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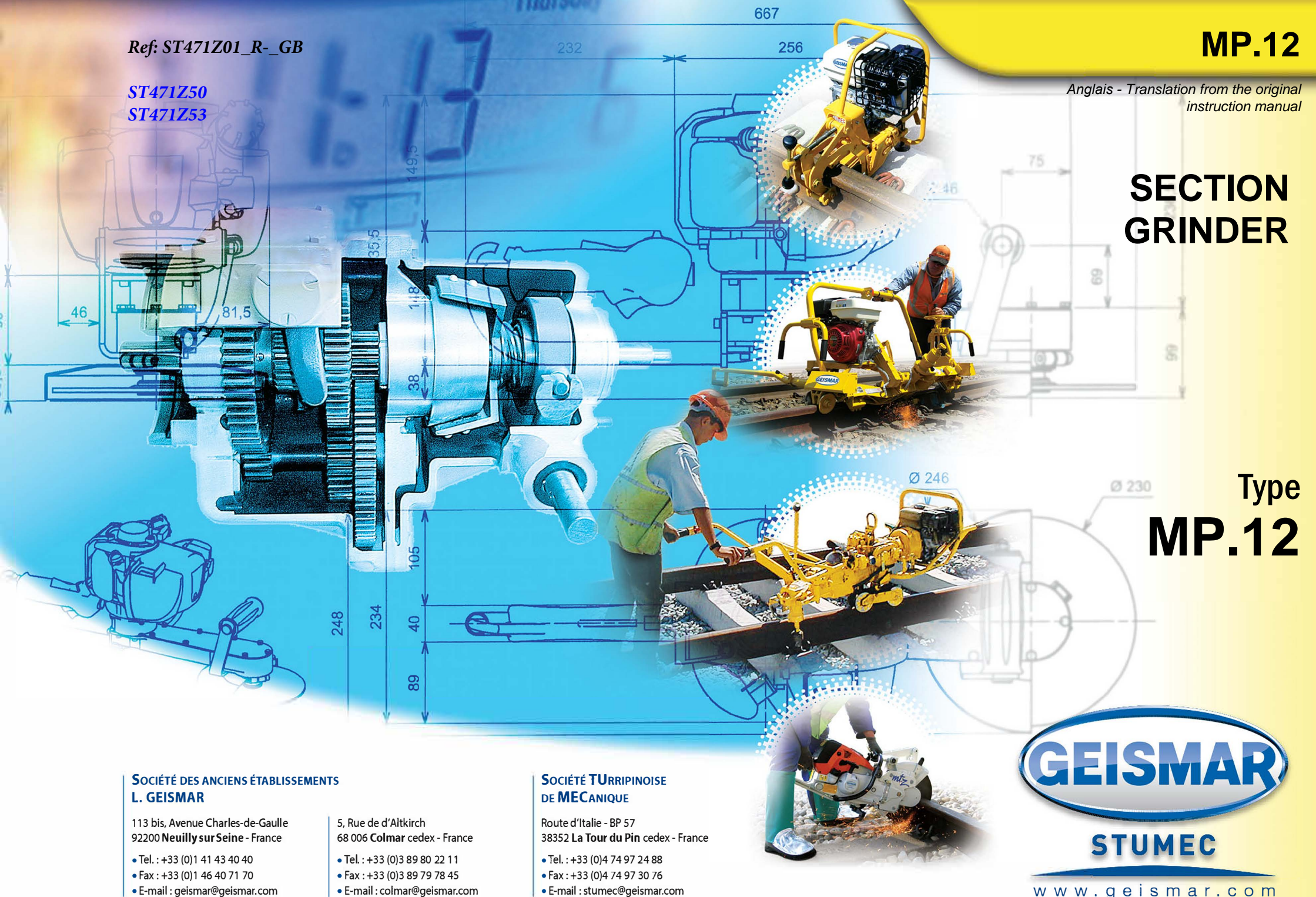
ST471Z50  
ST471Z53

MP.12

Anglais - Translation from the original  
instruction manual

## SECTION GRINDER

Type  
MP.12



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GEISMAR, the quality choice !

You have just acquired a machine for laying and servicing railway lines. We thank you for choosing equipment developed and constructed by GEISMAR / STUMEC, the fruit of over eighty years' experience.

Every day since 1924, the GEISMAR Group has been investing in research and state-of-the-art construction to offer you the quality and reliability so essential to the requirements of the world of railways.

This machine, built entirely in France from design through to delivery, has been subjected to continuous, extremely strict controls. Formed of different mechanical elements assembled by highly qualified fitters, your machine has been tested, calibrated and controlled at every stage of its production.

We are convinced that it will give you every satisfaction and are, of course, at your service to offer you any recommendations you may require for its use or its maintenance.

We thank you for the confidence you have shown in us and, in the hope that we will remain one of your privileged partners, we would like to confirm that we are totally available for any comments or recommendations you may care to make.

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# CHAPTER 1 – SAFETY

## 1.1 Foreword

The following set of rules has been drawn up to ensure the application of precautionary principles that help to preserve the safety of persons and property when the machine is in use. Any failure to comply with these rules can have serious repercussions (bodily injury, etc.), and can even be fatal, so we must draw your attention to the fact that all persons involved in the use, maintenance, storage or custody of the machine covered by the present manual must be familiar with these rules.

Any users who cause an accident through failure to comply with these rules will be held personally responsible for the results of their actions.

## 1.2 Instructions for safety and general use

All persons using, servicing or repairing this equipment must have undergone the training, possess the skills, and have at their disposal the tools necessary to carry out any such operations.

Before using the equipment, even in a maintenance context, it is necessary to read the corresponding instruction manual, together with its appendices, and the safety rules in force in the workplace.

Comply carefully with the general safety instructions drawn up for the site by the person in charge of the site, especially if the work is carried out without stopping or diverting traffic.

The equipment can only be used, serviced or repaired by competent personnel who have undergone thorough specialized training beforehand. The technical documentation and the instructions are useful in completing the knowledge acquired during the training courses, but they can in no way replace theoretical and practical qualifying training, provided in accordance with good professional practice.

If the operating company is not in a position to carry out the necessary training for its staff, at a satisfactory level, the GEISMAR/STUMEC Company is able to provide advice concerning the training programme to be implemented.

The training must include an explanation of the various equipment functions, the instructions for use and maintenance, and the safety rules applicable, together with practical exercises.

**IMPORTANT! All persons using the machine must comply with the labour regulations in force**



**The GEISMAR/STUMEC Company cannot be held responsible for any modifications made without its written approval, or for any assembly work not in conformity with its recommendations, especially in the case of use of parts other than original manufacturer's parts.**

## 1.3 **General safety instructions**

- **The operator and the working environment**

- ⇒ To avoid all risks of accident or injury, it is essential to wear:
  - Sturdy, non-flammable clothing that is suitably close-fitting
  - Strong, non-slip gloves
  - Safety shoes
  - Protective eyewear
  - Safety helmet
  - All other equipment necessary on the site or when using the machine
- ⇒ In the case of use of ear defenders, the safety instructions in force on the site must be complied with at all times.
- ⇒ Make sure that the machine vibrations do not lead to a loss of sensitivity in the hands. Adapt the working periods to the level of vibration caused by the machine, which is shown within the framework of normal use.
- ⇒ Do not work with the machine if you are not sure that you can control it correctly. Do not start working with the machine until you are sure that you can do so in full safety, for yourself (good conditions of visibility and lighting) and for other people (work calmly and carefully). Take care to ensure you have a firm, stable footing; all unstable working positions must be prohibited.
- ⇒ The user must be in a physical and mental condition enabling work to be carried out without danger.
- ⇒ The work area must be free of all obstacles. The work area (and the surrounding areas) must be free of all flammable substances.
- ⇒ If anything does not seem clear to you, whether it concerns the machine or the work to be carried out, ask a qualified person for information. Do not base your work on assumptions.
- ⇒ For underground use (tunnel or gallery), or in a closed area, make sure there is sufficient ventilation or extraction to avoid the risks generated by inhaling exhaust gases or by their build-up.
- ⇒ This equipment must not be used in an explosive atmosphere.
- ⇒ Avoid working positions in which exhaust gases could come into contact with parts of the body, whether protected or not.
- ⇒ In a general way, take all necessary precautions to prevent flammable products from coming into contact with fire hazards.
- ⇒ The operator must ensure that no one else is within the working area. In particular, it is necessary to make sure that in the direction in which the machine is travelling, no one can be hit. If someone is nonetheless in the path of the machine, the operator must stop and warn the person of his passage.
- ⇒ When the machine is installed on the track, it must be handled only by the number of operators strictly necessary for its normal use.
- ⇒ As the overall size of the machines does not enable extinguishers to be carried on them, we strongly recommend placing extinguishers of an appropriate type to deal with the fire hazards close to the machine.
- ⇒ The user must comply with all the regulatory environmental instructions applicable to the machine in use.

- The operator and the machine

- ⇒ Before putting the machine into service each time, check that its condition and its operation are in compliance with the instructions.  
In particular, make sure that the controls are free and in good working order, and that they are in the “stop” or “neutral” position. Never make any modifications that could affect correct operation of the control systems.
- ⇒ All the protective elements must be kept carefully in place and in good condition.
- ⇒ Always keep the machine clean and remove any accumulated dust, especially if it could absorb flammable products.
- ⇒ Always move forwards when working.
- ⇒ When working, always hold the machine with both hands to ensure control at all times, and to be able to use it in full safety.
- ⇒ Never bring a machine close to a flame or a source of heat.
- ⇒ The machine must never be positioned close to hot or protruding elements that could damage some parts (tanks, exhaust, housings...).
- ⇒ Never move away from a machine while the engine is running, even when it is idling. Stop the engine immediately if the machine is not in use. After stopping the engine, wait until all moving parts have come to a complete stop.
- ⇒ Work on the electrical installations on the machine can only be carried out by suitably qualified persons.
- ⇒ Read and make sure you fully understand all the signs placed on the machine, and always comply with all the instructions.
- ⇒ The signs placed on the machine include pictograms, manufacturer’s plates, and instruction labels. Make sure they are kept clean and replaced if they have been damaged, or if they are missing or illegible. If one of these elements is on a part that is to be replaced, a new element must be present on the replacement part. Please contact us on this subject.
- ⇒ When using a lifting device, the lifting operations of the machine must be done only using the lifting points indicated on the instruction manual.
- ⇒ When possible, the lifting of the machine is to be done only when the machine needs to be set in or out of the track. If the machine has to stay lifted (for a maintenance operation for example), the hazardous area must be signaled/marked, so that no one can stay below the machine or walk close by.

**THE MACHINE MUST NEVER BE USED FOR A PURPOSE OTHER THAN THAT FOR WHICH IT IS INTENDED**

**NEVER TOUCH A MOVING PART WITH A TOOL, OR WITH THE HAND, OR WITH ANY OTHER PART OF THE BODY**

**IT IS ESSENTIAL TO STOP THE ENGINE AND SET THE CONTROL TO THE STOP POSITION BEFORE CARRYING OUT :**

- ANY HANDLING WORK
- ANY WORK TO CHANGE TOOLS OR SOCKETS
- ANY WORK INVOLVING FUEL OR OIL (FILLING, TOPPING UP, CHECKING LEVELS, ETC.)
- ANY REPAIR, MAINTENANCE OR CLEANING WORK

- Using and handling fuel and oil

- ⇒ It is essential to stop the engine and set the control to the stop position before carrying out any work involving fuel (filling up, checking the level, draining, etc.).
- ⇒ Always keep suitable extinguishers ready for use in all areas where fuel is handled (storage, filling up, etc.).
- ⇒ Always store fuel and oil in separate cans specially designed for the purpose and bearing the labels required by regulations. They must be stored in a safe place, well away from all types of fire hazard.
- ⇒ Each time a machine is started up, and while it is running, make sure that there are no fuel leaks from any part of the machine. If a leak is suspected, stop the engine immediately and do not restart the machine until the leak has been repaired.
- ⇒ Never carry out any work on a fuel tank or handle fuel to fill a tank, or for any other reason, in an area where there could be a fire hazard (such as a burning cigarette, a blowtorch, sparks, etc.) or substances that are incandescent or at a high temperature (such as welding spatters, slag, clinker, etc.). All such work must always be carried out outdoors or in a well-ventilated area.
- ⇒ Always turn all mobile phones off while filling a tank with fuel or handling fuel.
- ⇒ Carefully tighten the fuel filler cap each time, and check that no fuel leaks from it.
- ⇒ Always remove a filler cap slowly, to enable any internal pressure to be released without spraying any fuel out. Take special care if the surrounding temperature is high.
- ⇒ When putting fuel in a machine that has heated up, never fill the tank completely. Do not put in more than three-quarters of the tank capacity.
- ⇒ If fuel starts to boil in the tank when putting fuel in a machine that has heated up, screw the cap on again immediately and leave the machine to cool down.
- ⇒ Make sure the fuel used is suitable for the type of engine on the machine. See the user manual for the engine.
- ⇒ Do not inhale fuel vapour.
- ⇒ If it is necessary to drain the fuel tank, pour the fuel into a container designed for the purpose and bearing the labels required by regulations. Always close them tightly, even if they only contain a small quantity. Never use a glass container.
- ⇒ Never use fuel for cleaning work. Use only non-flammable, non-toxic products that are harmless for the user, the equipment and environment.
- ⇒ If fuel has been spilt near the filling area for any reason, clean it up immediately. Clean straightaway any spillage of fuel on the skin. Make sure no fuel has been spilt on your clothes; otherwise, change clothes immediately. Remove all rags or other materials used to wipe fuel, and store them in a safe place well away from all sources of heat or combustion. Move the machine well clear of any spilt fuel before starting it up (at least 6 metres away), and do not move any closer to the area while the engine is running.

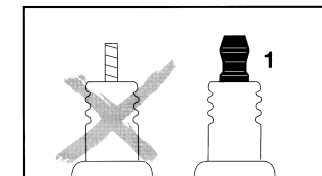
**IN CERTAIN CASES HANDLING OIL CAN GIVE RISE TO THE SAME TYPE OF RISKS AS HANDLING FUEL. IT IS THEN ESSENTIAL TO TAKE THE SAME PRECAUTIONS WITH OIL AS THOSE SET OUT ABOVE FOR FUEL.**

- Tools to be used on the machine

- ⇒ Use only the types of tools intended for normal use of the machine.
- ⇒ Measure the speed of all rotating tools at regular intervals.
- ⇒ Never use tools at speeds greater than the maximum speed for which they have been designed and approved.
- ⇒ Never use damaged tools or tools that have reached their maximum level of wear.

- The engine on the machine

- ⇒ Never touch the hot parts of the engine, and especially the exhaust pipe. If it is necessary to work on the engine, wait until it has cooled down.
- ⇒ The factory setting of engine corresponds to the conditions of the production site (fuel, temperature, altitude, etc...), verify at receipt of the machine the rotational speed of the engine and correct if necessary.
- ⇒ Check the engine rotation speed at regular intervals, and especially after fitting tools or reassembling the machine. Adjust if necessary.
- ⇒ Never exceed the speed shown in the technical specifications.
- ⇒ After starting with the choke, remember to return the choke to the normal running position.
- ⇒ Never wind the starter rope around your hand, and never release it suddenly.
- ⇒ If the machine does not operate correctly after the engine has been started, stop the engine and inform the head of maintenance.
- ⇒ For petrol engines, use only spark plugs whose tops are as shown in drawing 1 opposite. If the plug is fitted with a screw top, make sure the top is fully tightened. After fitting the spark plug, make sure that the plug cap is in good condition and that it stays firmly on the plug. Carefully check the fastening system to make sure that no sparks can be formed.



- Using trolleys (If applicable)

- ⇒ A machine designed to work on a trolley must not be used without the trolley. The trolley is thus an integral part of the machine. The machine and the trolley must not be used separately.
- ⇒ Trolleys whose use is dedicated to a machine must never be used to transport equipment or personnel, or attached to a vehicle.
- ⇒ Before fitting the machine on its trolley, it must be placed correctly on the track to ensure that it can run freely. If it is on a sloping section of track, make sure the trolley is kept immobile while the machine is being put on the track or taken off it.
- ⇒ Attention, the trolley takes up the full width of the track and can cause injuries to the legs if it hits someone.



## **1.4 Specific safety recommendations**

### **1.4.1 Risks that may arise through use of the "MP.12"-type grinder**

The main risks for the user and those around that arise when using the "MP.12"-type rail grinder are:

- ➔ Fire connected with fuel handling.
- ➔ Fire caused by the sparks coming into contact with inflammable material.
- ➔ The grinder bursting under abnormal conditions.
- ➔ Injury caused by sparks (the eyes in particular must be protected) or debris scattered by the grinder.
- ➔ Severe burns and injuries from contact of part of the body with the grinder, if it is rotating.
- ➔ Inhalation of particles scattered by the grinder (be sure to wear protective equipment to prevent this)

### **IMPORTANT**

Because the engine can be tilted when in use, the following rules must be respected:

- Always keep the grinder in an upright position, stop grinding and stop the engine before removing the cap of the fuel tank.
- Never fill the fuel tank more than  $\frac{3}{4}$  full (to avoid spillage when the engine is tilted).
- Never work on a fuel tank, or handle fuel for any reason, including filling the tank up, in an area where there may be: A source of fire (for example: lit cigarette, welding torch, sparks, etc.) or very hot materials (for example: welding fragments, cinders, etc.) Always work outside in a well-ventilated location.  
Make sure the fuel tank cap is properly in place and no fuel is leaking.
- Refer to §1.2 “Safety and general usage recommendations” and §1.3 “General safety instructions”

#### 1.4.2 Safety rules to be observed before and during use of the "MP.12"-type grinder

- All personnel using this equipment must wear the clothing listed in paragraph §1.3 "General safety instructions / The operator and his environment" masks or goggles, helmet, smock, fire-proof gaiters or boots.

Use of protection to avoid inhaling the grinding dust is also recommended.

- Do not use grinding wheels that are damaged or have cracks or splits.
- For all new or re-assembled grinding wheels, run the engine freely for 30 seconds with all personnel at a distance (apart from the operator, who must stay at the controls outside of the grinding wheel's path of rotation, ready to stop the engine if necessary).
- When grinding, do not stand in front of the grinding sparks. If necessary, position a screen to block the front jet of sparks to prevent them from reaching hazardous areas (risk of brush fire in summer).
- Do not strike the grinding wheel while it is in use: this may cause it to burst apart.
- Make sure the grinding wheel never comes into contact with a sleeper or ballast, or any other foreign body.
- Before starting the machine, make sure it is in good condition and the protective hood of the grinding wheel is properly attached. Never modify the machine.
- Install a new hood each time the grinding wheel bursts, and each time there appears to be less resistance.
- Regularly measure the rotation speed of the grinding wheel and the engine, in particular after reassembling the machine, and correct it if necessary.
- Only use authorised grinding wheels, for both the dimensions and the composition.
- Never use grinding wheels at speeds greater than the maximum speed recommended by the manufacturer, which must be marked on each grinding wheel.
- Before taking the machine off the tracks, or between two series of grinding that require movement, stop the engine and raise the grinding wheel so that it is hidden inside the protective covering.

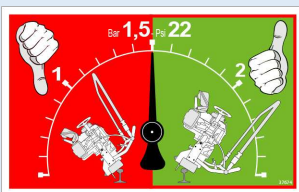
#### **ONLY USE GRINDERS:**



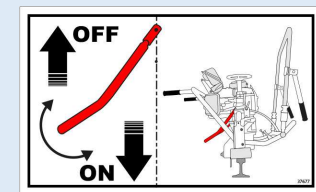
- ➔ Of which the maximum rated speed is higher than the maximum running speed of the grinder holding shaft, which is marked on the machine.
- ➔ Of which the outside diameter is less than or equal to the maximum authorized diameter, which is marked on the machine.
- ➔ Authorized by the regulation in application for this type of machine



#### **IN ORDER NOT TO DAMMAGE THE ENGINE :**



- Do NOT tilt the grinder more than 10° from the vertical, opposite side of the operator. When the machine is tilted excessively and the crutch touches the ground, the engine stops
- Check that the oil pressure does not exceed 1,5 bar or 22 Psi



### 1.4.3 Personal protective equipment

- All personnel using this equipment must wear the clothing listed in paragraph §1.3 "General safety instructions / The operator and his environment". They must also wear anti-spark protection, such as: mask or goggles, smock and non-slip sturdy gloves, fire-resistant gaiters or boots.
- They must wear a helmet and safety boots with non-slip soles and steel toes.
- Use of protection to avoid inhaling the grinding dust is also recommended.
- Use of hearing protection is also recommended. Nonetheless, refer to the applicable rail regulations governing the work site to determine if this can be used or not.
- In addition to the use of the Personal Protective Equipment described in §1.3 "General safety instructions / The operator and his environment", we recommend use of hearing protection. Nonetheless, refer to the applicable rail regulations governing the work site to determine if this can be used or not.



## 1.4.4 Safety symbols and recommendations

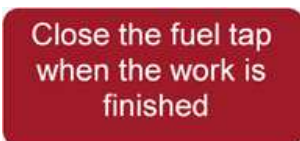
The safety pictograms and recommendations must be present on the grinder at the indicated location.

If one of them is missing or has deteriorated, another must be ordered immediately and installed in its place.

If a component bearing a label has been replaced, make sure a new label is placed on the replacement part.



**Reference:** N° **12528** (yellow background)  
**Location:** Stuck on the machine chassis next to the lock handle of the operating lever.



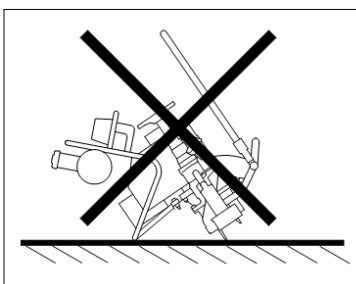
**Reference:** N° **54079** (red background)  
**Location:** Stuck on the engine tank next to the filling cap.



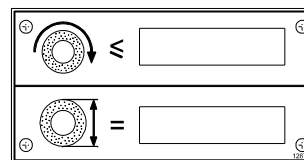
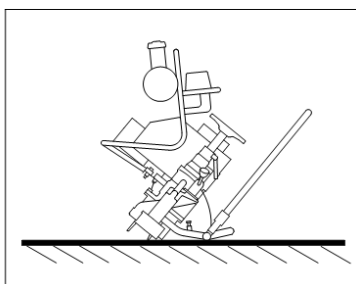
**Reference:** N° **HZM** (blue background)  
**Location:** Stuck on the engine air filter.



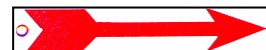
**Reference:** N° **12517K** (yellow background)  
**Location:** Stuck on the engine air filter.



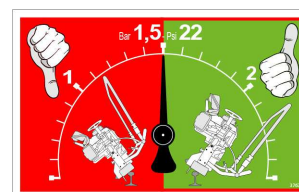
**Reference:** N° **37654** (white background)  
**Location:** Stuck on the engine tank next to the filling cap.



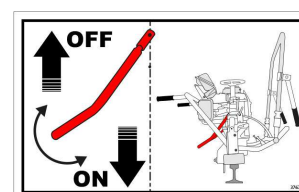
**Reference:** N° **12670**  
**Location:** Riveted to the machine chassis above the grinding wheel housing.  
(for the direction of this plate, refer to §3.1 "Installing the grinding wheel").



**Reference:** N° **12412**  
**Location:** Riveted to the machine chassis above the grinding wheel housing.  
(for the direction of this plate, refer to §3.1 "Installing the grinding wheel").



**Référence :** N° **37674**  
**Emplacement :** Riveted to the fuel tank



**Référence :** N° **37677**  
**Emplacement :** Riveted to the fuel tank

## CHAPTER 2 – DESCRIPTION OF THE MACHINE

### 2.1 General points

|                                  |  |
|----------------------------------|--|
| <u>Manufacturer:</u>             | <b>SOCIETE TURRIPINOISE DE MECANIQUE</b><br>Route d'Italie<br>38110 LA TOUR DU PIN<br>FRANCE |
| <u>Description of equipment:</u> | Section grinder  |
| <u>Type</u>                      | MP.12  |

The MP.12 section grinder is designed for grinding railheads and welds, including the curves and sides.

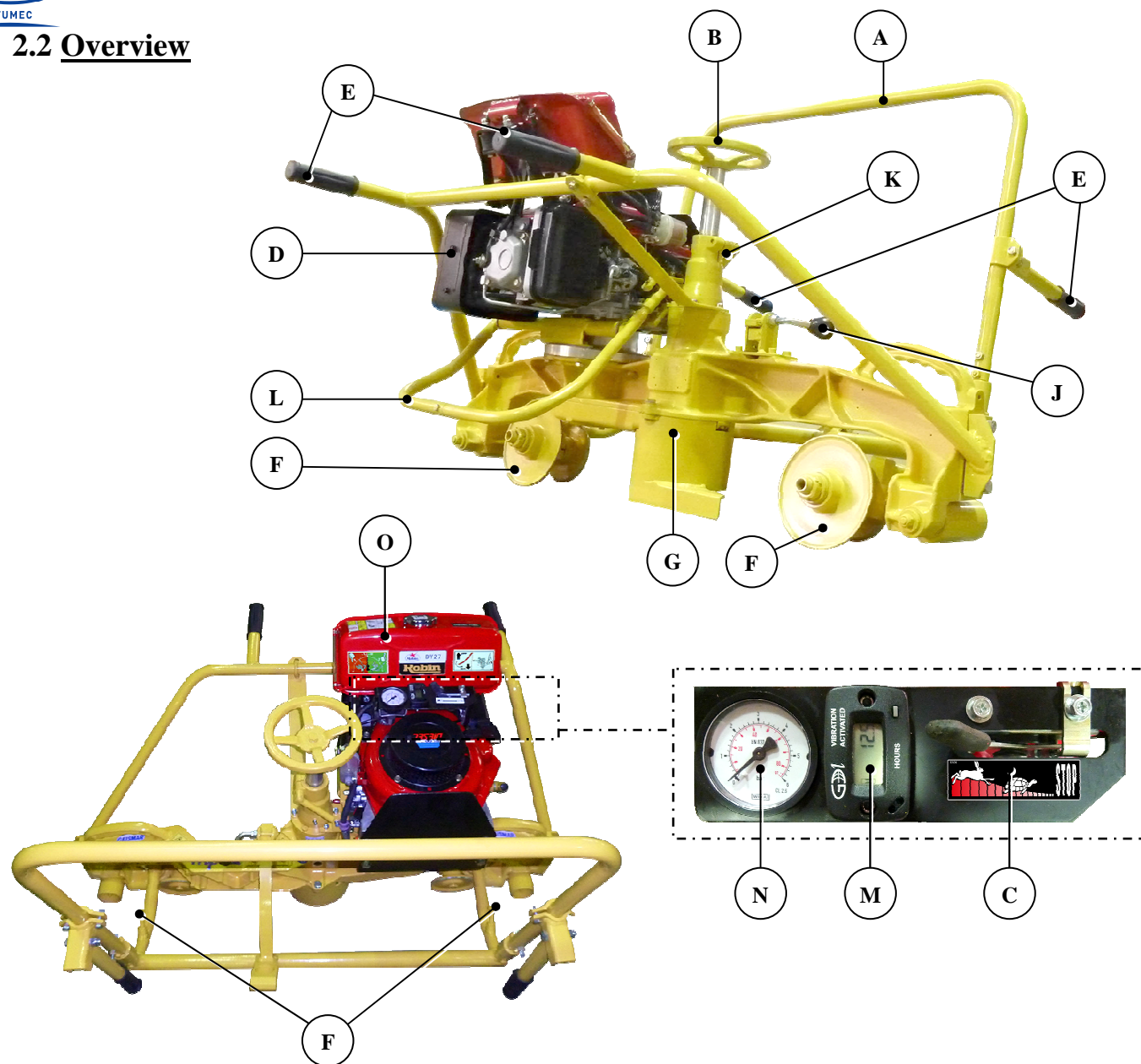
Its exceptional performance and durability, due to its rigid and non-deformable alloy chassis, provide the operator with optimum ease of use.

The guiding rollers and broad wheelbase guarantee consistency of grinding from the horizontal to the vertical.

It was entirely designed using the most modern techniques used in the domain of machine tooling.



## 2.2 Overview



| Ref. | Description                                    |
|------|--|
| A    | Manoeuvring handle                             |
| B    | Grinding wheel adjusting assembly              |
| C    | Engine shutdown                                |
| D    | Engine   |
| E    | Carrying handle (x2)                           |
| F    | Guide roller                                   |
| G    | Grinding wheel housing                         |
| H    | Stop lug                                       |
| J    | Manoeuvring lever lock handle                  |
| K    | Grinding wheel descent blocking handle         |
| L    | Crutch anti tilt Engine cut                    |
| M    | Hour meter                                     |
| N    | Engine pressure gauge<br>Do not exceed 1.5 bar |
| O    | Fuel tank                                      |



To simplify machine identification, when ordering spare parts, please specify their type and number, engraved on the nameplate.

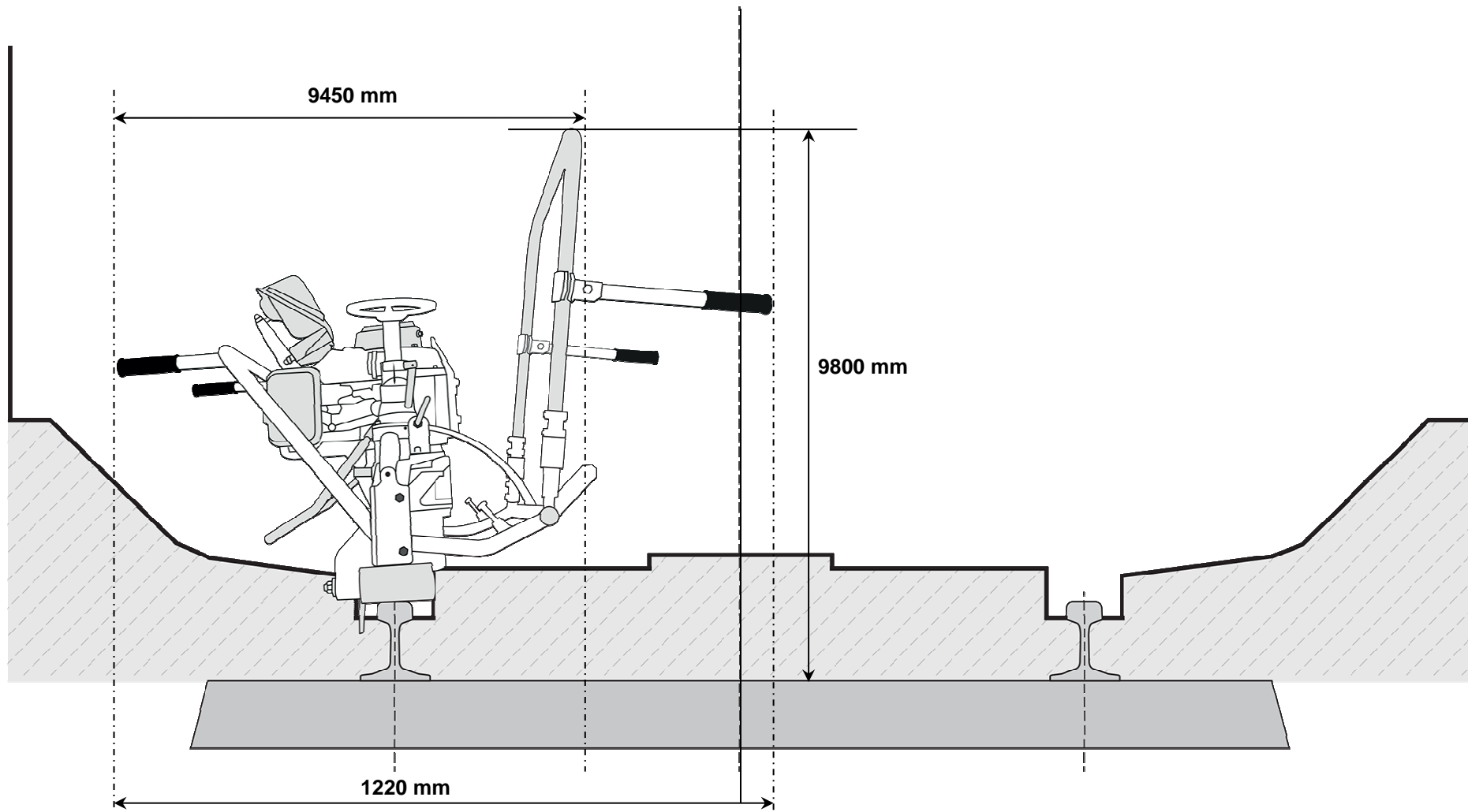
## 2.3 Technical characteristics

| <i>ENGINE TYPE</i>   |                  | MP.12 Engine Robin DY27-2D                                     |
|--|------------------|--|
| <b>Machine dimensions</b>                                  |                  |  |
| Length / width / height                                    | mm               | ---/---/---  |
| <b>Masses</b>  |                  |  |
| Machine (no load)  | kg               | ---  |
| Machine (in working order)                                 | kg               | ---  |
| <b>Noise</b>   |                  |  |
| Acoustic pressure level (L <sub>aeq</sub> ) <sup>(1)</sup> | dB (A)           | --- (±2)   |
| Acoustic power level (L <sub>wa</sub> ) <sup>(2)</sup>     | dB (A)           | --- (±2)   |
| <b>Vibrations</b>  |                  |  |
| Level of vibration (A <sub>eq</sub> ) <sup>(3)</sup>       | ms <sup>-2</sup> | --- (±2%)  |
| <b>Engine</b>  |                  |  |
| Power  | kW               | 5 (= 3,7ch) à 3600 tr/min                                      |
| Fuel tank capacity   | litre            | 3,2  |
| Fuel consumption   | .....            | Gasoil   |
| Number of cycles per tank                                  | .....            |  |
| Starting   | .....            | Automatic return starting cable                                |
| <b>Machine</b>   |                  |  |
| Engine adjustment speed (max speed)                        | tr/min           | 3600   |
| Grinding wheel rotation speed                              | tr/min           | 3600   |
| Max grinding wheel diameter                                | mm               | 150  |
| Maximum cant for which the machine is stable               | mm               | ---  |
| <b>Grinding wheel</b>                                      |                  |  |
| Outside diameter   | mm               | 150  |
| Inside diameter  | mm               | 55   |
| Height   | mm               | 72   |
| Authorised grinding wheel rotation speed                   | tr/min           | 6370   |
| Authorised wheel peripheral speed.                         | m/sec            | 50   |
| Composition of the grinding wheel                          | .....            | Meule résinoïde (meule constituée d'agglomérants synthétiques) |
| Grinding wheel travel height                               | mm               | 62   |

<sup>(1)</sup> Measurements done according to NF EN ISO 11204 while machine working. <sup>(2)</sup> Measurements done according to NF EN ISO 3746 while machine working. <sup>(3)</sup> Measurements done according to NF EN ISO 5349 while machine working.

## 2.5 Machine location inside the clearance gauge

The diagram below shows the dimensions of the machine as compared with the lower UIC 505-1 clearance gauge (track with a nominal gauge of 1.435 m).



## CHAPTER 3 – INSTALLATION – STARTING

### 3.1 Installing the grinding wheel

**The grinding wheel must be installed with the engine off and the machine on the ground.**

To install the grinding wheel, proceed as follows:

➔ Disassembling the grinding wheel:

- 1 → Lower the grinding wheel as far as possible, then remove the grinding wheel housing ② by removing the 2 bolts ① (17 spanner) (see fig.1).
- 2 → Immobilise the pin ④ using a 27 open-ended spanner then unscrew the “grinding wheel+wheel holder” assembly using a second 27 open-ended spanner.
- 3 → Separate the grinding wheel ⑥ from the grinding wheel holder plate ⑤:
  - *assembly Fig.2* >> Unscrew the fastening bolts ③ (13 open-ended spanner).
  - *assembly Fig.3* >> Immobilise the grinding wheel ⑥, then unscrew the wheel holder plate ⑤ (27 open-ended spanner).

➔ Assembling the grinding wheel:

- 5 → - *assembly Fig.2* >> Position the grinding wheel ⑥ so the inside Ø is on the sholder of the wheel holder plate ⑤. Place the fastening bolts ③ on the grinding wheel ⑥ and bring them together until they touch. Tighten them.
- *assembly Fig.3* >> Immobilise the grinding wheel ⑥, then screw in the wheel holder plate ⑤ (27 open-ended spanner).
- 6 → To put the “grinding wheel +wheel holder” assembly back, carry out operations 2 and 1 in the opposite order from disassembly.

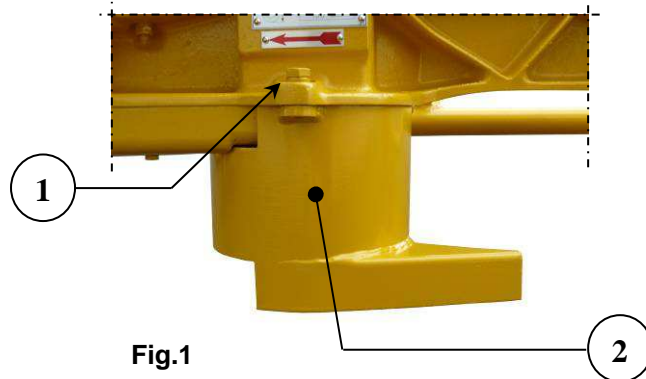


Fig.1

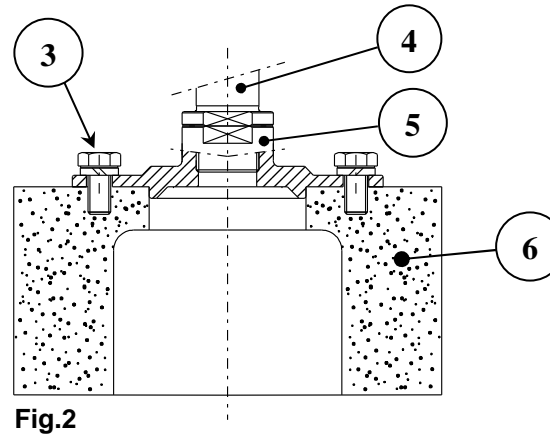


Fig.2

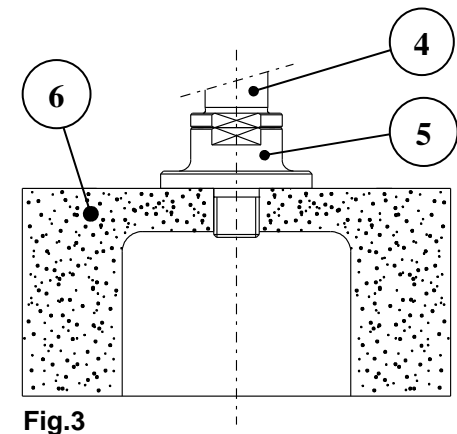


Fig.3



**THE GRINDSTONES YOU USE SHOULD MEET THE TECHNICAL SPECIFICATIONS STATED IN § 2.3 "TECHNICAL DATA / GRINDSTONE"**

**The grinding wheels have expiry dates. Make sure these have not been exceeded.**

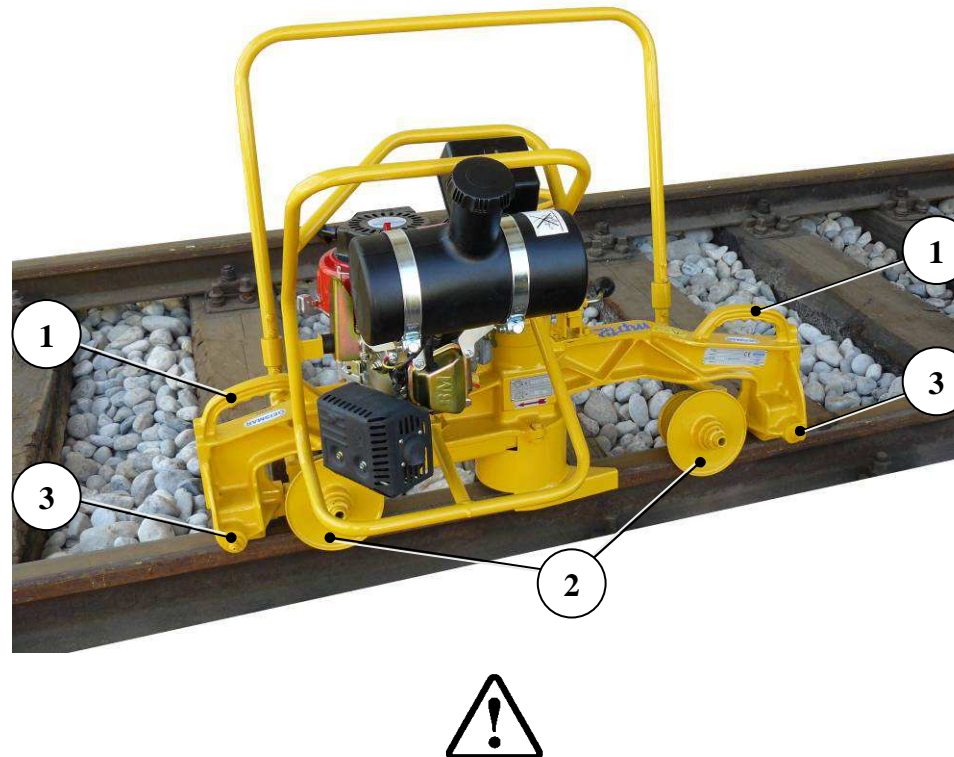
### **3.2 Placing the machine on the track**

At least two people must be involved when placing the machine on or taking it off track. Nonetheless, if the work area is difficult to access, more people may be required to ensure safe handling operations.

- To place the machine on the track, proceed as follows:

Take the machine by the carrying handles ① on either side of the machine. Position the machine on the track. The rollers ② and ③ must roll freely on the rails. If the machine is equipped with a balancing bar (optional), attach it so the roller rolls freely on the rail.

If the machine is equipped with a balancing bar, it must be immobilised (with support) once on the track, to avoid moving and injuring someone in case of a collision.



**THE ENGINE MUST BE OFF WHEN THE MACHINE IS PLACED ON OR TAKEN OFF THE TRACK.**



### 3.3 Guide roller settings

The guide roller separation is adjustable, so the machine can be placed on all types of rail, regardless of the width of the railhead.

#### 3.3.1 Settings for flat-bottomed rails

➔ Adjust one of the two guide rollers, as follows:

- Remove the two guide flanges ① held in place by nuts and locknuts ① (25 hook spanner).
- Remove or replace, for each of the two roller axes, the necessary number of spreaders ③ (the same on both sides) for clearance of 5 to 10mm between the railhead and one of the two guide flanges ① (see diagram)
- Place the unused spreaders outside the guide flanges ①.
- Replace and securely block the nuts and locknuts ②.

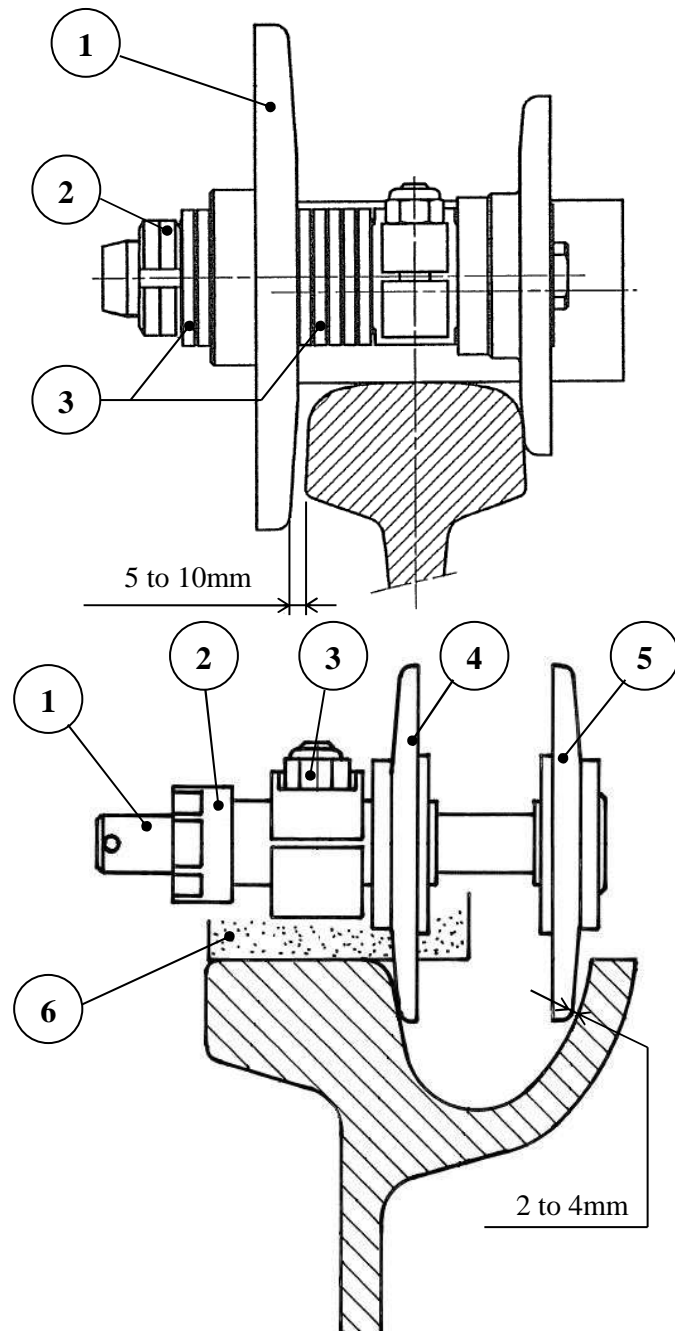
➔ Mount the second guide roller in the same way.

#### 3.3.2 Settings for grooved rails (if equipped)

➔ Adjust one of the two guide rollers, as follows:

- Unblock the nuts ② and ③.
- Position the machine on the rail, placing the guide rollers ④ and ⑤ in the groove.
- Position the grinding wheel ⑥ level with the outside of the rail (see diagram), progressively moving the machine towards the outside of the track.
- Bring the guide roller ④ into contact with the outside of the groove and block the nuts ③.
- Push the shaft ① to bring the guide roller ⑤ to within a few millimetres of the inside of the groove, and block the nut ②.


We recommend using an Ø80 mm grinding wheel and an adapted grinding wheel protective hood (Ref. 37101) that lets you raise the fillet.



## 3.4 Fuel

- The rail grinder's engine must use of Gas-oil
- *Motor oil* ➔ use 4-stroke motor oil that meets or exceeds the engine recommendations.
- *Storing the Gas-oil* ➔ *Empty the fuel tank and run the engine until it stops after each use of the machine.* Filling up with fuel



Be careful when opening the fuel can.

 The can may be under pressure. Open it carefully.

Before filling up, carefully clean the plug and the area around it so no impurity enters the tank.

Position the machine vertically, so the tank plug is pointing up.



- Opening the plug:
  - ❶ Turn the plug counter-clockwise by hand as far as possible.
  - ❷ Remove the tank plug.
-  Carefully open the fuel tank plug so that any excess internal pressure can escape slowly, without ejecting fuel.
-  Never open the plug using a tool. This risks damaging the plug and fuel may escape.
- Fill the tank in a well-ventilated area and never near possible sources of fire, such as: blow torches, sparks, soldering equipment.
- Move the machine at least 6m from where it was filled up before starting it.



**When filling, do not spill the fuel and never completely fill the tank. Never completely fill the tank, but only put in a quantity of fuel equal to  $\frac{3}{4}$  of the maximum capacity.**

- Closing the plug:
  - ❶ Position the tank plug in front of the filling hole.
  - ❷ Turn the plug clockwise as far as possible.

### 3.5 Inspecting the machine

Each component of the machine must be inspected by a qualified person prior to commissioning in order to detect any defects. The inspection is mainly a visual and operational check.

The inspection phase ensures the different components are in good condition and have not been damaged during transport or storage.

- Checking the mechanical-welded assemblies (this inspection takes place with the engine off)  
Visually check that there are no external defects, deformations, superficial cracks, wear or marks of corrosion.
- Checking levels (this inspection takes place with the engine off)
  - Fuel level: Check the fuel level and if necessary fill it up (⚠: Refer to §1.3 "General safety instructions" / sub-§: "Use and handling of fuel" before any action).
- Check the safety devices  
Switch on the motor (⚠: make sure you do read §4.1.2 "Starting-up and shutting-down the machine"), and check that the safety devices work properly (motor shutdown).
- Operating checks  
Make sure the control instruments are functioning properly. Make sure the grinding wheel raising/lowering and tilt controls are working properly: this means that when they are operating, the components must move as fluidly as possible, with no sticking points.
- Inspecting the grinding wheel and mount  
Visually check that the grinding wheel and mount are in good condition. Make sure the grinding wheel is hidden inside the protective hood.
- Inspecting the protective hood  
Make sure there are no dents or cracks in the protective hood.



**IN THE EVENT AN ANOMALY SHOULD BE FOUND DURING THIS INSPECTION OR DURING USE, THE MACHINE MUST BE RESTORED TO FULL COMPLIANCE BY QUALIFIED PERSONNEL OR BY THE MANUFACTURER PRIOR TO RE-USE.**

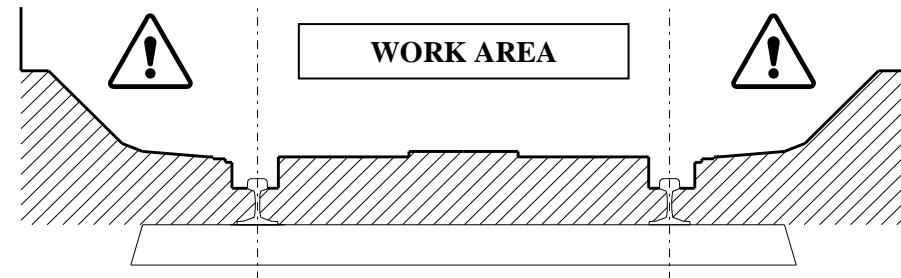
## CHAPTER 4 – USE

### 4.1 Conditions of use

#### 4.1.1 Operator work area

The operator's work area is between the two rails on a single string. This work area ensures the operator can work under optimum safety conditions. The operator must (where possible) always remain within this area.

⚠ If the work to be carried out requires positioning outside this area, make sure it is safe, above all if the work is carried out without stoppage of traffic.



#### 4.1.2 Operator position

While working, the operator must remain in the position shown in the photo opposite, firmly holding the manoeuvring handle.

To adjust the height of the grinding wheel, hold the manoeuvring handle with one hand and operate the grinding wheel adjusting assembly with the other.

This position guarantees perfect control of the machine.




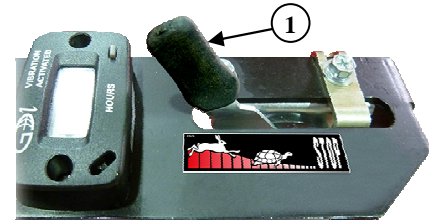
## 4.2 Starting and stopping the machine

Refer to the engine manufacturer's guide to determine the location of the components to activate when starting and stopping.

**THE MACHINE MUST ONLY BE STARTED WHEN IT IS ON THE TRACK**

### → Mise en marche:

- Vérifier que la manette d'accélération du moteur Rep. ① est bien sur la position « **RAPIDE** » 
- Tirez doucement la poignée du lanceur jusqu'à ce que vous sentiez une résistance, puis revenez à la position initiale.
- Tirez énergiquement à deux mains la poignée du lanceur jusqu'à ce que la marque rouge sur la corde apparaisse Rep. ②
- Après démarrage, ramener doucement la manette vers la droite afin de baisser le régime moteur
- Laisser tourner quelques instants jusqu'à ce que le régime se stabilise et que le moteur monte en température.



### → Arrêt de la machine:

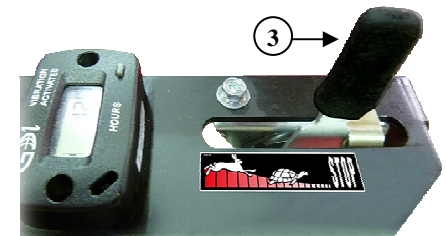
- Arrêter le moteur en poussant la manette d'arrêt Rep. ③ sur la position « **STOP** ».
- La meule doit être escamotée à l'intérieur de son protecteur, dès que le meulage est terminé. Cette précaution permet d'éviter aux opérateurs d'entrer accidentellement en contact avec la meule en mouvement, d'éviter également une détérioration de la meule ou des projections de cailloux en cas de fausse manœuvre.



*Ne pas tirer la corde du lanceur jusqu'à la limite de sa course.*



Pour toutes manipulations de la machine, la meule doit être escamotée à l'intérieur de son carter





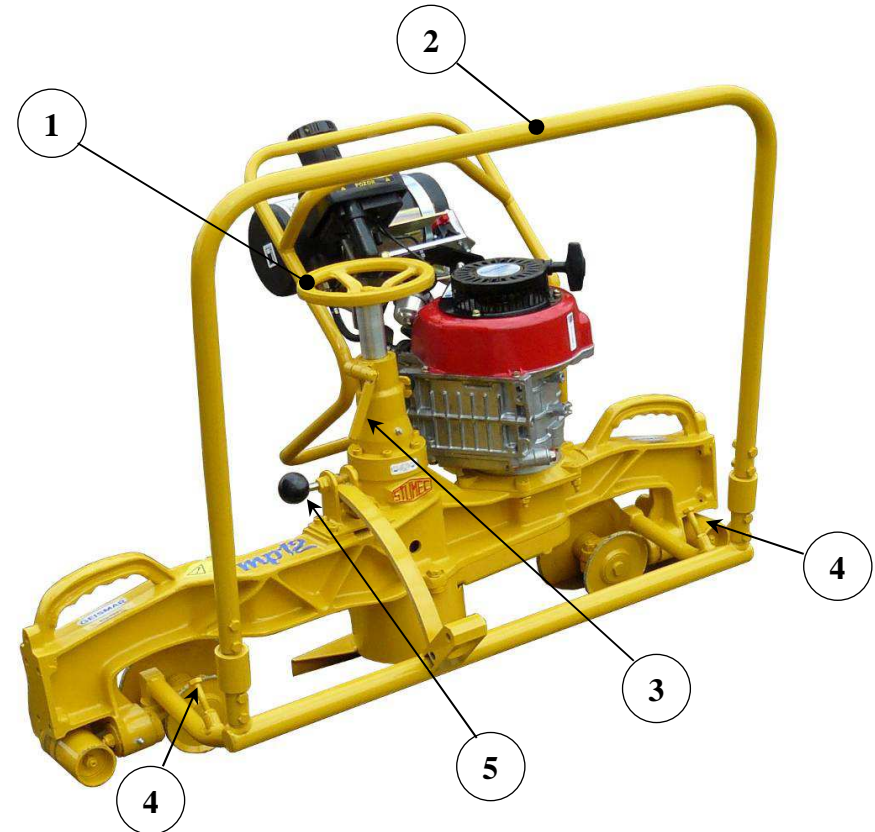
## 4.3 Operating the machine

### 4.3.1 Use on flat-bottomed rails

Move the machine on the rail using the two flat rollers, keeping the guide flanges horizontal on either side of the rail (See §3.3 “Guide roller settings”).

- Start the engine (see engine guide and §4.2 “Starting and stopping the machine”).
- Loosen the handle ③ so the grinding wheel can rise and descend.
- Start by polishing the part of the rail to grind up to about one millimetre from the surface of the rail. Work in quick successive passes, using short movements of the machine back and forth along the rail. With each pass, turn the wheel a fraction ① to move the grinding wheel forward. Work on the horizontal by choosing the most displaced position of the manoeuvring lever ② with respect to the machine. To do this, loosen the handle ⑤, separate the two components as much as possible and tighten the handle again ⑤.
- Polish the forward sides, first moving the manoeuvring lever as close as possible ② to the machine. To do this, loosen the handle ⑤ and bring the two components into contact with the stops ④. There are two intermediate positions marked with a spring-ball detent: select them for grinding rail curves. You can, however, also work in any other position.
- To move from one side to the other, turn the machine over by raising it above the rail. A single operator can turn it over by raising one side (take the lightest side) and letting it pivot on the rail.
- For finishing, return to the grinding position on the top of the rail. Then precisely adjust the grinding wheel for the rail section. To do this, put the grinding wheel flush on the rail (some sparks appear). This procedure is not necessary in an area with welding nearby, but is required in an area where it is the right rail section.
- Continue grinding the section until all traces of welds have disappeared (starting from the top, then the side, and finally the curve). Finish off over approximately 10cm on either side of the weld. Use a straight-edge to make sure it is perfectly flat. If necessary, use the steering wheel ① to compensate for wear to the grinding wheel. It is never possible to make a dent if these recommendations are respected.

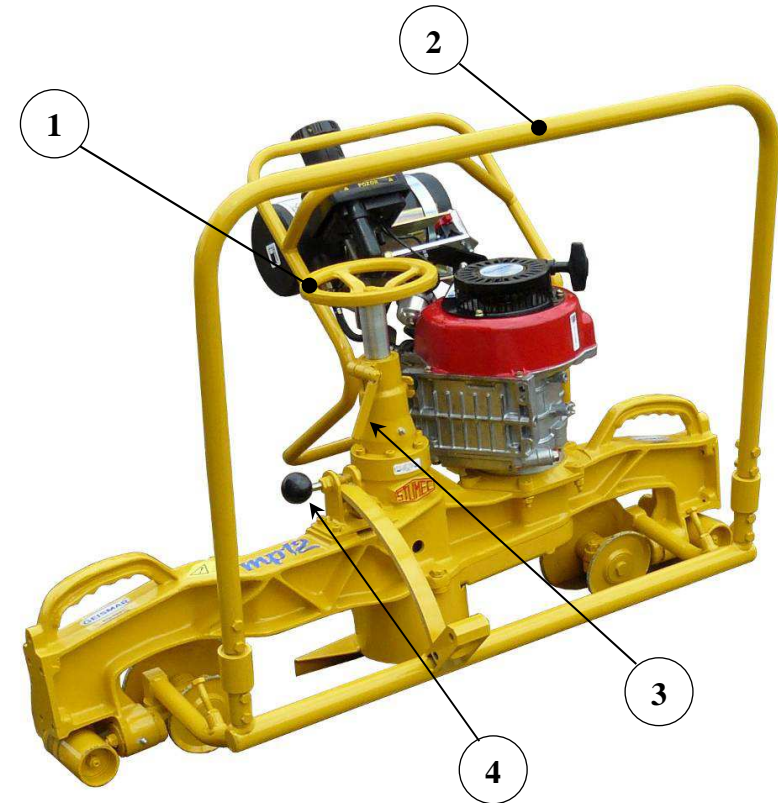
When you have finished grinding, turn the grinding wheel movement steering wheel ① 3 or 4 turns counter-clockwise. The grinding wheel is protected in the protective housing and will not come into contact with the next weld.



#### 4.3.2 Use on grooved rails (if the machine is equipped with grooved rollers)

Move the machine on the rail using the two flat rollers, keeping the guide flanges horizontal and centred in the groove (See §3.3 “Guide roller settings”).

- Start the engine (see engine guide and §4.2 “Starting and stopping the machine”).
- Loosen the handle ③ so the grinding wheel can rise and descend.
- Start by polishing the part of the rail to grind up to about one millimetre from the surface of the rail. Work in quick successive passes, using short movements of the machine back and forth along the rail. With each pass, turn the wheel a fraction ① to move the grinding wheel forward. Work on the horizontal surface as well as the inside curve of the flange by choosing the most displaced position of the manoeuvring lever ② with respect to the machine. To do this, loosen the handle ④, separate the two components as much as possible and tighten the handle again ④.
- For finishing, return to the grinding position on the top of the rail. Then precisely adjust the grinding wheel for the rail section. To do this, put the grinding wheel flush on the rail (some sparks appear). This procedure is not necessary in an area with welding nearby, but is required in an area where it is the right rail section.
- Continue grinding until all traces of welds have disappeared. Finish off over approximately 10cm on either side of the weld. Use a straight-edge to make sure it is flat. If necessary, use the steering wheel ① to compensate for wear to the grinding wheel. It is never possible to make a dent if these recommendations are respected.




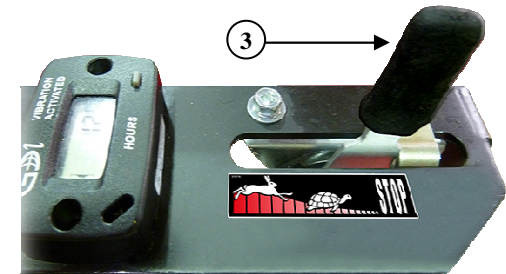
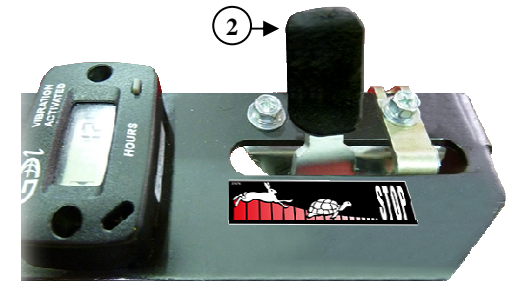
When you have finished grinding, turn the grinding wheel movement steering wheel ① 3 or 4 turns counter clockwise. The grinding wheel is protected in the protective housing and will not come into contact with the next weld.

## 4.4 Taking the machine off the track

Depending on the situation (more or less time to take the machine off the track), take the machine off the track following “a) Normal procedure” or “b) Emergency procedure”.

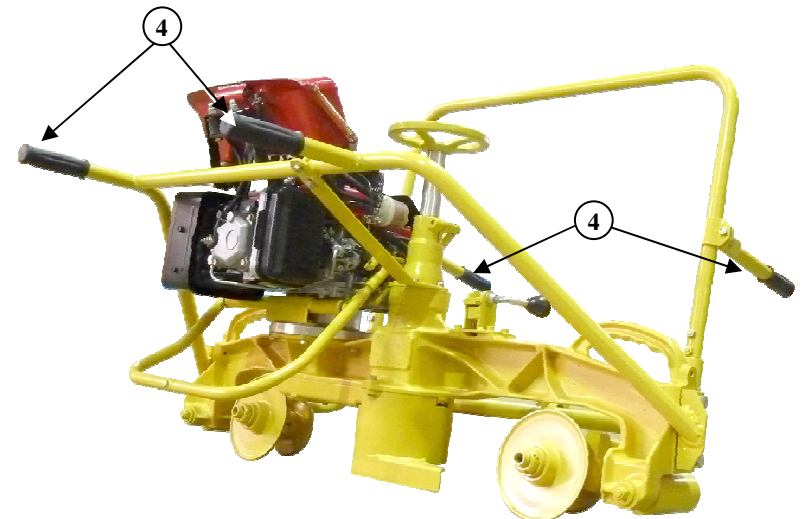
### a) Normal procedure

- Raise the grinding wheel so there is at least 3mm between it and the railhead.
  - Bring the machine to the vertical position.
  - Decrease the engine speed by sliding the lever on position *Ref.* ② 
  - Stop the engine by sliding the lever on the position **STOP** *Ref.* ③,
  - and the wait for the complete stop of the grindstone.
  - Take the machine off the track by following §3.2 “Placing the machine on the track” in reverse order.
- ➔ As indicated in the same paragraph, the MP.12-type section grinder can be placed on/taken off the track by two people. Nonetheless, if the work area is difficult to access, more people may be required to ensure safe handling operations.



### b) Emergency procedure

- Stop the engine by sliding the lever on the position **STOP** *Ref.* ③
- Hold the machine by the two carrying handles *Rep.* ④ located on either side of the machine and quickly take it off the track.



**IMPORTANT:** After applying the emergency procedure to take the machine off the track, you must make sure no component has been damaged and the grinding wheel is in good condition. Do not start the machine up again until it has been inspected and, if necessary, repaired

## 4.5 Storage

### 4.5.1 General storage recommendations

During periods where the equipment is not in use, it is indispensable to store it properly in order to keep it in good working order. Poorly-stocked equipment may deteriorate when recommissioned. It is also important for the personnel responsible for storage operations to take great care during storage, and to carefully follow the recommendations.

#### ⇒ Storage protection system

The choice of storage protection systems depends on 2 main factors:

- the length of time it will be stored
- the storage conditions: "unprotected" storage (exposure to bad weather) and "protected" storage (building, closed hangar, open hangar, canopy, etc.)

Equipment must be run in before being stored. Measures must be taken to ensure ease of access around the equipment for servicing purposes.

#### ⇒ Storage sites

In general, premises for storing equipment should provide as good protection as possible against:

- dust, exhaust emissions, humidity
- direct sunlight
- rapid temperature changes

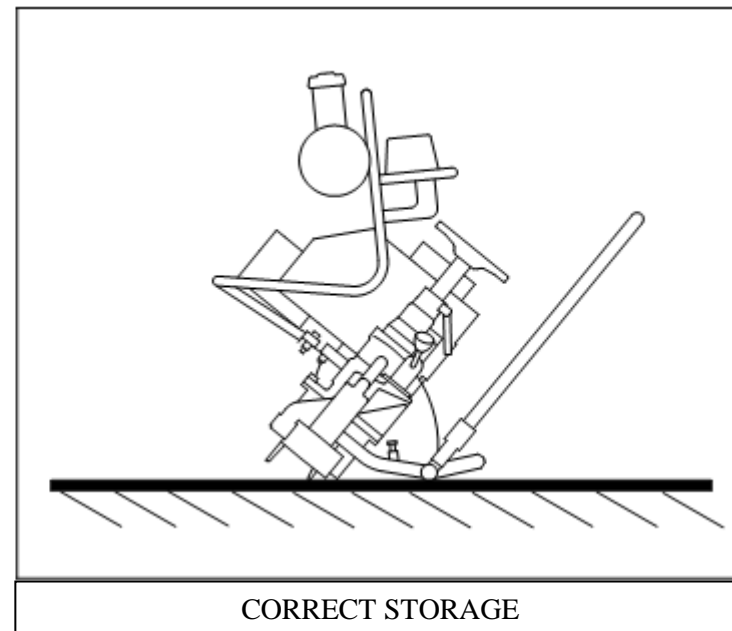
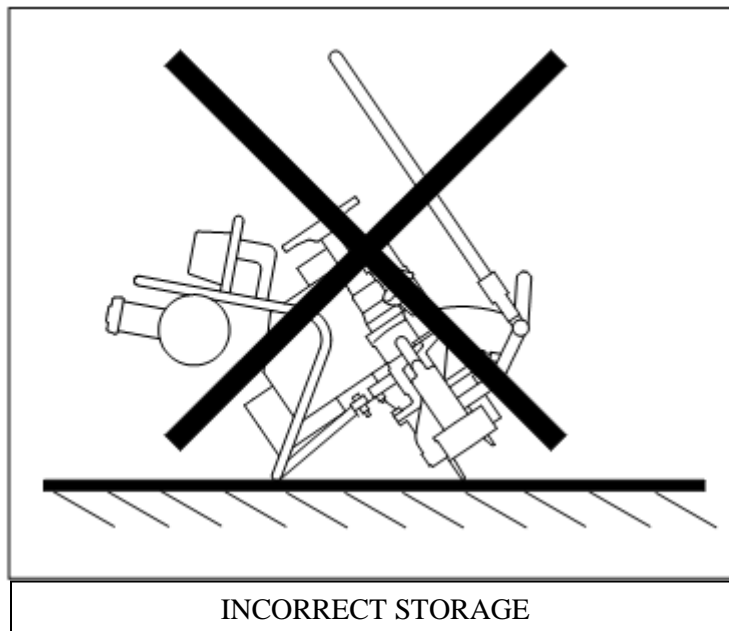
#### ⇒ Storage procedures

The state of the equipment when recommissioned after storage depends on the way it was prepared and protected before storage.

- cleaning the equipment (after cleaning, protect the moving parts with grease).
- technical inspections to check for anomalies

#### 4.5.2 Specific storage recommendations






- ⇒ For extended storage of the machine, empty the fuel tank.
- ⇒ Never store the machine with the grinding wheel mounted.
- ⇒ Store the grinding wheels in a dry place, protected from frost, sunlight and heat. Arrange them so they are not under stress to avoid deformation. The equipment must not be stored for more than 2 years.
- ⇒ If the engine is turned off and lying on one side, oil will flow from the cylinder and carburettor, and the engine will no longer start.  
As a result, *the machine must be stored on the manoeuvring lever mount*, which is designed to keep the engine in a horizontal position during storage.
- ⇒ After extended storage, the engine hoses must be replaced.





## CHAPTER 5 – SERVICING

### 5.1 Servicing

-  Proper training, skills and tools are required to correctly use, maintain and repair this material.
-  This equipment may only be serviced and repaired by skilled personnel with a thorough knowledge of general mechanics.
-  Before carrying out any servicing or repair operation, stop the engine (leave the control in the stop position) and wait for it to cool down.
-  Waste resulting from servicing and maintenance operations (fluids, filters, used cloths, etc.) must be processed in accordance with applicable regulations governing the protection of the environment.
-  Any part that is worn, damaged or missing must be changed or repaired immediately, whenever there is a risk in terms of safety.

#### 5.1.1 List of equipment and accessories essential for servicing

The following tooling is required for carrying out all the servicing and maintenance operations correctly:

| <b>Work tooling (provided with the machine)</b> |  | <b>Maintenance and servicing tooling (not provided with the machine)</b>   |
|---|--|--|
| MP.12 - MINSEL M165                             | 13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. ) 37088)<br>10 elbow pipe spanner (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)<br>Spark plug spanner         | 10, 13, 16 and 18 open-ended spanners<br>5, 6 and 8 spanners<br><br><u>For special angle-bracket grinding wheel mount:</u><br>8 open-ended spanner (Ref. GAZ)<br>13 elbow pipe wrench (Ref. GBQ)<br><br><u>For 600Y grinding wheel mount:</u><br>Pin (Ref. 16761)<br><br><u>For 37042 and 37006 wheel plate:</u><br>13 open-ended spanner (Ref. GAW)<br>This list of tooling does not exclude the need for normal necessary equipment such as: cloths, brushes, grease, etc. |
| MP.12 - BERNARD 211-5006                        | 13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. 37088)<br>10 elbow pipe wrench (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)<br>Spark plug spanner (Ref. GGK) |  |
| MP.12 - BRIGGS & STRATTON 122672                | 13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. 37088)<br>10 elbow pipe wrench (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)<br>Spark plug spanner (Ref. FVL) |  |
| MP.12 - LEROY SOMER LS100                       | 13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. 37088)<br>10 elbow pipe wrench (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)                                  |  |
| MP.12 - CASAPPA 11 cm <sup>3</sup> /r           | 13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. 37088)<br>10 elbow pipe wrench (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)                                  |  |
|   |  | MP.12 - Robin DY27-2D    13 x 23 open-ended spanner (Ref. GAW)<br>Hook spanner (Ref. 37088)<br>10 elbow pipe wrench (Ref. FCC)<br>17 open-ended spanner (Ref. FJM)<br>Spark plug spanner (Ref. GGK)  |

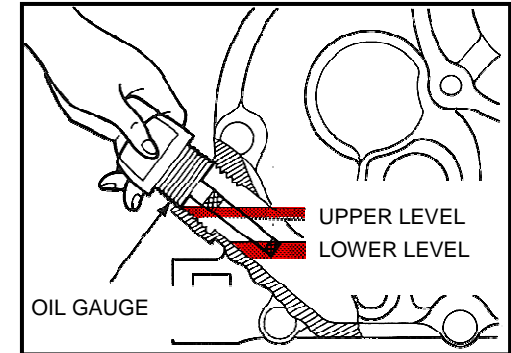
### 5.1.2 Engine

Strictly comply with the manufacturer's instructions.

#### FILLING ENGINE OIL

- Place the engine horizontally and pour oil up to the upper level of the oil gauge (approx. 0.9 liter).
- Use diesel engine oil with viscosity of :
- Use diesel engine oil of grade "CC" or "CD" (API ranking).
- Inferior quality engine oil and/or lack of oil may cause an engine trouble or shorter engine life

| SEASON OR TEMPERATURE                                       | GRADE OF OIL |
|---|--------------|
| Spring or Summer or Autumn<br>104°F (40 °C) to +50°F (10°C) | SAE30        |
| +68°F (20°C) to +14°F (-10° C)                              | SAE 10W-30   |

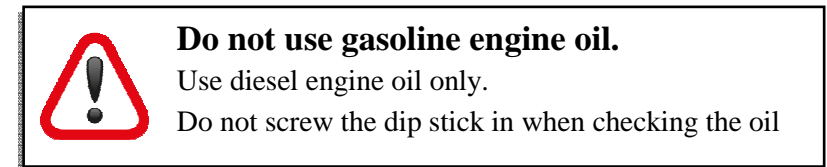


### 5.1.3 Cleaning

Make sure that the machine is kept as clean as possible. Care in cleaning the machine will lead to longer service life and improved performance.

Clean the machine carefully with a clean cloth or an airgun, taking special care to remove all dirt that has accumulated on it, especially close to any moving parts. As a precautionary measure, always wear gloves to avoid injury or burning of hands.

Regularly clean the carrying and guide rollers. Clean both sides of the machine.



### 5.1.4 Lubrication

Regularly oil the threads of the different locking levers of the machine.

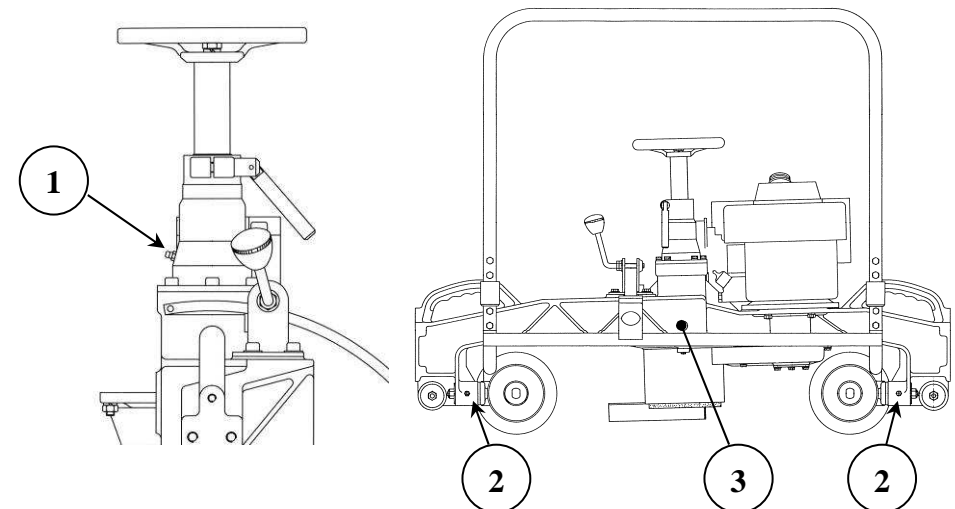
Each week, fill up the 4 greasers ①, ② and ③ of the machine.

Use one of the recommended greases below:

- TOTAL MULTIS EP 2
- KLÜBER CENTOPLEX 2 EP

Or any other grease complying with norm DIN 51 354 or ISO.L.XBBFB.00 (grade 00 tacky grease for heavy load gears. Temperature of use from - 20°C to + 120 ° C).

The thrust ball bearing OP (plan 37 000 KR) of the pin is lubricated for life with the synthetic grease CASTROL Longtime PD2. If the lubricants are filled up after operation, please contact us, or use NLGI.2 grease, with a usage temperature range from -20 to +150°C and complying with the norm MIL.G23827 A.

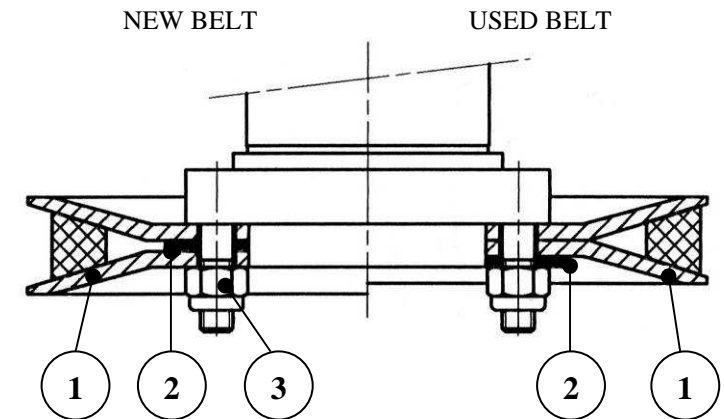


### 5.1.5 Drive belt tension (the engine must be off)

The drive belt is tensioned by variation of the pitch diameter of the pulleys through a clamp set. The drive pulley and the receiving pulley are both adjustable. To access the pulleys, dismantle the grinding wheel, the grinding wheel housing and the belt housing.

Every 50 hours of operation, check the belt tension and adjust it if necessary as follows:

- Dismantle the pulley flange ① kept in place by bolts ③ (see fig; 1).
- Remove a clamp ②.
- Replace the flange ①, placing the clamp between the flange and the bolts ③.
- Progressively tighten the six bolts ③, while turning the pulley by hand so the belt moves into position without becoming stuck between the two flanges.
- If the resulting tension is not enough, start the operation again to remove another clamp ②.



To guarantee proper alignment of the drive belt, you must carry out the same adjustment on each of the pulleys.

When there are no more clamps between the flanges of the two pulleys and the belt is slipping, a new belt must be installed in its place.

To install a new belt, put all of the clamps (12 per pulley) between the pulley flanges.

NOTE: When replacing or re-installing a belt, check that the pulley grooves are in good condition and clean them, and those of the belt, carefully.

**Check the belt tension after 10 hours of use, then check and adjust it, if necessary, after every 50 hours of use.**

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**Check the belt tension after 10 hours of use, then check and adjust it, if necessary, after every 50 hours of use.**

#### 5.1.6 Filtering

A clogged filtration system can cause the following problems:

- excessive fuel consumption
- problems starting the motor
- decreased motor power
- premature wear to the motor

➔ At the end of each work day (or every time it should prove necessary):

- ❶ Remove the air filter cover.
- ❷ Clean the filter box and surroundings, as well as the inside of the filter cover. Use compressed air for this, taking care not to point the air flow directly at the main filter.
- ❸ Refit the air filter and filter cover.

➔ You must replace the two filtration components in the event of clogging or damage.

To prevent particles from entering the inlet, you must replace the filter in a clean environment, such as a warehouse or maintenance workshop.



**NEVER USE THE MACHINE WITHOUT THE AIR FILTER**

### 5.1.7 Engine rotation speed

When shipped from the factory, the carburettor is delivered with the optimal adjustment corresponding to the pressure and climate conditions of the factory. For optimum use of the machine, the engine must have an engine speed corresponding to that indicated in §2.3 “Technical characteristics”.

Apart from standard maintenance during use, it is recommended that you have GEISMAR sales or breakdown repair agents carry out repairs or adjustments to the carburettor. All adjustments to the carburettor must take place with the engine hot. You must follow the manufacturer’s instructions when making these adjustments.

Periodically check the maximum engine rotation speed without load using an electronic rotation counter (Ref. HLN). An inspection must be carried out prior to commissioning: atmospheric conditions and altitude can significantly affect this adjustment.

For an inspection or adjustment, the machine must be on a blocked work position in order to measure the motor's speed under load.

A rotation generation mechanism rotation speed that is too low or too high may cause premature wearing of some components, and seriously affect the machine's performance.

## 5.2 Maintenance

### 5.2.1 Preventive maintenance calendar

| COMPONENTS                         | TYPE OF OPERATION  | FREQUENCY       |                |            |                |                 |   | See          |
|------------------------------------|--|-----------------|----------------|------------|----------------|-----------------|---|--------------|
|                                    |  | Before each use | After each use | Every week | Every 50 hours | Every 100 hours | When there are obvious signs of wear or malfunction |              |
| Entire machine                     | Inspecting the machine   | X               |                |            |                |                 |   | Chap.3 - § 8 |
| Entire machine                     | Perform general cleaning with a clean cloth or blow nozzle to remove dirt from the machine |                 | X              |            |                |                 |   | Chap.5 §1.3  |
| Lubrication                        | Grease   |                 |                | X          |                |                 |   | Chap.5 §1.4  |
| Drive belt                         | Adjust the tension   |                 |                |            | X              |                 |   | Chap.5 §1.5  |
|                                    | Replacement  |                 |                |            |                |                 | X   | Chap.5 §1.5  |
| Air filter                         | Clean  |                 | X              |            |                |                 |   | Chap.5 §1.6  |
|                                    | Replacement  |                 |                |            |                |                 | X   | Chap.5 §1.6  |
| Engine rotation speed without load | Check the engine rotation speed  |                 |                | X          |                |                 |   | Chap.5 §1.7  |

**NOTE:** These recommendations are not exhaustive. Treating a machine with care and properly organising regular preventative maintenance can only extend a machine's lifespan.

Indications on the preventive maintenance schedule are given for machines used under normal conditions. In more difficult working conditions and longer working days the frequency of maintenance operations must be increased accordingly.



### 5.2.2 List of normal wear parts (this list does not include motor parts)

This is a list of normal wear parts on the machine together with the conditions under which they should be replaced.

Nevertheless, any part that is worn, damaged or missing must be changed or repaired immediately, whenever there is a risk in terms of safety.

| Description                  | No. | Replacement conditions          |
|------------------------------|-----|---------------------------------|
| 35 – 1 scraper seal          | 1   | Oil leak or poor operation      |
| N°25 O ring                  | 1   |                                 |
| AS 28 – 40 7/10 scraper seal | 1   |                                 |
| gasket                       | 1   |                                 |
| Engine shutdown switch       | 1   | Broken or malfunctioning switch |
| trapezoid belt               | 1   | Wear or breakage                |
| 40 mm Bakelite ball          | 1   |                                 |
| 861 152 hose                 | 2   |                                 |

## CHAPTER 6 – ACCESSORIES AND OPTIONS

### 6.1 Optional equipment

#### 6.1.1 Power take-off

There must be two operators to use the grinding hose on machines equipped with power take-off.

**The engine must be turned off prior to work on the grinding wheel or hose.**

##### Installing the hose:

After making sure the fuel tank is not too full, to avoid fuel leaks, (if applicable) reinstall the grinding wheel so it is hidden as much as possible within the protective cover.

Tilt the manoeuvring arm side of the machine to make the power take-off accessible. Remove the power take-off protective plug then attach the flexible transmission.

##### Starting the engine:

If the hose has a clutch (required for EC use), the power take-off requires a single operator only.

If the hose does not have a clutch, two operators are required. The first operator, after attaching the desired tool, must pick up the grinding wheel holder and wait for the second operator to start the engine. He must not put the wheel holder back down until the second operator has completely stopped the engine. While the engine is running, one of the operators must remain near the engine and stop it immediately if anything should occur.

##### Safety measures:

While grinding, make sure the jet of sparks is not directed at the second operator, who must wear safety goggles and gloves.

Do not distort the hose, as this may damage the transmission and lead to accidents in the event of breakage due to improper use.

After stopping the engine, the hose must be dismantled, then the power take-off plug replaced. To continue working, put the machine back on the track before using it.



**Power take-off device** (ref. 37000 DS – original component supplement)

**Hoses** (for use with grinding wheel holders)

- **Hose without clutch:**
  - Length 3 m (ref. 16300 A);
  - Length 4 m (ref. 16300 B);
- **Hose with clutch**  
(Mandatory for EC machines equipped with power-take-off device):
  - Length 3 m (ref. 16300 E);
  - Length 4 m (ref. 16300 G);

**Reinforced resin grinding wheel** (for wheel holder with hose)

- For straight 230 x 20 x 16 mm wheel holder (code N00742);
- For square-shaft 230 x 6.4 x 22.2 mm wheel holder (code N00730) ;
- For square-shaft 150 x 72 mm wheel holder (code N00734);

**Wheel holders** for hoses:

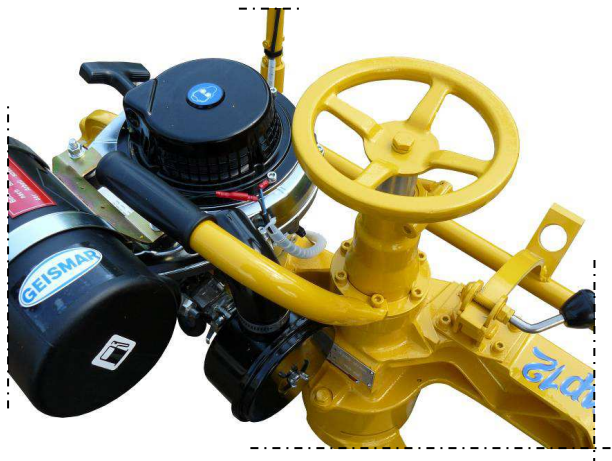
- Straight wheel-holder for grinding inside rail equipment, crossing and ends (ref. 600 W);
- Square shaft wheel holder, for grinding welds (ref. 600 X);
- Square shaft wheel holder, for grinding welds (ref. 600 Y);

#### 6.1.2 Handle

**Carrying handle** (ref. 37464)

**Minsel engine carrying handle** (ref. 37000 KK)

**Bernard engine carrying handle** (ref. 37000 MC)



#### 6.1.3 Spacing extension

**Spacing extension** (ref. 37000 V)



#### 6.1.4 Balancing bar

**Balancing bar** (ref. 37000 K – original component supplement)

**Variable spacing balancing bar** (ref 37000 KY)

**914-track balancing bar** (ref. 37054 A)

**1000-track balancing bar** (ref. 37054 B)

**1067-track balancing bar** (ref. 37054 C)

**1668-track balancing bar** (ref. 37054 D)

**1676-track balancing bar** (ref. 37054 E)

**1600-track balancing bar** (ref. 37054 F)

**1050-track balancing bar** (ref. 37054 G)

**1520-track balancing bar** (ref. 37054 H)

**1372-track balancing bar** (ref. 37054 J)

**914-track isolated roller balancing bar** (ref. 37181 A)

**1000-track isolated roller balancing bar** (ref. 37181 B)

**1050 - 1067 -track isolated roller balancing bar** (ref. 37181 C)

**1524-track isolated roller balancing bar** (ref. 37181 D)

**1600-track isolated roller balancing bar** (ref. 37181 E)

**1668 - 1676 -track isolated roller balancing bar** (ref. 37181 F)

#### 6.1.5 Palm stop button

**Palm stop button for all MP.12 and MOD.12 models** (ref. 12000 EZ)



#### 6.1.6 Manoeuvring lever (anti-vibration and height-adjustable)

**Anti-vibration manoeuvring lever** (ref. 37380)

**Anti-vibration manoeuvring lever** (ref. 37381)

**Anti-vibration manoeuvring lever** (ref. 37000 GF)

**Height-adjustable manoeuvring lever** (ref. 37000 HB)

**Manoeuvring lever** (anti-vibration and height-adjustable) (ref. 37000 KN)

#### 6.1.7 Graded inclination

**Graduated sector for grinding wheel inclination** (ref. 37482)

#### 6.1.8 Limit of grinding wheel descent

Grinding wheel descent limiter (ref. 37000 JZ)



#### 6.1.9 Adaptation kit for harmonic grinding

Harmonic wear grinding to convert a MP12 into a MOD12 with balancing bar (Ref. 37000 BH and 37000 K)

#### 6.1.10 Adaptation kit for grooved rail grinding

The machine must be equipped with a Ø 80mm grinding wheel and housing if the same diameter for proper rail grinding.

Grinding wheel housing (ref. 37101)

6 Ø 80 x 72 – M20-type sliding grinding wheel (ref. N03313)

Roller device for moving from grooved rails to flat-bottomed rails (ref. 37000 BB)

#### 6.1.11 Supplies

##### **Reinforced resin sliding grinding wheel for:**

- M8 4-hole wheel holder plate:
  - 150 x 72 mm (code N00734);
  - 125 x 60 mm (code N00733);
- M8 6-hole wheel holder plate:
  - 150 x 65 mm (code N00738);
- M20 wheel holder plate or nozzle:
  - 125 x 65 mm (code N02780);
  - 80 x 72 mm (code N03313);
- 5/8" wheel holder nozzle:
  - 150 x 65 mm (code N00737);
  - 80 x 72 mm (code N00731);
  - 6" x 3" (code N03243).

##### **Wheel holder nozzles and plates (accessories):**

- 5/8" wheel holder nozzle (ref. 16356);
- M20 wheel holder nozzle (ref. 16356 A);
- Ø125 - M20 wheel holder plate (ref. 16356 C);
- 4-hole wheel holder plate (M8 bolt) (ref. 37042).
- 6-hole wheel holder plate (M8 bolt) (ref. 37006).

## **CHAPTER 7 – SPARE PARTS CATALOG**

### **7.1 Drawings and parts lists**



## IMPORTANT

Afin que votre commande de pièces de rechange soit suivie d'une livraison prompte et correcte, bien indiquer :

- Le rep., le nombre et la désignation des pièces de rechange
- Le type et le n° de série de la machine (plaque sur le châssis)

\*\*\*\*\*

## IMPORTANT

To ensure that you are delivered promptly and correctly after placing an order for spare parts please state:

- the Reference, number and description of the spare parts
- the type and serial number of the machine (to locate this number, look at the plate on the chassis)

\*\*\*\*\*

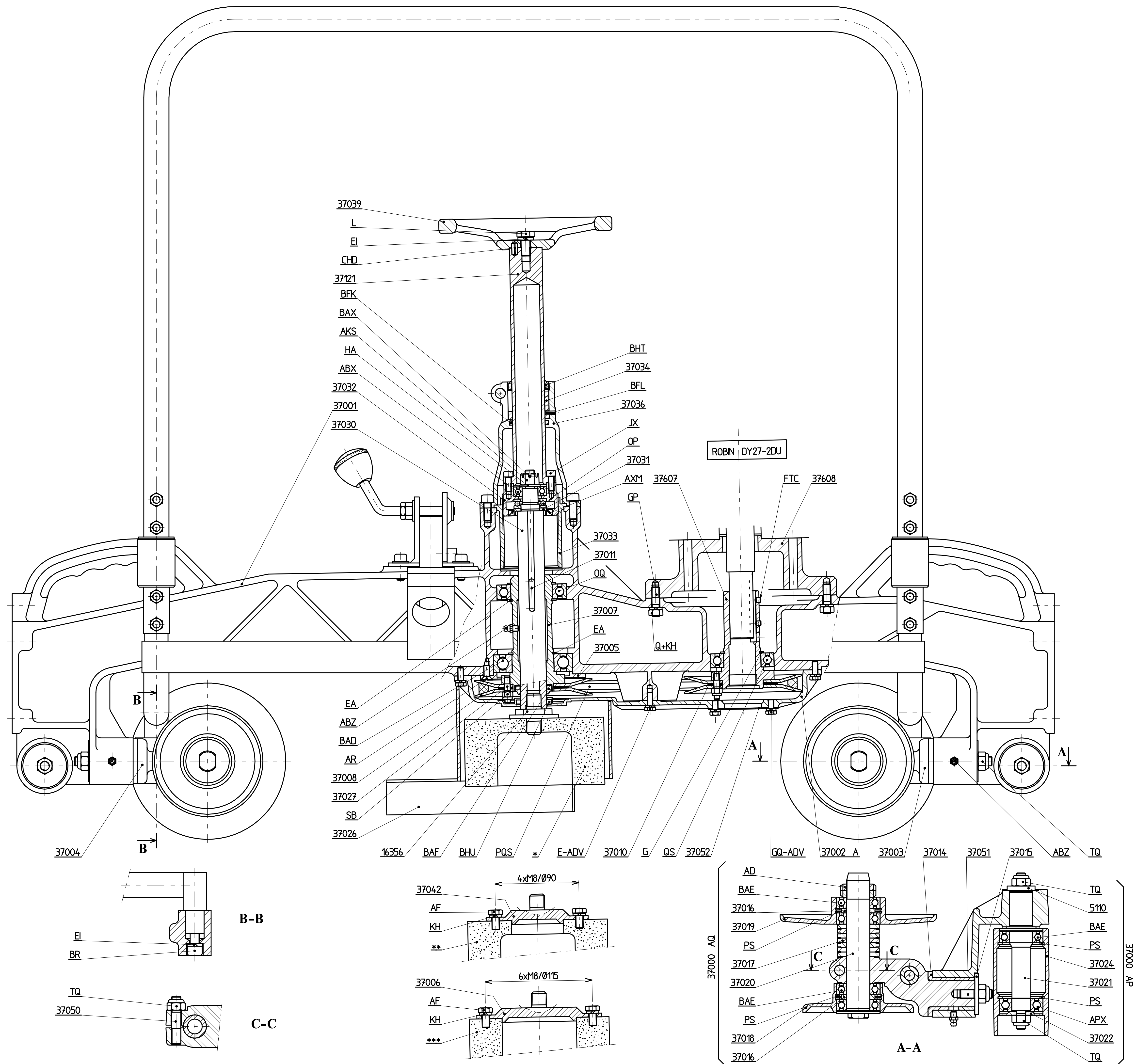
## WICHTIG

Um uns eine schnelle und fehlerlose Erledigung Ihres Ersatzteil-Auftrages zu erlauben, bitten wir Sie um folgende Angaben :

- Seriennummer und Baujahr der maschine
- Benennung und Bestellnummer der Ersatzteile

Tableau d'équivalence - codes machine / plans  
 Table of equivalence - machine codes / plans

| MP12<br>sans mot.<br><b>ST471Z01</b> | MP12<br>sans mot.<br><b>ST471Z50</b> | MP12<br>sans mot.<br><b>ST471Z53</b> |          |
|--------------------------------------|--------------------------------------|--------------------------------------|----------|
| X                                    | X                                    | X                                    | 37000 AP |
| X                                    | X                                    | X                                    | 37000 AQ |
| X                                    | X                                    | X                                    | 37000 KH |
| X                                    | X                                    | X                                    | 37000 KJ |



37000 KH  
06-01

| Ref.     | Qty | Description                      | Ref.     | Qty | Description                      |
|----------|-----|----------------------------------|----------|-----|----------------------------------|
| 8 057    | 1   | Tightening cap                   | 37 032   | 1   | Grindstone feed-screw            |
| 11 063   | 1   | Hand-lever of feedwheel brake    | 37 033   | 1   | Grindstone feed-nut              |
| 16 356   | 1   | Grindstone axle 5/8 WW           | 37 034   | 1   | Split ring of feedwheel-brake    |
| 37 001   | 1   | Frame                            | 37 036   | 1   | Feedwheel axle housing           |
| 37 002 A | 1   | Belt casing                      | 37 039   | 1   | Hand operating feedwheel         |
| 37 003   | 1   | Right support guide roller       | 37 042   | 1   | 4-screw type stone-holder        |
| 37 004   | 1   | Left support guide roller        | 37 049   | 1   | Lower part of operating hand-bar |
| 37 005   | 1   | Bearings-plug                    | 37 050   | 2   | Pin M 10 x 52 x 18 J = 18        |
| 37 006   | 1   | 6-screw type stone-holder        | 37 051   | 2   | Pin M 10 x 35 x 16 J = 16        |
| 37 007   | 1   | Receiving-pulley hub             | 37 052   | 1   | Belt casing locking device       |
| 37 008   | 4   | Flange of adjustable pulley      | 37 075 B | 1   | Clamping-body                    |
| 37 010   | 20  | Pulley adjustment-wedge          | 37 076   | 1   | Hand-lever of clamp              |
| 37 011   | 1   | Key of spindle                   | 37 121   | 1   | Feed-wheel axle                  |
| 37 014   | 2   | Ring of flange-support           | 37 252   | 2   | Washer 8,2 x 21 x 3              |
| 37 015   | 2   | Stop washer of pivoting-supports | 37 253   | 2   | Support                          |
| 37 025   | 1   | Operating handle-bar (removable) | 37 254   | 2   | Axle                             |
| 37 026   | 1   | Grindstone casing                | 37 607   | 1   | Driving hub pulley               |
| 37 027   | 12  | Pin M 6 x 30 x 14 J = 10         | 37 608   | 1   | Engine adaptation flange         |
| 37 030   | 1   | Grindstone spindle               | 29/846   | 1   | Position ball-spring             |
| 37 031   | 1   | Spindle-cap                      |          |     |                                  |

\* Grindstone type 6 Ø 150 x 75 x 5/8" with - 50 m/s

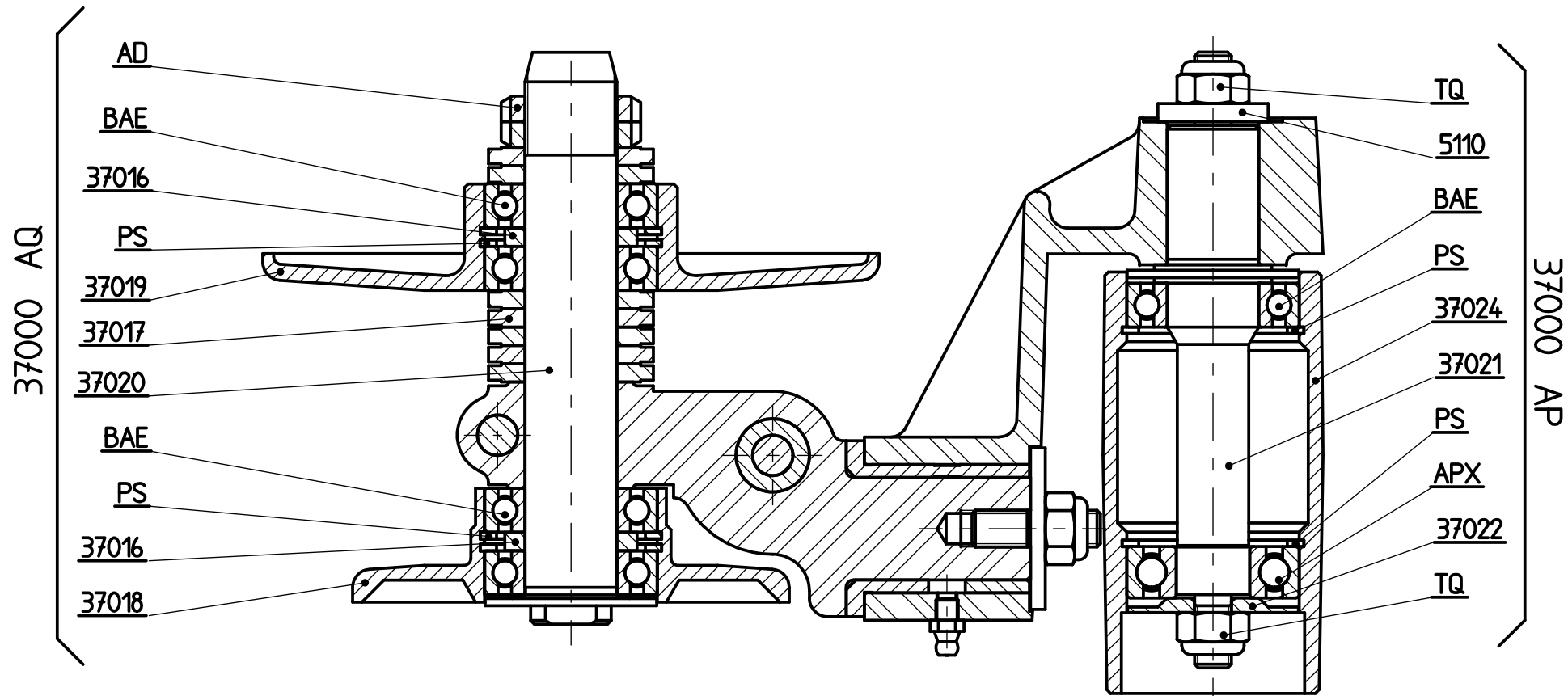
\*\* Grindstone type 6 Ø 150 x 72 x 4 x M 8 / Ø 90 - 50 m/s

\*\*\* Grindstone type 6 Ø 150 x 72 x 6 x M 8 / Ø 115 - 50 m/s

| Ref. | Qty    | Description         | Ref. | Qty | Description                  |
|------|--------|---------------------|------|-----|------------------------------|
| B    | 10     | Screw Chc 8 x 20    | MM   | 1   | Polyamide knob dia. 40       |
| E    | 5      | Screw H 6 x 15      | OP   | 1   | Thrust ball bearing n° 51104 |
| G    | 1      | Circlips 40 e       | OQ   | 1   | Ball bearing n° 6009 EE      |
| L    | 1      | Screw H 10 x 20     | QS   | 1   | Ball bearing n° 6008 EE      |
| Q    | 6      | Nut H 8             | SB   | 12  | Nylstop nut of 6             |
| Y    | 2      | Screw H 10 x 25     | TQ   | 4   | Nylstop nut of 10            |
| AF   | 4 or 6 | Screw H 8 x 15      | ABX  | 1   | Ball bearing n° 6003 EE      |
| AN   | 8      | Screw H 8 x 35      | ABZ  | 4   | Lubricator BEC M 6 x 100     |
| AP   | 2      | Screw H 8 x 20      | ADV  | 5   | Washer W 6                   |
| AR   | 6      | Screw TF/90° 6 x 15 | AFK  | 8   | Brake nut of 8               |
| AZ   | 1      | Nut H 10            | AIN  | 2   | Flexibloc 861 152            |
| BC   | 1      | Steel ball Ø 8,7    | AKS  | 1   | Nut HK M 10                  |
| BR   | 2      | Screw Chc 10 x 30   | ATJ  | 3   | Nut Hm 10                    |
| EA   | 3      | Circlips 45 e       | AXM  | 1   | Seal 35 x 47 x 6             |
| EI   | 5      | Washer W 10         | BAD  | 1   | Ball bearing n° 6209 EE      |
| FG   | 4      | Washer M 8 U        | BAF  | 1   | Scraper joint AS 28-40 7/10  |
| GP   | 6      | Pin M 8 x 32        | BAX  | 1   | Elastic pin Ø 2,5 x 15       |
| GQ   | 4      | Screw H 6 x 10      | BFK  | 1   | O-ring n° 25                 |
| HA   | 2      | Washer M 10 U       | BFL  | 1   | Elastic pin Ø 4 x 10         |
| JX   | 4      | Screw Chc 6 x 15    | BHT  | 1   | Scraper joint 35-1           |
| KH   | 8      | Washer W 8          | BHU  | 1   | Felt-sealing 5 x 5 x 100     |
| KS   | 2      | Screw H 10 x 30     | BHW  | 1   | Elastic pin 6 x 35           |
|      |        |                     | CHD  | 1   | Elastic pin Ø 6 x 12         |
|      |        |                     | DCH  | 1   | Elastic pin Ø 4 x 18         |
|      |        |                     | FTC  | 2   | Screw Hc 5 x 6 cup end       |
|      |        |                     | PQS  | 1   | V-belt 10 x 8 - length 775   |







STUMEC

37000 AP-AQ

12-96

**RAIL PROFILE GRINDING MACHINE**  
**Model MP.12**

**37 000 AP - 2 - Runner Assy, each including :**

| Ref.   | Qty | Description              | Ref. | Qty | Description             |
|--------|-----|--------------------------|------|-----|-------------------------|
| 5 110  | 1   | Washer DIA 10,5 x 30 x 5 | PS   | 2   | Circlips 47 i           |
| 37 021 | 1   | Runner-axle              | TQ   | 2   | Nylstop nut of 10       |
| 37 022 | 1   | Runner-plug              | APX  | 1   | Ball bearing n° 6204 ZZ |
| 37 024 | 1   | Runner                   | BAE  | 1   | Ball bearing n° 6005 ZZ |

**37 000 AQ - 2 - Guide flanged-rollers, Assy, each including :**

| Ref.   | Qty | Description                    | Ref. | Qty | Description             |
|--------|-----|--------------------------------|------|-----|-------------------------|
| 37 016 | 2   | Ball-bearing spacer            | AD   | 2   | Tightening nut KM.5     |
| 37 017 | 7   | Guiding roller adjustment-ring | PS   | 4   | Circlips 47 i           |
| 37 018 | 1   | Guide flange DIA 120 mm        | BAE  | 4   | Ball bearing n° 6005 ZZ |
| 37 019 | 1   | Guide flange DIA 170 mm        |      |     |                         |
| 37 020 | 1   | Guide flange axle              |      |     |                         |

