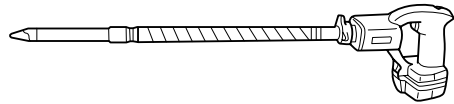




Cordless Concrete Vibrator

MODEL VR251D



001957

I N S T R U C T I O N M A N U A L

⚠ WARNING:

For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

SPECIFICATIONS

Model	VR251D
Vibrations per minute (min^{-1})	12,500
Vibrations amplitude	1.0 mm
Vibration head (diameter x length)	25 mm x 221 mm
Flexible shaft assembly length	1,200 mm
Overall length	1,431 mm
Net weight	3.2 kg
Rated voltage	D.C. 12 V

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

Intended use

The tool is intended for removing bubbles from concrete when casting concrete.

For European countries only

Noise and Vibration

The typical A-weighted sound pressure level is not more than 70 dB (A).

The noise level under working may exceed 85 dB (A).

– Wear ear protection. –

The typical weighted root mean square acceleration value is not more than 2.5 m/s^2 .

EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in compliance with the following standards of standardized documents, EN50260, EN55014 in accordance with Council Directives, 89/336/EEC, 98/37/EC.

Yasuhiko Kanzaki **CE 2003**



Director

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SAFETY INSTRUCTIONS

ENA002-2

WARNING:

When using battery operated tools basic safety precautions, including the following, should be followed to reduce the risk of fire, leaking batteries and personal injury: Read these instructions before operating this product and save these instructions.

For safe operations:

- 1. Keep work area clean.**
Cluttered areas and benches invite injuries.
- 2. Consider the work environment.**
Do not expose the tool to rain. Keep work area well lit. Do not use tools in the presence of flammable liquids or gases.
- 3. Keep children away.**
Do not let visitors touch the tool. Keep visitors away from work area.
- 4. Store batteries or idle tools.**
When not in use, tools and batteries should be stored separately in a dry, high or locked up place, out of reach of children. Ensure that battery terminals cannot be shorted by other metal parts such as screws, nails, etc.
- 5. Do not force the tool.**
It will do the job better and safer at the rate for which it was intended.
- 6. Use the right tool.**
Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended.
- 7. Dress properly.**
Do not wear loose clothing or jewellery, they can be caught in moving parts. Non-skid footwear is recom-

- mended when working outdoors. Wear protecting hair covering to contain long hair.
8. **Use protective equipment.**
Use safety glasses and if the cutting operation is dusty, a face or dust mask.
 9. **Connect dust extraction equipment.**
If devices are provided for the connection of dust extraction and collection ensure these are connected and properly used.
 10. **Do not abuse the supply cord (if fitted).**
Never carry the tool by the cord or yank it to disconnect from the socket. Keep the cord away from heat, oil and sharp edges.
 11. **Secure the work.**
Use clamps or a vice to hold the work. It is safer than using your hand and it frees both hands to operate the tool.
 12. **Do not over-reach.**
Keep proper footing and balance at all times.
 13. **Maintain tools with care.**
Keep cutting tools sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Inspect tool cords periodically and if damaged have repaired by an authorized service facility.
 14. **Disconnect tools.**
Where the design permits, disconnect the tool from its battery pack when not in use, before servicing and when changing accessories such as blades, bits and cutters.
 15. **Remove adjusting keys and wrenches.**
Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
 16. **Avoid unintentional starting.**
Do not carry the tool with a finger on the switch.
 17. **Stay alert.**
Watch what you are doing. Use common sense. Do not operate the tool when you are tired.
 18. **Check damaged parts.**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service facility unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized service facility. Do not use the tool if the switch does not turn it on and off.
 19. **Warning.**
The use of any accessory or attachment, other than recommended in this instruction manual or the catalog, may present a risk of personal injury. Ensure that the battery pack is correct for the tool. Ensure that the outside surface of battery pack or tool is clean and dry before plugging into charger. Ensure that batteries are charged using the correct charger recommended by the manufacturer. Incorrect use may result in a risk of electric shock, overheating or leakage of corrosive liquid from the battery.
 20. **Have your tool repaired by a qualified person.**
This tool is constructed in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.
 21. **Disposal of battery.**
Ensure battery is disposed of safely as instructed by the manufacturer.

ADDITIONAL SAFETY RULES FOR TOOL

ENB061-1

1. Always keep your hands and face away from vibrating head when operating.
2. Switch off the tool immediately if you notice abnormal noise or something faulty during operation.
3. Inspect the tool carefully for breakage, cracks or deformation if you accidentally drop it or strike it against something.
4. Do not allow pieces of metal, water or other foreign objects to get into the charger port where the charging terminals are located.
5. Do not carry the tool with finger on switch.
6. Do not set the tool down and switch it on. The vibrating head may whip around out of control and cause an accident.
7. Be careful not to allow water, wet concrete or the like to get into the tool. Do not let the tool fall into wet concrete.
8. Insert the vibrating head carefully between iron/ steel frames or reinforcing rods not to come in contact with them.
9. Do not crush or twist the flexible hose.
10. Do not overly bend the flexible hose.
11. Use a wet cloth or the like to carefully wipe off any wet concrete left on the tool after use. Extra care should be given to thorough cleaning of the vents, switch area, cover openings, etc.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CARTRIDGE

ENC004-1

1. Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
 2. Do not disassemble battery cartridge.
 3. If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
 4. If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
 5. Always cover the battery terminals with the battery cover when the battery cartridge is not used.
 6. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - (3) Do not expose battery cartridge to water or rain.
- A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
7. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).
 8. Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
 9. Be careful not to drop or strike battery.

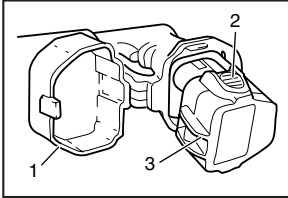
SAVE THESE INSTRUCTIONS

Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged.
Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10°C - 40°C (50°F - 104°F). Let a hot battery cartridge cool down before charging it.
4. Charge the Nickel Metal Hydride battery cartridge when you do not use it for more than six months.

FUNCTIONAL DESCRIPTION

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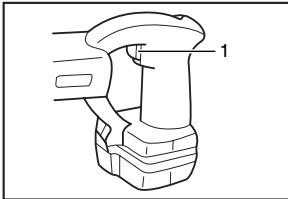


1. Cover
2. Button
3. Battery cartridge

Installing or removing battery cartridge

- Always switch off the tool before insertion or removal of the battery cartridge.
- To remove the battery cartridge, open the cover and withdraw it from the tool while pressing the buttons on both sides of the cartridge.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not use force when inserting the battery cartridge. If the cartridge does not slide in easily, it is not being inserted correctly.

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1. Switch trigger

Switch action

CAUTION:

- Before inserting the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

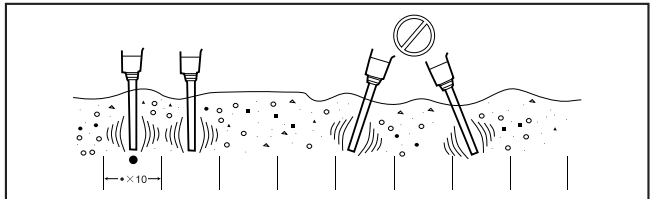
To start the tool, simply pull the switch trigger. Release the switch trigger to stop.

OPERATION

Hold the tool straight when inserting/operating. Use the tool within the effective vibrations range at equidistant intervals. The effective air bubble removal range is about ten times diameter of the vibrating head, or around 250 mm.

Do not use this tool to move concrete within a form. The mortar will just move away and the coarse aggregate will remain, causing segregation.

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Effective leveling and removal of air bubbles

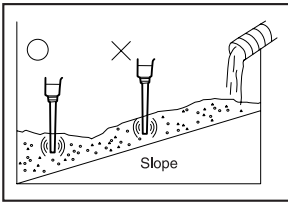
Removal of the air bubbles is complete after you have worked the tool throughout each effective range, the concrete stops shrinking, and the mortar has risen evenly to the surface, giving off a light appearance. Gently remove the operating tool not to leave holes.

NOTE:

- Vibrating too long in a single place causes concrete segregation.
- When the coarse aggregates segregates when placing concrete, shovel out the coarse aggregate and put it where there is plenty of mortar. Then

use the tool on it. Don't leave coarse aggregate in the segregated condition.

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When concreting a slope site, always pour from the bottom at the beginning. This way the weight of the freshly poured concrete and vibration will lead to effective removal of air bubbles. Conversely, if the pouring is done first from above, the mortar will separate and eventually slide to the bottom.

MAINTENANCE

CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

ACCESSORIES

CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita service center.

- Various type of Makita genuine batteries and chargers

Makita Corporation