Operating Instructions

for

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AXV / AXG / BXV / RXV
Axial Fans
1 General safety notes

1.1 The operator’s duty of care

The fans of the AXV and BXV series have been constructed and built whilst taking into account an analysis of the hazards involved, and after careful selection of the harmonised standards to be observed, as well as other further technical specifications. They thus correspond to the current level of technology and guarantee a high degree of safety.

In operational practice, however, this level of safety can only then be attained if all required measures are taken. It is incumbent upon the operator’s duty of care to plan these measures and to monitor their execution.

In particular, the operator must ensure that
- the fan is only used as stipulated (cf. chapter, „Product Description“)
- the fan is only operated in a faultless and functional condition and that safety fittings, especially, are regularly examined with respect to their functionality
- the operating instructions are always maintained in a readable condition and are available at the fan’s location of deployment in their entirety
- only sufficiently qualified and authorised personnel operate, maintain and repair the machine
- these members of personnel are familiar with the operating instructions and especially the safety notes contained therein
- no safety and warning signs fitted to the fan are removed, and that they are kept in a readable condition.

1.2 Explanation of the safety symbols used

The following symbols are used in these operating instructions. These symbols are, above all, intended to draw the reader’s attention to the text contained in the adjacent safety note.

- **Warning**
  This symbol indicates that dangers exist which are hazardous to life and health

- **Mortal danger**
  Electrical hazard. Serious – and also fatal – injury can result if these notes are disregarded.

- **Note**
  Indicates user tips and other useful advice.

1.3 Basic safety measures

Wolter axial fans are, at the moment of delivery, manufactured to the current level of technology.

Extensive materials, function and quality checks assure them of a high level of usefulness and long service life. Nevertheless, these machines can be dangerous if they are improperly used by untrained personnel or are used in a non-stipulated manner.

- Read these operating instructions carefully before putting the axial fans into operation!
- Only operate the fan in its enclosed state or with properly assembled protective anti-intrusion fittings, or with protective screens. (We can supply suitable, tested protective screens on request!)
Assembly, electrical connection and maintenance may only be carried out by trained craftsmen!

Only operate the fan in the manner stipulated and within the specified output limits (see rating plate) and with approved conveyed media!

1.4 Particular kinds of hazards

The fans of the AXV and BXV series are axial fans. Particular hazards are caused by the rotor and through the flow of air, which can, at times, be considerable. For this reason, the following points must be observed:

- Never reach into the rotor when it is rotating. Do not try to use your hand as a brake for the rotor during maintenance work.
- Loose clothing or light parts can be sucked in by the draught of air. That is why you should always wear tight-fitting clothing during maintenance work and during free-suction operation.
- Larger items (tools etc.) can obstruct or totally ruin the rotor. For this reason you should always fit a protective screen during free-suction or free-blowing operation.

2 Product description

2.1 Stipulated usage

Our axial fans have been specially developed for use in modern ventilation and air conditioning systems. The rotors are statically and dynamically balanced at the factory, and manufacture is subject to the strictest intermediate and end checks and is certified in accordance with DIN/EN/ISO 9001.

Conditions of use

The air should correspond to tender specifications, as the corresponding components are determined for this. If these are not listed in more detail, then the following applies:

The axial fans of the AXV and BXV series are suitable for the conveyance of

- clean air
- air which has little dust and grease content
- gases and vapours which are only slightly aggressive in nature
- media up to a maximum density of 1.3 kg/m³
- flow volumes at temperatures ranging from -20 °C to + 40 °C
- media up to a max. humidity of 95%

High temperature executions for F300 or F400 are also suitable to convey smoke gases of the respective temperature class.

Conditions of fitting

- The fan must either be built into a ducting channel or have inlet and outlet protection elements fitted to it.

The fans are not designated for any types of usage other than those cited here, and any such use shall be considered as improper usage!

- In particular, we especially draw your attention to the following points. Non-compliance can either result in considerable material damage or personal injury, or that the demanded fan output values are not attained.
- The fan may not be operated without the necessary safety fittings. Should there be no ducting channel connected at one end, e.g. the suction end, then a protective screen must be fitted at that end in order to prevent access to rotating parts.
- In order to avoid any damage to the fan and specially to the rotor vanes, you must prevent the possibility of loose parts being sucked in by the fan or of other items being able to find their way into the fan.
- The fitting notes regarding intake and outlet flow conditions are to be observed.
2.2 Construction

The axial fan consists of the following main parts:

(1) Ducting piece as fan housing
(2) Rotor mounted onto the motor shaft
(3) Motor support in the form of struts or bracket
(4) Electric motor

According to the particular use the fan is put to, the following parts may also be included:

(5) An intake nozzle complete with suction protective screen for free-suction operation
(6) An outflow protective screen for free-blow operation
(7) Flexi-connectors are obtainable to prevent de-coupling through vibration
(8) Vibration dampers (spring or rubber vibration dampers according to the weight of the unit)
(9) Counter flange
(10) Fan switch-off facility
(11) Assembly base supports

In normal circumstances the fan is built into a ducting system. It can, however, be integrated into a box in order to suppress noise, which is then built into the ducting system.

The rotors, made from plastic or aluminium, have fins which can be adjusted when the fan is not running. The fan’s characteristic curve can be adapted the required operational point by this means (take note of the motor’s loading specification!)

2.3 Functional description

The fan draws air from the ducting on the suction side through the rotating rotor and conveys this air in the axial direction to the outflow side via the motor. The motor is positioned in the air flow and is cooled by the flow.

Control and regulation of the system is carried out by an external control unit. This does not form part of the fan itself. The corresponding operating instructions are to be consulted with regard to the control unit’s operation. The fan itself requires no operation when it is running.
2.4 Technical data

<table>
<thead>
<tr>
<th>Nominal size</th>
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<th>Di [mm]</th>
<th>hF [mm]</th>
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<tr>
<td>1600</td>
<td>4</td>
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</table>
3 Transportation and Storage

3.1 Transportation
Wolter fans are packed at the factory to suit the respectively agreed mode of transportation.
Transport the fan in its original packaging.
- Only use suitable means of transport, such as pallet trucks or fork-lift trucks.
- If the fan is to be transported by hand, ensure that supporting and carrying loads are kept within reasonable limits for the personnel involved.

⚠️ The following special hazards must be taken into account when transporting the equipment:
- The transportation packaging does not prevent damage to the equipment through improper transportation. The fans must not be dropped or thrown.
- Sharp, protruding edges can lead to injury through cuts.
  - Suspended loads can fall, which then constitutes a fatal hazard – stand well clear of suspended loads!
- Parts which have been stacked too high can collapse.
- If load-carrying devices other than those specified here are used, then this can lead to serious damage to the machine.
- A risk of fire exists due to the easily flammable nature of the packaging materials – do not use naked flames and do not smoke!
- Read the chapter, „General Safety Notes“.

3.2 Storage
- Store the fan in a dry, weather-protected location in its original packaging or protect it from the effects of dirt and the weather until final assembly. Cover open pallets with tarpaulin sheets and protect the fans from the effects of dirt and contaminants (e.g. swarf, stones, wire etc.)
- Avoid extremes of cold and heat.
- Avoid lengthy storage periods (a maximum of one year is recommended) and check that the motor bearing assembly is in good functional order prior to fitting.

3.3 Dimensions
See chapter „Technical Data“
4 Assembly

Assembly and electrical work is only to be carried out by trained and instructed craftsmen and in accordance with the respectively applicable regulations!

The following points are to be observed when assembling the fan:

- Secure the fan to the assembly base plates.
- The fans must not be deformed or twisted during fitting! Use spacing plates if the need arises.
- The fitting position agreed in the lay-out is to be observed.
- Only self-locking screws may be used for securing the outflow flange!

Attention: Make the electrical connection in accordance with the technical connection conditions and the relevant regulations!

- Make the electrical connection as per the enclosed terminal plan in the motor connection cabinet or terminal cabinet housing.
- The operator must ensure that a motor protection device (e.g., motor protection switch), which is suitable for the motor duty as shown on the motor rating plate, is used and correctly connected.
- Control by frequency inverter is only permissible when the motor is equipped with thermistors. The fan may not be operated at less than 30% of the nominal rpm of the motor for a prolonged period of time.
- If present, connect the thermistor / thermo-contact for motor protection to a suitable trigger device; failure to do so will void the warranty.

High temperature fans F300/F400 with thermistors:

- The control panel/trigger device to which the thermistors are connected must be programmed to bypass the thermistors in case of fire, as otherwise the motors would shut off prematurely, eliminating their intended function as a smoke removal device!
- When operated on a frequency converter, the fans must be switched to direct mains operation in case of fire.

- Feed in and seal the cable into the connection cabinet properly.

Before checking the direction of travel:

- Remove foreign bodies from the fan area.
- Assemble contact protector, protective screen (see accessories), or box in fan.
- Turn the rotor through a few revolutions by hand in order to test its ease of movement.
- Check the direction of travel in accordance with the arrow on the housing by switching on and off very quickly.
- If necessary, alter the direction of travel for AC motors by swapping 2 phases.
- In the case of single-phase motors, reverse the direction of travel by swapping Z1 with Z2 (attention: the direction of current flow in the auxiliary winding also changes).
4.1 Common errors which occur during assembly

The following points must always be observed in order to achieve the desired duty and efficiency and to guarantee the fan’s safe operation.

4.1.1 Inlet

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
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<tbody>
<tr>
<td>![Incorrect]</td>
<td>![Correct]</td>
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</table>

**Incorrect**: No intake nozzle – Result: The vane edges are not in the air flow, the air output is reduced, noise output becomes greater. This can cause permanent damage to the rotor blades.

**Recommended**: The intake nozzle enables an even flow to be achieved over the whole cross-sectional area.

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
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<tbody>
<tr>
<td>![Incorrect]</td>
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</table>

**Incorrect**: The fan output is reduced if an obstacle is situated too close to the intake

**Recommended**: The distance must be at least as great as the fan diameter

4.1.2 Outlet

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
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<tbody>
<tr>
<td>![Incorrect]</td>
<td>![Correct]</td>
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</tbody>
</table>

**Incorrect**: Any blockage of the outflow must be prevented

**Recommended**: The distance must at least be as great as the fan diameter
### 4.1.3 Bends

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
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<tr>
<td><img src="image1" alt="Incorrect Bend Diagram" /></td>
<td><img src="image2" alt="Correct Quadratic Channel Corner Diagram" /></td>
</tr>
</tbody>
</table>

**Incorrect**: Bends with a small radius of curvature reduce fan output and increase noise levels if fitted too close in front of the vane.

**Recommended**: A quadratic channel corner with short guide vanes is preferred.

### 4.1.4 Changes in cross-sectional area

<table>
<thead>
<tr>
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<th>Correct</th>
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<tr>
<td><img src="image3" alt="Incorrect Diffuser Angle Diagram" /></td>
<td><img src="image4" alt="Correct Diffuser Angle Diagram" /></td>
</tr>
</tbody>
</table>

**Incorrect**: Diffusers or nozzles having an angle greater than 30° should not be used.

**Recommended**: If possible the angle should be less than 15°.

### 4.1.5 Flexible connections

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Incorrect Flexible Connections Diagram" /></td>
<td><img src="image6" alt="Correct Flexible Connections Diagram" /></td>
</tr>
</tbody>
</table>

**Incorrect**: Loose, flexible connections in front of the fan obstruct the available cross-sectional area, fan output is reduced and noise levels increase.

**Recommended**: Flexible connections should be tensioned to such a point that they only permit the movement required for insulation.
5 Initial Start-up

The following points are to be observed in order to avoid damage to the machinery or life-threatening injury during initial start-up:

- Only qualified personnel may carry out the machine's initial start-up and this must take place in compliance with the safety notes.
- Prior to initial start-up, check that all tools and foreign bodies have been removed from the machine.
- Activate all safety devices and Emergency Stop switches prior to initial start-up.
- Check the motor's direction of travel prior to initial start-up.
- Read the chapter, "General Safety Notes".

5.1 Checks prior to initial start-up

Proceed with the fan's initial start-up in the following sequence:

- Check that the mechanical assembly has been carried out properly
- Remove foreign bodies located in the suction and outflow areas and in the fan space
  - Check that the electrical installation has been completed in accordance with regulations
  - Does the mains voltage match the motor voltage specified on the rating plate?
  - Is the switchgear used suitable for the motor both with respect to the switching functions to be carried out and also to the switching conditions and switched output of the motor?
- Is the motor protection system set correctly with regard to the motor's nominal current? The setting must be carried out in accordance with the corresponding details contained on the motor output plate.
- Has the motor been connected correctly in accordance with the wiring diagram?

Accident prevention

- Protective anti-intrusion fittings, protective screens (see accessories) mounted, fan boxed in or assembled out of reach.
- If the fan is assembled for free inlet, the inlet side must be covered by a protective guard, in order to comply with the accident prevention regulations regarding protection from contact.

5.2 Starting up the fan for the first time

Only put the fan into operation after it has been assembled in accordance with the regulations!

- Put the fan into operation.
- Monitor its correct function (quiet running, vibration, imbalance, power consumption, controllability)
- The thermo-protection system may be triggered if the motor power consumption is too high!

Always keep inlet openings clear! Check protective guards or protective anti-intrusion fittings for dirt, and clean if necessary!

5.3 Checks after initial start-up

Check the mechanical connections after initial start-up, especially the joints at the fan.
6 Help with Malfunctions

The following points must be observed in order to avoid damage to the machinery or life-threatening injury when eliminating machine malfunctions:

- Only eliminate any malfunction if you have the specified qualifications necessary for the task.
- First of all ensure that the machine cannot be switched on inadvertently, by locking the equipment’s off switch or control cabinet by means of a padlock.
- Secure the hazardous area with respect to moving machine parts.
- Read the chapter, “General Safety Notes”.

6.1 Tabular overview of possible malfunctions and aids in eliminating those malfunctions

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Elimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor or motor control system switches off</td>
<td>Motor too hot, thermo-contact activates.</td>
<td>Allow the motor to cool off. Depending upon the control equipment in use, the fan will either start itself up or will have to be re-started again. Check whether: - The conveyed medium is too hot - All phases are evenly loaded and connected - Operating point does not match the lay-out - Rotor blocked</td>
</tr>
<tr>
<td>Air output incorrect</td>
<td>Incorrect direction of travel of the fan</td>
<td>Change the direction of travel (see electrical assembly)</td>
</tr>
<tr>
<td>Fan assembled incorrectly</td>
<td>Either the rotor is incorrectly mounted on the motor shaft or the whole fan has been incorrectly fitted into the installation. Switch off the fan. Correct the incorrect assembly (rotor or complete fan).</td>
<td></td>
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<tr>
<td>Rotor blocked</td>
<td>Switch off the fan. Remove the blockage. Ensure that the accident prevention regulations are observed in the process.</td>
<td></td>
</tr>
<tr>
<td>Rotor defective</td>
<td>Switch off the fan. Dismantle the rotor and fit a new one.</td>
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</tr>
<tr>
<td>Lay-out does not match installation resistance</td>
<td>Clean or replace filters if dirty; In the event of an erroneous lay-out, the fan’s output can be altered by changing the vane angle within limits. In this case the shaft output must be checked for the required vane, so that the motor is not overloaded. The rotor should be re-balanced after any alteration to the vane angle.</td>
<td></td>
</tr>
<tr>
<td>Fan is labouring under load, air flow is periodically interrupted</td>
<td>Fan is operating within an unfavourable range of the fan curve (stall)</td>
<td>If possible, reduce the installation resistance. Operation in the stall area of the fan curve can cause severe damage to the fan.</td>
</tr>
</tbody>
</table>
7 Maintenance

The following safety notes must be observed when maintaining the machine – life-threatening injuries to personnel, damage to the machine and other material damage, as well as environmental damage, will be avoided in this way.
- Cleaning, lubrication and maintenance work may only be carried out by authorised operating personnel – operating instructions are to be observed.
- Repair work may only be carried out by authorised craftsmen – accident prevention regulations are to be observed.
- Secure the operational area over a large area prior to the commencement of maintenance work.
- The specified sequence of the working stages is to be observed exactly.
- All work on the machine’s electrical equipment may only basically be carried out by trained electricians.
- Self-locking screws and nuts are always to be renewed.
- All specified screw torque settings are to be observed precisely.
- Read the chapter, "General Safety Notes".

7.1 Servicing

The rotor and housing are subject to natural wear and tear through the action of dust, acidic and corrosive vapours, as well as the gases which are mixed into the conveyed flow. The type and concentration of the dust, as well as the gases and vapours, can lead to deposits, abrasion and corrosion at the rotor and housing. The materials can be attacked so much by this natural wear and tear that they can no longer stand up to the demands made of them. Deposits on the rotor, which have never been evenly distributed, lead to an imbalanced state and thus to noisy running, which in turn can result in damage to the motor bearing. Deposits in the housing lead to a narrowing of the available cross-sectional area or to a roughening of the housing panels and can thus have an unfavourable effect on the fan’s output data. Should the checks, the regularity of which depend on the conveyed media and other operating conditions which differ in each individual case, only reveal slight wear and tear, then the individual parts can be cleaned in good time, or replaced if necessary.

Prior to all servicing work:
- Bring the fan to a halt in the prescribed manner and completely isolate the fan from the mains supply!
- Wait until the rotor has come to a halt!
- Ensure that the machine cannot be switched on again!
- Clean the fan
- Clean the inlet area
- Clean the rotor (if necessary dismantle the protective anti-intrusion fitting)

Only use cleaning agents generally available through the trade and in compliance with the prescribed safety measures. Do not use scratching or scraping tools (protective surface coating will be damaged)
- Do not overload the motor!
- Do not bend the rotor or vanes!
- Assemble the protective anti-intrusion fitting
Recommended periodic inspection intervals

- Axial fans for standard temperature 40°C: 12 months
- High temperature axial fans F300 / F400, which are also used for regular daily ventilation: 6 months
- High temperature axial fans F300 / F400, which are used for emergency smoke removal only: 3 months

Periodic inspection checks

- Visual inspection of motor, impeller, accessories and electric connection for damages, dirt and dust deposits, foreign matter
- Fan performance as desired?
- Excessive bearing play?
- Lubricant leaking from the bearings?
- Unusual noise or vibration during operation?
7.2 Overhaul

Prior to all overhaul work:
- Bring the fan to a halt in the prescribed manner and completely isolate the fan from the mains supply!
- Wait for the rotor to come to a halt!
- Ensure that the machine cannot be switched on again!

Only use spare parts which have been tested and approved by us!

7.2.1 Dismantling the rotor

- Remove hub cover if fitted.
- Slacken off securing screw (Allen key), completely undo one grub screw and slacken off the tension cone using the forcing drilling.
- Pull off the impeller from the motor shaft (use puller tool if necessary)

7.2.2 Assembling the rotor

- Push the rotor onto the motor shaft
- Tighten both grub screws evenly, whilst observing the torque settings given in the adjacent table.
- Fit the hub cover if equipped

7.2.3 Impeller blade pitch angle

The blade pitch angle has been factory-adjusted to the optimum setting with a special tool. Do not attempt to change this factory setting, as this is unnecessary. Doing so can result in damage to the motor and impeller, will influence the performance of the fan, and will void the warranty.

In rare cases where the fan is operating at an unfavourable duty point (see 7.1), please contact Wolter for assistance.

7.2.4 Motor bearing service intervals

**Standard 40°C motors:**

The roller bearings of the standard AC motors are basically equipped with a permanently sealed lubrication system consisting of a high-quality, temperature-resistant, lithium-based roller bearing grease (melting point approximately 160°C). The amount of lubricant supplied to the bearing by the motor manufacturer is sufficient for 10,000 to 20,000 operating hours.

Unfavourable operating conditions, such as permanently lengthy operating periods, changes in bearing loads etc., require that the motor bearings are monitored carefully. The service intervals or lubrication deadlines and amounts depend on the motor’s operating conditions, the rotary speed and size of bearing.
Maintenance

As only the construction size and rotary speed of the motors are usually known, the service intervals specified in the adjacent table should be applied. They refer to a coolant temperature of 40°C in the case of horizontal fitting (construction form B3). The service intervals are to be put back by 1/3 in the case of vertical fitting.

You should consult the manufacturer without fail in the event that motor repairs are required within the warranty period.

Attention:

High temperature fans AXV / AXG F300 / F400 are equipped with special motors certified for smoke exhaust operation. No service, repair or modification may be performed by the user, as such action will void the certification of the motor and the complete fan as a smoke exhaust ventilation device.

The bearings are lifetime-greased with special lubricants and do not require relubrication. In case of bearing damage or wear, the motor must be replaced by Wolter. Please contact the Wolter technical staff for support.

7.2.5 Bearing replacement

Only allow work on the electric motor to be carried out by a craftsman or by a suitable motor winding workshop.

High temperature axial fans AXV / AXG F300 / F400:

Any repair or service work on the special high temperature motors, including bearing replacement, may only be done by the motor manufacturer, otherwise the high temperature certification of the motor and fan will be void. Please contact the Wolter technical staff for support.

8 Disassembly and Disposal

Disassembly, electrical work and disposal is only to be carried out by trained and instructed craftsmen and in accordance with the respectively applicable regulations!

The fan and its components are of high weight. Therefore, each component must be thoroughly secured prior to disassembly, in order to avoid hazards by falling or shifting parts.

Preparation:

- Bring the fan to a halt in the prescribed manner and ensure that it can not be switched on again.
- Secure fan against falling or shifting
- Disconnect fan from mains supply and connected ducting components.

Disassembly and disposal:

- The fan can be disassembled into its components with regular manual tools (wrenches, screwdrivers, pulling tool if required)
- If present, remove any operating supplies such as grease or oil and dispose in accordance with local environmental regulations.
- The fan mainly consists of metallic materials (steel, aluminum, non-ferrous metals), as well as possibly small amounts of plastics, ceramic (connecting board) and electrical cables. These components shall be separated and sorted.
- The fan shall be disassembled into its correctly sorted materials, and shall be disposed of in accordance with local environmental regulations. If necessary, contact a certified waste management company for further assistance.
9 Declaration of Incorporation

We hereby declare that the partly completed machinery named above is intended to be assembled with other machinery / machine components to constitute machinery, which may not be put into operation until the assembled machinery has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC. 

The following essential requirements of the Machinery directive 2006/42/EC are applied and fulfilled:

1.1.1 General Remarks – Definitions
1.1.2 Principles of safety integration
1.1.3 Materials and products
1.1.5 Design of machinery to facilitate its handling
1.3.2 Risk of break-up during operation (Protection from hazards caused by ejected fragments is only given when protection guards on the inlet and outlet side are part of the scope of delivery)
1.3.4 Risks due to surfaces, edges or angles
1.3.7 Risks related to moving parts (only when complete and readily installed protection guards are part of the scope of delivery)
1.4.1 Required characteristics of guards and protective devices – General requirements (only when complete and readily installed protection guards are part of the scope of delivery)
1.4.2.1 Fixed guards (only when complete and readily installed protection guards are part of the scope of delivery)
1.6.3 Isolation of energy sources (only when readily mounted and connected repair switch is part of the scope of delivery)
1.7.3 Marking of machinery (except for CE marking, as the product named above is partly completed machinery)
Folgende harmonisierende Normen finden Anwendung:

- **EN 60204-1**  
  Sicherheit von Maschinen - Elektrische Ausrüstung von Maschinen - Teil 1: Allgemeine Anforderungen

- **DIN EN ISO 12100-1**  
  Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze - Teil 1: Grundsätzliche Terminologie

- **DIN EN ISO 12100-2**  
  Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze - Teil 2: Technische Leitsätze

- **DIN EN ISO 13857**  
  Sicherheit von Maschinen - Sicherheitsabstände gegen das Erreichen von Gefährdungsbereichen mit den oberen und unteren Gleitflächen

**Hinweis:**  

- **DIN EN 60034-1**  
  Drehende elektrische Maschinen - Teil 1: Bemessung und Betriebsverhalten

**Note:**  
The compliance with DIN EN ISO 13857 refers to the fitted contact safety device only when it is part of the scope of delivery. The total compliance with DIN EN ISO 13857 is in the responsibility of the system manufacturer as the manufacturer of the complete machine.

**DIN EN 60034-1**  
Rotating electrical machines - Part 1: Rating and performance

**Ausführungsbevollmächtigter (zu kontaktieren über den Hersteller):**

Martin Kresse

**Die speziellen technischen Unterlagen nach Anhang VII Teil B der Maschinenrichtlinie 2006/42/EG wurden erstellt.**

Wir verpflichten uns, einzelnstatische Stellen auf begründetes Verlangen die speziellen technischen Unterlagen der unveröffentlichten Maschine in elektronischer oder gedruckter Form zu übermitteln.

Malsch, 02.02.2009

**Authorised person for the compilation of the relevant technical documentation (to be contacted through the manufacturer):**

Hans Rudolf Kresse

**Geschäftsführer / Managing Director**

Votter GmbH Maschinen- und Apparatebau KG  
Amit Zweisam 14 - D-76315 Malsch
Tel. +49 (0) 7204/9201-0 - Fax +49 (0) 7204/9201-11
www.votterfans.de - info@votterfans.de

Statutenänderungen:  
Volksbank Offingen (BLZ 760 932 00 - KTO 32770002)  
Unternehmensbank Karlsruhe (BLZ 760 402 18 - KTO 22992070)  
BWD Bank Karlsruhe (BLZ 750 203 30 - KTO 4641844800)

KG: Amtsgericht Mannheim HRB 360207  
GmbH: Amtsgericht Mannheim HRB 360208
Geschäftsführer: Hans-Rudolf Kresse
USt-IdNr.: DE143182109

**ISO 0001**

Operating Instructions AXV / AXG / BXV / RXV  
26.09.16
EC Declaration of conformity

10 EC Declaration of conformity as defined by Directive 2009/125/EC

EG-Konformitätserklärung

Im Sinne der ErP-Richtline 2009/125/EG

Bauart der Maschine / Type of machinery:

- Axialventilator / Axial fan
- Radialventilator / Centrifugal fan

AXV, BXV, AXG, RXV
TRZ, HRZ, TBE, TBE, TN, HM, DRS, ERS, EB, DB

Hersteller / Manufacturer:
Wolter GmbH
Maschinen und Apparatebau KG
Am Waser 11
76316 Malsch / Germany

Hiermit erklären wir, daß die oben bezeichneten Maschinen den grundlegenden Anforderungen entsprechen, die in den nachfolgenden Harmonisierungsrichtlinien festgelegt sind.

- ErP-Richtlinie 2009/125/EG
- ErP-Verordnung 2011/65/EU

We hereby declare that the machinery named above meets the essential requirements that are laid down in the harmonization legislation designated below.

- ErP Directive 2009/125/EC
- ErP Regulation 2011/65/EU

Folgende technischen Normen finden Anwendung:

- DIN EN ISO 5801 / AMCA 210

The following technical standards are used:

- DIN EN ISO 5801 / AMCA 210


This declaration of conformity acc. to Directive 2009/125/EC and Regulation 2011/65/EU is valid only for products respectively marked as compliant, in conjunction with the ErP-related data in the product information and on the type plate.

Malsch, 05.01.2015

Martin Kresse
Geschäftsführer / Managing Director

Vater GmbH Maschinen- und Apparatebau KG
Am Waser 11 • D-76316 Malsch
Tel.: +49 (0) 7264/320-100 • Fax: +49 (0) 7264/320-11
www.vater.eu • info@vater.eu

Verwaltungen:
Volksbank Ettlingen (BLZ 680 902 00 • KTO 37710002)
Commerzbank Karlsruhe (BLZ 600 400 18 • KTO 2255575)

KS: Amtsgericht Mannheim HRB 360227
Geschäftsführer: Martin Kresse, Michael Wiese
UG: HRB: DE143102009

ISO 9001:2008