

Electric Concrete Vibrator

Operation Manual



Please read the manual carefully before using or servicing the tool.

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SAFETY GUIDELINES

WARNING – READ ALL SAFETY WARNINGS AND ALL INSTRUCTIONS. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Work Area Safety

1. Keep the work area clean and well lit. Cluttered or dark areas should be illuminated.
2. Do not operate the power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which can ignite them.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

1. Power tool plugs must match the outlet. Never modify the plug in anyway. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce the risk of an electric shock.
2. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. This will increase the risk of an electric shock if your body is earthed or grounded.
3. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
4. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords will increase the risk of an electric shock.
5. When operating a power tool outdoors, use an extension cord suitable for outdoor environment. Using a cord that is suitable for the outdoor will reduce the risk of an electric shock.
6. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Using a GFCI will reduce the risk of electric shock.

Service

1. Have your power tool serviced by a qualified repairer using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
2. Follow the instruction for lubrication and changing accessories
3. Keep handles dry, clean and free from oil and grease.

Personal Safety

1. Stay alert. watch what you are doing and use common sense when operating a power tool. Do not use a power tool if you are fatigued or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. Use personal protective equipment. Always wear eye protection. Protective wear such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. Prevent unintentional starting. Ensure the switch is in the “OFF” position before connecting the power source and/or battery pack, picking up or carrying the tool. Carrying power tools with you finger on the switch or energised power tools that have the switch in the “ON” position can cause accidents.
4. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injuries.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. Dress properly for the situation. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothing, jewellery or long hair can get caught in moving parts.

Power tool use and care

1. Do not apply heavy force on the power tool. Use the correct power tool for your application. The correct power tool will do a better and safe job for its design.
2. Do not use the power tool if the switch does not toggle to the “ON” and “OFF” position. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. Disconnect the plug from the power source and/or to the battery pack from the power tool before any adjustments, changing accessories, or storing power tools. These preventive safety measures reduce the risk of starting the power tool accidentally.
4. Store idle power tools out of the reach of children and do not allow people unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained operators.
5. Maintain the power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool’s operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

6. Use the power tool, accessories and tool bits etc. in accordance with these instructions taking into account the working conditions and the work to be performed. Use of the power tool for applications different from their intended use could result in accidents or possible injuries happening.

Concrete Vibrato Safety Warnings

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 carry the tool with your finger on the switch.
5. Do not set the tool 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 similar liquids from getting into the tool. Do not let the tool fall into wet concrete.
7. Insert the vibrating head carefully between the iron/steel frames or reinforcing rods so as to not let the hose come in contact with them.
8. Do not crush, twist or overly bend the flexible hose.
9. 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 thoroughly clean the vents, switch areas, cover openings etc. This is to ensure the features can do their intended use.
10. Do not use the tool in the rain. Do not clean the tool in water.
11. Ensure all operators read, understand and follow the operating instructions.
12. Never allow anyone to operate the tool unless they are familiar with its operations.
13. This tool vibrates during use. Repeated or long-term exposure to the vibrations may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. Include several vibration-free periods throughout the work day.
14. Ensure that the moulding board is secure if working on vertical applications to ensure that any concrete walls or pillars will not collapse due to the power vibration produced by this machine.
15. A concrete vibrator is heavy, and typical use of this vibrator will include construction settings where the operator will be working on high walls. DO NOT operate the machine unless all protective guards are in place. The weight and vibration of the machine could cause the operator to lose footing if guards are not in place.

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 manual may cause serious personal injury.

SPECIFICATIONS

Power	850W	1800W
Hose length	1.5m	2m
Rod diameter	35mm	35mm
Input Power	220V 50Hz	240V 50/60Hz
Max Swing	0.55mm	0.55mm
Net Weight	9 Kg	11 Kg
No Load Speed	4000 RPM	5600 RPM

OPERATION

Operating principles

The following instructions were compiled to provide you information on how to obtain long and trouble-free use of the vibrator. Periodic maintenance of the vibrator is essential. Read the manual carefully and thoroughly familiarize yourself with the machine and its functions. Failure to do so may injure yourself or bystanders.

Usage Conditions

The concrete vibrator consists of an electrical motor in an impact and shockproof plastic housing and a flexible vibration hose. The flexible hose is attached to the part of the spindle which sticks out of the motor housing. On the motor housing is a switch for turning the electric motor on and off. The concrete vibrator is applied to tamp concrete products and concrete pouring construction with various kinds of reinforcing bars, clear up spiracle in concrete and offer intensity of concrete member. The tool can only be operated safely when the operation instructions and the safety instructions have been completely read and strictly adhered.

Before starting

Before starting the power tool, the operator must know the location and function of all controls, and check the following items:

- The switch on the motor is in the off positions.
- The cord has no defects.
- All bolted joints are tightened.
- Be sure the head is well screwed to the flexible shaft.
- When parts are noticeably worn out, replace it.

Notice: Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation.

To start and stop

- To start, place the flexible hose near the concrete mix and press the switch on the motor to the “ON” position.
- To stop, pull the flexible hose out of the concrete mix and turn the switch on the motor to the “OFF” position.

When the operation is finished

1. Bring the head out of the concrete and proceed to stop. Never stop the vibrator while it has just been placed or is already in the concrete.
2. Turn the switch on the motor to the “OFF” position.
3. ALWAYS rinse or wipe off the vibrator head and shaft of any wet concrete before it dries or hardens.
4. Please clean the outside of the machine, pony roll and tie up the cable wire every time after each operation. Do not leave them lying about.

WAREHOUSE

Operation Cautions

1. Keep the bending radius of the flexible hose to a minimum during use.
2. DO NOT start the tool with the vibration head immersed in the concrete mix. After the tool has started, immerse the vibration head quickly into the concrete mix.
3. NEVER turn the power tool off when the vibrator head is immersed in the concrete.
4. When moving the tool around the work area, do not drag the vibration head and shaft on the ground.
5. DO NOT allow the head to vibrate against already hardened concrete or steel used for reinforcement.
6. NEVER drop or kick the vibrator head against any hard objects.
7. DO NOT switch off or cut off the electricity supply when the hose is taping concrete, otherwise the taped hose would become involved in concrete and will be difficult to get out due to the cease of vibration.
8. Check seal condition of all the joints between the tube and the tap hose during use.
9. Do not let water and/or concrete get inside the vibrator. This will damage the bearing and oil tight it into place. This will result in the vibrator ceasing up.
10. Stop using the vibrator as soon as the appearance of abnormal noises, sparks coming from the brush, unregulated high temperatures and peculiar smell and so on occurs. Research the cause and solution or look at the troubleshooting before get it repaired.
11. Pay attention to the fraying condition of carbon brush.
12. In order to prevent water from getting into the vibrator, use polytetrafluoroethylene belt to pack the threads when resealing the threaded joint in assembly.
13. If the shaft begins to helix excessively during operation, stop and investigate. This is an indication of the vibrator overloading.
14. The vibration head is cooled by the concrete. Operation of the vibrator under no load and in the air for more than 2 mins will cause the bearings to overheat and, as a result, premature head failure.
15. The distance between two vibration places and the vibrating period in one place, is dependent on the thickness of the concrete layer and composition of the concrete.

MAINTENANCE

To guarantee the tool has a long, trouble free life, it is essential to perform periodic maintenance on the concrete vibrator.

WARNING – DISCONNECT THE ELECTRICAL SUPPLY TO THE CONCRETE VIBRATOR BEFORE YOU CAN CARRY OUT ANY MAINTENANCE ON IT.

Periodic Maintenance of the Electric Power Assembly.

1. Only an expert shall work on the electrical parts.
2. Make sure that the electricity is in the “OFF” position before and during the repairs.
3. In all maintenance operations, original parts must be used.
4. After 100 hours of operation time, the carbon brushes should be inspected.
5. Clean the ventilation vents in the front and back part of the motor periodically to avoid overheating. Ensure that no water gets into the motor housing.
6. After 40 hours of operation time, the housing holding bolts should be inspected.
7. Every 12 months or more frequent usage, depending on the usage condition, it is recommended to get an inspection by an authorized seller.
8. After the maintenance and service, all safety devices should be assembled correctly.

Periodic Maintenance of Flexible Shaft and Vibration Head.

1. To do the work in the transmission and vibration head, firstly disconnect the motor.
2. In all maintenance operations, original parts must be used.
3. To check the wear of the vibration head controlling the outside diameter and length of the hose. Replace the housing or cap when the diameter or length in the lowest diameter is less than the specified measurement.
4. Lubricate the shaft after every 100 operating hours.
5. When the length of the shaft is not equal to the hose, it is necessary to repair them. Otherwise, it can result in the vibrator breaking down.
6. Every 12 months of more frequent usage depending on the usage condition, it is recommended to get an inspection by an authorize seller.
7. After maintenance and service is done, all the parts must be assembled correctly.

Periodic Maintenance to change the Lubricant in the Vibration Head.

1. Every 300 hours of operation, it is recommended to change the lubricant of the vibration head. To change the oil in the vibration head, dismount the cap. Hold the housing on a vice and tap the cap with a rubber mallet. This will help break the seal and loosen the threads.
2. Take out the old oil and fill the cavity of the cap with a light oil non-foaming SAE40 or equivalent. Mount according to the recommendations of the following point.
3. If inspection reveals that the oil is thick, heavy, stick mixture, then the grease of the flexible shaft has penetrated into the head, and the seals have to be replaced.

To Replace the Seals

1. Flush the parts with solvent and wipe down all the parts.
2. Examine the bearings, seals and hex driver. If the inspection reveals that grease from the transmission has penetrated into the head, then the oil seals needs to be replaced.
3. When replacing seals, mount them back to back (neoprene seal lips face away from each other).
4. The purpose of the seals is to keep the oil of the head in and the flexible shaft grease out. Be careful not to damage the polished surface where the seals are positioned.
5. When the seals are dismounted, it is recommended to change them.
6. Fill the cavity of the cap with a light oil non-foaming SAE40 or equivalent.
7. Apply sealant before assembling and fix the O-ring. Tighten and clean the excess sealant. It is important all the parts are tightened to avoid water and cement trying to get into the head.

Checking/replacing the carbon brushes

WARNING – IMPROPER REPLACEMENT OF PARTS CAN CAUSE ELECTROCUTIONS. ONLY A QUALIFIED ELECTRICIAN IS PERMITTED TO REPLACE THE PARTS AND PERFORM A SUBSEQUENT SAFETY CHECK ACCORDING TO THE DIRECTIVES IN EFFECT.

1. Pull the plug from the plug receptacle.
2. Remove any dirt around the cap.
3. Unscrew the carbon brush caps (on both sides of the drive) with the correct screwdriver and remove with the O-ring.
4. Remove the carbon brush from the motor.
5. Mark the position and location of the carbon brush with a pencil for reinstalling.
6. Check that both carbon brushes do not fall short of the minimum length. If one carbon brush is smaller than the minimum length, both carbon brushes must be replaced.

7. Install the carbon brushes on both sides of tool. Pay attention to the original position and location of used carbon brushes, to avoid damage and sparking on the collector.
8. Screw on the cap with the O-ring and tighten with a screwdriver by hand until it is tight enough.

Note: If you have installed new carbon brushes, the drive must be run for approx. 5 minutes without the flexible shaft attached.

Lubrication

The long life and successful operation of any parts of machinery is dependent on frequent and thorough lubrication. A way to lubricate the shaft is to grab some grease in the palm of the hand and run the close hand with the lubricant over the length of the shaft, leaving the shaft with a light coating of the lubricant on the entire length of the shaft. Do not overlubricate, it could cause the grease to penetrate into the hose. Do not clean the shaft with solvent.

Transporting

- Always shut down the power tool before transporting.
- This will ensure the vibrator is safe against slipping, overturning and blows during transportation.

Storage

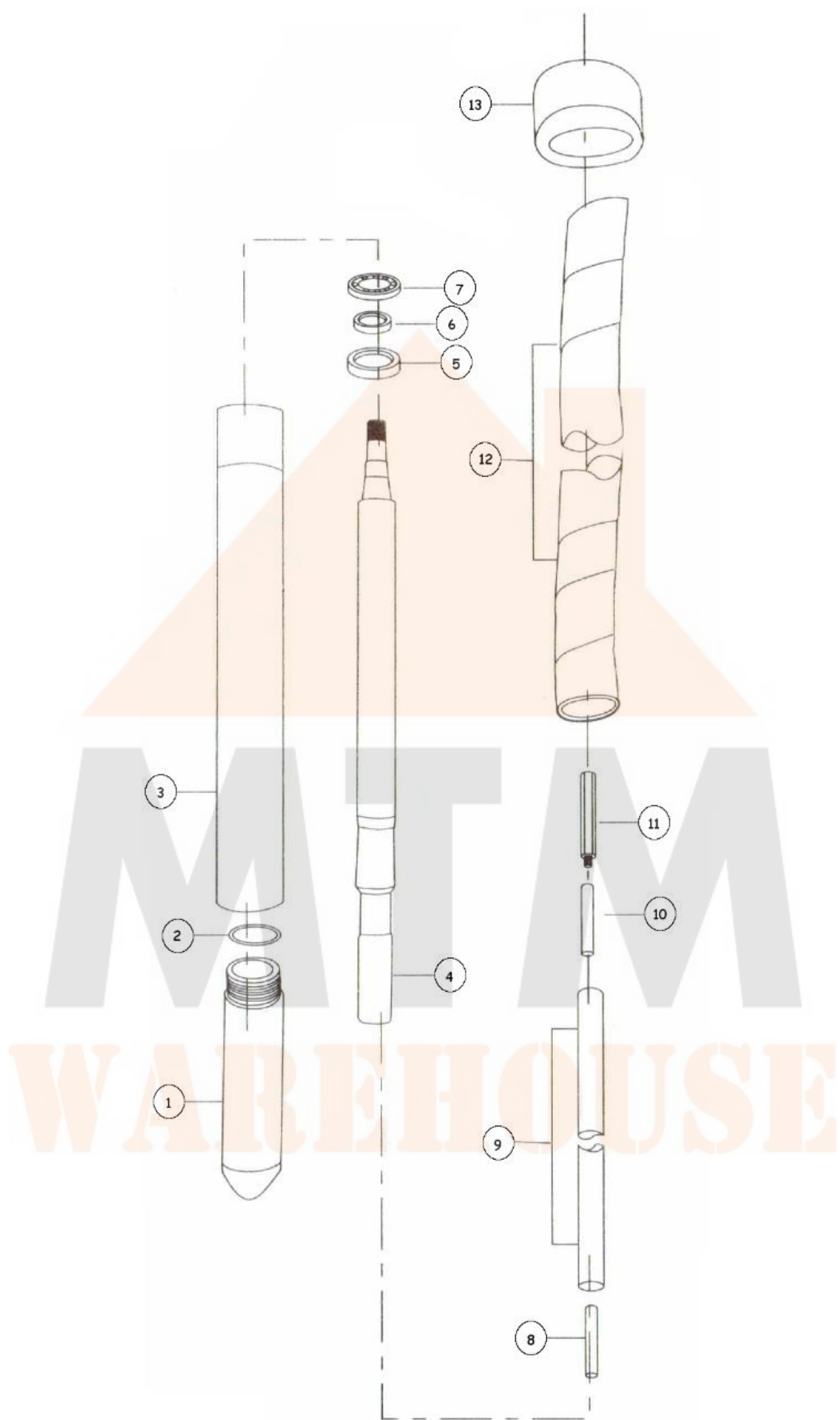
When storing the vibrator for more than 30 days, the following is required:

- Clean all external parts and frame with a soft cloth.
- Clean the flexible hose with water and a cleaning detergent that does not affect the hose material.
- Cover the machine and store it in a clean and dry area.

TROUBLESHOOTING

Problem	Cause	Solution
Machine not in operation.	<ol style="list-style-type: none"> 1. Power cable interrupted. 2. Carbon brushes worn. 3. Fault current protective switch. 4. ON/OFF switch defective. 5. Electric power supply fuse triggered. 6. Motor burned through 	<ol style="list-style-type: none"> 1. Check power cable and have it replaced if it is broken or defective. 2. Replace the carbon brushes. 3. Turn on fault current protective switch. 4. Have ON/OFF switch replaced. 5. Activate the fuse. 6. Replace the drive.
Machine cuts out.	<ol style="list-style-type: none"> 1. Carbon brushes worn. 	<ol style="list-style-type: none"> 1. Replace the carbon brushes.
Motor runs very loud.	<ol style="list-style-type: none"> 1. Carbon brushes broken. 2. Drive bearing worn. 3. Rotor grinds on stator. 	<ol style="list-style-type: none"> 1. Replace the carbon brushes. 2. Replace the drive bearing. 3. Replace the rotor.
Motor runs normally, but overheated.	<ol style="list-style-type: none"> 1. Air cleaner, ventilation grill or ventilation slots are clogged. 2. Too much special lubricant in the flexible shaft. 3. Too much oil in the vibrator head. 	<ol style="list-style-type: none"> 1. Remove dirt, replace air cleaner if necessary. 2. Remove excess special lubricant with a cloth. 3. Remove the excess oil.
Motor runs slow and overheats.	<ol style="list-style-type: none"> 1. Input voltage too low. 2. Wire cross-section of extension cable is too small. 3. Incorrect combination of vibration head and flexible shaft. 4. Shaft core of the flexible shaft not sufficiently lubricated. 5. Vibrator head bearing or drive bearing worn. 6. Rotor grinds on stator. 	<ol style="list-style-type: none"> 1. Provide correct line voltage. 2. Use extension cable with sufficient wire cross-section. 3. Only use combination according to the table. 4. Lubricate the shaft core. 5. Check and replace both parts. 6. Replace the rotor.





Vibration Motor			Vibration Head		
No.	Description	Quantity	No.	Description	Quantity
1	Spindle	1	1	Cap Head	1
2	Key	1	2	O-Ring	1
3	Bearing 6200RS	1	3	Case	1
4	Screw	1	4	Rotary Shaft	1
5	Gear Box	1	5	Counter Oil Seal	1
6	Gear	1	6	Oil Seal	1
7	Circlip	1	7	Bearing	1
8	Steel Bush	1	8	Shaft Joint	1
9	Middle Cover	1	9	Flexible Shaft	1
10	Bearing 6200RS	1	10	Shaft Joint	1
11	Rotor	1	11	Hex Shaft Joint	1
12	Carbon Brush	1	12	Flexible Hose	1
13	Carbon Brush Holder	1	13	Locking Nut	1
14	Bearing 608Z	1			
15	Washer	1			
16	Wind Guard	1			
17	Screw	1			
18	Stator	1			
19	Housing	1			
20	Switch	1			
21	Handle Assembly	1			
22	Vibration Hose	1			
23	Cord Clamp	1			
24	Screw	1			
25	Cord Sleeve	1			
26	Cord	1			
27	Circlip	1			
28	Screw	1			

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