CS 1001

Features of the Carbon/Sulfur Analyzer

JUNG INSTRUMENTS GmbH

C S O N H

CS 1001

Features of the Carbon/Sulfur Analyzer

Analysis principles
Infrared light absorption during combustion in Oxygen flow

HF Induction furnace

Options
- Selectable temperature ramps
- Selectable different frequencies
- Selectable different power for combustion
- Solid state infrared detectors with gold path for simultaneous detection of SO2 and CO2 gas
- Automatic furnace dust cleaning by brush
- Automatic furnace cleaning by Oxygen
- Robot module

Automatic high/low range selection

Options
- Up to 4 different detectors
- Selectable range for each IR detector

Simple and short gas circuit, rapid analysis with Automatic operation

Features
- Special Jung Instruments metal dust filter
- Requires fewer reagents, less quartzwool, less dust, offers more stability
- Automatic leakage test
- high performance mass flow controller
- Real time result display
- Automatic weight transfer
- Advanced diagnostics
- Transfer to local network
- Possibility of modular hard- ware and software upgrade
- Online spare parts and consumables catalog

Options
- Rapid and low cost service diagnostic by software
- Service by internet
- Hardware service diagnostic for maximum hard- and software performance an exchange of information between the costumer and Jung Instrument GmbH is desirable

Service
- Service hotline per email or by mobil phone
- Applications support

Option
24H service support

Application

Metals
Steel, Iron, Cast Iron, Pure Metals, Alloy, Copper, Titanium, Zircon, Precious Metals, Ores

Minerals
Ceramics, Cement, Stones, Lime, Gypsum, Glass, Slag

Organic samples
Coal, Coke

Inorganic samples
Inorganic salt, Carbide, Oxides, Nitrides, Ashes, Sand, Steel, Cast Iron, Copper, Alloy, Pure Metals, Precious Metals, Ores, Carbides, Ceramics, Nickel, Cement, Minerals, Coal, Oxides, Ashes, Lime, Soils, Titanium, Gypsum

Pneumatic
- Furnace cylinder movement up/down: < 1 bar/air
- Closed furnace in end position: 6 bar/air


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Technical parameters

High-frequency furnace
The RF Generator is a free floating, air-cooled oszillator in a Colpitts circuit.

Controller
High performance controller by National Instruments

Analysis time (Sample dependent)
Between 45 to 65 seconds

Sample mass
0.5 to 1g

Reproducibility
Better than half the standard deviation of certified reference material analyzed

Measuring Ranges
- Carbon (Low range):
0.1% C at 500 mg sample
- Carbon (High range):
6% C at 500 mg sample
- Sulfur:
0.5% S at 500 mg sample

Option
Additional second S range:
(Sample dependent)
> 1%

Sensitivity
- C - 0.1ppm C
At 500 mg sample dependent
- S - 0.1ppm S
At 500 mg sample dependent

Induction furnace
- 13.7 MHZ, 20 MHz or 27 MHz
- 2.3-3.0 kVA Power

Chemicals
- H2O trap:
magnesium perchlorate
- CO2 trap:
sodium hydroxide

Gases required
Oxygen:
- Purity 99.6%
- 3 bar (45 psi) for analysis
- 6 bar (90 psi) for cleaning

Compressed air:
- 6 bar (90 psi)
- Oil- and water free

Power requirements
230V AC +/-10%
50/60Hz 6 A
(Automatic fuse: 16A Type C)

Dimensions (W x H x D)
550 x 775 x 600 mm
21.7 x 30.5 x 23.6 inch

Weight
~ 100 kg

Accessories
- Analytical Balance
0,0001g to minimum 120g
- New PC system
- Windows based operating system

Optional
Color printer

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