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Converter

FU 1,5/200W

Operator´s Manual

1. Foreword

For your own safety and protection from bodily injuries, carefully read, understand and follow the safety instructions in this manual.

Please operate and maintain your Wacker machine in accordance with the instructions in this manual. Your Wacker machine will reward your attention by giving trouble-free operation and a high degree of availability.

Replace faulty or defective components Immediately.

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2. Safety instructions

for 3-phase frequency and voltage convertes

2.1 General

2.1.1 Converters may only be operated by persons who

- are at least 18 years of age
- are physically and mentally fit for this job
- have been instructed in operating with converters and proved their ability for the job to the employer
- may be expected to carry out the job they are charged with carefully.

The persons must be assigned the job of operating converters by the employer.

2.1.2 Converters may only be operated if the operating instructions of the manufacturer relating to the specific product and these safety instructions are observed.

2.1.3 The persons entrusted with the operation of converters are to be familiarised with the necessary safety precautions relating to the machine. In case of unusual applications the contractor must compile and issue the necessary additional instructions.

2.2 Operation

2.2.1 The actuation (control) elements and safety equipment must not be inadmissibly tampered with or their operation prevented.

2.2.2 It must be ensured that the converter is only connected to the voltage and frequency specified on the nameplate. Choose correct cross section for extension cords.

2.2.3 Before the converter is commissioned, it must be ensured that the protective hoods are firmly installed.

2.2.4 Before the converter is commissioned, the machine must be installed in a stable condition to prevent it from unintentionally tipping over, slipping or falling.

2.2.5 The converter must not to be switched on and off by inserting the plug into the socket or pulling it out. This also applies to the equipment to be connected to the converter.

2.2.6 The power supply cable of the converter must not be used to pull the plug out of the socket.

2.2.7 The power supply cable of the external vibrator must not be used to pull the plug out of the socket.

2.2.8 Electric equipment and material may only be used if they comply with the operational and local safety requirements. They must be in proper conditions and they must be maintained in this condition.

2.2.9 It is forbidden to operate converters in hazardous environments.



Danger to life

2.2.10 Do not expose electrical equimpent to rain. Do not use electrical equimpent in damp or wet surroundings.

2.3 Safety checks

2.3.1 Before starting operation, the operator has to check that all control and safety devices function properly.

2.3.2 Check electric cables regularly for damage.

2.3.3 Converters may only be operated with all the safety equipment.

2.3.4 If defects in the safety equipment or other defects are detected which impair the safe operation of the internal vibrator, the supervisor is to be notified without delay.

2.3.5 The machine must to be switched off immediately in case of defects jeopardizing the operational safety of the equipment.

2.4 Maintenance

2.4.1 Only use original spare parts. Modifications to this machine including the adjustment of the maximum speed set by the manufacturer are subject to the express approval of WACKER. In case of nonobservance all liabilities shall be refused.

2.4.2 The converter is to be disconnected from the mains supply for maintenance and repair work.

2.4.3 Work on the electric parts of the machines may only be carried out by skilled technicians.

2.4.4 The green/yellow protective earth conductor of the connection cable must be longer so that it does not become detached if the strain relief clamp fails. There is a danger to life and limb if this connection is broken. After repair work, check protective earth conductor for continuity.

2.4.5 All safety devices must be reinstalled properly immediately after maintenance and repair jobs have been completed.

2.5 Transport

2.5.1 For loading and transporting converters with lifting devices, suitable attachments are to be provided at the specified attachment points.

2.5.2 On transport vehicles converters are to be secured against slipping or tipping over.

2.6 Maintenance checks

2.6.1 According to the conditions and frequency of use, converters have to be checked for safe operation at least once every 6 monts by skilled technicians, such as those found at WACKER service stations, and be repaired if necessary.

Please also observe the corresponding rules and regulations valid in your country.

3. Technical data

		FU 1,5/200W
Item no.		0007949
Length x width x height	mm:	495 x 220 x 340
Operating weight (mass)	kg:	27
Input ratings		
Alternating current	V:	230 / 1~
Rated current	A:	9
Frequency	Hz:	50
Power input	kVA:	2,1
Connecting cable	A/V:	2 m with shock-proof plug
Output		
Voltage	V:	42 / 3~
Rated current	A:	20,6
Frequency	Hz:	200
Power input	kVA:	1,5
Socket CEE	A/V:	2 x 32/42
Protection system		IP 44
Sound pressure level at operator's station	L_{PA}:	less than 70 dB(A)

4. Description

4.1 Field of application

As a drive for WACKER high frequency internal and external vibrators as well as electric hammers.

5. Operation

5.1 Putting into operation

Check integrity of fan cover and both ABS half-flanges as well as the reliable fastening of the halves by way of the corresponding screws before each operation with the machine.

Electrical connection of the machine

The electrical supply cable has been provided with an appropriate plug. This plug is intended for connection to a three-phase 230 V, 50 Hz jobsite electrical control panel single-phase alternate current. Please contact the manufacturer in case of connections different to the one mentioned above.

The jobsite electrical control panel must comply with existing safety regulations. Check the conditions of the plug and supply cable (the cable must not be bent or damaged in any way in its entire length) before connecting the machine.

The machine may not be operated in areas where explosion hazards exist.

Cooling

The machine must always be placed so as to allow a free flow of air to the fan for cooling purposes.

Operation

Connection

Prior to connecting to the power mains check whether the local current and voltage coincide with design and wiring of the converter. Upon arrival the converters are wound for 230 V if not otherwise requested. Ground wire (green and yellow core of the connection cable) must be clamped correctly when assembling the plug device. Also please pay close attention to the correct connection of the earth conductor when using an extension. The power supply cable should be protected with a 16 amps safety fuse. Switching on: Connect the converter only when unloaded.

To connect the converter turn the rotary type switch clockwise up to the stop and then let go once the converter has started.

To disconnect the converter turn the rotary type switch back to the off-position.

6. Maintenance

With exception of the removal of foreign matters from the openings of the fan cover the machine requires no maintenance work. In the case of the presence of foreign matters please proceed as follows:

* Check to see that the switch of the machine is set to the zero position.
* Remove the plug from the socket.
* Loosen both fixing screws from the air filter cover.
* Pull off the filter cover and then remove all foreign matters.
* Check to see that the air filter cover has been replaced correctly before starting operations.

Note

Disconnect the machine and place it in a dry storage area if it is not to be used for longer periods of time.

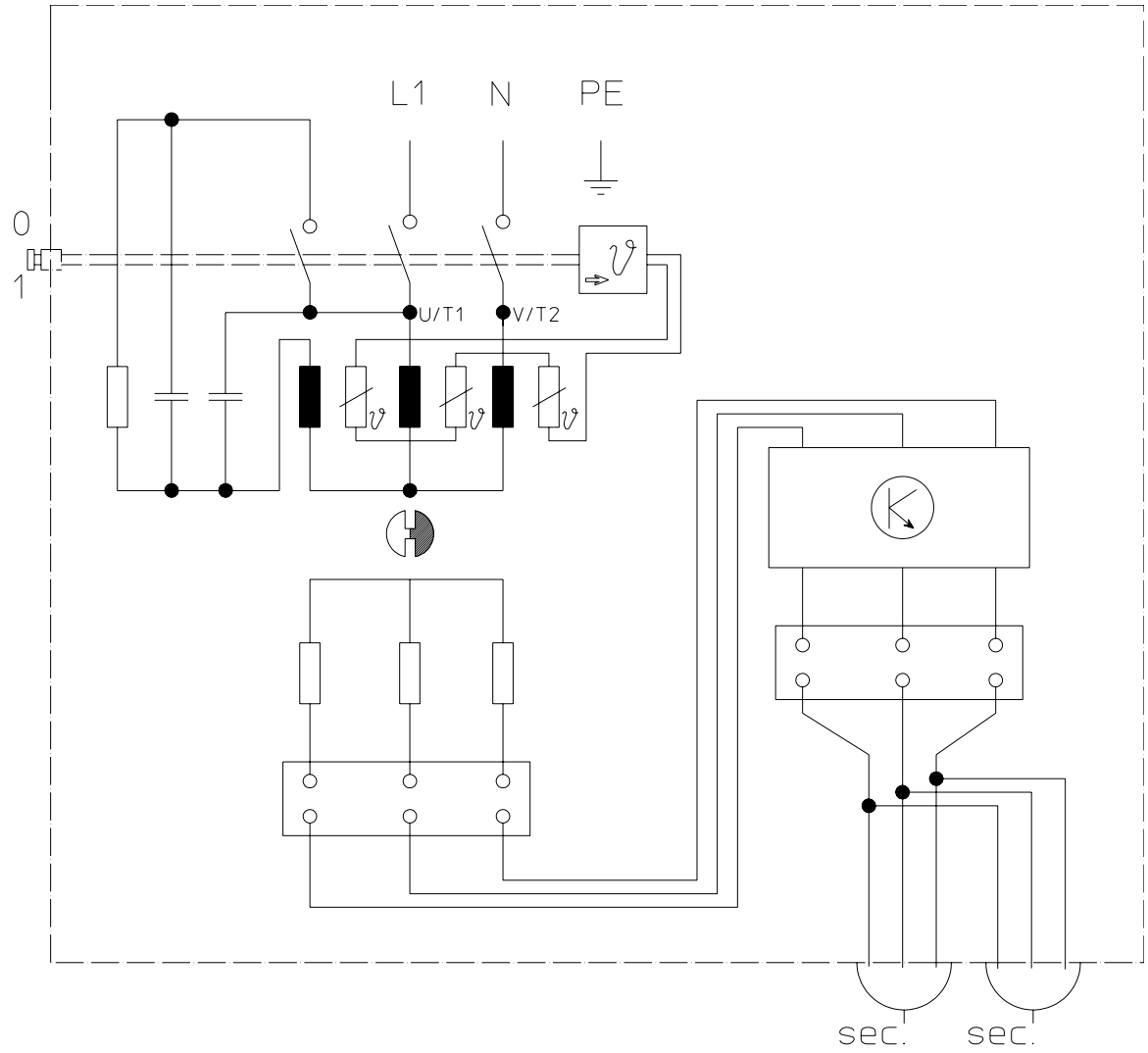
Bearings

The bearings contain a quantity of grease which, under normal conditions, is sufficient for approx. 8000 hours of operation.

7. Wiring Diagram

FU 1,5/200W

1x230 V, 50 Hz



8. Diagram

Selection of required cross section for extension of cables and power lines

This procedure takes into consideration:

1. The ohmic and inductive resistance of the line with an admissible loss of voltage of 5% and cos phi = 0,8 as per voltage-frequency-curves.

2. The admissible warming-up of the lines as per VDE standard (table of required minimum cross section).

ATTENTION! **The larger one of both cross sections has to be chosen.**

Example:

Nominal voltage 3 ~ 400 V, 200 Hz

Rated current 15 A Line length 100 m

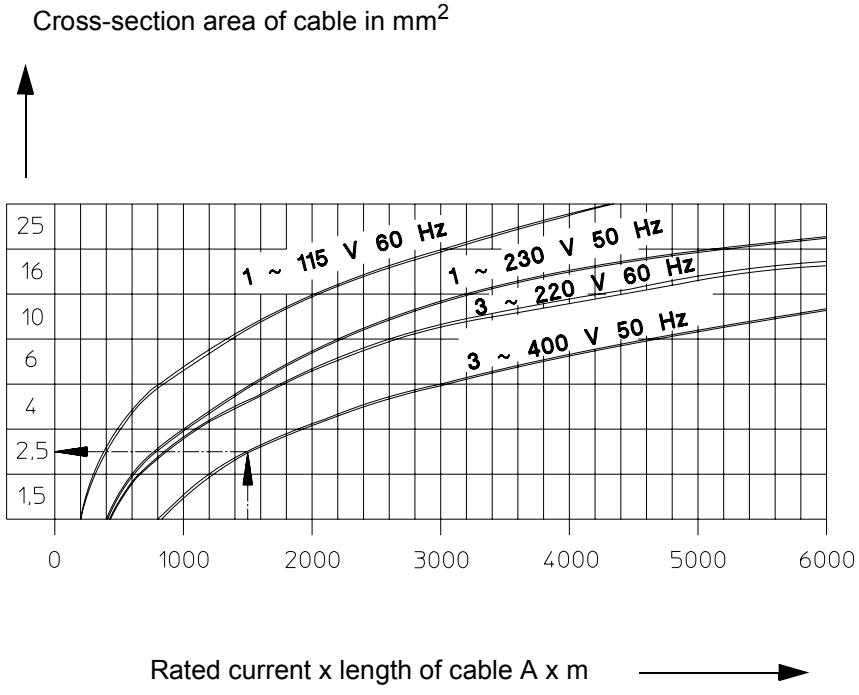
15 A x 50 m = 1900 A x m

Cross section as per diagramm: 2,5 mm^2

Cross section as per table: 15 A : 1mm^2

Chosen cross section: 2,5 mm^2

Voltage - Frequency - Curves



Minimum cross-section area according to VDE		
Cable	Max. load	Max. fuse
mm^2	A	A
1	15	10
1,5	18	10/3~16/1~
2,5	26	20
4	34	25
6	44	35
10	61	50
16	82	63
25	108	80

9. Disposal

9.1 Disposal of the machine

If the machine has reached the end of its service life, it has to be handed into a suitable recycling operation for environmental friendly reuse or recycling.

During disposal observe the regional rules and regulations. e.g. the European Directive for obsolete electical and electronic devices.

	Do not dispose the machine in the household rubbish. It must be disposed at a recycling facility.

EG - Konformitätserklärung

EC - Conformity-Certificate

Wacker Construction Equipment AG, Preußenstraße 41, 80809 München

bescheinigt, daß das Baugerät:
hereby certify that the construction equipment specified hereunder:

1. Art / Category:

Umformer / Converter

2. Typ / Type:

FU ... / FUE ... / KTU ...

3. Gerätenummer innerhalb Typenserien-Nummer / Type serial number of equipment:

0007752, 0007949, 0007978, 0007979, 0008884, 0008890, 0008891, 0008901, 0008902, 0008934, 0008935, 0008947, 0008948, 0008949, 0008950, 0108479, 0107999, 0108000, 0610011, 0610012, 0610013, 0610015, 0610019, 0610020, 0610022, 0610023, 0610094, 0610156

in Übereinstimmung mit folgenden Richtlinien hergestellt worden ist:
has been produced in accordance with the following standards:

98/37/EWG

89/336/EWG

73/23/EWG

Dr. Stenzel
Leitung Forschung und Entwicklung
Research and Development Management

Bescheinigung bitte sorgfältig aufbewahren / File certificate carefully

VDE Prüf- und Zertifizierungsinstitut

VDE VERBAND DER ELEKTROTECHNIK
ELEKTRONIK INFORMATIONSTECHNIK e.V.

C E R T I F I C A T E

Registration-Number: 6236/QM/06.97

This is to certify that the company

Wacker Construction Equipment AG
Wacker-Werke GmbH & Co. KG

at the following locations

Head Office Munich
Preußenstraße 41
80809 Munich

Production plant Reichertshofen
Karlsfeld logistics centre
Sales regions with all branches all over Germany

has implemented and maintains a
Quality **M**anagement **S**ystem for the following scope:

Machine manufacture
Construction machines

This Q System complies with the requirements of

DIN EN ISO 9001:2000

and the requirements of the German and international Road Traffic Act.

This Certificate is valid until 2009-06-05.

VDE Testing and Certification Institute
Certification

Date: 2006-05-30

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The VDE Testing and Certification Institute is accredited by DAR Accreditation Bodies according to DIN EN ISO 17020 and DIN EN ISO 45012 and notified in the EU under ID.No. 0366.

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