Romania Water Let's save Blue & Green

Systea S.p.A. Analytical Technologies

MICROMAC ECO

ON LINE ANALYZER FOR COD/BOD/TSS/pH

MICROMAC ECO MODELS

MICROMAC COD UV/BOD: SAC direct reading at 254nm, turbidity compensation at 550nm as per DIN 348404-3, correlation with COD by known calibrant, this version measures BOD, the COD-BOD correlation, established in the factory, can be customized on site.

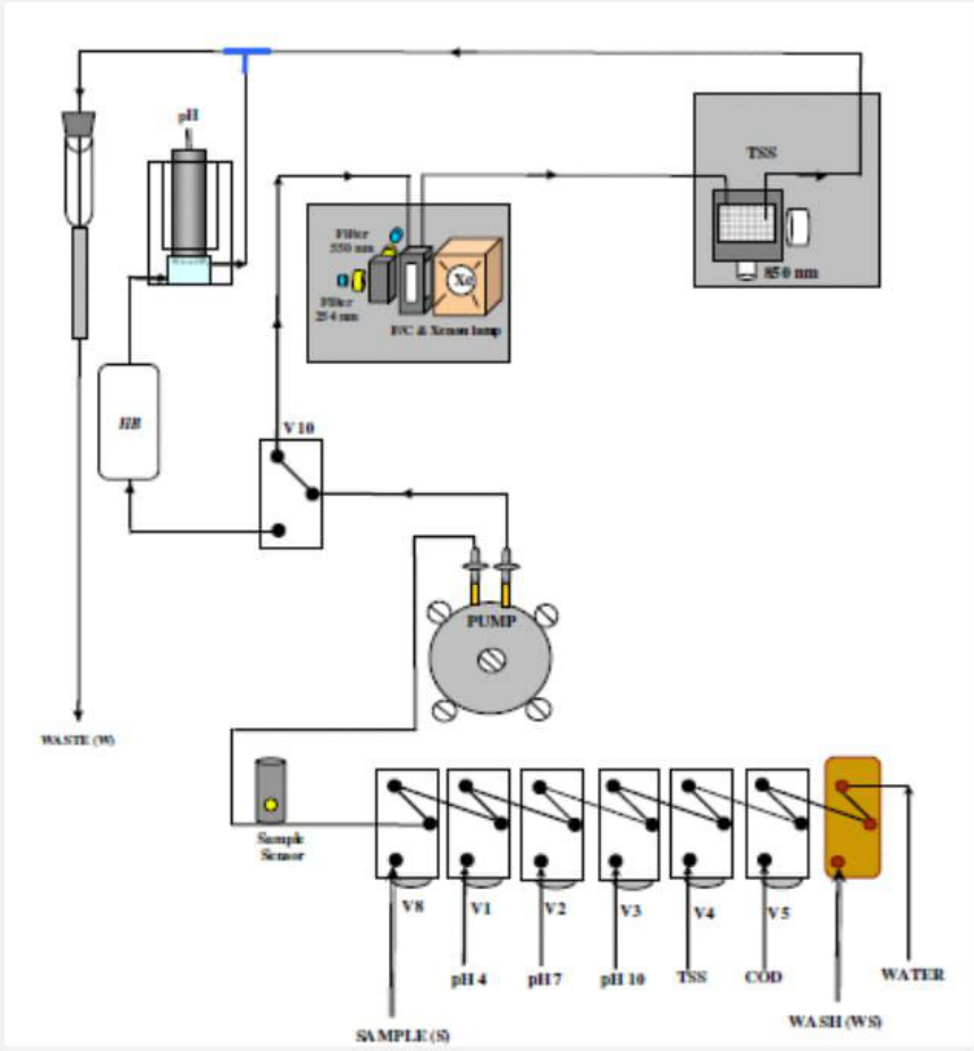
This version can measure TOC as alternative to COD

TSS option: turbidity measure at 850nm as per ISO 7027, calibration with a known formazine standard, correlation with TSS to be established on site.

pH option: measure of pH trough pH combined electrode in flow trough cell at controlled temperature, result are given as pH at 20°C or 25°C.

MICROMAC ECO MP4

MICROMAC ECO offer a full MP4 version to measure sequentially: COD UV/BOD/TSS/pH



MICROMAC ECO PRINCIPLE

SELF CLEANING FILTRATION UNIT

For waste water or other dirty samples application a self cleaning filtration unit can be installed close to the analyzer.
Thanks to the integrated PLC, the filtration unit runs periodically a self cleaning cycle, using compressed air generated externally or even internally (as option).
One filtration unit can be used to supply a clean water sample up to 10 analyzers.

EASY TO INSTALL

The filtration unit is delivered completely assembled on a stainless steel and PVC frame, ready for connection to a sample line. It is sufficient to connect the sample line, the waste line and the analyzer's sampling line.

LOW MAINTENANCE

Self cleaning cycle and long life pump tube ensures low maintenance cost.

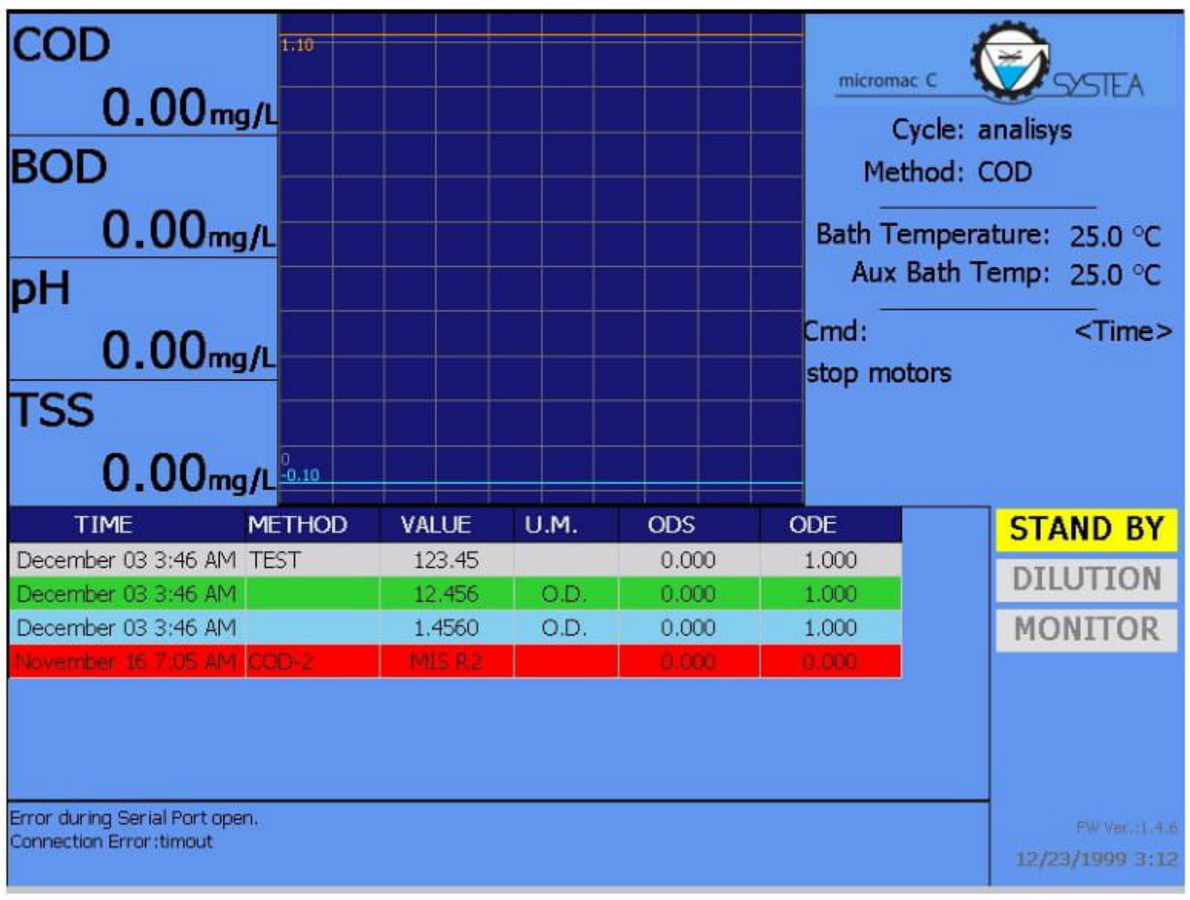
ANALYZER CONTROLLED

Micromac activates the filtration unit only when the analytical cycle starts.

STAINLESS STEEL FILTER

A stainless steel filter ensures long operation and no corrosion with the most common matrix.

MICROMAC ECO
ON LINE ANALYZER



MICROMAC ECO is a microprocessor controlled on-line analyzer, specifically designed for automatic monitoring inside WWTP

ROBUST AND RELIABLE

Designed for industrial and environmental on-line applications, it ensures the highest level of robustness in the electronics, mechanics and hydraulics components. With a complete separation between electronics and hydraulics and a simple and robust hydraulics allows long term and reliable operations.

EASY TO INSTALL

The analyzer is delivered from factory only after a successful final tests. It is provided ready for installation, with a spares set for start-up operations.

pH Flow Cell with electrode

UV Detector for COD or TOC

AUTOMATIC CALIBRATION

The analyzer performs automatic calibration, the new calibration factor is checked and accepted if inside acceptance limits.

MEASURING INTERVAL

User selectable; between two measurements the analyzer remains in stand-by mode, without reagents consumption.

OFF SCALE REANALYZE

The analyzer identifies off scale samples and reanalyze the sample after automatic dilution

FEATURES/BENEFITS

- 8" Colour touch screen
- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Nearly no reagents
- Easy operation; fully documented plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for PC or printer connection (optional)
- Yearly maintenance

Technical Data	
MEASURING PRINCIPLE	COD/BOD/TSS- UV Spectroscopy double beam 254-850 nm range with Xenon Flash Lamp
	As per DIN 348404-3; COD correlation against known calibrant
	BOD: Correlation against with COD; BOD – COD correlation can be adjusted and/or established on site TSS: As per ISO 7027, correlation with TSS to be established on site.
	pH: combined pH electrode in flow trough cell, sample at controlled temperature, pH values temperature corrected
STANDARD RANGE	COD: 0-50/100/200/500 mg/L – alternative ranges available on request BOD: 0-15/25/50/100 mg/L – alternative ranges available on request TSS: 0-20/50/100/150 NTU – alternative ranges available on request pH: Calibration range 4-7-10
MEASUREMENT TYPE	Batch, multi parametric version batch and sequential
MEASURING FREQUENCY	Programmable
MEASURING TIME	COD/BOD: 7-10min/TSS: 7-10min/pH: 7-10min; depending on the range and sample temperature, for combined versions 10-15min
NUMBER OF MEASURING POINTS	COD: up to 6 streams; BOD: up to 6 streams; COD/BOD: up to 3 streams; COD/BOD/TSS or pH: up to 2 streams; same range on all streams. MP4 version (full option units) only single stream
OUTPUT SIGNAL AND COMMUNICATIONS PORTS	RS232 bidirectional – standard or on request one between: a) RS485 - option b) RTU Modbus - option c) 4-20mA separated per each method or stream – option Galvanic insulator on 4-20mA outputs - option
INPUT SIGNALS	Analysis: 1 digital contact with photocoupler, galvanically isolated Calibration: 1 digital contact with photocoupler, galvanically isolated
ALARM CONTACTS	Standard: General: 1 potential free switch SPDT, max load 24 AC DC 0.5 A, separated for each stream - Standard Options (separated per each method): High Limit : 1 potential free switch SPDT, max load 24 AC DC 0.5 A Calibration: 1 potential free switch SPDT, max load 24 AC DC 0.5 A
ALARM MESSAGES	On 8" color touch screen
SAMPLE DELIVERY	Pressure: atmospheric Temperature: 10° - 35 °C Volume: 50/80 mL per analysis depending on analyzer model Connection: Standard silicone 2x4, other on request Waste: pressure free silicone 2x4 mm
REAGENTS	Not necessary only wash solutions and calibration solutions
ENVIRONMENTAL TEMP.	10-45°C
MOUNTING	Wall mounting
STANDARD PROTECTION	IP 55, IP 65 optional on request
HARDWARE	PC104 standard microcontroller, integrated 8" colour touch screen
POWER SUPPLY	12 Vdc; external power supply from 110/220 Vac to 12 Vdc included in the scope of delivery
ABSORPTION	4W stand by, 10 W analysis
WEIGHT	25 Kg without reagents
DIMENSION	800x420x280 mm (hxwxd)
SELF CLEANING FILTER	
POWER SUPPLY	12Vdc
SAMPLE PRESSURE	min 0.3 bar
SAMPLE RATE	30 l/h max 1 bar
COMPR. AIR SELF CLEAN.	max 2 bar

Subject to change without notice

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Registered office : Plot No. GH/01, N/31904 Erose Sam Pooram Sector-2,
Near Roja Jalalpur Chowk, Greater Noida West - 201306, Mob.: +91-8383076564

Branch office : Flat No 1803 Platina F Casa Bell Gold, Palaba City, Maharastra, Dombivali 421204, Mob.: +91-7982188517
Branch office: D127 PTPS New Market Road No 3 Ranchi, Hazaribagh Patratu 829119, Mob.: +91-7428393469
Branch office : H.N. 240, Adhiya Mohalla, Vill. & Post Gotha, District Mau, Dohrighat 275303, Mob.: +91-8130181009
Email : info@romaniawater.in, sales@romaniawater.in

Systea S.p.A. Analytical Technologies

SYSTEA SpA
Facilities : Via Paduni, 2/A - 03012 ANAGNI (FR) -
Tel. (+39) 0775.776058 - Fax (+39) 0775.772204
e mail: info@systea.it Web site: http://www.systea.it