



Thermo Scientific ECA-3 Online Elemental Coal Analyzer

The third generation Thermo Scientific™ Elemental Coal Analyzer™ (ECA-3) provides minute-by-minute quality analysis of your critical process streams to facilitate sorting, blending and out-of-seam dilution control. With the ECA-3, you can control coal quality in real time, and improve the efficiency of your operation.

The Thermo Scientific ECA-3 is a Prompt Gamma Neutron Activation Analyzer (PGNAA) designed to mount around an existing conveyor belt and analyze the composition of the total burden of coal on the belt in real-time. An optional moisture analyzer provides additional reporting of heating value and Lbs SO₂ per million BTU. Online quality analysis improves efficiency leading to increased yield with less waste.

The operator interface to the instrument is through the unique and state-of-the-art Omni View software package. Omni View processes, displays and archives data while at the same time tracks the health

of the system. Omni View is highly configurable and allows users to get the most from their online instrument. For further information please reference the Omni View data sheet.

The ECA-3 provides the ultimate performance in cross-belt, online elemental analysis of coal. Instantaneous coal quality data enable operators to make pro-active control decisions to improve your bottom line.



The ECA-3 Measures and Reports

- Ash
- Moisture
- Al₂O₃
- Na₂O
- TiO₂
- N
- Sulfur
- SiO₂
- Fe₂O₃
- CaO
- K₂O
- Cl

The ECA-3 Calculates and Reports

- Heating Value (kcal/kg, kJ/kg or BTU/ lb)
- Lbs SO₂ per million BTU

ECA - 3 Elemental Coal Analyzer Specifications

System Assembly Specifications

| | | | | |
|------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Conveyor Belt Sizes | 600 mm to 1060 mm (24" to 42") | 1200 mm to 1400 mm (48" to 55") | 1600 mm to 1800 mm (63" to 72") | 2000 mm to 2200 mm (78" to 87") |
| Length | 1380 mm (54.5") | 1380 mm (54.5") | 1380 mm (54.5") | 1380 mm (54.5") |
| Width | 1700 mm (67") | 1975 mm (78") | 2350 mm (93") | 2720 mm (107") |
| Height | 1850 mm (73") | 1900 mm (75") | 2000 mm (79") | 2080 mm (82") |
| Weight | 1800 Kg (3970 Lbs) | 2000 Kg (4410 Lbs) | 2450 Kg (5400 Lbs) | 2800 Kg (6200 Lbs) |
| Operating Temperature | -30 C to +50 C (-22 F to +122 F) | | | |

Electronics Enclosure Specifications

| | |
|-------------------------------|---|
| Dimensions | 800 mm Height x 600 mm Width x 300 mm Depth (31.5" H x 23.75" W x 12"D) |
| Weight | 45 Kg |
| Connection to Analyzer | 25 meter fixed length cable provided |
| IP Rating | NEMA 4X |

Electrical Requirements

| | |
|---------------------------|--|
| System Electronics | 230 VAC, 50 or 60 Hz, 10 A, 1 Phase |
| Operator Console | 120 VAC, 50 or 60 Hz, 5 A, 1 Phase OR 230 VAC, 50 or 60 Hz, 2.5 A, 1 Phase |

Communications

| | |
|--|-------------------|
| Electronics Enclosure to Operator Console (End User Supplied) | Fiber Optic |
| Operator Console to Control System | OPC Protocol |
| Offsite, Remote Connection | Ethernet Internet |

Radiolotope Sources

| | |
|-------------------------|-----------------------------------|
| ²⁵²Cf | Neutron Source to Enable Analysis |
|-------------------------|-----------------------------------|

Software

| | |
|------------------------------|--|
| OmniView | Comprehensive user interface, processes, displays & archives data in multiple formats while monitoring and tracking the health of the system |
| AutoDiagnostics | Monitors, tracks and trends system parameters for rapid troubleshooting and pre-emptive repairs |
| COBOS (optional) | Real time Coal Blending Optimization Software |
| AutoReport (optional) | Generates automated custom spreadsheet reports |

Find out more at thermofisher.com/PGNAA-PFTNA