Operator's manual

Internal vibrator

IRflex
FUflex

Model	IRflex, FUflex
Document	5100025390
Issue	06.2016
Version	02
Language	en

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG
Preussenstrasse 41
80809 Munich
www.wackerneuson.com

Tel.: +49-(0)89-354 02-0
Fax: +49-(0)89-354 02-390

Translation of the original operator's manual in German

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 Using the manual

This manual is to be considered part of the machine and should be carefully stored during the entire service life of the machine. This manual shall be transferred to subsequent owners or users of the machine.

2.2 Storage location of the manual

This manual is part of the machine and must be kept in the immediate vicinity of the machine and made accessible to staff at all times.

If this manual is lost, or if a second copy is required, there are two options to obtain a replacement:

- Download from the Internet www.wackerneuson.com
- Contact your Wacker Neuson contact partner.

2.3 Accident prevention regulations

In addition to the notes and safety instructions in this manual, the local accident prevention regulations as well as the national health and safety regulations apply.

2.4 More information

This manual applies to various machine types from one product series. For this reason, some figures may vary slightly in appearance from the machine purchased. Depending on the model, there may be descriptions of components that are not included in the standard package.

The information contained in this manual is based on machines manufactured up to the time of printing. Wacker Neuson reserves the right to change this information.

The manufacturer shall immediately include any modifications or additions in this manual.

2.5 Target group

Individuals working with this machine must be regularly trained on the dangers of handling the machine.

This operator's manual is intended for the following persons:

Operating personnel:

These individuals have been trained on the machine and informed about the possible dangers in the event of improper conduct.

Technically trained personnel:

These people have professional training as well as additional knowledge and experience. They are able to assess the tasks assigned to them and recognize possible dangers.

2.6 Explanation of symbols

This manual contains specially emphasized safety instructions in the following categories: **DANGER, WARNING, CAUTION** and **NOTICE.**

Before performing any work on or with this machine, the notes and safety instructions must be read and understood. All notes and safety instructions in this manual must be passed on to the maintenance, repair, and transport personnel.

DANGER

This combination of symbol and signal word indicates a hazardous situation that will lead to death or serious injury if it is not avoided.

WARNING

This combination of symbol and signal word indicates a hazardous situation that can lead to death or serious injury if it is not avoided.

CAUTION

This combination of symbol and signal word indicates a hazardous situation that can lead to minor injury or damage to the machine if it is not avoided.

NOTICE

Supplementary information.

2.7 Wacker Neuson Contact partner

Depending on the country, the Wacker Neuson contact partner is a Wacker Neuson service department, a Wacker Neuson affiliate, or a Wacker Neuson dealer.

On the Internet at www.wackerneuson.com.

The manufacturer's address can be found at the beginning of this manual.

2.8 Disclaimer

For the following violations, Wacker Neuson dismisses any liability for personal injury or material damage:

- Failure to follow this manual.
- Unintended use.
- Deployment of untrained personnel.
- Using non-approved spare parts and accessories.
- Improper handling.
- Structural modifications of any kind.
- Failure to observe the "General Terms and Conditions" (GT&Cs).

2.9 Product identification of the machine

Data of the nameplate

The nameplate contains information that uniquely identifies this machine. This information is required for ordering spare parts and when inquiring about technical issues.

- Enter information about the machine in the following table:

Designation	Your information
Group and model	
Year of manufacture	
Serial 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 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 General sources of danger

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 Safety devices

Safety devices protect the user of this machine from being exposed to existing hazards. These are barriers (separating protective devices) or other technical measures. This prevents the user from being exposed to a danger. The source of danger will be eliminated in certain situations or the danger will be reduced.

This machine has the following safety equipment:

Item	Description
1	Bodyguard®

Bodyguard®

The Bodyguard® acts to protect the operator from electric shock.

3.12 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 Power Tool Safety Warnings

WARNING

Read all safety warnings and all instructions. *Failure to follow the warnings and instructions 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. **Work area safety**
   a) **Keep work area clean and well lit.** *Cluttered or dark 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 may ignite the 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.** *Unmodified 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 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 energizing power tools that have the switch on invites accidents.
   d) **Remove an 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 connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
4. **Power tool use and care**
   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 the battery pack from the power tool 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. 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) K**eep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) U**se the power tool, accessories and tool bits etc. 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.

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 Safety and information labels

WARNING

Illegible symbols

Over time, labels and signs on the machines can become dirty or otherwise unrecognizable.

- Keep all safety, warning, and operating instructions on the machine in a legible condition.
- Replace damaged labels and signs immediately.

The following labels are found on the FUflex inverter:

Item	Label	Description
1		■ Attention: electric shock. ■ Do not open housing. ■ Read operator's manual.

6 Setup and function

6.1 Standard package

The standard package includes:

- IRflex vibrator head (optional).
- FUflex inverter (optional).
- Operator's manual.

NOTICE

The components, that are marked as *optional* must be ordered separately.

The IRFUflex machine consists of two components:

- IRflex vibrator head.
- FUflex inverter.

6.2 Application areas

The internal vibrator is a machine used to de-aerate and compact freshly mixed (green) concrete.

6.3 Short description

High frequency oscillations are generated in the vibrator head. The vibrator head makes gyrations due to these vibrations.

The immersion of the vibrator head in the freshly mixed (green) concrete de-aerates and compacts the concrete in the operating area of the vibrator head.

At the same time, the freshly mixed (green) concrete cools the vibrator head.

6.3.1 IRflex vibrator head

An electric motor in a vibrator head drives an eccentric weight, thus producing gyrations. Through these gyrations, the vibrator head directs vibrations into the concrete.

6.3.2 FUflex inverter

The inverter consists of a current rectifier and a DC–AC converter and is monitored by control electronics.

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

The DC–AC converter converts the generated DC voltage into current (3-phase AC).

When switching on the machine, the control electronics ensure a smooth start and therefore prevent the emergence of critical switch-on currents.

6.3.3 Bodyguard®

The Bodyguard® connects the power supply line to the inverter and monitors the in and out flowing operating currents. The Bodyguard® acts to protect the operator from electric shock.

The control lamp lights up green if the machine is correctly connected and no dangerous leakage currents occur.

The control lamp lights up red if a leakage current occurs within the machine. In this event, the mains-side power supply is interrupted and the inverter is locked. The machine does not work. The power supply will remain interrupted until the problem is solved.

The machine only works in conjunction with the Bodyguard®.

6.3.4 Quickflex coupling

The Quickflex coupling makes it possible to separate the vibrator head with IRflex protection hose from the FUflex inverter and replace it with a vibration head with a different sized diameter and hose length.

6.3.5 Thermal overload protection

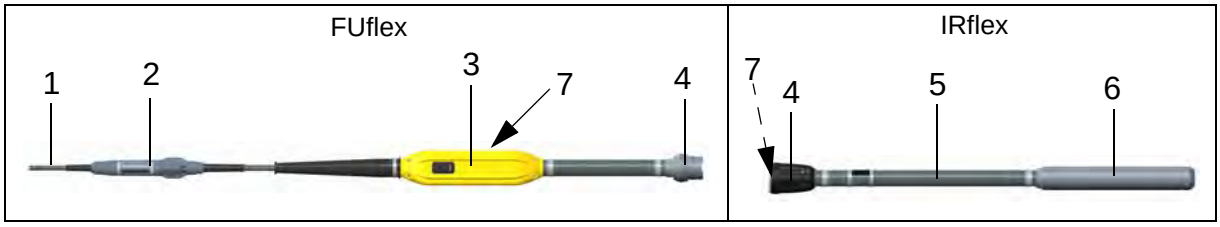
The machine is protected against overheating. In case of overheating, the machine switches itself off automatically.

7 Components and operator's controls

7.1 Components

These components can be combined in different designs, depending on the application conditions.

The IRFUflex is composed of the following components:

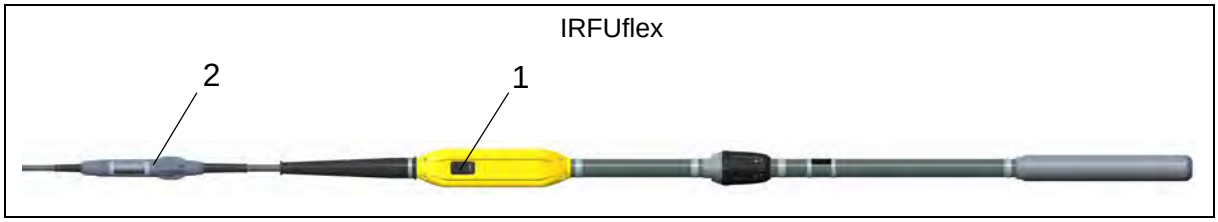


Item	Designation	Item	Designation
1	Power cable with plug	5	Protection hose
2	Bodyguard®	6	IRflex vibrator head
3	Switch box with FUflex inverter	7	Nameplate
4	Quickflex coupling		

Protection hose

The machine is held on the protection hose and guided.

7.2 Operator's controls



Item	Designation	Item	Designation
1	ON/OFF switch with control lamp	2	Control lamp

8 Quickflex Coupling Assembly

As needed, the Quickflex coupling enables the exchange of the IRflex vibrator head. This can thus be exchanged for a new or different vibrator head with various sized diameters and protective hose lengths.

8.1 Carry out preparations

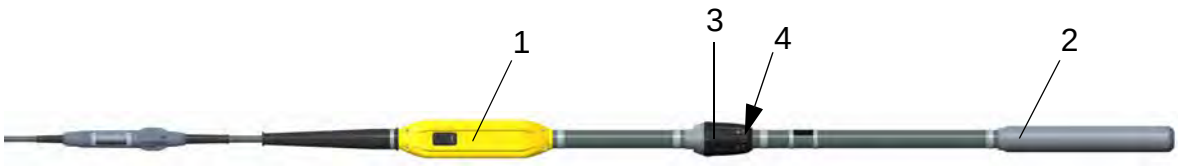
NOTICE

Only use an operational, fully assembled machine - IRflex vibrator head with FUflex inverter on the job site!

The exchange of IRflex vibrator heads may only be carried out in a clean and dry environment with an unplugged FUflex inverter:

- Disconnect the machine from the power supply.

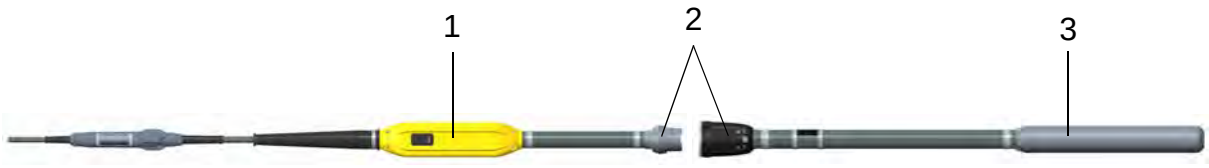
8.2 Separate the IRflex vibrator head from FUflex inverter



Item	Designation	Item	Designation
1	FUflex inverter	3	Quickflex coupling
2	IRflex vibrator head	4	Retaining screw and protective cap

1. Remove dirt accumulation within the area of the Quickflex coupling.
2. Open the protective cap and retaining screw using Allen wrench.
3. Unscrew the Quickflex coupling.
4. Separate the IRflex vibrator head from FUflex inverter.

8.3 Assemble IRflex vibrator head and FUflex inverter



Item	Designation	Item	Designation
1	FUflex inverter	3	IRflex vibrator head
2	Quickflex coupling		

1. Clean the flat-faced sealing surfaces of the Quickflex coupling and inspect for damage.

NOTICE

The flat-faced sealing surfaces of the Quickflex coupling are soft components, which are co-responsible for IP protection.

2. Stick the IRflex vibrator head together with the FUflex inverter.
3. Screw the Quickflex coupling together as tightly as possible.

Item	Designation
1	Retaining screw and protective cap

4. Tighten the retaining screw using the Allen wrench.

NOTICE

The retaining screw must be completely screwed in, otherwise there is a danger the machine will remain stuck during operation, e.g. on a reinforcement.

5. Press protective cap onto the retaining screw.

9 IRFUflex 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.

9.1 Loading and transport

Carry out preparations

1. Switch the equipment off with the ON/OFF switch.
2. Wait until the machine has come to a complete standstill.
3. Pull the plug out of the plug receptacle.
4. Let the machine cool.
5. Place the protection hose and power cable together.

NOTICE

- Leave the machine consisting of IRflex and FUflex assembled for transport.
- Do not bend the protection hose and power cable.

Transport the machine

1. Lay the machine in or on a suitable means of transport.
2. Secure all components against falling down or sliding away.

10 Operation and use

WARNING

Improper handling may result in injury or serious material damage.

- Read and observe all safety instructions in this operator's manual, see chapter *Safety*.

WARNING

Leak current due to moisture penetration.

Injury from electric shock.

- Use the extension cable in IPx4 design so that the connection link of the plug / coupling is splash-water protected.

10.1 Prerequisites for operation

NOTICE

Only use an operational, fully assembled machine - IRflex vibrator head with FUflex inverter on the construction site!

10.2 Before commissioning

10.2.1 Inspection before commissioning

Complete the following inspections:

- Check all components for damage.
- Check to ensure the Quickflex coupling is firmly seated.
- Check whether the power supply system or job site electrical distributor has the correct operating voltage (see nameplate of the machine or the chapter *Technical data*.
- Check whether the power supply system or job site electrical distributor is secured according to the applicable national standards and guidelines.

10.3 Commissioning

WARNING

Damaged insulation.

Risk of electric shock.

- Do not bend or damage the protection hose and power cable.

10.3.1 Connect the machine to the electric power supply

NOTICE

Only connect the machine to single-phase AC. For connection values, see the chapter *Technical data*.

NOTICE

Electrical voltage.
An incorrect voltage can damage the machine.

- Check whether the voltage of the power source conforms to the specifications of the machine. See chapter *Technical data*.

WARNING

Electrical voltage.
Injury from electric shock.

- Check power cable and extension cable for damage.
- Only use extension cables whose grounded conductor is connected to the plug and coupling (only for machines of class rating I, see chapter *Technical data*).

WARNING

Machine start-up.
Risk of injury from uncontrolled start-up of machine.

- Switch the machine off before connecting to the electric power supply.

1. Switch the machine off with the ON/OFF switch.
2. Insert the plug into the plug receptacle.

NOTICE

The control lamp of the Bodyguard® lights up green if the machine is correctly connected and no leakage currents occur. If there is a malfunction or fault, the Bodyguard® control lamp lights up red.

10.3.2 Commissioning the machine.

Item	Designation	Item	Designation
1	ON/OFF switch	2	Control lamp

1. Take up the machine by the protection hose - hold in the vicinity of the vibration head.
2. Switch the equipment on with the ON/OFF switch.

NOTICE

The control lamp on the inverter lights up green if the machine is ready for operation.

10.4 Operation

In accordance with the intended purpose, the operator's intended location is by the protection hose of the machine.

10.4.1 Compacting freshly mixed (green) concrete

1. Hold the machine with both hands on the protection hose and guide it.
2. Quickly immerse, submerge the vibrator head into the freshly mixed (green) concrete, wait for a few seconds and slowly pull it out.
3. Immerse the vibrator head in all areas of the formwork and compact the freshly mixed (green) concrete.

NOTICE

- Compact particularly intensely within the range of the formwork corners, because reinforcement density is the greatest there.
- **Avoid letting the vibrator head come into contact with the reinforcement. If the vibrator head comes into contact with the reinforcement, the following damage may occur:**
  - The connection of the concrete to the reinforcement may be lost.
  - The machine can be damaged.

  The result of the compaction depends on the following factors:
  - The time the vibrator head is in the concrete.
  - The diameter of the vibrator head.
  - The consistency of the concrete.
  - Narrow spacing between the steel rods.

For example, if a vibrator head with a small diameter is used, you have to compact for longer to achieve the same effect as with a large diameter.

Features of when the concrete has been sufficiently compacted:

- The concrete is no longer settling.
- Little to no air bubbles are rising any longer.
- The sound of the vibrator head no longer changes.

10.5 Decommissioning

10.5.1 Decommissioning the machine

CAUTION

Proper motion of the running vibrator head outside of the freshly mixed (green) concrete.
Risk of injury or danger of property damage due to beating around vibrator head.

- Switch the machine off before setting it down.

CAUTION

Warming up the running vibrator head outside of the freshly mixed (green) concrete.
Risk of burning from hot surface.
Damage to the machine from increased wear.

- Do let the machine run outside of the freshly mixed (green) concrete.

Item	Designation
1	ON/OFF switch

1. Slowly pull the vibrator head out of the freshly mixed (green) concrete and hold it in the air.
2. Switch the machine off with the ON/OFF switch.
3. Wait until the machine has come to a complete standstill.
4. Slowly set machine down.

NOTICE

Do not bend the protection hose and power cable.

5. Pull the plug out of the plug receptacle.
6. Let the machine cool.

10.6 After operation

10.6.1 Clean the machine

Clean all components after each operation.

- Only clean machine with water and wipe with a damp, clean cloth.

NOTICE

Do not clean the machine with high pressure or steam cleaners!

Do not hit the Quickflex coupling with hammer blows to remove dirt!

NOTICE

With the machine running, the concrete residue can be removed from the vibrator head by immersing it in a gravel bed.

11 Maintenance

WARNING

Improper handling may result in injury or serious material damage.

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

WARNING

Risk of death from electric shock in the event of improper work.

- According to the applicable guidelines, opening the machine, repairing and a subsequent safety control may only be performed by a qualified electrician.

11.1 Maintenance schedule

Activity	Daily before operation	Daily after operation	Every 100 hours
Visual inspection for damage and leaks.	■		
Check to ensure the connection link is firmly seated.	■		
Clean machine and components.		■	
Check wear dimensions of the vibrator head.		■	
Replace the oil in the vibrator head.*			■
* Have this work performed by the service department of your Wacker Neuson contact partner.			

NOTICE

The oil cannot be replaced in the IR30 vibrator head. The vibrator head must be replaced by the service of your Wacker Neuson contact partner.

11.2 Maintenance jobs

The machine must be separated from the power supply before maintenance work starts!

CAUTION

Health risk from fuel, lubricants and coolants.

- Do not inhale fuel, lubricants, coolants or vapors.
- Avoid contact of skin or eyes with fuel, lubricants and coolants.

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

- Protection of the machine from dirt on the construction site.
- A level and clean working surface makes work easier.
- Small parts are easier to see and therefore are harder to lose.

11.2.1 Visual inspection for damage and leaks

WARNING

Damage to the machine or power cable can lead to physical injury from electric shock.

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

- Check all components for damage.
- Check the seal of the switch membrane of the on/off switch against leakage.
- Check the flat-faced sealing surfaces/soft components of the Quickflex coupling for damage and impurities.

11.2.2 Check to ensure the connection link is firmly seated

Check to ensure the connection link between the IRflex vibrator head and the FUflex inverter is firmly seated.

- If necessary, screw together the Quickflex coupling as tightly as possible, tighten the retaining screw and attach the protective cap.

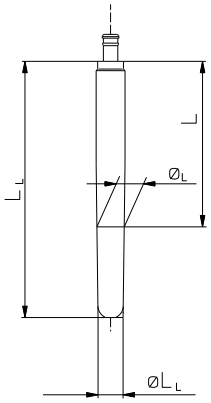
11.2.3 Check wear dimensions of the vibrator head

The wear dimensions are:

- Minimum diameter bottom of the pipe øL_L
- Minimum diameter bottom of the vibrator head øL
- Length of the vibrator head L_L

The wear is highest at the end of the vibrator head.

If a wear dimension is reached at one point, have the vibrator head exchanged by your Wacker Neuson contact partner's service.



Machine type	Dimensions of the vibrator head and bottom of the pipe [mm]			
	øL_L	L_L	øL	L
IR30	**28** (30)	**347** (353)	-*	-*
IR38	**33** (38)	**338** (345)	**36** (38)	(218)
IR45	**38** (45)	**372** (382)	**42** (45)	(333)
IR57	**50** (58)	**390** (400)	**54** (58)	(253)
* Vibrator head is not divided.				

Dimensions in bold are wear dimensions.

Dimensions in brackets are original dimensions of a new machine.

12 Faults

DANGER

Danger to life from unauthorized troubleshooting.

- If faults occur with this machine that are not described in this manual, contact the manufacturer. Do not eliminate the faults independently.

12.1 Troubleshooting table - FUflex Inverter

Fault	Cause	Remedial measure
The control lamp illuminates red.	■ Mains voltage interrupted. ■ Incorrect mains voltage.	The inverter starts automatically as soon as the correct mains voltage is present (again).
The control lamp flashes red.	Defect in the vibrator head.	Have the machine repaired.*
Control lamp flashes red twice.	Inverter shut down due to excessive temperature.	1. Allow inverter to cool down. 2. Carry out reset: Switch machine off and on.
Control lamp blinks 3 times red (for a short time).	The Bodyguard® has switched off the machine.	Have the machine repaired.*
	No Bodyguard® present.	
* Have this work performed by the service department of the Wacker Neuson contact partner.		

12.2 Troubleshooting Table - Bodyguard®

Fault	Cause	Remedial measure
The control lamp illuminates red. Mains voltage is on.	■ The Bodyguard® has switched off the machine. ■ Machine fault.	1. Pull the plug out of the plug receptacle. 2. Check the power cable for damage – in the event of damage, have it replaced.* 3. Insert the plug into the plug receptacle. If the fault is not fixed, then have the machine repaired.*
	■ Water in the inverter. ■ Defect in the vibrator head.	Have the machine repaired.*
Control lamp is not illuminated.	No mains voltage.	1. Pull the plug out of the plug receptacle. Check the power cable for damage – if the machine is damaged, have it repaired.*
	Bodyguard® is defective.	Have the machine repaired.*
	Plug is defective.	
	Control lamp is defective.	
* Have this work performed by the service department of your Wacker Neuson contact partner.		

13 Disposal

13.1 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.

14 Technical data

14.1 IRflex30

Designation	Unit	IRflex30/230/5	IRflex30/230/10
Item number		5100025336	5100025337
Rated current	A	0.90	0.90
Rated voltage	V	220	220
Rated frequency	Hz	200	200
Rated power**	kW	0.20	0.20
Phases	~	3	3
Double amplitude of play	mm	2.0	2.0
Oscillations	Rpm	12,000	12,000
	Hz	200	200
Overheat protection triggering	°C	150	150
Vibrating body diameter	mm	30	30
Protection hose external diameter	mm	28	28
Length of vibrator head	mm	353	353
Length of protection hose	m	5	10
Weight	kg	3.5	6.7
Plug		Quickflex	Quickflex
Type of engine		Asynchronous motor	Asynchronous motor
Oil specification		4UH1-46N	4UH1-46N
Oil quantity	l	0.005	0.005
Class rating		I	I
Protection rating***		IP 67	IP 67
Storage temperature range	°C	-20 – +60	-20 – +60
Operating temperature range	°C	-10 – +40	-10 – +40
Sound pressure level L_{pA}*	dB(A)	79	79
Standards		EN ISO 11201	
Vibration total value a_{hv}	m/s^2	< 2.5	< 2.5
Standards		EN ISO 20643	
Uncertainty of measurement of the vibration total value a_{hv}	m/s^2	0.5	0.5

* These measured values were determined while operating the machine, which was freely suspended at a 1 meter distance.

** The electrical load rating gives the actual power consumed at nominal operation.

*** Only applies to the assembled machine consisting of IRflex – FUflex.

14.2 IRflex38

Designation	Unit	IRflex38/230/5	IRflex38/230/10	IRflex38/230/5r	IRflex38/230/10r
Item number		5100025338	5100025339	5100025360	5100025361
Rated current	A	1.70	1.70	1.70	1.70
Rated voltage	V	220	220	220	220
Rated frequency	Hz	200	200	200	200
Rated power**	kW	0.45	0.45	0.45	0.45
Phases	~	3	3	3	3
Double amplitude of play	mm	1.9	1.9	1.9	1.9
Oscillations	Rpm	12,000	12,000	12,000	12,000
	Hz	200	200	200	200
Overheat protection triggering	°C	150	150	150	150
Vibrating body diameter	mm	38	38	38	38
Protection hose external diameter	mm	31	31	31	31
Length of vibrator head	mm	345	345	345	345
Length of protection hose	m	5	10	5	10
Weight	kg	5.6	10.7	5.6	10.7
Plug		Quickflex	Quickflex	Quickflex	Quickflex
Type of engine		Asynchronous motor	Asynchronous motor	Asynchronous motor	Asynchronous motor
Oil specification		4UH1-46N	4UH1-46N	4UH1-46N	4UH1-46N
Oil quantity	l	0.008	0.008	0.008	0.008
Class rating		I	I	I	I
Protection rating***		IP 67	IP 67	IP 67	IP 67
Storage temperature range	°C	-20 – +60	-20 – +60	-20 – +60	-20 – +60
Operating temperature range	°C	-10 – +40	-10 – +40	-10 – +40	-10 – +40
Sound pressure level L_{pA}*	dB(A)	79	79	79	79
Standards		EN ISO 11201			
Vibration total value a_{hv}	m/s^2	< 2.5	< 2.5	< 2.5	< 2.5
Standards		EN ISO 20643			
Uncertainty of measurement of the vibration total value a_{hv}	m/s^2	0.5	0.5	0.5	0.5

* These measured values were determined while operating the machine, which was freely suspended at 1 meter distance.

** The rated power gives the active power consumed at nominal operation.

*** Only applies to the assembled machine consisting of IRflex – FUflex.

14.3 IRflex45

Designation	Unit	IRflex45/230/5	IRflex45/230/10	IRflex45/230/5r	IRflex45/230/10r
Item number		5100025362	5100025363	5100025364	5100025365
Rated current	A	2.50	2.50	2.50	2.50
Rated voltage	V	220	220	220	220
Rated frequency	Hz	200	200	200	200
Rated power**	kW	0.58	0.58	0.58	0.58
Phases	~	3	3	3	3
Double amplitude of play	mm	2.3	2.3	2.3	2.3
Oscillations	1/min	12,000	12,000	12,000	12,000
	Hz	200	200	200	200
Overheat protection triggering	°C	150	150	150	150
Vibrating body diameter	mm	45	45	45	45
Protection hose external diameter	mm	31	31	31	31
Length of vibrator head	mm	382	382	382	382
Length of protection hose	m	5	10	5	10
Weight	kg	8.0	12.0	8.0	12.0
Plug		Quickflex	Quickflex	Quickflex	Quickflex
Type of engine		Asynchronous motor	Asynchronous motor	Asynchronous motor	Asynchronous motor
Oil specification		4UH1-46N	4UH1-46N	4UH1-46N	4UH1-46N
Oil quantity	l	0.008	0.008	0.008	0.008
Class rating		I	I	I	I
Protection rating***		IP 67	IP 67	IP 67	IP 67
Storage temperature range	°C	-20 – +60	-20 – +60	-20 – +60	-20 – +60
Operating temperature range	°C	-10 – +40	-10 – +40	-10 – +40	-10 – +40
Sound pressure level L_{pA}*	dB(A)	79	79	79	79
Standards		EN ISO 11201			
Vibration total value a_{hv}	m/s^2	< 2.5	< 2.5	< 2.5	< 2.5
Standards		EN ISO 20643			
Uncertainty of measurement of the vibration total value a_{hv}	m/s^2	0.5	0.5	0.5	0.5

* These measured values were determined while operating the machine, which was freely suspended at 1 meter distance.

** The rated power gives the active power consumed at nominal operation.

*** Only applies to the assembled machine consisting of IRflex – FUflex.

14.4 IRflex57

Designation	Unit	IRflex57/230/5	IRflex57/230/10	IRflex57/230/5r	IRflex57/230/10r
Item number		5100021651	5100025366	5100025367	5100025368
Rated current	A	3.30	3.30	3.30	3.30
Rated voltage	V	220	220	220	220
Rated frequency	Hz	200	200	200	200
Rated power**	kW	1.05	1.05	1.05	1.05
Phases	~	3	3	3	3
Double amplitude of play	mm	2.5	2.5	2.5	2.5
Oscillations	1/min	12,000	12,000	12,000	12,000
	Hz	200	200	200	200
Overheat protection triggering	°C	150	150	150	150
Vibrating body diameter	mm	58	58	58	58
Protection hose external diameter	mm	40	40	40	40
Length of vibrator head	mm	400	400	400	400
Length of protection hose	m	5	10	5	10
Weight	kg	12.1	17.6	12.1	17.1
Plug		Quickflex	Quickflex	Quickflex	Quickflex
Type of engine		Asynchronous motor	Asynchronous motor	Asynchronous motor	Asynchronous motor
Oil specification		4UH1-46N	4UH1-46N	4UH1-46N	4UH1-46N
Oil quantity	l	0.012	0.012	0.012	0.012
Class rating		I	I	I	I
Protection rating***		IP 67	IP 67	IP 67	IP 67
Storage temperature range	°C	-20 – +60	-20 – +60	-20 – +60	-20 – +60
Operating temperature range	°C	-10 – +40	-10 – +40	-10 – +40	-10 – +40
Sound pressure level L_{pA}*	dB(A)	79	79	79	79
Standards		EN ISO 11201			
Vibration total value a_{hv}	m/s^2	< 2.5	< 2.5	< 2.5	< 2.5
Standards		EN ISO 20643			
Uncertainty of measurement of the vibration total value a_{hv}	m/s^2	0.5	0.5	0.5	0.5

* These measured values were determined while operating the machine, which was freely suspended at 1 meter distance.

** The rated power gives the active power consumed at nominal operation.

*** Only applies to the assembled machine consisting of IRflex – FUflex.

15 Technical data

15.1 FUflex

Designation	Unit	FUflex4/230	FUflex4/230 CH	FUflex4/120 UK
Item number		5100021653	5100025401	5100025402
Rated current	A	6.00	6.00	12.00
Rated voltage	V	220 – 240	220 – 240	110 – 130
Rated frequency	Hz	50 – 60	50 – 60	50 – 60
Electrical load rating	kVA	1.38	1.38	1.44
Phases	~	1	1	1
Output current	A	3.5	3.5	3.5
Output voltage	V	220	220	220
Output frequency	Hz	200	200	200
Output rated power	kVA	1.33	1.33	1.33
Output phases	~	3	3	3
Length	mm	350	350	350
Width	mm	90	90	90
Height	mm	100	100	100
Length of power cable*	m	15	15	15
Weight	kg	9.4	9.4	9.4
Plug		CEE 7/7 (type EF)	SEV 1011 (Typ J)	CEE 2P+E 16A 110V 4H
Number of plug receptacles		1	1	1
Plug receptacle type		Quickflex	Quickflex	Quickflex
Class rating		I	I	I
Protection rating**		IP 67	IP 67	IP 67
Storage temperature range	°C	-20 – +60	-20 – +60	-20 – +60
Operating temperature range	°C	-10 – +40	-10 – +40	-10 – +40
Sound pressure level L_{pA}	dB(A)	< 70.0	< 70.0	< 70.0
Standards		EN ISO 11201	EN ISO 11201	EN ISO 11201
* Cable length including plug.				
** Only applies to the assembled machine consisting of IRflex – FUflex.				

15.1.1 Extension cable

WARNING

Electrical voltage.
Injury from electric shock.

- Check power cable and extension cable for damage.
- Only use extension cables whose grounded conductor is connected to the plug and coupling (only for machines of class rating I, see chapter *Technical data*).

- Only use approved extension cables, see chapter *Safety*.
- Find the necessary stranded conductor cross-section of the extension cable in the following table:

NOTICE

Find the model designation and voltage of the machine on the nameplate or using the item no. in the chapter *Technical data*.

Machine	Voltage [V]	Extension [m]	Stranded conductor cross-section [mm^2]
IRFUflex30	230 1~	≤ 136	1.5
IRFUflex38	230 1~	≤ 86	1.5
		≤ 142	2.5
IRFUflex45	230 1~	≤ 63	1.5
		≤ 104	2.5
		≤ 150	4.0
IRFUflex57	230 1~	≤ 50	1.5
		≤ 83	2.5
		≤ 132	4.0

Example: An IRflex57/230/5 is to be mounted onto an FUflex4/230 and this unit extended with an extension cable measuring 75 m. According to the table, given a supply voltage of 230 V 1~, the extension cable must have a stranded conductor cross-section of at least 2.5 mm².

Machine	Voltage [V]	Extension [m]	Stranded conductor cross-section [mm^2]
IRFUflex30	120 1~	≤ 36	1,5
		≤ 59	2,5
		≤ 94	4,0
IRFUflex38	120 1~	≤ 22	1,5
		≤ 37	2,5
		≤ 59	4,0
IRFUflex45	120 1~	≤ 16	1,5
		≤ 27	2,5
		≤ 43	4,0
IRFUflex57	120 1~	≤ 13	1,5
		≤ 22	2,5
		≤ 34	4,0

Machine	Voltage [V]	Extension [m]	Cross-section area of cable [AWG]
IRFUflex30	230 1~	≤ 119	16
IRFUflex38	230 1~	≤ 75	16
		≤ 119	14
IRFUflex45	230 1~	≤ 55	16
		≤ 86	14
		≤ 137	12
IRFUflex57	230 1~	≤ 44	16
		≤ 69	14
		≤ 109	12

Machine	Voltage [V]	Extension [m]	Cross-section area of cable [AWG]
IRFUflex30	120 1~	≤ 102	16
		≤ 161	14
		≤ 255	12
IRFUflex38	120 1~	≤ 64	16
		≤ 101	14
		≤ 160	12
		≤ 253	10
IRFUflex45	120 1~	≤ 47	16
		≤ 74	14
		≤ 117	12
		≤ 185	10
IRFUflex57	120 1~	≤ 37	16
		≤ 59	14
		≤ 93	12
		≤ 148	10

16 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, Preussenstrasse 41, 80809 Munich

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product

Product	IRflex30	IRflex38	IRflex45	IRflex57
Product type	Internal vibrator			
Function of product	Compacting of concrete			
Item number	5100025336, 5100025337	5100025338, 5100025339, 5100025360, 5100025361	5100025362, 5100025363, 5100025364, 5100025365	5100021651, 5100025366, 5100025367, 5100025368

Guidelines and standards

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

2006/42/EC (2009-10), 2014/35/EU (2014-02), 2014/30/EU (2014-02), 2011/65/EU (2015-03), EN 60745-1 (2010-10), EN 60745-2-12 (2009-07), EN 61800-3 (2012-03), EN 12649 (2011-07)

Person responsible for technical documents

Robert Räthsel,
Wacker Neuson Produktion GmbH & Co. KG, Preussenstrasse 41, 80809 Munich

Munich, 18.01.2016

Helmut Bauer
Managing Director

Translation of the original Declaration of Conformity

EC declaration of conformity

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preussenstrasse 41, 80809 Munich

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product

Product	**FUflex4**
Product type	Inverter
Function of product	Conversion of frequency
Item number	5100021653, 5100025401, 5100025402

Guidelines and standards

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

2014/35/EU (2014-02), 2014/30/EU (2014-02), 2011/65/EU (2015-03), EN 60745-1 (2010-10), EN 60745-2-12 (2009-07), EN 61800-3 (2012-03)

Person responsible for technical documents

Robert Räthsel,
Wacker Neuson Produktion GmbH & Co. KG, Preussenstrasse 41, 80809 Munich

Munich, 01.04.2016

Helmut Bauer
Managing Director

Translation of the original Declaration of Conformity