



Sabre G500 Floor Grinder Owner's Manual



Sabre G500 Floor Grinder

Quick Start Guide

Always disconnect the Sabre G500 from the power supply before working on the machine or making any adjustments.

Do not operate in in the wet.

It is important that the machine is always adjusted so that the grinding head is level and parallel to the floor i.e. the motor axis is at 90 deg. to the floor. Levelling the machine is achieved by loosening the rear wheels with a 17mm spanner and moving the wheel axles up and or down in the slots. The Sabre is set level when delivered new, adjustment may be required as parts wear or the machine is dropped or abused.

The grinding head must rotate in the direction of the arrow on the motor fan cowl. A reversing plug is fitted to the machine so the direction can be quickly changed as required. Simply insert a flat bladed screwdriver into the slot between the brass pins of the plug, press and rotate through 180 deg. The motor will then run in the opposite direction.

Note: Always apply some body weight to the handlebar when starting the grinder. This reduces the load on the motor and therefore the power required. When starting the machine ensure you have a firm hold of the handlebars because it will "kick" when starting.

If you experience problems starting and running the machine the problem will be the supply or the cable to the machine. The switch and motor are very reliable and will perform without trouble for many years.

Minimum generator requirement for the machine only is 15KVA If you are operating a dust collector as well a larger generator will be required.

For optimal dust control we suggest you have a gap of 1-2mm between the skirt and the floor. This gap allows air to enter so the dust can be extracted. Leaving a gap also ensures the machine can float smoothly over the surface for easy operation. If the skirt is too low it will grab on the floor and cause the machine to stick which can result in swirl marks.

To achieve a uniform finish always keep the grinding head moving across the floor at a uniform speed, swinging the head from side to side while advancing steadily forward or backward.

Note: When grinding concrete all vacuum filters will quickly become blocked. Be prepared to clean them frequently as soon as dust begins to escape from the grinder. The time period between filter blockages can be greatly extended by fitting a cyclonic interceptor between the vacuum and the grinder. Please call for further information.

Index:

1 . EU-Declaration of Conformity	...4
2. Technical data	...5
3. Tool applications	...6
4. Safety rules for the operation of the Sabre G500	...6
5. Operating	...7
6. Changing and replacing of the tools	...8

EU-Declaration of Conformity

According to the Machinery Directive 98/37/EC (89/392/EWG), Appendix 11 A

We hereby declare that the machine:

Type: Floor Grinder

Name: Sabre G500

Conforms with the following standards confirmed as being valid at the date written below:

EC-Directive 98/37/EC (89/392/EEC), in its current wording

EC-Directive 89/336/EEC, in its current wording

EC-Directive 73/23/EWG (89/392/EEC), in its current wording

List of the essential harmonized standards:

EN 12100	Safety of machines
EN 418	Emergency-Stop-Devices
EN 953	Separating safety devices
EN 60204 Part 1	Electric equipment of machinery, general requirements
EN 1050	Guiding principles for the risk judgement

Pollington
27/01/2021

(Place and date)

(Authorized signature)

P.Welburn, Engineer

(Name and function of the authorized person)

2 Technical Data:

Grinding Width	450 mm	
Width	51 cm	
Length	124 cm	
Height	91 cm	
Tool Speed	1430 rpm	
Weight 400 V, 3 phases	106 kg	
Hose	70 mm	
Height adjustment	PRESET	
Power	Europe	
	400 V, 5.5 kW, 50 Hz	
Average value of acceleration ah,	10.2 m/s ²	
Noise level L	105 dB(A)	
Noise level Leg	95 dB(A)	



3 Diamond Segment Applications:

		Colour	Grit	Bond	Code
#57056	Aggressive grinding on extremely hard concrete	Silver	25	Very soft bond	DFG5-3
#57068	Very Aggressive stage 0.5 grinding	Blue	16	Medium bond	DFG 7-3
#57059	Stage 1. Grinding of medium to hard concrete	Dark blue	30/40	Medium bond	DFG7-4
#57066	Stage 2. Smooth grinding of medium to hard con-	Blue	80	Medium bond	DFG7-5
#57067	Stage 3. Smoother grinding of medium to hard con-	Light blue	120	Medium bond	DFG7-6
#57060	Stage 1. Grinding of abrasive concrete. Long life	Dark brown	30/40	Hard bond	DFG8-4
#59035	Stage 1. Grinding of very abrasive concrete. Long	Black	30/40	Hard bond	DFG9-4
#57071	GT - Crazy Hard Floor	Green		Hard Bond	DFG-GT
#57073	Universal Grizzly	Blue	Coatings		
#57077	Grizzly Backing Plate	Blue	Holder		
#59000		Yellow	30/40	Soft bond	FTR
#59001		Yellow	60/80	Soft bond	FTR
#59002		Yellow	80/100	Soft bond	FTR
#47037	PCD grit. Removal of latex, adhesives and thick	Silver	n/a	Hard bond	PCDG
#59031	PCD plates. Removal of latex, adhesives and thick	Gold	n/a	CW Plates	PL
#59032	PCD plates. Removal of latex and thick coatings	Gold	n/a	CCW Plates	PL

4 Safe Operation of the Sabre G500 Floor Grinder

This machine has been designed and is intended for the grinding of flat, horizontal, dry surfaces that are typically concrete, or asphalt and with or without a coating. For optimum performance and compatibility always use tools supplied by PWM. Operation of the grinder outdoors is only permitted if the weather is dry.

Attention! The PWM floor grinders are constructed according to existing safety rules and regulations. These technical precautions must not be removed or changed under any circumstances. While operating the grinder the following points should also be kept in mind.

The floor grinder may only be operated by trained professionals. The operator must have read and be familiar with the contents of this manual.

The floor grinder must not be operated in areas where there is a potential fire / explosion risk.

The floor grinder can only be started when the tools are not in contact with the floor. Always start the machine with no weight on the tools.

The tools and discs may be hot after use. Take care when changing them.

Never operate the floor grinder on a sloping surface.

Take care when moving the machine on a sloping surface, substantial rolling forces can be produced.

The machine should always be stored in a warm, dry place when not in use. The floor grinder should only be operated with the dust guard fitted.

Only PWM original tools and spare parts are to be used.

The grinder should only be operated with all safety guards in position.

When changing tools, during transportation, cleaning, repair or maintenance the grinder must be disconnected from the power supply.

The operator must never leave the machine unattended during operation.

Before leaving the machine all rotating parts must be brought to a standstill. Electric models must be disconnected from the power supply. Ensure the machine cannot roll or move by itself.

After any maintenance and adjustment all safety guards must be refitted.

Ear protectors must be worn.

Eye protectors must be worn.

Safety shoes with steel caps must be worn.

Operating the grinder produces large volumes of dust, the grinder should be connected to a suitable dust collector.

Depending on the floor (floor coating) grinding can produce gases. The operator must be held responsible if the gases generated are hazardous and whether protection is necessary. Grinding floors containing asbestos is especially dangerous and can cause health problems. Special masks must be worn which keep the breathing air clean. A dust collector must be used and should be equipped with filters suitable for asbestos dust.

The floor must be brushed before grinding to prevent loose material collecting in the tools and then being thrown out with force. Anchor screws and bolts in the floor can also be seen better if the area is clean. If the grinding head strikes an anchor screw or bolt then serious damage can be caused to the machine and grinding head.

Operation:

After mounting the appropriate tools, the operation of the SABRE G500 grinder can begin. Connect the hose of the dust collector to the hose port on the grinder.

Ensure the grinding head is level i.e. the motor axis is at 90 degrees to the floor.

Attention! When switching on the motor the machine jumps slightly.

After the motor has reached full rotation speed place the tools carefully on to the floor. If the machine is correctly adjusted for level it is easier to control and move across the floor.

If the machine pulls to the left or right, the machine has to be re-adjusted for level.

The dust skirt should be adjusted to clear the floor by 1-2mm. This small gap allows airflow for better dust extraction and control while also ensuring the machine moves easily across the floor.

Attention! Never switch on the motor while the diamond tools are still in contact with the floor



The rear wheels can be individually adjusted so the grinder can be set completely level in both directions: Front to Back and Left to Right. When set correctly the grinder will run smoothly and be effortless to control with no tendency to pull in one direction. Using a spirit level will help to simplify this task but first ensure you have placed the machine on a level area of floor.

Attention ! Before working on the grinder allow the motor to come to a complete stand still and disconnect from the mains.

Tilt the machine onto the back wheels and rest it on the handlebar.

All tools are fixed with 3 screws onto the tool bracket.

Loosen and remove the screws with a 6 mm Allen key. Check the grinding tool for wear and tear for the next application.

Fix a new tool with the 3 screws on the tool bracket.

Adjust the machine to compensate for tools of different height. The motor axis of the grinder has to be 90° level to the floor. Different tools need different heights for the rubber dust skirt, adjust as previous.



Sabre G500 Lovato soft start.

Red warning light sequence;

- 2 Flashes – wrong phase sequence
- 3 Flashes – line voltage out of range
- 4 Flashes – frequency out of range
- 5 Flashes – locked rotor condition
- 6 Flashes – Ramp up time
- 7 Flashes – Over temperature
- 8 Flashes – Current not normal (at bypass)
- 9 Flashes – Supply voltage unbalance