



QCX[®] FLA100 Automatic Free Lime Analyser

The FLA100 Automatic Free Lime Analyser automatically measures and analyses free lime content in clinker. It uses the principle of ethylene glycol reaction with CaO, which delivers highly accurate determination.

This Free Lime Analyser is fully automatic. An advanced software system and touch-panel give you user-friendly operation. The software controls the automatic analysis cycle as well as manual or automatic sample loading. You can pre-set methodology to save time and guarantee reproducibility.

Another significant benefit is reduced sample cross-contamination. The reaction well is flushed with pure glycol, enabling the analyser to achieve accurate and precise results.

The Automatic Free Lime Analyser is designed to withstand tough environments. A steel plate enclosure and dust protection give it industrial strength. You can count on it to operate effectively, long term, even in the harshest industrial setting.

Advantages

- Safety: fully automatic sample analysis significantly reduces health and safety risks by ensuring your operators are not exposed to hot substances.
- Efficiency: troubleshoot, repair and monitor equipment performance easily thanks to local and remote diagnostic, alarm and event reporting, as well as analyser calibration and data presentation. This all substantially increases work efficiency.
- Superior determination: analysis using ethylene glycol reaction is extremely accurate compared to other techniques, especially when free-lime concentration is low.

Fast, reliable analysis

How it works

Free lime analysis using the Automatic Free Lime Analyser is based on the dissolution of Ca^{2+} in hot ethylene glycol where the Ca^{2+} concentration is determined by a conductivity measurement.

The unit comprises a dosing device, a balance system with analytic temperature stabilised head, and a pumping system with heated reservoir for ethylene glycol – all of which are housed in a cabinet suited to any industrial environment.

Sample input can be automatic or manual, with the Automatic Free Lime Analyser having a measuring capacity of four samples per hour.

It can be used standalone for manual operation or installed in automated operations.

Possible configurations

Robot automation

The analyser can be seamlessly integrated in this automated laboratory with robotic system.

QCX® CUBE Free Lime Analyser

As part of the QCX product suite, the analyser works perfectly with this containerised process solution at a process line.

Specification

Sample material	Clinker and lime, dry, non-sticky, max. 5 % residue on a 100 micron sieve
Sample quantity	Min. 10 cm ³
Sample frequency	4 samples / hour
Dedusting	0.5 m ³ / min, -16 to -31 kPa
Glycol	99.0 – 99.5 % purity
Consumption of glycol	Approx. 60 ml / cycle
Measuring range	0 – 99 % of free CaO
Analysed sample mass	0.5 – 1.5 g
Std. error of calibration	< 1 % (absolute free CaO concentration)
Repeatability	1 sigma < 3 % relative
Contamination	Between consecutive samples < 3 % relative
Power supply	230 V; 50 Hz; 1.4 kW
Compressed air supply	0.6 – 1.0 MPa (Quality 1.4.1 as per ISO 8573-1)
Operating conditions	Temperature: 15°C to 35°C Humidity: 30 – 75 %
Weight	Approx. 140 kg
Dimensions (H x W x D)	1,475 x 600 x 655 mm



Robot automation



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