

Titan™ CCA

Complete coal analysis



The Titan CCA, the newest member of Progression's family of on-line analyzers, is specifically designed for the coal and coke industries. With the help of the Titan CCA, economic operations are improved, greenhouse gas emissions are reduced, risk management is improved, as well as the ability to verify custodial transfers. It utilizes a unique blend of the latest Progression technologies and proprietary data processing software to provide accurate and timely measurements of coal.

Progression designed the Titan CCA with flexibility in mind, to provide very basic information or be configured to provide

complete coal analysis. Some of the basic functions include measuring moisture and energy content. In order to provide complete coal analysis, the Titan CCA can be scaled to include parameters such as total carbon content, sulfur, total ash content and ash constituents without changing the footprint or disrupting plant operations. The analyzer will be installed to comply with ASTM standard D6543-00.

The Titan CCA can operate in dusty, hazardous environments such as coal-fired generating stations. Its small footprint, relatively low weight and minimal operational requirements allow it to be installed nearly anywhere within a power plant, mining operation or other industrial processes.

Energy Series

Benefits

- Improved plant efficiency
- Reduced greenhouse gas emissions
- Lower operating and maintenance costs
- Improved plant factor resulting from less derates
- Improved plant up time and availability
- Enhanced risk management
- More effective coal blending resulting in lower fuel costs

Advantages

- Rapid payback
- No radioactive or hazardous material required
- Minimal maintenance requirements
- Results in seconds
- Flexibility
- Worldwide support/training

Applications

- Power generation
- Coal mining
- Coal liquification
- Coal gasification



Specification

Laser

Laser Type

Nd:YAG
Wavelength: 1064 nm
Repetition frequency: 1 – 20 Hz
Pulse energy: 50 – 400 mJ

Field Cabinet

System Siting

Hazardous and non-hazardous options, Group IIB, T4
Designed for use in -20°C (-4°F) to $+50^{\circ}\text{C}$ (125°F)
Cabinet is NEMA4X (IP66).

Climate Control

Air conditioner/electric heaters maintain cabinet to 25°C (77°F) $\pm 5^{\circ}\text{C}$.

Dimensions

Cabinet: 64" W x 24" D x 66" H (163 x 61 x 168 cm)

Weight

Approximately 1600 lbs (725 Kg)

PLC

Integral PLC in field cabinet for control and sequencing of valves and plant interfacing.

Piping/Tubing

Piping and tubing is 304/316 stainless steel. Swagelok fittings are used on all tubing connections. 150 lb RF flanged connections are used on all customer interfaced piping.

Utilities

Power Requirements

110 – 240 VAC, 50 or 60 Hz, single phase, 30A

Water

80 psig

Air

100 psig

Control Computer System

Location

At analyzer

DCS Link

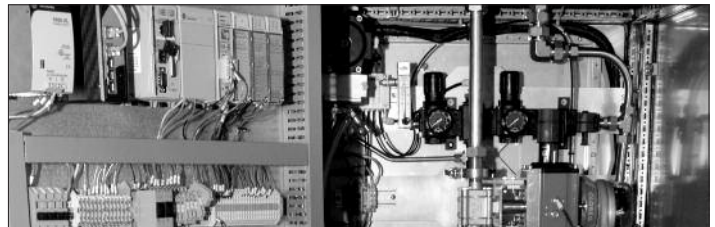
Bidirectional digital link standard

Software

Progression's proprietary A/Ztec[®] operating software
(Windows based) pcAnywhere[™] modem communication software

Connections

Direct phone line to modem
Fiberoptic cable (4 fibers) to field cabinet (wire connection optional)
Purge safety alarm contact to DCS (optional)



An internal view of the Titan CCA

On-line Extraction System

Location

Location (at plant transfer line or process) is agreed upon by Progression and customer.
Components used on extraction panel are approved to appropriate area classification.

Dimensions

Approximately 30" W x 14" D x 46" H (76 x 37 x 116 cm)

Weight

Approximately 200 lbs (91 Kg)

Piping/Tubing

All piping and tubing is 304/316 stainless steel.
Swagelok fittings are used on all tubing connections.
150 lb RF flanged connections are used on all piping.
Customer connections are as follows: nitrogen supply (1"), instrument air supply (0.5"), inlet to extraction system (1"), sample/gas return to process (1.5").

Covered by one or more of the following patents: USA: #5,530,350, #5,596,275, #5,675,253, #5,408,181, #5,420,508, #5,015,954, #5,049,819, #5,302,896, #5,162,103, #5,319,308, #5,302,897. Canada: #2,170,640. Germany, France, UK, Netherlands: #576,421. Other patents pending.



Analyze with integrity.™

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