BLUE LINE

FLUE GAS ANALYSERS PLUS

TEMPERATURE & PRESSURE MEASURING INSTRUMENTS

TÜV SÜD
Production monitored
Safety tested

Technologically advanced equipment fully compliant with BS EN50379 PART 2 for use in statutory measurement and assessment procedures

shawcity

HELPING YOU TO MAKE MORE ACCURATE DECISIONS.....

BLUE LINE RANGE

EUROLYZER ST

Three-in-one-instrument!

- *Flue gas analysis*
- *Pressure measurement*
- *Temperature measurement*

- ***Intuitive user guidance with touchpad for scrolling***
- ***High resolution TFT colour monitor with brilliant contrast***
- ***Choice of display colours for measurement values***
- ***Highest flexibility through data storage on Micro-SD-Card***
- ***Extended CO measuring range with H2 compensation***
- ***Measurement with two active display levels (Multi-Tasking-Function)***
- ***Separate measurement programmes for (differential) pressure and temperature***
- ***Powerful NiMH rechargeable battery block provides for up to 8 hours of measurement***
- ***Internationally normed plug connector system***
- ***Unbeatable price/quality ratio***

Application

Ideal for checking and servicing of small and medium sized heating systems acc. to BImSchV and for safety-technical CO checks of gas fired installations.
The instrument is ideally suited for measurements on bi-valency combination and efficiency modulating BHKW – heating installations up to a Lambda value of 1.00 and provides also an exact calculation of the 'Eta' value for all combustion heating systems with fuel-specific dewpoint calculation.

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Technical Specification

Measured values, depending on equipment
O_2, CO/H_2, Flue gas temperature, combustion air temperature, draught, pressure

Calculated values, depending on equipment
CO undiluted, Lambda, CO_2, efficiency (Eta), temperature difference, pressure difference Eta-BW (for combustion systems), flue gas losses (q_A), dewpoint

Input possibilities, depending on equipment
Sutt figure, oil derivatives, customer No., boiler temperature

Measuring ranges

Flue gas temperature (incl. separate differential pressure measurement)

Measuring range:	0 °C/+1000 °C
Resolution:	1 °C
Accuracy:	± 1 °C + 1 digit (up to 300 °C)
	± 1% of meas. value (above 300 °C)
Thermoelement:	NiCr-Ni (Type K)

External wall or air temperature

Measuring range:	-20 °C/+200 °C
Resolution:	0,1 °C
Accuracy:	± 3 °C + 1 digit (-20,0 to 0,0 °C)
	± 1 °C + 1 digit (-0,1 to +200,0 °C)
Thermoelement:	NiCr-Ni (Typ K)

Draught/Differential pressure

Measuring range:	±50hPa(draught)/±130hPa(diff.-pressure)
Accuracy:	± 2 Pa (up to ± 2 hPa)
	± 1% of meas. value (up to ± 50 hPa)
	± 1,5% meas. value (above ± 50 hPa)
Resolution:	1 Pa (= 0,01 hPa)

O_2-Measurement

Measuring range:	0 ... 21 vol.-%
Resolution:	0,1 vol.-%
Accuracy:	± 0,2 vol.-% of meas. value

CO_2-Determination

Indicating range:	0 ... CO_2 max.
Resolution:	0,1 vol.-%
Accuracy:	± 0,2 Vol.-%

CO-Measurement

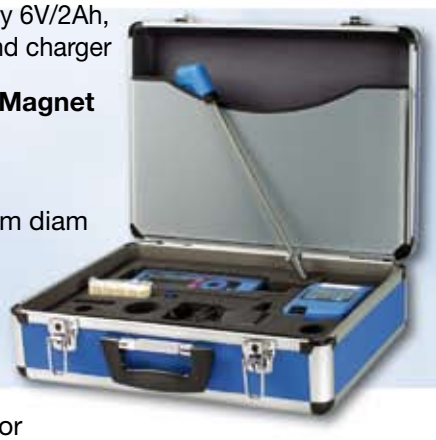
Measuring range:	0 ... 5000 ppm (nom.)/0 ... 9999 (max.)
Resolution:	1 ppm
Accuracy:	± 5 ppm (up to 50 ppm)
	± 5% of meas. value (above 50 ppm)

Display
TFT colour monitor

Date Communication
USB-interface via cable
Wireless infra-red printer interface
Bluetooth (optional)

Memory
Micro-SD-card (Option: std. commercial up to max. 4 GB)

Power Supply
NiMH rechargeable battery 6V/2Ah,
external mains adaptor and charger



Protective Sleeve with Magnet
Soft plastic

Connections
Draught/Pressure: 7 mm diam
Gas: 8 mm diam

Housing
Mineral fibre plastic

Temperature
Plug connector system for
NiCr-Ni thermoelements (Type K)

Approvals
Acc. to BImSchV and KUO as well as EN 50379-2

Weight (instrument only)
approx. 400 g

Instrument Variants
Eurolyzer ST for measurement of O_2, CO
and (differential) temperature **(Pt.No. 69332)**

EUROLYZER ST for measurement of O_2, CO,
(differential) temperature, draught **(Pt.No. 69333)**

EUROLYZER ST for measurement of O_2, CO_2, (differential) temperature, (differential) pressure, draught **(Pt.No. 69334)**

Scope of Delivery
EUROLYZER ST, incl. of calibration protocol, mains adaptor, flue gas probe, condensate filter cartridge, ambient air sensor, connector set for gas fittings, protective sleeve with magnet, aluminium instrument case

Optional Extras
Bluetooth interface, Micro-SD-Memory Card, Printer

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Flue Gas Analysis Computer MULTILYZER NG

Ideal for servicing all types of heating installations and for measurements and adjustments on solid fuel burner systems

- ***USB interface for PC/Laptop and IR interface for printer***
- ***Bluetooth Data Interface (optional)***
- ***Individually programmable measurement configurations***
- ***Multitasking measuring mode with two active levels***
- ***LCD display with up to 10 measured values***
- ***For use with maximum number of electrochemical sensors in combination: O_2, CO/H_2 (H_2 compensated), NO, SO_2, NO_2 and $CO_{20,000}$***
- ***Separate measuring programmes for (differential-) pressure and temperature with min./max. indication of all measured values and reset function***
- ***Graphic evaluation of measured values according combustion chart for gas and fuel oil systems as well as a flue-gas stream search function***
- ***MULTILYZER NG is certified to EN 50379-2 and approved for legally regulated measurements in Europe***

Application

MULTILYZER NG is ideally suited for checking and servicing of small and medium sized heating installations according to BImSchV and for checking CO concentrations in gas-fired systems. In addition, the instrument can be used for measurements and adjustments on solid fuel systems, in particular for pellets, as well as bivalent, modulating combined heating and power plants. The compact design allows the instrument to be equipped with any combination of up to six electrochemical sensors.

BLUE LINE RANGE

In addition to the existing approvals according to BImSchV, MULTILYZER NG is also approved according to the stringent rules of EN 50379 (Part 2) and is therefore ideally suited for measurements regulated by law through-out Europe. The large LCD display allows for 5 or 10 measured values to be displayed. Measured values can be transmitted wireless either directly from the measuring programme or the memory to an infrared printer. In addition, the unit features a USB interface for data transmission to a PC. The instrument is also equipped with a device monitoring function, limit value monitoring (flushing pump; can also be operated manually), graphic evaluation of the measured values according combustion charts for gas and oil fired systems as well as a core stream search function. 4 measured gas values can be displayed and the pressure measurement value in 6 different units. Furthermore, separate measurement programmes are available for (differential-) pressure as well as temperature with min./max. indication and reset function.

Calculated parameters: CO undiluted, Lambda, CO_2, Eta efficiency, flue gas losses, dew point, temperature difference.

Technical Specifications

Flue gas temperature (incl. separate differential temperature measurement)
Measuring range: 0 °C/1,000 °C
Resolution: 1 °C
Thermocouple: NiCr-Ni (Type K)

Ambient/air temperature
Measuring range: -20 °C/+200 °C
Resolution: 0.1 °C
Thermocouple: NiCr-Ni (Type K)

Draught/differential pressure
Measuring range: ±70 hPa (nominal/±130 hPa (max.)
Accuracy: ±1% of meas.value/±2% of meas.value
Resolution: 0.01 hPa

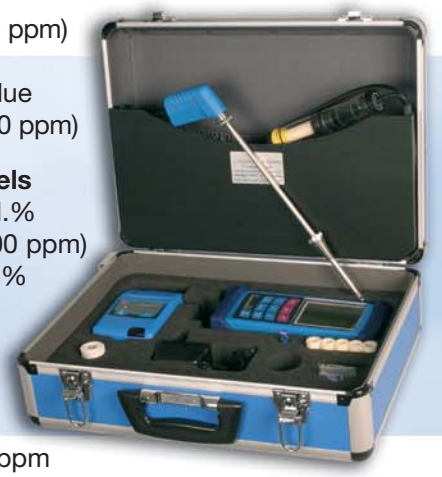
O_2 measurement
Measuring range: 0/21 Vol.%
Resolution: 0.1 Vol.%
Accuracy: ±0.2 Vol.% of meas.value

CO_2 calculated value
Measuring range: 0/CO_2 max.
Resolution: 0.1 Vol.%
Accuracy: ±0.2 Vol.%

CO measurement (with H_2 compensation)
Measuring range: 0/4,000 ppm
Resolution: 1 ppm
Accuracy: ±3 ppm (up to 20 ppm)
±5 % of meas.value
(above 20 ppm)

Options

NO measurement
Measuring range: 0/2,000 ppm
Resolution: 1 ppm
Accuracy: ±5 ppm
(up to 50 ppm)
±5 % of
meas.value
(above 50 ppm)



CO measurement solid fuels
Measuring range: 0/2.0 Vol.%
(or 20,000 ppm)
Resolution: 0.01 Vol.%
Accuracy:
±5 % of meas.value
±1 digit

SO_2 measurement
Measuring range: 0/2,000 ppm
Resolution: 1 ppm
Accuracy: ±10 ppm (up to 150 ppm)
±5 % of meas.value
(above 150 ppm)

NO_2 measurement
Measuring range: 0/200 ppm
Resolution: 1 ppm
Accuracy: ±10 ppm (up to 50 ppm)
±10% of meas.value
(above 50 ppm)

Scope of delivery
MULTILYZER NG with up to 6 measuring cells, incl. mains power adaptor, calibration certificate, 300 mm flue gas combination probe, condensate filter cartridge, ambient air sensor, connection kit for gas fittings, protective housing with magnet, aluminium carry case.

Type	*Part no.*
MULTILYZER NG O_2, CO_{H2}, differential pressure	*69631A*
MULTILYZER NG O_2, CO_{H2}, NO, differential pressure	*69632A*
MULTILYZER NG O_2, CO_{H2}, $CO_{20,000}$, differential pressure	*69633A*
MULTILYZER NG O_2, CO_{H2}, $CO_{20,000}$, NO, diff. pressure	*69634A*
MULTILYZER NG – Special equipment	*69635*
Service contract (please enquire).	

BLUE LINE RANGE

Flue Gas Analysis Computer MAXILYZER NG

Ideal for checking and servicing every type of heating system according to BImSchV as well as other calorific appliances and solid fuel burner systems.

- ***Dust- and waterproof instrument case with vent valve***
- ***For use with maximum number of 6 electro-chemical sensors***
- ***Powerful rechargeable battery for up to 36 hours continuous use with active display illumination***
- ***Multitasking measuring mode with two active levels***
- ***LCD display with up to 10 measured values***
- ***Hold function, zoom function, core stream search function and unit conversion***
- ***Bluetooth Data Interface (optional)***
- ***Graphical evaluation of measured values according combustion chart (online function)***
- ***MAXILYZER NG is certified to EN 50379-2 and approved for legally regulated measurements throughout Europe***

Application

Flue gas analysis computer with integrated printer and gas treatment unit housed in a robust and waterproof plastic case. Optimised gas distribution, an efficiently accommodated gas treatment system in the lid of the case and a second pump for the protection of the CO sensors make this a user and service-friendly analysis computer which performs all daily measuring tasks reliably.

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Measured parameters
O_2, $CO_{4,000}$ (H_2 compensated), (optional: $CO_{20,000}$, NO, NO_2 and SO_2), flue gas temperature, combustion air temperature, differential pressure, differential temperature.

Calculated parameters
CO undilated, Lambda, CO_2, efficiency η, flue gas losses q_A. When the lid is opened, all operating and connection elements are found on the front of the analyser with connection sockets for pressure, temperature, battery charger, USB port and connections for the flue gas combination probe on the left hand side. Located in the upper half is the large graphic display with 3 special soft keys below it. Located on the right hand side is the integrated thermal paper printer and a foil keypad fitted flush into the instrument surface.
The large display has 10 lines with an additional info-line, graphic display, zoom and hold function as well as an electronic core stream search function and sensor status diagnostics. The unit was also designed for the optimisation of solid fuel burners, pellet firing and similar calorific systems. The 2-stage gas treatment unit is integrated in the lid with a condensate cartridge and Infiltec dust filter with cartridge. This provides optimum protection for the instrument against humidity and dirt particles. Further equipment includes: Data memory for 100 measurement protocols, choice of mains power operation or rechargeable battery for up to 36 hours operation with intelligent rapid charging system.

Scope of delivery
MAXILYZER NG with 2, 3, 4, 5 or max. 6 sensors.
Instrument case with charger, ambient air sensor, flue gas combination probe, operating instructions and accessories.
TÜV By RgG 247

Technical Specifications

Flue gas temperature
Measuring range: 0 °C/+1,000 °C
Resolution: 1 °C
Thermocouple: NiCr-Ni (Type K)

Ambient/air temperature
Measuring range: -20 °C/+200 °C
Resolution: 0.1 °C
Thermocouple: NiCr-Ni (Type K)

Draught/differential pressure
Measuring range: ±130 mbar (max. ±150 mbar)
Resolution: 0.01 hPa

O_2 measurement (electro-chemical measuring cell)
Measuring range: 0/21 Vol.-%
Resolution: 0.1 Vol.-%

CO_2 (calculated from O_2)
Measuring range: 0/CO_2 max.
Resolution: 0.1 Vol.-%

CO measurement
(electro-chemical measuring cell, with H_2 compensation)
Measuring range: 0/4,000 ppm
Resolution: 1 ppm

Options

CO measurement, solid fuels
(without H_2 compensation)
Measuring range: 0/2.0 Vol.-% (20,000 ppm)
Resolution: 0.01 Vol.-%

NO measurement
(electro-chemical measuring cell)
Measuring range: 0/2,000 ppm
Resolution: 1 ppm

SO_2 measurement
(electro-chemical measuring cell)
Measuring range: 0/2,000 ppm
Resolution: 1 ppm


Integrated Gas treatment


Operating and connection elements

Weight
approx. 3 kg

Dimensions W x H x D
275 x 115 x 250 mm

Gas treatment for MAXILYZER NG

Maintenance advice
Your attention is drawn to the patented „water stop“ of the gas treatment system. In order to provide maximum protection for the MAXILYZER NG measuring system the following parts should be exchanged in good time:
09 Teflon membrane
07 Infiltec fine filter
We recommend that you purchase a stock of these spares together with the instrument.

Type	*Part no.*
MAXILYZER NG O_2, CO_{H2}	*69193*
MAXILYZER NG O_2, CO_{H2}, NO	*69194*
MAXILYZER NG O_2,CO_{H2},$CO_{20.000}$, NO	*69195*

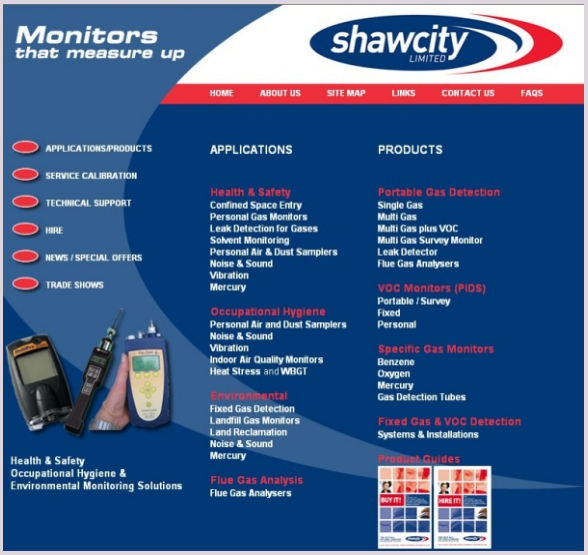
TEMPERATURE & PRESSURE INSTRUMENTS

2600
Multi-Option Temperature Measurement

2600
Multi- Option Pressure Measurement

PLEASE REQUEST OUR SEPARATE BROCHURE

WEBSITE & PRODUCT GUIDES



INFORMATION ON BS EN 50379 (PORTABLE MEASURING INSTRUMENTS)

On March 01, 2007 BS EN 50379 for portable measuring instruments came into effect.

This standard covers devices used to determine the gas concentration and other combustion parameters in the installation and maintenance of domestic and industrial heating systems with standard fuels.

The standard defines the design, testing and operating requirements for portable devices, which are used to determine specific flue gas parameters such as the concentration of individual gas components, the temperature and/or the pressure in combustion processes in order to ensure compliance with national directives regarding the operating behaviour of combustion systems.

The standard is divided into three parts:

Part 1: **General requirements and test procedures**
EN 50379-1 specifies the general requirements concerning the design, testing and operating behaviour of devices used for short-term measurements to determine specific flue gas parameters such as the concentration of individual gas components, the temperature and/or the pressure in combustion processes in order to ensure compliance with national directives regarding the operating behaviour of combustion systems using commercially available fuels in domestic and industrial applications.

Part 2: **Requirements concerning the operating behaviour of devices used in statutory measurements and assessments**
EN 50379-2 applies to devices which are used in statutory measurements or measurements specified by regulations. National legislation covering the operating behaviour of combustion systems exists in several European countries. Authorised inspectors use such devices to measure flue gas parameters and verify the compliance of combustion systems with national directives.
Since the results of such measurements have statutory consequences, there are stringent requirements concerning the accuracy of these devices. Therefore, EN 50379-2 specifies maximum values for measuring inaccuracy. Tests with real flue gases constitute an essential part in the proof of suitability for statutory measurements. The determination of the measuring inaccuracy must be demonstrated and confirmed with internationally approved methods for the entire measuring range.

Part 3: **Requirements for devices in non-regulated areas in the maintenance of gas fired heating installations**
EN 50379-3 applies to devices which are used in non-statutory applications. The requirements are less stringent because the devices are used in determining whether a gas fired combustion system may require maintenance or in setting up a gas fired combustion system during maintenance. The measuring inaccuracy does not have to be determined for such devices.
These devices do not comply with the technical measuring specifications for measuring devices. Therefore, devices certified according to EN 50379-3 are not suitable for measuring combustion systems using fuels other than gas.

The standard was ratified on March 01, 2004. Binding dates for all EU member states:
September 01, 2004 - Day of announcement
March 01, 2005 - Publication as a National Standard
March 01, 2007 - Withdrawal of contravening National Standards

All Shawcity BLUE LINE flue gas measuring instruments as well as the pressure and temperature measuring instruments meet the stringent requirements of EN 50379-2.

The TÜV quality mark (OCTOGON) confirms EN 50379-2 compliance and can only be used, if the production is audited by TÜV-SÜD at regular intervals.

High quality measuring devices help you to make more accurate

TECHNICAL ADVICE

Shawcity Technical Support Engineers are on hand to give expert advice on your best choice of instrument.
We will come and show you just how simple to operate our instruments are - whilst giving you the most accurate and comprehensive data.
We can offer product support workshops on your premises or at our base near Oxford.

shawcity

shawcity.co.uk

01367 246960 info@shawcity.co.uk
Pioneer Road, Faringdon, Oxfordshire SN7 7BU

ISO 9001

Not all features are available on every instrument shown and some may be options. Please confirm the exact configuration and specification of instruments with our technical support team or ask for written details. Subject to alteration without notice. E&OE.

HEALTH & SAFETY, OCCUPATIONAL HYGIENE & ENVIRONMENTAL MONITORING SOLUTIONS