

Productivity Tools for the Coal Industry



AshScanDuo[®] is typically more accurate than conventional laboratory analysis of samples. Why?

- ▶ Discrete sampling only provides a "snapshot" of coal quality, and does not show any short term variations
- ▶ Recent advances in technology pioneered by RTI have significantly improved the performance of dual energy Ash Analysers

AshScanDuo[®]'s many practical design features make it by far the simplest Online Ash Analyser to install, calibrate and operate.

AshScanDuo[®] Online Coal Ash, Moisture and Energy Analyser

Continuous real-time analysis
of all coal, not just a sample

- ▶ Real-time data means REAL control
- ▶ Reliable, accurate data
- ▶ Low cost of ownership
- ▶ Reduced analysis costs

Features and Benefits.

AshScanDuo® provides instantaneous, continuous measurement of ash, moisture and energy for real-time control of plant operations.

- ▶ **Rapid Return on Investment** through reduced laboratory analysis, and optimisation of plant operation in real time
- ▶ **SAFE:** Source can be switched ON/OFF, and source holder removed, all from the walkway while the belt is running. ***Belt shut down not required***
- ▶ Suited for **most coal types**
- ▶ Multiple stored Calibrations for **multi-seam operations**
- ▶ **Fast response**
- ▶ **Automatic bed depth correction**
- ▶ **3G interface** for comprehensive remote diagnostics by RTI engineers, independent of client IT infrastructure. ***RTI engineers can remotely calibrate the AshScanDuo® for you***
- ▶ **Rugged and reliable** for harsh mining conditions, with **low ongoing maintenance**
- ▶ All standard communications protocols supported. ***Seamless, hassle-free plant integration***

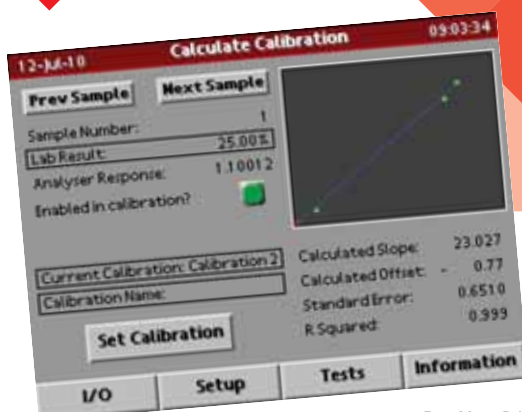
- ▶ **Easy menu driven touchscreen HMI** for setup, calibration, and viewing results
 - **Can be fully calibrated at the HMI**
 - No laptop connection required
 - Step by step setup virtually eliminates "set up error" - a major reason for poor performance in other Analysers
 - Automatic diagnosis software for verification of instrument setup and stability as well as static calibration verification



Is AshScanDuo® the best choice for my application?

RTI manufacture a range of Analysers to cover most operational needs, including the **AshScan®**, **AshScanDuo®**, **GammaScan®** and **AllScan®**.

The right choice depends on your application, so contact us now to discuss your Ash Analysis needs.



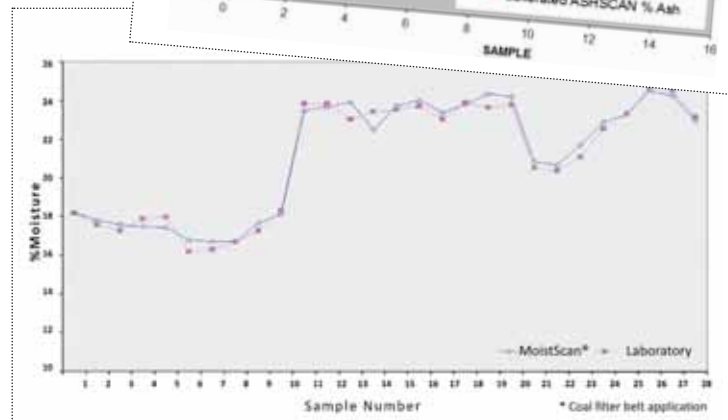
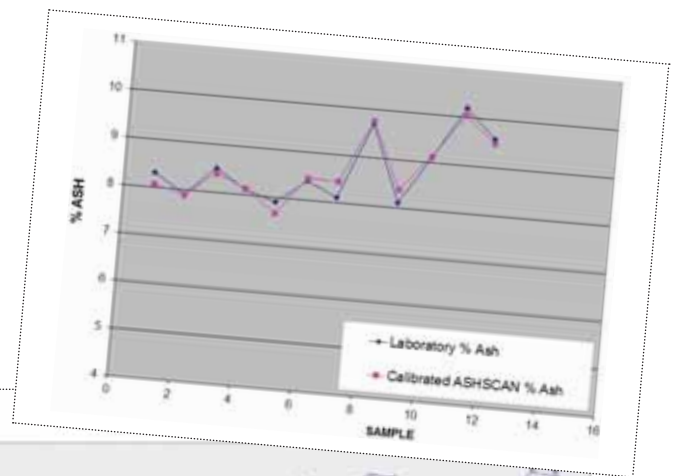
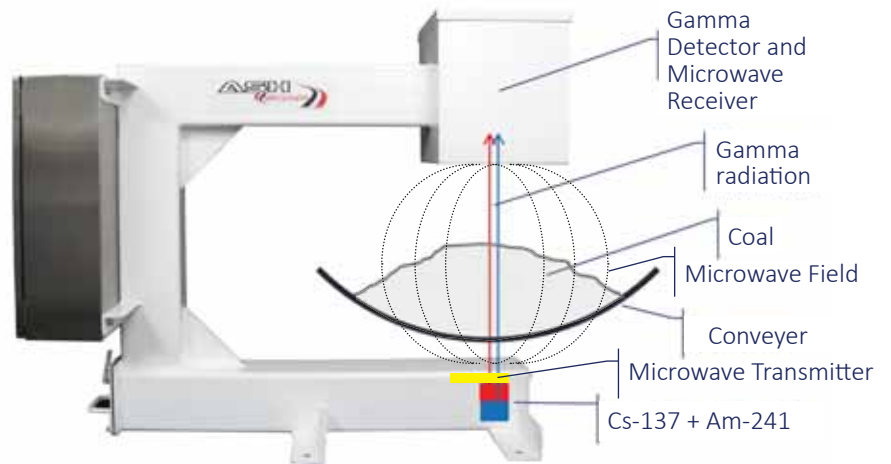
Easy Menu Driven Touchscreen

Working Principle.

The **AshScanDuo®** utilises two radioactive sources and a microwave signal.

1. The absorption of Am-241 low energy gamma rays.
2. The absorption of Cs-137 high energy gamma rays.
3. The absorption of the microwave signal occurs due to the presence of moisture in the coal.

The above three parameters form the basis of a regression equation that generates instantaneous values for ash, moisture and energy (calorific value).



Specifications.

Operational

Principle of Operation	"Dual Energy Transmission". Also referred to as "Low Energy Transmission" (or "LET") Microwave Attenuation and Phase Shift
Sources	Cs-137 and Am-241
Conveyer width	Up to 1400mm as standard (larger belts accomodated depending on application)
Belt Speed	No Limit
Bed Depth Range	Best suited to 50 – 350 mm (application dependant)
Ash Range	0 – 100%
Weight	typically 90kg, fully assembled
Measurement time	Continuous instantaneous readout of rolling average over "x" seconds, where "x" is typically 10, but adjustable up/down for higher precision or faster response, respectively

Expected Precision

Note: Precision may be affected by steel cord belts.

Ash in typical raw coal	typically $\pm 0.9\%$ (1SD) dependant on range.
Ash in typical washed coal	typically $\pm 0.6\%$ (1SD) dependant on range.
Ash in pulverised coal (single seam)	typically $\pm 0.3\%$ (1SD) dependant on range.
Moisture in all coal types typically 0.3% at 1SD (application dependant)	

Environmental

Humidity	5% – 95% RH non condensing
Operating temperature	0 – 45°C
IP Protection Rating	IP66 Stainless steel. Optional Sunshade for Control Cabinet

Control and Communications

At-Instrument Control	Touchscreen HMI, no laptop connection required. HMI provides access to all functions via a simple menu structure. Includes diagnostics, setup, calibration, instantaneous ash, moisture and calorific value, trend data in graphical and tabular format.
Outputs (Standard)	4-20mA instantaneous/tons-weighted ash 4-20mA instantaneous/tons-weighted moisture 4-20mA instantaneous/time averaged energy High and Low Ash Alarm Relay AshScanDuo® can be supplied with any standard communication protocol such as Ethernet, Modbus, and others
Inputs (Standard)	Conveyer Running (digital) Tons weighted reset (digital)
Data Storage	Removable CF card can store typically up to 3 months of data
Remote 3G Diagnostics	3G modem supplied (optional). Access is via a secure web page and allows complete diagnostics by RTI Engineers.
Utility Requirements	
Power	110-240 VAC 50/60Hz single phase, 500W
Communications Cabling	Standard cabling depending on choice of protocol (no specialised cabling required)

Locations.

AMERICAS | ASIA | EUROPE | OCEANIA | AFRICA | MIDDLE EAST

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