

GB  Application guidance

Oscillating plaster saw

Content

1	Scope of delivery	2
2	Safety remarks	2
3	Scope	2
3.1	Intended Use	2
3.2	Contraindications	2
4	Mounting / exchanging the saw blade	3
4.1	Releasing the retaining screw / removing the old saw blade	3
4.2	Inserting the new saw blade	3
5	Operation	3
5.1	Opening plaster casts	3
6	Cleaning and sterilization	4
7	Warranty	4
8	Environmental protection	4

29831



SCHWERT
SWORD · ESPADA
EPEE · SPADA



A. Schweickhardt GmbH & Co. KG

Hersteller zahnärztlicher und
chirurgischer Instrumente

Tuttlinger Str. 12
78606 Seitingen-Oberflacht, Germany

Tel.: +49 7464 98910-700

contact@schwert.com
www.schwert.com

SCHWERT KUNDENINFORMATION SWORD CUSTOMER INFORMATION



www.schwert.com/
en/media-library/

seit / since 1896

MADE IN GERMANY



SCHWERT
SWORD · ESPADA
EPEE · SPADA

Oscillating plaster saw

1. Scope of delivery

- REF 29831** Oscillating plaster saw, 220 V with 2 blades
- REF 29821-50** Circular saw blade, dia. 50 mm, x-bite
- REF 29821-65** Circular saw blade, dia. 65 mm, x-bite

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:



Before using the saw, carefully read through these operating instructions and the valid national occupational safety regulations and act accordingly. Please keep these operating instructions for later reference and always include them if the device is sold or passed on to third parties.



Application in accordance with the intended application: This device is intended for sawing open plaster casts.



Never rivet or screw signs or symbols onto the device, as this can render the protective insulation ineffective. We recommend using adhesive signs.



Only ever use undamaged plugs and cables. Check cables and plugs regularly.



The mains voltage and specified voltage rating shown at the device must agree.



Only use original accessories.



Wear personal protective gear such as safety goggles, hearing protectors and gloves.



This device may only be used in hospitals, practices and orthopedic centers. The device must not be operated in areas at risk from explosion.

Manufacturer's guidelines - Electromagnetic emissions

The product is intended for use in the environment specified below. The customer or the user should assure that the product is used in such an environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The product uses RF energy only for its internal function. Therefore, its RF emission is very low and is unlikely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The product is suitable for use in facilities other than residential areas and those directly connected to the public power supply network, which also supplies buildings used for residential purposes, provided that the following warning is observed: Warning: The product is intended for use by medical professionals. In residential areas, this product may cause radio interference, in which case it may be necessary to take appropriate remedial measures, such as new orientation, new arrangement or shielding of the product, or filtering the connection to the site.
Harmonic emissions IEC 61000-3-2	Class A	
In accordance with IEC 61000-3-3 *Emission of voltage fluctuations / flicker emissions*		

Manufacturer's guidelines - Electromagnetic immunity

The product is intended for use in the environment specified below. The customer or the user should assure that the product is used in such an environment.

Immunity test	IEC 60601 test level	In accordance	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 15 kV air	Yes	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	Yes	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Yes	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% U _r *; ½ period at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U _r *; 1 period and 70 % U _r *; 25/30 periods Single phase: at 0 degrees 0% U _r *; 250/300 periods	Yes	Mains power quality should be that of a typical commercial or hospital environment. If the user of the product requires continued operation during power mains interruptions, it is recommended that the product is powered from an uninterruptible power supply or battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	Yes	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

*NOTE: U_r is the mains voltage prior to application of the test level.

Guidelines and manufacturer's declaration - Electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that they are used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V _{eff} 150 kHz to 80 MHz 6 V _{eff} * in ISM-Frequency bands 150 kHz to 80 MHz	3 V _{eff} 150 kHz to 80 MHz 6 V _{eff} * in ISM-Frequency bands 150 kHz to 80 MHz	Portable and mobile radios should not be used at a distance (including wires) less than the recommended protective distance of 30 cm from the device. The field strength of stationary radio transmitters determined during an on-site investigation should be below the compliance level at all frequencies. ^a Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz	3 V/m 80 MHz to 2.7 GHz	

Note These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a The ISM bands between 150 kHz and 80 MHz are 6,765 MHz to 6,795 MHz, 13,553 MHz to 13,567 MHz, 26,957 MHz to 27,283 MHz and 40,66 MHz to 40,7 MHz.

^b The field strength of stationary transmitters, such as base stations of radio telephones and land mobile radios, amateur radio stations, AM and FM radio and television transmitters, cannot theoretically be predicted exactly. In order to electromagnetic environment with regard to stationary transmitters, a site investigation should be considered. If the measured field strength at the site where the equipment is used exceeds the above compliance levels the proper functioning of the device must be observed. In case of unusual operating behaviour, additional measures may be necessary, such as a change in alignment or another location of the device.

Recommended separation distances between portable and mobile RF telecommunications equipment and the models listed

Determination against high-frequency wireless communication devices

Frequency band (MHz)	Test frequency (MHz)	Modulation	Compliance level (V/m)
380-390	385	Puls ^a - 18 Hz	27
430-470	450	FM ± 5 kHz stroke or Puls ^a - 18 Hz	28
704-787	710, 745, 780	Puls ^a - 18 Hz	9
800-960	810, 870, 930	Puls ^a - 18 Hz	28
1700-1990	1720, 1845, 1970	Puls ^a - 217 Hz	28
2400-2570	2450	Puls ^a - 217 Hz	28
5100-5800	5240, 5500, 5785	Puls ^a - 217 Hz	9

Note A minimum protective distance of 30 cm should be maintained between portable RF telecommunications equipment transmitting in the given frequency band and the equipment. This includes mobile phones, WLAN and RFID and Bluetooth devices. Failure to do so may result in degradation of the device's performance.

^a The pulse modulation is defined as a square wave signal with 50% duty cycle.

3 Scope

A hand-held electric-driven device (AC) to cut casts or synthetic materials. Usually used during the removing of casts.

3.1 Intended Use

Plaster saws Accessories, Saws: A hand-held, power-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 rotating or vibrating rather than by sawing.



Oscillating plaster saw

4 Mounting / exchanging the saw blade



**Danger of injury due to unintentional activation.
Disconnect the plug before changing the saw blade.
If applicable use thick gloves to prevent injury when
handling the saw blade.**

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.

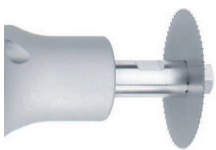


Fig. 2: Inserting the saw blade

5 Operation

Switching on: Slide the switch forward from OFF to ON (1)
Switching off: Slide the switch back from ON to OFF (0)



Fig. 3: Switching ON and OFF

Recommended use:

We recommend a maximum continuous operation of 8 minutes, because this saw is not ventilated due to its structural design and its serializability.

Thereafter, a cooling time of 30-40 minutes should be done to get the saw back to a comfortable temperature.

5.1 Opening plaster casts

Apply the SCHWERT 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 approx. 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 advantageous 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 SCHWERT 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 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. Then disconnect the power supply from the power receptacle.
- ▶ 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°.



Oscillating plaster saw

6 Cleaning and sterilization



Danger of injury through unintentional activation. Disconnect the plug before any cleaning or maintenance work.

The Oscillo-Saw Diamond and the cable between handpiece and power supply are waterproof and can be cleaned and sterilized as follows:

On the basis of international standards (EN ISO 15883) and national directives, only validated machine cleaning and disinfection methods may be used.

The chemical cleaning should take place at 40°C -60°C for at least 5 minutes. We recommend products with a pH-value within 9-10. MediClean forte from Dr.Weigert.

The thermal disinfection should take place at temperatures of between 80 and 95°C, with an exposure time as outlined in EN ISO 15883.

Ensure adequate drying by the cleaning and disinfection device or using other suitable measures. The drying temperature should not exceed 95°C to avoid material-related ageing processes.

Prior to sterilization, products must undergo cleaning and disinfection, be rinsed off without residue using demineralized water and subsequently dried. SCHWERT recommends using a validated steam sterilization process (e.g. sterilizer in compliance with EN 285 and validated in accordance with DIN EN ISO 17665-1).

On using the fractionated vacuum method, sterilization must be performed with at least 134° C (USA 132° C) with a minimum dwell period of 4 minutes and subsequent vacuum drying.

Information on instrument preparation and sterilization:

- ▶ Use cleaning and/or disinfection agents with a pH-value within 9-10.
- ▶ Please observe manufacturer instructions regarding dosage, exposure time and renewal of solutions.
- ▶ Do not use hard brushes or coarse abrasive cleaners.
- ▶ Never leave instruments in cleaning or disinfection agents for longer than the specified time.
- ▶ Only used demineralized water for rinsing.
- ▶ Observe manufacturer instructions of cleaning and sterilizing equipment.

Wipe disinfection are suitable for power supply and power cord. For this purpose, we recommend products with a pH-value within 9-10, e.g. MediClean forte from Dr. Weigert.

7 Warranty

We provide a guarantee for SCHWERT cast cutting saws in accordance with statutory and country-specific legislation (proof of purchase by invoice or delivery note). The minimum warranty period is 12 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.

8 Exceptions !

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.



Explanation of symbols

	Consult instructions for use		CE marking
	Manufacturer		Caution

A. Schweickhardt GmbH & Co. KG

Hersteller zahnärztlicher und chirurgischer Instrumente

Tuttlinger Str. 12
 78606 Seitingen-Oberflacht, Germany

Tel.: +49 7464 98910-700

contact@schwert.com
 www.schwert.com

