Aluminum Ramps Operation & Maintenance Manual

PRODUCT IDENTIFICATION

<table>
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<tr>
<th>MODELS</th>
<th>M030</th>
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SH RANGE RAMPs | MPC EVENT RAMPs

IDENTIFICATION TAG DATA

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<th>PRODUCT TYPOLOGY</th>
<th>MODEL</th>
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<td>SINGLE RAMP WEIGHT</td>
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<td>LOADING CAPACITY SINGLE OR COUPLED AND CORRESPONDING WHEELBASE</td>
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<td>MINIMUM WHEEL/TRACKS WIDTH (IF APPLICABLE)</td>
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IMPORTANT NOTICE TO HELP IDENTIFYING THE APPROPRIATE MODEL GIVEN USAGE NEEDS

- RAMP LENGTH
  Maximum allowable slope during ramps usage is 30%, corresponding to 16.5°. Applying the following formula the corresponding ramp length can be determined:

  \[
  \text{RAMP LENGTH (METERS)} = \frac{\text{HEIGHT DIFFERENCE (METERS)}}{\text{SLOPE (°)}} \times 100
  \]

  Example: if the difference in meters between loading deck and ramp base plan is equal to 1.20 meters (in most cases this difference equals loading deck height), then:

  \[
  \text{RAMP LENGTH (METERS)} = \frac{1.20 \text{ meters}}{30} \times 100 = 4 \text{ meters}
  \]

  Deployable ramps should be at least 4 meters long; the model selection should then take into account the weight of the vehicle to be loaded through the ramps.

Please Note: through the application of the above formula the ramp length is determined in correspondence to the optimal 30% slope. Should a lower slope be employed, the feasibility of ramps fitting should be checked with the manufacturer.
- **LOADING CAPACITY**
  
  The **loading capacity** identifies the maximum carrying weight of a single or couple of ramps. Maximum carrying weight declared on the manufacturer’s plate should never be exceeded.

  The manufacturer’s plate reports the maximum loading capacity corresponding to the wheelbase of the vehicle to be loaded.

  **Ramps loading capacity varies along with the vehicle wheelbase.**

  **Ramps loading capacity will in any case decrease when the vehicle wheelbase decreases.**

  In case a vehicle with a wheelbase different from those reported on the manufacturer’s plate should be loaded, please refer to your dealer to obtain your ramps loading capacity in correspondence to this wheelbase.

  Loading capacity reported on the manufacturer’s plate refers to homogeneously distributed loads in relation to different wheelbases and minimum footprint. In case of vehicles presenting an un-homogeneous weight distribution (e.g. skid steer loaders, forklifts, milling machines ...) reported loading capacity can decrease: it is therefore mandatory to ask your dealer or the manufacturer the correct loading capacity to be considered.

  In case of vehicles with steel crawlers, the actual vehicle’s weight must be increased of a 15% amount to determine the appropriate loading capacity.

- **CRAWLER OR WHEEL FOOTPRINT**

  The footprint of wheels or crawlers of the vehicle to be loaded must not be lower than that reported on the manufacturer’s plate.

- **LOADING OF STEEL CRAWLERS VEHICLES AND ROLLER COMPACTORS**

  Never climb on ramps with steel crawlers and steamrollers unless ramps are borderless and they have been especially geared (e.g. deploying rubber bands).

  Please Note: roller compactors must present a two axes traction.

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**TRANSPORT AND HANDLING**

- In case of manual loading never exceed maximum carrying weight per person according to applicable Health and Safety Regulations.

- In case of loading assisted by lifting equipment, polyester bands should be employed to avoid damage to ramps’ structure.

- Never bump or hit the ramps with tools that can damage ramps’ components or structure.

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**USAGE WARNINGS AND RESTRICTIONS**

**Personnel deployed to loading ramps usage must be adequately trained on their usage and on every applicable health and safety regulation.**

**Always use ramps with the appropriate length, loading capacity and typography according to the manufacturer’s guidelines. Ramps usage is strictly forbidden in any case in which manufacturer’s usage requirements are not met.**
|铝制合金斜坡旨在允许斜坡在存在坡度的情况下部署。 |

- 为了安全的斜坡放置，加载甲板必须与地面平行。斜坡和加载甲板都不应该放在斜坡上。运输车辆应始终保持停车制动和车轮用楔块或类似手段固定。

- 斜坡必须平行放置并垂直于加载甲板。检查斜坡之间的距离是否等于车辆的轮轨。

- 设置斜坡轨迹以避免在斜坡上爬坡：不允许在上升时做任何修正。

- 总是使用斜坡的中心部分：禁止用轮子或刮刀将斜坡边的支撑物覆盖。

- 安全斜坡至加载甲板使用推荐的锚固系统（请参阅本手册的专门章节）。请确保斜坡的边缘板的整个表面均与加载甲板接触。

- 严禁以任何方式增加斜坡的最大负载。

- 速度应保持恒定，避免制动和加速。

- 速度超过斜坡应始终保持在0.12 km/h的限制以下。

- 除非斜坡已特别加重（例如：通过部署橡皮筋）。

- 使用带橡皮筋的斜坡来支持钢轮或压路机，轮子和滚轮应保持清洁以确保良好牵引。

- 为避免斜坡表面的损坏，请确保车辆在安装时始终保持清洁的轮胎或刮刀。

- 斜坡应根据重量分布选择斜坡：较重的轴应保持在更高位置，如果使用支撑设备，则应安装在较低位置以防止车辆。

- 挖掘、压路机和类似的设备应始终保持斜坡空着，即使总重量保持在最大载荷重量以下。

- 除非有制造商特别设计，否则不得将斜坡用作通道。

- 如本手册维护段所述，在任何装载斜坡部署之前，人员应始终保持确认斜坡的结构和焊缝完整。如果发现任何可见的损坏，斜坡的使用将被严格禁止。
ANCHORING SOLUTIONS

Anchoring solutions are mandatory means of securing ramps to loading deck, to increase safety of use.

- **FASTENING CHAIN**
  The chain must be hooked to loading deck through the shackle and to ramp, below its loading surface by means of provided anchoring means, for example:
  - a ring
  - a reinforced rod locked by plates
  - an hollow profile welded above the surface of the ramp
  - a rod welded to the lower part of the hedgeboard (final part of the ramp to be placed on the loading deck).

- **PIN**
  A 12–15 mm diameter pin must be inserted through holes drilled into the ramp and the loading deck.

- **ALUMINIUM BRACKET**
  The provided aluminum bracket must be slipped between loading deck and sideboard to assure correct anchorage of the ramp.

- **STEEL BRACKET**
  This anchoring solution can be assembled and disassembled as necessary. For a correct anchoring, the clamp must be slipped between loading deck and sideboard. The main advantage of this solution consists in the fact that the clamp is free to scroll along the ramp width as well as rotate around the pin used to couple it with the ramp.
MAINTENANCE

- Prior to each ramp deployment, personnel should always ascertain ramp’s structure integrity: the ramp surface, struts, hedge boards and each coupling welding must not present any structural yield. Should any fault be visible, ramp’s usage is strictly forbidden.
- Monthly at a minimum, presuming daily deployment, ramps should be visually inspected to ascertain their usage state or the existence of faults in their structure or welding, by qualified personnel properly instructed on procedures reported in this document.
- Users should always keep written proof of any inspection, with their date of occurrence and name, address and signature of the inspection responsible.
- Should inspections call for unplanned maintenance, maintenance services must be handled by qualified personnel, in conformity to manufacturer’s prescriptions or by the manufacturer itself, to avoid forfeiture of the warranty.

LIABILITY CLAUSE

- The manufacturer shall in no event be liable to the customer for any loss to living or non-living things, due to improper use of the equipment, to complete or partial non-compliance to usage instructions and restrictions, periodical inspection instructions, or applicable safety regulations.

WARRANTY

- The Customer shall deploy the equipment according to applicable Health and Safety Regulations, for its intended usage and applying proper operations and maintenance guidelines, bearing every responsibility in case of unforeseen or uncontrollable circumstances.
- Warranty is limited to twelve months, effective upon delivery from METALMEC to the Customer and subject to the disclosure of faults within eight days from their discovery.
- Warranty will cover repair or substitution of products where manufacturing defects are acknowledged by METALMEC, excluding any fault or damage arising from negligence in use or maintenance, improper use, accidental or transport fractures, wrong environmental conditions, normal wear, etc. Equally, warranty will not cover faults not resulting in lessened functionalities or decreased intrinsic value of the product.
- Warranty does not cover reimbursements of any kind nor compensations for any kind of damages incurred by living or non-living things.
- Any cost related to shipment to and from the manufacturer’s site for warranty service will be fully sustained by the customer.
- Warranty will be immediately void in case of alterations or modifications made to METALMEC products by the Customer of its own will or by third parties, or in case of any unauthorized alteration or modification performed by the customer or third parties.
- Repairs covered by warranty must be executed by the manufacturer only.
DECLARATION OF CONFORMITY

The manufacturer:
METALMEC s.r.l.
Via San Cassiano, 6 – 24030 Mapello (BG) – Italy
Tel. +39-035-4945858 - Fax. +39-035-4945149
www.metalmecsrl.it

declares that the:

Loading ramps made of aluminium alloy 6005A
Models: M030, M040, M050, M070, M070P, M075, M080, M090, M100,
M115, M115A, M115H, M120S, M125, M135, M140, M145, M150, M155,
M160, M165, M170, M185, M200, M230, MPC Ramps, SH Short Ramps.

comply with the Machinery Directive 2006/42/EC.

Standards applied:


Person authorised to compile the technical file: Mr. Luca Benigni,
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Technical Director

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