

Operator's manual

Internal vibrator

IEC



Model	IEC
Document	5100036868
Issue	02.2019
Version	03
Language	en

Copyright © 2019 Wacker Neuson Produktion GmbH & Co. KG

Printed in Germany

All rights are reserved, in particular the worldwide applicable copyright, right of duplication and right of distribution.

This document may only be used by the recipient for the intended purpose. The document may not be reproduced entirely or partially, or translated into any other language.

Reproduction or translation, even extracts thereof, only with written approval of Wacker Neuson Produktion GmbH & Co. KG.

Any breach of the statutory provisions, in particular the protection of copyright, will lead to civil and criminal prosecution.

Wacker Neuson Produktion GmbH & Co. KG is constantly working on the improvement of its products as part of the technical further development. Therefore, we reserve the right to make changes to the illustrations and descriptions in this documentation without incurring any obligation to make changes to machines already delivered.

Errors excepted.

The machine on the cover may have special equipment (options).



Manufacturer

Wacker Neuson Produktion GmbH & Co. KG

Wackerstraße 6

D-85084 Reichertshofen

www.wackerneuson.com

Tel.: +49 845 3340 3200

E-mail address: service-LE@wackerneuson.com

Original operator's manual

1 CALIFORNIA Proposition 65 Warning

**WARNING**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**WARNING**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

**WARNING**

Cancer and Reproductive Harm -
www.P65Warnings.ca.gov.

**WARNING**

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.



1	CALIFORNIA Proposition 65 Warning	3
2	Preface	5
3	Introduction	6
	3.1 Means of representation for this operator's manual.....	6
	3.2 Wacker Neuson representative	6
	3.3 Described machine types	6
	3.4 Identification of the machine	7
4	Safety	8
	4.1 Principle	8
	4.2 Qualification of the operating personnel	9
	4.3 Protective gear.....	10
	4.4 Transport	10
	4.5 Operating safety	11
	4.6 Safety during the operation of hand machines	12
	4.7 Safety during the operation of electric appliances	12
	4.8 Maintenance	13
5	General safety instructions for power tools	14
6	Safety and information labels	16
7	Structure and function	17
	7.1 Scope of delivery	17
	7.2 Application	17
	7.3 Functionality.....	17
8	Components and operator's controls	18
9	Transport	19
10	Use and operation	20
	10.1 Prior to starting the machine.....	20
	10.2 Starting up	20
	10.3 Decommissioning	22
	10.4 Cleaning.....	23
11	Maintenance	24
	11.1 Maintenance personnel qualifications.....	24
	11.2 Maintenance schedule.....	24
	11.3 Maintenance work.....	25
12	Disposal	26
	12.1 Disposal of old electrical and electronic equipment.....	26
13	Technical data	27
	13.1 IEC45.....	27
	13.2 IEC58.....	28
	13.3 Extension cable	29
14	Glossary	30
	EC declaration of conformity	31

2 Preface

This operator's manual contains important information and procedures for the safe, proper and economic operation of this Wacker Neuson machine. Carefully reading, understanding and observing is an aid to avoiding hazards, repair costs and downtime, and therefore to increasing the availability and service life of the machine.

This operator's manual is not a manual for extensive maintenance or repair work. Such work should be carried out by Wacker Neuson service or by technically trained personnel. The Wacker Neuson machine should be operated and maintained in accordance with this operator's manual. An improper operation or improper maintenance can pose dangers. Therefore, the operator's manual should be constantly available at the location of the machine.

Defective machine parts must be exchanged immediately!

If you have any questions concerning the operation or maintenance, a Wacker Neuson contact person is always available.

3 Introduction

3.1 Means of representation for this operator's manual

Warning symbols

This operator's manual contains safety information of the categories: DANGER, WARNING, CAUTION, NOTICE.

They should be followed to prevent danger to life and limb of the operator or damage to equipment and exclude improper service.



DANGER

This warning notice indicates immediate hazards that result in serious injury or even death.

- Danger can be avoided by the following the actions mentioned.



WARNING

This warning notice indicates possible hazards that can result in serious injury or even death.

- Danger can be avoided by the following the actions mentioned.



CAUTION

This warning notice indicates possible hazards that can result in minor injury.

- Danger can be avoided by the following the actions mentioned.

NOTICE

This warning notice indicates possible hazards that can result in material damage.

- Danger can be avoided by the following the actions mentioned.

NOTES

Complementary information will be displayed here.

Instructions

- ▶ This symbol indicates there is something for you to do.
- 1. Numbered instructions indicate that you have to carry out something in a defined sequence.
 - This symbol is used for lists.

3.2 Wacker Neuson representative

Depending on your country, your Wacker Neuson representative is your Wacker Neuson service, your Wacker Neuson affiliate or your Wacker Neuson dealer.

You can find the addresses in the Internet at www.wackerneuson.com.

The address of the manufacturer is located at the beginning of this operator's manual.

3.3 Described machine types

This operator's manual is valid for different machine types from a product range. Therefore some figures can differ from the actual appearance of your machine. It is also possible that the descriptions include components which are not a part of your machine.

Details for the described machine types can be found in the chapter *Technical data*.



3.4 Identification of the machine

Nameplate data

The nameplate lists information that uniquely identifies your machine. This information is needed to order spare parts and when requesting additional technical information.

- ▶ Enter the information of your machine into the following table:

Designation	Your information
Group and model	
Year of manufacture	
Machine number	
Version no.	
Item number	

4 Safety

4.1 Principle

State of the art

This machine has been constructed with state-of-the-art technology according to the recognized rules of safety. Nevertheless, when used improperly, dangers to the life and limb of the operator or to third persons or damage to the machine or other materials cannot be excluded.

Proper use

The machine may only be used for compacting fresh concrete. The vibrator head has to be immersed in the fresh concrete.

The vibrator head may not be immersed into acidic or alkaline liquids.

The vibrator head may not come into contact with or be inserted into parts of the body.

Its proper use also includes the observance of all instructions contained in this operator's manual as well as complying with the required service and maintenance instructions.

Any other use is regarded as improper. Any damage resulting from improper use will void the warranty and the liability on behalf of the manufacturer. The operator assumes full responsibility.

Structural modifications

Never attempt to modify the machine without the written permission of the manufacturer. To do so will endanger your safety and the safety of other people! In addition, this will void the warranty and the liability on behalf of the manufacturer.

Especially the following are cases of structural modifications:

- Opening the machine and the permanent removal of components from Wacker Neuson.
- Installing new components which are not from Wacker Neuson and not equivalent to the original parts in design and quality.
- Installation of accessories which are not from Wacker Neuson.

It is no problem to install spare parts from Wacker Neuson. In Internet under www.wackerneuson.com.

It is no problem to install accessories that are available in the Wacker Neuson product range of your machine. Please refer to the installation regulations in this operator's manual.

Do not drill into the housing, e.g. to install signs. Water could penetrate the housing and damage the machine.

Requirements for operation

The ability to operate the machine safely requires:

- Proper transport, storage and setup.
- Careful operation.
- Careful service and maintenance.

Operation

Operate the machine only as intended and only when in proper working condition.

Operate the machine in a safety-conscious manner with all safety devices attached and enabled. Do not modify or disable any safety devices.

Before starting operation, check that all control and safety devices are functioning properly.

Never operate the machine in a potentially explosive environment.

Supervision

Never leave the machine running unattended!

Maintenance

Regular maintenance work is required in order for the machine to operate properly and reliably over time. Failure to perform adequate maintenance reduces the safety of the machine.

- Strictly observe the prescribed maintenance intervals.
- Do not use the machine if it requires maintenance or repairs.

Malfunctions

If you detect a malfunction, you must shut down and secure the machine immediately.

Eliminate the malfunctions that impair safety immediately!

Have damaged or defective components replaced immediately!

For further information, refer to chapter *Troubleshooting*.

Spare parts, accessories

Use only spare parts from Wacker Neuson or such that are equivalent to the original parts in design and quality.

Only use accessories from Wacker Neuson.

Non-compliance will exempt the manufacturer from all liability.

Exclusion of liability

Wacker Neuson will refuse to accept liability for injuries to persons or for damage to materials in the following cases:

- Structural modifications.
- Improper use.
- Failure to comply with this operator's manual.
- Improper handling.
- Using of spare parts which are not from Wacker Neuson and not equivalent to the original parts in design and quality.
- Using of accessories which are not from Wacker Neuson.

Operator's manual

Always keep the operator's manual near the machine or near the worksite for quick reference.

If you have misplaced the operator's manual or require an additional copy, contact your Wacker Neuson representative or download the operator's manual from the Internet (www.wackerneuson.com).

Always hand over this operator's manual to other operators or to the future owner of the machine.

Country-specific regulations

Observe the country-specific regulations, standards and guidelines in reference to accident prevention and environmental safety, for example those pertaining to hazardous materials and wearing protective gear.

Complement the operator's manual with additional instructions taking into account the operational, regulatory, national or generally applicable safety guidelines.

Operator's controls

Always keep the operator's controls of the machine dry, clean and free of oil or grease.

Operating elements such as ON/OFF switch, gas handles etc. may not be locked, manipulated or changed without authorization.

Checking for signs of damage

Inspect the machine when it is switched off for any signs of damage at least once per work shift.

Do not operate the machine if there is visible damage or defects.

Have any damage or defects eliminated immediately.

4.2 Qualification of the operating personnel**Operator qualifications**

Only trained personnel are permitted to start and operate the machine. The following rules also apply:

- You are physically and mentally fit.
- You have received instruction on how to independently operate the machine.
- You have received instruction in the proper use of the machine.
- You are familiar with required safety devices.
- You are authorized to start machines and systems in accordance with the standards governing safety.
- Your company or the operator has assigned you to work independently with this machine.

Incorrect operation

Incorrect operation or misuse by untrained personnel can endanger the health and safety of the operator or third persons and also cause machine and material damage.

Operating company responsibilities

The operating company must make the operator's manual available to the operator and ensure that the operator has read and understood it.

Work recommendations

Please observe the recommendations below:

- Work only if you are in a good physical condition.
- Work attentively, particularly as you finish.
- Do not operate the machine when you are tired.
- Carry out all work calmly, circumspectly and carefully.
- Never operate the machine under the influence of alcohol, drugs or medication. This can impair your vision, reactions and your judgment.
- Work in a manner that does not endanger others.
- Ensure that no persons or animals are within the danger zone.

4.3 Protective gear**Work clothing**

Clothing should be appropriate, i.e. should be close-fitting but not restrict your movement.

When on construction sites, do not wear long hair loosely, loose clothing or jewelry including rings. These objects can easily get caught or be drawn in by moving machine parts.

Only wear clothing made of material that is not easily flammable.

Personal protective gear

Wear personal protective gear to avoid injuries or health hazards:

- Non-skid, hard-toed shoes.
- Work gloves made of durable material.
- Overalls made of durable material.
- Hard hat.
- Ear protection.

Ear protection

This machine generates noise that exceeds the country-specific permissible noise levels (individual rating level). It may therefore be necessary to wear ear protection. You can find the exact value in the chapter *Technical Data*.

When wearing ear protection while working, you must pay attention and exercise caution because your hearing is limited, e.g. in case someone screams or a signal tone sounds.

Wacker Neuson recommends that you always wear ear protection.

4.4 Transport**Switching off the machine**

Before you transport the machine, switch it off and pull the plug out of the plug receptacle. Allow the motor to cool down.

Transporting the machine

Secure the equipment on the transport vehicle against tipping over, falling down or sliding.

Lifting the machine

A falling machine can cause serious injuries.

The machine has no lifting or lashing points.

While lifting, secure the equipment against tipping over, falling or slipping, for instance when in a closed transport container.

Restarting

Machines, machine parts, accessories or tools that were detached for transport purposes must be re-mounted and fastened before restarting.

Only operate in accordance with the operating instructions.

4.5 Operating safety**Explosible environment**

Never operate the machine in a potentially explosive environment.

Work environment

Familiarize yourself with your work environment before you start work. This includes e.g. the following items:

- Obstacles in the work and traffic area.
- Load-bearing capacity of the ground.
- The measures needed to cordon off the construction site from public traffic in particular.
- The measures needed to secure walls and ceilings.
- Options available in the event of an accident.

Starting the machine

Observe the safety information and warning notices located on the machine and in the operator's manual.

Never attempt to start a machine that requires maintenance or repairs.

Start the machine as described in the operator's manual.

Avoid body contact with grounded components.

Vertical stability

Always make sure that you stand firmly when working with the machine. This applies particularly when working on scaffoldings, ladders, uneven or slippery floors etc.

Caution with hot parts

Do not touch the hot vibrator head during or shortly after operation. The vibrator head can become very hot and can cause severe burns.

Do not use components of to machine for climbing on or holding onto

Never use the protective hose, power cable or other components of the machine for climbing on or holding onto.

Switching off the machine

Switch off the machine and pull the plug out of the plug receptacle in the following situations:

- Before breaks.
- If you are not using the machine.

Before storing the machine, wait until it has completely stopped running.

Store the machine or put it down in such a way that it cannot tilt, fall down or slip.

Storage

Set the machine down or store it securely so that it cannot tilt, fall down or slip.

Storage location

After operation, allow the machine to cool and then store it in a sealed-off, clean and dry location protected against frost and inaccessible to children.

Vibrations

When manually operated machines are intensively used, long-term damage caused by vibrations cannot be precluded.

Observe the relevant legal instructions and guidelines to minimize vibration stress.

Details on vibration stress associated with the machine can be found in the chapter *Technical Data*.

4.6 Safety during the operation of hand machines

Setting the hand machine down properly

Set the machine down carefully. Do not drop the machine to the floor or from greater heights. Dropping the machine can cause injuries to other persons or the machine itself can be damaged.

Safe working with hand machines

While working, always hold the machine on the handle provided.

4.7 Safety during the operation of electric appliances

Electric power supply for class I electrical appliances

NOTES

The rated voltage is indicated on the nameplate of your machine.

The machine must be connected to a 15 A/16 A shock-proof plug receptacle (continental type) with a corresponding overload protection.

The machine may only be connected to an electric power supply with all machine parts in proper working condition. Take special notice of the following components:

- Plug.
- Power cable along the entire length.
- Switch diaphragm of the ON/OFF switch, if there is one.
- Plug receptacles.

The machine must only be connected to an electric power supply with an intact grounded conductor connection (PE) and a 15 A/16 A plug receptacle with shock-proof connector and suitable overload protection.

The device must only be connected to one of the following power sources in accordance with the standard:

- Do not connect the unit directly to the construction site power supply system.
- A motor generator which ensures the same separation from the power supply as an isolating transformer (IT network or electrically isolated).
- Safety isolating transformer according to IEC/DIN EN61558-2-23 with an input power of at least 2,500 VA for only one single consumer.

NOTES

Observe the respective national safety regulations!

Extension cable

The machine may only be operated with undamaged and tested extension cables!

Only use extension cables with grounded conductor and correct connection of the grounded conductor to the plug and coupling (only for machines of class rating I, see chapter Technical data).

Only use tested extension cables which are suitable for use at construction sites: Wacker Neuson recommends H07RN-F, H07BQ-F, an SOOW cable, or a country-specific equivalent design.

Immediately replace damaged extension cables (e.g. tears in the sheathing) or loose plugs and couplings.

Cable drums and multiple plug receptacles must fulfill the same requirements as the extension cable.

Protect extension cables, multiple plug receptacles, cable drums and connection couplings against rain, snow or any other forms of moisture.

Uncoil the cable drum completely

Danger of fire due to wound cable drum.

Uncoil the cable drum completely before operation.

**Protecting the power cable**

Do not use the power cable to pull or lift the machine.

Do not unplug the power cable by pulling on the cable.

Protect the power cable from heat, oil and sharp edges.

If the power cable is damaged or the plug is loose, have it replaced immediately by your Wacker Neuson representative.

Protecting the protective hose

- Do not drag the protective hose over sharp edges.
- If the vibrator head jams in the reinforcement, do not pull out the protective hose suddenly or violently. Free the vibrator head by carefully moving it back and forth.

4.8 Maintenance**Maintenance work**

Service and maintenance work must only be carried out to the extent described in these operating instructions. All other procedures must be performed by your Wacker Neuson representative.

For further information, refer to chapter *Maintenance*.

Disconnecting the machine from the electric power supply

Before carrying out service or maintenance work, pull the plug out of the plug receptacle in order to disconnect the machine from the electric power supply.

Cleaning

Always keep the machine clean and be sure to clean it each time you have finished using it.

Do not use gasoline or solvents. Danger of explosion!

Do not use high pressure washers. Permeating water can damage the machine. When electrical equipment is present, this can pose a serious injury risk from electric shocks.

5 General safety instructions for power tools



WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool.

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. Working area safety
 - a) **Keep work area clean and well lit.** Cluttered or dark working areas invite accidents.
 - b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks, which can ignite dust or fumes.
 - c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.
2. Electrical safety
 - a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unchanged plugs and matching outlets will reduce risk of electric shock.
 - b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
 - c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
 - d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
 - e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
 - f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.
3. Personal safety
 - a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
 - b) **Use personal protective equipment. Always wear eye protection.** Protective equipment, such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
 - c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
 - d) **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 injury.
 - e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
 - f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
 - g) **If devices are provided for the connecting of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
 - h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tools safety principles.** A careless action can cause severe injury within a fraction of a second.
4. Use and handling of the power tool



- a) **Do not force the power tool.** Use the correct power tool for your application. *The correct power tool will do the job better and safer at the rate for which it was designed.*
 - b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
 - c) **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
 - d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
 - e) **Maintain power tools and accessories. 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.*
 - f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
 - g) **Use the power tool, accessories and tool bits ect. 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.*
 - h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*
5. Service
- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

6 Safety and information labels

Your machine has adhesive labels containing the most important instructions and safety information.

- Make sure that all the labels are kept legible.
- Replace any missing or illegible labels.

The item numbers for the labels are in the parts book.

The following labels are found on the switch housing inverter:



Item	Label	Description
1		<ul style="list-style-type: none"> ■ Attention: electric shock. ■ Read operator's manual.
2		Warning.
3		Warning. From chemicals that cause cancer, birth defects or other reproductive damage.

7 Structure and function

7.1 Scope of delivery

The internal vibrator is delivered completely mounted.

The scope of delivery includes:

- Machine.
- Operator's manual.

7.2 Application

Use the machine only as intended, see chapter Safety, Proper use.

Design - R with rubber seal cap

The machine is protected from damage of the formworks by the rubber seal cap.

7.3 Functionality

Principle

The machine is an internal vibrator which creates high-frequency vibrations in the vibrator head.

Concrete is deaerated and compressed in the effective range of the vibrator head when the vibrator head is immersed into the fresh concrete.

The fresh concrete is simultaneously cooling the vibrator head.

NOTES

The concrete is being compressed for as long as bubbles of air arise.

Vibrator head

In the vibrator head, an electric motor drives an eccentric weight at approx. 12,000rpm (200Hz) and thus generates precessions. By these precessions the vibrator head introduces vibrations into the concrete.

Inverter

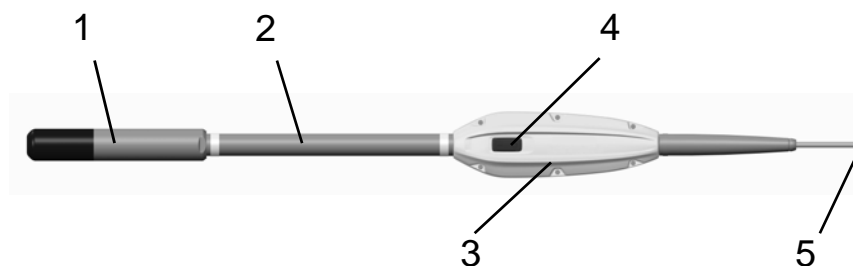
The inverter comprises a current rectifier and a d.c.-a.c. converter monitored by an electronic control.

The current rectifier converts the input voltage (AC single phase) to DC voltage.

The d.c.-a.c. converter converts the generated DC voltage to three phase current (AC three phase).

When the machine is switched on, the control electronics provides a soft start and thus prevents critical starting currents.

8 Components and operator's controls



Item	Designation	Item	Designation
1	Vibrator head	4	ON/OFF switch
2	Protective hose	5	Power cable with Plug
3	Switch housing with Inverter		

9 Transport



WARNING

Improper handling can result in injury or serious material damage.

- ▶ Read and follow all safety information of this operator's manual, see chapter *Safety*.
-



WARNING

This warning notice indicates possible hazards that can result in serious injury or even death.

- ▶ Only touch the vibrator head once the engine has cooled down.
 - ▶ Wear protective gloves.
-

Transporting the machine

1. Switch off the machine via the ON/OFF switch.
2. Wait until the machine has come to a complete standstill.
3. Pull the plug from the plug receptacle.
4. Place the machine on or into a suitable means of transport.
5. Roll up the power cable and the protective hose.

NOTES

Do not kink the protective hose and power cable.

6. Secure the machine against falling and sliding.

10 Use and operation



WARNING

Improper handling can result in injury or serious material damage.

- ▶ Read and follow all safety information of this operator's manual, see chapter *Safety*.
-

10.1 Prior to starting the machine

After unpacking, the machine is ready for operation.

Checking the machine

- ▶ Check the machine and all components for damages.
- ▶ Check protective hose and power cable for damage.

Checking the mains

- ▶ Check if mains or power distribution on the construction site have the correct operating voltage (see nameplate of the machine or chapter *Technical Data*).
- ▶ Check if mains or power distribution on the constructions site are protected in accordance with current standards and regulations.

10.2 Starting up



WARNING

Damaged insulation.
Danger of electrocution!

- ▶ Do not kink or damage the protective hose and power cable.
-

Connecting the machine to the electric power supply

NOTES

The machine may only be connected to AC single phase, connection values see chapter *Technical Data*.

NOTICE

Electrical voltage.
Incorrect voltage can cause damage on the machine.

- ▶ Check if the voltage of the current source corresponds with the information of the machine, see chapter *Technical Data*.
-

Follow the instructions for "safe operation of electrical appliances".


WARNING

Starting of the machine.
Danger of injuries from uncontrolled starting of the machine.

- ▶ Deactivate the machine before connection to the electric power supply.

1. Switch off the machine via the ON/OFF switch.


WARNING

Electrical voltage.
Injuries from electrocution.

- ▶ Check power cable and extension cable for signs of damage.
- ▶ Only use extension cables for which grounded conductors are connected to the plug and the coupling (only for machines of class rating I, see chapter *Technical Data*).

2. If required, connect the machine to a permitted extension cable.

NOTES

See chapter *Technical data* for the permitted lengths and cross-section areas of extension cables.

3. Insert the plug into the plug receptacle.

Switching on the machine


Item	Designation
1	ON/OFF switch

1. Use the protective hose to hold the machine near the vibrator head.
2. Switch on the machine via the ON/OFF switch.


CAUTION

Hot surface can cause burns.

- ▶ Do not touch vibrating bodies when in operation

Compacting fresh concrete

1. Quickly immerse the vibrator head in the fresh concrete, hold it for several seconds and slowly pull it out again.
2. Immerse the vibrator head in all areas of the formwork and compact the fresh concrete.

Notes:

- Compact especially intensively in the area of formwork corners. In these areas, the reinforcement rate is the highest.
- Avoid contact of the vibrator head with the concrete reinforcement. The following damages are possible if the vibrator head comes into contact with the concrete reinforcement:
 - The connection of the concrete to the reinforcement can be lost.
 - The machine can be damaged.
- The result of the compacting depends on the following points:
 - Holding time of the vibrator head in the concrete.
 - Diameter of the vibrator head.
 - Consistency of the concrete.
 - Reinforcement rate.

If you use a vibrator head with a smaller diameter, the compacting time to achieve the same results as with a vibrator head with a larger diameter will increase.

- Indications that the concrete is sufficiently compacted:
 - The concrete no longer sets.
 - Air bubbles no longer or rarely rise.
 - The sound of the vibrator head is not changing anymore.

10.3 Decommissioning

Switching off the machine



CAUTION

The vibrator head moves if it is turned on and not immersed in the fresh concrete. Danger of injury or danger of damage to property by uncontrolled vibrator head.

- ▶ Switch the machine off before you put it down.



CAUTION

The vibrator head heats up if it is turned on and not immersed in the fresh concrete. Hot surface can cause burns. Damage to the machine with excessive wear.

- ▶ Do not operate the machine with the internal vibrator not immersed in the fresh concrete.



WARNING

Danger of electrocution!

- ▶ Switch off the equipment before pulling the plug.

1. Slowly remove the machine from the fresh concrete; hold the vibrator head in the air.
2. Switch off the machine via the ON/OFF switch.
3. Wait until the machine has come to a complete standstill.
4. Put down the machine slowly.
5. Do not kink the protective hose and power cable.
6. Pull the plug from the plug receptacle.

10.4 Cleaning**Cleaning the machine**

- ▶ Clean the machine and all components with water after each use.

NOTES

You can remove concrete residuals by immersing the running machine into gravel.

11 Maintenance



WARNING

Improper handling can result in injury or serious material damage.

- ▶ Read and follow all safety instructions of this operator's manual, see chapter *Safety*.



WARNING

Improper handling may cause a danger to life by electrocution.

- ▶ Only a qualified electrician is permitted to open the machine, perform repairs, and perform a subsequent safety check in accordance with applicable regulations.

11.1 Maintenance personnel qualifications

Qualifications for maintenance work

The maintenance tasks described in this operator's manual may be performed by any responsible user unless otherwise stated.

Some maintenance tasks may only be performed by specially trained personnel or by the service staff of your Wacker Neuson contact — these are specifically noted.

11.2 Maintenance schedule

NOTES

The time intervals mentioned here are reference values for normal operation. For extreme operation, e.g. continuous use, the service intervals should be halved.

Task	Daily before operation
Visual inspection of all parts for damage.	■
Check the tightness of the switch diaphragm for the ON/OFF switch.	■
Check the wear dimensions.	■

The vibrator head assembly is filled with oil by the manufacturer and is therefore maintenance-free.

NOTES

If the lower part of the vibrator head assembly needs to be replaced, fill it with sufficient oil. Secure the lower part of the vibrator head assembly accordingly. Have this work performed by the service department of the Wacker Neuson contact partner.

11.3 Maintenance work


WARNING

A damaged machine part, protective hose or power cable can result in personal injury caused by electric current.

- ▶ Do not operate a damaged machine.
- ▶ Have a damaged machine repaired immediately.

Working in the workshop

Perform maintenance work in a workshop on a workbench. This has the following benefits:

- Protection of the machine of contamination on the construction site.
- A level and clean work surface makes work easier.
- There is a better overview over small parts and they are not lost as easily.

Checking the wear dimensions of the vibrator head

Wear dimensions:

- Minimum diameter of lower tube $\varnothing L_L$
- Minimum diameter of vibrator head $\varnothing L$ at measuring point L
- Length of vibrator head L_L

Wear is highest at the end of the vibrator head.

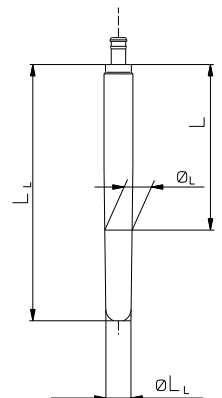
Let the vibrator head be exchanged by your Wacker Neuson contact if the wear dimensions are reached at a certain point.

The vibrator head assembly must be replaced by the service department of the Wacker_Neuson contact partner.

Machine type	Dimensions for vibrator head and lower tube [mm]			
	$\varnothing L_L$	L_L	$\varnothing L$	L
IEC38	33 (38)	275 (285)	35 (38)	180
IEC45	38 (45)	315 (327)	42 (45)	194
IEC58	50 (58)	390 (400)	54 (58)	205

Dimensions in bold are wear dimensions.

Dimensions in brackets are original dimensions of new machines.



12 Disposal

12.1 Disposal of old electrical and electronic equipment

Professional disposal of this machine avoids negative effects on human health and the environment, helps with the targeted treatment of pollutants and makes it possible to recycle valuable raw materials.

For customers in EU countries

This machine is subject to the European directive for old electrical and electronic equipment (Waste Electrical and Electronic Equipment (WEEE)), as well as the corresponding national laws. The WEEE directive provides the framework for an EU-wide treatment of old electrical equipment.



The machine is marked with the following symbol of a crossed-out garbage bin. This means that you do not dispose of the battery in normal household waste but that it must be disposed of in a separate, environmentally friendly collection facility.

This unit is provided as a professional electrical tool exclusively for commercial use (a so-called B2B device according to the WEEE directive). Unlike equipment mostly used in private households (so-called B2C devices), this machine may therefore not be disposed of in some EU countries, such as in Germany, at the collection points of public waste management organizations (e.g. municipal collection stations). If there are any doubts, information regarding the different methods of disposal for B2B electronic devices for each country can be obtained from the sales location, so that the disposal takes place in accordance with the valid statutory provisions. There are also some notes to follow in the sales contract or in the general Terms and Conditions of the sales location.

For customers in other countries

It is recommended that you do not dispose of the machine in normal household waste but rather in a separate, environmentally friendly collection facility. National laws also may, under certain circumstances, prescribe the separate disposal of electrical and electronic products. Correct disposal of this machine in accordance with current national guidelines must be assured.

13 Technical data

13.1 IEC45

Designation	Unit	IEC45/120/3 US	IEC45/120/8 US
Item no.		5100036227	5100036228
Rated current	A	8,0	
Rated voltage	V	120	
Rated frequency	Hz	50 – 60	
Rated input power **	kW	0,56	
Phases	~	1	
Vibration range in air	mm (in)	2,3 (0.09)	
Vibrations	rpm	12,000	
	Hz	200	
Vibrator head diameter	mm (in)	45 (1.8)	
Outer diameter of protective hose	mm (in)	31 (1.2)	
Length of vibrator head	mm (in)	320 (12.6)	
Length of protective hose	m (ft)	3 (9.8)	8 (26.4)
Length of power cable ***	m (ft)	5 (16.4)	
Weight	kg (lb)	10,8 (23.8)	14,6 (32.2)
Plug		NEMA 5-15P (type B)	
Engine type		Asynchronous motor	
Oil specification		4 UH1- 46N	
Oil quantity	l	0,006	
Class rating		I	
Protection class		IP 67	
Storage temperature range	°C (°F)	-20 – +60 (-4 – +140)	
Operating temperature range	°C (°F)	-10 – +40 (+14 – +104)	
Sound pressure level L_{pA} *	dB(A)	79	
Standard		EN 12649	
Vibration total value a_{HV}	m/s^2 (ft/s^2)	< 2,7 (< 8.9)	
Standard		DIN EN ISO 20643	
Uncertainty of measurement of vibration total value a_{HV}	m/s^2 (ft/s^2)	0,5 (1.6)	
* These measurements were obtained when the device was operated freely suspended in the air at a distance of 1 meter.			
** The rated power is the active power consumed during nominal operation.			
*** Cable length: including plug as far as inverter.			

13.2 IEC58

Designation	Unit	IEC58/120/3 US	IEC58/120/8 US
Item no.		5100036229	5100036350
Rated current	A	10,0	
Rated voltage	V	120	
Rated frequency	Hz	50 – 60	
Rated input power **	kW	0,72	
Phases	~	1	
Vibration range in air	mm (in)	2,9 (0.11)	
Vibrations	rpm	12,000	
	Hz	200	
Vibrator head diameter	mm (in)	58 (2.3)	
Outer diameter of protective hose	mm (in)	40 (1.6)	
Length of vibrator head	mm (in)	327 (12.9)	
Length of protective hose	m (ft)	3 (9.8)	8 (26.4)
Length of power cable ***	m (ft)	5 (16.4)	
Weight	kg (lb)	14,1 (31.1)	19,2 (42.3)
Plug		NEMA 5-15P	
Engine type		Asynchronous motor	
Oil specification		4 UH1- 46N	
Oil quantity	l	0,008	
Class rating		I	
Protection class		IP 67	
Storage temperature range	°C (°F)	-20 – +60 (-4 – +140)	
Operating temperature range	°C (°F)	-10 – +40 (+14 – +104)	
Sound pressure level L_{pA} *	dB(A)	79	
Standard		EN 12649	
Vibration total value a_{hv}	m/s^2 (ft/s^2)	2,7 (8.9)	
Standard		DIN EN ISO 20643	
Uncertainty of measurement of vibration total value a_{hv}	m/s^2 (ft/s^2)	0,5 (1.6)	
* These measurements were obtained when the device was operated freely suspended in the air at a distance of 1 meter.			
** The rated power is the active power consumed during nominal operation.			
*** Cable length: including plug as far as inverter.			

13.3 Extension cable

WARNING

Electrical voltage.
Injuries from electrocution.

- ▶ Check power cable and extension cable for signs of damage.
- ▶ Only use extension cables for which grounded conductors are connected to the plug and the coupling (only for machines of class rating I, see chapter *Technical Data*).

- Only use permitted extension cables, see chapter *Safety*.
- Refer to the following table for the required cross-section area of the extension cable:

NOTES

Refer to the nameplate or the chapter *Technical data* (via the item number) for the type designation and voltage rating of your machine.

Machine	Voltage [V]	Extension [m]	Cross-section area of cable [mm ²]
IEC45	120 1~	≤ 45	1,5
		≤ 75	2,5
		≤ 119	4
IEC58	120 1~	≤ 18	1,5
		≤ 30	2,5
		≤ 48	4

Example

You utilize an IEC58 and want to use an extension cable with a length of 25 m.

The machine has an input voltage of 120V 1~.

According to the table, the extension cable must feature a cross-section area of 2.5 mm².

Machine	Voltage [V]	Extension [ft]	Cross-section area of cable [AWG]
IEC45	120 1~	≤ 129	16
		≤ 205	14
		≤ 323	12
IEC58	120 1~	≤ 52	16
		≤ 82	14
		≤ 129	12

14 Glossary

Class rating

The class rating according to DIN EN 61140 identifies electrical machines in terms of safety measures for the prevention of an electric shock. There are four class ratings:

Class rating	Significance
0	No special protection, other than the basic insulation. No grounded conductor. Plug connection without a grounded conductor contact.
I	Connection of all conductive housing components to the grounded conductor. Plug connection with a grounded conductor contact.
II	Reinforced or double insulation (protective insulation). No connection to the grounded conductor. Plug connection without a grounded conductor contact.
III	Machines are operated with a protective low voltage (<50 V). Connection to the grounded conductor is not necessary. Plug connection without a grounded conductor contact.

Protection rating IP

The protection rating DIN EN 60529 indicates the suitability of electrical machines for certain environmental conditions and also the protection against hazards.

The protection rating is specified with an IP code according to DIN EN 60529.

Code	Significance of 1st digit: Protection against contact with hazardous parts. Protection against ingress of foreign bodies.
0	Not protected against contact. Not protected against foreign bodies.
1	Protected against contact with the back of the hand. Protected against large foreign bodies with a diameter of > 50 mm.
2	Protected against contact with a finger. Protected against medium foreign bodies (diameter > 12.5 mm).
3	Protected against contact with a tool (diameter > 2.5 mm). Protected against small foreign bodies (diameter of > 2.5 mm).
4	Protected against contact with a wire (diameter > 1 mm). Protected against particle shape foreign bodies (diameter > 1 mm).
5	Protected against contact. Protected against dust deposits inside.
6	Completely protected against contact. Protected against dust ingress.

Code	Significance of 2nd digit: Protection against ingress of water
0	Not protected against water penetration.
1	Protected against vertically falling drip water.
2	Protected against angled falling drip water (15° inclination).
3	Protected against spray water (60° inclination).
4	Protected against splash water from all directions.
5	Protected against water jets (nozzle) from any angle.
6	Protected against powerful water jets (flooding).
7	Protected against temporary submersion in water.
8	Protected against continuous submersion in water.



EC Declaration of Conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product	IEC45, IEC58
Product type	Internal vibrator
Function of product	Compacting of concrete
Item number	5100036227, 5100036228, 5100036229, 5100036350

Guidelines and standards

We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:

2006/42/EC, 2014/30/EU, EN 60745-1:2009 +A11:2010, EN 60745-2-12:2009, EN 55014-1:2017, EN 55014-2:2015, EN 12649:2008 +A1:2011

Person responsible for technical documents

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, D-85084 Reichertshofen

Reichertshofen, 19.11.2018

Helmut Bauer
Managing Director

