

The BSP™31 Label Attachment System is designed to mechanically fasten an adhesive label to a tissue cassette before the tissue fixation and embedding process. This easy-to-use unit forms rivets on the label which prevent the label from detaching. Use with Brady B-482 tissue cassette label and Brady R6400 series ribbon.



Patent Pending

Physical Properties

Operating temperature	68-80°F (18-27°C)
Operating humidity	30-85% non condensing
Temperature of cassette holder	<158°F (70°C); UL limit 158°F (70°C)
Dimensions	H: 6.51 in. (16.53 cm), D: 10.34 in. (26.26 cm), W: 6.45 in. (16.38 cm)
Weight	13 lbs (5.9 kg)
Space surrounding recommendation	Back and Side: 12 in (30.5 cm), Top: 18 in. (45.7 cm)
Noise level	BPS31 = 65 dBA, per ISO 9614-1 measurements Industry Threshold = 85 dBA

Front Panel 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 turning power off, riveting about 150 cassettes or 75 in 20 minutes, the light turns steady red indicating a probe cleaning cycle. During cleaning no riveting can occur. Auto clean can manually be initiated as well.
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 Filter light goes off and the Power light turns red. The unit will prevent further riveting until the filter is replaced.
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 staking process.

Regulatory Approvals

UL / CSA / EN / IEC 60950-1 Information Technology Equipment
EMC Directive 2004/108/EEC
EN 55011 / CISPR 11 Radiated and Conducted Emissions
EN 61000-4-2 Electrostatic Discharge Immunity
EN 61000-4-3 Radiated Radio Frequency Immunity
EN 61000-4-4 Electrical Fast Transient Burst Immunity
EN 61000-4-5 Surge Immunity
EN 61000-4-6 Radio Frequency Conducted Immunity
EN 61000-4-8 Magnetic Field Immunity
EN 61000-4-11 Voltage Dips and Interruptions Immunity
EN 61000-3-2 Harmonics Emissions
EN 61000-3-3 Voltage Flicker Immunity
UL / CSA / EN / IEC 60950-1 Information Technology Equipment
FCC Part 15.109 Radiated and FCC Part 15.107 Conducted Emissions
ICES-003 Radiated and Conducted Emissions
*RoHS compliant per European Directive 2002/95/EC.
*WEEE Waste Electrical And Electronic Equipment

Electronics

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
Fuses	US 120V unit: 6.3A, 250V, Time Lag
	Europe 230V unit: 3A, 250V, Time Lag

Care And Maintenance

Cleaning Recommendation (Exterior)

See user guide

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
 - PDI Sani-Cloth® Plus Wipes
 - Commercial-grade Lysol®
 - Bleach solution (25% bleach, 75% water)
 - Ethanol Chem-Wipes (70%)

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

Brush Cleaning Recommendation For Metal Probes

See user guide, > 2000 cassettes

Filter

Certifications:

Media meets the requirements of a UL Class 1 fire rating Recommendation for changing (time or number of cassettes): 6 months or 5000 cassettes

Waste Disposal Method:

Dispose of used filters in accordance with local, state and federal regulations (potassium permanganate media).

Recommend using gloves during removal.



Cassettes

Recommended And Tested Cassette Types

Maximum number of cassettes per day: 200

Recommended number of cassettes per day: 50

Tissue cassette angle: 35°, 45°

Wax removal recommend heat melting process



Label can be attached in either direction.

SIMPORT		McCormick Scientific	Sakura - Tissue Tek
M486	M480	MC-500	4170
M493	M492	MC-510	4182
M499	M498	MC-600	4184
M506	M505	MC-650	4187
M507	M485	MC-550	
M508		MC-560	

*Fisher and VWR are approved cassettes.

Tissue Cassette Label

Printable Area

Label Width	1.04 in (26.50 mm)
Cassette Width	1.11 in (28.25 mm)
Distance Between Rivet Holes	0.88 in (22.25 mm)
Rivet Diameter	0.08–0.14 in (2.0–3.5 mm)
Printable Width	0.67–0.73 in (17–18.5 mm)

Maximize Label Print Information

The table on the right shows a recommended number of alphanumeric characters that will fit on the label and still include a 2D barcode.

2D barcode element size of 5 mil was used on the 600 dpi printer, 6.7 mil on the 300 dpi printer.

For more information see operators guide or visit www.bradyid.com/bsp31

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Font Type	Printer dpi	Number of Characters	
		Lines 1 & 2	Line 3
Trebuchet 5pt Bold	600	18	20
Arial 5pt Bold	600	16	20
Trebuchet 5pt Bold	300	17	20
Arial 5pt Bold	300	15	18

Bold fonts were selected because they are more readable and don't add width. Arial is more readable than Trebuchet.



Sample of barcode and text size