

MIR  
9000P



# Portable multi-gas analyzer

Save time all along your stack emission testing process

8

## SIMULTANEOUS PARAMETERS

NO<sub>x</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, O<sub>2</sub> and residual H<sub>2</sub>O

Accuracy and extended measuring ranges

Compliant with  
international directives &  
regulations

### EN 15267-4

Meets the highest  
European & U.S. standards  
for Portable-Automated  
Measuring Systems



# THE MIR 9000P

belongs to the new generation of ENVEA gas monitors, showcasing eco-design, IoTs and on-board intelligence. It measures simultaneously 8 gases and uses the non-dispersive infrared method with gas filter correlation (NDIR-GFC). O<sub>2</sub> is measured by a SRM built-in **paramagnetic** sensor.

The analyzer has been designed to meet the specific needs of on-site regulatory measurement providing superior mobility, robustness, accuracy and compliance.

All this makes up for a unique gas emission monitor offering high productivity and low operational cost.

## INCREASED MOBILITY & PRODUCTIVITY

- > All-in-one case design for easy transport/storage
- > Lightweight, compact and extra resistant transport case

	L	641 mm		15 kg
	H	393 mm		33 lbs
	D	209 mm		

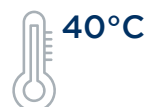


- > The analyzer operational temperature can be maintained:
    - in between stack controls (optional battery unit)
    - in transport, through the 12 V car plug (adaptor not provided)
  - > Standby mode guarantees the instrument is operational at any time
- ✓ Maximizes the number of stacks tested

## ROBUST DESIGN

- > Built-in vibration absorber ensures measurement cell protection and stability
- > Extended operating temperature ranges
- > High protection (IP 44) against water splashing from any direction

✓ Whatever the weather, it operates!

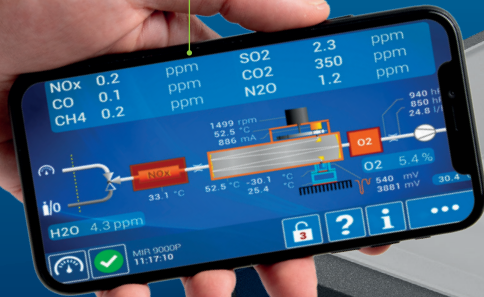


## STAY CONNECTED & GET ON WITH OTHER TASKS

- > Remote access to full operation thanks to ENVEA Connect™ App and proprietary WiFi
- > Smartphone alerts and notifications
- > IoT ready: software update, TCP/IP access...



Operates case closed or open



FREE APP



PLUG  
&PLAY

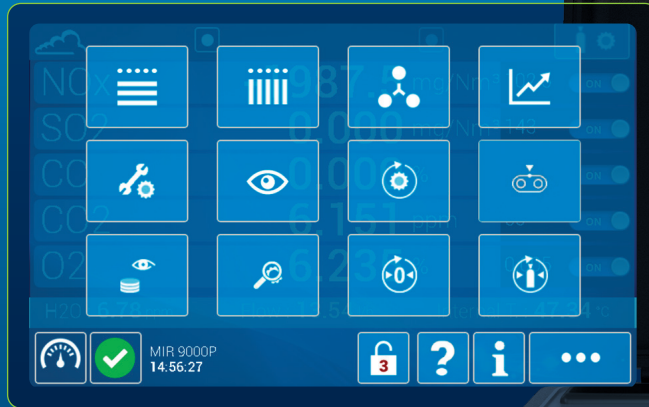
## QUICK INSTALLATION

- > Warm-up time: 30 min maximum
- > Robust gas connectors
- > Self-adaptive measuring scales
- > Compatible with most sampling systems on the market



## ONE CLICK OPERATIONS

- > Integrated user guidance and shortcuts to key functions: calibrations, span check, zero, etc.
- > Synoptic with real-time status
- > Secured user management



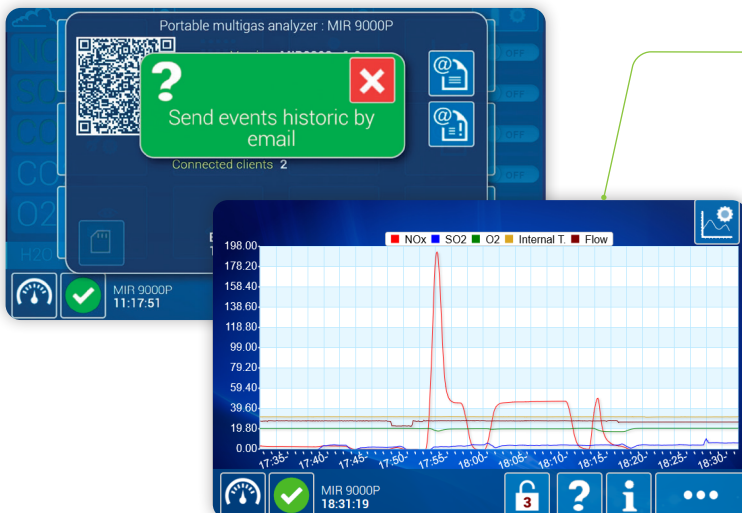
## ANALYZER STATUS AT A GLANCE

- > Front side indicator provides key status info to the user



- ✓ No more comings & goes to open the lid and check on the analyzer

## PREPARE REPORT ELEMENTS WHILE ON SITE



- > Direct access to real-time and stored data; time frame selection to generate graphs
- > Screenshot function for quick integration into reports
- > Redundant and secured data back-up
- > All data can be saved on USB memory stick



## MAXIMIZED UPTIME OF THE ANALYZER

- > Modular design and Plug & Play parts (O<sub>2</sub> probe, NOx converter, protection filter, etc.)
- > Share the analyzer's state of health and get remote diagnosis & support



- > Turn-up lid designed for quick access to operational modules and easy maintenance

# SYSTEM & ACCESSORIES



MIR 9000P



Gas conditioning unit



Heated line



## TECHNICAL SPECIFICATIONS

Measured gases	SO <sub>2</sub> , NO or NO <sub>x</sub> , CO, CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub> , O <sub>2</sub> and residual H <sub>2</sub> O	
Measuring units (programmable)	ppm, mg/m <sup>3</sup> or % vol.	
<b>Parameters</b>	<b>Typical measuring ranges</b>	
SO <sub>2</sub>	0-141/1410/8500 mg/Nm <sup>3</sup>	0-50/500/3000 ppm
NO <sub>x</sub> as NO (after NO <sub>x</sub> converter)	0-70/2000/3300 mg/Nm <sup>3</sup>	0-50/1500/2500 ppm
NO <sub>x</sub> as NO <sub>2</sub> (after NO <sub>x</sub> converter)	0-110/3000/5000 mg/Nm <sup>3</sup>	
CO	0-60/3000/8000 mg/Nm <sup>3</sup>	0-50/2400/6500 ppm
CO <sub>2</sub>	0-20/30% vol.	
N <sub>2</sub> O	0-1000 mg/Nm <sup>3</sup>	0-500 ppm
CH <sub>4</sub>	0-70/700 mg/Nm <sup>3</sup>	0-100/1000 ppm (higher range upon request)
O <sub>2</sub>	0-10/25% vol. Measured by a built-in paramagnetic sensor	
Residual H <sub>2</sub> O	0-2% vol.	
Repeatability	±2%	
Zero drift	±2% / 30 days	
Span drift	±2% / 30 days	
Linearity	±1% of Full Scale	
Resolution	< 0.1 ppm (CO <sub>2</sub> : < 0.1%)	
Response time	1 minute as standard, programmable	
Dimensions (L x H x D)	641 x 393 x 209 mm	
Weight	15 kg / 33 lbs	
Protection class	IP 44 (case closed)	
Operating temperature	+5 to +40°C	
Power supply	100-250VAC, 50/60Hz + ground	
Energy consumption (except accessories)	Preheating: 120 W / 160 VA Measurement: 60 W / 75 VA	
Sample flow-rate	6.66 × 10 <sup>-6</sup> m <sup>3</sup> /s (0.4 l/min.)	
Display & Control	Color touchscreen, TFT LCD 7", resolution: 800(RGB) x 4480	
Internal storage of measurement data	1 year for 1 minute data/ 1 month for 5 sec	
Standard I/O	3 x USB ports type A: 2.0 (compatible 3.0) 1 x RJ45 (MODBUS TCP, MODBUS RTU (dongle) UDP Protocol) WiFi (via USB) Analog input: 0-250 mV or 0-1 V	
Connectivity	iOS, Android : via IP address or free ENVEA Connect™ App Computer (via any browser, TCP/IP)	
<b>Options</b>	I/O	<ul style="list-style-type: none"> <li>• 8 analog outputs (0-1 V, 0-10 V, 0-20 mA, ou 4-20 mA)</li> <li>• 8 analog inputs, 0-2.5 V</li> <li>• 12 digital outputs by dry, potential free, contact relay</li> </ul>
	Battery	Type: AA 2800 mAh (min. 2650 mAh) NiMH 1,2 V x 20
	System accessories	<ul style="list-style-type: none"> <li>• Portable gas sample probe electrically heated with calibration gas feeding.</li> <li>• Portable sample conditioning system equipped with high-performance Peltier gas cooler.</li> <li>• Heated sample line with multi-pin plug on-off electronic temperature controller.</li> </ul>

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