



Critical and Volumetric Flow Controllers from FIA

Control and monitoring of the air-flow is pivotal when it comes to performance testing of inhalation devices. FIA offers three models ranging from our standard trigger box to our most advanced critical flow controller.

Typical usages are for delivered dose uniformity and aerodynamic particle size distribution testing. The products have been designed from both the user and regulatory perspective, why the equipment is compact and user-friendly but still complies with the European Pharmacopoeia and the US Pharmacopoeia. Acknowledging a lab set up may become crowded with lots of tubing and electrical cords, FIA's range of equipment minimises the number of units the analyst needs to handle on the bench.



Trigger Model I



Optional output and inputs configurable according to customer needs.

Trigger Box Model I – Standard

This model gives the analyst the basic functionality in a very compact and easily managed format.

Key features are:

- Generous flow path which minimizes loss of flow and helps attaining the critical flow condition (P2, P3 ratio)
- Flow control valve
- Timer controlled valve
- Resettable counter for actuations
- Optional
 - Input to trig from external equipment or from optional handheld or foot switch
 - Configurable electrical, logical and pneumatic output to trig other equipment (such as a camera) at a set time after trig is pressed.



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Trigger Model II



Detail of the laminar flow element and connecting tubes measuring the air flow of Trigger Model III.

Trigger Box Model II – Critical Flow Controller

This model builds on the functions of Model I with the addition of differential pressure transducers for measuring and presenting pressure at P1, P2 and P3.

Key features are:

- Generous flow path which minimizes loss of flow and helps attaining the critical flow condition (P2, P3 ratio)
- Flow control valve
- Timer controlled valve
- Measurement of P1 and critical flow (P2, P3 ratio)
- Resettable counter for actuations
- 5" TFT touch screen for control and presentation of measured values, suitable to operate with or without gloves
- Ports for external printer (list of dose #, dP and ratio) and USB for export to usb-stick in .csv format
- Optional
 - Input to trig from external equipment or from optional handheld or foot switch
 - Configurable output to trig other equipment (such as a camera) at a set time after trig is pressed.

Trigger Box Model III – Critical Flow Controller with Flow Measurement

Trigger Box Model III has the same format as Model II, and is also equipped with an internal flow meter. With this equipment the user has full control of the testing, including volumetric flow measurement. The latter is enabled by an integrated laminar flow element downstream the test set-up (e.g. dose collector or impactor). By using a conversion factor set at the factory and simultaneous pressure measurement, the air flow into the device can be calculated. The principle has proven to be robust and has been used by FIA's customers for over 25 years but has now been integrated into a compact format for routine use.

Key features are:

- Generous flow path which minimizes loss of flow and helps attaining the critical flow condition (P2, P3 ratio)
- Flow control valve
- Timer controlled valve
- Measurement of P1 and critical flow (P2, P3 ratio)
- Measurement of volumetric air flow into the device
- Resettable counter for actuations
- 3.5" TFT touch screen for control and presentation of measured values, suitable to operate with or without gloves
- Ports for external printer (list of dose #, dP and ratio) and USB for export to usb-stick in .csv format
- Optional foot switch (frees up hands working with the device)
- Optional
 - Input to trig from external equipment or from optional handheld or foot switch
 - Configurable output to trig other equipment (such as a camera) at a set time after trig is pressed.

For contact and more information

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