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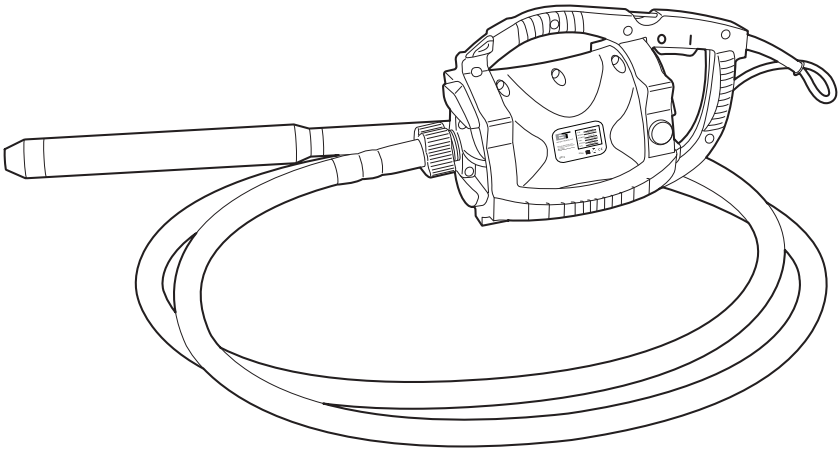
User manual
Humdinger concrete vibrator



Introduction

I Legal note

This user manual contains the original instructions, written in the English language.

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Beton Trowel N.V. may not be held responsible for any liabilities for not following strictly all the information and instructions in this manual.

Beton Trowel retains then right the right to revise this publication and to alter the contents over certain periods of time, without the obligation to report such alternations and changes first.

For the maximum performance of the equipment, we recommend to read carefully the safety and operations instructions. Users have to understand all the user information in this manual.

Defect parts should be replaced by original parts immediately to avoid major problems.

We thank you for the confidence you have placed in us by purchasing a Beton Trowel machine and wish you many years of satisfied use.

II How to use this manual

This manual has been created to help you operate and service the Humdinger concrete vibrator.

Directives with regard to the notations

Texts in this manual to which special attention must be paid, are shown in the following way:

Tip: Gives the operator suggestions and/or advice to carry out a certain procedure easier or in in a handier way.

Attention! A remark with supplementary information which brings possible problems to the operator's attention.

Caution! The product can be at risk. The concrete vibrator will become damaged if procedures are not carried out in the correct manner.

Warning! Injury to the operator or damage to the poker vibrator. The procedure must be carried out correctly and carefully.

Danger! The life of the operator can be at risk.

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1. Intended use & operation

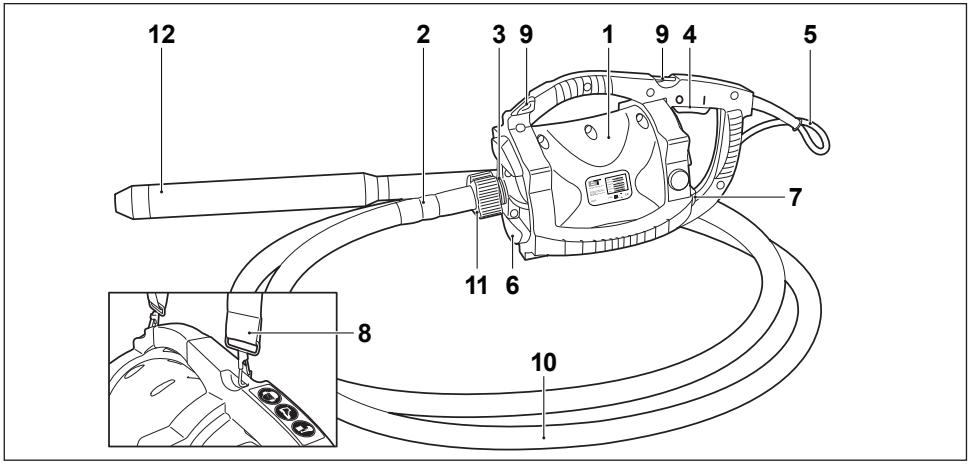
Intended use

Use the Humdinger 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

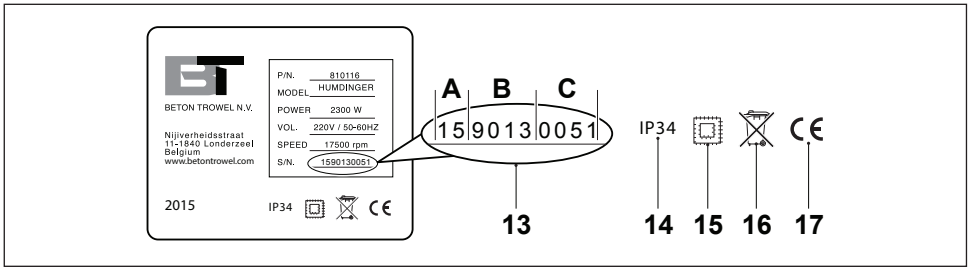
The motor unit is started by switching on the ON/OFF-switch to the ‘ON/I -position’. The drive shafts rotation turns an eccentric shaft held captive between bearings. The eccentric motion causes the vibration. The vibrations from the head compact the concrete.

The concrete vibrator



1. Motor compartment
2. Flexible shaft (diff. diameters/ lengths possible)
3. Left threads
4. 'ON/OFF'-Switch
5. Cable/plug
6. Input air cover
7. Output air covers
8. Belt
9. Belt hook positions
10. Hose
11. Nut to connect to motor left threads
12. Hose end reinforcement

Name plate



13. S/N: **A**. Year
    B. Customer code
    C. Series number
14. Protection against solid subjects > 2,5 mm (**3**) and spattered drops of water (**4**)
15. Double insulated
16. Do not dispose at normal garbage (follow local requirements)
17. Product compliant to Machine Directive 2006/42/EG

2. Safety instructions

Tip: *If the safety instructions are not clear to you, then ask for an explanation from qualified, experienced colleagues or 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 plugging 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 liquids, 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.
- Don't 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 the motor, make sure that the operators have been instructed in the proper 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 has 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 not 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 he electrical feeding cable to remove the plug from the socket.
- Make sure that the electrical cable is with the proper section and functioning properly.

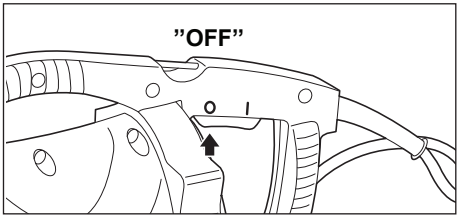
Before repair

- Before you start any type of repair, disconnect the motor from the electrical system.

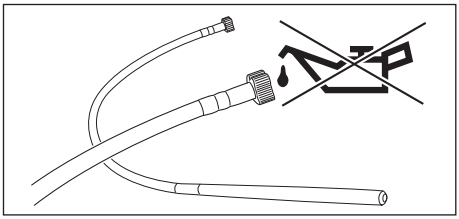
3. Operation instructions

3.1. Connect the flexible shaft to the motor

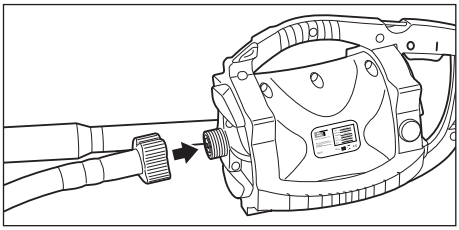
Warning! *Check that the ON/OFF-switch is switched OFF and don't connect the plug yet.*



1. Check that the left threads is cleaned.
   Caution! *Do not lubricate the spindle.*



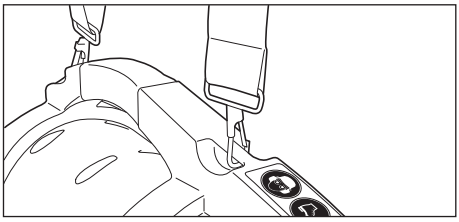
2. Put the flexible shaft on the spindle and screw nut on the left threads.
   Attention! *No tools are required!*



3.2. Work with the belt

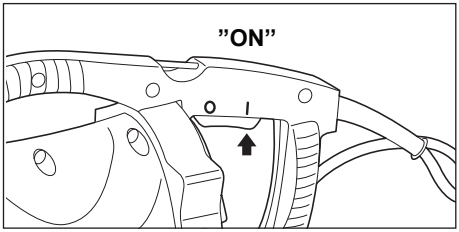
Tip! *Use the belt, it will lighten your work.*

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

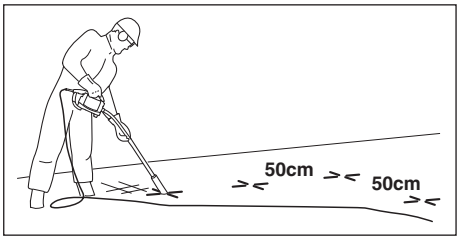


3.3. Compacting the concrete

Warning! *Check that the ON/OFF-switch is switched OFF.*
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.
   Attention! *The motor is double isolated, the socket do not has to be earthed.*
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 position I.
4. Compact any area about 3 to 4 seconds and switch OFF the motor.
   Caution! *Do not switch on the vibrator while the poker is out of the concrete.*
   Caution! *Do not restrict the movement of the poker during the work*
   Caution! *Do not allow the flexible shaft to work at an acute angle, as this will cause hotspots in the shaft and potential failure.*
5. Move to the following place and continue compacting (repeat action 2 to 4).
   Caution! *Do not stop the motor while the poker is in the concrete.*
6. Take the flexible shaft and poker out of the concrete and switch off the motor.

4. 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
The unit is not working	**1.** No voltage.	Check the power supply.
		Make sure the power is on.
	2. Carbon brushes are worn.	Check carbon brushes. In case 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 overheats	**1.** Air intakes and output are soiled.	Clean the air intake and output openings in the housing and/or change filter
	2. House fixing bolts loosed by vibrations.	Make sure nuts and bolts fixing outer housing are properly fixed.
The motor works slowly and it overheats	**1.** Problems with power supply.	Verify voltage of electrical system.
	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 and/or shaft have to be replaced, contact a technician or your dealer.
The motor becomes too noisy	**1.** Defective carbon brushes.	Check carbon brushes. In case brushes have to be replaced, contact a technician or your dealer.
	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 bolts.	Contact a technician or your dealer.

5. Periodic maintenance – storage – transportation

5.1. 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

1. A periodic lubrication of the converters' bearings is not necessary.

Ventilation

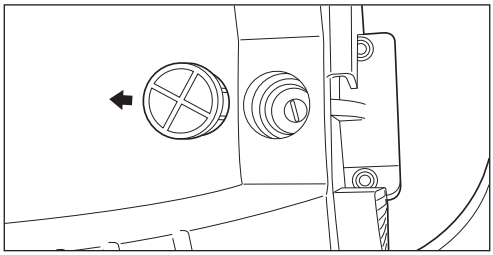
1. Clean the ventilation vents in the front and back part of the converter periodically to avoid overheating.

2. Check that the filter is situated in the air intake, under the switch. If it is soiled, change it. To do this, press with both hands on the rear grating in the place where it says "PRESS", take out the grating and the filter and replace with another new one. Then mount the grating, firstly inserting the bottom into its guide and then the upper part whilst pressing the "PRESS" indications.

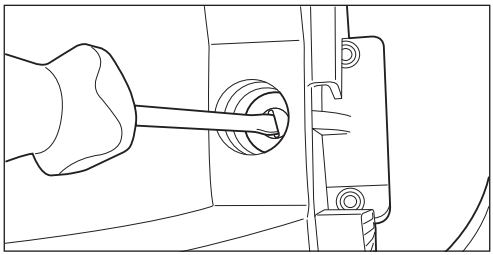
Carbon brushes

1. Inspect every 100 hours carbon brushes. They should be changed if effective length is less than 5 mm. Change the brushes:

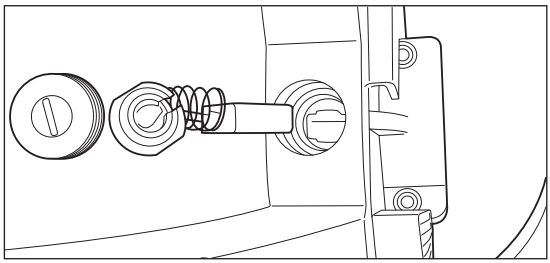
   a. With a screwdriver remove the side cap of the housing, introducing the screwdriver between the cap and the housing and lever it.



   b. We find the brush retainer; this is a treated part, with a screwdriver. Remove it andso we can see the brush, turn the motor 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 cap.



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 be done by an authorized dealer. Clean the filter on a regular basis or replace if necessary.

5.2. Storage

When the Humdinger concrete vibrator will not be used for long periods of time, it should always be stored in a clean, dry, stable and protected area.

5.3. Transportation

When transporting by vehicle, ensure the Humdinger concrete vibrator is safe against slipping, overturning and blows.

6. Ordering spare parts

All spare parts requests must include part code number as stated in the part list.
We recommend to include item's manufacture number.
The identification plate with manufacture and model number is located in the top part of the motor`s plastic frame.
Let us know the correct shipping instructions, including the wished route and the address and consignee`s complete name.

Beton Trowel nv reserves the right to modify any part of this manual without prior notice.

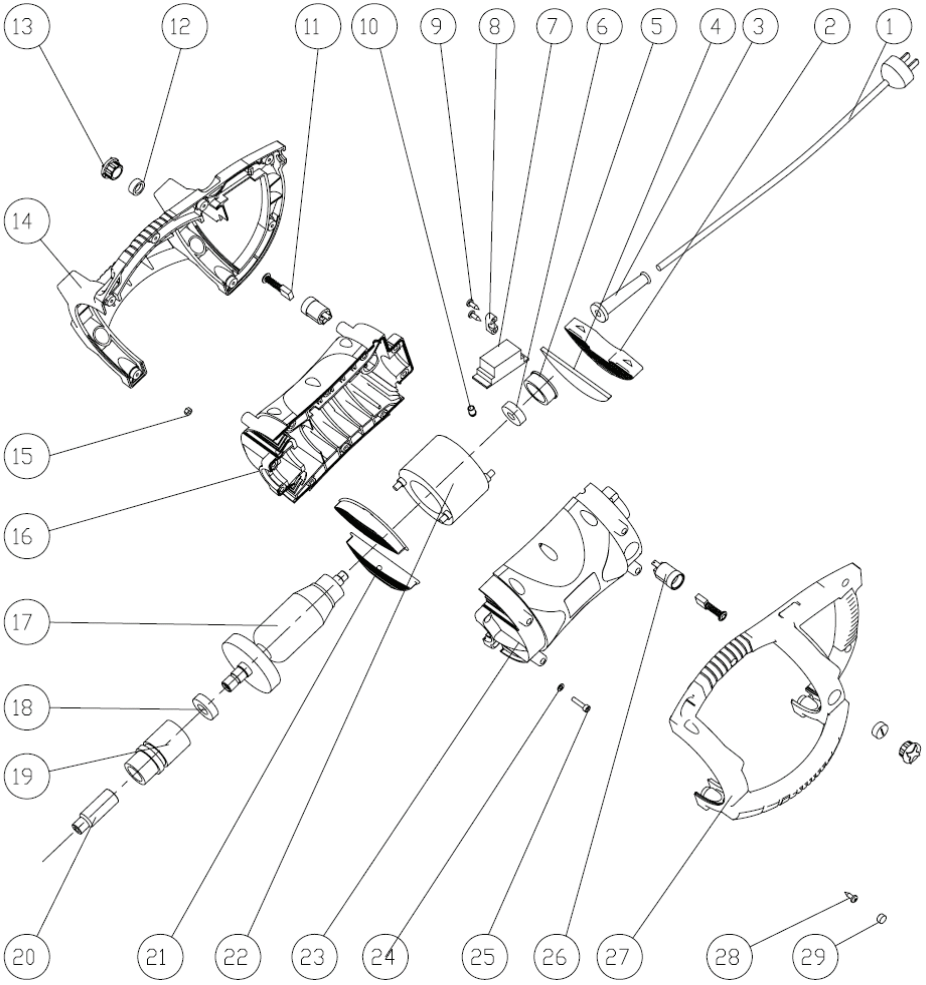
Material List of Motor

S/N	P/N	Description	Qty.
1	106011	Cable with Plug	1.00
2	201006	Rear Lattice (Black)	1.00
3	201007	Cable Protector	1.00
4	201004	Filter	1.00
5	201014	Rear Bearing Support	1.00
6	103011	Bearing 6201	1.00
7	301002	Assy. Switch Set	1.00
8	201008	Cable Clamp	1.00
9	101019	Screw M3.9x19 DIN 7981	2.00
10	201009	Rubber Sleeve	1.00
11	106003	Carbon Brush 230V	2.00
12	105002	Cap of Brush Holder	2.00
13	201010	Cap on Handle	7.00
14	201003	Handle	1.00
15	101027	Hex. Nut M5 DIN 986	10.00
16	201001	Housing	1.00
17	110001	Rotor 230V 2300W	1.00
18	103004	Bearing 6003	1.00
19	201015	Front Bearing Support	1.00
20	201016	Square Transmissor	1.00
21	201005	Front Lattice (Black)	2.00
22	110002	Stator 230V 2300W	1.00
23	201001	Housing	1.00
24	101031	Plat Washer 5 DIN 125	10.00
25	101008	Hex. Bolt M5x22 DIN 912 8.8	10.00
26	105001	Brush Holder	2.00
27	201003	Handle	1.00
28	101023	Screw M4,8x16 DIN 7981	7.00
29	201010	Screw Cap	7.00

For motor 110V, just need to replace the below items with right parts:

S/N	P/N	Description	Qty.
11	106004	Carbon Brush 110V	2.00
17	109003	Rotor 115V 2300W	1.00
22	109004	Stator 115V 2300W	1.00

Exploded view with part numbers



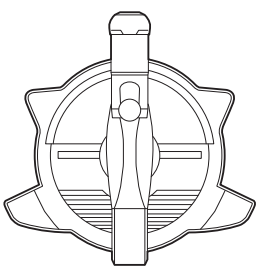
7. Disposal

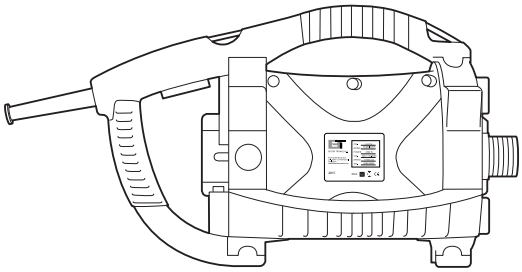
A worn out concrete vibrator contains valuable materials. Take the discarded apparatus and accessories to the nearest official collection point.

The concrete vibrator is manufactured from the following materials:

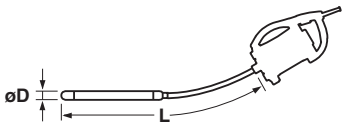
Housing, grips	Plastic & bakelite parts
Input/output air covers	Plastic
Stator rotor	Steel & insulation material
Wiring stator rotor	Copper
Brushes	Carbon
Cable/plug	Copper core & rubber coat
Flexible shaft	Rubber & steel
Square transmissor	Steel
Hose	Rubber
Belt	Nylon
ON/OFF-switch	Brass & Bakelite

8. Technical specifications





Motor type	Universal single phase
Electric insulation type	Double insulation, IP 34
Housing	Polyamide 6.6 + 26% GF
Power	2.300 or 1.600W
Voltage	220V or 115V – 50/60 HZ
Loading consumption	10A (220V) / 13A (115V)
Unloaded speed	17.500 RPM
Noise emission	77-80 dB(A)
Vibrations	ø25 - 1.16 m/s^2, ø38 - 1.41 m/s^2, ø48 - 1.53 m/s^2
Loaded speed	12.000 RPM
Weight	5.8 KG
Function	Transmits rotation power to an internal vibrator by a flexible shaft
Connection to flexible shaft	Female – 7”
Connection type	Left thread



Diameter vibrator head øD (mm)	Mass vibrator (kg)	Vibration frequency (p/min)	Acceleration (m/s^2)	Length flex. shaft-vibrator head L (m)
25	1.18	12500	1.16	
38	2.06	12000	1.41	1.0 - 2.0 - 3.0 - 4.0 - 5.0
48	3.57	11000	1.53	3.0 - 4.0 - 5.0

9. Warranty

- The warranty is valid 1 year after purchasing the machine. The warranty will cover parts with manufacture's defects. In no case the warranty will cover a malfunction due to improper usage of the equipment.

- In all warranty requests the machine must be sent to Beton Trowel nv or to an authorized shop, always including the complete address and name of the consignee.

- The Technical Assistance Service will immediately notify you if it accepts the warranty and if requested, it will send a technical report.

- The warranty will be void if any equipment has been previously handled by personnel outside Beton Trowel nv or not authorized by it.

- Let us to know the correct shipping instructions, including the wished route and the address and consignee`s complete name.

10. EC-Declaration

Beton Trowel nv

Declaration of Conformity / Certificat de conformite / Gelijkvormighheids certificaat / Declaracion de Conformidad / Declaracao de Concormidade / Dichiarazione Di Conformita

Machine : Power Unit **Serial No : 1490130127**
Model : Humdinger **Year : 2014**

We Beton Trowel NV

Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standards or other normative documents.
Declarons sous notre responsabilite que le produit cette declaration est conforme aux norms suivantes ou d'autres documents habituels.
Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standards of anders gebruikelijke documenten is.
Declaramos bajo nuestra unica responsabilidad que el producto en lo que esta declaracion concierne, es conforme con la siguiente normative u otros documentos.
Declara sob sua responsabilidade que o produto a quem esta declaracoa interessar, esta em comformidade com os seguintes documentos legais ou normas directivas.
Dichiariamo sotto la ns. Unica responsibilita che il prodotto al quale questa dichiarazione si riferisce, e fabbricato in conformita ai seguenti standard e documenti di normative.

Machinery Directive 2006/42/EC
EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC (Optional)
EN 60745-1
EN 60745-2-12

name and address of the person authorised to compile the technical file, who must be established in the Community

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