

Guide to the Buxco[®] E-Cig/Vapor/Tobacco Smoke Generator

Spend less time on maintenance
and more time on research.

- Ultimate versatility
- Simple to use
- High throughput
- Built to last



DSI[™]
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Get More from a Smoke Generator

The Buxco E-cigarette, Vape, and Tobacco (EVT) Generator provides ultimate versatility, enabling delivery of multiple smoke types simultaneously. This is possible through a modern, software-controlled system capable of assessing the amount of smoke aerosolized by a device and inhaled by subjects, leading to unprecedented research data. The EVT accepts up to three smoke stations, each working with any type of smoking device, including button-activated pens/MODS, to generate smoke aerosol to single or multiple destinations.

Flexibility and Productivity

- Ability to work with different devices or e-juices simultaneously reduces experiment variability and increases productivity
- Greater aerosol output with a small footprint and reduced cost
- All smoke stations can operate in-sync creating deep inhalation puff profile

Deliver tobacco, e-cigarette, and vape smoke simultaneously.



Patented Design - Smoke Bellows

The EVT Smoke Generator's Smoke Bellows uses an important patented design which separates all smoke from the instrument itself. The molded, disposable nature of the part significantly reduces the cleaning and maintenance required while increasing product reliability and longevity:

- Rated for 10,000 puffs
- Easily replaced by user, software automatically checks for proper installation
- Keeps 100% of aerosol out of instrumentation, protecting critical components
- Maintains ISO puff requirements
- Bellows life puff counter included in EVT software
- Disposable nature allows user to associate bellows with specific aerosol, avoiding unwanted contamination

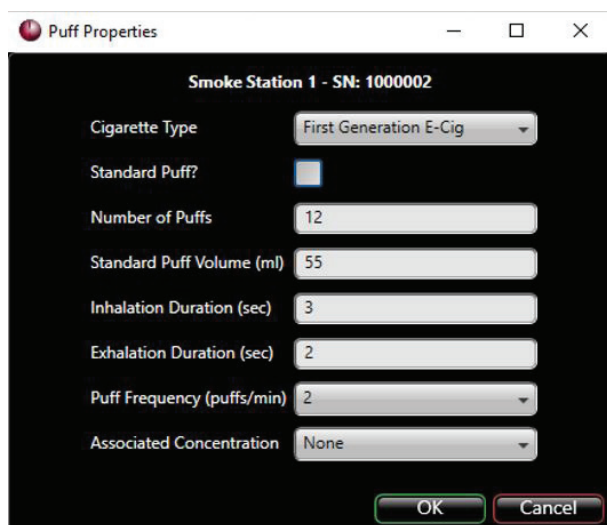


By removing the risk of smoke residue build-up within the instrument, DSI's smoke bellows design increases the life of the instrument.

Standard and Custom Puff Profiles

The EVT Smoke Generator is a software-controlled instrument that accepts user-defined criteria to create countless puff profile regimens. Your unique experiments are easily stored in the software, allowing highly reproducible studies from day-to-day and technician-to-technician.

- Choose between the following standard devices:
 - Tobacco and marijuana cigarette
 - First-generation electronic cigarette
 - Mid-size pen, button-activated vaporizer
 - MOD button-activated vaporizer
- Device type selection automatically populates ISO regulated puff profile regimen
- For each device type, users can alter the volume, inhalation/exhalation duration and puff frequency to generate countless custom profiles
- EVT software notifies user if custom puff profile is achievable in real-time



Puff Properties

Smoke Station 1 - SN: 1000002

Cigarette Type: First Generation E-Cig

Standard Puff?:

Number of Puffs: 12

Standard Puff Volume (ml): 55

Inhalation Duration (sec): 3

Exhalation Duration (sec): 2

Puff Frequency (puffs/min): 2

Associated Concentration: None

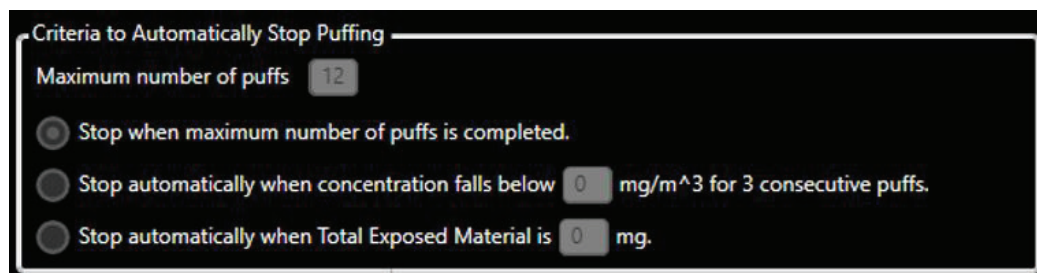
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Customizable software settings give you control over your entire experiment.

Smoke Exposure Protocols

The EVT Smoke Generator offers three distinct methods to stop operation, yielding easy-to-use, reproducible experiments:

- Number of Puffs: the user specifies the number of puffs the station will smoke, and once that number is reached, the station's operation ceases.
- Pod is Empty: cease puffing when real-time aerosol concentration falls below a certain level, indicating that the e-juice in the respective electronic-cigarette has run out.
- Total Exposed Particulate Matter: EVT continues to operate until a user-defined aerosol amount has been aerosolized by the respective station.



Criteria to Automatically Stop Puffing

Maximum number of puffs: 12

Stop when maximum number of puffs is completed.

Stop automatically when concentration falls below 0 mg/m³ for 3 consecutive puffs.

Stop automatically when Total Exposed Material is 0 mg.

Cease exposure automatically according to your study design.

Complete ISO Conformance

Conduct your studies with assurances that the smoke is generated under ISO regulated puff property specifications, including electronic and traditional cigarettes:

- Puff volume, duration and frequency
- Trapezoidal and bell puff profile shapes
- Puff regulated flow rate
- Cigarette holder labyrinth
- Adjustable smoke device stationary angle
- Timing between puff button-activation and puff
- Software generated study parameters report

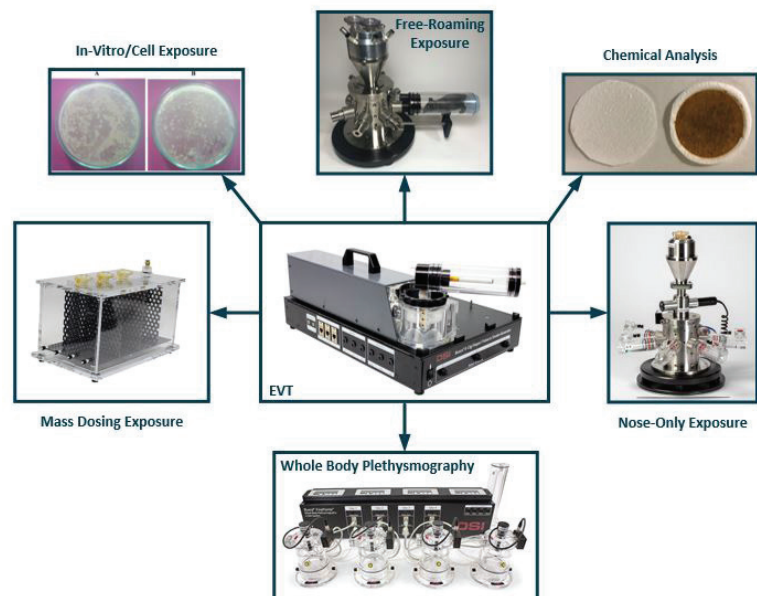


Button-activated device holder with adjustable angle, conforming to ISO standards.

Flexible System Configuration

From in-vitro exposure to precise in-vivo inhalation studies with pulmonary function endpoints, DSI's systems are a one-stop-shop for smoke related research. The EVT Generator can be integrated with DSI's inhalation and respiratory solutions including:

- Mass Dosing Chamber
- Free-Roaming Exposure Tubes
- Nose-Only Inhalation Tower
- Whole Body Plethysmography
- In-Vitro cell exposure
- Chemical Analysis



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