

# Instruction Manual

## — Cyclon extraction unit

— ZAA 2863 AF



ZAA 2863 AF

ZAA-SERIES

## Imprint

### Product identification

|                        |             |
|------------------------|-------------|
| Cyclon extraction unit | Item number |
| ZAA 2863 AF            | 5128928     |

### Manufacturer

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### Information about the operating instructions

Original operating instructions

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## 1 Introduction

You have made an excellent choice in purchasing a HOLZKRAFT Cyclon extraction unit.

**Carefully read the operating instructions prior to commissioning.**

They describe correct commissioning, intended use and safe as well as efficient operation and maintenance of the Cyclon extraction unit.

The operating instructions form part of the Cyclon extraction unit. Always keep them at the Cyclon extraction unit location of use. Please also observe the local accident prevention regulations and general safety regulations for the use of the Cyclon extraction unit.

### 1.1 Copyright

The contents of these operating instructions are protected by copyright. Their use is permitted within the context of using the Cyclon extraction unit. Any further use shall not be permitted without written consent by the manufacturer.

To protect our products, we register our rights to our brands, patents and designs where possible in each individual case. We take strong action against any violation of our intellectual property.

### 1.2 Customer service

Please contact your specialist retailer if you have any questions regarding your Cyclon extraction unit or require any technical information. Your specialist retailer will be happy to support you with specialist advice and information.

#### Germany:

Stürmer Maschinen GmbH  
Dr.-Robert-Pfleger-Str. 26  
D-96103 Hallstadt

#### Repair service:

Fax: 0049 (0) 951 96555-111  
E-Mail: [service@stuermer-maschinen.de](mailto:service@stuermer-maschinen.de)  
Internet: [www.holzstar.de](http://www.holzstar.de)

#### Spare parts orders:

Fax: 0049 (0) 951 96555-119  
E-Mail: [ersatzteile@stuermer-maschinen.de](mailto:ersatzteile@stuermer-maschinen.de)

Please submit any information and experiences you make during application of the machine as these may be valuable for product improvements.

## 1.3 Disclaimer

All data in this operation manual has been compiled on the basis of the state-of-the-art, valid standards and guidelines as well as our many years of expertise and experience.

The manufacturer shall not be liable for damage in the following cases:

- Failure to comply with the operation manual,
- Unintended use
- Deployment of untrained staff
- Conversions at one's own responsibility
- Technical modifications
- Use of unauthorised spare parts

The actual scope of delivery may deviate from the descriptions and illustrations in this document as a result of special variants, optional extras or recent, technical modifications. The obligations defined in the supply contract shall apply in addition to the general terms and conditions and the manufacturer's general terms and conditions as well as the statutory regulations valid at the time of the conclusion of the contract.

## 2 Safety

This section provides an overview of all important safety packages for personal protection as well as safe and reliable operation. The individual sections contain additional, task-specific safety information.

### 2.1 Legend of symbols

#### Safety instructions

Safety instructions in this operation manual have been highlighted with symbols. Safety instructions are indicated by signal terms that express the degree of risk involved.



#### **DANGER!**

This combination of symbol and signal term indicates a directly dangerous situation which may cause death or serious injury if not averted.



#### **WARNING!**

This combination of symbol and signal term indicates a potentially hazardous situation which may cause minor or light injuries if it is not averted.



### IMPORTANT!

This combination of symbol and signal term indicates a potentially dangerous situation which may cause material damage or harm the environment if it is not averted.



### ATTENTION!

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, could result in material and environmental damage.



### NOTE!

This combination of symbol and signal term indicates a potentially dangerous situation which may cause material damage or harm the environment if it is not averted.

### Tips and recommendations



### Tips and recommendations

This symbol highlights useful tips and recommendations as well as information for efficient and reliable operation.

Observe the safety information in these operating instructions to minimise the risk of personal injury as well as material damage and prevent hazardous situations.

## 2.2 Operator responsibility

Operators are defined as the persons who operate the machine for commercial or profit-based purposes or provide the machine to third parties for use or application and bear the legal product responsibility in terms of the protection of users, staff or third parties during operation.

### Obligations of the operator:

If the machine is used for commercial purposes, operators are subject to the legal stipulations in terms of occupational safety. For this reason, the safety instructions in these operating instructions as well as the safety, accident prevention and environmental protection regulations valid at the installation location must be complied with. In this process, the following shall apply in particular:

- Operators shall obtain information about valid occupational safety regulations and determine additional hazards as part of a risk assessment which result from the specific operating conditions at the machine's installation location. Said risk assessment shall be reflected in operating instructions for machine operation.
- During the entire machine operating time operators must check whether the operating instructions they created meet current standards and adapt the operating instructions where necessary.
- Operators shall clearly manage and specify the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- Operators must make sure that all persons handling the machine have read and understood these operating instructions. Operators must also regularly train staff and notify of the hazards.
- Operators shall provide staff with the required protective equipment and wearing the required protective equipment shall be mandatory.

Operators shall also be responsible for maintaining the machine in a technically perfect condition. For this reason, the following shall apply:

- Operators shall make sure that the maintenance intervals described in these operating instructions are complied with.
- Operators shall regularly check that the safety equipment is fully functional and complete.

## 2.3 Operating staff qualification

The different tasks described in these operating instructions require different levels of skills in terms of the qualifications of operating staff working with the machine.



### WARNING!

#### Risk from inadequately qualified persons!

Inadequately qualified persons are unable to assess the risks when handling the machine, thus putting themselves and others at risk of severe injuries.

- All work must be carried out by qualified persons only.
- Keep inadequately qualified persons and children away from the work area.

Exclusively persons of whom it can be expected that they reliably complete assigned tasks shall be authorised to carry out any tasks. Persons whose reactions have been impaired shall not be authorized, e.g. drug users, users under the influence of alcohol or medication.

These operating instructions specify the following personal qualifications for the different tasks:

### Operating staff:

Operating staff has undergone an induction by the operator about the entrusted tasks and potential hazards resulting from improper behaviour. Tasks which go beyond normal operation may only be carried out by the operator if they are listed in the operation manual and the operator has made him/herself familiar with them.

### Qualified electrician:

Due to the electrician's specialised training, know-how, experience and knowledge of pertinent standards and regulations the electrician is in a position to work on the electrical systems, and autonomously identify and avoid potential hazards.

### Specialist staff:

As a result of specialist training, expertise, experience and skills in terms of the relevant standards and regulations, specialist staff is able to complete the tasks they are entrusted with and independently identify hazards and avert risks.

### Manufacturer:

Certain work must be carried out by manufacturer specialist staff only. Other staff is not permitted to carry out this work. Contact our customer service to have the work carried out.

## 2.4 Personal protective equipment

Personal protective equipment is intended to protect the health and safety of persons at work. Staff must wear the personal protective equipment indicated in individual sections of these operating instructions when carrying out the different tasks on the machine.

The personal protective equipment is described in the following section:



### Ear protection

The ear protection protects against hearing damage caused by noise.



### Eye protection

Protective glasses protect the eyes against projected parts and splashes of liquid.



### Protective gloves

The protective gloves serve to protect the hands from sharp-edged components, as well as from friction, abrasions or deeper injuries.



### Breathing protection

Respiratory protection is used to protect the respiratory tract and lungs from the ingestion of dust particles.



### Safety shoes

Safety shoes protect feet from pinching, falling parts and slipping on slippery surfaces.



### Protective clothing

Protective work clothing is close-fitting work clothing, without protruding parts, with low tear resistance.

## 2.5 Safety labels on the device

The following safety markings are attached to the Cyclon extraction unit (Fig. 1), which must be observed and followed.

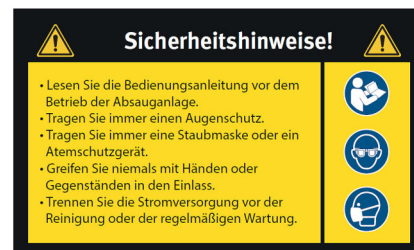


Fig. 1: Safety labels

The safety markings attached to the machine must not be removed. Damaged or missing safety markings can lead to incorrect actions, personal injury and damage to property.

They must be replaced immediately. If the safety markings are not recognisable and comprehensible at first glance, the machine must be taken out of operation until new safety markings have been applied.

## 2.6 General safety informations

### The following must be observed:

- The cyclone suction unit may only be operated and maintained by persons who have read and understood these operating instructions. The operator must be sufficiently trained in the use, setting and operation.
- If you pass on this cyclone suction unit, you must hand over all tools and documents supplied with the cyclone suction unit.
- Do not switch on the machine until immediately before starting the extraction work. Switch off the machine during work breaks and when not in use. Do not leave the machine, which is ready for operation, unattended.
- Never open the protective covers while the cyclone extraction system is in operation.
- Defective or damaged parts of the machine must be replaced immediately.
- Keep the workplace and the floor in the vicinity of the cyclone extraction system free of any objects that could endanger your stability or pose a tripping hazard. Keep the workplace tidy. Disorder can result in accidents.
- Check the danger area before and during work to ensure that no unauthorized persons are present. Do not allow the cyclone suction unit to be operated by other persons, especially children.
- Only use the machine in dry rooms or in dry surroundings and ensure that the working area is sufficiently illuminated.
- Protect the machine from moisture and humidity to avoid electrical hazards.
- Maintain the machine with care in order to be able to work well and safely with it in the long term. Follow the instructions for maintenance.
- Wood dust can be harmful to health. Tropical woods and hard woods such as beech and oak in particular are classified as carcinogenic.
- Ensure that the environment in which the machine is operated is cleaned regularly - excessive dust deposits on skylights, heaters, electrical panels or other heat sources increase the risk of fire.
- To reduce this risk, make sure the machine is grounded.
- Do not operate the cyclone extractor outdoors in the rain or in wet locations - contact with water can cause electric shock or shorten the life of the machine.
- Keep children away from the machine.
- Protect the power cord from heat, oil and sharp edges.
- Do not allow steel or stones to strike the impeller - this can create sparks. Sparks can smolder in wood dust for a long time before a fire is detected. If you accidentally cut into wood that contains foreign metal (nails, staples, spikes, etc.), turn off the machine immediately and unplug it.
- Work with common sense and concentration. Do not use the cyclone extraction system if you are not concentrated.
- Do not operate the machine in areas with a high risk of explosion. High risk areas include, but are not limited to, areas near pilot lights, open flames, or other sources of ignition.
- Never place your hands or tools near the suction port during operation. The suction could easily cause accidental contact with the impeller, resulting in serious injury or damage to the machine.
- Operation or maintenance of the cyclone suction system is prohibited for persons who are under 18 years of age or who are under the influence of alcohol, drugs or medication.
- Operate the machine only with safety devices fully and correctly attached and do not modify anything on the machine that could affect safety.
- There must be sufficient ventilation and lighting.
- Before starting extraction work, inform yourself about the type of material to be processed and about any possible health hazard due to released dusts. If necessary, take suitable precautionary measures.
- Always wear hearing protection and respiratory protection when working with the cyclone extraction system. Wearing loose clothing (ties, scarves, open jackets and clothing that is not tight-fitting) is prohibited. There is a risk of injury from getting caught or pulled into moving machine parts. A hair net must be worn for long hair.
- Avoid unnatural posture and maintain balance at all times. Wear work shoes to increase your stability.
- Do not aspirate flammable gases or materials (e.g. paint or paint mist) or metallic parts.
- Before further use of the machine, the protective devices or slightly damaged parts must be carefully checked for proper and intended function.
- Damaged protective devices and parts must be properly repaired or replaced by a recognized specialist workshop or by the manufacturer, unless otherwise specified in the operating instructions.
- Switch off the machine and disconnect the power plug from the socket during repair work, maintenance, cleaning and replacement of the chip bag.
- Use only original spare parts.
- Do not use the cyclone suction unit if it does not allow the machine to be switched on or off properly with the switch and the control components do not reach their proper operating state.



- Replace a damaged power cord immediately.
- NEVER operate the machine with a damaged filter or suction hose.
- The connector of the connection cable must be splash-proof.
- The plugs on connecting cables must be made of or covered with rubber, non-rigid PVC or other thermoplastic material with the same mechanical stability.
- When laying the power cable, make sure that it is not crushed, bent or wet.
- Unwind the cord completely when using a cord reel.
- Regularly check the extension cords and replace them if they are damaged.
- Do not use defective interconnecting cords.
- Do not make temporary electrical connections.
- Never bypass or disable protective devices.
- Use only chip bags that are not damaged.
- Replace damaged filter bags immediately. Use of the machine is prohibited until the filter bag is replaced.
- Do not use the machine for purposes for which it is not intended.
- Do not overload the cyclone suction system. It works better and safer in the specified power range. Do not use the cyclone suction system for heavy work that requires a more powerful machine.
- Check the stability of the machine.
- Be aware that the use of application tools and other accessories other than those recommended by the manufacturer may put you at risk of injury.
- Check that all repair and adjustment tools have been removed before switching on.
- This machine is not designed to pick up hazardous dust.
- Wear a dust mask (filter mask with particle filter) when changing and emptying the chip bag.
- Before each maintenance and chip bag change, the cyclone extraction system must be secured against accidental start-up.
- Never reach into the machine when it is running or is about to run down.
- Never start up the machine without the suction hose.
- To avoid contact with the rotating fan wheel, unused suction connections must always be covered.
- All protective and safety devices must be refitted immediately after repair or maintenance work has been completed.

- After maintenance, repair and cleaning work, check that all covers and protective devices are properly refitted to the machine and that there are no tools inside or in the suction area of the machine.
- DO NOT put fingers or foreign objects into the dust collection openings. Keep hair, loose clothing, and hands away from openings and moving parts of the machine.

### 3 Intended use



#### **DANGER!**

Intended use also includes compliance with all the information in these instructions. Any use beyond the intended use or any other use is considered as misuse. Stürmer Maschinen GmbH accepts no liability for design and technical modifications to the cyclone suction unit.

The cyclone suction unit is used for suction of dust and chips, which are produced during processing of wood or wood-like materials. The technology uses centrifugal force to separate chips from dust and transports them to the container. The associated filter cartridge cleans the air.

#### 3.1 Residual risks

Residual hazards are potential hazards that are not obvious, such as:

- Injuries due to non-compliance with safety instructions, standards, guidelines or regulations.
- Injuries due to uncoordinated work,
- Danger due to work on the electrical system, cables and connections.
- There is a risk of crushing due to the clamping lever when installing the chip bag.
- Hearing damage when working on the machine for longer periods without hearing protection.
- Fire hazard
- Electrostatic discharge at the suction hose
- Danger from electric current due to wear of electric cables and electric connections.
- Danger from wood dust

### 3.2 Foreseeable misuse

- No liquids, aggressive gases, easily flammable materials or glowing particles (smoldering nests or similar) may be sucked in. Suctioning wood processing machines where ignition sparks and glow nests are to be expected (e.g. multi-blade saws) is prohibited.
- The cyclone extraction system is not intended for installation in a hazardous area.
- The discharge or extraction of smoke or vapors is not permitted.
- The extraction of metal chips is not permitted.
- DO NOT use the machine if a filter and dust collection bag is not present and properly secured.
- Never operate the machine with unsealed dust collection openings that are not connected to a wood dust generating machine. Always cover the exposed dust inlet.
- Solid bodies, e.g. pieces of wood (over an edge length of 1 cm) as well as metal parts and stones etc. must not be vacuumed. Such bodies will cause damage to the impeller (exclusion of warranty).
- The machine is ONLY intended for light commercial use!

## 4 Technical Data

### 4.1 Table

| Model  | ZAA 2863 AF   |
|--|---------------|
| Length                                       | 1343 mm       |
| Width / Depth                                | 900 mm        |
| Height                                       | 2170 mm       |
| Weight                                       | 178 kg        |
| Supply voltage                               | 400 V         |
| Rated volume flow                            | 1760 m³/h     |
| Negative pressure for rated volume flow      | 2800 Pa       |
| Filter surface area                          | 4.32 m²       |
| Filter cleaning                              | Automatically |
| Extraction duct inlet outside nominal width  | 1 x 200 mm    |
| Extraction duct outlet outside nominal width | 3 x 100 mm    |
| Max. sound pressure level                    | 78 dB(A)      |
| Motor input                                  | 3000 W        |
| Motor output                                 | 2400 W        |

### 4.2 Type plate





| Zyklonabsauganlage<br>Cyclon extraction unit   |                         |    |                          |
|--|-------------------------|---|--------------------------|
| Typ<br>Type  | <b>ZAA 2863 AF</b>      | Serien-Nr.<br>Serial no.  |                          |
| Artikel-Nr.<br>Item no.  | 5128928                 | Baujahr<br>Year of manufacture  | Monat/Jahr<br>month/year |
| Aufnahmeleistung<br>Input power  | 3,0 kW                  | Netzanschluss<br>Power connection   | 400 V / 3 ~ / 50 Hz      |
| Abgabeleistung<br>Output power   | 2,4 kW                  | Max. Luftstrom<br>Max. Airflow  | 1760 m³/h                |
| Stutzen Eingang<br>Nozzle inlet  | 1 x 200 mm + 3 x 100 mm |   |                          |
| Gewicht<br>Weight  | 178 kg                  |   |                          |
|  |                         | Stürmer Maschinen GmbH<br>Dr.-Robert-Pfleger-Str. 26, 96103 Hallstadt<br>Deutschland / Germany  |                          |

Fig. 2: Type plate



## 5 Description of the device

Figures in this operation manual serve to provide a basic under-standing and may differ from the actual design.

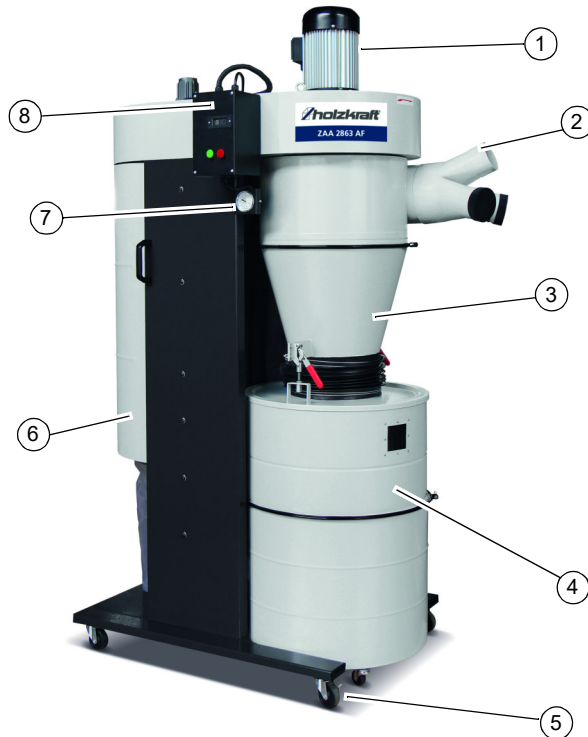


Fig. 3: Description of the ZAA 2863 AF

- 1 Engine
- 2 Adapter suction nozzle
- 3 Cyclone hopper
- 4 Dust collection container
- 5 Transport rollers
- 6 Filter cartridge
- 7 Pressure indicator (manometer)
- 8 On / Off switch and timer

### 5.1 Scope of delivery

- Filter cartridge
- Flex hose
- Remote control

### 5.2 Accessories

- Filter cartridge  
**Item number: 5129005**
- Dust bag for filter cartridge  
**Item number: 5129006**
- Chip bag for filling container  
**Item number: 5129007**

## 6 Transport, packaging, storage

### 6.1 Delivery and transport

#### Delivery

Check the Chip Extraction Unit for visible transport damage upon delivery. In case of visible damage to the Chip Extraction Unit, immediately notify the carrier or your retailer.

#### Transport



#### CAUTION!

Injuries caused by parts falling over or off a forklift, pallet truck or transport vehicle.  
Only use means of transport that can carry the total weight and are suitable for it.

Improper transport of individual devices, unsecured devices stacked on top of each other or next to each other in packed or already unpacked condition is accident-prone and can cause damage or malfunctions for which we do not grant any liability or guarantee.

Transport the scope of delivery secured against shifting or tilting with a sufficiently dimensioned industrial truck to the installation site.

#### General risks during internal transport



#### CAUTION: DANGER OF TIPPING!

The device may be lifted unsecured by a maximum of 2cm.  
Employees must be outside the danger zone, the reach of loads. Warn employees and, if necessary, advise employees of the hazard.

Devices may only be transported by authorized and qualified persons. Act responsibly during transport and always consider the consequences. Refrain from daring and risky actions.

Gradients and descents (e.g. driveways, ramps and the like) are particularly dangerous. If such passages are unavoidable, special caution is required.

Before starting the transport check the transport route for possible danger points, unevenness and disturbances as well as for sufficient strength and load capacity.

Danger points, unevenness and disturbance points must be inspected before transport. The removal of danger spots, disturbances and unevenness at the time of transport by other employees leads to considerable dangers.

Careful planning of internal transport is therefore essential.

## 6.2 Packaging

All of the Chip Extraction Unit's packaging materials and packing aids are suitable for recycling and must always be disposed of using material-based recycling systems.

Packaging materials made of cardboard must be shredded and recycled as waste paper.

The foils are made of polyethylene (PE), padding is made of polystyrene (PS). Dispose of these substances at a recycling centre or hand them over to a qualified waste disposal company.

## 6.3 Storage

Store the cyclone suction unit thoroughly cleaned in a dry, clean and frost-free environment.

The cyclone suction unit must not be stored in the same room as chemicals.

# 7 Assembly



### WARNING!

Assembly, electrical connection, supply connection, maintenance, commissioning, repair, etc. may only be carried out by trained specialist personnel.



**Wear protective gloves!**



**Wear safety shoes!**



**Wear protective clothing!**

The cyclone suction unit is supplied in individual parts. It must be assembled properly and used in strict compliance with our instructions.

If the assembly is carried out contrary to our instructions and if the defect/damage that has occurred is causally related to improper modification, processing or other handling, all claims for damages or warranty are excluded. The customer must prove that the improper assembly was not the cause of the defect that occurred.

## 7.1 Requirements for the installation site

Remove the cyclone suction unit from the packaging and remove all protective foils.

In order to achieve good functioning and a long service life of the cyclone suction unit, the installation site should meet the following criteria:

- The surface must be level, firm and vibration-free.
- The installation or work area must be dry and well ventilated.
- Do not set up or operate the machine in a damp or wet environment. The air humidity should not exceed 90% and the measured ambient temperature should be between -10°C and +50°C.
- There must be sufficient space for the operating personnel, for material transport and for adjustment and maintenance work.
- Mains voltage and frequency should correspond to the characteristics of the machine's motor.
- The installation site must have good lighting.

## 7.2 Assembly of the exhaust system



**Wear protective goggles!**



**Wear safety shoes!**



**Wear protective clothing!**



### DANGER!

The mains plug must be disconnected before all maintenance, retrofitting and assembly work on the cyclone suction system!

The cyclone suction unit is not pre-assembled. After unpacking, the machine must be assembled. Before unpacking the cyclone suction unit, transport it in its packing crate to a place close to its final installation site. The machine must be fully assembled before it can be put into operation.

Before starting the assembly, collect all the listed items. To ensure that the assembly process runs smoothly, first clean all parts that are covered or coated with a heavy-duty rust inhibitor (if applicable).

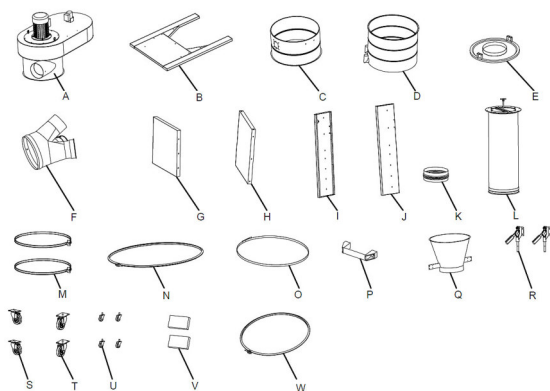


Fig. 4: Assembly parts

Proceed as follows to assemble the cyclone exhaust system:

**Step 1:** Remove the packaging and check the machine for completeness.

**Step 2:** Attach the two wheels (B, Fig.5) and castors (A, Fig.5) to the base frame and tighten them.

**Step 3:** Place the left and right side panels (C and D, Fig.5) on the base frame (E and F, Fig.5) and fasten them.

**Step 4:** Attach the handles (G, Fig.5) to the left and right side wall.

**Step 5:** Mount the pressure gauge (H, Fig.5) on the right side wall.

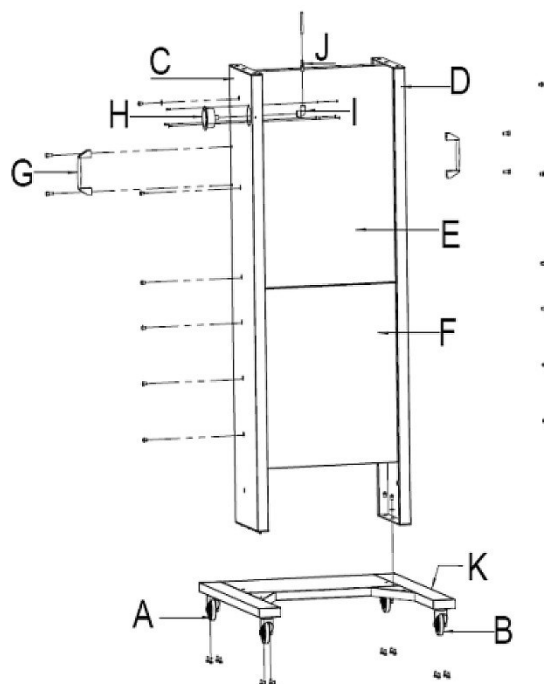


Fig. 5: Mount wheels and side panel

**Step 6:** Insert the bracket (A, Fig.6) between the filter cartridge guide and main housing and use the M8X16 hex bolts to assemble the filter cartridge (B, Fig.6) and main housing (C, Fig.6) together.

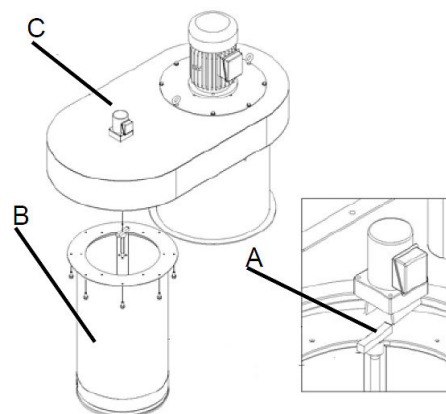


Fig. 6: Mount main housing

**Step 7:** With the help of other people, lift the housing (B, Fig.7) onto the base and attach the housing to the left and right side panels (C and D, Fig.7).

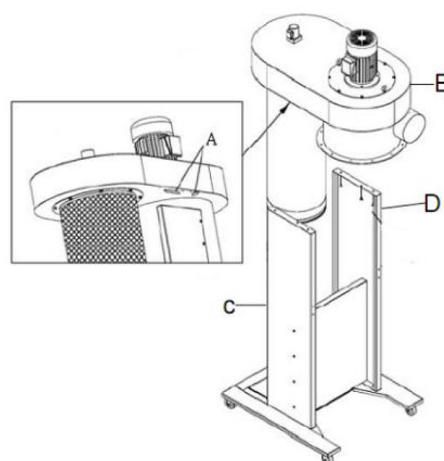


Fig. 7: Assemble main housing and base frame

**Step 8:** Attach the cyclone funnel (B, Fig.8) to the housing (C, Fig.8) with a clamp (A, Fig.8).

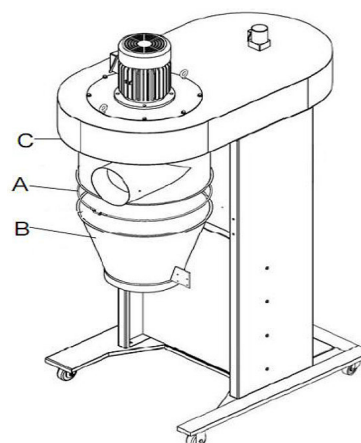


Fig. 8: Fasten cyclone funnel

Step 9: Mount the 4 rollers (A, Fig.9) on the collection container (C, Fig.9).

Step 10: Attach the collection container (C, Fig.9) to the housing (D, Fig.9) using a clamp (B, Fig.9).

Step 11: Mount the handle (E, Fig.9) on the housing (D, Fig.9).

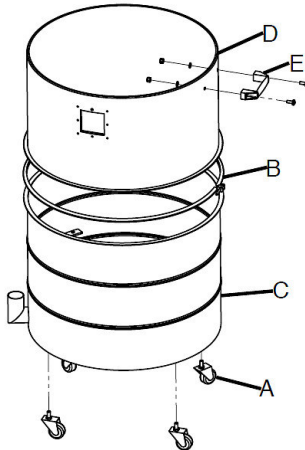


Fig. 9: Assemble collection container

Step 12: Mount the suction nozzle (A, Fig.10) to the housing (B, Fig.10).

Step 13: Insert the hose ( F, Fig.10) between the collection container ( E, Fig.10 ) and cyclone hopper ( D, Fig.10) and secure it with the hose clamp (C, Fig.10).

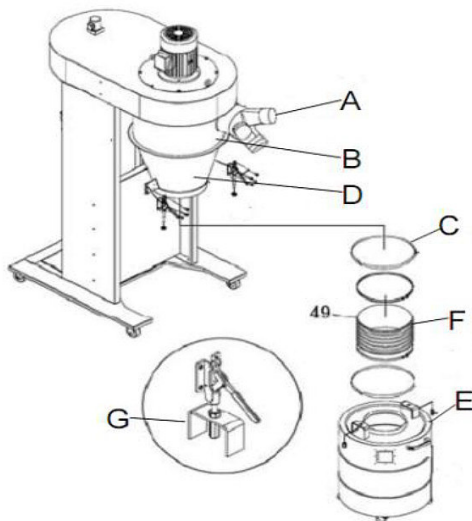


Fig. 10: Assemble collecting tank with cyclone hopper

Step 14: Attach the quick release fastener (G, Fig.10) to the cyclone hopper ( D, Fig.10) and use the M10 nut to secure the other end of the quick release fastener ( G, Fig.10) to the hopper lid (E Fig.10).

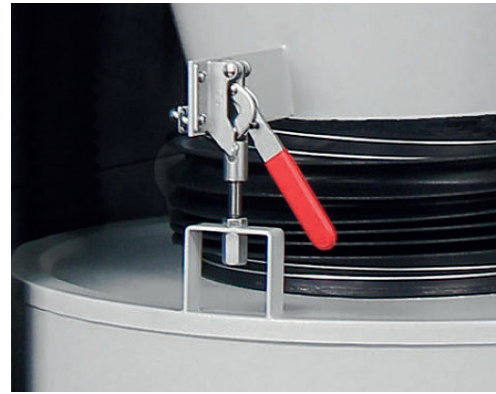


Fig. 11: Assemble quick release fastener

Step 15: Mount the switch box (A, Fig.12) with on / off switch to the housing (B, Fig.12).

Step 16: Attach the chip bag (C, Fig.12) to the filter cartridge (D, Fig.12) with the hose clamp (F, Fig.12).

Step 17: Mount the filter cover (E, Fig.12) to the left and right side panels and fasten it.

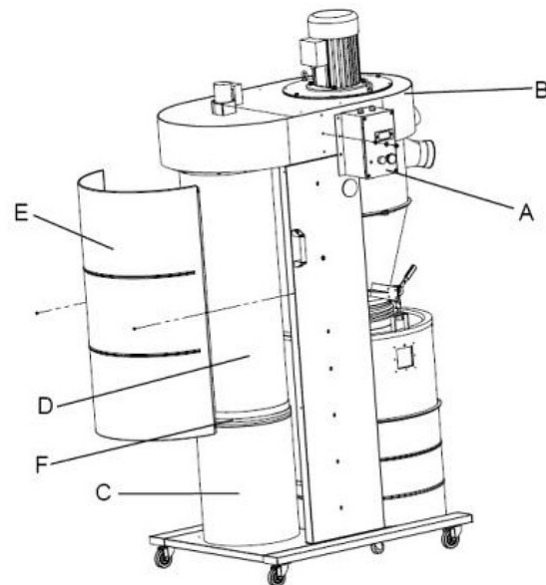


Fig. 12: Mount switch box and filter cover

## 8 Commissioning



**Wear protective clothing!**



**Wear safety shoes!**



**Wear protective gloves!**



### **DANGER!**

DO NOT start the machine until all the preceding safety instructions have been carried out and observed. The operation of an improperly set up machine can lead to malfunctions or unexpected incidents, which can cause damage to the machine or personal injury and property damage.

After assembly is complete, perform a test run to ensure that the machine is properly connected to the power supply and that the safety components are functioning correctly.

If you notice an unusual problem during the test run, stop the machine immediately, disconnect it from the power supply and correct the problem BEFORE restarting the machine.

### 8.1 Electrical connection



### **DANGER!**

#### **Danger to life due to electric shock!**

Danger to life due to electric current!

In case of contact with live components, there is an immediate danger to life due to electric shock.

- The cyclone suction system may only be connected by qualified electricians.
- Work on the electrical system may only be carried out by qualified electricians.



### **DANGER!**

- If the direction of rotation is incorrect, there is a risk of overloading the motor.
- The current consumption must not exceed the specified rated current.

Connect the cyclone suction unit to the mains in the following steps:

Step 1: Connect the cyclone suction unit to a 400 V socket.

Step 2: Check that all safety devices are mounted.

Step 3: Switch on the machine.

Step 4: Check that the direction of rotation of the motor is correct.

#### 8.1.1 Grounding the machine



### **DANGER!**

#### **Ensure good earthing of the cyclone extraction system!**

Static charge leads to

- Grinding dust build-up
- Faster corrosion of moving parts.
- Sparking during discharge with danger of explosion!

The machine must be grounded. Should a malfunction or failure occur, grounding provides a path of least resistance for electrical current to reduce the risk of electric shock.

The cyclone exhaust system is equipped with a cord with a grounding conductor and grounding plug. The plug must be plugged into a suitable outlet that is properly installed and grounded in accordance with all local codes and ordinances.

For grounded, corded machines: Make sure the machine is plugged into an outlet having the same configuration as the plug. Do not use an adapter with the machine. If the machine must be reconnected for use on a different circuit, qualified service personnel must perform the reconnection.

For a machine with a permanent connection: connect to a grounded electrical box; or use an equipment

grounding conductor must be routed with the circuit conductors and connected to the equipment grounding terminal or conductor on the machine.

### 8.2 Test run

DO NOT operate the machine without a collection container and do not operate it without first connecting it to a dust collection system and closing all unused exhaust adapter ports.

Otherwise, the lack of airflow resistance will cause the motor to operate at full current load, which may cause the circuit breaker to trip or a fuse to blow.



Step 1: Remove all setup tools from the machine.

Step 2: Lock all casters to the chassis.

Step 3: Check that the suction hose is firmly connected to the cyclone suction system and to the suction adapter of the woodworking machine.

Step 4: Close any unused extraction adapter connections.

Step 5: Check that the chip bag is securely fastened.

Step 6: Connect the machine to the power supply.

Step 7: Switch on the machine.

Step 8: Check that the motor starts and runs smoothly without any problems or unusual noises.

Step 9: Turn off the machine.

## 9 Operation



**Wear protective gloves!**



**Wear safety shoes!**



**Wear breathing protection!**



**Wear protective clothing!**



**NOTE!**

Before operating the cyclone extraction system for the first time, carry out the following points.

- Check all screw connections on the assembled cyclone suction unit and tighten them if necessary.
- Check the cyclone suction system for leaks.
- Check the hose and suction connection for damage and blockage.
- Check the electrical cables for damage.

### 9.1 Switch on

- Check that the suction hose is firmly connected to the cyclone suction system and to the suction adapter of the woodworking machine.
- Close unused suction connections on the suction system.
- Check if the chip bags are well fastened.
- Switch on the extraction system by pressing the green button.
- Switch on the woodworking machine.

### 9.2 Switch off

- Switch off woodworking machine
- Switch off the cyclone extraction system.

#### 9.2.1 Operation via remote control

Using the remote control, it is possible to set the operating hours of the cyclone exhaust system. When starting the machine with the On button, the screen displays "L", which means that the machine is in continuous operation.

Once you press the timer on the remote control, 1 will be displayed, which means that the machine will be on for 1 hour. Each time you press the timer again, 2, 3, 4 to 9 will be displayed, which means the operating hours from 2, 3, 4 to 9 hours.



Fig. 13: Operation via remote control



## 10 Care, maintenance and repair



### Tips and recommendations

To ensure that the cyclone extraction system is always in good operating condition, regular care and maintenance work must be carried out.



### DANGER!

#### Danger to life from electric shock!

There is a danger to life in the event of contact with live components.

- Before starting cleaning and maintenance work, switch off the machine and disconnect the power plug.
- Connections and repairs of the electrical equipment may only be carried out by a qualified electrician.



### WARNING!

#### Danger in case of insufficient qualification of persons!

Inadequately qualified persons cannot assess the risks involved in repair work on the cyclone extraction system and expose themselves and others to the risk of serious or fatal injury.

Have all maintenance work performed only by persons qualified to do so.



### NOTE!

After care, maintenance and repair work, check that all covers and protective devices are properly reattached to the cyclone extraction system and that there are no more tools inside or in the working area of the cyclone extraction system. Damaged protective devices and device parts must be repaired or replaced by a recognized specialist workshop in accordance with the regulations.

### 10.1 Care by cleaning

The cyclone exhaust system must always be kept in a clean condition.



### Wear Protective gloves!



### NOTE!

Never use harsh cleaning agents for any cleaning work. This can lead to damage or destruction of the device.

All plastic parts and painted surfaces should be cleaned with a soft, damp cloth and some neutral cleaner.

### Cleaning instructions on the extraction unit

- Do not clean the motor and switch directly with water.
- Wear a dust mask when cleaning.
- Clean the electric motor and circuit breaker only with a dry cloth.
- Clean the dust bag when changing it.
- Clean the filter regularly. If the pressure gauge shows a value of 1Kpa, the filter is heavily soiled and must be cleaned or replaced.

### 10.2 Maintenance and repair



### DANGER!

Maintenance and repair work may only be carried out by qualified personnel.



### Wear Protective gloves!



### DANGER!

Exposure to dust from machine use can cause cancer or long-term respiratory damage. Always wear safety glasses and an approved respirator when working with the dust collection bags or filters.

If the cyclone suction unit does not function properly, contact a specialist dealer or our customer service. The contact details can be found in chapter 1.2 Customer service. All protective and safety devices must be refitted immediately after repair and maintenance work has been completed.

### Daily maintenance work

- Clean/vacuum off dust deposits from machine body and motor.
- Check the fastening screws of the machine.
- Replace damaged safety devices immediately.
- Check dust bags, filter bags and suction hoses for damage and possible leaks.
- Check mains cable and other power lines for damage.
- Check electrical safety devices and guards.

### Weekly maintenance work

- Clean the machine regularly with a damp cloth and some soft soap. Do not use any cleaning agents or solvents; these could attack the plastic parts of the machine. Make sure that no water can get into the interior of the machine.
- Keep guards, air slots and motor housing as free of dust and dirt as possible. Wipe the machine with a clean cloth or blow it out with compressed air at low pressure.
- Wear a dust mask when changing and emptying the chip bag and container.

#### 10.2.1 Replace chip bag

Remove and empty the chip bag when it is half full.

Step 1: Switch off the machine and disconnect the power plug.

Step 2: Loosen hose clamp (Pos.69, Fig.14) and remove chip bag.

Step 3: Empty and clean the chip bag and replace with a new chip bag if necessary.

Step 4: Insert the new chip bag and clamp it with the hose clamp.

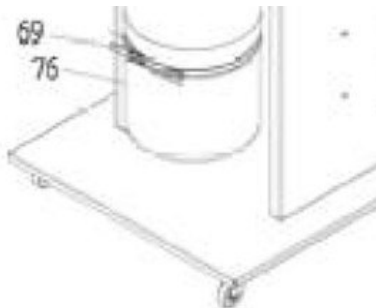


Fig. 14: Replace chip bag

#### 10.2.2 Clean the dust collection

Empty the dust collection bag as soon as it is 3/4 full. Replace the bag if it is leaking or damaged.

Step 1: Switch off the machine and disconnect the power plug.

Step 2: Release the quick-release fasteners (Fig.15) to open the container.

Step 3: Remove the dust bag from the container.

Step 4: Empty and clean the dust bag, if necessary, replace it with a new one.

Step 5: Insert the dust bag into the container.

Step 6: Close the quick-release fasteners to clamp the container.

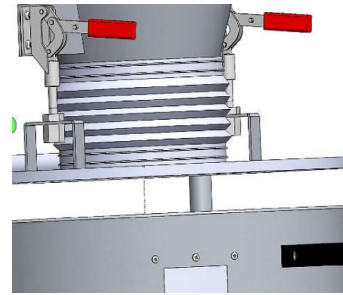


Fig. 15: Clean dust collector

## 11 Disposal, recycling of old equipment

In your own interest and in the interest of the environment, please ensure that all components of the cyclone extraction system are disposed of only via the designated and approved channels.

### 11.1 Decommission

Disused cyclone extraction systems must be taken out of service immediately in a professional manner in order to prevent subsequent misuse and danger to the environment or persons.

Step 1: Remove all environmentally hazardous operating materials from the old machine.

Step 2: If necessary, dismantle the machine into manageable and recyclable assemblies and components.

Step 3: Route the machine components and operating materials to the designated disposal channels.

### 11.2 Disposal of electrical equipment

Please note that electrical equipment contains a variety of recyclable materials as well as components that are harmful to the environment. Help to ensure that these components are disposed of separately and properly. If in doubt, please contact your municipal waste disposal service. If necessary, enlist the help of a specialized disposal company for reprocessing.

### 11.3 Disposal of lubricants

The disposal instructions for the lubricants used are provided by the lubricant manufacturer. If necessary, ask for the product-specific data sheets.

## 11.4 Disposal via municipal collection points

Disposal of used electrical and electronic equipment (Applicable in the countries of the European Union and other European countries with a separate collection system for these appliances).



The symbol on the product or its packaging indicates that this product should not be treated as normal household waste, but must be returned to

a collection point for the recycling of electrical and electronic equipment. By helping to properly dispose of this product, you are protecting the environment and the health of others. Environment and health are endangered by improper disposal. Material recycling helps to reduce the consumption of raw materials. For more information about recycling this product, contact your local community, municipal waste management, or the shop where you purchased the product.

## 12 Troubleshooting



### DANGER!

If any of the following errors occur, stop working with the machine immediately. Serious injury and damage could result. All repairs or replacement work may only be carried out by qualified and trained personnel.

| Fault  | Possible cause  | Remedy  |
|--|---|---|
| The machine does not start or the fuse blows immediately after starting. | <ol style="list-style-type: none"> <li>1. Incorrect mounting.</li> <li>2. Incorrect power supply.</li> <li>3. Fuse blown.</li> <li>4. Motor overheated.</li> <li>5. Incorrect wiring.</li> <li>6. Switch defective.</li> <li>7. Capacitor defective.</li> <li>8. Motor defective.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Check mounting and connections.</li> <li>2. Let the power supply checked by a qualified electrician.</li> <li>3. Replace fuse.</li> <li>4. Allow motor to cool down.</li> <li>5. Let the wiring checked by a qualified electrician.</li> <li>6. Let the switch checked and replaced if necessary.</li> <li>7. Let the capacitor checked, repaired/replaced if necessary.</li> <li>8. Let the motor checked and replaced if necessary.</li> </ol>                    |
| Machine does not work properly   | <ol style="list-style-type: none"> <li>1. Engine overheated.</li> <li>2. Suction lines damaged.</li> <li>3. Filter cartridge dirty.</li> <li>4. Machine is too far away from the woodworking machine.</li> <li>5. Condenser damaged.</li> <li>6. Motor bearing damaged.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Allow engine to cool down.</li> <li>2. Check suction line and replace if necessary.</li> <li>3. Clean the filter cartridge.</li> <li>4. Place the machine closer to the woodworking machine.</li> <li>5. Check condenser and replace if necessary.</li> <li>6. Check motor bearings, replace if necessary.</li> </ol>   |
| Strong vibrations or loud noises during operation.                       | <ol style="list-style-type: none"> <li>1. Engine damaged or loose.</li> <li>2. Engine fan damaged.</li> <li>3. Engine bracket damaged.</li> <li>4. Impeller damaged.</li> <li>5. Engine bearing defective.</li> <li>6. Engine shaft damaged.</li> <li>7. Uneven surface on which the machine is placed.</li> <li>8. Damaged impeller.</li> <li>9. Impeller loose on motor shaft.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check motor and fasten if necessary.</li> <li>2. Check fan and fan cover.</li> <li>3. Check motor bracket, replace if necessary.</li> <li>4. Check impeller and replace if necessary.</li> <li>5. Check motor bearing, replace if necessary.</li> <li>6. Check motor shaft, replace if necessary.</li> <li>7. Move the machine to a flat surface and tighten casters.</li> <li>8. Replace impeller.</li> <li>9. Check impeller and remount if necessary.</li> </ol> |

| Fault                            | Possible cause  | Remedy  |
|----------------------------------|---|---|
| Poor suction power               | <ol style="list-style-type: none"> <li>1. Chip bag / bag full.</li> <li>2. Filter cartridge dirty.</li> <li>3. Suction hose clogged.</li> <li>4. Pipe clamps not fastened.</li> <li>5. Too many bends in the suction pipe.</li> <li>6. Wood is too wet.</li> <li>7. Leak in the pipe.</li> <li>8. Connections incorrectly dimensioned.</li> </ol> | <ol style="list-style-type: none"> <li>1. Empty the chip bag.</li> <li>2. Clean the filter cartridge.</li> <li>3. Clean the suction hose.</li> <li>4. Check pipe clamps and tighten if necessary.</li> <li>5. Shorten suction line, if necessary, remove dust deposits from on the suction socket.</li> <li>6. Allow wood to dry.</li> <li>7. Seal pipe, replace if necessary.</li> <li>8. Mount larger connections.</li> </ol> |
| Machine blows dust into the air. | <ol style="list-style-type: none"> <li>1. Hose clamps or filter cartridge not mounted properly.</li> <li>2. Cylinder or funnel seals loose or damaged.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check hose clamps and filter cartridge and retighten if necessary.</li> <li>2. Retighten all mounting and sealing points; replace damaged seals.</li> </ol>   |

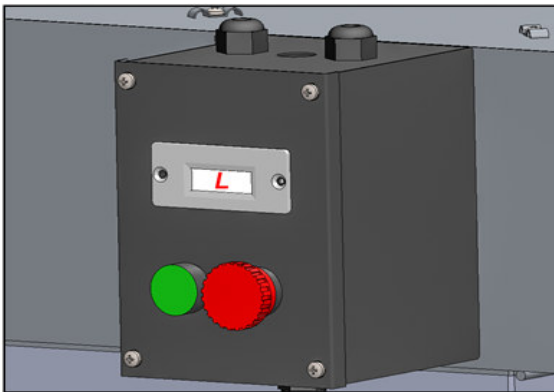


## NOTE!

The machine is fitted with an automatic alarm function to remind clean-up for collection drum.

Under normal circumstances, the display screen would show "L" which means the machine is powered up and running normally.

When use the remote control to timing the machine to run at 2,4,6 and 8 hours, the display screen would show „2“ „4“ „6“ „8“.



When the dust in the collection drum get to the pre-set height, the sensor will sense it and trigger alarm system, the alarm will keep beeping and the digital display will sparkle red "F".



## NOTE!

The alarm will keep going as long as the machine is powered on. Pressing stop button won't stop the alarms and also the alarms won't stop the machine from working.

**keep beeping and the digital display sparkle red „F“.**  
**The sensing distance may not be appropriate and need to be readjusted, or there may be some wood dust blocking the sensor and need to be cleaned.**

## 13 Spare parts



### DANGER!

#### Risk of injury due to the use of incorrect spare parts!

The use of incorrect or faulty spare parts can result in danger to the operator and cause damage and malfunctions.

- Only original spare parts from the manufacturer or spare parts approved by the manufacturer are to be used.
- In case of any uncertainties, always contact the manufacturer.



### Tips and recommendations

Use of non-approved spare parts will void the manufacturer's warranty.

### 13.1 Ordering spare parts

The spare parts can be obtained from the authorized dealer or directly.

Specify the following key data when making inquiries or ordering spare parts:

- Device type
- Item number
- Item number
- Year of manufacture
- Quantity
- Desired shipping method (mail, freight, sea, air, express)
- Shipping address

Spare parts orders without the above information cannot be considered. In the absence of information on the shipping method, shipping will be at the discretion of the supplier.

Information on the device type, article number and year of manufacture can be found on the type plate attached to the machine.

### Example

The engine for the Cyclon extraction unit ZAA 2863 AF must be ordered. The engine has the number 23 in the spare parts drawing .

By ordering spare parts, send a copy of the spare parts drawing with the marked part (engine) and marked position number (23) to the dealer or spare parts department and provide the following information:

- Type of device: **Cyclon extraction unit ZAA 2863 AF**
- Item number: **5128928**
- Position number: **23**

## 13.2 Spar parts drawing

The following drawing should help to identify necessary spare parts in case of service. To order, send a copy of the spare parts drawing with the marked components to your authorized dealer.

**Spare parts drawing valid up to serial number 512-23-0016**

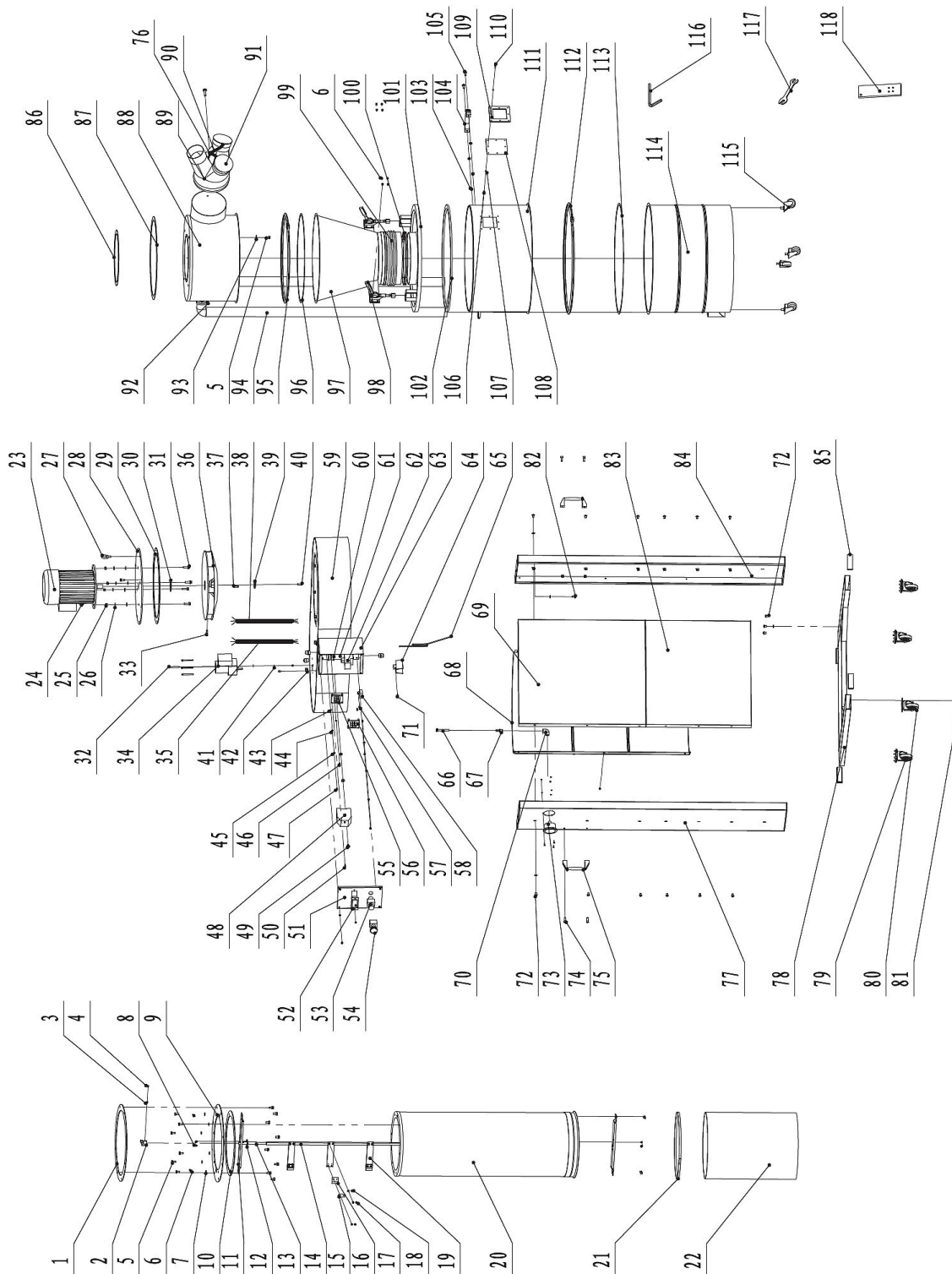


Fig. 16: Spare parts drawing



Spare parts drawing valid from serial number 512-23-0017

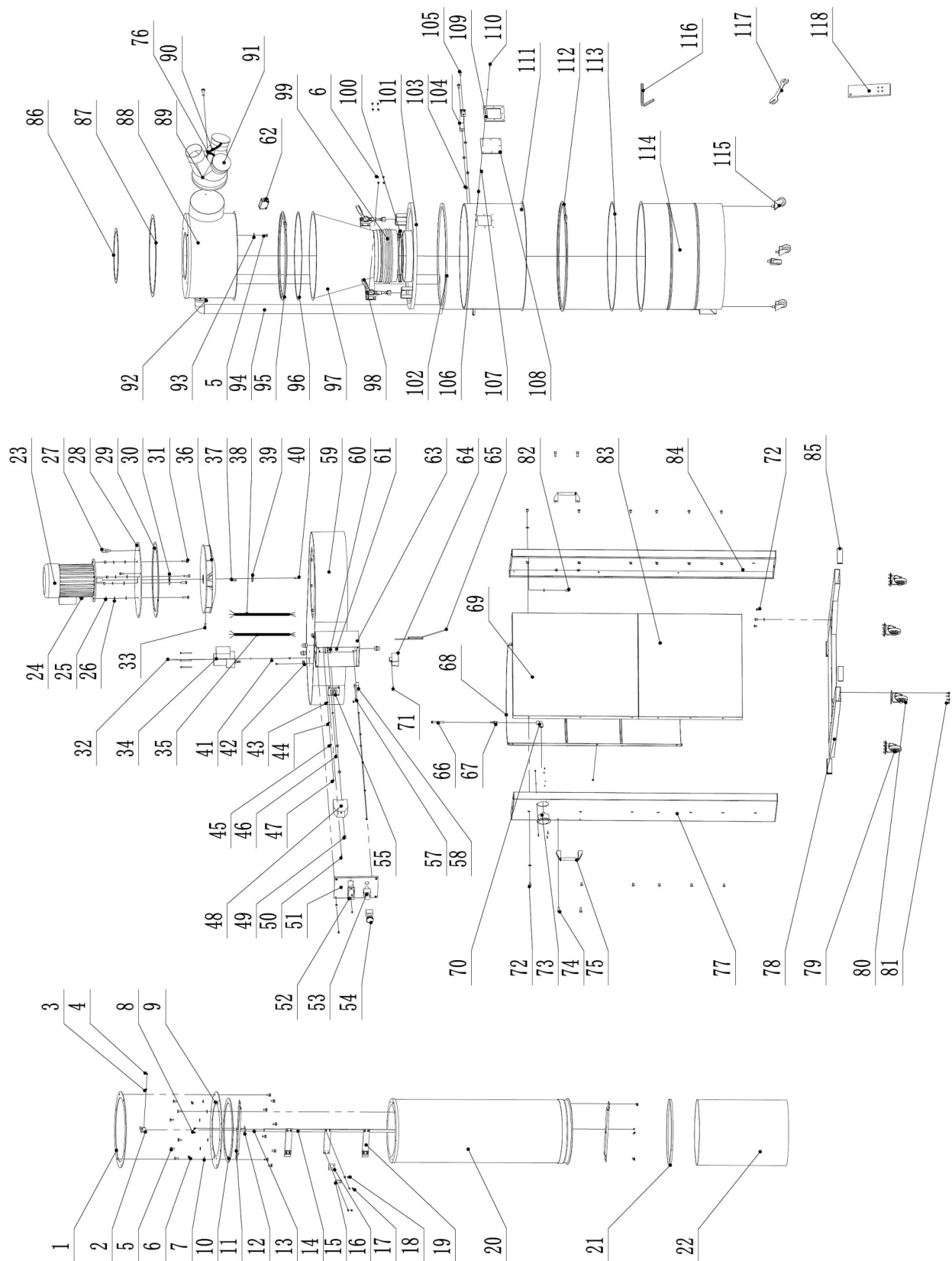


Fig. 17: Spare parts drawing

14 Electrical circuit diagram

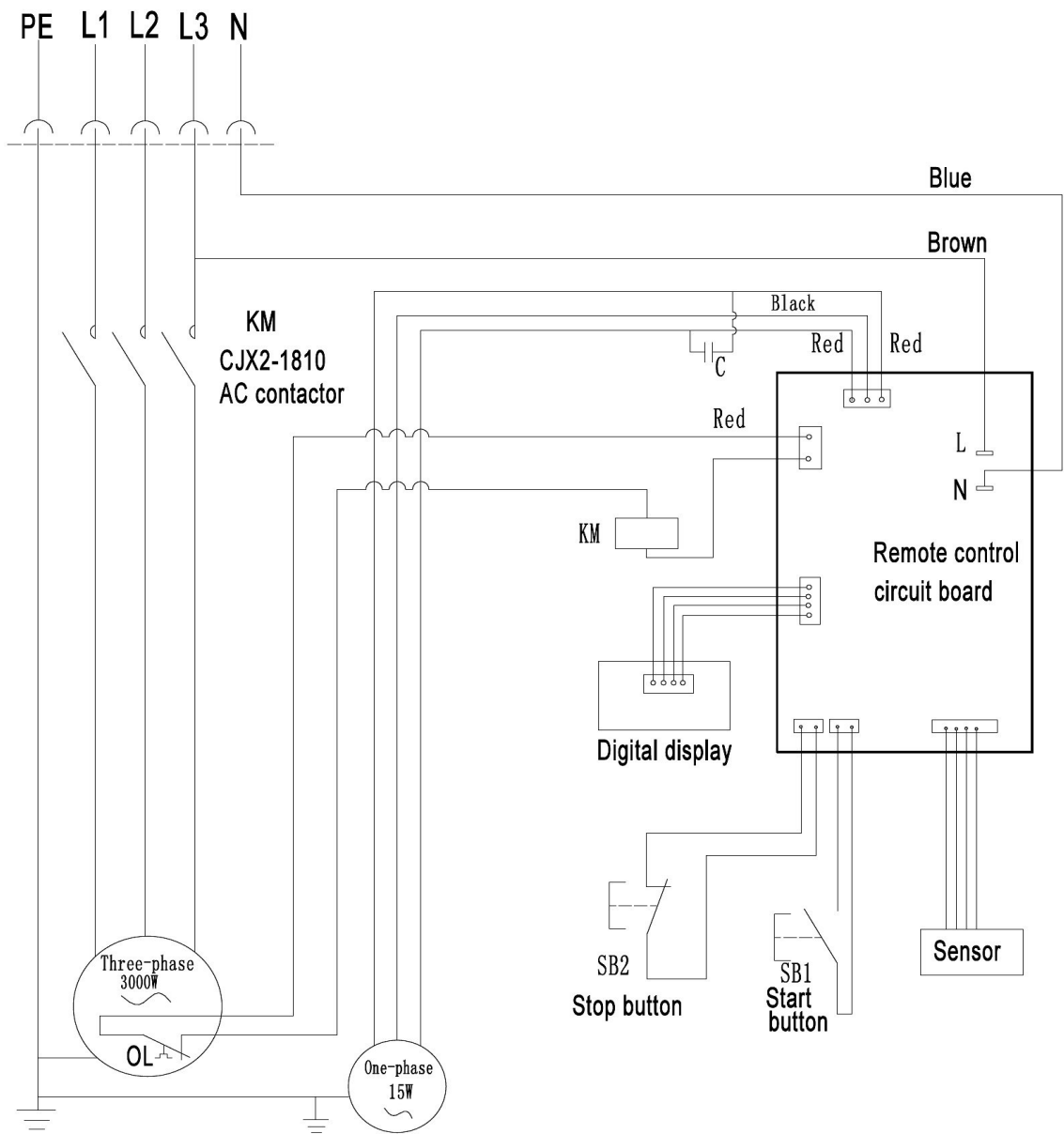


Fig. 18: Electrical circuit diagram

## 15 EC Declaration of Conformity

According to Machinery Directive 2006/42/EC Annex II 1.A

**Manufacturer/carrier:** Stürmer-Maschinen GmbH  
Dr.-Robert-Pfleger-Str. 26  
D-96103 Hallstadt

hereby declares that the following product

**Product group:** Holzkraft® Holzbearbeitungsmaschinen

**Machine type:** Cyclon extraction unit

**Designation of the machine:** ZAA 2863-AF

**Item number:** 5128928

**Serial number\*:** \_\_\_\_\_

**Year of manufacture\*:** 20\_\_\_\_\_

\*fill in these fields according to the information on the type plate

due to its design and construction, as well as in the version placed on the market by us, complies with the relevant, fundamental safety and health requirements of the above-mentioned as well as the following EU directives.

**Applicable EU directives:** 2012/19/EU WEEE - Directive  
2014/30/EU EMC - Directive

**Applicable EU regulations:** 1907/2006/EU REACH-Regulation

### The following harmonized standards were applied:

|                              |  |
|------------------------------|--|
| DIN EN 60335-1/A13:2018-07   | Household and similar electrical appliances - Safety - Part 1: General requirements  |
| DIN EN 60335-2-69:2015-07    | Household and similar electrical appliances - Safety - Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush for commercial use  |
| DIN EN 62233:2008-11         | Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure   |
| DIN EN 55014-1:2018-08       | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission   |
| DIN EN 55014-2:2016-01       | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard   |
| DIN EN IEC 61000-3-2:2019-12 | Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)  |
| DIN EN 61000-3-3:2014-03     | Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |

**Responsible for documentation:** Kilian Stürmer, Stürmer Maschinen GmbH,  
Dr.-Robert-Pfleger-Straße 26, D-96103 Hallstadt

Hallstadt, 11.01.2021



Kilian Stürmer  
Manager



