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The Elemental CrossBelt Analyzer (ECA) provides minute-by-minute quality analysis of your critical process streams to facilitate sorting, blending and out-of-seam dilution control. With the ECA, you can control coal quality in real time and improve the efficiency of your operation. The ECA is designed to improve your bottom line.

Product Specifications

Elemental CrossBelt Analyzer™ (ECA)

Prompt Gamma Neutron Activation Analyzer (PGNAA)



The ECA Measures and Reports

- Ash
- Sulfur
- Moisture

The ECA Calculates and Reports

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

Thermo Electron Corporation's ECA is a Prompt Gamma Neutron Activation Analyzer (PGNAA) designed to mount around an existing conveyor belt and analyze the composition of the coal on the belt in real-time.

The analyzer is designed for applications requiring process accuracy at a modest cost.

The ECA measures and reports ash and sulfur. A moisture measure and report option is also available. If the optional moisture meter is purchased, the ECA calculates and reports heating value and Lbs SO₂ per million BTU.

It is used to control the sorting and blending of coals to maximize coal resources, reduce out-of-seam dilution and control preparation plant performance.

The analyzer's operator interface is a comprehensive, easy-to-use Windows®-based package that comes standard with current analyses, rolling averages, cumulative averages, product tracking, extensive data graphing capabilities, alarm information, and advanced OPC data linking to the customer's PLC or other control system.

There is an optional Automated Report Generator software package available that allows data from the analyzer to be reported to the customer in a configurable spreadsheet compatible format.

The ECA provides the ultimate performance in cross-the-belt, online coal process control analysis to improve your bottom line.

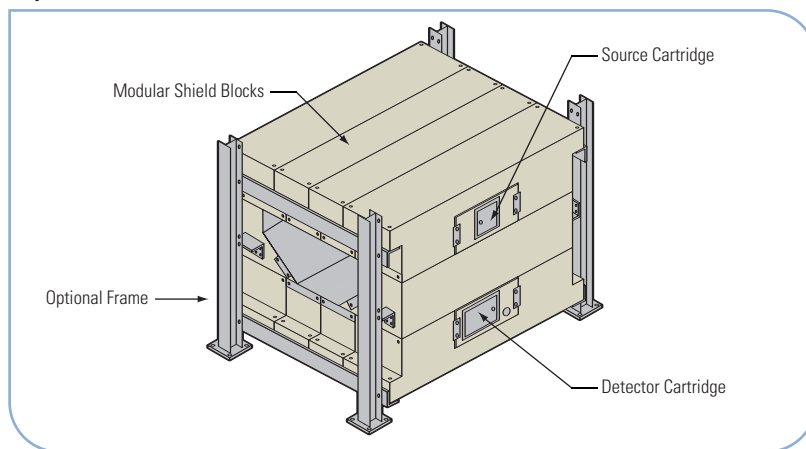
Analyze • Detect • Measure • Control™

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ECA — PGNAA Elemental CrossBelt Analyzer

Specification					
Belt Size	800 mm (30 in)	1,000 mm (42 in)	1,200 mm (48 in)	1,400 mm (60 in)	1,800 mm (72 in)
Length of Unit	2,438 mm (96 in)	2,438 mm (96 in)	2,438 mm (96 in)	2,438 mm (96 in)	2,438 mm (96 in)
Width	1,600 mm (63 in)	1,600 mm (63 in)	1,753 mm (69 in)	2,032 mm (80 in)	2,337 mm (92 in)
Detector Installation Clearance	914 mm (36 in)	914 mm (36 in)	914 mm (36 in)	914 mm (36 in)	914 mm (36 in)
Approximate Height	1,475 mm (58 in)	1,546 mm (61 in)	1,596 mm (63 in)	1,696 mm (67 in)	1,771 mm (70 in)
Clearance between Belt and Bottom of Analyzer	660 mm (26 in)	660 mm (26 in)	660 mm (26 in)	660 mm (26 in)	660 mm (26 in)
Weight	3,765 kg (8,300 lb)	3,765 kg (8,300 lb)	4,135 kg (9,120 lb)	4,875 kg (10,750 lb)	5,985 kg (13,190 lb)
Note: Dimensions are meant to be used as information regarding the general dimension of the analyzers. Special site-specific tunnel height needs may affect these dimensions.					
Physical Dimensions					
Optional Frame	Thermo can supply a frame to support the analyzer as shown in the physical overview illustration below				
Troughing Angle	35-degrees (standard) or 45-degrees (optional)				
Electronics Enclosure	1,096 mm (43.13 in) tall x 762 mm (30 in) wide x 295 mm (11.6 in) deep, NEMA 4X stainless steel enclosure				
Connection from ECA to Electronics Enclosure	Standard 25 m (82 ft) or 50 m (164 ft) cable lengths, configurable on request				
Electrical Specifications					
Electronics Enclosure	230 VAC 50 or 60 Hz, 5 Amps 4 wire (L1, L2, N, GND)				
Operator Console	120 VAC 50 or 60 Hz, 5 Amps 1 Phase or 230 VAC 50 or 60 Hz, 2.5 Amps 1 Phase				
Communication Links					
Electronics Enclosure to Operator Console (customer supplied)	RS-422 twisted-shielded pair cable (Belden #8104) 2000 m (6,500 ft) max. or Fiber Optic 62.5/125 multimode (minimum of 2 fibers) 4000 m (13,000 ft) max. Wireless Xpert : Connects remote analyzer to Operating Console by using radio modems (optional)				
Operator Console to Customer Control System (customer supplied)	OPC client/server link				
Off-Site Communication	One data quality phone line or internet link required				
Isotope Sources					
Cf 252	Neutron source				
Cs 137	Gamma source (if the optional moisture meter is selected)				
Software					
Base Coal (standard)	Comprehensive software that provides analysis data on minute-by-minute, rolling average, cumulative average, and interval basis, product tracking capabilities, extensive graphic functionality, alarms, and the ability to transfer data to control systems over an OPC link or by .csv spreadsheet files				
pcAnywhere® (standard)	Allows for remote troubleshooting by supplier or remote user access to data				
Automated Report Generator (optional)	Allows automated custom spreadsheet output of analyzer data to the user				
Silo Tracking (optional)	Reports coal quality in downstream silos and stockpiles				
COBOS Blending (optional)	Blends coal from multiple sources to achieve target				

Physical Overview of ECA



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