

Weed brush  
**OB90M**  
User manual



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## Foreword

The Becx weed brush is specially developed to quickly and efficiently remove weeds growing in the street. This machine can be mounted on virtually all wheel loaders/loaders. It makes it extremely easy to brush or sweep the street.



- **Please read this manual carefully before you use the weed brush. Always observe the safety requirements as set out in Section 3.**
- **A copy of this manual must be kept with the weed brush and be available to the user. All important maintenance work and relevant notes must be recorded by the maintenance company.**
- **It is the user's responsibility to select a suitable tool holder for the weed brush and ensure that it is correctly attached and connected to the arm.**

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**Declaration of conformity (IIa) (copy)**

We:

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

declare entirely under our own responsibility that the product:

<b>Description</b>	: Becx Weed brush.
<b>Type</b>	: BECCX OB90M
<b>Serial number</b>	: .....

with respect to this declaration, conforms to the provisions of the Directives:

**Machinery directive** 2006/42/EC

In accordance with the following standards:

<b>NEN-EN-12100-1</b>	Safety of machinery. Basic concepts, general principles for design. Part 1: Basic terminology, methodology
<b>NEN-EN-12100-2</b>	Safety of machinery. General concepts for design. Part 2: Technical principle and descriptions
<b>NEN-EN 14121-1</b>	Safety of machines – Risk assessment – Part 1: Principles

Director, Erwin Hommen



The Netherlands, Moergestel,

Date: .....

## Overview of symbols

All actions and situations risking the safety of the operator and/or technician and where actions must be carried out carefully will refer to the following symbols in this user manual:

	Take note!
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	Explanation.
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## 1. Technical details

Description	Value	Unit
<b>General</b>		
Sound pressure	See tool holder	dB(A)
Vibration level during normal use	N/A	
<b>Physical data</b>		
Min. width	1100	mm
Max. width	1630	mm
Length	1415	mm
Height	600	mm
Dead weight	+/- 152	kg
<b>Attachment details</b>		
Front side		
Depending on the type of tool holder	-	-
Force on the attachment point	1,520	N
Suspension torque	+/- 890	Nm
<b>Connection details</b>		
Maximum operating pressure	250	bar
Maximum RPM for brush	210	-/min
Nominal RPM	+/- 225	-/min
Maximum oil flow	60	L/min
Required oil flow for proper results	30	L/min
Brush motor connections		
Pressure line connection	15L	
Return line connection	15L	
Leak line connection	12L	
Maximum pressure on the leak line	no pressure	bar
Hydraulic oil		
Requirements for filtering hydraulic oil	10	micron
Oil for the drive	HV-46 or equivalent	

## 2 Safety

### 2.1 General

	<ul style="list-style-type: none"><li>• The weed brush may not be modified.</li><li>• It is the user's responsibility to ensure that the correct tool holder is used (see Section 1:Technical details). To this end, the following points are important:<ul style="list-style-type: none"><li>• The maximum pressure and rotational speed (oil flow) must not be exceeded. Exceeding these limits may damage the installation and injure bystanders.</li><li>• The tool holder must be sufficiently strong and stable enough to bear the forces and torques caused by the weed brush in all circumstances.</li></ul></li></ul>
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### 2.2 During use

	<ul style="list-style-type: none"><li>• Consult the manual for the tool holder and the additionally attached options to look up the resulting sound load. As the specified nominal RPMs is significantly higher than the sound produced by the weed brush, the sound load from the tool holder is leading.</li><li>• The installation may only be used for the work activities it is designed for.</li><li>• If people or animals approach or enter the safety zone, the weed brush and the work activities must be stopped immediately.</li><li>• If passers by constantly interrupt the work activities too much, consideration should be given to fencing off the work area.</li><li>• If the weed brush begins to make a different sound and/or starts to vibrate, the work and the weed brush must be immediately stopped (see 4.2). The work must not restart until the cause is found and resolved. .</li><li>• Inspection and maintenance work must be carried out.</li><li>• During inspection and maintenance, the installation must not be used for other purposes.</li><li>• During inspection, maintenance, or cleaning, the hydraulic feed to the weed brush must be disconnected to prevent it being accidentally switched on.</li><li>• The local work and safety regulations must be observed.</li><li>• If the installation is to be used in the dark, sufficient lighting must be used (approx. 50 lux on the place of operation).</li><li>• To prevent damage to the installation, the device must be gradually switched off using the lowest RPMs. Depending on the tool holder used, this is idling speed or the minimal flow.</li></ul>
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### 2.3 Operating personnel:

	<ul style="list-style-type: none"><li>• Operating personnel must be older than 18 years of age.</li></ul>
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	<ul style="list-style-type: none"><li>• Only individuals authorized by the owner may work on or with the installation.</li><li>• Operators may only perform work activities that they are trained for. This applies to both the maintenance work and normal usage.</li><li>• The operating personnel must be acquainted with all situations that can occur.</li><li>• If the operating personnel discover faults or risks or do not agree with the safety measures, this must be reported to the owner or person in charge.</li></ul>
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## 2.4 Warning symbols on the machine

1. 	Read the manual before you use the machine!
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2. 	safety zone
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### 3 Description of components

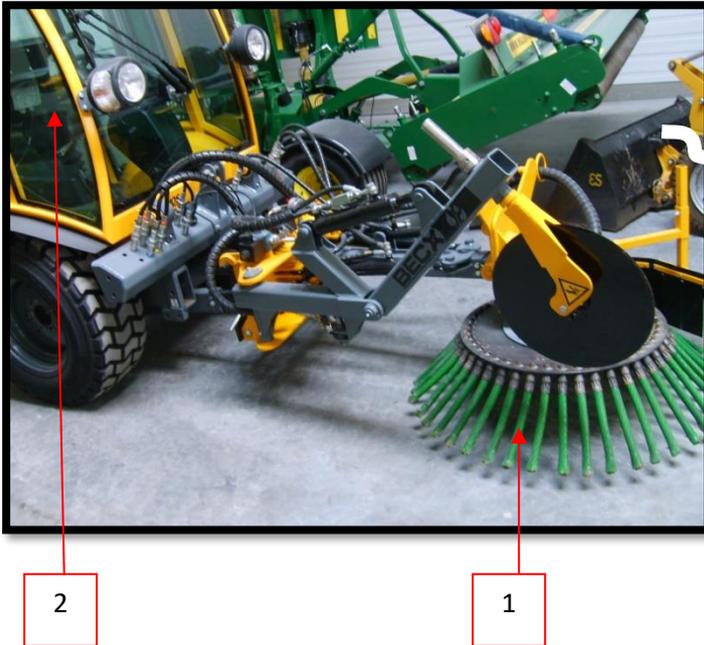
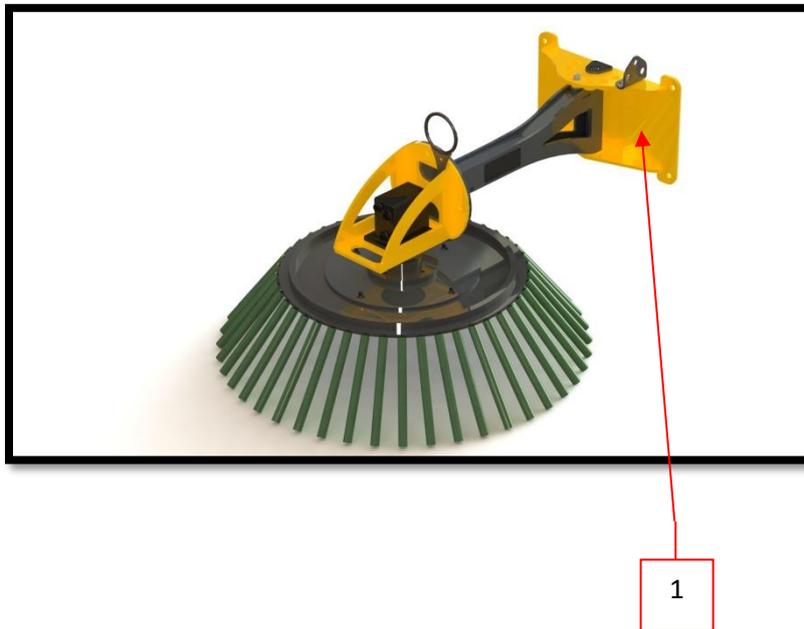


Figure 1: Overview photo

Figure 1	Element	Explanation
1	Brush	<ul style="list-style-type: none"><li>The brush sweeps away the weeds so that these are completely removed from the ground.</li></ul>
2	Tool holder	<ul style="list-style-type: none"><li>The tool holder is not part of the delivery. It is the user's responsibility to ensure that a suitable tool holder is used for the weed brush.</li></ul>

**3.1 Tool nesting place mechanical components**



**Figure 2: Overview of tool nesting place mechanical components**

Figure 2	Element	Explanation
1	Tool nesting place	<ul style="list-style-type: none"> <li>• The unit is fastened to the tool holder using an adapter (Figure 2:1).</li> <li>• The type of adapter and its fastening in the tool holder is dependent on the type of tool holder.</li> <li>• The up and down movement is achieved by controlling the tool nesting place. The is not part the brush arm, but part of the tool holder.</li> </ul>

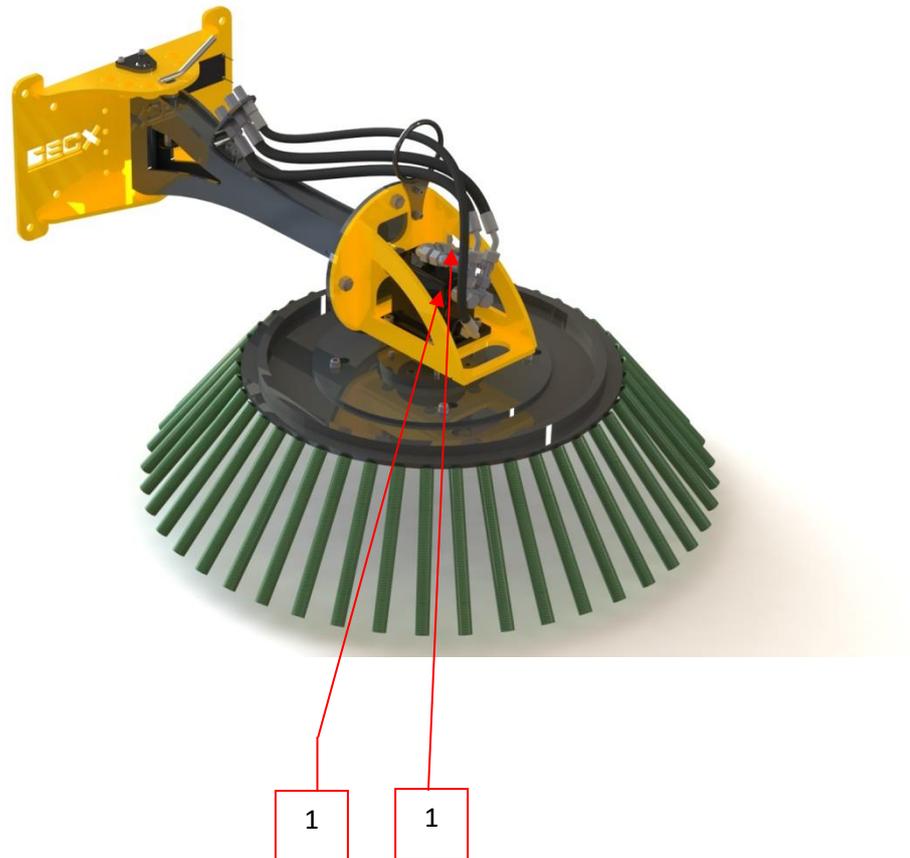
**3.2 Brush mechanical components**



**Figure 3: Overview of brush mechanical components**

Figure 4	Element	Explanation
1	Width position adjustment point	<ul style="list-style-type: none"> <li>The brush position can be manually adjusted using the adjusting pin. (</li> <li>Figure 3:1)</li> </ul>
2	Brush attachment	<ul style="list-style-type: none"> <li>If the brush is worn, it can be easily replaced. To do so, the insert nuts must be loosened and removed. The brush can then be removed from the holder. (Figure 4:2)</li> </ul>
3	Brush angle adjustment	<ul style="list-style-type: none"> <li>The angle in which the brush must clean the streets can be manually adjusted using three bolts that can be moved (</li> <li>Figure 3:3).</li> </ul>

**3.3 Hydraulic components**



**Figure 4: Overview of hydraulic components**

Figure 3	Element	Explanation
1	Brush hydraulic motor	<ul style="list-style-type: none"> <li>The hydraulic motor has a connection for a supply line, a return line, and a leak line. (Figure 5:1)</li> </ul>
2	By-pass valve	<ul style="list-style-type: none"> <li>To prevent damage to the hydraulic motor, the hydraulic motor slows down using this valve.</li> </ul>

## 4 Operation

### 4.1 Make the weed brush ready for use

No.	What to do	Action	Result
1	Select the correct tool holder.  	<ul style="list-style-type: none"> <li>• Ensure that the tool holder is sufficiently strong and stable enough for the weed brush (see Section 1: Technical details for the unladen weight, the load in the nesting place, and the resulting torque in the nesting place).</li> <li>• Ensure that the maximum pressure and rotational speed (oil flow) cannot be exceeded.</li> <li>• Ensure the correct quick-release couplings are attached for the supply, return, and leak lines.</li> <li>• Ensure that the correct adapter is attached.</li> </ul>	Not respecting the specified limits may damage the installation and injure bystanders.
2	Connect the hoses	<ul style="list-style-type: none"> <li>• Connect the quick-release couplings for the supply, return, and leak lines.</li> <li>• See the tool holder manual for the correct connection positions.</li> </ul>	
3	Adjust the oil supply.	<ul style="list-style-type: none"> <li>• Adjust the generator for the tool holder so that the maximum pressure and rotational speed cannot be exceeded.</li> <li>• This depends on the type of tool holder used. See the tool holder manual.</li> </ul>	
4	Adjust the brush to the desired position	<ul style="list-style-type: none"> <li>• Various settings allow the brush to be adjusted so that the optimal setting is achieved for the tool holder and operator.</li> </ul>	

## 4.2 Using the weed brush

No.	What to do	Action	Result
1	Check the installation	<ul style="list-style-type: none"> <li>• Check the following points:               <ul style="list-style-type: none"> <li>• Check the rotational speed of the brush motor. In practice, 50% of the capacity (30 liters) is sufficient for decent results.</li> <li>• Check that the brush motor runs without vibration and there are no irregular sounds.</li> <li>• If one of the above checks discovers a deficiency, it must first be rectified before the weed brush can be used.</li> </ul> </li> </ul>	
2	Drive to the work area	<ul style="list-style-type: none"> <li>• Always switch off the brush motor when it is not being used.</li> </ul>	
3	Switch on the brush motor	<ul style="list-style-type: none"> <li>• For detailed instructions, see the tool holder manual.</li> <li>• To prevent damage to the installation, it is important that the weed brush is gradually switched on or off using the lowest RPMs. Once the installation is switched on, the RPMs can be increased.</li> </ul>	Switching on or off at high RPMs causes high loads on the installation.
4	Adjust the brush to the desired position  	<ul style="list-style-type: none"> <li>• Use the width setting and the height setting to achieve the correct brush position. For detailed instructions, see the tool holder manual.</li> <li>• Check that no one is in the work area.</li> </ul>	
5	Brushing	<ul style="list-style-type: none"> <li>• Drive with the tool holder over the street.</li> </ul>	
6	<b>Stop in the following situations!</b>  	<ul style="list-style-type: none"> <li>• <b>The weed brush and the work activities must be stopped immediately in the following situation:</b> <ul style="list-style-type: none"> <li>• People or animals are present in the work area. The driver must make this assessment.</li> <li>• The weed brush starts making a different sound or starts to vibrate.</li> </ul> </li> </ul>	<b>If you do not stop promptly in the above situations, it may lead to serious injury.</b>

<b>No.</b>	<b>What to do</b>	<b>Action</b>	<b>Result</b>
7	Switch off the weed brush	<ul style="list-style-type: none"><li>• Once the work activities are complete, switch off the weed brush. For detailed instructions, see the tool holder manual.</li><li>• To prevent damage to the installation, it is important that the weed brush is gradually switched on or off using the lowest RPMs. Once the installation is switched on, the RPMs can be increased.</li></ul>	Switching on or off at high RPMs causes high loads on the installation.

## 5 Maintenance

	<ul style="list-style-type: none"> <li>• Components may only be replaced or repaired using components delivered by or approved by the manufacturer.</li> <li>• If work activities will be carried out on the installation, the weed brush must always be disconnected from the power supply. You can do so using the quick-release couplings.</li> <li>• Only trained and/or experienced individuals who can demonstrate they have sufficient knowledge of mechanical and hydraulic installations may perform the maintenance work.</li> <li>• The installation may be spray cleaned using a high-pressure jet cleaner. However, never spray the hydraulic components.</li> </ul>
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### Weekly maintenance

No.	What to do	Action	Result
1	Lubricate pivot points	<ul style="list-style-type: none"> <li>• Spray grease in the grease nipples. These are located:                             <ul style="list-style-type: none"> <li>• at all of the articulating points.</li> </ul> </li> </ul>	
2	Tighten bolts	<ul style="list-style-type: none"> <li>• Check the fastener bolts.</li> </ul>	
3	Visual inspection	<ul style="list-style-type: none"> <li>• Visually inspect the structure and the hydraulic installation for damage and cracks.</li> </ul>	
4	Retighten adjusting bolts	<ul style="list-style-type: none"> <li>• Within 4 working hours, tighten the set screws of the clamping sleeve mounting on the motor shaft and then check it regularly! (45NM) See image on page 18</li> </ul>	



Image of clamping sleeve bottom of brush head.

#### Yearly maintenance

No.	What to do	Action	Result
1	Inspect	<ul style="list-style-type: none"><li>• Check the following parts for damage, cracks, and play:<ul style="list-style-type: none"><li>• The tubes and sleeves of the width setting.</li><li>• The bearing and seal.</li></ul></li></ul>	

## 6 Malfunction analysis

	<b>Malfunction</b>	<b>Solution</b>
1	After switching on, the brush motor does not rotate	<ul style="list-style-type: none"><li>• Check that the hydraulic hoses are connected.</li></ul>
2	The machine works, but has no or insufficient brush force.	<ul style="list-style-type: none"><li>• Check that the motor rotation direction is correct. If this is not the case, you can change it using the quick-release coupling to switch the pressure and return hoses.</li></ul>

If you cannot resolve the malfunction using the recommendations in the above table, consult with your dealer or maintenance department.

## 7 Disposal

When replacing components or at the end of the lifespan, ensure that all materials are disposed of, destroyed, or reused in a “legally” responsible and environmentally friendly manner.







