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Cordless Concrete Vibrator USER MANUAL

MODEL: FTC5220

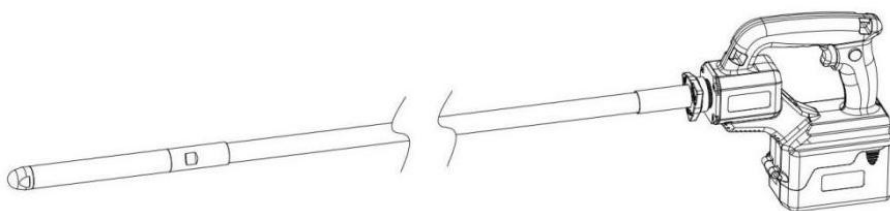
We continue to be committed to provide you tools with competitive price.

"Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and does not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.

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FTC5220



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Have product questions? Need technical support? Please feel free to contact us:




CustomerService@vevor.com

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

IMPORTANT SAFEGUARDS

	Warning - To reduce the risk of injury, users must read instructions manual carefully.
	This symbol, placed before a safety comment, indicates a kind of precaution, warning, or danger. Ignoring this warning may lead to an accident. To reduce the risk of injury, fire, or electrocution, please always follow the recommendation shown below.
	Alternating current
	Warning- Be sure to wear ear protectors when using this product.
	Warning- Be sure to wear eye protectors when using this product.
	Warning- Be sure to wear gloves when using this product.
	FCC statement: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)This device may not cause harmful interference, and (2)this device must accept any interference received, including interference that may cause undesired operation.

 **WARNING:** Read all safety warnings, instructions, illustrations and specifications provided with this CONCRETE VIBRATOR. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

SPECIFICATIONS

Model:	FTC5220	
Motor:	DC Brushless Permanent Magnet Synchronous Motor	
Power(Max):	800W	
Rated voltage	18V	
Vibrations Mode:	Normal mode	Power mode
Vibrations per minute(VPM)	12000	15500
WORKING CAPACITY IN FULL CHARGER(*1):	70min	35min
Net weight (*2) :	1.92kg	
Vibration head diameter:	Ø28 mm	ø35 mm
Flexible shaft lengths:	1.2m/1.5m/1.7m/2.4m	
Gross Weight:	2.2/2.5/2.8/3.6 kg	2.7/3.1/3.4/4.3 kg

*1 with 35mm-1.7 m flexible Vibrator

*2 without flexible Vibrator

Applicable battery cartridge and charger

Battery Pack	BL1870
Charger	GM130-2100500-D

* Some of the battery cartridges and chargers listed above may not be available depending on your region of residence.

WARNING: Only use the battery cartridges and chargers listed above. Use of any other battery cartridges and chargers may cause injury and/or fire.

Cordless concrete vibrator safety warnings

- 1.Always keep your hands and face away from the vibrating head when operating.
- 2.Switch off the Vibrator immediately if you notice abnormal noise or something faulty during operation.
- 3.Inspect the Vibrator carefully for breakage, cracks, or deformation if you accidentally drop it or strike it against something.
- 4.Do not carry the Vibrator with your finger on the switch.

5. Do not set the Vibrator down and switch it on. The vibrating head may whip around out of control and cause an accident.
6. Be careful not to allow water, wet concrete, or the like to get into the Vibrator. Do not let the Vibrator fall into wet concrete.
7. Insert the vibrating head carefully between iron/steel frames or reinforcing rods not to come in contact with them.
8. Do not crush or twist the flexible hose.
9. Do not overly bend the flexible hose.
10. Use a wet cloth or the like to carefully wipe off any wet concrete left on the Vibrator after use.
Extra care should be given to thoroughly cleaning the vents, switch area, cover openings, etc.
11. Do not use the Vibrator in the rain. Do not clean the Vibrator in water.
12. After operating the Vibrator, switch off Vibrator and wait until the vibration of the flexible shaft stops completely before putting down the Vibrator.
13. After operating the Vibrator, do not touch the vibrating part as it may be extremely hot and could burn your skin.
14. Do not operate the Vibrator outside of the concrete. The vibrating part is cooled down by inserting the vibrating part into concrete.
15. If the power is cut off due to power failure or the disconnection of the power plug, set the switch to the off position.

WARNING: DO NOT let comfort or familiarity with the product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

Important safety instructions for battery cartridge

1. Before using the battery cartridge, read all instructions and cautionary markings on
 - (1) Battery charger,
 - (2) Battery, and
 - (3) Product using the battery.
2. Do not disassemble or tamper with the battery cartridge. It may result in a fire, excessive heat, or explosion.
3. If the 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. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridges in a container with other metal objects such as

nails, coins, etc.

(3) Do not expose the battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns, and even a breakdown.

6. Do not store and use the Vibrator and battery cartridge in locations where the temperature may reach or exceed 50 °C (122 °F).

7. Do not incinerate the battery cartridge even if it is severely damaged or completely worn out. The battery cartridge can explode in a fire.

8. Do not nail, cut, crush, throw, drop the battery cartridge, or hit a hard object to the battery cartridge. Such conduct may result in a fire, excessive heat, or explosion.

9. Do not use a damaged battery.

10. The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

For commercial transports e.g. by third parties and forwarding agents, the special requirements on packaging and labeling must be observed.

For the preparation of the item being shipped, consulting an expert for hazardous material is required. Please also follow possibly more detailed national regulations. Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.

11. When disposing of the battery cartridge, remove it from the Vibrator and dispose of it in a safe place. Follow your local regulations relating to the disposal of batteries.

12. Use the batteries only with the products specified by ours. Installing the batteries to non-compliant products may result in a fire, excessive heat, explosion, or leak of electrolyte.

13. If the Vibrator is not used for an extended period of time, the battery must be removed from the Motor.

14. During and after use, the battery cartridge may take on heat which can cause burns or low-temperature burns. Pay attention to the handling of hot battery cartridges.

15. Do not touch the terminal of the Vibrator immediately after use as it may get hot enough to cause burns.

16. Do not allow chips, dust, or soil to stick into the terminals, holes, and grooves of the battery cartridge. It may cause heating, catching fire, burst, and malfunction of the Vibrator or battery cartridge, resulting in burns or personal injury.

17. Unless the Vibrator supports the use near high-voltage electrical power lines, do not use the battery cartridge near high-voltage electrical power lines. It may result in a malfunction or breakdown of the Vibrator or battery cartridge.

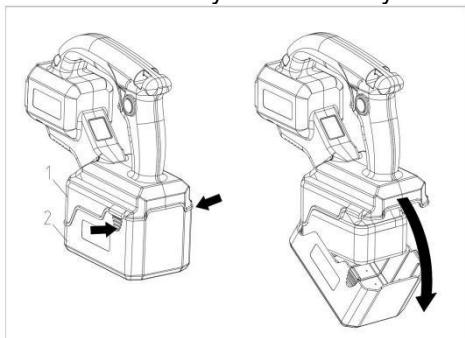
18. Keep the battery away from children.

CAUTION: Only use genuine batteries.

Use of non-genuine batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury, and damage. It will also void the warranty for the Vibrator and charger.

Battery Installation

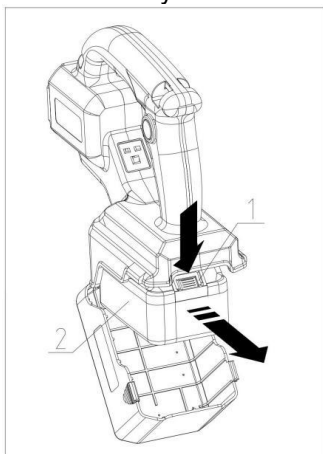
1. Open the battery case while pressing the buttons on the sides of the battery case.
2. Insert a battery cartridge in place aligning its tongue with the groove on the Vibrator.
3. Close the battery case securely.



1. Battery case
2. Buttons

Battery Uninstallation

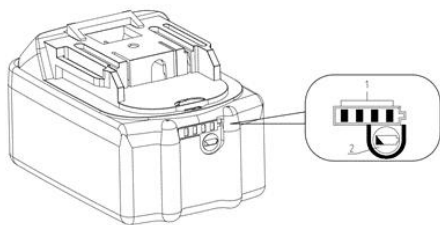
1. Open the battery case while pressing the buttons on the sides of the battery case.
2. Slide the battery cartridge off from the Vibrator while pressing the button in front of the battery cartridge.
3. Close the battery case securely.











1. Battery case
2. Buttons

Indicating the remaining battery capacity

Press the check button on the battery cartridge to indicate the remaining battery capacity. The indicator lamps light up for a few seconds.



1. Indicator lamps
2. Check button

Indicator lamps			Remaining capacity
 Lighted	 Off	 Blinking	
			75% to 100%
			50% to 75%
			25% to 50%
			0% to 25%
			Charge the battery.

NOTE: Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.
 NOTE: The first (far left) indicator lamp will blink when the battery protection system works

Vibrator / Battery protection system

The Vibrator is equipped with a Vibrator/battery protection system. This system automatically cuts off power to the motor to extend Vibrator and battery life. The Vibrator will automatically stop during operation if the Vibrator or battery is placed under one of the following conditions:

Overload protection

When the Vibrator or battery is operated in a manner that causes it to draw an abnormally high current, the Vibrator stops automatically. In this situation, turn the Vibrator off and stop the application that caused the Vibrator to become overloaded. Then turn the Vibrator on to restart.

NOTE: If the Vibrator does not restart smoothly, cease operation for a period longer than one minute, or remove the battery cartridge from the Vibrator and place it back in the Vibrator before a restart.

Over-discharge protection

When the battery capacity is not enough, the Vibrator stops automatically. In this case, remove the battery from the Vibrator and charge the battery.

Protections against other causes

The protection system is also designed for other causes that could damage the Vibrator and allows the Vibrator to stop automatically. Take all the following steps to clear the causes, when the Vibrator has been brought to a temporary halt or stopped in operation.

1. Turn the Vibrator off, and then turn it on again to restart.
2. Charge the battery(ies) or replace it/them with recharged battery(ies).
3. Let the Vibrator and battery(ies) cool down.

Switch action

CAUTION: Before installing the battery cartridge into the Vibrator, always make sure that the switch trigger returns to the "OFF" position.

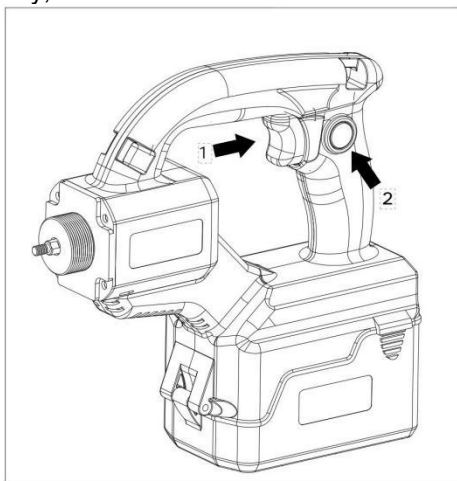
CAUTION: The switch can be locked in the "ON" position for ease of operator comfort during extended use. Apply caution when locking the Vibrator in the "ON" position and maintain a firm grasp on the Vibrator.

CAUTION: Do not install the battery cartridge with the lock button engaged.

CAUTION: When not operating the Vibrator, depress the trigger-lock button from the side to lock the switch trigger in the OFF position.

For continuous operation, depress the lock button while pulling the switch trigger, and then release the switch trigger. To stop the Vibrator, pull the switch trigger

fully, then release it



1. Switch trigger

2. Lock button

Electronic function

The Vibrator is equipped with the following electronic function for easy operation.
Constant speed control

Possible to perform a stable operation, because the speed (frequency) of vibrations is kept constant even under the loaded condition



Mode selector

The speed (frequency) of vibrations can be changed in two levels using the mode selector.

Press the mode button to toggle the vibrations in normal mode (1) and power mode (2). Either of the two indicators for the mode, you select lights up.



1. Normal mode indicator
2. Power mode indicator
3. Mode button

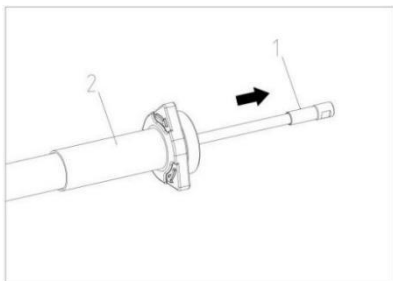
Mode (Indication number)	Vibrations per minute	Application
 <p>Normal Mode(1)</p>	12000 /min	For formwork and surface vibrating operations; Commonly used in precast concrete construction, small pours that require a minimal amount of vibration, patching and repairing work with precise operation.
 <p>Power Mode(2)</p>	16000 /min	For vibrations at larger pours; Ideal for pours with a greater surface area, such as construction joints, slab consolidation, where the operator moves around to cover the entire area.

ASSEMBLY

CAUTION: Always be sure that the Vibrator is switched off and the battery cartridge is removed before carrying out any work on the Vibrator.

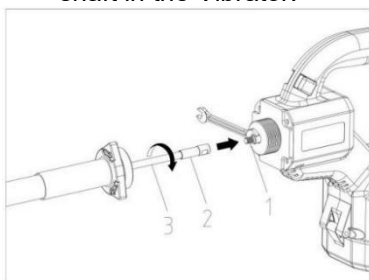
Installing and removing flexible Vibrator

1. Pull the flexible shaft reasonably straight out of the Hose connector.



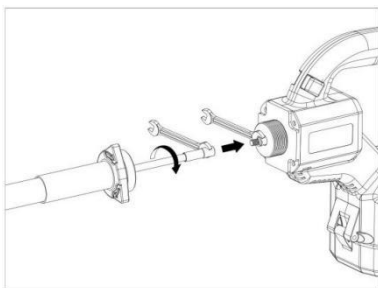
1.Flexible shaft 2.Hose coupling

2. Hold the drive shaft in the Vibrator still using the wrench provided. Then hand thread the Flexible shaft connector of the flexible shaft onto the solid drive shaft in the Vibrator.

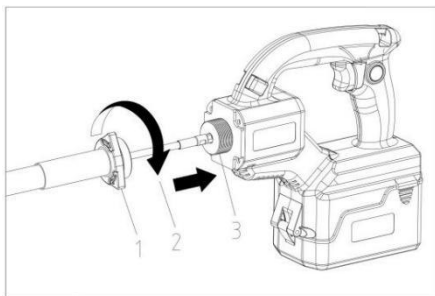


1.Drive shaft
2.Flexible shaft connector
3.Flexible shaft

3. Fasten the Flexible shaft connector of the Drive shaft up tightly using a pair of wrenches.

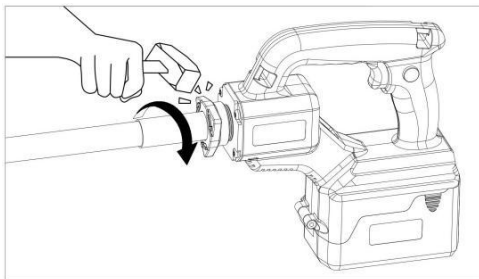


Hand thread the Hose Gland of the Hose Coupling onto the male thread of the Vibrator.



1. Hose Gland
2. Hose Coupling
3. Male thread

4. Knock each of the three corners of the triangular Hose Gland with a hammer a few times in random order to secure assembly.



Note: If the Hose Gland does not reach or fit securely onto the male thread of the Motor, pull the Hose coupling further towards the Vibrator while hand-turning the flexible shaft so the shaft top well fits into the shaft slot in the vibration head and becomes fully engaged.

Uninstallation

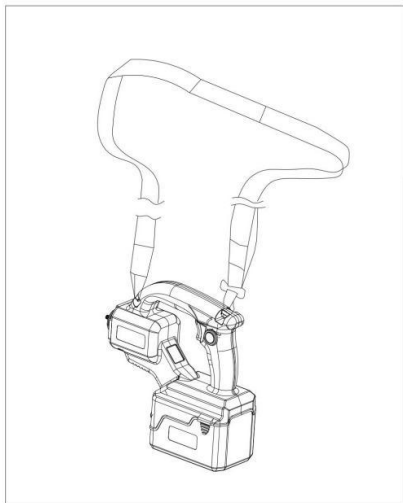
Follow the installation steps in reverse order

Installing shoulder strap

WARNING: Wearing multiple harnesses and straps may impair the chances to take the equipment off quickly in case of emergency and result in personal injury.

WARNING: Do not use the parts for attaching the shoulder strap for other purposes, such as fall prevention at a high location. If the parts for attaching the shoulder strap are used for other purposes, the excessive load may break them and cause serious injury to the operator and the person around/ underneath the operator.

Hang the hooks of the shoulder strap over the hanging holes on top of the Vibrator.



1. Shoulder strap
2. Hook
3. Hanging hole

CAUTION: Be sure to attach the hooks of the shoulder strap to the Vibrator securely. If the hooks are attached incompletely, they may come off and cause injury.

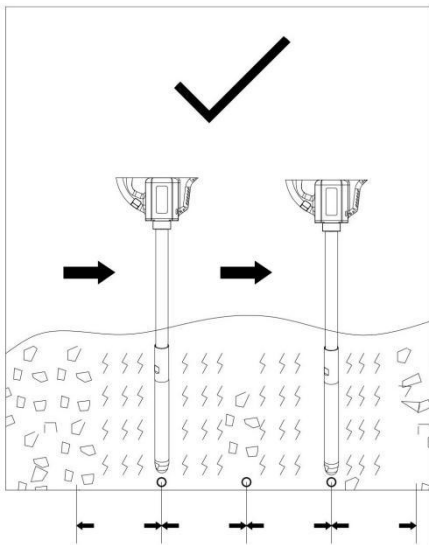
CAUTION: Be sure to use the shoulder strap dedicated to this Vibrator. Using other shoulder strap may cause an injury.

OPERATION

CAUTION: Put the shoulder strap on the shoulder, and hold the Vibrator firmly with both hands.

NOTICE: At the very beginning of the operation, the flexible shaft tends to vibrate at a higher amplitude. The Vibrator will restore the normal amplitude after you squeeze and release the switch trigger a few times repeatedly.

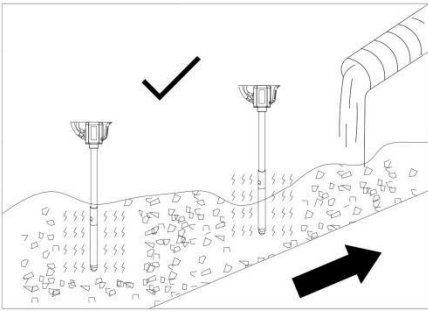
Make sure to throw in and keep the vibration head stand straight during operation. Use the Vibrator within the effective vibration ranges at equidistant intervals. The effective air bubble removal range is approximately ten times the diameter of the vibration head.



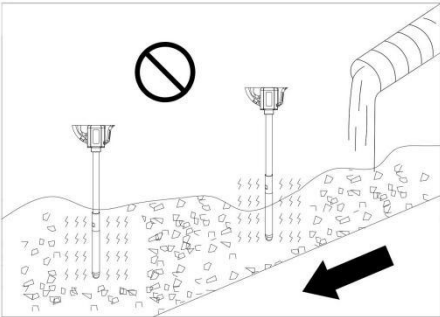
NOTICE: Do not use the Vibrator to move concrete in the formwork. The mortar will just move away and the coarse aggregate will remain, causing segregation.



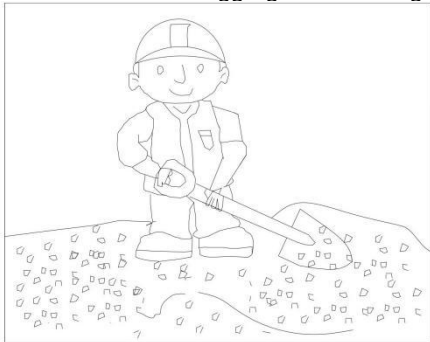
Effective leveling and removal of air bubbles Removal of the air bubbles is complete after you have worked the Vibrator throughout each effective range, the concrete stops shrinking, and the mortar has risen evenly to the surface, giving off a light appearance. Gently remove the operating Vibrator not to leave holes. When using the Vibrator on a slope, always operate it from the bottom at the beginning. If you operate the Vibrator from the top, the mortar will separate and eventually slide to the bottom.



NOTE: Vibrating Vibratorong in a single place causes concrete segregation.



NOTE: When the coarse aggregate segregates when placing concrete, shovel out the coarse aggregate and put it where there is plenty of mortar. Then use the Vibrator on it. Don't leave coarse aggregate in the segregated condition.



MAINTENANCE

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

NOTICE: Never use gasoline, benzene, thinner, alcohol, or the like. Discoloration, deformation, or cracks may result.

NOTICE: Avoid cleaning the Vibrator in water. Water will get into the motor housing and cause motor failure.

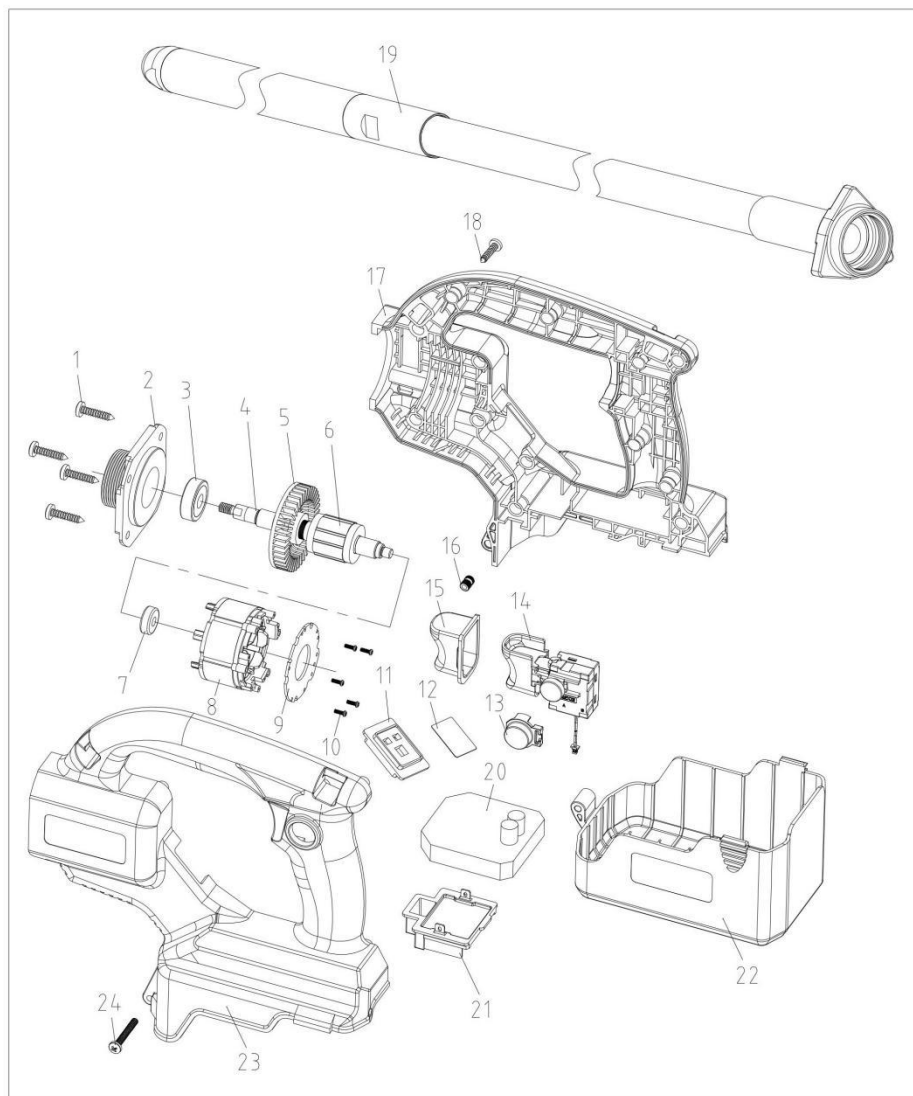
NOTICE: Use a wet cloth or the like to carefully wipe off any wet concrete left on the Vibrator after use. Extra care should be given to thorough cleaning of the vents, switch area, cover openings, etc.

OPTIONAL ACCESSORIES

CAUTION: These accessories or attachments are recommended for use with the Vibrator 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.

- Ø28 mm x 1.2 m Flexible Vibrator
- Ø28 mm x 1.5 m Flexible Vibrator
- Ø28 mm x 1.7 m Flexible Vibrator
- Ø28 mm x 2.4 m Flexible Vibrator
- Ø35 mm x 1.2 m Flexible Vibrator
- Ø35 mm x 1.5 m Flexible Vibrator
- Ø35 mm x 1.7 m Flexible Vibrator
- Ø35 mm x 2.4 m Flexible Vibrator
- Shoulder strap
- genuine Battery Pack
- genuine charger

Diagram / Parts List



No.	Item Cord	Parts Description / Model	QTY	Unit	Re-mark
1	FOT-L1-01	TAPPING SCREW(ST5.0x20)	4	PC	
2	FOT-L1-02	HOSE SCREW HOLDER	1	PC	
3	FOT-L1-03	BALL BEARING(629VV)	1	PC	
4	FOT-L1-04	DRIVE SHAFT	1	PC	
5	FOT-L1-05	FAN	1	PC	
6	FOT-L1-06	ROTOR ASS'Y	1	PC	
7	FOT-L1-07	BALL BEARING(606VV)	1	PC	
8	FOT-L1-08	STATOR	1	PC	
9	FOT-L1-09	LINE FILTER	1	PC	
10	FOT-L1-10	TAPPING SCREW(ST2.0×6)	5	PC	
11	FOT-L1-11	SWITCH CIRCUIT COMPLETE	1	PC	
12	FOT-L1-12	SWITCH LABEL	1	PC	
13	FOT-L1-13	LOCK LEVER COVER	1	PC	
14	FOT-L1-14	SWITCH	4	PC	
15	FOT-L1-15	SWITCH COVER	1	PC	
16	FOT-L1-16	COPPER NUT INSERT(M4)	1	PC	
17	FOT-L1-17	HOUSING RIGHT	1	PC	
18	FOT-L1-18	TAPPING SCREW(ST4.0x20)	13	PC	
19	FOT-L1-19	FLEXIBLE VIBRATOR	1	PC	
20	FOT-L1-20	CONTROLLER	1	PC	
21	FOT-L1-21	TERMINAL UNIT	1	PC	
22	FOT-L1-22	BATTERY CASE	1	PC	
23	FOT-L1-23	HOUSING LEFT	1	PC	
24	FOT-L1-24	TAPPING SCREW(M4×20)	1	PC	

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