HERR® 880200-40

Central Extraction System

Operating instructions EX-0-922-001/N-24365 • BAL.1345

Edition 2, 2025-10-08

THERMACUT®
THE CUTTING COMPANY®

Table of contents

1 Identification

These operating instructions describe the central extraction system HERR® 880200-40. When used in these operating instructions, the terms “device”, “product”, and “central extraction system” always refer to the central extraction system HERR® 880200-40.

The device is used for extracting welding, cutting, and grinding fumes.

1.1 Signs and symbols used

In these operating instructions, the following signs and symbols are used:

►	General instructions.
1.	Steps to be carried out in succession.
–	Lists.
⇨	The cross-reference refers to detailed, supplementary or further information.
1	Caption, item description.

1.2 Classification of the warnings

The warning notices used are divided into four different levels and are printed in front of potentially dangerous work steps.

Depending on the type of danger, the following signal words are used:

⚠ DANGER

Describes an imminent danger.

Will result in death or serious injuries if not avoided.

⚠ WARNING

Describes a potentially dangerous situation.

May result in death or serious injuries if not avoided.

⚠ CAUTION

Describes a potentially damaging situation.

May result in slight or minor injuries if not avoided.

NOTE

Describes possible property damage.

If the notice is not followed, irreparable damage to the product or equipment can be the result. Work results may be impaired.

1.3 Product label

This product fulfills the requirements that apply to the market to which it has been introduced. A corresponding marking has been affixed to the product, if required.

1.4 Declaration of Conformity

HERR INDUSTRY SYSTEM

(EN) EC Declaration of Conformity

In accordance with 2006/42/EG (Machinery)
Translation of the EC-conformity declaration

Manufactuerer:
HERR Industry Sytem (Shanghai) Co., Ltd.
No.50 Ganghe Road, Xidu Industry Area
Fengxian, Shanghai 201401
China

Importeur EU:
HERR Industry System GmbH
Am Rübgarten 2
57299 Burbach
Germany

Authorisation:
for the compilation of the
Technical Documents
see Adress Importer EU

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product:	**Description:**	The 880 Series Fume Extraction Unit is used to extract welding, cutting and grinding fumes.		
	Designation:	Filter system	**Function:**	Device for extracting welding, cutting and grinding fumes
	Trade name:	Filter system series 800	**Type:**	880200, 88200-4, 880400

The aforementioned object of this Declaration described above, by virtue of its design and construction in the version we have brought onto the market, complies with the applicable essential health and safety requirements of the harmonization legislation of the European Union listed below. This declaration ceases to be valid in case of any modification of the devices without our authorization.

		References
Relevant harmonization	2006/42/EC Machinery	(OJ L 157, 09.6.2006)
Union rules	2014/29/EC	(OJ L 96/45, 29.3.2014)
	2014/30/EU EMC	(OJ L 96, 29.03.2014)
	2011/65/EU RoHS	(OJ L 174, 01.07.2011)
Harmonized standards applied	EN ISO 12100:2010 EN ISO 15012 EN ISO 13857:2018 EN 61000-6-2:2005 EN 61000-6-4:2007 EN 61000 A1:2011	
Applied national standards and technical specifications		

Burbach, 2021-03-05

Signature:

Ralf Weber, Managing Director

Archiving 05.03.2021

HERR® INDUSTRY SYSTEM

(EN-GB) UK CA UK Declaration of Conformity

Manufactuerer:	HERR Industry Sytem (Shanghai) Co., Ltd. No.50 Ganghe Road, Xidu Industry Area Fengxian, Shanghai 201401 China
Importer UK:	ABICOR BINZEL (UK) Ltd. Binzel House, Mill Lane, Winwik Quay Warrington WA2 8UA United Kingdom
Authorisation: **for the compilation of the** **Technical Documents**	Address – see address of Importer UK

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product:	**Description:**	The 880 Series Fume Extraction Unit is used to extract welding, cutting and grinding fumes.		
	Designation:	Filter system	**Function:**	Device for extracting welding, cutting and grinding fumes
	Trade name:	Filter system series 800	**Type:**	880200, 88200-4, 880400

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Applied national standards and technical specifications		

Burbach, 2021-03-05

Signature:

Ralf Weber, Managing Director

Archiving 05.03.2021

1.5 Nameplate

The device is labeled by means of a nameplate.

► In case of inquiries, please have the device type, device number, and year of construction as indicated on the nameplate at hand.

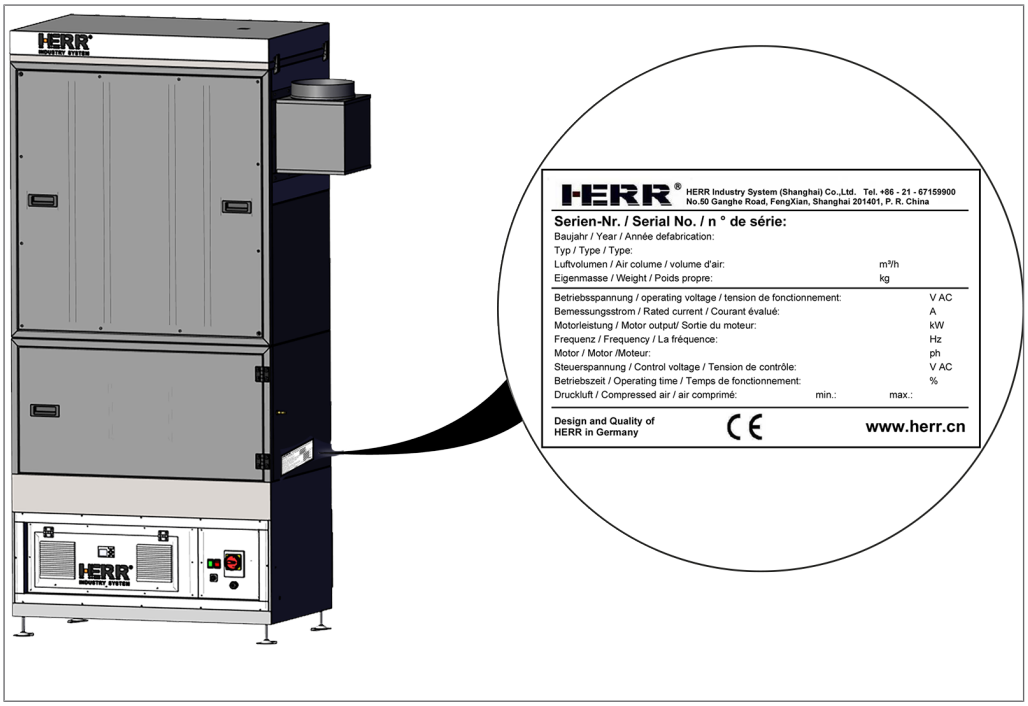


Figure 1 Nameplate

2 Safety

This chapter describes the essential safety requirements and warns of residual hazards that should be kept in mind to operate the product safely. Non-observance of the safety instructions may result in risks to the life and health of personnel as well as cause environmental or material damage.

2.1 Intended use

This device is intended exclusively for industrial use.

The device is used to extract fumes and dust that result from welding, grinding, and thermal cutting processes.

The device can be used for extraction during the welding, cutting and grinding of steels with an alloy content of nickel and chrome less than 30 %.

The device may be used only for the purpose and in the manner described in this documentation. Any other use is considered non-intended. Unauthorized conversion work or modifications to increase performance or change function are not permissible.

- ► Only operate the device with original THERMACUT spare parts.
- ► Do not exceed the maximum load data given in the documents. Excess loads will lead to irreparable damage.
- ► Do not make constructional changes to the device.
- ► Only ever use the device in closed rooms.
- ► Do not use or store the device in wet conditions.
- ► Only store the device outdoors when sufficiently protected against the influences of the weather.
- ► Check the extraction hoses for damage and soiling at regular intervals, but at least once every week.

2.2 Responsibilities of the operator

⚠ WARNING

Risk of injury due to electromagnetic fields

The device can produce electromagnetic fields that could impact the proper function of cardiac pacemakers and implanted defibrillators.

- ► Do not use the device if you have a pacemaker or an implanted defibrillator.
- ► The device may be used only in industrial zones according to DIN EN 61000-6-3.

- ► Keep non-suitably qualified people away from the workplace.
- ► Ensure that only suitably qualified personnel perform work on the device or system.

Suitably qualified personnel are:

– those who are familiar with the basic regulations on occupational safety and accident prevention;

– those who have been instructed on how to handle the device;

– those who have read and understood all related documentation;

– those who have been trained accordingly;

– those who are able to assess the work assigned to them and recognize possible risks thanks to their special training, experience and knowledge.

2.2.1 Country-specific obligations of the operator

► Note that in some countries the volume flow routed back into the workspace may not exceed 50 % of the supply air to the installation room. With free room ventilation, a supply air flow of one times the room volume per hour can be assumed. This means an air exchange rate of one per hour (supply air flow [m^3/h] = room volume [m^3] × air exchange rate [1/h]).

In some countries returning filtered air to the installation room is prohibited on account of residual health risks.

For example, when operating the device in France, the cleaned air must be expelled from the building.

► Observe the local health & safety requirements.

2.3 Warnings and information signs

The following warning, notice and mandatory signs can be found on the product.

These markings must always be legible. They may not be covered, obscured, painted over, or removed.

	► Read and follow the operating manual. Ensure that the operating instructions can be consulted at all times.
	► Wear a respiratory mask.
	► Wear a protective suit.
	► Wear protective gloves.
	► Wear safety goggles.
	► Disconnect the mains plug.
	Rotating fan blade warning. Risk of injury. ► Disconnect the device from the power supply before opening it.

	Beware of electric voltage. Risk of electric shock. ► Always only have the unit opened by a qualified electrician. ► Disconnect from the electrical power supply before opening.
	► Do not use the air outlet as a climbing aid.

2.4 Safety instructions

2.4.1 Basic safety instructions

The device has been developed and manufactured in accordance with the latest technology and recognized safety standards and directives. Due to the device design, unavoidable technical residual risks exist to the user, third parties, devices, and other material property. The manufacturer will accept no liability for damage caused by non-observance of the documentation.

- ► Please read the documentation carefully before using the product for the first time and comply with the instructions contained.
- ► Only operate the device in technically perfect condition and ensure compliance with all documentation.
- ► Read the documentation carefully before carrying out specific work, for example commissioning, operation, transport, and maintenance.
- ► Use suitable means to protect yourself and bystanders from the hazards listed in the documentation.
- ► Store the documentation within easy reach of the device for reference and enclose all documents when passing on the device.
- ► Consult the documentation for the other components used.
- ► Information about how to handle gas cylinders can be found in the instructions provided by the gas manufacturer and the relevant local regulations.
- ► Disconnect the power supply and shut off the gas and compressed air supply for the entire duration of maintenance, servicing and repair work.
- ► Observe the local accident prevention regulations.
- ► Only trained specialists should commission, operate, and service the device. Qualified personnel are persons who, based on their special training, knowledge, experience and due to their knowledge of the relevant standards, are able to assess the tasks assigned to them and identify possible dangers.
- ► Ensure the workplace is well lit and keep it neat and tidy.
- ► For disposal, observe the local regulations, laws, provisions, standards, and directives.

2.4.2 Safety instructions for the electrical power supply

- ► Protect the mains connection on the mains side in accordance with the amperage.
- ► Make sure that the power supply cable does not become damaged, for example by being driven over, crushed and pulled.
- ► Check the power supply cable for damage and wear at regular intervals.
- ► Use an adequate replacement cable to replace or extend the power supply cable.
- ► Only a qualified electrician should replace the power supply cable and the mains plug.
- ► Splash-water protection and mechanical stability must be ensured when replacing the mains plug of the power supply cable.

2.4.3 Safety instructions for electrical components

- ► Check the device for damage and for its proper functioning in accordance with its designated use.
- ► Do not expose the device to rain and avoid a moist or wet environment.
- ► Protect yourself from electric shock by using insulating mats and wearing dry clothing.
- ► Do not use the device in areas subject to fire or explosion hazards.

2.4.4 Safety instructions for welding, cutting, and grinding

- ► Arc welding, thermal cutting, and grinding can damage the eyes, skin, and hearing. Note that further hazards can occur in connection with other components. For this reason, always wear the mandatory protective clothing in accordance with local laws and directives.
- ► All metal vapors, especially lead, cadmium, copper and beryllium, are harmful. Ensure sufficient ventilation or extraction. Do not exceed the established occupational exposure limit (OEL).
- ► To prevent phosgene gas from forming, always use clear water to rinse workpieces that have been degreased using chlorinated solvents. Do not set up degreasing baths containing chlorine near the workplace.
- ► Adhere to the general fire protection regulations and remove flammable materials from the vicinity of the workplace prior to starting work. Provide suitable fire extinguishing equipment at the workplace.

2.4.5 Safety instructions for personal protective equipment

- ► Do not wear any loose clothing or jewelry.
- ► Wear a hairnet over long hair.
- ► Note local laws and directives concerning protective equipment.
- ► Make sure that any third parties in the direct vicinity are wearing personal protective equipment.
- ► Wear your personal protective equipment according to the hazard.

2.4.6 Safety instructions for welding, cutting and grinding fumes, and dust

The welding, cutting or grinding process produces fumes containing harmful dust particles which can settle on surfaces and get into the ambient air. They can damage the respiratory system when inhaled.

- ► Always only operate the device with the designated filters.

The extraction of substances and materials which are combustible, aggressive, chemical or contain oil vapors as well as aluminum or magnesium dusts can lead to fire and explosion due to chemical reactions. Serious injuries and irreparable damage to the device can be the result.

- ► Only ever use the device as intended.
- ► Check and wear your personal protective equipment.
- ► Only use the device in rooms which are sufficiently ventilated.
- ► Make sure that all the seals on the device are free of dirt.
- ► Remove dust deposits in the surrounding area immediately using an industrial vacuum cleaner of dust class H or a damp cloth.

2.4.7 Safety instructions for emergencies

- ► In an emergency, immediately disconnect all supplies (for example electrical power supply, coolant supply, compressed air supply, shielding gas supply).
- ► Extinguish burning oil or emulsions using a CO_2 or powder fire extinguisher.

3 Scope of delivery

The following components are included in the scope of delivery:

– 1x filter system HERR® 880200-40

– 1x operating manual

► Order the equipment parts and wear parts separately.

► The order data for the equipment parts and wear parts can be found in the current order documents.

► For more information about points of contact, consultation, and orders, visit *www.thermacut.com*.

Although the items delivered are carefully checked and packaged before dispatch, it is not possible to fully exclude the risk of transport damage.

Goods-in inspection

► Use the delivery note to check that everything has been delivered.

► Check the delivery for damage (visual inspection).

Complaints

► If goods are damaged, contact the final carrier.

► Keep the packaging for a possible check by the carrier.

Returns

► Use the original packaging and packing material for returns.

► If you have questions concerning packaging and safety during shipment, contact your supplier, carrier, or transport company.

4 Product description

4.1 Setup and function

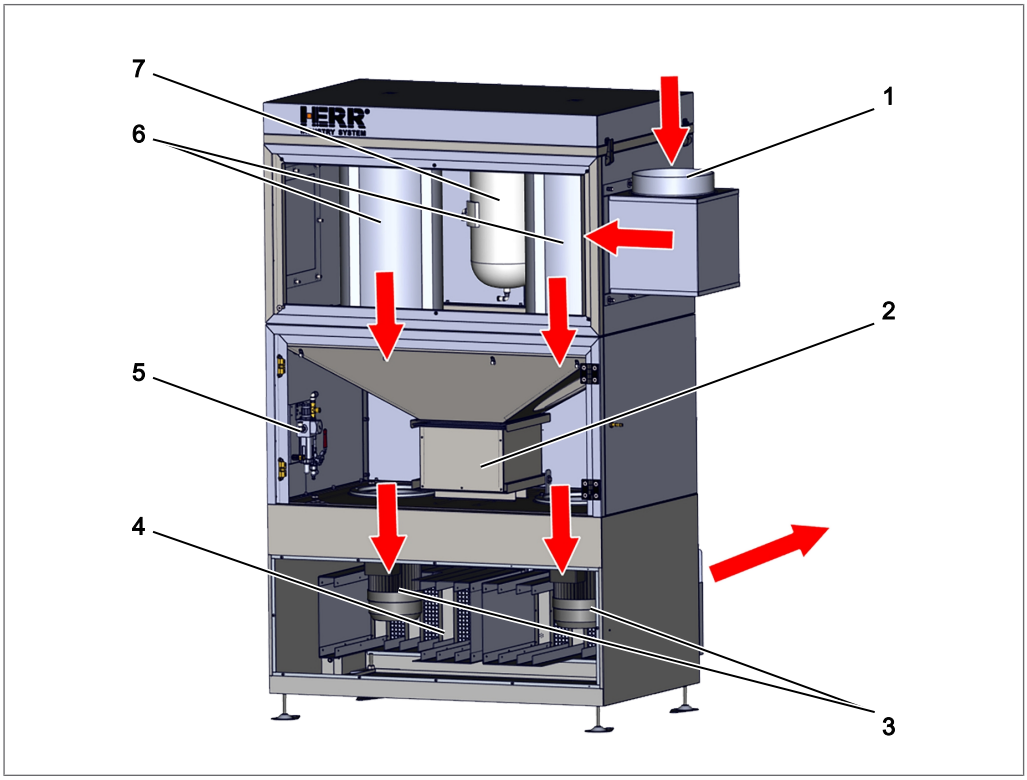


Figure 2 Setup and function

1	Air inlet	**2**	Dust collecting container
3	2x ventilator	**4**	Air exhaust louver
5	Compressed air unit	**6**	2x filter cartridges
7	Compressed air tank		

Areas of application for the device are automated welding, grinding or thermal cutting up to a max. duty cycle of 100% in conjunction with extraction hoods as well as plasma and flame cutting applications with low dust generation. Fumes which are hazardous to health are generated during welding, grinding, and thermal cutting. The fumes are filtered and cleaned by the filters inside the device.

The device can be used for extraction during the welding, cutting and grinding of steels with an alloy content of nickel and chrome less than 30 %.

Two motors draw the welding, grinding and cutting fumes into the device through the air inlet. The fumes are pressed through filter membranes in the filter cartridges. The filter membranes trap the dirt particles. The cleaned air is then routed to the bottom section of the device and returned to the environment through air exhaust louvers.

Dedusting of the filters takes place automatically. The device is equipped with two rotary nozzles, which with the help of a pulse of pressurized air, blow dirt particles out of the filter membranes. The dirt particles are trapped in a dust bin.

The following extraction devices can be connected to the device:

- Exhaust tables
- Fume extractor arms and cranes
- Extraction nozzles
- Extraction hoods
- Sanding tables

4.2 Operator controls and connections

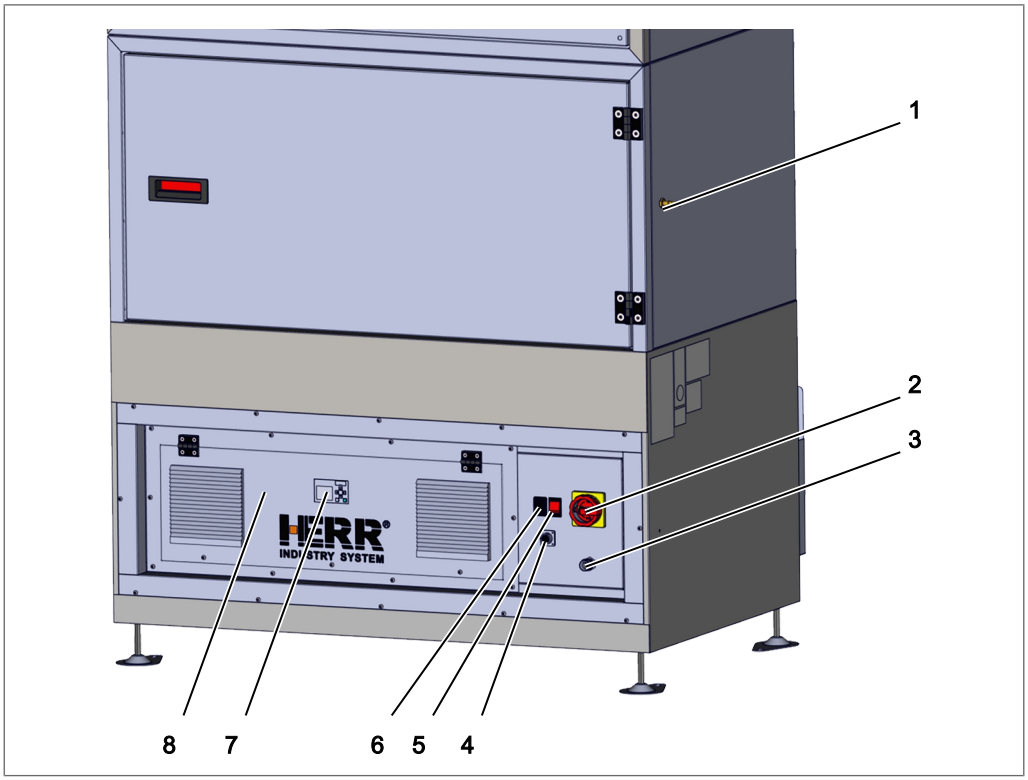


Figure 3 Operator controls and connections

1	Compressed air connection	**2**	Main switch
3	Mains connecting cable	**4**	Connecting socket for remote On/Off switch
5	Manual cleaning switch	**6**	<I/O> switch
7	Control display	**8**	Electric unit

<I/O> switch	Extraction is activated when the <I/O> switch is set to <I>. When the device is running, the <I/O> switch and not the main switch must be used to switch it off in order to ensure that the automatic double cleaning process for the filters is run.
Remote On/Off switch (optional)	If a remote On/Off switch is connected to the connecting socket, the device can be switched on and off externally.
<Manual cleaning> switch	When the switch is pressed, the filter membranes are cleaned. The switch has an indicator light for maintenance. If the filter cartridges are dirty, the indicator light illuminates red. If the indicator light is still illuminated after the switch has been pressed several times, the filter cartridges must be checked and replaced if necessary. Effective cleaning is achieved when the <I/O> switch is used to switch off the device, as the dust is then not immediately drawn back in again.

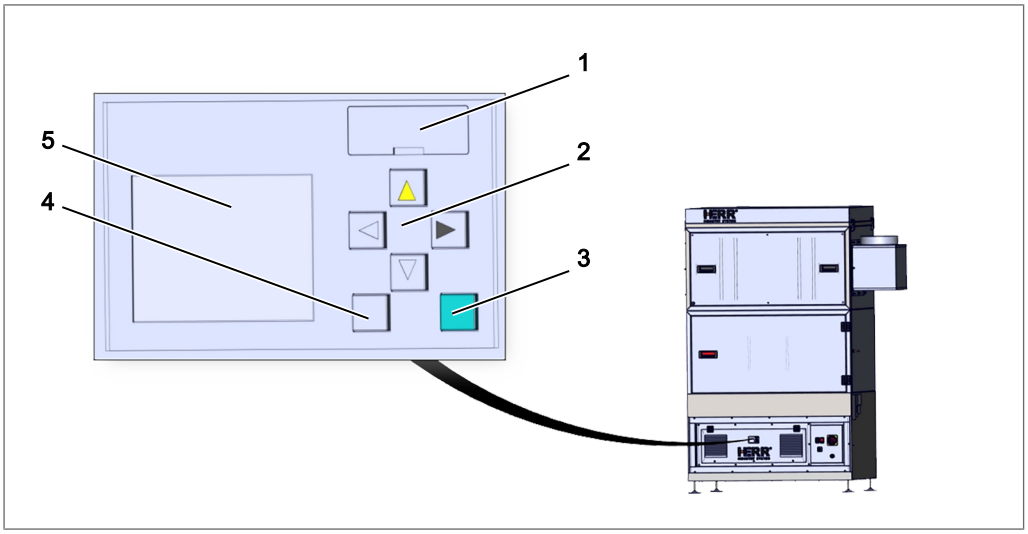


Figure 4 Control display

1	Slot with software flash drive	**2**	Arrow buttons
3	<OK> button to enter/confirm	**4**	<ESC> button to cancel/return to higher-level menus
5	Display		

The device is controlled by a PLC. The buttons on the device's electric unit control display are used for control.

5 Technical data

5.1 Ambient conditions

Temperature of the ambient air	-10 °C to +40 °C
Relative air humidity	Up to 80% non-condensing

Table 1 Ambient conditions for transport and storage

Temperature of the ambient air	+10 °C to +40 °C
Relative air humidity	Up to 70% non-condensing
Max. site altitude	1000 m above sea level

Table 2 Ambient conditions for operation

5.2 Product data

	880200-40
Mains voltage	380 to 400 V AC
Mains frequency	50 Hz
Mains fuse	Miniature circuit breaker characteristic C 3 x 16 A
Control voltage	24 V AC
Rated current	6.4 A
Max. duty cycle	100 % (continuous operation, 2 shifts at 7.6 hours each)
Drive capacity	2x 1.5 kW
Capacity of dust bin	max. 15 l
Filter surface per filter	20 m^2
Filter dimensions	327 mm x 1200 mm
Filter material	HISTec® ePTFE coating
Type of cleaning	HiRoto® rotary nozzle
Connection diameter	250 mm
Dimensions of the exhaust air opening	2x 238 mm x 396 mm
Max. air volume flow	3000 m^3/h
Nominal pressure	2500 Pa
Pressure volume	54 l
Sound pressure level LpA	≤75 dB(A)
Protection rating	IP 20
Compressed air quality	Dry and oil-free (5 to 6.5 bar)

	880200-40
Compressed air consumption	120 l/min
Inner diameter compressed air hose	9 mm
Weight	Approx. 490 kg
Dimensions (LxWxH)	1420 mm x 800 mm x 2445 mm

Table 3 Product data

6 Transport and setup

⚠ WARNING

Risk of injury due to improper transport and setup

Improper transport and setup can lead to the unit tilting or falling. Serious injuries can be the result.

- ► Check and wear your personal protective equipment.
- ► Place the unit on a suitable base (level, firm, dry) so that it cannot tilt over.
- ► Take the weight of the unit into account when lifting the unit. ⇨ *5 Technical data (Page 17)*
- ► Use suitable lifting gear with load-handling attachments to transport and set up the unit.
- ► Avoid jerky lifting and set-down of the unit.
- ► Do not lift the unit over people or other units.

NOTE

Property damage due to improper transport and setup

Improper transport or setup can lead to the device tilting or falling. Property damage and irreparable damage to the device can be the result.

- ► Protect the device against influences of the weather, for example rain and direct sunlight.
- ► When driving over edges make sure that the device does not become caught.
- ► Only use the device in dry, clean and well ventilated rooms.
- ► When setting the device up, keep a minimum clearance of 1 m to the wall so that the device is sufficiently ventilated.
- ► When installing the unit, maintain a minimum clearance of 1.6 m from the ceiling so that the filter cartridges can be lifted up and out of the unit.

The device can be transported and installed using either a forklift or lifting gear.

6.1 Installation with a forklift

1. Drive under the device with a forklift on the long or short side.

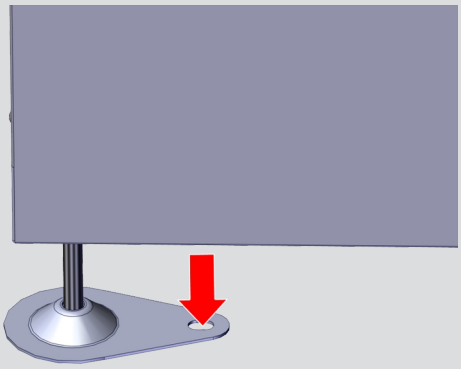
2. Transport to a suitable installation site but do not set down yet.

3. Loosen all screws on the transport pallet.

4. Remove all parts of the transport pallet.

5. Slowly set down the device.

6. Mark the drill holes (4x) on the floor and use a percussion drill to drill them.

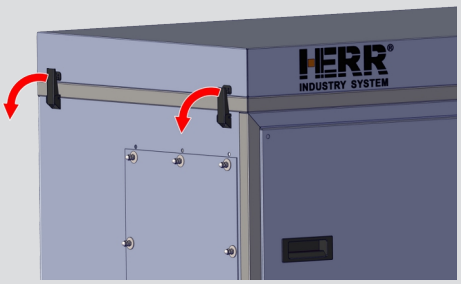


7. Insert the nail plugs into the drill holes.

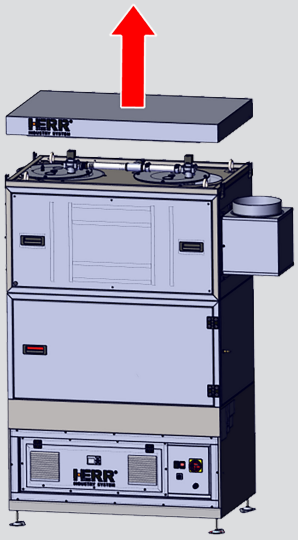
8. Screw the foot firmly into the floor of the room where the device is to be installed using the nail plugs anchors.

6.2 Installation with lifting gear

1. Loosen the tension locks of the upper cover plate on both sides.

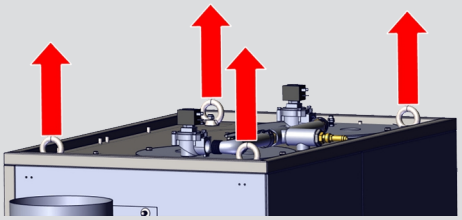


2. Two people should work together to carefully remove the upper cover plate.



3. Hook the lifting gear into the transport lugs.

4. Slowly raise the device and make sure it remains balanced during transport.



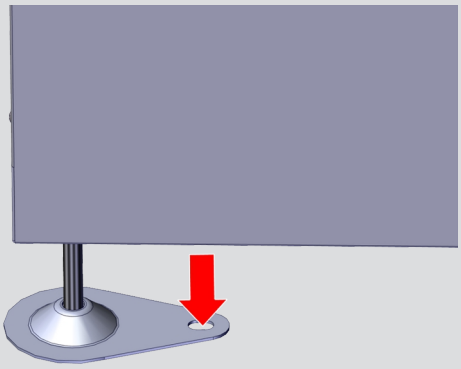
5. Set the device up.

6. Remove the lifting gear.

7. Two people should work together to carefully put the upper cover plate back in place.

8. Tighten the tension locks of the upper cover plate on both sides.

9. Mark the drill holes (4x) on the floor and use a percussion drill to drill them.

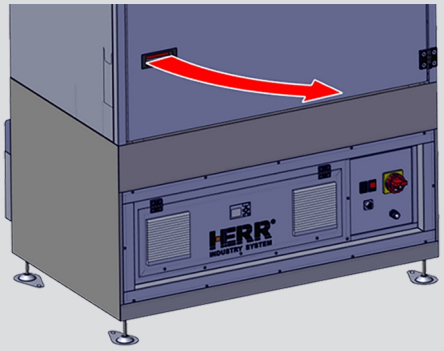


10. Insert the nail plugs into the drill holes.

11. Screw the foot firmly into the floor of the room where the device is to be installed using the nail plugs anchors.

6.3 Removing the transport lock from the dust bin

1. Open the door.



2. Loosen the screws (2x) of the transport lock.

3. Remove the transport locks on both sides.

4. Close the door.

7 Putting into operation

7.1 Attaching the pipe to the air intake fitting of the air inlet

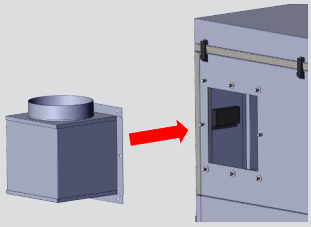
Depending on requirements, the air inlet for the customer's pipe can be mounted on the right- or left-hand side of the device. The side without a pipe connection must always be closed with the cover plate to ensure optimum extraction.

Depending on requirements, the air inlet can be mounted with the air intake fitting facing up or down.

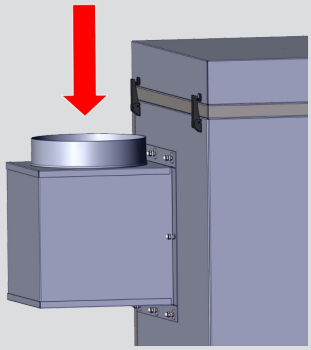
1. Undo all domed nuts, screws and washers (8x) of the cover plate on the side wall of the device.

2. Remove the cover plate.

3. Mount the air inlet with the washers, screws, and domed nuts.

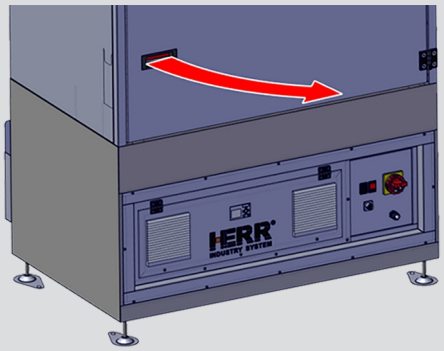


4. Fasten the pipe firmly and tightly to the air intake fitting of the air inlet using a suitable adapter.



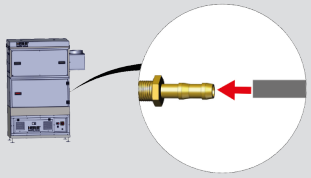
7.2 Attaching compressed air hose

1. Open the door.

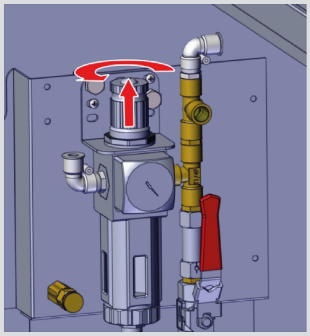


Alternatively, the compressed air hose can be executed as a quick-action coupling.

2. Attach the compressed air hose with a hose clamp to the pressure reducer and connect to the compressed air supply.



3. Pull the pressure regulator on the throttle valve up and turn it to set 5 bar to 6 bar. If a pressure of more than 6 bar is set, the pressure relief valve on the compressed air tank can be triggered. An air pressure of less than 5 bar will lead to ineffective filter cleaning.



4. Press the pressure regulator on the throttle valve down to lock it.

7.3 Connecting an external fire extinguishing system (optional)

► Observe the operating instructions provided by the fire extinguishing system's manufacturer.

7.4 Connecting the optional remote control

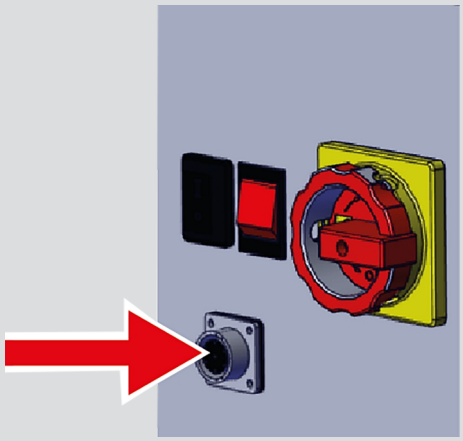
⚠ WARNING

Electric shock due to damaged or improperly installed cables

The use of damaged or improperly installed cables can result in potentially fatal electric shocks.

- ► Check all live cables and connections for proper installation and damage.
- ► Have any damaged, deformed, or worn parts replaced by a qualified electrician only.

1. Connect the remote controller to the 7-pole connection socket.



7.5 Establishing the electrical power supply

► Note the safety instructions. ⇨ *2.4.2 Safety instructions for the electrical power supply (Page 11)*

⚠ WARNING

Electric shock due to damaged or improperly installed cables

The use of damaged or improperly installed cables can result in potentially fatal electric shocks.

- ► Check all live cables and connections for proper installation and damage.
- ► Have any damaged, deformed, or worn parts replaced by a qualified electrician only.

⚠ WARNING

Fire hazard due to improper mains connection

A fire can be caused by an improper mains connection. Serious burns can be the result.

- ► Make sure that the operating voltage stated on the rating plate matches the mains voltage.

For power supply and fuse protection, see:

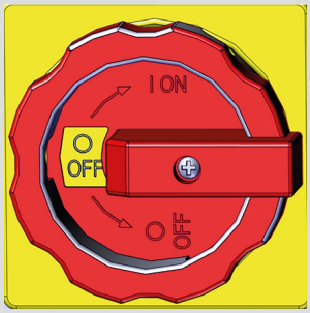
⇨ *5 Technical data (Page 17)*

⇨ *15 Circuit diagram (Page 48)*

► Plug in the mains plug. Ensure that the rotary field rotates clockwise.

7.6 Carrying out a functional test

1. Open the customer's compressed air supply.
2. Check that the pressure at the pressure reducer is between 5 bar and 6 bar.
   If the pressure is below 5 bar, the device will signal a compressed air fault. If the pressure is above 7 bar, the pressure relief valve will open.
3. Plug in the mains plug.
4. Switch on the main switch.



5. Have a qualified electrician check the rotary field at the input of the motor protective switch using a rotary field meter.
   The rotary field must rotate clockwise.
6. Set the <I/O> switch to <I>. Extraction starts.
7. Using an ammeter, have a qualified electrician check the motor current at the output of the soft starter or frequency converter.

8 Operation

⚠ WARNING

Health risk due to inhalation of harmful welding, grinding, and cutting fumes

Welding, grinding and thermal cutting processes produce fumes containing harmful dust particles that can settle on surfaces and be released into the ambient air. They can damage the respiratory system when inhaled.

- ► Check and wear your personal protective equipment.
- ► Only use the device in rooms which are sufficiently ventilated.
- ► Make sure that all the seals on the device are free of dirt.
- ► Always only operate the device with the designated filter.
- ► Always only operate the device with the dust bin closed.
- ► Do not open the dust bin until at least one minute after switching the device off.
- ► Keep the device closed during operation and the cleaning process.
- ► Remove dust deposits in the surrounding area immediately using an industry-standard vacuum cleaner of dust class H or a damp cloth.

⚠ WARNING

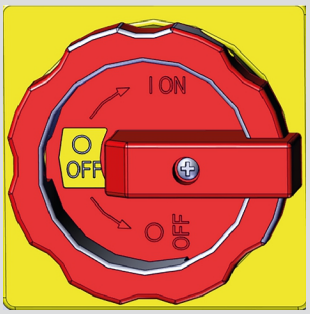
Fire hazard due to improper use

Improper use of the device can result in fire. Serious burns can be the result.

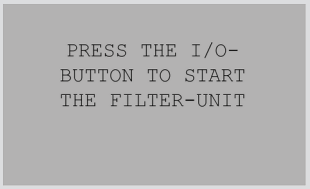
- ► Do not use the device in areas subject to dust or explosion hazards.
- ► Do not use the device to extract welding fumes that result from welding oil-wetted parts.
- ► Do not use the device to extract flammable substances and liquids.

1. Check that the main switch is at <0>.

2. Switch the device on at the main switch.



3. Wait until the control display has booted. The prompt to press the <I/O> switch to start extraction is displayed.



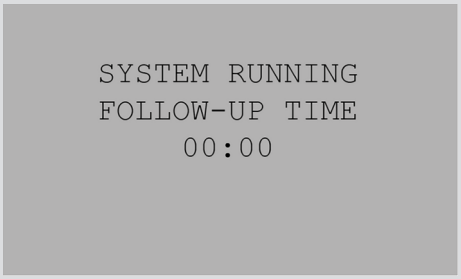
8.1 Starting and stopping extraction

1. To start extraction, set the <I/O> switch to <I>.

2. To stop extraction, set the <I/O> switch to <O>. Alternatively, start extraction using the optional remote On/Off switch.

After extraction has been stopped, the filters are dedusted twice automatically.

3. Note that the post-monitoring time <00:00> is only active for automatic start/stop. In this case, the ventilator is switched off after 0 s to 360 s.



8.2 Starting manual filter cleaning

The filter cartridge is automatically dedusted at regular intervals. If required, the cleaning process can also be performed manually.

1. Press the <Manual cleaning> switch to start manual cleaning. The filter cartridges are cleaned once or twice depending on the degree of contamination.

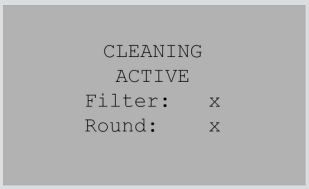
8.3 Indications on the control display

Display during the cleaning process

During operation, dust is extracted into the filter cartridge and adheres there. This leads to a pressure difference between the clean air side and the dirty air side. When the pressure difference reaches the preset value, the differential pressure switch initiates the cleaning process and automatically cleans the filter cartridges one after the other.

The value can be adjusted. For plasma operation, the default setting is 1375 Pa.

1. Read off the number of cleaned filters and cleaning process cycles at the control display.

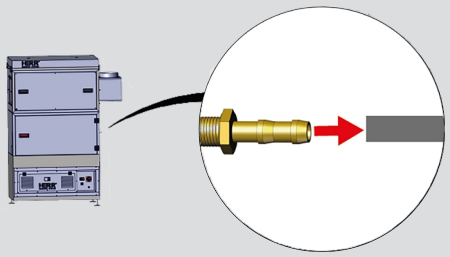


Current date and time display

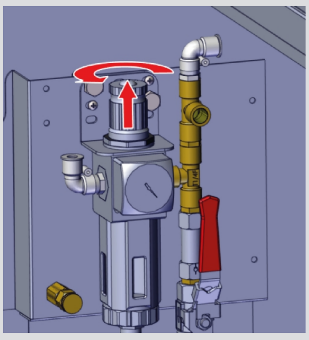
1. Read off the current date and time at the control display.

9 Putting out of operation

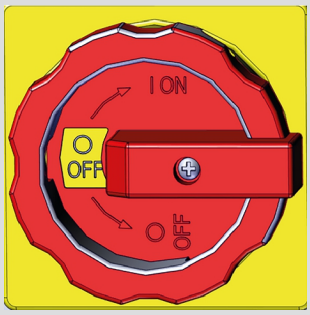
1. Disconnect the device from the compressed air supply.



2. Open the rotary knob on the pressure reducer (relax).



3. Set the main switch to <O>.



4. Disconnect the device from the power supply.

10 Maintenance and cleaning

Regular maintenance and cleaning are prerequisites for a long service life and perfect function. The regular removal of dust can extend the service life of the filter cartridges. The maintenance interval is determined by the working environment and operating time of the devices. If the device is operated for longer than 8 hours per day, the maintenance interval should be adapted according to requirements.

⚠ WARNING

Health risk due to inhalation of harmful welding, grinding, and cutting fumes

Welding, grinding and thermal cutting processes produce fumes containing harmful dust particles that can settle on surfaces and be released into the ambient air. They can damage the respiratory system when inhaled.

- ► Check and wear your personal protective equipment.
- ► Only use the device in rooms which are sufficiently ventilated.
- ► Make sure that all the seals on the device are free of dirt.
- ► After cleaning and maintenance work check all screwed joints for a tight fit, leaks, chafing points. Tighten any loosened screwed joints. Correct any faults found immediately.
- ► Remove dust deposits in the surrounding area immediately using an industrial vacuum cleaner of dust class H or a damp cloth.

⚠ WARNING

Electric shock due to damaged or improperly installed cables

The use of damaged or improperly installed cables can result in potentially fatal electric shocks.

- ► Check all live cables and connections for proper installation and damage.
- ► Have any damaged, deformed, or worn parts replaced by a qualified electrician only.

⚠ WARNING

Risk of crushing through improper assembly or disassembly

Improper assembly and disassembly of device components can crush limbs.

- ► Do not reach into the danger zone.
- ► Check and wear your personal protective equipment.

⚠ CAUTION

Risk of injury due to unexpected start

If power is supplied during maintenance, cleaning or disassembly, rotating parts can start running unexpectedly and lead to injuries from cuts.

- ► Switch off the device.
- ► Disconnect all electrical connections.
- ► Depressurize all device sections and pressure lines to be opened. The device may have residual pressure even when the compressed air is switched off.

10.1 Maintenance and cleaning intervals

The given intervals are for guidance and refer to one-shift operation. We recommend documenting the checks. At least the test date, the defects found and the name of the tester should be documented.

Interval	Job
Daily	► Empty the dust bin. ⇨ *10.2 Emptying the dust bin (Page 33)*
Weekly	► Check the device for outer signs of damage. ► Check the cables, connection hoses and connections for a tight fit and damage, replace if necessary. ► Check all the connection points of the filter unit for dust escaping. ► Check the dust bin for leaks. ► Check condensate and drain if necessary. ⇨ *10.3 Draining condensate (Page 34)*
Annually or after 1600 operating hours	► Have a qualified trained specialist or the service department run a functional test on the device. ⇨ *10.4 Carrying out a functional test (Page 35)*
If the indicator light of the <Manual cleaning> switch is on	► Check both filter cartridges and replace if necessary. ⇨ *10.6 Replacing filter cartridges (Page 36)*
Every 5 years	► Have the internal check (visual inspection) of the pressure vessel carried out by a qualified trained specialist in accordance with the Pressure Equipment Directive (directive 2014/68/EU).
Every 10 years	► Have the material strength of the pressure vessel carried out by a qualified trained specialist in accordance with the Pressure Equipment Directive (directive 2014/68/EU).

Table 4 Maintenance and Cleaning Intervals

10.2 Emptying the dust bin

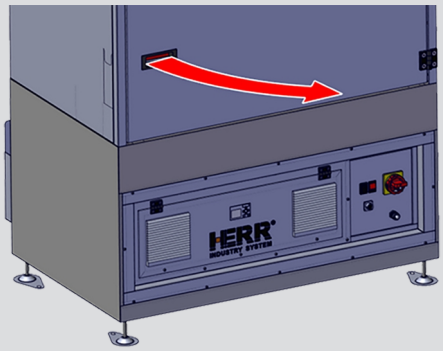
⚠ WARNING

Health risk through inhalation of harmful dust

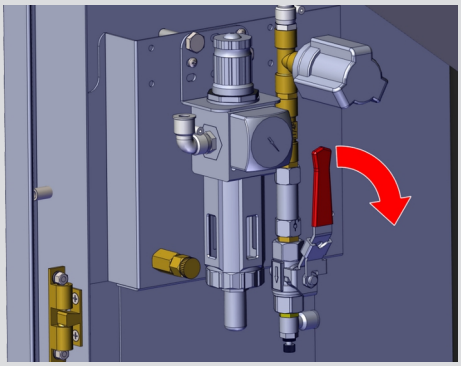
If the dust collecting container is not emptied properly, harmful dust and dirt particles can get into the surrounding air. They can damage the respiratory system if inhaled.

- ► Do not open the dust collecting container until at least one minute after switching the device off.
- ► Do not use compressed air to clean the device.
- ► Immediately remove dust from the dust collecting container with a dust class H industrial vacuum cleaner or a damp cloth.

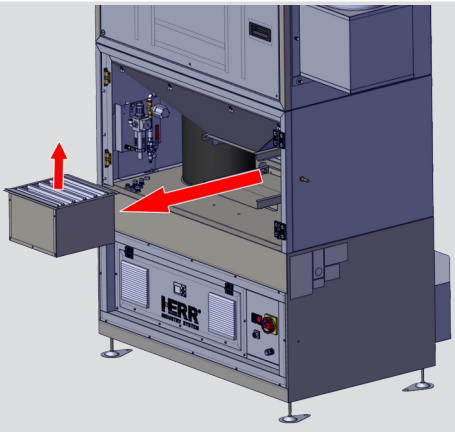
1. Open the door.



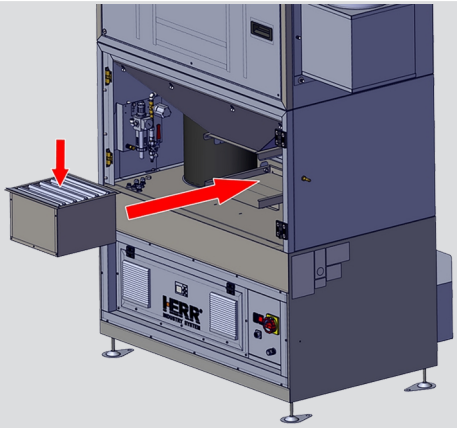
2. Move the compressed air valve lever down so that the compressed air lock for the dust collecting container unlocks.



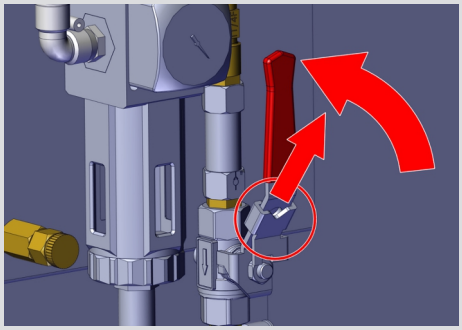
3. Pull the dust collecting container out all the way.
4. Remove the grill.
5. Remove dust with a class H industrial vacuum cleaner and clean the dust collecting container with a cloth if necessary.



6. Replace the grill.
7. Insert the dust collecting container.



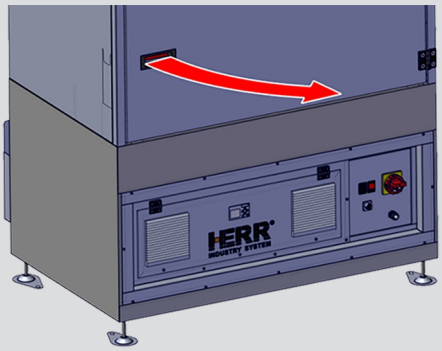
8. Unlock the compressed air valve lever lock and move the lever up to lock the compressed air lock for the dust collecting container.



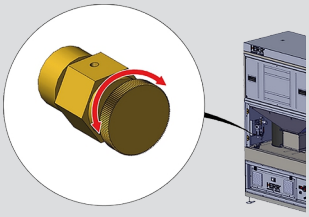
9. Close the door.

10.3 Draining condensate

1. Open the door.



2. Hold a suitable container under the condensate drain valve.
3. Carefully open the condensate drain valve, press and hold it pressed until no more condensate runs into the container.
4. Close the condensate drain valve.



10.4 Carrying out a functional test

The functional test may only be carried out by a trained specialist or THERMACUT Service.

1. Carry out a visual inspection of the device and all cables and connection lines.
2. Carry out a visual inspection of the pneumatic lines.
3. Connect to the power supply and put the device into operation.
4. If faults or messages are shown on the control display, eliminate the cause. ⇨ *11.2 Fault Messages on the Control Display (Page 43)*
5. If unusual noises or vibrations occur during operation, eliminate the cause.
6. Check that 2 compressed air impulses are given for a cleaning process.
7. Check whether dust escapes from the device during operation.
8. Switch the device off and disconnect it from the power supply.

10.5 Carrying out an electrical check

⚠ WARNING

Electric shock due to faulty cables

If maintenance work on electrical components is not carried out properly, life-threatening electric shocks can occur. Components or cables can still be live even when the device is switched off at the main switch,

- ► Disconnect the device from the power supply.
- ► Always have testing of electrical cables and ground connections done by a qualified electrician only using suitable measuring and testing devices.
- ► Check all live cables and connection for proper installation and any damage.

1. Disconnect from the power supply, set the main switch to <O> and secure the device against unintentional reconnection.

2. Open the door of the electronic control unit completely.
3. Tighten all the contacts in the electronic control unit and check for tightness.
4. Test all electrical lines, ground connections and contacts in line with local and mandatory requirements.
5. Close the door of the electronic control unit.

10.6 Replacing filter cartridges

1. Use a ladder or other suitable climbing aid to replace the filter cartridges.
2. Always replace both filter cartridges.

NOTE

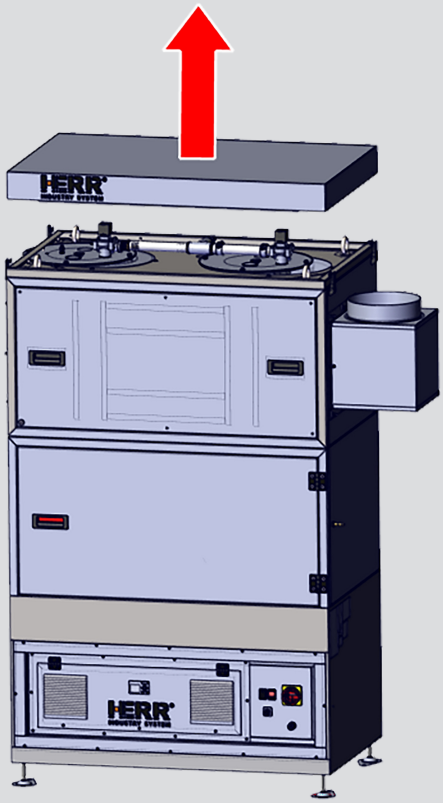
Damage to the rotation nozzle through faulty removal or insertion

A rotation nozzle can become damaged through faulty removal and insertion.

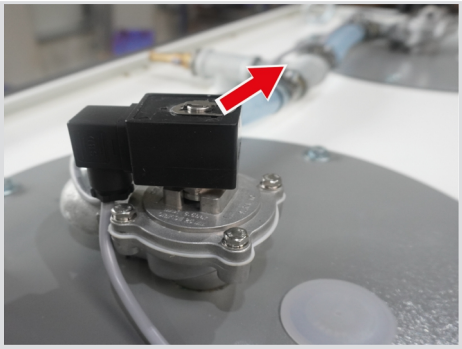
- ► Detach the rotary nozzle without tilting and remove the rotary nozzle concentrically from the housing, avoiding contact with the filter cartridge.
- ► Insert the rotary nozzle concentrically to the new filter cartridge.

3. Loosen the tension locks of the upper cover plate on both sides.

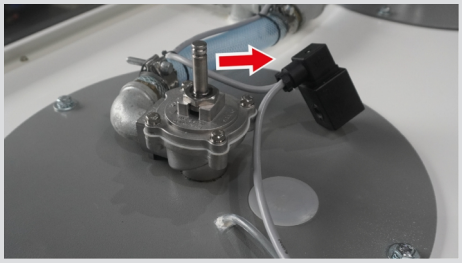
4. Two people should work together to carefully remove the upper cover plate.



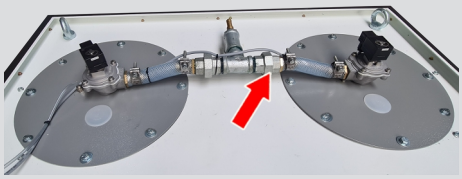
5. Pull the solenoid valve pin up.
6. Remove the tension lock.



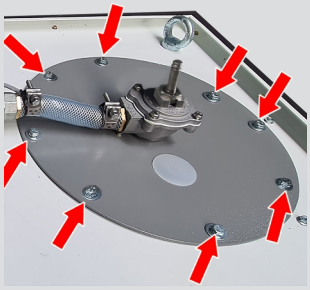
7. Remove the solenoid valve.



8. Undo the union nut at the threaded joint.

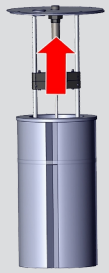


9. Loosen screws (8x) using a size 13 wrench.

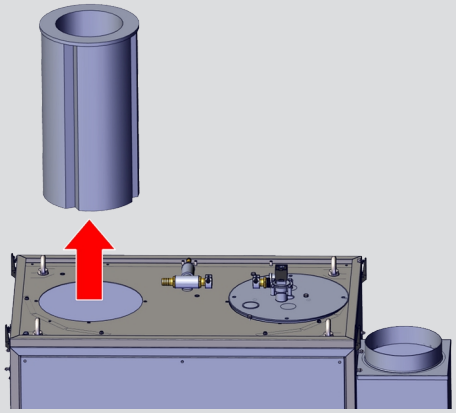


10. Loosen the hose for differential pressure monitoring from the quick-action coupling.

11. Remove the rotary nozzle from the filter cartridge.



12. Carefully remove the filter cartridge.



13. Seal the filter cartridge dust-tight in the dust collecting bag (cable pull/cable tie).

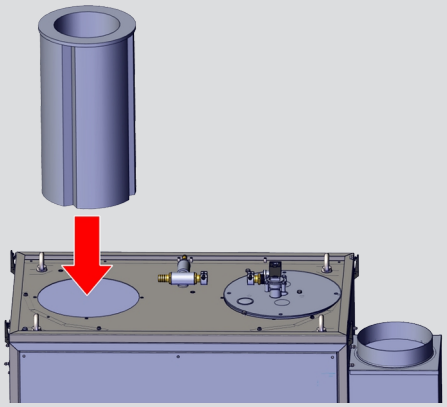
14. Dispose of the dust collecting bag with the filter cartridge in accordance with local laws and directives. Disposal of welding dust

15. Insert the new filter cartridge.

16. Install the new rotary nozzle.

17. Insert the rotary nozzle into the new filter cartridge.

18. Tighten the screw for fastening the rotary nozzle.

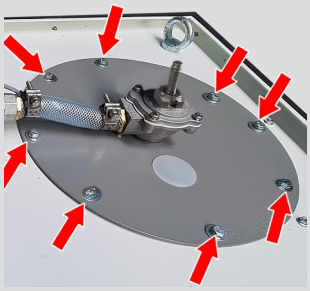


19. Open the plastic cap.

20. To check that the cartridge filter has a correct centric fit, look through the opening into the cartridge filter.

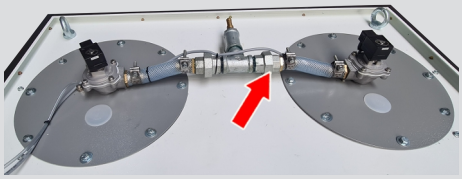
21. Close the plastic cap.

22. Tighten the screws (8x).



23. Mount the solenoid valve in reverse order.

24. Attach the union nut at the threaded joint.



25. Connect the hose for differential pressure monitoring to the quick-action coupling.

26. Carry out all the steps again on the other side to replace the second filter cartridge.

27. Two people should work together to carefully put the upper cover plate back in place.

28. Tighten the tension locks of the upper cover plate on both sides.

11 Identifying and correcting faults

⚠ WARNING

Health risk due to inhalation of harmful welding, grinding, and cutting fumes

Welding, grinding and thermal cutting processes produce fumes containing harmful dust particles that can settle on surfaces and be released into the ambient air. They can damage the respiratory system when inhaled.

- ► Check and wear your personal protective equipment.
- ► Only use the device in rooms which are sufficiently ventilated.
- ► Make sure that all the seals on the device are free of dirt.
- ► Always only operate the device with the designated filter.
- ► Always only operate the device with the dust bin closed.
- ► Do not open the dust bin until at least one minute after switching the device off.
- ► Keep the device closed during operation and the cleaning process.
- ► Remove dust deposits in the surrounding area immediately using an industry-standard vacuum cleaner of dust class H or a damp cloth.

- ► Consult the documentation of all components used.
- ► Contact your retailer or THERMACUT in the event of questions or problems.

Fault	Cause	Correction
Indicator light of the <Manual cleaning> switch is illuminated red	Filter cartridges are defective/ saturated.	► Perform manual cleaning several times in succession.
		► If the indicator light remains illuminated, replace both filter cartridges. ⇨ *10.6 Replacing filter cartridges (Page 36)*
		► Contact THERMACUT Service if necessary.
Insufficient air pressure	Dust collecting container leaking.	► Check the position of the dust collecting container and the seal between the dust collecting container and the filter housing. ► Lower the dust collecting container and raise it again.
Low flow of air.	Dust collecting container leaking.	► Check the position of the dust collecting container and the seal between the dust collecting container and the filter housing. ► Lower the dust collecting container and raise it again.

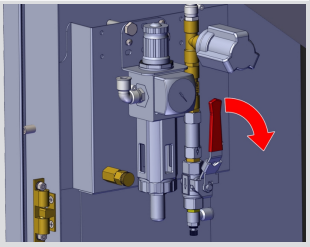
Fault	Cause	Correction
	Dust collecting container is not covered.	► Place the grill on the dust collecting container.
	Dust collecting container full.	► Empty the dust collecting container. ⇨ *10.2 Emptying the dust bin (Page 33)*
	Air pressure and volume flow are insufficient.	► Check that the compressed air is at 6 bar. ► Increase the volume flow (approx. 4 m^3).
No flow of air	Motor has stopped.	► Restart the motor. ► Contact THERMACUT Service if necessary.
	Device incorrectly connected to the power supply.	► Check the clockwise rotary field. ⇨ *7.5 Establishing the electrical power supply (Page 24)*
Rapid shutdown.	Required pressure is not reached in the compressed air tank. Filter cartridges cannot be cleaned. Filter cleaning cannot be performed.	► Check that the compressed air is at 6 bar. ► Check the compressed air supply and compressed air connection. ► Contact THERMACUT Service if necessary.
Dust is escaping from the dust collecting container.	Dust collecting container leaking.	► Check the position of the dust collecting container and the seal between the dust collecting container and the filter housing. ► Lower the dust collecting container and raise it again.
	Dust collecting container full.	► Empty the dust collecting container. ⇨ *10.2 Emptying the dust bin (Page 33)*
No power supply.	Protective motor switch is faulty.	► Have the connections in the electric unit checked by a qualified electrician. ► Contact THERMACUT Service if necessary.
	Fuse has tripped	
Unit makes very loud noises.	Ventilator is defective.	► Check the ventilator and replace if necessary.

Fault	Cause	Correction
Unit vibrates to an unusual extent.	Filter cartridge not inserted correctly.	► Check filter cartridge and replace if necessary. ⇨ *10.6 Replacing filter cartridges (Page 36)* ► Contact THERMACUT Service if necessary.

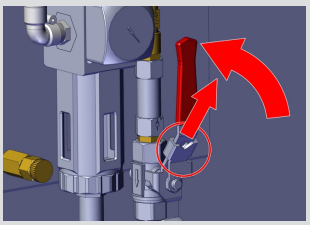
Table 5 General faults

11.1 Checking position of the dust bin

1. Set the ball valve of the pneumatic lifting device down so that the compressed air lock for the dust bin unlocks.
2. Check the position of the dust bin and the seal.



3. Release the lock and set the ball valve of the pneumatic lifting device up to close the compressed air lock for the dust bin.



11.2 Fault Messages on the Control Display

Differential pressure

The preset differential pressure has been reached.

1. Change filter cartridges.
2. Contact THERMACUT Service if necessary.

Check the compressed air supply

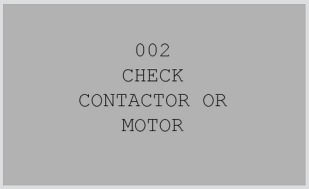
Required pressure in compressed air tank is not reached. Filter cartridges cannot be cleaned. If the compressed air supply is too low, the device is automatically switched off.

1. Check that the compressed air is at 6 bar.
2. Check the compressed air supply and compressed air connection.
3. Contact Service if necessary.

Check contactor or motor

The PLC control controls the function of the star-delta switch or soft starter. If the motor temperature is too high, the device is automatically switched off.

1. Contact Service if necessary.



Contact Service

The device must be checked by qualified personnel.

1. Contact Service.

12 Disassembly

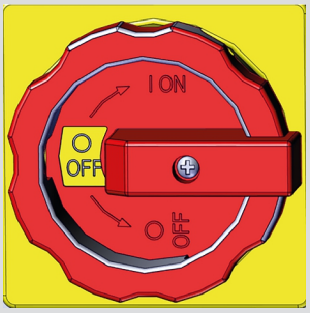
⚠ CAUTION

Risk of injury due to unexpected start

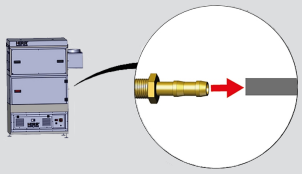
If power is supplied during maintenance, cleaning or disassembly, rotating parts can start running unexpectedly and lead to injuries from cuts.

- ► Switch off the device.
- ► Disconnect all electrical connections.
- ► Depressurize all device sections and pressure lines to be opened. The device may have residual pressure even when the compressed air is switched off.

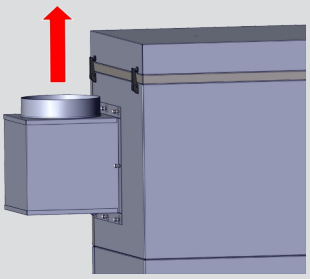
1. Set the main switch to <O>.



2. Disconnect the device from the compressed air supply.

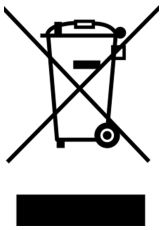


3. Disassemble the air inlet piping.



13 Disposal

13.1 Disposing of waste equipment



Equipment marked with this symbol is covered by European Directive 2012/19/EU on waste electrical and electronic equipment (WEEE).

- ► Do not dispose of waste electrical and electronic equipment in household waste.
- ► Disassemble waste electrical and electronic equipment prior to proper disposal.
- ► Collect components of waste electrical and electronic equipment separately and recycle in an environmentally responsible manner.
- ► Observe local regulations, laws, provisions, standards, and directives.
- ► Please consult the responsible local authority for information about collection and return of waste electrical and electronic equipment.

13.2 Disposing of welding, grinding, and cutting dust

Disposal of the welding, grinding and cutting dust and the dust collecting bag is subject to special waste regulations. Welding, grinding and cutting dust and the dust collecting bag must not be allowed to get into the sewage system or be disposed of together with household waste.

- ► Heed local laws and directives on disposal.

13.3 Disposal of materials

This product is mainly made of metallic materials that can be melted in steel and iron works and are thus almost infinitely recyclable. The plastic materials used are labeled in preparation for their sorting and separation for later recycling.

- ► Heed local laws and directives on disposal.

13.4 Disposal of consumables

Oil, greases and cleaning agents must not contaminate the ground or enter the sewage system.

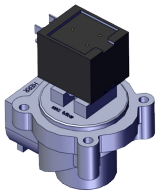
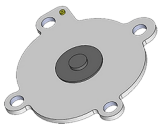
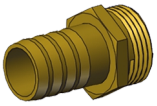
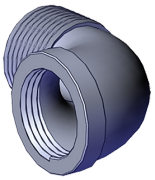
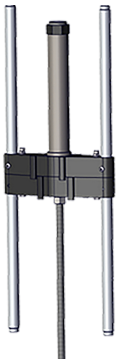
- ► Store, transport and dispose of consumables in suitable containers.
- ► Dispose of contaminated cleaning tools (brushes, rags, etc.) in accordance with the information provided by the consumables' manufacturer.
- ► Observe the local laws and regulations on disposal provisions in the safety data sheets of the consumables manufacturer.

13.5 Disposing of packaging

THERMACUT has reduced the transport packaging to a minimum. The ability to recycle packaging materials was always considered during their selection.

- ► Heed local laws and directives on disposal.

14 Spares and wear parts

Item	Item designation	Item number
	HERR air valve 2/2, 24 V AC/50 Hz	EX-0-715-001
	Membrane	EX-0-715-025
	T-piece connector 1"	EX-0-715-004
	Angle 90° IG + AG galv. G1"	EX-0-715-003
	Hose clamp 31–34, width 20 mm	EX-0-715-005
	Pressure hose NW25/4.3 mm	EX-0-715-024
	Seal 380 mm x 218 mm x 5 mm	EX-0-715-006
	HERR HiRoto nozzle, 1200 mm	EX-0-715-013

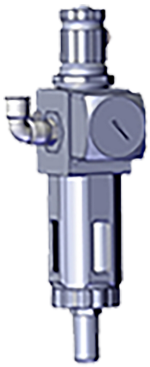
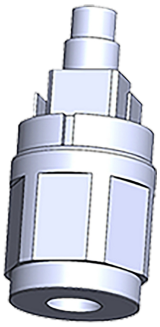
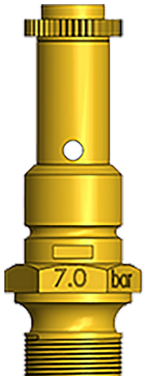
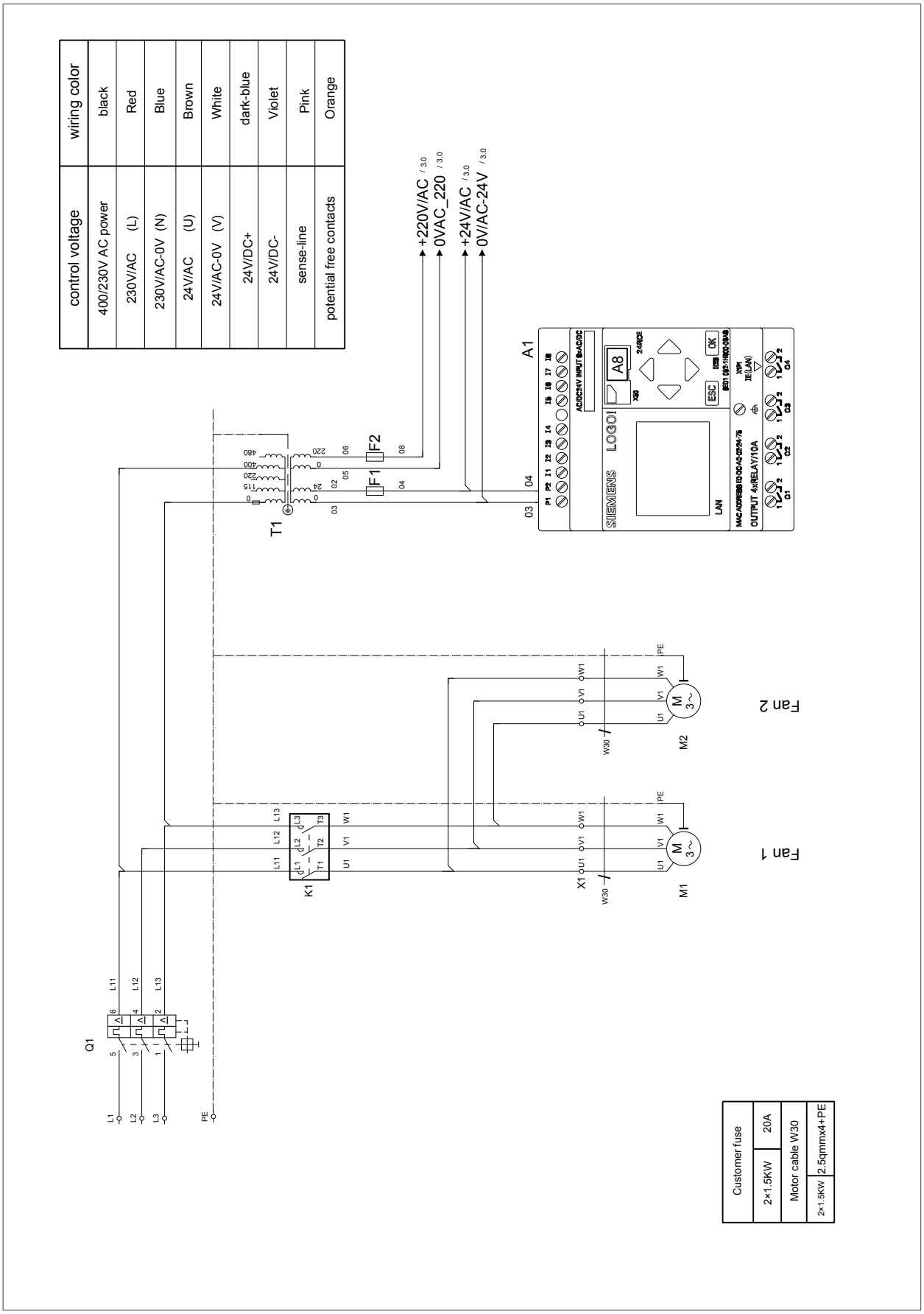
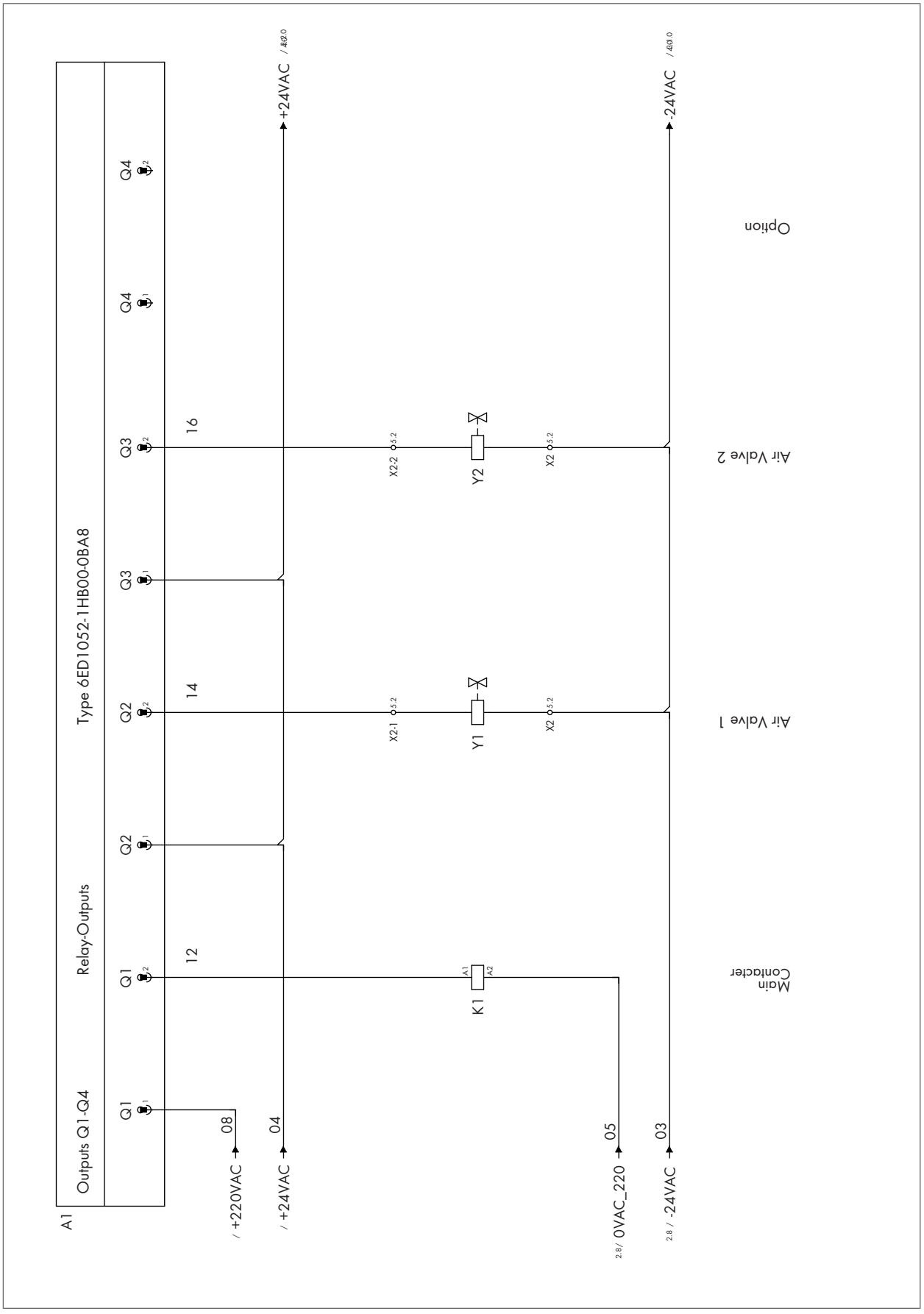
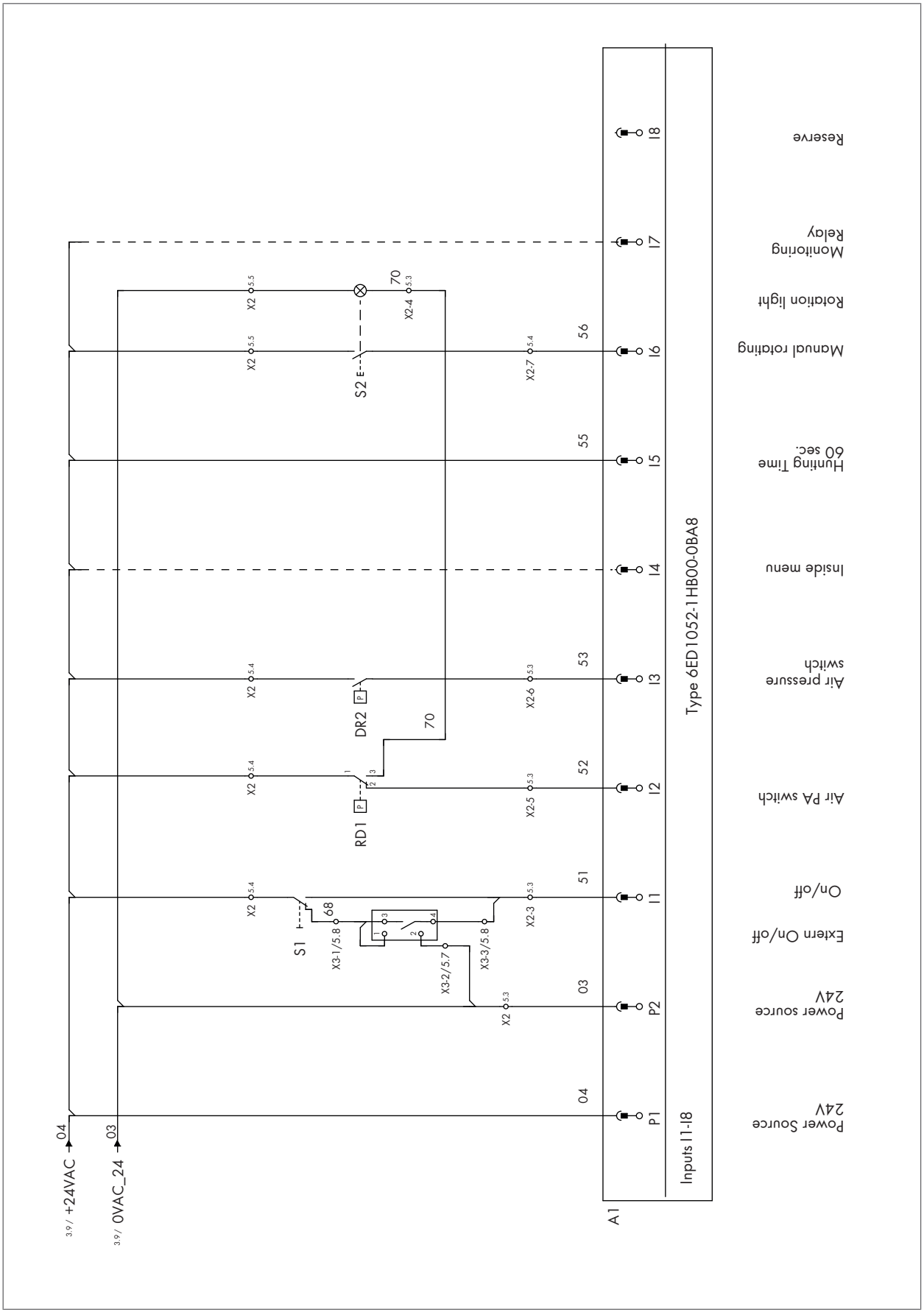
Item	Item designation	Item number
	HERR filter cartridge, 20 m^2, ePTFE, L=1200 mm	EX-0-711-001
	Compressed air unit 0–12 bar	EX-0-715-008
	LOGO! logic module 24RC A8	EX-0-715-014
	Pressure switch 1/4" with protective cap 1–10	EX-0-715-019
No illustration	Transformer/40 VA/50–60 Hz, Input: 115 V/230 V/ 380 V, Output: 24 V (40 VA)/220 V (23 VA)	EX-0-715-020
	Safety valve 7 bar, G 1/2"	EX-0-715-023

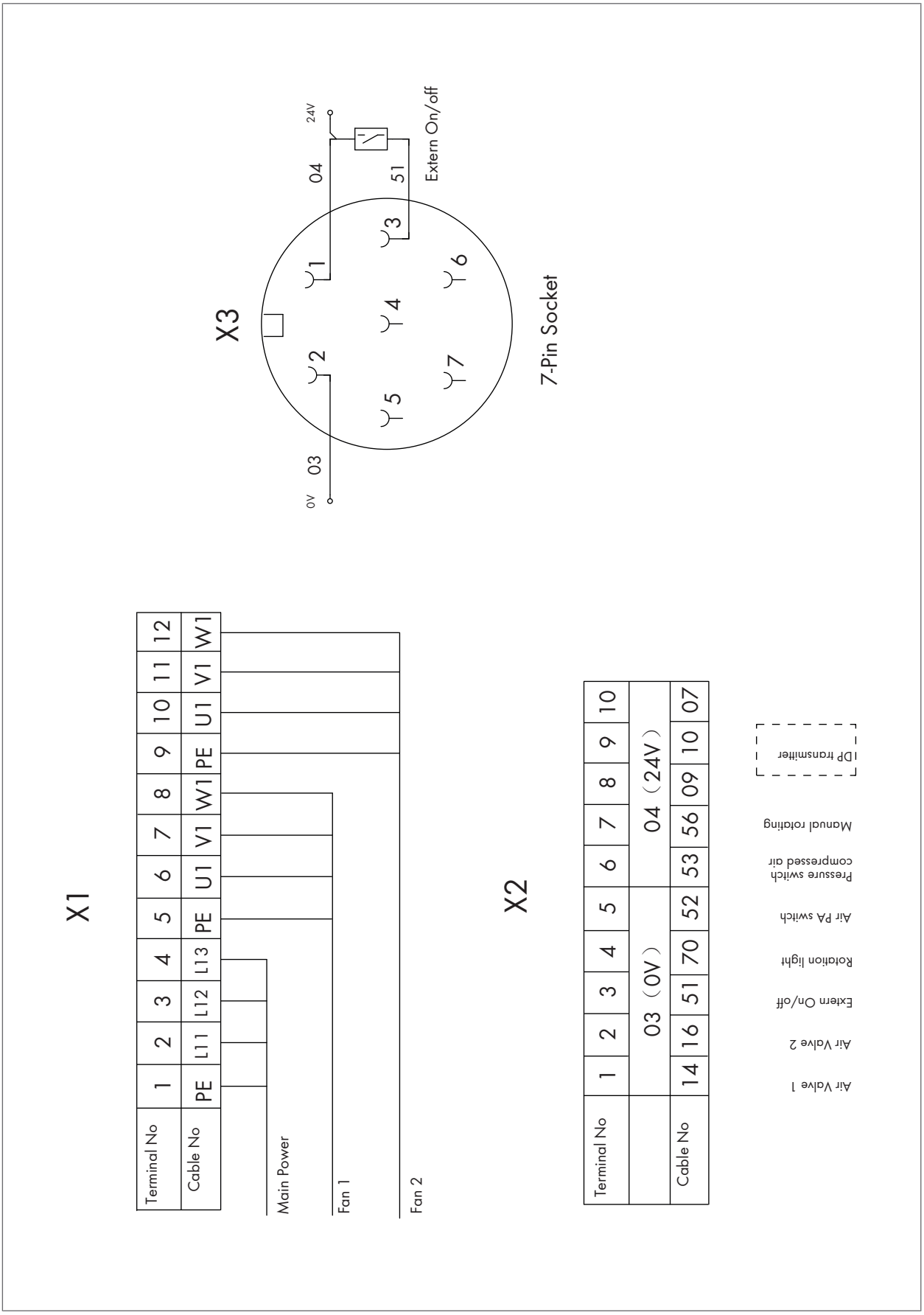
Table 6 Spares and wear parts

15 Circuit diagram




A1
Outputs Q1-Q4
Relay-Outputs
Type 6ED1052-1HB00-0BA8
Q1
Q2
Q3
Q4
12
14
16
08
04
05
03
/ +220VAC
/ +24VAC
2.8/ 0VAC_220
2.8 / -24VAC
+24VAC
-24VAC
K1
Y1
Y2
X2-1
X2-2
X2
Main Contacter
Air Valve 1
Air Valve 2
Option


Reserve
Monitoring Relay
Rotation light
Manual rotating
Hunting Time 60 sec.
Inside menu
Air pressure switch
Air PA switch
On/off
Extern On/off
Power source 24V
Power Source 24V
Inputs I1-I8
Type 6ED1052-1HB00-0BA8
A1
P1
P2
I1
I2
I3
I4
I5
I6
I7
I8
04
03
51
52
53
55
56
70
68
S1
S2
DR2
RD1
X2
X2-3
X2-5
X2-6
X2-7
X2-4
X3-1/5.8
X3-2/5.7
X3-3/5.8
+24VAC
0VAC_24


X3
24V
04
51
Extern On/off
0V
03
1
2
3
4
5
6
7
7-Pin Socket
X1
Terminal No
Cable No
1 2 3 4 5 6 7 8 9 10 11 12
PE L11 L12 L13 PE U1 V1 W1 PE U1 V1 W1
Main Power
Fan 1
Fan 2
X2
Terminal No
Cable No
1 2 3 4 5 6 7 8 9 10
03（0V） 04（24V）
14 16 51 70 52 53 56 09 10 07
Air Valve 1
Air Valve 2
Extern On/off
Rotation light
Air PA switch
Pressure switch compressed air
Manual rotating
DP transmitter

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