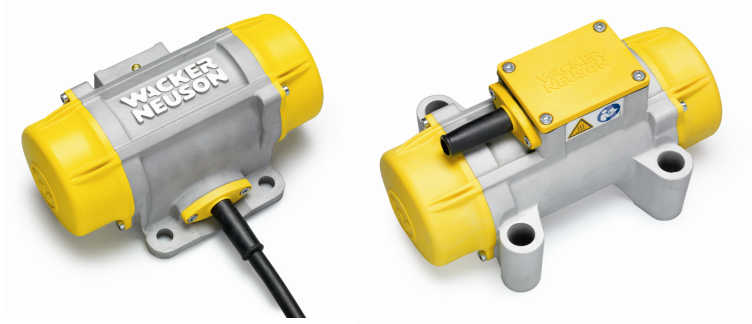
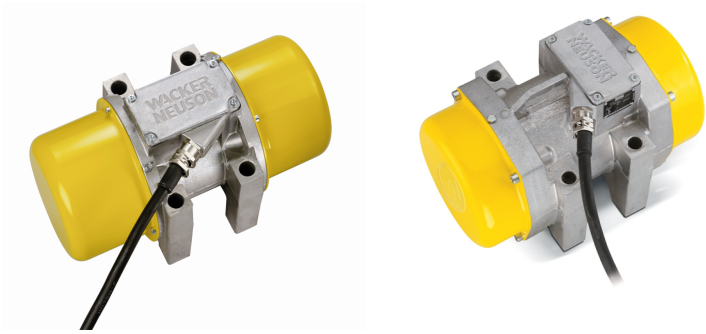
Operator’s manual

External vibrator

AR, ARFU





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Translation of the original operator's manual in German

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.

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 Use of the manual

This manual is considered as part of the machine and must be kept in a safe place throughout the entire lifecycle. This manual must be handed over to every subsequent owner or user of the machine.

2.2 Storing the manual

This manual is part of the machine and must be stored in the immediate vicinity of the machine and be available to staff at all times.

In the case of loss or if a second copy of this manual is required, there are two options for obtaining a replacement:

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

2.3 Accident prevention regulations

Local accident prevention regulations and national occupational safety provisions apply in addition to the notes and safety information contained in this manual.

2.4 Further information

This manual is valid for different machine types from a product range. As such, some illustrations may differ from the appearance of your machine. Variant-dependent components may also be described that are not included in the delivery.

The information contained in this manual is based on machines which have been manufactured at the time of printing. Wacker Neuson reserves the right to amend this information without notification.

It must be ensured that any potential amendments or supplements from the manufacturer are included immediately in this manual.

2.5 Target group

Note: Persons working with this machine must receive regular training about the risks and hazards of this machine.

This operator's manual is aimed at the following persons:

Operatives:

These persons are introduced to the machine and informed about potential hazards arising from improper behavior.

Specialist staff:

These persons have specialist training, as well as additional knowledge and experience. They are able to assess the tasks entrusted to them and recognize potential risks and hazards.

2.6 Symbol explanation

This manual contains prominent safety information relating to category types: **DANGER, WARNING, CAUTION** and **NOTE.**

Before commencing any work on or with this machine, notes and safety information must be read and understood. All notes and safety information contained in this manual must also be shared with maintenance, repair, and transport staff.

DANGER
This combination of symbol and signal word indicates a hazardous situation, which, if ignored, will lead to death or serious injuries.

WARNING
This combination of symbol and signal word indicates a hazardous situation, which, if ignored, may lead to death or serious injuries.

CAUTION
This combination of symbol and signal word indicates a potentially hazardous situation, which, if ignored, may lead to minor injuries and damage to the machine.

Notes

Note: Further information.

2.7 Wacker Neuson representative

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

On the Internet at www.wackerneuson.com.

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

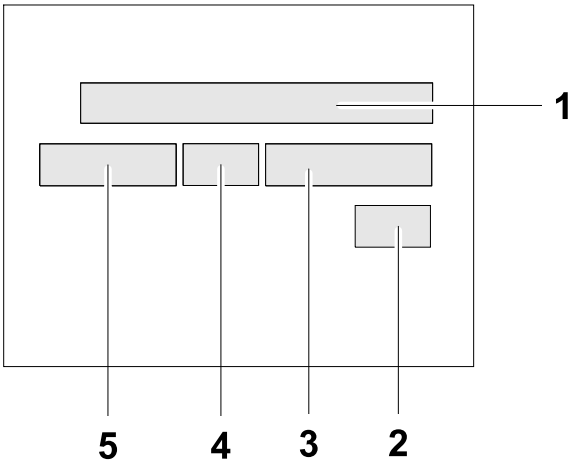
2.8 Limitation of liability

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

- Failure to comply with this manual.
- Improper use.
- Use of untrained staff.
- Use of non-authorized spare parts and accessories.
- Improper handling.
- Any type of structural alteration.
- Non-compliance with with the General Terms and Conditions of Business (T&C).

2.9 Identification of the machine

Nameplate data



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

▶ Enter details on the machine in 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

NOTE
Notes and safety information in this chapter apply to all machine types described in this manual.

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. However, improper use can pose a risk to life and limb of the user and/or third parties, or cause damage to the machine and other equipment.

3.2 Proper use

This machine, depending on its type, can be used only for the excitation of all types of molds and formworks, vibratory tables, vibratory stands, compaction of fresh concrete and for mounting on conveyor belts (silo).

Other special applications must be checked and released by Wacker Neuson.

Proper use also includes the observance of all notes and safety information contained in this manual, as well as complying with the prescribed 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.

Misuse particularly applies to:

- Immersing the machine in fresh concrete.
- Using the machine and the components of this machine as climbing aids.
- Failure to observe instructions for vibratory tables, frequency converters, etc.

3.3 Structural modifications

Structural modifications must not be undertaken without the written consent of the manufacturer. Structural changes without the consent of the manufacturer can pose a risk to users and/or third parties, and also damage the machine.

The manufacturer's liability and warranty will also cease in the event of unauthorized structural modifications.

Especially the following are cases of structural modifications:

- Opening the machine and the permanent removal of components.
- Installing components that do not originate from Wacker Neuson and are not equivalent in terms of design and quality to the original components.
- The addition of any type of accessory that does not originate from Wacker Neuson.

3.4 Operator responsibility

The operator is the person who operates this machine for commercial or economic purposes, or who hands it over for use/application by a third party, and who bears legal product responsibility during operation for the protection of staff or third parties.

The operating company must make the manual available to staff at any time and ensure that operatives have read and understood the manual.

3.5 Operating company responsibilities

- Know and implement applicable occupational safety provisions.
- Investigate dangers in a risk assessment based on working conditions at the site.
- Produce operating instructions for this machine.
- Regularly check that the operating instructions are up-to-date with the latest guidelines.
- Clearly regulate and specify responsibilities for installation, use, troubleshooting, maintenance and cleaning.
- Train staff at regular intervals and inform them about potential hazards.
- Provide staff with the required protective gear.

3.6 Personnel qualification

This machine may only be operated and used by trained staff.

Incorrect application, misuse or use by untrained staff threaten the health of the users and/or third parties and risk damaging the machine or causing a failure.

The following requirements also apply to the user:

- Physically and mentally fit.
- Reactions not impeded by drugs, alcohol or medication.
- Familiarity with the safety information in this manual.
- Familiarity with correct operation of this machine.
- The minimum age to use the machine has been reached.
- Instructed in how to operate the machine independently.

3.7 General sources of danger

The following section lists dangers based on the risk assessment. Residual risks are particular risks associated with handling machinery which, despite compliance with the standards of safe construction, cannot be eliminated.

Residual risks are not obviously recognizable and can be the source of a potential injury or risk to health.

If unforeseeable residual risks occur, the machine must be switched off immediately and the competent manager informed. The manager will make further decisions and do everything necessary to eliminate the risk.

The manufacturer of the machine must be informed if necessary.

DANGER
Risk of fatal injury from electrical voltage!
There is an immediate danger to life from touching live parts. Damaged insulation or individual parts can be dangerous to life.
Therefore:
- ▶ If the insulation is damaged, immediately disconnect the power supply and arrange repair work.
- ▶ Only allow qualified electricians to perform work on the electrical system.
- ▶ The electrical system must be disconnected from the mains power and tested to ensure no voltage.
- ▶ The power supply must be switched off before maintenance, cleaning and repair work and fused before being switched on again.
- ▶ Do not bypass fuses or decommission. Use the correct number of amps when changing fuses.
- ▶ Protect live parts from wet conditions. Danger due to short circuit.

WARNING
Noise-induced hearing damage!
Noise in the area where work is performed can cause serious hearing damage.
Therefore:
- ▶ Suitable ear protection must be worn during all work that generates noise.
- ▶ Only remain in the danger zone for as long as is necessary.

WARNING
Heat-induced risk of burning!
The machine can become extremely hot during long use and cause burns on contact with skin.
Therefore:
- ▶ Allow the machine to cool down after use.
- ▶ If the cooling down stage cannot be complied with (e.g. in an emergency), always wear heat-resistant gloves.

3.8 General safety information

The safety information in this chapter contain the "General Safety Information", which must be listed in the manual in accordance with applicable standards. Information may be included that does not apply to this machine.

NOTE
All notes and safety information in this manual must be read and complied with. Failure to comply with these instructions can result in electric shock, fire and/or serious injuries, damage to the machine, and/or damage to other objects. Keep safety information and notes for future reference.

3.8.1 Safety in the workplace

- Keep work space tidy. Untidy or unlit work spaces can lead to accidents.
- Working with this machine in an explosive environment is forbidden. Electrical tools produce sparks, which can ignite dust or vapor.
- Keep children and other persons away from work performed on this machine. Distraction while using the machine can cause loss of control.
- Working with this machine among dry vegetation is forbidden. Danger of fire!
- Always secure the machine against tipping over, rolling, sliding, and falling. Danger of injury!

3.8.2 Service

- Machine must only be repaired or maintained by qualified specialist staff.
- Only use original replacement parts and accessories. This ensures that the operational safety of the machine is maintained.

3.8.3 Safety of people

- Working under the influence of drugs, alcohol or medication can lead to serious injuries.
- Suitable protective gear must be worn for all work. Suitable protective gear significantly minimizes the risk of injury.
- Ensure that the machine is switched off before connecting to a power source. Unintended setup can lead to serious injuries.
- Remove tools before starting up the machine. A tool left on a moving part could be hurled out and lead to serious injuries.
- Always ensure your position is safe.
- Wear suitable clothing. Keep loose or baggy clothing, gloves, jewelry, and long hair away from moving or rotating parts. Risk of entanglement!

3.8.4 Handling and use

- Do not exceed the operating limits of the machine or allow it to operate for longer periods. Risk of damage to the machine.
- Never start up machines with defective switches. Replace defective switches immediately. Machines with defective switches conceal a high risk of injury.
- Avoid unintended machine startup. Remove plug from plug receptacle before making adjustments to the machine settings. Unintended startup can lead to serious injuries.
- Keep unused machines out of reach of children. Machine may only be used by trained staff.
- Handle machine with care. Replace defective parts immediately before starting up this machine. Defective machines conceal a high accident risk.
- Use the machine, accessories, tools, etc., in accordance with these instructions.

3.9 Electrical safety

The safety information in this chapter contain the "General Safety Informations", which must be listed in the manual in accordance with applicable standards. Information may be included that does not apply to this machine.

NOTE
All notes and safety information in this manual must be read and complied with. Failure to comply with these instructions can result in electric shock, fire and/or serious injuries, damage to the machine, and/or damage to other objects. Keep safety information and notes for future reference.

NOTE
The rated voltage is located on the nameplate of this machine.
Observe relevant national safety regulations!

- Machine connector plug must fit plug receptacle. Connector plug must not be altered in any way. Do not use adapter plugs with grounded machines. Unaltered plugs and plug receptacles minimize the risk of electric shock.
- Avoid body contact with grounded surfaces. There is an increased risk of electric shock if the body is grounded.
- Keep machine away from wet conditions. Penetrating moisture increases the risk of electric shock.
- Do not use cables other than for their intended purpose. Protect cables from heat, oil, and sharp objects. Damaged or tangled cables increase the risk of electric shock.
- When working outdoors, only use cables suitable for outdoor spaces. Using a cable for outdoor spaces minimizes the risk of electric shock.
- A fault current protective switch must be used if working in a damp environment cannot be avoided. Fault current protective switches minimize the risk of electric shock.
- Safety devices, switches, or easily damaged parts must be checked to ensure that they are functioning perfectly and according to regulations before this machine is used. Defective safety devices conceal a high risk of injury and must be replaced immediately by specialist staff.

3.9.1 Electric power supply for electrical appliances of protection class I+III

This machine must be in perfect condition before it is connected to an electric power supply. The following parts must be particularly checked for damage before use.

- Plug.
- Entire length of power cable.
- Power cable.

One of the following safety devices must be present when connecting to local or mobile power generators:

- Transformer with safe separation.
- Motor generator with equally separated windings.

3.9.2 Extension cable and cable drum

Compliance with the following points is required to minimize the risk of injury, fire, electric shock, and material damage:

- Extension cables and cable drums must be checked and undamaged.
- Only use extension cables with grounded conductor and grounded conductor connection on plug and coupling.
- Only use extension cables and cable drums that are tested and suitable for use on the construction site.
- Damaged extension cables and cable drums must not be used and must be replaced immediately.
- Cable drums and multiple plug sockets must display the same requirements as extension cables.
- Protect extension cables, cable drums, multiple plug sockets and connection couplings from wet conditions.
- Extension cables and cable drums must be fully unwound before startup.

3.10 Specific safety information – external vibrators

NOTE
All notes and safety information in this manual must be read and complied with. Failure to comply with these instructions can result in electric shock, fire and/or serious injuries, damage to the machine, and/or damage to other objects. Keep safety information and notes for future reference.

3.10.1 Operating safety

- Only use this machine for the specified applications.
- Never leave machine running unattended – **Risk of injury!**
- Use a wide area to separate off work space and keep out unauthorized persons – **Risk of injury!**
- Users of this machine must ensure that persons who have to remain in the work space keep to a minimum distance of 15 meters from the machine while in operation.
- Personal protective gear must be worn during all work on and with this machine.
- If the machine is not used, it must be put away.
- Store machine accordingly.

3.11 Safety when using formworks

NOTE
All notes and safety information in this manual must be read and complied with. Failure to comply with these instructions can result in electric shock, fire and/or serious injuries, damage to the machine, and/or damage to other objects. Keep safety information and notes for future reference.

3.11.1 Use stable formwork

Only use stable molds and formworks to attach the external vibrator.

Molds and formworks which have not been properly hardened or which are too loosely connected can overload the machine or be damaged themselves.

Ensure that the formwork is suitable for attaching external vibrators.

The following points must be observed:

- Sufficient possibilities for attaching.
- Formwork sufficiently stable for attaching the variant of external vibrator used (depending on performance of the external vibrator).

3.11.2 Formwork and safety belt

If an external vibrator is used in conjunction with fastening clamps, the fastening clamp must always be attached with a safety belt (Wacker Neuson accessory) to the formwork – **Risk of falling!**

The following points must be observed:

- Securely attach the safety belt to the formwork above the external vibrator.
- Safety belt must be attached so that it is taut.

3.12 Personal protective gear

NOTE
To avoid injuries wherever possible while handling the machine, personal protective gear must be worn when working on or with this machine.

Pictogram	Meaning	Description
	Use ear protection!	Protects against permanent hearing damage.
	Wear a hard hat!	Hard hats protect against head injuries from falling parts.
	Wear safety shoes!	Safety shoes shoes protect feet from being crushed, from falling parts, and from sliding on slippery floors.
	Wear protective gloves!	Protective gloves protect hands against abrasions, puncture wounds, and contact with hot surfaces.

3.13 Safety devices

Safety devices protect the user of a product from exposure to existing risks. These safety devices are barriers (protective guards) or other technical measures. These prevent the user being exposed to a risk, or, in certain situations, eliminate or reduce the source of risk.

WARNING
Risk of injury due to missing or non-operational safety devices.
- ▶ Only operate the machine with properly installed and functioning safety devices.
- ▶ Do not modify or remove safety devices.

NOTE
Always operate this machine with a protective motor switch!

3.14 Safeguarding against switching back on

DANGER
Danger to life from unauthorized or uncontrolled switching back on. Unauthorized or uncontrolled switching back on can lead to serious injuries or death.
- ▶ Switch off machine at the ON/OFF switch.
- ▶ Disconnect machine from the electric power supply.
- ▶ Before switching back on, ensure that all safety devices are mounted and functional.

Compliance with the following steps is required to ensure that the machine is safeguarded against unauthorized or uncontrolled switching on:

1. Switch off machine at ON/OFF switch (if there is one).
2. Switch off power or fuel supply.
3. Remove plug from power generator.

3.15 How to act in dangerous situations

Preventive measures:

- Always be prepared for accidents.
- Keep first aid kit (first aid box, blankets, etc.) within easy reach.
- Familiarize staff with accident reporting, first aid, and rescue facilities.
- Keep access roads clear for the emergency services.
- Train staff in first aid.

What to do in an emergency:

- Immediately switch off the machine (e.g. remove mains plug from plug receptacle).
- Get the injured and any other people away from the danger zone.
- Commence first aid.
- Call doctor and/or fire department.
- Clear access roads for the emergency services.
- Inform managers at the site.

4 Safety and information labels

WARNING
Illegible symbols.
Over time stickers and signs on the machine can become dirty or otherwise unclear.

- ▶ Ensure that all safety and warning notices and operating instructions on the machine are in a legible condition.
- ▶ Replace damaged stickers and signs immediately.

The following stickers are located on the machine:

Label	Description
	Warning of hot surface. Read the operator's manual before start-up.
US machine 	Caution.
	■ Warning! Risk of electrocution. ■ Do not open housing. ■ Read the operator's manual.
US machines 	Warning

5 Scope of delivery

Item	Description	Quantity
1	External vibrator	1
2	Operator's manual	1
3	Parts book	1

6 Structure and function

6.1 Field of application

External vibrators are generally used when space for using an internal vibrator is restricted. External vibrators are also suitable for attaching to all types of vibratory tables and vibratory stands.

Specific variants of this machine can even be mounted on conveyor belts (e.g. on silos).

6.2 Brief description

The external vibrator is a construction machine for concrete processing which deals with the compaction of liquid concrete. For this purpose, the external vibrator is firmly attached to a formwork and transfers vibrations from there into the concrete.

Inside the external vibrator is an electric motor, which helps drive an eccentric weight. Different centrifugal forces can be set by adjusting the balance of the eccentric weights or the number of eccentric discs.

Concrete has to be compacted to eliminate the air inclusions in fresh concrete. This is how concrete gets its solidity.

The eccentric discs must be symmetrically mounted to avoid damage to formworks.

Bodyguard ®

The Bodyguard ® connects the power supply with the inverter and monitors the incoming and outgoing operating currents. The Bodyguard ® is designed to protect the operator.

If the machine is correctly connected and if there are no dangerous leakage currents, the status LED lights green.

If there is a leakage current within the machine, the status LED lights red. In this case the electric power supply from the mains is interrupted and the inverter is inhibited. The machine does not work.

Note: The machine works only in combination with the Bodyguard ®.

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.

6.3 Variants

Several variants were specified in the technical data for the machine types:

w

Alternating current

cs

Cable switch

3,5kN

Max. centrifugal force set

v

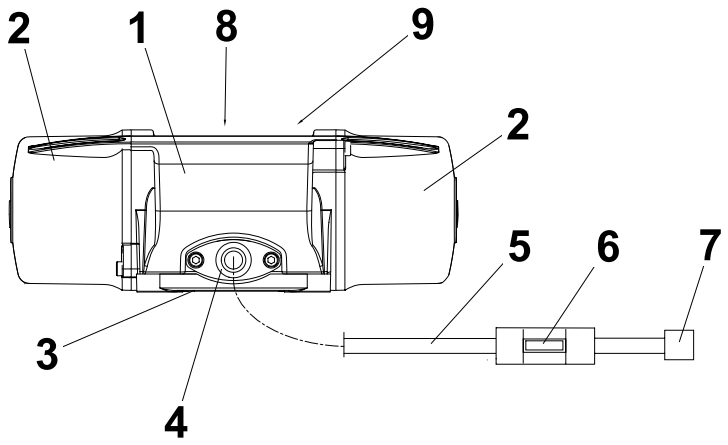
Variably adjustable voltage from … through

7 Components and operator's controls

Keep the indicators and operating elements of the machine clean, dry and free from oil and grease at all times.

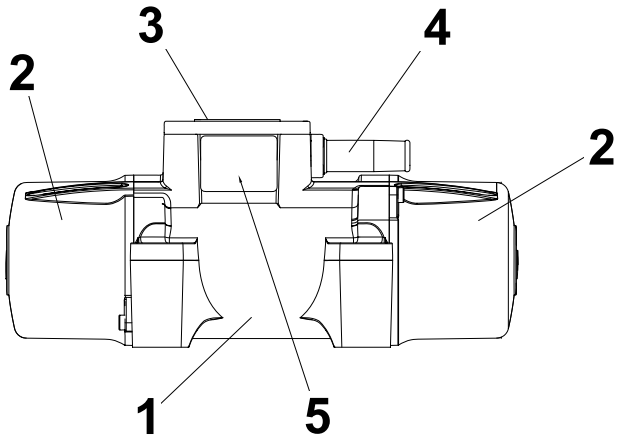
Operating elements such as ON/OFF switch, etc., must not be locked, manipulated, or changed without authorization.

7.1 AR 2



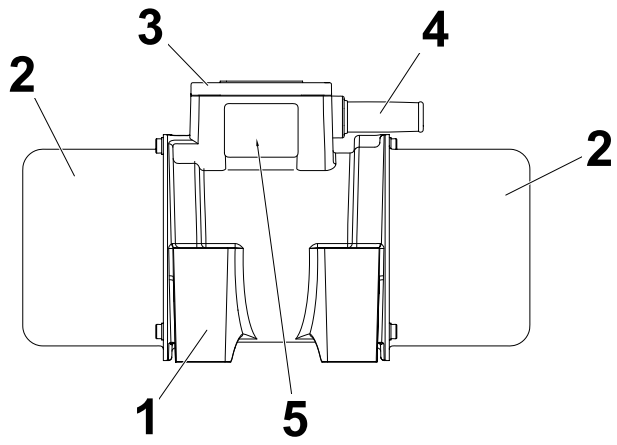
Item	Description	Quantity	AR 26
1	Motor case.	1	■
2	Hood.	2	■
3	Terminal box.	1	■
4	Cable gland.	1	■
5	Power cable (optional).	1	■
6	ON/OFF switch (optional).	1	■
7	Plug (optional).	1	■
8	Control lamp (optional).	1	■
9	Nameplate.	1	■

7.2 AR 3



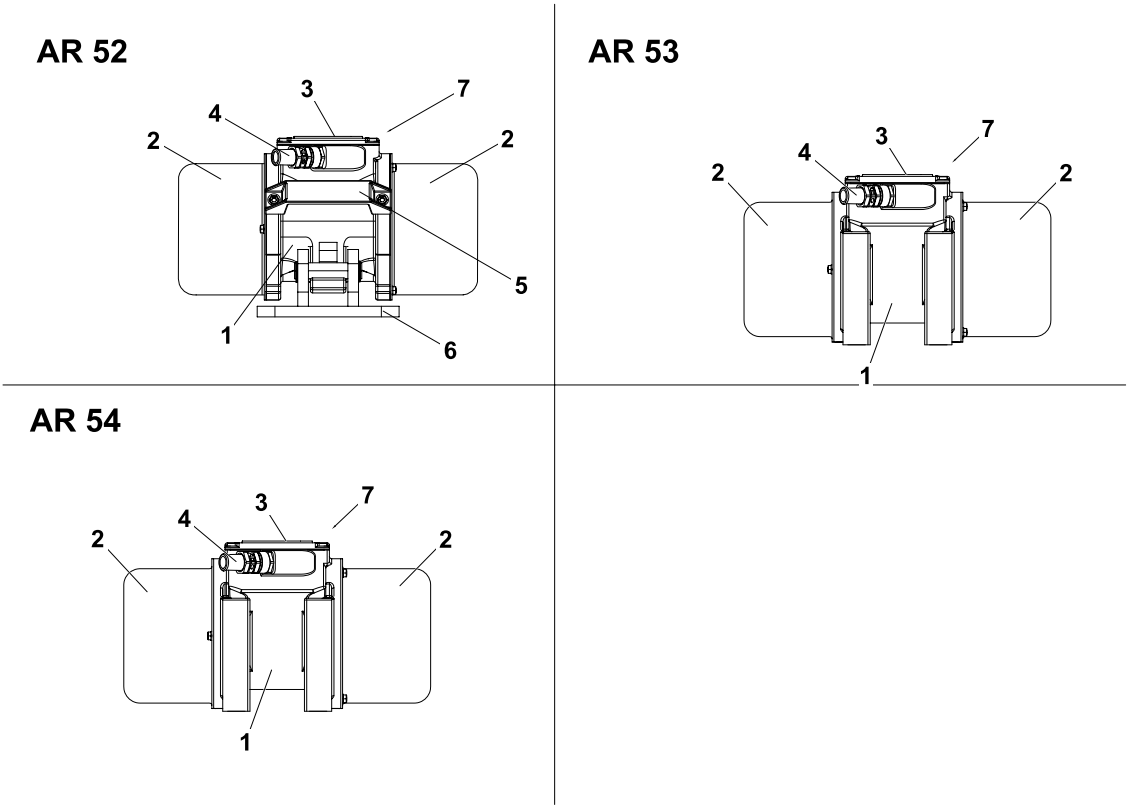
Item	Description	Quantity	AR 34
1	Motor case.	1	■
2	Hood.	2	■
3	Terminal box.	1	■
4	Cable gland.	1	■
5	Nameplate.	1	■

7.3 AR 4



Item	Description	Quantity	AR 43
1	Motor case.	1	■
2	Hood.	2	■
3	Terminal box.	1	■
4	Cable gland.	1	■
5	Nameplate.	1	■

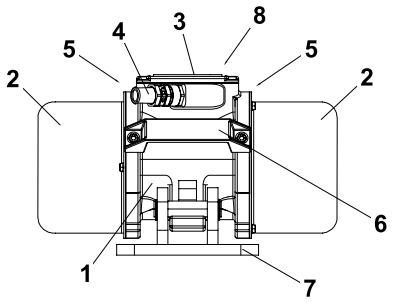
7.4 AR 5



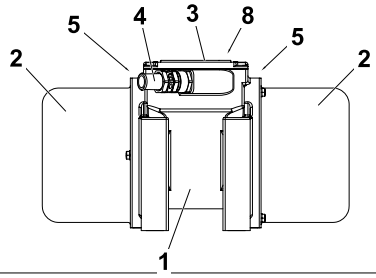
Item	Description	Quantity	AR 52	AR 53	AR 54
1	Motor case.	1	■	■	■
2	Hood.	2	■	■	■
3	Terminal box.	1	■	■	■
4	Cable gland.	1	■	■	■
5	Handle.	1	■		
6	Screwed-on saddle clamp.	1	■		
7	Nameplate.	1	■	■	■

7.5 AR 6

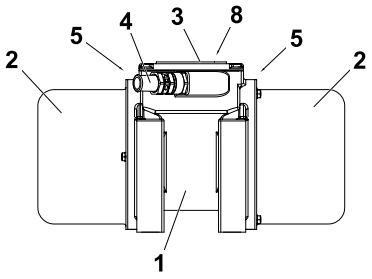
AR 62



AR 63

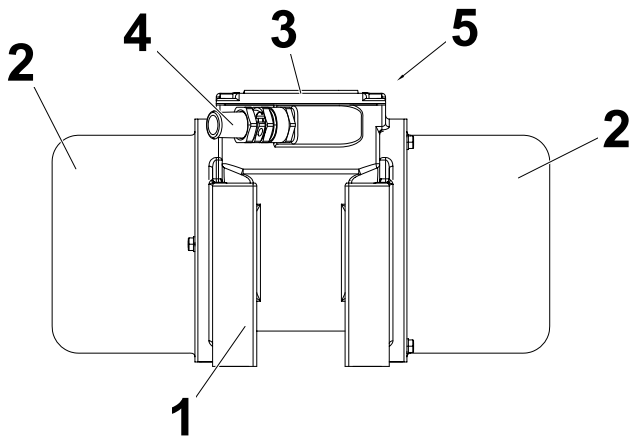


AR 64



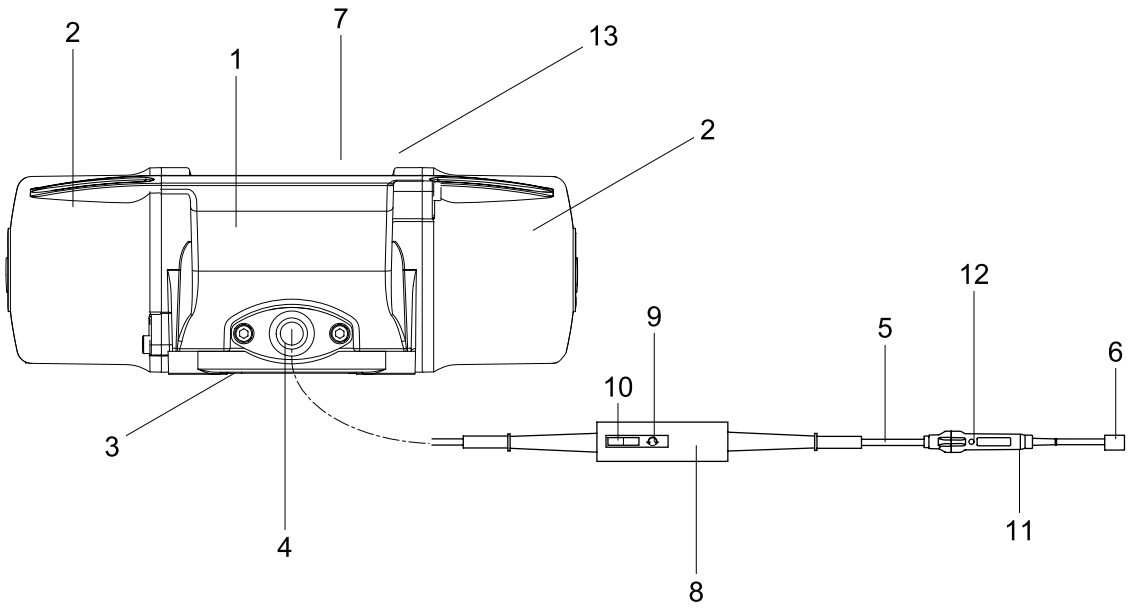
Item	Description	Quantity	AR 62	AR 63	AR 64
1	Motor case.	1	■	■	■
2	Hood.	2	■	■	■
3	Terminal box.	1	■	■	■
4	Cable gland.	1	■	■	■
5	Tapered zerk fitting.	2	■	■	■
6	Handle.	1	■		
7	Screwed-on saddle clamp.	1	■		
8	Nameplate.	1	■	■	■

7.6 AR 7



Item	Description	Quantity	AR 75
1	Motor case.	1	■
2	Hood.	2	■
3	Terminal box.	1	■
4	Cable gland.	1	■
5	Nameplate.	1	■

7.7 ARFU 2



Item	Description	Quantity	ARFU 2
1	Motor case.	1	■
2	Hood.	2	■
3	Terminal box.	1	■
4	Cable gland.	1	■
5	Power cable.	1	■
6	Plug.	1	■
7	Control lamp (optional).	1	■
8	Inverter.	1	■
9	Control lamp.	1	■
10	ON/OFF switch.	1	■
11	Bodyguard ®.	1	■
12	Control lamp.	1	■
13	Nameplate.	1	■

8 Transport and storage

8.1 Safety

WARNING
Incorrect transport
Risk of injury and damage to the machine from incorrect transport.
- ▶ Perform all steps in accordance with the specifications of this manual.
- ▶ Observe notes when transporting machine.
- ▶ Use personal protective gear.

8.2 Transport preparation

Compliance with the following steps is required before the machine is transported:

1. Switch off machine at the ON/OFF switch.
   NOTE: If the machine does not have an ON/OFF switch, it can be switched off using the inverter ON/OFF switch.
2. Wait until the machine has come to a complete standstill.
3. Disconnect the machine from the electric power supply.
4. Let the machine cool off. **Risk of burns!**
5. Unscrew machine from formwork or undo from fastening clamp.

8.3 Transporting the machine

Compliance with the following points is required wherever possible to avoid serious injuries or damage to the machine:

- Place machine in a suitable container for transport (e.g. wire mesh collapsible).
- Wind up power cable – do not bend power cable.
- Secure machine against falling, tipping, and rolling away.
- Do not use leads, cables, or safety belts as transport handles.
- Do not use leads, cables, or safety belts to secure for transport.
- Do not lift machine directly with a crane – use suitable container for transport (e.g. wire mesh collapsible).

8.4 Storage

The following points must be observed to avoid possible damage to the machine:

- Do not store outside.
- Store in a dry and dust-free place.
- Do not expose to aggressive substances.
- Avoid mechanical vibrations.
- Oil the places that are prone to rust.

9 Installation

9.1 Safety

DANGER
Danger to life from incorrect installation and initial operation. Installation and initial operation must only be carried out by a Wacker Neuson service engineer or qualified electrician.

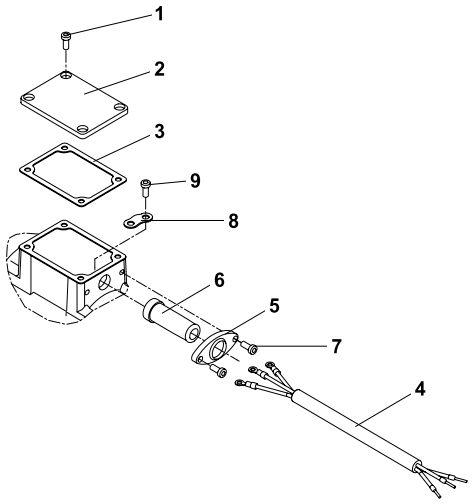
- ▶ Errors made during installation and initial operation can lead to fatal situations and cause significant material damage.
- ▶ Complete installation followed by safety check according to applicable guidelines only.

9.2 Before installation

Compliance with the following steps is required before the cable is installed.

1. Ensure that any loose packaging has been removed from the machine.
2. Inspect the machine and its components for damage. Do not operate the machine if there is obvious damage. Immediately contact your Wacker Neuson representative for advice.
3. Check that all parts belonging to the machine (according to the delivery) have been delivered.
4. Attach components that have not yet been fitted.
5. Have suitable tools to hand.

9.2.1 AR 2, 3, 4 Installation – power cable

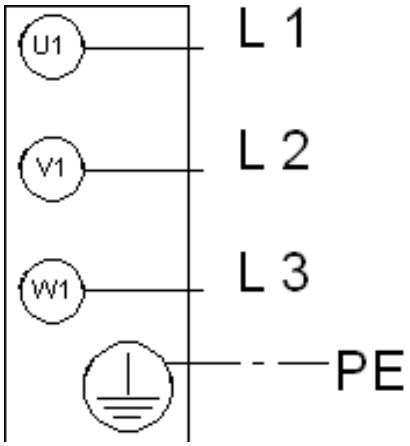


Item	Designation	Quantity
1	Screws	4
2	Cover	1
3	Seal	1
4	Power cable	1
5	Cable gland	1
6	Cable support sleeve	1
7	Screws	2
8	Clamp	1
9	Screws	2

Compliance with the following steps is required when installing the power cable:

Step	Task	Note
1	Unscrew the screws from the terminal box.	
2	Remove cap and seal.	
3	Guide the power cable through the cable gland, cable support sleeve, and terminal box hole.	
4	Secure the power cable in the terminal box with the clamp and screws.	Torque 2,6 Nm
5	Screw the cable gland to the terminal box with screws.	Torque 2,6 Nm

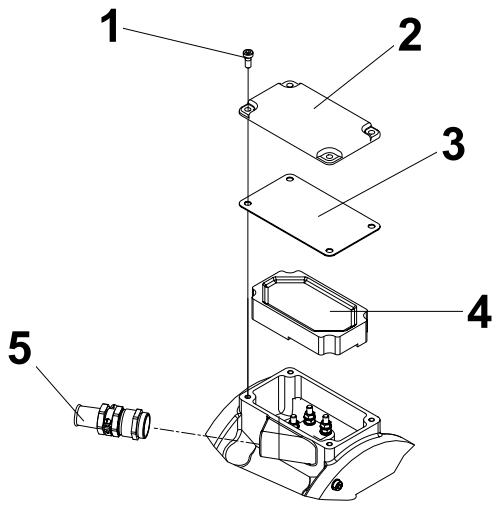
Installation – cable to terminal board box



Compliance with the following steps is required when installing the cable to the terminal board box:

Step	Task	Notes
1	Connect power cable as shown in wiring diagram.	When attaching two external vibrators, ensure that they rotate in opposite directions.
2	Fit grounded conductor (only for machines of protection class rating I)	
3	Fastening the seal and lid.	Seal must sit correctly.
4	Terminal board box must be dust-free and dry when sealed. Tighten the screws on the lid of the terminal board box.	The screws are glued in and tightened with 3.5 Nm.

9.2.2 AR 5, 6, 7 Installation – power cable

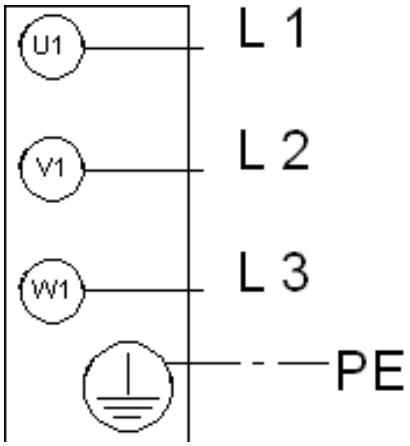


Item	Designation	Quantity
1	Screws	4
2	Cover	1
3	Seal	1
4	Molded rubber part	1
5	Cable gland	1

Compliance with the following steps is required when installing the power cable:

Step	Task	Note
1	Unscrew the screws from the terminal box.	
2	Remove the cover, seal, and molded rubber part.	
3	Guide the power cable through the cable gland, cable support sleeve, and terminal box hole.	Torque 7.5 Nm
4	Screw the cable gland to the terminal box.	Torque 3.0 Nm

Installation – cable to terminal board box



Compliance with the following steps is required when installing the cable to the terminal board box:

Step	Task	Notes
1	Connect power cable as shown in wiring diagram.	When attaching two external vibrators, ensure that they rotate in opposite directions.
2	Fit grounded conductor (only for machines of protection class rating I)	
3	Fastening the seal and lid.	Seal must sit correctly.
4	Terminal board box must be dust-free and dry when sealed. Tighten the screws on the lid of the terminal board box.	The screws are glued in and tightened with 3.0 Nm.

10 Use and operation

10.1 Safety

DANGER
Improper handling can lead to serious injuries or substantial material damage.
▶ Read and follow all safety information of this manual - see chapter "Safety".

DANGER
Danger of electrocution. Damage on a component part of the machine or power cable can lead to serious injuries or death from the electric current.
▶ Do not operate a damaged machine.
▶ Have a damaged machine repaired immediately.

10.2 Prior to starting the machine

10.2.1 Checks before startup

The following parts must be checked for damage before each start-up.

Description
Machine and components
Fastening clamp
Screws and fastening equipment
Power and extension cable
Safety belt

10.2.2 Checking the mains

Description
Check if mains or power distribution on the construction site have the correct operating voltage (see nameplate of the machine or chapter *Technical data*).
Check if mains or power distribution on the constructions site are protected in accordance with current standards and regulations.
Check whether the mains power is protected with a fault current protective switch (30 mA).
Check the connection values of this machine.

10.3 Fitting the machine

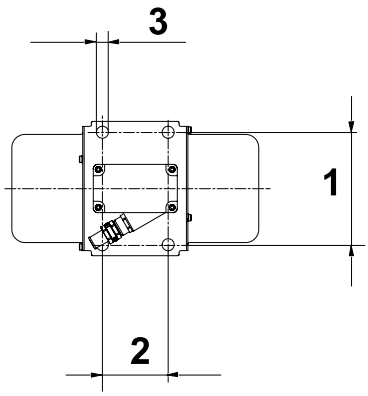
WARNING
Machine at risk of falling during operation.
Falling machine can cause serious injuries.
- ▶ Ensure that no persons are in the danger zone.
- ▶ Regularly check that machine is securely supported. Regularly check safety belt and fastening clamps.

NOTE
When fitting this machine to a formwork, all instructions and hazard warnings in this manual must be complied with. The "Assembly instructions – fastening clamp" must also be observed and the instructions and hazard warnings complied with.

10.3.1 Before fitting

Description
Ensure that any loose packaging has been removed from the machine.
Inspect the machine and its components for damage. If there is visible damage, do not operate machine but contact a Wacker Neuson representative immediately.
Check that all parts belonging to the machine (according to the delivery) have been delivered.
Check that you have the current local regulations relating to noise and light emissions. These regulations must be present when using this machine.

10.3.2 Hole pattern



Item	Machine types				
	AR 26	AR 34	AR 43	AR 52	AR 53
1	125 mm	120 mm	154 mm	120 mm	154 mm
2	90 mm	120 mm	90 mm	120 mm	90 mm
3	12 mm	18 mm	18 mm	17 mm	16,5 mm

Item	Machine types				
	AR 54	AR 62	AR 63	AR 64	AR 75
1	120 mm	120 mm	154 mm	120 mm	180 mm
2	120 mm	120 mm	90 mm	120 mm	95 mm
3	16,5 mm	17 mm	16,5 mm	16,5 mm	17 mm

10.3.3 Fastening material requirements

When mounting the machine on the base plate, only the following fastening material can be used:

NOTE
If only 1 external vibrator is used, both this and the fastening plate can be mounted on the formwork in any position.

1. Remove any dirt around the seating surface.
2. Screw on machine with all screws, washers and nuts.

Machine types	Fastening material	Strength class	Standard	Note
AR 2	Screw/Nut: M10	8.8 / 8	Screw: DIN EN ISO 4014, DIN EN ISO 4017, DIN EN ISO 4762, Nut: DIN EN ISO 4032 Washer: DIN EN ISO 7090	Torque 47 Nm
AR 3	Screw/Nut: M16			Torque 150 Nm
AR 4	Screw/Nut: M16			
AR 5	Screw/Nut: M16		Screw: DIN EN ISO 4014, DIN EN ISO 4017, DIN EN ISO 4762 Nut: DIN EN ISO 4032 Washer: DIN 7989	Torque 210 Nm
AR 6	Screw/Nut: M16			
AR 7	Screw/Nut: M16			

3. Attach the machine to the formwork.

10.4 Electrical connection

10.4.1 Connecting to a generator

CAUTION
Improper handling can cause damage.
- ▶ Unplug other electrical devices from the generator before switching on the machine.
- ▶ The remaining power output from the generator must not be exceeded for the connection of additional electrical devices.

Starting the generator

1. Unplug all plugs from the generator.
2. Start the generator - see the generator operator's manual.
3. Allow the generator to warm up for approx. 3 minutes.
4. Check that the ON/OFF switch on the machine is switched off.
5. On machines without an ON/OFF switch, check that the inverter is switched off.
6. Plug the power cable into a free plug receptacle of the generator.
7. Use an additional extension cable if necessary.

10.4.2 Connecting to mains power

1. Check that the ON/OFF switch on the machine is switched off.
2. On machines without an ON/OFF switch, check that the inverter is switched off.
3. Plug the power cable into a free plug receptacle on the generator.
4. Use an additional extension cable if necessary.

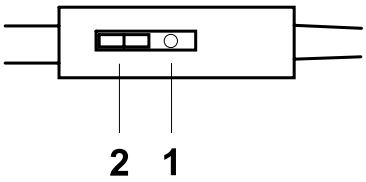
10.5 Switching on the machine

NOTE
15 - 20 minutes after switching on, switch off external vibrators and retighten all fastening screws with a torque wrench.

Before the installed machine is switched on with the ON/OFF switch, the following points must be observed and checked:

- ▶ Check that the machine is securely positioned in the fastening clamp/formwork.
- ▶ Check safety belt for firm seating.
- ▶ No persons must be in the immediate vicinity of the machine.
- ▶ The control lamp (if there is one) comes on when the machine is supplied with voltage.

ARFU



Item	Designation
1	Control lamp
2	ON/OFF switch

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

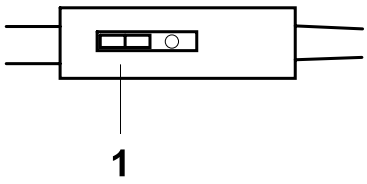
If the machine is ready for operation, the control lamp on the inverter lights green.

10.6 Switching off the machine

In the following situations, switch off the machine immediately using the ON/OFF switch and remove the plug from the plug receptacle:

- Before work breaks.
- If the machine is not being used.
- In a dangerous situation.

ARFU



Item	Designation
1	ON/OFF switch

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

10.7 Activities after use

The following points must be observed and complied with:

1. Switch off the machine with the ON/OFF switch. If the machine does not have an ON/OFF switch, switch off using the ON/OFF switch on the inverter.
2. Wait until the machine has come to a complete standstill.
3. Disconnect the machine from inverter/electric power supply.
4. Let the machine cool off.
5. Release the machine from the formwork.
6. Place the machine securely on firm, level ground.
7. Clean the machine.

11 Maintenance

11.1 Safety

WARNING
Improper handling can lead to serious injuries or material damage.
▶ Read and observe all safety information in this manual.

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.
▶ Remove the plug from the plug receptacle before all work on the machine.

The following instructions must be complied with:

- This machine must not be serviced, repaired, set or cleaned while it is switched on.
- Observe maintenance intervals.
- Safety devices must be reattached to the machine after each maintenance or repair. Missing safety devices can lead to serious injuries and cause total failure of the machine.
- Observe maintenance schedule. Missed maintenance work can lead to machine damage.
- Always replace worn or damaged parts immediately. Only use spare parts from Wacker Neuson.
- Keep the machine clean.
- Missing, damaged or illegible safety stickers must be replaced immediately. Safety stickers contain important information to protect the operator.
- Maintenance work must be performed in a clean and dry environment (e.g. workshop).

11.2 Maintenance personnel qualifications

Maintenance work described in this manual may be performed by any trained operator unless otherwise indicated.

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

11.3 Maintenance schedule

Task	Daily before operation	Every 20 hours of operation	Every 150 hours of operation	Notes
Visual inspection of all parts for damage.	■			
Check that power cable is in perfect condition – replace defective power cables immediately.	■			Defective power cables can only be replaced by a Wacker Neuson representative or a qualified electrician.
Check the tightness of all screws on the machine and fastening screws.		■		
Lubricate machine (cylindrical roller bearings).			■	
Clean the machine.	■			

11.4 Cleaning the machine

WARNING
Use of improper cleaning agents may lead to fire or explosion.
▶ Do not use gasoline or any other solvents to clean the machine.

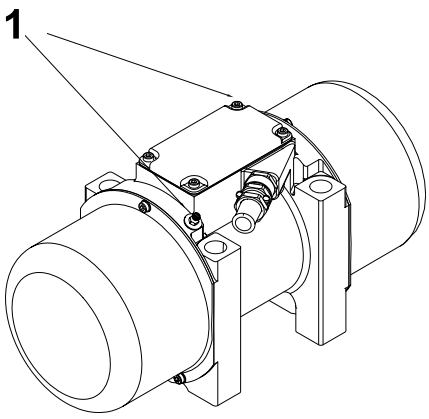
Wacker Neuson recommends cleaning the machine after each use for long, trouble-free running times.

The following points must be observed and complied with:

- Do not use high pressure washers for cleaning – danger from electric shock.
- Only use clean water for cleaning – wipe machine dry with a cloth.

11.5 Lubricate machine

WARNING
Excessive grease can conduct electricity.
Injuries from electrocution.
- ▶ Position the grease gun so that no excess grease is spread in the equipment.
- ▶ Wipe off excessive grease.



Item.	Designation
1	Tapered zerk fitting.

To achieve long, error-free running times for this machine, Wacker-Neuson recommends lubricating it periodically.

The following points must be observed and complied with:

1. Remove any dirt around the zerk fitting.
2. Place filled manual grease gun onto the zerk fitting and operate approx. 1-2 times.

- Wipe the area around the zerk fitting with a clean cloth.

12 Troubleshooting

12.1 Safety

DANGER
Danger to life from own attempts at troubleshooting.
▶ Contact the manufacturer if this machine has a malfunction not described in this manual. Do not attempt to rectify malfunctions yourself.

12.2 Table – malfunctions

The following chart shows malfunctions, their possible causes and remedies.

Malfunction	Possible causes	Remedy	Must be performed by a Wacker Neuson representative
Machine not running.	Power cable defective.	Replace power cable if defective.	■
	Bearing defective.	Repair machine.	■
Control lamp (optional) does not light up.	Power cable defective.	Replace power cable if defective.	■
	Control lamp defective.	Repair machine.	■
	Machine overheated – caused by bearing damage.	Repair machine.	■
	Fault in current source.	Check electric power supply – if malfunction not corrected, repair machine.	■

12.3 Bodyguard ®

Malfunction	Cause	Remedy
Control lamp lights red. The line voltage is applied.	■ The Bodyguard® has turned off the machine. ■ Machine malfunction.	1. Pull the plug from the plug receptacle. 2. Check power cable for damage – if damaged, have it replaced. * 3. Insert the plug into the plug receptacle. If the fault is not remedied, have the machine repaired. *
	■ Water in inverter. ■ Defect in the vibrator head.	Have the machine repaired. *
Control lamp does not light up.	No line voltage.	1. Pull the plug from the plug receptacle. 2. Check power cable for damage – if damaged, have it replaced. * 3. Insert the plug into the plug receptacle.
	Bodyguard® is defective.	Have the machine repaired. *
	Defect in the plug.	Have the machine repaired. *
	Defect in the Control lamp.	Have the machine repaired. *

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

12.4 Inverter

Malfunction	Cause	Remedy
Control lamp lights red.	■ Line voltage is interrupted. ■ Incorrect line voltage.	Inverter starts automatically as soon as the correct line voltage is available (again).
Control lamp flashes red.	Defect in the vibrator head.	Have the machine repaired. *
Control lamp flashes red twice.	Inverter has switched off due to excess temperature.	1. Allow the inverter to cool down. 2. Carry out a reset: Switch the machine off and on again.
Control lamp flashes red three times (for a short period).	The Bodyguard® has turned off the machine.	1. Pull out the plug. 2. Eliminate the fault or have it eliminated. * 3. Insert the plug.
	No Bodyguard® present.	Have the machine reset to its original condition. *

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

13 Disposal

13.1 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.

14 Accessories

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

For more information on the individual accessories, visit the following website: www.wackerneuson.com.

14.1 Fastening clamps

Only use accessories from Wacker Neuson.

Note: Observe the safety information in this operator's manual and the assembly instructions supplied with the fastening clamp.

CAUTION

Insufficient attachment of the external vibrators with fastening clamp and safety belt.

Injuries or damage to property by the external vibrator with fastening clamp falling off when starting up the system.

- ▶ Check the external vibrator and fastening clamp for damages.
- ▶ Always attach the safety belt to the formwork when using external vibrators with the fastening clamp to prevent falling.

15 Technical data

15.1 Performance data

15.1.1 AR 26

Designation	Unit	AR 26/3/230 w	AR 26/3/400	AR 26/3.6/230 US
Item no.		5100003938	5100003960	5100003961
Rated current	A	1.75	0.65	1.30
Rated voltage	V	230	400	230
Rated frequency	Hz	50	50	60
Rated output	kW	0.40	0.40	0.40
Phases	~	1	3	3
Centrifugal force	kN	2.61	2.70	2.56
Vibrations	rpm	3,000	3,000	3,600
	Hz	50	50	60
Centrifugal force max.	kN	2.93	3.04	3.44
Length	mm (in)	274 (10.8)	274 (10.8)	274 (10.8)
Width	mm (in)	190 (7.5)	190 (7.5)	190 (7.5)
Height	mm (in)	99 (3.9)	99 (3.9)	99 (3.9)
Weight	kg (lb)	7.02 (15.5)	6.20 (13.7)	5.54 (12.2)
Length of power cable	m (ft)	5 (16.4)	–	–
Cross section	mm^2 (in^2)	1.0 (0.0015)	–	–
Plug		–	–	–
Power cable		H 07 RN-F 3G1,0	–	–
Motor type		High-frequency cage motor		
Class rating		I	I	I
Protection class		IP65	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)

Designation	Unit	AR 26/3/230 w	AR 26/3/400	AR 26/3.6/230 US
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	64,0	64,0	64,0
Standard		DIN EN ISO 11201		
* Measured at distance of 1 m (3.2 ft).				

Designation	Unit	AR 26/6/042	AR 26/6/042 cs	AR 26/6/042 3.5kN	AR 26/6/250
Item no.		5100003120	5100003940	5100004048	5100003953
Rated current	A	8.00	8.00	8.00	1.35
Rated voltage	V	42	42	42	250
Rated frequency	Hz	200	200	200	200
Rated output	kW	0.30	0.30	0.30	0.30
Phases	~	3	3	3	3
Centrifugal force	kN	2.17	2.17	3.47	3.47
Vibrations	rpm	6,000	6,000	6,000	6,000
	Hz	100	100	100	100
Centrifugal force max.	kN	3.47	3.47	3.47	3.47
Length	mm (in)	223 (8.8)	223 (8.8)	223 (8.8)	223 (8.8)
Width	mm (in)	190 (7.5)	190 (7.5)	190 (7.5)	190 (7.5)
Height	mm (in)	99 (3.9)	99 (3.9)	99 (3.9)	99 (3.9)
Weight	kg (lb)	6.23 (13.7)	7.47 (16.5)	6.40 (14.1)	4.55 (10)
Length of power cable	m (ft)	10 (32.8)	10 (32.8)	10 (32.8)	–
Cross section	mm^2 (in^2)	1.5 (0.0023)	1.5 (0.0023)	1.5 (0.0023)	–
Plug		CEE-32A 3P 4H 42V	CEE-32A 3P 4H 42V	CEE-32A 3P 4H 42V	–
Power cable		H 07 RN-F 3x1,5	H 07 RN-F 3x1,5	H 07 RN-F 3x1,5	–
Motor type		High-frequency cage motor			
ON/OFF switch		–	■	–	–
Operation display		■	■	■	–
Class rating		III	III	III	I
Protection class		IP67	IP67	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)

Designation	Unit	AR 26/6/042	AR 26/6/042 cs	AR 26/6/042 3.5kN	AR 26/6/250
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	64,0	64,0	64,0	64,0
Standard		DIN EN ISO 11201			
* Measured at distance of 1 m (3.2 ft).					

15.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 26/3/230 w	230 1~	≤ 150 (492.1)	1.0
AR 26/3/400	400 3~	≤ 150 (492.1)	1.5
AR 26/3.6/230 US	230 3~	≤ 150 (492.1)	1.5
AR 26/6/042 AR 26/6/042 cs AR 26/6/042 3.5kN	042 3~	≤ 16 (52.5)	1.5
		≤ 26 (85.3)	2.5
		≤ 40 (131.2)	4
		≤ 58 (190.3)	6
AR 26/6/250	250 3~	≤ 150 (492.1)	1.5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
AR 26/3/230 w	230 1~	≤ 150 (492.1)	16
AR 26/3/400	400 3~	≤ 150 (492.1)	16
AR 26/3.6/230 US	230 3~	≤ 150 (492.1)	16
AR 26/6/042 AR 26/6/042 cs AR 26/6/042 3.5kN	042 3~	≤ 14 (45.9)	16
		≤ 21 (68.9)	14
		≤ 33 (108.3)	12
		≤ 51 (167.3)	10
AR 26/6/250	250 3~	≤ 150 (492.1)	16

16 Technical data

16.1 Performance data

16.1.1 AR 34

Designation	Unit	AR 34/3/230 v	AR 34/3/400
Item no.		5100002831	5100002830
Rated current	A	1.30	0.75
Rated voltage	V	0 - 400	400
Rated frequency	Hz	0 - 87	50
Rated output	kW	0.00 - 0.70	0.40
Phases	~	3	3
Centrifugal force	kN	0.00 - 6.93	3.47
Vibrations	rpm	0 - 5,220	3,000
	Hz	0-87	50
Centrifugal force max.	kN	6.93	3.47
Length	mm (in)	295 (11.6)	295 (11.6)
Width	mm (in)	151 (5.9)	151 (5.9)
Height	mm (in)	131 (5.2)	131 (5.2)
Weight	kg (lb)	6.27 (13.8)	7.00 (15.4)
Motor type		High-frequency cage motor	
Class rating		I	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA}*	dB(A)	70.0	70.0

Designation	Unit	AR 34/3/230 v	AR 34/3/400
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

Designation	Unit	AR 34/6/042	AR 34/6/250
Item no.		5100002161	5100002826
Rated current	A	9.00	1.70
Rated voltage	V	42	250
Rated frequency	Hz	200	200
Rated output	kW	0.40	0.40
Phases	~	3	3
Centrifugal force	kN	6.98	6.98
Vibrations	rpm	6,000	6,000
	Hz	100	100
Centrifugal force max.	kN	6.98	6.98
Length	mm (in)	243 (9.6)	243 (9.6)
Width	mm (in)	151 (5.9)	151 (5.9)
Height	mm (in)	131 (5.2)	131 (5.2)
Weight	kg (lb)	5.94 (13.1)	5.94 (13.1)
Engine type		High-frequency cage motor	
Class rating		III	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (-14 – +122)	-10 – +50 (-14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)

Designation	Unit	AR 34/6/042	AR 34/6/250
Sound pressure level L_{pA} *	dB(A)	70.0	70.0
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

16.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 34/3/230 v	0...400 3~	≤ 150 (492.1)	1.5
AR 34/3/400	400 3~	≤ 150 (492.1)	1.5
AR 34/6/042	042 3~	≤ 14 (45.9)	1.5
		≤ 23 (75.5)	2.5
		≤ 35 (114.8)	4
		≤ 52 (170.6)	6
AR 34/6/250	250 3~	≤ 150 (492.1)	1.5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
AR 34/3/230 v	0...400 3~	≤ 150 (492.1)	16
AR 34/3/400	400 3~	≤ 150 (492.1)	16
AR 34/6/042	042 3~	≤ 12 (39.4)	16
		≤ 19 (62.3)	14
		≤ 30 (98.4)	12
		≤ 46 (150.9)	10
AR 34/6/250	250 3~	≤ 150 (492.1)	16

17 Technical data

17.1 Performance data

17.1.1 AR 4

Designation	Unit	AR 43/3/230 v	AR 43/3/400	AR 43/6/042	AR 43/6/250
Item no.		5100004246	5100004247	5100004248	5100004249
Rated current	A	1,04	0,60	12,00	2,00
Rated voltage	V	0 - 400	400	42	250
Rated frequency	Hz	0 - 87	50	200	200
Rated output	kW	0,00 - 0,50	0,29	0,50	0,50
Phases	~	3	3	3	3
Centrifugal force	kN	0,00 - 10,42	8,21	10,02	10,02
Vibrations	rpm	0 - 5.220	3.000	6.000	6.000
	Hz	0 - 87	50	100	100
Centrifugal force max.	kN	10,42	10,02	10,02	10,02
Length	mm (in)	220 (8.7)	305 (12,0)	220 (8.7)	220 (8.7)
Width	mm (in)	187 (7.4)	187 (7.4)	187 (7.4)	187 (7.4)
Height	mm (in)	168 (6.6)	168 (6.6)	168 (6.6)	168 (6.6)
Weight	kg (lb)	8.42 (18.56)	11.90 (26.23)	8.11 (17.88)	7.95 (17.53)
Motor type		High-frequency cage motor			
Class rating		I	I	III	I
Protection class		IP67	IP67	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA}*	dB(A)	70.1	70.1	70.1	70.1

Designation	Unit	AR 43/3/230 v	AR 43/3/400	AR 43/6/042	AR 43/6/250
Standard		DIN EN ISO 11201			
* Measured at distance of 1 m (3.2 ft).					

17.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 43/3/230 v	230 1~	≤ 150 (492.1)	1.5
AR 43/3/400	400 3~	≤ 150 (492.1)	1.5
AR 43/6/042	42 3~	≤ 10 (32.8)	1.5
		≤ 17 (55.8)	2.5
		≤ 27 (88.6)	4
		≤ 39 (128.0)	6
		≤ 61 (200.1)	10
AR 43/6/250	250 3~	≤ 150 (492.1)	1.5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
AR 43/3/230 v	230 3~	≤ 150	16
AR 43/3/400	400 3~	≤ 150	16
AR 43/6/042	42 3~	≤ 9	16
		≤ 14	14
		≤ 22	12
		≤ 34	10
		≤ 52	8
AR 43/6/250	250 3~	≤ 150	16

18 Technical data

18.1 Performance data

18.1.1 AR 52

Designation	Unit	AR 52/6/042	AR52/6/250	AR 52/9/042
Item no.		5100004253	5100004257	5100004260
Rated current	A	18,20	2,70	14,00
Rated voltage	V	42	250	42
Rated frequency	Hz	200	200	150
Rated output	kW	1,10	1,10	0,80
Phases	~	3	3	3
Centrifugal force	kN	8,16	8,16	9,11
Vibrations	rpm	6.000	6.000	9.000
	Hz	100	100	150
Centrifugal force max.	kN	14.14	14.14	13.77
Length	mm (in)	231 (9.1)	231 (9.1)	231 (9.1)
Width	mm (in)	217 (8.5)	217 (8.5)	217 (8.5)
Height	mm (in)	204 (8.0)	204 (8.0)	204 (8.0)
Weight	kg (lb)	18.56 (40.92)	18.56 (40.92)	17.90 (39.46)
Motor type		High-frequency cage motor		
Class rating		III	I	III
Protection class		IP67	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	77,4	77,4	77,4
Standard		DIN EN ISO 11201		
* Measured at distance of 1 m (3.2 ft).				

18.1.2 AR 53

Designation	Unit	AR 53/3/400	AR53/6/042	AR 53/6/250
Item no.		5100004251	5100004254	5100004258
Rated current	A	1,70	18,20	2,70
Rated voltage	V	400	42	250
Rated frequency	Hz	50	200	200
Rated output	kW	1,10	1,10	1,10
Phases	~	3	3	3
Centrifugal force	kN	8,16	8,16	8,16
Vibrations	rpm	3.000	6.000	6.000
	Hz	50	100	100
Centrifugal force max.	kN	14,14	14,14	14,14
Length	mm (in)	338 (13.3)	231 (9.1)	231 (9.1)
Width	mm (in)	184 (7.2)	184 (7.2)	184 (7.2)
Height	mm (in)	188 (7.4)	188 (7.4)	188 (7.4)
Weight	kg (lb)	16.78 (36.99)	12.28 (27.07)	12.28 (27.07)
Motor type		High-frequency cage motor		
Class rating		I	III	I
Protection class		IP67	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	77,4	77,4	77,4
Standard		DIN EN ISO 11201		
* Measured at distance of 1 m (3.2 ft).				

Designation	Unit	AR 53/9/042	AR53/9/250
Item no.		5100004262	5100004263
Rated current	A	14,00	2,40
Rated voltage	V	42	250
Rated frequency	Hz	150	150
Rated output	kW	0,80	0,80
Phases	~	3	3
Centrifugal force	kN	9,11	9,11
Vibrations	rpm	9.000	9.000
	Hz	150	150
Centrifugal force max.	kN	13,77	13,77
Length	mm (in)	231 (9.1)	231 (9.1)
Width	mm (in)	184 (7.2)	184 (7.2)
Height	mm (in)	188 (7.4)	188 (7.4)
Weight	kg (lb)	11.62 (25.62)	11.62 (25.62)
Motor type		High-frequency cage motor	
Class rating		III	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	77,4	77,4
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

18.1.3 AR 54

Designation	Unit	AR 54/6/250
Item no.		0006917
Rated current	A	2,70
Rated voltage	V	250
Rated frequency	Hz	200
Rated output	kW	1,10
Phases	~	3
Centrifugal force	kN	8,16
Vibrations	rpm	6.000
	Hz	100
Centrifugal force max.	kN	14,14
Length	mm (in)	245 (9.6)
Width	mm (in)	150 (5.9)
Height	mm (in)	188 (7.4)
Weight	kg (lb)	13.40 (29.54)
Motor type		High-frequency cage motor
Class rating		I
Protection class		IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)
Sound pressure level L_{pA} *	dB(A)	77,4
Standard		DIN EN ISO 11201
* Measured at distance of 1 m (3.2 ft).		

18.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 52/6/042	42 3~	≤ 11 (36.1)	2,5
		≤ 18 (59.5)	4
		≤ 25 (82.0)	6
AR 52/6/250	250 3~	≤ 150 (492.1)	1,5
AR 52/9/042	42 3~	≤ 15 (49.2)	2,5
		≤ 23 (75.5)	4
		≤ 34 (111.5)	6
AR 53/3/400	400 3~	≤ 150 (492.1)	1,5
AR 53/6/042	42 3~	≤ 11 (36.1)	2,5
		≤ 18 (59.5)	4
		≤ 25 (82.0)	6
AR 53/6/250	250 3~	≤ 150 (492.1)	1,5
AR 53/9/042	42 3~	≤ 15 (49.2)	2,5
		≤ 23 (75.5)	4
		≤ 34 (111.5)	6
AR 53/9/250	250 3~	≤ 150 (492.1)	1,5
AR 54/6/250	250 3~	≤ 150 (492.1)	1,5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
Maschinentyp	**Spannung [V]**	**Verlängerung [m]**	**Litzenquerschnitt [AWG]**
AR 52/6/042	42 3~	≤ 9 (29.5)	14
		≤ 15 (49.2)	12
		≤ 23 (75.5)	10
AR 52/6/250	250 3~	≤ 150 (492.1)	16
AR 52/9/042	42 3~	≤ 12 (39.4)	14
		≤ 19 (62.3)	12
		≤ 30 (98.4)	10
AR 53/3/400	400 3~	≤ 150 (492.1)	16
AR 53/6/042	42 3~	≤ 9 (29.5)	14
		≤ 15 (49.2)	12
		≤ 23 (75.5)	10
AR 53/6/250	250 3~	≤ 150 (492.1)	16
AR 53/9/042	42 3~	≤ 12 (39.4)	14
		≤ 19 (62.3)	12
		≤ 30 (98.4)	10
AR 53/9/250	250 3~	≤ 150 (492.1)	16
AR 54/6/250	250 3~	≤ 150 (492.1)	16

19 Technical data

19.1 Performance data

19.1.1 AR 62

Designation	Unit	AR 62/6/042	AR 62/6/250
Item no.		5100004204	5100004221
Rated current	A	21,50	3,10
Rated voltage	V	42	250
Rated frequency	Hz	200	200
Rated output	kW	1,20	1,20
Phases	~	3	3
Centrifugal force	kN	10,36	10,36
Vibrations	rpm	6.000	6.000
	Hz	100	100
Centrifugal force max.	kN	19,03	19,03
Length	mm (in)	230 (9.1)	230 (9.1)
Width	mm (in)	217 (8.5)	217 (8.5)
Height	mm (in)	204 (8.0)	204 (8.0)
Weight	kg (lb)	20,18 (44.5)	20,18 (44.5)
Motor type		High-frequency cage motor	
Class rating		III	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA}*	dB(A)	70.0	70.0

Designation	Unit	AR 62/6/042	AR 62/6/250
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

19.1.2 AR 63

Designation	Unit	AR 63/6/250
Item no.		5100004222
Rated current	A	3,10
Rated voltage	V	250
Rated frequency	Hz	200
Rated output	kW	1,20
Phases	~	3
Centrifugal force	kN	10,36
Vibrations	rpm	6.000
	Hz	100
Centrifugal force max.	kN	19,03
Length	mm (in)	230 (9.1)
Width	mm (in)	184 (7.2)
Height	mm (in)	188 (7.4)
Weight	kg (lb)	13.90 (30.6)
Motor type		High-frequency cage motor
Class rating		I
Protection class		IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)
Sound pressure level L_{pA} *	dB(A)	70.0
Standard		DIN EN ISO 11201
* Measured at distance of 1 m (3.2 ft).		

19.1.3 AR 64

Designation	Unit	AR 64/1,5/ 400	AR 64/3/230	AR 64/3/400	AR 64/6/042
Item no.		5100004207	5100004024	5100004210	5100004216
Rated current	A	1,40	3,00	1,70	21,50
Rated voltage	V	400	230	400	42
Rated frequency	Hz	50	50	50	200
Rated output	kW	0,80	0,90	0,90	1,20
Phases	~	3	3	3	3
Centrifugal force	kN	3,98	9,24	9,24	10,36
Vibrations	rpm	1,500	3,000	3,000	6,000
	Hz	25	50	50	100
Centrifugal force max.	kN	5,05	16,05	16,05	19,03
Length	mm (in)	352 (13.9)	352 (13.9)	352 (13.9)	245 (9.6)
Width	mm (in)	150 (5.9)	150 (5.9)	150 (5.9)	150 (5.9)
Height	mm (in)	188 (7.4)	188 (7.4)	188 (7.4)	188 (7.4)
Weight	kg (lb)	21.00 (46.3)	18.69 (41.2)	18.69 (41.2)	13.80 (30.4)
Motor type		High-frequency cage motor			
Class rating		I	I	I	III
Protection class		IP65	IP65	IP65	IP65
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	70.0	70.0	70.0	70.0
Standard		DIN EN ISO 11201			
* Measured at distance of 1 m (3.2 ft).					

Designation	Unit	AR 64/6/250	AR 64/9/042
Item no.		5100004223	5100004021
Rated current	A	3,10	16,00
Rated voltage	V	250	42
Rated frequency	Hz	200	150
Rated output	kW	1,20	1,10
Phases	~	3	3
Centrifugal force	kN	10,36	9,88
Vibrations	rpm	6,000	9,000
	Hz	100	75
Centrifugal force max.	kN	19,03	18,14
Length	mm (in)	245 (9.6)	245 (9.6)
Width	mm (in)	150 (5.9)	150 (5.9)
Height	mm (in)	188 (7.4)	188 (7.4)
Weight	kg (lb)	13.80 (30.4)	12.90 (28.4)
Motor type		High-frequency cage motor	
Class rating		I	III
Protection class		IP65	IP65
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA}*	dB(A)	70.0	70.0
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

19.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 62/6/042	42 3~	≤ 15 (49.2)	4
		≤ 22 (72.2)	6
		≤ 34 (111.5)	10
AR 62/6/250	250 3~	≤ 150 (492.1)	1,5
AR 63/6/250	250 3~	≤ 150 (492.1)	1,5
AR 64/1,5/400	400 3~	≤ 150 (492.1)	1,5
AR 64/3/230	230 3~	≤ 150 (492.1)	1,5
AR 64/3/400	400 3~	≤ 150 (492.1)	1,5
AR 64/6/042	42 3~	≤ 15 (49.2)	4
		≤ 22 (72.2)	6
		≤ 34 (111.5)	10
AR 64/6/250	250 3~	≤ 150 (492.1)	1,5
AR 64/9/042	42 3~	≤ 20 (65.6)	4
		≤ 30 (98.4)	6
		≤ 47 (154.2)	10

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
AR 62/6/042	42 3~	≤ 12 (39.4)	12
		≤ 19 (62.3)	10
AR 62/6/250	250 3~	≤ 150 (492.1)	16
AR 63/6/250	250 3~	≤ 150 (492.1)	16
AR 64/1,5/400	400 3~	≤ 150 (492.1)	16
AR 64/3/230	230 3~	≤ 150 (492.1)	16
AR 64/3/400	400 3~	≤ 150 (492.1)	16
AR 64/6/042	42 3~	≤ 12 (39.4)	12
		≤ 19 (62.3)	10
AR 64/6/250	250 3~	≤ 150 (492.1)	16
AR 64/9/042	42 3~	≤ 11 (36.1)	14
		≤ 17 (55.8)	12
		≤ 26 (85.3)	10

20 Technical data

20.1 Performance data

20.1.1 AR 75

Designation	Unit	AR 75/1,5/400	AR 75/3/230 v	AR 75/3/400
Item no.		0007800	0007865	0007799
Rated current	A	3,40	3,80	2,40
Rated voltage	V	400	0 - 400	400
Rated frequency	Hz	50	0 - 87	50
Rated output	kW	1,90	0,00 - 2,10	1,40
Phases	~	3	3	3
Centrifugal force	kN	7,50	0,00 - 12,06	12,66
Vibrations	rpm	1,500	0 - 5.220	3.000
	Hz	25	0 - 87	50
Centrifugal force max.	kN	10,29	0,00 - 24,11	25,23
Length	mm (in)	420 (16.5)	330	420
Width	mm (in)	218 (8.6)	218	218
Height	mm (in)	218 (8.6)	218	218
Weight	kg (lb)	36.50 (80.47)	30,50	33,00
Motor type		High-frequency cage motor		
Class rating		I	I	I
Protection class		IP67	IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70	-30 – +70
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50	-10 – +50
Housing external temperature	°C (°F)	80 (176)	80	80
Sound pressure level L_{pA}*	dB(A)	70.0	70,0	70,0

Designation	Unit	AR 75/1,5/400	AR 75/3/230 v	AR 75/3/400
Standard		DIN EN ISO 11201		
* Measured at distance of 1 m (3.2 ft).				

Designation	Unit	AR 75/6/042	AR 75/6/250
Item no.		0007794	0007797
Rated current	A	32,00	7,50
Rated voltage	V	42	250
Rated frequency	Hz	200	200
Rated output	kW	2,00	2,50
Phases	~	3	3
Centrifugal force	kN	14,05	14,05
Vibrations	rpm	6,000	6,000
	Hz	100	100
Centrifugal force max.	kN	26,56	26,56
Length	mm (in)	330 (13.0)	330 (13.0)
Width	mm (in)	218 (8.6)	218 (8.6)
Height	mm (in)	218 (8.6)	218 (8.6)
Weight	kg (lb)	26.80 (59.1)	26.80 (59.1)
Motor type		High-frequency cage motor	
Class rating		III	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	70.0	70.0
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

Designation	Unit	AR 75/9/042	AR 75/9/250
Item no.		0007793	0007796
Rated current	A	28,00	4,30
Rated voltage	V	42	250
Rated frequency	Hz	150	150
Rated output	kW	1,60	1,60
Phases	~	3	3
Centrifugal force	kN	13,19	13,19
Vibrations	rpm	9,000	9,000
	Hz	150	150
Centrifugal force max.	kN	26,38	26,38
Length	mm (in)	330 (13.0)	330 (13.0)
Width	mm (in)	218 (8.6)	218 (8.6)
Height	mm (in)	218 (8.6)	218 (8.6)
Weight	kg (lb)	27.50 (60.6)	27.50 (60.6)
Motor type		High-frequency cage motor	
Class rating		III	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-30 – +70 (-22 – +158)	-30 – +70 (-22 – +158)
Operating temperature range	°C (°F)	-10 – +50 (+14 – +122)	-10 – +50 (+14 – +122)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	70.0	70.0
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

20.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
AR 75/1,5/400	400 3~	≤ 150 (492.1)	1,5
AR 75/3/230 v	0-400 3~	≤ 150 (492.1)	1,5
AR 75/3/400	400 3~	≤ 150 (492.1)	1,5
AR 75/6/042	42 3~	≤ 10 (32.8)	4
		≤ 14 (45.9)	6
		≤ 23 (75.5)	10
AR 75/6/250	250 3~	≤ 99 (324.8)	1,5
		≤ 150 (492.1)	2,5
AR 75/9/042	42 3~	≤ 12 (39.4)	4
		≤ 17 (55.8)	6
		≤ 27 (88.6)	10
AR 75/9/250	250 3~	≤ 150 (492.1)	1,5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
AR 75/1,5/400	400 3~	≤ 150 (492.1)	16
AR 75/3/230 v	0-400 3~	≤ 150 (492.1)	16
AR 75/3/400	400 3~	≤ 150 (492.1)	16
AR 75/6/042	42 3~	≤ 13 (42.7)	10
		≤ 20 (65.6)	8
AR 75/6/250	250 3~	≤ 86 (282.2)	16
		≤ 135 (442.9)	14
		≤ 150 (492.1)	12
AR 75/9/042	42 3~	≤ 15 (49.2)	10
		≤ 23 (75.5)	8
AR 75/9/250	250 3~	≤ 150 (492.1)	16

21 Technical data

21.1 Performance data

21.1.1 ARFU 26

Designation	Unit	ARFU 26/6/230	ARFU 26/6/115 UK
Item no.		5100004243	5100004245
Rated current	A	6.00	12.00
Rated voltage	V	220 - 240	110 - 130
Rated frequency	Hz	50 - 60	50 - 60
Rated output	kW	1.10	1.10
Phases	~	1	1
Centrifugal force	kN	2.30	2.30
Vibrations	rpm	6,000	6,000
	Hz	100	100
Centrifugal force max.	kN	3.47	3.47
Length	mm (in)	223 (8.8)	223 (8.8)
Width	mm (in)	190 (7.5)	190 (7.5)
Height	mm (in)	99 (3.9)	99 (3.9)
Weight	kg (lb)	12.40.(27.4)	12.40.(27.4)
Length of power cable	m (ft)	15 (42.9)	15 (42.9)
Cross section	mm^2 (in^2)	1.5 (0.0023)	1.5 (0.0023)
Plug		IEC 60884-1 SS VII-CEE 7	WIT 5-15 HBL 14W47
Power cable		H 07 RN-F 4G1,5	SOOW 4x14AWG
Motor type		High-frequency cage motor	
ON/OFF switch		■	■
Operation display		■	■
Class rating		I	I
Protection class		IP67	IP67
Storage temperature range	°C (°F)	-20 – +60 (-4 – +140)	-20 – +60 (-4 – +140)

Designation	Unit	ARFU 26/6/230	ARFU 26/6/115 UK
Operating temperature range	°C (°F)	-10 – +40 (+14 – +104)	-10 – +40 (+14 – +104)
Housing external temperature	°C (°F)	80 (176)	80 (176)
Sound pressure level L_{pA} *	dB(A)	70.0	70.0
Standard		DIN EN ISO 11201	
* Measured at distance of 1 m (3.2 ft).			

21.2 Extension cable

WARNING
Warning about voltage.
Serious injuries from electric shock.
- 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 protection class I + III, see chapter "Technical data").

The following points must be observed:

- Only use permitted extension cables.
- Refer to nameplate for details of type designation and voltage of this machine.
- Refer to the following table for the required cross-section area.

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [mm^2]
ARFU 26/6/230	220 - 240 1~	≤ 50	1,2
		≤ 83	2,5
ARFU 26/6/115 UK	110 - 130 1~	≤ 12	1,5
		≤ 21	2,5

Machine type	Voltage [V]	Extension [m] (ft)	Cross-section area of cable [AWG]
ARFU 26/6/230	220 - 240 1~	≤ 44	16
		≤ 69	14
ARFU 26/6/115 UK	110 - 130 1~	≤ 11	16
		≤ 17	14
		≤ 27	12

22 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.

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 26**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100003938, 5100003960, 5100003120, 5100003940, 5100004048, 5100003953

Declaration of Incorporation of partly completed machinery

We hereby declare that this product is designed for installation in a machine and that commissioning is only permitted once it has been determined that this machine corresponds to the terms of the following EC guidelines: 2006/42/EC

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:

2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

The technical documents were written according to Appendix VII, Part B of 2006/42/EC.

Written or electronic copies of these technical documents are available to the national authorities upon request.

Munich, 4/4/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 34**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100002831, 5100002830, 5100002161, 5100002826

Declaration of Incorporation of partly completed machinery

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Munich, 20/6/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 43**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100004246, 5100004247, 5100004248, 5100004249

Declaration of Incorporation of partly completed machinery

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Munich, 13/6/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 52**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100004253, 5100004257, 5100004260

Declaration of Incorporation of partly completed machinery

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Guidelines and standards

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2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

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Munich, 29/4/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 53**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100004251, 5100004254, 5100004258, 5100004262, 5100004263

Declaration of Incorporation of partly completed machinery

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Guidelines and standards

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2006/42/EC, 2006/95/EC, 2011/65/EU

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Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 54**
Product type	External vibrator
Product function	Compacting concrete
Item number	0006917

Declaration of Incorporation of partly completed machinery

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Guidelines and standards

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2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

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Munich, 13/6/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 62**	**AR 63**
Product type	External vibrator	
Product function	Compacting concrete	
Item number	5100004204, 5100004221	5100004222

Declaration of Incorporation of partly completed machinery

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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:

2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

The technical documents were written according to Appendix VII, Part B of 2006/42/EC.

Written or electronic copies of these technical documents are available to the national authorities upon request.

Munich, 2/5/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 64**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100004207, 5100004024, 5100004210, 5100004216, 5100004223, 51000004021

Declaration of Incorporation of partly completed machinery

We hereby declare that this product is designed for installation in a machine and that commissioning is only permitted once it has been determined that this machine corresponds to the terms of the following EC guidelines: 2006/42/EC

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:

2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

The technical documents were written according to Appendix VII, Part B of 2006/42/EC.

Written or electronic copies of these technical documents are available to the national authorities upon request.

Munich, 20/6/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**AR 75**
Product type	External vibrator
Product function	Compacting concrete
Item number	5000007800, 5000007865, 5000007799, 5000007794, 5000007797, 5000007793, 5000007796

Declaration of Incorporation of partly completed machinery

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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:

2006/42/EC, 2006/95/EC, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

The technical documents were written according to Appendix VII, Part B of 2006/42/EC.

Written or electronic copies of these technical documents are available to the national authorities upon request.

Munich, 25/6/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation

Declaration of Incorporation

Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

Product

Product	**ARFU 26**
Product type	External vibrator
Product function	Compacting concrete
Item number	5100004243, 5100004245

Declaration of Incorporation of partly completed machinery

We hereby declare that this product is designed for installation in a machine and that commissioning is only permitted once it has been determined that this machine corresponds to the terms of the following EC guidelines: 2006/42/EC

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:

2006/42/EG, 2006/95/EG, 2004/108/EG, EN 61000, 2011/65/EU

Authorized representative for technical documentation

Axel Häret,
Wacker Neuson Produktion GmbH & Co. KG, Preußenstraße 41, 80809 München

The technical documents were written according to Appendix VII, Part B of 2006/42/EC.

Written or electronic copies of these technical documents are available to the national authorities upon request.

Munich, 13/09/2013

Dr. Michael Fischer
Director of Technology and Innovation

Translation of the original Declaration of Incorporation