



SMART BEDDING MACHINE

93-220-000-0* / 93-110-000-0*

USER MANUAL

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INTRODUCTION




Optimize the bedding process for your brake pads intelligently using our Smart Bedding Machine. Whether you're a professional or a home mechanic, this machine eliminates the need to bed in new brake pads in inconvenient and inconsistent conditions, be it in the rain or outdoors. Say goodbye to guesswork – the Bedding Machine expertly guides you through the bedding process. Experience a revolutionary braking sensation with precise control at your fingertips.

For technical questions or support feel free to contact us:





info@sinter.si

Thank you for choosing Sinter and for choosing the smart way.








SYMBOLS












	Safety icon: if a safety hazard is possible, icons with an exclamation mark or different are visible
	Warning icon: triangle symbols with symbols like lightning are used where health risks are possible due to electricity
	Note: helpful notes for the end user

SAFETY INFORMATION

	Before using the appliance, read these safety instructions carefully. Keep them nearby for future reference. These instructions and the appliance itself provide important safety warnings to be observed at all times. The manufacturer declines any liability for failure to observe these safety instructions, for inappropriate use of the appliance or incorrect setting of controls
	The machine is designed for bicycles equipped with disc brakes and is not compatible with rim brakes. Only authorized personnel should operate the machine.
	The machine is intended for use by bicycle service technicians, experienced individuals, and other professional institutions such as teams.
	The machine is specifically designed for indoor use.

SAFETY WARNINGS

	Unsafe or inappropriate use can result in severe personal injury, financial damage, and death.
	For children aged 0-13, operating the machine is not recommended and the machine should be disconnected from the power source if unattended children are present. Children above 13 may use it only under supervision and after receiving instructions on safe use and understanding of the hazards involved.
	Keep animals away from the machine and never leave them unattended in its vicinity.
	Individuals with limited physical, sensory, or mental capabilities, as well as those lacking experience and knowledge, should refrain from operating this machine.
	Rotating shafts can cause serious injuries. Please keep your clothes, hair, body parts, and jewellery away from the rollers.
	The brake system can reach temperatures exceeding 300°C during operation. Avoid touching the disc after the bedding process.
	Ensure that the bicycle is not positioned on the machine when plugging in or activating the switch

	The machine operates on electricity. Improper connection can result in injury or death.
	Any alterations made to the machine will nullify the warranty. The manufacturer cannot be held accountable for damages or improper function if the machine has been modified.
	Avoid using the machine outside its design purpose
	Do not simultaneously operate two machines on one bike.
	Use the power cable supplied with the machine.
	Before performing maintenance or cleaning, ensure the machine is switched off and unplugged. Additionally, make sure the machine cannot accidentally turn on, as it is equipped with sensors for activation.
	Damage to the brake system, tires, or any other component may occur if the equipment is used inappropriately. It is essential to follow proper usage guidelines to prevent such issues. Please note that the manufacturer cannot be held responsible if the guidelines are not followed.
	Risk of leg injury if the direction of the wheel rotation is not correctly set.
	Loading the bicycle inappropriately may cause the motor to overheat. If the motor fails to start due to an excessive load, damage to the electric motor may occur.
	Ensure that the bicycle's brake system is correctly assembled according to the manufacturer's specifications.
	Check the tires before working on the bicycle with the machine to prevent debris from entering the equipment or causing damage to the operator.

DECLARATION OF CONFORMITY

Sinter Ljubljana d.o.o with full responsibility declares that the subject of this declaration complies with the following harmonised European Union legislation:

Machinery Regulation (EU) 2023/123

EMC Directive 2014/30/EU

Reference to harmonized standards used in the design of the product:

SIST EN ISO 12100 - Safety of machinery - General principles for design - Risk assessment and risk reduction

SIST EN ISO 13857 - Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.

SIST EN ISO 13850 - Safety of machinery - Emergency stop - Principles for design

SIST EN 60204-1 - Safety of machinery - Electrical equipment of machines - Part 1: General requirements

SIST EN 61000-3-2 - Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)

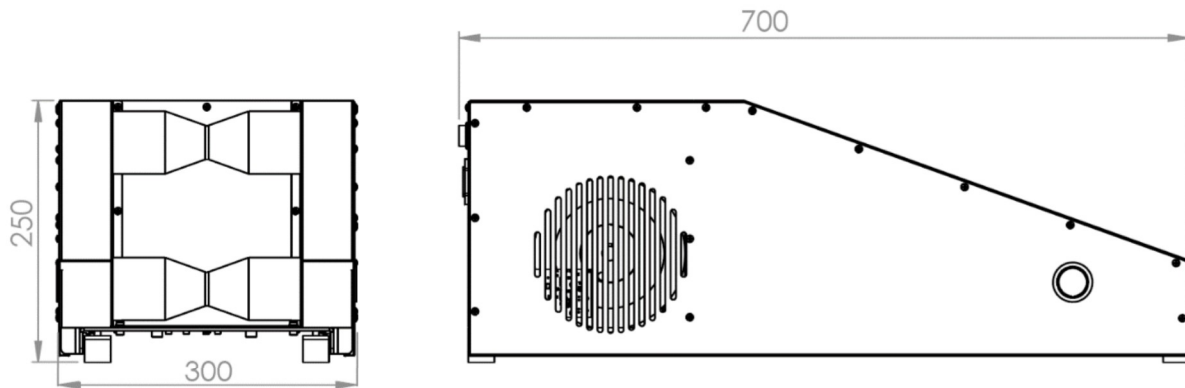
SIST EN 61000-6-2 - Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

For the product, the conformity assessment procedure has been carried out based on internal production control (module A)



GENERAL SPECIFICATIONS, MACHINE PROPERTIES AND FUNCTIONS

MECHANICAL AND ELECTRICAL PROPERTIES



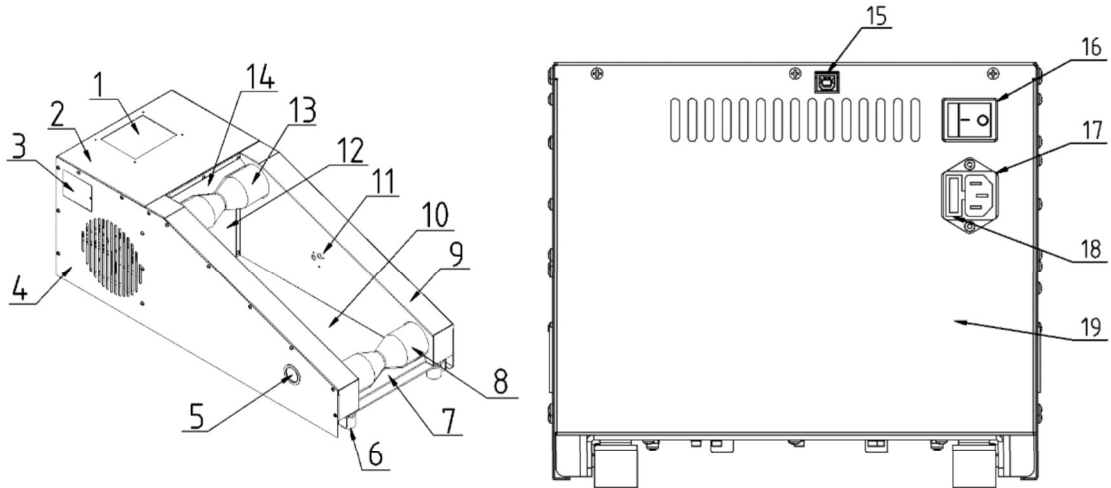
Dimensions of the machine	Height	250 mm
	Width	300 mm
	Length	700 mm
	Weight	28 mm
	Cord length	1,8 and 3m EU 3 m USA
Performance	Power input	220 V-240 V / 50Hz EU 110 V / 60 Hz USA
	Fuse	10 A EU 16 A USA
	Power	0.55 KW
	Average speed generated	24 km/h
Wheel size	Minimum	20"
	Maximum	29"
Tyre size	Maximum	3"
	Minimum	1"
Ingress Protection	IP21	

i	Position the machine to allow sufficient space for the bicycle and for turning the bike around to access the rear wheel. Ensure the machine is level on the ground, making sure that all four legs are in contact with the floor.
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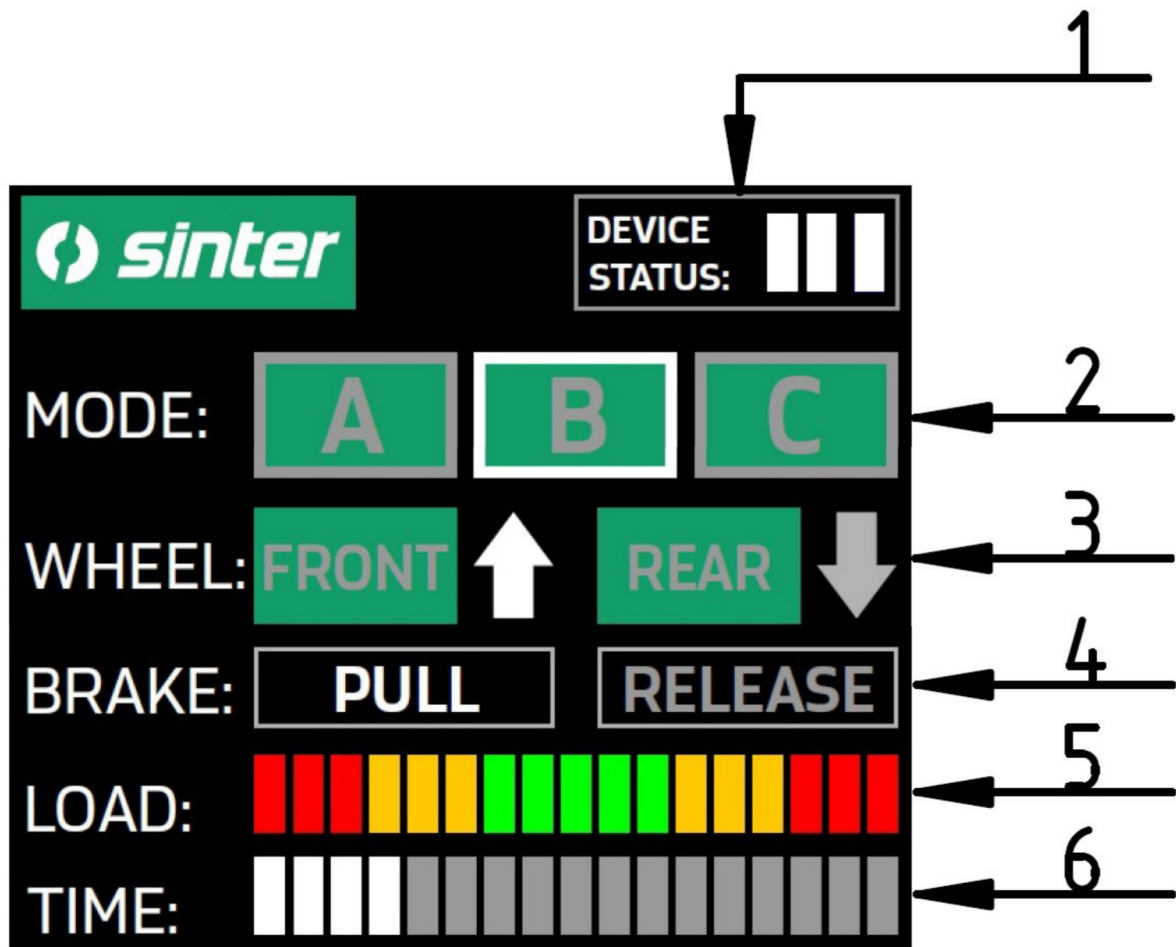
Use the machine in a well-ventilated room as fumes from the bedding process can develop.

HARDWARE



1	Control panel	10	Base panel
2	Front panel	11	Wheel sensor
3	Machine ID	12	Middle panel
4	Side panels L and R	13	Upper aluminium roller
5	Touchless switch	14	Upper roller protector
6	Rubber legs	15	USB-B type port
7	Lower roller protector	16	ON/OFF switch
8	Lower aluminium roller	17	3-Pin Male Power Supply Socket
9	Inner panels L and R	18	Fuse slot/holder
		19	Back panel

CONTROL PANEL



1. Device status

When the machine is turned on, and the bicycle is positioned in the machine, the machine will initiate an automatic start. The first LED within the DEVICE STATUS bracket will begin to flash. This signals the beginning of a calibration process of the electric motor (LOAD). Once the calibration is complete, the first light will remain illuminated.



The second light activates when the bedding process is interrupted. After a 5-second pause, the machine resets, the light turns off, and no other LED lights are flashing.

2. Mode setting

The mode setting buttons (A, B and C) are utilized to select the brake system and disc size combination for the bedding process, with all available combinations listed on page 12. Additionally, these combinations are provided as a sticker to put beside the display. When a mode is chosen, such as mode B shown in the image below, the box around the button illuminates, indicating confirmation.



3. Wheel rotation

After turning on the machine, using the FRONT and REAR buttons on the display the wheel rotation can be chosen. The wheel rotation can also be changed via the touchless switches on the side panels (refer to HARDWARE, section 4, page 8).



4. Brake lever status



When the first LED in the DEVICE STATUS area is turned on after flashing, the PULL light illuminates, indicating the operator should now pull the brake lever. The machine then signals when to release the lever by illuminating the RELEASE indicator, the operator should now release pressure from the brake lever.



5. Load

The LOAD indicator provides information about the stress on the electric motor generated while braking. The RED and ORANGE lights signal whether you need to increase or release the brake lever force. The green light range indicates the optimal load applied by the brake.



	Do not put too much pressure on the bicycle with your body weight as the displayed load won't be accurate
	Inappropriate bicycle holding can result in higher load and damage to the tires.

6. Time

When the PULL light illuminates and the applied LOAD is within the GREEN light range, the countdown timer is active, and its value is shown on the TIME bar by sequentially turning off the LEDs. If the electric motor's LOAD is below or above the green range, the timer stops. When the RELEASE bracket lights up, the TIME bar shows the remaining time of the cooling cycle.



MODES

MODES			
BRAKE SYSTEM COMBINATION	A	B	C
	140, 2pcs*, 2piston	160, 2pcs*, 2 piston	180, 2pcs*, 2 piston
	160, REGULAR, 2 piston	180, REGULAR, 2 piston	203, REGULAR, 2 piston
	180, REGULAR, 4 piston	180, 2pcs*, 4 piston	220, REGULAR, 2 piston
	203, REGULAR, 4piston	203, 2 pcs*, 4 piston	220, REGULAR, 4 piston



* two-piece disc designs referring to floating, or dual material discs.

OPERATION OF THE MACHINE

1. Insert the provided power cord into the machine and connect it to the power outlet.




The power cord should not be excessively extended and avoid sharp corners. Ensure it lies securely on the floor, away from pathways.

2. Power ON the machine by toggling the switch. The LCD screen will illuminate.

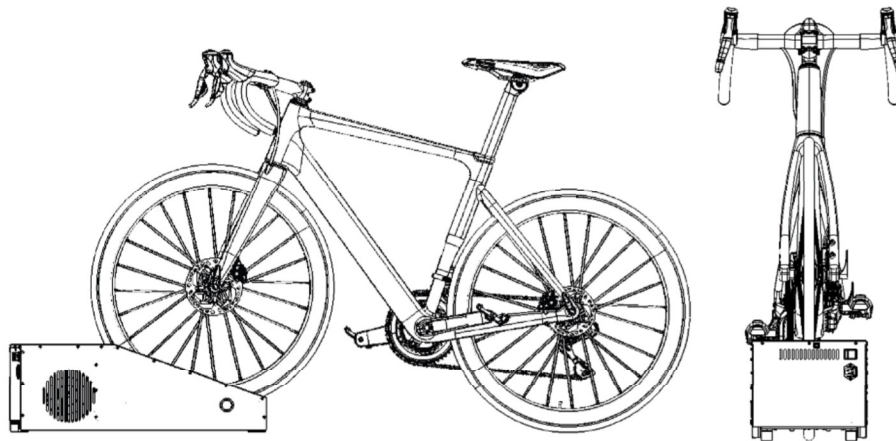







Next to the power socket on the machine, you'll find a fuse pocket containing the fuse. If, for any reason, the installed fuse blows, replace it with the spare fuse provided in the fuse holder. If the backup fuse blows too, turn off the machine, remove the power cord from the machine and contact your distributor or the manufacturer

- The operator needs to choose the appropriate MODE for the brake system disc combination. From factory mode A is set. The operator can check with the supplied TABLE which mode (A, B, C) works with the brake system on the bicycle.







	The table is provided in the form of a sticker, allowing the operator to place it conveniently next to the CONTROL PANEL.
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- Position the bicycle by placing the front wheel on the aluminium rollers. Make sure the bike is aligned with the machine and perpendicular to the ground. The machine starts automatically. When the DEVICE STATUS first LED starts flashing, the calibration of the LOAD initiates. When the machine is calibrated, the first LED light stops flashing and stays illuminated. At the same time, the PULL light lights up, signalling to the user to apply the brake lever.




	When positioning the bicycle on the rollers, apply a slight load to ensure proper friction between the tire and the rollers. The bike preload varies depending on the tire type. Excessive preload can result in tire damage or damage to the brake system.
	Ensure that all components are properly tightened following the specifications provided by the brake system manufacturer.
	If the bike is leaning or not aligned it will induce vibration and wobble
	If needed, stand over the bike to keep it straight and stable when bedding the front brake.
	When bedding the rear wheel hold the bike by the saddle to stabilise it.


- When applying the brake, the operator should use the appropriate amount of force on the brake lever to keep the LOAD within the green light range. As the correct load is applied, the TIME brackets will turn off sequentially.


	LOAD: 	LOAD TOO HIGH - release the brake lever
	LOAD: 	LOAD TOO LOW- increase the lever force
	LOAD: 	LOAD IS CORRECT

	Start the brake gently and apply it progressively.
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- When the TIME lights on the screen run out, the PULL light turns off, and the RELEASE bracket lights up, indicating to the operator to release the brake lever. The cooling cycle begins, during which the brake should not be engaged. After the TIME lights shut down, the PULL light illuminates again.

	After completing the first brake cycle (PULL and RELEASE), you should notice an improvement in the feel and responsiveness of the brake lever.
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	Brakes with limited or no modulation should be applied with caution; gently apply the brake.
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	If the brake cycle is interrupted due to factors such as tire slippage, the machine retains the last position for 5 seconds. During this time, the interrupted bedding sequence will resume. After the 5-second interval, the machine resets, and the bedding process must be repeated.
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7. When the program sequence concludes, the machine stops automatically. The bike can be removed from the machine, and the DEVICE STATUS LED shuts off. The operator can choose to initiate a new bedding process.
8. The same steps are applied to the rear wheel. The operator selects the wheel rotation with the touchless switch on the side panels or by pressing the FRONT or REAR buttons on the CONTROL. PANNEL. After choosing the direction of rotation, the operator can proceed with the bedding process for the rear wheel.

	To ensure stability, hold the saddle with one hand and the handlebar and brake lever with the other hand when Bedding the rear brakes
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9. After completing the bedding process, turn off the machine.

	Turning electrical devices off when not in use can save you money and can save the environment.
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TROUBLESHOOTING

	The machine is not turning ON	Check the supplied power cable and the connection
	The machine when loaded can't start up on its own	Lift the bike slightly and load the machine when the rollers are rotating
	The machine turned on but turned off immediately after loading the bicycle on the rollers	Check the fuse box, and replace the blown fuse
	Time LEDs got stuck	Turn the machine off for 5 seconds.
	Load LEDs got stuck	Turn off the machine for 5 seconds
	The time is not counting	Increase the brake lever force or release it
	The tyres are slipping	Load the bike more or hold it firmly
	The wheel does not fit	Minimum wheel size is 20" Maximum wheel size 29"
	Tyre too big for roller shape	Recommended maximum tyre width is 3"
	A strong burning smell is present	Load too high, release the brake lever. Wait for the rollers to cool down before new bedding process
	Tyre smell and tyre marks on the rollers	Too much load on the bicycle, hold it normally but steadily
	Tyres are constantly slipping and hard to control	Check the tyre pressure and condition of the tyres.
	Noise from the machine	Check if the bolts connecting the panels are loose or if the belt needs to be tensioned

MAINTENANCE




Cleaning

Clean the machine when needed. Tyre debris, dirt from the tyres and so on can collect in the roller area, use a vacuum cleaner or a dry or semi-wet cloth. For removing any grease oil use brake cleaner.

	Remember to wear gloves when using household cleaners or shop cleaners. Please follow the instructions on the cleaning product for safe use
	Do not pressure wash the machine or with a garden hose, electrical components can get damaged or may cause
	If using compressed air do not point the air gun into the electric components.

Tensioning of the belt

The SBM is run by a belt drive system. The belt is factory pre-tensioned. If the belt becomes loose through time and usage the belt can develop some noise from vibrations. The belt can be tensioned with the built-in belt tensioner manually. The instructions can be found on the manufacturer's website or contact your distributor or the manufacturer directly for instructions.

	Tensioning of the belt should be done by a trained mechanic. Never open the machine if you do not know how to tension the belt
	A loose belt can result in belt slipping, which increases belt and roller heating and wear.
	You can apply a simple slipping test by holding one roller to prevent its rotation while manually rotating another roller. Caution: before this test turn off the machine and remove the power cord!

WARRANTY/SUPPORT

Warranty:

We are confident in the quality and performance of our product. Please review the following warranty information for your understanding and reference. Your electronic machine is covered by a 2-year warranty from the date of purchase, in compliance with the Consumer Sales and Guarantees Directive. During the warranty period, the manufacturer will, at its discretion, repair, replace, or refund the product if it is found to be defective or non-compliant.

Presumption of Defects:

If a defect becomes apparent within the first six months after purchase, it is presumed to have existed at the time of delivery unless proven otherwise by the seller.

Coverage:

The manufacturer warrants the product against defects in materials and workmanship during the specified warranty period.

Terms and Conditions:

The warranty is subject to the terms and conditions outlined in the product documentation provided with your purchase.

Exclusions:

The warranty does not cover damages caused by:

- Misuse, abuse, or negligence.
- Accidents, fire, flood, or other acts of nature.
- Unauthorized modifications or repairs.

How to Obtain Warranty Service:

If you encounter an issue covered by the warranty, please follow these steps:

- Contact Customer Support at info@sinter.si
- Provide proof of purchase, including the date and place of purchase.
- Follow any additional instructions provided by the customer support team.

Support

The Smart Bedding Machine is equipped with a USB-B type to connect it to a computer for software updates and troubleshooting. Minimal system requirements:

- Operating System: Windows 7 or later, macOS 10.10 (Yosemite) or later
- An available USB port on the computer.
- Processor: a dual-core processor
- RAM: 2 GB or more
- Hard disk: 100 MB

In case of a software update, the manufacturer will send you an email that you provided while purchasing with the needed instructions.

ENVIRONMENTAL NOTICE

Disposal of packaging materials


The packaging material is 100% recyclable and is marked with the recycle symbol.

The various parts of the packaging must therefore be disposed of responsibly and in full compliance with local authority regulations governing waste disposal.

Scrapping of the machine

The SBM machine is manufactured with recyclable or reusable materials. Dispose of it following local waste disposal regulations. For further information on the treatment, recovery and recycling of electric machines contact your local authority or contact the distributor or the manufacturer directly.



The symbol  on the product or on the accompanying documentation indicates that it should not be treated as domestic waste but must be taken to an appropriate collection centre for recycling of electrical and electronic equipment.

The packaging is 100% recycled and has the recycling symbols added on. Throw away the packaging according to your local laws for handling waste materials.

The box that came with the SBM machine was designed so it could withstand several transportations if the machine would be needed in different locations or similar.