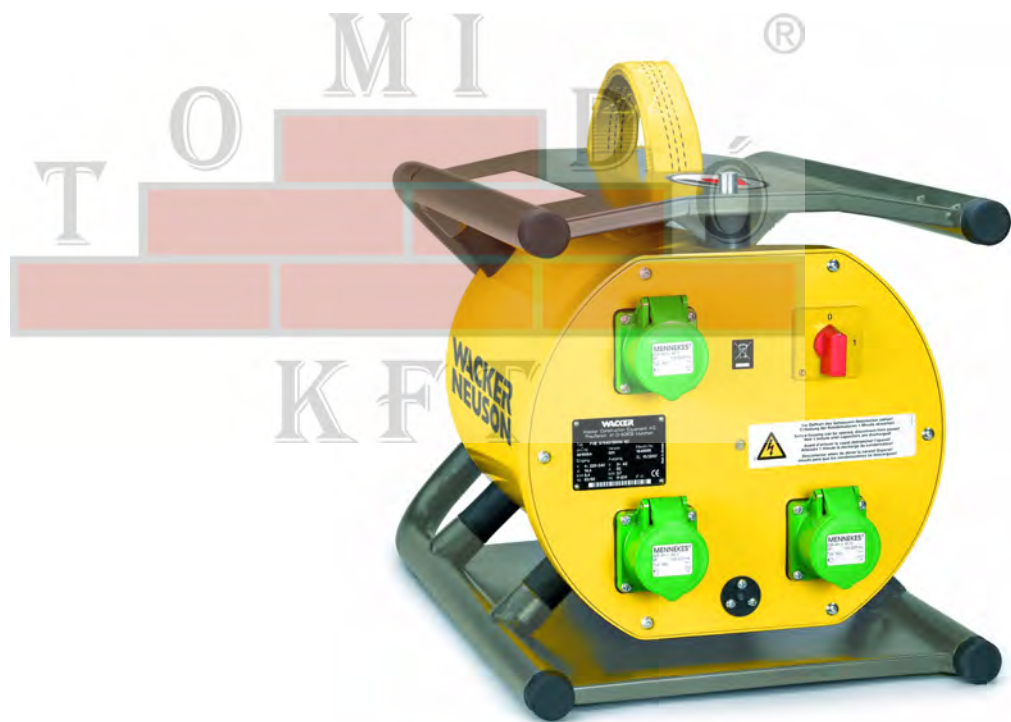


Operator's manual

Converter

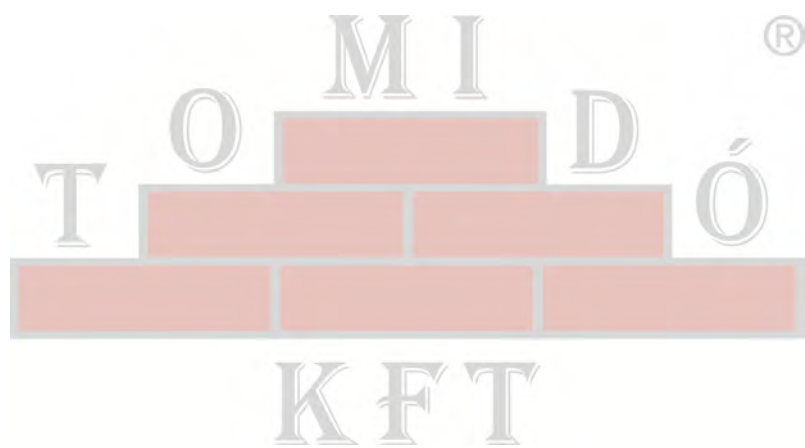
**FUE, KTU**



03.2011

0227699en / 002

T O M I D Ó<sup>®</sup>  
K F T



### Manufacturer

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Translation of the original operator's manual in German

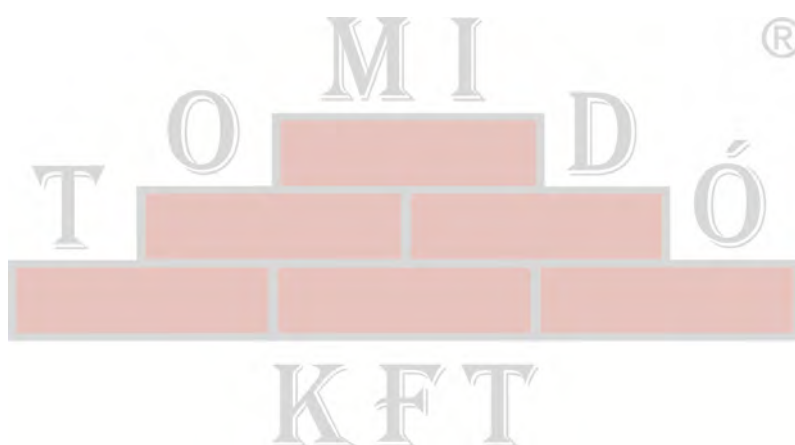


**WACKER  
NEUSON**

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### 1 Foreword

This operator's manual contains information and procedures for the safe operation and maintenance of your Wacker Neuson machine. In the interest of your own safety and to prevent accidents, you should carefully read through the safety information, familiarize yourself with it and observe it at all times.

This operator's manual is not a manual for extensive maintenance and repair work. Such work should be carried out by Wacker Neuson service or authorized specialists.

The safety of the operator was one of the most important aspects taken into consideration when this machine was designed. Nevertheless, improper use or incorrect maintenance can pose a risk. Please operate and maintain your Wacker Neuson machine in accordance with the instructions in this operator's manual. Your reward will be troublefree operation and a high degree of availability.

**Defective machine parts must be replaced immediately!**

Please contact your Wacker Neuson representative if you have any questions concerning operation or maintenance.

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We expressly reserve the right to make technical modifications – even without special notice – which aim at further improving our machines or their safety standards.

## 2 Introduction

### 2.1 Means of representation for this operator's manual

#### Warning symbols

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

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



---

#### **DANGER**

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

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

---



---

#### **WARNING**

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

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

---



---

#### **CAUTION**

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

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

---

---

#### **NOTICE**

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

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

---

#### Notes

**Note:** Complementary information will be displayed here.

### Instructions

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

### 2.2 Wacker Neuson representative

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

You can find the addresses in the Internet at [www.wackerneuson.com](http://www.wackerneuson.com).

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

### 2.3 Described machine types

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

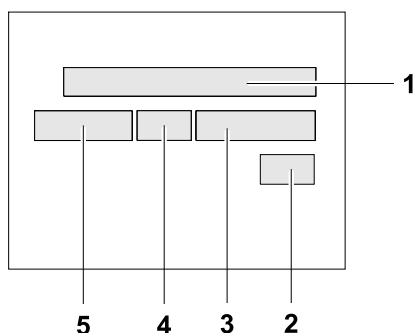
Details for the described machine types can be found in the chapter *Technical data*.





## 2.4 Identification of the machine

### Nameplate data



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

► Enter the information of your machine into the following table:

Item	Designation	Your information
1	Group and type	
2	Construction year	
3	Machine no.	
4	Version no.	
5	Item no.	

### 3 Safety

#### 3.1 Principle

##### State of the art

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

##### Proper use

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

The machines to be connected must have the appropriate connection specifications (voltage, frequency, phase number).

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

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

##### Structural modifications

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

Especially the following are cases of structural modifications:

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

It is no problem to install spare parts from Wacker Neuson.

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

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

### Requirements for operation

The ability to operate the machine safely requires:

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

### Operation

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

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

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

Never operate the machine in a potentially explosive environment.

### Maintenance

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

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

### Malfunctions

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

Eliminate the malfunctions that impair safety immediately!

Have damaged or defective components replaced immediately!

For further information, refer to chapter *Troubleshooting*.

### Spare parts, accessories

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

Only use accessories from Wacker Neuson.

Non-compliance will exempt the manufacturer from all liability.

### Exclusion of liability

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

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

### Operator's manual

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

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

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

### Country-specific regulations

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

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

### Operator's controls

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

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

### Checking for signs of damage

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

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

Have any damage or defects eliminated immediately.

## 3.2 Qualification of the operating personnel

### Operator qualifications

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

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

### Incorrect operation

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

### Operating company responsibilities

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

### Work recommendations

Please observe the recommendations below:

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

### 3.3 Protective gear

#### Work clothing

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

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

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

#### Personal protective gear

Wear personal protective gear to avoid injuries or health hazards:

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

### 3.4 Transport

#### Switching off the machine

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

#### Transporting the machine

Secure the machine on the transport device against tilting, falling or slipping.

### 3.5 Operating safety

#### Explosible environment

Never operate the machine in a potentially explosive environment.

### Work environment

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

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

### Starting the machine

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

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

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

Avoid body contact with grounded components.

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

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

### Switching off the machine

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

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

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

### Storage location

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

### 3.6 Safety during the operation of electric appliances

#### Specific regulations for electrical appliances

Observe the safety information provided in the brochure *General Safety Rules* which is included in the scope of delivery of your machine.

Also observe the country-specific regulations, standards and guidelines in reference to accident prevention in connection with electrical equipment and machines.

**⚠ WARNING Read all safety information and instructions.** Failure to follow the safety information and instructions may result in electric shock, fire and/or serious injury.

**Save all safety information and instructions for future reference.**

#### Electric power supply for electrical appliances of class rating I

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

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

One of the following fault current protective switches is required:

- Standard fault current protective switch (AC sensitive, Type A).
- AC/DC sensitive fault current protective switch (Type B).

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

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

The machine may only be connected to an electric power supply whereby the connector of the grounded conductor (PE) is intact.

There must be at least one of the following safety devices if connected to a stationary or mobile generator:

- Fault current protective switch.
- Isolation (earth leakage) monitor.
- IT-net.

If you connect your machine to a worksite distribution board, the worksite distribution board must be grounded.

**Note:** Observe the respective national safety regulations!



### Extension cable

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

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

Only use tested extension cables which are suitable for use at construction sites: Average rubber hose H05RN-F or better – Wacker Neuson recommends H07RN-F, an SOW cable, or a country-specific equivalent design.

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

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

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

### Uncoil the cable drum completely

Danger of fire due to wound cable drum.

Uncoil the cable drum completely before operation.

### Protecting the power cable

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

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

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

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

### Protecting from moisture

Protect the machine against rain, snow or any other forms of moisture. This could cause damage or other malfunctions.

## 3.7 Maintenance

### Maintenance work

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

For further information, refer to chapter *Maintenance*.

#### **Disconnecting the machine from the electric power supply**

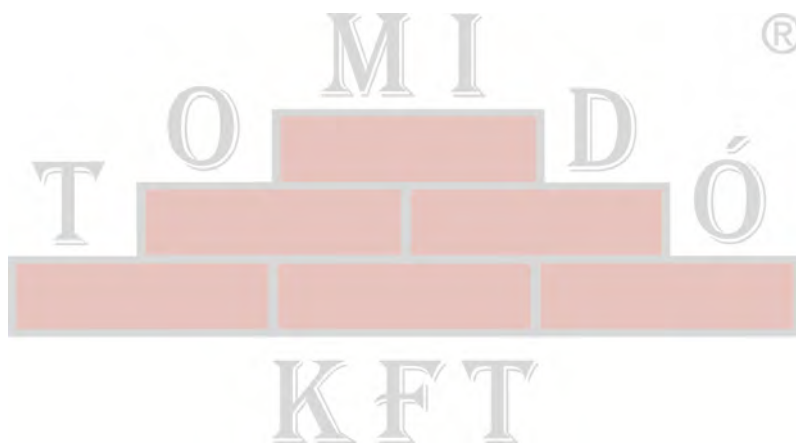
Before carrying out service or maintenance work, pull the plug out of the plug receptacle in order to disconnect the machine from the electric power supply.

#### **Cleaning**

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

Do not use gasoline or solvents. Danger of explosion!

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

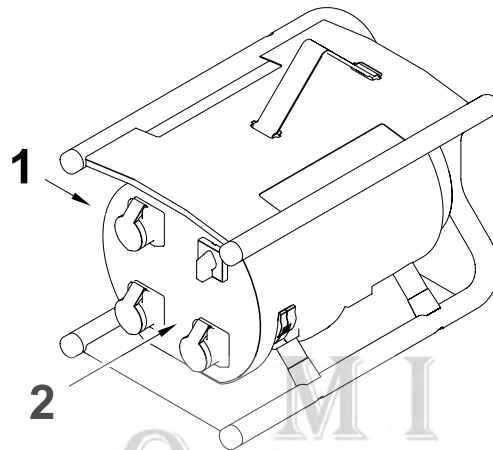


## 4 Safety and information labels

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

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

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

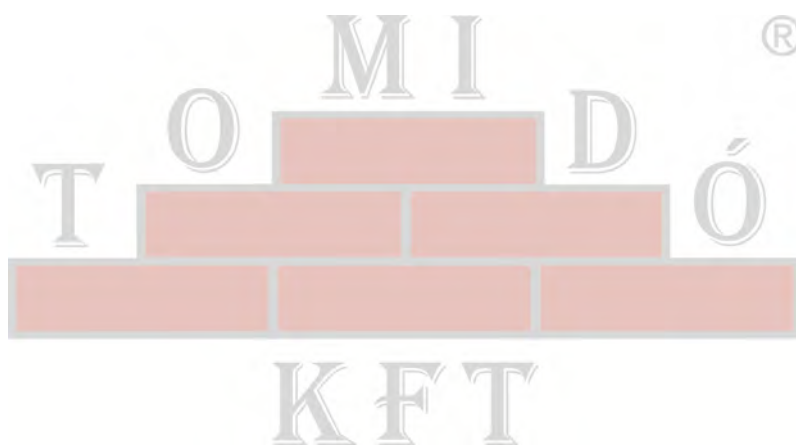


Item	Label	Description
1	without KTU 	<ul style="list-style-type: none"> <li>■ Warning of hot surface.</li> </ul> Read the operator's manual before start-up.
2		<ul style="list-style-type: none"> <li>■ Guaranteed sound power level.</li> <li>■ Do not open housing.</li> <li>■ Read the operator's manual.</li> </ul>

### 5 Scope of delivery

The scope of delivery includes:

- Machine.
- Operator's manual.
- Parts book.
- General safety information.



## 6 Structure and function

### 6.1 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.

### 6.2 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

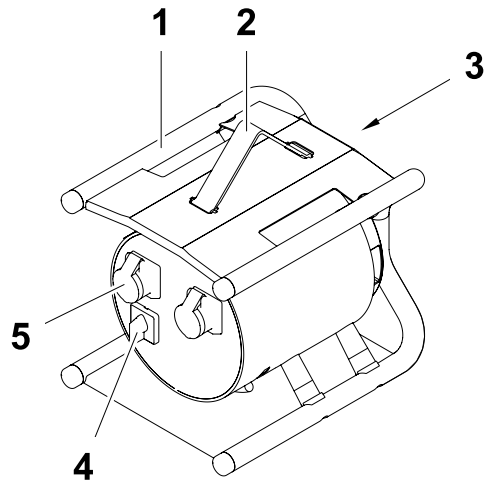
The inverter comprises a current rectifier and a d.c.-a.c. converter monitored by an electronic control.

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.

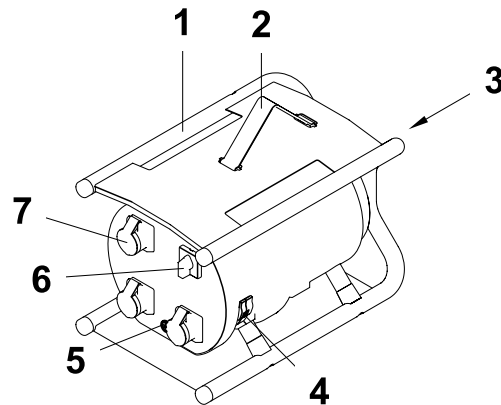
## 7 Components and operator's controls

### 7.1 FUE 1, 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)

7.2 FUE 6



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**

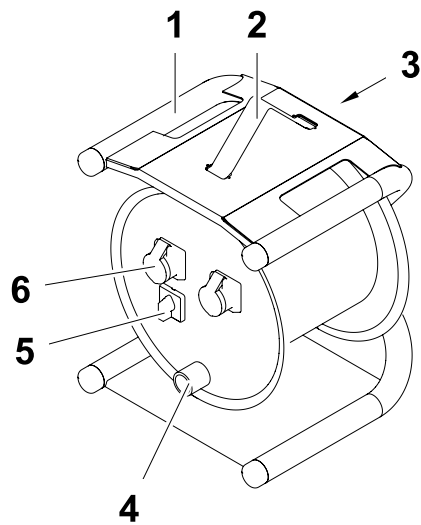
If the machine is correctly connected, the control lamp lights green.

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.

7.3 KTU 2



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



## 8 Transport



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**WARNING**

Improper handling can result in injury or serious material damage.

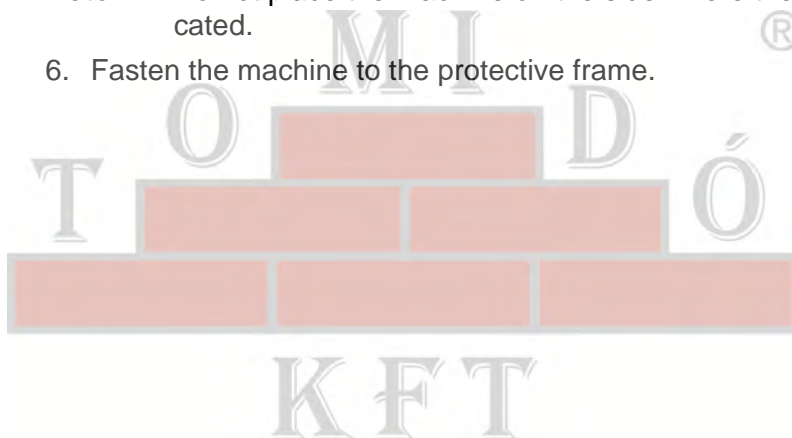
- ▶ Read and follow all safety information of this operator's manual, see chapter *Safety*.
- 

### 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.

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

6. Fasten the machine to the protective frame.



## 9 Use and operation



---

### WARNING

Improper handling can result in injury or serious material damage.

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

### 9.1 Prior to starting the machine

After unpacking, the machine is ready for operation.

#### Checking the machine

- ▶ Check the machine and all components for damages.

#### Checking the mains

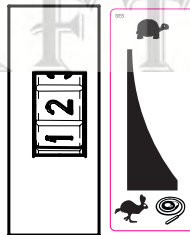
- ▶ Check if mains or power distribution on the construction site have the correct operating voltage (see nameplate of the machine or chapter *Technical Data*).
- ▶ Check if mains or power distribution on the construction site are protected in accordance with current standards and regulations.

#### Only FUE 6...SC

When connecting internal and external vibrators.

**Note:** 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.

## 9.2 Starting up



### WARNING

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

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

### Important instructions for the connection of consumers



### WARNING

Improper handling can damage the insulation of the inverter. Mortal danger from electrocution and risk of fire.

- ▶ The total rated current of all connected consumers must not exceed the maximum rated output current of the inverter.
- ▶ The rated current of every attached consumer must not exceed the maximum rated current of the plug receptacle.

### Do not exceed the rated current of all attached 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.

### Connecting the machine to the power supply

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

---

#### NOTICE

Electrical voltage.

Incorrect voltage can cause damage on the machine.

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



#### WARNING

Starting the connected machines.

Danger of injuries from uncontrolled starting of the machines.

- ▶ Deactivate all connected machines before connection 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.

Injuries from electrocution.

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

- 
3. If required, connect the machine to a permitted extension cable.  
**Note:** See chapter *Technical data* for the permitted lengths and cross-section areas of extension cables.
  4. Insert the plug into the plug receptacle.

### Switching on the machine

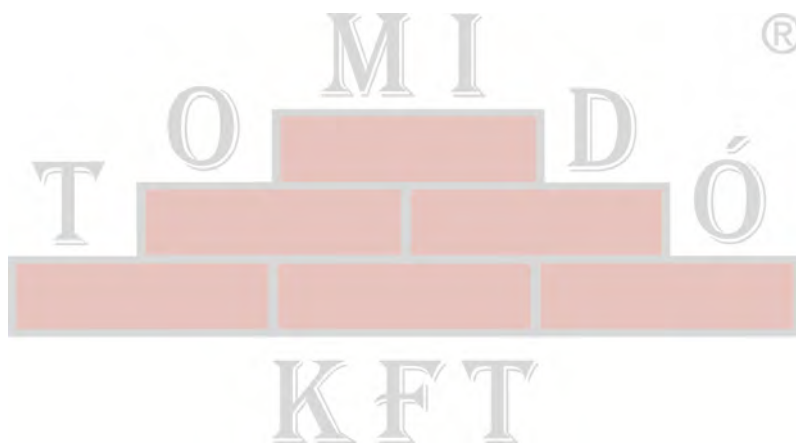
- ▶ Switch on the inverter via the ON/OFF switch.

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

### 9.3 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.



## 10 Maintenance



### WARNING

Improper handling can result in injury or serious material damage.

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



### WARNING

Improper handling may cause a danger to life by electrocution.

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

### 10.1 Maintenance schedule

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

Task	Daily before operation	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 the machine.		■

## 10.2 Maintenance work

### Visual inspection for damage



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**WARNING**

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

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

- ▶ Check all machine parts and components for damage.  
Have damages repaired by your Wacker Neuson representative.

### Cleaning the machine

**Note:** Do not clean the machine with high pressure washers or steam jet cleaners!

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).

## 11 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.

### 11.1 FUE 1, 2, KTU 2

Malfunction	Cause	Remedy
Inverter not in operation.	<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).
	<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>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 in 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 has switched off due to excess 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>	Have the ventilator repaired. **

\* 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.

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



## 11.2 FUE 6

A control lamp makes troubleshooting easier.

Malfunction	Cause	Remedy
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>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 in 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 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>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.
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. **

\* 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.

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

## 12 Disposal

### 12.1 Disposal of waste electrical and electronic equipment

#### For customers in EU countries

This device is subject to the European Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) and the corresponding national legislation. The WEEE directive outlines the procedure for handling electrical waste equipment across the EU.



The device is labelled with the symbol of a crossed out dustbin shown here. This means you may not dispose of it with normal household waste but in a separate environmentally-friendly waste collection.

This device is a professional electrical tool designed for commercial applications only (B2B device according to WEEE directive). Contrary to equipment used in most private households (B2C devices), in some EU countries such as Germany, this device may not be disposed of at a collection point in a public disposal facility (for example at public waste depots). In case of doubt, ask the sales outlet about the proper disposal procedure for B2B electrical equipment in your country and ensure you dispose of the device in accordance with the valid legal guidelines. Please also note any information in the sales contract and the general terms and conditions from the point of sales.

The proper disposal of this device prevents the occurrence of any negative effects on people or the environment, follows the specific procedures for handling harmful substances and enables valuable raw materials to be recycled.

#### For customers in non-EU countries

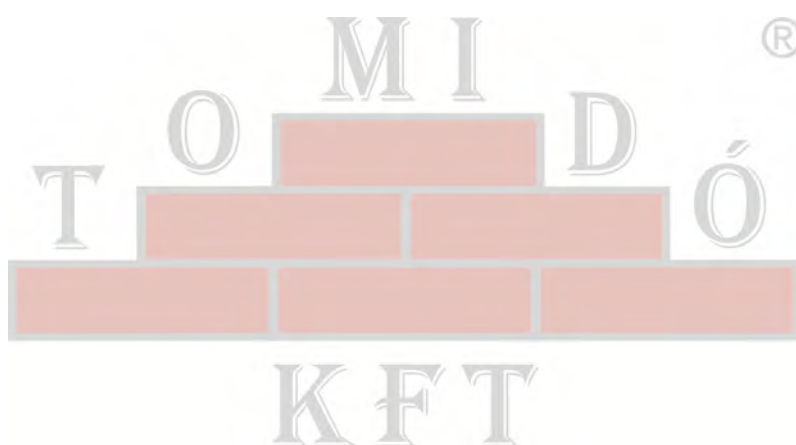
The proper disposal of this device prevents the occurrence of any negative effects on people or the environment, follows the specific procedures for handling harmful substances and enables valuable raw materials to be recycled. Therefore, we recommend that this device is disposed of in a separate, environmentally-friendly waste collection and not with normal household waste. In some cases, national legislation also stipulates the separate disposal of electric and electronic products. Please ensure you dispose of this device in accordance with the valid regulations in your country.

## 13 Accessories

There is a wide range of accessories available for the machine.

For more information on the individual accessories, visit the following website:

[www.wackerneuson.com](http://www.wackerneuson.com).



## 14 Technical data

### 14.1 FUE 1

Designation	Unit	FUE 1/042/200W	FUE 1/120/200W
Item no.		0008934	0610023
Length x Width x Height	mm (in)	420 x 325 x 325 (16.5 x 12.8 x 12.8)	
Weight	kg (lb)	25 (55.1)	
Input rated voltage	V	230 1~	
Input rated frequency	Hz	50	
Input rated current	A	9,6	
Nominal input power	kVA	2,2	
Rated output voltage	V	42 3~	120 3~
Rated output frequency	Hz	200	
Rated output current	A	25	9
Rated output power	kVA	1,8	
Class rating *		I	
Protection class **		IP 44	
Mains cable		2,5 m with shock-proof connector	
Number of plug receptacles		1 x 32 A/42 V	1 x 16 A/250 V
Sound pressure level $L_{pA}$ at operator's station ***	dB(A)	< 70	

\* According to DIN EN 61140.

\*\* According to DIN EN 60529.

\*\*\* According to DIN EN ISO 11201.

14.2 FUE 2

Designation	Unit	FUE 2/042/200W	FUE 2/250/200W
Item no.		0008902	0610011
Length x Width x Height	mm (in)	420 x 325 x 325 (16.5 x 12.8 x 12.8)	
Weight	kg (lb)	26,4 (58.2)	
Input rated voltage	V	230 1~	
Input rated frequency	Hz	50	
Input rated current	A	13	
Nominal input power	kVA	3	
Rated output voltage	V	42 3~	250 3~
Rated output frequency	Hz	200	
Rated output current	A	35	6
Rated output power	kVA	2,6	
Class rating *		I	
Protection class **		IP 44	
Mains cable		2,5 m with shock-proof connector	
Number of plug receptacles		2 x 32 A/42 V	2 x 16 A/250 V
Sound pressure level $L_{pA}$ at operator's station ***	dB(A)	< 70	

\* According to DIN EN 61140.

\*\* According to DIN EN 60529.

\*\*\* According to DIN EN ISO 11201.

14.3 FUE 6

Designation	Unit	FUE 6/042/ 200W	FUE 6/042/ 200W SC	FUE 6/042/ 200W SC 4 CEE
Item no.		0610176	0610084	0610405
Length x Width x Height	mm (in)	524 x 325 x 325 (20.6 x 12.8 x 12.8)		
Weight	kg (lb)	32,5 (71.6)		
Input rated voltage	V	230 1~		
Input rated frequency	Hz	50		
Input rated current	A	14,8		
Nominal input power	kVA	3,4		
Rated output voltage	V	42 3~		
Rated output frequency	Hz	200		
Rated output current	A	52		
Rated output power	kVA/kW	3,7/3,0		
Class rating *		I		
Protection class **		IP 44		
Mains cable		2,5 m with shock-proof connector		
Number of plug receptacles		2 x 32 A/42 V		4 x 32 A/ 42 V
Sound pressure level $L_{pA}$ at operator's station ***	dB(A)	70		

\* According to DIN EN 61140.

\*\* According to DIN EN 60529.

\*\*\* According to DIN EN ISO 11201.

14.4 KTU 2

Designation	Unit	KTU 2/042/200W	KTU 2/250/200W
Item no.		0008884	0610013
Length x Width x Height	mm (in)	387 x 395 x 446 (15.2 x 15.5 x 17.5)	
Weight	kg (lb)	33,2 (73.1)	
Input rated voltage	V	230 1~	
Input rated frequency	Hz	50	
Input rated current	A	13	
Nominal input power	kVA	3	
Rated output voltage	V	42 3~	250 3~
Rated output frequency	Hz	200	
Rated output current	A	35	6,0
Rated output power	kVA	2,6	
Class rating *		I	
Protection class **		IP 44	
Mains cable		25 m with shock-proof connector	
Number of plug receptacles		2 x 32 A/42 V	2 x 16 A/250 V
Sound pressure level $L_{pA}$ at operator's station ***	dB(A)	< 70	

\* According to DIN EN 61140.

\*\* According to DIN EN 60529.

\*\*\* According to DIN EN ISO 11201.

## 14.5 Extension cable



### WARNING

Electrical voltage.

Injuries from electrocution.

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

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

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

Machine	Voltage [V]	Extension [m]	Cross-section area of cable [mm <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	220-240 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



**Extension cable for the US market:**

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	220-240 1~	-	16
		≤ 184	14
		≤ 290	12
KTU 2/042/200W KTU 2/250/200W	230 1~	≤ 66	16
		≤ 105	14
		≤ 165	12

**Example**

You utilize a FUE 1/120/200W and want to use an extension cable with a length of 62 m (24 ft).

The machine has an input voltage of 230 V.

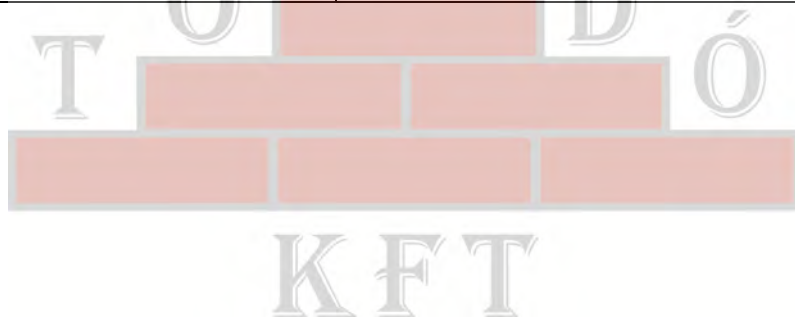
According to the table, the extension cable must feature a cross-section area of 4,0 mm<sup>2</sup> (AWG 16).

## 15 Glossary

### Class rating

The class rating according to DIN EN 61140 specifies the safety measures for electrical equipment to avoid electrocution. There are four class ratings:

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



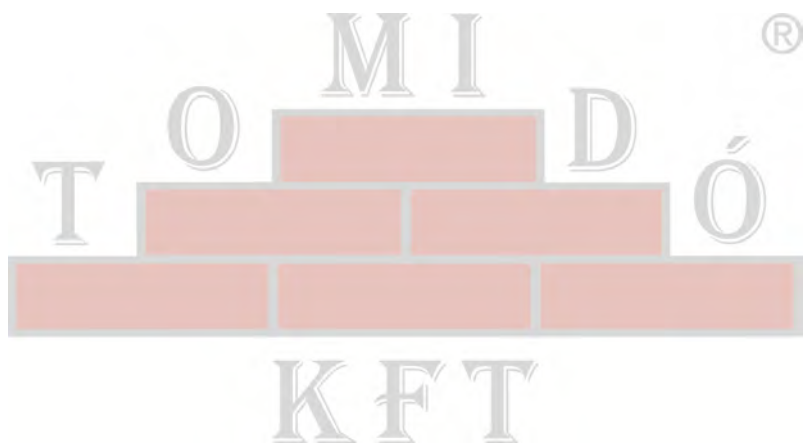
### Protection class IP

The protection class according to DIN EN 60529 indicates the suitability of electrical equipment for use in certain ambient conditions as well as the protection against risks.

The protection class is specified by an IP code according to DIN EN 60529.

Code	Meaning 1st number: Protection against touching hazardous parts. Protection against permeating foreign objects.
0	Not protected against contact. Not protected against foreign bodies.
1	Protected against contact with the back of the hand. Protected against large foreign objects with diameter > 50 mm (1.9 in).
2	Protected against contact with one finger. Protected against medium-sized foreign objects (diameter > 12.5 mm (0.5 in)).
3	Protected against touch with a tool (diameter > 2.5 mm (0.01 in)). Protected against small foreign objects with (diameter > 2.5 mm (0.01 in)).
4	Protected against touch with a wire (diameter > 1 mm (0.03 in)). Protected against granular foreign objects (diameter > 1 mm (0.03 in)).
5	Protected against contact. Protected against dust depositing inside.
6	Completely protected against any contact. Protected from dust.

Code	Meaning 2nd number: Protection against permeating water
0	Not protected against permeating water.
1	Protected against water dropping vertically.
2	Protected against diagonally falling water (15° angle).
3	Protected against spray (60° angle).
4	Protected against spraying water from all directions.
5	Protected against water jets (nozzle) from any angle.
6	Protected against strong water jets (overflow).
7	Protected from temporary immersion in water.
8	Protected from ongoing immersion in water.





## EC Declaration of Conformity

### Manufacturer

Wacker Neuson SE  
Preußenstraße 41, 80809 München

### Product

Type	FUE	KTU
Product type	Inverter	
Item no.	0008902, 0008934, 0610011, 0610023, 0610176, 0610084, 0610405	0008884, 0610013

### Guidelines and standards

This is to certify that this product meets and complies with the relevant regulations and requirements of the following guidelines and standards:

2006/95/EC, EN 61558-1, EN 61558-2-23, 2004/108/EC, EN 61000

Munich, 18.06.2010

Franz Beierlein  
Head of product management

Dr. Michael Fischer  
Head of Research and Development

