATION OF CONFORMITY

(pursuant to UNI CEI EN ISO/IEC 17050-1)

The Undersigned company **METALMEC S.r.l.** with registered offices at:  
Via San Cassiano, 6 – 24030 Mapello (BG) - Italy

**HEREBY DECLARES, IN ITS CAPACITY AS THE MANUFACTURER, AND UNDER ITS OWN RESPONSIBILITY, THAT THE FOLLOWING PRODUCT:**

**Commercial denomination:** Loading ramps in aluminium alloy 6005A

---

**Models:** HLS, HS, M060, M090, M105F, M120F, M130F

---

**has been designed, built and tested in accordance with the following technical standards applied by the manufacturer:**


- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.


**the manufacturer also DECLARES**

That the buyer is responsible for the proper use of the product purchased in accordance with its intended use and the indications contained in the instructions and warnings manual furnished along with the product itself.  
It is forbidden to make changes of any kind and/or in any measure to the product purchased.

The manufacturer shall bear no direct and/or indirect responsibility for the improper use of the product or any use of the product for purposes other than those expressly indicated by the manufacturer.

The model, capacity, date of manufacture, and serial number are indicated on the manufacturer's identification plate affixed to the product, which contains the data listed below based on the type of ramp purchased.

	<b>LOADING RAMP</b>	<b>MODEL:</b>
	<b>RAMP WEIGHT:</b> <b>INDIVIDUAL CAPACITY:</b> <b>PAIR CAPACITY:</b> <b>DATE OF MANUFACTURE:</b> <b>MANUFACTURER:</b> METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy	<b>SERIAL NR.:</b>

	<b>LOADING RAMP</b>	<b>MODEL:</b>
	<b>RAMP WEIGHT:</b> <b>INDIVIDUAL CAPACITY:</b> <b>PAIR CAPACITY:</b> <b>MINIMUM WIDTH OF THE TRACK / WHEEL:</b> <b>DATE OF MANUFACTURE:</b> <b>MANUFACTURER:</b> METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy	<b>SERIAL NR.:</b>

All the products furnished by Metalmec S.r.l. are inspected and tested according to the safety coefficients required by the reference standard.

The technical documentation regarding the product is held by **Metalmec S.r.l.** in its capacity as a legal entity - Via San Cassiano, 6 – 24030 Mapello (BG) - Italy.

Technical Director  
Luca Benigni

Mapello, 16/02/2016



---

## MANUFACTURER'S DECLARATION OF CONFORMITY

(pursuant to UNI CEI EN ISO/IEC 17050-1)

The Undersigned company **METALMEC S.r.l.** with registered offices at:  
Via San Cassiano, 6 – 24030 Mapello (BG) - Italy

**HEREBY DECLARES, IN ITS CAPACITY AS THE MANUFACTURER, AND UNDER ITS OWN RESPONSIBILITY, THAT THE FOLLOWING PRODUCT:**

**Commercial denomination:** Driveways and Walkways in aluminium alloy 6005A

---

**Models:** MP12, MP16, MP22, MP26, MP32, MP40, MP50,  
MP60, MPP12, MPP16, MPP22, MPP26, MPP32,  
MPP40, MPP50, MPP60

---

**has been designed, built and tested in accordance with the following technical standards applied by the manufacturer:**

- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.



**the manufacturer also DECLARES**

That the buyer is responsible for the proper use of the product purchased in accordance with its intended use and the indications contained in the instructions and warnings manual furnished along with the product itself.  
It is forbidden to make changes of any kind and/or in any measure to the product purchased.



The manufacturer shall bear no direct and/or indirect responsibility for the improper use of the product or any use of the product for purposes other than those expressly indicated by the manufacturer.

The model, capacity, date of manufacture, and serial number are indicated on the manufacturer's identification plate affixed to the product, which contains the data listed below based on the type of driveway or walkway purchased.

For driveways, the following identification plate is affixed:

	<b>DRIVEWAY</b>	<b>MODEL:</b>	
	<b>WEIGHT:</b> <b>LOADING CAPACITY FOR 750 mm WIDE VEHICLES WITH RUBBER-TRACKS:</b> <b>LOADING CAPACITY FOR 900 mm WIDE VEHICLES WITH TYRES:</b> <b>DATE OF MANUFACTURE:</b>		

For walkways, the following identification plate is affixed:

	<b>WALKWAY</b>	<b>MODEL:</b>	
	<b>WEIGHT:</b> <b>CAPACITY:</b> <b>DATE OF MANUFACTURE:</b> <b>SERIAL NR.:</b> <b>MANUFACTURER: METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</b>		

All the products furnished by Metalmec S.r.l. are inspected and tested according to the safety coefficients required by the reference standard.

These products were inspected by technicians employed by TÜV (an international notified body), after which the manufacturer was issued certificate no. R 60098489.

The technical documentation regarding the product is held by **Metalmec S.r.l.** in its capacity as a legal entity - Via San Cassiano, 6 – 24030 Mapello (BG) - Italy.

Technical Director  
Luca Benigni

Mapello, 16/02/2016



---

## MANUFACTURER'S DECLARATION OF CONFORMITY

(pursuant to UNI CEI EN ISO/IEC 17050-1)

The Undersigned company **METALMEC S.r.l.** with registered offices at:  
Via San Cassiano, 6 – 24030 Mapello (BG) - Italy

**HEREBY DECLARES, IN ITS CAPACITY AS THE MANUFACTURER, AND UNDER ITS OWN RESPONSIBILITY, THAT THE FOLLOWING PRODUCT:**

**Commercial denomination:** Bridges and Tail Lifts in aluminium alloy 6005A

---

**Models:** MPL, MS030, MS040

---

**has been designed, built and tested in accordance with the following technical standards applied by the manufacturer:**

- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.

**the manufacturer also DECLARES**

That the buyer is responsible for the proper use of the product purchased in accordance with its intended use and the indications contained in the instructions and warnings manual furnished along with the product itself.


It is forbidden to make changes of any kind and/or in any measure to the product purchased.

The manufacturer shall bear no direct and/or indirect responsibility for the improper use of the product or any use of the product for purposes other than those expressly indicated by the manufacturer.




The model, capacity, date of manufacture, and serial number are indicated on the manufacturer's identification plate affixed to the product, which contains the data listed below based on the type of bridge or tail lift purchased.

For bridges, the following identification plate is affixed:

	<b>LOADING BRIDGE</b>	<b>MODEL:</b>
	<b>WEIGHT:</b> <b>CAPACITY:</b> <b>DATE OF MANUFACTURE:</b> <b>SERIAL NR.:</b> <b>MANUFACTURER:</b> METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy	

For tail lifts, the following identification plate is affixed:

	<b>TAIL LIFT</b>	<b>MODEL:</b>
	<b>WEIGHT:</b> <b>CAPACITY:</b> <b>DATE OF MANUFACTURE:</b> <b>SERIAL NR.:</b> <b>MANUFACTURER:</b> METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy	

All the products furnished by Metalmec S.r.l. are inspected and tested according to the safety coefficients required by the reference standard.

The technical documentation regarding the product is held by **Metalmec S.r.l.** in its capacity as a legal entity - Via San Cassiano, 6 – 24030 Mapello (BG) - Italy.

Technical Director  
Luca Benigni

Mapello, 16/02/2016



---

## MANUFACTURER'S DECLARATION OF CONFORMITY

(pursuant to UNI CEI EN ISO/IEC 17050-1)

The Undersigned company **METALMEC S.r.l.** with registered offices at:  
Via San Cassiano, 6 – 24030 Mapello (BG) - Italy

**HEREBY DECLARES, IN ITS CAPACITY AS THE MANUFACTURER, AND UNDER ITS OWN RESPONSIBILITY, THAT THE FOLLOWING PRODUCT:**

**Commercial denomination:** Access ramps in aluminium alloy 6005A

---

**Models:** MBAP, MBAC

---

**has been designed, built and tested in accordance with the following technical standards applied by the manufacturer:**

- EN 1090-3 - Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures.
- EN 1999-1-1 - Eurocode 9: Design of aluminium structures - Part 1-1: General structural rules.
- EN ISO 15613 - specification and qualification of welding procedures for metallic materials - qualification based on pre-production welding test.
- EN ISO 15614-2 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 2: Arc welding of aluminium and its alloys.
- EN 1398:2009 - Dock levellers - Safety requirements.


**the manufacturer also DECLARES**

That the buyer is responsible for the proper use of the product purchased in accordance with its intended use and the indications contained in the instructions and warnings manual furnished along with the product itself.

It is forbidden to make changes of any kind and/or in any measure to the product purchased.

The manufacturer shall bear no direct and/or indirect responsibility for the improper use of the product or any use of the product for purposes other than those expressly indicated by the manufacturer.

The model, capacity, date of manufacture, and serial number are indicated on the manufacturer's identification plate affixed to the product, which contains the data listed below.

	<p><b>ACCESS RAMP</b>                      <b>MODEL:</b></p> <p><b>WEIGHT:</b> <b>CAPACITY:</b> <b>DATE OF MANUFACTURE:</b> <b>SERIAL NR.:</b> <b>MANUFACTURER:</b> METALMEC S.r.l. Via S. Cassiano 6 Mapello 24030 (BG) Italy</p>
---	--

All the products furnished by Metalmec S.r.l. are inspected and tested according to the safety coefficients required by the reference standard.

The technical documentation regarding the product is held by **Metalmec S.r.l.** in its capacity as a legal entity - Via San Cassiano, 6 – 24030 Mapello (BG) - Italy.

Technical Director  
Luca Benigni

Mapello, 16/02/2016

### 4.1.3 Environmental operating conditions

The product may be utilized in indoor and/or outdoor environments that are protected against aggressive agents like corrosive vapours and sources of excessive heat.

In particular, the purchased product must be utilized under the following specific environmental conditions:

Ambient temperature range: from -20°C to +45°C

It is strictly prohibited to use the purchased product under conditions that are not consistent with those indicated.

In particular, the installation and usage environment must not pose the following risks:

- Exposure to corrosive fumes and/or vapours;
- Exposure to oil mist;
- Exposure to explosive mixtures of dust or gas or hazardous areas;
- Exposure to abnormal vibrations, impacts, or jolts;
- Exposure to the elements or water infiltrations beyond the limitations permitted;
- Presence of nuclear radiation.

### 4.2 Disposal of waste materials

The product does not cause any environmental contamination following its installation and during its normal use.



#### **ATTENTION**

**ALWAYS RESPECTS THE CURRENT LAWS REGARDING THE DISPOSAL OF MINERAL OILS AND METAL PROCESSING RESIDUES.**

The disposal of the toxic waste materials encountered during the collection, transport, and handling phases required for recycling purposes, as well as the landfill storage and disposal of the same, constitute activities of public interest that are subject to compliance with the following general principles:

- a) Any risk or damage to human health and safety, in relation to both the public and individuals, must be avoided.
- b) Compliance with the health and hygiene requirements must be ensured, and all risks of polluting the air, water, soil, and subsoil must be avoided.

Systems for recovering and recycling materials and energy must be promoted, by respecting economic and efficient criteria.




#### **ATTENTION**

**THE IMPROPER DISPOSAL OF THE PRODUCT BY ITS USER CAN RESULT IN THE APPLICATION OF THE ADMINISTRATIVE SANCTIONS FORESEEN BY THE CURRENT REGULATIONS.**

### 4.3 Residual risks

The areas and components at risk were evaluated during the design phase, and all the necessary precautions were subsequently taken in order to mitigate and/or eliminate the risks posed to people and the product itself, as indicated in the previous sections.


	<p><b>ATTENTION</b></p> <p><b>DO NOT REMOVE THE PROTECTIVE DEVICES PRESENT. DO NOT INSERT FOREIGN OBJECTS OR TOOLS INTO THE OPERATING OR WORK AREA.</b></p>
---	---

A summary of the residual risks is provided below.

In consideration of the type of product purchased, it is recommended to observe the indications and requirements contained within this manual.

#### 4.3.1 Impact and crushing

- Risk of impact during the product's handling, positioning and installation phases, both prior to and during its use, if the requirements and indications provided by the manufacturer are not respected.
- Risk of crushing during the product's handling, positioning and installation phases, both prior to and during its use, if the requirements and indications provided by the manufacturer are not respected.
- Risk of crushing posed to any individuals who position themselves underneath the product or use the product as a bridge for transit without respecting the requirements and indications provided by the manufacturer.

	<p><b>DANGER</b></p> <p><b>IT IS STRICTLY FORBIDDEN TO WALK OR STAND UNDER THE PRODUCT, TO USE IT AS A BRIDGE, OR TO ENGAGE IN ANY OTHER SIMILAR TYPE OF USE UNDER ANY CONDITIONS, ABOVE ALL WHILE IT IS IN USE. ALWAYS OBSERVE ALL THE MANUFACTURER'S INDICATIONS CONTAINED HEREIN WHEN PERFORMING THE HANDLING AND INSTALLATION ACTIVITIES</b></p>
--	--

Residual Risks		Protective Equipment	   
----------------	---	----------------------	--

#### 4.3.2 Shearing

- Risk of shearing involving the product's edges during its handling, positioning and installation phases, both prior to and during its use, if the requirements and indications provided by the manufacturer are not respected.

Residual Risks		Protective Equipment	   
----------------	---	----------------------	--


### 4.3.3 Falling

- Risk of the vehicle tipping and falling if the indications provided in this manual are not respected, with particular regard to the indications contained in chapter 3.
- It is forbidden to leave any work tools and/or objects that could impede or limit the product's use anywhere on top of the product itself, even temporarily.
- It is forbidden to stand or walk upon the product during the transit of vehicles, as this could pose a risk of dangerous falls, as well as the risk of being struck by the vehicle.

<b>Residual Risks</b>		<b>Protective Equipment</b>	   
-----------------------	---	-----------------------------	--

### 4.3.4 Slipping

- Any residues of oil and/or lubricants on the product could pose a risk of slipping for the vehicles in transit and/or the personnel in charge of installing and positioning the product prior to use.

	<b>ATTENTION</b> <b>WEAR NON-SLIP SHOES WHEN ACCESSING THESE ZONES AND ALWAYS KEEP THEM CLEAN. CARRY OUT PERIODIC INSPECTIONS BASED ON THE PRODUCT'S USE.</b>
---	--

<b>Residual Risks</b>		<b>Protective Equipment</b>	   
-----------------------	--	-----------------------------	--





### 4.3.5 Tripping

- In addition to posing a risk of tripping and obstructing the operators' movements (whether partially or entirely), the disorderly storage of materials can also pose risks of falling and slipping for both the vehicles and/or personnel present in the area.
- Prior to use, always make sure that no materials have been placed on top of the ramps, bridges, and walkways, and make sure that the work areas, passageways, and escape routes are free of any obstacles and are compliant with the current regulations.

#### 4.4 Warning plates

Appropriate labels and pictograms have been affixed to the product in order to highlight any residual risks present and mandatory behaviours to be adopted, based on the safety procedures indicated in this manual.

The safety signage can be distinguished by colour and shape, and the operators must always bear in mind that:

Meaning	Shape	Colour
Danger		Yellow
Prohibition		Red
Obligation		Blue
Information		Blue

Any failure to respect the safety signage could result in hazardous situations, which in turn could potentially lead to death, personal injury, and/or damage to the equipment itself.

Based on the various types of risks that have been identified, Metalmec S.r.l. has equipped the product with danger, warning, and obligation signs, which have been prepared in accordance with the specific European regulation regarding the graphic symbols to be utilized (Directive 92/58/EEC).

These signs are positioned in clearly visible locations.



#### **ATTENTION**

**IT IS STRICTLY FORBIDDEN TO REMOVE THE WARNING PLATES PRESENT ON THE PRODUCT. METALMEC S.R.L. SHALL BEAR NO RESPONSIBILITY IN RELATION TO THE PRODUCT'S SAFETY IF THIS PROHIBITION IS NOT RESPECTED.**



#### **ATTENTION**

**THE USER IS REQUIRED TO REPLACE ANY WARNING PLATES THAT HAVE BEEN RENDERED ILLEGIBLE DUE TO WEAR.**



## NOTE

FOR THE TYPES OF WARNING PLATES AFFIXED TO THE PRODUCT, PLEASE REFER TO THE SECTION INDICATED BELOW. THE “CODE” COLUMN OF THE TABLE SHOWN IN CHAPTER 1 INDICATES THE CODE OF THE LABEL TO BE COMMUNICATED TO OUR SPARE PARTS DEPARTMENT AT THE TIME OF THE PURCHASE ORDER.



## 5. INSTALLATION

### 5.1 General information

This chapter contains the general instructions to be followed in order to carry out the following operations under safe conditions:

- Unloading of the packaged products from the truck upon delivery at the Customer's facility.
- Methods and environmental conditions for storing the packaged products.
- Unpacking the product.
- Handling the purchased product.

The operators for whom this chapter is intended must read and fully understand the instructions contained herein prior to performing any type of product **handling** operations.

All the instructions relating to the operations listed above must be followed scrupulously, as specified in this manual.

Finally, the personnel in charge of the handling, loading, and unloading activities are responsible for preventing any situation that could constitute a potential safety risk of themselves and/or others by using the utmost caution and by immediately notifying their supervisors in the event of any anomalies and/or damage to the purchased product.

### 5.2 Supply conditions

#### 5.2.1 Packaging and transport

METALMEC S.r.l. ships the purchased product from the production or distribution facility to that of the end Customer, either in a single package or else in separate parcels.

Based on the shipping distance, the Customer's specifications, and the time that the consignment will remain in the packaging,



the shipment will be carried out in the following manners:

- normal protective packaging: product secured and/or wrapped in heat shrink film and/or positioned upon disposable wooden Euro pallets;
- special protective packaging for shipments outside the EU: product secured and/or wrapped in heat shrink film and/or positioned upon Euro presswood pallets (which do not require heat or fumigation treatments).

The shipment must be carried out using covered or tarp-enclosed means of transport, based on the type of consignment.



A label indicating the shipper's address and the recipient's address is affixed to the product.

The **Transport/Shipping Document (DDT)** issued at the time of shipping contains a detailed list of the products comprising the consignment (including specific reference to this instructions and warnings manual), complete with the quantities and the overall weight of the merchandise, thus providing all the indications necessary to identify the contents.



### **ATTENTION**

**THE PRECAUTIONS AND WARNINGS LISTED BELOW MUST BE OBSERVED IN ORDER TO GUARANTEE STABILITY AND PREVENT THE RISKS ASSOCIATED WITH THE PRODUCT'S HANDLING:**

- Do not improvise any manoeuvres that have not been authorized by competent personnel.
- Do not use chains or steel cables as slings for handling the product, as these could ruin or damage the product itself.
- Only use polyester straps as slings for handling the product.
- **Important:** the polyester straps used to handle the product must be of a suitable capacity for the weight of the product to be handled.
- The lifting and handling operations should be performed using a forklift, crane or bridge crane with the necessary capacity, using the appropriate slinging elements indicated above.
- Caution: do not walk or stand beneath suspended loads.



### **ATTENTION**

**IN THE CASE OF MANUAL TRANSPORT, NEVER EXCEED THE LOAD LIMIT PER PERSON, AS INDICATED BY THE CURRENT HEALTH AND SAFETY REGULATIONS.**

**HANDLING OPERATIONS PERFORMED USING LIFTING ACCESSORIES MUST BE CARRIED OUT WITH POLYESTER STRAPS IN ORDER TO AVOID DAMAGING THE PRODUCT'S STRUCTURE.**

**DO NOT STRIKE OR IMPACT THE RAMPS WITH EQUIPMENT OR VEHICLES THAT COULD COMPROMISE THE INTEGRITY OF ITS STRUCTURE AND/OR ITS INDIVIDUAL COMPONENTS.**

These operations must only be performed by properly trained personnel (slinging specialists, crane operators, etc.). If the load's encumbrance does not allow for sufficient visibility, it is recommended to have an operator stationed on the ground, who can provide signals to the operator performing the manoeuvres and supervise every stage of the handling operations.

### 5.3 Preparation of the work environment

#### 5.3.1 General information

Taking into account the exceptions made during the contract negotiations, the customer for whom the purchased product is intended must arrange for the following:

- Lifting devices suitable for the loads to be handled.
- An appropriate grounding line for the product, if intended to be used in outdoor and/or classified areas.

The installation must be performed by specialized personnel based on the documentation furnished along with the merchandise, with the customer being responsible for the preparation of all the necessary infrastructures.

The Customer must be sure to have received, examined, and fully understood the following documents prior to initiating any **handling and installation** operations:

- The **Transport/Shipping Document (DDT)** - Contains a detailed list of the products comprising the entire consignment (including specific reference to this instructions and warnings manual), complete with the quantities and the overall weight of the merchandise.
- The **Instructions and Warnings Manual** - Allows the operators to gain a full understanding of the specific information relating to the purchased product.



#### **ATTENTION**

**FOR THE ENVIRONMENTAL OPERATING CONDITIONS, PLEASE REFER TO CHAPTER 4, WHICH INDICATES THE NECESSARY CHARACTERISTICS OF THE INSTALLATION AND USAGE ENVIRONMENT.**



#### **ATTENTION**

**THE UNLOADING, HANDLING, LIFTING, ETC., OF THE PURCHASED PRODUCT MUST NOT BE CARRIED OUT IN THE CASE OF ADVERSE ATMOSPHERIC CONDITIONS, SUCH AS, FOR EXAMPLE, WIND SPEEDS GREATER THAN 0.3 M/MINUTE.**

Check the quantities and the integrity of the materials upon receipt, and immediately notify the manufacturer if any damage is encountered. It is also recommended to make note of any discrepancies or damage encountered on the **Transport/Shipping Document (DDT)** itself.

#### 5.3.2 Selecting the location and verifying the installation requirements

And the product's installation and usage location must be carefully determined by the customer, and must be sufficiently large in terms of:

- work spaces
- passageways
- escape routes.

The customer is nevertheless directly responsible for verifying the product's final installation and ensuring its use in accordance with the current applicable regulations.

The floor/flooring of the location selected for installation and use must be uniform, level, and compliant with the usage specifications, and must be capable of sustaining the weights specified in this manual in relation to the purchased product, considering the appropriate safety coefficients.

A minimum amount of space must be available for handling and positioning the purchased product (based on the dimensions of the product itself).

The user is directly responsible for evaluating the minimum spaces necessary for all the use, maintenance, and inspection activities, as well as for the passageways, escape routes, etc., in accordance with the risk assessment performed based on the product's intended use, and in compliance with the current laws and regulations in force at the product's usage location.

### 5.3.3 Lifting and handling procedures

The lifting and handling of the purchased product must be carried out according to the instructions indicated below.

**The capacities of the lifting devices must at least correspond to the weight of the product, increased based on the applicable safety regulations.**

The overall weight of the purchased product is indicated on the product's identification plate.



#### NOTE

**THE LIFTING AND HANDLING OF THE PARCELS MUST ONLY BE CARRIED OUT BY SPECIALIZED AND PROPERLY TRAINED PERSONNEL WHO HAVE BEEN PREPARED AND CERTIFIED FOR HANDLING THESE TYPES OF ITEMS.**

**WHEN HANDLING THE PARCELS, ALWAYS RESPECT THE INDICATIONS AND PICTOGRAMS SHOWN ON THE PARCELS THEMSELVES, USING SUITABLE TOOLS AND EQUIPMENT.**



#### DANGER

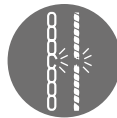
**PRIOR TO USE, ALWAYS CHECK THE STATUS AND THE PROPER FASTENING OF THE LIFTING EQUIPMENT AND DEVICES. USE SUITABLE SLINGS AND EQUIPMENT (SUITABLE PPE).**



The use of safety gloves is mandatory



The use of safety shoes is mandatory



Check the straps periodically, and always prior to use.



Never walk or stand beneath suspended loads

The work area must be free of any tools and/or materials that could obstruct the activities of the assigned personnel.

The operations described in this manual may not be performed by any personnel who are not physically capable of performing them, or use substances that could compromise their reaction times.

The personnel in charge must prohibit any unauthorized personnel from entering the work area during the course of the work phases described in this manual.

Use appropriate tape or ribbon to delineate the entire perimeter of the work area reserved exclusively for authorized personnel!





### ATTENTION

IN THE CASE OF ENCUMBRANCES AND/OR OPERATING CONDITIONS THAT DO NOT ENSURE A PERFECT VIEW FOR THE OPERATOR PERFORMING THE MANOEUVRES, ADDITIONAL PERSONNEL MUST BE STATIONED OUTSIDE THE RANGE OF THE LIFTING EQUIPMENT'S ACTION IN ORDER TO PROVIDE SIGNALS.



### DANGER

NEVER WALK OR STAND BENEATH SUSPENDED LOADS. NEVER MOVE THE LOAD ABOVE PERSONNEL OPERATING WITHIN THE WORK SITE/ FACILITY.

#### 5.3.4 Signs to be placed in the work area

The following signs must be placed in the work area during the installation phases:



Access forbidden to unauthorized personnel!



No smoking!



Do not use open flames!



Suspended loads!



Forklifts in transit!



Danger of falling!

#### 5.3.5 Residues and environmental contamination



##### Packaging residues

Regardless of the type of packaging used to ship the material (Pluriball or Bubble Wrap and straps), always remove the filler materials and any types of restraints or blocking elements (if present) during the unpacking stages. Packaging residues are waste materials resulting from the unpacking activities performed at the customer's facility.



### NOTE

THE USER IS RESPONSIBLE FOR DISPOSING OF THE WASTE MATERIALS IN ACCORDANCE WITH THE CURRENT REGULATIONS IN THE PRODUCT'S COUNTRY OF USE. THE USER IS RESPONSIBLE FOR TRAINING ITS PERSONNEL TO PROPERLY MANAGE THE WASTE MATERIALS.

### 5.3.6 Lifting accessories

For certain operations described in the following chapters:

- Unloading and handling packaged materials
- Unpacking
- Handling parts

the use of lifting accessories is indispensable (e.g. polyester straps), which are not supplied by Metalmec S.r.l.

The following sections contain important information regarding the safe use of certain lifting accessories (polyester straps).



#### **DANGER**

**THE INFORMATION CONTAINED IN THE FOLLOWING SECTIONS REGARDING THE LIFTING ACCESSORIES ARE GENERAL INDICATIONS WHICH MUST ALWAYS BE RESPECTED.**

Choose the type of lifting accessory to be utilized based on its capacity and the load to be lifted.

Remember to also consider the distribution of the loads on the individual connection or slinging points, as the load itself could be eccentric or not perfectly balanced.

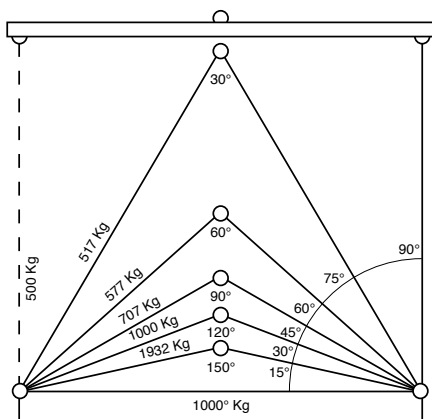
Refer to the technical data sheets provided by the lifting accessories' manufacturer for the appropriate operating methods and functionality checks.



#### **DANGER**

**AS INDICATED IN THE FOLLOWING DIAGRAM, THE LOADS THAT CAN BE SUSTAINED BY POLYESTER STRAPS THAT ARE NOT USED VERTICALLY DECREASE AS THE ANGLES FORMED BETWEEN THEM INCREASE. THIS LOAD REDUCTION MUST THEREFORE BE TAKEN INTO ACCOUNT WHEN CHOOSING EQUIPMENT WITH A SUITABLE CAPACITY. AN EXAMPLE ILLUSTRATING THIS REDUCTION AS A FUNCTION OF THE ANGLE IS PROVIDED BELOW.**

Based on the slope of the segments comprising the sling, in the case of a 1000 kg load, the force acting upon each segment varies from 500 kg (vertical slings) to 1932 kg (vertical angle 150°), as illustrated in the figure.





#### NOTE

ALWAYS PERFORM THE FOLLOWING OPERATIONS BEFORE HANDLING AND LIFTING ANY LOADS USING SLINGS AND STRAPS:

- VISUALLY CHECK THE OVERALL WEAR STATUS.
- MAKE SURE THEY ARE PERFECTLY INTACT AND FUNCTIONING PROPERLY.
- MAKE SURE THAT THE CAPACITY OF THE STRAP INDICATED ON THE LABEL IS SUITABLE FOR THE LOAD TO BE LIFTED.
- MAKE SURE THAT THE LOAD IS PROPERLY BALANCED FOR LIFTING AND DOES NOT CONTAIN ANY LOOSE PARTS.
- MAKE SURE THAT THE STRAP WILL NOT BE DAMAGED DURING THE LIFTING OPERATION.



#### ATTENTION

PARCELS THAT WEIGH MORE THAN 25 KG MUST BE LIFTED USING SUITABLE LIFTING EQUIPMENT, TAKING INTO ACCOUNT THE SAFETY MARGINS REQUIRED BY THE CURRENT SAFETY LAWS AND REGULATIONS.

## 5.4 Storage

The packaged material can normally be kept in a warehouse or indoor environment provided that the temperature is not less than -20 °C or greater than 45 °C, and the relative humidity does not exceed 70 %. The product may not be stored vertically, resting against walls and/or other surfaces, due to the risk of falling in the case of impacts and/or high winds.

Always store the product horizontally, on a level surface.

Maximum caution must always be taken during loading, unloading, and transport operations in order to avoid impacts. Make sure that the packaged elements are not damaged during the aforementioned operations. Packaged elements that have been damaged must not be stored by the customer.

## 5.5 Unpacking

**Opening the packaging:** open with care, separate the parts, carefully apply appropriate slings, and extract the parts vertically. After having removed the packaging, the purchased product must only be lifted using equipment suitable for this purpose.

**Integrity check:** check the integrity of the purchased product while opening the packaging.

Notify the manufacturer if any parts appear to be missing.

## 5.6 Assembly and positioning

Depending on its use, the purchased product must be positioned in the vicinity of its usage location.

Prior to initiating the installation and usage activities, it is necessary:

- to remove the covers and the protective packaging elements (if present).
- to remove any restraints used during transport
- use cables/straps that are securely fastened to the lifting equipment at the ends, in accordance with the indications provided in this manual.
- verify that the floor of the location/site selected for installation and/or use is uniform, level, and capable of sustaining the specific weights indicated.



### **INFORMATION**

**PRODUCTS WEIGHING MORE THAN 25 KG MUST BE HANDLED USING APPROPRIATE EQUIPMENT, SUCH AS A FORKLIFT OR PALLET JACK, DURING TRANSPORT AND INSTALLATION OPERATIONS.**



### **ADDITIONAL INFORMATION**

**ALWAYS REFER TO THE DOCUMENTATION FOR EACH INDIVIDUAL PIECE OF LIFTING OR SUPPORT EQUIPMENT.**

With regard to accident prevention, in addition to the current regulations in the product's country of use, the personnel in charge must also respect the general instructions contained within this manual.

## **5.7 Preparations to be carried out by the user**

The user is required to prepare:

- The place of installation and/or use, as required by the current local regulations regarding workplace health and safety.

## **5.8 General inspections**

Perform a general inspection of the product's mechanical parts. In particular:

- perform a visual check of the units comprising the purchased product (for products not supplied as a single unit), verifying the absence of any particular mechanical anomalies and/or foreign objects;
- carefully check the product's integrity;
- check to make sure that the mechanical units are perfectly assembled, aligned, connected and secured to the product's structure.
- check the tightness of the nuts and bolts on the purchased product's main parts;
- check to make sure that the moving parts (if present) are able to move freely.

## **5.9 Decommissioning**

The following section contains advice and indications for decommissioning, dismantling, and removing the purchased product at the end of its service life.

The decommissioning activities must take into account the operations described below, as well as the indications contained in the manuals for the components utilized.

**The operations described below must only be performed by qualified personnel who have been specifically authorized for this purpose:**

- make sure that there is enough space to perform all the movements without posing any risks to the personnel
- always use appropriate PPE when performing these operations, as indicated in chapter 4.

*The purchased product does not contain any hazardous components or substances that require special removal procedures.*



**DANGER**

**ALWAYS USE MAXIMUM CAUTION, AS THE POSSIBILITY OF PARTS OR COMPONENTS FALLING DURING THE REMOVAL STAGE COULD POSE A SERIOUS RISK TO THE OPERATORS.**

- Remove the mobile parts, and separate the various components by material type as much as possible. The parts to be subjected to sorted waste collection must be separated by material type (plastic, metal, etc.). The materials recovered from the demolition activities must be entrusted to dedicated companies for disposal.
- take all the necessary precautions when removing the various parts from the work area
- before lifting any parts of considerable size, check to make sure that the lifting devices are secured properly, and that adequate slings and equipment are being utilized, as described in the previous sections.



**NOTE**

**THE DISPOSAL OPERATIONS MUST BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT LEGISLATION IN THE PRODUCT'S COUNTRY OF USE THE USER MUST OPERATE IN ACCORDANCE WITH THE CURRENT REGULATIONS IN THE PRODUCT'S COUNTRY OF USE.**



**ATTENTION**

**KEEP IN MIND THAT CERTAIN PARTS OF CONSIDERABLE SIZE AND WEIGHT CAN ONLY BE HANDLED USING SUITABLE LIFTING EQUIPMENT.**



**ATTENTION**

**ALL THE DECOMMISSIONING ACTIVITIES MUST BE CARRIED OUT BY SPECIALIZED AND PROPERLY TRAINED PERSONNEL EQUIPPED WITH SUITABLE PERSONAL PROTECTIVE EQUIPMENT (PPE).**



## 6. MAINTENANCE

### 6.1 General considerations

This chapter, which is intended for the customer's maintenance personnel and the Metalmec S.r.l. support centre, describes the maintenance operations to be performed upon the product.

The maintenance operations described below serve to keep the purchased product in good condition and working properly, and are aimed at preventing potential breakdowns or malfunctions.

The term "maintenance" includes the following activities:

- **Preventive maintenance**

The various interventions performed at regular intervals, or based on certain criteria, aimed at reducing the possibility of malfunctions or the deterioration of a product's functionality; preventive maintenance includes inspections, controls, adjustments, and cleaning interventions.

- **Special maintenance**

Special maintenance consists of the various interventions performed at regular intervals, or following breakdowns and malfunctions, aimed at restoring a product's functionality. Special maintenance includes the overhaul, repair, replacement, or reinstatement of the nominal operating conditions of a faulty, defective or worn component.



#### **NOTE**

**THE SPECIAL MAINTENANCE OPERATIONS INVOLVING THE RESTORATION OF WELDS MUST ONLY BE CARRIED OUT BY METALMEC S.R.L. OR BY PERSONNEL AUTHORIZED BY THE SAME.**

This manual defines a **Maintenance Technician** as “A person qualified to install, properly utilize, adjust, clean, and maintain the purchased product”.



#### **NOTE**

**THE FREQUENCY WITH WHICH REPAIR OPERATIONS ARE CARRIED OUT MUST BE:**

**A) BASED ON THE PRODUCT'S WEAR STATUS: A REPAIR OPERATION MUST BE PERFORMED AFTER EVALUATING THE RESULTS OF A PRELIMINARY WEAR STATUS ANALYSIS, IN ORDER TO PREVENT DAMAGE TO THE PRODUCT.**

**B) BASED ON THE OCCURRENCE OF A FAULT OR DETERIORATION: A REPAIR OPERATION MUST BE PERFORMED AFTER A FAULT OR EXCESSIVE DETERIORATION IS ENCOUNTERED.**

**THE REPAIR MUST BE PERFORMED AFTER EVALUATING THE RESULTS OF THE ANALYSIS.**

It should be noted that properly performed maintenance interventions can reduce the risk of breakdowns and accidents. Performing repair interventions promptly can help to prevent additional deterioration.

Always use original spare parts and repair the malfunctioning components in a careful manner in order to restore them to their nominal operating status



**NOTE**

**METALMEC S.R.L. SHALL NOT COVER ANY FAULTS OR ANOMALIES ENCOUNTERED DURING THE WARRANTY PERIOD RESULTING FROM LACK OF MAINTENANCE, REPLACEMENTS USING NON-ORIGINAL SPARE PARTS OR PARTS NOT AUTHORIZED BY THE MANUFACTURER, OR THE USE OF THE PRODUCT IN A MANNER THAT IS NOT CONSISTENT WITH THE INDICATIONS CONTAINED IN THIS INSTRUCTIONS AND WARNINGS MANUAL.**

**6.2 General safety precautions**

The personnel in charge of maintenance must be properly trained and must have an in-depth knowledge of the accident prevention regulations; unauthorized personnel must remain outside the maintenance/work area while the operations are in progress.

The accident prevention precautions indicated in this section must always be scrupulously respected during product maintenance interventions in order to avoid personal injuries and equipment damage.

*The personnel assigned to the product's use, and particularly those in charge of its maintenance, must be aware of the risks associated with the use of these types of products when they are utilized in construction, agricultural, logistical, industrial environments, etc.*

- Post specific warning signs of the following type: **EQUIPMENT UNDERGOING MAINTENANCE - WORK IN PROGRESS - DO NOT PERFORM ANY MANOEUVRES** next to the access zones and in all the zones where the maintenance interventions are being carried out, taking care to make sure that they are clearly visible.



**DANGER**

**IT IS FORBIDDEN TO PERFORM MAINTENANCE OPERATIONS IN THE PLACES WHERE THE PRODUCT (RAMPS, BRIDGES, GANGWAYS, ETC.) IT UTILIZED: THESE OPERATIONS MUST ALWAYS BE PERFORMED IN PROPERLY EQUIPPED PLACES WHERE THEY CAN BE PERFORMED UNDER CONDITIONS OF TOTAL SAFETY, LIKE WORKSHOPS.**

### 6.2.1 Maintenance indications to always be respected

**Prior to performing any operations**, the maintenance personnel must always visually check the integrity of the structure and the welds, with particular regard to the surfaces, the struts, the head connections, and all the joint welds, which must not show any signs of cracking, becoming deformed, or breaking down. If any anomalies and/or damaged parts are encountered, the product's use must be strictly forbidden in order to avoid the possibility of personal injury and/or property damage. If utilized consistently and on a daily basis, **every week** the purchased product must be subjected to a scheduled inspection by qualified personnel who are familiar with the contents of the aforementioned regulations, in order to verify the product's wear status, and to check for any damage to the structure or the welds. The buyer/user must keep written records of the results of all the inspections, including the name, qualification, address, and signature of the individual who performed them, as well as the date upon which they were performed. Upon penalty of the warranty's nullification, any extraordinary maintenance interventions that may be required following the inspections must be performed by qualified and competent personnel, in accordance with the manufacturer's requirements, or else must be entrusted directly to the manufacturer itself.

### 6.2.2 Screw tightening torque values for MS040-B/BF series articulated / counter-balanced loading bridges

While performing maintenance procedures up on products equipped with bolts, steel bolts of various types and sizes often need to be tightened using a torque wrench. In particular, the MS040-B/BF product series is equipped with special spiral springs, which are fastened using UNI 5739 class 8.8 hexagon head bolts with wide threading.

These bolts must be inspected during every maintenance intervention, and, if necessary, must be tightened to the following torque values:

- M10: the value of 36 Nm is recommended;
- M12: the value of 62 Nm is recommended;
- M16: the value of 153 Nm is recommended.

### 6.2.3 Inspection frequency chart

The chart indicating the frequency according to which the maintenance interventions must be performed by the buyer in order to ensure the product's integrity and safe use is provided below.

The chart contains fields indicating the operation to be performed, the frequency of the check and/or inspection, and the qualification of the personnel in charge.

Example of the Legend regarding the frequency:

- xY: every x years
- A: annually
- xM: every x months
- M: monthly
- xW: every x weeks
- W: weekly
- D: daily
- U: prior to each use

Operation	Frequency	Personnel
Structural integrity check	U	Operator
Scheduled inspection	W	Maintenance operator
Weld inspection	U	Maintenance operator
Check bolt tightening torque (only applicable to models MS040-B and MS040-BF)	M	Maintenance operator

## 6.2.4 Preventive maintenance plan

It is important for the products utilized to be periodically subjected to preventive maintenance by qualified personnel in order to avoid any malfunctions that could result in direct or indirect damage.

By way of example, the maintenance of the product's components have been organized into technical maintenance data sheets. These are based in part on the maintenance activities to which the product is traditionally subjected, in part on the results of systemic analyses, and in part on specific databases.

This allows for the creation of a single document, which even includes information that takes into account the product's specific differences linked to its critical points.



### **NOTE**

**THE PREVENTIVE MAINTENANCE OPERATIONS MUST BE CARRIED OUT BASED ON THE INDICATIONS LISTED ON THE DATA SHEETS BY THE USER AND/OR THE PERSONNEL ENGAGED BY THE SAME.**

In order to ensure safe working conditions and extend the product's service life, it is recommended to:

- **Periodically clean the exterior surface of the product in order to eliminate any deposits that could pose a risk of slipping and/or falling to the user (e.g. oil, grease, mud, etc.);**
- **Periodically clean the exterior surface of the product in order to eliminate any deposits that could pose a risk of damage to the product itself (e.g. rocks, solid debris).**



### **DANGER**

**IT IS FORBIDDEN TO USE THE PURCHASED PRODUCT IF ANY MATERIALS SUCH AS ROCKS, SOLID DEBRIS, GREASE, OIL, ETC. ARE PRESENT UPON ITS SURFACE, AS THESE COULD COMPROMISE VIABILITY, TRACTION, AND TRANSIT UNDER SAFE CONDITIONS. THOROUGH AND REGULAR CLEANING WILL ENSURE THE PRODUCT'S SAFE USE.**

**COMPLETION CRITERIA**

The maintenance data sheets can follow the completion scheme indicated below, or else another similar system that is equally effective for the purposes of traceability. It is recommended to utilize the maintenance data sheets provided in order to maintain a functional organization of the maintenance activities themselves.

<b>Preventive maintenance data sheet</b>		No.	Date:
Purchased product	Intervention		
Reference drawing (if present)	Number		
Intervention frequency	Intervention duration		
Intervention description			
Spare parts required			
Necessary equipment			
Detailed description of the operations to be performed in chronological order			
Comments			

In particular, it is essential for the data sheet indicated above to be completed for each maintenance activity, and to be subsequently filed in a dedicated archive by the maintenance manager.

The data that must be indicated on the data sheet are the following:

1. Type of preventive maintenance
2. Maintenance data sheet no.
3. Date upon which the maintenance took place
4. Product name
5. Intervention type
6. Reference drawing (if present)
7. Reference drawing no. (if present)
8. Frequency: minimum intervention frequency recommended
9. Foreseen intervention duration
10. Description of the type of intervention indicating the intervention points, even using drawings (if present)
11. Indication of any spare parts necessary to perform/complete the intervention
12. Equipment required to perform the intervention: wrenches, compressed air, gloves, etc.
13. Detailed description of the operations to be performed (in chronological order) in order to properly complete the intervention.  
Any suggestions, warnings, or inherent risks (if present) associated with the maintenance activity in question must also be indicated in this section.





**METALMEC SRL**  
Via S. Cassiano, 6  
24030 Mapello (BG) Italy  
Tel. +39 035 4945858  
Fax +39 035 4945149  
[www.metalmecsr.it](http://www.metalmecsr.it)  
[info@metalmecsr.it](mailto:info@metalmecsr.it)



Management System  
ISO 9001:2008



[www.tuv.com](http://www.tuv.com)  
ID 0910090317

ISO 9001:2008 quality management system certification