



BSD 600 *Ascent A2*

Semi-automated Punch Instrument

Two Plate Capacity
Dual Imaging Systems
Open Systems Integration
Optimised for Molecular Assays



VALIDATION • AUTOMATION • TRACEABILITY



The BSD Difference

BSD Robotics has over 30 years' experience providing innovative biosample punch instruments for life science applications. The BSD brand represents a dedication and specialisation in the design, manufacture and lifetime support of sample preparation instruments.

Supporting life science laboratories worldwide, our highly experienced service team provide assurance for maximum instrument performance and workflow efficiency. BSD Products are proudly recognised worldwide as the gold standard in forensic databasing laboratories and as the preferred alternative in newborn screening.

ASCENT A2



The BSD600 has a proud product history having been supplied to forensic laboratories for over 25 years and installed in more than 30 countries worldwide. The BSD600 Ascent A2 represents a design update that builds on the proven form, function, and performance of the BSD600 series. The BSD600 Ascent satisfies the needs of modern laboratories with enhanced traceability, data automation and system interfacing features. Since 2018, the BSD600 Ascent A2 has established a reputation as a laboratory staple and continues BSD Robotics' history as the market leader in forensic applications.

Tradition + Technology

Originally developed for forensic biology applications, the BSD600 Ascent has features and functions, backed by BSD customisation services, to meet application needs in a wide range of laboratories. Traditional features include fast dual punch positioning, programmable punch tool cleaning, internal humidifier and paper dust extraction. New enhancements include LED illumination, digital imaging and recording, intuitive touch-screen operation, improved static mitigation, extended punch size range, labware and card compatibility, and new data automation software.



Flexibility of choice without compromising on traceability in a compact benchtop solution.



A Gold Standard

With widespread installations and validation in forensic, justice and police departments, genealogy, paternity, genetic, DNA data banking and health screening laboratories, the BSD600 is the instrument of choice for molecular assays. Comprehensive system configuration, combined with hardware systems for mitigation of static electricity, programmable punch cleaning functions and extended sample traceability combine with intuitive and rich software features to suit the needs of a broad variety of workflows.

VALIDATION AUTOMATION TRACEABILITY

Assurance You Can Depend On

Get the results and support you need, backed by the renowned reliability and operational lifetime of BSD instruments and outstanding technical support.

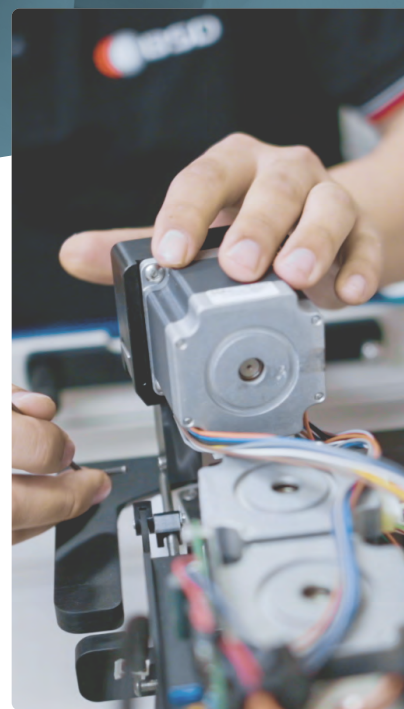
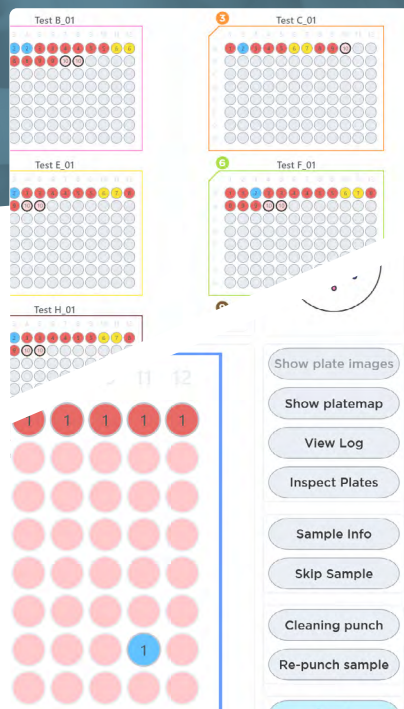
Comprehensive results are recorded for each punch run with the ability to select the data and format to suit current and future information requirements. Each punch can be tracked and recorded for complete traceability through a comprehensive panel of variables and images from the sample and each receiving well.

Two image processing systems are used to display and capture images of the punch area and plate wells. Punch site selection is performed by assessing sample image metrics in real time to reduce operator decision making and help to improve first-pass success rates.



Safety And Security

The BSD600 Ascent A2 includes a system to reduce airborne paper dust and dust accumulation on the instrument surfaces to ensure good working health of punch operators. Protective covers and safety interlocks are additional safety features of the design. A new feature of the Ascent series adds detailed user permissions so that individual punch operators have tailored access to specific features and functions for operational security. The system runs independent of a network connection and can be optionally interfaced with a wired network.



More Flexibility

Configure your tests to suit your needs and start punching in minutes.

Created to ensure ease of navigation and overall usability from initial setup to the very last punch. BSD Studio software combines functionality with usability. Whether you need to punch sequentially, via barcodes or by plate maps, BSD Studio software allows you to have full control over your sample punching process.

More Integration

Connect to the systems you need with ease.

BSD Studio software is packaged with the new BSD Integrator providing a greater degree of flexibility to streamline and automate your workflow. This highly configurable worklist file conversion software allows for open systems integration with LIMS, liquid handlers, analytical instrumentation and genetic analysers.

Ability to produce multiple output file formats from each test.

Output file processing runs automatically after each punch run.

More Support

High quality instrumentation backed by expert service and support.

Investing in BSD, gives your laboratory benefits from high-quality product performance coupled with peace of mind for the lifetime of your instrument. BSD is committed to assuring both durability and reliability through expert service knowledge and support to ensure maximum productivity for your laboratory.

FEATURES & SPECIFICATIONS

Instrumentation

Plate Deck

Two plate capacity. Compatible with ANSI SLAS 1-2004 microplate dimensions. Suits standard 14mm high microplates, PCR formats, deep well and tube racks up to 44mm height.

Punch Head

Dual (two punch sizes) manufactured from high precision steel. Custom size selections from 1.0, 1.2, 1.5, 2.0, 3.0, 3.2, 3.8, 4.0, 4.7 to 6.0mm combinations. Quick release for easy cleaning or changing punch size.

Mobile Chute

An electronically controlled two-piece assembly that connects to the plate and guides the path of paper disks to fall directly into a well.

Punch Activation

Three ways to punch: (1) Footswitch, (2) Auto-trigger function, or (3) Software control screen.

Auto-trigger Function

An automatic punch function detects the presence of a sample card on the card platform and activates the punch. A footswitch can be used in parallel with the auto-trigger turned on or off.

Physical

Hardware

Windows PC with Windows 11 Pro OS and touchscreen monitor.

Software

Includes one license copy of BSD Studio Software and BSD Integrator application.

Power Supply

External 110-240V low leakage medical grade power adaptor. The instrument is internally powered from 24V DC.

Physical Weight & Dimensions

515 W x 585 D x 425 H* mm. Weight: 25 kg / 55 lbs.
(* height does not include any tablet mount or bracket)

System

Disk Detection System

A high-speed optoelectronic sensor is used to validate the passage of punched disks through the mobile chute.

Decontamination

Programmable cleaning punch used to perform multiple cleaning punches into a dedicated cleaning container. Multiple cleaning punches may be programmed between samples. The dust extraction system reduces the amount of paper dust gathered around the punch site.

Light Targeting System

Precise LED illumination of punch location. Position the sample card to the most desirable location under the programmed light pattern.

Pattern Punching

Punch multiple disks from any one sample. Programmable pattern to punch up to 7 disks with the aid of light guides. Ability to punch combinations from two different punch sizes in the same punch run.

Sample Compatibility

Compatible with all sample collection filter paper, dried samples on filter paper and framed or unframed cards. E.g. Guthrie cards, Whatman FTA cards, FTA PlantSaver cards Protein Saver cards and Bode Buccal DNA collectors.

Static Control

Static electricity is mitigated by the Ionizer system in combination with the Air Humidification system. An electronically controlled internal micropump provides positive air flow to assist the passage of punched disks and considerably reduce punch disk errors. The Ionizer can be turned off for biochemical assays.

Documentation

Barcode Readers

An integrated barcode reader positioned above the card platform for quick scanning of card barcodes. Plate barcodes are scanned using an internal reader.

Plate Validation Camera

Image is displayed prior to and after each punch to verify correct placement of each disk in the well. Text data specific to the well is saved with each image.

Worklist Files

A worklist may be imported to fill plates according to sample barcodes.

Output Files

Generate output files with logs of selectable fields. Output files saved as .csv / .txt / .dat / .xml formats.



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Manufactured in Australia by BSD Robotics.