

Operating Instructions

FCG 6.0

„Grind-on-Demand“
- for Filter Coffee -



The professional art of grinding
since 1924

Dear customer / service personnel

the NEW "FCG 6.0" is a dedicated filter coffee grinder of the proven MAHLKÖNIG quality.

We have developed this product with over 80 years of experience in the manufacture of coffee grinders assuring you of high quality grinding for filter coffee and also other types of coffee beans (non pressurised brewing methods).

Read through and observe the operating instructions, so you and your customers will thoroughly enjoy the "FCG 6.0". Please store the instructions in a safe place. If anything is unclear or additional information is required, please contact your authorized dealer or us as the manufacturer.

We will be pleased to advise you further. We wish you unlimited pleasure and success with our product.

MAHLKÖNIG GmbH & Co. KG

Table of Contents

1. Safety	5		
1.1 Symbols	5		
1.2 Safety instructions	5		
1.3 Usage purpose	6		
1.4 User requirements	6		
2. Technical Data	6		
3. Description	7		
4. Safety Devices of the Grinder	8		
5. Set-Up and Basic Adjustment	8		
5.1 Usage location	8		
5.2 Electrical connection of the grinder	8		
6. Operation	9		
6.1 Fill the grinder with coffee beans	9		
6.2 Switch on the grinder	9		
6.3 Insert the brew basket	9		
6.4 Choose the unit of dosing	9		
6.5 Adjust the amount of coffee	10		
6.6 Start/stop the grinder	10		
7. Grinder Statistics	11		
7.1 Resettable day counter	11		
7.2 Permanent counter (non resettable)	11		
		7.3 Cleaning counter	11
		7.4 Disc change counter	11
		8. Calibration of The Dosing Units	12
		8.1 Grind a preset amount of coffee	12
		8.2 Enter the correct amount of coffee	12
		8.3 Quit the calibration mode	12
		8.4 Changing the coffee-to-water-ratio (g/l)	12
		9. Operating Faults	13
		10. Cleaning	14
		10.1 Cleaning with GRINDZ™ grinder cleaner	14
		10.2 Cleaning the grinder placement surface	14
		10.3 Cleaning the grinder casing	14
		10.4 Cleaning of the hopper	14
		10.5 Cleaning the residue tray	15
		11. Service	15
		12. Spare Parts	15
		13. Wiring Diagrams	16
		14. Certificate	17
		15. Warranty Conditions	17

1. Safety



Please carefully read and observe the following safety instructions. Failure to do so can result in damage to the grinder and danger to the user.

1.1 Symbols

The following two symbols are used in these operating instructions:



Safety Instruction:

Imminent accident danger if you fail to observe.



General Instruction:

Failure to observe can result in damage to the grinder and optimum operation cannot be guaranteed.

1.2 Safety instructions

Only whole roasted coffee beans may be ground in the FCG 6.0

When unpacking please inspect whether the power supply (voltage) complies with the grinder voltage on the manufacturer's name plate on the bottom of the grinder. Never operate the grinder in damp or wet surroundings.

Always remove the electrical plug from the outlet prior to conducting maintenance or cleaning work on the grinder. Also, prior to removing the hopper, the plug must be removed from the electrical outlet.

Never operate a grinder with a damaged electrical cord. Inspect the grinder regularly for damages of the electrical cord, plug, etc.

Any required repairs may only be conducted by authorized service personnel. For this reason, please contact a customer service repair facility, your dealer or us directly as the manufacturer.

Do not exceed the maximum allowable grinding cycle of S3 25%.

One grinding cycle implies 1/4 grind time and 3/4 rest time for cooling, e.g. for 1l / 55g / 10s grind need 30s rest (grind cycle of appr. 40s). Practical restriction: The FCG 6.0 can serve two pourover filter coffee machines. The extraction time of the filter coffee machines gives enough time for resting.

Do not make any modifications or alterations to the grinder. The manufacturer assumes **absolutely no liability** for damages occurring from failure to observe these instructions.

Children cannot appreciate the dangers that can exist in the operation of electrical grinders. For this reason, never leave children unsupervised with electronic appliances such as this grinder.



Never submerge the grinder in water and never operate with wet hands.

1.3 Usage purpose

Only whole, unground, roasted, cleaned coffee beans may be ground in the FCG 6.0 grinder. Never use the grinder to grind other products or objects.

1.4 Personnel requirements

No special requirements are necessary for the users of this grinder. Nevertheless it is a prerequisite that these operating instructions have been carefully read and understood and that all instructions provided are observed. In addition, safety-conscious operation is expected.

2. Technical Data

Type	FCG 6.0
Voltage/Frequency	220-240V / 50-60Hz
Rotation	
@ 50 Hz	2850 rpm
Sound emission	
Idle operation	65 dB
Grinding	85 dB
Pre-fuse	16 A-slow
Current consumption	2,2 A
Permissible max. Operating time of the grinder	S3 25% ¹⁾
Dimensions in mm	W 205, D 370, H 550
Dimensions in inch	W 8.1 x D 14.6, H 21.7
Net weight	13 kg (28.7 lbs)
Hopper capacity	2500 g (1.1 lbs)

(Please request technical data for other voltages and frequencies from the manufacturer or dealer.)

¹⁾ see chapter 1.2 "Safety instructions"

3. Description

The main components and operating elements are pictured in the illustration.

- Pos. 1 Hopper lid
- Pos. 2 Hopper with window
- Pos. 3 “Start”-button
- Pos. 4 Increase button (+)
- Pos. 5 decrease button (-)
- Pos. 6 Adjustment of grind size
- Pos. 7 Display
- Pos. 8 ON / OFF switch
- Pos. 9 Brew basket holder (expandable)
- Pos. 10 Residue tray for placing the bigger brew baskets



4. Safety Devices of the Grinder

Motor protector

The winding of the motor is protected by a thermal switch (thermo pill/bimetal), which will trip when the motor heats up significantly. The grinder cannot be started again. Let it rest for appr. 30 minutes. The thermal switch will re-connect the motor automatically.



The user has no influence whatsoever on these circuit breakers. If the circuit breaker trips repeatedly, an authorised service partner must be consulted, as the motor's winding may be damaged.

Finger protector / Magnet holder

A combined finger protector / magnet holder is fitted in the hopper of the grinder. It is supposed to prevent the user from reaching into the running grinding mechanism. At the same time, it also prevents ferrous foreign objects from getting into the grinding mechanism. Every now and then clean the magnet since adhering foreign objects could block the coffee supply.



Never remove the finger protection!

5. Set-up of the grinder

A grinding test run is carried out on each grinder in our factory. This is why you may find ground material residue in the grinding mechanism!

You have received your grinder in operating condition. Now you only need to connect the grinder to the mains plug. Proceed as follows:

5.1 Usage Location

Place the grinder on a level, vibration-free surface. The grinder is often used in rooms where there is water and humidity, and therefore it must be properly insulated.



Never operate the grinder in moist, or even worse, in wet surroundings!

5.2 Electrical connection of grinder

Connect the grinder to an earthed 230V 16A wall outlet.



The machine must be connected to an earthed power outlet! Always observe the rules in effect in the user's country.



Protect your device with separate pre-fuses (not included in the scope of delivery) according to the information provided under Point 2 “Technical data”.



Make sure that the pre-fuse is not overloaded by other devices (e.g. fan heaters, deep freezers).



Check whether the main voltage and frequency correspond to the information on the rating plate.

6. Operation

6.1 Fill the hopper with coffee beans

Lift the lid (pos.1) and fill whole roasted coffee beans into the hopper. Close the lid.

6.2 Switch on the grinder

Turn on the grinder by pressing the ON/OFF switch (pos. 8).

6.3 Insert the brew basket

The grinder can be used for various brew basket sizes, i.e. all popular 1.8l - 6.0l pourover filter coffee machines.

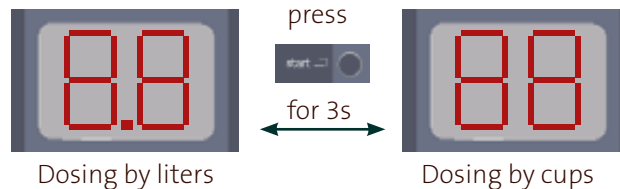
Slide the brew basket between the movable brackets or place it on the residue tray. It should be positioned central under the spout of the grinder.



The maximum height of the brew basket to fit the FCG 6.0 is 150 mm (5,9 inch). ²⁾

6.4 Choose the unit of dosing

The display shows the current dosing setting (unit). The coffee can be dosed either by CUPS or by LITERS. The active selection is shown in the display by the dot between the figures.



To change from CUPS to LITERS and vice versa press the START button for 3 seconds.

²⁾ To make off-size brew baskets fit the FCG 6.0 contact the manufacturer for adaptations.

6.5 Adjust the amount of coffee

In both dosing units (cups and liters) the amount of coffee can be adjusted with the +/- buttons prior to grinding.



Press the +button (pos.4) to increase the amount of ground coffee (full cups or 0.1 liters).

Press the -button (pos.5) to decrease the amount of ground coffee.

See table on the right for dosing suggestions.

6.6 Start/stop the grinder

Press the START button (pos.3) to start the grinding process. The grinder stops automatically after grinding the pre-set amount. To manually stop the grinder before the pre-set amount has been ground press the START button again.



Note: The remaining time of the discontinued grinding process will not be saved.

Overview - Dosing Suggestions

Basic definitions by the manufacturer:

- The approximate grind speed of the FCG 6.0 at a medium filter coffee grind size adjustment is 5.5 g/s.
- The dosing parameters of the FCG 6.0 have been calibrated to grind coffee to “SCAE GOLD CUP Standard”³⁾, i.e. coffee-to-water-ratio of 55g/l.
- One cup has been defined as 125ml (4.23oz).
- The maximum doses are 48 cups or 6.0 liters respectively.

Dosing examples:

Dosing Unit		Amount	Appr. Time
cups	liters		
-	0,1	5,5 g	1,0 s
1	(0,125)	7,0 g	1,4 s
-	0,5	28 g	5,0 s
8	1,0	55 g	10 s
16	2,0	110 g	20 s
	4,0	220 g	40 s
30 (max)	6,0 (max)	250 g	45 s

3) For more information about this standard, go to www.scae.com

7. Grinder Statistics

7.1 Resettable day counter

Press and hold the +button (pos.4) for 3 seconds to see the amount of cups or liters for which coffee has been ground since the last reset of the counter.

To exit the counter mode press any button.

For resetting the day counter turn off the grinder by pressing the main ON/OFF switch (pos.8). Press and hold the +button while turning the grinder back ON. The day counter will be reset to Zero.



The counter always shows the value of your pre-set dosing unit (cups or liters).

7.2 Permanent counter (non resettable)

Press and hold the -button (pos. 5) for 3 seconds to see the amount of cups or liters for which coffee has been ground with this FCG 6.0 since production. To exit the permanent counter mode press any button.

7.3 Cleaning counter

After grinding appr. 15 kg of coffee the display will show “C” for CLEAN. The grinder can still be used despite this alarm.



It is advisable to clean the grinder regularly in order to keep the taste of the ground coffee, the grind speed and dosing accuracy as constant as possible.

For resetting the cleaning counter turn off the grinder by pressing the main ON/OFF switch (pos.8). Press and hold the -button (pos.5) while turning the grinder back ON. The cleaning counter will be reset to Zero

7.4 Disc change counter

After grinding appr. 700 kg of coffee the display will show DISC as a ticker while grinding. The grinder can be used ongoingly despite this alarm.

For resetting the disc change counter turn off the grinder by pressing the main ON/OFF switch (pos.8). Press and hold both the +button (pos.4) and -button (pos.5) while turning the grinder back ON. The disc change counter will be reset to Zero.



It is advisable to change the discs after grinding appr. 700 kg of coffee in order to keep the uniformity of the ground coffee particles, the grind speed and dosing accuracy as constant as possible.

Note: The cleaning counter and the disc change counter are hidden counters. Their actual position cannot be shown. Their parameters cannot be changed.

8. Calibration of The Dosing Units

As stated in the overview on page 10, the FCG 6.0 has been calibrated to grind to a coffee-to-water-ratio of 55g/l at a given grind speed of appr. 5.5 g/s.

Depending on:

- the origin of the coffee,
- the type of coffee (arabica, robusta, etc.),
- the size of beans,
- the blend,
- the degree of roasting,
- the cooling method after roasting (i.e. moisture content of the bean),
- the age of the roasted coffee,
- the cleaning status of the grinder,
- other external influences (humidity, temperature, etc.)
- and most importantly: the adjusted grind size

the grind speed of the FCG 6.0 can vary quite drastically (5g/s up to 8g/s).

Subsequently the dosed amount e.g. per cup of an individual coffee at its best grind size does not match the aimed-for 55g/l.

The actual grind speed of the FCG 6.0 for the chosen coffee has to be adjusted in the software to ensure the perfect coffee-to-water-ratio.

8.1 Grind a preset amount of coffee

With coffee in the hopper place a tared cup under the spout and press the START-button (pos.8) for 6 seconds. The grinder will start grinding for exactly 10 seconds. The display will show CA for “calibration”.

Weigh the ground coffee.

8.2 Enter the correct amount of coffee

The display will show a number (factory setting 55). Using the +/--buttons enter the correct weight of the coffee that has been ground in 10 seconds.

The software will automatically adjust the grind times to match the coffee-to-water-ratio of 55g/l.

8.3 Quit the calibration mode

To leave the calibration mode press the START-button (pos.8) for 6 seconds.

8.4 Changing the coffee-to-water-ratio (g/l)

In order to change the factory setting of 55g/l (SCAE Gold Cup Standard) use the following formulae to calculate the value that has to be typed into the grinder (see 8.2).

$$\text{Value to enter in calibration mode (see 8.2)} = \frac{\text{weight of coffee (gram) ground in 10s (see 8.1)}}{\text{wanted coffee-to-water-ratio (g/l)}} + \left(55 - \text{wanted coffee-to-water-ratio (g/l)} \right)$$

9. Operating Problems

Defect	Cause	Remedy
The grinder hums but does not grind.	The spout is clogged.	Carefully clean any adhering coffee grounds out of the spout. Set grinding fineness to “coarse” and trigger the grinding process. The grinder will then grind itself free. Afterwards, return the setting to the desired grinding fineness.
	A foreign object blocks the grinding mechanism.	Set grinding fineness to “coarse” and trigger the grinding process. The grinder will then grind itself free. Afterwards, return the setting to the desired grinding fineness. In case the grinder does not grind itself free and stay clogged, contact your service partner.

Defect	Cause	Remedy
The grinder does not start, the display is not lit.	The main plug is not inserted.	Insert the main plug into the socket.
	The thermo protector has been tripped. The grinder is noticeably warm.	Let the grinder cool down for about 30 min.! The thermo protector will reset itself.
	The pre-fuse has tripped.	Check the pre-fuse. Restore the pre-fuse to its initial state or replace it. Determine whether other devices are connected to this fuse.

In the case of other malfunctions or continued problems, please contact your dealer or your authorised customer service centre.

10. Cleaning

You should clean your filter coffee grinder regularly, just like your brewing machine. Grind-on-demand grinders in particular have to be kept clean and residue free in order to ensure dosing accuracy for every shot and every customer.

10.1 Cleaning with GRINDZ™ grinder cleaner

We recommend cleaning your filter coffee grinder every 1-2 weeks (every 15 kg) with our GRINDZ™ Grinder Cleaner.

The display will show “GRINDZ” when 15 kg were ground with no influence on the standard operation. To reset this cleaning alarm see chapter 7.3.

For cleaning your grinder with GRINDZ™, just follow the steps below:

- Run the grinder empty of beans
- Fill 70 grams of GRINDZ™ directly into the hopper (content of two sachets or two can lid).
- Adjust the grind size to coarse (for a better cleaning effect of the GRINDZ™-particles).
- Start the grinder and grind through all GRINDZ™ into your brew basket or a separate bin.
- Grind appr. 2 - 3 sec. of coffee in order to purge the residues of GRINDZ™ out of the disc casing.



Formation of dust while grinding GRINDZ is natural and harmless. The dust particles can be cleaned with a soft cloth from the casing and spout.

10.2 Cleaning the grinder placement surface



Pull out the mains plug!

- Lift the grinder aside and clean the area on which it stands and the bottom of its base.
- Both surfaces must be dry and free of oil and grease.
- Reposition the grinder and re-insert the plug.

10.3 Cleaning the grinder casing

From time to time clean the outside of the casing using a damp cloth with a liquid non-abrasive detergent.

10.4 Cleaning of the hopper

The hopper should be cleaned weekly with a damp cloth inside in order to remove coffee and oil residues which could negatively influence the taste in the cup.

10.5 Cleaning the residue tray

The residue tray should be cleaned regularly with a dry cloth. It pops out of the cut-out when lifted and pushed from below.

11. Service



Do not let any foreign objects fall into the grinding mechanism!



Inspect the grinder regularly for damage, particularly to the electrical cable, plug, etc.



Any required repairs may only be conducted by authorized specialist personnel. For this reason, please contact a customer service repair facility, your dealer or us directly as the manufacturer. Observe the safety instructions under 1.2!



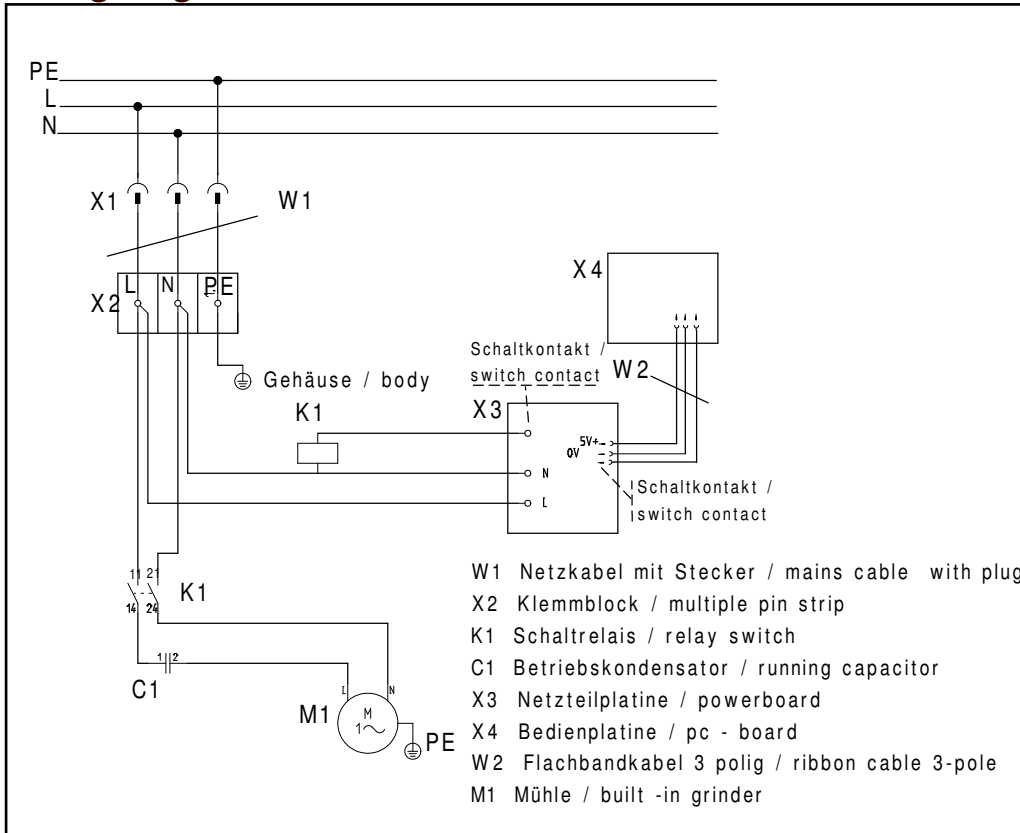
Always pull out the main plug from the socket before carrying out maintenance or cleaning work on the grinder!

12. Spare Parts



Spare parts are usually ordered from your customer service centre or your local dealer. To ensure quick and correct processing of your order, the following information is absolutely essential:

1. Type designation, serial number and voltage of the grinder (on the rating plate underneath the grinder).
2. An exact description of the part to be replaced or the article number.

13. Wiring Diagram 200-240V 50/60Hz



14. Certificate

EC Declaration of Conformity		
The manufacturer:	MAHLKÖNIG GmbH & Co. KG Tilsiter Straße 142 D - 22047 Hamburg Tel.: +49 (0) 40 69 69 40 - 0 Fax: +49 (0) 40 69 39 72 - 1	
hereby declares that the below mentioned product:		
product type:	device for food processing	
machine description:	Coffee grinder	
machine typ:	FCG 2.0 / FCG 6.0 high and low versions	
is in compliance with the following directives and regulations:		
• The provisions of the Machinery Directive	2006/42/EG	
• The Low Voltage Directive	73/23/EWG	
• The EC Electromagnetic Compatibility Directive	2004/108/EG	
• The Directive on the restriction of use of certain hazardous substances in electrical and electronic equipment	2011/65/EU	
• The EU chemicals regulation (REACH – Regulation)	(EG) Nr. 1907/2006	
Supplements in Europe:		
Regulation 1935/2004	Requirements for materials and the objects with Food comes into contact	
Documentation Agent:	Sven Erdmann	
Address of the proxy documentation:	See the address of the manufacturer	
Done in Hamburg on:	01.08.2013	
Function of subscriber:	General Manager	
Name of signatory:	Philipp Baumberger	
	Signature	
<small>MAHLKÖNIG GmbH & Co. KG, Amtsgericht Hamburg HR A 85 074, Persönlich haftende Gesellschafterin: Beteiligungsgesellschaft MAHLKÖNIG mbH, eingetragen Amtsgericht Hamburg HR 45 374, Geschäftsführer: Nils Erichsen, Philipp Baumberger, Jochen Christoph Dresdner Bank AG (BLZ 200 800 00) Kto. 983 780 400, Postbank Hamburg (BLZ 200 100 20) Kto. 253 89-203, Commerzbank AG (BLZ 250 105 100) Kto. 250 105 100, Kto. 250 105 100, Kto. 250 105 100</small>		

15. Warranty Conditions

- The warranty period is 1 year from the date of purchase.
- The warranty covers all damages that can be attributed to inferior materials or defective workmanship. Corresponding grinders will be repaired or replaced free-of-charge, with the exception of transport or freight charges. Transport is the responsibility of the customer. Therefore, avoid damages with all returns by correct packing.
- The grinder may only be opened for cleaning purposes in accordance with the Operating Instructions.
- This warranty does not cover damages which have occurred through: Improper usage, improper maintenance, lack of servicing, usage for purposes other than those intended, incorrect installation, incorrect voltage, breakage, natural wear or for reasons beyond our sphere of influence.
- In order to maintain the warranty, only original spare parts and accessory parts may be used.
- Observe in addition our General Delivery Conditions in their respective current version.
- The manufacturer is in no way liable for consecutive or secondary damages.
- The warranty does not cover costs resulting from repairs conducted by non-authorized personnel.

Notes

Notes

MAHLKÖNIG GmbH & Co. KG

Tilsiter Straße 142
D- 22047 Hamburg, Germany

Phone: +49 (0)40 / 69 69 40-0

Fax: +49 (0)40 / 69 39 721

office@mahlkoenig.de ; www.mahlkoenig.de

September 2013

Subject to change without prior notice!!



The professional art of grinding
since 1924