SCAN COMBIFLEX 500i/500PD

MANUAL

SCANMASKIN

MACHINES–MINERALS–KNOW-HOW

Important Information!

This User Guide only concerns the floor grinding machines "**Scan Combiflex 500i**" and "**Scan Combiflex 500PD**" hereby referred to as "**SC-500**". SC-500 may only be used for grinding horizontal surfaces approved by Scanmaskin Sweden AB.

If SC-500 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-500. The spare parts, grinding discs used on SC-500 must be approved by Scanmaskin Sweden AB.

Table of Contents

1 Specifications

The SC-500 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 electrical cabinet door.

Never connect the SC-500 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[1]	400 V 3~[2]	230 V 3~	230V 1~
Power	4 kW (5hk)	4 kW (5hk)	4 kW (5hk)
Current	8.8 A	17.6 A	30 A
Voltage	380 - 400 V 3~	200 - 240 V 3~	200 - 240 V 1~
Frequency	50/60 hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%
External fuse[3]	16 A	25 A	30 A
Power inlet4	415 V 3P+N+PE	250 V 3P+PE	250 V 2P+PE
Noise level sound pressure	84.5 db (A)	84.5 db(A)	84.5 db (A)
Noise level sound effect	92.5 db (A)	92.5 db (A)	92.5 db (A)
Vibration (hand- and armvibration	4.9 m/s²	4.9 m/s²	4.9 m/s²

Table 1-1 Electrical specifications

All models are CE-marked.

If using a generator see "2.6.2 Using a generator"

[1] This refers to different power choices. Note that a SC-500 made for one choice of power must be used with the particular choice.
[2] Standard
[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.

1.2 Mechanical specifications

Model	500i	500PD
Grinding diameter	500 mm 19.7”	
Grinding plate diameter	200 mm 7.9”	
Grinding plate speed	300 – 1100 RPM	
Mass	160 kg (352 lbs)	
Gear barrel	Synchronized 	

Table 1-2 Mechanical specifications

Measurements of SC-500

Width	530 mm	20.9”
Height	1100 mm	43.3”
Depth	1150 mm	45.3”

Measurements of shipping box

Width	610 mm	24”
Height	1410 mm	55.5”
Depth	820 mm	32.3”

Ambient temperature range during operation	-10°C to 50°C	14°F to 122°F
Ambient temperature range during storage	-40°C to 70°C	-40°F to 158°F

When using water the ambient temperature must never fall below 0°C (32°F). The water tank should be empty during storage.

1.3 Options

The SC-500 has got two options for water supply. The standard SC-500 does not come with either of these two options.

1.3.1 Water connection

Inside the cover of the gear barrel there is a sprinkle system connected to an external water connection. The water connection comes with its counterpart and fits a standard ½ inch hose. At the connection that is fitted near the handle there is a tap to adjust the flow.

1.3.2 Built in water tank

The cover of the gear barrel is configured in the same manner as with the previous option but instead of an external water connection the machine features a 18 l built in water tank

The flow of the water is controlled by a knob on the right hand side of the machine.

The operation of the knob is described in “*4.4 Water tank SC-500PD*”.

Figure 1-1 SC-500PD with watertank

Figur 1-1-2 SC-500i

1.4 Tools

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

*See “**Grinding guide**” for information about available tools and “4.12 Changing tools” for information about how to change the tools.*

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

Available tools

- SC-Tiger PCD
- Diamond tools
- Sand paper

Figure 1-2 Scan-On plate with tools fitted.

1.5 Range of application

SC-500 is exclusively designed to process horizontal surfaces. SC-500 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-500. Failure to follow the directions in this user guide will void the warranty.

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

1.6 Scope of supply

The following parts are included with the standard SC-500 grinding machine:

- Key to electrical cabinet
- Socket key for adjusting the handle
- User guide

If the machine has got a water connection, the counter part for the connection will be included and fit in the water connection near the handle.

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.

1.7 Overview

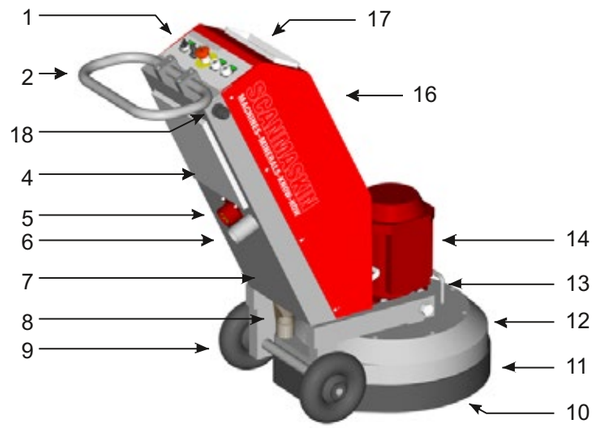


Figure 1-3 Overview of SC-500PD with built in water tank.

Figur 1-6 Overview of SC-500i

Item	Description	Reference
1	Control panel	*4.3 Control panel*
2	Handle	
4	Electrical cabinet	
5	Power inlet	*1.1 Electrical specifications*
6	Dust collector connection	
7	Frame	
8	Dust hoses	
9	Wheels	
10	Gear barrel	*4.12 Changing tools*
11	Dust cover	
12	Cover	
13	Lift handle	*3.3 Lifting*
14	Motor	
15	Cover	
16	Cover	
17	Water tank	*4.4 Water tank*
18	Start device	

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 Legend

	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 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 jewelery 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 on the machine may only be undertaken by trained personnel.
- Specify clearly the responsibilities of personnel for operation, setting up, servicing and maintenance work!
- Make sure that only authorized personnel operate or work on the machine!
- Define responsibilities of the machine operator, with regard to 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 have to 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.

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 meters (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 as 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.

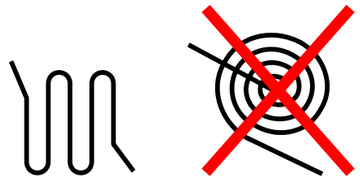


Figure 2-1 Recommended way to handle excessive cable length.

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) in order 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 Definition 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 it's 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 of time 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 "2 Safety Regulations" for further information.

2.9 Safety regarding transport

Always remove the tools before transport. The tools may fall of 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 "3.3Lifting". 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 Transport

3.1 Precautions

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

If the machine is being transported lying down, make sure that there is no water in the tank. This applies to SC500PD with built in water tank.

3.2 Manual transport

- Detach the tools according to the instructions in "*4.12 Changing tools*".
- Push the handle downwards to lift the gear barrel about 10 cm (4") from the ground.
- 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 "*4.12 Changing tools*".
- Fasten the straps used for lifting at the two handles as shown in "*Figure 3-1*".
- Lift the machine.

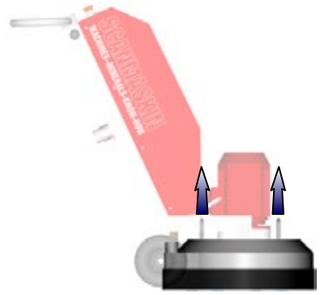


Figure 3-1 Lifting points

3.4 Inside vehicles

- Detach the tools according to the instruction in "*4.12 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 cause injuries or damages.

4 Operation

4.1 Precautions

Any machine, if it is not used according 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 its 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 *Safety Regulations*" before operating the machine.

4.2 Operation of machine

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 hold the tools used. See "*Figure 4-1*".

Figure 4-1 Illustrates the rotation of the grinding heads versus the gear barrel.

4.3 Control panel

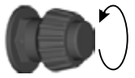
Figure 4-2 Control panel of SC-500.

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 4-1 Description of the control panel.

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

4.4 Water tank SC-500PD



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.

4.5 Start up the SC-500PD

See "*4.1 Precautions*" before starting the machine.

How to start the machine

- Make sure that the power plug and hoses for dust collector and water (if water supply is used) are connected to the machine.
- Turn on the dust collector if used.
- Push the handle downwards to lift the gear barrel about 10 cm (4") from the ground.
- Make sure that the "EMERGENCY STOP" is in its upper position.
- Press the "START" button on the control panel.
- Lower the gear barrel down to the floor.

4.6 Emergency stop / Reset SC-500PD

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

Reset procedure:

- Turn the Emergency Stop button clockwise to release it
- Press the Stop button

The machine is now ready to be started again.

4.7 Stop

How to stop the machine

- Press the “STOP” button.
- Wait for the machine to come to a complete stop before letting go of the handle.
- Turn off the dust collector if used.

4.8 Grinding speed SC-500PD

Use the “SPEED” dial to adjust the rotation speed of the grinding discs between the intervals described in chapter 1.

4.9 Rotation direction SC-500PD

Use the “L/R” switch to change direction of the grinding discs. The machine will first do a soft stop then a soft start.

4.10 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.

4.11 Grinding

Refer to “*Grinding Guide*” for instructions and information about grinding.

4.12 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.

4.13 Using with 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) in order to ensure that all safety devices are functioning and eliminate possible damage to electrical components.

5 Maintenance

5.1 Precautions

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

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

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 it's 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 of time 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.

5.2 Daily inspection prior to operation

Inspect the following items prior to operation

- Inspect the wheels for damage.
- Inspect the grinding heads. Dirt between the Scan-On plate and the grinding hub can impair the flexibility of the grinding head.
- If any screws appears loose, tighten them.
- Look over the machine for any other damage.

5.3 Maintenance and inspection list

Daily	▪ Inspect the wheels ▪ Inspect the grinding heads ▪ Look for any other damage
Every 300 hours	▪ Demount the motor and the machine house cover. Change grease on the gearing 53002. Make sure that the sealing 530028 is in good condition.
12 hours after service	▪ Tighten all screws

5.4 Grinding disc replacement / assembly

Follow these steps to replace the Scan-On plate

- Make sure the machine is in its "Safety off position"
- Tilt the machine backwards and secure it.
- Remove any tools used.
- Loosen the three screws holding the Scan-On plate.
- Replace the Scan-On plate.
- It's recommended that new screws are used to fasten the replacement Scan-On plate.
- It's also recommended that copper paste is used on the surface of the screw hole at the Scan-On plate.
- Tighten all screws by hand and make sure that they are secured.

5.5 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 is recommended.

5.6 Trouble shooting

5.6.1 Common faults

Symptom	Cause	Correction	A[6]
The machine won't start	▪ There is a power failure from the power supply	▪ Inspect the fuses in the worksites fuse box ▪ Inspect cables ▪ Measure that all three phases are present and at full voltage near the machine	O E E
	▪ The emergency stop button is depressed	▪ Release the emergency stop button.	O
	▪ Internal error	▪ If possible, read the alarm or fault code present at the display inside of the electrical cabinet. Alarm codes are formatted as "Axxxx" where "x" is the number. Fault codes are formatted as "Fxxxx". ▪ Contact Scanmaskin Sweden AB	O
The machine is weak and might stop when on the ground.	▪ One of the three phases are missing from the power supply ▪ There is a voltage drop at the power supply	▪ Inspect the display on the inverter for any alarm code ▪ 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.	O O E E O
The machine vibrates a lot	▪ The grinding speed is to high	▪ Lower the speed	O
	▪ The tools are damaged	▪ Inspect the tools ▪ Change the tools if needed	O O

Table 5-1 Common faults

5.6.2 Error codes

Code	Description	Cause	Correction	A[7]
A2001	Over current	▪ One of the three phases is missing from the power supply ▪ There is a voltage drop at the power supply	▪ 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	O O E E
		▪ The environmental temperature is too high. When the temperature is above 40°C (104°F) the inverter will decrease its maximum output current	▪ Inspect the ventilation fans ▪ Inspect the filters to the fans	O O
A2002	Over voltage	▪ The power supply has got voltage transients	▪ Inspect the power source	E
A2003	Under voltage	▪ One of the three phases is missing from the power supply ▪ There is a voltage drop at the power supply	See A2001	
A2006	Speed reference error	▪ The potentiometer on the control panel is damaged	▪ Inspect the potentiometer ▪ Replace if necessary	S S
A2009	Over temperature	▪ The internal temperature in the inverter is above 120°C (248°F). This could be caused by faulty ventilation in the electrical cabinet.	▪ Inspect the ventilation fans ▪ Inspect the filters to the fans ▪ Contact Scanmaskin Sweden AB	O O
A5001	Internal error	Contact Scanmaskin Sweden AB		
F0001	Over current	See A2001		
F0002	Over voltage	See A2002		
F0003	Over temperature	▪ The internal temperature in the inverter is above 135°C (275°F). This could be caused by faulty ventilation in the electrical cabinet.	See A2009	
F0004	Short circuit in motor	▪ The cable to the motor has been damaged ▪ The motor has been damaged	▪ Inspect the motor cable ▪ Inspect the motor connection ▪ Contact Scanmaskin Sweden AB	E E
F0006	Under voltage	See A2003		
F0007	Speed reference error	See A2006		
F0016	Protective earth failure	▪ The cable to the motor has been damaged ▪ The motor has been damaged ▪ Water have entered the motor	▪ Inspect the motor cable ▪ Inspect the motor connection ▪ Contact Scanmaskin Sweden AB	E E
F0018 F0021	Internal error	Contact Scanmaskin Sweden AB		
F0022	Power supply phase fault	See A2003		
F0034	Motor phase fault	▪ One of the three phases to the motor is missing. This could be due to damage to the motor cable or to the motor.	▪ Inspect the motor cable ▪ Inspect the motor connection ▪ Contact Scanmaskin Sweden AB	E E

Table 5-2 Error codes

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.

The following table describes the access for the task.

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

Table 5-3 Access rights for different persons

[6] See access table "Table 5-3"
[7] See access table "Table 5-3"

6 Spare parts

6.1 Drawings

Machine overview

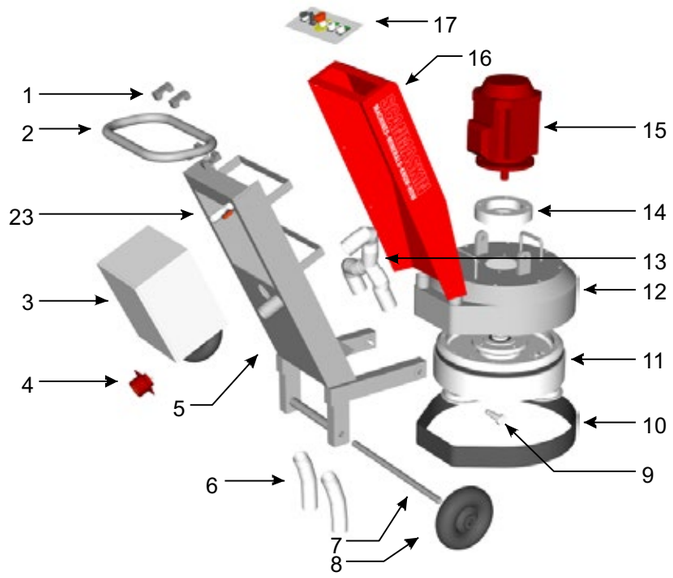


Figure 6-1 SC500PD with water inlet

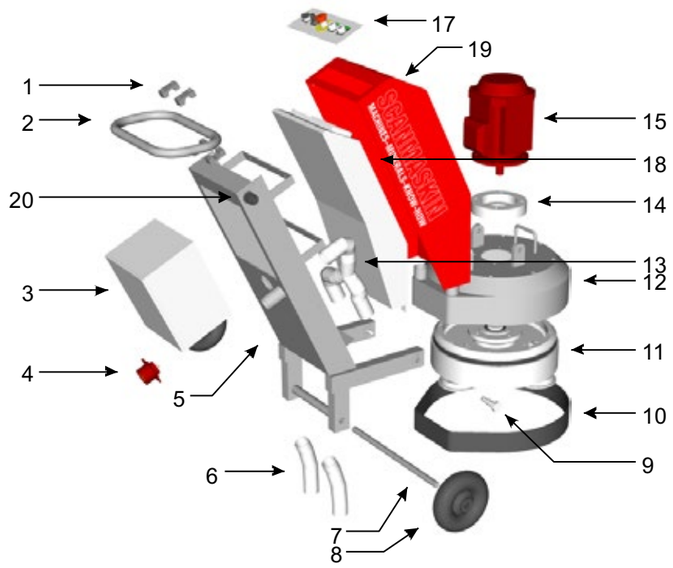


Figure 6-2 SC500PD with built in water tank

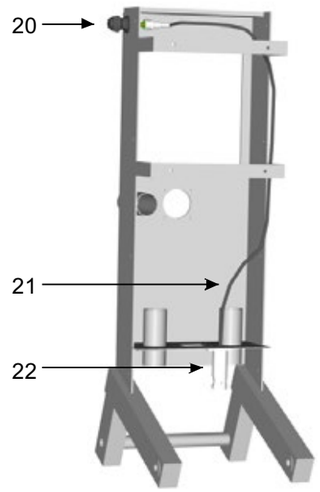


Figure 6-3 Water regulation for the SC500PD with built in water tank.

No.	Part	Art. No
1	Fastener	520022
2	Handle	520006
3	Electrical cabinet	*See Table 6-2*
4	Main inlet	*See Table 6-2*
5	Frame	*See Table 6-3*
6	External dust hoses	570170
7	Wheel axis	530087
8	Wheel	530086
9	Bolt	530043
10	Dust cover	530015
11	Gear barrel	*See Table 6-3*
12	Cover	*See Table 6-3*

No.	Part	Art. No
13	Internal dust hoses	570170
14	Distance	530038
15	Motor	*See Table 6-2*
16	Cover	
17	Control panel	530044
18	Water tank	530005
19	Cover	
20	Water flow control	530072
21	Water flow cable	530073
22	Water flow regulator	530074
23	Water inlet	

Table 6-1 Spare parts SC-500

Power choice	Motor w. cable (15)	Main inlet (4)	Inverter	Electrical cabinet assembly (3)
400 V 3~	530121			530101
230 V 3~	530122			530102
230 V 1~	530122			530103

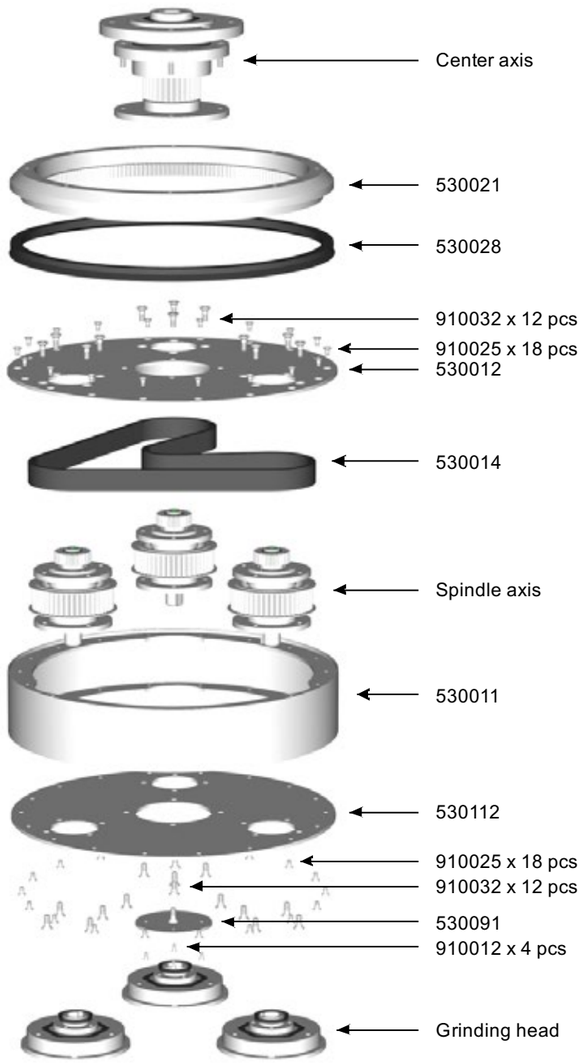
Table 6-2 Spare parts for different power choices

Model variant	Gear barrel (11)	Gear barrel cover (12)	Frame (5)
500i	530111		
500PD	530112		

Table 6-3 Spare parts for different models

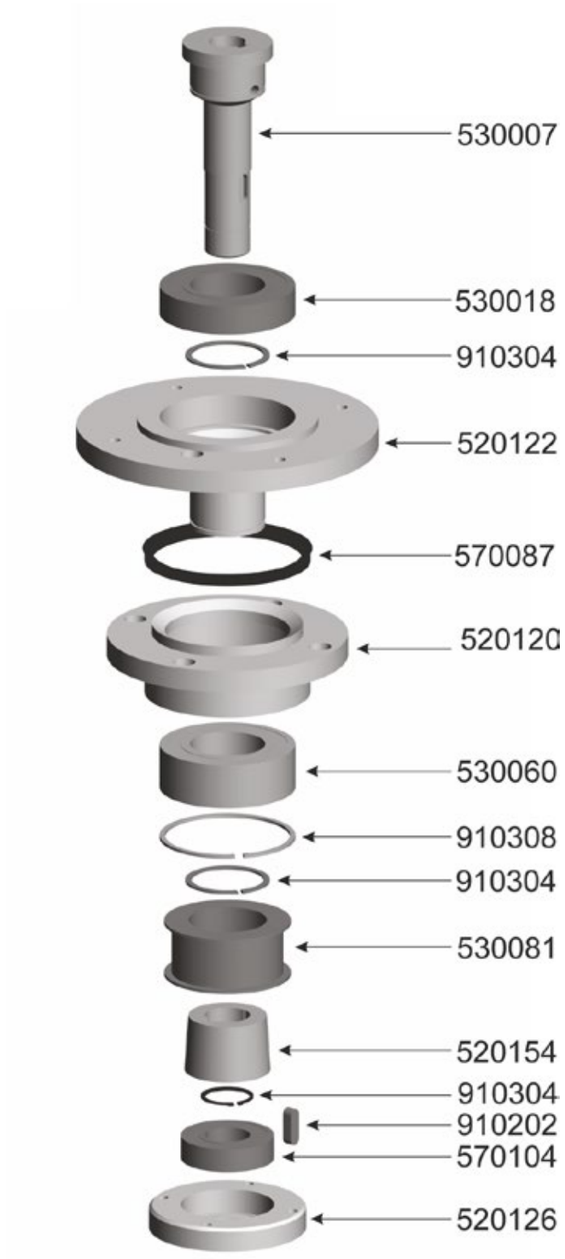
6.1.1 Gear barrel overview

6.1.1.1 SC-500PD



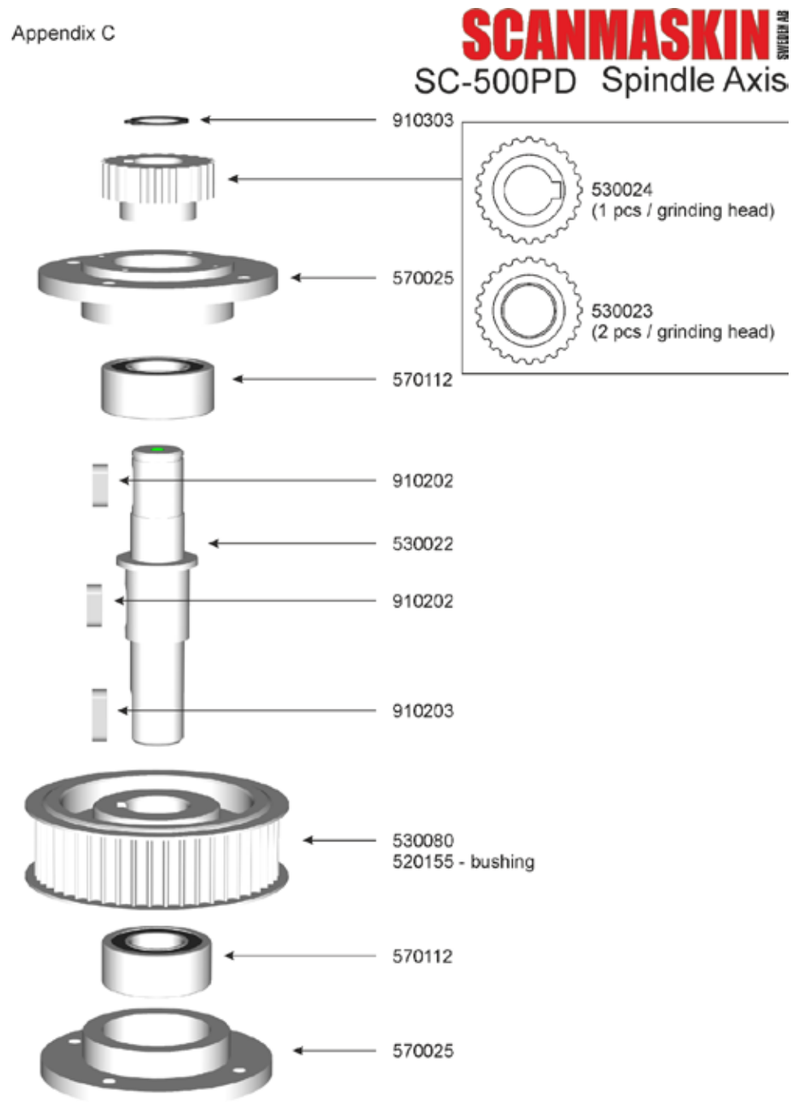
Gear barrel SC - 500	
530011	GEAR HOUSING
530012	LOWER PLATE SC-500
530014	DRIVE BELT SC-500
530021	GEAR RIM SC-500
530028	V-RING V-400A
530091	COVER PLATE
530112	GEAR HOUSING
910012	M4 x 8 SUNKEN
910025	SKREW M6 x 12 SUNKEN HEXAGON
910032	SCREW M8 x 20H SUNKEN HEXAGON

6.1.1.2 Center axis



Center axis SC - 500	
520120	CENTRAL BEARING BOX
520122	UPPER ROTATING BESRING BOX
520126	BEARING BOX SM-18/450/500/650/700/800
520154	TAPER LOCK FOR CENTRE GEARWHEEL (1615-30) SC-450
530007	CENTRE AXLE, SC-500
530018	BEARING 6210-RS1, SC-330/450/500/ SM-18
530060	BEARING 3210 2RS1 SC-450/500/SM-18
530081	BELT PULLEY CENTER (BL 32-8M-30)
570087	V-RING V-100A SM-18/SC-450/500
570104	BEARING 6206 SM-18/SC-450/500/650/700/800/1000
910202	PARALLEL KEY 8x7x20
910304	CIRCLIP SGA 30
910304	CIRCLIP SGA 30
910308	CIRCLIP SGH 90

6.1.1.3 Grinding spindle



Note that the parallel key 910202 used with the gear wheels only is used with the gear wheel 530024.

Grinding spindel SC - 500	
520155	TAPER LOCK FOR GRINDING AXLE SC-450
530022	GRINDING AXLE SC-500
530023	GEARWHEEL WITH BUSHING SC-500
530024	GEARWHEEL FOR KEY SC-500
530080	GEARWHEEL GRINDING AXLE SC-500
570025	BEARING BOX SC-500/650/700/800
570025	BEARING BOX SC-500/650/700/800
570112	BEARING SPINDLE AXLE 3205, SC-500/650/700/800
570112	BEARING SPINDLE AXLE 3205, SC-500/650/700/800
910202	PARALLEL KEY 8x7x20
910202	PARALLEL KEY 8x7x20
910203	PARALLEL KEY 8x7x25
910303	CIRCLIP SGA 24

6.1.1.4 Grinding head

(1). Standard SC-450
(2). Standard SC-500

Grinding head	
520132	LOWER FASTENING PLATE, FLEX TOOL HOLDER SC-450/500/SM-18
520134	SPACER for AXLE, FLEX TOOL HOLDER, 18/450/500/650/700/800
520161	TAPER LOCK BUSHING 25mm FLEX TOOL HOLDER, 18/450/500/800/
580161	CENTRAL HUB FLEX TOOL HOLDER
583023	COVER FOR CENTRAL HUB, FLEX TOOL HOLDER
583032	V-RING 65 FLEX TOOL HOLDER
590061	EXCHANGE KIT FLEX TOOL HOLDER (1 DISC)
590062	EXCHANGE KIT FLEX TOOL HOLDER (2 DISC)
590063	EXCHANGE KIT FLEX TOOL HOLDER (3 DISC)
910022	SCREW ALLEN KEY M6 x 12

6.1.2 Electrical schematics

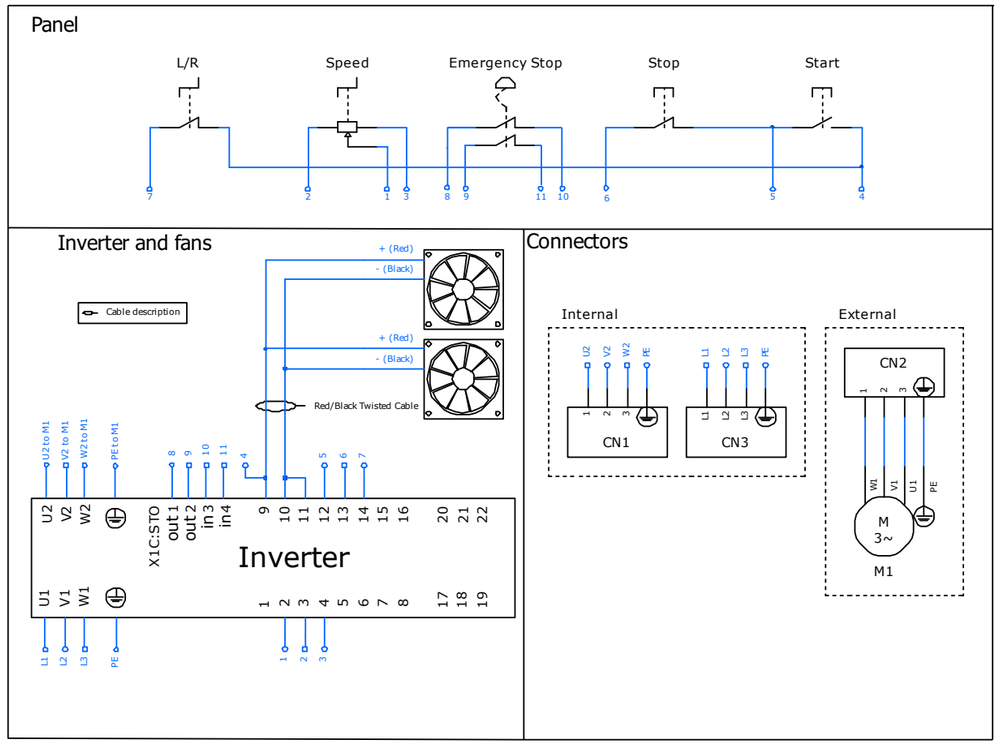


Figure 6-4 Electrical schematic

Component	Description	Art. No.
S1	Rotary switch	
S2	Potentiometer assembly	
S3	Red push button	
S4	Green push button	
S5	Emergency stop	
Fan 1-2	Cabinet fan	
U1	Inverter	*See Table 6-2*
CN3	Power inlet	*See Table 6-2*
	Motor cable	530131
CN2	Motor connector male	
CN1	Motor connector female	

Table 6-4 Electrical spare parts

7 Warranty

This product from Scanmaskin Sweden AB comes with a twelve month warranty. 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 labour 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 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 components, or incorrect use and installation.
    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. Scanmaskin reserves the right to modify the design – or make improvements without obligation to change previously manufactured products.
8. 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 cover by the warranty agreement.

8 EU Declaration

Declaration of conformity CE

Manufacturer	Scanmaskin Sweden AB
Address	Heljesvägen 10 437 36 Lindome Sweden
Product	Grinding machine
Name	Scan Combiflex 500
Serial number	_____

Standards used including number

Machine directives	2006/42/EG
EMC	2004/108/EC
LVD	2006/95/EG

Harmonized standards

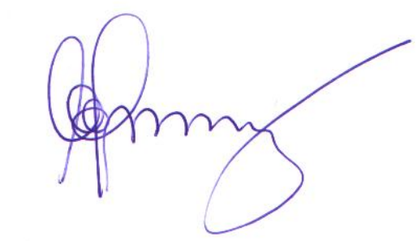
Safety of machinery	EN ISO 12100:2010
Safety of machinery	EN ISO 60204-1
Safe Torque Off	EN 61800-5-2

Place of issue	Lindome / Gothenburg / Sweden
Name of authorized representative	Claes-Göran Bergstrand
Position	Managing Director

Declaration

We declare that as the authorized representative, the above information in relation to the supply / manufacture of this product is in conformity with the stated standards and other related documents following the provisions of EEC directives.

Signature of authorized representative:



9 Alphabetical reference

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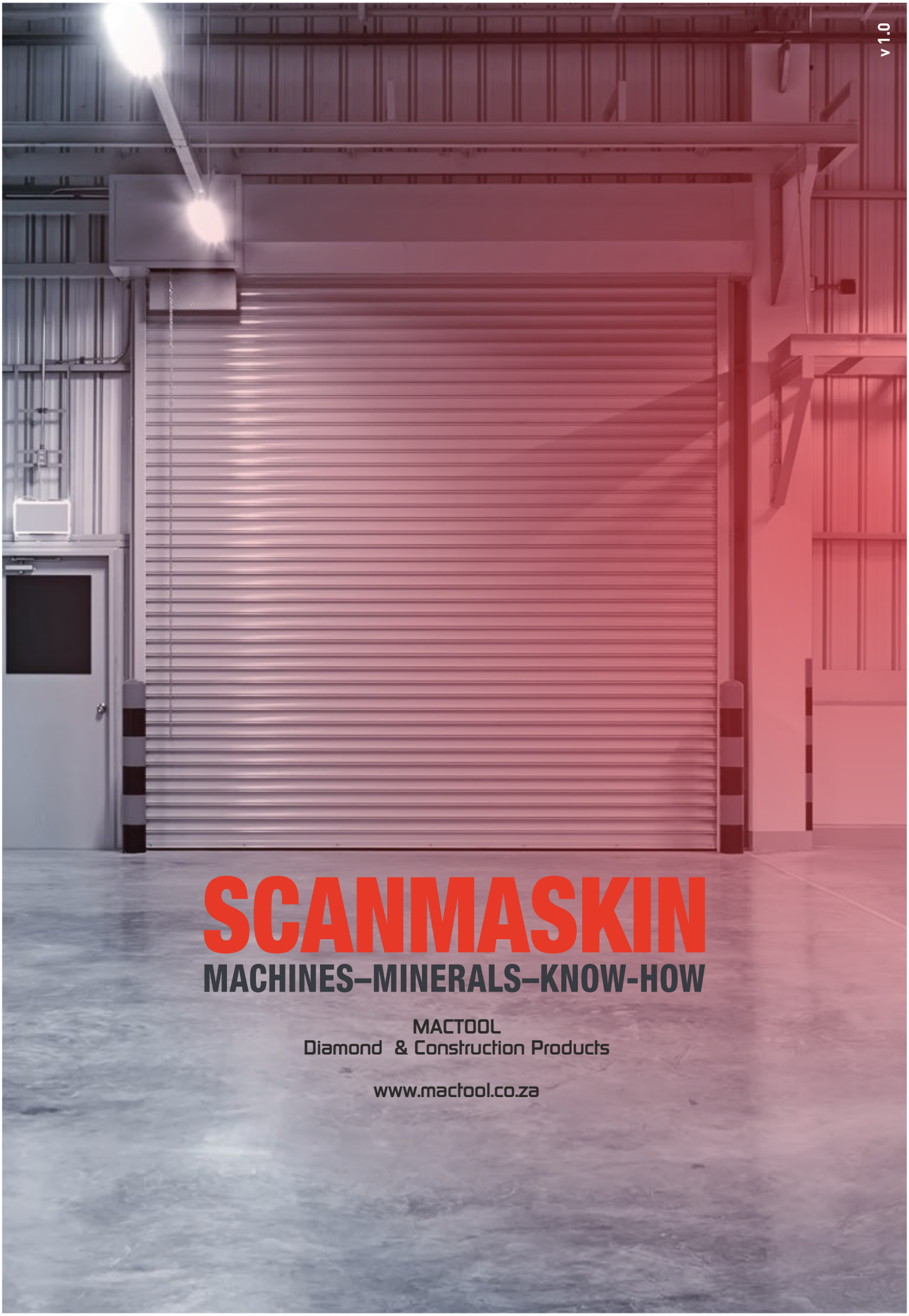

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