



Original Operation Manual

Snow blade-spring-fold

-difficult execution-
Shield height 60 cm
with hydraulic swivel device, left and right skids

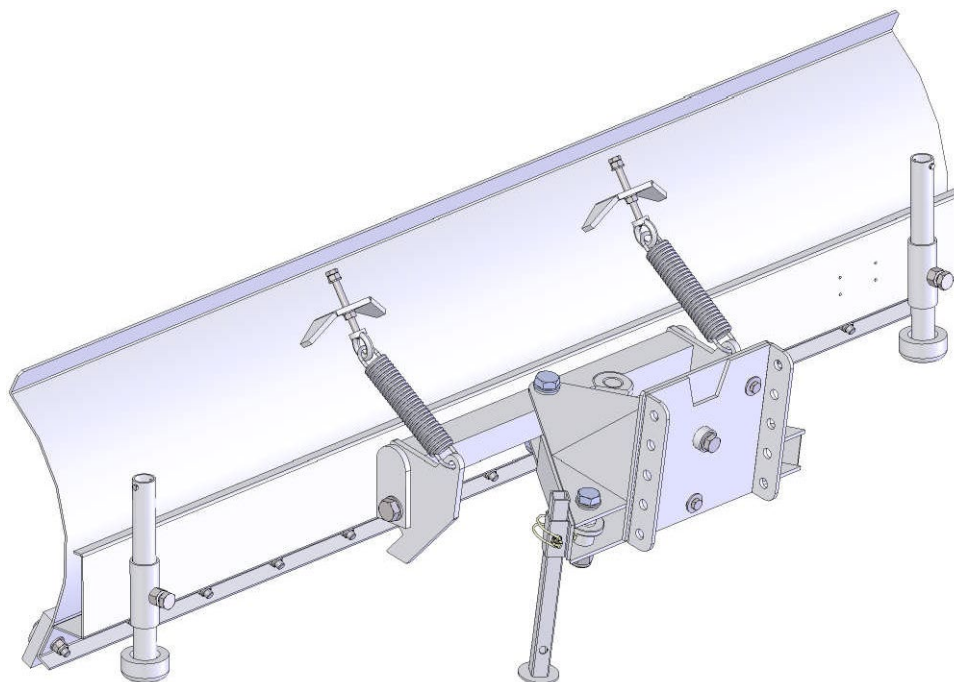
Suitable for forklifts, tractors and surface mowers

SCHN 13060 FK - ABR

SCHN 15060 FK - ABR

SCHN 18060 FK - ABR

SCHN 20060 FK - ABR



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1 Introduction

Dear Customer,

Thank you for choosing a quality product from Kersten.

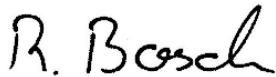
This product has been manufactured according to the latest manufacturing techniques and extensive quality assurance measures, because only when you are satisfied with your device, our goal is reached.

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 handling instructions.

Have fun with your Kersten - device wishes you



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

2 About this manual

The machine or implement 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.

Therefore, no claims can be derived from the information and illustrations in this booklet.



2.1 Before commissioning

As self-propelled implements and attachments can cause serious accident or hazards if used improperly, it is imperative that expert and authorized personnel be instructed during the 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:

- Text
- 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 attachments

The most important safety instructions in this manual cannot 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 snow blade is built for the usual or common use in winter service and is used for clearing snow on roads, paths and squares.
- Any other use is considered improper use. The manufacturer is not liable for damage resulting from this, 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 snow plough 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 recognized safety and occupational health 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 work equipment must not be operated by persons under the age of 16, not even under the supervision of an Adults, be served! 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 clothing of the user should be tight. 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!
- Take care when swivelling the snow blade - safety distance!
- There are crushing and shearing points on moving parts!
- Driving behaviour, steering and possibly braking capability as well as tilting behaviour are influenced by mounted or attached devices and load. For this reason, only implements approved by the manufacturer may be used. The working speed must be adapted to the respective conditions.
- Unauthorized conversions that endanger the operational safety of the machine are prohibited!
- Check the machine for operational safety before each use!
- Never remove or change protective devices!
- Never go under the unsecured device for repair or inspection!

3.2.2 Occupational and danger area



- The user is responsible to third parties in the work area!
- Staying in the danger area of the machine is prohibited!
- Check the near range before switching on the implement and starting up.
- Pay special attention to children and animals. Ensure sufficient visibility!
- Before starting work, foreign bodies should be removed from the surface to be worked. Pay attention to other foreign objects during work and eliminate them in good time.
- When working in enclosed areas, the safety distance to the border must be maintained so as not to damage the tool.
- When working on public roads and squares or in the immediate vicinity, warning and danger signs should be set up in order to attract the attention of third parties.

3.2.3 Before starting work



- The 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. During the work assignment it is too late!



- Familiarize yourself with the contour of the surface to be cleared before the broaching process. Holes, holes, hollows etc. should always be avoided.
- Check the area to be cleared for protruding obstacles such as paragraph boundaries, large stones, etc. and remove them. Obstacles can be caused by snow be easily covered.

3.2.4 During operation



- Never leave the control room while driving!
- During operation do not make any adjustments to the attachment - risk of accident!
- The transportation of persons and objects is prohibited!



- If, for example, the attachment has caught a foreign object and blocked it, stop the engine and clean the attachment with a suitable tool!
- Always switch off the engine when intervening or cleaning the attachment! You're welcome
- Observe the safety instructions of the self-propelled implement.
- In the event of damage to the attachment, stop the engine immediately and have the damage repaired.

3.2.5 Leaving the machine



- When leaving, secure the machine against rolling away, by using wheel chocks or if necessary, by operating the parking brake leave the control room while driving!
- Secure the device against unauthorized use!
- Never leave the appliance unattended while it is still in operation!

3.2.6 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 ensure sufficient stability.
- Secure the self-propelled work machine and attachment against rolling away (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 at the prescribed places.

3.2.7 Maintenance, cleaning and repair work



- Only carry out maintenance and cleaning work with the drive switched off and the motor stationary!
- Check settings and wear of the two runners and the Robalon-S scraper.
- Clean the snow blade and mounting frame well and remove debris.
- 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 held directly in bearings, turned parts, grease nipples, etc. After every cleaning with the high-pressure cleaner, the lubrication points must be re-greased. At Contravention extinguishes the claim for warranty!
- Check the moving parts for ease of movement and if necessary, grease them!
- After maintenance and cleaning work, be sure to replace 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 tighten if necessary.
- During maintenance, cleaning and repair work on the raised device always make sure that it is protected by suitable support elements!
- Before doing any repairs, make sure the hydraulic system is depressurized, 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.
- Welding work should only be carried out on the removed snow shield.
- Repair work such as welding, grinding, drilling, etc. must not be carried out on load-bearing and other safety-related parts such as frames, axles, etc.!

3.3 Used pictograms

Explanation of the pictograms used:



Before commissioning read and observe the operating instructions and safety instructions.



Follow the instructions in the technical manual.
Smudge!



Touch machine parts only when they have come to a complete stop.



Danger from passing parts while the engine is running -
keep safety distance!

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 as 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 for the start of the warranty period. When selling the device, please complete the sales message completely and send it back to us within 14 days. If warranty claims are asserted without us having received a sales notice, no warranty service will be provided.

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. Furthermore, the warranty expires due to improper operation, when performing 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 using bio lubricant oil or bio lubricant grease. With the use of bio lubricant, 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 decommissioned for more than 30 days should have their fuel drained completely to avoid resin residues in the carburettor, 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 repair. You should only carry out major maintenance work and repairs yourself if you have the appropriate tools and knowledge of machines and internal combustion engines.

7 Installation

7.1 Attachment of snow blade

With the tractor just approach the plow blade from behind and check whether the attachment system of the dozer blade matches that of the tractor.

To adapt the coupling triangle and the hydraulic hoses, the tractor type must be specified when ordering. Couple the hydraulic hoses of the swivel cylinder to the tractor.

Adjust the top link so that the swivel and shuttle are horizontal to get a better result and less wear.

Adjust the skids according to the desired working depth and clamp them with the screw.

8 Operation

8.1 Adjustment

Ground clearance:

Through the two skids and the Robalon-S scraper at the lower edge of the blade, the ground clearance can be adjusted.

To do this, loosen the screws. Evenly change the skids and the Robalon-S scraper and tighten all screws again.

The Robalon-S scraper blade on the snow blade must be adjusted for the first time, depending on the local conditions.

If worn, the Robalon-S scraper can be adjusted or turned. To do this, please loosen the screws of the retaining rail. The height must be adjusted equal to left and right.

Never use the snow blade without Robalon-S scraper.

Never set the skids higher than the lower edge of the snow blade.

Replace worn Robalon-S scraper in time or replace with a new one!

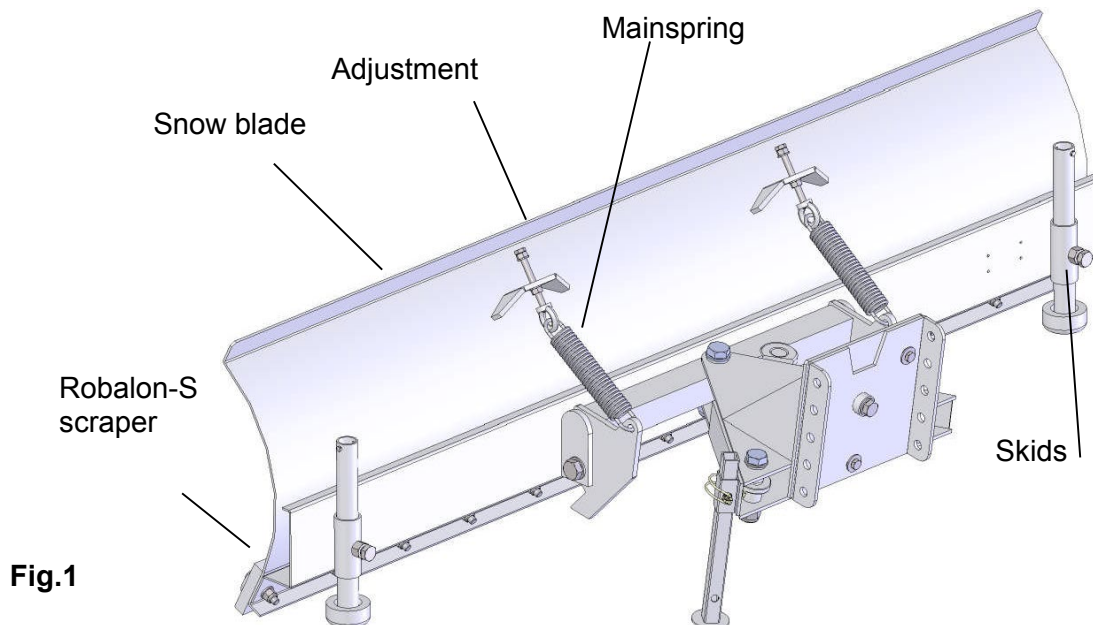


Fig.1

Tilt angle of the spring flap snow blade:

The retraction force is adjusted by the two adjusting screws, above the tension springs (see Fig. 1).

The tension springs should be equally tight on both sides.

(The tighter the spring is set, the harder the sign will turn around).

The snow plow is designed only for snow clearing, not for other materials.

To prevent collision damage, the area of work should be examined beforehand. However, the dozer blade is equipped with flap springs so that the sign can tilt forward when approaching or overloading.

As soon as the plate tilts forward, stop the tractor immediately to avoid damage!

The spring flap will not fire:

- In careless driving.
- When an object hits the top of the shield.

9 Maintenance



9.1 General

Attention!

Injuries to persons or damage to the machine can occur if ignored.
Before using the machine, check all safety-relevant parts.

9.2 Maintenance

- The machine must be subjected to regular maintenance.
- Once work has been completed, all disassembled protective devices must be properly replaced.
- Retighten all screws and nuts after the first 10 operating hours and then check them regularly and retighten if necessary.

9.3 Daily maintenance

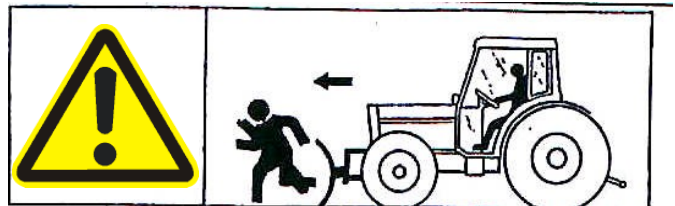
- **Clean the device after each use.**
- **Rub the snow blade with oil to prevent rusting.** This also helps the snow to slide better off the snow blades the next time you use it.
- Check the safety elements and moving parts for wear before each use.

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.
- Lubricate the grease nipple at the pivot pin (= swivel joint) regularly with grease.
- Regularly grease the grease nipple at the rear of the shuttle.
- Replace the rubber disc in good time if worn.

This sign means:

Danger: **There may not be any
People are in front of the snow
blade!**



9.5 Disorders

Faults	Possible cause	Remedy
Snow blade rattles (vibrates) unusually loud during a clearing operation.	Snow blade rattles (vibrates) unusually loud during a clearing operation.	Set the snow blade.
Bad clearance performance.	Bad clearance performance.	Reduce the clearing width.

10 Technical data

10.1 Spring flap snow clearing shield

Working width: 1300 mm, 1500 mm, 1800 mm, 2000 mm

Blade Height: 60 cm

Robalon-S scraper

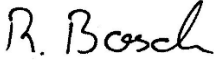
Skids

hydraulic swivel device right and left

- 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
Federklappen - Schneeschild	Valve resort de la neige bouclier	Valve spring snow shield	Klepveer sneeuw schild
SCHN 13060,15060,18060,20060 FK-ABR			
mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist.	satisfait à l'ensemble de la directive machines 2006/42/CE.	fulfils 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 relevant provisions of 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 werden 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, 15.04.2014 			
Geschäftsführer	Directeur	Managing Director	Bedrijfsleider

Kersten

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