



**WEARABLE, REAL-TIME DPM / EC  
MONITOR REPLICATES NIOSH 5040**

## FLIR AIRTEC™ DPM MONITOR

The Airtec Diesel Particulate Monitor (DPM) from FLIR displays elemental carbon levels in real-time, taking the measurement out of the laboratory and placing it in the hands of the mine operator/ventilation engineer. Sensitive, rugged and easy-to-use, the Airtec monitor provides results that are time-and-space-resolved. This capability enables rapid modification of vehicle use, personnel placement and mine or building ventilation. The monitor uses technology developed by the diesel particulate group at the NIOSH Pittsburgh Research Laboratory and has been determined to precisely replicate results from their method 5040 test.

[www.flir.com/airtec](http://www.flir.com/airtec)



Available for Rental at:  
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### Product Features

- Lightweight, portable, and rugged design
- Large LCD display with backlighting
- Wearable by miners on a belt loop or vehicle/wall mounted
- High sensitivity to DPM
- Contains a flow-selectable air pump
- Equivalent results to NIOSH method 5040
- Long battery life operation (>12 hr continuous use) or AC power

### Benefits

- Real-time results — No more waiting days or weeks for results
- Decreased DPM monitoring costs
- Helps prevent MSHA non-compliance
- Increased miner safety
- High DPM level alarms
- Enables VOD and engineering control evaluation
- Bolsters confidence in a healthy environment

### Operational Advantages

- No filters to send to an outside lab where all measurements are done on the instrument
- Easy-to-use, self-explanatory interface
- Verifies effectiveness of ventilation
- Generates dozens to thousands of EC concentration values for less than a single NIOSH 5040 test
- Specifically detects DPM (via EC measurements); no sensitivity to common mine interference

## SPECIFICATIONS

Sensitivity	< 15 µg/m³ elemental carbon (EC)
Dynamic Range	9-600 µg/m³ (8 hr TWA EC)
Data Archive	2.75 to 66.6 days (1 min. to 1 hr sample intervals)
Output	LCD display with user-controlled backlight; User selectable 1, 5, 15 min. averaging EC and TC data logged 8 hr TWA DPM levels; Mini-USB connection
Alarms	LCD alerts user of Low battery, Filter change, and Pump flow
Power	7.4 VDC (built-in Li-ion rechargeable battery); 100 - 240V AC adaptor
Battery Life	>12 hrs (continuous use)
System Weight	1.5 lbs (681 g)
Dimensions	4.75" (H) x 5.25" (W) x 2.5" (D) / 12.1 cm (H) x 13.3 cm (W) x 6.4 cm (D)

## Ordering information

350-10595	Airtec Elemental Carbon Monitor
ATC-01-A	Airtec Filter Cassette
ATC-02-B	Airtec Prefilter Cartridge
ATC-03-KIT	Airtec Filter/Prefilter Kit (3 Filter Cassettes and 1 Prefilter Cartridge)
ATC-04	Airtec Inlet Prefilter Assembly
ATC-03-KIT-1MO	Airtec Consumable Kit* (1 Month Supply) - 30 Cassettes & 10 Cartridges
ATC-03-KIT-3MO	Airtec Consumable Kit* (3 Month Supply) - 90 Cassettes & 30 Cartridges



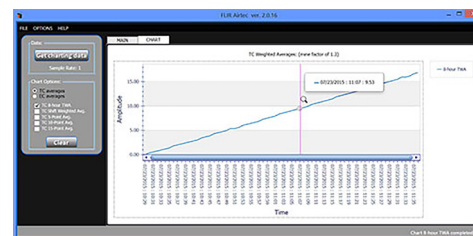
Includes Airtec monitor, software, inlet prefilter assembly, five filter cassettes, two prefilter cartridges, USB to mini-USB PC cable, rechargeable battery with 9V/2A Universal AC adaptor (100-240VAC)



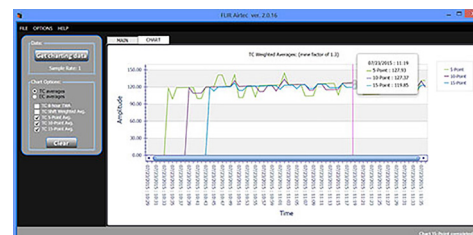
Lightweight and wearable on a belt loop

## AIRTEC SOFTWARE

- Windows compatibility
- Sorting of multiple recorded sessions
- Full graphing capabilities for both Elemental and Total Carbon measurements:
  - 8 hour TWA
  - Shift-weighted TWA
  - 5, 10, and 15 sample point average
- Adjustable Mine Conversion Factor for converting Elemental Carbon measurements to Total Carbon (NIOSH 5040 test required to determine Conversion Factor)
- Adjustable flow rate



8 Hour Time Weighted Average



5, 10 and 15 Point Running Averages

Start Time	End Time	Sample Rate (min)	Data Points
10/28/2015 18:36:00	10/29/2015 19:43:00	1	68
10/28/2015 19:48:00	10/29/2015 09:32:00	1	585
10/29/2015 09:35:00	10/29/2015 13:19:00	1	465
10/29/2015 16:13:00	10/29/2015 16:54:00	1	42
10/29/2015 20:01:00	10/29/2015 20:20:00	1	20
10/29/2015 22:19:00	10/29/2015 22:32:00	1	14

Sorts Multiple Sessions

Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)

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