



Original operating instructions Weed Brush Attachment

WKB-H-K 35, WKB-H-KU 70



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Manufactures by
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1 Foreword

Dear customers,

Thank you for choosing a quality product from Kersten.

This product was manufactured using the most modern manufacturing processes and extensive quality assurance measures, because our goal is reached only when you are satisfied with your device. Please read these operating instructions completely and conscientiously before using this machine or the attachment for the first time. If you do not understand any of the information in this safety data sheet or in the product-specific assembly or operating instructions, please contact your seller or the machine manufacturer.

Keep these operating instructions to hand. You can then access important information if needed and read instructions.

We wish you lots of fun with your Kersten device

A handwritten signature in black ink that reads "R. Bosch". The signature is written in a cursive style and is enclosed within a thin black rectangular border.

R. Bosch
(managing director)

2 About this Instruction manual

2.1 Before commissioning



Because of self-propelled implements and attachments with improper application and the dangers that can emanate from this, instruction from competent and authorised persons absolutely are necessary when using the device for the first time. You'll do best with its basic features when familiarising yourself with handling by choosing a clear and level terrain for your first ride.

- **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.

- **Please note the safety instructions on the following pages!**
- **Please read the operating instructions before commissioning!**
- **Also pass on all safety instructions to other users!**

2.2 Safety Instructions for the attachments

Enumerations will be marked by dots.

Example:

- Text
- Text

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

Example:

1. Text
2. Text


The machine or attachment is subject to technical progress. All information, illustrations and technical information correspond to the latest status at the time of the publication. Changes in terms of technical progress reserved to the manufacturer at any time.

3. Safety instructions for the attachments

The most important safety instructions in this manual may 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 along by the one who does use and maintain the machine.


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

3.1 Intended use


	<ul style="list-style-type: none"> • The attachment is designed for standard use in Arial Care for weed removal. • Any use that goes beyond this is considered to be improper. The manufacturer is not liable for any resulting damage; the risk is borne solely by the operator. • Intended use also includes compliance with the operating, maintenance and repair conditions specified by the manufacturer. • The attachment may only be used, serviced and repaired by persons who are familiar with this and have been informed of the dangers. • The relevant accident prevention regulations as well as the other generally accepted safety and occupational health rules must be observed. • Unauthorised modifications to the machine lead to the manufacturer's exclusion of liability for the resulting damage.
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3.2 General safety and accident prevention rules


3.2.1 Basic rules

	<ul style="list-style-type: none"> • In addition to the information in these operating instructions, also observe the generally applicable safety and accident prevention regulations! • The working device must not be used by persons under the age of 16, not even under the supervision of an adult! Children and young people should be instructed not to play with. • Only trained personnel or persons are allowed to use this machine! • When using public transport routes, please note the relevant regulations! • The user's clothing should be tight-fitting. Avoid loose 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 the safe operation; this is for your safety! • Be careful with rotating tools - keep a safe distance! • Be careful with trailing tools - Before working on these, wait until they have come to a complete standstill! • There are crushing and shearing points on driven parts! • Driving behaviour, steering and, if necessary, braking ability as well as tipping behaviour are controlled by built-in or attached devices and loading affected. For this reason, only the attachments approved by the manufacturer may be used. The working speed must be adapted to the respective circumstances. • Unauthorised modifications that endanger the operational safety of the machine are forbidden! • 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!
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3.2.2 Work and danger area

	<ul style="list-style-type: none"> • 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 attachment and driving off, check the immediate area. Pay particular attention to children and animals. Make sure you have sufficient visibility! • Before starting work, foreign objects must be removed from the area to be worked on. When working, watch out for other foreign objects and remove them in good time. • When working in enclosed areas, the safety distance to the border must be maintained in order to not to damage the machine or brushes. • When working in the immediate vicinity of public roads and paths, these should, if possible, not be approached across but as lengthwise as possible, as this minimises the risk of injury to third parties from objects flying around. • When working on public streets and squares or in the immediate vicinity, information and danger signs must be set up to draw the attention of third parties.
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3.2.3 Before starting work

	<ul style="list-style-type: none"> • Before starting work, please familiarise yourself with all facilities and controls and familiarise also with their function and make sure that all protective devices are properly installed and in the protective position. During the work assignment it is too late for that!
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3.2.4 During operation

	<ul style="list-style-type: none"> • Never leave the operating area while driving! • Do not leave the operating station until the brushes of the attachment come to a standstill! • Do not make any adjustments to the attachment during operation - risk of accident! • The transport of persons and objects is prohibited! • For example, if the attachment has caught a foreign object and is blocking, the engine must be switched off and the attachment cleaned with a suitable tool! Always switch off the engine and remove the spark plug connector for interventions or cleaning the attachment! Please note the safety instructions from self-propelled implement. • In the event of damage to the self-propelled implement or attachment, stop the engine immediately • and have the damage repaired. • In the event of damage to the self-propelled implement or attachment, stop the engine immediately and have the damage repaired.
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3.2.5 Leaving the machine

	<ul style="list-style-type: none"> • When leaving the machine, secure it against rolling away, by using wheel chocks or if necessary by operating the parking brake. • Secure the device against unauthorised use! • Never leave the appliance unattended while it is still in operation!
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3.2.6 Screw connections and tires

	<ul style="list-style-type: none"> • When working on the wheels, make sure that the device is parked safely and secured against rolling away! • Regularly check nuts and bolts for tightness and retighten if necessary. • Repair work on the tires may only be carried out by specialists and with the appropriate assembly tools! • If the tire pressure is too high there is a risk of explosion! • Check the air pressure regularly.
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3.2.7 Coupling and uncoupling attachments

	<ul style="list-style-type: none"> ● Only connect and disconnect attachments when the engine is off and the PTO is 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 attachment against rolling away (parking brake, wheel chocks). ● There is a risk of injury (crushing) when coupling attachments. Special caution is necessary. ● Couple attachments according to regulations and fasten them at the specified points.
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3.2.8 Maintenance, cleaning and repair work

	<ul style="list-style-type: none"> ● Maintenance and cleaning work only when the drive is switched off and the motor stationary! ● If protective devices and work equipment are subject to wear and tear, then these should be checked regularly and replaced if necessary. ● Only use original spare parts from the manufacturer, as these correspond to the technical requirements and minimise the risk of accidents! ● Cleaning work with the high-pressure cleaner should be carried out in such a way that the Water is held not directly on bearings, turned parts, grease nipples, shaft seals, wheel hubs etc. After each cleaning with the high-pressure cleaner, the lubrication points must be re-greased. Otherwise the guarantee will be void! ● Check the moving parts for ease of movement and if necessary grease them! ● After maintenance and cleaning work, be sure to remove the protective devices 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. ● When carrying out maintenance, cleaning and repair work on the lifted device, always make sure that it is protected by suitable support elements! ● Before carrying out any repairs, make sure that the hydraulic system is pressureless, because fluids under pressure can penetrate the skin and cause serious injuries! Therefore, seek medical attention immediately - risk of infection! ● Repairs may only be carried out by qualified personnel. ● Check the hydraulic hose lines for damage and aging at regular intervals and replace if necessary. ● Disconnect the battery when performing welding work on the towing vehicle or on the attached device. ● Repairs such as welding, grinding, drilling, etc. must not be carried out on supporting and other safety-related parts such as frames, axles, etc.!
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3.3 Used pictograms

Explanation of the pictograms used:



Before commissioning read and observe the operating instructions and safety instructions



Never open or remove protective devices while the engine is running!



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

Devices must comply with applicable local, city, or state regulations be disposed of in the country.

Depending on the material, dispose of the parts in residual waste, hazardous waste or recycling. The company Kersten Areal Maschinen GmbH does not accept any 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 fill in the sales message completely and send them back to us within 14 days. If warranty claims are asserted without us having a sales message, no warranty service will be provided.

A sales message is attached to the device, which, among other things, states the time for the start determined by the warranty period. If you are selling the device, please fill out the sales message completely and send them back to us within 14 days. If warranty claims are asserted without us having received a sales message, there will be no warranty processing.

Guarantee claims should be made immediately, but no later than six weeks after the occurrence of the damage which should be submitted with details of the purchase data, otherwise no Areal Maschinen GmbH will provide the warranty. Wear parts are excluded from the guarantee. Furthermore the guarantee expires in the event of improper operation, in the event of no or incorrect operation maintenance work, the use of impermissible operating resources and the use of non original spare parts.

6. Recommendations

6.1 Lubricants

For "open" lubricating points or nipples, we recommend bio-lubricating oil or bio-lubricating grease to use. With the use of bio-lubricants you act ecologically correct, protect the environment, and promote the health of people, animals and plants.

6.2 Maintenance and repair

Your dealer has trained mechanics who can provide proper maintenance and repairs. You should only carry out major maintenance work and repairs

You should only carry out major maintenance work and repairs if you have the appropriate tools and knowledge of machines and internal combustion engines.

7. Montage

7.1 Installation of the Weedbrush



Danger!

- Severe injuries to the operator or third parties may occur.
 - Before fitting or disassembling the Weedbrush, switch off the prime mover and remove the spark plug connector.
 - The receptacle and the receiving tube must be clean and freshly greased.
1. Pull up the locking pin (see Fig.1 and 2).
 2. Insert the receiving tube on the intermediate frame of the Weedbrush into the receiving socket on the basic device.
 3. Then lock the locking pin.
 4. Now insert the two hydraulic lines (see Fig.3).
 5. To dismantle, follow the steps in reverse order.

K 2000, K 2100

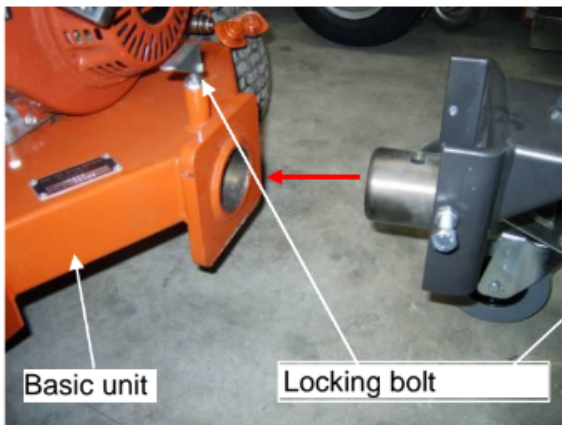


Fig. 1

K820 Pro, K 1500

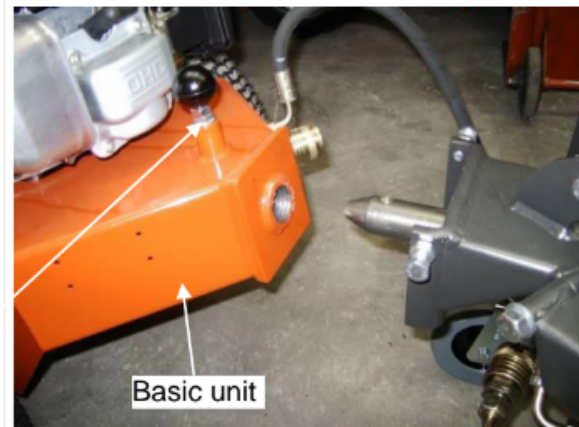


Fig. 2



Fig. 3

8. Operation

8.1 Operating instructions - Weedbrush

The best performance of the Weedbrush is achieved when the brushes in area "A" (see Fig.4) touch the ground. Since the vertical inclination of the brush plate also contributes to the work output, the following relationship applies:

The more the brush holder is lowered at an angle (vertical inclination), the sooner and more aggressively the brushes are used and the wear increases.

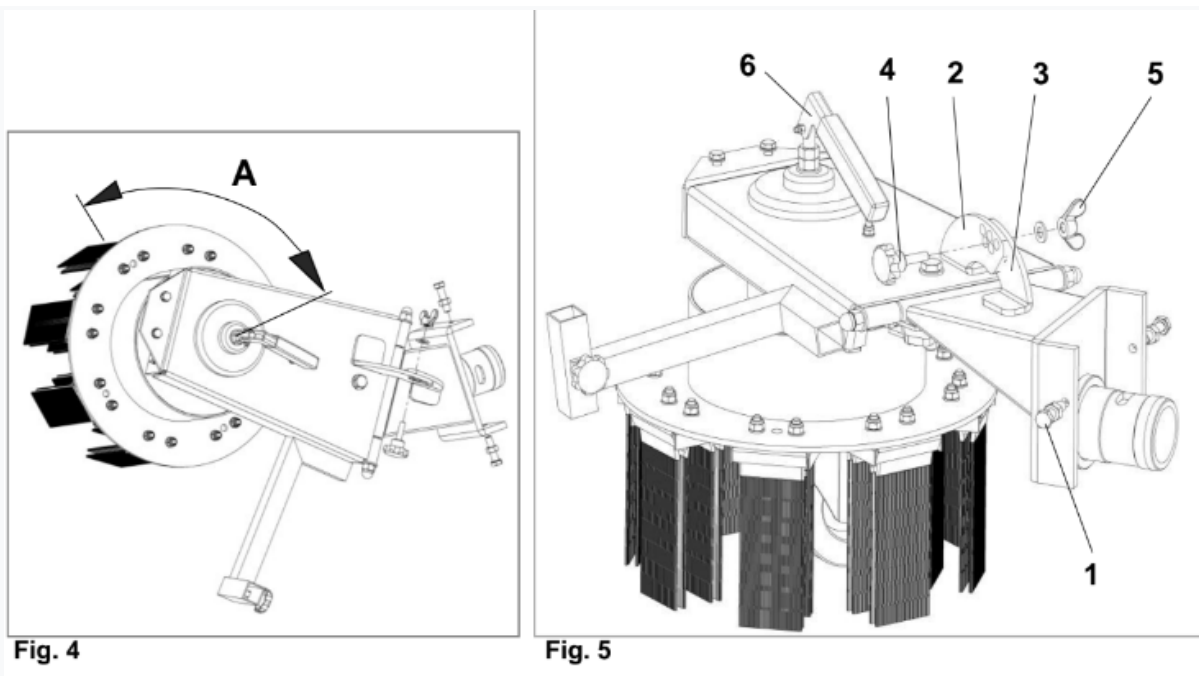
Setting the work area:

In order to get to the working area "A" first, the horizontal inclination of the brush plate must be adjusted.

The horizontal inclination of the brush plate is adjusted using the two screws (Fig.5; Item 1) on the left and right of the drive unit mount. For that, loosen the lock nuts, adjust the inclination with the help of the screws and then tighten lock nuts.

The vertical two wheeled tractor of the brush plate is changed by moving the stem housing (Fig.5; Pos.2) to accommodate (Fig.5; Item 3) at an angle over predefined holes. Using a star grip (Fig.5; Item 4) and a thumbscrew (Fig.5; Item 5) the angle adjustment is locked.

The height adjustment of the brush plate is made by a support wheel, which can be changed via the lever (Fig.5, Pos.6). Changes in length of the brushes due to wear are hereby compensated.



8.2 Turning on the Weedbrush

The Weedbrush is switched on by operating the lever for the hydraulic power take-off (PTO).

9. Maintenance

9.1 General



Personal injury or damage to the machine can occur.
Before each use of the machine, check all safety-relevant parts and the hydraulic connections.

9.2 Maintenance

- The weed brush must undergo regular maintenance.
- After carrying out maintenance work, all disassembled protection devices must be properly replaced.
- Check all bolt and bolt connections after the first 5 operating hours.
- 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 hours, retighten if necessary!



Only tightening has no success !!!
Please first loosen a leaking hydraulic screw connection, then move the hose or screw connection. Now the screw connection can be tightened again.

9.3 Daily test

- Check the brush elements for tightness.
- Check the safety elements and moving parts for wear before each use.
- Check the hydraulic connections and lines.
- Perform a test run before each use.
- Clean the device after each use.

9.4 Maintenance after 50 hours of working hours or longer idle time

- 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 hydraulic connections and hoses for leaks and damage, replace if necessary. Also consider the legal regulations for the maximum duration of use.
- Grease the mounting of the attachment regularly.

9.5 Storage

If the machine is not used for a long time, the following measures are recommended:

1. Carry out cleaning
2. Check the function of all parts
3. Check all screws and bolts for tightness and tighten if necessary
4. Replace worn or damaged components, only use original Kersten spare parts
5. subordinate the machine
 - To prevent corrosion, protect the machine from weathering. Do not place the machine in damp rooms, stables or artificial fertiliser storage.
6. Cover the machine with a cloth or similar

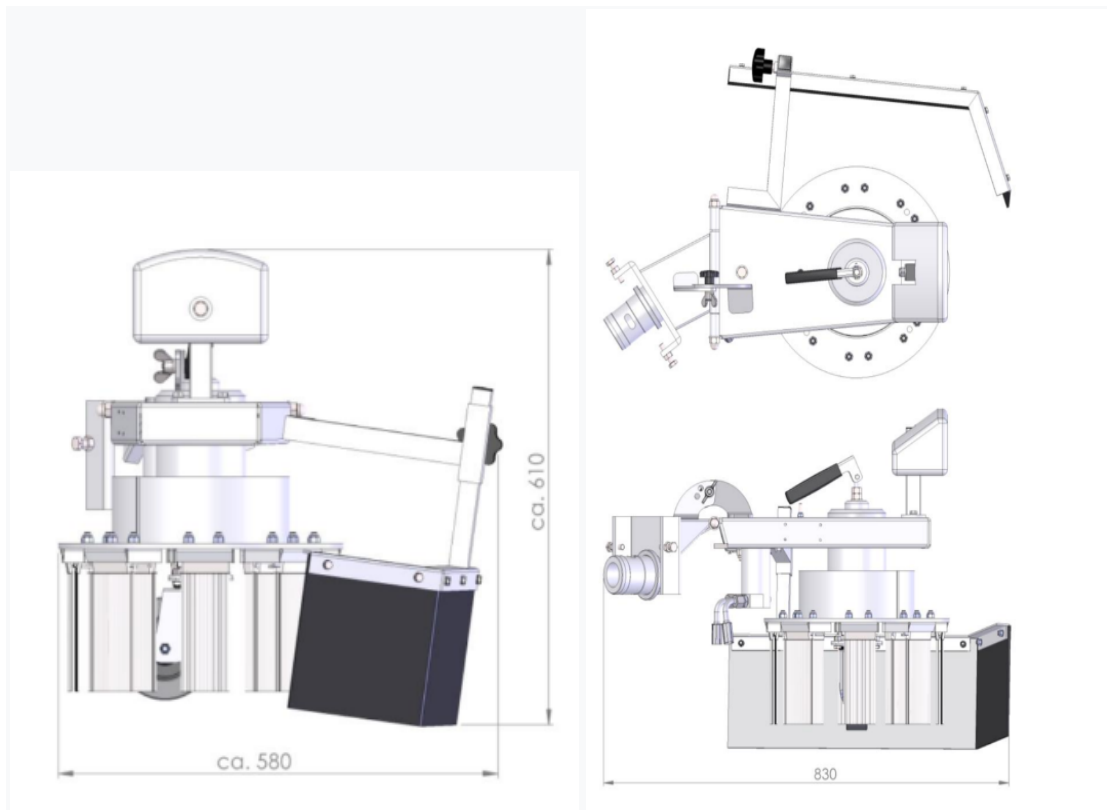
10 Technical data

10.1 Weedbrush attachment


Technical data	
Drive	hydraulisch
Amount of oil	minute 10 l / min
Number of brushes	8 pieces
Brush plate diameter	40 cm
Splash guard	height adjustable
Weight attachment	42 kg

Reserve technical change!

10.2 Measurement sheet, attachment



11. Fault cause and remedy

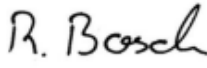
	<p>This chapter describes in more detail the most important faults that can occur during operation on the artificial turf care brush. Faults which require major intervention must always be rectified by your specialist workshop.</p>
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Observe safety instructions!

Malfunction:	Possible causes:	Remedy:
Hydraulic motor does not turn	Internal combustion engine is not running.	Start combustion engine.
	Hydraulic power take-off not switched on.	Switch on hydraulic power take-off on the single-axle vehicle.
	Hydraulic hoses not connected.	Connect hydraulic hoses.
	Hydraulic connector not engaged.	Check hydraulic connector, insert if necessary until it clicks into place.
	No hydraulic fluid in the hydraulic tank.	Fill hydraulic fluid in the hydraulic tank of the monobloc.
Brushes do not come on tours	Speed on the single-axle set too low.	Increase the speed of the single axle.
	Hydraulic fluid level too low.	Top up hydraulic fluid in the hydraulic tank of the single-axle.
	Leakage on the hydraulic hoses.	Replace hydraulic hoses.
	Leakage at the hydraulic connectors.	Release hydraulic connector and insert again until it clicks into place. Should leakage continue; Check hydraulic connector and replace if necessary.
	Leakage at the hydraulic screw connection.	Slightly loosen the hydraulic screw connection, move the hose slightly and tighten the hydraulic screw connection again.
	Contact pressure on the work surface too large.	Align the machine higher so that the brushes are relieved.
Slope adjustment stiff	Threaded rod and bending mechanism rusted.	Release threaded rod and remove. Remove dirt, grease and reassemble. Clean the hinge.
Height adjustment stiff	Threaded spindle dirty.	Release lever, unscrew jockey wheel. Clean spindle and jockey wheel and grease.
Recording does not engage.	Pickup dirty, adjusting screws screwed in too far.	Remove dirt from the receiving socket and the pick-up tube and then grease them fresh. Re-adjust the adjusting screws (see chapter 8.1, Fig. 5, item 1).

12. EG - Konformitätserklärung

- 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
Wildkrautbürste-hydraulisch	Brosse désherbante – hydraulique	Weed brush - hydraulic	Hydraulische het kruidborstel van het spel -
WKB-H-K 35, WKB-H-KU 70			
mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist.	satisfait à l'ensemble de la directive machines 2006/42/CE.	fulfies 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 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, 15.04.2014 			
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