

**OPERATION MANUAL  
HIGH FREQUENCY POKER VIBRATOR  
WITH INTEGRATED INVERTER  
LHF-E**



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## 1. Preface

This manual has been written to help you operate and maintain the poker vibrator LHF-E safely. This manual is intended for dealers and operators of these types of poker vibrators and contains useful instructions for use, maintenance and repair. These instructions need to be respected and followed.

### Guarantee provisions

All damage to parts of the poker vibrator, occurring within 12 months after date of purchase as a consequence of material, production or construction defects, will be replaced by the manufacturer as soon as possible.

The manufacturer declines all responsibility for unsafe situations, accidents and damage caused by:

- Ignoring safety and using instructions as described on the machine or the instruction manual.
- Incompetent or incorrect maintenance (f.i. irregular cleaning of the ventilation slots and cleaning with a high pressure cleaner or by a water jet under high pressure)
- Connecting the poker vibrator to the wrong voltage.
- Storing the machine in a damp place.
- Assembling or dismantling of the poker vibrator by unqualified personnel (employees who are unfamiliar with the content of this instruction manual)
- Other use than the prescribed use.
- Alternations of the machine carried out by other than manufacturer. This also includes assembling of non-original parts.


### Guarantee certificate

Poker vibrator type LHF-E- nr. \_\_\_\_\_

Date of purchase: \_\_\_\_\_

*Ces de Wit*

Mr. C.M. de Wit

MPM3542	Type LHF		CF	N
	Prod. Nr		Serv.	S 1
V 230 ~	Hz 50/60	Vibr./min	12000	
A	kW	IP 58	Year	
<b>LIEVERS HOLLAND</b> Gr. Mijdrechtstr. 68 3641 RW MIJDRECHT				
				

**Figure 1: example ratingplate LHF-E**

The ratingplate can be found on the switch cover.

## 2. Safety

Explanation of the used safety symbols :



- 1) Read the instruction manual.
- 2) Safety glasses, safety helmet and ear protection compulsory.
- 3) Vibration reducing glove with GELFÔM compulsory.
- 4) Safety shoes with extra protection compulsory.
- 5) Before opening remove the plug.
- 6) Dangerous electric voltage.
- 7) Be careful.

Figure 2: safety symbols

ENSURE, THAT ALL SYMBOLS ON THE MACHINE, CAN ALWAYS BE CLEARLY READ.

### 2.1 Safety aspects

The following safety aspects apply to the machine:

- Safety symbols are present on the poker vibrators LHF-E.

### 2.2 Safety precautions

- Before operating these machines, make sure to have read this manual carefully. If you have any questions, do not hesitate to contact the supplier.
- Ensure that you are qualified (familiar with the contents of this manual), to operate and carry out light maintenance work to the machine.
- Regular maintenance of the machine improves safe operation.
- On working areas, take notice and follow general and local safety regulations. Before starting your work, make sure that you are informed about all safety regulations and instructions.
- In case the value of acceleration  $> 2,5 \text{ ms}^2$ , then wearing anti vibration gloves is obligated.
- When operating the poker vibrator wear ear protection, safety glasses, a safety helmet, protective (anti-vibration) gloves and protective clothing.
- Wear safety shoes with extra protection (steel caps and anti-slip soles).
- Be careful when lifting and carrying the poker vibrator. Do not bend forwards when picking up the apparatus, but bend your knees.
- Make sure that the working area is lightened well.

- Do not pull the plug out of the wall socket or extension lead by its lead.
- Check the feeder cable's outercasing and if in use extension lead's outercasing before you connect the machine to the electrical mains. The outercasing may not be damaged. Replace the cable if you cannot read the marks on the outercasing anymore.
- Do not use the machine in an explosion endangered area.
- Regularly check the connections of the supply-cable to the switch.
- Ensure that the wall socket and possible connections between the extension leads are protected against dampness.
- Switch off the machine, when the electrical power cuts off. This prevents the machine from starting suddenly when the electrical power comes on again.
- Check the machine's cable-connections before you connect the machine to the electrical mains. The cables must be properly connected.
- After use, place the poker vibrator on a stable and dry surface.
- When the poker vibrator is not being used for longer a period of time, then it must be stored in a dry and clean area.
- When cleaning the poker vibrator, ensure that no water or cleaning detergent gets into the poker vibrator.
- Disconnect the electrical supply to the poker vibrator, before you start to clean or maintain the poker vibrator.

### 2.3 Rest risk

The manufacturer aimed for the best balance in functionality, safety and operation possibilities of the LHF-E.

Please take notice of the following rest: **for prolonged working with LHF-E poker vibrators it is obligated to wear anti vibration gloves.**

Well instructed operators with a correct working attitude concerning safe operating are well capable of working safely with both LHF-E poker vibrators.

### 3. Technical specifications

LHF-E	36mm short	36mm long	50mm short	50mm long	57mm short	57mm long	65mm
Voltage	230v/200Hz	230v/200Hz	230v/200Hz	230v/200Hz	230v/200Hz	230v/200Hz	230v/200Hz
Current consumpt.	2,0	2,2	2,8	3,6	4,2	4,7	5,6
Vibr/Min	12.000	12.000	12.000	12.000	12.000	12.000	12.000
Compaction diameter	Ø35cm	Ø45cm	Ø55cm	Ø65cm	Ø75cm	Ø85cm	Ø100cm
Sound press Level ISO 6081 At operator's place	70 db(A)	72db(A)	75db(A)	77db(A)	79db(A)	82db(A)	85db(A)
**Value of acceleration	2,5 m/s <sup>2</sup>	2,53 m/s <sup>2</sup>	2,60 m/s <sup>2</sup>	2,77 m/s <sup>2</sup>	5,25 m/s <sup>2</sup>	5,75 m/s <sup>2</sup>	4,7 m/s <sup>2</sup>
Comfort. exposure (max) per day	8hr 32hr	7,8hr 31,2hr	7hr 28hr	6,5hr 26,1hr	2,0hr 7,0hr	1,5hr 6,0hr	2,3hr 9,1hr

**Table 1: technical specifications LHF-E**

\*\* The weighted effective value of acceleration, determined according to ISO 5349

Use of anti-vibration gloves obligated with value > 2,5 m/s<sup>2</sup>.

## 4. Use

### 4.1 Intended use

Poker vibrators LHF-E are machines with a vibrating, steel bottle, for compacting concrete.

### 4.2. General

**CAREFUL: READ THE GENERAL- AND SPECIFIC SAFETY-INSTRUCTIONS BEFORE YOU SWITCH ON THE POKER VIBRATOR.**

#### NOTE:

- Start-up, service and repairs have to be executed only by qualified employees (in compliance with CE-machinery directives). Improper installation of the vibrators can cause a defect of the inverter and/or deadly injuries of the operator. Follow the listed instructions and the local and national safety regulations carefully.
- After disconnecting from the input mains, the DC-circuit and the capacitors are still under voltage. The discharging time can be longer than 3 minutes.

### 4.3. Technical data

Input voltage	: 230 Volt $\pm$ 10%--50/60 Hz. 1 ph. (min.180 / max. 260V) : 115 Volt $\pm$ 10%--50/60 Hz 1 ph. (min. 85 / max. 135V) If the tool is connected to uncontrolled motor generators, the tool can be destroyed because of inadmissible high overvoltage !!!!!
Output voltage	: 230 Volt $\pm$ 10%--200 Hz. 3 ph. : 115 Volt $\pm$ 10%--200 Hz. 3 ph.
Nominal current	: 4 amp. max. 7 amp.
Motor cable	: 10 mtr.
Capacity	: 1,4 Kva.
Housing	: Aluminium, powder coated, as desired with grip.
Protection	: IP 65.The electronic components are covered with a special resin, to protect against moisture, shock and vibrations.
Weight	: approx. 2 Kg. without cable.

The Lievers poker vibrator is tested before delivery.

For questions of Information, please contact your dealer or:

LIEVERS HOLLAND

Tel: 0297-231900 E-mail: [info@lieversholland.nl](mailto:info@lieversholland.nl)

Fax: 0297-231909 [www.lieversholland.com](http://www.lieversholland.com)

## 5. Maintenance

### 5.1 Maintenance

Although the poker-vibrators type LHF-E have a few moving parts, regular maintenance promotes a long and trouble-free life.

**WARNING: DO NOT CLEAN THE POKER VIBRATOR WITH A HIGH PRESSURE CLEANER. DISCONNECT THE ELECTRICAL SUPPLY TO THE POKER VIBRATOR BEFORE YOU CARRY OUT ANY MAINTENANCE.**

### 5.2 Cleaning and servicing of the poker vibrator

During concrete compaction the poker vibrator, switch and supply cable will become dirty. Periodical maintenance is vital to the safe and efficient operation of the poker vibrator. It is, therefore, highly recommended to clean the poker vibrator daily with water and a cleaning detergent which does not affect material of the poker vibrator.

When storing the poker vibrator make sure that the operation hose has been coiled properly, in order to prevent cuts and cracks to the rubber hose.

If the poker vibrator is to be stored for a long period of time, it should be put on an appropriate stand and left to hang.

**TIP: IN CASE OF FAILURE OR BREAK DOWN OF THE POKER VIBRATOR, WE ADVISE YOU TO SEND THE MACHINE TO AN AUTHORISED LIEVERS SERVICE-STATION.**

**WARNING: WE STRONGLY ADVISE YOU NOT TO CARRY OUT REPAIRS TO THE POKER-VIBRATOR BY YOURSELF, WITHOUT BEING INSTRUCTED BY THE MANUFACTURER OR DEALER (READ GUARANTEE-PROVISIONS).**

### 5.3 Changing the tip of the pokerhead

- 1) Lock the rear part of the pokerhead in a vice.
- 2) File away the welding point where the rear part joints the front part. Loosen the screw thread by tapping on the tip of the pokerhead with a hammer.
- 3) Unscrew the tip by means of a hook spanner.(available from the producer).
- 4) By locking the pokerhead in the vice vertically, you prevent the lubricating oil from running out of the pokerhead.
- 5) Before the new tip is installed, the screw thread of the tip, needs to be winded with at least 8 windings of teflon tape.
- 6) Now tighten the tip by means of the hook spanner and secure it by providing the tip with a welding point of approx. 5mm. diam.

**CAREFUL: REFILL OIL IF DURING THE ABOVE DESCRIBED PROCEDURE OIL HAS RUN OUT OF THE POKERHEAD. THIS OIL IS AVAILABLE FROM THE SUPPLIER OR DEALER. (SPECIAL OIL Ø36MM-15cc/Ø50MM-20cc/Ø57MM-25cc/Ø65MM-30cc).**



#### 5.4. Maintenance of the inverter

High grade electronic components are built in the alloy housing. A layer of special resin-coating prevents failure or destruction caused by water of condensation, it however does not protect the components against penetrating water, caused by inadmissible cleaning by means of a high pressure cleaner.

**WARNING: DO NOT CLEAN THE ELECTRONIC INVERTER WITH A HIGH PRESSURE CLEANER.**

Supplier: LIEVERS HOLLAND,  
Tel.: 0297 23 1900 Fax.: 0297 23 1909



## 6. Repairs

### Spare parts

It is not strictly necessary to keep spare parts on stock. However, if you want to keep certain spares on stock then please contact the manufacturer/dealer for advise.

When ordering parts please state the following information:

- Type of poker vibrator.
- Year of construction.
- Order number plus description of the part.
- The required quantity.
- The dispatch address and dispatch mode.

**TIP: WHEN ORDERING PARTS, FILL IN THE ORDER FORM ACCURATELY. LIEVERS B.V. DECLINES ALL RESPONSIBILITY FOR THE SUPPLY OF INCORRECT SPARES DUE TO INCOMPLETE OR UNCLEAR REQUESTS.**

### Contact details Lievers Holland:

P.O. Box 103

3640 AC Mijdrecht

Tel: +31 (0)297-231900

Fax: +31 (0)297-231909

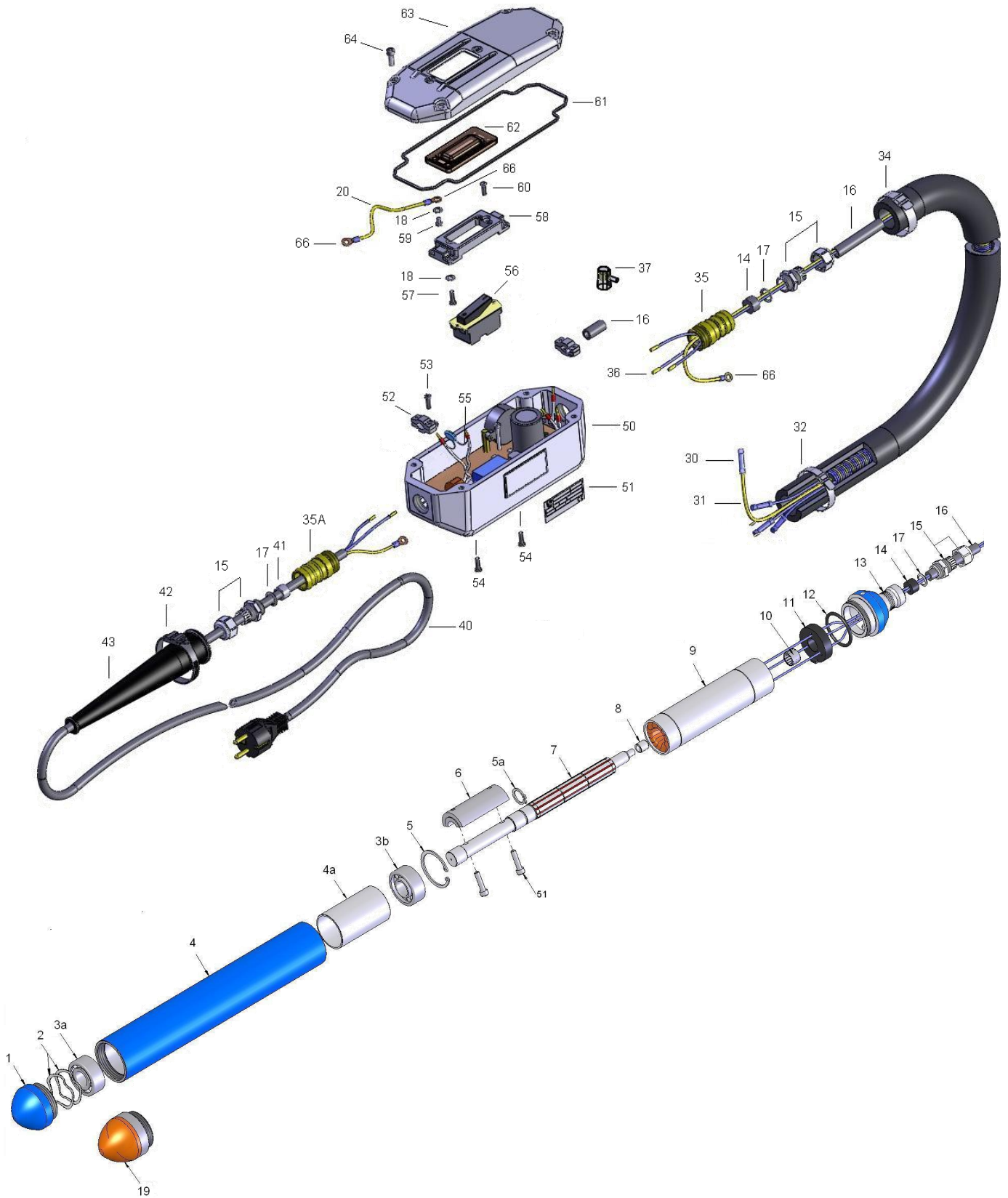
E-mail: [info@lieversholland.nl](mailto:info@lieversholland.nl)

Internet: [www.lieversholland.nl](http://www.lieversholland.nl)

## 7. Dismantling, disposal

National and local regulations concerning dismantling and disposal of materials need to be obeyed.

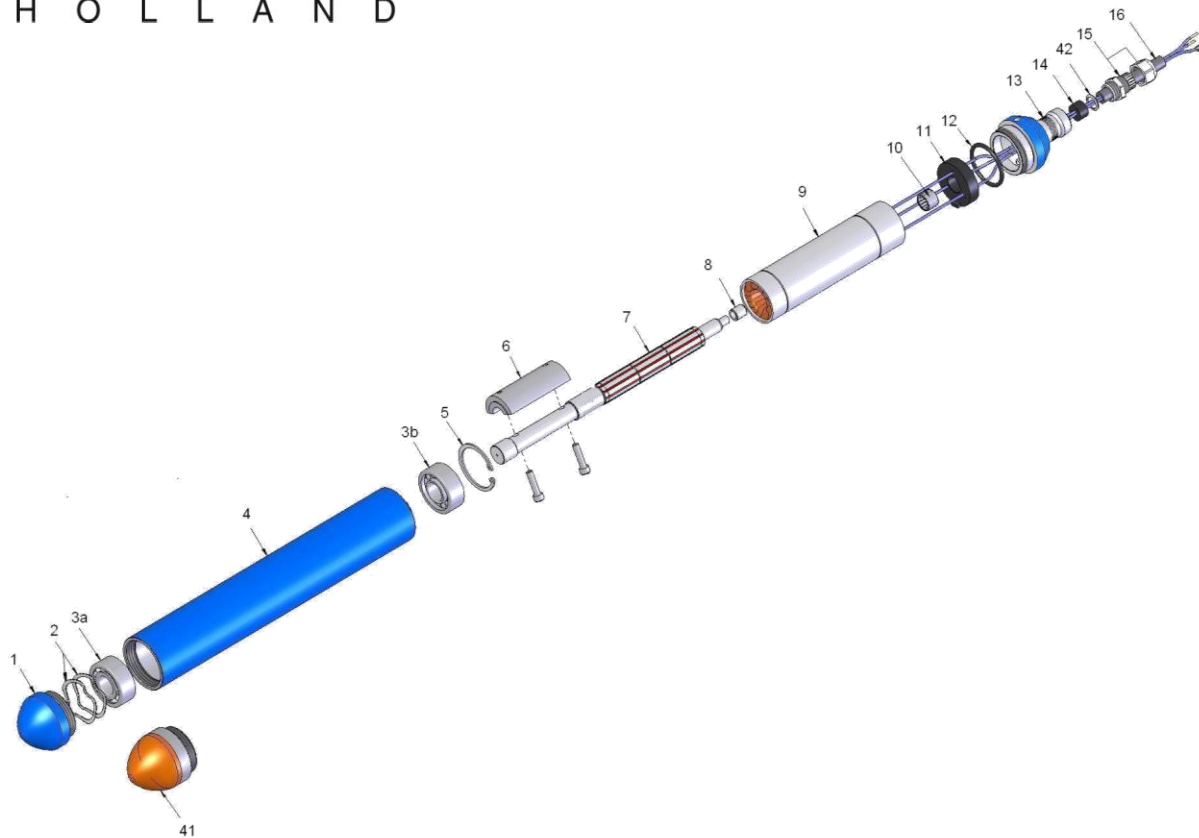
**8. Part lists**



**Figure 3: Exploded view LHF-E**

Pos	Number Ø36	Number Ø50	Number Ø57	Number Ø65	Quantity	Description
1	1300360011	1300500011	1300570011	1300650011	1	Steel tip
2	1300360020N	1300500020K	n.v.t.	n.v.t.	1	Spring soucer
2	n.v.t.	n.v.t.	1300570020N	1300650020N	2	Spring soucer
3a	1300360030	1300500030	1300570030	1300650030	1	Bearing
3b	1300360030	1300500030	1300570070	1300650070	1	Roller bearing
4	1300360040N	1300500040N	1300570040N	1300650040N	1	Motorhousing
4a	n.v.t.	n.v.t.	1300570050	1300650050	1	Spacer
5	1300360070N	1300500070N	1300570070N	1300650070N	1	Retaining ring (in motorhousing)
5a	n.v.t.	n.v.t.	1300570080	1300650080	1	Retaining ring om rotor
6	1300360060REX	1300500060REX	1300570060REX	1300650060REX	1	Excentriek
7	1300360090RE	1300500090RE	1300570090RE	1300650090RE	1	Rotor
8	1300360100	1300500100	1300500100	1300570100	1	Bearingbushing
9	1300360114N	1300500114N	1300570114N	1300650114N	1	Stator 230 V / 200 Hz
10	1300360120	1300500120	1300500120	1300570120	1	Needle bearing
11	1300360130N	1300500130N	1300570130N	1300650130N	1	Ring / Trumpet
12	1300360125N	1300500125N	1300570125N	1300650125N	1	Intermediate ring
13	1300360140N	1300500140N	1300570140N	1300650140N	1	Trumpet
14	1300360150N	1300500150N	1300000150N	1300000150N	1	Rubberring cable buckle
15	0435	0431	0431	0431	1	Cable buckle (steel)
16	1300360170N	13000000170N	13000000170N	13000000170N	1	Protection sleeve
17	1300360155N	13000000155N	13000000155N	13000000155N	1	Steel ring cable buckle
18	1370000018	1370000018	1370000018	1370000018	4	Washer M4
19	1300360012	1300500012	1300570012	1300650012	1	Rubber tip
20	1370000020	1370000020	1370000020	1370000020	2	Earth wire
30	1300017	1300017	1300017	1300017	4	Cable connector
31	0015	0015	0016	0016	28m	Innercable
32	13000210	13000211	13000211	13000211	2	Hose clamp
33	1300012	1300013	1300013	1300013	5mtr	Rubberslang
34	13000210	13000211	13000211	13000211	1	Hose clamp
35A	1370002535	1370002535	1370002535	1370002535	1	Trumpet
35	1370001935	1370002535	1370002535	1370002535	1	Trumpet
36	1370000036				4	Cable end connection
37	1370000037				3	Conductor sleeve
40	1370000040				1	Cable with plug 230V
41	1370000041				1	Rubberring cable buckle
42	13000212				1	Clamp
43	1370000043				1	Cable sleeve
50	1370000050				1	Inverter box
51	1300360240E				1	Rating plate
52	1370000052				2	Cable support bracket
53	1370000053	I	I	I	2	Bolt
54	1370000058	D	D	D	2	Tapbolt M4x10 of print plate
55	1370023055	E	E	E	1	Print plate 230V/50Hz 230V/200Hz
56	1370000056	M	M	M	1	Switch 2-poles
57	1370000057				4	Screw M4 x10
58	1300027				1	Alu. Support switch
59	1370000059				4	Earth screw M
60	1370000060				1	Screw M4
61	1370000061				1	Seal
62	1300025				1	Protection cover
63	1370000063				1	Cover of inverter box
64	1370000064				1	Drive screw M5x25 of cover
66	1370000066				4	Connector

Table 2: Partlist LHF-E



**Figure 4: Exploded view LHF-E Short bottle**

LHF / HS	Ø 36 Short	Ø 50 Short	Ø 57 Short		
Pos.	Number	Number	Number	Quantity	Description
1	1300360011	1300500011	1300570011	1	Steel tip
2	1300360020N	1300500020K	n.v.t.	1	Spring soucer
2	n.v.t.	n.v.t.	1300570020N	2	Spring soucer
3a	1300360030K	1300500030K	1300570070K	1	Bearing
3b	1300360030K	1300500030K	1300570070K	1	Bearing
4	1300360040K	13005000040KN	1300570040K	1	Motorhousing
5	1300360070N	1300500070N	1300570070N	1	Retaining ring (in motorhousing)
6	1300360060KREX	1300500060KREX	1300570060KREX	1	Excentric
7	1300360090REK	1300500090REK	1300570090REK	1	Rotor
8	1300360100	1300500100	1300500100	1	Bearing bushing
9	1300360114K	1300500114KN	1300570114KN	1	Stator 230V
10	1300360120	1300500120	1300500120	1	Needle bearing
11	1300360130N	1300500130N	1300570130N	1	Ring /Trumpet
12	1300360125N	1300500125N	1300570125N	1	O-ring
13	1300360140N	1300500140N	1300570140N	1	Trumpet
14	1300360150N	1300000150N	1300000150N	1	Rubberring cable buckle
15	0435	0431	0431	1	Cable buckle
16	1300360170N	13000000170N	1300000170N	1	Protection sleeve
41	1300360012	1300500012	1300570012	1	Rubber tip
42	1300360155N	1300000155N	1300000155N	1	Steel ring cable buckle

**Table 3: Partlist LHF-E Short bottle**

## 9. Declaration of conformity

### EC-DECLARATION OF CONFORMITY

#### EC-declaration of agreement for machinery

(Directive 2006/42/EC, Annexe II, under A)

Supplier: Bouwmachinefabriek Lievers B.V.  
Address: Groot Mijdrechtstraat 68, 3641 RW Mijdrecht

Hereby declares that

#### The high frequency poker vibrator LHF-E:

1) complies with the regulations in the Machine Directive (directive 2006/42/EC) , the EMC-Directive (directive 2004/108/EC), Directive 2002/44/EC and Directive 2002/49/EC .

2) complies with the following harmonized standards: NEN-EN-60204-1 (2006), NEN-EN 12649, EN 60034-5 (2001), EN 50144-1 , EN 60034-1.

Mijdrecht, 1 June 2010

Supplier: Bouwmachinefabriek Lievers B.V.  
Address: Groot Mijdrechtstraat 68, 3641 RW Mijdrecht



Name: C.M. de Wit  
Position: Managing Director