

ASHSCAN ASHSCAN DUO

The smartest coal ash analyser in the world

A quantum leap in on-line, real-time coal ash analysis technology, delivering higher yields, increased returns, and lower costs for your operation

- World-best analyser innovation
- Simple, intuitive calibration
- Lowest cost of operation in the market
- Maximise output, minimise downtime and costs
- Shore up site and resource sustainability

Cutting edge technology for improved yield and productivity for your operation.

The AshScan and AshScanDUO bring together world-best innovation and the smartest technology to deliver the most advanced coal ash analyser, and combined coal ash and moisture analysers, in the world today.

FEATURES AND BENEFITS

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

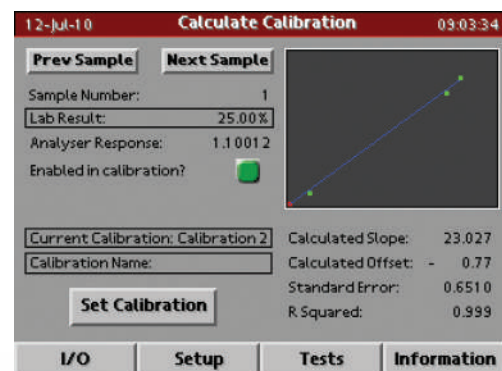
- **Rapid return on investment** through reduced laboratory analysis, and optimisation of plant operation in real time
- **SAFE:** Source can be switched ON/OFF, and source holder removed, all from the walkway while the belt is running. *Belt shut down not required*
- Suited for **most coal types**
- Multiple stored calibrations for **multi-seam operations**
- **Fast response**
- **Automatic bed depth correction**
- **4G 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*



This means cleaner, more sustainable and cost-effective outcomes for your operations.

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

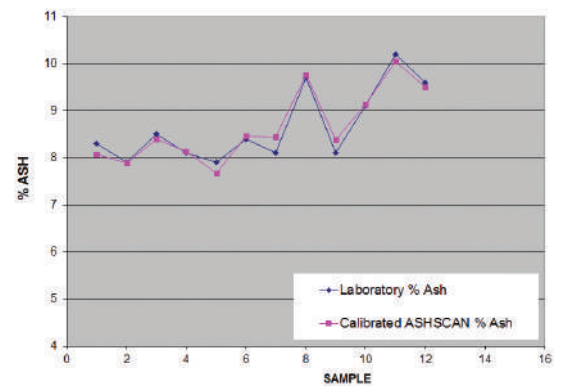
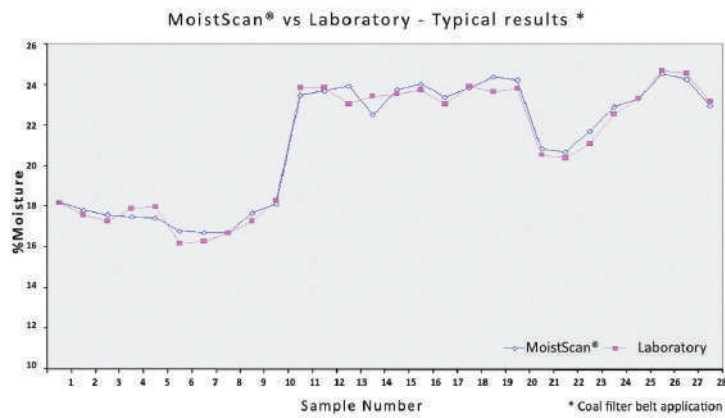
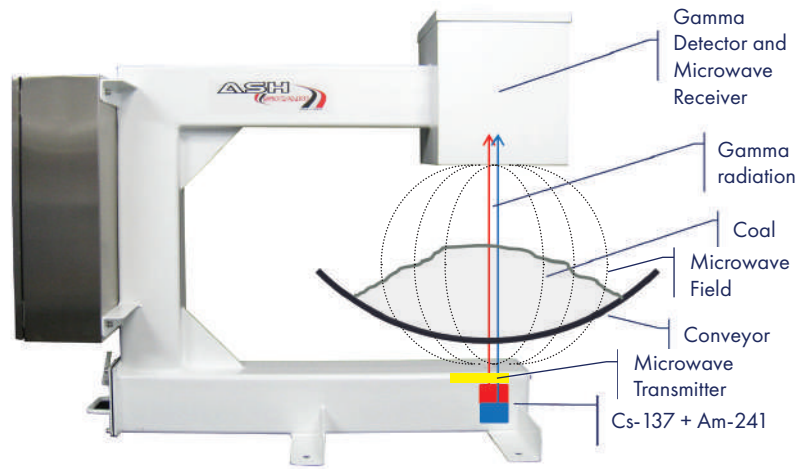


WORKING PRINCIPLE

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.
Conveyor width	Up to 1400mm as standard (larger belts accommodated 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)	Conveyor running (digital). Tons weighted reset (digital).
Data Storage	Removable CF card can store typically up to 3 months of data.
Remote 4G Diagnostics	4G 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

GLOBAL HEADQUARTERS

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