EGAS 2M

Engine Exhaust Gas Analysis Systems (EGAS)

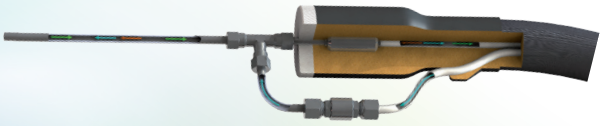
PROCESS & EMISSIONS MONITORING SYSTEMS

STATE-OF-THE-ART SYSTEM DESIGN:

- Modular design with interchangeable bench components
- User-friendly networking technology for analyzer control & host interface (Ethernet-TCP/IP)
- Internal architecture designed for easy access and maintenance
- Wide measuring range for many applications
- Remote control of system and components
- Easy to operate software

SPECIFIC FEATURES:

- Modular design for maximum system flexibility
- Complies to latest emission regulations
- Positive pressure sample
- Total solutions with full turnkey capabilities
- Unique: SS filter integrated to the primary heated sample line
- Unique optical technology for precise, highly accurate and simultaneous measurement of CO, CO_2, NO/NOx, THC, O_2, N_2O, SO_2, NH_3 and CH_4
- Designed to measure emissions from all combustion engines, regardless of fuel type
- Separate, mobile sample handling system with built-in sample pump or full integration in the main control unit
- External or built-in operating PC with dedicated 40 CFR Part 1065 software package



Sample probe with integral heated filter and unique span gas injection

MAIN APPLICATIONS:

- Engine manufacturers and testing companies in the automotive, heavy duty, aviation, marine, rail transport sectors, etc.
- Certification Bodies
- Universities and Research Centres
- General engine and/or vehicle performance test
- Development of clean engines
- Optimisation and evaluation of exhaust gas after-treatment devices
- Catalyst system performance evaluation (pre and post cat measurements)
- SCR, raw, diluted exhaust and EGR...

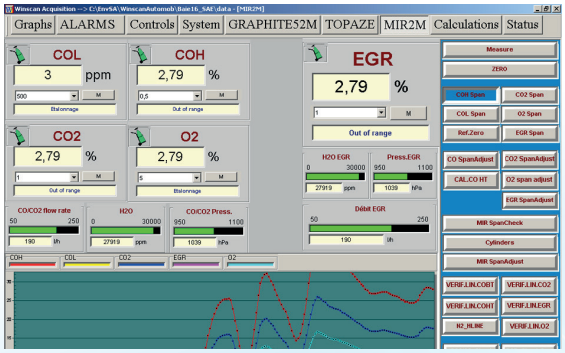
Engine Exhaust Gas Analysis System **EGAS-2M**

For the future development of new engines and fuels and in order to improve flue gas treatment systems in general (catalyzed systems), continuous and simultaneous measurement of multiple "exotic" gases in addition to the main gases regulated by engine exhaust gas standards is necessary. Thus ENVEA has developed a monitoring system of multi-compounds raw gases, allowing a real time analysis of short events or transient phenomena.

The system has been designed to be operated by technicians not necessarily experienced with FTIR, the EGAS-2M rack cabinet being userfriendly and easy to maintain. The user and bench operator only need to purge the interferometer with a low debit nitrogen injection on a daily basis and fill the liquid nitrogen reservoir about every 12 hours of use. Every task (excepted the filling of liquid nitrogen) can be preprogrammed with simply one button on the operating system.

TECHNICAL SPECIFICATIONS

Enclosure	19" rack cabinet
Dimension (mm)	1360x600x800 (LxWxD)
Weight	150kg / 330lbs (includes all internal components)
Operating temperature	5°C to 45°C
Relative Humidity	max 90%
Power supply	230V/50-60Hz or 115V/60Hz
Nominal power consumption	3.2 kVA
Sample dimensions (mm)	1000x540x420 (LxWxD)
Sample weight	78kg / 154lbs (includes all internal components)
Utilities	• Compressed air for back purge • H_2/He (40/60%) for HFID • N_2 (100%) for zero gas • O_2 (100%) for CLD • Span gases function of analyzers



OPTIONS AND ACCESSORIES:

- EGR measurement (CO_2)
- NH_3 measurement by FTUV
- NH_3 measurement by laser TDLS (New)
- Mid Cat measurement (NOx)
- Gas divider/NOx converter efficiency test package
- Wet/dry NOx measurements
- Touch screen for PC operation
- LCD screens on analyzers' front panels
- WinscanTM remote maintenance software

Dual stream version (optional)

- Designed to measure emissions from 2 independent streams
- Ideal for pre/post catalyst analysis or raw gas sampling from 2 separate sources

COMMUNICATION

Host protocol (AK protocol)	• Serial link RS232/422/485 • Ethernet TCP/IP
Analyzer control	• Serial link RS232/422 • Ethernet TCP/IP
Network connection	LAN
Software	• Control of the sampling and analyzer units • Full management of all functions • Chart, graphics and view-meters displays • Password-protected access

STANDARD FEATURES/COMPONENTS

- Hang-up checker - used to check for hydrocarbon hang-up in the sample lines
- Heated sample line; 10 meters + 3 meters
- Heated sample line selector
- Heated sample pump
- Back-flushing filter function
- Heated stainless steel filter
- Remote display and control

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