



The original operating instruction

Sweeper KM 52

KM 12552 H, 125 cm working width

KM 15052 H, 150 cm working width

KM 19052 H, 190 cm working width

KM 22552 H, 225 cm working width

Roller diameter 52 cm, rear and front attachment



Stand: 07/2006



Manufactures by
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1 Introduction

Dear Customer,

Thank you for choosing a quality product from Kersten.

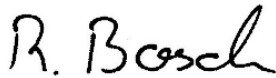
This product has been manufactured according to the latest manufacturing techniques and comprehensive quality assurance measures, because only when you are satisfied with your device, our goal is reached.

Before using this machine or implement for the first time, please read this manual thoroughly and thoroughly.

If you do not understand any of the information contained in this safety data sheet or the product-specific installation or operating instructions, please contact your sales representative or the machine manufacturer directly.

Keep this manual handy. If necessary, you can read important information and instructions.

Have fun with your Kersten - device wishes you



Dipl.- Ing. (FH) Robert Bosch
Managing Director

2 About this manual

The machine or attachment is subject to technical progress. All information, illustrations and technical data are up-to-date at the time of publication. Changes in the sense of technical progress are reserved to the manufacturer at any time.

2.1 Before commissioning



As self-propelled implements and implements are subject to considerable accident or danger sources if not used properly, it is imperative that expert and authorized personnel be instructed during initial commissioning of the Kersten implement. The best way to familiarize yourself with its basic functions and its handling is to choose a free and level terrain for your first trip.

- **You reduce the risk of accidents on your part or third parties!**

For further information and difficulties of any kind, please contact the dealer, importer or directly to the manufacturer.

- **Be sure to read the safety instructions on the following pages!**
- **Read the operating instructions before commissioning!**
- **Pass on all safety instructions to other users!**

2.2 Notes on this manual

Enumerations are marked with eye-catching points.

Example:

1. Text
2. Text

Instructions are marked according to the order in which they are to be carried out.

Example:

1. Text
2. Text

3 Safety instructions for implements

The most important safety instructions in this manual can not cover all possibilities. It goes without saying that common sense and caution are factors that are not built into a machine, but must be brought by the person who uses and maintains the machine.

In order to keep the accident risk as low as possible, please observe the following subchapters.

3.1 Intended use



- The sweeper has been developed for sweeping on paved surfaces, sidewalks and facilities for the usual or common use in the field of area care.
- Any other use is considered improper. The manufacturer is not liable for any damage resulting therefrom, the risk being solely borne by the operator.
- Proper use also includes compliance with the operating, maintenance and service conditions specified by the manufacturer.
- The attachment may only be used, maintained and repaired by persons who are familiar with it and have been informed of the dangers.
- The relevant accident prevention regulations as well as the other generally accepted safety and occupational medical rules must be observed.
- Unauthorized modifications to the machine lead to the exclusion of liability of the manufacturer for the resulting damage.

3.2 General safety and accident prevention regulations

3.2.1 Basic rules



- In addition to the instructions in this operating manual, observe the general valid safety and accident prevention regulations!
- The implement must not be operated by persons under the age of 16, not even under the supervision of an adult! Children and adolescents should be instructed not to play with it.
- Only trained personnel or persons may use this machine!
- When using public traffic routes, observe the relevant regulations!
- The user's clothing should fit snugly. Avoid loose-fitting clothing and wear sturdy shoes or safety shoes!
- Only work in good visibility and light conditions!
- The attached warning and information signs provide important information for safe operation; the attention serves your safety!
- Beware of oscillating brushes - keep safety distance!
- Be careful with trailing machine parts. Wait for work on them until they are completely stopped!
- There are crushing and shearing points on driven parts!
- Driving behavior, steering and, if applicable, braking capability and tilting behavior are influenced by mounted or attached implements and load. For this reason, only implements approved by the manufacturer may be used.

3.2.2 Work and danger area



- The user is responsible to third parties in the work area!
- Staying in the danger area of the machine is prohibited!
- Before switching on the implement and starting, check the near area.
- Pay special attention to children and animals. Make sure you have enough sight!
- Before starting work, remove foreign matter from the surface to be worked. In the
- Pay attention to other foreign objects and eliminate them in good time.
- When working in enclosed areas, the safety distance to the border must be
- be maintained in order not to damage the machine or brushes.
- When working in the immediate vicinity of public roads and paths, these should be followed
- Possibility not longitudinal, but as possible transversely be approached, because this is the
- Risk of injury to third parties due to flying objects minimized.
- When working on public roads and squares or in the immediate vicinity are notice and
- Set up danger signs to attract attention to third parties.

3.2.3 Work and danger area



- Before starting work, familiarize yourself with all equipment and actuators and their function and make sure that all safety devices are properly grown and in protective position. It's too late during the work assignment!

3.2.4 During operation



- Never leave the control room while driving!
- Do not leave the operating station until the brushes of the attachment come to a standstill!
- Make no adjustments to the attachment during operation - risk of accident!
- The transportation of persons and objects is prohibited!
- For example, if the attachment has caught a foreign object and is blocking it, stop the engine and clean the attachment with a suitable tool! At Interventions or cleaning of the attachment always switch off the engine! You're welcome Observe the safety instructions of the self-propelled implement.
- If the self-propelled implement or attachment is damaged, stop the engine immediately and have the damage repaired.

3.2.5 Leaving the machine



- By using wheel chocks or, if necessary, the parking brake, secure the machine from rolling away when leaving.
- Secure the device against unauthorized use!
- Never leave the appliance unattended while it is still in operation!

3.2.6 Screw connections and tires



- When working on the wheels, make sure that the device is safely parked and secured against rolling away!
- Check nuts and bolts regularly for tightness and retighten if necessary.
- Repair work on the tires may only be carried out by qualified personnel and with a suitable assembly tool!
- If the tire pressure is too high there is a risk of explosion!
- Check the air pressure regularly.

3.2.7 Coupling and uncoupling attachments



- Only connect and disconnect implements with the engine switched off and the PTO switched off.
- When changing attachments and their parts, use suitable tools and wear gloves.
- When mounting and dismounting, bring the required support equipment into the respective position and ensure sufficient stability.
- Secure the self-propelled work machine and the attachment to prevent it from rolling (parking brake, wheel chocks).
- When attaching attachments, there is a risk of injury (crushing). Special care is necessary.
- Attach implements according to regulations and fix in the prescribed places.

3.2.8 Maintenance, cleaning and repair work



- Only carry out maintenance and cleaning work with the drive switched off and the motor stationary!
- If guards and working tools are subject to wear, they must be checked regularly and replaced if necessary.
- Only use original spare parts from the manufacturer, as these meet the technical requirements and thus the risk of accidents is minimized!
- Cleaning with the high-pressure cleaner should be carried out so that the water jet is not directly in stock, turned parts, grease nipples, shaft seals, wheel hubs etc. is held. After each cleaning with the high-pressure cleaner, the lubrication be greased. In case of infringement, the right to guarantee expires!
- Check the moving parts for ease of movement and grease if necessary!
- After maintenance and cleaning work, be sure to re-install the guards and put them in the protective position!
- To avoid the risk of fire, keep the machine clean!
- Check nuts and bolts regularly for tightness and retighten if necessary.
- During maintenance, cleaning and repair work on the lifted device, always make sure that it is protected by suitable support elements!
- Make sure that the hydraulic system is depressurised before carrying out any repairs, because fluids under pressure can penetrate the skin and cause serious injury cause! Therefore, seek medical attention immediately - risk of infection!
- Repairs may only be carried out by qualified personnel.
- Check hydraulic hose lines for damage and aging at regular intervals and replace if necessary.
- When welding the tractor or mounted equipment, disconnect the battery.
- Repair work such as welding, grinding, drilling, etc. must not be carried out on supporting and other safety-related parts such as frames, axles, etc.!

4 Disposal

The equipment must be disposed of in accordance with local, state, or local regulations.

Depending on the material, you can dispose of the parts in the form of residual waste, special waste or recycling. The company Kersten Arealmaschinen GmbH assumes no disposal

5 Warranty

The device is accompanied by a sales message, which among other things determines the time of the start of the warranty period. When selling the device, please complete the sales message and send it back to us within 14 days. If warranty claims are asserted without us having received a sales message, no warranty processing will be carried out.

Warranty claims should be submitted promptly, but no later than six weeks after the occurrence of the damage, giving details of the purchase data, otherwise no warranty service will be provided. Complaints must be confirmed by the company Kersten Arealmaschinen GmbH. Wear parts are excluded from the warranty. In addition, the warranty expires in the case of improper operation, in the event of no or incorrect maintenance work, when using inadmissible equipment and when using non-original spare parts.

6 Recommendations

6.1 Lubricants

For engine and gearbox, use the specified lubricants (see under "Technical data").

For "open" lubrication points or nipple points we recommend to use biolubricant oil or biolubricant grease. With the use of biolubricants you act ecologically correct, protect the environment and promote the health of people, animals and plants.

6.2 Fuels

The built-up B & S or Honda engine can be easily operated with commercial unleaded normal and premium gasoline and leaded premium gasoline.

Do not add oil to the gasoline.

If unleaded petrol is used for the environment, engines that are to be shut down for more than 30 days should have their fuel drained completely to avoid resin residues in the carburetor, fuel filter and tank, or to add a fuel stabilizer to the fuel.

6.3 Maintenance and repair

Your dealer has trained mechanics who perform proper maintenance and repairs. You should only carry out major maintenance and repairs yourself if you have the appropriate tools and knowledge of machines and internal combustion engines.

7 Installation

7.1 Attachment of sweeper

Severe injuries to the operator or third parties may occur. Switch off the tractor and remove the ignition key before mounting or dismounting the mounted sweeper.

Suspend the sweeper in the front or rear hydraulics or in the front loader of the tractor. Adjust the horizontal width of the mounting frame according to the tractor type and lock with two screws on the right and left.

For the front loader attachment, an additional bracket is necessary - this requires two through holes of 12.5mm Ø on the mounting frame.

Adjust the top link until the roof of the sweeper is horizontal.

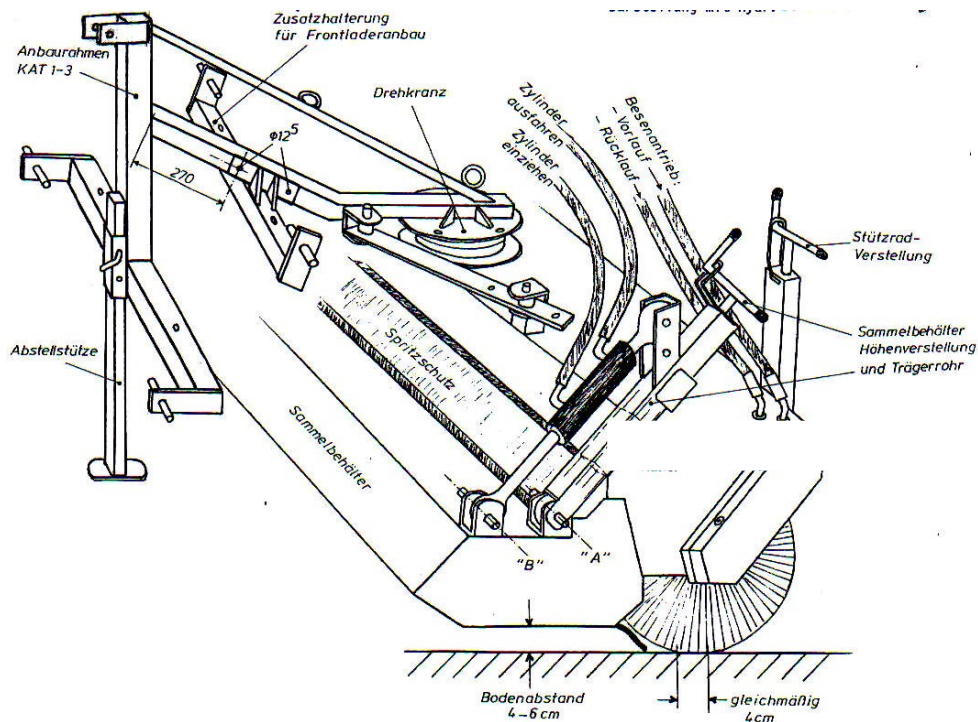
Now guide the two hydraulic hoses (supply and return) of the sweeping roller drive through the rings on the attachment frame to the tractor and insert into the plug-in coupling so that the sweeping roller rotation direction is correct.

7.2 Installation of dirt collector and splash guard

First, insert the two carrier tubes left and right through the holders on the sweeper. Then secure the container and the splash guard on both sides by the bolts at "A" and the container additionally by the bolt at "B" (see sketch on next page). The bolts are each secured by linch pin.

The splash guard falls by its own weight diagonally against the sweeper base housing and the two rubber straps at the top and bottom close the space between sweeper and container.

Notes: Tighten all hydraulic fittings before the test run.



8 Service

8.1 Operating instructions - Sweeper

Sweeping roller adjustment: Using the turning handles, set the two support wheels in such a way that the sweeping roller pushes off a strip approx. 4 cm wide on the floor.

Pay attention to the same setting of the two support wheels!

Note: A sweeping roller set too tight will not result in better sweeping results but will cause more wear on the sweeping roller.

Depending on the wear of the brush, it is important to adjust the height setting on the support wheels.

Storage: Never store the sweeper on the broom.

For easier storage and installation of the sweeper we recommend the additional two support wheels, which are available as special accessories.

Because of the risk of contamination, put the dust caps over the hydraulic plugs!

Pivoting the sweeper: Depending on the work involved, the sweeper can be swiveled straight or left or right over the ball slewing ring.

Lock the handrail in the desired position.

8.2 Dirt collecting container - setting

The ground clearance of the collecting container should be 4 - 6 cm evenly and is adjusted via the two twist grips on the left or right support tube.

Attention: Please adjust carefully for very uneven ground conditions!

For container emptying pull in the hydraulic cylinder, then the container folds up.

8.3 Side brush - setting

Please adjust the side broom only when the main broom and the dirt collector are set.

The height is adjusted by operating the spindle on the mounting plate.

The best sweeping performance with a side brush results in a sweeper that is slightly tilted towards the middle of the road.

When not in use, fold up the side broom and secure it, this is also the storage position.

When dismantling the side broom and operating the sweeper without a side brush, be sure to put the hydraulic hoses in circulation.

Make sure that the hydraulic connectors are clean!

9 Maintenance

9.1 General



Danger!

Personal injury or damage to the machine may occur.

Before using the machine, check all safety-related parts and the hydraulic connections.

- Tighten the sweeping roller tension rod after the first 5 operating hours.
- Grease the spindle of the support wheels as required.
- Check the drive chain for voltage every 20 hours of operation and light as required Grease.
- Grease the grease nipple on the ball race as required.

9.2 Maintenance

- The sweeper must be subjected to regular maintenance.
- After carrying out the work, all dismantled safety devices must be removed be properly installed again.
- After the first 5 hours of operation, check all bolts and bolts Bolt connections.
- Lubricate or lubricate all moving parts.
- Check the hydraulic connections for leaks before each use.
- Check hydraulic connections for the first time after 5 operating

Important NOTE:

Only tightening has no success!

Please unscrew a leaking hydraulic fitting first, then hose or screwing move. Now the screw can be tightened again.

9.3 Daily test

- Check the safety elements and moving parts before each use on wear.
- Check the hydraulic connections and lines.
- Perform a test run before each use.
- Clean the device after each use.
- Sweeping roller: Turn up both support wheels for storage, until the sweeping roller is unloaded.
- Side brush: Store only when lifted.

9.4 Maintenance after 20 or 100 operating hours or longer downtime

- At regular intervals and always at the beginning and end of the season, the moving parts of the unit must be greased or oiled.
- Check the tension of the drive chain and grease slightly.
- Grease the spindle of the wheels.
- Make sure the gear unit is tight.

9.5 Sweeping roller installation or change

- First remove the tension rod,
- Then loosen the three screws of the bearing shell and remove the bearing.
- Remove the drive tube, insert the sweeping roller into the machine and the drive tube reassemble with the bearing.

10 Technical specifications

10.1 Sweeper

| Type | KM 12552 H | KM 15052 H | KM 19052 H | KM 22552 H |
|--|------------|------------|--------------------|--------------------|
| Working width | 125 cm | 150 cm | 190 cm | 225 cm |
| Sweeping roller diameter | 52 cm | 52 cm | 52 cm | 52 cm |
| Suitable for rear three-point construction | Kat. I | Kat. I | Kat. I und Kat. II | Kat. I und Kat. II |
| Suitable for front loader | | --- | Gr. II und Gr. III | Gr. II und Gr. III |

10.2 Scope of delivery as standard

- Attachment frame (tractor-dependent)
- Combined rotary roller with poly-twist trim, five-row
- Infinitely variable speed control of the sweeping roller



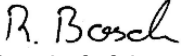
10.3 Additional equipment

- Adjustable height adjustable support wheel (only for use without container)
- Dirt cover as splash guard on the front of the sweeper
- Dirt collecting container with hydraulic container emptying
- Parking supports with rollers (recommended for use with and without container)
- hydraulic swivel device right, left
- Water blaster
- Surface-mounted side brush 50 cm Ø (hydraulically driven)
- further sweeping rollers on request

- Reserve technical changes! -

11 EG – Konformitätserklärung

CE Déclaration de conformité
EC Declaration Conformity
EG conformiteitsverklaring,

| D | F | GB | NL |
|--|--|---|---|
| Wir | Nous | We | Wij |
|  Kersten Arealmaschinen GmbH Empeler Straße 95 D- 46459 Rees  | | | |
| erklären, dass das Produkt | déclarons que le produit | herewith declare that the product | verklaren dat het produkt |
| Frontkehrmaschine | Balayeuse de front | Front sweeper machine | Frontveegmachine |
| KM 12552 H; KM 15052 H; KM19052 H; KM22552 H | | | |
| mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist. | satisfait à l'ensemble de la directive machines 2006/42/CE. | fulfiles all relevant provisions of Directive 2006/42/EC. | voldoet aan alle toepasselijke bepalingen van EG-Machinerichtlijn 2006/42/EG. |
| Die Maschine ist auch in Übereinstimmung mit allen einschlägigen Bestimmungen der folgenden EG-Richtlinien: | Cette machine satisfait également à toutes les dispositions pertinentes des directives CE suivantes: | The machinery is also in compliance with all the following EC directives: | De machine is ook in overeenstemming met alle toepasselijke bepalingen van de volgende EG- richtlijnen: |
| Weiterhin wurden folgende Normen angewendet: | En outre, les normes et spécifications techniques suivantes ont été utilisées: | The following harmonised standards apply: | Volgende geharmoniseerde normen warden gehanteerd: |
| EN ISO 12100 :2010 | | | |
| Herr | Monsieur | Mr. | De heer |
| Dipl. Ing. (FH) Robert Bosch Empeler Straße 95 D- 46459 Rees | | | |
| ist bevollmächtigt die technischen Unterlagen zusammenzustellen. | est autorisé à constituer la documentation Technique conformément à l'annexe VII A. | is authorised to compile the technical file according to Annex VII A. | is gemachtigd het technische dossier samen te stellen. |
| Rees, 16.04.2014  Geschäftsführer | | | |

Kersten

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