BSP™61 - Print and Apply System

Complete labelling solution to obtain 100% traceability

The BSP™61 Print and Apply System offers a fully automatic labelling solution anywhere along the production line. It combines a thermal transfer label printer with an automatic applicator and is designed to consistently print and accurately position and apply labels in almost all manufacturing applications. The BSP61 combines precision, versatility and high print quality and offers best value for money.

Increase your productivity

The use of high-performance equipment for labelling in a production environment maximises efficiency by enabling first-time clean, clear and accurate labelling, streamlined traceability, reducing material wastage, maintaining uptime and measuring WIP. The result? A reduction of each unit's total production cost. Tier 1 automotive suppliers have reported up to 70% labour cost savings and an increase in production efficiency and quality.
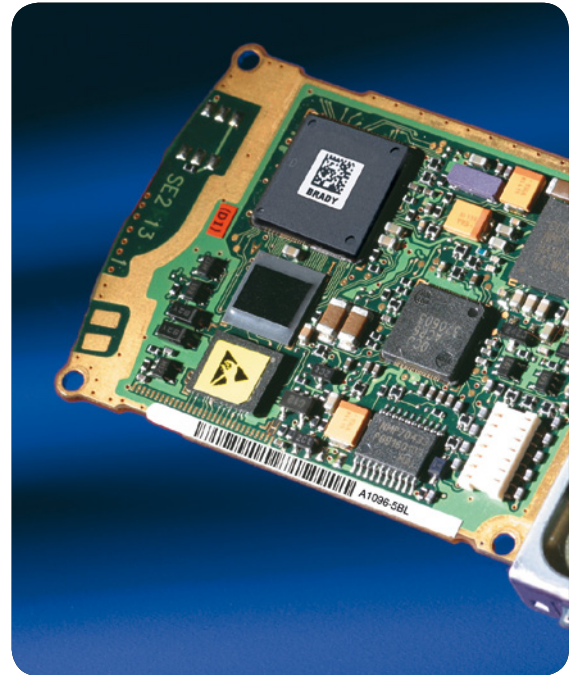
Meets the demands of your environment

The BSP™61 Print and Apply System is developed for applications such as PCB marking, component and product marking in high quality demanding industries like automotive, electronics, manufacturing and laboratory. Designed for optimum, easy integration into existing production lines, the BSP61 has a compact footprint and offers a software that is compatible with your host system.

Your benefits

Real time processing and tracking	
Zero queue print and apply	Follows real time processing and tracking eliminating the potential for error

Printing and labelling at the same time	
Multi-tasking capability	Allows printing and labelling at the same time to maximise efficiency in the production process, reducing production time and therefore total unit cost

A specially developed Auto Apply labelling material	
Brady tailored label materials for Auto Apply	Best print quality and dispensability. Materials available for every harsh environment, such as, chemical washes, abrasion, temperature and weathering including UV. Specially developed ROHS PCB labelling material.

Ensure correct traceability with crisp printing	
300 and 600 dpi printing capability	Maximum flexibility for labelling. With the quality of 600 dpi, small, legible labels are guaranteed. Capable of printing 2D codes (DataMatrix, QR, ...) on the smallest of labels.

Label sizes for every application	
Prints and applies a range of labels sized from 4 mm to 60 mm height, and 4 mm to 115 mm width	Label sizing to suit every application. Ideal for labelling small components or surfaces to ensure correct traceability.

Maximum efficiency in production line integration	
Manual or automatic feeding by adding a foot switch or interfacing to a PLC	With a choice of how to control the print and apply cycle, it maximises efficiency in production line integration

One system for many applications	
3 standard applicators: 1 or 2 axis placement and rotation 90° or 180°	Brings both efficiency and flexibility. Use the same print & apply machine to label different components on same surface or product i.e. PCB even if components are positioned differently on surface

Accurate label positioning	
Very high placement accuracy +/– 0.3 mm	Best quality labelling, to ensure content is in the right place on the label and also the label is correctly positioned in situ. Ensures 100% accurate traceability

Easy integration into existing production lines	
Compact size	A small footprint and overall size allows fast, easy integration into existing production lines and work areas.

Seamless software integration	
Direct programming with J-Script, printer language is easy to integrate into your host (manufacturing / ERP) system	No data duplication, error and risk reduction, ensure correct traceability

ESD safe working	
Anti-static brush	Ensures optimal functionality in ESD production environments

Why Brady labelling solutions?

■ Brady runs one of the world's largest R&D programmes on the design and production of industrial-grade labels. Our expertise in the application of specialist inks, adhesives, plastics and other materials used in labels is unrivalled.

■ Brady products and services are focused on its industrial customer base. We have a team of qualified engineering consultants who know how to implement a lineside labelling system for maximum efficiency.

■ Brady labels are manufactured in facilities with ISO/TS 16949 certification. You can rest assured that your production process will not be hindered by failures in our products.

■ Brady supplies via specialised integrators a complete labelling system that includes the means to print and apply labels within your production process and link the printing software into your production software system, quickly and easily.

Problem free automatic labelling

Brady have developed unique solutions that remove the problems of automating label application to ensure reliable tracking and tracing.

■ **No Cutting into the liner** – custom developed Clean Liner Technology (CLT) prevents over cutting into the liner and ensures a perfect result from the outset.

■ **Clean pick up** – our applicator head will pick up every label without exception

■ **No Adhesive bleeding** – CLT eradicates any problems with the adhesive

■ **No Label curling** – our labelling materials are developed specifically for automatic application with a no-curl guarantee

■ **Accuracy** – correct placement first time, every time

High performance identification materials for demanding applications require:

■ A label material and material top coat that is carefully matched with an ink to create the most durable print for your application

■ An adhesive selected to adhere to the application surface and stay applied for the product's lifetime

■ Production expertise to ensure that however the product is applied, it can be dispensed and/or handled efficiently

Whatever your application, our carefully developed material combinations withstand nearly any chemical that is found in use in the industry, often without the need to laminate.
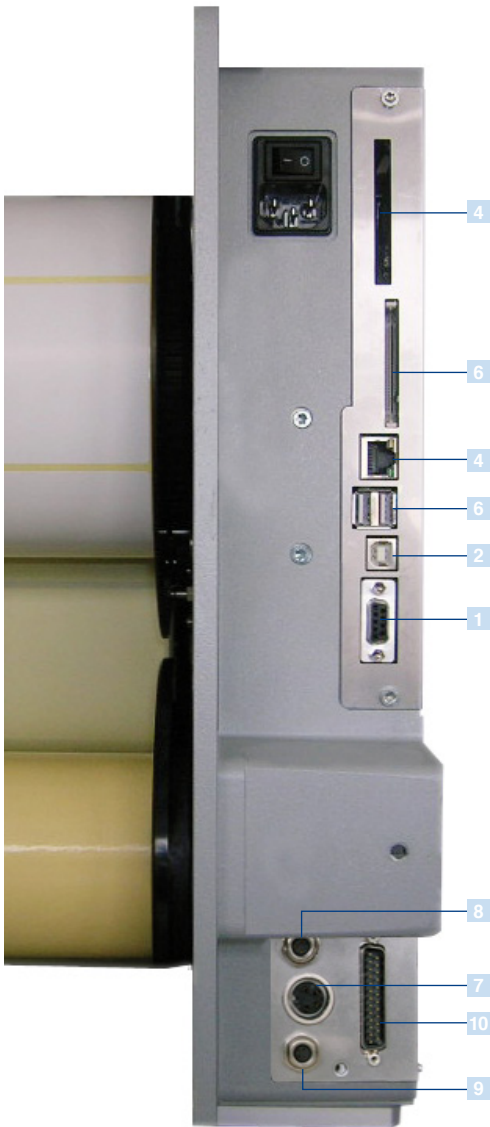
Our label materials are extensively tested in our world-class laboratories for resistance to chemicals, abrasion, temperature on one line and weathering, including UV. In many cases it is possible to test specific material combinations to specifications defined by you.

Technical details

1 Large graphic display
White backlight guarantees clarity of display.
Depending on the installation position the display can be rotated in 90° steps.

2 Navigator pad
Simple, interactive menu control. Applicable functions are illuminated. Menu handling is easy to comprehend.

3 Ribbon retainer
The three part tightening axles allow a fast and easy ribbon exchange.

4 Solid, buckling resistant metal chassis
Manufactured from die cast aluminium.
All components are fixed to the body.

5 Assembly applicator
The applicator is attached by hinges and can be changed easily.

6 Printing offset
After changing the label roll the printing position is set up automatically after a few printed labels. This label position is then stored, even if the machine is turned off.

7 Printhead
The printhead can be replaced easily.
Adjustments and set-ups are not necessary.

8 Ribbon saver
It is used for labels which are to be only partially printed. The printhead is lifted off in the plain area and the ribbon is stopped during label feed.

9 Transport system
The ball bearing transport rollers ensure a highly accurate printing and the precise feeding of labels.

10 Label unwinder
The swing lever and the integrated brake make sure that the labels are unwound with constant tension.

11 Rewinder
The liner of a label roll is rewound after the labels have been peeled off. The clamping shafts enable an easy exchange of the roll.

12 Print direction
All BSP61 label printers with applicators are available in left and right orientation.

Interfaces

1. RS232C- Interface

2. USB 2.0 Slave interface

3. Ethernet 10/100 Base T-interface with TCP/IP

4. Slot for Wireless LAN-card

5. Two USB-Master-interfaces to connect an external operation panel, keyboard, scanner or service key

6. Slot for memory card CompactFlash Type I

7. Connection for warning light

   Indicates the display and the printer status
   Green   Ready for operation
   Yellow   Pre-warning: end of label, end of ribbon
   Red   Printing or applying error

8. Connection main valve for air pressure:
   On / off signal for compressed air supply

9. Connection external E-stop
   In connection with a main valve this interface allows to cut off the compressed air supply in case of an emergency

10. Digital I/O interface
    25-pin SUB-D socket.
    All 24V in- and outputs are optically isolated

Inputs	Outputs
Start printing and applying	Ready to operate
Reprint	Print data available
Label feed	Paper feed on
Delete print job	Pre-warning end of ribbon
Pause	Pre-warning end of label
Label dispensed	Error end of ribbon
Reset	Error end of label
Stop printing and applying	Label in dispensing position
Print first label	Basic position / upper end position
Rotation 4200	Applying position / lower end position
	Common alarm

Options

Interface Centronics bi-directional acc. IEEE 1284.
Interface RS422/RS485 1.200 up to 230.400 Baud/8 Bit.
The interfaces are connected to the PC.
Connection to the printer via mini USB-connection cable.

Label selection box-I/O-box. Via SPS up to 16 different labels can be loaded from a memory card.
Operation of four in-/outputs via Basic Interpreter.

WLAN card 802.11 b/g.

Technical data

1. Printhead	BSP61-62	BSP61-34
Print method	Thermal transfer/Direct thermal	
Print resolution dpi	600	300
Print speed up to mm/s	100	250
Print width up to mm	57	105.60
2. Material		
Labels on rolls	Paper, cardboard, textiles, synthetics PET, PE, PP, PVC, PU, acrylate, PI	
Thickness mm / weight g/m²	0.055 - 0.35 / 60 - 160	
Width Labels[1] mm	4 - 58	10 - 114
Width of liner Spool / Roll	10 - 62 / 25 - 62	– / 25 - 118
Label height[1] when dispensing mm	4 - 200	8 - 250
Media roll: Total Ø up to mm	205 / 305	
Core Ø mm for BSP61	40	–
Roll / Adapter	40 / 50	40 / 50
Roll	76	76
Winding direction	outside or inside	
3. Ribbon		
Ink	outside or inside	
Roll diameter up to mm	80	80
Core diameter mm	25	25
Ribbon length variable up to m	500	500
Width[2] mm	60	114
4. Internal rewinder		
Total diameter up to mm	155 / 210	
Core diameter mm	76	76
5. Dimensions of the printer		
Height mm Label roll Ø 205 mm	400	
Label roll Ø 305 mm	538	
Depth mm Label roll Ø 205 mm	400	
Label roll Ø 305 mm	518	
Width mm	200	255
Weight kg	15	16
6. Label sensor		
See-through sensor	for leading edge of the label or punching marks and end of material	
Reflective sensor from the bottom / from the top	for printing marks	
Distance from center to shoulder middle wall	2 - 26	2 - 47
7. Electronics		
Processor high speed 32 Bit Clock rate MHz	266	
(RAM) MB	64	
Memory IFFS MB Flash	8	
Slot for memory CompactFlash-card Type I	■	
Slot for Wireless LAN-card	■	
Battery buffer for	Real-time clock, printout of time and date storage of data with shut-down	
Warning signal	Acoustic signal when error	
8. Interfaces		
Centronics bi-directional acc. IEEE 1284	□	
RS232 C 1.200 up to 230.400 Baud/8 Bit	■	
USB 2.0 High Speed Slave for PC-connection	■	
Ethernet 10/100 Base T, LPD, RawIP-Printing, ftp-Printing, DHCP, HTTP, FTP, SMTP, SNMP, TIME, Zeroconf, mDNS, SOAP	■	
RS422, RS485 1.200 up to 230.400 Baud/8 Bit	□	
WLAN card 802.11b/g WEP/WPA PSK (TKIP)	□	
2x USB Master for	external operation panel, keyboard, scanner or service key	
Connection warning light	■	
Digital I/O-Interface	■	
cab applicator connection	■	
Connection for external emergency stop	■	
Connection compressed air	■	
9. Operation data		
Power supply	100 - 240 V ~ 50/60 Hz, PFC	
Power consumption	max. 300 W	
Temperature / Humidity: Operation	+ 5 - 40°C / 10 - 85% not condensing	
Storage	+ 0 - 60°C / 20 - 85% not condensing	
Transport	–25 - 60°C / 20 - 85% not condensing	
Approvals	CE, FCC class A CB*, CCC*, UL*	

*pending

■ Standard   □ Option

10. Operation panel	
Buttons / LED-display:	Pause, Feed, Cancel, Menu, Enter, 4 x Cursor
LCD-graphic display:	Width 60, Height 40 mm Text 4 lines, 20 characters per line

11. Settings		
	Digital or analogue clock	time
	System settings	date
	Print parameters	interfaces
	25 language settings	security

12. Monitoring		
Warning if:	End of ribbon	■
	End of labels	■
Stop printing if:	End of ribbon	■
	End of labels	■
	Printhead open	■
On the display	Data reception	Clock
	WLAN field intensity	Date sheet
	Ethernet state	abc debug
	Used memory	Input buffer
	Temperature printhead	Remaining quantity of ribbon
	Access to memory card	

13. Test routines	
System diagnosis	When switched on with testing of printhead
Short Status, Status print	Font list, device list, WLAN state, profile of label, test grid, monitor mode, PPP state
Status reports	Extensive status print with information about setting, e.g. print length counter, runtime counter etc. Request of machine state via software command. Detailed status messages on the display, e.g. network error-no link, barcode error etc..

14. Fonts	
Font types	5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821 available internally, loadable TrueType fonts. Optional Chinese (simplified Chinese), Optional Thai
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBC DIC 500, ISO 8859-1 up to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, K0I8-R. All West and East European latin, cyrillic, greek, hebrew and arabic characters are supported. Optional Thai and Chinese.
Bitmap fonts	Size of width and height 1 - 3 mm Zoom 2-10 Orientation 0°, 90°, 180°, 270°
Vector- / TrueType fonts	Size of width and height 0.9 - 128 mm variable zoom, Orientation 360° in steps of 1°
Font formats	Bold, italic, underlined, outline, negative, grey, vertical, depending on character fonts
Font width	Variable

15. Graphics	
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG

16. Barcodes		
Linear barcodes	Code 39, Code 93	Interleaved 2 / 5
	Code 39 Full ASCII	Ident- and lead
	Code 128 A, B, C	code of Deutsche
	Codabar	Post AG
	EAN 8, 13	JAN 8, 13
	EAN / UCC 128	MSI
	EAN / UPC Appendix 2	Plessey
	EAN / UPC Appendix 5	Postnet
	FIM	RSS 14
	HIBC	UPC A, E, E0
2D-Codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14 truncated, limited, stacked and stacked omnidirectional, EAN-Datamatrix, GS1 Data Bar	
	All codes variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and Start/Stop code, depending on code type.	

17. Software		
Programming	J-Script direct programming	■
	abc-Basic Compiler	■
	Database Connector	□
System diagnosis / administration	Printer monitoring	■
	Network Manager	□
Accredited for Windows driver	32 / 64 bit for Windows XP Server 2003 Windows Vista Server 2008 Windows 7 Server 2008 R2	■
Stand-alone operation		■

[1] The label size is additionally defined through the type of the applicator. Depending on label size, material and adhesive limitations are possible. Critical material or applications have to be tested and cleared.

[2] For best print performance the width of the ribbon should be approximately the same width as the labels.

Ordering Options

	Order Reference	Description
	BSP61-62L	BSP61 for up to 50 mm wide consumables - 600 dpi - to be combined with left applicator
	BSP61-34L	BSP61 for up to 101 mm wide consumables - 300 dpi - to be combined with left applicator
	BSP61-62R	BSP61 for up to 50 mm wide consumables - 600 dpi - to be combined with right applicator
	BSP61-34R	BSP61 for up to 101 mm wide consumables - 300 dpi - to be combined with right applicator

Product Supplied
Label printer, Power cable Type E+F, length 1.8 m, Connecting cables USB, length 1.8 m, Operation manual in English and German

	Order Reference	Description
	Applic. 4114L-200	Left applicator - cylinder stroke 200 mm - horizontal precision guide in feed direction
	Applic. 4114L-300	Left applicator - cylinder stroke 300 mm - horizontal precision guide in feed direction
	Applic. 4214L-200	Left applicator - cylinder stroke 200 mm - horizontal rotary cylinder (angle of rotation 90 other 180°)
	Applic. 4214L-300	Left applicator - cylinder stroke 300 mm - horizontal rotary cylinder (angle of rotation 90 other 180°)
	Applic. 4414L-200	Left applicator - cylinder stroke 200 mm - adjustable horizontal precision guides in X and Y direction (up to Y = 13 mm, X = 5 mm)
	Applic. 4414L-300	Left applicator - cylinder stroke 300 mm - adjustable horizontal precision guides in X and Y direction (up to Y = 13 mm, X = 5 mm)
	Applic. 4114R-200	Right applicator - cylinder stroke 200 mm - horizontal precision guide in feed direction
	Applic. 4114R-300	Right applicator - cylinder stroke 300 mm - horizontal precision guide in feed direction
	Applic. 4214R-200	Right applicator - cylinder stroke 200 mm - horizontal rotary cylinder (angle of rotation 90 other 180°)
	Applic. 4214R-300	Right applicator - cylinder stroke 300 mm - horizontal rotary cylinder (angle of rotation 90 other 180°)
	Applic. 4414R-200	Right applicator - cylinder stroke 200 mm - adjustable horizontal precision guides in X and Y direction (up to Y = 13 mm, X = 5 mm)
	Applic. 4414R-300	Right applicator - cylinder stroke 300 mm - adjustable horizontal precision guides in X and Y direction (up to Y = 13 mm, X = 5 mm)

Cover
Protection against dirt and accidental contact.

External operation panel
If the operation panel is not accessible after installation of the printer into a production plant it is possible to attach an external operation panel.

Compact keyboard
Connection: USB, number of keys: 86.
L x W: 282 x 132 mm, Cherry G84-4100.

Product sensor
For automatic printing and applying after detection of a product, e.g. on a conveyor belt.

Sub-D plug
Connection of the control signals to the IO-interface with screw clamps.

Warning light
Indicates the display and the printer status.
Red: Printing or applying failure
Yellow: Pre-warning: end of label, end of ribbon
Green: Ready for operation

Air pressure regulation unit
The unit can be assembled to the BSP61 or its brackets. Pre-adjustment to 4.5 bar by using a mounting angle.

Air pressure regulation unit with additional cut-in valve
In case of integration of the print & apply system into a production line the air-pressure can be turned on or off externally. Pre-adjustment to 4.5 bar.

BRADY EMEA

BRADY Africa
PO BOX 18015
Jebel Ali, Dubai, UAE
Phone +971 4 881 2524
Fax +971 4 881 3183

BRADY Benelux
Industriepark C/3
Lindestraat 20
9240 Zele, Belgium
Phone +32 (0) 52 45 78 11
Fax +32 (0) 52 45 78 12

Brady Central & Eastern Europe
Na Pántoch 18
831 06 Bratislava, Slovakia
Phone +421 2 3300 4800
Fax +421 2 3300 4801

BRADY Denmark
Svendborgvej 39D
5260 Odense S
Phone +45 66 14 44 00
Fax +45 66 14 44 50

BRADY France
Parc EUROCIT
45, avenue de l'Europe
59436 Roncq Cedex
Phone +33 (0) 3 20 76 94 48
Fax +33 (0) 3 20 76 76 06

BRADY Germany
Büchenhöfe 2
63329 Egelsbach
Phone +49 (0) 6103 7598 660
Fax +49 (0) 6103 7598 670

BRADY Hungary
Puskás Tivadar u. 4.
2040 Budaörs
Phone +36 23 500 275
Fax +36 23 500 276

BRADY Italy
Via Pitagora 18
20128 Milano
Phone +39 02 26 00 00 22
Fax +39 02 25 75 351

BRADY Middle East FZE
PO BOX 18015
Jebel Ali, Dubai, UAE
Phone +971 4881 2524
Fax +971 4881 3183

BRADY Norway
Lerstadveien 506
6018 Ålesund
Phone +47 70 13 40 00
Fax +47 70 13 40 01

BRADY Spain & Portugal
Calle Aragón 271
08007 Barcelona, Spain
Phone +34 900 902 993
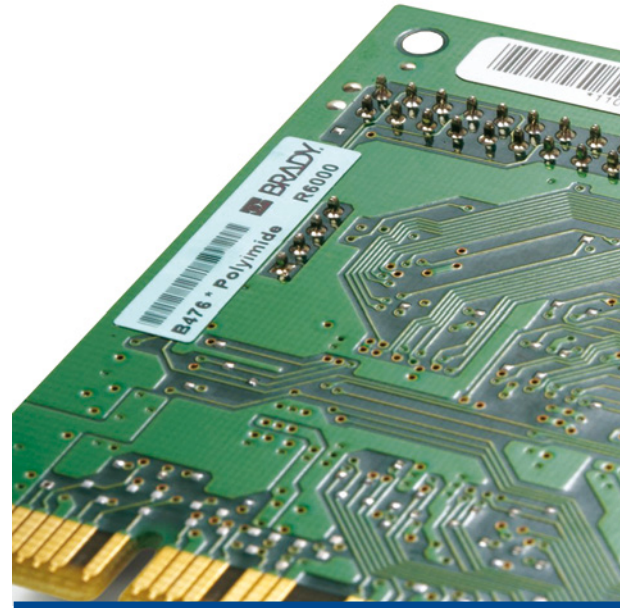Fax +34 900 902 994

BRADY Sweden
Vallgatan 5
170 67 Solna
Phone +46 (0) 8 590 057 30
Fax +46 (0) 8 590 818 68

BRADY Turkey
Selvili Sok. No: 3/4
4.Levent Istanbul 34330
Phone +90 212 264 02 20 / 264 02 21
Fax +90 212 270 83 19

BRADY UK & Ireland
Wildmere Industrial Estate
Banbury, Oxon – OX16 3JU, UK
Phone +44 (0) 1295 228 288
Fax +44 (0) 1295 228 100

Your distributor

INDUSTRIEL

T: +48 18 442 18 10

info@industriel.pl

www.industriel.pl

BRADY WORLDWIDE

Australia 612-8717-6300
Brazil 55-11-3686-4720
Canada. 1-800-263-6179
China (Beijing) 86-10-6788-7799
China (Shanghai) 86-21-6886-3666
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