



QCX[®] ACS820L Automatic Carbon-Sulphur Analyser

The ACS820L Automatic Carbon-Sulphur Analyser accurately analyses carbon and sulphur in powder samples. Typically used for cement, it can also handle and analyse clinker, ores and mineral processing products, ceramics, and other inorganic materials. It also applies to the optimisation of pyro processing. This opens it up to performing a huge range of applications.

The Automatic Carbon-Sulphur Analyser helps you determine cement quality with exceptional accuracy by eliminating the risk of wrong recipes or sample mixes.

At the same time, automation means improved safety for your operators by reducing their exposure to hot components, dust and other chemicals.

You also get increased capacity. Seamless integration of the Automatic Carbon-Sulphur Analyser into automated labs allows for 24/7 operation requiring minimal labour capacity.

For good laboratory practice, the analyser comes with optional automated revalidation to measure certified reference material for the most high-quality analytical results.

Advantages

- Speed and accuracy: direct methods for analysis of powder samples are the most accurate. The Automatic Carbon-Sulphur Analyser couples this with time-saving automation, giving you the most reliable high productivity available.
- Advanced offering: no other fully automatic carbon-sulphur analyser is available. It's a future-proof option – suited for use as a standalone analyser, yet ready for upgrade or expansion into a fully automated environment.
- Flexible automation: the analyser is designed for a range of possible configurations giving you complete flexibility for the level of automation you require.

Accurate analysis and high productivity

How it works

By operating under full automation, the Automatic Carbon-Sulphur Analyser eliminates sporadic or method-dependent variations, and inconsistencies and deviations from procedures.

The system doses sample and accelerator materials into a ceramic crucible using automatic gravimetric dosing. It then transfers and loads the sample into an analytical furnace and performs the analysis. The used ceramic crucible is transported to the collecting bin after analysis.

Possible configurations

The Automatic Carbon-Sulphur Analyser is available in three configurations:

Stand-alone unit for laboratory use

Suitable for small operations. This requires your operators to manually load and unload samples.

Integrated unit in an automated laboratory

Whether you already use automated samplers and/or sample transport systems, or whether you need to be prepared for future automation, the Automatic Carbon-Sulphur Analyser can be seamlessly integrated into automated laboratories.

Containerised process solution at a process line

In this configuration, the Automatic Carbon-Sulphur Analyser works best with the QCX Cube at-line setup of sampler + analyser.

Specification

Integrated analytical furnace	LECO
Sample material	Dry powder sample ($d < 250 \mu\text{m}$)
Sample quantity	15 – 50 cm^3
Sample frequency	20/hour, lower with certain sample types
Capacity of crucible feeder	Max. 112 pcs
Integrated analytical standard materials option	2 containers of 300 cm^3 equipped with mixing functionality from which standard materials can be dosed automatically.
Measuring accuracy	1% relative
Accelerator dosing	2 containers with gravimetric dosers
Dedusting	1 m^3/min , -16 to -31 kPa
Power supply	230 V; 50/60 Hz; max. 4.0 kW
Compressed air supply	0.6 – 1.0 MPa (Quality 1.4.1 as per ISO 8573-1)
Oxygen supply	0.2 – 0.4 MPa, purity 99.5 %
Operating conditions	Temperature: 15°C to 30°C Humidity: 20 – 80 % (non-condensing)
Weight	440 kg
Dimensions (W x D x H)	1,380 x 900 x 1,600 mm



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