Medisca ProMill® Basic

Owner's Manual

5474-01 | 5473-01 Version 1.1

CE This Product is CE Certified
This manual complies with CE directives

PMMAN046
MM1M TRM 16
MM1M TRM 25

Content

Overview

The Medisca ProMill Basic milling machine is a tabletop, adjustable, three-roll mill that reduces particle size in ointments, creams, pastes, gels, and suspensions. Smaller and more uniform particle size facilitates homogeneous blending and increases surface area. The three rollers rotate in opposite directions and at different speeds, creating shear force that moves the preparations through the machine.

Intended Use

Milling of semi-solid preparations including creams, gels, ointments, and pastes for compounding, cosmetic, general pharmaceutical, and/or other needs.

Features

- Engineered for durability.
- Inox (SS304 and SS316) and Anodized Aluminum construction.
- Durable Ceramic Rollers made from 99.7% purity Aluminum oxide.
- Reduces particle size to below 20 microns, depending on the product and number of passes.
- Safety Bar for use while cleaning.
- Auto-stop safety feature if rollers jam due to foreign material.
- Shipped in a lightweight polypropylene box with custom foam padding for protection from vibration or damage. Box can be used for storage and transport. Keep box and packaging materials for repairs or return purposes.

Medisca ProMill Basic milling machine is NOT to be used for milling the following

- Flammable or explosive products.
- Products that may emit harmful vapors.
- Thick, dough-like substances that can jam rollers.

Recommended Environmental Conditions

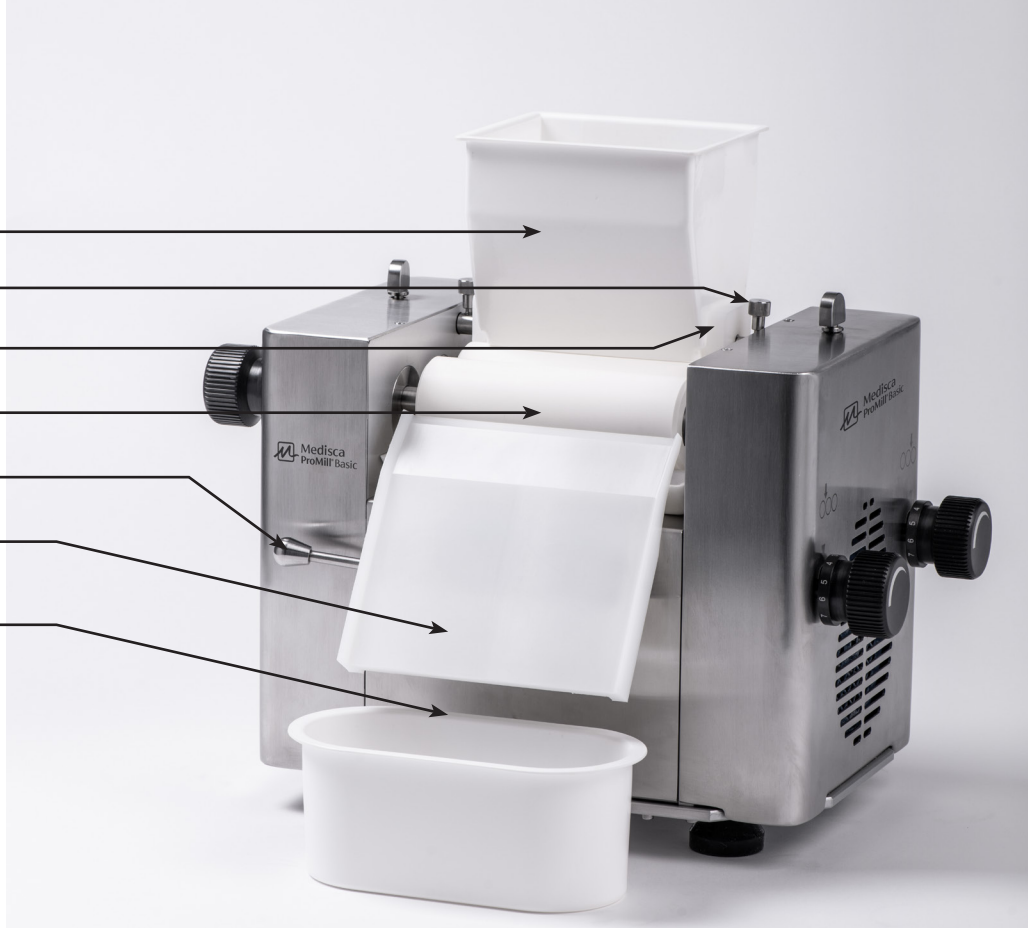
Medisca ProMill Basic milling machine will operate normally in temperatures from 0º C to 45º C. However, both temperature and humidity affect the viscosity and integrity of the compound. It is best to follow temperature and humidity guidelines for the ingredients in your compound.

Disposal

- Dispose of residual product in accordance with local environmental regulations.
- Dispose of Electrical parts in accordance with local regulations.

Parts Identification

	Part Name	Description / Application
1	Hopper (Optional Use)	For use with larger product volume
2	Rollers (x3)	Provide shearing action to reduce particle size
3	Scraper Handle	Used to install / remove Scraper
4	Scraper	Scrapes the product from front Roller
5	Product Tray	Collect product that falls off Scraper
6	Roller Guide Lock Bolts (x2)	Hold Roller Guides in place
7	Roller Guides (x2)	Guides product through mill (adjustable)
8	Gap Adjustment Knobs (x2)	Used to adjust gap between Rollers
9	Splash Tray	Catches product that falls from Rollers
10	C14 Inlet	Electrical connection
11	Manual Rotation Knob	Used to manually rotate Rollers only during cleaning or if an object is jammed
12	Label	Serial Number and voltage requirements
13	ON/OFF Switch	Start or stop mill
14	Fuses	For electrical safety (x2)
15	Safety Bar	Protects from unwanted objects entering Rollers during cleaning
16	Safety Bar Lock Knobs (x2)	Lock Safety Bar in place during cleaning
17	Tool Kit	Allen Keys (2, 2.5, 3, 4), Wrench 6-7 & 8-9, Phillips Head Screwdriver, Fuse (x2), A12 Circlips (x2)
18	Power Cord	Connects mill to wall outlet. Supplied with type B (5474 - US/CAN), or type I (5473 - AUS)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Medisca
ProMill Basic


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Medisca
ProMill Basic
Tool Kit / Kit d'outils

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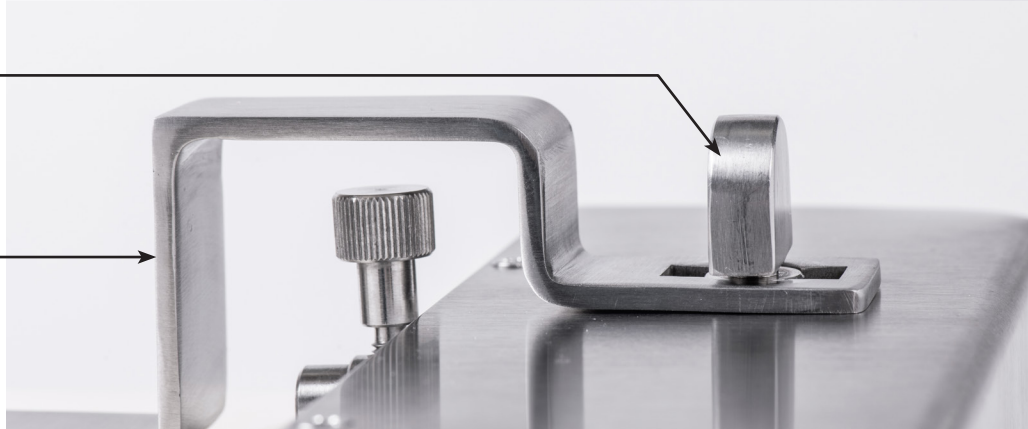
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Technical and Safety Information

Technical Specifications		
	Metric	**Imperial**
Outer Dimension (W x D x H) with Hopper and Scraper	415 x 260 x 375 mm	16.3 x 10.2 x 14.8 in
Net Weight	18 Kg	39.6 lbs
Roller Diameter	50 mm	2.0 in
Roller Length	150 mm	5.9 in
Roller Gap Width	10 - 220 microns	0.39 - 8.66 mils
Hopper Volume	1250 mL	42 fluid oz
Shipping Weight	24 Kg	52.8 lbs

Electrical Requirements		
Input Voltage (As ordered)	**5474 110-130 V / 60 Hz**	**5473 220-240 V / 50 Hz**
Power Requirements	200 W	200 W
Fuse	12 A	6 A
Full Load Current / Peak Start Current	4.3 amp / 12 amp	1.9 amp / 5 amp
Permitted voltage drop	± 10%	± 10%

Operational Safety

1. Medisca ProMill Basic milling machine is designed to pull in all material that comes into contact with the rollers. NEVER allow any object not intended for inclusion in the product to touch the Rollers during operation.
    a. Hair should be tied back or in a hair net.
    b. Avoid wearing loose clothing or jewelry.
    c. Do not place spatula or anything other than product between Rollers.
    d. Keep hands away from Rollers.
2. Manual Rotation Knob should only be installed during cleaning to manually rotate Rollers or if unjamming an object. Milling machine needs to be OFF and disconnect from power supply. Manual Rotation Knob needs to be removed while running the milling machine, as it can spin off.
3. If an object is lodged in the Rollers, they will stop rotating. Turn the milling machine OFF and disconnect from power supply. Insert the Manual Rotation Knob to rotate the Rollers in reverse direction to remove the object. If the object does not dislodge, increase the Roller gap and try again. After dislodging the object, remove the Manual Rotation Knob.
4. Do not adjust Rollers while Milling Machine is running.
5. Operate Milling Machine on a level surface.
6. Always unplug Milling Machine before opening side panels.
7. Do not open cover and change factory settings.
8. Follow directions in this manual.

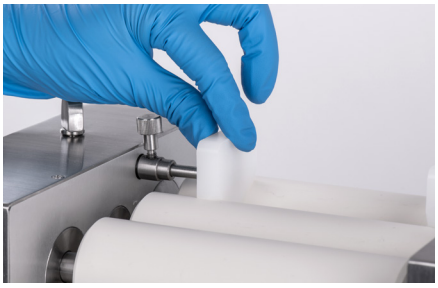
Electrical Safety

1. Only connect to supply voltage indicated on the side label.
2. Do not remove ground prong.
3. Plug into a 3-prong grounded outlet.
4. Only use a 3-prong extension cord.

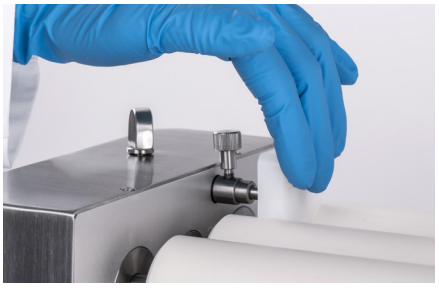
Production Set-up

Clean the Medisca ProMill Basic milling machine before first use. Follow instructions beginning on page 12.

1. Remove the Manual Rotation Knob. Slide Splash Tray under Rollers.

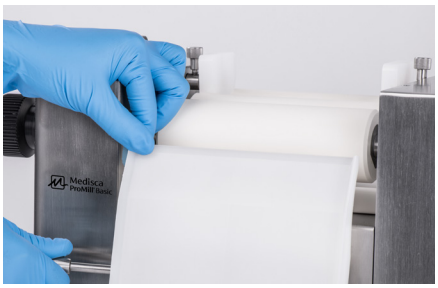


2. Loosen Roller Guide Lock Bolts. Place Roller Guide (marked with R or L) between center and rear Rollers, flat side up.

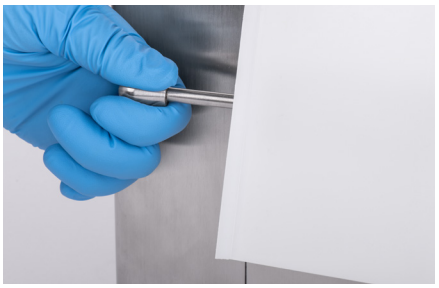


3. Slide Roller Guide into hole. Repeat for second Roller Guide on opposite side.

4. Adjust distance between Guides based on volume of product. Tighten Roller Guide Lock Bolts to hold Guides in place.



5. Press down Scraper Handle. Slide Scraper metal guides over the metal plate.



6. Slowly release the Handle so the Scraper edge rests gently against the front Roller.

7. Place Product Tray under the Scraper to collect any product that may slide off.

8. For product volume over 300 mL, push Roller Guides all the way to the outside and slide hopper onto Guides.

9. Connect to power supply.

Production Run

1. Appropriately mix preparation before milling.

2. Ensure Milling Machine is set up according to page 8.
Important: Remove the Manual Rotation Knob if installed.

3. Adjust Roller gaps. See page 10 for tips.

4. Use rubber or plastic spatula to place product between Roller Guides. Scrape spatula flat against rear Roller to remove product.

5. Turn Milling Machine ON.

6. Product passes through Milling Machine and is scraped onto the Scraper. When all product is passed through, turn Milling Machine OFF.

7. Use spatula to remove product from Scraper. If further particle size reduction is needed, pass the product again through the Milling Machine with a reduced gap between Rollers (steps 3-6). See quick tips for more information

8. Mix for product homogeneity. After mixing, the product is ready for dispensing.

Quick Tips

1. Do not put product back in mortar and pestle to avoid introducing larger particles left behind from previous use.
2. Fully clean spatula before scraping product off Scraper to avoid introducing larger particles back into the product.

Roller Gap Adjustment Guidelines and Product Preparation Tips

Roller Gap Adjustment

Medisca ProMill Basic milling machine has 3 Rollers: 1 stationary center Roller and 2 adjustable Rollers. The gap setting between the Rollers is determined by the product's viscosity, surface tension, particle size, moisture content, and sometimes temperature. Specific recommended settings cannot be estimated.

To assist you in setting your Rollers, we offer these guidelines:

1. Each Gap Adjustment Knob has settings from 1 to 7: Finest to largest particle size. See table on the right.
2. Each number on the Gap Adjustment Knob adjusts the gap, and therefore the particle size.
3. The front gap should be the same or 0.5 to 1 number less than the rear gap so product does not build up within the Milling Machine.
4. Pass product through the mill several times, reducing the gap incrementally until desired particle size and product texture is achieved. Typically, product requires 2-3 passes.

   As the product exits Rollers onto the Scraper, check for desired consistency and particle size using thumb and forefinger.

Gap Setting	Gap width in microns
1	10-15
2	25-30
3	50-55
4	90-95
5	130-135
6	190-195
7	220-225

Product Preparation Tips

1. Pre-mixing with mortar and pestle greatly increases the efficiency of the Milling Machine. Medisca ProMill Basic milling machine should not be used to crush whole tablets.
2. Mix product again after milling to ensure uniform particle dispersion. Medisca ProMill Basic milling machine reduces particle size but does not distribute ingredients.
3. If initial particle size is large, or product is more viscous, start with larger Roller gaps and reduce gaps for each pass through the Milling Machine.
4. Passing product through the Milling Machine a second time using the same gap setting does not reduce the particle size. Reduce the gap setting for each pass. The smallest gap setting may benefit from a second pass at that setting.
5. Plan for up to 5% waste. It is impossible to recover all product from Rollers and Scraper.

Operating Tips

1. For product volumes above 300 mL, optionally place Hopper between rear and center Rollers before turning ON. Leave Roller Guides loose (do not tighten the Roller Guide Bolts) to improve product flow through Milling Machine.
2. If Rollers stop or run with difficulty during production, turn OFF. Increase Roller gaps before proceeding.
3. Scraper should press gently and evenly on the front Roller to remove product. If it is worn or warped, replace it.
4. Do not operate Rollers without product to avoid unnecessary wear on the Scraper.
5. If Roller Guides slide during the run, tighten the Roller Guide Lock Bolts.

Cleaning and Maintenance Guidelines

Cleaning / Maintenance Tips

1. Clean the Milling Machine before first use.
2. Clean the Milling Machine immediately after use to avoid dried-on product.
3. Use supplied Safety Bar to avoid objects entering Rollers during cleaning.
4. Only the Roller Guides and Safety Bar are top rack dishwasher safe, though hand washing is recommended. All other loose parts should be hand washed.
5. Non-plastic parts can be wiped with Isopropyl Alcohol 70% solution.
6. DO NOT remove any panels to access motor area. For additional technical support, please contact Medisca Technical Support Team: eqsupport@medisca.com.
7. DO NOT immerse Milling Machine in water.
8. Allow parts to dry fully before re-assembling Milling Machine.
9. DO NOT lubricate plastic gears. Gears are nylon, which have self-lubricating properties.

Safe Cleaning Products

1. Hand dishwashing liquid diluted in water (up to 50% dilution). Recommended water temperature: 55-65° C (130-150° F).
2. Isopropyl Alcohol 70% solution. Wipe parts with a cloth dipped in isopropyl alcohol, then immediately wipe dry with a clean cloth.
3. Vinegar (4% acetic acid) or citric acid (20%) can help remove discoloration from Rollers. Wipe or brush on the diluted acid solution. Rinse thoroughly with water.

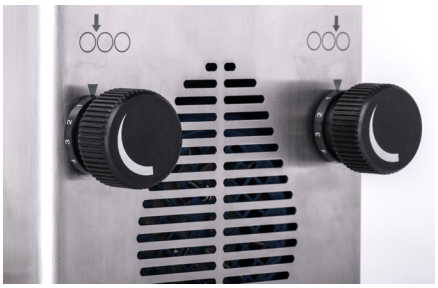
Cleaning Instructions

Items Required

- Cloths, sponges, or paper towels (both wet and dry).
- Optional non-abrasive household cleanser.
- Hot, soapy water (55-65° C / 130-150° F), about 50-100 mL. Hand dishwashing liquid recommended. For greasy products, hot water is especially important. You can also use an alkaline detergent.
- Hot, clear water (55-65° C / 130-150° F), about 250-500 mL.

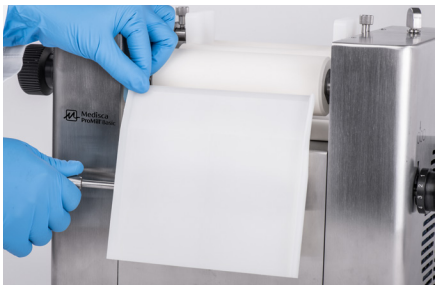
For faster cleaning using less water, use this cleaning procedure.

1. Install Manual Rotation Knob. Loosen Roller Guide Lock Bolts and remove the Roller Guides. Note: if Safety Bar is installed, turn the Safety Bar Lock Knobs and remove it.
   See photo in step 8.



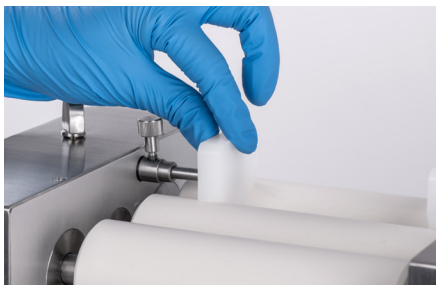
2. Set both roller gap settings to 1.

3. Run Milling Machine for 30-60 seconds to remove residual product. Meanwhile clean the Roller Guides with a paper towel.



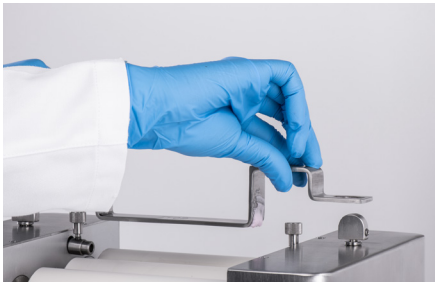
4. Press down Scraper Handle and lift Scraper to remove. Wipe Scraper edge with a paper towel.

5. Wipe the Rollers while rotating Manual Rotation Knob. Wipe for at least 3 revolutions of the Rollers.



6. Reassemble the Scraper and Roller Guides.

7. Unscrew Safety Bar Lock Knobs 2-3 turns and line up parallel to front of Milling Machine.



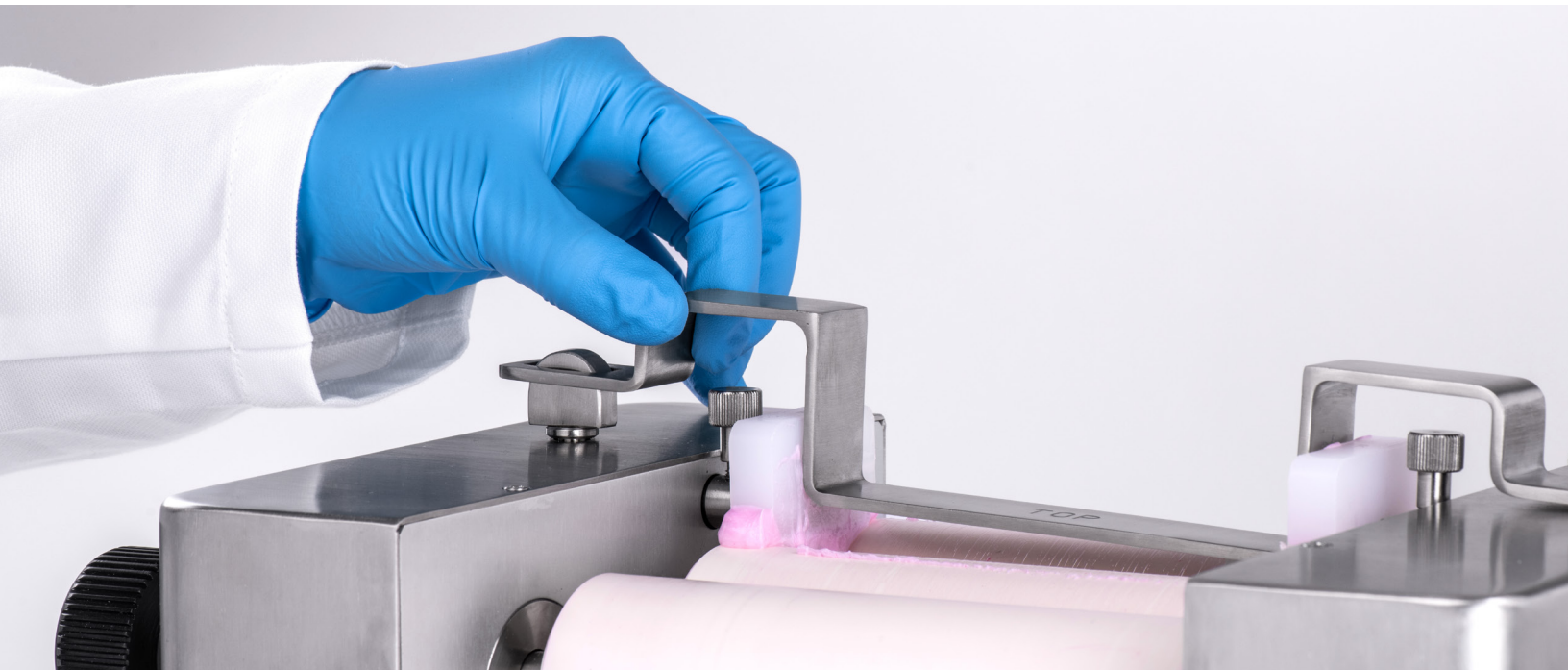
8. Fit Safety Bar over Lock Knobs and turn to tighten. Check that Splash Tray below Rollers is empty. If not, empty it.

9. Turn Milling Machine ON. Dip a clean cloth or sponge into soapy water. Hold it on the spinning Rollers and wipe them while pouring about 50 ml soapy water slowly into the rear gap between center and rear Rollers.

10. Pour about 100 mL clear hot water slowly into the rear gap to rinse. After all water is scraped off, turn Milling Machine OFF. Empty Splash Tray.

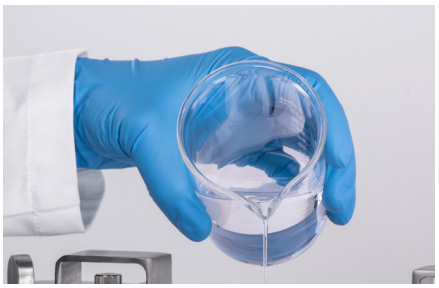
11. If Rollers are not discolored, continue to step 12. If Rollers are discolored, run non-abrasive cleanser (see Safe Cleaning Products on page 11) through Milling Machine. Hold a sponge or clean cloth against Rollers to remove the cleanser. Continue to step 12.

12. Remove the Safety Bar, Roller Guides and Scraper.



Cleaning Instructions (cont.)

13. Increase the roller gap settings to 3 or more.



14. While spinning the Manual Rotation Knob, pour no more than 250 mL hot water slowly over the Rollers, or use a solvent in which the product last processed is soluble. Make sure the water passes over Rollers and their edges and collects in Splash Tray.

15. Carefully remove Splash Tray and empty collected water. If Rollers require more rinsing, repeat step 14.

16. Use paper towel to dry the Rollers while rotating the Manual Rotation Knob.

17. Hand wash the loose parts: Roller Guides, Scraper, Splash Tray, Product Tray, Safety Bar, and Hopper (if used) in warm water mixed with hand dishwashing liquid. Rinse all parts with hot water. Dry parts using a paper towel or clean cloth.

18. When parts are dry, reassemble the Splash Tray and Roller Guides. Store the Scraper OFF the Milling Machine to avoid warping.

Tip: Remember to remove the Manual Rotation Knob before beginning production.

Troubleshooting

1.	**Product splashing out of Medisca ProMill Basic milling machine during operation**	
1.1	Roller gaps require adjustment.	Increase front roller gap. Front gap should be the same size or smaller than rear gap.
1.2	Increase front roller gap. Front gap should be the same size or smaller than rear gap.	Make sure Scraper is pressed all the way down and evenly onto the metal plate. Replace worn or warped Scraper.
1.3	Roller Guides not inserted into place. Product is moving into space between edge of Roller and sidewall of Milling Machine.	Install Roller Guides to keep product in place.
2.	**Product leaking under sides of Hopper**	
2.1	Roller Guides are too tight.	Loosen Roller Guide Bolts to allow some play in Roller Guides.
3.	**Product spreads left and right on Rollers**	
3.1	Roller Guides not inserted into place.	Install Roller Guides. See page 8, steps 2-4.
3.2	Rollers set too close together.	Increase both Roller gaps. Front gap should be the same size or smaller than rear gap.
4.	**All Rollers are rotating but product does not reach Scraper, or product is on only one section of the Rollers**	
4.1	Front Roller gap is too large.	Reduce front gap to be the same size or smaller than rear gap.
4.2	Scraper not installed properly.	Check placement as per page 8, steps 5 and 6.
5.	**Target particle size not achieved**	
5.1	Initial particles are large, or product is viscous or thick.	Pre-mix with a mortar and pestle before running through the Milling Machine. Use wider gap setting for first pass. Reduce gap incrementally in next passes.
6.	**Medisca ProMill Basic milling machine does not start and ON/OFF switch does not light**	
6.1	Fuse may be blown.	To check and replace fuse, see page 16. The Tool Kit included in the original shipment contains 2 spare fuses. See page 16 for fuse specifications.
7.	**Some but not all Rollers are rotating**	
7.1	Roller Gears are out of position or broken.	Contact Medisca for technical support.
7.2	Drive Belt tension is too tight.	Contact Medisca for technical support.
8.	**Rollers not rotating or rotating very slowly**	
8.1	Drive Belt is loose or worn.	Contact Medisca for technical support.

Fuse Replacement

Items Required

- Fuse (either 1 or 2) – included in Tool Kit. Be sure to use correct fuse for your electrical requirements. To purchase a fuse or to select the correct fuse from your Tool Kit, see Specs for Fuse Replacement below.
- Flat head screwdriver (not included).

1. Switch OFF Milling Machine. Remove power supply cord.

2. Unscrew fuse holder and remove it.

3. Remove glass fuse from fuse holder. A blackened fuse or a broken wire indicates the fuse is blown. A multimeter or test lamp could also be used to test fuse. If the fuse is bad, replace with a new one.

4. Put the fuse holder back in place.

5. Repeat steps 2-4 for the second fuse.

6. Connect the power supply cord and turn ON the ON/OFF switch. If the switch does not light up, contact Medisca for technical support.

Specs for Fuse Replacement

- 2 included in Tool Kit
- Length 20 mm
- Diameter 5.3 mm
- 12 Amp for 110 V

Glass Fuse

Declaration of

Custom Capsules Pvt. Ltd.

Works : B-8/1, MIDC, Tarapur, Camlin Naka, Dist. Palghar, Maharashtra, Pin-401 506. India
Phone : 02525 - 272538 Fax No. : 02525 - 272357

DECLARATION OF CONFORMITY

Product Name	:	Three Roll Mill
Model	:	ProMill® Basic
Serial Number	:	XXXXX
Manufacturer	:	Custom Capsules Pvt. Ltd. B 8/1 Camlin naka, Tarapur MIDC, Boisar, Dist: Thane, Maharashtra, India, 401506
Contact Person	:	Lalit G Patel Email : lgp@customcapsules.com Phone : + 91-2525-272538 Fax : + 91-2525-272537

It is hereby confirmed that the above product complies with the applicable requirements set out in the following directives.

2006/42/EC	:	Machinery directive
2014/35/EU	:	Low voltage directive
2014/30/EU	:	EMC directive

The harmonized standards applied are as follows.

EN ISO 12100:2010	:	Safety of machinery. General principles for design. Risk assessment and risk reduction
EN 61010-1:2010	:	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
EN 61326-1:2013	:	Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements.

The above declaration is made with the following assumptions.

1. The machine is properly installed.
2. Proper care has been taken of all safety considerations.

We confirm the correctness of all the information mentioned above.

CE

Signed

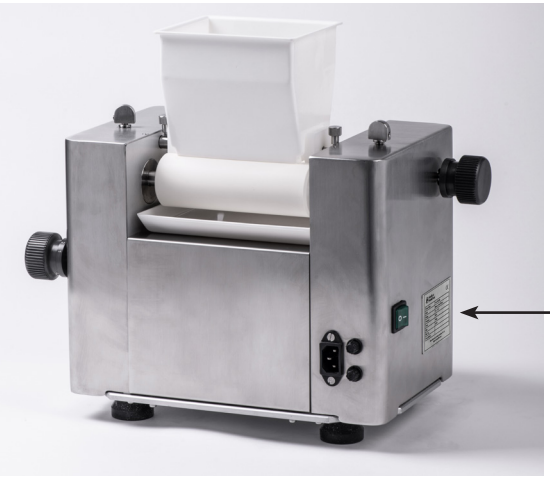
Name: Lalit G Patel
Position: Sr. QA Executive

Place: MIDC Tarapur, India
Date: 27 Mar. 2023

Warranty

This product has a 12 months warranty , from date of purchase, on parts against manufacturing defects. On-site service is not included. Problems due to accidental damage or use other than as described in this manual are not covered.
Please include Serial Number with all correspondence.

Technical Support or to Order Change parts, Spare Parts, Accessories
Please contact your Account Executive or Medisca.



Medisca ProMill® Basic CE

Product Name	Three Roll Mill
Model	Promill® Basic (5474)
Voltage	110-130 V
Frequency	60 Hz
Phase	Single
Watt	200 W
Mfg. Year	2023
Serial Number	xxxx

Manufactured by Custom Capsules Pvt. Ltd
Made in India

Technical Support or to Order Change parts, Spare Parts, Accessories


Medisca
ProMill® Basic

Distributed By:

Medisca Inc.
661 Route 3, Unit C, Plattsburgh, NY 12901 USA

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4509 Rue Dobrin, St-Laurent, QC H4R 2L8 Canada

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