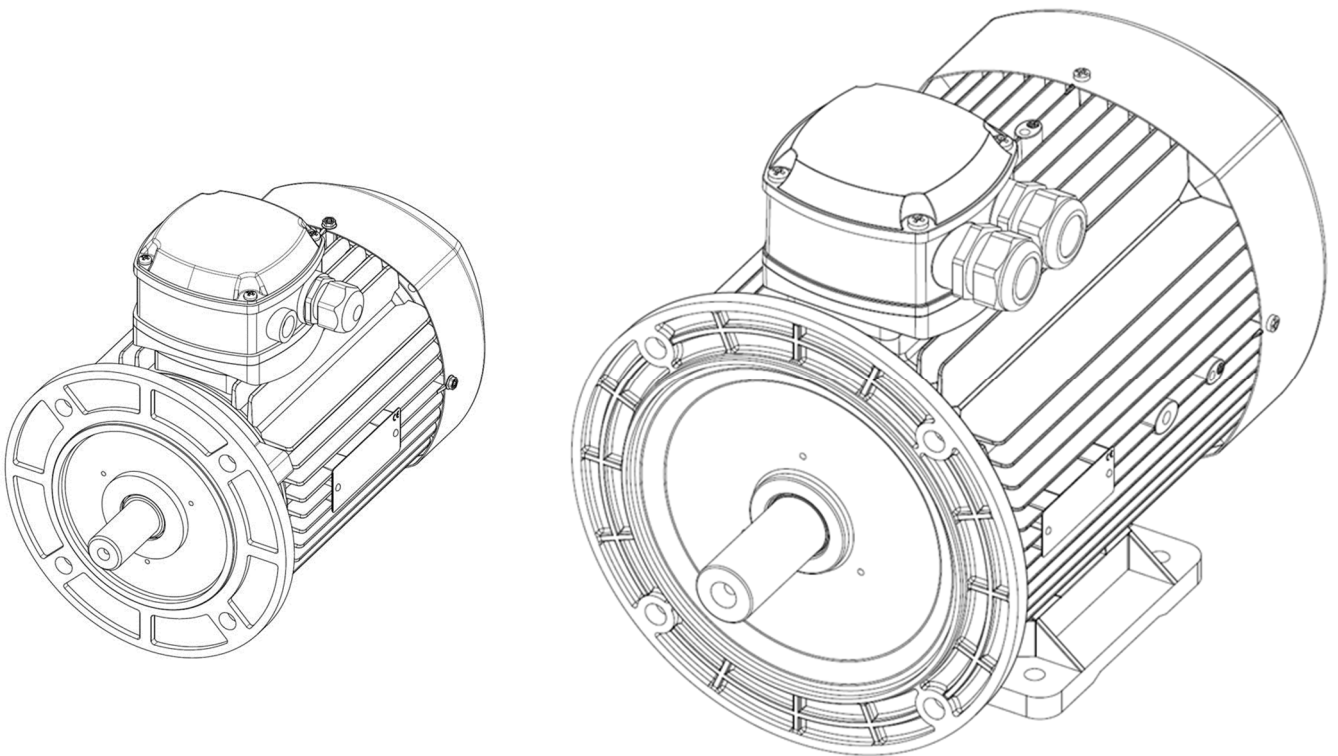


**Pioneering for You**

# **Wilo Asynchronous Motors**



en Installation and operating instructions

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## 1 General information

*About this document:* The language of the original operating instructions is German. All other languages of these instructions are translations of the original operating instructions.

These installation and operating instructions are an integral part of the product. They must be kept readily available at the place where the product is installed. Strict adherence to these instructions is a precondition for the proper use and correct operation of the product.

These installation and operating instructions correspond to the relevant version of the product and the underlying safety standards valid at the time of going to print.

### **EC declaration of conformity:**

A copy of the EC declaration of conformity is a component of these operating instructions.

If a technical modification is made on the designs named there without our agreement or the declarations made in the installation and operating instructions on product/personnel safety are not observed, this declaration loses its validity.

## 2 Safety

These installation and operating instructions contain basic information which must be adhered to during installation, operation and maintenance, and during all works without exception. For this reason, these operating instructions must, without fail, be read by the service technician and the responsible specialist/operator before installation and commissioning.

It is not only the general safety instructions listed under the main point "safety" that must be adhered to but also the special safety instructions with danger symbols included under the following main points.

The safety instructions included in these installation and operating instructions, the existing national regulations for accident prevention together with any internal working, operating and safety regulations of the operator are to be complied with.

Low voltage machines have dangerous, live and rotating parts, as well as potentially hot surfaces.

## 2.1 Symbols and signal words in the operating instructions

*Symbols:*

 **General danger symbol**

 **Danger due to electrical voltage**

 **Note**

*Signal words:*

**DANGER!**

**Acutely dangerous situation.**

**Non-observance results in death or the most serious of injuries.**

**WARNING!**

**The user can suffer (serious) injuries. 'Warning' implies that (serious) injury to persons is probable if this information is disregarded.**

**CAUTION!**

**There is a risk of damaging the motor 'Caution' implies that damage to the product is likely if this information is disregarded.**

Note:

Useful information on handling the product. It draws attention to possible problems.

Information that appears directly on the product, such as:

- Direction of rotation arrow,
- Rating plate,
- Warning sticker,

must be strictly complied with and kept in legible condition.

## 2.2 Personnel qualifications

The installation, operating and maintenance personnel must have the appropriate qualifications for this work. Area of responsibility, terms of reference and monitoring of the personnel are to be ensured by the operator. If the personnel are not in possession of the necessary knowledge, they are to be trained and instructed.

### **2.3 The five safety instructions**

For personal safety and to prevent material damage, the safety relevant instructions and the following five safety instructions “Works in voltage-free state” must be observed at all times during all works.

The sequence of the five safety instructions must be strictly observed prior to starting work:

- 1st Isolate.  
Also isolate auxiliary power circuits, e.g. anti-condensation heater.
- 2nd Secure against reactivation.
- 3rd Ensure system is voltage-free.
- 4th Earth and short-circuit.
- 5th Cover or shut down neighbouring live parts.

Once work is complete, undo the measures taken in reverse order.

### **2.4 Danger in the event of non-observance of the safety instructions**

Non-observance of the safety instructions can result in risk of injury to persons and damage to the environment and the product/unit. Non-observance of the safety instructions results in the loss of any claims to damages.

In detail, non-observance can, for example, result in the following risks:

- Risk of personal injury from electrical and mechanical influences,
- Damage to the environment due to leakage of hazardous materials,
- Property damage,
- Failure of important product/unit functions,
- Failure of required maintenance and repair procedures.

## **2.5 Safety instructions for the operator**

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been supervised by or received instruction concerning use of the device from a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

- Danger from electrical current must be eliminated. Local directives or general directives [e.g. IEC, VDE etc.] and instructions from local energy supply companies must be adhered to.

## **2.6 Safety instructions for installation and maintenance work**

The operator must ensure that all installation and maintenance work is carried out by authorised and qualified personnel, who are sufficiently informed from their own detailed study of the installation and operating instructions.

Work on the product/unit must only be carried out when at a standstill. It is mandatory that the procedure described in the installation and operating instructions for shutting down the product/unit be complied with.

Immediately on conclusion of the work, all safety and protective devices must be put back in position and/or recommissioned.

## **2.7 Unauthorised modification and manufacture of spare parts**

Unauthorised modification and manufacture of spare parts will impair the safety of the product/personnel and will make void the manufacturer's declarations regarding safety.

Modifications to the product are only permissible after consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer ensure safety. The use of other parts will absolve us of liability for consequential events.

## **2.8 Improper use**

The operational reliability of the supplied product is only guaranteed when used properly in accordance with the section in the installation and operating instructions titled "Intended use". The limit values must on no account fall under or exceed those values specified in the catalogue/data sheet.

### 3 Transport and interim storage

#### 3.1 Shipping

**Shipping** The motor is delivered from the factory packaged in a cardboard box or secured to a pallet and protected against dust and moisture.

**Transport inspection** Immediately check the motor for any transit damage on receipt. If transport damage is detected, take the necessary steps with the forwarding agent within the respective time limits.

**Storage** Before installation, the motor must be kept dry, frost-free, and protected from mechanical damage.

**⚠ CAUTION! Risk of damage due to incorrect packaging.**

If the motor is transported again at a later time, it must be packaged so that it cannot be damaged during transport.

- Use the original packaging for this, or an equivalent.

#### 3.2 Transport for installation/dismantling purposes

Check the transport eyes for damage and secure fixation before use.

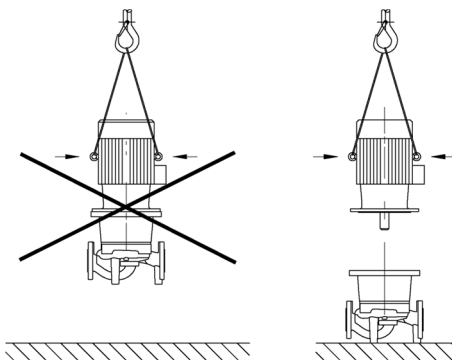


Fig. 1: Transporting the motor

**⚠ WARNING! Risk of injury.**

Improper transport can lead to personal injury.

- The motor must be transported using approved lifting gear (e.g. block and tackle, crane, etc.).
- The transport eyes on the motor are only for transporting the motor, and are not approved for transporting the entire system (Fig. 1).

**⚠ WARNING! Risk of injury.**

Setting up the motor without securing it can lead to personal injury.

- Do not place the motor unsecured on the motor support feet. The base with the threaded holes is used for fixation only. When standing freely, the motor might not be sufficiently stable.



**DANGER! Risk of fatal injury.**

The motor itself and motor parts can be extremely heavy. Falling parts pose a risk of cuts, crush injuries, bruises or impacts, which can be fatal.

- Always use suitable lifting equipment and secure parts against falling.
- Never stand underneath a suspended load.
- Make sure the motor is securely positioned and is stable during storage and transport as well as prior to all installation and other assembly work.

## 4 Application (intended use)

*Fields of application* The motor is intended exclusively for installation and operation in closed rooms. No provision has been made for direct installation of the device in rooms used for other purposes (residential and work rooms).

Low voltage machines are intended for commercial systems. They are compliant with the harmonised EN/IEC 60034 standards series (see Tab. 1)

*Contraindications* The following is not permitted:



**CAUTION! Risk of property damage.**

**A motor with no Ex rating is not suitable for application in potentially explosive areas.**

- Intended use includes compliance with this manual.
- Any other use is regarded as non-compliant with the intended use.

The motor is designed to protection class IP55, but not for outdoor use.

Always observe deviating specifications on the rating plate.

The application location conditions must correspond to all rating plate specifications. In the event of non-compliance with requirements, please consult with the manufacturer.



Feature:	Standard
Rating and performance	EN/IEC 60034-1
Methods for determining losses and efficiency of rotating electrical machines and tests	EN/IEC 60034-2-1 EN/IEC 60034-2-2 EN/IEC 60034-2-3
Protection class	EN/IEC 60034-5
Cooling	EN/IEC 60034-6
Construction	EN/IEC 60034-7
Connection designations and direction of rotation	EN/IEC 60034-8
Noise emission	EN/IEC 60034-9
Temperature/thermal protection	EN/IEC 60034-11
Starting performance, rotating electrical machines	EN/IEC 60034-12
Vibration severity	EN/IEC 60034-14
Efficiency classes of three-phase current, squirrel-cage motors	EN/IEC 60034-30-1
IEC standard voltages	IEC 60038
Insulation classes	IEC 60085
Safety of electrical machines	IEC 60204-1
Clearance and creepage distances	IEC 60664-1

*Tab. 1 Applicable standards for standard motors*

**Note: Always use the currently applicable standard version.**

## 5 Product information/version

Asynchronous motors are used as industrial drives. They are designed for drive technology application fields, both for mains operation and also in connection with frequency converters. The motors are low voltage three-phase current asynchronous drives with cylindrical shaft end and keyway. The motors can be supplied in a fixed speed version and air-cooled

### 5.1 Motor identifier type key

Example:	W080070-2-V18HR
W	Wilo
080	Motor size
070	Stator package length
2	Number of poles
V18	Flange type
H	Balanced with half key
R	Reinforced roller bearing

*Tab. 2 Type key*

## 5.2 Technical data

Property	Value	Remarks
Operating mode	S1	EN/IEC 60034-1
Efficiency class	IE2 – IE4	EN/IEC 60034-30-1
Speed range	1800/3600 rpm	2-pole/4-pole Depending on operation type
Ambient temperature min./max.	IE2 from -20 °C to +50 °C IE3 from -20 °C to +60 °C IE4 from -20 °C to +60 °C	Lower or higher ambient temperatures on request
Storage temperature min./max.	From -20 °C to +80 °C	
Insulation class	F	IEC 60076
Protection class	IP55	DIN EN 60529 (IEC 529/VDE 047 T1)
Electromagnetic compatibility Interference resistance		EN 6100-6-2 EN/IEC 60034-1
Sound-pressure level 1)	LpA, 1m < 75 dB(a)   ref. 20 lJPa	Depending on the motor type Compliance with ISO 1680 approved sound-pressure level
Electrical connection	1~220 V ±10 %, 50/60 Hz 3~440 V ±10 %, 50/60 Hz 3~400 V ±10 %, 50/60 Hz 3~380 V -5 %/+10 %, 50/60 Hz According to rating plate specification	Supported mains types: TN, TT, IT
Relative humidity - at Tambient = 30 °C - at Tambient = 40 °C	< 90 %, non-condensing < 60 %, non-condensing	

Tab. 3 Technical data

1) Average sound-pressure level value at a spatially rectangular measuring surface at a distance of 1 m from the motor in accordance with DIN EN ISO 3744

## 5.3 Rating plate

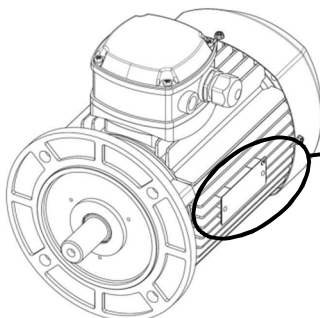


Fig. 2 Motor view

	<b>3-Induction Motor</b>			
<small>Wilo SE Nortkirchenstraße 100 44263 Dortmund Germany</small>				
3511099	W080080-2-F188LT	TR	1406.003	
Class F	PTC155°C	S1	IP55	12.8kg EN60034
50Hz 1.10kW		T <sub>ambient</sub> ≤60°C		
Δ/Y 220-240/380-415V		2831-2866min <sup>-1</sup>		
I	4.33-4.45/2.50-2.57A	Cosφ=0.86-0.76		
I <sub>max</sub>	4.76-4.90/2.75-2.83A	IE2 – 79.6% 78.1% 75.2%		

Fig. 3 Rating plate

### 5.3.1 Rating plate key

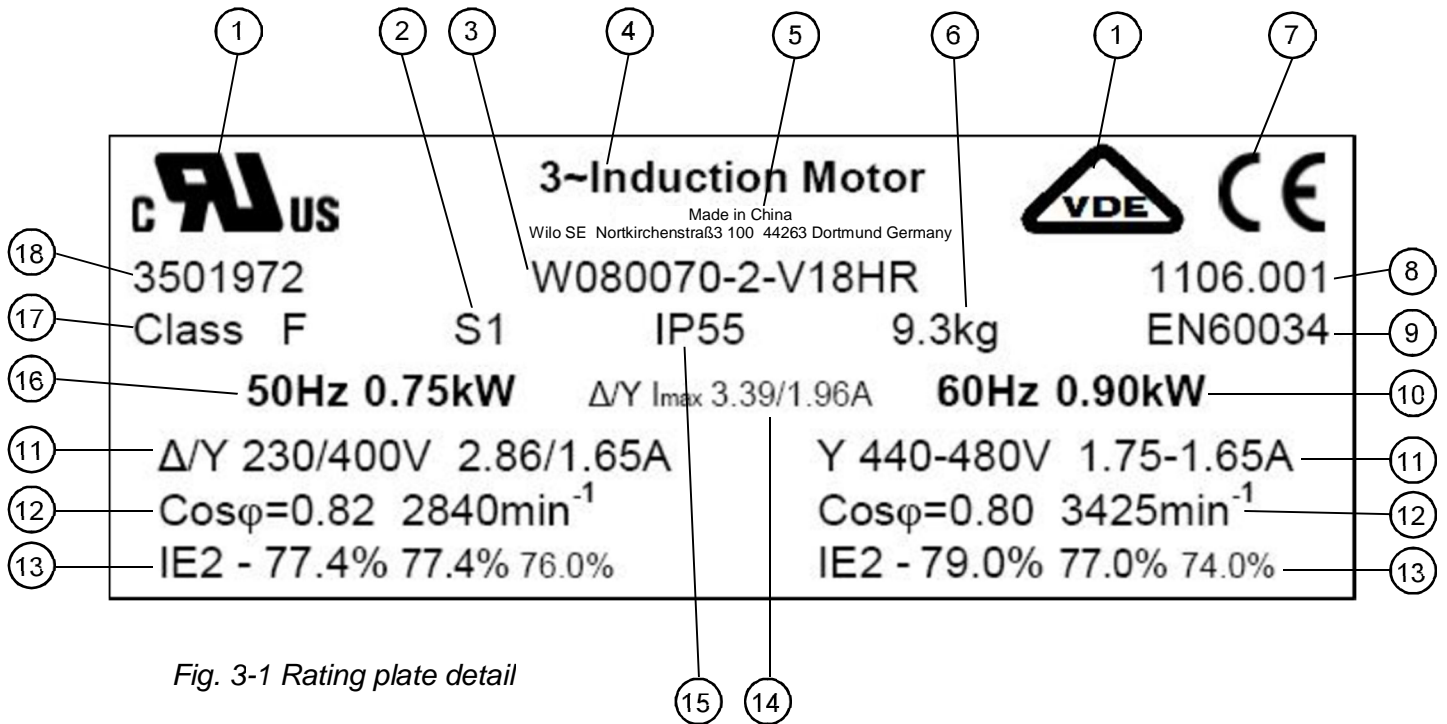


Fig. 3-1 Rating plate detail

Item 1	Mark of conformity
Item 2	Operating mode
Item 3	Motor designation
Item 4	Motor type
Item 5	Manufacturer
Item 6	Motor weight
Item 7	CE conformity
Item 8	Production identifier
Item 9	Motor standard
Item 10	Frequency/performance
Item 11	Connection type/voltage/currents
Item 12	Rated power factor/speed
Item 13	Efficiency
Item 14	Max. current
Item 15	IP protection class
Item 16	Frequency/performance
Item 17	Motor insulation class
Item 18	Part No.

Tab. 4 Key for Fig. 3-1

### 5.4 Scope of delivery

- Motor
- Installation and operating instructions

## 6 Description and function

### 6.1 Description of the product

The exploded view drawing shows the main component parts of the motor. However, only those component parts of interest to the operator are included in the key.

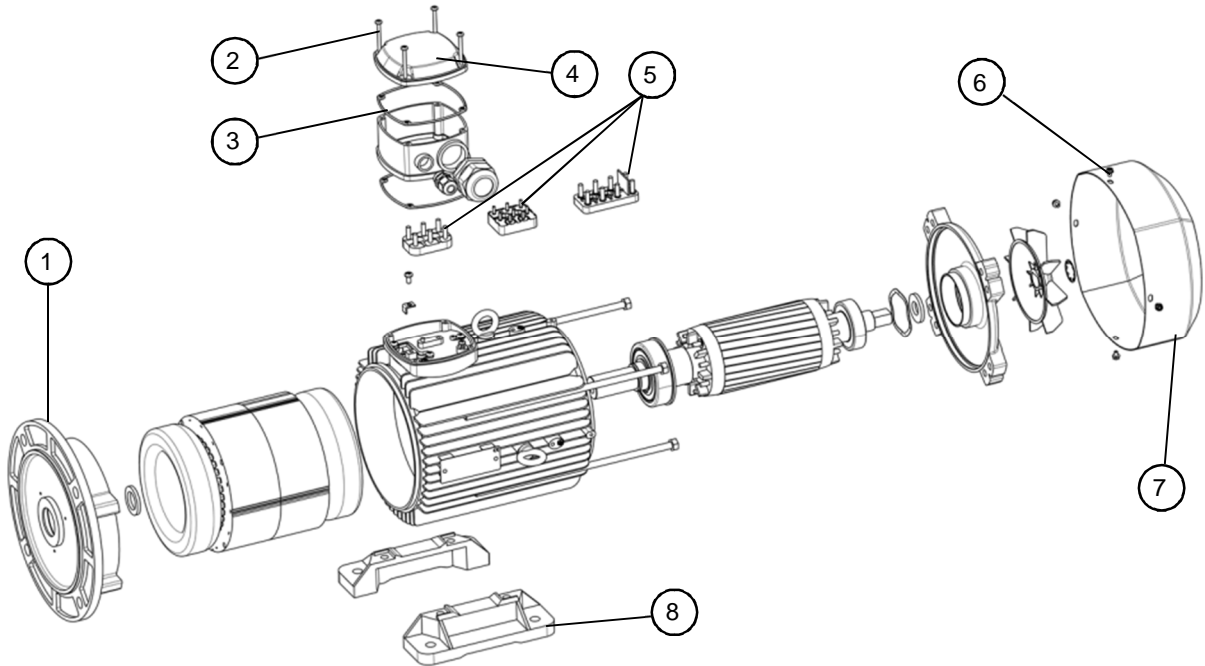



Fig. 4 Main motor component parts


Item 1	Motor flange
Item 2	Screws for terminal box
Item 3	Gasket for terminal box cover
Item 4	Terminal box cover
Item 5	Terminal board
Item 6	Screw for fan cover
Item 7	Fan cover
Item 8	Fixation feet


Tab. 5 Key for Fig. 4

## 7 Installation and electrical connection

### Safety

-  **DANGER! Risk of fatal injury.**  
**Incorrect installation and improper electrical connections can be life-threatening.**
- **Have the electrical connections established by approved electricians only, in compliance with the applicable regulations!**
  - **Adhere to accident prevention regulations.**

-  **DANGER! Risk of fatal injury.**  
**Failure to install module cover safety devices can cause electrical shock, potentially resulting in life-threatening injuries.**
- **Before commissioning, all removed safety devices, such as module covers, must be reinstalled.**

-  **CAUTION! Risk of property damage.**  
**Risk of damage due to incorrect handling.**
- **Have the motor installed by qualified personnel only.**

### 7.1 Installation

*Preparation* The motor must be protected from the weather and installed in a frost/dust-free, well-ventilated atmosphere which is not potentially explosive. The motor must not be installed outdoors. The motor can be installed to a system using either the motor flange Fig. 4 Item 1 or with the corresponding feet Fig. 4 Item 8. Compare the rating plate specifications with the available current type, voltage, and frequency, as well as the required performance, speed, and operating mode. Use the motor only in accordance with the stamped protection class according to EN 60034-5/IEC 60034-5/DIN VDE 0530-5 and only in the design intended by the manufacturer according to EN 60034-7/IEC 60034-7/DIN VDE 0530-7

Permissible installation location room temperature according to Tab. 3 and permissible installation height up to 1000 m above sea level\* in accordance with EN 60034-1/IEC 60034-1/DIN VDE 0530-1.

\*) For other values see rating plate

*Positioning/alignment*

A hook or eyelet with the corresponding bearing capacity is to be installed vertically above the motor (see catalogue/data sheet for the total motor weight), to which hoisting gear or similar aids can be attached when conducting maintenance or repair work on the motor.

**⚠ DANGER! Risk of fatal injury.**  
**The motor itself and motor parts can be extremely heavy. Falling parts pose a risk of cuts, crush injuries, bruises or impacts, which may lead to death.**

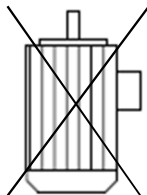
- Always use suitable lifting equipment and secure parts against falling.
- see Chapter 3.2

**⚠ CAUTION! Risk of property damage.**  
**Risk of damage due to incorrect handling.**

- Only use lifting eyes on the motor for carrying the weight of the motor and not for carrying the entire system
- see Chapter 3.2

**⚠ CAUTION! Risk of property damage.**  
**Make sure that the cooling air flows unobstructed to and through the air intake and outlet openings, and cannot be immediately sucked in again.**  
**Cooling fins, and air intake and outlet openings must be protected from clogging and coarse dust particles.**

- Minimum axial distance between a wall and the fan cover of the motor: free removal dimension of at least 200 mm + fan cover diameter.
- All installation positions except for “shaft end facing upward” are allowed. – See Fig. 5



*Fig. 5 Impermissible installation position*

**ⓘ NOTE**

- The motors are equipped with two condensation drain holes, which are factory-sealed with plastic plugs (in order to guarantee that protection class IP55 is achieved).
- With a horizontal motor shaft, the condensate drainage holes must be positioned towards the bottom. If necessary, the motor/motor flange must be turned accordingly.
- If used in air-conditioning/cooling systems, these plugs must be removed downwards so that condensation water can drain off.

**ⓘ NOTE**

- If the plastic plugs are removed, protection class IP55 is no longer ensured.

## 7.2 Installation of transmission elements



*Fig. 6 Using a hammer for installation is not allowed*

**⚠ CAUTION!** Risk of property damage. Install transmission elements (for example, belt pulleys or couplings) using suitable fitting devices only.

- Fitting the drive elements by means of hammer blows is not permitted, due to the risk of bearing damage and damage to any additional add-on components such as sensors, for example.
- When replacing bearings, generally only remove and hoist them using suitable devices and the shaft centring.

## 7.3 Checks before commissioning

**⚠ CAUTION!** Risk of property damage. Check the following items before commissioning:

- Do the rating plate specifications agree with the required values,
- Do motor voltage and frequency agree with the mains values,
- Are auxiliary devices – where present – functional,
- Are air intake openings and cooling surfaces clean,
- Is the motor attached correctly.

## 7.4 Electrical connection

**⚡ DANGER! Risk of fatal injury.**  
 Incorrect electrical connections can cause fatal electric shocks.

- Have the electrical connection set up by an electrician approved by the local electricity supplier only and in accordance with local regulations.
- Observe Chapter 2.

**⚠ WARNING! Risk of mains overload!**  
 An inadequate mains design causes system failures and even cable fires due to mains overload.

- When designing the mains, pay special attention to the cable cross-sections and fuses used.
- The electrical connection must be established via a fixed mains connection cable (cross-section to be complied with, see Tab. 6). Route the mains connection cable through the corresponding M20 or M25 or M32 threaded cable connection (Fig. 7).

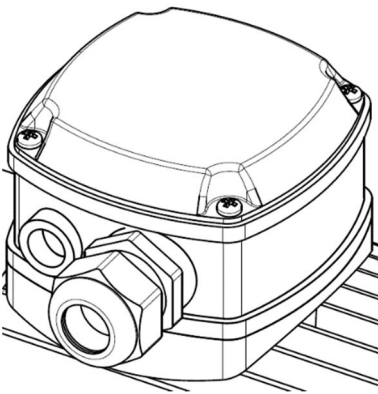


Fig. 7 Threaded cable connection

Power PN	1.5 – 4 kW	5.5/7.5 kW	11 kW	15 kW	18.5/22 kW
Cable cross-section in mm <sup>2</sup>	1.5 – 4	2.5 – 6	4 – 6	6 – 10	10 – 16
PE cable cross-section in mm <sup>2</sup>	2.5 – 4	4 – 35			

Tab. 6 Cable cross-sections

- In order to ensure drip protection and strain relief on the threaded cable connection, cables are to be used which have a sufficient outer diameter and are to be screwed sufficiently tightly. In addition, the cables must be bent near the threaded cable connection, for drainage of any drips that accumulate into a drain loop. Position the threaded cable connection or lay the cables accordingly to ensure that no drips can run into the module. Non-assigned threaded cable connections must remain sealed with the plugs provided by the manufacturer.
- The connection pipe is to be installed in such a way that it cannot under any circumstances come into contact with the motor housing.



## 7.5 Electrical connection in the terminal box

Designation	Assignment	Notes
L1, L2, L3	Mains connection	See Tab. 3
PE	Protective earth conductor connection	
T1/T2	Temperature sensor connection	

Tab. 7 Connection terminal assignment



**DANGER!** Risk of fatal injury.

Incorrect electrical connections can cause fatal electric shocks.

- The smallest clearances between uninsulated, live parts, to one another and to earth, must not be below the values laid down in DIN VDE 0110 & UL 1004:
- 4 mm for UN ≤ 550 V.
- 5.5 mm for UN > 550 V ≤ 725 V.

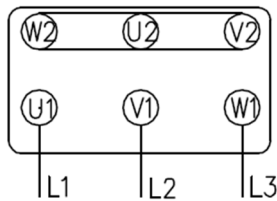


Fig. 8-1 3~ star connection

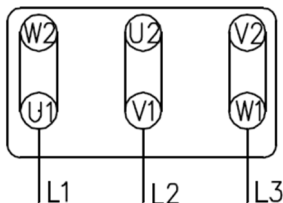


Fig. 8-2 3~ delta connection

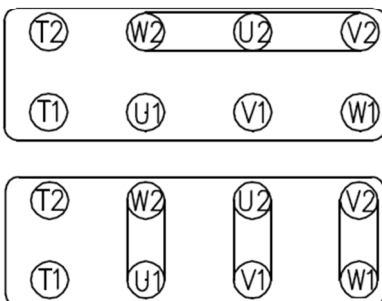


Fig. 9 Connection of the temperature sensor



**CAUTION!** Risk of property damage.

Connect the motor according to the circuit diagram shown in the terminal box cover.

- See Fig. 8-1 and Fig. 8-2
- The motor must be protected against impermissible heating (for example by a motor protection switch).
- It must be connected in such a way that a sustainably safe electrical connection is ensured.
- No protruding wire ends.
- Use a ring terminal to secure cable ends.

The temperature sensor for winding temperature monitoring, available on special order, must be connected via the additional terminals T1 and T2 provided in the terminal box.

Connection is carried out according to the circuit diagram provided.

See Fig. 9

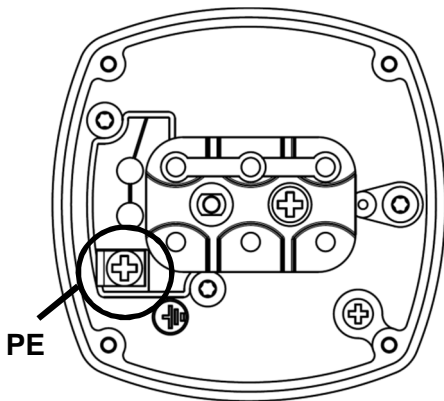


Fig. 10 Protective earth conductor terminal – PE

- ⚠ DANGER! Risk of fatal injury.**  
 Improper protective earth conductor connection poses a risk of fatal injury due to electric shock.
- Always connect protective earth conductor in accordance with IEC 60364 to the green highlighted PE protective earth conductor terminal.
  - See Fig. 10

- ⚠ CAUTION! Risk of property damage.**  
 Make sure that the terminal box contains no foreign objects, dirt, or humidity.
- Seal the terminal box cover with the original gasket only.
  - Seal unused cable inlet openings so that they are dust-tight and watertight.
  - Secure the key for test operation without drive elements.

- ⚠ CAUTION! Risk of property damage.**  
 After a longer storage period or longer standstill, before commissioning, measure the winding insulation resistance phase against phase and phase against protective earth conductor.

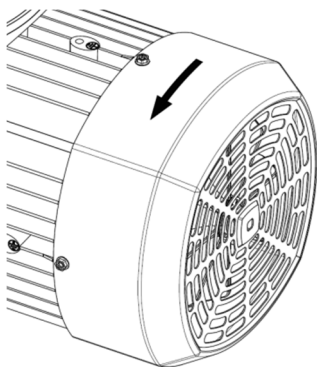


Fig. 11 Direction of rotation arrow

### 7.6 Direction of rotation

Connection of phases L1, L2, L3 to terminals U1, V1, W1 (in alphabetical or natural order) always results in clockwise rotation when viewed facing the drive side

- see Fig. 11
- see Tab. 1 – IEC 60034-8


### 7.7 Change of direction of rotation

The motors are suitable for both directions of rotation.

- With direct activation and pole changing motors with separate windings, the direction of rotation can be reversed by interchanging any mains conductor on the motor terminal board.
- For motors with star/delta starting and pole changing motors with Dahlander circuit, swap 2 mains conductors on the motor switch power supply.

## 8 Commissioning

### *Safety*

-  **DANGER! Risk of fatal injury.**  
Failure to install motor safety devices can cause electrical shock or contact with rotating parts, potentially resulting in life-threatening injuries.
- Before commissioning as well as after maintenance work, all removed safety devices such as module covers and fan covers must be reinstalled.
  - Keep a safe distance during commissioning.


*Preparation* Before commissioning, motor and module must be at the ambient temperature.


## 9 Maintenance

### *Safety*

**Have maintenance and repair work carried out by qualified personnel only.**

Have the motor serviced and checked by Wilo customer service only.

-  **DANGER! Risk of fatal injury.**  
There is a risk of fatal injury from electric shock when working on electrical devices.
- Work on electrical devices may only be carried out by electricians approved by the local electricity supplier.
  - Before working on electrical devices, switch them off so that they are voltage-free and secure against reactivation.
  - Any damage to the motor connection cable should be rectified by a qualified electrician only.
  - Never use an object to poke around the module openings and never insert anything into the motor.

-  **DANGER! Risk of fatal injury.**  
The motor can be very heavy. Falling parts pose a risk of cuts, crush injuries, bruises or impacts, which can be fatal.
- See Chapter 3.2

### 9.1 Air supply

Check the air supply to the motor housing at regular intervals.  
Remove dirt in order to allow the motor to cool sufficiently.

## 10 Faults, causes and remedies

Have faults remedied by qualified personnel only!  
Some faults may be remedied by Wilo customer service only.  
These are identified in the following fault table. see Tab. 8.1  
Follow the safety instructions in Chapter 9.

- If the malfunction cannot be rectified, consult a specialist technician or the nearest customer service centre or representative office.

### 10.1 Mechanical faults


Faults		Possible causes	Remedy	Wilo customer service	
Noises on the bearing	Turbulent motor running				
X	X	Faulty bearing	Replace bearing	X	
X	X	Bearing forces too high	Check load		
X	X	Coupling forces push or pull on shaft end	Mount motor accurately/correct coupling		
X	X	Incorrect motor installation	Check motor construction		
	X	Imbalance caused by coupling	More exact balancing		
Faults				Possible causes	Remedy
Motor does not start	Motor too hot	Speed fluctuations	Protective device trips		
X		X	X	Counter torque too high	Check motor/load torque
X	X	X	X	Incorrect connection	Observe circuit diagram and rating plate
	X	X	X	Overload	Observe rating plate specifications
X		X		Mains voltage too low	Check mains conditions
X		X	X	Phase interruption	Check connection network
	X			Inadequate aeration	Check cooling air channels/direction of rotation
	X			Contaminated aeration channels	Clean fan cover/motor
			X	Turn fault, phase leakage, earth fault	Dry motor if necessary, measure turning resistances measure insulation resistances

Tab. 8.1 Possible faults

## 11 Spare parts

Spare parts may be ordered via a local specialist and/or Wilo customer service.

To avoid queries and incorrect orders, all data from the rating plate must be specified with every order.

 **CAUTION! Risk of property damage.**  
**Trouble-free motor function can be guaranteed only where genuine spare parts are used.**

• **Use only genuine Wilo spare parts.**  
**Information to be provided when ordering spare parts:**


- **All data from the motor rating plate**

 **NOTE**

For a list of genuine spare parts, see the Wilo spare parts documentation.

- [www.wilo-motors.com](http://www.wilo-motors.com)

## 12 Disposal

 **CAUTION! Risk of property damage.**  
**Proper disposal and recycling of this product prevents damage to the environment and risks to personal health**



 **NOTE**

The product or any of its parts must not be disposed of with household waste

For further information on recycling, visit

<http://www.wilo.com/recycling/>

### **12.1 RoHS**

The product fulfils the requirements of guideline 2011/65/EU (RoHS guideline) in its currently valid version.

### **12.2 REACH**

Due to information obligations according to article 33 of EC regulation no. 1907/2006, we wish to declare that the insulation materials used, which contain Nomex®, exceed in very few cases the limit value for the DMAc (N,N-Dimethylacetamide) listed in the SVHC list. See extract from the supplier declaration on this topic. Furthermore, the manufacturer of this material is confident that it poses no risk to human health and the environment. No substitution option for this substance exists at this time.

If additional relevant materials are included in the candidate list and we are made aware of its use by our suppliers, these shall be substituted or we will fulfil our information obligation.

**Subject to change without prior notice.**

## 13 Declaration of conformity

**EU/EG KONFORMITÄTSERKLÄRUNG  
EU/EC DECLARATION OF CONFORMITY  
DECLARATION DE CONFORMITE UE/CE**

Als Hersteller erklären wir unter unserer alleinigen Verantwortung, dass die Elektromotortypen der Baureihe  
*We, manufacturer, declare under our sole responsibility that the electric motor types of the series*  
*Nous, fabricant, déclarons sous notre seule responsabilité que les types de moteurs électriques de la série*

**3~ Induction Motor  
(Built-in motor 3-Phases)**

*(Die Seriennummer ist auf dem Typenschild des Produktes angegeben / The serial number is marked on the product site plate / Le numéro de série est inscrit sur la plaque signalétique du produit)*

mit den folgenden Bezeichnungen /with the following designations /avec les désignations suivantes :

**W071050-2-...**

bis /up to /jusqu'à

**W132270-2-...**

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entsprechen :

*In their delivered state comply with the following relevant directives :*

*dans leur état de livraison sont conformes aux dispositions des directives suivantes :*

– **Niederspannungsrichtlinie 2014/35/EU**

– **Low voltage 2014/35/EU**

– **Basse tension 2014/35/UE**

– **Richtlinie energieverbrauchsrelevanter Produkte 2009/125/EG**

– **Energy-related products 2009/125/EC**

– **Produits liés à l'énergie 2009/125/CE**

*Nach den Okodesign-Anforderungen der Verordnung 640/2009 für Ausführungen mit einem einstufigen Dreiphasen - 50Hz - Käfigläufer - Induktionselektromotor, der Verordnung 4/2014 "Geänderte*

*This applies according to eco-design requirements of the regulation 640/2009 to the versions with an induction electric motor, squirrel cage, three-phase, single speed, running at 50Hz, amended by Regulation 4/2014 "*

*suivant les exigences d'éco-conception du règlement 640/2009 aux versions comportant un moteur électrique à induction à cage d'écureuil, triphasé, mono-vitesse, fonctionnant à 50Hz, amendé par le règlement 4/2014"*

– **Beschränkung der Verwendung bestimmter gefährlicher Stoffe-Richtlinie 2011/65/EU**

– **Restriction of the use of certain hazardous substances 2011/65/EU**

– **Limitation de l'utilisation de certaines substances dangereuses 2011/65/UE**

und entsprechender nationaler Gesetzgebung,

*and with the relevant national legislation,*

*et aux législations nationales les transposant,*

sowie auch den Bestimmungen zu folgenden harmonisierten europäischen Normen :

*comply also with the following relevant harmonized European standards :*

*sont également conformes aux dispositions des normes européennes harmonisées suivantes :*

**EN 60034-1**

**EN 60034-30-1**

Dortmund,

Digital

unterschieden von

Holger Herchenhein

Datum: 2017.01.09

11:43:54 +01'00'

**H. HERCHENHEIN  
Senior Vice President - Group ITQ**

**WILO SE  
Nortkirchenstraße 100  
44263 Dortmund - Germany**

N°2156049.01 (CE-A-S n°2187650)



<p align="center"><b>(BG) - Български език</b> <b>ДЕКЛАРАЦИЯ ЗА СЪОТЕТСТВИЕ ЕО</b></p> <p>WILO SE декларира, че продуктите посочени в настоящата декларация съответстват на разпоредбите на следните европейски директиви и приелите ги национални законодателства:</p> <p>Ниско Напрежение 2014/35/ЕО ; Продукти, свързани с енергопотреблението 2009/125/ЕО ; Ограничение на употребата на определени опасни вещества 2011/65/ЕО</p> <p>както и на хармонизираните европейски стандарти, упоменати на предишната страница.</p>	<p align="center"><b>(CS) - Čeština</b> <b>ES PROHLÁŠENÍ O SHODĚ</b></p> <p>WILO SE prohlašuje, že výrobky uvedené v tomto prohlášení odpovídají ustanovením níže uvedených evropských směrnic a národním právním předpisům, které je přejímají:</p> <p>Nízké Napětí 2014/35/ES ; Výrobků spojených se spotřebou energie 2009/125/ES ; Omezení používání určitých nebezpečných látek 2011/65/EU</p> <p>a rovněž splňují požadavky harmonizovaných evropských norem uvedených na předcházející stránce.</p>
<p align="center"><b>(DA) - Dansk</b> <b>EF-OVERENSSTEMMELSESERKLÆRING</b></p> <p>WILO SE erklærer, at produkterne, som beskrives i denne erklæring, er i overensstemmelse med bestemmelserne i følgende europæiske direktiver, samt de nationale lovgivninger, der gennemfører dem:</p> <p>Lavspændings 2014/35/EF ; Energirelaterede produkter 2009/125/EF ; Begrænsning af anvendelsen af visse farlige stoffer 2011/65/EU</p> <p>De er ligeledes i overensstemmelse med de harmoniserede europæiske standarder, der er anført på forrige side.</p>	<p align="center"><b>(EL) - Ελληνικά</b> <b>ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΚ</b></p> <p>WILO SE δηλώνει ότι τα προϊόντα που ορίζονται στην παρούσα ευρωπαϊκά δηλωσή είναι σύμφωνα με τις διατάξεις των παρακάτω οδηγιών και τις εθνικές νομοθεσίες στις οποίες έχει μεταφερθεί:</p> <p>Χαμηλής Τάσης 2014/35/ΕΚ ; Συνδεδεμένα με την ενέργεια προϊόντα 2009/125/ΕΚ ; Περιορισμός της χρήσης ορισμένων επικίνδυνων ουσιών 2011/65/ΕΕ</p> <p>και επίσης με τα εξής εναρμονισμένα ευρωπαϊκά πρότυπα που αναφέρονται στην προηγούμενη σελίδα.</p>
<p align="center"><b>(ES) - Español</b> <b>DECLARACIÓN CE DE CONFORMIDAD</b></p> <p>WILO SE declara que los productos citados en la presenta declaración están conformes con las disposiciones de las siguientes directivas europeas y con las legislaciones nacionales que les son aplicables :</p> <p>Baja Tensión 2014/35/CE ; Productos relacionados con la energía 2009/125/CE ; Restricción del uso de ciertas sustancias peligrosas 2011/65/UE</p> <p>Y igualmente están conformes con las disposiciones de las normas europeas armonizadas citadas en la página anterior.</p>	<p align="center"><b>(ET) - Eesti keel</b> <b>EÜ VASTAVUSDEKLARATSIOONI</b></p> <p>WILO SE kinnitab, et selles vastavustunnistuses kirjeldatud tooted on kooskõlas alljärgnevale Euroopa direktiivide sätetega ning riiklike seadusandlustega, mis nimetatud direktiivid üle on võtnud:</p> <p>Madalpingeseadmed 2014/35/EÜ ; Energiamõjuga toodete 2009/125/EÜ ; Kasutamise piiramine teatavate ohtlike ainete 2011/65/EL</p> <p>Samuti on tooted kooskõlas eelmisel leheküljel ära toodud harmoneeritud Euroopa standarditega.</p>
<p align="center"><b>(FI) - Suomen kieli</b> <b>EY-VAATIMUSTENMUKAISUUSVAKUUTUS</b></p> <p>WILO SE vakuuttaa, että tässä vakuutuksessa kuvutat tuotteet ovat seuraavien eurooppalaisten direktiivien määräysten sekä niihin sovellettavien kansallisten lakiasetusten mukaisia:</p> <p>Matala Jännite 2014/35/EY ; Energiaan liittyvien tuotteiden 2009/125/EY ; Käytön rajoittaminen tiettyjen vaarallisten aineiden 2011/65/EU</p> <p>Lisäksi ne ovat seuraavien edellisellä sivulla mainittujen yhdenmukaistettujen eurooppalaisten normien mukaisia.</p>	<p align="center"><b>(GA) - Gaeilge</b> <b>EC DEARBHÚ GOMHLÍONTA</b></p> <p>WILO SE ndearbhaíonn an cur síos ar na táirgí atá i ráiteas seo, siad i gcomhréir leis na forálacha atá sna treoracha seo a leanas na hEorpa agus leis na dlíthe náisiúnta is infheidhme orthu:</p> <p>Ísealvoltais 2014/35/EC ; Fuinneamh a bhaineann le táirgí 2009/125/EC ; Srian ar an úsáid a bhaint as substaintí guaiseacha acu 2011/65/EU</p> <p>Agus siad i gcomhréir le forálacha na caighdeáin chomhchuíbhithe na hEorpa dá dtagraítear sa leathanach roimhe seo.</p>
<p align="center"><b>(HR) - Hrvatski</b> <b>EZ IZJAVA O SUKLADNOSTI</b></p> <p>WILO SE izjavlja da su proizvodi navedeni u ovoj izjavi u skladu sa sljedećim prihvaćenim europskim direktivama i nacionalnim zakonima:</p> <p>Smjernica o niskom naponu 2014/35/EZ ; Smjernica za proizvodne relevantne u pogledu potrošnje energije 2009/125/EZ ; Ograničenju uporabe određenih opasnih tvari 2011/65/EU</p> <p>i usklađenim europskim normama navedenim na prethodnoj stranici.</p>	<p align="center"><b>(HU) - Magyar</b> <b>EK-MEGFELELŐSÉGI NYILATKOZAT</b></p> <p>WILO SE kijelenti, hogy a jelen megfelelőségi nyilatkozatban megjelölt termékek megfelelnek a következő európai irányelvek előírásainak, valamint azok nemzeti jogrendbe átültetett rendelkezéseinek:</p> <p>Alacsony Feszültségű 2014/35/EK ; Energiával kapcsolatos termékek 2009/125/EK ; Korlátozása az egyes veszélyes anyagok 2011/65/EU</p> <p>valamint az előző oldalon szereplő, harmonizált európai szabványoknak.</p>
<p align="center"><b>(IS) - Íslenska</b> <b>EB LEYFISYFIRLÝSING</b></p> <p>WILO SE lýsir því yfir að vörurnar sem um getur í þessari yfirlýsingu eru í samræmi við eftirfarandi tilskipunum ESB og landslögum hafa samþykkt:</p> <p>Lágspennutilskipun 2014/35/EB ; Tilskipun varðandi vörur tengdar orkunotkun 2009/125/EB ; Takmörkun á notkun tiltekinna hættulegra efna 2011/65/EU</p> <p>og samhæfða evrópska staðla sem nefnd eru í fyrri síðu.</p>	<p align="center"><b>(IT) - Italiano</b> <b>DICHIARAZIONE CE DI CONFORMITÀ</b></p> <p>WILO SE dichiara che i prodotti descritti nella presente dichiarazione sono conformi alle disposizioni delle seguenti direttive europee nonché alle legislazioni nazionali che le traspongono :</p> <p>Bassa Tensione 2014/35/CE ; Prodotti connessi all'energia 2009/125/CE ; Restrizione dell'uso di determinate sostanze pericolose 2011/65/UE</p> <p>E sono pure conformi alle disposizioni delle norme europee armonizzate citate a pagina precedente.</p>
<p align="center"><b>(LT) - Lietuvių kalba</b> <b>EB ATITIKTIES DEKLARACIJA</b></p> <p>WILO SE pareiškia, kad šioje deklaracijoje nurodyti gaminiai atitinka šių Europos direktyvų ir jas perkeliančių nacionalinių įstatymų nuostatus:</p> <p>Žema įtampa 2014/35/EB ; Energija susijusiems gaminiams 2009/125/EB ; Apribojimų dėl tam tikrų pavojingų medžiagų naudojimo 2011/65/EU</p> <p>ir taip pat harmonizuotas Europas normas, kurios buvo cituotos ankstesniame puslapyje.</p>	<p align="center"><b>(LV) - Latviešu valoda</b> <b>EK ATBILSTĪBAS DEKLARĀCIJU</b></p> <p>WILO SEdeklarē, ka izstrādājumi, kas ir nosaukti šajā deklarācijā, atbilst šeit uzskaitīto Eiropas direktīvu nosacījumiem, kā arī atsevišķu valstu likumiem, kuros tie ir ietverti:</p> <p>Zemsprieguma 2014/35/EK ; Energiju saistītiem ražojumiem 2009/125/EK ; Izmantošanas ierobežošanu dažū bīstamu vielu 2011/65/EU</p> <p>un saskaņotajiem Eiropas standartiem, kas minēti iepriekšējā lappusē.</p>



<p align="center"><b>(MT) - Malti</b> <b>DIKJARAZZJONI KE TA' KONFORMITÀ</b></p> <p>WILO SE jiddikjara li l-prodotti speċifikati f'din id-dikjarazzjoni huma konformi mad-direttivi Ewropej li jsegwu u mal-leġislazzjonijiet nazzjonali li japplikawhom:</p> <p>Vultaġġ Baxx 2014/35/KE ; Prodotti relatati mal-enerġija 2009/125/KE ; Restrizzjoni tal-użu ta 'ċerti sustanzi perikolużi 2011/65/UE</p> <p>kif ukoll man-normi Ewropej armonizzati li jsegwu imsemmija fil-paġna preċedenti.</p>	<p align="center"><b>(NL) - Nederlands</b> <b>EG-VERKLARING VAN OVEREENSTEMMING</b></p> <p>WILO SE verklaart dat de in deze verklaring vermelde producten voldoen aan de bepalingen van de volgende Europese richtlijnen evenals aan de nationale wetgevingen waarin deze bepalingen zijn overgenomen:</p> <p>Laagspannings 2014/35/EG ; Energiegerelateerde producten 2009/125/EG ; Bepanking van het gebruik van bepaalde gevaarlijke stoffen 2011/65/EU</p> <p>De producten voldoen eveneens aan de geharmoniseerde Europese normen die op de vorige pagina worden genoemd.</p>
<p align="center"><b>(NO) - Norsk</b> <b>EU-OVERENSSTEMMELSESERKLAERING</b></p> <p>WILO SE erklærer at produktene nevnt i denne erklæringen er i samsvar med følgende europeiske direktiver og nasjonale lover:</p> <p>EG-Lavspenningsdirektiv 2014/35/EG ; Direktiv energirelaterte produkter 2009/125/EF ; Begrensning av bruk av visse farlige stoffer 2011/65/EU</p> <p>og harmoniserte europeiske standarder nevnt på forrige side.</p>	<p align="center"><b>(PL) - Polski</b> <b>DEKLARACJA ZGODNOŚCI WE</b></p> <p>WILO SE oświadcza, że produkty wymienione w niniejszej deklaracji są zgodne z postanowieniami następujących dyrektyw europejskich i transponującymi je przepisami prawa krajowego:</p> <p>Niskich Napięć 2014/35/WE ; Produktów związanych z energią 2009/125/WE ; Ograniczenie stosowania niektórych niebezpiecznych substancji 2011/65/EU</p> <p>oraz z następującymi normami europejskich zharmonizowanymi podanymi na poprzedniej stronie.</p>
<p align="center"><b>(PT) - Português</b> <b>DECLARAÇÃO CE DE CONFORMIDADE</b></p> <p>WILO SE declara que os materiais designados na presente declaração obedecem às disposições das diretivas europeias e às legislações nacionais que as transcrevem :</p> <p>Baixa Voltagem 2014/35/CE ; Produtos relacionados com o consumo de energia 2009/125/CE ; Restrição do uso de determinadas substâncias perigosas 2011/65/UE</p> <p>E obedecem também às normas europeias harmonizadas citadas na página precedente.</p>	<p align="center"><b>(RO) - Română</b> <b>DECLARAȚIE DE CONFORMITATE CE</b></p> <p>WILO SE declară că produsele citate în prezenta declarație sunt conforme cu dispozițiile directivelor europene următoare și cu legislațiile naționale care le transpun :</p> <p>Joasă Tensiune 2014/35/CE ; Produselor cu impact energetic 2009/125/CE ; Restricțiile de utilizare a anumitor substanțe periculoase 2011/65/UE</p> <p>și, de asemenea, sunt conforme cu normele europene armonizate citate în pagina precedentă.</p>
<p align="center"><b>(RU) - русский язык</b> <b>Декларация о соответствии Европейским нормам</b></p> <p>WILO SE заявляет, что продукты, перечисленные в данной декларации о соответствии, отвечают следующим европейским директивам и национальным предписаниям:</p> <p>Директива ЕС по низковольтному оборудованию 2014/35/ЕС ; Директива о продукции, связанной с энергопотреблением 2009/125/ЕС ; Ограничение использования некоторых опасных веществ 2011/65/ЕУ</p> <p>и гармонизированным европейским стандартам, упомянутым на предыдущей странице.</p>	<p align="center"><b>(SK) - Slovenčina</b> <b>ES VYHLÁSENIE O ZHODE</b></p> <p>WILO SE čestne prehlasuje, že výrobky ktoré sú predmetom tejto deklarácie, sú v súlade s požiadavkami nasledujúcich európskych direktív a odpovedajúcich národných legislatívnych predpisov:</p> <p>Nízkonapäťové zariadenia 2014/35/ES ; Energeticky významných výrobkov 2009/125/ES ; Obmedzenie používania určitých nebezpečných látok 2011/65/EÚ</p> <p>ako aj s harmonizovanými európskymi normami uvedenými na predchádzajúcej strane.</p>
<p align="center"><b>(SL) - Slovenščina</b> <b>ES-IZJAVA O SKLADNOSTI</b></p> <p>WILO SE izjavlja, da so izdelki, navedeni v tej izjavi, v skladu z določili naslednjih evropskih direktiv in z nacionalnimi zakonodajami, ki jih vsebujejo:</p> <p>Nizka Napetost 2014/35/ES ; Izdelkov, povezanih z energijo 2009/125/ES ; O omejevanju uporabe nekaterih nevarnih snovi 2011/65/EU</p> <p>pa tudi v usklajenimi evropskih standardi, navedenimi na prejšnji strani.</p>	<p align="center"><b>(SV) - Svenska</b> <b>EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE</b></p> <p>WILO SE intygar att materialet som beskrivs i följande intyg överensstämmer med bestämmelserna i följande europeiska direktiv och nationella lagstiftningar som inför dem:</p> <p>Lågspännings 2014/35/EG ; Energi-relaterade produkter 2009/125/EG ; Begränsning av användningen av vissa farliga ämnen 2011/65/EU</p> <p>Det överensstämmer även med följande harmoniserade europeiska standarder som nämnts på den föregående sidan.</p>
<p align="center"><b>(TR) - Türkçe</b> <b>CE UYGUNLUK TEYID BELGESİ</b></p> <p>WILO SEbu belgede belirtilen ürünlerin aşağıdaki Avrupa yönetmeliklerine ve ulusal kanunlara uygun olduğunu beyan etmektedir:</p> <p>Alçak Gerilim Yönetmeliği 2014/35/AT ; Eko Tasarım Yönetmeliği 2009/125/AT ; Belirli tehlikeli maddelerin 2011/65/EU bir kullanımını sınırlandırılan</p> <p>ve önceki sayfada belirtilen uyumlaştırılmış Avrupa standartlarına.</p>	

## 14 Addresses - Wilo – International (Subsidiaries)

<p><b>Argentina</b> WILO SALMSON Argentina S.A. C1295ABI Ciudad Autónoma de Buenos Aires T +54 11 4361 5929 carlos.musich@wilo.com.ar</p>	<p><b>Denmark</b> WILO Danmark A/S 2690 Karlslunde T +45 70 253312 wilo@wilo.dk</p>	<p><b>Lebanon</b> WILO LEBANON SARL Jdeideh 1202 2030 Lebanon T +961 1 888910 info@wilo.com.lb</p>	<p><b>Spain</b> WILO Ibérica S.A. 8806 Alcalá de Henares (Madrid) T +34 91 8797100 wilo.iberica@wilo.es</p>
<p><b>Australia</b> WILO Australia Pty Limited Murrarie, Queensland, 4172 T +61 7 3907 6900 chris.dayton@wilo.com.au</p>	<p><b>Estonia</b> WILO Eesti OÜ 12618 Tallinn T +372 6 509780 info@wilo.ee</p>	<p><b>Lithuania</b> WILO Lietuva UAB 03202 Vilnius T +370 5 2136495 mail@wilo.lt</p> <p><b>Morocco</b> WILO Maroc SARL 20250 Casablanca T +212 (0) 5 22 66 09 24 contact@wilo.ma</p>	<p><b>Sweden</b> WILO NORDIC AB 35033 Växjö T +46 470 727600 wilo@wilo.se</p>
<p><b>Austria</b> WILO Pumpen Österreich GmbH 2351 Wiener Neudorf T +43 507 507-0 office@wilo.at</p>	<p><b>Finland</b> WILO Finland OY 02330 Espoo T +358 207401540 wilo@wilo.fi</p>	<p><b>The Netherlands</b> WILO Nederland B.V. 1551 NA Westzaan T +31 88 9456 000 info@wilo.nl</p>	<p><b>Switzerland</b> Wilo Schweiz AG 4310 Rheinfelden T +41 61 836 80 20 info@wilo.ch</p>
<p><b>Azerbaijan</b> WILO Caspian LLC 1065 Baku T +994 12 5962372 info@wilo.az</p>	<p><b>France</b> Wilo Salmson France S.A.S. 53005 Laval Cedex T +33 2435 95400 info@wilo.fr</p>	<p><b>Norway</b> WILO Norge AS 0975 Oslo T +47 22 804570 wilo@wilo.no</p>	<p><b>Taiwan</b> WILO Taiwan CO., Ltd. 24159 New Taipei City T +886 2 2999 8676 nelson.wu@wilo.com.tw</p>
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