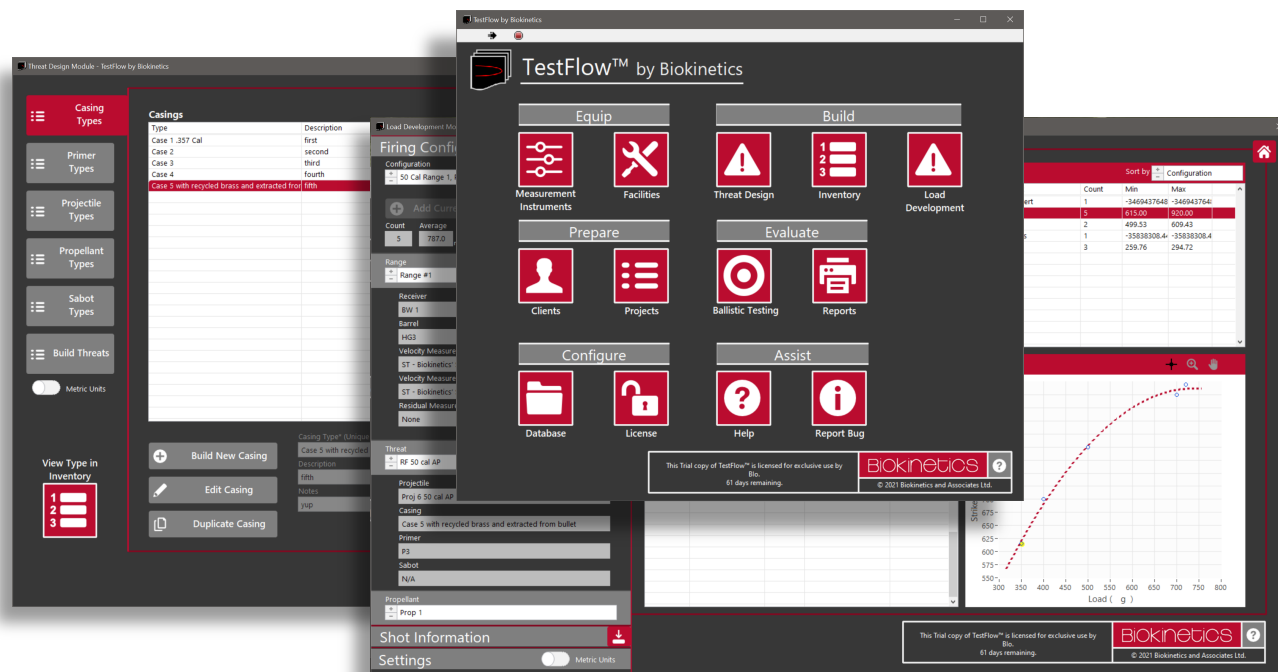


# TestFlow™ – Ballistics Testing Workflow Software

Ballistics workflow software for testing and evaluating the ballistics performance of armour systems

## Ballistics Workflow Software – TestFlow™



### Overview:

Biokinetics' ballistics workflow software TestFlow™ provides a standardized process for the collection and documentation of ballistics testing to meet the requirements of body armour performance standards (e.g. NIJ 0101.06). The software includes the ability to define test range set-ups, threats and load profiles, test programs including test conditions, armour configurations and all measurements with traceability to their certifications. TestFlow™ guides the technician through the data collection and data management processes with intuitive menus and forms with editing features and automated report generation. This includes clay calibration, labelling verification, P-BFS, V50 and Vproof ballistic limit assessments. TestFlow™ is empowered by a Microsoft Access® database for archiving and query of all test setups, configurations, test programs and inventory.

### Features:

- **Keeps track of test equipment and setups:** Document all measurement quantities and instruments with traceability to certificates, record all test range setups including witness materials, clay ball drop setups, barrels, universal receivers, velocity measurement systems and range configurations using any combination of the documented components.
- **Build and track threats and define load curves:** Document all components (projectiles, propellants, primers, casings, sabots), develop loads, define load curves and track inventory.
- **Easily define projects and test groups:** Link test projects to client lists, project codes and proposal numbers along with armour models and performance assessment type. Allows for multiple test groups within each project for different test requirements.
- **Define ballistics testing requirements:** Define armour sample configuration, serial/lot numbers and workmanship with quick duplication of entries. Assign armour to test groups including test type, conditioning, test standard, threat, number of samples and initial velocity requirements. Creates customized workplans or quickly set-up new workplans using built-in templates from standards [NIJ 0101.06]. Standardized all-in-one record keeping for ballistic limit testing. Includes clay calibration, label verification, and P-BFS, V50 and Vproof testing capabilities.

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- **Facilitates testing and recording:** Intuitive interface for entering, saving and editing shot history. Records measured and residual velocities, yaw measurements, impact location and outcome. Computes target strike velocity using projectile drag equations [AEP 2920]. Automatically suggests the next velocity based on the Up-Down firing procedures of either [AEP 2920] or [NIJ 0101.006]. Recommends propellant type and quantity based on firing history to quickly achieve intended velocity and includes display of shot calibration curves.
- **Get insight into your data:** Updates shot history and output curves in real time. Indicates when  $V_{50}$  computation conditions are met according to standards [e.g. AEP 2920]. Multiple  $V_{50}$  computation methods including Logit regression [NIJ 0101.06], Probit regression and arithmetic procedure [AEP 2920]. Includes capability to report a second ballistic limit (e.g.  $V_{01}$ ,  $V_{10}$ , etc.).
- **Generate reports.** One-click automated MS Excel® report generation using customizable templates. Automatically generated time stamps and testing period improves estimates of effort required for future test programs.

## Specifications

Distribution:	Licensed with hardware Dongle	Computer Requirements:	PC: Intel i5 or better OS: Windows 11, 64 bit Other: Microsoft Office 365, 64 bit
Features:	<ul style="list-style-type: none"> <li>• Test equipment and configuration documentation.</li> <li>• Tacking of all instruments and calibration certificates.</li> <li>• Documentation of ballistics clay and ball drop setup, witness materials, and fixtures.</li> <li>• Documentation of threat components and combinations, load curves and inventory tracking.</li> <li>• History of customers, project codes, proposals, test program configuration, assessment type.</li> <li>• Keeps track of armour models/configuration and workmanship.</li> <li>• Defines test matrix including armour sample, layup configuration, sampling requirements, conditioning, test standard and initial velocity requirements.</li> <li>• Creates custom workplans or uses standard templates.</li> <li>• All-inclusive record keeping of ballistic limit testing (P-BFS, <math>V_{50}</math>, <math>V_{proof}</math>, clay calibration, labelling)</li> <li>• Documents shot history and results (shot velocity, residual velocity, yaw, impact location, outcome).</li> <li>• Computes strike velocity per AEP 2920 and guides up-down firing procedures of NIJ 0101.06 and AEP 2920. Recommends propellant type/amount based on history.</li> <li>• Instant feedback of compliance with <math>V_{50}</math> computation conditions per NIJ 010.06 and AEP 2920.</li> <li>• Data analysis with Logit, Probit regressions or Arithmetic Mean procedure. Can include second ballistic limit (<math>V_{01}</math>, <math>V_{10}</math>).</li> <li>• Automated reports with MS Excel® customizable templates.</li> <li>• Automated record keeping of time stamps and testing period.</li> </ul>	Part Number:	BWS-001

(All specifications are subject to change)