



**HEMRO**  
GROUP

Global Coffee Grinding Solutions

# **HEMRO Academy**

## **Distributor training: Mahlkönig X54**

September 2022



**ditting**



# Content

- 01** Product overview
- 02** Product service
- 03** Information handouts



# Mahlkönig X54: model and option overview

## Bean hoppers & dosing cups

- 250g : article 704127
- 500g : article 703727
- Filter coffee dosing cup (220ml) : article 703813
- Espresso dosing cup : article 704123



## Burrs

: article 703738 - 54mm special steel

## Front interface options

- Filter coffee insert : article 703730
- Espresso portafilter insert : article 703729

## Standard body color options

: black matte  
: white matte  
: chrome high gloss

## Motor configurations

- 100-120V 50/60Hz; 1.000 – 1.050 rpm
- 220-240V 50/60Hz; 1.000 – 1.050 rpm

## Weight (net / gross)

: 5,1 kg / 5,4 kg

## Dimensions

- 250g configuration : 19 × 28 × 37,8 cm
- 500g configuration : 19 × 28 × 42,5 cm





# Mahlkönig X54: notable features at a glance

**Switchable front inserts  
for convenient workflow**



**Allround grinding from  
Espresso fine to Cold Brew**



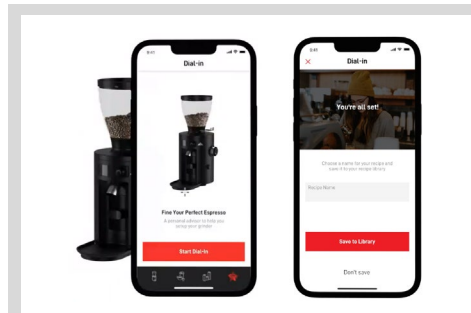
**Special burrs for best taste  
in all recipe preparations**



**Easy digital interface  
with 4 recipe settings**



**Recognizable Mahlkönig  
design & durable materials**



**App & Web-Interface for  
learning & info exchange**

# Mahlkönig X54: key sales arguments

**Allround grinding capability** to do both espresso and coarse filter recipes in one device with modular interfaces

**High grinding performance** and great taste from special steel burrs made in Germany

**Top usability** with intuitive digital interface offering configurable recipes, break function and downloadable statistics

**Mobile App** to set and share recipes and to support users in finding the perfect grinder calibration for their tastes

**Design and material quality similar to Mahlkönig's professional product lines** and superior to competitors

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- 03 Information handouts



# Disclaimer



## **WARNING:**

The contents shown in this section are meant to support qualified technicians and trained staff only. Only parts that comply with the original appliance specification may be used for repairs. Errors in opening or assembling the machine may cause injuries and/or damages and malfunctions. If the machine is opened by an unauthorized person the manufacturer's liability and warranty expire.

# Often overlooked in the quest for best taste and operations performance: the relevance of equipment maintenance

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## Benefits of regular grinder maintenance

**More aroma extraction** due to lower grinding temperatures

**Exact recipe execution** due to higher dosing consistency

**Clearer taste** due to lack of coffee residues and cross contamination

**Reduced costs due to longer equipment life**, esp. burrs

*"Insufficient maintenance of key equipment always results in poor quality in the cup regardless of raw materials"*

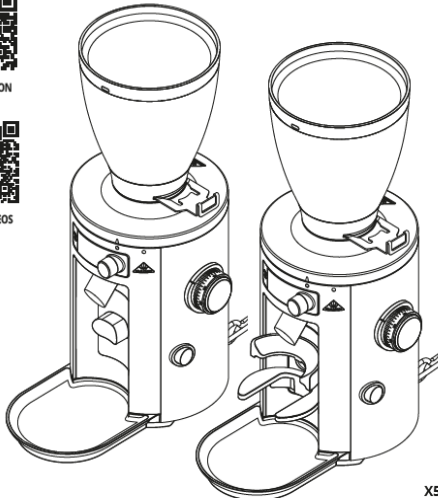


# Hemro service resources: spare part list in the Mahlkönig website dealer section and YouTube service videos

ERSATZTEILLISTE | SPARE PARTS LIST Version 1.1  
X54 220-240 V 50/60 Hz | 110-127 V 60 Hz | 100 V 50/60 Hz

INFORMATION

SERVICEVIDEOS



X54

**WARNUNG:**  
Diese Ersatzteilliste richtet sich ausschließlich an qualifizierte Techniker und geschultes Fachpersonal. Fehler beim Öffnen oder Montieren der Mühle können zu Verletzungen und/oder Beschädigungen und Fehlfunktionen führen. Bei Reparaturen dürfen nur Teile verwendet werden, die den ursprünglichen Gerätedaten entsprechen.  
Mit dem Öffnen der Mühle durch eine nicht autorisierte Person, erlöschen die Haftungs- und Garantieansprüche gegenüber dem Hersteller.

**WARNUNG:**  
This spare part list is meant to support qualified technicians and trained staff only. Only parts that comply with the original appliance specification may be used for repairs. Mistakes in opening or assembling the grinder may cause injuries and/or damages and malfunctions.  
If the grinder is opened by an unauthorized person, the manufacturer's liability and warranty expire.

gültig ab | valid from 01.07.2021

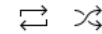
Änderungen ohne Vorankündigung vorbehalten. | Subject to change without prior notice.

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## Mahlkönig X54 | Service & Repair

Mahlkoenig - 1 / 12



- 1 **Mahlkönig X54 | Switch board replacement**  
Mahlkoenig 2:52
- 2 **Mahlkönig X54 | Power board replacement**  
Mahlkoenig 3:22
- 3 **Mahlkönig X54 | Portafilter switch replacement**  
Mahlkoenig 7:58
- 4 **Mahlkönig X54 | Gear wheel and gear wheel shaft replacement**  
Mahlkoenig 2:36
- 5 **Mahlkönig X54 | Display replacement**  
Mahlkoenig 8:03
- 6 **Mahlkönig X54 | Calibration**  
Mahlkoenig 1:42
- 7 **Mahlkönig X54 | WiFi connection and web server**  
Mahlkoenig 1:31
- 8 **Mahlkönig X54 | Quick start guide**  
Mahlkoenig 3:57
- 9 **Mahlkönig X54 | Built-in grinder replacement**  
Mahlkoenig 8:11





## YouTube Service & Repair Mahlkönig EK43

[https://www.youtube.com/watch?v=eM0wjxN4I-4&list=PL6PDLeLQefbOyFCL-OL0I6sOf2\\_LGErYB](https://www.youtube.com/watch?v=eM0wjxN4I-4&list=PL6PDLeLQefbOyFCL-OL0I6sOf2_LGErYB)

# Hemro service resources continued: Product Management Sharepoint for most recent documentations and knowledge

**HEMRO** Hemro - Product Management

+ New Page details Analytics



**Hemro Group - Article Number Locator** **Brand Logos - Download**

For technical support and product management representatives please contact

**PM** Product Management

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Documents > 04\_Mahlkönig > X54

Name

- 01\_Product presentation
- 02\_Product pictures and 3D models
- 03\_Instruction manuals
- 04\_Spare parts
- 05\_Service videos & FAQs
- 06\_Product Videos

**Downloadable knowledge repository for all of Hemro's products including most recent:**

- Product presentations
- Product pictures
- Instruction manuals
- Spare part lists, recommended spare part lists, spare part locator tools
- Service videos, frequently asked questions, How-To's, wiring diagrams, etc.

**If you do not yet have access, please reach out to [productmanagement@hemrogroup.com](mailto:productmanagement@hemrogroup.com) to receive it today**

# Mahlkönig X54: build overview and frequent service parts

## Frequent replacement and service parts

### Switchable front panels:

- Filter coffee : articles 703730
- Espresso : articles 703729

**Flapper:** article 703877

**Spout pipe:** article 703728

**Drip tray:** article 703731

**Special steel burrs:** article 703738 (standard)

**Grind size adjustment and shaft gear wheel:** articles 703733 (grind size adjustment) and 703732 (shaft gear wheel)

**Grinder feet:** article 700727

### Bean hoppers

- 250g: article 704127
- 500g: article 703727

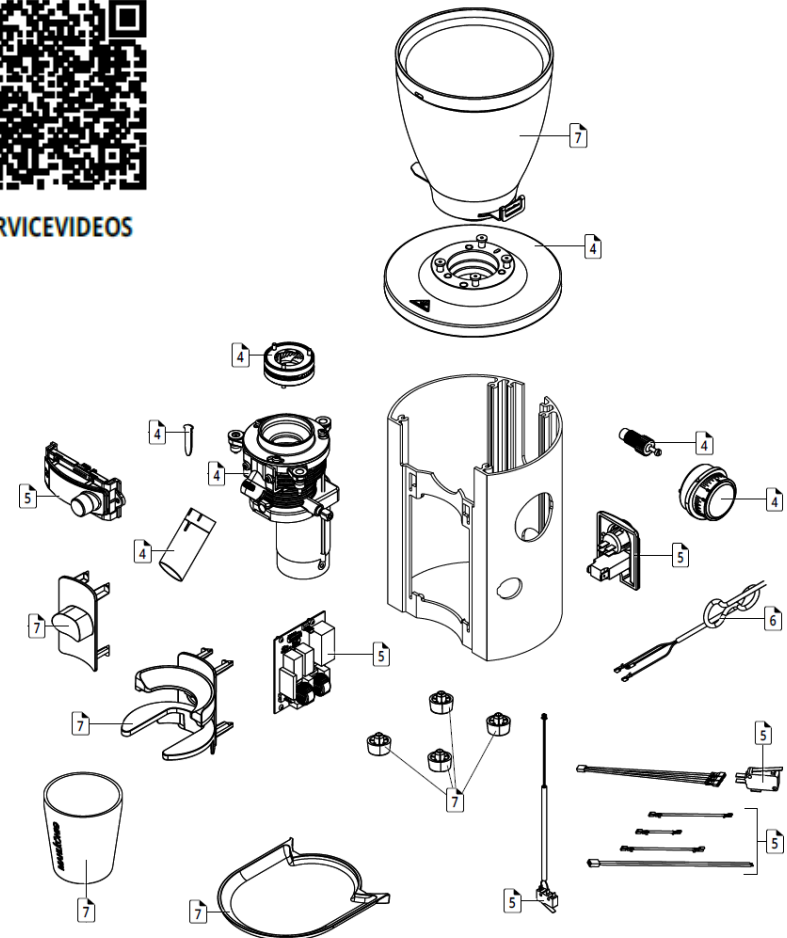
### Dosing cups

- Filter coffee dosing cup (220ml) : article 703813
- Espresso dosing cup : article 704123





## Overview grinder construction



SERVICEVIDEOS




# Mahlkönig X54: recommended parts and service contacts

			
<b>FILTER COFFEE INSERT, X54 HOME</b>	<b>PORTAFILTER INSERT, X54 HOME</b>	<b>SPOUT PIPE, X54 HOME</b>	<b>GRINDER FEET SET, 4 PCS</b>
€11,90	€58,31	€17,85	€5,47
price incl. 19% VAT excl. shipping costs	price incl. 19% VAT excl. shipping costs	price incl. 19% VAT excl. shipping costs	price incl. 19% VAT excl. shipping costs
Free shipping within Germany for orders over 100 EUR.	Free shipping within Germany for orders over 100 EUR.	Free shipping within Germany for orders over 100 EUR.	Free shipping within Germany for orders over 100 EUR.
<b>ADD TO CART</b>	<b>ADD TO CART</b>	<b>ADD TO CART</b>	<b>ADD TO CART</b>

**X54 grinders & all frequent service parts available in Mahlkönig's online shop** that carries plenty of stock (list prices including EU VAT for German shop)

**Recommended spare part lists** & stock recommendations per 10 grinders available on request from the product management team

## Mahlkönig E-Shop for Spare Parts



**SPARE PARTS FOR X54 HOME**

The X54 Home coffee grinder provides optimal grinding to meet the highest demands towards coffee quality. As a true allrounder, the grinder is suitable for all common coffee preparation methods, for your aromatic espresso in the morning to your pour-over or French press in the afternoon. Shop available spare parts for this model.

**FIND YOUR DISTRIBUTOR**

We cooperate with sales and service partners in more than 70 countries around the globe. Find the dealer that is closest to you and get into contact.

### Link:

[https://www.mahlkoenig.com/collections/spare-parts/grinder-model\\_x54-home](https://www.mahlkoenig.com/collections/spare-parts/grinder-model_x54-home)

### For part or technical support, please contact:

- Service-center  
@hemrogroup.com
- Productmanagement  
@hemrogroup.com

# Mahlkönig X54: frequently encountered problems

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**Problem** : grind size cannot be adjusted to coarse recipes  
**Cause** : wrong screws were used during initial production run that prevent rotary burr carrier from moving downwards  
**Solution** : replace panhead screws with sunkhead screws / contact your service technician

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**Problem** : grind size cannot be adjusted at all  
**Causes** : shaft gear wheel is broken or grind size adjustment mechanism is not properly lubricated  
**Solution** : shaft gear wheel (part 703732) needs replacement  
: lubricate grind size adjustment mechanism below rotary burr carrier

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**Problem** : grinder randomly restarts during operation  
**Causes** : display unit is not properly insulated towards metal front plate and electrical load travels from display to grinder body (no danger to user since grinder is grounded but software detects unwanted power discharge)  
**Solution** : check for display assembly within display frame and ensure display fixation screws aren't overly tightened

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**Problem** : grinder does not grind fine enough for light roast espresso  
**Causes** : factory calibration is not fine enough  
**Solution** : recalibrate grinder to desired fineness

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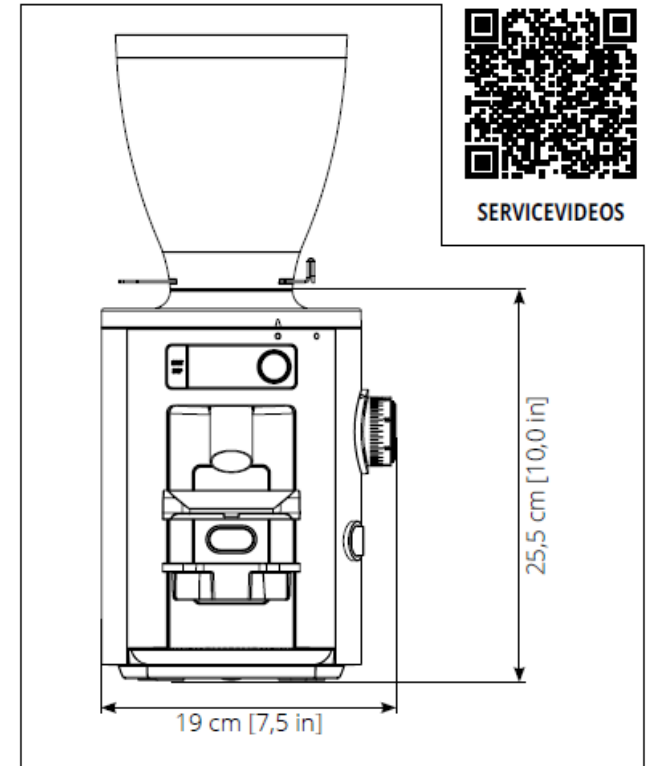
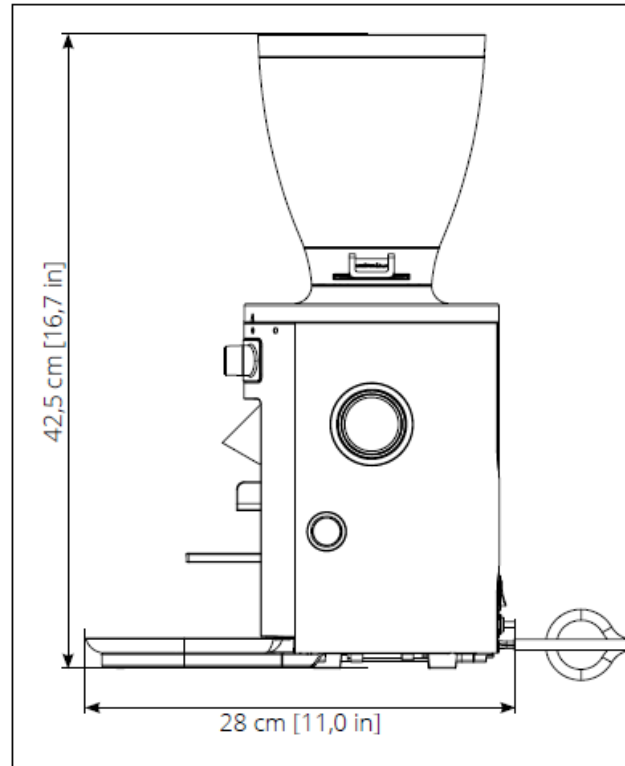
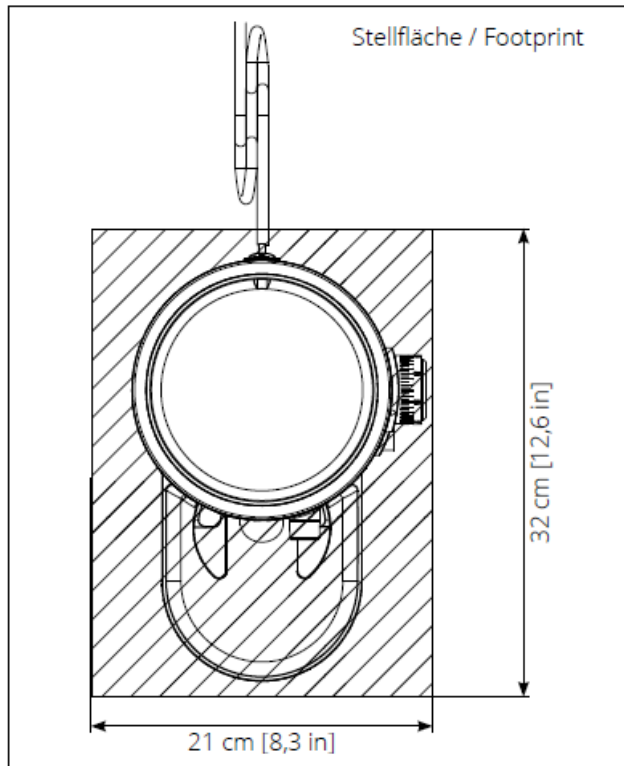




# Recommended tools for performing Hemro maintenance and service

Tools	Reference parts
<ul style="list-style-type: none"> <li>▪ 1x ¼ inch torque wrench</li> <li>▪ 1x universal ¼ inch bit set in short and long configurations</li> <li>▪ 1x 13mm combination wrench</li> <li>▪ 1x Wire cutter</li> <li>▪ 1x Telescope magnet for lost screws</li> <li>▪ 1x Cable stripper</li> <li>▪ 1x Long pliers</li> <li>▪ Pulling tool Mahlkönig EK43, DK15, VTA6S</li> <li>▪ Pulling tool Mahlkönig Guatemala 2.0</li> <li>▪ Burr change tool 65mm (Mahlkönig E65S, Mahlkönig E65S GbW, Anfim Pratica, Anfim Solida)</li> <li>▪ Burr change tool 80mm (Mahlkönig E80, Mahlkönig E80 GbW, Ditting 807)</li> <li>▪ Burr alignment tool Mahlkönig K30x</li> <li>▪ Burr alignment tool Mahlkönig EK43</li> <li>▪ Special grease NSF/H1 50g</li> <li>▪ Special lubrication NSF/H1 60g</li> <li>▪ Soft bristle brush</li> <li>▪ Multimeter (20A)</li> <li>▪ Digital coffee scale</li> <li>▪ Windows-PC for software updates</li> </ul>	<ul style="list-style-type: none"> <li>▪ Würth 071471 91</li> <li>▪ Würth 061425059</li> <li>▪ Würth 071330213</li> <li>▪ Würth 071401571</li> <li>▪ Würth 07153535</li> <li>▪ Würth 071401570</li> <li>▪ Würth 071401578</li> <li>▪ Hemro 703750</li> <li>▪ Hemro 703048</li> <li>▪ Hemro 700974</li> <li>▪ Hemro 703290</li> <li>▪ Hemro 306590</li> <li>▪ Hemro 105866</li> <li>▪ Hemro 105168</li> <li>▪ Hemro 309336</li> <li>▪ / - Any</li> <li>▪ / - Any</li> <li>▪ / - Any</li> <li>▪ / - Any</li> </ul>

# Mahlkönig X54: dimensions



SERVICEVIDEOS

# Mahlkönig X54: reference particle analysis – finest setting (0)

## PARTIKELGRÖSSENVERTEILUNG

PAQXOS 4.1 FREE

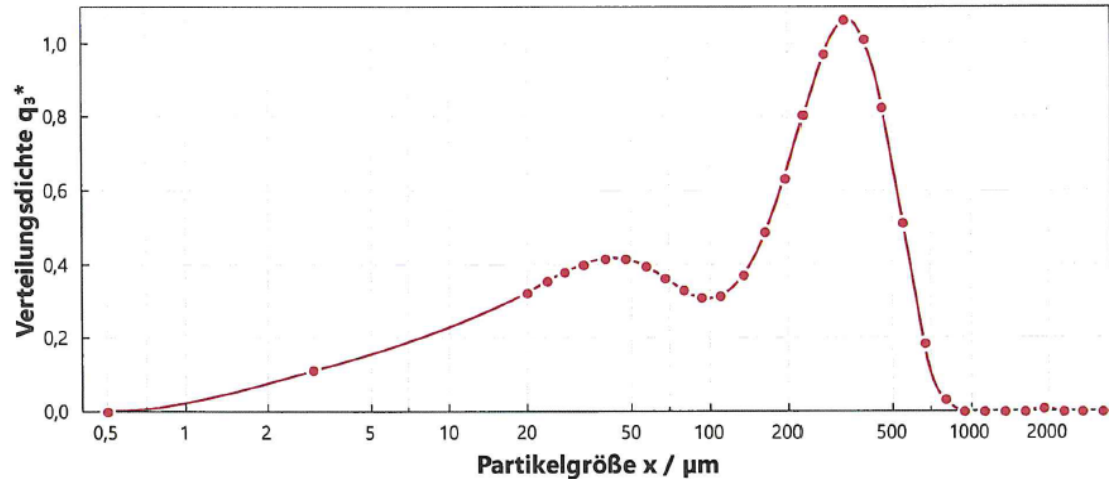
$x_{10,3} = 10,64 \mu\text{m}$

$x_{50,3} = 143,05 \mu\text{m}$

$x_{90,3} = 447,17 \mu\text{m}$

SMD =  $35,66 \mu\text{m}$

$C_{\text{opt}} = 9,99 \%$



## SYSTEM

Gerät HELOS (H4132) & RODOS/T4, R7  
Referenz 2021-10-06 09:01:31  
Software PAQXOS 4.1

## TRIGGERBEDINGUNG

Start Kanal 24  $\geq 1,2 \%$   
Gültig immer  
Stop 5 s Kanal 21  $\leq 1,2 \%$  oder 80 s Echtzeit

## DISPERGIERMETHODE

Druck 2 bar  
Unterdruck 108 mbar  
Drehzahl 0 %

Dosierer VIBRI  
Förderrate 65 %  
Spaltweite 7 mm

## BENUTZERDEF. PARAMETER

Mühle Mahlkönig X54  
Medium Coffee Songwa  
Artikel Nr.  
Sonstiges Finest

## KOMMENTAR

## Comments:

- Analysis performed on a laboratory Sympatec Helos Laser Diffraction analyzer
- For comparable results to series production image analyzers ca.  $60 \mu\text{m}$  need to be added to the median particle size value  $x_{50}$
- On finest factory setting Mahlkönig X54 produces ca.  $200 \mu\text{m}$  of median particle size**

# Mahlkönig X54: reference particle analysis – medium setting (20)

## PARTIKELGRÖSSENVERTEILUNG

PAQXOS 4.1 FREE

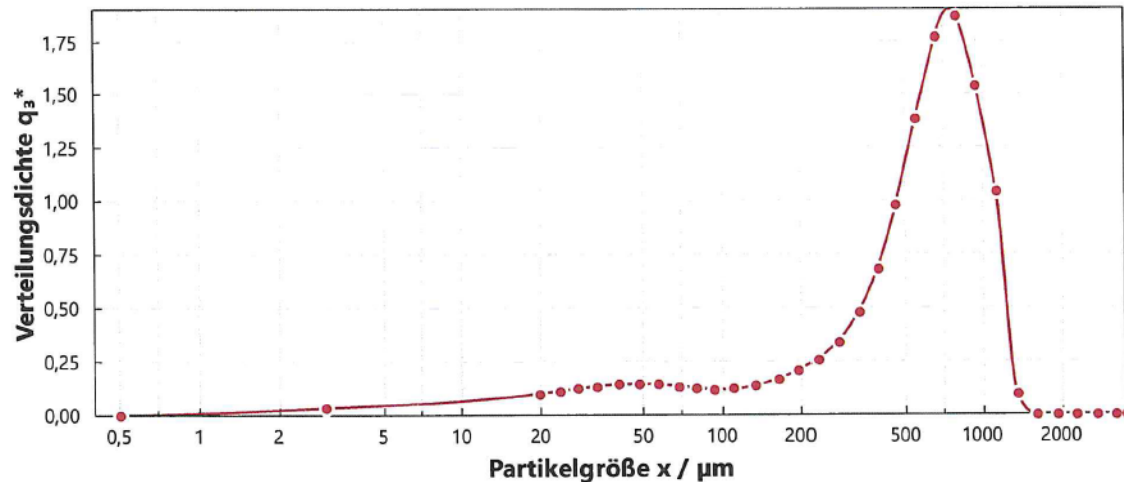
$x_{10,3} = 43,82 \mu\text{m}$

$x_{50,3} = 587,88 \mu\text{m}$

$x_{90,3} = 1003,93 \mu\text{m}$

SMD = 101,73  $\mu\text{m}$

$C_{\text{opt}} = 7,02 \%$



## SYSTEM

Gerät HELOS (H4132) & RODOS/T4, R7  
Referenz 2021-10-06 09:03:25  
Software PAQXOS 4.1

## TRIGGERBEDINGUNG

Start Kanal 24  $\geq 1,2 \%$   
Gültig immer  
Stop 5 s Kanal 21  $\leq 1,2 \%$  oder 80 s Echtzeit

## DISPERGIERMETHODE

Druck 2 bar  
Unterdruck 108 mbar  
Drehzahl 0 %

Dosierer VIBRI  
Förderrate 65 %  
Spaltweite 7 mm

## BENUTZERDEF. PARAMETER

Mühle Mahlkönig X54  
Medium Coffee Songwa  
Artikel Nr.  
Sonstiges Grinding degree 20

## KOMMENTAR

## Comments:

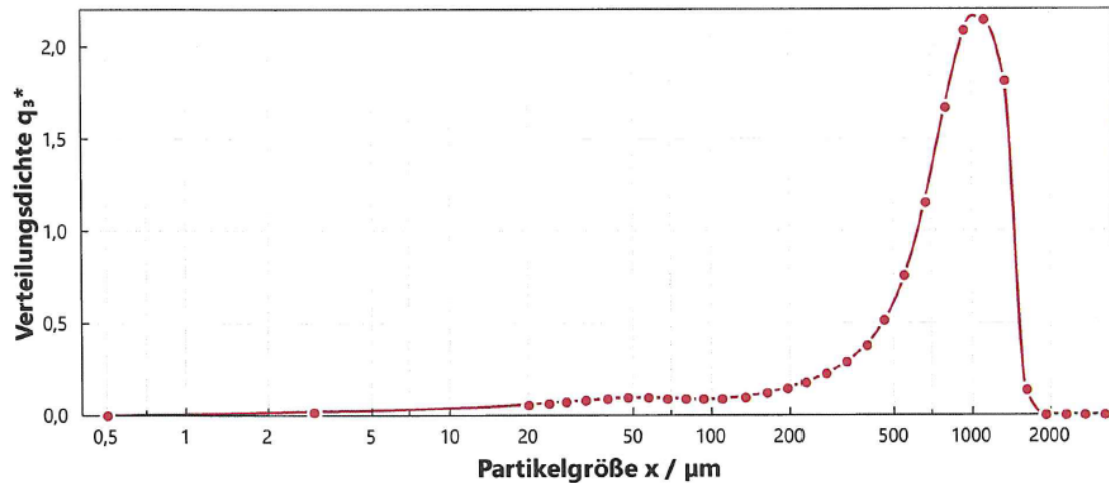
- Analysis performed on a laboratory Sympatec Helos Laser Diffraction analyzer
- For comparable results to series production image analyzers ca. 60  $\mu\text{m}$  need to be added to the median particle size value  $x_{50}$
- On medium factory setting Mahlkönig X54 produces ca. 650 $\mu\text{m}$  of median particle size**

# Mahlkönig X54: reference particle analysis – coarsest setting (35)

## PARTIKELGRÖSSENVERTEILUNG

PAQXOS 4.1 FREE

$x_{10,3}$  = 122,47  $\mu$ m     $x_{50,3}$  = 830,88  $\mu$ m     $x_{90,3}$  = 1308,36  $\mu$ m    SMD = 159,45  $\mu$ m     $C_{opt}$  = 5,49 %



## SYSTEM

Gerät HELOS (H4132) & RODOS/T4, R7  
Referenz 2021-10-06 09:05:10  
Software PAQXOS 4.1

## TRIGGERBEDINGUNG

Start Kanal 24  $\geq$  1,2 %  
Gültig immer  
Stop 5 s Kanal 21  $\leq$  1,2 % oder 80 s Echtzeit

## DISPERGIERMETHODE

Druck 2 bar  
Unterdruck 108 mbar  
Drehzahl 0 %

Dosierer VIBRI  
Förderrate 65 %  
Spaltweite 7 mm

## BENUTZERDEF. PARAMETER

Mühle Mahlkönig X54  
Medium Coffee Songwa  
Artikel Nr.  
Sonstiges Grinding degree 35

## KOMMENTAR

## Comments:

- Analysis performed on a laboratory Sympatec Helos Laser Diffraction analyzer
- For comparable results to series production image analyzers ca. 60  $\mu$ m need to be added to the median particle size value  $x_{50}$
- On coarsest factory setting Mahlkönig X54 produces ca. 900 $\mu$ m of median particle size**

# Mahlkönig X54 home grinder FAQ part 1 (general)

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## General

### **Some facts about the X54**

- Developed in Switzerland in 2019/2020; start of production in Q1 of 2021

### **What is special about the X54**

- The X54 is one of few grinders that combines real espresso fine grinding (ca. 200 µm) and filter grinding (500µm and above) in one machine with easily interchangeable front modules
- The X54 offers four predefined recipes that can be adjusted to user requirements
- The X54 uses 54mm flat special steel discs for gentle grinding and best taste
- The X54 emits very low noise while grinding at less than 70 dB(A)

### **How do I adjust the portafilter holder to the portafilter of my espresso machine?**

- Please follow the operating instructions, or:
- Remove the portafilter module
- Turn over the portafilter module and loosen the screw of the bottom portafilter support part with a standard screw driver. Once loose, adjust its height until the portafilter of the espresso machine fits tightly into the portafilter module.
- Fasten the screw and remove the filter holder
- Place the portafilter module back into the X54 grinder and fasten it securely
- The portafilter holder should now fit tightly and allow for “hands free” grinding

### **What is the capacity of the hopper of the X54?**

- Two options: appr. 500g / 1.1lbs and appr. 250g / 0,5 lbs

### **What is the weight of the X54?**

- Net weight: appr. 5kg / 11 lbs

### **What is the grind speed of the X54?**

- Appr. 1 g/s (finest grinding for espresso)
- Appr. 2.5-2.8 g/s (coarse grinding)

### **Which factors does the grind speed of the X54 depend on?**

- Origin and type of coffee (e.g. arabica, robusta, etc. ),
- Size and hardness of beans, degree of roasting and cooling method after roasting (i.e. moisture content of the bean)
- Cleaning status of grinder
- Other external influences (humidity, temperature, etc.).



# Mahlkönig X54 home grinder FAQ part 2 (general)

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## Which functions are included in the X54 software?

- 4 preconfigured grinding-by-time recipes (2 for espresso (single/double); 2 for filter (single cup & litre))
  - Adjustable to user preferences
- Manual on-demand grinding
- Sleep timer
- Disc lifetime monitor
- Security switch off of the motor when bean hopper is not mounted
- WiFi for usage statistics and error logs (for service technicians)
- See operating instructions

## Where is the X54's ON/OFF switch?

- The X54 ON/OFF switch is located at the back of the grinder where the power cable exits the housing
- The X54 takes approximately 3-5 seconds to fully boot

## The display of my X54 is on, the motor does not start. What can I do?

- If the Error message E001 is displayed the motor does not start because the bean hopper is not mounted correctly
- The hopper has to click-in completely for the motor to start operating. To mount correctly, push down the bean hopper and push through the stainless steel bean slider until the hopper is locked into place
- When new, the hopper fixation will be a bit tight, which will wear down after some repetitions

## Which repairs may I carry out without losing warranty?

- As described in the user manual, the grind chamber may be opened for cleaning or checking for foreign objects
- IMPORTANT: Any warranty claim is void in any of the following cases:
1. The grinder casing was removed
  2. Electronic components were changed or tampered with
  3. The grinder was obviously manipulated or changed
  4. Improper use (other materials than coffee were ground).

## How and how often should I clean my grinder?

- Your grinder should be cleaned approx. once a week. Cleaning intervals are highly dependent on intensity of use, type of beans and grinding degree
- We recommend GRINDZ to clean your grinder – please follow the user manual for specific directions

## How do I empty my grinder to switch coffee beans

- Pull out the bean hopper slider until the indication marking is visible – “closing” the hopper while leaving it firmly attached. Now operate the grinder normally until all residual beans in the grinder neck have been consumed. You can now pull out the bean hopper slider completely to remove the hopper and switch beans.

# Mahlkönig X54 home grinder FAQ part 3 (motor)

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## Motor

### **What is the maximum recommended daily grinding capacity of the X54?**

- The X54 is designed for domestic use and not intended for high-volume professional environments such as cafés
- Maximum daily grinding capacity is approximately 1.7kg but depends on bean type, grinding degree and the power frequency.  
IMPORTANT for USA: users in UL-Region (USA) must limit the cumulative product use-time per year to less than 100 hours (see UL 982 cl. 1.1. & National Electrical Code ANSI/NFPA 70.)

### **How fast does the motor of the X54 turn in rotations per minute?**

- The motor turns at approx. 10.000 RPM; the grinding discs turn at approx. 1.000 RPM (all depending on various influences on the grind speed)

### **Which voltages/frequencies is the X54 available in?**

- 220–240 V; 50/60 Hz (Rest of World)
- 110–127 V; 60 Hz (USA)
- 100 V; 50/60 Hz (Japan)

### **Can I run my X54 in different power and frequency systems?**

- The motor and the electrical power boards are designed especially for the respective mains network and should not be used with different voltages. It could result in blockade, over-heating or major defects in the electronic boards in the grinder

### **What is the electrical current consumption of the X54?**

- max 1.5-2.5 A when grinding, depending on voltage and frequency

### **What is the electrical power consumption of the X54?**

- appr. 120W

# Mahlkönig X54 home grinder FAQ part 4 (grinding)

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## Grinding discs

### **What is the material and diameter of the X54 discs?**

- Mahlkönig special steel 54mm flat discs

### **What is the lifetime of the X54 discs?**

- The lifetime of the X54 discs is >500kg due to high abrasion resistance of the steel in use. Only stones or other hard pieces can damage the discs

### **Can I exchange the discs of the X54?**

- Changing the discs of the X54 is only necessary when a stone or other hard foreign particles have damaged the discs
- An exchange due to wear and tear is easily possible but not expected to be necessary

### **Can I grind Turkish fine with my X54?**

- The X54 is designed to grind fine espresso all the way up to coarse coffee for French press
- Even at the finest setting the discs will not be able to grind very fine, flour-like coffee powder needed for Turkish preparation
- Turkish fine grinding requires demanding conditions of discs, disc casing and motor made from high precision and stable materials

### **Can I change the grind adjustment without starting the grinder?**

- Changing the grind adjustment from fine to coarse is possible also when the grinder is not running
- Readjusting from coarse to fine is not possible when beans are blocking the grinding mechanism. Using force to change the setting to fine could damage the adjustment levers or – even worse – the disc casing, therefore we always recommend to start the grinder first when adjusting from coarse to fine

### **Which grind size settings are recommended for common grinding recipes?**

- Depending on the coffee, the method of extraction and your preferred taste, we recommend the following settings
  - Espresso 01-05
  - Caffè Crème 05-15
  - Filter coffee 15-25
  - French Press >25

### **What is the maximum fineness the X54 can achieve?**

- • At the finest setting, the X54 grinds coffee to an average particle size of ca. 200µm.

### **How loud is the X54?**

The X54 emits less than 70 dB(A) while grinding