



# HB 8891

- HB 8891-A*
- HB 8891-B*
- HB 8891-G*
- HB 8891-S*
- HB 8891-V*

## Oscillating cast cutting saw HEBU Oscillo-Saw GOLD II Autopsy

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## 1 Scope of delivery

HB 8891	HEBU oscillating cast cutting saw GOLD II Autopsy
HB 8892-01	Segment saw blade, ø 65 mm
HB 8893-01	Deep saw blade, ø 70 mm, for plaster casts
HB 8877	Special grease, 8 g tube
E 8894-01	2 x open end wrenches
E 8891-03	Torx-wrench with T-handle
	Instruction manual

## 2 Safety remarks

Our products are exclusively intended for professional use by appropriately trained and qualified personnel and may only be acquired by them.

All safety remarks in these operating instructions are marked with the symbol **!**.

<b>!</b>	<p><b>Before using the saw, carefully read through these operating instructions and the valid national occupational safety regulations and act accordingly.</b></p> <p><i>Please keep these operating instructions for later reference and always include them if the device is sold or passed on to third parties.</i></p>
<b>!</b>	<p><b>Application in accordance with the intended application:</b></p> <p><b>This device is intended for sawing open plaster casts or autopsy.</b></p>
<b>!</b>	<p><b>Never rivet or screw signs or symbols onto the device, as this can render the protective insulation ineffective. We recommend using adhesive signs.</b></p>
<b>!</b>	<p><b>Only ever use undamaged plugs and cables.</b></p> <p><b>Check cables and plugs regularly.</b></p>
<b>!</b>	<p><b>The mains voltage and specified voltage rating shown at the device must be in agreement.</b></p>
<b>!</b>	<p><b>Only ever use original accessories.</b></p>
<b>!</b>	<p><b>Wear personal protective gear such as protective goggles, ear protectors and gloves.</b></p>
<b>!</b>	<p><b>The device must not be operated in areas at risk from explosion.</b></p>

### 3 Scope

The use of oscillating plaster saws mainly takes place in orthopaedics for plaster removal.

#### 3.1 Intended Use

A hand-held, current-driven (AC) product for cutting gypsum or synthetic material usually during the removal of a plaster cast. The proximal end (the handle) is usually cylindrical, while the distal end terminates in a round, crescent-shaped, or circular blade suitable for cutting plaster casting material. The leaves cut as an electric motor in the handle drives them (swinging). The cut is done by vibration rather than by sawing.

#### 3.2 Contraindication

There are no known contraindications.

### 4 Mounting / exchanging the saw blade



**Danger of injury due to unintentional activation.  
Pull out the plug before changing the saw blade.  
If applicable use thick gloves to prevent injury when handling the saw blade.  
Only ever connect the HEBU oscillating cast cutting saw to the mains when  
it is switched off.**

#### 4.1 Releasing the retaining screw / removing the old saw blade

1. Place the cast cutting saw on a stable underlay (table).
2. Apply one fork wrench at the drive shaft behind the saw blade, and the other one at the front at the retaining screw (see fig. 1).
3. Hold the rear wrench firmly and use it to fix the cast cutting saw.
4. Release the retaining screw using the front wrench.
5. Remove the retaining screw and the fixing ring.  
Ensure that you do not lose any components.
6. If applicable, remove the old saw blade.



**Fig. 1:**  
Releasing the retaining screw

## 4.2 Inserting the new saw blade

1. Check that the female thread and saw blade support of the drive shaft are clean.
2. Position the new saw blade.  
*It makes no difference which side of the saw blade is facing inwards or outwards.*

### **Important!**

The notches in the saw blade must be positioned precisely flush on the spigots of the drive shaft.

3. Position the fixing ring. The notches in the fixing ring must always be pointing towards the saw (see fig. 2). These must also be positioned precisely on the spigots.
4. Screw the retaining screw in manually until hand tight.
5. Then tighten firmly using the fork wrench, as described above.  
The tightening torque is 6 – 7 Nm. Caution! Do not overtighten.



**Fig. 2:**  
Inserting the saw blade

## 5 Operation

### Switching on and off (see fig. 3)

Switching on: Push the switch forwards ( I )  
 Switching off: Push the switch back ( 0 )



Fig. 3

### Setting the oscillating frequency (see fig. 4)

Select the oscillating frequency when the motor is running. The optimum oscillating frequency can be selected at the speed gauge depending on the properties of the plaster cast.

Oscillating frequency preselection using the electronic speed gauge.

Lowest oscillating frequency ( 1 )  
 Highest oscillating frequency ( 8 )



Fig. 4

### 5.1 Opening plaster casts

First select a suitable saw blade.

Apply the HEBU oscillating saw with the saw blade mounted to the cast you wish to open and press in lightly. Your guiding hand can be used as a support and for depth control, and to prevent sudden penetration of the blade when the cast has been cut through.

As long as the saw blade is cutting through the plaster, you will be able to feel a resistance. Once the plaster cast has been cut through, this resistance disappears. Once the breakthrough point is tangible, lift the saw blade off lightly without removing it from the cutting groove and move it forwards appr. 15 mm in the direction of cutting.

Then apply the blade again and proceed as described above until the next piece has been cut through.

In this way, the plaster cast is more safely opened through a series of cuts and linear movements along the cutting line than would be the case if executing a continuous linear cut.

After you have used the saw only a few times, you will become accustomed to guiding the saw through the plaster cast and you will also develop an instinctive feel for the moment where no further resistance is tangible and no further pressure should be applied to the saw blade.

If the saw blade oscillates for too long on the wadding, high-speed oscillation can bring about a burning sensation on the skin under the wadding.

#### Additional remarks:

- Because different materials are used, every plaster or plastic cast has different properties. While working, try to determine the optimum speed for the respective material.
- A lower speed is advantages when cutting through plastic casts. This prevents the plastic from starting to melt due to friction heat generated during cutting.
- Where possible, avoid cutting through plaster casts without wadding when using the HEBU oscillating cast cutting saw. Injuries can result if the skin has become stuck to the plaster, and so does not oscillate with the saw blade. Where a plaster cast close to the skin is preferred, we recommend laying a knitted or felt strip

along one side of the arm or leg and drawing a line precisely above this strip on the surface of the plaster cast using indelible ink. When sawing open the cast, this line can be used as guiding mark.

- When applying a plaster cast following surgery, the position of the operation wound should be marked on the surface of the plaster cast. This will allow a window to be cut subsequently in the plaster for removing stitches and observation of the wound.
- Cutting a window in the plaster also simplifies the extraction of bone nails and also facilitates any necessary punctures or incisions.
- Metal rails inserted in the plaster cast should not be cut.
- While serving, check the retaining screw for a firm fit and if necessary tighten.
- If the motor is overloaded, the device is automatically switched off. The fuse (see fig. 9 on page 28, item 110) is located on the electronic circuit board (see fig. 7 on page 28, item 110) and can be quickly and easily exchanged after unscrewing the housing.
- Used and blunt saw blades place excessive stress on the motor and should consequently be continuously checked and exchanged in good time.
- To ensure even wear of the saw blade, open the retaining screw and turn the saw blade by 90°.

## 5.2 For the autopsy

The oscillating saw is used in the autopsy for cutting bones. The guiding of the saw is described in 4.1.

In pathological use, hard bandages can be also opened with the Autopsy saw if necessary.

Please note also the additional information in 4.1!

## 6 Cleaning and maintenance



**Danger of injury through unintentional activation.  
Pull out the plug before any cleaning or maintenance work.**

Wipe disinfection is suitable for motor housing, cable, power plug and all accessories, such as saw blades and an open-end wrench. For this purpose, we recommend products with a pH-value within 9-10, e.g. MediClean forte from Dr. Weigert.

It is important to ensure that the device is disconnected from the power supply and the disinfecting liquid does not enter the interior of the motor.



Fig. 5

### 6.1 The use of the cast saw.

The following measures should be performed once a week or more often if the saw is used frequently:

Clean the cooling slots (see fig. 5) to ensure sufficient ventilation for cooling the motor. Clean the motor compartment from the outside with a jet of dry compressed air.



## 6.2 The use of the autopsy saw:

The saw should be cleaned after every use. An efficient cleaning can only be made if you remove the saw blade. (Compare 3.1 Releasing the retaining screw/ removing the old saw blade). Remove the two head screw. The retaining screws, fixation ring and saw blade have to be removed. Take off the saw head (compare fig. 10).



Fig. 10



### Warning!

**Please use thick gloves to prevent injury when handling the saw blade**

For the machine cleaning the saw head should lie down horizontal- compare fig. 11. The machine cleaning should be effected with a standard cleaning program. The cleaning agent must have a pH-value of <math><10</math>, otherwise the surface coating will be damaged.

For the manual cleaning use plastic brushes and /or cleaning pistols. Do not use cleaning agents with fixing effect. The pH- value should be also <math><10</math>, so that the surface coating won't be damaged. Wash the saw head with fully demineralized water. Then use disinfectant.



Fig. 11



**The preparation and sterilization is only allowed for the saw head! Not for the electrical motor!**

Furthermore clean the cooling slots (see fig.5) to ensure sufficient ventilation for cooling the motor. Clean the motor compartment from the outside with a jet of dry compressed air. After the sterilization the construction takes place.

## 7 Sterilization

### Only autoclave the saw head (gear part) in steam!

Do not autoclave the electrical motor. It should not come in contact with water, respectively other liquids, or their steam.

#### Disassembly:

Remove the retaining screw, fixation ring and saw blade. Loosen the two Allen screws and unscrew completely. Take off the saw head (gear part), it can now be autoclaved.

#### Reassembly:

Is done in reverse order. It is important to make sure that the wing is lightly greased with about 1ml HB 8877 before reassembly. Furthermore the screws must be tightened with 6 Nm.

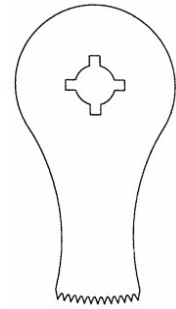


**Attention:** Plugging the saw head to the motor is done by pressing with slight back- and forth movements until the wing is locked outside the groove ball bearing.

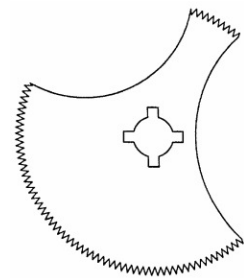


## 8 Accessories

HB 8899-01	Transportation case with insert
HB 8889-01	Retrofit kit (vacuum cleaner, hose, suction unit, tool), 220-240V
HB 8889-01V	Retrofit kit (vacuum cleaner, hose, suction unit, tool), 100-120V
HB 8878-01	Patent Screw
HB 8895-03	Round saw blade TITANIUM, Ø 50 mm
HB 8896-03	Round saw blade, TITANIUM, Ø 65 mm
HB 8895-04	Round saw blade "non-stick", Ø 50 mm
HB 8896-04	Round saw blade, "non-stick", Ø 65 mm
HB 8897-01	Round saw blade, Ø 44 mm, for plaster
HB 8897-02	Round saw blade, Ø 44 mm, x-bite
HB 8895-01	Round saw blade, Ø 50 mm, for plaster
HB 8895-02	Round saw blade, Ø 50 mm, x-bite
HB 8896-01	Round saw blade, Ø 65 mm, for plaster
HB 8896-02	Round saw blade, Ø 65 mm, x-bite
HB 8898-01	Round saw blade, Ø 80 mm, for plaster
HB 8898-02	Round saw blade, Ø 80 mm, x-bite
HB 8893-01	Deep saw blade, Ø 70 mm, for plaster
HB 8893-02	Deep saw blade, Ø 70 mm, x-bite
HB 8892-01	Segmental saw blade, Ø 65 mm, for plaster
HB 8892-02	Segmental saw blade, Ø 65 mm, x-bite
HB 8890-01	Waisted saw blade, Ø 65 mm, for plaster
HB 8890-02	Waisted saw blade, Ø 65 mm, x-bite



**HB 8893-01/-02**  
Autopsy saw blade



**HB 8892-01/-02**  
Segment saw blade,  
Ø 65 mm

## 9 Spare Parts

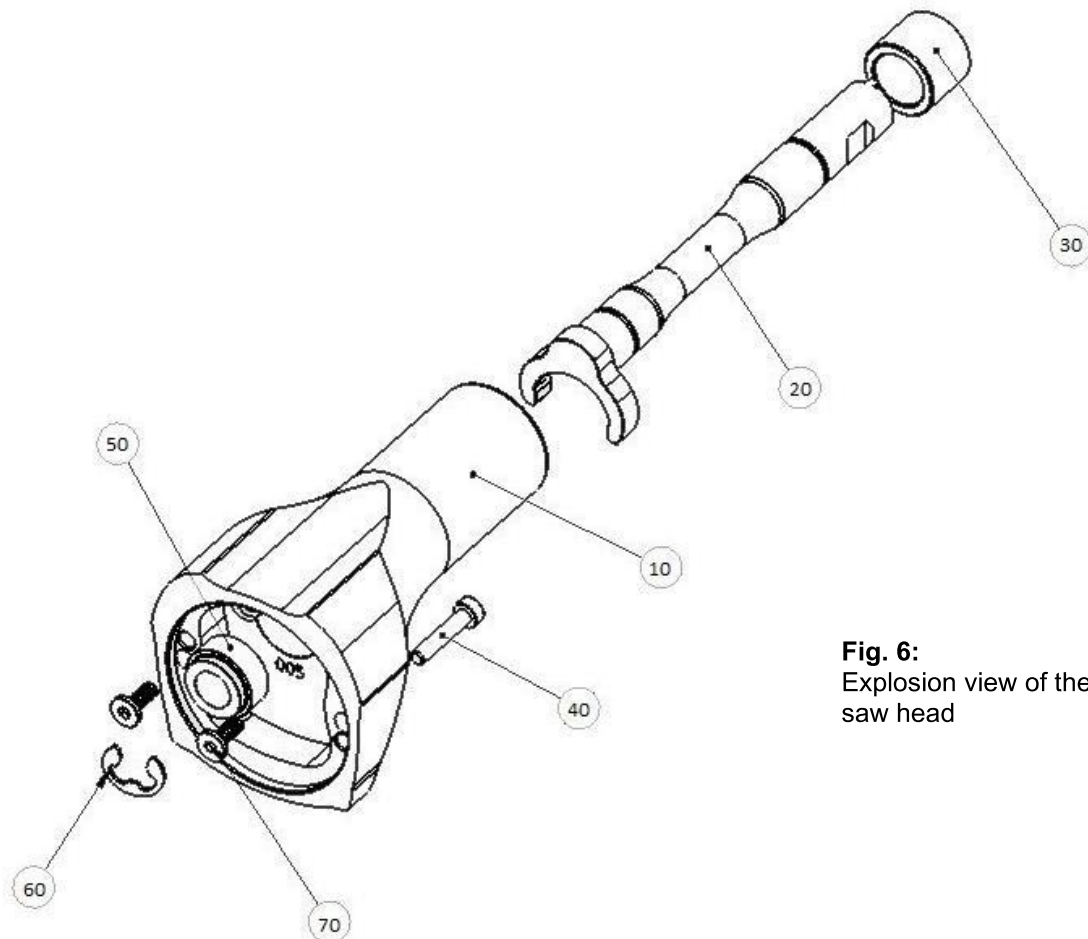
E 8894-01	Fork wrench
E 8894-02	Retaining screw
E 8894-03	Fixing ring
E 8891-01	Allen wrench with T-handle
E 8891-02	Allen screw for gear part

## 10 Servicing

### 10.1 Saw head

Drawing items refer to fig. 6

Pos.	Pc.	Description	GOLD II Autopsy	
			50-60Hz / 220-240 V	50-60Hz / 110-120 V
			HB 8891	HB 8891V
10	1	Saw head housing	E 8810-01GO	
20	1	main shaft / Fork	E 8810-20/1	
30	1	Front floating bearing	E 8810-12	
40	2	Head Screw with washer	E 8810-13	
50	1	Back floating bearing	E 8810-15/1	
60	1	retaining ring	E 8810-20/2	
70	2	Bearing screw	E 8810-19	



**Fig. 6:**  
Explosion view of the  
saw head

## 10.2 Saw motor

The drawing items refer to fig. 7 to 9, next page.

Pos.	Pc.	Description	GOLD II Autopsy	
			50-60Hz / 220-240 V	50-60Hz / 110-120 V
			HB 8891	HB 8891V
10	1	Motor housing	E 8820-00SW	E 8820-00SW
20	1	Switching rod	E 8820-01	E 8820-01
30	1	Switching slide	E 8820-02	E 8820-02
40	1	Pole housing with winding	E 8820-03	E 8820-04
50	2	Ejot Delta PT screw	E 8820-05	E 8820-05
60	1	Air guiding ring	E 8820-06	E 8820-06
70	2	Brush holder	E 8820-07	E 8820-07
75	2	Plug connector	E 8820-08	E 8820-08
80	2	Carbon brush	E 8820-09	E 8820-09
90	1	Contact spring	E 8820-10	E 8820-10
110	1	Electronic circuit	E 8820-11	E 8820-12
115	1	Fuse	E 8820-13	E 8820-14
116	1	Pressure pad for fuse	E 8820-15	E 8820-15
130	1	Cable clamping bridge	E 8820-16	E 8820-16
150	1	Lid	E 8820-17SW	E 8820-17SW
155	1	Pressure pad for lid	E 8820-18	E 8820-18
160	1	Ejot Delta PT screw	E 8820-19	E 8820-19
170	5	Ejot Delta PT screw	E 8820-20	E 8820-20
190	1	Protective hose	E 8820-21	E 8820-21
250	1	Anchor	E 8820-22	E 8820-23
260	1	Deep groove ball bearing	E 8820-26	E 8820-26
270	1	Deep groove ball bearing	E 8820-27	E 8820-27
300	1	Intermediate bearing	E 8820-28	E 8820-28
310	1	Bearing bush	E 8820-29	E 8820-29
320	1	Deep groove ball bearing	E 8820-32	E 8820-32
330	4	Ejot Delta PT screw	E 8820-34	E 8820-34
340	1	Parallel pin	E 8820-36	E 8820-36
180	1	Cable standard "Europe", 3-pin	E 8825-01	-
180	1	Cable „USA“, 2-pin	-	E 8825-02-V
180	1	Cable „Australia“, 3-pin	E 8825-03-A	-
180	1	Cable „USA“, 3-pin	-	E 8825-04-W
180	1	Cable „UK“, 3-pin	E 8825-05-G	-
180	1	Cable „Switzerland“, 2-pin	E 8825-06-S	-
180	1	Cable „Aspiration“, 2 pin	E 8825-07-C	-
180	1	Cable „Aspiration“, 2 pin	-	E 8825-07-CV

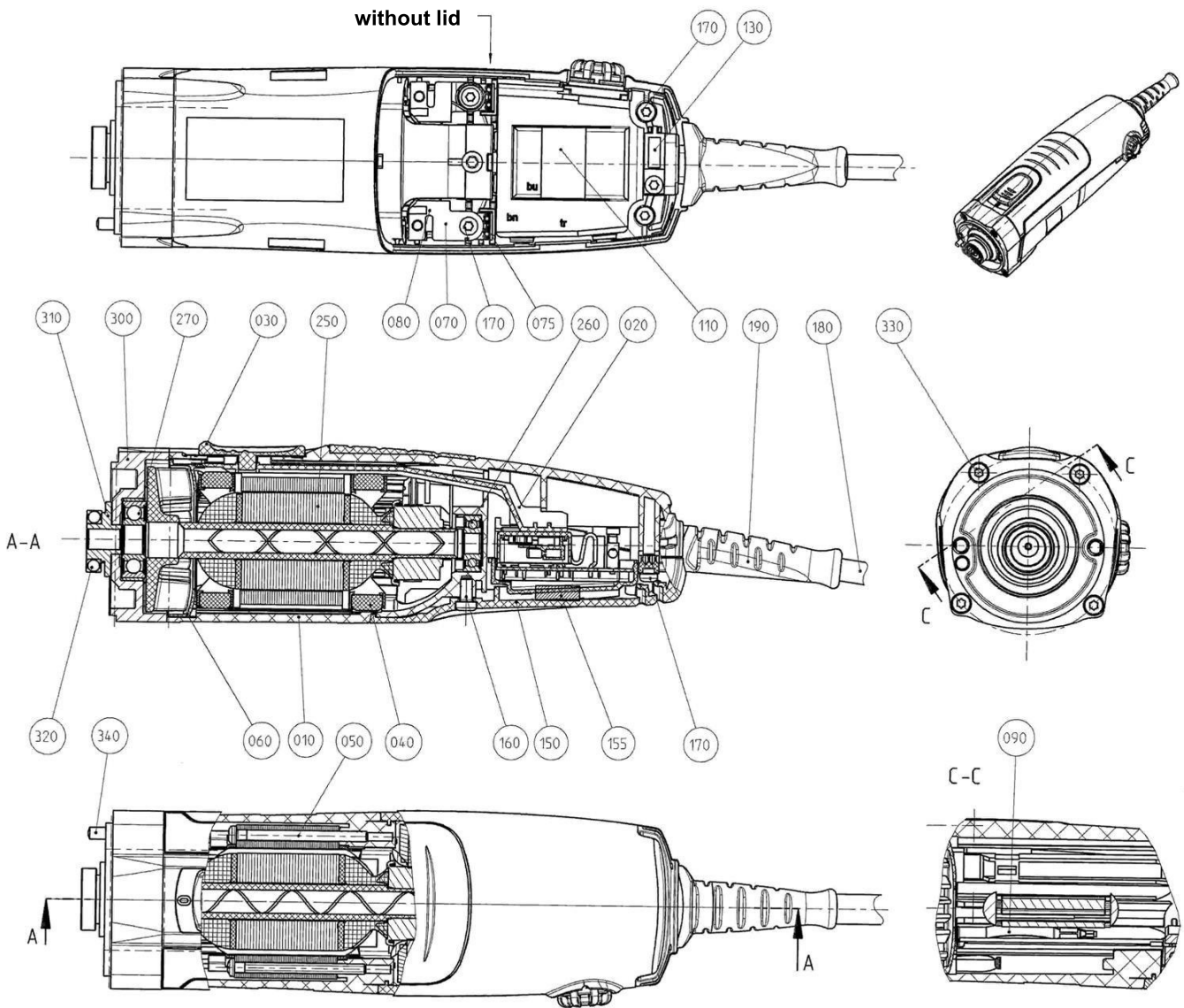


Fig 7:  
Motor drawing

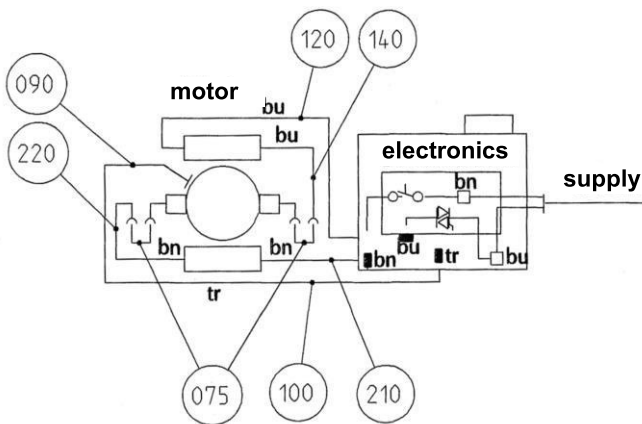


Fig 8  
Motor terminal plan

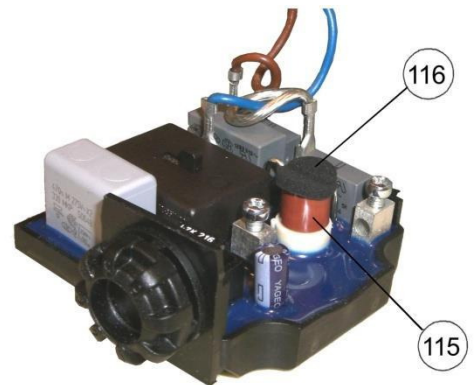


Fig 9:  
Electronic circuit

## 11 Warranty

We provide a guarantee for HEBU cast cutting saws in accordance with statutory and country-specific legislation (proof of purchase by invoice or delivery note). The period of warranty is 18 months. In the event of material or production defects, we provide free repair of the device. Any attempt to carry out unauthorized repairs will result in forfeiture of your warranty cover.

Damage caused by incorrect handling, overloading or normal wear and tear is not covered by the warranty. Please contact our aftersales service department.

In case of warranty claims and repairs, please enclose a copy of the invoice or delivery note with the device.

## 12 Environmental protection

Any packaging materials, disused devices and accessories must be sent for environmentally friendly recycling or disposal. Electrical devices may not be disposed of with the household waste but taken to the local disposal and recycling facility for electrical devices. For more information on this subject, consult your specialist dealer.



## 13 Specifications

Model	HB 8891 (A / G / S)	HB 8891 (B / V)
Mains connection	220-240 Volt, 50/60 Hz.	110-120 Volt, 50/60 Hz.
Rated current consumption	250 Watt	250 Watt
Current type	1 ~	1 ~
Oscillations	ca. 12000 – 21000 min <sup>-1</sup>	ca. 12000 – 21000 min <sup>-1</sup>
Weight	1,3 kg	1,3 kg
Protection class	II <input type="checkbox"/>	II <input type="checkbox"/>
IP Code	IP2X	
Noise level (A-graded)	Typically 75 dB (A). The noise level during sawing can exceed 85 dB (A). From 85 dB (A), wear ear protectors!	
Hand-arm vibration	Typically lower than 2.5 m/s <sup>2</sup> . Measured values determined in accordance with EN 50 144.	

## 14 Manufacturer and aftersales service address

**HEBUmedical GmbH**

Badstraße 8

78532 Tuttlingen

Germany

Tel: +49 74 61 / 94 71 – 0

Fax: +49 74 61 / 94 71 – 22

eMail: [service@HEBUmedical.de](mailto:service@HEBUmedical.de)

Web: [www.HEBUmedical.de](http://www.HEBUmedical.de)

