



GAS ANALYZER AND SMOKEMETER

RY-500AGH

The **Gas Analyzer RY-500AG** is a modern equipment, prepared and ready to meet the requirements of OIML class 1 and class O, ISO 3930, UNE 82501, bar 90, bar 97, U.S. EPA ASM, R24, ISO 3173, ISO / TC22/ SC 5 N650 and EURO 4 Engine Exhaust gas capability.

Based on infrared technology it measures **4 or 5 gases** (CO, CO₂ HC, O₂, NOx) and other parameters such as Lambda, corrected CO, oil temperature and rpm. It is very useful for detecting ignition and injection problems as well as for improving fuel consumption. The software presents the concentration of the gases and the r.p.m. in numerical form.

The **Smokemeter RY-500AH** is a modern equipment, prepared and ready to meet the requirements of UNE 82503 and DIN 57411, SAE J1677 USA / Canada. Ryme Worldwide offers a solution in one trolley that integrates 2 equipments called **RY-500AGH (Gas analyzer and smokemeter)**.

The **RY500AGH** is a device that analyzes gases from diesel and gasoline vehicles, adjusting each vehicle to different measurement standards. The devit is a partial flow meter based on the principle of light absorption by smoke.

Adapted to measurements of GLP, GNC and GNL

5 GAS MEASUREMENT
CO, CO₂, HC, O₂ NOx

Certification and commissioning
Module F



Analysis of all types of vehicles

The **RY-500AGH** is capable of comprehensive analysis of diesel and gasoline vehicles.

Electronics



Best Processors

New high-speed processor
Increase the response and process of each vehicle test

ANTES
AHORA

RAM memory

New memory 16 times faster



RS-232



Ethernet

Increased Connections

Connections Ethernet (TCP-IP) / RS-232 Wifi on the main board

ANTES
AHORA

Flash Memory

New memory 4 times faster

Standard Equipment

- ✓ Smoke analyzer module (Opacimeter).
- ✓ Gas analyzer module (5 Gas measurement).
- ✓ Trolley for mobility and all equipment integration.
- ✓ Sampling probe (1,8 m) max 300°.
- ✓ Commissioning certificate for SMOKEMETER modulo F.
- ✓ Test room temperature meter.
- ✓ Rpm meter and oil temperature.
- ✓ Dust collector for the smoke meter.



+



Gas Analyzer

Smokemeter



Gas Analyzer and Smokemeter
RY-500AGH

Operation

The **gases control of the RY-500AGH** consists of a thorough analysis of vehicle gases collected by a probe from the exhaust pipe. The exhaust emissions must not contain more monoxide than that marked by the manufacturer. In case this information does not exist, the carbon monoxide and hydrocarbons cannot be higher than the standard value.

The test will **always be performed at minimum engine speed and operating temperature**.

Our software will display the results on screen so that you can quickly and visually consult the results in real time.

Technical Data of Gas Analyzer

Technical data

Gases	CO, HC, CO ₂ , O ₂ and NOx
Lambda factor calculation and corrected CO	
Storage temperature	-50 °C a 70 °C ± 2deviation
Operating temperature	-5 °C a 45 °C ± 2deviation
Operating pressure	750 - 1.100 mbar (1000 mbar nominal)
Automatic removal of water and particles	>5 µ.
Power Supply	220 V - 50 Hz, 65 W
Oil temperature gauge	0 - 150 °C ; resolution 1°C
R.P.M. Meter	0 - 9990 ; 10 r.p.m.
Lambda	0.5 - 9.999; 0,001 or 0,01 (configurable)
It has a database and rejection assessment	

Measurement range and accuracy

HC	0-2.000 p.p.m. 0-4.000 p.p.m.	10 p.p.m vol
CO	0-25 % vol.	0,1 % vol.
CO ₂	0-20 % vol.	0,5 % vol.
O ₂	0-25 % vol.	0,1 % vol.
NO _x	0-5.000 p.p.m.	1 p.p.m.

Technical Data Smokemeter

Environmental working conditions	Temperature: from 5 to 40°C Humidity: 0-95 % Pollution: < 2%
Storage temperature	-32 °C a 50 °C
Optics	Light source Green LED 560 nm
Detector	Silicon Photodiode
Response time	10% a 90% 0,25 ms
Acoustic noise	3 - 6 min. according to temperature
Warm-up period	240 sg.
Test probe	1800 mm. 10 mm. Ø

Opacity	0-999 m ⁻¹ / Resolution 0,01 m ⁻¹
Power Supply	220 V. 50 Hz
Free measure	
Official opacity test	
Electronic test of measurement accuracy	
Self-diagnosis of the equipment	
Complies with the following standards: DIN 57.411, UNE 82.503, SAE J1677 US / CANADA	
Measurement of opacity in% and absorption coefficient k calculated according to the Beer-Lambert law	

Dimensions

Dimensions smokemeter	500 x 250 x 450 mm.
Dimensions smokemeter packed	480 x 390 x 300 mm.
Weight packed equipment	8,5 kg.
Gas equipment dimensions	400 x 400 x 190 mm.
Gas equipment dimensions packed	570 x 470 x 190 mm.

Weight packed equipment	10 kg.
Cabinet dimensions	730 x 580 x 1.530 mm
Packed cabinet dimensions	1.200 x 800 x 380 mm.
Weight Cabinet packed	90 kg.

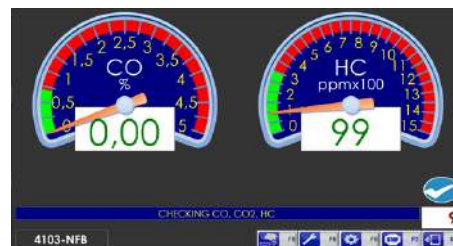
Software

- Adapted to current standards for vehicles with dual exhaust systems, and possibility of two measurements
- Auto zero automatic
- Sending and processing data and graphics in real time
- Possibility of sending encrypted data to the server using the AES encryption method (Advanced Encryption Standard)
- Automatic pass/fail results of both
- Assigning permissions to different user levels
- Possibility of assigning the results obtained to a vehicle plate before or after each test
- Customization of the test duration to the minimum and/or maximum time to optimize working time
- Intuitive, simple and fast configuration software
- Graphical and numerical display of results
- Very intuitive control software guided by graphic icons
- Common database (both in network and in local mode), which allows to store cards with customer and vehicle data. All tests performed are recorded and can be easily searched for comparison with new tests
- Translation module which the user will be able to translate the program into his own language or modify any sentence or word on it.
- Connection RS-232 and Ethernet



smrw

software maquinaria ryme worldwide
ryme worldwide machinery software
(integrated)



Software Adaptation

Possibility of analysis and study, for adaptation to new regulations of any region and/or country.

Software



More Productive

Repetition of partial tests



Safer

Ryme application can encrypt data, make them safer



More Intuitive

Incorporation of graphic icons. RYME applications share the same menus..



More Compatible

Our software has improved in this years and now is compatible with more SO and mange systems



Online support

Possibility of remote connection from our technicians with your equipment
Consult conditions



More Reliable & Precise

Improvement in the process of calibrating the main board Allows the adjustment of the weighing and force calibration to very precise values.