

Hedge trimmer

HS130ER

User Manual



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Although Becx Machines B.V. has taken the greatest care to make sure that individual parts have been described correctly and in full where necessary, it accepts no liability for damage as a result of inaccuracies or incompleteness of this manual.

This manual is a translation of the original Dutch version.

Preface

The hedge trimmers are specially designed and exclusively intended to trim hedges safely and efficiently and leave a professional visual result. The hedge trimmer is constructed in such a way that it continues to function well even under the toughest conditions and has a long service life.

The HS130ER as described in this manual is an all-electric hedge trimmer, which is built with components making this trimmer specific to use on an Alltrec 8015F.

This manual is intended for users and maintenance personnel and has been compiled with care. However, if it is not possible to find a clear answer to your question, please contact your supplier's technical service department.



- Read this manual carefully before you start to use the hedge trimmer. Always follow the safety instructions set out in chapter 2.
- Only use the hedge trimmer for its intended purpose.
- One copy of this manual must be kept with hedge trimmer and must be available to the user. All important servicing sessions and any comments must be recorded and retained by the servicing company.
- The user is responsible for selecting a suitable tool carrier for the hedge trimmer and for ensuring that the hedge trimmer is properly attached and connected.

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Certificate of conformity (Ila) (copy)

We:

Becx Machines B.V.
De Sonman 35
5066 GJ Moergestel
The Netherlands

declare entirely under our sole responsibility, that this product:

Description: Becx Hedge Trimmer.

Type: HS130ER

From serialnumber: 130-670-01

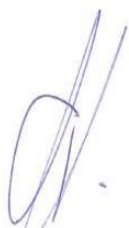
to which this declaration applies, complies with the provisions of the Directives:

Machinery Directive 2006/42/EG
EMC-directive 2014/30/EC

Complies with the following standards:

NEN-EN-12100 Safety of machinery. Basic definitions, general design principles.
NEN-EN ISO 14982 Agricultural and forestry machinery - Electromagnetic compatibility -
test methods and acceptance criteria.
IEC 60204-1:2016 Safety of machinery - Electrical equipment of machines -
Part 1: General requirements

Director; Erwin Hommen



Moergestel, The Netherlands

Date: 25th June 2025

List of symbols

For all operations and situations, where operator and/or technician safety is involved and care must be taken, the following symbols have been used in this user manual:

	Warning!
---	-----------------

	Explanation.
--	---------------------

1. Technical data

Description	Value	Units
General		
Cutting capacity	25	mm
Needed power	9,6	kW
Dimensions and weights (figure 1)		
Width	1327	mm
Length	1131	mm
Height	406	m
Dead weight	160	kg
Attachment information (figure 9)		
Standard connection tube	80*80	mm
Available mounting width	290	mm
Vertical force on attachment point (Fo)	1600	N
Tipping moment (Mo)	814	Nm
Connection data (figure 7)		
Voltage	80	V
Maximum current	40	A
Maximum motorspeed	2.500	min ⁻¹
Connection	Alltec Multiconnector	
Maintenance		
Lubrication Grease	NLGI 2	

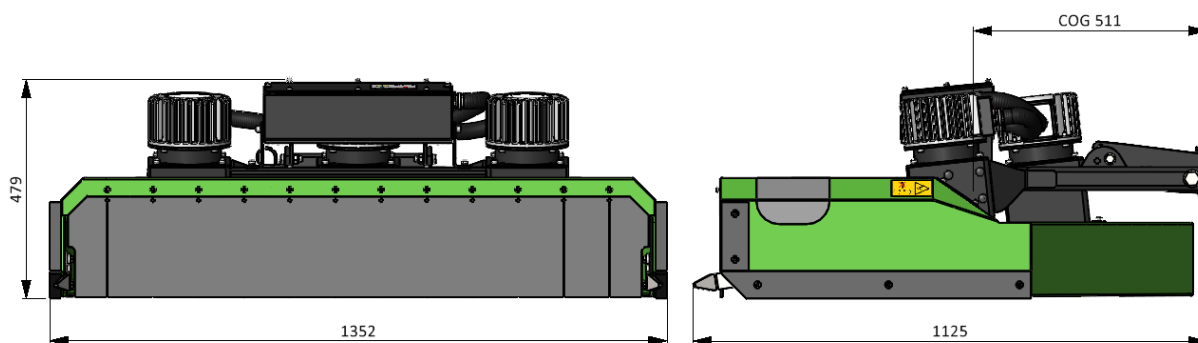


Figure 1: Dimensions and location center of gravity (COG).

2. Safety

2.1 General

	• No modifications may be made to the hedge trimmer. • Only cutting blades that comply with the supplier's specifications may be fitted. • The blades are sharp! There is a risk of injury when handling the blades. Wear cut-resistant gloves. • It is the user's responsibility to ensure that the correct tool carrier and support arm are used. The following points are particularly important here: • The maximum pressure and oil flow (speed) must not be exceeded. Exceeding this may result in damage to the equipment and injury to bystanders. • The support arm and tool carrier must have sufficient strength and stability to safely absorb the forces and moments caused by the hedge trimmer under all conditions.
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2.2 During operation

	• Consult the manual of the tool carrier for the noise levels generated. As this will be considerably higher than that of the hedge trimmer, the noise level of the tool carrier is decisive in determining whether hearing protection is required. • The system may only be used for the intended work. • The hedge trimmer is not suitable for groundlevel-cutting work. Given the construction of the hedge trimmer, the risk of the blades coming into contact with the ground and/or obstacles is too high. • If persons or animals are present or approach the safety zone, stop immediately and switch off the hedge trimmer. • If excessively heavy traffic from passers-by restricts the progress of the work too much, one can consider cordoning off the work area. • If the hedge trimmer starts making a different noise and/or vibrating, stop immediately and switch off the hedge trimmer. Only when the cause is found and resolved should work be resumed.
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- When **not working**, the hedge trimmer should always be switched off. So also at times when driving to or from the worksite. The risk of coming into contact with bystanders is greater at these times than during trimming. In these situations, the hedge is not present as a shield and the direction of driving is more difficult for bystanders and passers-by to foresee. If no hedge is present, debris can travel a greater distance unhindered.
- Inspection and maintenance work should be carried out at set out intervals.
- During inspection, maintenance or cleaning, the hedge trimmer must be switched off.
- Local working and safety regulations must always be followed.

2.3 Operating personnel



- Operating personnel must be over 18.
- Only persons who have received permission from the owner are allowed to operate the system.
- Persons must only carry out jobs for which they are trained. This applies to both maintenance work and normal operations.
- Personnel who operate equipment must be familiar with all possible situations that could arise.
- The owner or person in charge must be told if personnel operating machinery identify faults or hazards or do not agree with safety measures.

2.4 Warning symbols

	Read manual before operation!
	Cutting hazard! You can't see the spinning blades, but they can cause very serious injury.
2500 min⁻¹ MAX REVS MAX TOERENTAL MAX DREHZAHL	Maximum speed The machine is set at 2.500 rpm. Running at higher speeds only increases wear, energy consumption and risk of damage, not the capacity of the machine.
Warning: Hazourdou voltage enclosed Voltage or current hazard sufficient to cause shock Disconnect and lock out power before servicing Only authorized personnel may service this equipment    102735	<u>CAUTION! Machine parts live.</u> Beware of short circuits. Read user manual. Do not direct high-pressure water jet at electrical components.
	Hearing protection! Wear hearing protection if the tool carrier is not equipped with a cab.

3. Machine description

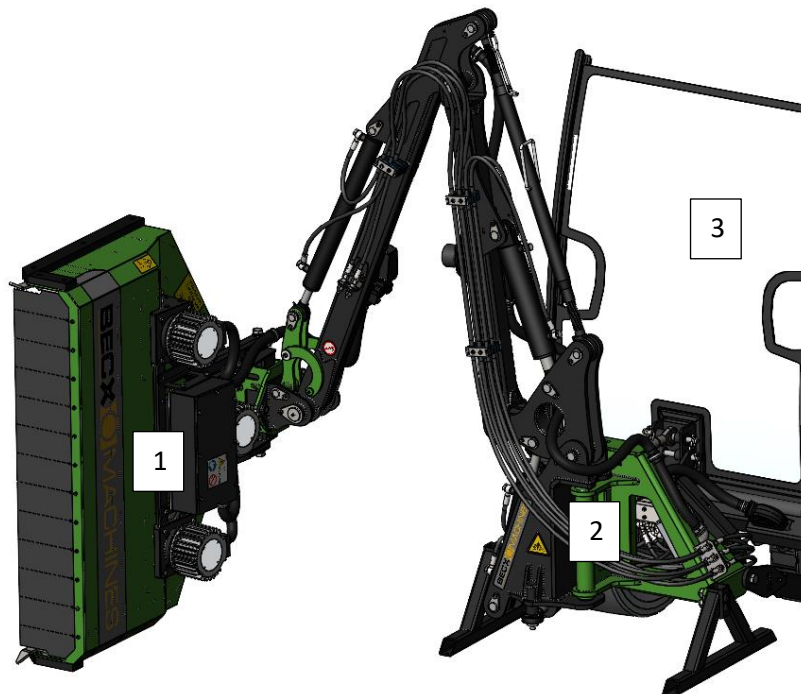


Figure 2: Overview.

Position	Element	Description
1	Hedge trimmer	The hedge trimmer can be used horizontally, vertically and at all intermediate angles. Specific installation and maintenance requirements of the hedge trimmer are described in this manual.
2	MA270 Lifting arm + Connector	Using the MA270 support arm, the HS130ER hedge trimmer can be adjusted from the Alltrec 8015F to the desired position in relation to the hedge to be trimmed. See the MA270 manual for specific mounting and maintenance instructions for this support arm. The model-specific connector forms the mechanical connection between the MA270 and the Alltrec 8015F. See the BEC-ABD-ALLTREC coupling part manual for specific mounting and maintenance instructions for this coupling part.
3	Implement carrier	The Alltrec 8015F implement carrier is not part of the delivery. Please refer to the Alltrec 8015F manual for specific mounting, operating and maintenance instructions.

3.1 Mechanische componenten

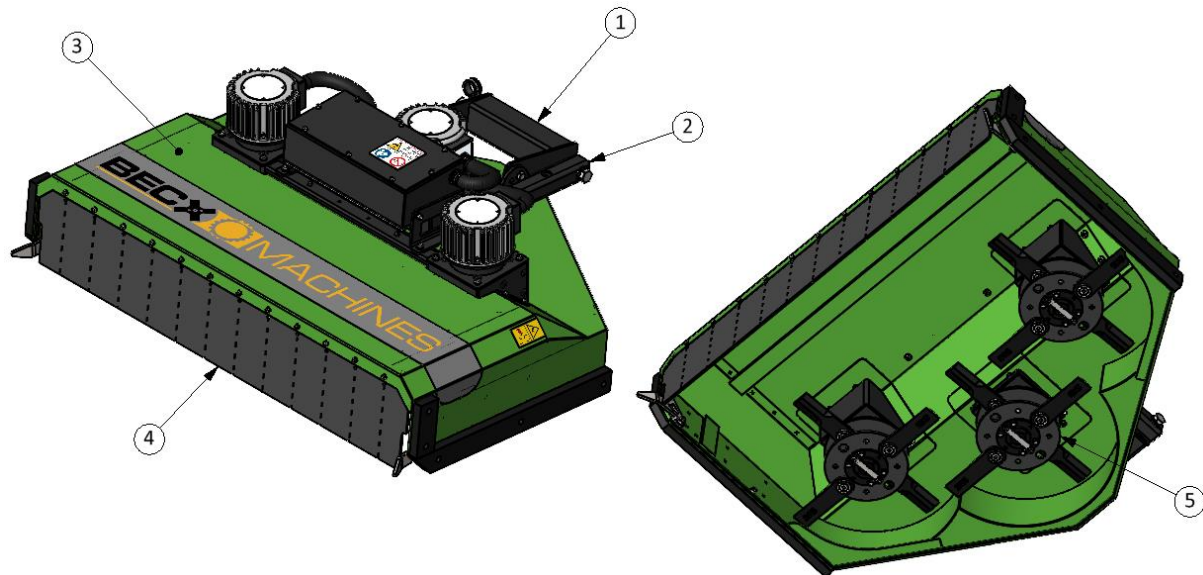


Figure 3: Overview of mechanical components.

Position	Element	Description
1	Attachment tube	The hedge trimmer is to be secured to the arm of the tool carrier by means of the attachment tube.
2	Angle adjustment	After the hedge trimmer is attached to the arm, the correct angle can be set (see section 4.1).
3	Protective cover	The guard is made of high-strength steel and prevents cut material from being ejected out of the machine.
4	Inlet	During cutting, the branches to be trimmed reach the blade heads via the inlet side shielded with high quality rubber.
5	Cutting head	Each of the 3 cutting heads is equipped with 4 blades. The 2 blades of the lower disc cut the branches of the hedge. The 2 blades of the upper disc shred the cut branches into small pieces.

3.2 Electrical components

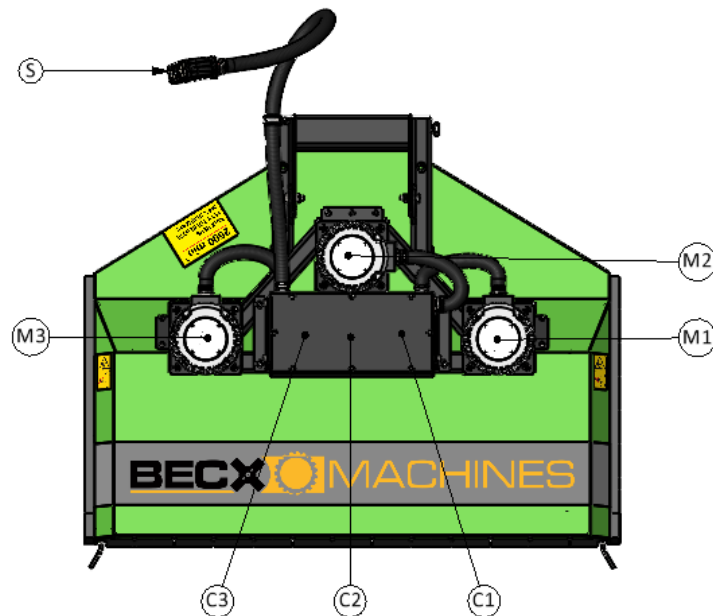


Figure 4: Overview of Electrical components.

Position	Element	Description
M	Electric motor	The 3-phase 80V DC motors drive the blade heads directly.
C	Inverter box	Each electric motor has its own inverter which is mounted on an heatsink in the inverter box.
S	Multi-connector	The power supply and control signals are provided via the multi-connector.

3.3 Direction of rotation

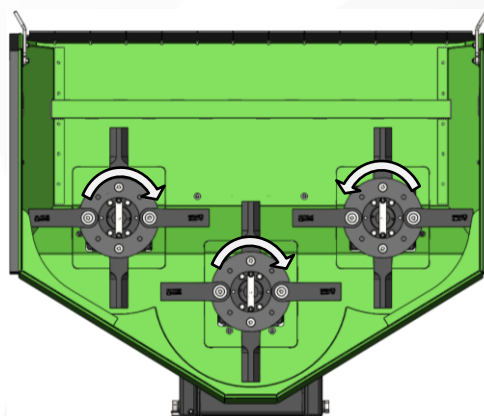


Figure 5: Direction of rotation of the cutting heads.

3.4 Circuit diagram

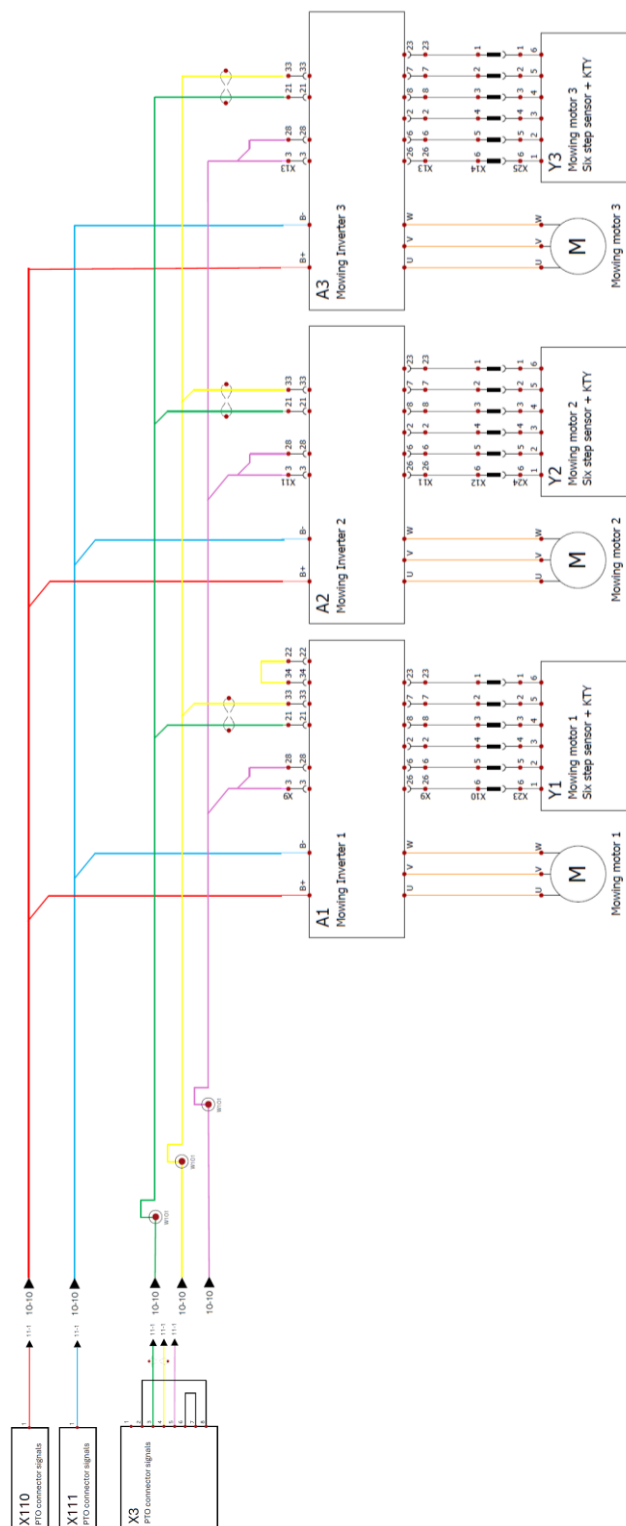


Figure 6: Circuit diagram.

4. Operation

4.1 Assembly and adjustment of the hedge trimmer

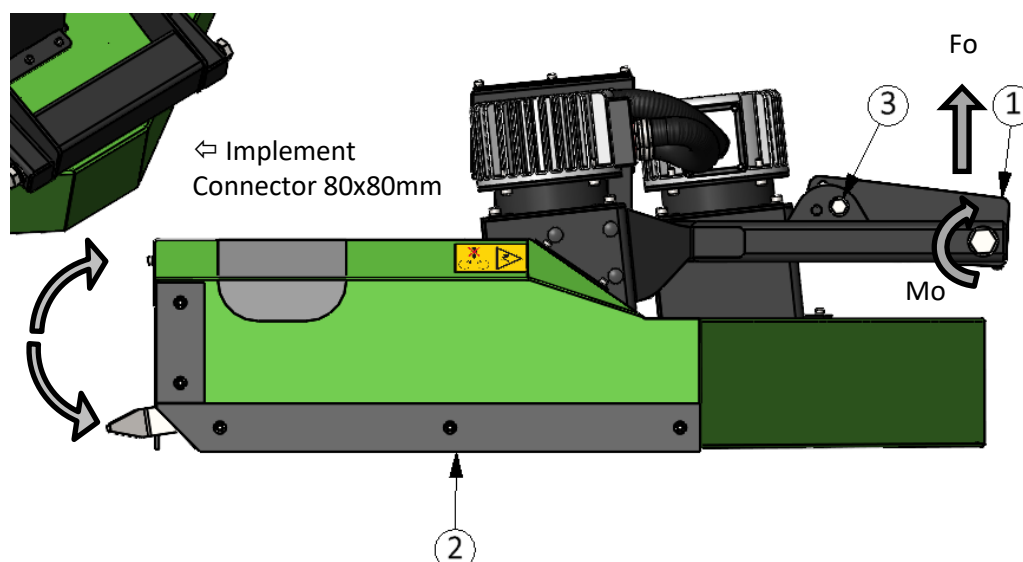


Figure 7: Horizontal adjustment of the hedge trimmer.

Step	What to do	Description
1	Connect the hedge trimmer to the support arm.	- Place the centre of the clamping plates of the support arm attachment on the centre of the attachment tube. Pay attention to the correct orientation of the hedge trimmer when doing this. - Fit 4x Hex bolt M12x130 with M12 Flanged lock nut and tighten in 2 stages to 120 Nm.
2	Adjust the hedge trimmer horizontally	- Depending on the deflection of the support arm, the edges (see figure 7 position 2) of the hedge trimmer may not be positioned completely horizontal. - Correct any inclination with the angle adjustment (see figure 7 position 3) so that the hedge trimmer ends up as horizontally when lifted as possible. - The unit performs best when the cover of the hedge trimmer is parallel to the area to be pruned.
3	Plug in the Multiconnector	Insert the multi-connector into the connector box on the side of the support arm. This can only be done in 1 way. Flip the latch when the plug is properly inserted.
4	Switching on implement function	Before switching on the hedge cutter, make sure that nobody is near the machine and that the cutting heads can rotate freely.

4.2 Performing trimming operations

Working safely is of paramount importance. While performing trimming work, bystanders and animals in the vicinity of the work should be kept at a sufficient distance. This is possible by placing a fence or other warning just outside the safety zone.

The size of this safety zone depends on the cutting height and position of the hedge trimmer.

The tables below show the recommended safety zones.

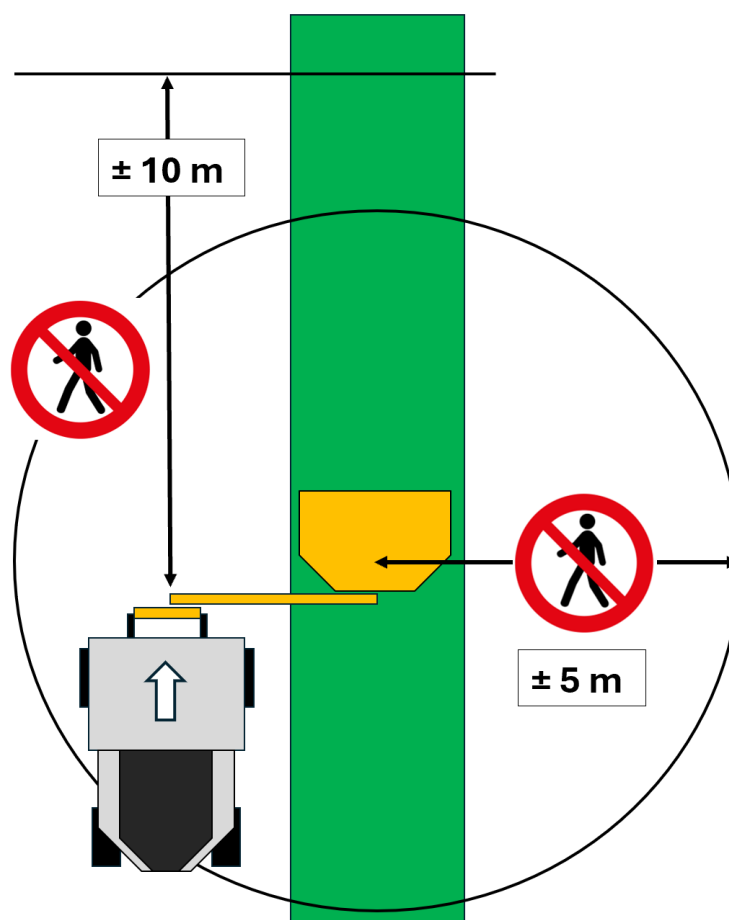


Figure 8: Overview of safety zone up to 1m trimming height in horizontal position.

Trimming height	Safety radius	Frontal safety distance
0 - 1 m	5 m	10 m
1,1 - 1,2 m	6 m	11 m
1,2 - 1,3 m	7 m	12 m
1,3 - 1,4 m	8 m	13 m
1,4 - 1,5 m	9 m	14 m
> 1,5 m	10 m	15 m

Tabel 1: Trimming height – safety distance horizontal position.

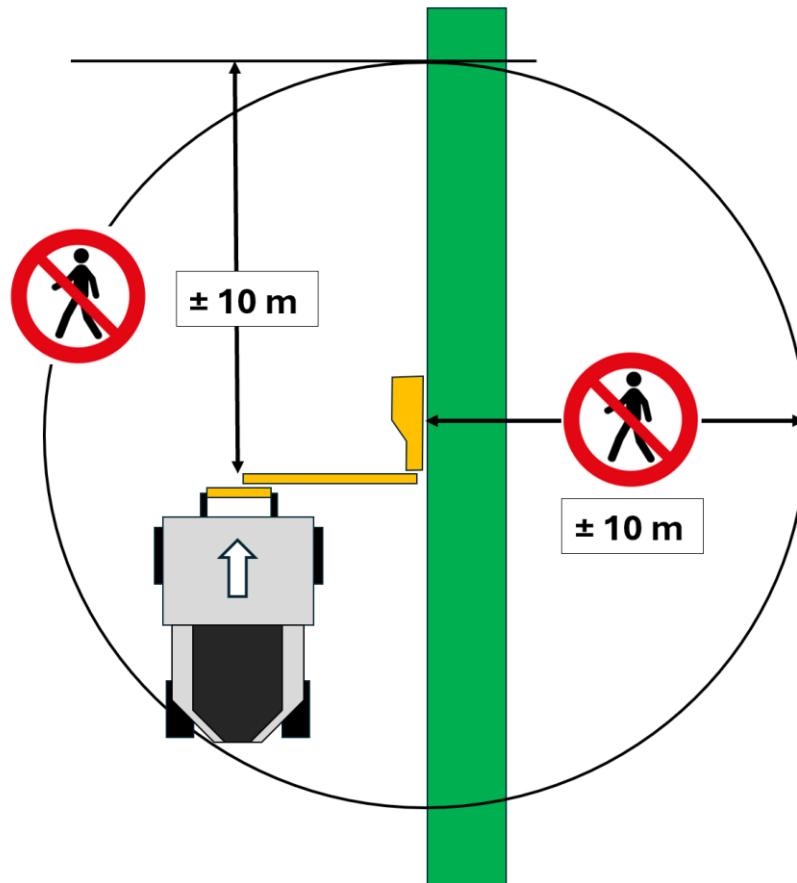


Figure 9: Overview of safety zone up to 1m trimming height in vertical position.

Trimming height	Safety radius	Frontal safety distance
0 - 1 m	10 m	10 m
1,1 - 1,2 m	11 m	11 m
1,2 - 1,3 m	12 m	12 m
1,3 - 1,4 m	13 m	13 m
1,4 - 1,5 m	14 m	14 m
> 1,5 m	15 m	15 m

Tabel 2: Trimming height – safety distance vertical position.

Step	What to do	Description	Step
1	Check the machine. 	• Check the blades: - The blades must not be over-sharpened and must be balanced (see 5.4). - Check the blades for damage and cracking before starting work and immediately after the blades have come into contact with hard object. • Visually check, at least daily, that the locking plates and locking nuts on the blade head have not loosened. • Check the speed of the machine. • Check that the machine runs vibration-free. • If a defect is found, it must be remedied before the hedge trimmer is put back into operation.	Continuing to work with loose locknuts, cracked blades or with a bad or too fast running installation can result in damage to the installation and/or injury to the operator or bystanders.
2	Check the work site. 	• Are there any obstacles present that could be damaged by the hedge trimmer or cause damage to the hedge trimmer. • Are there any loose elements such as litter or iron wire present? • Be sure there are no persons or animals within the safety zone. • If the work has to be stopped frequently due to many passers-by, cordon off the work area. • The work area should be cordoned off if there are high non-transparent hedges where there is no overview to the back of the hedge. • It should be prevented at all times that people can find themselves on the other side of a high opaque hedge.	

Step	What to do	Description	Step
3	Drive to work site. 	- Always switch off the hedge trimmer at times when no trimming is being done. - A bystander is more likely to enter the danger zone unnoticed than during the trimming process itself. - If no hedge is present, ejected particles can travel a greater distance unhindered.	
4	Positioning the trimmer. 	Using the lifting arm, the hedge trimmer can be adjusted to the correct height and angle. For detailed instructions, see the manual of lifting arm and tool carrier.	
5	Switching on the trimmer. 	For detailed instructions, see the manual of lifting arm and tool carrier.	
6	Trimming a hedge	Adjust the driving speed to the required trimming result. Excessive driving speed results in poor visual trimming result .	
7	Stop in the following situations !!! 	In the following situation, stop pruning immediately and stop the hedge trimmer: - If the blades have collided with materials other than what the hedge trimmer is intended for. - The hedge trimmer makes a different noise, has started to vibrate or shows abnormal behaviour. - Persons or animals have entered or are threatening to enter the 5 - 10 m safety zone around the hedge trimmer.	
8	Switching off the hedge trimmer.	After a section of hedge is finished, the hedge trimmer must be switched off. For detailed instructions, see the manual of lifting arm and tool carrier.	

5. Maintenance

	• When replacing or repairing parts, only components supplied or approved by the manufacturer should be used. • If work is carried out on the installation, always disconnect the power supply from the hedge trimmer. This can be done by disconnecting the hydraulic hoses. • Only persons with proven knowledge of mechanical and hydraulic installations through training and/or experience may carry out maintenance work.
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5.1 Daily maintenance

Step	What to do	Description
1	Greasing the cutting heads	• Pump grease into the grease nipples of the cutting heads (see Figure 12). See Chapter 1 for grease specifications. Grease preferably at the end of the working day, before the machine goes into storage.
2	Cleaning	• Clean the machine at the end of the working day, before the machine goes into storage. • If a high-pressure sprayer is used for this purpose, do not spray directly on the electrical components and shaft seals.

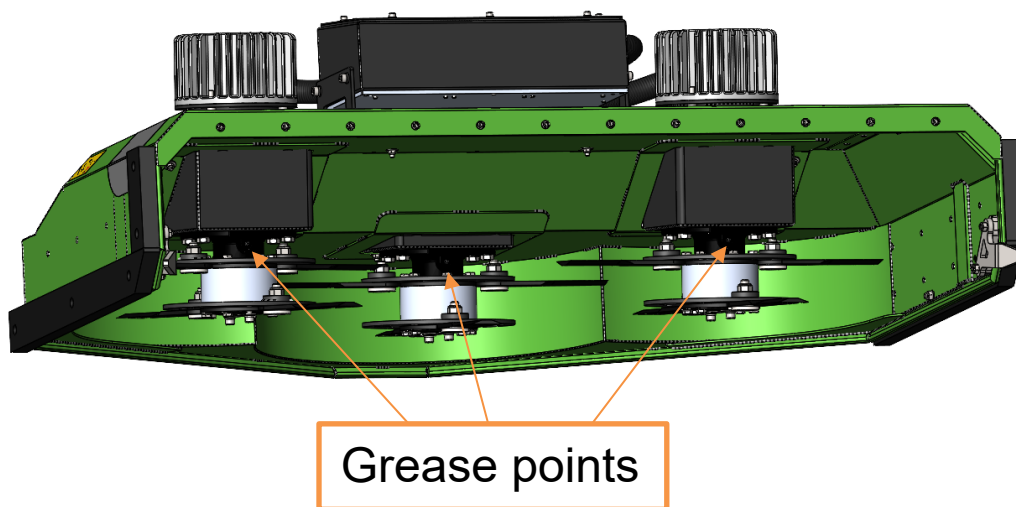


Figure 10: Grease points.

5.2 Weekly maintenance

Step	What to do	Description
1	Retighten knife bolts	• Check the bolts and blade locking nuts to ensure they are tightened to the correct torque (see 5.7).
2	Visual inspection	• Visually inspect the construction, electrical system and blades for damage and cracking.

5.3 Annual maintenance

Step	What to do	Description
1	Inspect the drivelines	• Check the following parts for damage, cracking and play: - The nylon couplings. - The bearings and seals. - The blade shafts.
2	Inspect the Electrical parts	• Check the following parts for damage and cracking: - Multi-connector. - Protective hoses and connection glands. - Motor housing and inverter box.
2	Inspect the inverter box	• Check and clean the inverter cabinet: - Remove the cover. - Check the inside for moisture, corrosion and dirt. - Clean/dry if necessary. - Make sure the drainage holes are clear. - Check all cable connections on the inverters. - Retighten the cable connections with 6 Nm. - Make sure that cable eyes of adjacent connections cannot touch each other. - If necessary, fit the cover with a new seal.

5.4 Replacing and/or sharpening the blades

	• To avoid imbalance, the blades should be replaced and/or sharpened per set. • The maximum permissible weight difference between the 2 blades from 1 set is 10 grams. • If a blade is crooked or shows cracks, it should always be replaced. Straightening or repairing such a knife is not allowed due to risk of breakage at speed.
	• Knives may be ground back to a maximum width of 42 mm as shown in Appendix A. The drawings are printed in actual size so that you can use them as calibre. • Knife attachment parts should be replaced if any kind of excessive damage and/or wear is noticed.
	• The minimum wear limit for the knife bushings can be found in Figure 11. • The knife bushings should not be exchanged only when they are below the wear limit. For safety reasons, the bushings should be replaced together with a new set of blades / bolts / washers / nuts.

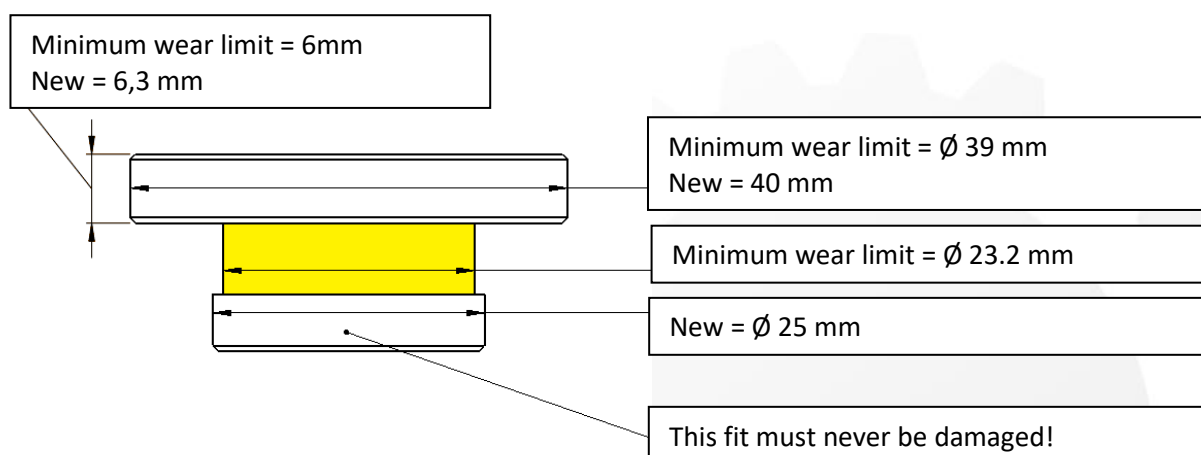
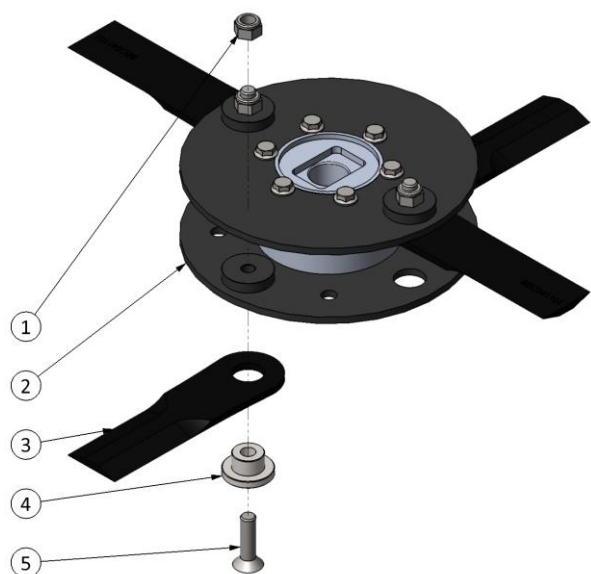


Figure 11: Wear limits of knife bushes.

Fixing the blades



CAUTION!

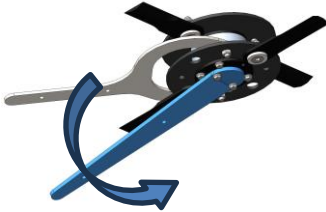
Make sure the flat sides of the blades
 are turned the right way.
 Upper blades upwards.
 Lower blades downwards.

Figure 12: Knife assembly on the cutting head.

Step	What to do	Description
1	Use personal protection equipment 	Provide good sturdy gloves with cut protection when handling blades.
2	Fitting a blade (4x)	Attach the blade (Figure 14-3) and the blade bush (Figure 14-4) to the knife discs (Figure 14-2) with the M12 10.9 knife bolt (Figure 14-5). Note! Is the position of the flat side of the blade correct?
3	Securing the knife bolt (4x)	Place the locknut (figure 14-1) onto the bolt and tighten the <u>bolt</u> to the tightening torque specified in section 5.7 while retaining the locknut with an open ended spanner.
4	Test run	- After installing the blades, always perform a test run. - Only when the system is running vibration-free should the hedge trimmer be released for use.

5.5 Removing a cutting head

Step	What to do	Description
1	Use personal protection equipment 	Provide good sturdy gloves with cut protection when handling blades.
2	Positioning the hedge trimmer	- Preferably place the hedge trimmer on one side on the ground so that the cutting heads are easily accessible. - Always make sure that the machine is properly supported and that no instability can occur due to sagging cylinders of the tool carrier.
3	Removing the locking plate	Remove the locking plate with fixing bolts. 
4	Removing the retaining ring	Remove the countersunk socket screw and retaining ring. 
5	Removing the flanged nut	Remove the flange nut using the special spanners provided. 

Step	What to do	Description
5a	Installing the special flanged nut-spanner	Attach the flange nut spanner (part no. BEC020700) to the flange nut with the M8 bolts provided. 
5b	Installing the special knife disc nut-spanner	Insert the bolts of the blade disc spanner (part no. BEC020600) into the holes of the blade disc and secure the nuts. 
5c	Loosening the flanged nut	Loosen the flanged nut by turning the flanged nut-spanner anti-clockwise. Hold the knife disc-spanner down so that the blade disc does not rotate with it. 
6	Removing the cutting head 	Remove the complete knife head from the drive shaft.  CAUTION: Wear suitable work gloves! The blades can move freely and thus collide with fingers/hands with the cutting edges.

5.6 Reinstalling a cutting head

To reinstall the cutting head, the work sequence of section 5.5. can be followed in reverse order.

**CAUTION!**

Ensure that all fasteners are tightened to the correct torque. See section 5.7.

**ATTENTION!**

When fitting the complete knife head back onto the drive shaft, ensure that the milled surfaces of the shaft fall into the rectangular chamber of the aluminium bobbin (see figure 13).

If the knife head is not form-fitted onto the drive shaft correctly, it may come loose from the drive shaft and lead to damage and injury!

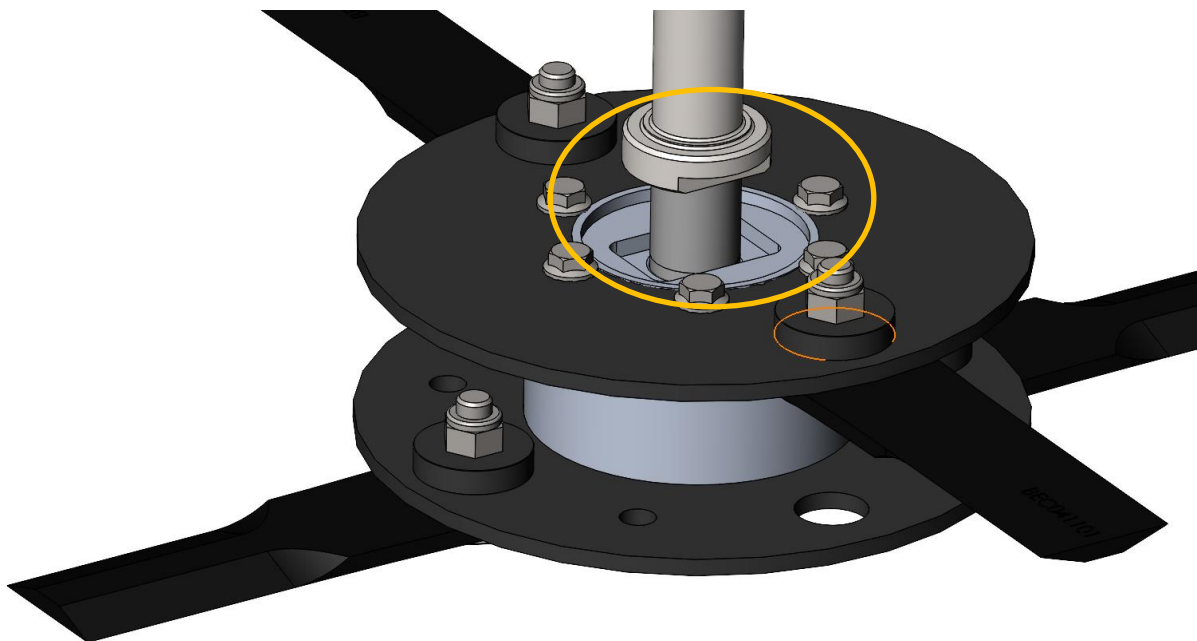


Figure 13: Form-fitting driveshaft.

5.7 Tightening torque settings

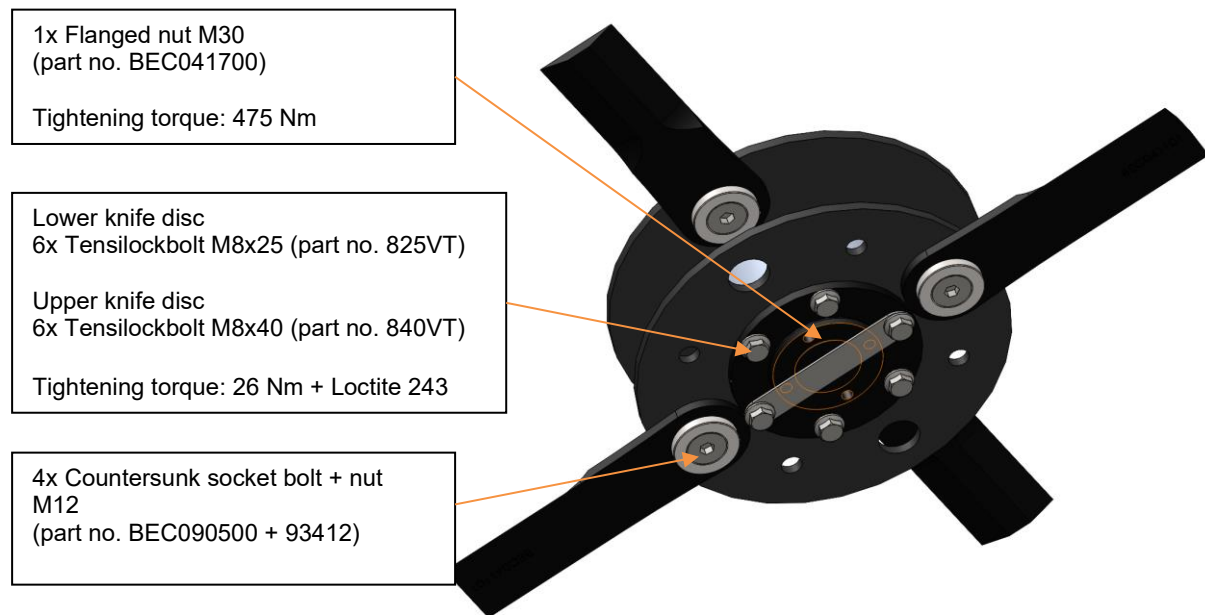


Figure 14: Torque settings cutting head.

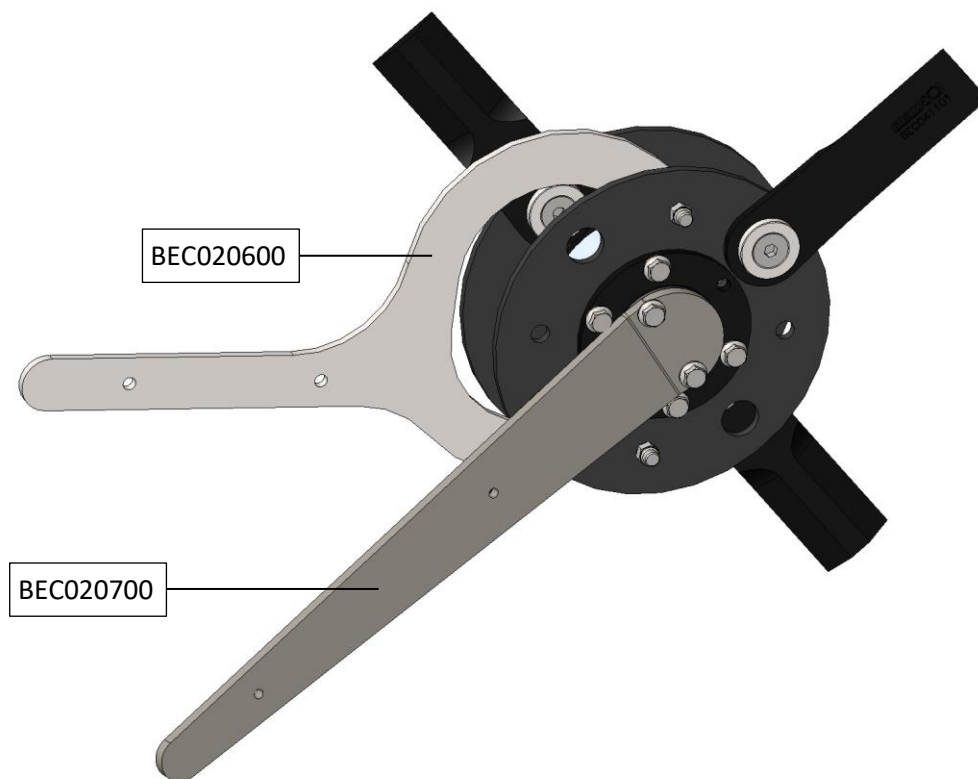


Figure 15: Special tools.

6. Malfunction analysis

Step	Problem	Action
1	After switching on, the blades do not rotate.	• Check that the hydraulic hoses are correctly connected.
2	Machine is switched on but not all knife heads are turning.	• Check the nylon bushing of the drive clutch fitted for the safety device. • Turn the blade head by hand. The motor should provide a jerky resistance. Remove the multi-connector from the tool carrier before touching the hedge cutter! • If in doubt, dismantle the pruner with the motor by loosening the 4 cover nuts. • Replace the nylon ring if it is broken or damaged.
3	The machine works but the result is not optimal and/or the cut material is thrown too far away.	• Check if the direction of rotation of the blades corresponds to that indicated in section 3.3.
4	The machine works, the blades turn in the right direction and are sharp, but the result is not optimal.	• Check the speed of the blade heads. The speed of the blade heads should be: 2.500 rpm. Contact your Alltrec dealer if the speed is not correct.
5	The machine runs properly but the trimming pattern is not flat.	• Check that the trimmer is suspended parallel to the surface to be trimmed. See chapter 4.1. and adjust the parallelism.
6	The trimmer vibrates when running at operating speed.	• Check the blades and blade discs. • Probably one of the blades is damaged and causes imbalance. Always replace the blades in pairs. See chapter 5.4 for replacement of the blades. • Possibly a knife disc has become warped. If this is the case, replace it at all times and do not try to straighten it!!!

If a fault cannot be solved with the recommendations from the table above, consult your supplier's service department.

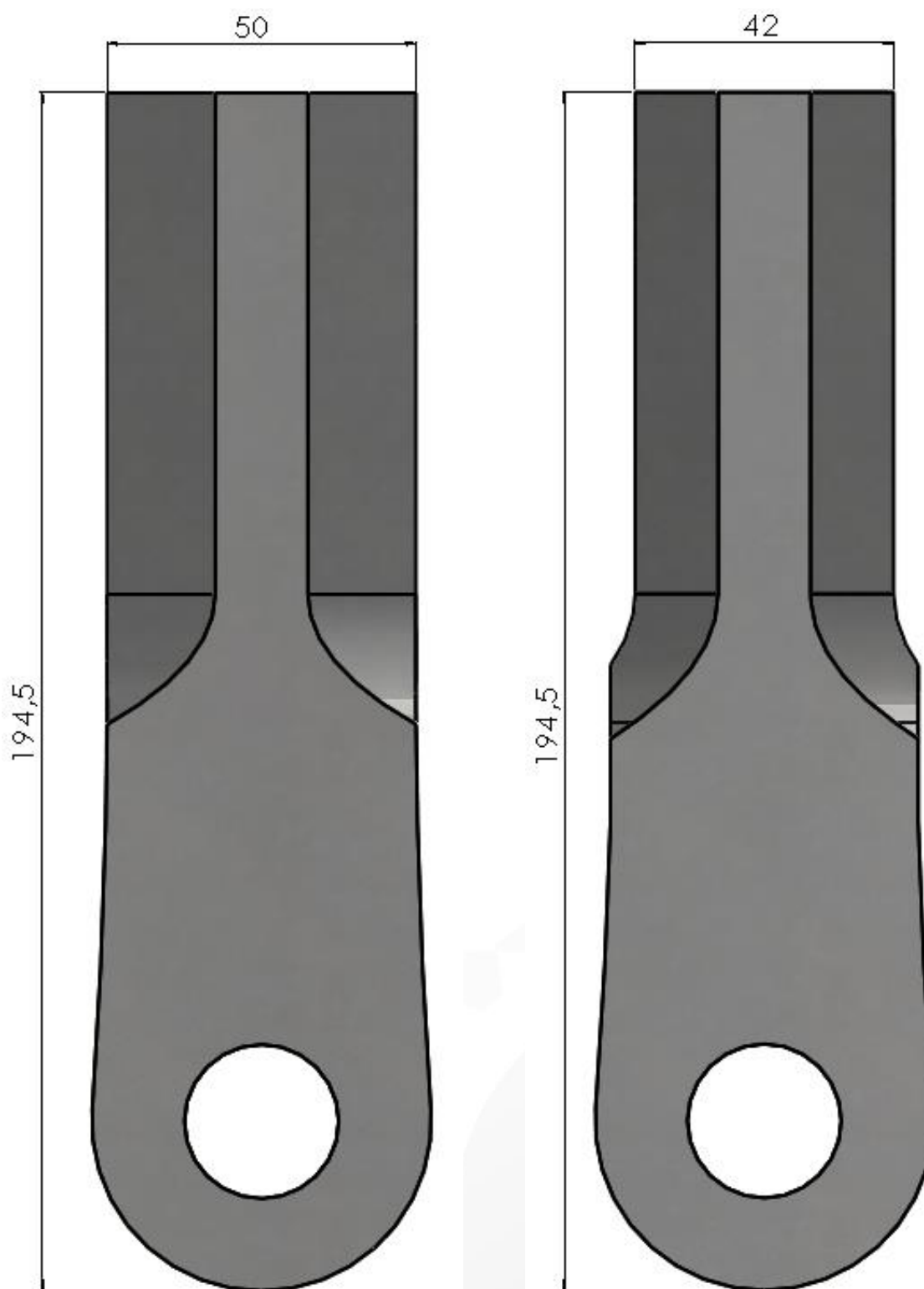
The storage location is preferably dry, stable and flat. Placing the machine on a pallet is advised.

When parts are replaced or at end-of-life, care should be taken to ensure that all materials are disposed of, destroyed or reused in a "legally" responsible and environmentally friendly manner.

Good insight into the technical condition of a machine is of great importance to use a machine efficiently and sustainably. We therefore advise every user of a Becx machine to keep a written record of inspections, maintenance and repairs.

[illegible]

APPENDIX A – Blade dimension calibres (1:1)



Blade (part no. BEC041101) dimensions new

Blade minimal dimensions