

# Operating instructions

## Sembdner Small engine rollers

**KM 1**

**KM 2**



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# 1 Technical data

## 1.1 Machine characteristics

Technical data	KM 1	KM 2
Roller width	80 cm	80 cm
Roller diameter	50 cm	50 cm
Total width	93 cm	93 cm
Total length	152 cm	152 cm
Total height	105 cm	105 cm
Weight without water filling	approx. 275 kg	approx. 315 kg
Weight with water filling	approx. 395 kg	approx. 415 kg
4-stroke petrol engine Honda GX 160 Speed	5.5 HP / 4 kW max 4.5 km/h	5.5 HP / 4 kW max 4.5 km/h
split rollers (differential gears)	○	●

## 1.2 Type plate

<b>Sembdner</b>	
<b>Maschinenbau GmbH</b>	
<b>CE</b>	
<b>82256 Fürstenfeldbruck, Germany</b>	
Type <input style="width: 50px;" type="text"/>	Nr. <input style="width: 50px;" type="text"/>
weight <input style="width: 50px;" type="text"/>	Mot/kW <input style="width: 50px;" type="text"/>
Construction year <input style="width: 50px;" type="text"/>	

## 1.3 Range of uses

All rolling work on tennis courts and sports facilities.

## 2 Safety information

### 2.1 General safety information

Please observe the general safety and accident prevention regulations in addition to the safety information in these operating instructions. All safety instructions should also be communicated to other users.

Young people below the age of 18 must not use the roller.

All operators must familiarise themselves before starting work with all the facilities and operating parts as well as all the functions. Once work has started, it is too late.

Before starting up: Check the immediate area (children!); make sure there is good visibility.

Do not run the engine in enclosed spaces. Risk of poisoning!

Drivers should wear tightly fitting clothes. Avoid loose clothing.

Care is needed when handling fuel – increased risk of fire.

Never fill up with fuel near an open flame or sparks that could start a fire.

Do not fill the tank while the engine is running.

Petrol spilled on a hot engine runs the risk of fire or explosion. First let the engine cool down.

When refuelling, no smoking, no naked light.

### 2.2 Selection of staff and qualifications

Working with the roller should only be done by reliable staff. Observe the statutory minimum age. The operator is responsible for instructing any hired skilled staff and/or trained employees.

As operator, you are advised to establish, before starting the roller, how much knowledge the hired staff possess in relation to the following points:

- Aware of the contents of the operating instructions
- Aware of the safety and operating regulations contained there
- Aware of statutory accident prevention regulations

Only trained or properly instructed staff should be employed. Establish clearly the skills the staff have for operating, maintaining or repairing the roller.

### 2.3 Safety at work when using rollers in pedestrian operation

These instructions were drawn up in support of the "Sicherheitsregeln für den Betrieb von Straßenwalzen und Bodenverdichtern" \*) (Safety rules for operating street rollers and ground compactors" \*).

- The roller should be driven only by suitable, reliable persons aged at least 18.
- The operating instructions of the manufacturer and the safety rules \*) must be observed.
- Rollers must only be operated with all safety devices.
- Before starting work, check the facilities for an emergency stop in the event of danger (e.g. parking brake, reversing on full throttle or forced OFF position).
- If you find defects in the safety facilities or other defects which would impair the safe operation of the devices, notify the person in charge immediately.
- In the event of defects that jeopardise operational safety, immediately stop operating the device.
- While driving the roller, the machine driver must not let go of the operational facilities for driving the roller.
- If any operational work needs to be done on the roller, it must only be done on a stationary roller secured against rolling away.
- Operational facilities that change position by themselves when released must not be used.
- The roller must not be driven downhill with the engine clutch out. When using a roller without load-switchable gears, the correct gear must be selected before driving on gradients. Changing gear while driving on gradients is not permitted.
- When reversing, shaft-steered rollers must be steered by the shaft at the side, to avoid any harm to the driver from being caught between the end of the shaft and any obstacle.
- Rollers must be driven and parked so that they cannot topple over, particularly on slopes.
- Before leaving the roller, the machine driver must stop the drive and secure the roller against unintentional movement.
- The rollers must be parked and secured so that there is no danger to traffic.
- Maintenance and repair work must only be carried out when the drive is stopped. The only exception is when such work cannot be carried out without the drive.
- After maintenance and repair work, safety devices must be properly re-attached.

\*) „Sicherheitsregeln für den Betrieb von Straßenwalzen und Bodenverdichtern“ (Safety rules for operating street rollers and ground compactors“ \*), is obtainable from the trade association.

### 2.4 Safety information for operators

- wear tightly fitting clothes
- wear safety boots
- wear ear protectors

## 3 General

### 3.1 Limitation of liability

All the technical information, data and notes contained in these operating instructions for operating and maintaining small engine rollers represent the latest technical position, and have been produced based on our experience and understanding hitherto, to the best of our knowledge.

We reserve the right to make technical changes as part of ongoing product development of the rollers described in these operating instructions.

No claims can therefore be derived from the statements, illustrations and descriptions in these operating instructions.

No liability is accepted for damage or interruptions to operations arising from operational errors, non-observance of these operating instructions, or from improper repairs.

Sembdner Maschinenbau GmbH is not liable for damage arising from the use of non-original replacement parts and/or accessories.

Translations have been done to the best of our knowledge. We cannot therefore accept liability for translation errors, even where the translation has been produced by ourselves or has been commissioned by us.

The German text is the authoritative text.

### 3.2 Guarantee

Guaranteed claims are to be notified immediately the damage is found, including the purchase date. Complaints must be verified by us. Wear and tear of parts is not covered by the guarantee.

The guarantee is nullified in the event of:

- improper operation
- use not in accordance with the purpose of the rollers
- improper use of operational resources
- failure to use original replacement parts

### 3.3 Testing regulations

The acoustic pressure level in the ear of the operator does not exceed 85 dB(A).

The acoustic pressure level meets the guidelines of the Bundesverbandes der landwirtschaftlichen Berufsgenossenschaft (Federal Association of Agricultural Trade Associations) for machines driven by pedestrians.

### 3.4 Accident prevention regulations

The accident prevention regulations of the Gartenbau-Berufsgenossenschaft (Horticultural Trade Association) shall apply.

## 4 Transport / Start-up

### 4.1 Packaging

The small engine roller is strapped to the transport pallet using band clamps, and packaged using cardboard and strapping.

## 4.2 Scope of delivery

On acceptance of the roller, please check that all accessories are present and complete. If parts have been damaged or lost during transport, please complain to the delivery company.

# 5 In operation

## 5.1 Engine

The engine is an air-cooled 4-stroke petrol engine. Unleaded regular petrol must be used.



**Do not run the engine in enclosed spaces. Risk of poisoning!**

### **Starting the engine**

Before starting the engine, place the travel direction handle V/R in the off or neutral position. Set the engine speed lever on the control shaft to **max**.

**Activating the choke:** Set the lever on the engine to the Choke or Start position.

Pull the starter handle gently until some resistance is felt, then pull vigorously. Do not let the starter handle spring back to the engine. Move the handle back carefully, to avoid damaging the starter.

While the engine is warming up, gradually push the choke lever back to the open/run position. A warm engine will require less choke activation than a cold engine.

### **Oil warning system:**

The oil warning system is designed to avoid damage to the engine. If there is not enough engine oil in the crankcase, the oil warning system switches off the engine automatically. If the engine stops and will not restart, the first thing to check as a possible cause is the oil level.



**Do not carry out any maintenance on a running engine.**

**In order to avoid unintentional starting: Remove the sparking plug.**

### **Air filter:**

Never run the engine without the air filter – this will only lead to faster wear and tear on the engine. Check the air cleaner element in order to make sure that it is clean and in good condition. If necessary, clean the pre-filter. If the paper filter cartridge is very dirty, replace it.

### **Engine oil change:**

First oil change after five hours, then either after 50 hours or each season.

Use engine oil SAE 30 for the engine and gears. Major maintenance and repair work should only be done in specialist workshops.

**The engine is not manufactured by us. For more detailed information about operating and maintenance, see the engine manufacturer's operating instructions.**

## 5.2 Reverse gear unit

The small engine roller has a reverse gear unit for operating forwards or backwards.

This cogwheel planetary gear is equipped with two brake bands that enable forwards or backwards travel by using the gear lever **1**.

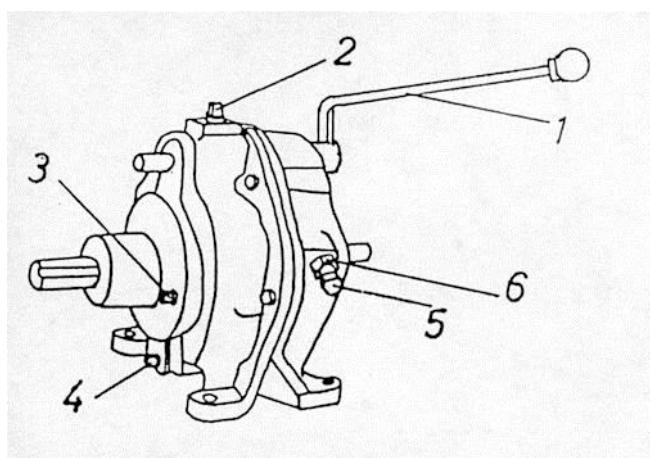
When changing the direction of travel, first switch to the O position, and wait for the machine to stop before switching to the opposite direction of travel. This will significantly lengthen the service life of the brake bands.

**Settings:** The angled screws **5** marked in yellow on the reverse gear unit are used for readjusting the brake bands if the machine is no longer accelerating properly.

The rearmost adjusting screw (looked at from the roller's direction of travel) is for the forward gear; the screw at the front is for adjusting the reverse gear. After loosening the lock nut **6** adjust only to the point where a slight final pressure is felt when switching gears using the gear lever.

The forward and reverse gears are adjusted individually.

After adjusting the screws, do not forget to tighten the lock nut **6**.



- 1 Gear lever
- 2 Oil filler plug
- 3 Oil level checking screw
- 4 Oil drain plug
- 5 Adjusting screw for adjusting the brake bands
- 6 Lock nut

**Reverse gear unit oil change** Change oil after first 30 hours of operation, then after every 100 hours of operation.

Loosen oil drain plug **4**, let the oil drain into a suitable container and dispose of correctly.

Tighten the drain plug again, and fill up with fresh oil SAE 30 up to the oil level checking screw **3**.

Carry out a monthly oil level check and top up as required.

## 5.3 Chain drive

After the first few hours of operation, the chain tension will slacken somewhat and the drive chain must be re-tensioned.



**Re-tensioning the drive chain must only be done with the drive switched off and the engine stationary.**

For this, remove the chain guard, loosen the chain tensioning wheel and adjust to get the correct chain tension. After tensioning the chain, protective clothing must again be put on.



## 5.4 Safety switch

The roller is fitted with a safety switch system.

Safety is achieved in two ways – by a magnetic switch on the reverse gear unit, and a dead man's handle on the control shaft.

Starting the engine is only possible with the travel direction handle in the O position.

Before activating the gear lever "Forwards – Backwards", the dead man's handle on the control shaft must be raised – otherwise the safety switch on the machine will stop the engine.

The dead man's handle must be raised for **all** movements – otherwise the engine will immediately be stopped.

The dead man's handle serves as an **emergency OFF switch**. It must be released in dangerous situations where a rapid switch-off is required.



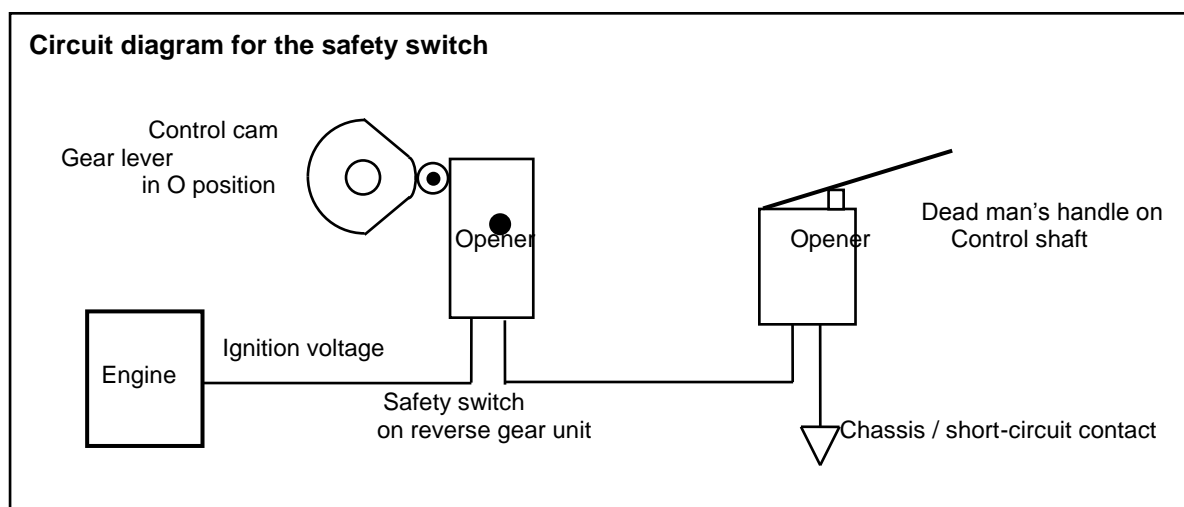
**Caution: Engine keeps running because of the flywheel mass!**

Keep a safe distance when reversing in enclosed areas or near fixed components.



**Do not tie down the safety lever (dead man's handle)!**

Check that the safety switch – dead man's handle is working correctly every time before starting the roller. Modifications to the safety switch – dead man's handle are strictly forbidden.



### Checking the safety switch system

If the dead man's handle has not been raised, the safety switch must stop the engine in both directions of travel before the gear lever is engaged.

In the event of a defect in the safety switch, check the settings of the safety switch/control cam on the reverse gear unit, and also the cable and cable connections.

### Settings for the safety switch/control cam

For the basic setup, mount the control cam on the shaft of the reverse gear unit in such a way that when forward or reverse gear is engaged, the flat surfaces of the control cam are parallel (vertical) with the safety switch. In this, the sprocket wheel of the safety switch should fit closely to the surfaces.

For fine adjustment, the control cam on the shaft can be turned slightly, or the distance between the safety switch and the control cam can be corrected.

The switch must only be pressed by the control cam in the O position of the gear lever (see circuit diagram).

## 6 Maintenance/Serviceing

### 6.1 Notes on maintenance



**All maintenance, servicing and modification work must be done with the engine switched off and the sparking plug removed!**

Check the engine oil level before each start-up. As well as that, all instructions about maintenance and repairs in the attached operating instructions from the engine manufacturer must be observed.

Reverse gear unit – check oil level often, carry out maintenance and setting as under section 5.2.

Check that the safety circuit – dead man's handle is working correctly every time the roller is started. (see description 5.4)



**After all maintenance, servicing and modification work – re-attach all chain and belt guards and check that the safety switch is working correctly!**

All ball bearings are sealed and permanently lubricated, and are therefore maintenance-free.

### 6.2 Troubleshooting and rectification

Defects in a roller that require more extensive work should always be rectified in a specialist workshop. Incorrect repairs can cause major damage.

The engine does not start up when using the recoil starter:

Is there fuel in the tank?

Is there enough oil in the engine? (cut-off warning light of insufficient oil is flashing).

Is the stop control set to the ON position?

Check the sparking plug to see if there is an ignition spark.

Check the setting of the dead man's handle safety switch, in case there is a break in the ignition current.

(see description 5.4)

If the engine still does not start after these checks, please refer to an authorised engine workshop.

The reverse gear unit provides forwards and backwards travel. In the event of obviously slower acceleration by the machine in one direction of travel, the wear and tear on the brake band must be equalised by adjusting the adjusting screws. Make the settings as described in section 5.2.

### 6.3 Replacement parts

Only original replacement parts from the SEMBDNER company may be used, otherwise guarantee claims are nullified. When ordering replacement parts, please provide the machine number and the technical details on the type plate.

### 6.4 Customer service

Our specialist staff, our resellers, agricultural machinery dealers and motorists are available to provide technical information.

For our customers abroad, authorised country representatives and/or workshops are available. In case of need, please refer to the manufacturing works, where we will be happy to help you.

### 6.5 Customer service addresses

In the operating instructions, there is a list of customer service workshops for the relevant engine manufacturer for maintenance and repair work.

## 7 Declaration of conformity

### **Declaration of conformity**

in accordance with the EU Directive

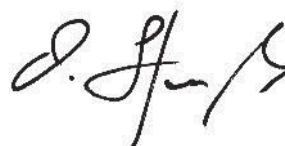
**Sembdner Maschinenbau GmbH  
Liebigstr. 16  
D - 82256 Fürstfeldbruck**

We hereby declare that the products

**Small engine roller KM 1  
Small engine roller KM 2**

to which this declaration relates, conform to the  
relevant safety and health requirements  
of EU Directive 98 / 37 / EU

München, 7 Dec 2014



**Olaf Stauß  
Managing Director**