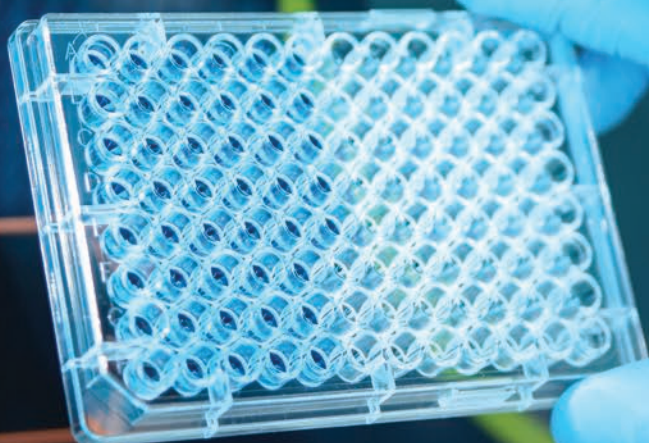# BSD

Sample Punchers

SERVICE

SPARE PARTS

SALES

PRODUCT CATALOGUE 2016

bsdrobotics.com

BSD

For all BSD products*, we offer:

✓ *Continuity of Service and Support*

✓ *Large inventory, long term supply of spare parts*

✓ *Authorised service agents*

✓ *Technical support and software updates*

✓ *New Sales*

* BSD100, BSD300, BSD304, BSD600 Duet, BSD600 Plus.

Microelectronic Systems

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Brendale QLD 4500
Australia

Sales: sales@microelectronics.com.au
Support: support@microelectronics.com.au
Tel: +61 7 3881 1834

See more information on our website:

Company Profile

Microelectronic Systems was incorporated in 1996 and we have over 60 years of combined experience in the design, manufacture and service of BSD instruments.

With a global network of distributors and service agents, we offer instrument service contracts and one-off services for all BSD models.*

Spare parts are readily available and we maintain a large parts inventory in Australia and commonly used parts in the USA.

www.bsdrobotics.com

SERVICE
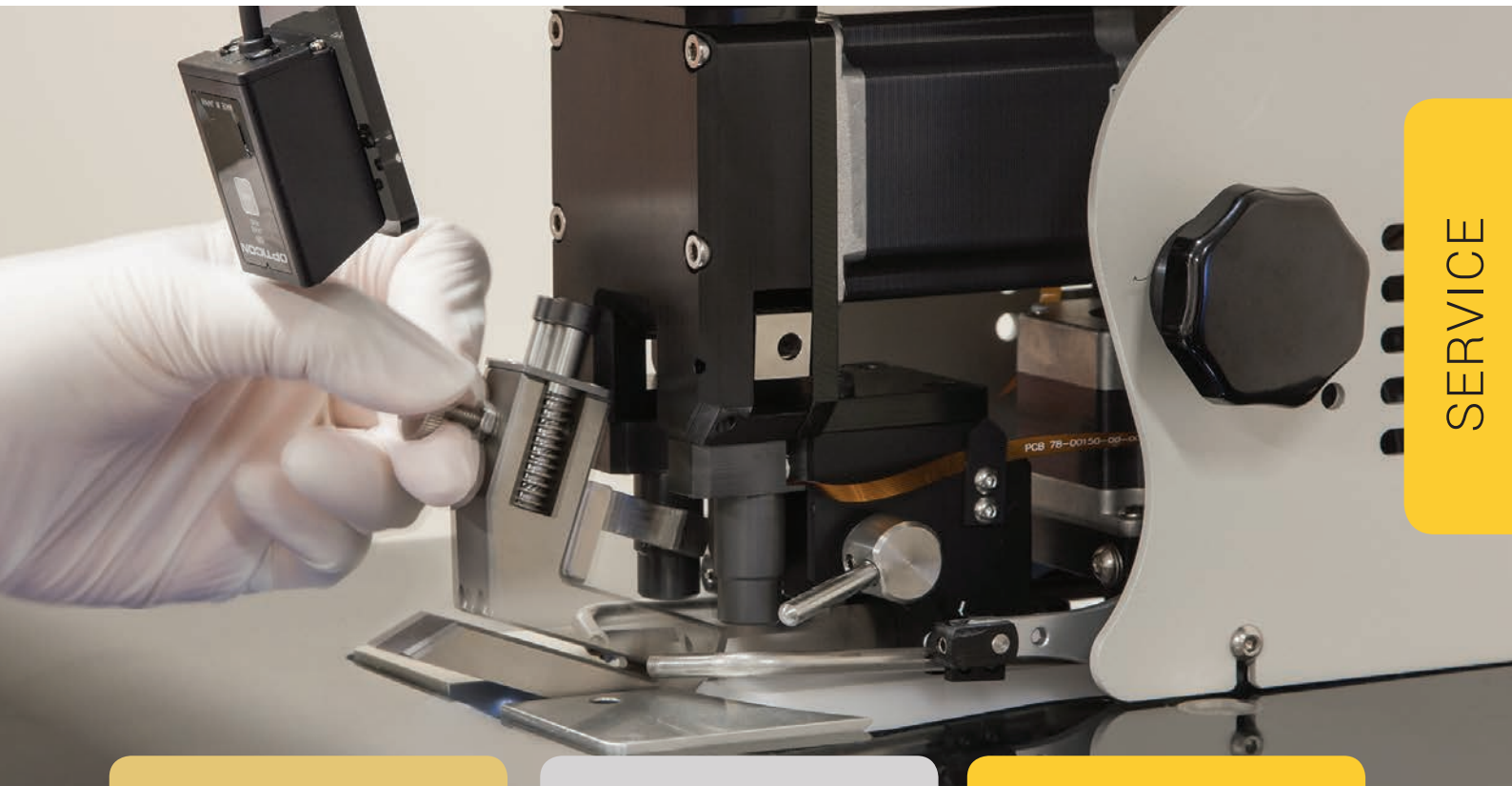
| BRONZE	SILVER	GOLD
One repair visit	One repair visit	One repair visit + one emergency visit
One preventive maintenance service	Two preventive maintenance services	Two preventive maintenance services
Technical support via email or telephone	Technical support via email or telephone	Technical support (incl. free software upgrades)
Spare parts at list price	15% discount on spare parts	Included repair and spare parts *

* Conditions apply.

Service contracts are normally 12 months and longer term contracts are available. Contact us for full service terms and conditions. Servicing is available in most regions with a range of options to suit a level of service and budget to ensure your BSD instrument operates as a reliable and efficient part of your laboratory workflow.

Service contracts within the Australia and New Zealand region are handled directly by Microelectronic Systems. A network of authorised service agents provide spare parts, service and service contracts across the globe.

See back page for contact details.

FEATURES

Integrated Barcode Scanner
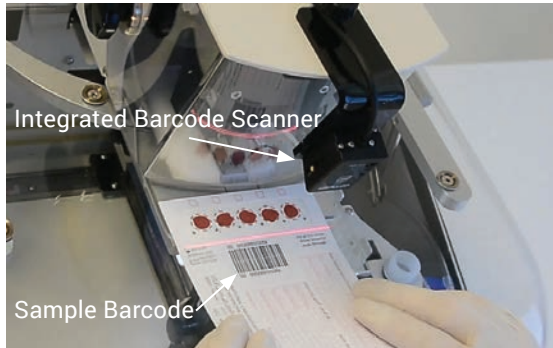
Sample Barcode

TRACEABILITY

Punch data files are generated for sample tracking and traceability. The BSD output files can be configured to interface with a wide range of LIMS software. Barcodes of samples are scanned prior to punching and plate barcodes can be scanned for inclusion in the punch file. Sample delivery into the plate is confirmed using an optical sensor.

QR Punch & Die

Dust Extractors

Chute
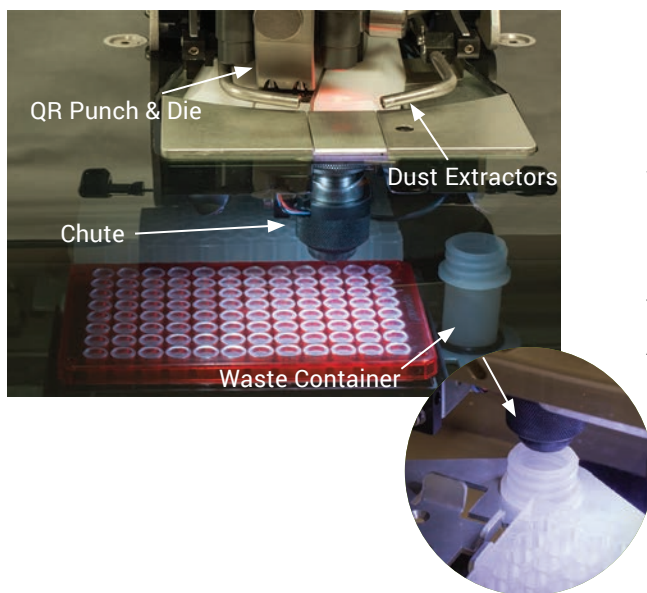
Waste Container

INTEGRITY

Minimisation of sample carry-over is achieved using features for automatic and routine cleaning of the punch area. A separate waste container on the plate deck allows a programmable number and frequency of cleaning punches to be performed as part of the test sequence.

An optional dust extraction system vacuums paper dust from the punching area. The quick release (QR) punch and die can easily be removed and cleaned.

Deep Well Plate   Optional Tray Adaptor
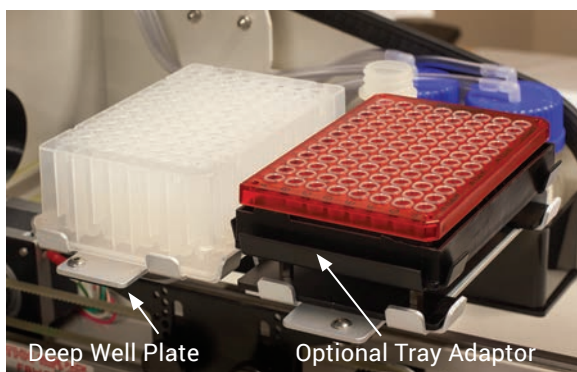
COMPATIBILITY

BSD Punchers are compatible with a wide range of collection device and plates. The tray height can be set to accommodate standard 96 well or deep well plates or test tube adaptors. Optional tray adaptors are available to allow combinations of plate heights and tube adaptors in the same test run.

OPTIONAL EXTRAS

▶ Autotrigger Unit

All BSD punchers come with a foot switch for activating each punch or punch pattern. The Autotrigger function has an optical sensor on the punching deck that senses the presence of a card. Upon detection, the punch is activated after an adjustable time delay. This avoids the need to manually activate the punch using the foot switch and can result in reduced punching times when processing a batch of sample cards.

Autotrigger Unit
Suits BSD600Duet and BSD300 models
Part Number: AS-MOD-AUTO

▶ Dust Extraction System

The dust extraction system has a vacuum system to remove paper dust from the punching deck to keep the area clean and minimise incidence of sample carry-over. The system includes a replaceable filter.

Dust Extraction System
Suits all BSD Models
Part Number: AS-MOD-DE

▶ Other Options

- Plate Adaptors
- Tube Holders
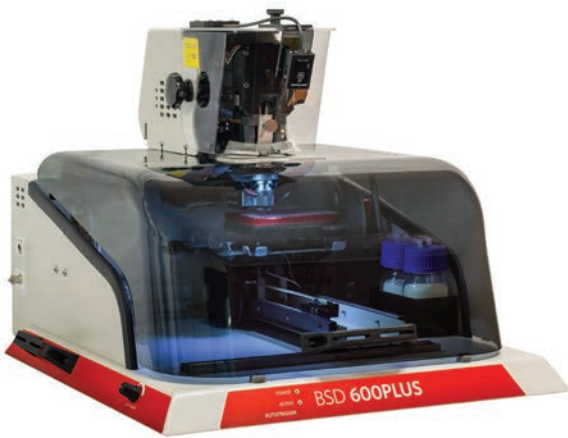- Plate Barcode Reader
- More options available - just ask us!

PRODUCTS

BSD SERIES 3

The BSD100 and BSD600 Plus are third generation instruments with new features and improvements for ease of use.

The BSD100 offers a reliable solution with core features, while the BSD600 Plus comes with a full feature set.

These models share a common platform and employ the latest Mark 4 punch and die design with a quick release mechanism for easy removal for cleaning and inspection.

MODEL 1001A

MODEL 6003A

BSD100	BSD600 PLUS
2 plate capacity	2 plate capacity
96 well standard or deep well types, PCR plate or 96 tube adaptors	96 well standard or deep well types, PCR plate or 96 tube adaptors
Single punch size	2 punch sizes
Air humidifier system	Air humidifier system
Integrated barcode reader	Integrated barcode reader
-	Programmable punching pattern
-	Light targeting system
Autotrigger option*	Autotrigger
Dust extraction system option*	Dust extraction system option*
USB connection	USB connection
External 110-240V power pack	External 110-240V power pack
575 W x 600 D x 500 H (mm)	575 W x 600 D x 500 H (mm)

*Optional Extras

BSD SERIES 2

The BSD300 and BSD600 Duet are second generation BSD punchers with over a decade of field proven reliability. The BSD300 offers a larger plate capacity of up to 6 plates and has been a popular choice for newborn screening.

The BSD600 Duet remains a choice by laboratories with an existing install base of BSD600 Duets with existing operational familiarity and process validation.

MODEL 3002A

MODEL 6002A

BSD300	BSD600 DUET
6 plate capacity	2 plate capacity
96 well standard or deep well types, PCR plate or 96 tube adaptors	384 or 96 well standard or deep well types, PCR plate or 96 tube adaptors
2 punch sizes	2 punch sizes
Air humidifier system	Air humidifier system
Integrated barcode reader	Integrated barcode reader
Programmable punching pattern	Programmable punching pattern
Light targeting system	Light targeting system
Autotrigger option *	Autotrigger option *
Dust extraction system option *	Dust extraction system option *
RS232 port	RS232 port
Internal 110-240V power	Internal 110-240V power
1000 W x 450 D x 400 H (mm)	650 W x 530 D x 460 H (mm)

*Optional Extras

FEATURES
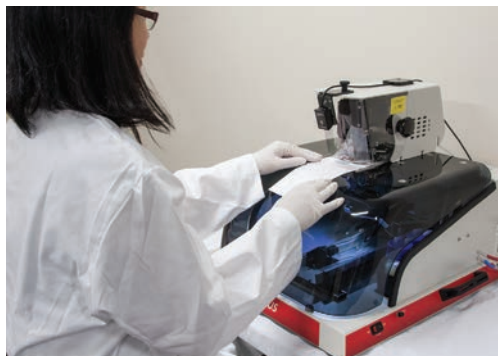
# BSD SERIES 3 HIGHLIGHTS

▶ **1. Improved Ergonomics**

- Curved front for comfort when sitting or standing.
- Clear one-piece cover and internal lighting for high visibility of punching operations.
- Lift-up cover for easy access for plate loading from the front.

▶ **2. Quick Release Punch and Die**

1 Depress plate.   2 Turn lever 180 degrees.   3 Carefully remove punch and die.

Simple locking/release mechanism for punch removal in seconds. Allows swapping of punch and dies with minimal down-time.
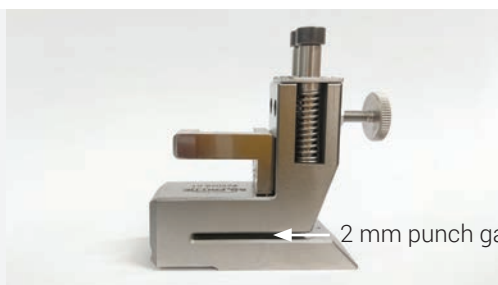
Provides ease of maintenance and cleaning.
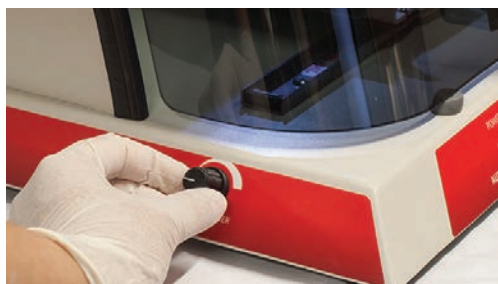
Adjustable autotrigger delay

▶ **3. Integrated Autotrigger**

- Fitted as standard on the BSD600 Plus, optional for the BSD100.
- Automatically activates the punch upon detection of the sample card with an adjustable delay time.
- Can reduce punching times when processing a batch of sample cards.


2 mm punch gap

▶ **4. Extended Sample Compatibility**

- Wider punch gap of 2.0 mm to suit thicker sample collectors or materials.
- Wide range of sizes from 1.0 to 6.0 in single and dual punch size configurations.

▶ 5. Compact Barcode Scanner

- A compact USB unit provides sample barcode scanning and recording in the punch file with corresponding sample locations in the plate.
- An option is available for a plate barcode reader.
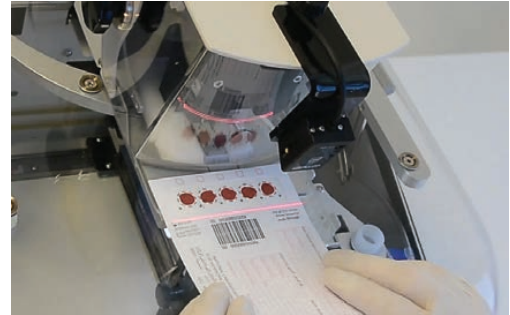
▶ 6. Improved Chute Design

- An improved 5 beam design provides improved detection of disk delivery to the plate, particularly for smaller punching sizes.
- Robust easy grip connector for easy unplugging and re-plugging of the chute connection.
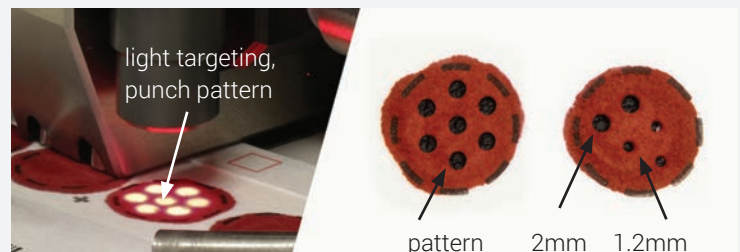

▶ 7. USB Interface

- USB interfaces to host computer for compatibility with desktop and laptop computers.
- USB connection of barcode scanners.

BSD100 vs BSD600 PLUS

manually positioned single punches

light targeting, punch pattern

pattern   2mm   1.2mm

BSD100

- Single punch size
- No light targeting
- No pattern punching
- Manual place for each punch

BSD600 Plus

- Dual punch sizes
- Light targeting system
- Programmable punching pattern
- Shrink pattern feature

SOFTWARE

Easy to use software

All BSD punchers are computer controlled and are complemented with flexible and easy to use software. BSD software allows flexible programming of punching protocols to suit a wide range of laboratory procedures and processes using a variety of media and plate maps.

The software generates output files after every run with each file including fields for test name, plate number and barcode, grid reference, sample barcode, type of disk, fill order and comments.

Files can be easily viewed or imported by third party laboratory information systems and downstream instruments for sample tracking.
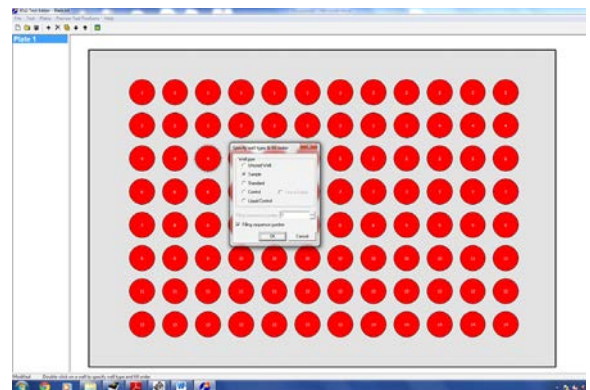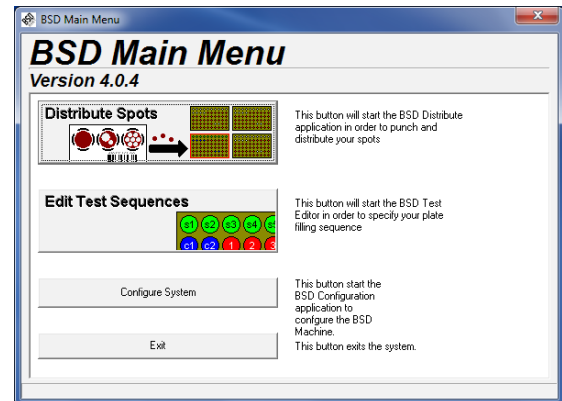
3 Easy Steps

1 Configure instrument settings for barcode and punch file options, punch and cleaning options.

2 Add or Edit test sequences to define content of wells and filling order.

3 Run a test to fill a plate and generate a BSD output punch file and plate map.

BSD Puncher Order Codes

The table below shows the model numbering system for BSD puncher models.

Please specify the model, punch sizes and required voltage when requesting a quote.

Model	Version	Build		Punch size (mm)			Voltage	Plug Style	
				Left	Right				
100	1	A	-	32	XX	-	110	US	*example only*
100	1	A		1.0	1.0		110	AU	
300	2	DO		1.2	1.2		240	EU	
600	3			1.5	1.5			UK	
				2.0	2.0			US	
				3.0	3.0				
				3.2	3.2				
				3.8	3.8				
				4.0	4.0				
				4.7	4.7				
				6.0	6.0				

Example 1:
1001A-32XX-110US
BSD100 (Version 1), Model A, Single 3.2mm punch, 110V, US Plug.

Example 2:
6003A-1220-240AU
BSD600 Plus (Version 3), Model A, Dual Punch 1.2mm / 2.0mm, 240V, Australian Plug.

Example 3:
6002A-3247-240EU
BSD600Duet (Version 2), Model A, Dual Punch 3.2mm / 4.7mm, 240V, European Plug.

BSD

bsdrobotics.com

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Zentech S.A.
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