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Made in the USA

Model FCT

47mm Filter Cassette Opening Tool Instructions

Tool Operation

Model FCT is a lab-grade tool for separating the two halves of 47mm air sampling filter cassettes in order to install or remove the filter disc. The tool is designed to open the cassette by spreading the two white plastic parts straight apart along the main axis, not by wedging them apart from one side. This reduces stretching and wear of the cassette plastic. This tool also easily opens tight fitting filter cassettes.

1. With the deeper (filter) side of the cassette facing upwards as shown in the photo, load the narrower waist section of the filter cassette into the large slot on the FCT tool. Make sure that you slide the cassette all the way to the back of the slot in the tool.
2. Press the black knob downward slowly and firmly to open the cassette.

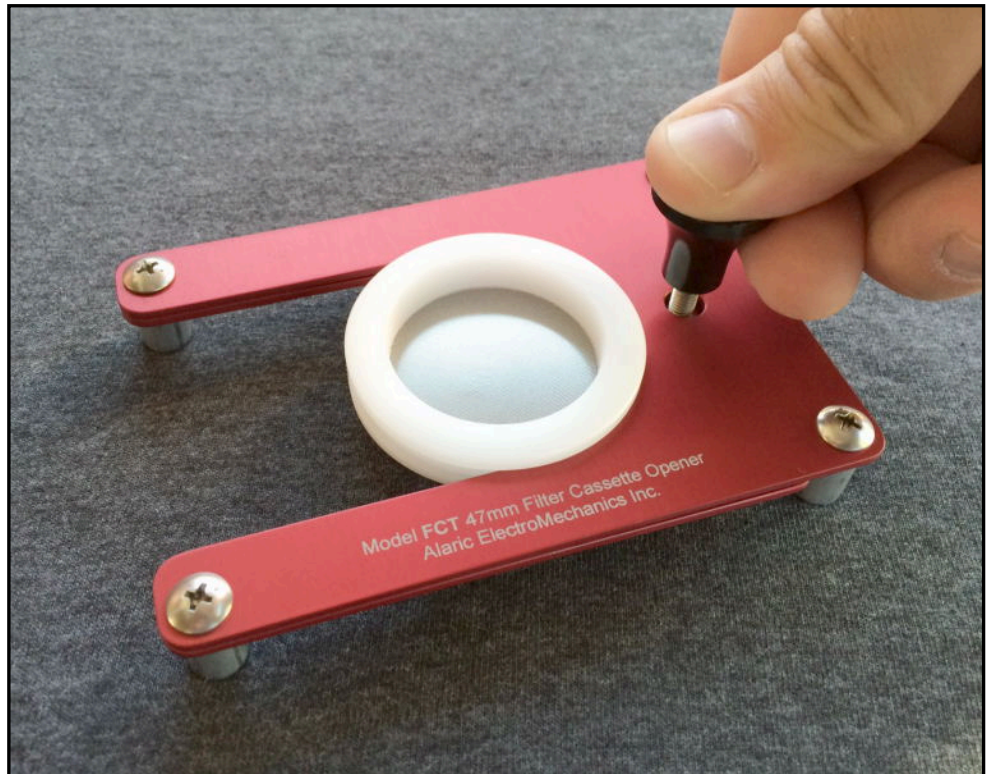
Note: The bottom of the black knob limits the maximum travel of the lower section of the opener. With the knob fully screwed onto its stud, the opener will usually leave the two halves of the cassette just slightly engaged with each other. The knob can be unscrewed a couple of turns in order to increase the travel if preferred. With proper technique, the cassette assembly should not pop apart violently when opening.

For particularly tight cassettes, rotate the cassette in the slot and press the knob down several times to work it open. Tight filter cassettes usually loosen up slightly after a few uses.

Never pry filter cassettes apart with a screwdriver or any other improvised tool that could gouge the plastic surfaces.

Application Notes

Generally, a laboratory technician loads a clean, pre-weighed filter disc on top of the steel support screen, then closes the cassette and places it into a protective transport container. The cassette is transported to the field site and placed into the air sampler by a technician. Air is drawn through the filter for a period of



time, after which the cassette is removed, placed back into the transport container, and returned to the laboratory for analysis.

Air sampling filter cassettes usually should not be disassembled in the field.

In most cases, there are specific requirements for how the cassettes are to be packed, transported, and shipped. More detailed procedures for cassette operation and filter handling can be found in *EPA Quality Assurance Document 2.12: Monitoring PM_{2.5} in Ambient Air Using Designated Reference or Class I Equivalent Methods*.

Maintenance & Cleaning

The Model FCT tool should not need to be disassembled for cleaning. The screws are retained with Loctite® and will be difficult to remove without the application of heat. The unit may be cleaned with isopropyl rubbing alcohol and a lint free tissue, or it can be rinsed with warm water.

Warranty

Alaric ElectroMechanics Inc. cassettes openers are warranted against defects in materials and workmanship for a period of one year from shipment from the factory, when used per these instructions. This warranty does not apply to products that have been subjected to misuse, negligence, accidents, acts of nature, or to products that have been modified, altered, or used for an application other than intended. Any product found to be defective will be repaired or replaced at our option. The liability of Alaric Electromechanics Inc. shall not exceed the purchase price of the product.