

BSP™ 31

LABEL ATTACHMENT SYSTEM



www.bradyid.com/bsp31
www.bradyeurope.com



User Guide

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Trademarks

Brady reserves the right to make changes without further notice to any product or system described herein to improve reliability, function, or design.

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Brady Warranty

Limited Warranty

A. Warranty and Warranty Periods. Brady Worldwide, Inc. (“Brady”) warrants only to the original end user that the products and parts set forth below will be free from defects in material and workmanship from the date of purchase for the applicable warranty periods set forth below:

PRODUCT OR PART	APPLICABLE WARRANTY PERIOD
Brady BSP31 (EXCLUDING SPECIFIC PARTS LISTED BELOW)	12 MONTHS or 10,000 STAKES
ACCESSORIES	1 MONTH

B. Brady's Obligation Under Warranty. Brady's sole obligation under the above warranty shall be to repair or replace products and parts during the warranty period. **Brady** does not assume responsibility for delays in replacement or repair of products or parts. Products and parts repaired or replaced by **Brady** under warranty shall be warranted for the balance of the original warranty period or ninety (90) days, whichever is longer.

C. INTENTIONALLY DELETED.

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E. Limitations. No salesperson, representative, or agent of **Brady** is authorized to make any guarantee, warranty or representation that contradicts the terms contained in this Limited Warranty. Any waiver, alteration, addition, or modification to the warranties contained herein must be in writing and signed by an executive officer of **Brady** to be valid, binding and enforceable. The Limited Warranty shall not apply to the use or compatibility of any **Brady** product or part with other equipment. Character of page yield is also not a covered warranty service, as it is influenced by customer application, printer contrast settings, operating environments, printer conditions, and paper type. All statements, technical information, or recommendations relating to the products, or parts are based upon tests believed to be reliable, but do not constitute a guaranty or warranty. **BRADY SHALL NOT UNDER ANY CIRCUMSTANCES WHATSOEVER BE LIABLE TO ANY PARTY FOR LOSS OF PROFITS, DIMUNITION OF GOOD WILL, OR ANY OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES WHATSOEVER WITH RESPECT TO ANY CLAIM IN CONNECTION WITH BRADY PRODUCTS AND/OR PARTS.** **Brady's** maximum liability for warranty claims is limited to the invoice price of the product claimed defective. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to particular end users, but, in such event, all other terms and conditions of this Limited Warranty shall remain in full force and effect.

F. What May Void Warranty. This Limited Warranty shall be null and void in the following circumstances:

1. Modification or repair of any covered product or part by the end user or any non-authorized **Brady** service provider; or
2. Improper use or installation, failure to conduct regular maintenance or cleaning, or damage by accident or neglect, of any covered product or part by the end user or any third party; or
3. Failure of the end user or any third party to exercise caution to protect any covered product or part from electrostatic discharge, adverse temperature and humidity conditions, or physical abuse; or
4. Failure by the end user or any third party to use **Brady** printheads or other parts; or

-
5. Failure by the end user or any third party to use only **Brady** media if use of such media causes or contributes to the damage for which warranty service is sought; or
 6. Failure by the end user to follow the Return Appointment Process set forth below.

G. Repair Process. In order to avail itself of this Limited Warranty, and as a condition precedent thereto, the end user must:

1. Obtain a return material authorization (“RMA”) from **Brady**, which will include an RMA number that must be prominently displayed on the outside of the shipping container. Returns without an RMA number will be rejected by **Brady** and immediately returned to end user, freight collect.
2. Ship the items being returned to **Brady**, freight prepaid, together with a written description of the claimed defect.
3. Pack the items being returned in the original packing carton or equivalent. Damage in transit is end user’s responsibility and may be cause to void the warranty claim.

H. Transportation Costs. **Brady** will pay surface freight to return products or parts covered by this Limited Warranty. However, if **Brady** determines in the exercise of its reasonable but sole discretion that the product or part returned for warranty service is not defective, or does not otherwise qualify for warranty service, the end user shall be liable for all costs of handling and transportation.

Request for Limited Warranty Repair

To obtain service on a product that is under warranty, please follow these simple steps:

1. Request a Return Authorization Number
 - a. **Europe:** <http://www.bradyeurope.com/services>
- or -
North America:
Telephone Technical Support
Monday — Friday 6:30AM-6:30PM (CST)
800-643-8766 (Phone)\
414-358-6767 (Fax)
 - b. Send an e-mail to Technical Support: technicalsupport@bradycorp.com
 - c. Request a RA via Website
[http://bradyid.com/bradyid/cms/contentView.do/1081/0/0/0/
GenericPage/Tech-Support.html](http://bradyid.com/bradyid/cms/contentView.do/1081/0/0/0/GenericPage/Tech-Support.html)
FAX FORM (US)
FAX FORM (Canada)
2. Complete a decontamination certificate found in your User Guide and include this decontamination certificate with your product.
3. Write your RA number on your return.
4. Write your RA number clearly on the outside of the package to be returned. If your defective product was shipped in a standard carton, be sure to return using the same or similar packaging.
5. Ship the defective product back to us
6. You may ship the defective product back to us using standard mail, UPS, Fed EX, or DHL. We will not be responsible for items lost or damaged in transit to our repair center. You are responsible for freight charges to our repair center.
7. Upon completion of the repair we will return the repaired product to you.
8. We will pay surface freight to return products covered under warranty. However if we determine in the exercise of its reasonable but sole discretion that the product returned for warranty service is not defective, or does not otherwise qualify for warranty service, you will be responsible for all costs of handling and transportation.

Out of Warranty Repair

To the extent that replacement parts are available you may request an out-of-warranty repair for products outside of the standard warranty period. Repair charges, depending on your model, are charged on a time and materials or flat fee basis. Please contact our Technical Support team for more information. Out-of-warranty products that are determined to be unrepairable will be returned to you “as-is.”

Registration

Register the **Brady BSP™31 Label Attachment System** and receive free updates and support. To register, go to www.bradycorp.com/register.

Agency Compliance and Approvals

UNITED STATES

FCC Class A Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Modifications: Any modifications made to this device that are not approved by the **Brady Corporation** may void the authority granted to the user by the FCC to operate this equipment.

CANADA

ICES-003 Class A Notice, Classe A

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.

EUROPE

Warning – This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.



Waste Electrical and Electronic Equipment Directive

In accordance with the European WEEE Directive, this device needs to be recycled in accordance with local regulations.

RoHS Directive 2002/95/EC

This statement clarifies **Brady's** product compliance with the European Union's Directive 2002/95/EC, Restriction of Hazardous Substances

EU Declaration of Conformity

EC DECLARATION OF CONFORMITY		
MANUFACTURER'S NAME:	Brady Worldwide, Inc.	
MANUFACTURING ADDRESS:	6835 Winnetka Circle Brooklyn Park, Minnesota 55428-1538	
EU MEMBER ADDRESS:	W.H. Brady, N.V. Industriepark C3; Lindestraat 20 B-9240 Zele Belgium	
DECLARES THAT THE PRODUCT, PRODUCT NAME:	Label Attachment System	
MODEL NUMBER / NAME:	BSP31	
CONFORMS TO THE FOLLOWING PRODUCT SPECIFICATIONS:		
SAFETY: IEC 60950-1 (2005) Second Edition UL 60950-1 Second Edition CAH/CSA-C22.2 No. 60950-1-07 Second Edition (IEC 60950-1:2005, MOD)		
EMC: EN55022:2006 with Amendment A1:2007, Class A, Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurements EN55024:1998 Amendments A1:2001 & A2:2003 Information Technology Equipment Immunity Characteristics Limits and Methods of Measurement (DSFR 24:1997, Modified) using: IEC Publication 61000 Electromagnetic Compatibility (EMC) Part 4: Testing and measuring techniques, Section 1: Overview of Immunity Test, Basic EMC Publication EN 61000-3-2:2006, Part 3: Limits – Section 2: Limits for Harmonic Current Emissions (equipment input current up to and including 16 Amps per phase) EN 61000-3-3:1995, A1:2001, A2:2005, Electromagnetic Compatibility (EMC), Part 3: Limits – Section 3: Limitation of Voltage Fluctuations and Flicker in low-voltage supply systems for equipment rated current up to 16 Amps Radio Standard Specification CES-003, Issue 4 Class A, February 2004		
SUPPLEMENTARY INFORMATION: The product herewith complies with the requirements of the Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC, and carries the CE marking accordingly.		
BRADY US CONTACT	AUTHORIZED REPRESENTATIVE IN THE COMMUNITY	
NAME: Jeff Mueller	NAME: Paul Rombouts	
POSITION: Lead Regulatory Engineer	POSITION: Director of Strategy, Brady Offer Europe	
DATE: July 28, 2009	DATE: July 29, 2009	
		
Signature	Signature	

Occupational Health

Potential for Release of Hazardous Fumes

The process of heat riveting a tissue cassette causes the release of formaldehyde in a gaseous state. This device uses a filtration and exhaust system to conform to regulated permissible exposure limits. The filtration and exhaust system has been designed and evaluated to control the release of noxious fumes during the riveting process.



WARNING

Use the unit in a well-ventilated area and follow all safety instructions in this manual. Also see "Safety information on page xiv.

OEHHA Proposition 65 Notice

Proposition 65 requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. By providing this information, Proposition 65 enables Californians to make informed decisions about protecting themselves from exposure to these chemicals. Businesses are required to provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a listed chemical.



WARNING

This product causes the release of a chemical known to the State of California to cause cancer.

Safety information

Before using the **BSP™31**, please note the following precautions:



WARNING

Failure to follow all instructions and limitations for the use of the BSP™31 filter may result in adverse health effects.

- Follow all maintenance and usage instructions for the **BSP™31** filter.
- Read all instructions carefully before operating the **BSP™31** and prior to performing any procedure.
- Do not place the unit on an unstable surface, cart or stand.
- Do not place anything on top of the unit.
- Keep the top clear of obstructions.
- Always use the **BSP™31** in a well ventilated area. Do not block the slots and opening on the unit, which are provided for ventilation.
- Except for the **Brady** Probe Cleaning brush, do not push objects or fingers into the riveting slot, as heat from the probes may cause burns and damage the unit.
- Only use the power source indicated on the rating label.
- Use only the power cord that comes with the unit.
- Do not place anything on the power cord.
- Avoid using the system near water, in direct sunlight or near a heating device.
- The heat probes are hot. Do not touch or insert fingers in the cassette slot as touching may cause burns and/or damage the unit.
- Do not expose heat probes to any external cleaning solutions, foreign objects or fingers.
- Replace fuses only with the correct voltage, current and fusing characteristics. The correct fuse ratings are marked on the unit adjacent to the fuse drawer. Replacing a fuse with an incorrect rating may result in a fire.

Overview

The purpose of this guide is to provide information and instructions on how to use the **BSP™31 Label Attachment System**.

Conventions

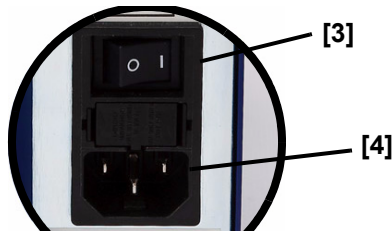
Step-by-step procedures are provided for each of the tasks. When necessary, images are used to illustrate the step(s) you are performing. The numbered references in the images correspond to the associated procedure step(s) and are identified with brackets (see example).

EXAMPLE:

1. Press **Power**  to turn unit off [1].



2. Allow the unit to cool down.
3. Turn *Main Power Switch* to OFF [3].
4. Remove the power plug [4].



Introduction

The **BSP™31 Label Attachment System** is designed to mechanically fasten an adhesive label to a tissue cassette before the tissue-embedding process. This easy-to-use unit forms rivets on the label which keep the label attached during tissue processing and during long-term storage.

When a cassette is inserted into the front of the unit, a clamp automatically grabs the cassette. In less than a minute, four small heat probes pierce through the label and front plastic of the cassette. Heat applied to the probes melts the cassette plastic and forms rivets on the label. When the unit retracts the probes from the cassette, the cassette is released and the user can remove it and place the biospecimen into the cassette.

The **BSP™31** unit must be used exclusively with **Brady B482** label material and **Brady R6400** thermal transfer printer ribbon.



Unpacking and Setup

Unpacking

The **BSP™31 Label Attachment System** and its accessories are packed in a cardboard carton with padding for protection during shipment. Keep the packaging materials for future use.

Verify that the following items are included in the shipping box. If an item is missing or appears to be damaged, contact your Brady representative immediately (see “*Technical Support*” on page 26).

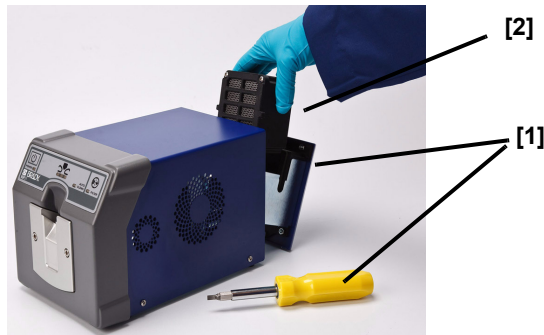
- **BSP™31 Label Attachment System**
- Power cord
- **Brady BSP™31 Filter**
- **Brady BSP™31 Probe Cleaning Kit**
- Quick Start Guide (printed)
- Product CD (contains electronic copy of Quick Start Guide and User Guide)


Placement

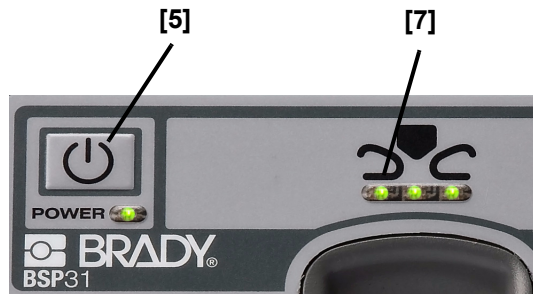
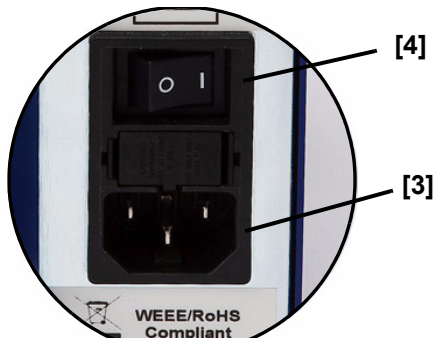
Bio Safety Level 3 or 4 Labs in North America: For ease of potential repair, **Brady** recommends that the **BSP™31** be stored in a Level 1 or Level 2 location within the lab and the pre-labeled and attached tissue cassettes be brought into the hazard areas.

Setup

1. Remove **BSP™31** unit, power cord, information and filter from packing carton and place unit on a solid surface. Do not plug unit in at this time.
2. Using a flathead screwdriver or coin, unfasten screws at back of unit and open filter door [1].
3. Remove plastic wrap from filter, insert filter, close door and tighten screws (2).



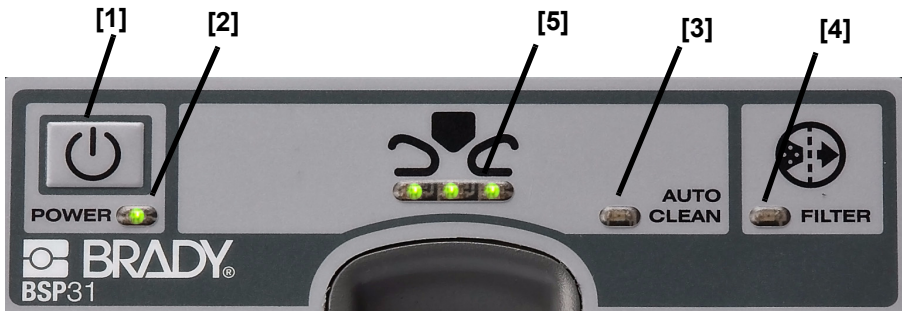
4. Plug power cord into unit [3] and to an AC power outlet.
5. Turn **Main Power Switch** at back of the unit to **ON** [4].
6. On front panel, press **Power**  [5]. The *Power* light turns steady green and the *Status* lights flash yellow.
7. When the unit is ready to rivet, the 3 *Status* lights [7] turn steady green (about 3 minutes).



Display


The front panel of the **BSP™31 Label Attachment System** contains the following indicators and lights:

- [1] **Power Button:** Press to start the unit after the main Power switch has been turned on.
- [2] **Power Light:** Steady green at power on, indicating unit has power. Red indicates a fault condition (e.g., filter door is open). During an autoclean cycle, the light goes off.
- [3] **Auto Clean:** Normally off. After riveting about 150 cassettes, the light turns steady red, indicating the unit is starting an auto-clean cycle. During the cleaning cycle, no riveting can be performed. Auto Clean is also initiated at the end of Standby mode and when the power button is pressed when the unit is ON.
- [4] **Filter:** Normally off. When a new filter is needed, turns yellow until the filter is changed and the unit is reset. If the filter is not changed within 800 cycles of initial indication, the Power light turns red, the Filter light stays yellow and the Status lights go off. The unit will prevent further riveting until the filter is replaced (see “*Changing the Filter*” on page 11 for details).
- [5] **Status Lights:** Steady green when the unit is in the ready state. Flashing yellow when the unit is heating to the required temperature. Flashing green during the riveting cycle.

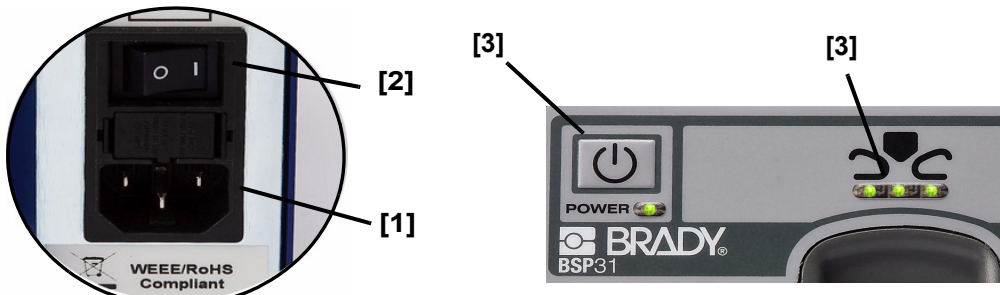


Power

Applying Power


1. Plug the power cord into unit and an AC power outlet [1].
2. Turn the *Main Power Switch* at back of the unit to **ON** [2].
3. On the front panel, press **Power**  [3] and wait until the three Status lights [3] turn steady green.

Note: Normal warm-up time is about 3 minutes.




Removing Power

Note: Do not turn the main power switch off without allowing the machine to cool down (see Step 1).

1. On the front panel, press **Power** . This initiates an auto clean and cool down cycle.
2. After the unit has completed the cool-down cycle (about 20 minutes), turn the *Main Power Switch* at the back of the unit to **OFF**.

Waking Unit from Sleep Mode

Note: To conserve energy if the unit is not used for about 2 hours, it automatically goes into sleep mode: the Auto Clean light turns steady red while it performs an autoclean cycle, when cycle is complete, all lights go off.

1. On the front panel, press **Power**  [1]. The *Power* light turns steady green and the *Status* lights flash yellow until the unit is warmed up. When the unit is ready for riveting, the *Status* lights turn steady green.
2. Begin the riveting process.



Operating Instructions

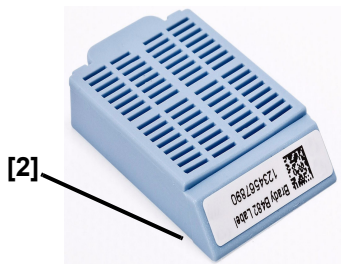
This system should be used in a well-ventilated area with a minimum clearance for air circulation of 12" from side and rear, and 18" from top of system. Do not place objects on top of unit.

Labeling a Cassette

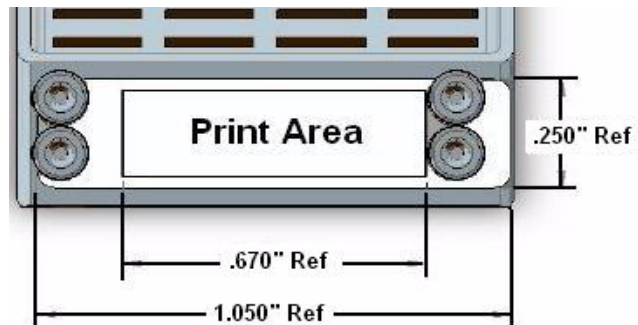
The **BSP™31** unit is designed to use only **Brady B482** label material and **Brady R6400** thermal transfer printer ribbon.

To label a cassette:

1. Remove a printed label from the liner or backing sheet.
2. Holding cassette, place the printed label on the cassette label surface [2].
3. Gently rub finger across the label surface to ensure it adheres to the tissue cassette.



Recommended Label Area:



*Ref = approximate location

Loading a Cassette

Unit should be operated in a well-ventilated area with adequate clearance for air circulation. The *Status* lights must be steady green before riveting.

If machine usage is significant (e.g., 150 cassettes in 1/2 hour or less), allow the machine to remain idle for a period of 30 minutes following the autoclean cycle.

 **WARNING**

The heat probes are hot. Do not touch or insert fingers in the cassette slot as touching may cause burns and/or damage the unit.

!CAUTION! Do not use the label attachment system with anything other than an unused, unprocessed tissue cassette, as damage may occur.

1. With power applied, allow riveting unit to warm up until flashing yellow lights turn steady green.

!CAUTION! Immediately release the cassette when inserting into the cassette slot. The gripping mechanism or probe may be damaged if the cassette is not released.

Note: Take care to insert the cassette correctly. If inserted incorrectly, it may damage the unit or place the rivets in the wrong position.

2. Insert and immediately release a labeled cassette into the cassette slot [2]. Insert cassette label side up and facing into the unit. The *Status* lights flash green.
3. When the riveting process is complete, the *Status* lights will turn steady green [3].
4. Remove the cassette.



Specifications

Model Number

- BSP31

Physical Characteristics

- **Height:** 6.51 inches (16.53 cm)
- **Depth:** 10.34 inches (26.26 cm)
- **Width:** 6.45 inches (16.38 cm)
- **Weight:** 13 lbs (5.9 kg)

Environmental Characteristics

Operating

- **Ambient Temperature:** 65° - 80° F (18° - 27° C)
- **Relative Humidity:** 30% to 85% (non condensing)

Storage

- **Storage Temperature:** -4° to 150° F (-20° to 66° C)
- **Storage Relative Humidity:** 10% to 85% (non condensing)

Electrical Characteristics

Europe

- **Input Current:** 2 Amps
- **Input Voltage:** 230 VAC
- **Input Frequency:** 50 Hz

US

- **Input Current:** 4 Amps
- **Input Voltage:** 120 VAC
- **Input Frequency:** 60 Hz

Operating Clearance

- **Back and Side:** 12 in. (30.5 cm)
- **Top:** 18 in. (45.7 cm)

Warm-up Time

- About 3 minutes (normal condition)

Label Size

- 1.050 in. x 0.250 in. (26.7 mm x 6.35 mm)

Tissue Cassettes

- **Nominal Angle:** 45 degrees
- **Minimal Angle:** 35 degrees

Fuses

- **U.S. 120V unit:** 6.3A, 250V, Time Lag
- **Europe 230V unit:** 3A, 250V, Time Lag

Maintenance

Changing the Filter

The filter should be replaced at least every 6 months or 5000 cycles, whichever comes first. At approximately 4200 cycles, the *Filter* light turns yellow indicating that the filter needs replacement. At 5000 cycles, the unit will stop functioning until the filter is changed and the reset button is pushed. A filter change log has been provided to help you keep track of when a filter change should be performed (see “*Filter Change Log*” on page 28.)

Estimated time to change the filter is 5 minutes (not including cool-down time). The unit will not operate without a filter installed.

Note: Contact with pellets in the filter may cause skin and eye irritation and is harmful if swallowed.


- **Contact with Skin:** Wash affected area with soap and water. If irritation persists, seek medical attention.
 - **Contact with Eyes:** Remove contact lenses. Flush eyes with water for 15 minutes. If irritation persists, seek medical attention.
 - **Ingestion:** Give two glasses of water for dilution. DO NOT induce vomiting. Never Give anything by mouth to an unconscious person; seek medical attention.
-

!CAUTION! DO NOT push the reset button unless the filter has been changed. Pressing the reset button without a filter change resets the filter cycle count and the unit will not indicate the correct time to change the filter.

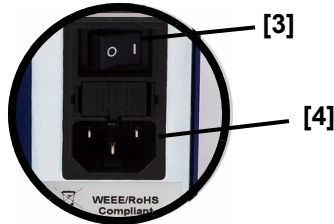
To install or change filter:

 **WARNING**

Do not open the filter door without removing power from the unit.


1. On front panel, press **Power**  to turn unit off. The autoclean lights turn red and the unit starts an autoclean cycle. When autoclean is done, all lights go off.
2. After autoclean cycle is done, allow the unit to cool down (about 20 minutes).

3. At the back of the unit, turn *Main Power Switch* to **OFF** [3].
4. Remove the power plug from the **BSP™31** system [4].



5. Unfasten the flat-head retaining screws [5] at the back of the unit and open the filter door.

Note: The retaining screws are permanently affixed and cannot be removed from the filter door.

6. Remove the old filter (if installed) and insert the new filter [6].
7. Close the filter door and tighten the retaining screws.
8. Plug power cord into unit and turn *Main Power Switch* to **ON**.
9. On front panel, press **Power** .
10. Using a pointed object, push **Reset** button [10] to reset the unit.

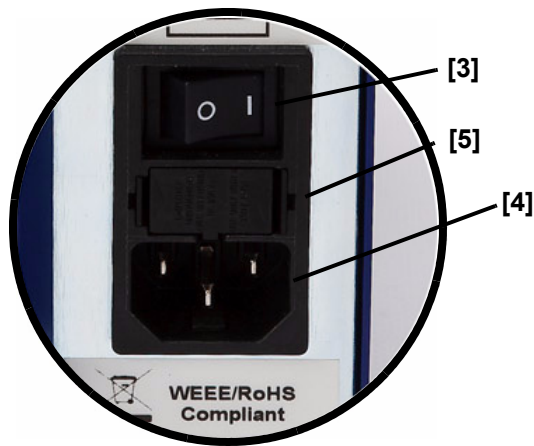


Note: *Waste Disposal Method:* Dispose of used filters in accordance with local, state and federal regulations.

!CAUTION! *If you replace the fuse and it immediately blows, do not try to replace it again. Contact your Brady Representative.*

Fuse Replacement

1. At the back of the unit, set *Main Power Switch* to **OFF** [3].
2. Remove the power plug from the **BSP™31** system [4].
3. Remove the fuse drawer [5] from the **BSP™31** power input module:
 - a. Using a small object, unsnap the **right** side of the fuse cover.
 - b. Unsnap the **left** side of the fuse cover.
 - c. Remove fuse cover and fuses.




⚠ WARNING

Replace fuses only with correct voltage, current and fusing characteristics. The correct fuse ratings are marked on the unit adjacent to the fuse drawer. Replacing a fuse with an incorrect rating may result in a fire.

4. Replace the fuses. The fuses can be inserted in any direction
 5. Insert the fuse drawer and push until both sides snap in place.
-


Note: The fuse drawer cannot be inserted incorrectly.

Note: Verify that the fuse drawer is completely closed before applying power to the **BSP™31** system.

6. Install the power plug to the **BSP™31** system.
7. Set *Main Power Switch* to **ON**.
8. On the front panel, press  [ON] and wait about 3 minutes for the unit to go through its power checks.

Cleaning the Label Attachment System

To clean the exterior of the system:

1. On the front panel, press **Power** . The autoclean lights turn red and the unit starts an autoclean cycle. When autoclean is done, all lights go off.
2. At the back of the unit, turn *Main Power Switch* to **OFF**.
3. Unplug the power cord from the unit.

!CAUTION! Do not spray fluids directly at or into the system.

4. Using a soft cloth, wipe the surface of the unit with any of the following cleaning fluids:
 - Isopropyl Alcohol
 - Bleach solution (25% bleach, 75% water)
 - PDI Sani-Cloth Plus Wipes
 - Commercial-grade Lysol
 - Ethanol Chem-Wipes (70%)

 **WARNING**

Do not introduce any external cleaning solutions, foreign objects or insert fingers into the cassette slot.

Probe Cleaning Procedure


During normal usage, the probes accumulate residue, which may build up and cause the rivet appearance to change. See “*Examples of rivets that provide acceptable performance:*” on page 19 for a range of rivet appearance that gives acceptable performance. Testing indicates that these labels will remain attached through tissue processing and long-term storage.

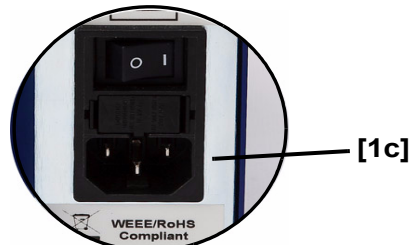
The probe cleaning brush kit can be used to remove accumulated residue.


!CAUTION! *Frequent probe cleaning (i.e., riveting less than 2000 cassettes between cleanings) can reduce the life of the probes, and is not recommended.*

!CAUTION! *Take care when cleaning the probes to avoid damage. See “Probe Cleaning Procedure” on page 16 for more details.*

Note: Unit must be Off and completely cooled down before performing this procedure.

1. If the unit is not cooled down and Off, do the following. Otherwise, skip to step 2.
 - a. On front panel, press **Power**  [1a] to turn unit off. An autoclean cycle starts. When autoclean is done, all lights go off.
 - b. Allow the unit to cool down (about 20 minutes).
 - c. At the back of the unit, turn *Main Power Switch* to **OFF** [1c].



2. Press and hold **Power**  while simultaneously turning the *Main Power Switch* **ON**. This action puts the unit into a probe-cleaning mode. During probe-cleaning mode, the status lights alternately flash yellow and then green.

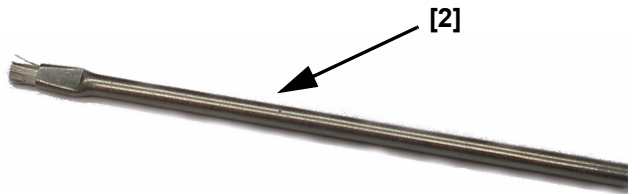
Note: In probe cleaning mode, the probes move to the down position [1] to allow access for cleaning. The probes remain in this position until the unit is taken out of probe cleaning mode.



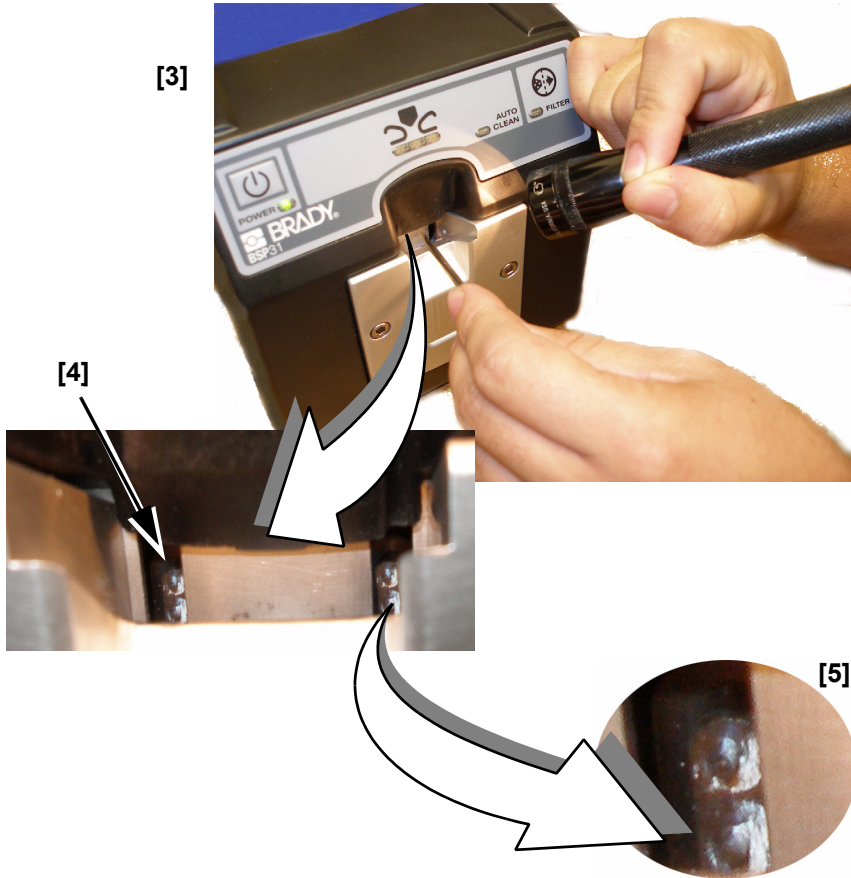
Note: During the cleaning, both the left and right sides of the probes must be cleaned

Note: Use the Brady Probe Cleaning Brush [2] only for cleaning the probes in the unit. Do not use the brush for any other purpose.

!CAUTION! *Use each brush for a maximum of two cleanings, then discard. Using a brush more than twice can reduce the life of the probes and is not recommended.*



- Using a flashlight to identify the probes [3], insert the Brady probe cleaning brush until it reaches the probes [4], then gently brush up and down 3 times on the dirty probes [5].



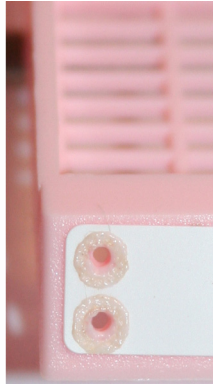
Note: After cleaning, the probes will have a slight white appearance.

4. Turn *Main Power Switch* to **OFF**.
5. Return the unit to normal riveting state (see “*Applying Power*” on page 5).
6. Rivet a trial cassette and check that riveting is normal. If not, repeat this procedure over again.

Examples of rivets that provide acceptable performance:



Rivet Appearance with Clean Probes



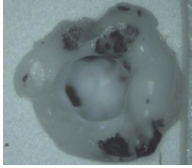

Rivet Appearance with accumulated Residue

Troubleshooting

Problem	Resolution
I replaced the filter, but now the unit won't restart.	The filter must be replaced and the filter reset button reset. See <i>"Changing the Filter"</i> on page 11 for instructions.
I left the unit on but when I came back all of the lights were off.	To conserve energy, the unit is designed to go into sleep mode when not used for a period of about 2 hours. See <i>"Waking Unit from Sleep Mode"</i> on page 6 for instructions.
When the Auto Clean light is Red, I can't rivet any cassettes.	The unit is designed to perform an autoclean at regular intervals. While this process occurs, no riveting can be done. When the auto clean cycle is complete, the Auto Clean light will go off, the status lights will turn steady green and you can resume riveting.
The filter light is yellow and won't go off.	When the filter needs to be replaced, the Filter light turns yellow. See <i>"Changing the Filter"</i> on page 11 for instructions.
What do the flashing yellow lights mean?	When the unit is getting ready to rivet (heating up) or not ready, the three status lights flash yellow.
Unit won't start.	<ul style="list-style-type: none">• Power cable not plugged in the wall.• Main Power switch off.• Soft power button not On.• Fuses are blown.

Problem	Resolution
The power light turns red as soon as I power on the unit.	<ul style="list-style-type: none"> • Verify that a filter is in place and the filter drawer is closed. • If problem persists, contact Technical Support.
There is a strong odor coming from the unit.	The unit is designed to signal when the filter needs replacing. If you experience strong odors before the regularly scheduled replacement time, replace the filter. See <i>“Changing the Filter”</i> on page 11 for instructions.
The rivet shape is flat and not uniform.	We recommend cleaning the probes. Shut down the unit to force the system to go into an autoclean cycle. See <i>“Cleaning the Label Attachment System”</i> on page 15 for instructions.
The power light is steady green, but the status lights are flashing yellow and never turn steady green.	Contact Technical Support.
The power light is steady green, the status lights are steady green, but when I inserted a cassette nothing happened.	<ul style="list-style-type: none"> • Check for correct cassette orientation. • Verify that the cassette is in the approved-cassette list (see <i>“Compatibility with Related Products”</i> on page 25). • Reinsert and release the cassette. • If problem persists, contact Technical Support.
The status lights were steady green, I riveted a few cassettes and the status lights flashed green while riveting. But then the status lights started to blink yellow. This happens intermittently.	<ul style="list-style-type: none"> • Flashing yellow indicates that the unit is warming up and can be a normal occurrence. • If the lights flash yellow for more than 1-1/2 minutes between cassette riveting, contact Technical Support.
After processing, the label does not lie flat on the label cassette surface.	Normal xylene and other chemicals will remove the adhesive. The rivets are designed to hold the label in place. This condition won’t interfere with ability to read the text or barcode.

Problem	Resolution
After riveting, my cassette is missing one or more rivets.	<ul style="list-style-type: none">• Re-insert the cassette.• Clean probes. See <i>“Probe Cleaning Procedure”</i> on page 16.• Incomplete or broken probe, contact Technical Support.
The text came off when I scraped the wax with a knife.	When removing the wax, scrape lightly or use a wax-melting paratrimmer.
The rivet is going through my text or barcode.	<ul style="list-style-type: none">• You may need to change your template in the software to center the text on your label. See <i>“Labeling a Cassette”</i> on page 7 for recommended text boundaries.• Reposition the label on the cassette.
The power light is steady green, the status lights are off, but when I insert a cassette, nothing happened.	<ul style="list-style-type: none">• Remove the cassette and check if the unit is in the probe-cleaning mode (probes are moving up and down and it won’t grab the cassette). If so:<ul style="list-style-type: none">- Turn the power switch (on back) to OFF.- Press the power button (on front) to OFF.- Press the power button (on front) again, to place the unit in standard mode.• If condition persists, contact Technical Support.

Problem		Resolution
There is some black ash on my label.		This is normal and will not harm the label.
There are extreme amounts of plastic 'strings' on my label.		<p>Some occasional stringing is normal. If stringing becomes severe and continual, do the following:</p> <ul style="list-style-type: none"> • Try another cassette type. • Clean the probes. See "<i>Probe Cleaning Procedure</i>" on page 16. • If cleaning doesn't fix the problem, contact Technical Support.
Wave in Label after processing		<p>This should not affect the integrity of the label nor affect barcode readability.</p> <p>Increasing dwell time (the time from when the label is put on cassette to the time it is riveted) to a few minutes, may reduce the wave.</p>
The status indicators show alternating green and yellow lights.		Indicates the unit is in probe cleaning mode.

Kits and Accessories

The following kits and accessories are available for the **BSP™31 Label Attachment System**:

- **Brady BSP™31 Filter Kit**
- **Brady BSP™31 Probe Cleaning Kit**

Related Products

The following Brady products and materials can be used to print the labels or barcodes. The materials are designed to withstand the biospecimen process.

- Brady B482 Labeling Material
- Brady R6400 Thermal Transfer Printer Ribbon
- Brady THT printers (e.g., Brady IP™ Printer, Brady LABXPRT™ Printer)
- Brady Barcode Scanners (e.g., Brady Code Reader® 3.0)

Compatibility with Related Products

The **BSP™31 Label Attachment System** has been tested and is compatible with the following labels and materials:

- **Label Material:**
 - B482 material
 - R6400 Ribbon
- **Industry Tissue Cassettes:**

Simport	McCormick Scientific	Sakura – Tissue Tek
<ul style="list-style-type: none">• M486• M493• M499• M506• M507• M508• M480• M492• M498• M505• M485	<ul style="list-style-type: none">• MC-500• MC-510• MC-600• MC-650• MC-550• MC-560	<ul style="list-style-type: none">• 4187• 4182• 4184

Technical Support

Repair and Return

If for any reason you need to return the **BSP™31** for repair, please follow these instructions:

1. Write a description of the issue and indicate what steps you took to resolve the problem. This information may be useful for the repair personnel.
2. Contact Technical Support (see “*Contact Information*” on page 26) for return instructions.

Contact Information

Please contact Brady Worldwide, Inc. with any questions or concerns. The contact support numbers for each region are listed below.

Americas www.bradyid.com/techsupport

United States	800-643-8766	technical_support@bradycorp.com
Canada	888-262-7576	techsuppcanada@bradycorp.com

Europe www.bradyeurope.com/services

BRADY France	T: +33 472 662 680	tsfrance@bradycorp.com
BRADY Germany (incl. Austria, Switzerland)	T: 0900 / 1 027 239 (0,99 €/min) F: +49 6032 8091 736	tsgermany@bradycorp.com
BRADY Italy	T: +39 02 96 286 014 F: +39 02 96 700 882	tsitaly@bradycorp.com
BRADY Spain / Portugal	T: +39 02 96 28 60 14	tsspain@bradycorp.com
BRADY Slovakia	T: +421 2 3300 4881 F: +431 2 3300 4801	ts_ece@bradycorp.com
BRADY Sweden	T: +46 (0)8 590 057 30 F: +46 (0)8 590 818 68	tssweden@bradycorp.com
BRADY Norway	T: +47 91 31 21 75 F: +47 70 19 05 67	tsnorway@bradycorp.com
BRADY Denmark	T: +45 40 14 44 79 F: +45 66 14 44 50	tsdenmark@bradycorp.com
BRADY Benelux (incl. Africa & Middle-East)	T: +32 52 457 397 F: +32 52 457 800	tsbelgium@bradycorp.com
BRADY U.K.	T: +44 1295 228 231 F: +44 1295 271 755	tsuk@bradycorp.com

Decontamination Certificate

NOTICE TO CUSTOMER: If this unit must be returned to Brady Corporation, or serviced on site, it must be cleaned and decontaminated. See the list of EPA-registered Disinfectants at:
<http://www.epa.gov>.

If this unit must be returned to Brady Corporation from a laboratory environment in which work with infectious microorganisms and/or laboratory animals is performed, the laboratory must meet the definition of BSL-1 or BSL-2, as defined by the Centers for Disease Control and Prevention's Biosafety in Microbiological and Biomedical Laboratories (BMBL). For information, see:
<http://www.cdc.gov>.

Brady Corporation cannot accept a unit from a laboratory environment that meets the definitions of BSL-3 or BSL-4, in which work with infectious microorganisms and/or laboratory animals is performed.

To ensure that this unit is not contaminated, complete the *Decontamination Certificate* on the following page. Make one copy and place it in the unit before packing. Make a second copy and attach it to the outside of the shipping box.

Note: If returned goods are considered to be hazardous, **Brady** Corporation will refuse to accept the shipment.

Decontamination Certificate

Product Name/Model:

Serial Number:

Return Authorization Number:

Sender Name:

Address:

Phone:



Please complete all parts of Sections A, B, C and D, including additional information, as requested.

Section A:

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	This equipment has not been in contact with unfixed biological samples.

Section B:

This equipment has been internally or externally exposed to hazardous materials:

Yes	No		Provide further detail here:
<input type="checkbox"/>	<input type="checkbox"/>	Blood, body fluids, pathological samples.	
<input type="checkbox"/>	<input type="checkbox"/>	Other biohazards.	
<input type="checkbox"/>	<input type="checkbox"/>	Chemicals/substances hazardous to health.	
<input type="checkbox"/>	<input type="checkbox"/>	Other hazards.	

Section C:

This equipment has been cleaned and decontaminated:

Yes	<input type="checkbox"/>	<i>If yes, give details of method:</i>
No	<input type="checkbox"/>	<i>If no, indicate why not:</i>

Section D:

Yes	No	This equipment has been prepared to ensure safe handling/transportation. If possible, use the original shipping box.
<input type="checkbox"/>	<input type="checkbox"/>	

Section E: Has this unit has been operated in a laboratory environment in which work with infections microorganisms and/or laboratory animals is performed:

Yes	No	<i>If yes, provide Biosafety Level to which the lab operates:</i>
<input type="checkbox"/>	<input type="checkbox"/>	

IMPORTANT: To avoid refusal of shipment, place one copy of this form inside box and attach one copy to outside of box. Customer assumes all responsibility for the immediate return shipment of units sent to Brady without proper decontamination documentation.

Signature: _____

(issuer of decontamination certificate)



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www.bradyeurope.com

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