SYstemes de LABoratoires

# CSBox Tube
# Carbon And Sulfur Analyzer

For Organic Samples by High Temperature Resistance Furnace

ASTM D4239 | ISO 19579 | ASTM D1552 | ASTM D5373 | ASTM D5016



CSBox Tube CS Analyzer


Coal


Coke


Fuel oils


Soil


Feed


Biomass


Waste samples

ORBIT

25 YEARS OF EXCELLENCE

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## Orbit Technologies Pvt. Ltd.

Orbit Technologies Pvt. Ltd., India is an ISO 9001 certified manufacturer of Thermogravimetric Analyzers, Carbon & Sulfur Analyzers, Ash Fusion Analyzers, Fast Pyrolysis Analyzers & Other Analytical Instruments.
Orbit's high performance analytical instruments are used for precise and reliable results.
Orbit Technologies has obtained the Technology and Business to Manufacture and Sell Carbon & Sulfur Analyzers, Ash Fusion Analyzers & Pyrolyzers from SYLAB S.a.r.l France.
Sylab S.a.r.l France, founded in 1989, is a manufacturer of Carbon & Sulfur Analyzers, Ash Fushion Analyzers, Pyrolyzers & other Analytical Instruments

## Carbon and Sulfur Analysis for Organic Samples

- Unique user friendly design of Orbit, where furnace is isolated from the infrared analyzer to improve the life of the NDIR analyzer.
- Complete software enabled operation of the Analyzer.
- Two individual solid state IR detectors for Carbon and Sulfur.
- High efficiency horizontal tube furnace design.
- Improved furnace design to enhance safety and convenience.
- Low maintenance.
- Rapid, precise, accurate and reliable Carbon and Sulfur analysis in Organic samples.


CSBox Tube CS Analyzer

CSBOX Tube Analyzer is used to determine Carbon and Sulfur in Organic samples like coal, coke, fuel oils, soil, biomass and other organic samples.

Simultaneously it does Carbon and Sulfur determination with minimal sample preparation. It consists of two independent infrared cells with wide measuring range of Carbon and Sulfur. The measuring range of each infrared cell is modified to the user's specific requirement to ensure optimum measurement conditions for each application.

CSBox Tube is supplied with a comprehensive user friendly software which includes statistic reports, diagnostics features and other functions.

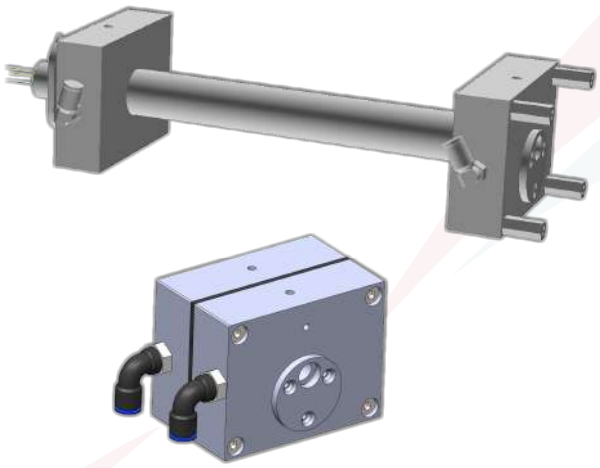
## Improved Furnace Design for Enhanced Safety And Convenience


Furnace

- High efficiency Horizontal Tube Resistance furnace design.
- Programmable furnace temperatures and programmable temperature ramp rates.
- Concentric ceramic furnace tube with ceramic lance directing the oxygen to the sample to ensure rapid analysis times and for complete combustion.
- Better gas flow control to increase the furnace life and reliability of combustion.
- Isolated furnace from the infrared analyzer to improve the life of the NDIR analyzer.

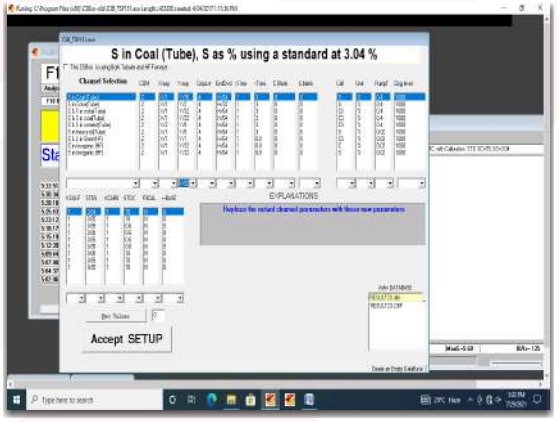
## Two individual solid state IR detectors for Carbon and Sulfur

- Customized infrared cells provide wide, dynamic measuring range.
- The “Stainless Steel” IR path provides increased cell life time for analysis of samples containing halogens and acids.
- Analyzer uses static emitters and static detectors for better signal to noise ratio.
- Orbit uses 100% static transmitter without chopper, no blade to modulate the IR beam. The detector is pyroelectric with 100% static and non-dispersive.



IR Detector

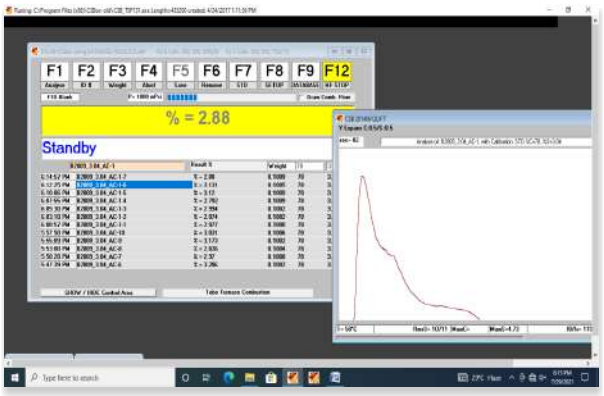
## Orbit’s CS software for Carbon and Sulfur Analyzers




Software Window

- Orbit software gives a complete solution for Carbon and Sulfur analysis. User will have complete access to analysis control like method setup, reports, diagnostics, data analysis and transfer graphs and other functions in a highly organised manner.
- CS software is designed for speed and ease of use.
- It is an easy method setup with automatic sample weight transfer from Analytical Balance.

- Capable to capture weights from all reputed analytical balances.
- Software allows to set up different methods and user profiles.
- Password protection facility.
- Grouping of sample data into sets depending on the customer choice.
- Instrument can be provided with external balance, printer and laboratory information management system (LIMS) with customizable transport feature supporting file.
- Advanced diagnostic features.
- Instrument leak check feature providing available diagnostic tool and increasing reliability.




Analysis Screen

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## *Other analyzers from Orbit for Coal, Mineral and Material analysis:*

### CSBox HFA Analyzer

CSBox HFA Analyzer with High Frequency Induction Furnace for Carbon and Sulfur in Inorganic samples

- High frequency induction furnace ensures complete decomposition of the samples like Steel, Ores, Cast iron, Refractories, etc.
- Unique user friendly design of Orbit, where furnace is isolated from the infrared analyzer to improve the life of the NDIR analyzer.
- Highly effective combustion for an extensive range of samples.
- Wider range of inorganic materials can be analysed.
- Optimised catalyst permits for precise carbon detection.


CSBox HFA Analyzer

### CSBox DCS Analyzer

Reliable and precise Carbon and Sulfur measurements in both Organic and Inorganic samples


CSBox DCS Analyzer

- Unique combination of two different combustion techniques in one analyzer.
- Single analyzer is capable to operate with two furnaces one for Organic and the other one for Inorganic samples.
- Due to the unique combination of two different combustion techniques in one Analyzer, the CSBox DCS Analyzer ensures reliable C/S measurement in both Organic and Inorganic sample materials.
- Typical sample materials for the CSBOX DCS analyzer are steel, iron, cast iron, copper, ceramics, soil, fuel, oil, coal and coke.

### Ash Fusion Analyzer

The Latest technology in the service of the fusion temperature determinations
IF 2000G-HDC for Coal and Coke ash samples
IF 2000G-HDBM for Biomass, Refuse-Derived Fuel (RFD),
Solid mineral fuel and Solid bio fuel ash samples

- Fully automatic instrument for determining the ash fusion points by means of image analysis.
- Orbit's Ash fusion analyzers use the most modern technology for monitoring, computing, storing results and curves obtained during the test.
- Up to 6 samples can be analysed in each batch.
- Real time monitoring of the samples and test process.


Ash Fusion Analyzer

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