seitron

EMISSIONS INDUSTRIAL ANALYZERS

www.seitron.it

CHEMIST SERIES for Industrial Emissions Analysis

Our team is committed to provide the most suitable and custom version of any instrument to match almost any application and need. Standards regulating exhaust gas emissions in industrial systems are also becoming more and more strict, being of great relevance for both climate and health protection.
In high intensity and high resources consuming processes, great quantities of toxic gases are produced, such as carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxide (NOx) or sulfur dioxide (SO2).
Emissions measurements, necessary for the control of the combustion efficiency, are often performed in extreme environments, with high level of humidity, high temperatures and presence of combustion powder. The analysis are typically performed by special labs, maintenance technicians of industrial plants or by the industries themselves.
In order to answer these needs, Seitron has developed a range of industrial emissions analyzers, both portable for periodical measurements and fixed for continuous analysis.

CHEMIST 600 and CHEMIST 600 BE GREEN are compact, portable instruments, that can measure up to 6 different gases and that can be customized upon customers' requirements.

Analyzer CHEMIST 900 offers the maximum flexibility as it incorporates both NDIR and electro-chemical technologies, which allow for the measurement of up to 12 different gases, all in a convenient portable format.

Analyzer CHEMIST 900 RACK is the instrument dedicated to the continuous measurement of industrial emissions. Thanks to its rack mounting, it is ideal for research and development environments as well as process monitoring.

Applications

Chemical Industries

Laboratories

Biogas Factories

Industrial Motors

Industrial Burners

Waste-to-energy Plants

Pellet Boilers

Industrial Cement Furnaces

CHEMIST 600 BE GREEN

CHEMIST 600
Built-in Printer

CHEMIST 600 BE GREEN / 600

UP TO 6 SENSORS

INDUSTRIAL EMISSIONS ANALYZER

Blue Backlit Lcd (55 X 95 Mm)

15 Preprogrammed Fuels
(Including Wood, Pellets, Biogas And Coal)

CO Protection Dilution Pump

Rechargeable Lithium Ion Batteries

Qr Code To Acquire Analysis With Smartphone

External Water Trap with Dust Filter

4 Pa Ventilation Measurement

Draught Measurement

Tightness Test

1 YEAR WARRANTY ON INSTRUMENT AND GAS SENSORS

Seitron Smart Analysis

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Seitron Smart Analysis Windows 10

EVERY KIT INCLUDES:

- Instrument
- 300 mm Smoke Probe with 3 m cable
- Water trap with dust filter, stainless steel fittings and silicon hose
- Combustion air temperature Probe
- Preassure Measures Kit
- Power Adapter and International Plug
- Hard plastic kit case
- Quick Guide
- Calibration Certificate

MAIN FEATURES

- Precalibrated gas sensors
- 3 consecutive analysis with average calculation
- Automatic autozero with sampling probe in the stack
- Self diagnostic function with sensors status
- 10 different preprogrammed languages
- Automatic calculation of gas pipes volume
- Hard plastic body with magnets
- Internal memory for 1000 analysis
- Dimensions:
  Analyzer 270Ax93Lx68Pmm, weight 0,8 Kg
  Kit 130Ax510Lx430Pmm, weight 3,4 Kg

MEASURED VALUES

- Flue gas temperature and Temperature Differential
- Outdoor air temperature and room temperature
- Draft and Pressure Differential
- Ambient CO

CALCULATED VALUES

- Boiler efficiency, including condensing
- Stack losses and excess air
- CO
- Flow velocity with Pitot tube
- Burning power

FEATURES	605 / 605 BG	606 HC / 606 HC BG	606 CO2 / 606 CO2 BG
up to 6 senosrs	✓	6 sensors	6 sensors
O2 Sensor	✓	✓	✓
CO/H2 (0 .. 8000 ppm) Sensor	✓	✓	✓
NO Sensor	✓	✓	✓
NO2 Sensor	✓	✓	✓
SO2 Sensor	✓	✓	✓
CxHy Measured	-	✓	-
C02 Sensor	-	-	✓
NOx Measured (NO+NO2)	✓	✓	✓

CHEMIST 600 X BE GREEN / X 600

Modular Gas Analyzer Kit up to 6 sensori of your choice

FUELS			
Natural Gas	Coal	Diesel Oil	Wood Chips
Propane	Biogas	Fuel Oil	Propane Air
LPG	Pellet 8% (RH)	Olive pits	Rice husks
Butane	Wood 20% (RH)	CO of gas	

CHEMIST 900 1-12 SENSORS
INDUSTRIAL EMISSIONS ANALYZER

Chemist 900 is an industrial emissions and combustion analyzer, mainly used for industrial burners, cogeneration groups, gas turbines, industrial ovens and processes, laboratories and generally everywhere the need is to measure and register for long periods the gas emissions, in compliance with existing regulations.

PRICE ON REQUEST
CHEMIST 900 WARRANTY:
1 YEAR ON INSTRUMENT, GAS SENSOR AND PRINTER

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Seitron Smart Analysis Windows 10

THE INSTRUMENT CONSISTS OF:

- Gas sampling system
- Expansion water trap
- Combustion Air temperature with 200mm tip
- Kit for differential temperature measurement
- 1000mm hose for remote condensate drainage
- USB cable
- Power supply cable
- UE/Schuko/USA plug
- Configuration software for laptop on usb pendrive
- Instructions manual
- Calibration certificate

Equipped for:
- Water trap system/cyclone cooling with Peltier sensor
- Installation with 1 to 9 sensors for “flex” electrochemical gases
- NDIR bench to measure up to 3 gases
- Gas sampling probe (with or without heated head)

MAIN FUNCTIONS

- Heated Sampling Probes (up to 6 m)
- Efficiency calculations
- Condesing efficiency calculation
- PCI efficiency calculation
- PCS efficiency calculation
- 15 default fuels
- 32 settable fuels
- CO sensor protected by an automatic dilution system

MEASUREMENT

- NDIR bench (measuring up to 3 gases)
- Electrochemical gas measurement sensors (up to 9)
- Local or remote combustion air measurement
- Sensors temperature measurement through thermal compensation
- Measurement of the differential pressure
- Air speed for air or flue gas leaving the stack with the use of Pitot tube
- Suction pump flow rate measurement

CHEMIST 900

Central Unit Version	Flex gas sensors (max 9)	NDIR bench (CO2/CO/ CxHy)	Anti-condensation cyclone Cooler with Peltier cell	Anti-condensation trap
Chemist 901	✓	-	-	✓
Chemist 901 IR3	✓	✓	-	✓
Chemist 902	✓	-	✓	-
Chemist 902 IR3	✓	✓	✓	-

GAS SAMPLING SYSTEMS

- **Passive Type:** utilizes sensors with different tip lengths and fittings, made of different materials, with flexible tube connection to the central unit in various lengths.

- **Active Type:** utilizes gas sampling sensor with heated head and flexible tube. This characteristic prevents water vapour condensation to reach the central unit, since it affects measurements of gases easily soluble in water, such as NO2 and SO2.
  The active sensor maintains the gas sample at a higher temperature than the dew point and keeps it stable as far as the cooling system: this is a fast, cyclone type with Peltier cell. The water vapour condenses so quickly that the NO2 and SO2 gases do not have time to dissolve in water.

Passive gas sampling probe

Active gas sampling probe with heated head and hose

750 mm gas sampling probe for industrial motors

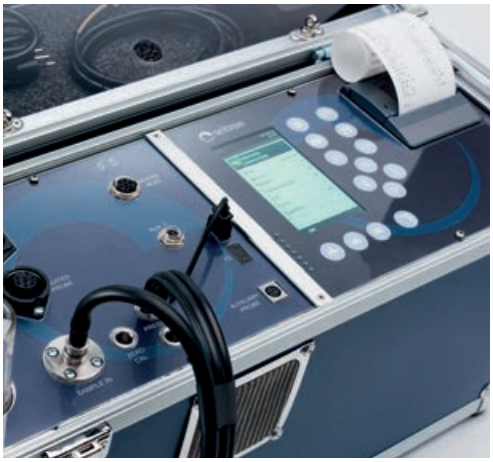
CHEMIST 900 - TECHNICAL FEATURES

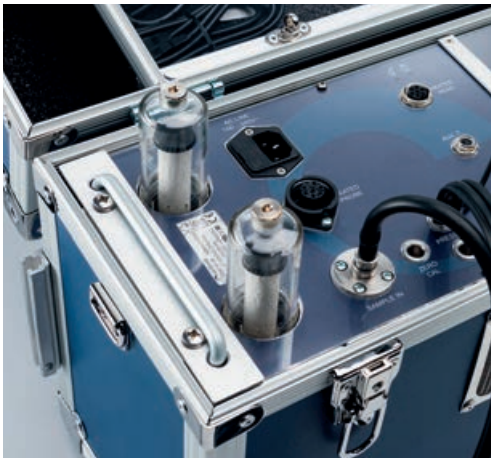
Power supply: Battery charge: Charging time: Instrument battery life:	100 .. 260V~ or Li-ion battery pack with internal protection circuit, rechargeable. With mains cable with IEC C14 socket. 8 hours from 0% to 90%. 10 hours of continuous operation (except printer and Peltier cell group). 2 hours with Cooler working.
Display:	Backlit TFT graphical colour display. 4.3" 480×272 pixel.
Connectivity Communication port: Bluetooth:	 TYPE B USB connector. Communication distance: <100 metres (open field).
Autozero: Dilution:	Automatic autozero cycle with gas sampling probe in stack. CO sensor measurement range expansion system up to 100,000ppm (10.00%). Starting point programmable by the user.
Gas measurement sensors: Infrared bench: Fuel type:	Up to 9, configurable among electrochemical, NDIR (single cell) and Pellistor. 3 gases NDIR bench: CO, CO2, CxHy. 12 preprogrammed and 16 programmable by the user.
Self diagnostics: Temperature measurement: Ambient temperature measurement:	Check all functions and internal sensors with status indication. TcK double input with mini connector (ASTM E 1684-96) for Temperature Differential measurement (supply and return). Via internal sensor or via T2 TcK input with remote sensor.
Printer: Printer power supply: Printer battery life:	Integrated, thermal, with easy paper loading and paper level sensor. Analyzer batteries. With fully charged batteries up to 40 analysis reports.
Internal Data Memory: User data: Printer header:	16.000 complete data analysis, time and customer's name can be stored. 8 programmable user names. 6 lines × 24 characters, user customisable.
In-line filter:	With replaceable cartridge, 99% efficiency with 20µm particles.
Vacuum pump: Capacity pump:	2.0 l/min flow rate in the stack up to 300hPa head. Internal sensor measuring pump flow rate.
Cooler sample treatment Drying system: Type: Set point temperature cooler: Max. temp. deviation from set point: Condensate emptying pump: Peristaltic duty cycle pump: Warm-up time: Operating temperature: Anti-condensation trap Type: Condensate emptying pump: Operating temperature:	 Rapid water condensation using cyclone system Peltier cell +5°C +10°C from set point Peristaltic hose 38 ml/min 30s On .. 30s Off ~ 15 .. 20 minutes -5°C .. +45°C Integrated Peristaltic hose 38 ml/min -5°C .. +45°

Carbon black: **Tightness test (where required):** **Condensing boiler efficiency :** **Ambient gases:** **Draught test:**	Using a manual external pump; the smoke index can be uploaded and printed. Tube gas tightness test with separate receipt printing, using AAKT05 accessory, subject to European standards UNI 7129 (new installations) and UNI 11137: 2012 (existing installations), with automatic calculation of the tube volume. Automatic assessment of the condensing boiler, with calculation and printing of the boiler efficiency. Separate measurement and printing of the ambient CO concentration. Draught test execution using external probe (AACDP02)
Working temperature: **Storage temperature:** **Humidity limit:** **Protection level:** **External dimensions:** **Weight:**	-5°C .. +45°C -20°C .. +50°C 20% .. 80% RH IP21 50 x 36 x 20 cm (W x H x D). 50 x 46 x 13 cm (W x H x D) with intermediate drawer for heated head and sensor transportation. ~ 12 kg (Typical configuration: nine sensors - Cooler - IR bench - smoke sampling sensor - power cable - USB cable - carrying strap - two paper rolls - USB stick - condensate drain tube - remote air intake tube - combustive air sensor). ~ 13 kg (Typical configuration with additional accessories such as: 3m extension for smoke sensor - auxiliary air sensor - 300mm Pitot Tube - draught gauge). ~ 16,7 kg (Typical configuration with additional accessories and intermediate drawer containing: heated head sensor with 300mm tip and heated tube).
Compliant with European standards EN 50379-1 and EN 50379-2 for the following measurements:	• O2 • CO • NO • SO2 • Temperature (flue gas) • Temperature (combustion air) • Pressure (draught) • Pressure (differential)

NDIR benches available for simultaneous measurement up to 3 gases:

Gas	Measure type	Range	Resolution	Response Time (t 90)
CO	NDIR	0 .. 2500 ppm 2500 .. 100000 ppm (10% Vol) 100000 .. 500000 ppm (50% Vol)	1 ppm 10 ppm 100 ppm	< 10 sec
CO2	NDIR	0 .. 50 % Vol	0,1 % Vol	< 10 sec
CH4 *	NDIR	0 .. 100 % Vol	1 ppm	< 10 sec
HC (C3H8)*	NDIR	0 .. 30000 ppm	1 ppm	< 10 sec





CHEMIST 900 RACK 1-6 SENSORS

INDUSTRIAL EMISSIONS ANALYZER

The CHEMIST 900 RACK is an onsite continious emissions monitor (CEM). This device can measure emissions generated by industrial combustion or transformation processes and it analyzes different gases thanks to the NDIR and electrochemical technology.
Combustions and emissions parameters are displayed in real time on a TFT color display, on a PC Software or on a PLC that receives data via RS485 serial connection. The sensors are thermally compensated in order to avoid measurement errors that could be caused by temporary thermal variation. The distinctive feature of the Chemist 900 Rack is its rack structure that allows to use it into standard 19" cabinet or even in laboratories because it comes standard equipped with 4 rubber bumpers. The Chemist 900 Rack is designed to perform long-lasting analyses periods thanks to an automatic commutation system that allows to reset both the gas sensors and the pressure sensor used for draft measures or differential pressure measures. This, together with a Pitot tube, allows measure the smoke speed inside the evacuation duct. A relevant feature of the Chemist 900 Rack is a cooling system that causes a quick condensation of the moisture contained in the gas thus allowing the gas to reach the sensors without dissolving in water. The gases that benefit from this system are NO2, SO2, NH3, H2S. Condensation water is collected into a water tank and emptied on a timed basis by a membrane pump. The gas sample and the air used for sensors cleaning are filtered by two interchangeable dust filters. The Chemist 900 rack is equipped with a system that allows taking in gases from two different points (e.g. two stacks) and carry them into a single smoke suction line (image 1). All parameters and collected data are sent via serial communication port type RS485 and USB communication port in order to connect to the PC for the analysis reading. The user can archive and analyze the collected data with the dedicated software provided with the instrument, Chemist Smart Analysis. Files are saved with .csv extension.

SAMPLING LINE SELECTION SYSTEM

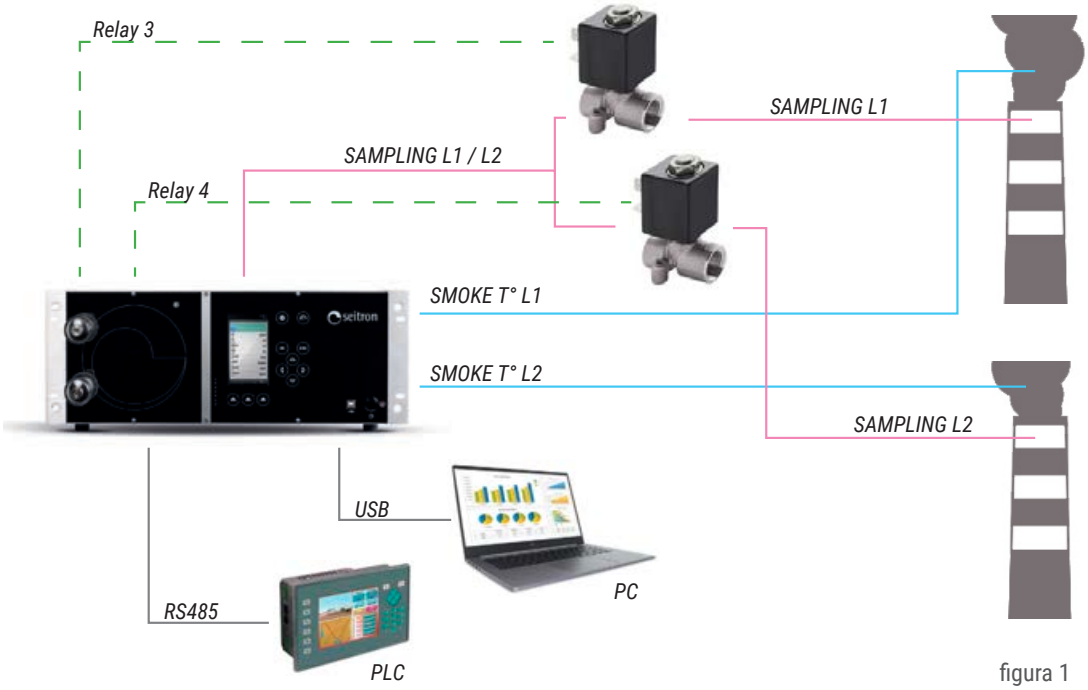


figura 1

THE INSTRUMENT CONSISTS OF:

- Gas sampling system
- USB cable,
- Power supply cable
- UE/Schuko/USA plug
- Calibration certificate
- Instructions manual

Predisposto per:

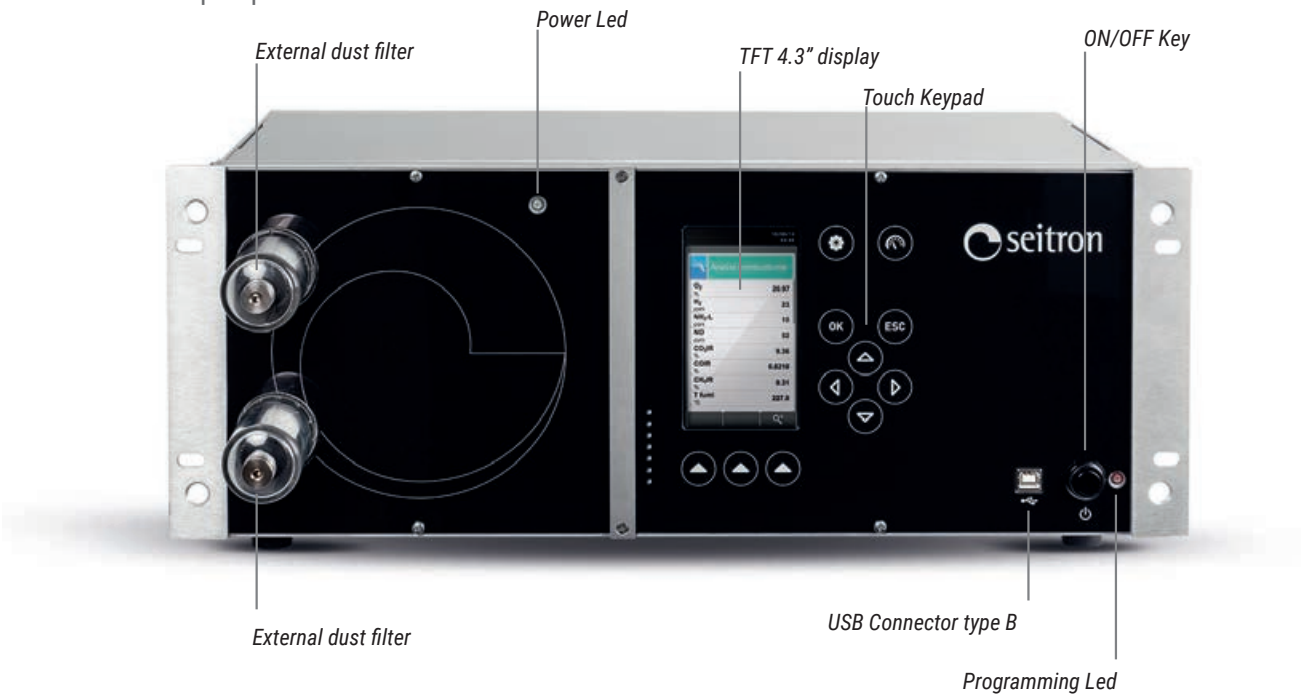
- Water trap system/cyclone cooling with Peltier sensor
- Installation with 1 to 3 sensors for "flex" electrochemical gases
- NDIR bench to measure up to 3 gases
- Gas sampling probe (with or without heated head)

MAIN FUNCTIONS

- Serial communication port type RS485 according to protocol MODBUS® RTU USB Communication
- Possibility of communication on ethernet line with external module
- 4 .. 20 mA isolated output
- 4 alarm relays outputs
- Heated Sampling Probes
- Efficiency calculations
- Condesing efficiency calculation
- PCI efficiency calculation
- PCS efficiency calculation
- 15 default fuels
- 32 settable fuels
- CO sensor protected by an automatic dilution system

MEASUREMENT

- NDIR bench (measuring up to 3 gases)
- Electrochemical gas measurement sensors (up to 3)
- Smoke temperature measurement (2 temperatures)
- Local or remote combustion air measurement
- Sensors temperature measurement through thermal compensation
- Draft in the stack with automatic autozero
- Measurement of the differential pressure
- Air speed for air or flue gas leaving the stack with the use of Pitot tube
- Suction pump flow rate measurement



NDIR benches available for simultaneous measurement up to 3 gases:

Gas	Measure type	Range	Resolution	Response Time (t 90)
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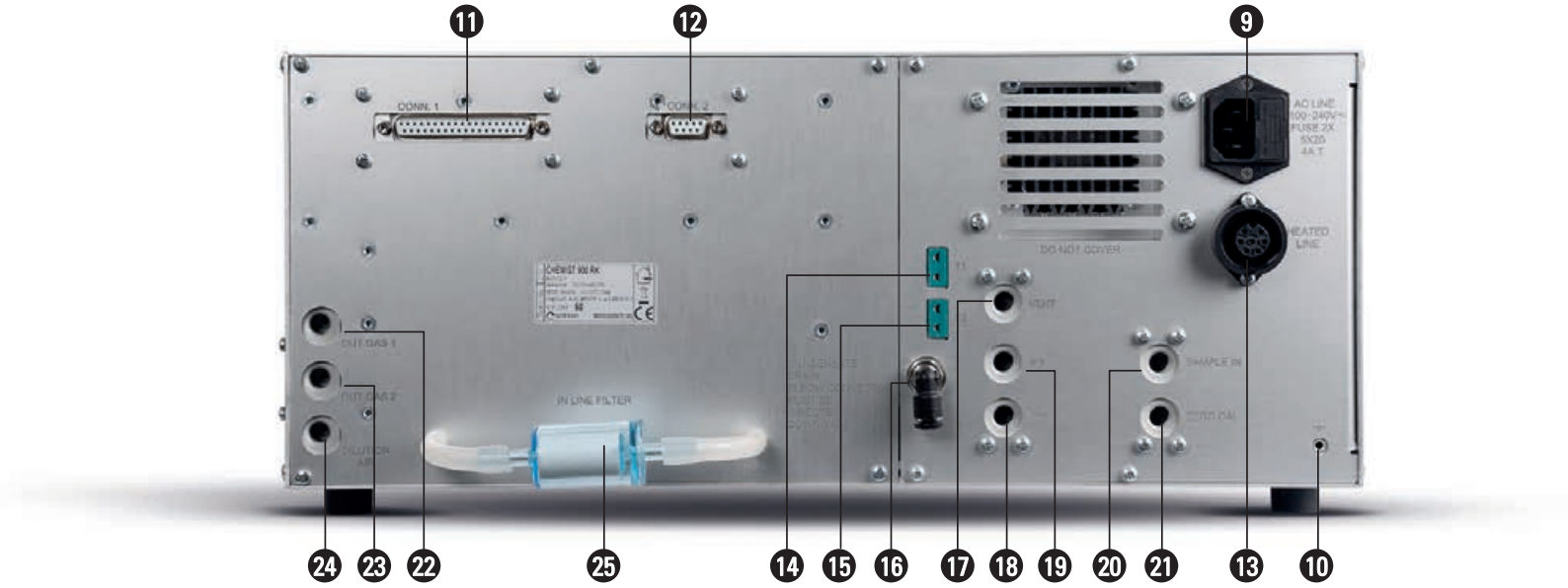
CO2	NDIR	0 .. 50 % Vol	0,1 % Vol	< 10 sec
CH4 *	NDIR	0 .. 100 % Vol	1 ppm	< 10 sec
HC (C3H8)*	NDIR	0 .. 30000 ppm	1 ppm	< 10 sec

BACK COVER DESCRIPTION



9. Power Supply 'AC LINE - 90 .. 264V-'
Plug IEC C14 to connect the power cable to the instrument, provided with the instrument itself. On the plug there is a fuse-holder hidden under a flap, containing 2 fuses 5x20 4A T.

10. Connection for grounding of the instrument.

11. 37 poles connector (4 outputs 4..20mA and 4 relay outputs)
Makes available for the user 4 4..20mA outputs and 4 relay outputs with potential free change over.

12. Serial connector RS485
Serial communication port type RS485 according to MODBUS® RTU protocol.

13. 'HEATED LINE' Connector
Plug for the heated line connection.

14. 'T1' Connector
Tc-K connector to plug in the male connector Tc-K of the probe for the measure of the smoke temperature.

15. 'T2' Connector
Tc-K connector to plug in the male connector Tc-K of the combustion air probe.

16. Condensation water drain

17. 'VENT' Connector - Female connector M5
Air vent used by the pressure sensor to perform the self-zeroing. If the instrument is installed on a rack or in pressurized environments, the air vent must be moved remotely at room temperature.

18. Pneumatic connector 'P-' - female connection 1/8 GAS BSPP.
Negative input (P-) to be used for the draft measurement.

19. Pneumatic connector 'P+' - female connection 1/8 GAS BSPP.
Positive input (P+) to be used for the measurement of the pressure in general.

20. Pneumatic connector 'SAMPLE IN' - female connection 1/8 GAS BSPP.
Input for the connection of the gas sampling probe.

21. Pneumatic connector 'ZERO CAL' - female connection 1/8 GAS BSPP.
Input for the line connection to the remote air vent in order to perform the self-zeroing. If the instrument is placed in a closed and polluted environment, it is possible to move the instrument air vent in a room with clean air using the 'ZERO CAL' connector

22. Connector 'OUT GAS 1' - female connection 1/8 GAS BSPP.
Analyzed gas remote output.

23. Connector 'OUT GAS 2' - female connection 1/8 GAS BSPP.
Analyzed gas remote output.

24. Connector 'DILUTION AIR' - female connection 1/8 GAS BSPP.
Remote air vent for CO dilution.

25. Dust filter for NDIR (infrared) bench protection

Technical Features

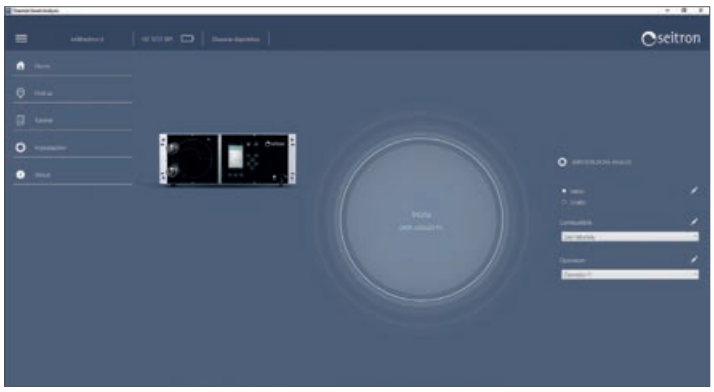
Power supply	90 .. 264 Vac
Power absorption at 230 V	100 VA
Display	TFT 4.3”, 272 x 480 pixels graphic color with backlight
PC Communication port	USB Connector type A
Connectivity	USB-RS485 MODBUS RTU
Autozero	Automatic autozero cycle with the probe inserted in the chimney
Suction pump	2,2 l/min head at the stack up to 300 hPa.
Line Filters	Replaceable cartridge, 95% efficiency with 20um particles
Sample treatment	Peltier cooling system with automatic emptying of the condensation water
Size	19” /4 HE / 400 mm
Operation temperature	+0°C + 45°C
Stock temperature	-20°C + 60°C
Alarm relay	4 x SPDT AC/DC 24 V 1A
Protection fuses	2 x 4A 5 x 20 T
Analog Outputs	4 x 4-20 mA max resistance load 1 KOhm
Gas 1, Gas 2 Output Connector	1/8 BSPP
Gas Input Connector	1/8 BSPP
Pressure P1, P2 Input Connector	1/8 BSPP
Condensate drainage Output Connector	1 /8 BSPP - fast connection tube 6 mm diameter
Air Connector	1/8 BSPP
Compliant with European Standards	EN 50270, EN 50379-1 ed EN 50379-2
Compliant with USA Standard	CTM030 and CTM034

Chemist Smart Analysis

Dedicated PC Software that allows:

- Manual analysis
- Periodic data logger parameters set up (autozero time, autozero range, stand-by time, sampling range, number of analysis cycles, start and end date of the analysis)
- Pump control
- Graphical or numerical visualisation of the parameters
- Alarms visualisation
- Instrument parameters set up
- Fuels set up
- Alarms set up
- 4-20mA channels set up
- Operator data set up
- CSV files data storing

Windows Software
Seitron Smart Analysis



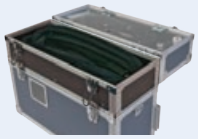
Gas Analysis Probes

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AASF51A		180 mm flue gas sampling probe, cable length 2m, maximum temperature 400 ° C, without anti-condensation unit	✓		
AASF62A		300 mm flue gas sampling probe, cable length 3m, maximum temperature 600 ° C, without anti-condensation unit	✓		
AASF65A		750 mm flue gas sampling probe, cable length 3m, maximum temperature 800 ° C, without anti-condensation unit	✓		
AASF66A		1000 mm flue gas sampling probe, cable length 3m, maximum temperature 1200 ° C, without anti-condensation unit	✓		
AASL05A		300 mm flue gas sampling probe, cable length 2m, maximum temperature 600 ° C, without anti-condensation unit	✓		
AASF31		180 mm flue gas sampling probe, cable length 3m, maximum temperature 400 ° C		✓	✓
AASF32		300 mm flue gas sampling probe, cable length 3m, maximum temperature 600 ° C		✓	✓
AASF35		750 mm flue gas sampling probe, cable length 3m, maximum temperature 600 ° C		✓	✓
AASF36		1000 mm flue gas sampling probe, cable length 3m, maximum temperature 1200 ° C		✓	✓

Modular Probes

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AATL01		S probe with clamp for 8mm tips, for use on waste systems	✓	✓	✓
AASJ03		Flue gas suction probe handle, without tip, rubber hose length 3 m. Fitting diameter 9 mm, without anti-condensation unit		✓	✓

CASE, HOLSTER AND ACCESSORIES

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AACR10		Hard plastic kit case	✓		
AASM06		Rubber holster	CHEMIST 600		
AASM10		Rubber holster	CHEMIST 600 BG		
AAEB01		Trunk Extension - Chemist 900		✓	
AATY01		Trolley for Trunk - Chemsit 900		✓	

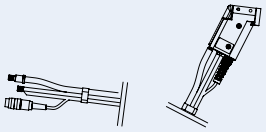
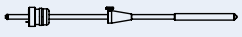
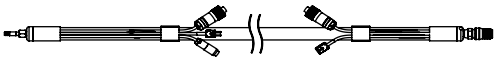
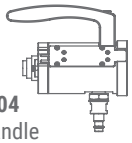
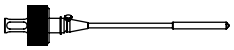
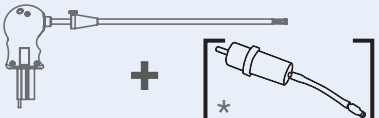
Accessories for Residential Applications

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AACKP01		Pressure Differential measurement kit 2 x 1 m hoses + fittings	✓	✓	✓
AAKT05		Kit for tightness test with 4 ways manifold, manual pump, 100 ml syringe, hoses, 1 silicone conical fitting	✓	✓	
AARA02		Gas valve hose adapter: d.i. 7 mm	✓		
AASA08		Outdoor air temperature 200 mm TcK probe, with 2 m cable	✓		
AASG01		Gas sniffer probe for Chemist 500 analyzers 1 m + fitting	✓		
AATT01		"L"shaped Pitot Tube. 300 mm length, 6 mm external diameter. Without thermocouple	✓	✓	✓
AATT02		"L"shaped Pitot Tube. 800 mm length, 6 mm external diameter. Without thermocouple	✓	✓	✓

PRINTERS AND CONSUMABLES

CODE	PHOTO	DESCRIPTION	CHEMIST 600	CHEMIST 600 BG	CHEMIST 900
AARC10		Long life plain thermal paper roll 57x30	✓	✓	✓
AAST04		Thermal printer with Bluetooth connection		✓	

Accessories for Industrial Applications

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AACEX01		3 m extension cable for flue gas probe (code AASFxxx)	✓	✓	✓
AAPM02		Bacharach hand Pump for carbon measurements	✓	✓	✓
AACE01		Active external cooler (compatible with AASF3xx probes)	✓		
Automatic Carbon Measurement Probe  +  **AASY01:** Handle with 3,5m cable **AAPT04** 750 mm Rigid Tip				✓	
Probe with electro-heated head and tube  +  +  **AATR01** Electro-heated 3m cable, with thermocouple **AAHH04** Probe handle with heated head - **AAPT01**: 300mm Rigid Tip - **AAPT02**: 1000mm Rigid Tip				✓	✓
Accessories for industrial measurements, high temperatures and particularly dirty smokes  +  +  **AAxxx** Gas Analysis Probe * **AACTA03A** Water Trap **AASP01** Guard shield **AAFS02** Stainless steel filter with adapter			✓	✓	✓
AATL01		S probe with clamp for 8mm tips, for use on waste systems	✓	✓	✓
AACP01		External unit for passive sample treatment, for NO2 and SO2 measurement, compatible with AASJ probe--	✓		

* : If not included in the probe AASFxxx

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SPARE REPLACEMENT PARTS

CODE	PHOTO	DESCRIPTION	CHEMIST 600/600 BG	CHEMIST 900	CHEMIST 900 RACK
AAPB01		Rechargeable Li-Ion battery, 3,7 V, 4,8 Ah	✓		
AAPB12		Rechargeable Li-Ion battery; 11,6V - 6200mAh		✓	
AAKA02		Power Adapter with international plug, USB A / USB B with 2 m cable	✓		
AACFA01		Fine dust filters for AACTA03 (5 pcs. package) Dimensions 12x32 mm	✓		
AACTA03A		Water trap with dust filter, stainless steel fittings and silicon hose suitable for all combustion analyzers	✓		
AAFA02		Spare Part Filter; dimensions 12x57mm; (2PCS)		✓	✓
AAFA03		HDPE filter for industrial engine probe (2PCS); dimensions 12x32mm; suggested use for NH3 measurements with passive probes	✓		
AAFA04		HDPE filter for industrial engine probe (2PCS); dimensions 12x57mm; suggested use for NH3 measurements with passive probes		✓	✓
AAFS01		Inox filter for industrial engine probe; dimensions 12x57mm (AAFS02 Spare Part)	✓	✓	✓

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