



SCAN COMBIFLEX 450 / 450NS

MANUAL V2023-06



SCANMASKIN
MACHINES-MINERALS-KNOW-HOW

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DEAR CUSTOMER!

Thank you for choosing Scanmaskin as your supplier.
We wish you all the best with your new
Scan Combiflex™ 450 and hope that
it meets your expectations.

Scanmaskin Sweden AB

Per-Anders Bardh
CEO

IMPORTANT INFORMATION!

This User Guide only concerns the floor grinding machines **"Scan Combiflex 450"** and **"Scan Combiflex 450NS"** hereby referred to as **"SC-450"**. For information that only concerns Scan Combiflex 450NS, that machine is called **"SC-450NS"**. SC-450 may only be used for grinding horizontal surfaces approved by Scanmaskin Sweden AB.

If SC-450 is used for other purposes or handled in ways other than that described in this User Guide, Scanmaskin Sweden AB disclaims all responsibility.

Especially note the section **"2 Safety Regulations"**. Read the User Guide before using the floor grinding machine SC-450. The spare parts, grinding discs used on SC-450 must be approved by Scanmaskin Sweden AB.

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1. SPECIFICATIONS

The SC-450 is available with different power inputs, two modes of mechanical operation and some options regarding wet grinding. This is described in the different sections later on in this chapter.

1.1. ELECTRICAL SPECIFICATIONS

To find the specifications that apply to your machine, check the information plate on the machine.



Never connect the SC-450 to any other voltage or number of phases than described in this specification.



The power source must be fused according to **“External fuse”** in this specification; also the cables used must be marked and rated in accordance with the fuse used. Failure to comply with the correct fuses may cause fire or injuries.

Power choice	230 V 1~ ¹	230 V 1 1~ ²	110 V 1~
Power	2.2 kW (3 hk)	2.2 kW (3 hk)	1.5 kW (2 hk)
Current	12.2 A	12 A	18.5 A
Voltage	200 - 240 V 1~	200 - 240 V 1~	100 - 130 V 1~
Frequency	50 Hz +/- 5%	50 Hz +/- 5%	60 Hz +/- 5%
External fuse ³	13 A	13 A	20 A
Power inlet ⁴	CEE 7/7 - 250V 16A + PE	CEE 7/7 - 250V 16A + PE	NEMA 5-20 - 125V 20A + PE

Table 1.1 Electrical specifications. All models are CE-marked.



If using a generator see *“2.6.2 Using a generator”*.

1.2. MECHANICAL SPECIFICATIONS

Model	SC-450 Standard	SC-450 NS	Gear barrel 450/450NS
Grinding diameter	450 mm 17,7"	450 mm 17,7"	Free running
Grinding plate diameter	162 mm 6.4"	162 mm 6.4"	
Grinding plate speed	750 rpm	300-1000 rpm	
Mass	100 kg 220 lbs	100 kg 220 lbs	

Table 1.2 Mechanical specifications.

1 Standard.

2 2,2kW motor / NS model.

3 Maximum current for the fuses used in the power source (i.e. the distribution box).

4 This is the standard inlet used. Machines sold outside of EU will be shipped either with a local standard inlet or an adapter.



Dimensions of SC-450

Width	460 mm	18.1"
Height	1030 mm	40,6"
Depth	850 mm	31,9"

Dimensions of shipping box

Width	610 mm	24,0"
Height	1430 mm	56,3"
Depth	810 mm	31,9"

Ambient temperature during operation:	-20 °C to +40 °C	+4 °F to 104 °F
Ambient temperature during storage:	-20 °C to +70 °C	-4 °F to 158 °F



Figure 1.1 SC-450



Figure 1.2 SC-450NS

1.3. TOOLS



The machine must be equipped with tools approved by Scanmaskin Sweden AB before operation.



See "Grinding guide" for information about available tools and "4.15 Changing tools" for information about how to change the tools.

The tools are fitted using the Scan-On system for easy fitting.

Available tools:

- Diamond tools
- SC-Tiger PCD
- Sand paper

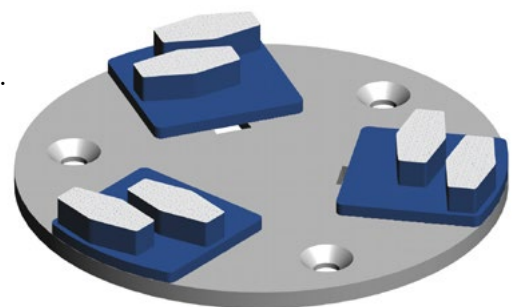


Figure 1.3 Scan-On plate with tools fitted.

1.4. RANGE OF APPLICATION



SC-450 is exclusively designed to process horizontal surfaces. SC-450 must not be used for other purposes than stated in this user guide. The manufacturer will not be liable for damage or injury resulting from incorrect usage of SC-450. Failure to follow the directions in this user guide will void the warranty. SC-450 is recommended from small to medium sized work sites.

Typical applications:

- Removal of old coatings, carpets, putty from hard surfaces
- Removal of undulated concrete surfaces
- Preparation of the surface for coatings
- Polishing of the surface
- Removal of coating defects
- Removal of glue residues

1.5. SCOPE OF SUPPLY

The following parts are included with the standard SC-450 grinding machine:

- User Guide
- 5 mm hexagon socket key

Machines sold outside of Europe will be either equipped with a local standard connector for the power inlet or the mating connector will be included and fitted at the main power inlet.



Read "2.6 Electrical safety" before connecting any included connectors.



1.6. OVERVIEW

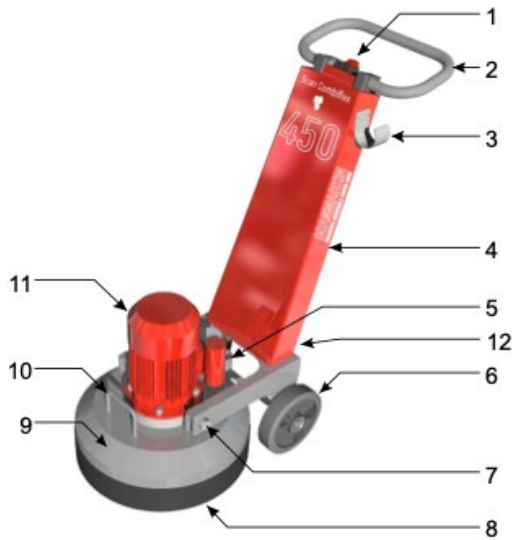


Figure 1.4 SC-450 overview

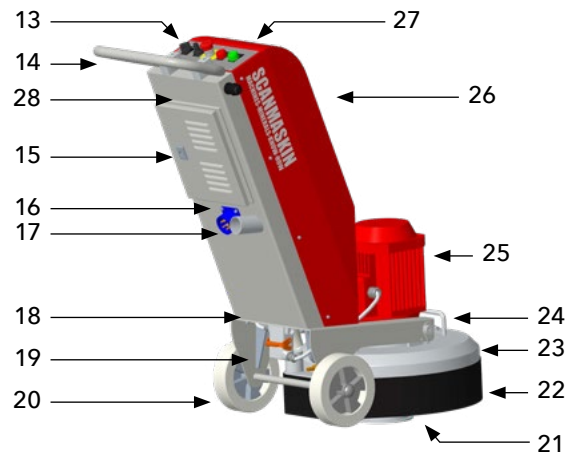


Figure 1.5 SC-450NS overview

Item	Description	Reference	Item	Description	Reference
1	Control device	4.3 Control device	15	Electrical cabinet	
2	Handle		16	Power inlet	
3	Dust collector hose holder		17	Dust collector connection	
4	Frame		18	Frame	
5	Dust collector outlet		19	Dust hoses	
6	Wheel		20	Wheels	
7	Pin		21	Gear barrel	
8	Dust cover		22	Dust cover	
9	Grinding head	4.15 Changing tools	23	Cover	
10	Lifting handle	3.3 Lifting	24	Lift handle	
11	Motor	1.2 Mechanical specifications	25	Motor	
12	Connector motor - frame		26	Cover	
13	Control panel		27	Water tank	
14	Handle				






Table 1.3 Machine parts overview.

2. SAFETY REGULATIONS



Read this entire chapter carefully! Failure to comply with safety regulations may result in serious injuries or damages.

2.1. EXPLANATION OF SYMBOLS

	Notation regarding safety
	Notation regarding electrical safety
	Notation regarding safety during transport
	Tipping hazard
	See reference

2.2. SAFETY PRECAUTIONS



Any machine, if it is not used according to the regulations, may be hazardous for operating, setting-up and service personnel. The operating authority is responsible for compliance with the safety regulations during operation and maintenance, and for the use of safety devices supplied with the machine, as well as the provision of appropriate additional safety devices!

- Eye and ear protection must be worn at all times.
- Never operate the machine when it's not in its upright position.
- Make sure there is no debris in the work area.
- Check the work area for screws or other hard objects in the concrete. Don't use the machine if there are any foreign objects stuck into the surface. Such objects must be removed prior to operation of machine.



Read "2.3 Organizational measures" and "2.5 Safety regarding operation of machine" thoroughly before operation!



2.3. ORGANIZATIONAL MEASURES



The user guide is to be kept near the location where the machine is being operated and must be within reach at all times.

- In addition to this user guide general and legal regulations regarding accident prevention and environmental protection must be complied with as per local regulations.
- Such duties may, for example, relate to the handling of hazardous substances, or to the provision and wearing of personal protection equipment, as well as compliance with traffic regulations.
- The user guide must be supplemented by other instructions, including the duty to supervise and report incidents relating to particular working practices, for example work organization, work procedures and personnel safety.
- Personnel entrusted with working with the machine must read the User Guide before starting work, in particular the “2 Safety Regulations” chapter. To read these instructions after work is commenced is too late. This particularly applies to incidental activities such as setting up the equipment, carrying out maintenance work or training staff to work with the machine.
- From time to time the working practices of the operators are to be checked by a supervisor especially to the items regarding awareness of safety and hazards.
- Operators must tie back long hair, and not wear loose clothing or jewelry including rings. There is a risk of injury through items getting caught or being drawn into moving machinery.
- Eye and ear protection must be worn at all times! Use personnel protection equipment if necessary or required by local regulations! Take notice of all safety and hazard notices on the machine!
- All safety and hazard notices at or on the machine must be kept complete and legible!
- If safety-critical changes occur to the machine or its working method, the machine must be shut down immediately! The cause of the fault must be established, and rectified.

- Changes, add-ons, or conversation to the machine, which might impair safety, must not be made, without the manufacturer's permission. This applies in particular to the fitting and adjustment of safety devices.
- Spare parts must comply with the technical requirements specified by the manufacturer. This is always guaranteed if original spare parts are used.
- Intervals for recurring checks and inspections specified in this User Guide must be complied with!
- To perform maintenance work correctly it is imperative to be equipped with the proper tools for the task in question.
- Repairs may only be made by Scanmaskin Sweden AB certified service technicians.
- Some grinding work may generate sparks under certain circumstances. Personnel working with the machine must therefore be aware of the risk of fire and how to handle a fire situation properly.
- Do not use the machine in areas with highly flammable and/or explosive materials.

2.4. PERSONNEL SELECTION AND QUALIFICATION

Fundamental duties:

- Work with the machine may only be undertaken by trained personnel!
- Clearly specify the responsibilities of personnel for operation, setting up, servicing and maintenance work!
- Make sure that only authorized personnel operate or work with the machine. Define responsibilities of the machine operator, regarding traffic safety regulations, and inform him not to take instructions from third parties who may not be complying with the local safety requirements.
- Personnel, who are being trained to operate equipment, may only use the machine under constant supervision of an experienced person!
- Work on electrical equipment may only be undertaken by a skilled electrician or by trained persons under the supervision of a skilled electrician, as well as in accordance with the local electrical engineering regulations.



2.5. SAFETY REGARDING OPERATION OF MACHINE



Do not allow any method of working that impairs safety!

- Recognized official procedures must be used to ensure the machine is operated in safe and best conditions.
- Only operate the machine when all safety devices and related safety equipment are present and operational!
- Check the machine visually for any damage and defects at least once a day.



See "5.2 Daily inspection prior to operation" for more information

- In the event of operational malfunctions, the machine must be shut down immediately and secured!
- Secure the work area around the machine in public areas providing a safety distance of at least 10 m (3.3 ft) from the machine.
- Faults must be immediately rectified.
- Carry out the switch on and switch off operations in accordance with this user guide.
- Before switching on the machine make sure that no-one can be endangered when the machine starts up.
- Never operate the machine when not in its upright position.
- Do not switch off or remove the exhaust and or the ventilation devices whilst the machine is running!
- All persons in the proximity of the machine must wear ear and eye protection as well as safety shoes. In addition, the machine operator must wear close-fitting protective clothing.
- Only use extension cables that are sized and marked in accordance with the overall power consumption of the machine and the valid VDE guidelines.



See "2.6 Electrical safety" for further information.

- Make sure there is no debris in the work area.
- Check the work area for screws or other hard objects in the concrete. Don't use the machine if there are any foreign objects stuck into the surface. Such objects must be removed prior to operation of machine.

2.6. ELECTRICAL SAFETY




The power source must be equipped fuses according to the table in "1.1 Electrical specifications". All cables used must be marked and rated according to the fuses used. Never connect the machine to a power source that does not provide protective earth!

- Work on electrical equipment may only be undertaken by a skilled electrician or by trained persons under the supervision of a skilled electrician as well as in accordance with the local electrical engineering regulations.
- Use only extension cables, that are used for extending the main cable, that are sized and marked in accordance with the overall power consumption of the machine and the valid VDE guidelines.
- The electrical equipment for the plant must be inspected regularly. Defects such as loose connections or scorched cables must be rectified immediately. Call a skilled electrician or out customer services.
- A second person must be in attendance whilst the electrical engineer is working on the equipment.
- The work area must be secured against any third party entering the work area. Follow local electrical engineering regulations while working on the machine. Never leave a machine unattended. Use only tools that are insulated against electricity.
- Only start work after you are familiar with the electrical engineering regulations that apply to the local area.
- Only use voltage seekers that comply with the regulations when troubleshooting. From time-to-time check voltage seekers to ensure that they are operationally efficient.



2.6.1. Cables

 Only use cables that are marked and rated according to the specifications in “1.1 Electrical specifications”. Don’t use excessive length of the cables. If a very long cable is needed, we recommend that you use a cable rated for more current and connect it to a distribution central near the machine. Never lay the cable in a loop when operating the machine, this will cause the cable to heat up and may cause fire. See “Figure 2.1” for explanation.

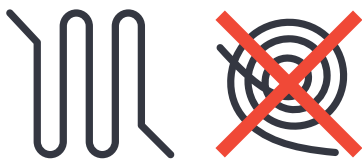



Figure 2.1 Recommended way to handle excessive cable length.

2.6.2. Using a generator


 The generator must be equipped with protective earth and operated in accordance with the current EN-VDE directives (this applies to the protective earth conductor in particular) to ensure that all safety devices are functioning and eliminate possible damage to electrical components.

2.7. DEFINITION OF THE “SAFETY OFF POSITION”

The machine is in a safe condition where it cannot be any hazard.

How to set the machine in the Safety off position:

1. Switch off the machine
2. If a dust collector is used, switch it off
3. Wait for all drives to come to a complete stop
4. Disconnect the main power
5. Secure against unintended restart

 Always disconnect the main power at the machine end to be able to prevent other persons from accidentally reconnect the main power while working on the machine.

2.8. SAFETY REGARDING MAINTENANCE

Set the machine into the Safety off position before beginning any work on the machine.



See "2.7 Definitions of the "Safety off position".

Never work on the machine while power is still connected!
All parts must have come to a complete stop before beginning any work!



When the machine is lying down on its back it might tilt to its upwards position. Take extra care to prevent this from happening to ensure that no injuries or damages occur.



When the machine has been operated the segments, Scan-On plates and other parts on the gear barrel may be hot. Take extra care to prevent burn injuries.

Adjustment, servicing, and inspection work on the period limits, specified in this User Guide as well as any information on the replacement or parts and equipment must be undertaken and/or complied with!

These activities may only be undertaken by qualified personnel.



The machine must not be connected to any power source while cleaning.



See "5.5 Cleaning the machine" for further information.



2.9. SAFETY REGARDING TRANSPORT



Always remove the tools before transport. The tools may fall off or damage the surface the machine is transported along.

2.9.1. Manual transport



When transporting the machine manually be observant about ramps and/or edges. Follow local traffic regulations for the work site to prevent accidents. Failure to comply with these regulations may cause injuries or damages.

2.9.2. Lifting



The machine must be secured according to local safety regulations before lifted. No person is allowed beneath a lifted machine! The machine must be lifted according to the instructions in "3.3 Lifting". Observe the machines point of balance before lifting! Failure to comply with these regulations may cause injuries or damages. Only use straps approved for the weight and circumstances!

2.9.3. Inside vehicles



Secure the machine according to local transport safety regulations before transporting the machine inside a vehicle.

3. TRANSPORTATION

3.1. SAFETY PRECAUTIONS



Read "2.9 Safety regarding transport" before attempting to transport the machine.

3.2. MANUAL TRANSPORTATION

- Detach the tools according to the instructions in "4.15 Changing tools"
- Tilt the machine backwards.
- Push the machine in desired direction.

3.3. LIFTING



Before attempting to lift the machine, read "2.9.2 Lifting".

- Detach the tools according to the instructions in "4.15 Changing tools".
- Fasten the straps used for lifting at the two handles as.
- Lift the machine.



Figure 3.2 Lifting points SC-450.



Figure 3.3 Lifting points SC-450NS.

3.4. SEPARATION OF MACHINE

If the machine needs to be transported in a limited space it can be separated into two parts. On each side of the grinding head / motor assembly there is two pins, each fastened by a locking clip. To separate the machine, disconnect the motor cable; remove the locking clips and the pins. Take extra care to prevent the frame from falling backwards.



3.5. INSIDE VEHICLES

- Detach the tools according to the instruction in "4.15 Changing tools".
- Secure the machine inside the vehicle.



Secure the machine according to local transport safety regulations before transporting the machine inside a vehicle.

Failure to secure the machine may result in injuries or damages.

4. OPERATION

4.1. PRECAUTIONS



Any machine, if it is not used according to the regulations, may be hazardous for operating, setting-up and service personnel.

The operating authority is responsible for compliance with the safety regulations during operation and maintenance, and for the use of safety devices supplied with the machine, as well as the provision of appropriate additional safety devices!

- Never operate the machine without proper tools.
- Eye and ear protection must be worn at all times.
- Never operate the machine when it's not in its upright position.
- Make sure there is no debris in the work area.
- Check the work area for screws or other hard objects in the concrete. Don't use the machine if there are any foreign objects stuck into the surface. Before operating the machine, such objects must be removed.



Read "2 Safety Regulations" before operating the machine.

4.2. MACHINE FUNCTIONS

The gear barrel has got three grinding heads that rotates in the opposite direction of the gear barrel. Each grinding head is equipped with a Scan-on plate where each plate holds the tools used. See "Figure 4.1".



Figure 4.1 Illustrates the rotation of the grinding heads versus the gear barrel.



The machine is equipped with a thermal protection circuit that will shut down the machine in the event of high motor temperature. Wait at least 15 minutes before operating the machine again if this occurs.

4.3. CONTROL DEVICE SC-450

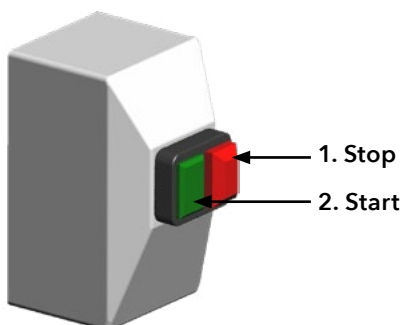


Figure 4.2 SC-450 control device.

Item	Function	Description
1	Stop	Stops the SC-450
2	Start	Starts the SC-450

Table 4.1 Description of control device.



4.4. START UP SC-450



See "4.1 Precautions" before starting the machine.

How to start the machine:

1. Make sure that the machine is equipped with the right "Scan on" tools.
2. Make sure that the main power and hoses for the dust collector are connected to the machine.
3. Turn on the dust collector if used.
4. Push the handle downwards to lift the gear barrel about 10 cm (4") from the ground.
5. Press the start button **(2)** on the control device.
6. Lower the gear barrel down to the floor.
7. Never let go of the handle during operation.

4.5. STOP

How to stop the machine:

1. Press the stop button **(1)**.
2. Wait until the machine comes to a complete stop before letting go of the handle.
3. If a dust collector is used, turn off.

4.6. CONTROL DEVICE SC-450NS



Figure 4.2 Control panel for SC-450NS.

No.	Text	Description	Part number
1	L/R	Selects rotation direction	596001
2	SPEED	Selects speed ⁵	596009
3	EMERGENCY STOP	Emergency stop	596003
4	STOP	Stops the machine	596007
5	START	Starts the machine	596006

Table 1.4 Description of the control panel.

4.7. WATER TANK SC-450NS



To increase the flow of the water, turn the knob counter clockwise. The knob will move outwards..



To decrease the flow of the water, turn the knob clockwise. The knob will move inwards.



To quickly stop the water flow, push the button on the knob. This releases the knob, and a spring will pull it inwards.



Secure the knob by tighten it slightly to ensure that no water will flow.

To empty the water tank before lying down transport, increase the water flow to a maximum and let the water pour out. Make sure the tank is empty before lying down transport. Empty the tank before long time storage.

⁵ See The range of the speed selection knob is described in "1.2 Mechanical specifications".



4.8. START UP THE SC-450NS



See "4.1 Precautions" before starting the machine.

How to start the machine:

1. Make sure that the machine is equipped with the correct tools from Scanmaskin.
2. Make sure that the power plug and hoses for dust collector and water (if water supply is used) are connected to the machine.
3. Turn on the dust collector if used.
4. Push the handle downwards to lift the gear barrel about 10 cm (4") from the ground.
5. Make sure that the "EMERGENCY STOP" **(3)** is in its upper position.
6. Press the "START" **(5)** button on the control panel.
7. Lower the gear barrel down to the floor.
8. Never release the handle during operation.

If the machine has been "emergency stopped", you must press "STOP" **(4)** before starting it to reset it.

4.9. EMERGENCY STOP / RESET SC-450NS

Use the Emergency Stop button to quickly stop the machine to prevent an accident or injuries.

Reset procedure:

1. Turn the Emergency Stop button clockwise to release it
2. Press the Stop button

The machine is now ready to be started again.

4.10. STOP THE SC-450NS

How to stop the machine:

1. Press the stop button **(4)**.
2. Wait until the machine comes to a complete stop before letting go of the handle.
3. If a dust collector is used, turn off.

4.11. GRINDING SPEED SC-450NS

Use the "SPEED" (2) dial to adjust the rotation speed of the grinding discs between the intervals described in chapter 1.

4.12. ROTATION DIRECTION SC-450NS

Use the "L/R" (1) switch to change direction of the grinding discs. The machine will first do a soft stop then a soft start.

4.13. SAFETY OFF POSITION

When working on the machine, either maintenance or tool change, the machine must be set to the "Safety off position". See "2.7 Definition of the "Safety off position"" for further information.

4.14. GRINDING

Refer to "Grinding Guide" for instructions and information about grinding.

4.15. CHANGING TOOLS



Before changing tools, read "2.8 Safety regarding maintenance".

This illustration shows how to change the tools.

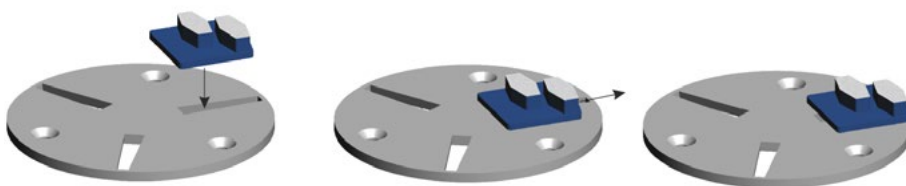


Figure 4.3 How to fit the diamond segments on the Scan-On plate

1. Insert the segment at the widest part of the slot.
2. Push the segment outwards.
3. The segment is now fit on the Scan-On plate.

To make sure that the tool is secured, use a small plastic hammer and slightly hit the tool outwards. In reverse this technique can be used to loosen tools that are stuck.



5. MAINTENANCE

5.1. PRECAUTIONS

Set the machine into the Safety off position before beginning any work on the machine.



See "2.7 Definitions of the "Safety off positions"".



Read "2.6 Electrical safety" before beginning any maintenance work.

Never work on the machine while power is still connected!
All parts must have come to a complete stop before beginning any work!



When the machine is lying down on its back it might tilt to its upwards position. Take extra care to prevent this from happening to ensure that no injuries or damages occur.



When the machine has been operated the segments, Scan-On plates and other parts on the gear barrel may be hot. Take extra care to prevent burn injuries.

Adjustment, maintenance and inspection work must be undertaken by qualified personnel.



The machine must not be connected to any power source while cleaning.

5.2. DAILY INSPECTION PRIOR TO OPERATION

Inspect the following items prior to operation:

- Inspect the wheels for damage.
- Inspect the grinding discs and hubs.
- Inspect the grinding head, dirt between the Scan-On plate and the grinding hub may lower the flexibility of the grinding head.
- If any screws appear loose, tighten them.
- Look over the machine for any other damage.

5.3. MAINTENANCE AND INSPECTION LIST

Daily	12 hours after service
<ul style="list-style-type: none"> Inspect the wheels Inspect the grinding heads Look for any other damage 	<ul style="list-style-type: none"> Tighten all screws

5.4. CLEANING THE MACHINE



Before starting to clean the machine, make sure it is in its "Safety off position".



The power must not be connected while cleaning the machine.

Do not use highly pressurized water to clean the machine. Water and soap are recommended.

5.5. TROUBLE SHOOTING

5.5.1. Common faults

Symptom	Cause	Correction	A ⁶
The machine won't start	<ul style="list-style-type: none"> There is a power failure from the power supply 	<ul style="list-style-type: none"> Inspect the fuses in the worksites fuse box Inspect cables Measure that all three phases are present and at full voltage near the machine 	<p>O</p> <p>E</p> <p>E</p>
The machine only operates while the start button is depressed	<ul style="list-style-type: none"> The motor is overheated The control device is damaged 	<ul style="list-style-type: none"> Wait until the motor is cool again Replace the control device 	<p>O</p> <p>S</p>
The machine is weak and might stop when on the ground.	<ul style="list-style-type: none"> There is a voltage drop at the power supply 	<ul style="list-style-type: none"> Inspect the fuses in the worksites fuse box Inspect cables Measure that the main voltage is present and at full voltage at the cable end near the machine. Make sure that the cable is not too long. If the cable should be too long, use a cable with higher rating to a distribution box nearer the machine. 	<p>O</p> <p>E</p> <p>E</p> <p>O</p>
The machine vibrates a lot	<ul style="list-style-type: none"> The grinding speed is too high The tools are damaged 	<ul style="list-style-type: none"> Lower the speed Inspect the tools Change the tools if needed 	<p>O</p> <p>O</p> <p>O</p>

Table 01 Common faults

⁶ See access table "Table 04"



5.5.2. Alarm- and fault codes SC-450NS

Alarm codes starts with "A" and fault codes starts with "F". The machine will be operational if an alarm code is present but not when an fault code is present.

Code	Description	Cause	Correction
GF	Ground Fault	<ul style="list-style-type: none"> The cable to the motor has been damaged The motor has been damaged Water have entered the motor 	<ul style="list-style-type: none"> Inspect the motor cable Inspect the motor connection Contact Scanmaskin Sweden AB
LF	Output Phase Loss	<ul style="list-style-type: none"> The cable to the motor has been damaged 	<ul style="list-style-type: none"> Inspect the motor cable Inspect the motor connection Contact Scanmaskin Sweden AB
LF2	Current Imbalance	<ul style="list-style-type: none"> Phase loss has occurred on the output side of the drive Terminal wires on the output side of the drive are loose Motor impedance or motor phases are uneven 	<ul style="list-style-type: none"> Check for faulty wiring or poor connections on the output side of the drive
oC	Overcurrent	<ul style="list-style-type: none"> One of the three phases is missing from the power supply There is a voltage drop at the power supply 	<ul style="list-style-type: none"> Inspect the fuses in the worksites fuse box Inspect cables Measure that all three phases are present and at full voltage at the cable end near the machine Make sure that the cable is not to long. If the cable should be to long, use a cable with higher rating to a distribution box nearer the machine
oH	Heatsink Overheat	<ul style="list-style-type: none"> Surrounding temperature is too high 	<ul style="list-style-type: none"> Inspect the ventilation fans Inspect the filters to the fans
oL1	Motor Overload	<ul style="list-style-type: none"> One of the three phases is missing from the power supply There is a voltage drop at the power supply Drive overloaded at low speeds 	<ul style="list-style-type: none"> Inspect the fuses in the worksites fuse box Inspect cables Measure that all three phases are present and at full voltage at the cable end near the machine Make sure that the cable is not to long. If the cable should be to long, use a cable with higher rating to a distribution box nearer the machine Increase the speed
oL2	Drive Overload	<ul style="list-style-type: none"> One of the three phases is missing There is a voltage drop at the power supply Overload occurred when operating at low speeds 	<ul style="list-style-type: none"> Inspect cables Inspect the fuses in the worksites fuse box Increase the speed
oL3	Overtorque Detection 1	<ul style="list-style-type: none"> There is a fault on the machine side (e.g., the machine is locked up) 	<ul style="list-style-type: none"> Check the status of the load. Remove the cause of the fault

ov	Overtoltage	<ul style="list-style-type: none"> • Drive input power voltage is too high 	<ul style="list-style-type: none"> • Check the voltage • Lower drive input power voltage within the limits listed in the specifications
PF	Input Phase Loss	<ul style="list-style-type: none"> • One of the three phases is missing from the power supply • There is a voltage drop at the power supply 	<ul style="list-style-type: none"> • Inspect the fuses in the worksites fuse box • Inspect cables • Measure that all three phases are present and at full voltage at the cable end near the machine • Make sure that the cable is not to long. If the cable should be to long, use a cable with higher rating to a distribution box nearer the machine
SC	IGBT Short Circuit	<ul style="list-style-type: none"> • The cable to the motor has been damaged • The motor has been damaged • Internal fault in drive 	<ul style="list-style-type: none"> • Check motor wiring
Uv1	Undervoltage	<ul style="list-style-type: none"> • There is a voltage drop at the power supply • One of the three phases is missing 	<ul style="list-style-type: none"> • Check the voltage • Inspect the fuses in the worksites fuse box

Table 02 Alarm- and fault codes SC-450NS.

The following table describes the access for the task.

Abbreviation	Person
O	Machine Operator
E	Electrician
S	Scanmaskin certified service technician

Table 04 Access rights for different persons



6. SPARE PARTS

See details in Scanmaskin service manual, scan the QR code or go to the following link:

https://drive.google.com/file/d/1foH7q4tmlL6VCrDjTeEk0Bgy0Dtiaxf9/view?usp=drive_link



7. WARRANTY

This product from Scanmaskin Sweden AB comes with a twelve month warranty. Warranty coverage shall begin on the date of purchase by the original end user (as evidenced by your invoice from the factory or Authorized Dealer) or six (6) months from the date the machine was shipped from the factory, whichever comes first.

The warranty registration form must be completed within 30 days of purchase.

Visit www.scanmaskin.com/register-your-product/ to fill in the form.

If the product does not function satisfactorily during this period, Scanmaskin will return the product to full working order for normal use which the product is intended for - with no charge for labor or spare parts, according to the following conditions:

- 1.** The warranty only applies to persons that have legal right to the equipment during the warranty period.
- 2.** The manufacturer's undertaking is limited to the repair of defective parts or the replacement of these according to the manufacturer's assessment. Costs and risks for transport as well as dismantling and reinstallation of the product / products and other direct or indirect costs, associated with the repair in question, are not covered by this warranty.
- 3.** Periodic inspections, adjustments, maintenance work and changes are not covered by the warranty.
- 4.** Scanmaskin is not liable for any damages to grinding discs, drive belts or other similar equipment.



5. The warranty only applies to material and design deficiencies and does not apply in the following cases:
 - a. Damage caused through accidents, carelessness, changes, use of spare parts or grinding tools that are not original
 - b. Damage caused by lightning, water, fire, vandalism, incorrect mains voltage, incorrect ventilation or other causes that lie outside of the manufacturer's control.
6. Scanmaskin reserves the right to modify the design - or make improvements without obligation to change previously manufactured products.
7. All warranty repairs must be carried out by Scanmaskin or by a Scanmaskin accredited repair workshop. Costs for repairs, carried out by an unauthorised workshop, will not be reimbursed by Scanmaskin. If such repairs damage this product these are not covered by the warranty agreement.

8. EC DECLARATION

Declaration of CE conformity

Manufacturer Scanmaskin Sweden AB
Address Heljesvägen 10
427 36 Lindome / Gothenburg
Sweden

Product Grinding machine
Product name Scan Combiflex 450
Scan Combiflex 450NS
Serial number _____

The product conforms with the following directives:

Machine directives 2006/42/EC
EMC 2014/30/EU
LVD 2014/35/EU
Harmonized standards EN ISO 12100:2010
EN ISO 60204-1

Location of issue Lindome / Gothenburg / Sweden

Authorized representative Per-Anders Bardh
CEO

Scanmaskin Sweden AB



Per-Anders Bardh
CEO



9. CONTACT INFORMATION

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MACHINES—MINERALS—KNOW-HOW

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