# 928 Series

## *Carbon/Nitrogen/Sulfur Analysis by Combustion*


LECO

EMPOWERING RESULTS

# *928 Series – Carbon/Nitrogen/Sulfur Analysis by Combustion*

By incorporating state-of-the-art hardware and an on-board, touch-screen software platform, the 928 Series allows you to easily handle the most demanding sample applications and increase your productivity. The core capabilities and performance of previous generations of LECO macro combustion instruments have been maintained, while key improvements have been made in throughput, uptime, and reliability.

Macro sample mass ability (up to 3 grams for nitrogen/protein model regardless of the sample carbon content) paired with rapid analysis times and a low cost-per-analysis make the 928 Series ideal for characteristically heterogeneous, difficult-to-prepare, or low analyte level samples.

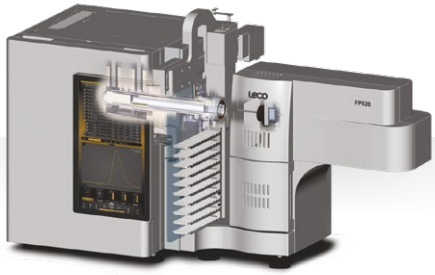
**Maximise lab efficiency and productivity with unmatched sample throughput coupled with superior instrument uptime**

- Rapid cycle time of 5 minutes
- Extended reagent lifetimes including a reduction reagent tube lifetime of over 4,000 samples
- 100-sample position autoloader for sequential and non-sequential analysis


# *Instrument Highlights and Features*

**Rugged design resulting in unparalleled versatility for the most demanding applications**

- Horizontal ceramic furnace with an exclusive oxygen environment ensures the complete oxidation of macro samples with maximum temperatures up to 1,450 °C
- Large, open, and reusable ceramic sample boats facilitate the handling and combustion of macro samples
- Sample ash is retained in boat for post-analysis removal, eliminating furnace tube maintenance
- Thermal conductivity cell supports the flexibility of using either helium or argon as a carrier gas without a hardware change



**Low operating cost**

- Reagent free, high-efficiency furnace with intelligent control optimises furnace reliability by extending the heating element and ceramic lifetime
- Thermoelectric cooler eliminates the use of chemical desiccant reagents for the removal of combustion gas moisture in the Nitrogen/Protein and Carbon/Nitrogen models
- Combustion gas aliquot system provides an extended and consistent reagent lifetime regardless of sample mass, matrix, or carbon content, including a 4,000 sample reduction tube reagent lifetime
- Dual loop aliquot doser provides the flexibility to optimise methods based upon sample element concentration (low/high), or analysis cost and uptime

**Operator Centred Design**

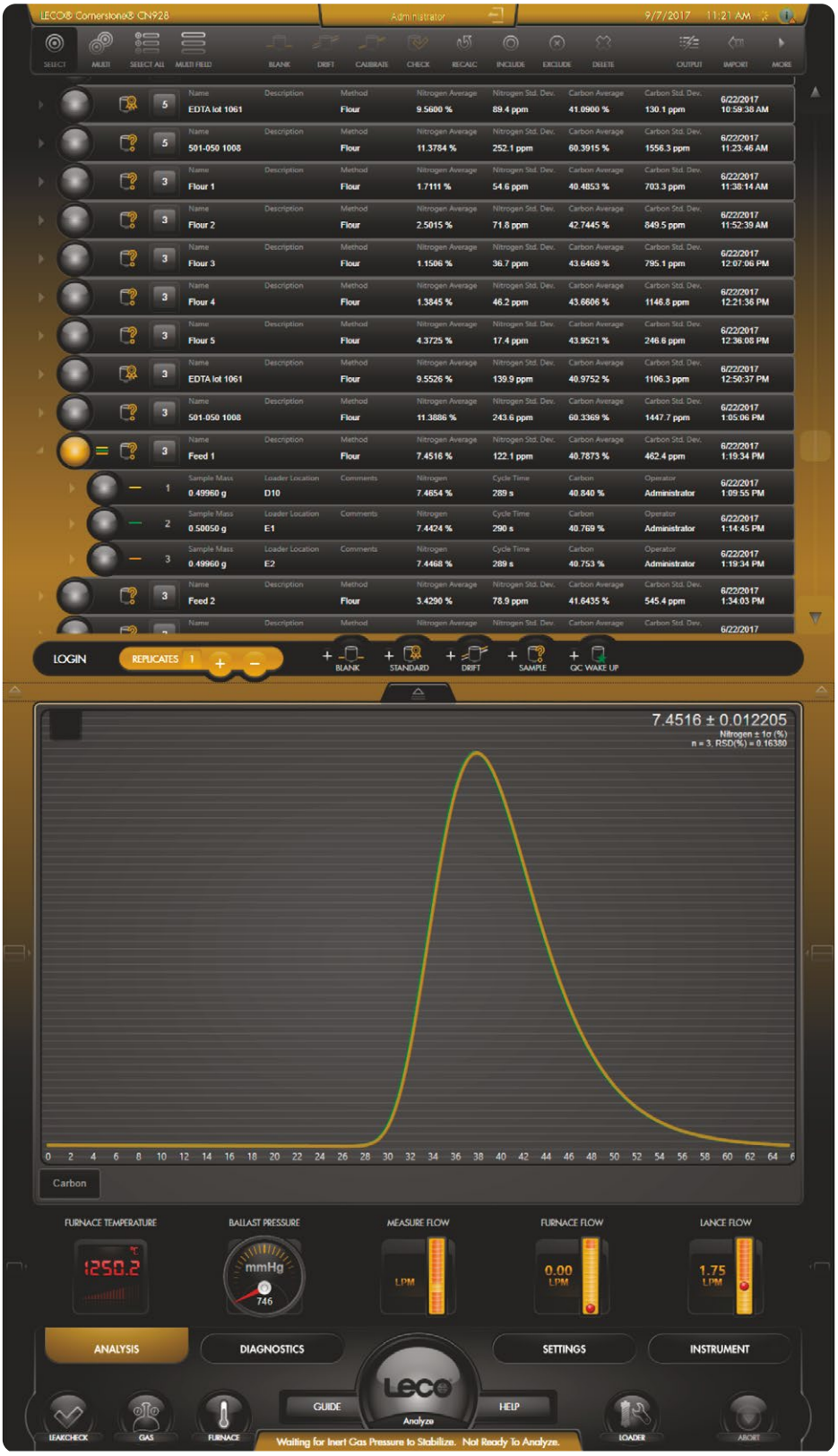
- Boom-mounted touch-screen user interface promotes an ergonomic workspace and optimised work flow while reducing system bench space requirements
- Open access to all reagent tubes and common maintenance areas with quick-release features speeds up and simplifies preventive maintenance routines, ensuring a robust and reliable instrument with superior uptime
- CORNERSTONE® Mobile remote software keeps the user updated from their smart phone on the instrument's analysis batch progress, performance, and status while away

**Reliability with Trusted Service and Support**

- Knowledgeable sales force with a customer-centred focus dedicated to helping you understand and identify the best instrumentation fit for your application
- State-of-the-art Technical Service Laboratory with experienced technical application chemists to assist in method development and other application related requests
- Global and regional LECO service network comprised of regional support centres and over 25 international LECO subsidiaries, dedicated to providing service and support offerings, including field service visits over the lifetime of the instrument

# *User-friendly CORNERSTONE® Brand Software*

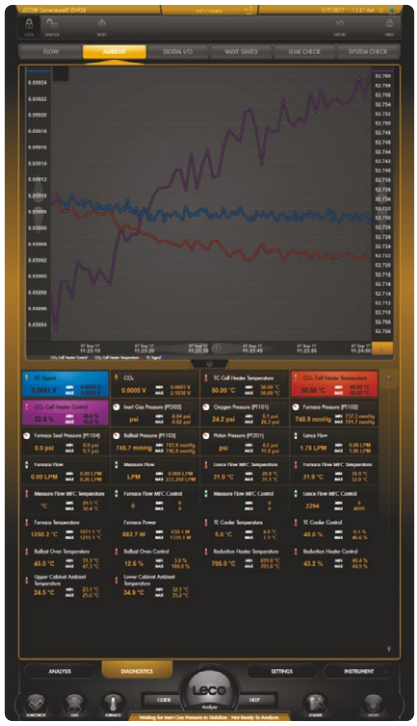
The exclusive *Cornerstone* brand software with touch-screen interface enables complete access to analysis control, method settings, diagnostics, reporting, and more in a highly organised, intuitive, and immersive environment. Designed through a collaboration of customer feedback and innovative engineering, *Cornerstone* features all of the routine day-to-day operations within a single analysis screen designed for speed and ease-of-use. Our innovative grouping of sample data into sets and replicates simplifies the data output and automatically calculates relevant statistics, alleviating the need for additional data processing.




*Analysis*

# *Software Features and Benefits*

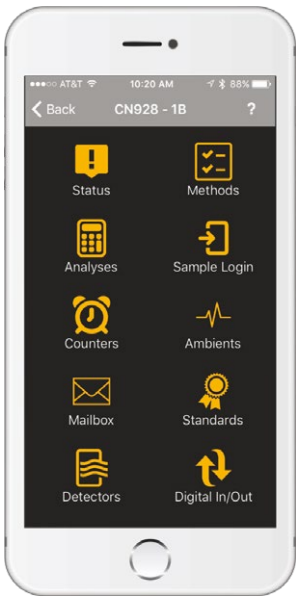
- The software is divided into four main sections – Analysis, Diagnostics, Settings, and Instrument – for simplified navigation and organisation
- Toolbars, sliders, and drop-down menus make it easy to set parameters for calibration and data processing
- The software also includes real-time monitoring of ambient parameters, with fully animated system diagrams
- Advanced interactive diagnostic features include a thorough digital on-board manual, maintenance animations, photo illustrations, and screen captures that quickly provide the direction needed without having to refer to multiple manuals
- *Cornerstone* also supports a multilingual interface, user permissions, extended data archiving and filtering, compatibility with various Laboratory Information Management Systems (LIMS), and flexible reporting capabilities; Compliance to FDA regulations 21 CFR Part 11 for a closed analytical system is also supported

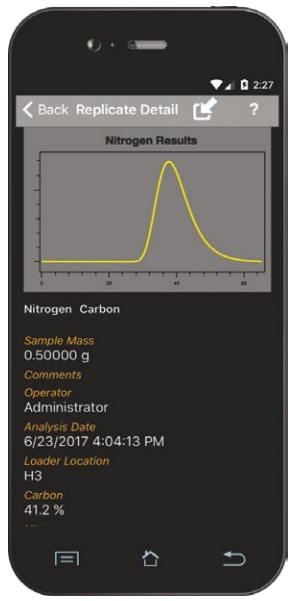


*Diagnostic > Ambients*

*Instrument > Furnace*

*Settings > Calibration*




*An optional Cornerstone Mobile application feature enables remote viewing of the instrument software from a smart phone, tablet, or PC.*

*It can also be programmed to set automatic notifications from the instrument against predefined software conditions using e-mail, text message, or the Cornerstone Mobile application.*

# Model Availability

Available in various models, the 928 Series is ideal for the most challenging applications and is compliant with ISO, AOAC, AACC, AOCS, and ASBC approved methods of analysis.

**FP928**

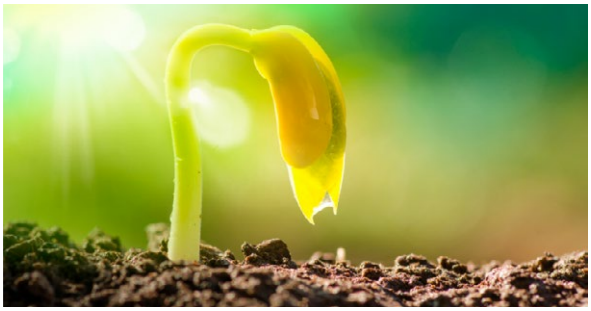
From unprocessed materials to final consumer-ready products, the FP928 determines nitrogen/protein in organic materials using a sample mass up to 3 grams.

- Meats
- Feeds
- Pet food
- Milled products

**CN928**

Quickly and easily analyse carbon and nitrogen in your most difficult-to-prepare or high-ash environmental and agricultural samples.

- Soil
- Plant tissue



**CNS928**

Quickly and easily analyse carbon, nitrogen, and sulfur simultaneously from one sample in agronomy and agricultural materials

- Soil
- Plant tissue

## 828 Series Carbon/Nitrogen

- Features a rapid analysis cycle time of 2.8 minutes or less with the ability to accommodate macro samples, delivering unparalleled throughput for diverse applications
- Extended reagent lifetimes maximise instrument uptime and lowers operating costs
- Operator-centred design with touch-screen *Cornerstone* brand software promotes an ergonomic workspace and optimised work flow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