

Operator's manual

**Converter**

**FUE, KTU**



Model

FUE, KTU

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Errors excepted.

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



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**Translation of the original operator's manual in German**

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## **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](http://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.

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#### **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.

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---

#### **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.

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**NOTICE**

Supplementary information.

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**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](http://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 Safety

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### 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 equipment is 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 or damage to the units and other material assets.

#### Proper use

The equipment may only be used for the operation of internal and external vibrators.

The equipment to be connected must have the appropriate specifications (voltage, frequency, number of phases) for the connection.

Use in accordance with the intended purpose also includes the observation of all information in this operator's 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

Do not carry out any structural changes without written approval from the manufacturer. You will thereby be endangering your safety and the safety of others! Additionally, the manufacturer's liability and warranty will be canceled.

In particular, the following cases are considered structural changes:

- Opening the device and permanent removal of components that originate from Wacker Neuson.
- Installing new components that do not originate from Wacker Neuson or are not comparable in the design system and quality of the original parts.
- Attaching 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](http://www.wackerneuson.com).

For example, do not drill into the housing to attach signs. Water can enter into the housing and damage the equipment.

#### Prerequisite for operation

The flawless and safe operation of the equipment requires the following:

- Proper transport, storage and assembly.
- Careful operation.
- Careful care and maintenance.

#### Operation

Only operate the equipment in accordance with the intended purpose and in a technically flawless condition.

Only operate the unit in a safety and hazard-conscious manner and with all protective devices. Do not change or by-pass any protective devices.

Before beginning work, check the effectiveness of the operator's controls and protective devices.

Never operate the unit in explosive environments.



**Maintenance**

Regular maintenance jobs are required for a flawless and permanent functioning of the equipment. Neglected maintenance reduces the equipment's safety.

- The prescribed maintenance intervals must be strictly observed.
- Do not use the equipment if maintenance or repairs are needed.

**Faults**

In the event of malfunctions, you must immediately switch the equipment off and secure it.

Immediately rectify faults that can impair safety!

Have damaged or defective components replaced immediately!

You can find more information in the chapter *Troubleshooting*.

**Spare parts, accessories**

Only use spare parts from Wacker Neuson or such spare parts that are comparable in the design system and quality of the original parts.

Only use accessories by Wacker Neuson.

Non-observance cancels out any liability.

**Disclaimer**

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

- Structural change.
- Use not in accordance with the intended purpose.
- Non-observance of this operator's manual.
- Improper handling.
- Using spare parts that do not originate from Wacker Neuson or are not comparable in the design system and quality of the original parts.
- Using accessories that do not originate from Wacker Neuson.

**Operator's manual**

Always keep the operator's manual readily available on the equipment or at the place of application of the equipment.

If you should lose the operator's manual or require another copy, please contact your Wacker Neuson contact partner or download the operator's manual from the Internet ([www.wackerneuson.com](http://www.wackerneuson.com)).

Hand over this operator's manual to every other operator or subsequent owner of the equipment.

**Country-specific regulations**

Also, observe country-specific regulations, standards and guidelines for accident prevention and environmental protection, such as dealing with hazardous substances and wearing personal protection equipment.

Supplement the operator's manual with additional instructions on taking operational, regulatory, national or generally applicable safety standards into consideration.

**Operator's controls**

Always keep the equipment operator's controls dry, clean and free from oil and grease.

Operator's controls, such as the ON/OFF switch, throttle control handles, etc. may not be locked, manipulated or changed without permission.

**Check for damage**

Check the shutdown equipment at least once per shift for externally visible damage and deficiencies.

Do not operate the equipment if damage or deficiencies are discernible.

Have damage and deficiencies rectified immediately.

### 3.2 Competence of the operating personnel

#### Competence of the operator

Only technically trained personnel may start and operate the equipment. In addition, the following conditions apply:

- They are physically and mentally suitable.
- They are trained in the independent operation of the equipment.
- They are trained how to use the equipment in accordance with the intended purpose.
- They are familiar with the necessary safety devices.
- They are authorized to operate equipment and systems independently according to the standards of safety engineering.
- They are appointed by the contractor or operator to work independently with the unit.

#### Faulty operation

In the event of faulty operation, misuse or operation by untrained personnel, you can run the risk of endangering the health of the operator or third parties as well as damaging the unit or other material assets.

#### Operator responsibilities

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

#### Recommendations for work

Please observe the following recommendations:

- Only work if you are in a good physical condition.
- Work attentively, especially at the end of working hours.
- Do not work with the equipment when you are tired.
- Perform all work calmly, cautiously and carefully.
- Never work under the influence of alcohol, drugs or medication. Your vision, reactivity and judgment may be impaired.
- Work so that no third parties are harmed.
- Make sure that there are no people or animals in the danger area.

### 3.3 Protection equipment

#### Workwear

The clothing should be appropriate, i.e. tight fitting, but not cumbersome.

Generally, do not have any long hanging hair, loose clothing or jewelry (including rings) during on site jobs. There is a risk of injury, for example from being snagged or pulled in on moving equipment parts.

Only wear flame-resistant work clothing.

#### Personal Protective Equipment

Use personal protection equipment in order to avoid injuries and health hazards:

- Safety shoes.
- Work gloves made from sturdy material.
- Overalls made from sturdy material.
- Protective helmet.
- Ear protection.

### 3.4 Transport

#### Switch off the unit

Before transport, switch the equipment off and remove the plug from the plug receptacle.

#### Transporting the equipment

Secure the equipment on the means of transport from tipping over, falling down or sliding.

### **3.5 Operational safety**

#### **Explosive area**

Never operate the unit in explosive environments.

#### **Work environment**

Familiarize yourself with the work environment before beginning work. For example, this includes the following points:

- Obstacles in the work and traffic area.
- Load-bearing capacity of the soil.
- Necessary protection of the job site, especially for the public transport area.
- Necessary protection of walls and ceilings.
- Options available in the event of accidents.

#### **Commissioning the unit**

Observe the safety information and warnings on the unit as well as those in the operator's manual.

Never operate equipment that is in need of maintenance or repairs.

Commission the unit in accordance with the operator's manual.

Avoid body contact with grounded parts.

#### **Do not use components of the equipment as a climbing aid or securing means**

Never use the protection hose, power cable or other components of the equipment as a climbing aid or securing means.

#### **Switch off the unit**

Switch the equipment off and remove the plug from the plug receptacle in the following situations:

- Before it breaks.
- When you are not using the equipment.

Set the equipment down so that it cannot tip over, fall down or slip.

#### **Storage location**

After operation, store the cooled equipment in a locked, clean, frost-protected and dry location that is inaccessible to children.

### **3.6 Safety when operating electrical equipment**

#### **Electric power supply for electrical equipment of class rating I**

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##### **NOTICE**

The rated voltage can be found on the nameplate of your equipment.

---

You need to connect the equipment 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).

You may only connect the equipment to electric power supplies if all device parts can be found in a technically perfect condition. In particular, pay attention to the following components:

- Plug.
- Power cable in its entire length.
- Switch membrane of the on/off switch, if present.
- Plug receptacles.

You may only connect the unit to electric power supplies with an intact grounded conductor connection (PE).

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.

If you connect your equipment to a site power distribution board, this must be grounded.

---

#### **NOTICE**

Observe the respective national safety standards!

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#### **Extension cable**

You may only operate the equipment with undamaged and tested extension cables!

You may only use extension cables with grounded conductors and a proper grounded conductor connection to the plug and coupling (only equipment of class rating I, see chapter *Technical data*).

You may only use tested extension cables that are suitable for job site use: average rubber sheathed cable H05RN-F or better — Wacker Neuson recommend H07RN-F a SOOW cable or a country-specific equivalent design.

You must immediately replace extension cables with damage (e.g. tears in the casing) or loose plugs and couplings.

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.

#### **Uncoil the cable drum completely**

Danger of fire due to wound cable drum.

Uncoil the cable drum completely before operation.

#### **Protect the power cable**

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

Do not pull the plug of the power cable out of the plug receptacle by pulling the cable.

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

Have your Wacker Neuson contact partner immediately replace damaged power cables or loose plugs.

#### **Protect against moisture**

Protect the equipment from rain, snow or other forms of moisture. Damage and other malfunctions are possible.



### **3.7 Maintenance**

#### **Maintenance jobs**

Care and maintenance jobs may only be carried out insofar as it is described in this operator's manual. All other work must be taken over by the Wacker Neuson contact partner.

You can find more information in the chapter *Maintenance*.

#### **Disconnect from the electric power supply**

Before performing maintenance jobs, you must remove the plug from the plug receptacle in order to disconnect the equipment from the electric power supply.

#### **Cleaning**

Always keep the equipment clean and clean it after every use.

Do not use any fuels or solvents. Explosion hazard!

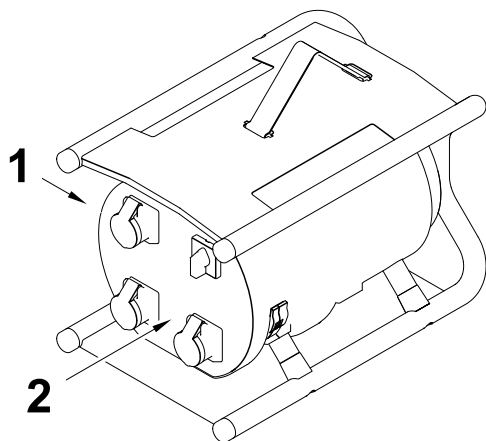
Do not use any high pressure washers. Water ingress can damage the unit. With electrical equipment, there is a serious risk of injury from electric shock.



## 4 Safety and information labels

There are labels on your unit that contain important information and safety instructions.

- Keep all labels legible.
- Replace missing or illegible labels.

The item numbers on the labels can be found in the parts book.



Item	Label	Description
1		<ul style="list-style-type: none"> <li>■ Warning against hot surface.</li> <li>■ Read the operator's manual before startup.</li> </ul>
2		<ul style="list-style-type: none"> <li>■ Attention: electric shock.</li> <li>■ Do not open housing.</li> <li>■ Read operator's manual.</li> </ul>

## **5 Setup and function**

### **5.1 Scope of delivery**

The scope of delivery includes:

- Machine.
- Operator's manual.

### **5.2 Application**

The machine may only be used for the operation of internal and external vibrators.

The machine is used to convert the current on the construction site into current that can be used by the machines to be connected.

### **5.3 Functionality**

#### **Principle**

The machine converts the current on the construction site (e.g. 230 V 1~) in order to operate machines with special specifications. Voltage, frequency and phase number are adjusted during this process.

#### **Machine features**

- Short-circuit and earth-fault proof.
- Shutdown in the case of excess temperature and fault voltage.
- Overload current detection.
- Protective low voltage provided by safety isolation transformer (applicable to 42 V machines).

#### **Inverter**

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

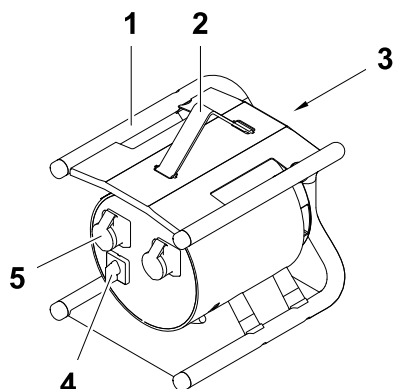
The current rectifier converts the input voltage (AC single phase) to DC voltage.

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

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

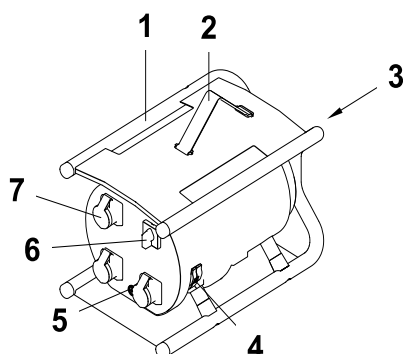
## 6 Components and operator's controls

### 6.1 FUE1, 2



Item	Designation	Item	Designation
1	Protective frame	4	ON/OFF switch
2	Lifting strap	5	Plug receptacle with protective cover
3	Ventilation slots		Power cable (not shown)

### 6.2 FUE6



Item	Designation	Item	Designation
1	Protective frame	5	Control lamp
2	Lifting strap	6	ON/OFF switch
3	Ventilation slots	7	Plug receptacle with protective cover
4	Thumbwheel for frequency adjustment (only FUE 6...SC)		Power cable (not shown)

#### Control lamp

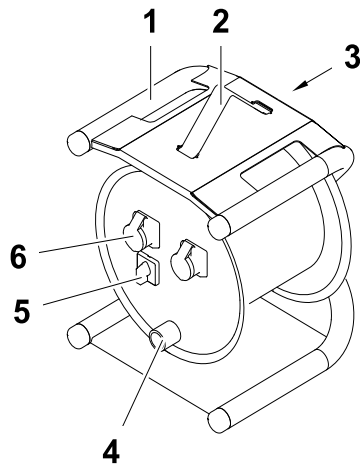
If the machine is correctly connected, the control lamp lights green.

In the case of different indications, a fault has occurred, see Chapter *Troubleshooting*.

#### Thumbwheel for frequency adjustment for FUE6...SC

Use the thumbwheel to adjust the output frequency of the machine and, as a result, affect the speed of the connected machines.



**6.3 KTU2**


Item	Designation	Item	Designation
1	Protective frame	5	ON/OFF switch
2	Lifting strap	6	Plug receptacle with protective cover
3	Ventilation slots	7	Power cable (not shown)
4	Crank knob		

## 7 Transport



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**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*.
- 

**Transporting the machine**

1. Switch off the machine via the ON/OFF switch.
2. Pull the plug from the plug receptacle.
3. Disconnect all connected machines from the inverter.
4. Wind up the power cable.
5. Set the machine on or into a suitable transport vehicle.

---

**NOTICE**

Do not place the machine on the side where the plug receptacle is located.

---

6. Fasten the machine to the protective frame.

## 8 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*.

### 8.1 Before commissioning

The equipment is ready for operation out of the box.

#### Check equipment

- Check the equipment and all components for damage.

#### Check the power supply system

- Check whether the power supply system or job site electrical distributor has the correct operating voltage (see nameplate of the unit 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.

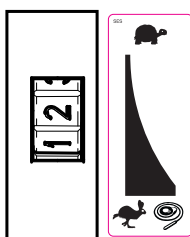
#### Only FUE 6...SC

When connecting internal and external vibrators.

### NOTICE

Please also refer to the operator's manual of the internal vibrators/external vibrators.

Applicable to inverters with frequency adjustment:



- During the operation of internal vibrators, set the thumbwheel to the maximum output frequency (highest number must be visible).
- During operation of external vibrators, use the thumbwheel to search the required output frequency. The output frequency affects the speed of the connected machines.

### 8.2 Commissioning



### WARNING

Damage to an equipment part or power cable can lead to physical injury from electric shock.

- Do not operate damaged equipment!
- Have damaged equipment repaired immediately.

### Important notes about connecting consumers



#### **WARNING**

Improper handling can damage the insulation of the inverter.  
Risk of death from electric shock and risk of fire.

- The rated current of all connected consumers may not in sum be greater than the maximum output rated current of the inverter.
- The rated current of each connected consumer may not be greater than the maximum rated current of the plug receptacle.

#### **Do not exceed the rated current of all connected consumers**

The total rated currents of all connected consumers must not exceed the maximum rated output current of the inverter.

The maximum rated output current is specified on the nameplate.

##### **Example:**

FUE 6/042/200W, maximum rated output current 52 A.

You can connect three IREN 57 with a rated current of 17.3 A each since the overall current  $I = 3 \times 17.3 \text{ A} = 51.9 \text{ A}$  and is therefore less than 52 A.

However, you cannot connect three IREN 65 with a rated current of 25 A each since the overall current  $I = 3 \times 25 \text{ A} = 75 \text{ A}$  and therefore exceeds 52 A.

#### **Do not exceed the rated current of the plug receptacle**

The rated current of every attached consumer must not exceed the maximum rated current of the plug receptacle.

The maximum rated current is specified on the plug receptacle.

##### **Example:**

FUE 6/042/200W, maximum rated current of a plug receptacle 32 A.

You must not connect consumers whose rated current is higher than 32 A.

---

**Connect the equipment to the electric power supply**

Only connect the unit to single-phase AC. For connection values, see the chapter *Technical data*.  
Observe the notes in the chapter *Safety when operating electrical units*.

---

**NOTICE**

Electrical voltage.  
An incorrect voltage can damage the equipment.

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



---

**WARNING**

Start-up of the connected equipment.  
Risk of injury from uncontrolled start-up of equipment.

- Switch all connected equipment off before connecting to the electric power supply.
- 

1. Switch off the inverter via the ON/OFF switch.
2. Switch off all connected machines via the respective equipment switch.



---

**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 equipment of class rating I, see chapter *Technical data*).
- 

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

---

**NOTICE**

Permissible lengths and cross-sections of extension cables can be found in the chapter *Technical data*.

---

4. Insert the plug into the plug receptacle.

**Switching on the machine**

- Switch on the inverter via the ON/OFF switch.

When the machine is ready to operate, the control lamp lights green (FUE 6 only).

**8.3****Decommissioning****Switching off the machine**

1. Switch off all connected machines via the respective equipment switch.
2. Switch off the inverter via the ON/OFF switch.
3. Pull the plug from the plug receptacle.
4. Disconnect all connected machines from the inverter.
5. Wind up the power cable.

## 9 Maintenance



### 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

### 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 Maintenance schedule

#### NOTICE

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

Activity	Daily before operation	After operation
Visual inspection of all parts for damage: <ul style="list-style-type: none"> <li>■ Housing.</li> <li>■ Power cable.</li> <li>■ Lifting strap.</li> <li>■ Plug receptacle.</li> <li>■ ON/OFF switch.</li> </ul>	■	
Clean equipment.		■

### 9.2 Maintenance jobs

#### Visual inspection for damage



### WARNING

Damage to an equipment part or power cable can lead to physical injury from electric shock.

- Do not operate damaged equipment.
- Have damaged equipment repaired immediately.

- Check all equipment parts and components for damage.
  - Have the damage fixed by your Wacker Neuson contact partner.



## **Clean equipment**

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### **NOTICE**

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

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1. Clean the ventilation slots with a suitable tool.
2. Wipe the housing with a damp and clean cloth.
3. Clean the thumbwheel (applicable to inverters with frequency adjustment).

## 10 Troubleshooting

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

Notify your Wacker Neuson contact in case of malfunctions you cannot or may not remedy yourself.

### 10.1 FUE1, 2, KTU2

Fault	Possible causes	Remedial measure
Inverter not in operation.	<ul style="list-style-type: none"><li>■ Mains voltage interrupted.</li><li>■ Incorrect mains voltage.</li></ul>	The inverter starts automatically as soon as the correct mains voltage is present (again).
	<ul style="list-style-type: none"><li>■ Short circuit in one of the connected pieces of equipment.</li><li>■ 2-phase operation * in one of the connected pieces of equipment.</li><li>■ Mechanical defect in one of the connected pieces of equipment.</li></ul>	<ol style="list-style-type: none"><li>1. Carry out a reset: Switch off the inverter and switch it on again.</li><li>2. Disconnect the connected machines and check them.</li><li>3. Repeat reset.</li></ol>
	Short-circuit within the inverter.	<ol style="list-style-type: none"><li>1. Disconnect connected machines.</li><li>2. Carry out a reset: Switch off the inverter and switch it on again.</li><li>3. If the fault is not remedied, have the machine repaired.</li></ol>
	Inverter shut down due to excessive temperature (> 85 °C).	<ol style="list-style-type: none"><li>1. Allow the inverter to cool down. Leave the inverter switched on to allow the ventilator to keep running.</li><li>2. Carry out a reset: Switch off the inverter and switch it on again.</li></ol>
		Reduce the current consumption of the connected machines.
Air cannot escape from the ventilation slots.	<ul style="list-style-type: none"><li>■ Ventilator turns too slowly.</li><li>■ Ventilator does not turn.</li></ul>	<ul style="list-style-type: none"><li>■ Have the ventilator repaired. **</li></ul>
<p>* 2-phase operation: The connected machine only uses 2 phases for current intake. Therefore, the engine does not turn. The connected machine hums and heats up quickly due to the high current consumption.</p> <p>** Have these tasks carried out by the service department of your Wacker Neuson contact person.</p>		





## 10.2 FUE6

A control lamp makes troubleshooting easier.

Fault	Possible causes	Remedial measure
Inverter in operation. Control lamp lights red and green.	<ul style="list-style-type: none"> <li>Excessive current consumption of connected machines.</li> <li>Inverter operates within the permissible overload range.</li> </ul>	Reduce the current consumption of the connected machines.
Inverter not in operation. Control lamp lights red.	<ul style="list-style-type: none"> <li>Line voltage interrupted.</li> <li>Incorrect line voltage.</li> </ul>	Inverter starts automatically as soon as the correct line voltage is available (again).
Inverter not in operation. Control lamp flashes red.	<ul style="list-style-type: none"> <li>Short circuit in one of the connected machines.</li> <li>2-phase operation * in one of the connected machines.</li> <li>Mechanical defect in one of the connected machines.</li> </ul>	<ol style="list-style-type: none"> <li>Carry out a reset: Switch off the inverter and switch it on again.</li> <li>Disconnect the connected machines and check them.</li> <li>Repeat reset.</li> </ol>
	Short circuit in inverter.	<ol style="list-style-type: none"> <li>Disconnect connected machines.</li> <li>Carry out a reset: Switch off the inverter and switch it on again.</li> <li>If the fault is not remedied, have the machine repaired.</li> </ol>
Inverter not in operation. Control lamp flashes red twice.	Inverter has switched off due to excess temperature (> 85 °C).	<ol style="list-style-type: none"> <li>Allow the inverter to cool down. Leave the inverter switched on to allow the ventilator to keep running.</li> <li>Carry out a reset: Switch off the inverter and switch it on again.</li> </ol>
		Reduce the current consumption of the connected machines.
Thumbwheel jammed.	Thumbwheel dirty.	Remove dirt.
Air cannot escape from the ventilation slots.	<ul style="list-style-type: none"> <li>Ventilator turns too slowly.</li> <li>Ventilator does not turn.</li> </ul>	Have the ventilator repaired. **
<p>* 2-phase operation: The connected machine only uses 2 phases for current intake. Therefore, the engine does not turn. The connected machine hums and heats up quickly due to the high current consumption.</p> <p>** Have these tasks carried out by the service department of your Wacker Neuson contact person.</p>		

## 11 Technical data

### 11.1 FUE1

Designation	Unit	FUE1/042/200W	FUE1/120/200W
Item number		0008934	0610023
Rated current	A	9,6	9,6
Rated voltage	V	230	230
Rated frequency	Hz	50	50
Rated power	kVA	2,2	2,2
Phases	~	1	1
Output current	A	25	9
Output voltage	V	42	120
Output frequency	Hz	200	200
Output rated power	kVA	1,8	1,8
Output phases	~	3	3
Length	mm	420	420
Width	mm	325	325
Height	mm	325	325
Length of power cable	m	2,5	2,5
Weight	kg	25	25
Plug		CEE 7/7 (type EF)	CEE 7/7 (type EF)
Number of plug receptacles		1	1
Plug receptacle type		CEE 3P 32A 4h 50V 100-200Hz	CEE 4P 16A 10h 50V 100-300Hz
Class rating		I	I
Protection rating		IP44	IP44
Storage temperature range	°C	-25 – +50	-25 – +50
Operating temperature range	°C	-15 – +40	-15 – +40
Sound pressure level $L_{pA}$	dB(A)	< 70	< 70
Standards		EN ISO 11201	EN ISO 11201

**11.2 FUE2**

Designation	Unit	FUE2/042/200W	FUE2/250/200W
Item number		0008902	0610011
Rated current	A	13	13
Rated voltage	V	230	230
Rated frequency	Hz	50	50
Rated power	kVA	3	3
Phases	~	1	1
Output current	A	35	6
Output voltage	V	42	250
Output frequency	Hz	200	200
Output rated power	kVA	2,6	2,6
Output phases	~	3	3
Length	mm	420	420
Width	mm	325	325
Height	mm	325	325
Length of power cable	m	2,5	2,5
Weight	kg	26,4	26,4
Plug		CEE 7/7 (type EF)	CEE 7/7 (type EF)
Number of plug receptacles		2	2
Plug receptacle type		CEE 3P 32A 4h 50V 100-200Hz	CEE 3P 32A 4h 50V 100-200Hz
Class rating		I	I
Protection rating		IP44	IP44
Storage temperature range	°C	-25 – +50	-25 – +50
Operating temperature range	°C	-15 – +40	-15 – +40
Sound pressure level L <sub>pA</sub>	dB(A)	< 70	< 70
Standards		EN ISO 11201	EN ISO 11201

## 11.3 FUE6

Designation	Unit	FUE6/042/200W	FUE6/042/200SC4CCEE
Item number		0610176	0610405
Rated current	A	14,8	14,8
Rated voltage	V	230	230
Rated frequency	Hz	50	50
Rated power	kVA	3,4	3,4
Phases	~	1	1
Output current	A	53	53
Output voltage	V	42	42
Output frequency	Hz	200	0 - 200
Output rated power	kVA	3,9	3,7
Output phases	~	3	3
Length	mm	524	524
Width	mm	325	325
Height	mm	325	325
Length of power cable	m	2,5	2,5
Weight	kg	32,5	32,5
Plug		CEE 7/7 (type EF)	CEE 7/7 (type EF)
Number of plug receptacles		3	4
Plug receptacle type		CEE 3P 32A 4h 50V 100-200Hz	CEE 3P 32A 4h 50V 100-200Hz
Class rating		I	I
Protection rating		IP44	IP44
Storage temperature range	°C	-25 – +50	-25 – +50
Operating temperature range	°C	-15 – +40	-15 – +40
Sound pressure level $L_{pA}$	dB(A)	< 70	< 70
Standards		EN ISO 11201	EN ISO 11201


**11.4 KTU2**

Designation	Unit	KTU2/042/200W
Item number		0008884
Rated current	A	13
Rated voltage	V	230
Rated frequency	Hz	50
Rated power	kVA	3
Phases	~	1
Output current	A	35
Output voltage	V	42
Output frequency	Hz	200
Output rated power	kVA	2,6
Output phases	~	3
Length	mm	387
Width	mm	395
Height	mm	446
Length of power cable	m	25
Weight	kg	34,4
Plug		CEE 7/7 (type EF)
Number of plug receptacles		3
Plug receptacle type		CEE 3P 32A 4h 50V 100-200Hz
Class rating		I
Protection rating		IP44
Storage temperature range	°C	-25 – +50
Operating temperature range	°C	-15 – +40
Sound pressure level $L_{pA}$	dB(A)	< 70
Standards		EN ISO 11201

## 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 equipment of class rating I, see chapter *Technical data*).

- Only use permitted extension cables, see chapter *Safety*.

**Find the necessary stranded conductor cross-section of the extension cable in the following table:**

### NOTICE

You can find the model designation and voltage of your equipment on the nameplate or using the item no. from the chapter *Technical data*.

Equipment	Voltage [V]	Extension [m]	Stranded conductor cross-section [mm <sup>2</sup> ]
FUE 1/042/200W FUE 1/120/200W	230 1~	≤ 31	1,5
		≤ 52	2,5
		≤ 82	4,0
FUE 2/042/200W FUE 2/250/200W	230 1~	≤ 23	1,5
		≤ 38	2,5
		≤ 61	4,0
FUE 6/042/200W FUE 6/042/200W SC FUE 6/042/ 200W SC 4CEE	230 1~	≤ 41	1,5
		≤ 67	2,5
		≤ 107	4,0
KTU 2/042/200W KTU 2/250/200W	230 1~	≤ 23	1,5
		≤ 38	2,5
		≤ 61	4,0


**US Machine**

Machine	Voltage [V]	Extension ft	Cross-section area of cable AWG
FUE 1/042/200W FUE 1/120/200W	230 1~	≤ 90	16
		≤ 142	14
		≤ 224	12
FUE 2/042/200W FUE 2/250/200W	230 1~	≤ 66	16
		≤ 105	14
		≤ 165	12
FUE 6/042/200W FUE 6/042/200W SC FUE 6/042/ 200W SC 4CEE	230 1~	≤ 105	16
		≤ 184	14
		≤ 290	12
KTU 2/042/200W KTU 2/250/200W	230 1~	≤ 66	16
		≤ 105	14
		≤ 165	12

**Example**

You utilize an FUE 2/250/200W and want to use an extension cable with a length of 25 m (82 ft).

The machine has an input voltage of 230 V.

According to the table, the extension cable must feature a cross-section area of 2.5 mm<sup>2</sup> (14 AWG).

## 12 Disposal

### 12.1 Disposal of old electrical and electronic equipment

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

#### For customers in EU countries

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



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

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

#### For customers in other countries

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



## 13 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.



# WACKER NEUSON

## 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	FUE1, FUE2, FUE6	KTU2
Product type	Inverter	
Function of product	Conversion of voltage and frequency	
Item number	0008934, 0610023, 0008902, 0610011, 0610176, 0610405	0008884

### 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 61558-1 (2009-04), EN 61558-2-16 (2013-11), EN 61558-2-23 (2010-10),

EN 61800-3 (2012-03)

### Person responsible for technical documents

Robert Räthsel,

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

Munich, 07.09.2016

Helmut Bauer  
Managing Director

Translation of the original Declaration of Conformity



