



WUHU RUIJIN MEDICAL INSTRUMENT & DEVICE CO., LTD
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Medical Electric Oscillating saw

Application and Feature:

Medical electric swing saw(Picture 1)is used for joint Surgery. Medical Electric Swing saw have been Gradually replaced the Traditional Industrial Drill and saw which only can be fumigating. It can be autoclavable by high temperature and 1.6Mpa High Pressure, can be killed some of bacteria and verses which fumigating can not.it also shorten the sterilization. Just under High temperature and high pressure,just 20 minutes,win the valuable time for the patient.the device is optional,and its good looks, small size, light weight, no wires, easy to carry, safe operation.



Picture 1

Composition:

The surgical power tool is composed of handpiece, charger, battery. The shell is hermetic. The charger is not used for medical instrument.



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Main Technical Feature:

Hand Piece	Working Voltage	14.4V
	Output Power	$\geq 20W$
	Unit rise in temperature	$\leq 25^{\circ}C$
Charger	Input Power	AC 220V, 50Hz
	Output Power	14.4V, 700mA
	Input Power	30VA
Battery	Voltage	14.4V
	Charging time	About 3 hours

Technical Data:

Non-load rotating Frequency	$\geq 16000r/min$
Non-load noise	$\leq 90dB (A)$

Products Classification:

Medical electric saw drill's classification is based on shocking protection, the motor belongs to inner power B type device, charger belongs to II – B type common device; the device can not be used in flammable anaesthesia air & air mix or oxygen mix air.

Marking introduction:  Working condition: Start up from cold status, run 1 minute with load condition, then stop working, after the instrument become cold, then work again.

Marking Introduction: : Class II type instrument;  : B type Instrument

Mark: L: forward R: reversal



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Battery Cover Mark: OPEN CLOSE

Explanation:

The product is professional medical instrument, the user must be the person who has relative technical experience or has been trained.

The product should be sterilized before using. The product should be test before performance: put the battery into handpiece, depress the trigger then the motor should be running, exchange the CW/CCW switch, the motor should be reverse running, otherwise there are something wrong with the handpiece, stop using immediately and contact to the seller, return the instrument to the factory for maintenance.

1:The saw blade’s insertion and release:

Depress the saw blade lock button, insert the saw blade to the lock button, then loosen the button, the saw blade will be locked tightly. The saw blade should be changed if it’s blunt.

2. Battery insertion and release:

Take off the battery cover, put the battery transfer ring on it, hold the battery with a sterile gauze, make the battery small side down, aim the concave channel to the channel of the handpiece, remove the gauze and cover the battery cover. After the procedure finished, hold the handle and shake it, then the battery will drop automatically.

Note: To avoid damage, don’t drop the battery to the ground.



Picture 2



picture 3

3.Charging and battery instruction



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The charger doesn't belong to medical instrument. During charging, the battery is separate from handpiece. Connect the charger to the power supply out of operation room, the power indicator light and charging indicator light will be on. Make the battery small side down, insert the battery to the charger, the charging indicator light will change from green to yellow, that mean the charging start, after 3 hours, the yellow indicator light will turn back to green, that mean the charging finished. The battery can not be used immediately after charging, it must be cold down first, then be covered by sterile protection cover and brought to operation room. The full charged battery can be used under full load condition no less than 8 minutes. The battery is J-AA 1800Ni-MH green battery, without memory, it's no need to discharge before charging.

If the battery will not be used for a long time, you should charge the battery timely (15 days) to confirm its life.

Testing the power capacity, connect the charger to the power supply, insert the socket on the battery to the charger, the indicator light turn to green mean the capacity is full, otherwise mean the capacity is not full, should charge it again or replace the battery. Normally, the battery can be charged and discharged for 500 times.

Note: Don't put the battery to fire, otherwise it will explode, it should be put into the special recycle box.

Attention:

1. Do check the drill bit's jumping before procedure performance, if it jump too big range, it can not be used. Check the drill if sharp, if not should be burnished. When the tool used to cut the object, then it should be fixed and without vibrating. If the drill bit is broken, please replace it immediately.
2. The drill bit and saw should be fixed tightly, a special chunk key can help you locking drill bit. Make sure the saw blade is properly seated and secure, pull the blade to test if it's fixed after inserting.
3. There is a F type, 10A fuse inside battery, if the instrument is not able to running when testing, that is to say, the fuse may broken, this situation occurred accompany handpiece broken, don't repair it yourself, contact your seller or factory, send the instrument to factory for a maintenance



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4. The battery should not be sterilized by high temperature and high pressure and can not be stay in handpiece for a long time. If power break occurred during the operation (the instrument stop running), replace the battery immediately.
5. If there are some abnormal voice during performance, or the instrument is too hot, please stop using and contact your seller or factory, send the instrument to factory for a maintenance .
6. Motor rotating speed: according to normal situation, if the speed is too high, may cause the bone burning damage, if the speed is too low means need too long time for an operation, so the optimal speed is very important. 500 r/min is the better choice.
7. Sterilization: The handpiece can be sterilized by high temperature and pressure, or by steam, or immersion. The battery is forbidden to sterilize by high temperature and pressure or immersion.

8. Troubleshooting:

1. The cutting saw blade is not in right position: follow operating manual strictly.
2. Battery lose efficiency: check the battery in time.
3. Battery uncharged: Charge it before operation.
4. Battery un-full charged: Check the battery before operation

Sterilization:

After sterilized according to hospital's sterilization standard, test it before using.

About Quality:

- a) Medical Electric swing saw have tested before send to you, please rest assured to use.
- b) After purchasing the medical electrically operated medical electric swing saw, please check the whole set instrument.



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Cleaning and sterilization:

★ **Note:** battery can not be sterilized by high temperature and high pressure.

1. **cleaning:** The surface of the Hand piece can be cleaned by gauze with water or alcohol, then store it.

2. **Sterilization:** After sterilized according to hospital's sterilization standard, test it before using.

Sterilization Suggestion(for Hand Piece):

Method	Temperature	Time	Dry
Quick without packing cloth	129°C~134°C	10min	8min
Vacuum with packing cloth	129°C~134°C	4min	8min
100% ethylene oxide with cloth	49°C~57°C	150min	Ventilate 8 hours
270F steam with cloth	129°C~134°C	35min	8min
270F steam with cloth	121°C~123°C	50 min	8 min

Note:

1. The battery can not be sterilized by high temperature and high pressure.
2. All the method above is reliable, but the time and the temperature should be controlled in the correct range strictly, otherwise will cause handpiece damage! The charger and battery can not be sterilized.
3. We suggest sterilize by steam of formalin according to hospital's standard, although it's corrosive, but can not damage the motor immediately. Pre-vacuumed sterilizer is recommended, for it's less vapor. Sterilization by epoxy ethane is the best way, neither vapor nor corrosivity.

Commitment: a) the absence of non-professional equipment repair removable parts.

b) if need our medical electric technical data, please kindly contact me.



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Transportation and Storage Condition	Environment temperature range	-10°C ~ +40°C
	Relative humidity range	≤90%
	Air pressure rang	500hPa ~ 1060hPa
Instrument running condition	Environment temperature range	5°C ~ 40°C
	Relative humidity range	≤70%
	Air pressure rang	860hPa ~ 1060hPa
	Charger's power supply	220V±22V; 50Hz±1Hz
	Handpiece power(DC	14.4V±10%

Packing List

part	amount
Hand Piece	1
Charger	1
Battery	1
Saw	2
Sterilization Channel	1
Operating Manual	1
Aluminium Box	1

The picture is only for reference, real products final. Because the technology improved, the customer request or other reasons cause some alteration on the product configuration, product picture, product technical data and so on, this alteration without further notice, real products final. We refuse to accept the responsibility of printing error and configuration change caused error. We are entitled to change the product without further notice.



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Medical Electric Acetabulum Polishing drill

Thank you for using our products,we are honored that we can provide good service for your noble work.Before using medical electric drill and saw,please kindly reading the operating manual carefully.

I: Application and Feature:

Medical Electric drill & saw is one of power tools which used in orthopedic operation.Gradually replaced traditional industrial drill and saw,it can be autoclavable up 135°C high temprature and 1.6Mpa high pressure.can be killed some of bacteria and verses which fumigating can not.it also shorten the sterilization, Just under High temperature and high pressure,just 20 minutes,win the valuable time for the patient.the device is optional,and its good looks,small size,light weight,no wires,easy to carry,safe operation.



Picture 1

II: Composition:

1: One Mainframe
2: One charger
3: One battery
4: One drill chuck
5: One sterilizing channel
6: One aluminum alloy box

III: Model Explanation:

Model	Composition
RJ-JZ-I	Handpiece, charger, battery, drill chuck, sterilizing channel, one aluminum alloy box

IV: Main Technical Data:

Hand Piece	Working Voltage	14.4V
	Output Power	$\geq 20W$
	Unit rise in temperature	$\leq 25^{\circ}C$
Charger	Input Voltage	AC 220V, 50Hz
	Output Power	14.4V, 900mA
	Input Power	30VA
Battery	Voltage	14.4V
	Charging time	About 3 hours

V: Technical Data of acetabulum burnishing drill:

Non-load speed	$\geq 300r/min$
Non-load noise	$\leq 63dB (A)$
Diameter run-out	$\leq 0.5mm$

VI: Classification:

Medical electric multifunction drill and saw's classification is based on shocking protection, the motor belongs to inner power B type device, charger belongs to II – B type common device; the device can not be used in flammable anaesthesia air & air mix or oxygen mix air.

1:Supplement marking:  Working condition: Start up from cold status, run 1 minute with load condition, then stop working, after the instrument become cold, then work again.

2: Marking Explanation:  : II type equipment;  : B type equipment

3: Rotation marking: L:forward R: backward

4: Marking of battery cover: OPEN CLOSE

VII: Explanation:

The product is professional medical instrument, the user must be the person who has relative technical experience or has been trained.

The product should be sterilized before using. The product should be test before performance: put the battery into handpiece, depress the trigger then the motor should be running, exchange the CW/CCW switch, the motor should be reverse running, otherwise there are something wrong with the handpiece, stop using immediately and contact to the seller, return the instrument to the factory for maintenance.

VIII:Warning mark and explanation:

1 、 warning mark: 

2、 Explanation:  Indicate that this products is short-run product,it's running time is 10 minutes.it can not be used constantly for long time.

3 、 Warning: The battery can not be sterilized by high temperature and high pressure and stay long time in hand piece.take off the battery after operation.

Medical electric acetabulum burnishing drill

IX: Charging battery:

a .Connect the charger to the power supply out of operation room,Power indicate light(red light)will be lighting 3 times.

b.Make the battery small side down, insert the battery to the charger,charging indicate light will on,that mean charging start,after one hours later,the red light turn to

green, that mean charging finished. The battery can not be used immediately after charging, it must be cold down first, then be covered by sterile protection cover and brought to operation room. this kind of battery without memory, it's no need to discharge before charging.

X: Battery insert and release:

Take off the battery cover, put the battery transfer ring on it, hold the battery with a sterile gauze, make the battery small side down, aim the concave channel to the channel of the handpiece, remove the gauze and cover the battery cover. After the procedure finished, hold the handle and shake it, then the battery will drop automatically.

Note: To avoid damage, don't drop the battery to the ground.



XI: Rotating direction control:

Turn the switch to the L means CW (clockwise), R means CCW (counter clockwise)

Note: The rotating direction should be changed under the condition of drill stop running.



PICTURE 6

Attention:

1: Do check the drill bit's jumping before procedure performance, if it jump too big range, it can not be used. Check the drill if sharp, if not should be burnished.

When the tool used to cut the object, then it should be fixed and without vibrating. If the drill bit is broken, please replace it immediately.

2: There is a fuse on the charger, if burn out, open the fuse holder with screwdriver (note, must unplug the power) remove the damaged fuse, replace the fuse and then screw on the new fuse holder. Fuse model for the T-250V, Capacity is 2A.

3: There is a F type, 10A fuse inside battery, if the instrument is not able to running when testing, that is to say, the fuse may broken, this situation occurred accompany handpiece broken, don't repair it yourself, contact your seller or factory, send the instrument to factory for a maintenance

4: The drill bit and saw should be fixed tightly, a special chunk key can help you locking drill bit. Make sure the saw blade is properly seated and secure, pull the blade to test if it's fixed after inserting.

5: The battery should not be sterilized by high temperature and high pressure and can not be stay in handpiece for a long time. If power break occurred during the operation (the instrument stop running), replace the battery immediately.

6: If there are some abnormal voice during performance, or the instrument is too hot, please stop using and contact your seller or factory, send the instrument to factory for a maintenance .

XII: Troubleshooting:

1. The cutting saw blade is not in right position: follow operating manual strictly.
2. Battery lose efficiency: check the battery in time.
3. Battery uncharged: Charge it before operation.
4. Battery un-full charged: Check the battery before operation.

XIII: Sterilization:

- 1: Fumigation methods ,such as fumigation, high temperature and high pressure and immersion. the battery is forbidden to sterilize by high temperature and pressure or

immersion.

XIV: About quality:

- 1: Medical Electric Bone Drill have tested before send to you, please feel easy to use.
- 2: After purchasing the medical electrically operated multifunction drill and saw, please prompt check the whole set instrument .

XV: Clearing and Sterilizing:

★ **Note:** battery can not be sterilized by high temperature and high pressure.

1: Sterilizing:

·Place the hand piece on the stainless steel mesh rack 135°C high temperature sterilization for 20 minutes.

2: Cleaning:

The surface of the Hand piece can be cleaned by gauze with water or alcohol, then store it.

XVI: Sterilization Suggestion(for Hand Piece):

Method	Temperature	Time	Dry
Quick without cloth	129°C~134°C	10min	8min
Vacuum with packing cloth	129°C~134°C	4min	8min
100%100% ethylene oxide with cloth	49°C~57°C	2hours30min	Ventilate 8 hours
270F steam with cloth	129°C~134°C	35min	8min
270F steam with cloth	121°C~123°C	50min	8min

XVII: Attention:

1. The battery can not be sterilized by high temperature and high pressure.
2. All the method above is reliable, but the time and the temperature should be controlled in the correct range strictly, otherwise will cause handpiece damage! The charger and battery can not be sterilized.
3. We suggest sterilize by steam of formalin according to hospital's standard, although it's corrosive, but can not damage the motor immediately. Pre-vacuumed sterilizer is recommended, for it's less vapor. Sterilization by epoxy ethane is the best way, neither vapor nor corrosivity.

Commitment:

- a) this products have no parts can be removed by non-professional.
- b) if you need technical data, please contact us.

Transportation and storage condition	Environment temperature range	-10℃ ~ +40℃
	Relative humidity range	≤90%
	Air pressure rang	500hPa ~ 1060hPa
Instrument running condition	Environment temperature range	5℃ ~ 40℃
	Relative humidity range	≤70%
	Air pressure rang	860hPa ~ 1060hPa
	Charging Voltage	220V±22V; 50Hz±1Hz
	Hand piece electricity source(DC)	12V±10%

XVIII: Note and after-sales service

1: The medical electric saw, drill only the equivalent of medical doctors or professional use and is a short time, can not long continuous use, should be read carefully before use instructions.

2: Charger power cord should not be traces of oil, solvents and other chemicals, erosion or mechanical damage, if it is found to be immediately replaced.

3: The company's medical electric saw, drill Users may not disassemble or repair, or responsibility by the user, the Company is not responsible for repairs. Man-made damage not covered under warranty, the costs incurred by the users themselves

4: In need of repairing during warranty period,should be packaged well before transportation,freight self.

5: Your need is our service,improve the service system,at your service.

XIX: Enclosed: Packing list

part	Quantity
Hand piece	1
Charger	1
Battery	1
Sterilizing Channel	1
Drill chuck	1
Aluminium alloy box	1