

BORMANN PRO BCM2050 075837 Semi Automatic Table Circular Machine Instruction Manual

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Manual ™

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BORMANN PRO BCM2050 075837 Semi-Automatic Table Circular Machine



Product Usage Instructions

Symbols:

- · Wear eye protection.
- · Wear protective gloves.
- Keep hands away from moving parts.

Warning: Read the manual carefully before use.

Failure to follow the warnings and instructions may result in damage to the unit and/or physical injury. Store the manual in a safe place for future reference.

Assembly

- 1. Identify all main parts as listed in the manual.
- 2. Assemble the control panel, front panel, and other components following the provided instructions.
- 3. Ensure all electrical components are securely connected.

Operation

- 1. Plug in the power cord to a suitable power supply.
- 2. Adjust the tension strength using the tension adjust knob.
- 3. Load the strapping material onto the dispenser and thread it through the strapping head.
- 4. Start the strapping cycle by pressing the appropriate controls on the control panel.

Maintenance

- 1. Regularly clean and inspect all components for wear or damage.
- 2. Lubricate moving parts as recommended by the manufacturer.
- 3. Keep the machine free from dust and debris.

Frequently Asked Questions

Q: Can I use strapping material of different widths?

A: The product is designed to work with strapping widths between 6mm and 15mm. Using other widths may affect performance.

Q: How do I adjust the tension strength?

A: Use the tension adjust knob located on the top view of the machine to set the desired tension level.

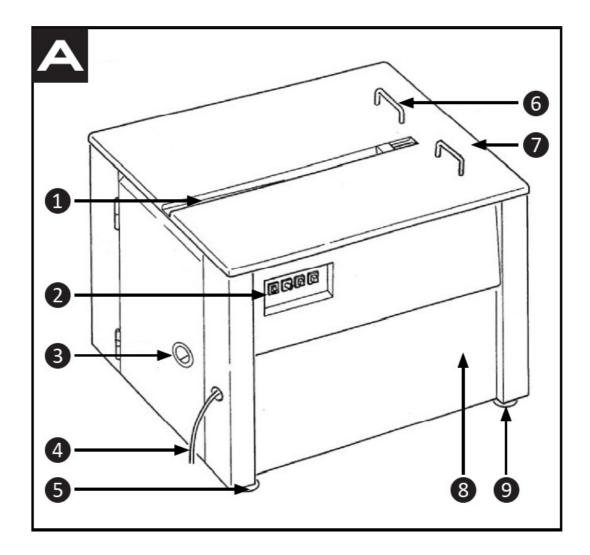
Q: What should I do if the machine stops working?

A: Check the power supply, ensure all connections are secure, and refer to the troubleshooting section of the manual for assistance.

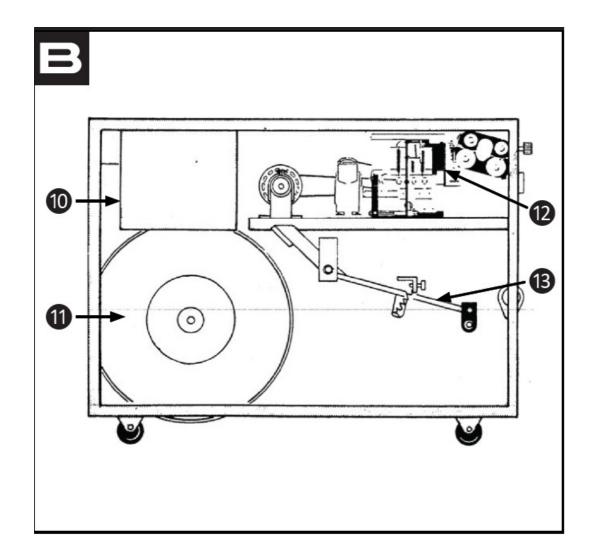
MAIN PARTS

EXTERIOR VIEW

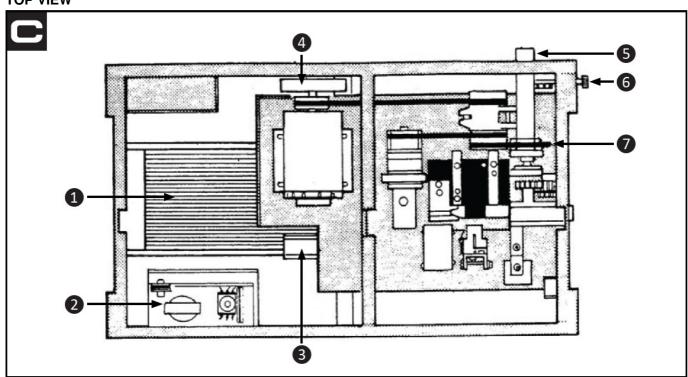
- 1. Strap channel
- 2. Control panel
- 3. Dispenser access panel
- 4. Power cord
- 5. Fixed caster
- 6. Package stop
- 7. Tabletop
- 8. Front panel
- 9. Swivel caster
- 10. Electrical components
- 11. Dispenser flange
- 12. Strapping head
- 13. Dispenser brake assembly



INTERNAL VIEW



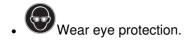
TOP VIEW



- 1. Coil of strap
- 2. Electrical panel
- 3. Dispenser brake
- 4. Motor fan

- 5. Tension adjust knob
- 6. Tension lock knob
- 7. Slip clutch

SYMBOLS





Keep hands away from moving parts.

SAFETY INSTRUCTIONS

- Warning: Read the manual carefully before use. Failure to follow the warnings and instructions may result in damage to the unit and/or physical injury. Store the manual in a safe place for future reference.
- Do not wear loose clothing.
- Keep hands and other parts of the body out of the strap chute area during operation.
- The temperature of the heater plate can reach 320°C. Do not touch.
- Do not insert a strap in the guide while there is no package on the operation table.
- Do not replace any safety parts with parts of different specifications.
- Disconnect the unit from the power supply once you have finished working and before carrying out maintenance.
- Do not use water or steam to clean the machine.

TECHNICAL DATA

Model	BCM2050	
Strap cycle speed	1.5 sec/strap	
Starting time	20 seconds	
Tension strength	20 – 65 kg	
Strapping material	PP	
Strapping width	6 – 15 mm	
Sealing method	Heating	
Table height	73.5 cm	
Top material	Stainless steel	
Power supply	220 V, 50 Hz, 650 Watt	
Product dimensions	L89.5 x W56.5 x H73 cm	
Weight	90 kg	

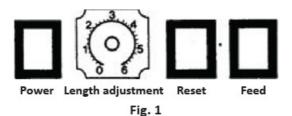
- The manufacturer reserves the right to make minor changes to product design and technical specifications without prior notice unless these changes significantly affect the performance and safety of the products.
- The parts described/illustrated in the pages of the manual that you hold in your hands may also concern other models of the manufacturer's product line with similar features and may not be included in the product you just acquired.
- To ensure the safety and reliability of the product and the warranty validity, all repair, inspection or replacement work, including maintenance and special adjustments, must only be carried out by technicians of the authorized service department of the manufacturer.
- Always use the product with the supplied equipment. Operation of the product with non-provided equipment may cause malfunctions or even serious injury or death.
- The manufacturer and the importer shall not be liable for injuries and damages resulting from the use of nonconforming equipment.

INSTALLATION

- Remove the machine from the crate, place it in its proper position, and secure it in place with the caster locks.
- The operation may begin once strap of the proper size is loaded and the power cord is plugged into an appropriate electrical outlet.

OPERATING INSTRUCTIONS

Control panel (Fig. 1)



Power button

- Press the power button to turn on the unit. The button glows when the unit is in operation.
- Press the power button once more to cut off the power supply to the unit.

Strap feed length timer

Metered lengths of strap can be adjusted to automatically feed in a range from 25 mm to approximately 7620 mm.

Reset button

• When pushed, the electromagnetic clutch is energized and the strapping head turns one complete revolution, stopping in the home position.

Feed length button

 When pushed, an additional strap is fed out into the strap channel. Strap feeding will continue as long as the button is pushed.

Loading strap into the unit (Fig. 2-3)

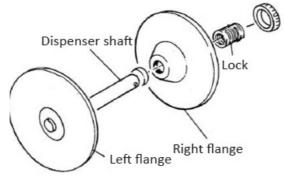
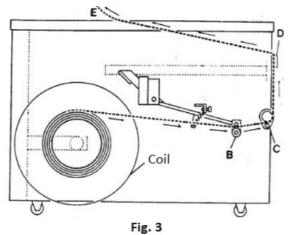


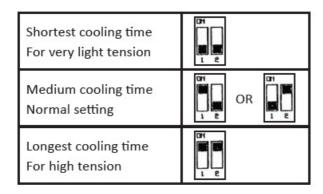
Fig. 2

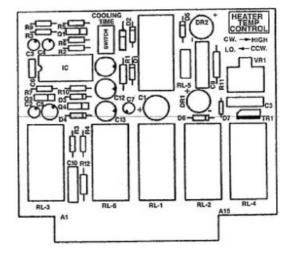
- 1. Withdraw the dispenser assembly (Fig. 2). Place the assembly as shown.
- 2. Push down on the lock and turn to disengage from the roll pin that protrudes from the shaft.
- 3. Remove the lock and lift the right flange from the dispenser shaft.
- 4. Place a coil of strap on the left flange, allowing the shaft to poke through the plastic wrap. (Fig. 3)
- 5. Replace the right flange and reinstall the lock.
- 6. At this time the securing straps can be removed from the coil of the strap.
- 7. Place the dispenser assembly back into the rear end of the unit. Make sure the assembly is placed in properly. The lock should be positioned to the right.
- 8. When installed, close the rear panel door.



Cooling time adjustment

Attention: Before making any adjustments to cooling time, turn off the unit.





Threading strap through the machine (Fig. 3)

The threading procedure involves routing the strap from the dispenser and up through the strapping head. Refer to figure 3 and proceed as follows:

- 1. Open the right-hand door and pull about 1 meter of strap from the coil.
- 2. Thread the strap through the looper (B), pass it under the roller (C), and allow it to exit the cabinet. Close the right-hand door.
- 3. Pull up on the strap, then insert the lead end between the guide and roller (D).
- 4. Continue to push the strap through the head until it can be seen at point E.

Strapping cycle

The unit is now ready to strap a package.

Proceed as follows:

- 1. Push the power button to the "ON" position and allow the hot knife 5 seconds to reach operating temperature.
- 2. Place a package on the tabletop, directly above the sealing head. Allow the package to contact the two package stops.
- 3. Grasp the strap on the left side of the package, bring it over the package, and insert the lead end into the strap guide on the right side of the package.
 - As the lead-end of the strap closes LS1, the strap will be tensioned, welded, and then released, all automatically.
 - Caution: Be sure to keep fingers from beneath the strap.
- 4. Remove the strapped package and note the length of the strap fed out for the next cycle. Adjust the timer as needed.
- 5. Note the condition of the weld and the tension of the tie on the package. If the condition of the weld or the level of tension is unsatisfactory, adjust the hot knife temperature or the tension level as needed.

Operating adjustments

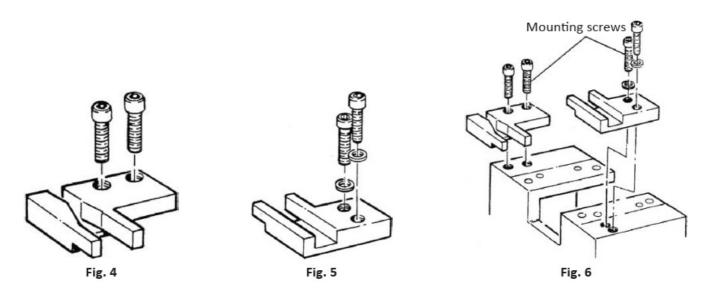
Adjusting tension

If tension adjustment is required, proceed as follows.

- 1. Loosen the locking knob at the righthand end of the unit.
- 2. Turn the knurled knob, located at the rear of the unit, clockwise to increase tension, counterclockwise to decrease tension.
- 3. When set to the desired tension level, tighten the locking knob.

Adjusting hot knife temperature

- If the weld appears to be only minimal, it may be that the temperature is improperly set. Make all corrections, in small increments, according to the following conditions.
- Raising hot knife temperature: If the weld appears to have insufficient heating, turn the hot knife rheostat (item 19 on the PC board), in a clockwise direction.
- Lowering hot knife temperature: If the condition of the weld appears to have been overheated, turn the rheostat counterclockwise.
- Replacing strap guides (Fig. 4-6)
- Each set of strap guides consists of an exit (Fig. 4) and a re-entry guide (Fig. 5).
- Figure 6 shows the correct location of each guide.
- Be sure not to inter-mix the sets as feeding reliability will be affected.
- Note: When installing the guides, be sure not to over-tighten the mounting screws.



SERVICE ADJUSTMENTS AND CLEARANCES

Anvil (Fig. 7)

To ensure that the anvil operates smoothly, a minimum clearance between the anvil and the left and right guides must be maintained.

To adjust, proceed as follows:

- 1. Make sure the right-hand guide is securely mounted.
- 2. Loosen the two left-hand guide mounting screws.
- 3. Insert a shim, .050mm thick, 3mm wide, and 130mm long between the shoulder of the anvil and the left guide.

- 4. Push the left guide against the anvil and tighten the left guide mounting screws.
- 5. Remove the shim and check to make sure the anvil moves smoothly.

Switch cam (Fig. 8)

The switch cam is a two level cam. The inner cam actuates LS4 and LS5. The outer cam actuates LS3. To make sure the cams are set properly, proceed as follows.

- 1. Make sure the machine is in the neutral or home position.
- 2. If the micro-switches need adjusting, loosen the mounting screws and set LS4 and LS5 as seen in Figure 8. When properly set, tighten the mounting screws.

LS3 (Fig. 9)

Position LS3 as shown in figure 9. When set, tighten the mounting screws.

Welding clamp and end gripper (Fig. 10)

To adjust the clearance between the welding clamp and the end gripper, proceed as follows.

- 1. Remove the anvil.
- 2. Loosen the two socket head cap screws that secure the "L" shaped adjustment bracket to the casting.
- 3. Push the block left or right to adjust the clearance. The clearance should not exceed 0.02mm.
- 4. When set, securely tighten the two mounting screws.
 - **Note:** If the cutting surface of the welding clamp has become dull, the welding clamp can be turned 180 degrees, thus doubling the life of the part.

Tension lever (Fig. 11)

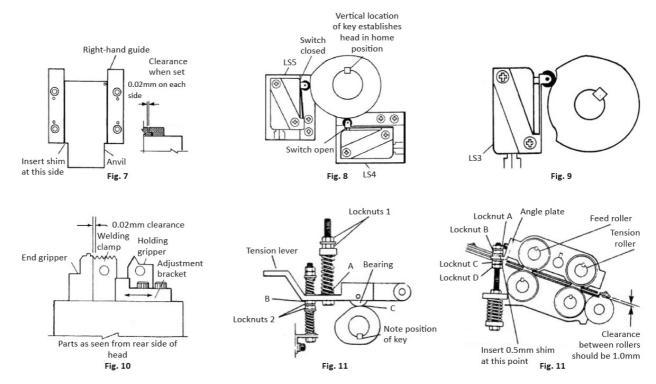
Before making any adjustments to the tension lever, check to see if the tension lever is level. To check and adjust if need be, proceed as follows:

- 1. Manually turn the rotor of the electromagnetic clutch until the key, seen at the end of the camshaft, is positioned as shown in Figure 11.
- 2. Make sure the tension lever bearing is in contact with the surface of the cam.
- 3. If there is no clearance at points A, B, and C, then the tension lever is considered to be level.
- 4. If there is clearance at any point, loosen the locknuts (1) and (2) and adjust all clearance out at points A, B, and C.
- 5. When set, tighten the locknuts.

Feed and tension rollers (Fig. 12)

When the machine is in the neutral position, the feed and tension rollers should not come into contact with the strap. The clearance between the rollers should be 1.0 mm. To adjust the feed rollers away from the strap proceed as follows.

- 1. Loosen the locknuts and turn all 4 nuts counterclockwise. This will raise the angle plate, pivoting the feed rollers upward. Make all adjustments in very small increments. When set, insert a 0.5mm shim between the angle plate and the locknut B and tighten locknut A against locknut B.
- 2. Remove the shim and press down on the angle plate. Tighten the locknuts, C and D.
 - Note: To adjust the tension rollers away from the strap, follow the above steps in reverse order.



MAINTENANCE

Before servicing the unit

Warning:

- Wear safety glasses with side shields that conform to ANSI standard Z87.1. Failure to wear safety glasses
 could result in severe personal injury or blindness.
- · Only trained personnel should service the unit.
- Unless specified, shut off and disconnect all electrical power.
- Follow all service instructions.
- Make sure the hot knife is cool before servicing.
- Use the correct tools.
- · Never adjust, repair, or oil moving parts.

General

Periodic checks of all drive belts for replacement should be made to prevent worn-out or stretched belts which will affect tensioning.

Lubrication (Fig. 12)

• Make sure the unit is clean before applying lubricants to the points shown in the figure below. Note: Use a

brush or compressed air to remove debris.

Tension trip arm assembly sleeves

 Apply a few drops of light machine oil to the edge of the sleeve so that the oil can penetrate to the shoulder of the screw.

Guide plates, welding clamp, end gripper, and holding gripper (Fig. 12)

• Apply light machine oil to these parts at the points indicated in Figure 12.

Gear reducer

• Replace the oil in the gear reducer once a year in the following manner.

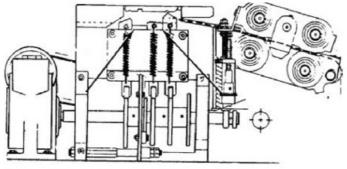


Fig. 12

- 1. Remove the oil filler plug at the top of the reducer.
- 2. Remove the lower plug and allow the oil to drain from the gearing.
- 3. Reinstall the lower plug and fill it with gear oil.
- 4. Reinstall the upper plug.

The following parts should never be lubricated:

- Electromagnetic clutch
- · Roller assemblies
- · Belts and pulleys
- · Clutch disc

TROUBLESHOOTING

Problem	Possible cause	Solution
Strap jams in the strappi ng head while feeding	Debris accumulation in the feed/tension roller area.	Disassemble the roller assembly and remove debris.
The strap pulls from the head before the seal an d cut-off	Worn gripper.	Replace gripper.
Strap will not feed	Solenoid 1 will not activate.	 Adjust the clearance of LS5 in relation to the switch cam. Refer to figure 8. Replace LS5. Adjust LS3 if needed to ensure the head stops in the home position.
Strap is not being cut-of f upon completion of str apping cycle	 LS3 inoperative. LS3 improperly adjusted. Clearance between welding clam p and end gripper too great. Cutting surface on welding clamp is dull. 	 Replace and adjust LS3, refer to figure 9. Adjust LS3 as required. Adjust the clearance as detailed in section "Service adjustments and clearances" Turn the welding clamp 180° to bring new cutting surface into play. Refer to section "Service adjustments and clearances"
Unit will not complete s eal and cut-off	 The belt that activates the tension trip arm is broken or has come off the pulleys. LS2 inoperative. 	 Replace the belt if necessary. Remount the belt if it has come off the pulleys. Replace LS2.
Poor strap weld	 Hot knife temperature is too high or too low. The 5 amp fuse has blown. 	 Adjust the hot knife temperature. Refer to section "Operating instructions". Before replacing the 5 amp fuse, attempt t o identify the cause of why the fuse failed and make necessary repairs.

ENVIRONMENTAL DISPOSAL

- In order to avoid damages on transportation, the tool has to be delivered in solid packaging. Packaging as well as the unit and accessories are made of recyclable materials and can be disposed of accordingly.
- The tool's plastic components are marked according to their material, which makes it possible to be environmentally friendly and differentiated because of available collection facilities.

Only for EU countries



- Do not dispose of electric tools together with household waste material!
- In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its

implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

WARRANTY

- The power tools have been manufactured according to strict standards, set by our company, which are aligned with the respective European quality standards.
- The power tools of our company are provided with a warranty period of 24 months for non-professional use, 12 months for professional use, and 12 months for chargers and batteries.
- The warranty is valid from the date of purchase of the product. Proof of the warranty right is the purchase document of the tool (retail receipt or invoice).
- Under no circumstances shall the company cover the relevant cost of spare parts and respective required working hours unless a copy of the purchase document is presented.
- In case the repair has to be done by our service department the cost of transportation (to and from) is entirely borne by the sender (client).
- The tools must be sent for repair to the company or to an authorized workshop in the appro-priate way and means of transport.

WARRANTY EXEMPTIONS AND RESTRICTIONS

- 1. Spare parts that wear out naturally as a consequence of being used (brushes, cables, switches, chargers, chucks, etc.).
- 2. Tools damaged as a result of non-compliance with the instructions of the manufacturer.
- 3. Tools poorly maintained.
- 4. Use of improper lubricants or accessories.
- 5. Tools are given to third entities free of charge.
- 6. Damage due to an electrical connection at a voltage other than that indicated on the appliance plate.
- 7. Connection to a non-earthed power supply.
- 8. Change in current voltage.
- 9. Damage resulting from the use of salty water (e.g., washing machines, pumps).
- 10. Damage or malfunction resulting from improper cleaning procedure of the tool.
- 11. Contact of the tool with chemicals, or damage as a result of moisture or corrosion.
- 12. Tools that have been modified or opened by unauthorized personnel.
- 13. Broken parts/components as a result of inappropriate use.
- 14. Tools used for rent.
 - The warranty covers only the free-of-charge replacement of the component that presents a manufacturing defect or material failure.
 - In case of a lack of a specific spare part, the company reserves the right to replace the tool with another corresponding model.
 - After all warranty procedures have been concluded, the warranty period of the tool shall not be extended or renewed.
 - Replacement of a spare part with a repair charge is covered by a 1-year warranty of good operation, subject to compliance with the warranty terms.

- The spare parts or tools that are replaced remain in the possession of our company. Requirements, other than those mentioned in this warranty form, regarding power tools repair or damage thereof, do not apply.
- Greek law and relative regulations apply to this warranty.
- The instructions manual is also available in digital format on our website www.nikolaoutools.com.
- Find it by entering the product code in the Search field.

Documents / Resources



BORMANN PRO BCM2050 075837 Semi Automatic Table Circular Machine [pdf] Instruction Manual

BCM2050 075837, BCM2050 075837 Semi Automatic Table Circular Machine, Semi Automatic Table Circular Machine, Automatic Table Circular Machine, Table Circular Machine, Circular Machine, Machine

References

User Manual

Manuals+, Privacy Policy

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