

Nemo

POWER TOOLS

THE WORLD'S FIRST
SUBMERSIBLE
WATERPROOF
ELECTRIC SAW.



NEMO

RECIPROCATING SAW

Functional Description and Specifications

Intended Use

The Nemo reciprocating saw is the world's first submersible reciprocating saw. Lightweight, powerful, and depth rated to 164 ft (50m), it can reach 3,000 strokes per minute and boasts a keyless blade clamp.

Packing List

Your Nemo reciprocating saw is packaged together with the following accessories:

- ◆ Saw blade
- ◆ (2) Rechargeable 6 Ah Lithium-ion (Li-ion) battery pack(s)
- ◆ Battery charger
- ◆ Carrying case
- ◆ Hand pump

Technical Specifications

Nemo Reciprocating Saw

Model	RS-18-6Li-50
Battery pack voltage	18V Li-ion
Battery cell specification	3Ah / 6Ah
Strokes per minute	0-3000
Brush motor	300W
Stroke length	0.55 in (14mm)
Net weight (with 6Ah battery)	9.4lbs (4.27kg)
Working temperature	32-140°F (0-60°C)
Submersible up to	164ft (50m)



Caution: You must pressurize your reciprocating saw before you can use it underwater, as described in *Pressurizing Your Reciprocating Saw for Underwater Use*, pages 8-9.

Battery Charger

Model	XVE-2100400
Approximate charging time	45 minutes
Charging output voltage	21V
Charging input voltage	100V-240V

Safety Warnings



Warning: Read all safety warnings and save them for future reference. Failure to adhere to these warnings can result in serious injury and damage to the equipment.

Work Area Safety

- ◆ Perform all work in accordance with the local, state, and government occupational safety and health guidelines.
- ◆ Keep your work area clean and well lit.
- ◆ Do not operate the reciprocating saw in explosive atmospheres, such as around flammable liquids, gases, or dust.
- ◆ Keep bystanders away when operating the reciprocating saw.

Personal Safety

- ◆ To prevent the reciprocating saw from starting unintentionally, ensure nothing is pulling on the trigger before connecting a battery pack or carrying the tool.
- ◆ Disconnect the battery pack from the reciprocating saw before you change the saw blade or store the tool.
- ◆ Stay alert and use common sense when operating the reciprocating saw. Do not use it when you are tired or under the influence of drugs, alcohol, or medication.
- ◆ Do not overreach. Maintain proper footing and balance for control of the reciprocating saw in unexpected situations.
- ◆ Use personal protective equipment. It is recommended to wear eye protection as well as a P2 filter-class respirator.
- ◆ Observe the relevant regulations in your country for the materials to be worked. Dust from materials such as lead-

containing coating, some wood types, minerals, and metal can be harmful to your health.

Power Tool Safety

- ◆ Store idle power tools out of reach of children and do not allow people unfamiliar with the reciprocating saw or these instructions to operate the saw.
- ◆ Maintain your power tools. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the reciprocating saw's operation. If damaged, have the reciprocating saw repaired by an authorized service technician.



Caution: Under no circumstances should the reciprocating saw be opened for repairs or any other purpose by anyone other than an after-sales service technician authorized by Nemo Power Tools. Opening the power tool invalidates the manufacturer warranty.

- ◆ Use the reciprocating saw, accessories, and tool bits in accordance with these instructions and in the manner intended for a reciprocating saw, considering the working conditions and the work to be performed. Consult the local, state, and government occupational safety and health guidelines before operating a power tool.
- ◆ Be prepared for high reaction torque that can cause kickback and switch off the power immediately if the saw blade jams. The saw blade can jam when the reciprocating saw is subject to overload, or if it becomes wedged in the workpiece.
- ◆ Hold the reciprocating saw with a firm grip.

- ◆ Work only on secured, stable items. Do not hold a workpiece in your hand. Secure the workpiece with clamping devices or in a vice to ensure safety.
- ◆ Always wait until the reciprocating saw has come to a complete stop before placing it down.

Rechargeable Battery Safety

- ◆ Only use the battery pack supplied with your reciprocating saw.
- ◆ Improperly connecting the battery, using the wrong type of battery, connecting an old battery, or connecting a fully drained battery can cause the battery to vent hydrogen gas, creating an increased risk for explosion.
- ◆ When the battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, and screws, which can make a connection from one terminal to another.
- ◆ Store the battery pack in a low-humidity area within a temperature range of 32°-95°F (0°C-35°C).
- ◆ When transporting and storing your reciprocating saw, remove the battery pack from the tool.
- ◆ Do not open the battery.
- ◆ Protect the battery against heat, including continuous sun exposure and fire.
- ◆ When the battery is defective, liquid can escape and come into contact with adjacent components.
- ◆ Use only original batteries with the voltage listed on the nameplate of your reciprocating saw. Using other batteries, such as imitations, reconditioned batteries, or other brands, may lead to personal injury as well as property damage due to battery explosion.

Battery Charger Safety

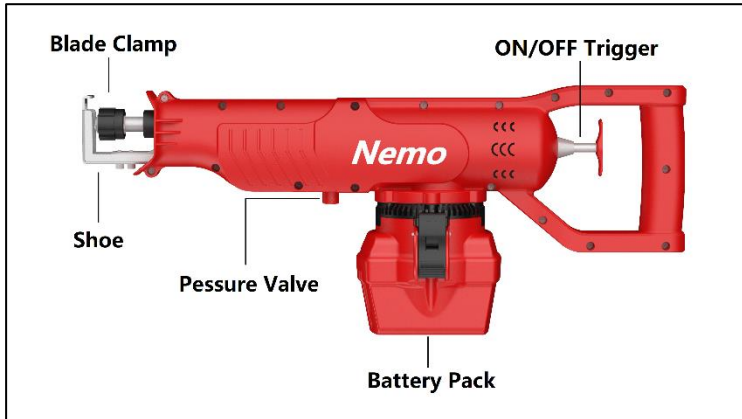
- ◆ Only use the battery charger provided with the reciprocating saw to recharge the battery. Only this battery charger is matched to the lithium-ion (Li-ion) battery of your reciprocating saw.
- ◆ Protect the battery charger from rain and moisture. The battery charger is not waterproof.
- ◆ Do not charge other batteries with the battery charger. The battery charger is only suitable for charging the battery pack supplied with the reciprocating saw.
- ◆ Before use, always check the battery charger, cable, and plug. If defects are detected, do not use the battery charger.
- ◆ Never open the battery charger. Instead, have it opened and repaired only by qualified personnel who will use original replacement parts.

Battery Disposal Safety

- ◆ Return all run-down batteries that are fully discharged to a battery collection point near you. Before the disposal of a battery, ensure that it is fully drained, and that a small piece of tape covers each pole.
- ◆ Battery disposal and battery collection point availability varies by country and jurisdiction. Always follow your local rules and laws when disposing of your reciprocating saw's battery.

Getting Started with Your Nemo Reciprocating Saw

Your Nemo reciprocating saw (RS-18-6Li-50) includes the following main components:



Pressurizing Your Reciprocating Saw for Underwater Use

Your reciprocating saw can be used in any wet conditions, and can be submerged and used underwater to depths of 164ft (50m). You must pressurize the reciprocating saw before submerging it to any depth.

1. Remove the red cap from the pressure valve on the bottom of the reciprocating saw.
2. Attach a pump to the valve.

3. Pressurize the reciprocating saw according to the depth to which you are going to submerge it, as follows:

Depth in meters	Depth in feet	Pressure
Up to 5m	16 feet	Minimum 15 psi (1 bar)
Up to 10m	33 feet	Minimum 29 psi (2 bar)
Up to 20m	66 feet	Minimum 44 psi (3 bar)
Up to 30m	98 feet	Minimum 58 psi (4 bar)
Up to 40m	131 feet	Minimum 73 psi (5 bar)
Up to 50m	164 feet	Maximum 87 psi (6 bar)



Caution: Never add more than 87 psi (6 Bars) of pressure to the reciprocating saw.



Caution: Under no circumstances should the reciprocating saw be pressurized underwater. Pressurizing the tool underwater will cause the tool to burn out.

Charging the Battery

The Li-ion batteries are supplied partially charged. Before using the reciprocating saw for the first time, charge the battery to full capacity using the battery charger provided with the saw.

You can charge a battery at any time without reducing its service life. The battery charger detects the charging condition of the

battery and charges it with the optimum current for its temperature and voltage. This lengthens the battery life and leaves it fully charged when stored in the charger. Interrupting the charging process does not damage the battery.



Caution: Only use the battery charger provided with the reciprocating saw. Only this battery charger is matched to the Li-ion batteries supplied with your saw.



Danger: Ensure that the voltage of the power supply corresponds with the data given on the nameplate of the battery charger.



Danger: Only use the charger in a dry environment. The charger is not waterproof. Never attempt to charge the battery under water.

1. Connect the main plug of the battery charger to an electrical outlet. A steady green light on the battery charger indicates that the charger is ready for operation.
2. Plug the battery charger's connector into the socket on the top of the battery pack.



The battery begins charging as soon as it is connected to the charger.

- ◆ A steady red light on the battery charger indicates that the battery is charging.

- ◆ A steady green light on the battery charger indicates that the battery is fully charged.



Note: The battery is equipped with an NTC temperature controller that only allows it to be charged when its temperature is between 50°F - 104°F (10°C -40°C), ensuring a long battery service life.

3. When you are ready to use the battery, unplug the battery from the charger and attach it to the reciprocating saw.

Changing the Battery



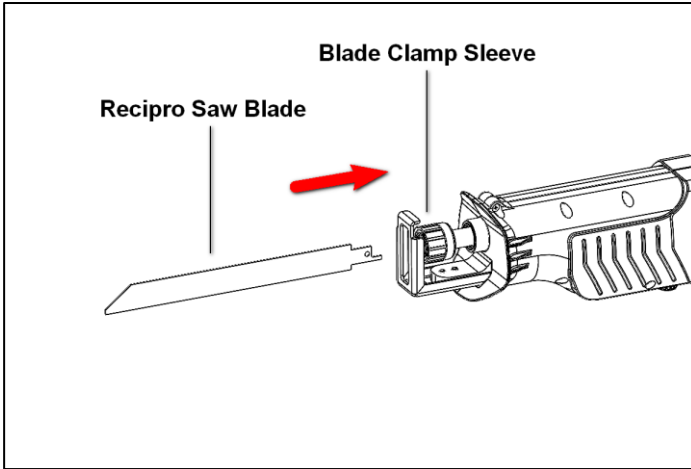
Caution: Use only a Li-ion battery from the original factory with the voltage listed on the nameplate of your reciprocating saw. Using other batteries not suitable for the saw can lead to malfunctions, cause damage to the power tool, and pose a fire hazard.

- ◆ To attach a battery pack to the reciprocating saw, align the battery pack socket with the 3-prong connector at the base of the tool body, then push the battery up until it clicks into place. Lock the clips on the sides of the battery pack to secure it in position.
- ◆ To remove the battery pack from the saw, unlock the clips on the battery pack that secure it in position, and then pull down on the battery pack to remove it from the socket.

Installing a Saw Blade

1. Remove the battery from the reciprocating saw.
2. Turn the chuck on the blade clamp clockwise to unlock it.

3. Slide the saw blade into the blade clamp sleeve until it can't go any further.



4. Release the chuck. The lock will automatically reset, securing the saw blade.
5. To see if the saw blade is secured, please carefully pull on the blade as if to remove it. If it does not move, your tool is ready to use. If the saw blade does move, unlock the clamp and restart the process.



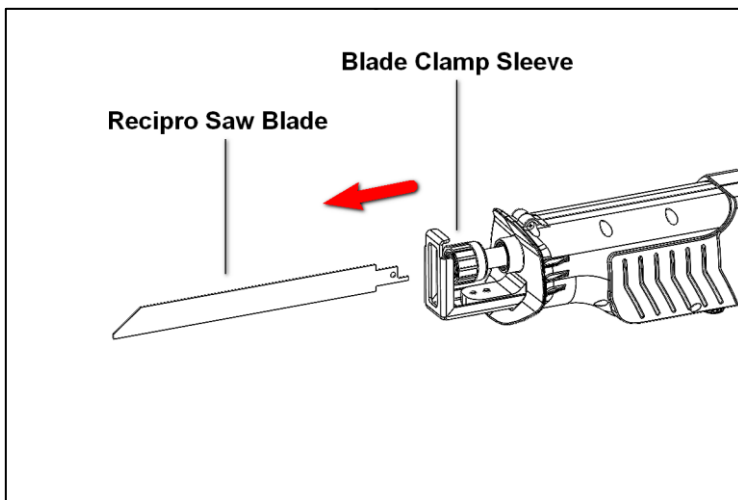
Caution: Always make sure the reciprocating saw is turned off and the battery is removed before installing or removing a saw blade.



Caution: Always test the saw blade's installation before you start the reciprocating saw. Operating the reciprocating saw with an improperly installed blade can result in personal injury and/or property damage.

Removing a Saw Blade

- Remove the battery from the reciprocating saw.
- Turn the chuck on the blade clamp clockwise to unlock it.
- Gently pull the saw blade out of the clamp.



Caution: After use, the blade will be hot. Allow it to cool before attempting to remove it, or use a glove or cloth to protect your hand from burns.

Operating the Reciprocating Saw

Switching the Reciprocating Saw On and Off

Your reciprocating saw features a switch trigger.

- ◆ To start the reciprocating saw, pull the switch trigger. Increase pressure on the trigger to increase the speed of the saw, and decrease pressure to slow the speed of the saw.
- ◆ To stop the saw, release the switch trigger.

Performing Sawing Operations

- ◆ Press the shoe of the reciprocating saw firmly against the object on which you're working.
- ◆ Make a pilot groove using a low speed and light, even pressure to prevent skipping and bouncing. Increase the speed to continue cutting.
- ◆ Maintain a steady hand and even pressure when cutting.
- ◆ When cutting through metal, use a cutting oil to maintain the lifespan of your blade.




Caution: Always wear gloves and safety goggles when operating the reciprocating saw. Failure to do so could result in personal injury and/or property damage.

Best Practices for Underwater Operation

Your reciprocating saw is designed to be waterproof. To obtain the maximum serviceable life of your tool, adhere to the following best practices when using the reciprocating saw underwater:

- ◆ You must pressurize the reciprocating saw before you can use it underwater, as described in *Pressurizing Your Reciprocating Saw for Underwater Use*, pages 8-9 .
- ◆ Do not exceed the maximum recommended operational depth.

- ◆ The reciprocating saw is a high-tech piece of equipment and should be treated with care. Its watertight seals may be damaged if it is dropped.
- ◆ The reciprocating saw can be used in saltwater.
 -  **Note:** After using the reciprocating saw in saltwater, immediately rinse it in fresh water to remove all salt residue.
- ◆ Before storing the reciprocating saw in the carrying case after use in saltwater, rinse it with fresh cool water. Dry the reciprocating saw with a lint-free cloth or allow it to air dry.
- ◆ Treat the high-quality battery with care. Keep it fully charged, dry, and ready for use. Always remove it from the reciprocating saw and store it in the carrying case when not in use.
- ◆ Before inserting the battery into the tool, make sure that the connector and socket are clean and in good repair.

How to preserve the battery life and store your Nemo Power Tools

Before using a Nemo Power Tool, ensure that the battery for the tool has been fully charged to 100%.

Do not operate a Nemo Power Tool, when the battery of the tool is low in power.

If the battery power becomes low, stop work immediately and recharge the battery.

When not in use, the Nemo Power Tool should be safely stored away with the battery disconnected from the power tool.

Never leave the battery connected to the Nemo Power Tool longer than 24 hours when not in use.

Make sure there is no metal or other things to block the connector after every dive and keep the brass pin dry when storing.

Maintenance

Routine care and maintenance will ensure your reciprocating saw operates reliably and efficiently throughout its lifespan.

If your reciprocating saw is damaged or faulty, have it repaired by an authorized service technician.



Caution: Under no circumstances should the reciprocating saw be opened for repairs or any other purpose by anyone other than an after-sales service technician authorized by Nemo Power Tools. Opening the reciprocating saw invalidates the manufacturer warranty.

Dealing with Flooding

If you use the reciprocating saw at depths greater than 164 feet (50m), or if you mishandle or drop the saw, there is a chance that it will flood during use underwater. If this occurs:

1. Turn the saw off immediately and return to the surface.
2. Remove the battery and allow the saw and battery to dry.
3. Attach the battery to the saw and check the saw's functionality.

If the saw does not turn on or does not operate properly, remove the battery and take the saw to an after-sales service technician authorized by Nemo Power Tools.

Servicing the Reciprocating Saw

If your reciprocating saw is damaged or faulty, have it repaired by an after-sales service technician authorized by Nemo Power Tools.

Transporting the Reciprocating Saw

For maximum protection, always transport your reciprocating saw secured in its carrying case, with the battery removed.

The battery pack has effective protection against internal over-pressure and short-circuiting, as well as devices preventing violent rupture and dangerous reverse current flow.

The lithium-equivalent content in the batteries is below applicable limit values. Therefore, the batteries are not subject to national or international regulations pertaining to dangerous mediums, either as individual components or when inserted into a power tool.

However, the regulations governing dangerous goods may be relevant when transporting several batteries. In this case, it might be necessary to comply with special conditions, such as those governing packaging.

Disposing of the Saw

At the end of its lifecycle, the reciprocating saw, its accessories, and packaging should be sorted for environmentally friendly recycling.

Do not dispose of the battery pack in household waste, fire, or water. Battery packs should be collected, recycled, or disposed of in an environmentally friendly manner.

Troubleshooting Battery and Charger

Problem: The battery is not charging, and there is a blinking red light on the battery charger.	
Possible Cause	Corrective Action
The battery is not correctly inserted in the charger.	Remove the battery from the charger, then re-insert it correctly.
The battery contacts are contaminated.	Clean the battery contacts, for example by removing and inserting the battery several times, or replace the battery.
The battery is defective.	Replace the battery.

Problem: The battery charger indicator does not light up.	
Possible Cause	Corrective Action
The mains plug of the battery charger is not correctly plugged into the socket.	Insert the mains plug fully into the socket outlet, and ensure that the socket is functional.
The socket outlet, mains cable, or battery charger are defective.	Check the voltage power; have the battery charger checked by an authorized after-service agent.

Problem: The battery charger is warm to the touch.	
Possible Cause	Corrective Action
Continuous or repetitive charging cycles without a break may cause the charger to warm up.	No corrective action is required as this does not indicate a fault with the battery charger.

Problem: The battery operation time is significantly reduced, even after the battery is fully charged.	
Possible Cause	Corrective Action
The battery is defective, or has reached the end of its life (approximately 1000 charging cycles).	Replace the battery.

Problem: The saw does not operate.	
Possible Cause	Corrective Action
The battery has not been charged sufficiently.	Charge the battery and then try to use the drill again.

Battery Safety Feature

A battery that " fails " or seems to have a short life before it shuts down, may simply be a battery that has gone into its SAFE mode.

A battery that has experienced an excessive current draw from a short circuit, or a high current draw when the tool was under an excessive load, may shut down prematurely. This is a built-in safety feature.

If the battery contacts are not damaged , recharging the battery for a short period (even a few minutes) will reset the battery`s electronics and restore the battery voltage to the voltage level before it shut down.

If this battery or another battery experiences the same problem immediately upon restarting the tool, then a short circuit should be suspected and the tool should be inspected for needed repair.

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