

# TECHNICAL CATALOGUE



**DMV-E** 



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# **General information**

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# **SYMBOLS**



This symbol indicates extremely dangerous situations that, if neglected, can seriously put the health and safety of people at risk.

# 1. INTENDED USE & OPERATION

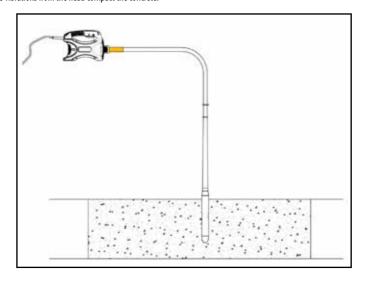
### Intended Use

Use the DVM-E concrete vibrator only for compacting concrete. Any other use than intended is prohibited. You can compact concrete floors, foundations, lintel beams and beams.

This user manual helps you to use the concrete vibrator in the way manufacturer has developed the product. Follow the instructions strictly.

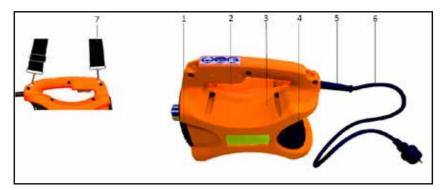
# Operation

The motor unit is started by switching on the 0N/0FF-switch to the 0/0/0F position. The drive shafts rotation turns an eccentric shaft held captive between bearings. The eccentric motion causes the vibration. The vibrations from the head compact the concrete.



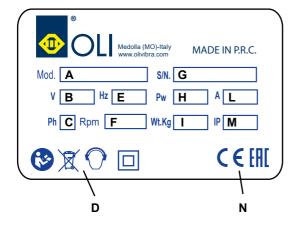


### The Concrete Vibrator



- 1. Front Lattice
- 2. ON/OFF'Switch
- 3. Driving Motor Set
- 4. Rear Lattice (For Replacing Brush)
- 5. Cable Protector
- 6. Cable with Plug
- 7. Belt with Hook

# **Name Plate**



Pos.	Description
A	Model
В	Voltage
C	Phase
D	Safety
E	Frequency
F	Rotation per minute
G	Serial Number
Н	Input Power
I	Weight
L	Current
М	IP sealing
N	Certification



# 2. SAFETY INSTRUCTIONS

Tip: If the safety instructions are not clear to you, then ask for an explanation from qualified, experienced colleagues of the manufacturer.







- Wear eye protection, helmet and hearing protection
- Wear safety shoes
- · Wear protection gloves

### **Personal Safety**

- Always wear eye protection, safety shoes, helmet, gloves and hearing protection.
- Stay alert, watch what you are doing and use common sense when operating power tool.
- Do not use tool while you are tired or under the influence of drugs, alcohol or medication.
- Avoid accidental starting.
- · Be sure the switch is off before plug in.
- · Do not overreach.
- · Do never work in twilight or dark situations.

### **Work Area**

- · Keep your work area clean and well lit.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquid, gases or dust.
- · Keep bystanders, children and visitors away while operating a power tool. Distractions can cause you to lose control.

### **Tool Use, Care and Service**

- · Do not use tool if switch does not turn it on or off.
- Stop use immediately if the rubber hose or the cable is damaged.
- Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.
- Store out of reach of children and other untrained persons.
- · Maintain tool according the instructions and with care.
- Use the power tool in accordance with these instructions, taking into account the working conditions and the work to be performed.
   Use of the power tool for operations different from those intended could result in a hazardous situation.
- · Service must be performed only by qualified repair personnel.
- Use only replacement parts that are recommended by the manufacturer.

### **Electrical Safety**

- · Do not modify the plug.
- Do not use any adapter plugs.
- · Do not expose power tools to rain or wet conditions.
- · Do not abuse the cord.
- · Never use the cord to carry the tool.
- · Keep the cord away from heat, oil, sharp edges or moving parts.
- Never use the vibrator with damaged cords. Damaged cords increase the risk of electric shock. Bring the vibrator to a qualified electrician for replacing the cord.
- When operating a power tool outside, use an outdoor extension cords marked "W-A", "W" or "H07RN-F".



# 2.1 SPECIFIC SAFETY RULES

### Well Instructed

For the proper operation of motor, make sure that the operators have been instructed in the roper management of this machine.

### **Electrical Connection**

- Before connecting the motor to the electrical system, make sure that the voltage and frequency coincide with the ones stated in the characteristics equipment plate, located in the top part of the housing.
- When connecting to a generator, make sure that the out tension and frequency is stable, right and ha the proper power (the motor's feeding voltage should not vary more than ±5% as stated on the motor's plate).

### Area of Work

- Do not work close to flammable liquids or in areas exposed to flammable. Ensure that all frame screws are tight before starting to work.
- Do not permit untrained personnel to operate the motor or connections. Maintain free ventilation of air.
- When finishing the job or when taking a break, the operator should unplug, disconnect it from the electrical system and have it placed in such a way that it should fall or tip.

# **Improper Use**

- · Do not connect the flexible shaft to the motor when this is working.
- Do not work with the plastic housing broken.
- · Do not use the plug should to start or stop the equipment.
- · Do not remove the electrical feeding cable to remove the plug from the socket.
- · Make sure that the electrical cable is with the proper section and functioning properly.

### **Before Repair**

• Before you start and type of repair, disconnect the motor from the electrical system.

# 3. TECHNICAL SPECIFICATIONS





# 3.1 DRIVING MOTOR

# **Overview**







S/N	ltem	Description	
1	Motor Type	Universal Single Phase	
2	Electric Insulation Type	Double Insulation, IPX4	
3	Housing	Polyamide 6.6 + 30%GF	
4	Power	2,300 W	
5	Voltage	220-240V or 110-130V - 50/60Hz	
6	Loading Consumption	10A (220V) / 13A (110V)	
7	Unloaded Speed	17,500 rpm	
8	Noise Emission	77 - 80 dB(A)	
9	Vibration	XP25 - 1.16m/s2, XP30 - 1.28m/s2, XP38 - 1.41m/s2, XP48 - 1.53m/s2, XP58 - 2.11m/s2	
10	Loaded Speed	12000rpm	
11	Net Weight	5.5 kgs	
12	Function	Transmits rotation power to an internal vibrator by a flexible shaft	
13	Connection to Flexible Shaft	Female Square 7	
14	Connection Type	Left Thread M36x2	



# 4. OPERATION INSTRUCTIONS

# 4.1 CONNECT THE FLEXIBLE SHAFT TO THE MOTOR

**Warning!** Check that the ON/OFF-switch is switched OFF and not connect the plug yet.

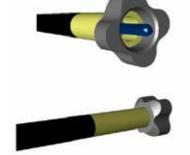
**Caution!** Check that there's no any break on hand-held rubber hose.

**Caution!** Check that the poker is well fastened to the flexible shaft.



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**Warning!** Check that the ON/OFF-switch is switched OFF and not connect the plug yet. **Caution!** Check that there's no any break on hand-held rubber hose. **Caution!** Check that the poker is well fastened to the flexible shaft.





# **4.2 WORK WITH THE BELT**

Tip! Use the belt, it will lighten your work.

- 1. Fasten the two belt hooks on the two belt hook positions.
- 2. Wear the belt onto your shoulder.



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# **4.3 COMPACTING THE CONCRETE**

Warning! Check that the ON/OFF-switch is switched OFF and not connect the plug yet.

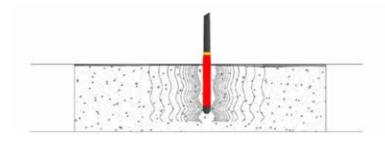
**Caution!** Check that the flexible shaft joint nut is well fastened to the motor.

Caution! Check that the poker is well fastened to the flexible shaft.

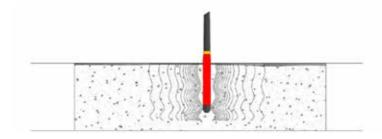
- 1. Put the plug into a socket.
- 2. Place the motor and shaft in direct vicinity and put the flexible shaft and poker into the concrete.
- 3. Switch the ON/OFF-switch ON, to the position I.



4. Compact any area about 5 - 6 seconds until no more air bubble comes out and just liquid concrete floating on surface.



5. Move to the following places that is about 8 - 10 times of the diameter of poker size, and continue compacting (repeat action 2 - 4).



6. Take the flexible shaft and poker out of the concrete and switch off the motor.



# 5. TROUBLE SHOOTING

Working with a tool which vibrates, will possibly result in minor or major problems with the tool. Check the information in this table and try to solve your problem. In case you have any doubt about the problem or solving it, please contact a technician or your dealer.

Problem	Cause	Solution	
	1 No voltago	Check the power supply.	
	1. No voltage	Make sure the power is on.	
The unit is not working	2. Carbon brushes are worn	Check carbon brushes. In case the brushes have to be replaced, contact a technician or your dealer.	
	3. Defect ON/OFF-switch	Check ON/OFF-switch. In case ON/OFF-switch has to be replaced, contact a technician or your dealer.	
The motor works, but it	1. Air intakes and output are soiled.	Clean the air intake and output lattice, open the rear lattice to clear the filter or replace a new filter	
overheats	2. Housing fixing bolts loosed by vibrations.	Make sure nuts and bolts fixing outer housing are properly fixed.	
	1. Problems with power supply.	Verify voltage of electrical system.	
The motor works slowly and it overheats	2. Cable is damaged.	Check cable and cable specifications. In case cable has to be replaced, contact a technician or your dealer.	
	3. Poker or shaft is damaged.	Check poker and shaft. In case poker or shaft has to be replaced, contact a technician or your dealer.	
	1. Defective carbon brushes.	Check carbon brushes. In case the brushes have to be replaced, contact a technician or your dealer.	
The motor becomes too noisy	2. Defective bearings	Contact a technician or your dealer.	
	3. The rotor might be touching the stator.	Contact a technician or your dealer.	
	4. Outer housing is broken or has loose bolt	Contact a technician or your dealer.	

# 6. PERIODIC MAINTENANCE - STORAGE - TRANSPORTATION

# **6.1 PERIODIC MAINTENANCE**

Caution! Only an expert shall work on the electrical parts.

Danger! Make sure that the electricity is off during repairs.

Tip! In all maintenance operations, original parts will be used.

### Lubrication

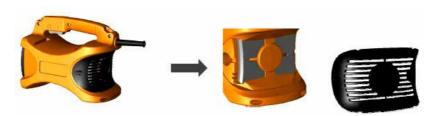
A periodic lubrication of the converters bearing is not necessary.



### Clean Air Intake Lattice & Filter

Check the filter that is situated in the air intake.

A. Use a screwdriver to open the rear lattice (P/N. 201046), and move out the rear lattice, clean the filter (P/N. 201048) or replace a new one.



### **Carbon Brushes**

Inspect the carbon brushes each 100 hours. They should be replaced if the effective length is less than 5mm. Replace the brushes as per below steps:

- A. Remove the rear lattice (P/N. 201046) with a screwdriver as per the same action as above.
- B. We find the brush retainer (P/N. 105002). This is a treated part, with a screwdriver, remove it and so we can see the brush (P/N. 106003). Turn the motor to let the brush goes out or introduce a thin tool to remove it.

C. To assemble, introduce the new brush and thread the retainer, and finally close the housing with the rear lattice.



# **Safety Devices**

After maintenance job and service, all safety devices should be assembled correctly.

# **Inspection by an Authorized Dealer**

Every 12 months or more frequently, depending on the usage conditions, it's recommended an inspection to be done by an authorized dealer. Clean the filter on a regular basis or replace if necessary.



# **6.2 STORAGE**

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When the DVM-E concrete vibrator will not be used for long period of time, it should always be stored in a clean, dry, stable and protected

# **6.3 TRANSPORTATION**

When transporting by vehicle, ensure the DVM-E concrete vibrator is safe against shipping, overturning and blows.

# 7. ORDERING SPARE PARTS

Please specify the following for requests of spare parts:

- Type of motovibrator
- Motovibrator series
- Power supply voltage
- Description of the spare part and drawing position number.\*

Any work on the DVM-E must be carried out by specialised personnel and equipped with designated PPE. Ensure the machine has been made safe before conducting work on it.

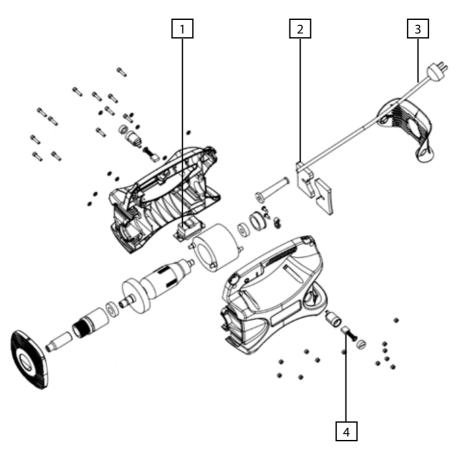
<sup>\*</sup> Contact OLI to check whether it is actually available.

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# 7.1 DRIVING MOTOR

# **Exploded View with Part Numbers**



# **Material List of Motor**

S/N	P/N	Description	Basic Qty.
1	KRV000142	ASSY. SWITCH DRIVER DVM-E PART N. 301002	1
2	KRV000141	FILTER DRIVER DVM-E PART N. 201048	2
3	KRV000140	CABLE H07RN-F 2X1,5 DRIVER DVM-E L=1MT WITH SCHUKO PLUG	1
4	KRV000143	CARBON BRUSH DRIVER DVM-E PART N. 106003	2



# 8. DISPOSAL

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A worn out concrete vibrator contains valuable materials. Take the discarded apparatus and accessories to the nearest official collection point.

The concrete vibrator is manufactured from the following materials:

### **Driving Motor**

Housing of Electronic Converter ---- Plastic
Stator & Rotor ------ Steel & Insulation Material
Wiring of Stator & Rotor ------ Copper
Cable with Plug ------ Copper Core & Rubber Coat
ON/OFF-switch ------ Brass & Bakelite

# 9. WARRANTY

- The warranty is valid 1 year after purchasing the machine. The warranty will cover parts with manufacturer's defects. In no case the
  warranty will cover a malfunction due to improper usage of the equipment.
- The Technical Assistance Service will immediately notify you if it accepts the warranty and if requested, it will send a technical report.
- Let us know the correct shipping instructions, including the wished route and the address and consignee's complete name.



# 10. DECLARATION



### OLI SPA

Via Canalazzo, 35 - 41036 Medolla (MO) - ITALY

### Declare that DVM-E series:

conform with the following directive listed on the following declaration.

# **EU DECLARATION OF CONFORMITY**

The motor DVM-E is manufactured in conformity with the following directives:

·2006/42/EC ·2006/95/EC ·2004/108/EC

The conformity has been verified according to the conditions included in the following standard documents:

· EN 12100-1 · EN 12100-2 · CEI EN 60745-2-12 · CEI EN 60745-1

### **DECLARATION OF INCORPORATION**

According to the Machine Directive 2006/42/EC the family of DVM-E over mentioned are identified as "PARTLY COMPLETED MACHINERY"

### B" Type:

- » These products, DVM-E are manufactured according to 2006/42/EC AND SUBSEQUENT AMENDMENTS
- » These products must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

According to Annex II B of Directive 2006/42/EC machines, the following essential requirements of safety and health protection are applied and respected:

1.1.1. - 1.1.2 - 1.1.3. - 1.1.5. - 1.3.1. - 1.3.2. - 1.3.3. - 1.3.4. - 1.3.7. - 1.3.8. - 1.3.9. - 1.4.1. - 1.5.1. - 1.5.2. - 1.5.4. - 1.5.5. - 1.5.6. - 1.5.8. - 1.6.1. - 1.6.4. - 1.7.1. - 1.7.2. - 1.7.3. - 1.7.4. - 1.7.4.2. - 1.7.4.3.

OLI SpA undertakes to transmit by mail or e-mail, in response to a reasoned request by the national authorities, relevant information on the products mentioned on the present declaration, except for intellectual properties of the producer. The technical documentation is kept at OLI SpA, Via Canalazzo, 35 – 41036 Medolla (MO) Italy

Medolla 13/01/2014

General Manager Giorgio Gavioli

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