Operator's manual

Internal vibrator

IREN

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Manufacturer

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Original operator's manual

1 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.

2 Introduction

2.1 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.

2.2 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.

2.3 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*.

2.4 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	

3 Security

NOTICE

Read and comply with all notes and safety instructions in this manual. Failure to comply with these instructions can cause electric shock, fire and/or serious injuries as well as damage to the machine and/or damage to other objects. Keep safety instructions and notes for the future.

3.1 Policy

In keeping with the latest technological developments

The machine has been built in keeping with the latest technological developments and the recognized technical safety rules. Nevertheless, improper use can result in hazards to life and limb of the user or third parties as well as damage to the equipment and other material assets.

Proper use

The machine may only be used for the following purposes:

- Compaction of freshly mixed (green) concrete.

The machine may not be used for the following purposes:

- Immersion in acidic or alkaline liquids.
- Contact with body parts or insertion into body parts.

Use in accordance with the intended purpose also includes the observation of all safety instructions in this manual as well as complying with the prescribed care and maintenance instructions.

Any use that exceeds or is not in accordance with the intended purpose is considered improper. The manufacturer's liability and warranty are canceled for any damage resulting from improper use. The risk lies entirely with the operator.

Structural changes

Structural modifications may not be undertaken without the written permission of the manufacturer. Unapproved structural changes may result in risks to the operator and/or third parties as well as damage to the machine.

In the case of unauthorized structural changes, the liability and warranty of the manufacturer are no longer applicable.

The following cases are considered structural changes:

- Opening the machine and the permanent removal of components.
- Installing spare parts that do not originate from Wacker Neuson or are not comparable in the design system and quality of the original parts.
- Attaching any accessories that do not originate from Wacker Neuson .

Spare parts or accessories that originate from Wacker Neuson can be safely mounted. They can be found on the Internet under www.wackerneuson.com.

3.2 Areas of responsibility of the operator

The operator is the individual who personally operates this machine for industrial or commercial purposes or who entrusts a third party with the use. The operator bears legal responsibility for his/her protection as well as that of third parties.

The user must make the operator's manual available to the operator and ensure that this has been read and understood.

The manual must be kept next to the machine or place of use.

The operator must hand over the manual to subsequent operators or owners of the machine.

The country-specific regulations, standards, and guidelines on accident prevention and environmental protection must be observed. The operator’s manual must supplemented with additional instructions that take regulatory, national, or generally applicable safety standards into consideration.

3.3 Operator responsibilities

- Know and implement the applicable industrial safety regulations.

- Use a risk assessment to identify the dangers that result from the working conditions at the site of application.
- Create operating instructions for the operation of this machine.
- Periodically check whether the user instructions correspond to the current state of regulations.
- Clearly regulate and specify responsibilities for operation, troubleshooting, maintenance, and cleaning.
- Regularly train employees and inform them about potential hazards.
- Provide employees with the necessary equipment.

3.4 Personnel qualification

This machine may only be installed and operated by trained personnel.

Faulty operation, misuse or operation by untrained personnel can endanger the health of the operator or third parties and lead to damage to or total loss of the machine.

In addition, the operator should be:

- physically and mentally fit.
- not under the influence of drugs, alcohol or medication that can impair responsiveness.
- familiar with the safety instructions in this manual.
- familiar with the intended use of this machine.
- the minimum age (18 years) to operate this machine.
- Be instructed in the independent operation of the machine.
- Be authorized to operate machines and systems independently according to the standards of safety engineering.

3.5 Residual dangers

Residual dangers in particular are hazards when dealing with machines that, despite a safe design, cannot be eliminated.

These residual dangers are not obvious and may be the source of a possible injury or health hazard.

If unforeseeable residual dangers occur, the operation of the machine is to be stopped immediately and the competent supervisor is to be informed. This supervisor shall make the following decisions and initiate everything required to eliminate the occurring danger.

If necessary, the machine manufacturer is to be informed.

3.6 General safety instructions

The safety instructions in this chapter include the "General Safety Instructions", which should be reported in the manual in accordance with the applicable standards. There may be information that is not relevant to this machine.

3.6.1 Working area

- Before starting work, familiarize yourself with the working environment e.g. load-bearing capacity of the floor or obstacles in the environment.
- Make working area safe for the public transport sector.
- Necessary fuse protection of walls and ceilings e.g. in trenches.
- Keep the working area tidy. Cluttered or dark working areas can lead to accidents.
- Using this machine in an explosive atmosphere is prohibited.
- When using this machine, children and unauthorized individuals must be kept away. Distraction can lead to loss of control of the machine.
- Always protect the machine against tilting, rolling, sliding, and crashing. Risk of injury!

3.6.2 Service

- The machine should only be maintained/repaired by technically trained personnel.
- Use only original spare parts and accessories. This ensures the operational safety of the machine.

3.6.3 Personal safety

- Working under the influence of drugs, alcohol, or drugs can lead to serious injuries.
- Protective equipment should be worn for all work. Appropriate personal protective equipment considerably reduces the risk of injury.
- Remove any tools before the machine is put into operation. Tools that are located on a rotating machine part can be ejected and cause serious injury.
- Always ensure good footing.

- In the case of extensive work with this machine, long-term vibration-induced damage cannot be ruled out. For exact values of vibration measurement, refer to the *Technical Data* section.
- Wear suitable clothing. Keep loose clothing, gloves, jewelry, and long hair away from moving/rotating machine parts. Danger of being pulled!
- Ensure that no other individuals are in the danger zone!

3.6.4 Handling and use

- Handle machines with care. Do not operate machines with defective components or operator's controls. Immediately replace defective components or operator's controls. Machines with defective components or operator's controls carry a high risk of injury!
- The operator's controls of the machine shall not be improperly locked, manipulated, or changed.
- The machine, accessories, and tools should be used in accordance with these instructions.
- Store unused machines out of reach of children. The machine may only be operated by authorized personnel.
- After operation, store the cooled-down machine in a locked, clean, frost-protected, and dry location that is inaccessible to children and other unauthorized individuals.

3.7 Electrical safety

3.7.1 Electric power supply for machinery of class rating I

The internal vibrator must be connected to a plug receptacle with a protective earth contact 15 A/16 A with the corresponding overload fuse protection.

One of the following protective ground fault interrupters is necessary:

- Standard protective ground fault interrupter (pulse current sensitive, type A).
- All current sensitive protective ground fault interrupter (type B).

Only connect to electric power supplies if all machine parts are in a technically perfect condition.

The electric power supply must exhibit an intact grounded conductor connection (PE) and a protective earth contact 15 A/16 A and corresponding overload fuse protection.

When connecting to fixed or mobile power units, at least one of the following safety devices must be present:

- Protective ground fault interrupter (GFI or GFCI).
- Insulation monitor.
- IT net.

When connecting a job site electrical distributor, it must be grounded!

Observe the respective national safety standards!

3.7.2 Extension cable

- Do not operate the machine with damaged extension cables.
- Use extension cables with grounded conductors and the correct grounded conductor terminal to plug and coupling.
- Only use tested extension cables! For job site use, Wacker Neuson H07RN-F, H07BQ-F, a SOOW-cable or a country-specific equivalent design are recommended.
- Cable drums and multi-pole plug receptacles must meet the same requirements as extension cables.
- Protect extension cable, multi-pole plug receptacles, cable drums and connection couplings from rain, snow or other forms of moisture.

3.8 Specific safety instructions – Internal vibrators

3.8.1 External influences

The internal vibrator may not be operated under the following external influences:

- In heavy rain on sloped surfaces. Risk of slipping!
- In potentially explosive areas. Explosion hazard!

3.8.2 Operational safety

- Pay maximum attention near drops or slopes, to scaffolding and ladders. Risk of crashing!
- Check the load-bearing capacity of the soil and protection of walls and ceilings.
- The operator must not leave the machine while it is in operation.
- Do not leave the machine unattended. Risk of injury!
- Protect the machine from unauthorized operation.
- Delimit spacious workspace and restrict access to unauthorized individuals. Risk of injury!

- Avoid physical contact with grounded parts.
- Do not use the protection hose, power cable or other components of the machine as a climbing aid or to secure transport.
- Vibration-induced long-term damage cannot be ruled out during intensive use of hand-operated machinery. The respective statutory provisions and guidelines shall be observed.
  The vibration emission value may differ from the declared value depending on the nature and manner in which the power tool is used.

3.9 Maintenance

The following notes must be observed:

- This machine may not be maintained, repaired, adjusted or cleaned while switched on.
- Adhere to maintenance intervals.
- After each maintenance or repair, the safety devices on this machine must be reattached.
- Observe the maintenance schedule. Identified work must be taken over by the service department of the Wacker Neuson contact partner.
- Immediately replace worn or damaged machine parts. Only use spare parts from Wacker Neuson.
- Keep the machine clean.
- Missing, damaged, or illegible safety warning labels should be replaced immediately. Safety stickers contain important information for the protection of the operator.
- Maintenance jobs must be carried out in clean and dry environment (e.g. in a workshop).

3.10 Personal Protective Equipment

NOTICE

To prevent personal injury when handling this machine, personal protective equipment must be worn when working on or around this machine.

Pictogram	Significance	Description
	Wear safety shoes!	Safety shoes provide protection from bruises, falling objects, and slipping.
	Wear protective gloves!	Protective gloves provide protection from abrasion, cuts, punctures, and hot surfaces.
	Wear ear protection!	Ear protection provides protection from permanent hearing impairment.

NOTICE

With this machine, the permissible, country-specific noise limit (personal rating level) may be exceeded. Therefore, ear protection must be worn. For exact values regarding noise emissions, refer to *Technical Data* section.

When wearing ear protection, remain alert because your ability to hear noises such as screams or signal tones is restricted.

Wacker Neuson recommends always wearing ear protection.

3.11 Behavior in dangerous situations

Preventive measures:

- Always be prepared for accidents.
- Keep first aid equipment on hand.
- Make sure that all employees are familiar with accident reporting, first aid, and rescue facilities.
- Keep access routes clear for emergency vehicles.
- Make sure that employees receive first aid training.

Measures in the case of an emergency:

- Immediately take the machine out of operation.
- Remove injured and other people from the danger zone.
- Initiate first aid measures.
- Alert rescuers.
- Keep access routes clear for emergency vehicles.
- Inform the person responsible at the site of application.

4 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 electic 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 tools will increase the risk of electric shock.*
   d) **Do not abuse the cord. Never use the cird 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 electic 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 unintetional 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 poer tool, accessories and tool bits ect. in accordance with these instructions, taking inti 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.*

5 Setup and function

5.1 Scope of delivery

The internal vibrator is delivered completely mounted and will only be ready for operation in combination with a three-phase inverter.

The scope of delivery includes:

- Machine.
- Operator's manual.

5.2 Application

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

GV

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

ST1

The machine is especially suited for better guidance and positioning in areas of the formwork which are difficult to reach.

5.3 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.

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

Thermal overload switch

The machine is protected against overheating by a thermal overload switch, which will deactivate the machine in the case of overheating.

After cooling, the machine has to be deactivated and activated again.

Note: If there is no ON/OFF switch on your machine, you need to switch off the inverter and switch it on again.

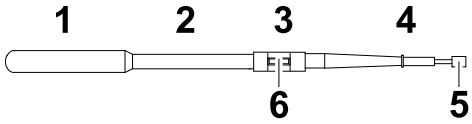
Vibrator head

In the vibrator head, an electric motor turns an eccentric weight at approx. 12,000 rpm (200 Hz) and thus generates vibrations.

These vibrations will cause the vibrator head to execute precessions.

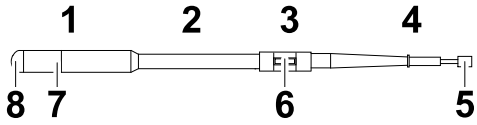
6 Components and operator's controls

IREN30



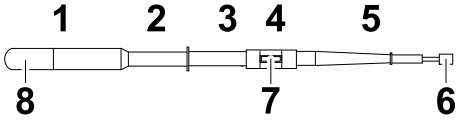
Item	Description	Item	Description
1	Vibrator head	4	Power cable
2	Protective hose	5	Plug
3	Switch housing	6	ON/OFF switch

IREN38, 45, 58, 65



Item	Description	Item	Description
1	Vibrator head	5	Plug
2	Protective hose	6	ON/OFF switch
3	Switch housing	7	Lower tube
4	Power cable	8	Rubber seal cap (optional)

IREN ST1



Item	Description	Item	Description
1	Vibrator head	5	Power cable
2	Pipe	6	Plug
3	Protective hose	7	ON/OFF switch
4	Switch housing	8	Lower tube

7 Transport

WARNING

Improper handling may result in injury or serious material damage.

- Please read and follow all safety instructions in this operator's manual.

WARNING

Hot vibrator head.
Contact may cause burns.

- Allow vibrator head to cool 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. Turn off the inverter.
4. Disconnect the machine from the inverter.
5. Place the machine on or into a suitable means of transport.
6. Roll up the power cable.

   Note: Do not kink the power cable!
7. Secure the machine against falling or sliding.

Note: Due to its length, IREN ST may protrude over the means of transport. Observe the valid road traffic regulations and secure the machine with a mandatory warning sign, if required.

8 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*.

8.1 Prior to starting the machine

After unpacking, the machine is ready for operation.

Checking the machine

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

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.

8.2 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

The machine may only be connected to a three-phase inverter, 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*.

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.

   Note: See chapter *Technical data* for the permitted lengths and cross-section areas of extension cables.
3. Insert the plug into the plug receptacle on the inverter.

Switching IREN on

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

Switching IREN ST1 on

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

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.

Note:

- 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.

8.3 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.

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.

   Note: If there is no ON/OFF switch on the machine, switch off the machine via the ON/OFF switch of the inverter.
3. Turn off the inverter.
4. Wait until the machine has come to a complete standstill.
5. Put down the machine slowly.

   Do not kink the protective hose and power cable!
6. Disconnect the machine from the inverter.

8.4 Cleaning

Cleaning the machine

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

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

9 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 information*.

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.

9.1 Qualifications for maintenance work

Qualifications for maintenance work

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

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

9.2 Maintenance schedule

Note: 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	Every 100 hrs.
Visual inspection of all parts for damage.	■	
Check the wear dimensions.	■	

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

Note: 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.

The oil cannot be replaced in the IREN30 vibrator head. The vibrator head assembly must be replaced by the service department of the Wacker_Neuson contact partner.

9.3 Maintenance work

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.

Visual inspection for damage

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.

▶ Check all machine parts for damage.
▶ Check the tightness of the switch diaphragm for the ON/OFF switch.

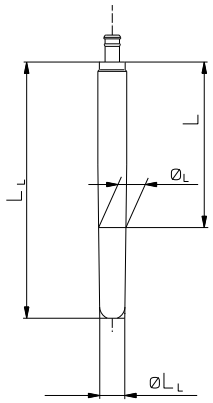
Check wear dimensions of the vibrator head

Wear dimensions:

- Minimum diameter of lower tube øL_L
- Minimum diameter of vibrator head øL
- Length of vibrator head L_L

Wear is highest at the immersed end of the vibrator head.

Machine type	Dimensions for vibrator head and lower tube [mm]			
	øL_L	L_L	øL	L
IREN30	**28** (30)	**347** (353)	— *	— *
IREN38	**33** (38)	**338** (345)	**36** (38)	218
IREN45	**38** (45)	**372** (382)	**42** (45)	333
IREN58	**50** (58)	**390** (400)	**54** (58)	253
IREN65	**52** (65)	**475** (490)	**58** (65)	322



* Vibrator head does not comprise 2 parts.

Dimensions in bold are wear dimensions.

Dimensions in brackets are original dimensions of new machines.

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

10 Troubleshooting

Potential faults, their causes and remedies can be found in the following table.

Malfunction	Cause	Remedy
Vibrator head does not vibrate.	No line voltage.	■ Connect the plug to the inverter. ■ Check power cable for damage, replace if defective.*
	Vibrator head has switched off due to excess temperature.	Deactivate the machine and allow the vibrator head to cool down.
	■ ON/OFF switch defective. ■ Mechanical defect in the vibrator head.	Have the machine repaired. *
Noticeable sound, vibrator head runs with reduced power.	One of the thermal overload protections has switched off (two phase operation).	Have the machine repaired. *

* Have these tasks carried out by the service department of your Wacker Neuson representative person.

11 Disposal

11.1 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.

12 Technical data

12.1 IREN30

Designation	Unit	IREN30/042/5	IREN30/042/10	IREN30/042/18
Item no.		5000008958	5000610018	5100040880
Rated current	A	3,5		
Rated voltage	V	42		
Rated frequency	Hz	200		
Rated input power **	kW	0,20		
Phases	~	3		
Vibration range in air	mm (in)	2,00 (0.08)		
Vibrations	rpm	12,000		
	Hz	200		
Vibrator head diameter	mm (in)	30 (1.2)		
Outer diameter of protective hose	mm (in)	28 (1.1)		
Length of vibrator head	mm (in)	353 (13.9)		
Length of protective hose	m (ft)	5 (16.4)	10 (32.8)	18 (59.0)
Length of power cable ***	m (ft)	15 (49)		
Weight	kg (lb)	8,7 (19.2)	13,0 (28.7)	17,1 (37.7)
Plug		CEE-32A 3P 4H 42V		
Engine type		Asynchronous motor		
Oil specification		4 UH1-46N		
Oil quantity	l	0,005		
Class rating		III		
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	76,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8,2)		
Standard		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: Length including plug.

12.2 IREN38

Designation	Unit	IREN38/042/5	IREN38/042/10	IREN38/042/18
Item no. GV		5000007895 5000008433	5000008515 5100054150	5100008966
Rated current	A	7,0		
Rated voltage	V	42		
Rated frequency	Hz	200		
Rated input power **	kW	0,41		
Phases	~	3		
Vibration range in air	mm (in)	1,90 (0.08)		
Vibrations	rpm	12,000		
	Hz	200		
Vibrator head diameter	mm (in)	38 (1.5)		
Outer diameter of protective hose	mm (in)	31 (1.2)		
Length of vibrator head	mm (in)	345 (13.6)		
Length of protective hose	m (ft)	5,0 (16.4)	10,0 (32.8)	18,0 (59.0)
Length of power cable ***	m (ft)	15 (49)		
Weight	kg (lb)	10,5 (23.1))	14,7 (32.4)	24,2 (53.3)
Plug		CEE-32A 3P 4H 42V		
Engine type		Asynchronous motor		
Oil specification		4 UH1- 46N		
Oil quantity	l	0,008		
Class rating		III		
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	79,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)		
Standard		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: Length including plug.				

Designation	Unit	IREN38/250/5	IREN38/250/18
Item no.		5000008470	5100040881
Rated current	A	1,4	
Rated voltage	V	250	
Rated frequency	Hz	200	
Rated input power **	kW	0,41	
Phases	~	3	
Vibration range in air	mm (in)	1,90 (0.08)	
Vibrations	rpm	12,000	
	Hz	200	
Vibrator head diameter	mm (in)	38 (1.5)	
Outer diameter of protective hose	mm (in)	31 (1.2)	
Length of vibrator head	mm (in)	345 (13.6)	
Length of protective hose	m (ft)	5 (16.4)	18 (59.0)
Length of power cable ***	m (ft)	15 (49)	
Weight	kg (lb)	10,6 (23.4))	21,75 (47.9)
Plug		CEE-16A 4P 10H 250V	
Engine type		Asynchronous motor	
Oil specification		4 UH1- 46N	
Oil quantity	l	0,008	
Class rating		I	
Protection class		IP 67	
Switch-off temperature	°C (°F)	150	
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)	79,0	
Standard		EN 12649	
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)	
Standard		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: Length including plug.

12.3 IREN45

Designation	Unit	IREN45/042/5	IREN45/042/10	IREN45/042/18
Item no. GV		5000007896 5000008434	5000008512 5100053969	5100008967
Rated current	A	10,0		
Rated voltage	V	42		
Rated frequency	Hz	200		
Rated input power **	kW	0,58		
Phases	~	3		
Vibration range in air	mm (in)	2,30 (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)	382 (15.0)		
Length of protective hose	m (ft)	5 (16.4)	10 (32.8)	18 (59.0)
Length of power cable ***	m (ft)	15 (49)		
Weight	kg (lb)	11,8 (26.0)	16,0 (35.3)	25,2 (55.5)
Plug		CEE-32A 3P 4H 42V		
Engine type		Asynchronous motor		
Oil specification		4 UH1-46N		
Oil quantity	l	0,008		
Class rating		III		
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	79,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)		
Standard		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: Length including plug.

Designation	Unit	IREN45/250/5	IREN45/250/18
Item no.		5000008472	5100040882
Rated current	A	1,85	
Rated voltage	V	250	
Rated frequency	Hz	200	
Rated input power **	kW	0,58	
Phases	~	3	
Vibration range in air	mm (in)	2,30 (0.08)	
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)	382 (15.0)	
Length of protective hose	m (ft)	15 (49.2)	18 (59.0)
Length of power cable ***	m (ft)	15 (49)	
Weight	kg (lb)	11,9 (26.2)	22,25 (49.1)
Plug		CEE-16A 4P 10H 250V	
Engine type		Asynchronous motor	
Oil specification		4 UH1-46N	
Oil quantity	l	0,008	
Class rating		I	
Protection class		IP 67	
Switch-off temperature	°C (°F)	150	
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)	79,0	
Standard		EN 12649	
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)	
Standard		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: Length including plug.

12.4 IREN58

Designation	Unit	IREN58/042/5	IREN58/042/10	IREN58/042/18
Item no. GV		5000007820 5000008435	5000008506 5100053968	5100008951
Rated current	A	17,3		
Rated voltage	V	42		
Rated frequency	Hz	200		
Rated input power **	kW	1,05		
Phases	~	3		
Vibration range in air	mm (in)	2,10 (0,08))		
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)	400 (15.7)		
Length of protective hose	m (ft)	5 (16.4)	10 (32.8	18 (59.0)
Length of power cable ***	m (ft)	15 (49)		8 (26)
Weight GV	kg (lb)	16,2 (35.7)	23,3 (51.2) 25,9 (57,1)	34,1 (75,2)
Plug		CEE-32A 3P 4H 42V		
Engine type		Asynchronous motor		
Oil specification		4 UH1-46N		
Oil quantity	l	0,012		
Class rating		III		
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	79,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)		
Standard		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: Length including plug.

Designation	Unit	IREN58/250/5	IREN58/250/18	IREN58ST1
Item no.		5000008466	5100040883	5000008903
Rated current	A	3,0		17,3
Rated voltage	V	250		42
Rated frequency	Hz	200		
Rated input power **	kW	1,05		
Phases	~	3		
Vibration range in air	mm (in)	2,50 (0.98))		
Vibrations	rpm	12,000		
	Hz	200		85
Vibrator head diameter	mm (in)	58 (2.3)		
Outer diameter of protective hose	mm (in)	40 (1.6)		
Length of vibrator head	mm (in)	400 (15.7)		
Length of protective hose	m (ft)	5 (16.4)	18 (59.0)	2 (6.6)
Length of power cable ***	m (ft)	15 (49)		
Weight	kg (lb)	16,4 (36.1)	31,85 (70.2)	27,0 (59.5)
Plug		CEE 16A 4P 10H 250V		
Engine type		Asynchronous motor		
Oil specification		4 UH1-46N		
Oil quantity	l	0,012		
Class rating		I		III
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	79,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (< 8.2)		
Standard		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: Length including plug.

12.5 IREN65

Designation	Unit	IREN65/042/5	IREN65/042/5 GV	IREN65/042/8 GV
Item no.		5000007847	5000008436	5100009700
Rated current	A	25,0		
Rated voltage	V	42		
Rated frequency	Hz	200		
Rated input power **	kW	1,46	1,70	1,46
Phases	~	3		
Vibration range in air	mm (in)	2,5 (0.1)		
Vibrations	rpm	12,000		
	Hz	200		
Vibrator head diameter	mm (in)	65 (2.6)		
Outer diameter of protective hose	mm (in)	40 (1.6)		
Length of vibrator head	mm (in)	490 (19.3		
Length of protective hose	m (ft)	5 (16.4)		8 (26.2)
Length of power cable ***	m (ft)	15 (49)		
Weight	kg (lb)	22,5 (49.6)		26,1 (57.5)
Plug		CEE-32A 3P 4H 42V		
Engine type		Asynchronous motor		
Oil specification		4 UH1-46N		
Oil quantity	l	0,012		
Class rating		III		
Protection class		IP 67		
Switch-off temperature	°C (°F)	150		
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)	79,0		
Standard		EN 12649		
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (8.2)		
Standard		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: Length including plug.

Designation	Unit	IREN65/042/10	IREN65/042/18
Item no.		5100015329	5100015350
Rated current	A	25,0	
Rated voltage	V	42	
Rated frequency	Hz	200	
Rated input power **	kW	1,46	
Phases	~	3	
Vibration range in air	mm (in)	2,5 (0.1)	
Vibrations	rpm	12000	
	Hz	200	
Vibrator head diameter	mm (in)	65 (2.6)	
Outer diameter of protective hose	mm (in)	40 (1.6)	
Length of vibrator head	mm (in)	490 (19.3	
Length of protective hose	m (ft)	10 (82.8)	18 (59.0)
Length of power cable ***	m (ft)	15 (49)	5 (16.4)
Weight	kg (lb)	26,1 (57.5)	34,3 (75.6)
Plug		CEE-32A 3P 4H 42V	
Engine type		Asynchronmotor	
Oil specification		4 UH1-46N	
Oil quantity	l	0,012	
Class rating		III	
Protection class		IP 67	
Switch-off temperature	°C (°F)	150	
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)	79,0	
Standard		EN 12649	
Vibration total value a_{hv}	m/s^2 (ft/s^2)	< 2,5 (8.2)	
Standard		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: Length including plug.

12.6 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]
IREN30	42 3~	≤ 35	1,5
		≤ 58	2,5
		≤ 91	4
IREN38	42 3~	≤ 29	2,5
		≤ 45	4
	250 3~	≤ 150	1,5
IREN45	42 3~	≤ 20	2,5
		≤ 32	4
		≤ 46	6
	250 3~	≤ 150	1,5
IREN58	42 3~	≤ 12	2,5
		≤ 18	4
		≤ 27	6
		≤ 42	10
	250 3~	≤ 150	1,5
IREN65	42 3~	≤ 8	2,5
		≤ 13	4
		≤ 19	6
		≤ 29	10

Example

You utilize an IREN38/042/10 and want to use an extension cable with a length of 30 m.
The machine has an input voltage of 42 V.
According to the table, the extension cable must feature a cross-section area of 4 mm^2.

Machine	Voltage [V]	Extension [ft]	Cross-section area of cable [AWG]
IREN30	42 3~	≤ 102	16
		≤ 160	14
		≤ 249	12
		≤ 385	10
IREN38	42 3~	≤ 51	16
		≤ 80	14
		≤ 124	12
		≤ 193	10
	250 3~	≤ 500	16
IREN45	42 3~	≤ 36	16
		≤ 56	14
		≤ 87	12
		≤ 135	10
	250 3~	≤ 500	16
IREN58	42 3~	≤ 32	14
		≤ 50	12
		≤ 78	10
	250 3~	≤ 500	16
IREN65	42 3~	≤ 35	12
		≤ 54	10

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	**IREN30, IREN38, IREN45, IREN58, IREN65**
Product type	Internal vibrator
Function of product	Compacting of concrete
Material number	5000007820, 5000007847, 5000007895, 5000007896, 5000008433, 5000008434, 5000008435, 5000008436, 5000008466, 5000008470, 5000008472, 5000008506, 5000008512, 5000008515, 5000008903, 5000008958, 5000610018, 5100008951, 5100008966, 5100008967, 5100009700, 5100015329, 5100015350, 5100040880, 5100040881, 5100040882, 5100040883, 5100053968, 5100053969, 5100054150

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, 2011/65/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, 05.12.2019

Helmut Bauer
Managing Director