


BP50 & BP-HST

OWNERS' MANUAL

 Please take a moment to read this manual prior to operation!



 **RAM PRODUCTS, INC.®**

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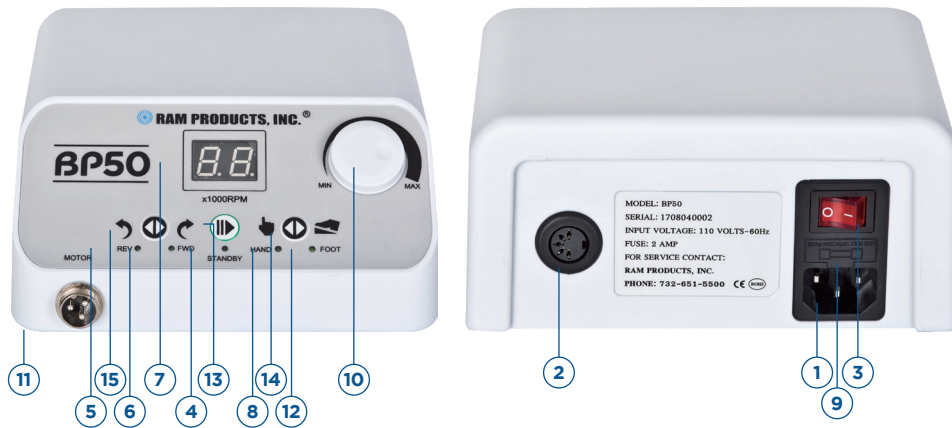
 Phone: 732.651.5500  ram@ramhp.com  www.ramhp.com

0721-Rev0

BP50 CONTROLLER



Please carefully inspect upon setting up. There is a protective plastic film over the controller front panel display. Do not wipe the LCD screen with any abrasives or chemicals. We suggest a microfiber cloth and isopropyl alcohol to clean.



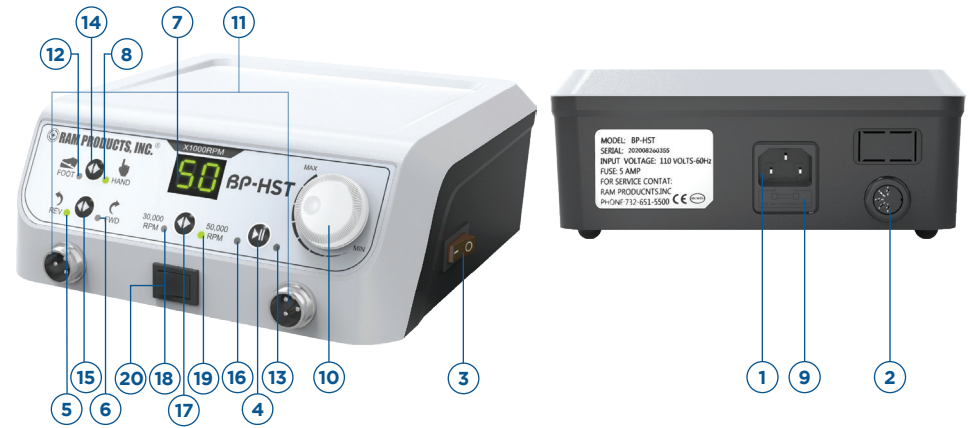
Set-Up

- Place in a convenient location avoiding any moisture or chemicals.
- All components should be connected prior to turning on the main power switch (#5). Make sure the power cord is securely attached in the rear (#1).

BP50 controller utilizes a state of the art microprocessor chip for programming of speed control, overload and safety and much more. This includes a memory feature to remember the last user settings before the main power is turned off.

- Power Outlet:** Main power cord receptacle. This also contains a safety fuse drawer and if there is no power, you can use the fuse. This is the main power switch to prepare the unit.
- Foot Pedal:** Variable speed foot control connects here.
- Main Power Switch:** Turns the unit on and off.
- Motor:** When the main power switch is on, the controller waits attention and is ready for use in standby mode. Touch the motor button to start the operation.
- Reverse Light:** Indicates operation in reverse direction has been selected.
- Forward Light:** Indicates operation in forward direction has been selected.
- LCD Display:** LED speed display and error alerts.
- Knob Speed Indicator:** Indicates operation in the hand mode has been selected, therefore the speed is controlled by the speed dial (#10).
- Power Fuse:** Shows the fuse location and is conveniently located to access if needed. BP-HST has a 5x20mm-5 amp fuse.
- Speed Control Dial:** 0-30,000rpm or 0-50,000rpm. Used to adjust or vary the desired speed. In hand mode, turn the dial clockwise to increase the speed and counterclockwise to reduce the speed. While using in foot pedal mode, the speed dial setting can also limit the top or maximum speed for greater control and safety.
- Handpiece Socket:** Connects the handpiece on the plug.
- Foot Speed Indicator:** Indicates operation by the foot pedal has been selected.
- Standby Motor Button:** Engages the handpiece for operation and use or can disengage for stopping or taking a rest from operation while remaining ready.
- Control Mode Button:** To operate by the speed dial and hand control or with the foot pedal and speed dial as set.
- Forward/Reverse Button:** Controls handpiece direction to forward or reverse.

BP-HST CONTROLLER



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- Control Mode Button:** To operate by the speed dial and hand control or with the foot pedal and speed dial as set.
- Forward/Reverse Button:** Controls handpiece direction to forward or reverse.
- Pause Indicator Light:** The handpiece stops working when this light is on.
- Maximum Speed Switch Button:** Switch to 0-30,000rpm or 0-50,000rpm.
- 30,000rpm Blue Led:** The maximum speed limit of the handpiece is 30,000 revolutions when this light is on.
- 50,000rpm Green Led:** The maximum speed limit of the handpiece is 50,000 revolutions when this light is on.
- Handpiece Switch:** It can switch to the left and right handpieces.

Set-Up

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Specifications

Model	Input	Output	MaxAmp	Rotate Speed	Power	L	W	H	Wt.
BP50	AC110V 50HZ-60HZ	DC 0-48V	3A	1000-50,000RPM	100W +/- 50	6.69"	6.3"	3.15"	3.44 lbs
BP-HST	AC110V 50HZ-60HZ	DC 0-48V	13A	1000-50,000RPM	420+/- 50	9.49"	7.09"	3.31"	7.05 lbs

Items to Check If Operation Has Failed

- The controller has automatic detection for heat or temperature utilizing thermal sensors it will shut down the unit preventing operation and possible damages. The display window will flash as an alert wait a few minutes before returning. Turn off the main power switch (#5) and check for possible causes. In the unlikely event of overheating, the unit will resume its operation after cooling.
- In the event the unit does not operate, check all connections for the power cord at (#1) and the wall outlet, handpiece connection at (#11), and the foot pedal connection at (#3).

Safety Tips!

- Turn off the main power switch when not in use to avoid power and electric current to the controller.
- Always check the handpiece carefully for smooth operation prior to each use.
- Do not use with any other brands of equipment as brushless units are not compatible with other brands.



CAUTION:

- The length of the bur as well as the weight of the material, type of type, and durability and precision of the bur construction can also be a major factor for maximum speed.
- Slowly increase the operating speed and stop immediately if any excessive noise or vibration.
- Most cutting burs will perform best by constant gentle movement letting the bur do the work.

Safety Precautions!

- Never use bent or damaged burs.
- Do not force any burs into the collet chuck and always check after insertion the bur is securely locked by pulling the bur.
- Always operate at a safe speed for the size and weight of the bur. Start at 0 while slowly increasing speed and securely gripping the handpiece. Operating at higher speeds often does not cut any better or faster and can increase wear on the bearings in the handpiece as well as the cutting tool.
- Follow basic safe speed operation according to the chart below and also the safety speed ratings of manufacturer of the burs.
- Never operate without a bur properly locked in the handpiece.
- After usage remove any excess dust or debris.
- Do not operate near water or moisture.
- Avoid any chemicals and disinfectants.



BP-HST TRUFLEX HANDPIECE

TRUFLEX HANDPIECE CHANGING/INSTALLING COLLET CHUCKS



TRUFLEX Handpiece was specifically designed to work only with BP-HST Control Box.



For safety purposes, please use only at the lower **30,000 RPM** speed setting.



LOCKING ROD



WRENCH TOOL



Remove rubber stopper which is about 1" down from the top of TRUFLEX.

Choose the proper collet chuck size.



ITEM#	DESCRIPTION
TRUFLEX32	3/32" (2.38MM) TRUFLEX CHUCK
TRUFLEX18	1/8" (3.175MM) TRUFLEX CHUCK
TRUFLEX14	1/4" (6.35MM) TRUFLEX CHUCK

Align the hole in the center of the handpiece by starting to screw in the desired chuck size turning gently clockwise by hand with your fingertips.



Insert locking rod entirely through the center hole.



Before completely installing or tightening the chuck install the bur.

Insert the 5 sided end of the wrench tool over the top of the chuck aligning it so the wrench tool can tighten the chuck.



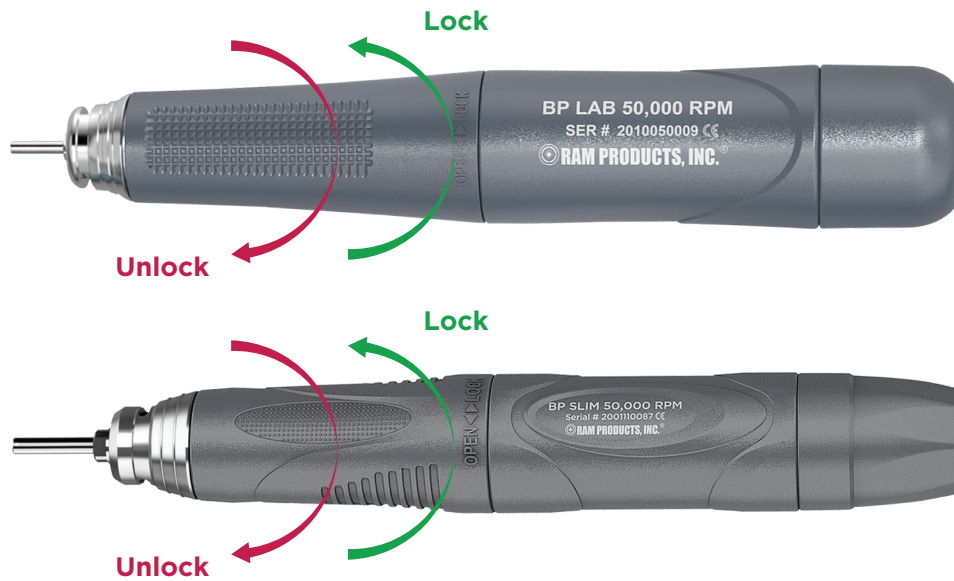
It takes about 10 turns to install and tighten using your fingers and the wrench tool.

Pull on the bur to ensure it is tightly secured and then remove locking rod and wrench tool. Save lock rod, wrench tool, and rubber stopper for future use.

CHANGING BURS

To remove burs, simply insert locking rod, place wrench tool over chuck and turn counter clockwise until bur is loose. Insert bur and tighten with wrench tool by turning counter clockwise.

CHANGING BURS



- 1 Open/Unlock
 - a. With the handpiece pointing upwards turn the front section clockwise towards you about quarter turn until it meets resistance then twist again slightly
 - b. You will hear 2 clicks — this is called a double lock chucking mechanism which allows a stronger grip of burs compared to single lock
 - c. When changing burs insert to desired length for safety
- 2 Changing Collet Chucks
 - a. Turn set ring to open the chuck
 - b. 2 clicks turning towards you as if to remove the bur
 - c. Take the larger triangle cutout of the wrench tool and place over top of chuck and turn counter clockwise about 10 times until completely unscrewed

*We suggest leaving the blank bur or a skinny bur to support the jaws of the chuck



TIPS

- While the chuck release is in the open position, gently catch the thread of the chuck to be screwed in turning clockwise
- Often it's easiest to start installing with your fingertips and use the wrench tool to tighten
- Close or lock the bur in place and gently tug, pull and/or spin



SAFETY TIPS

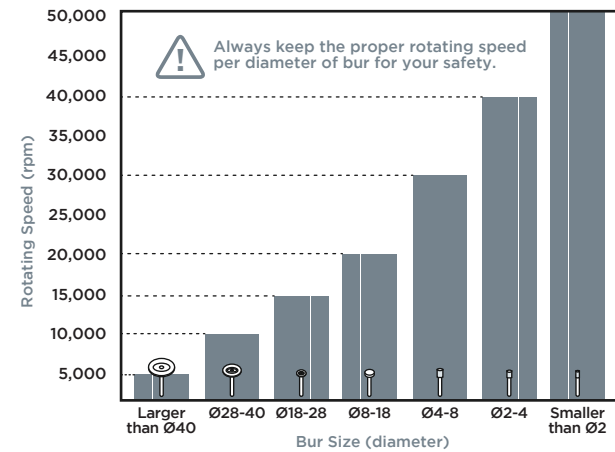
- Always keep a bur locked in the chuck
- Brushless handpieces start to perform above 5,000 RPM
- Often when the chuck is loosened, it is easier to unscrew with your fingertips
- When using the pedal it is easier to control the speed by lifting your foot to reduce speed



BP MAINTENANCE

Safety Speed Table Guidelines

This chart for allowable rotation speed can be slightly different depending on bur materials or bur type.



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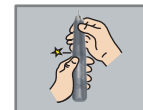
- 1 Avoid dropping the controller and handpiece. Carefully check the handpiece and bur for damage.



- 2 Select the proper burs to be used based on the material being worked on.



- 3 Inspect your BP before use without fail. Before using your BP, through visual inspection, make sure that your BP has no flaw, crack or faulty adhesion. Inspect daily upon use and remove any excess dust daily.



- 4 When installing any kind of bur to your handpiece, insert it properly to the final depth. Proper installation should avoid any extended distance from the chuck to reduce vibration but be sure the bur is not touching the nose tip of the handpiece with distance to spin freely.



- 5 Use the proper speeds and speed safety chart as a guideline. Always listen to the handpiece as it is the bur that should be doing the cutting and to find the optimal speed for performance. Excessive speed or an overly extended bur can become dangerous.



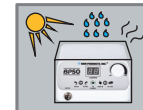
- 6 When using your BP always wear safety glasses and a dust mask.



- 7 If any abnormal vibration begins during use, stop operating and fix the cause. Always check the nose tip is screwed on tight to the front section.



- 8 Never use the product for any purpose other than the original intended use.



- 9 We suggest to store in a cool and dry place when not being used and to avoid humidity and moisture if possible.



- 10 Never leave your Motor Handpiece with the switch turned on, an accident may occur if it is over-heated.

WARRANTY PERIOD

Warranty is valid within the United States only.

ELECTRICAL EQUIPMENT - These products are under warranty for a period of ONE YEAR from the date of original installation by the purchaser.

HANDPIECES - These products are under warranty for a period of SIX MONTHS from the date of original installation by the purchaser. IT DOES NOT COVER MISUSE, NORMAL BEARING, OR CARBON BRUSH WEAR.

IN HOUSE OR FACTORY REPAIR - Repairs made under warranty will be honored until the completion of the original product warranty period. SHIPPING AND HANDLING CHARGES ARE NOT COVERED WITHIN THE WARRANTY.

PRODUCT WARRANTY

All returned items shall be free from defects/alterations in material, workmanship and original product design.

- The product shall have been used under the conditions for which it has been intended, and in a manner for which it has been designed.
- The product shall have been operated in a manner for which it was intended and in the proper environmental conditions.
- The customer must maintain the product as specified within the individual product instruction booklet.

Electrical and mechanical equipments and accessories which are mishandled, used incorrectly, and/or used for a purpose other than that for which they were designed and intended, will void the product warranty.

WARRANTY CLAIMS

Should your product require service attention within the warranty period, we will elect to make the necessary repair or replacement at no charge and providing the product is delivered prepaid to the proper address. However it is recommended that returns be adequately insured against carrier loss or damage.

All claims should describe the specific problem for accurate analysis and evaluation, the return date of the warranty card along with the supply house and/or dealer name.

No product replacement is permitted without prior authorization.

PRODUCT: _____
SERIAL NO.: _____
PURCHASE FROM: _____
PURCHASE DATE: _____
INSTALLATION DATE: _____

WARRANTY REGISTRATION

REGISTER ONLINE at www.ramprodinc.com/warranty

In order to validate your warranty, this card must be filled out completely and mailed within 10 days of purchase/installation.

PLEASE PRINT OR TYPE

NAME: _____
ADDRESS: _____
CITY: _____
STATE: _____ ZIP CODE: _____
PRODUCT: _____
CITY: _____
SERIAL NO(S): _____
PURCHASE DATE: _____
INSTALLATION DATE: _____

DEALER OR SUPPLY HOUSE NAME AND ADDRESS: _____

The short survey below is designed to improve the service and quality of product supplied to our customers. Please take a few minutes to complete the survey.

Did the item arrive in a satisfactory condition? **YES** or **NO**?
If NO please explain: _____

Did the instruction manual provide all details clearly for proper installation and operation? **YES** or **NO**? If NO please explain: _____

What factor(s) were involved in your decision to purchase this product:

- ☐ Advertisement ☐ Previous Purchase of a Ram Product
☐ Distributor Recommendation ☐ Recommendation by Colleague

Any feedback, comments or suggestions: _____

Thank you for your feedback.



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