CHN628 Series Sulfur Add-On Module

Specification Sheet

Instrument Range*	0.01 to 20 mg Sulfur
Precision (Sulfur)	0.005 mg or 1% RSD (whichever is greater)
Nominal Sample Weight	up to 350 mg, 250 mg nominal
Analysis Time	60 to 120 seconds (typical)
Detection Method	Infrared absorption
Chemical Reagents	Magnesium Perchlorate (Anhydrone)
Gas Requirements	Oxygen, 99.5% pure, 40 psi (2.8 bar) ±10% 3.5 lpm, 1.0 lpm purge
Furnace	600 to 1450°C ±1% of setpoint; Horizontal resistance-type
Operational Control	Windows®-based software for PC on CHN628
Environmental Conditions	Operating Temp: 15°C to 30°C (59°F to 86°F) Humidity: 20% to 80%, non-condensing
Physical Dimensions‡	31 in H x 13 in W x 27 in D (79 x 33 x 68 cm)
Weight (approx.)	147 lb. (67 kg) Shipping Weight (approx.): 198 lb. (543 kg)
Electrical Requirements	230 V~ (±10%; at max load), 50/60 Hz, single phase, 25 A; 19,700 BTU/hr†

Part Numbers	
FP628SC	FP628 System for Nitrogen and Sulfur Determination; Includes PC, Monitor, Windows®-based software, module, and host system
FP628SLC	Same as FP628SC above, with Sulfur Module Autoloader
CN628SC	CN628 System for Carbon, Nitrogen, and Sulfur Determination; Includes PC, Monitor, Windows®-based software, module, and host system
CN628SLC	Same as CN628SC above, with Sulfur Module Autoloader
CHN628SC	CHN628 System for Carbon, Hydrogen, Nitrogen, and Sulfur Determination; Includes PC, Monitor, Windows®-based software, module, and host system
CHN628SLC	Same as CHN628SC above, with Sulfur Module Autoloader
628SADD	628 Series Sulfur Add-On Module for upgrading 628 Systems; Includes Windows®-based software, module, and necessary components for mating module to an existing system, (no PC or Monitor)
628SADDL	Same as 628SADD above, with Sulfur Module Autoloader

Optional Accessories	
621-192	Dual Monitor Add-On Kit
528-203-250	Combustion Boats

**Adjusting sample size may extend instrument range.*
†Average output based on nominal operating parameters.
‡Allow a 6-inch (15 cm) minimum access area around all units.
V~ denotes VAC.

Delivering the Right Results

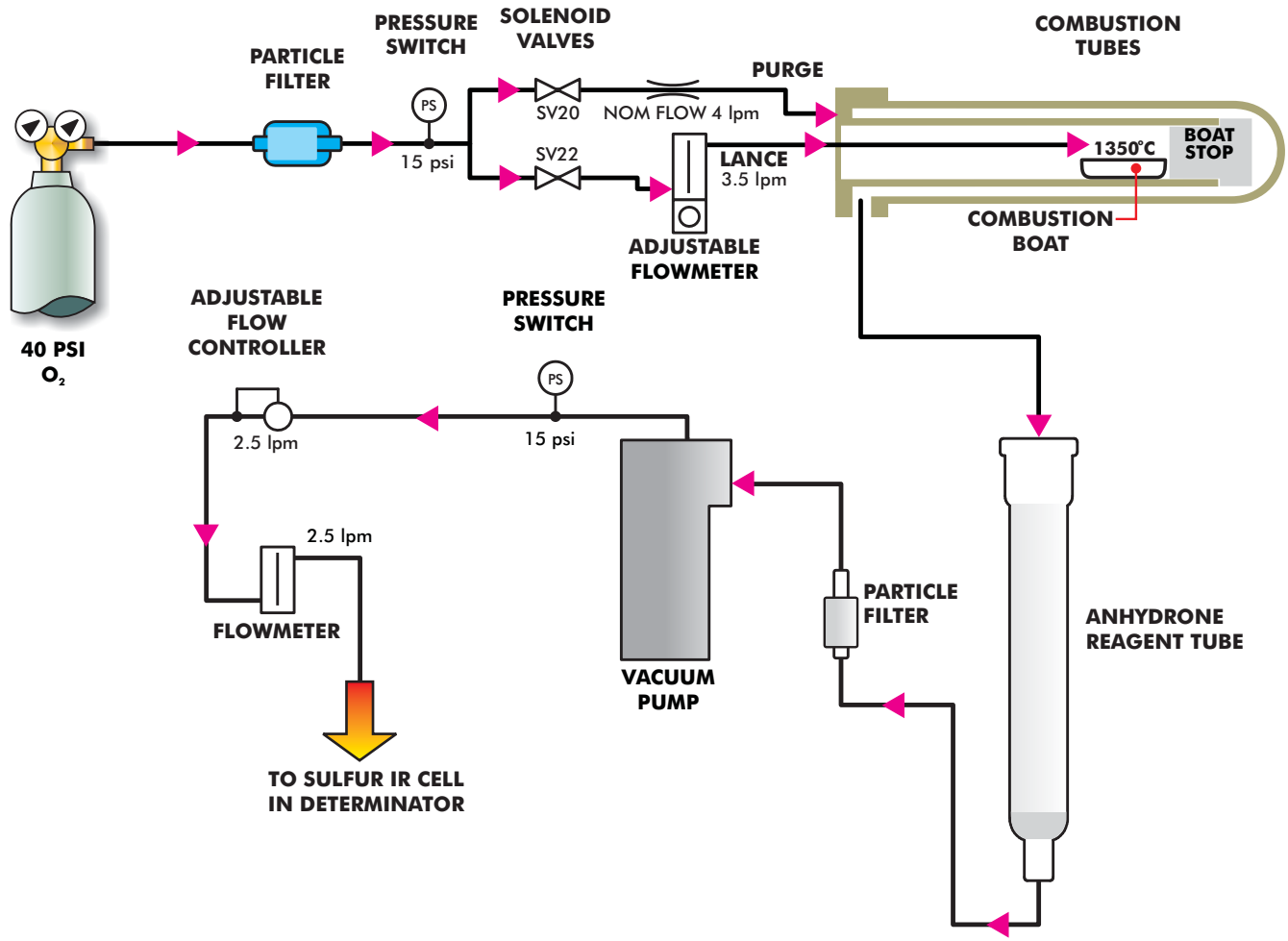
Theory of Operation

LECO offers a Sulfur Add-On Module for the CHN628 Series of Elemental Determinators. The add-on module provides sulfur analysis for any element combination of the CHN628 Series—FP (N), CN, or CHN. The 628 S module is specifically designed to determine the sulfur content in a wide variety of organic materials such as coal, coke, and fuel oils, as well as some inorganic materials such as soil, cement, and limestone.

Analysis begins as a sample is weighed into a combustion boat and placed in the furnace with pure oxygen typically regulated at 1350°C. Sulfur within the sample is evolved from the sample and forms SO_2. The sample gases exiting the furnace are first swept through the boat stop to the back of the inner combustion tube, then forward between the inner and outer combustion tubes. This allows the sample gases to remain in the high-temperature zone for a longer period and permit efficient oxidation. From the combustion system, the gases flow through an anhydrone tube to remove moisture, and through a flow controller that sets the flow of sample gases through the sulfur infrared detection cell within the CHN628 series instrument.

While the CHN628 Series instrument and sulfur add-on module can be loading/analyzing/operating completely independent of each other, the module requires the detection capabilities and PC offered within the CHN628 Series instrument system in order to complete the analysis.

Flow Diagram



Specifications and part numbers may change.
Consult LECO for latest information.

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