

2021-22

BSD PRODUCT CATALOG

Biosample Punch Instruments

BSD Brand



BSD punch instruments were first released into the market in the early 1990s. They made their mark in newborn screening and later were embraced by other life science laboratories for forensic and DNA data banking, genomics, pharmacokinetics, and infectious diseases.

To date over a thousand BSD punch instruments have been sold worldwide. They stand the test of time due to the quality and reliability of the instruments, the continual availability of spare parts, and the support of experienced field service technicians around the world.

What are punch instruments?

BSD offers solutions to automate laboratory sample preparation with semi-automated punch instruments. These computer-controlled instruments are used to punch dried biosamples into microtiter plates for subsequent downstream analysis for biochemical or molecular assays.

BSD punch instruments provide full traceability of samples to aide in downstream processing through customisable and user-friendly software. Plate maps are prepared using the BSD software and configured to suit specific assay requirements. Sample barcodes may be scanned and saved with each punch run and data output files may be exported in various file formats for use by third party LIMS software.

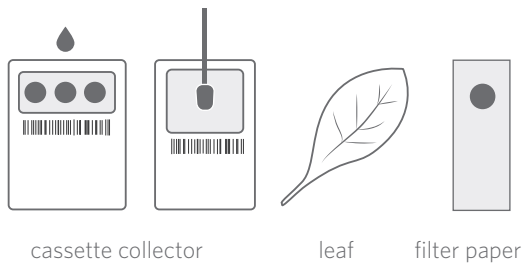
Applications

- Newborn screening
- Forensic and HID
- Human genetics
- Agrogenetics
- Animal genetics
- Pharmacokinetics
- Toxicology
- Drug discovery
- Infectious diseases e.g. HIV, HCV, Malaria



How It Works

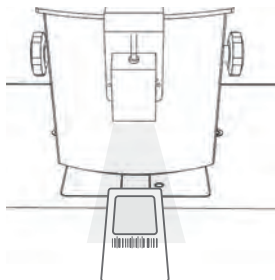
COLLECT SAMPLE



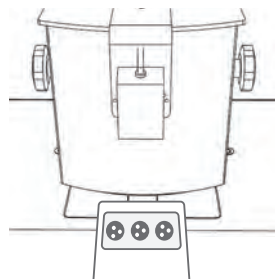
A drop of sample (e.g. blood) is applied directly onto the sample card or with an applicator swab and allowed to dry.

- * Unframed Filter Paper
- * Dried Blood Cassette Collectors
- * FTA Collectors
- * Buccal Collectors
- * Plant Leaf Samples
- * Hair Samples on cards

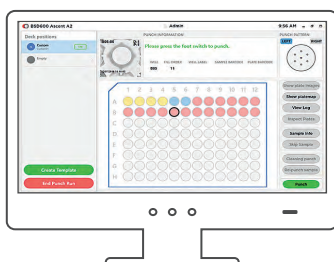
SCAN, PUNCH AND TRACK WITH **BSD**



Barcode reader scans and logs each sample card into the software.



Small circular disks are punched into collection microplates below.



At the end of the test, saved output files can be exported for LIMS software.

Traceability

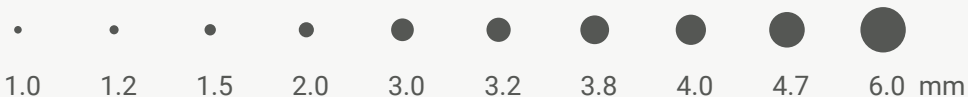
- Accurately track samples from barcode scanning, punching, to output data files.
- A worklist file may be imported to fill plates according to predefined sample barcodes and well IDs.
- Sample and plate barcode scanning and tracking.
- High resolution camera confirmation of punched disks (in latest BSD models).

Reliability

- Punch mechanism is precision engineered using tool steel and carbide components for durability and longevity.
- Programmable cleaning punch function between samples to reduce cross contamination.
- Dust extraction system to reduce paper dust from the punching area.

Flexibility

- Flexible software configuration of plate maps and punching parameters in test editor.
- Scanned barcode or custom naming of samples and plates.
- Punch sizes custom order from 1.0 mm to 6.0 mm. 8mm also available by special order.



Compatibility

- Compatible with 96-well standard and deep well microplates, PCR or tube racks.
- Work with a wide range of sample collectors and filter paper.

Customisation

WHAT SETS US APART Why choose us

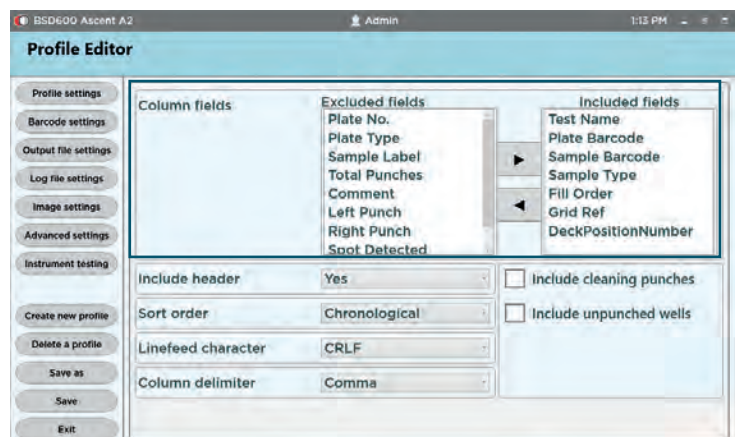
BSD is a trusted brand with a reputation for providing long lasting products for a wide variety of punching applications. We understand that not all laboratories work the same way, and different applications will require different solutions. With the support of our in-house R&D team, we strive to work together to improve and automate your workflow.

Customisation examples include:

- * Matching punch size and pattern to suit special requirements for punch area and sample geometry.
- * Customised plate formats and sizes, including adaptation for agar plates and tube racks.
- * Providing customer software applications for punch data file manipulation and conversion.
- * Implementing special features and functions into regular updates of BSD software.



Leaf punching for genetic analysis



Re-arrange output data field columns in latest BSD software.

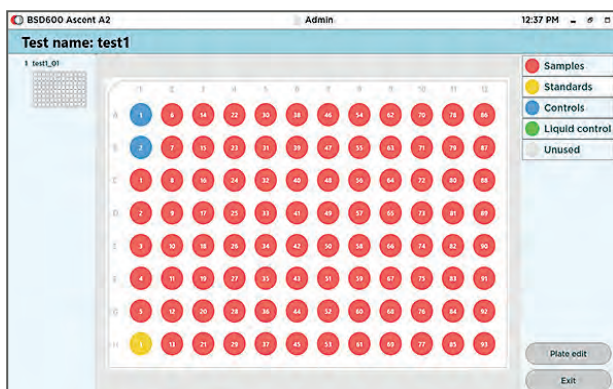
Products

BSD600 *Ascent*

Model: 6004

The BSD600 Ascent is the latest update on the BSD600 series range. This model builds on the proven form, function and performance of the BSD600 series with re-designed electronics and software to support new features such as a touchscreen user interface and high resolution plate validation camera, as well as an additional ionizer system option to reduce static electricity.

The main difference between the BSD600 Ascent A2 vs the M2 model is that the **A2 model has a robotic positioner** - which allows for light targeting of potential punch sites and pattern punching of multiple disks from the same sample.



BSD600 Ascent Software test editor

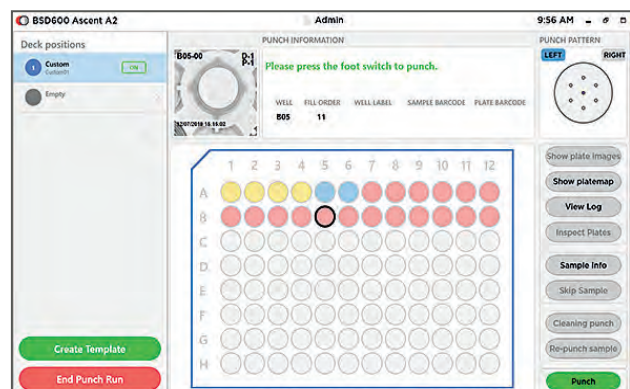


Plate camera view in Punch screen

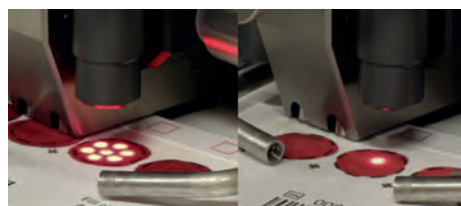
A2 Features

- * BSD Studio Software
- * Two Plate Capacity
- * 96-well, ELISA, PCR, deep well plates or tubes
- * Real Time View
- * Dual Punch Sizes
- * Auto-trigger Function
- * Sample Barcode Reader
- * Air Humidification System
- * Light Targeting System
- * Automatic Pattern Punching
- * Dust Extraction System



Includes:

- * Plate Validation Camera with touchscreen
- * Ionizer System



M2 Features

- * BSD Studio Software
- * Two Plate Capacity
- * 96-well, ELISA, PCR, deep well plates or tubes
- * Real Time View
- * Dual Punch Sizes
- * Auto-trigger Function
- * Sample Barcode Reader
- * Air Humidification System



Includes:

- * Plate Validation Camera with touchscreen
- * Ionizer System

A9 Features

- * BSD Studio Software
- * Dual Punch Sizes
- * **Nine Plate Capacity**
- * 96-well, ELISA, PCR, deep well plates or tubes
- * Real Time View
- * Auto-trigger Function
- * Sample and Plate Barcode Readers
- * Air Humidification and Ionizer System
- * Light Targeting System
- * Automatic Pattern Punching
- * Dust Extraction System
- * Plate Validation Camera
- * Ergonomic Monitor with in-built PC



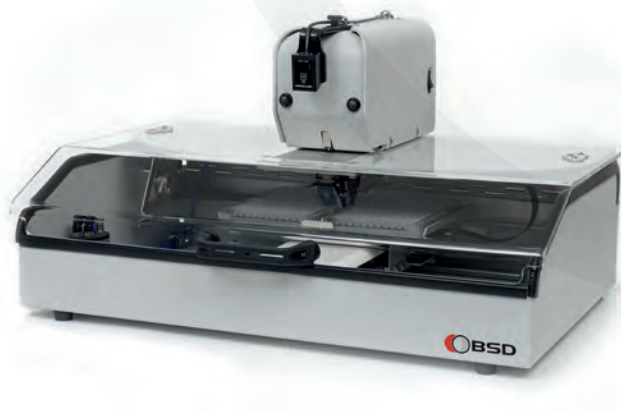
Key Application: Newborn screening

BSD NOVA M4

Model: M4

M4 Features

- * BSD Studio Software
- * Single Punch Size (1.0, 1.2, 1.5, 2.0, 3.0, 3.2, 3.8, 4.0, 4.7 or 6.0 mm)
- * **Four Plate Capacity**
- * 96-well standard height plate only
- * Sample Barcode Reader
- * Air Humidification System
- * Auto-trigger Function



Note:

BSD Nova M4 may not be available in all regions.

Servicing

CUSTOMER SATISFACTION

With every service

BSD Robotics aims to achieve superior service delivery with a long-term objective by providing onsite preventative maintenance and solutions backed by the informative reports you need. With extensive historical product knowledge and the use of only genuine spare parts, you can be assured your instrument is running at peak performance.

Our service team is composed of experienced technicians, each capable of in-depth onsite management and troubleshooting. Backed by factory support and expertise from our engineering and manufacturing departments, we provide an array of service packages to meet all types of customer requirements.

Service Plans

	BRONZE 	SILVER 	GOLD 
Repair visit	1	1	1
Emergency visit	-	-	1
Preventive maintenance service	1	2	2
Technical support - phone / email	✓	✓	✓
Free software upgrades	-	-	✓
Spare parts	List price	15% Discount	Included*

** Conditions apply*

Models serviced: BSD100, BSD300, BSD600 Duet, BSD600 Plus, BSD600 Ascent, BSD700, BSD Nova M4 and BSD Galaxy A9.

For a customised quotation to suit your individual requirements,
please email bsd@bsdrobotics.com for pricing.

Comparison



FEATURES	BSD600 Ascent M2	BSD600 Ascent A2	BSD Nova M4	BSD Galaxy A9
Plate Capacity	2	2	4	9
Plate Compatibility	96-well standard and deep well microplates PCR plates /tube racks	96-well standard and deep well microplates PCR plates /tube racks	96-well standard microplates	96-well standard and deep well microplates PCR plates /tube racks
Punch System (1.0, 1.2, 1.5, 2.0, 3.0, 3.2, 3.8, 4.0, 4.7 to 6.0 mm punch combinations) ●	dual	dual	single	dual
Removable punch head (quick release)	✓	✓	✗	✓
Integrated Barcode Reader ●	✓	✓	✓	✓
Cleaning (waste) container	✓	✓	✓	✓
Light Targeting System ●	✗	✓	✗	✓
Automatic Pattern Punching ●	✗	✓	✗	✓
Dust Extraction System	✗	✓	✗	✓
Auto-Trigger Function ●	✓	✓	✓	✓
Air Humidification System ●	✓	✓	✓	✓
Ionizer System ●	✓	✓	✗	✓
Plate Validation Camera & Touchscreen ●	✓	✓	✗	✓
Computer Connectivity	USB			
Computer Software ●	BSD Studio Software (Win 10 OS)			
Power Supply	external 110-240V			
Output File Formats ●	.csv / .txt / .dat / .xml			
Physical Dimensions (W x D x H) mm	515 x 585 x 425*	515 x 585 x 425*	650 x 435 x 350	855 x 575 x 385

* Height does not include any tablet mount.

- Validation and Traceability
- Flexibility
- Robotic punch positioner
- Anti-static

Disclaimer: This document provides general information only and is subject to change at any time without notice.



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