



# MORE CONTROL OVER PROCESS PERFORMANCE AND CHEMISTRY

Introducing the X-Series **OFX** Elemental Analyzer  
with dedicated Free Lime channel



INCORPORATED GRINDER &  
SAMPLE PREPARATION ROBOTICS

OVER 100 TIMES MORE MATERIAL  
ANALYZED IN ONE HOUR

ACCURATE ELEMENTAL ANALYSIS  
& FREE LIME DATA IN MINUTES

# CHANGING HOW THE CEMENT INDUSTRY CONTROLS CLINKER AND CEMENT BLENDS CHEMISTRY

Eliminate wet chemical methods or time consuming, complex and often inaccurate powder pellet analysis with the new X-Series OFX Elemental Analyzer, with dedicated Free Lime channel.

Combining both XRF and XRD techniques into the one unit, the OFX delivers time saving analyses of clinker or cement blends for better process control.

The OFX features the same ground-breaking technologies employed in the FLX line including in-built sample preparation robotics and XRD-based free lime control, with additional full spectrum EdXRF elemental analysis.

Direct measurement of free lime ( $\text{CaO}$ ) and key elements, Ca, Si, Al, & Fe (S & Mg option) are conveniently transmitted to the control room 20 times per hour for better kiln control.



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**Don't prepare your sample in the lab; bring the lab to the process with the power of combined XRF and XRD analysis.**

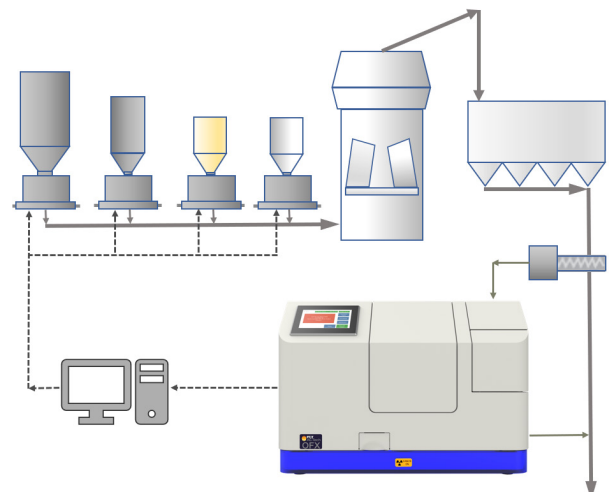
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Perfect for cement plants using alternative fuels, or any plant seeking improved kiln stability and control, the OFX provides fast, repeatable and accurate results.

With the continuous data trending ability of the OFX, operators can expect tighter kiln control, reduced fuel consumption and minimized chemical variability.

The OFX is also exceptionally suited for cement blends control and plants with multiple cement types.

A large sample of 200g/min (½ pound) ensures a highly representative result, improving process control and reducing the errors associated with smaller sample sizes.



Typical OFX cement installation showing analyzer feed and material return system.







## Features & Benefits

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- Ultra fast operation with direct measurement of major elements Ca, Si, Al, Fe & free lime (CaO) in just minutes
  - Designed for indoor benchtop use or outdoor online continuous operation
  - Hypothetical compounds  $C_2S$ ,  $C_3S$ ,  $C_4AF$ ,  $C_3A$  are calculated from oxides using Bogue equations with software adjustable coefficients to match plant specific needs
  - Inbuilt, automatic precision robotics replaces the need for a separate pulverizer and pellet press
  - Incorporated grinder accepts hot crushed clinker up to 12mm ( $\frac{1}{2}$ " )
  - Large processed sample quantity 200g ( $\frac{1}{2}$ lb) generates results that are more representative of the process than other available methods
  - Unique patented sample delivery system delivers outstanding accuracy and repeatability
  - Dual inlets for powder and coarse material
  - Proprietary state-of-the-art, high resolution SSD & SDD detectors for accurate high speed XRD and XRF analysis
  - Ultra efficient dual x-ray system reduces power consumption and heat generation
  - XRF based elemental analysis with guaranteed accuracy and repeatability on Ca, Si, Al & Fe
  - XRD based, fixed geometry free lime (CaO) analysis
  - Industrial grade touchscreen computer interface for easy operation, diagnostics and control
  - Self-adjusting grinder automatically compensates for wear, ensuring consistent and accurate results over time
  - Integrated Modbus TCP/IP protocol for fast and easy data transfer
  - Modular system allows for multiple batch analysis or at-line configurations
  - Optional ruggedization module for outdoor configuration
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## OFX Specifications

### Dimensions

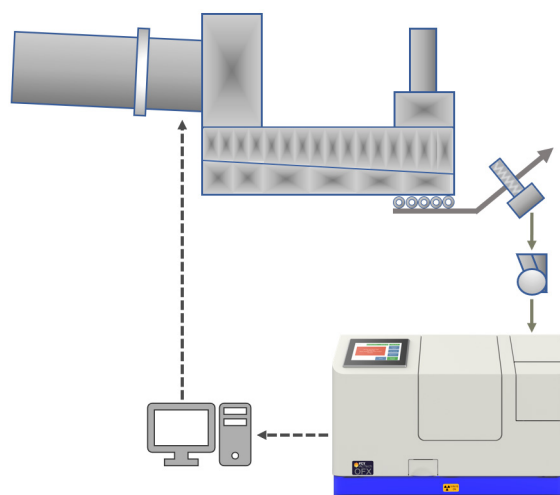
760 x 470 x 525mm (30 x 19 x 21 inches)

### Weight

80kg (175lb)

### Electrical specifications

120/220 VAC 50 or 60Hz, 750W, 1 Phase



Plant layout diagram showing OFX kiln integration.





## Why FCT ACTech?

For almost 20 years, FCT ACTech has been in the business of engineering tools for better process control. Our most recent breakthrough products are the ultra fast FLX Free Lime Analyzer for reduced clinker variability and the RMX Elemental Analyzer designed for raw mix control.

The OFX Analyzer is the most advanced unit in the X family of products, incorporating both XRD and XRF technologies, delivering unparalleled levels of process and quality control.

Customers are fully supported by process engineers who have extensive cement industry experience. We design and manufacture the instrumentation that we know would have made profound improvements to the operations of the plants we once worked in.

When you purchase an FCT ACTech product, you get local support backed by a global network of experts and professionals with intimate industry knowledge.

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