

ROTROIL

TECHNICAL DATA

Optical System:

Paschen Runge mounting
Spectral field: 190 to 800 nm
Focal length 500 mm
High luminosity Holographic grating with 1200 or 2700 grooves/mm depending on application

Source:

Multi-frequency spark source.
Excitation parameters controlled by computer.

Software:

MLab software, operating in Windows environment is very easy to be used. The operator can really use all the spectrometer's functions. Some of the most important functions are listed:
Analysis
Automatic standardization
Printing and management of certificates
Network linking and remote control
Autodiagnosis

PC built-in included with touch screen management

Power supply: 110/220 V AC 16 A 1 KW

Dimensions: P 50 x L 100 x H 75 cm

Weight: 60 Kg c.a.



GNR ANALYTICAL INSTRUMENTS GROUP

Sales Office:

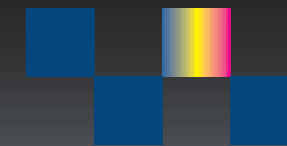
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Local Agent

In relation to the process of continuous development, GNR reserves the right to change the specification of the instrument without previous notice at any time.

ROTROIL

NEW



ANALYTICAL INSTRUMENTS GROUP
25 years of technology



The most advanced Rotating Disc Electrode
Atomic Emission Spectrometer

ROTROIL

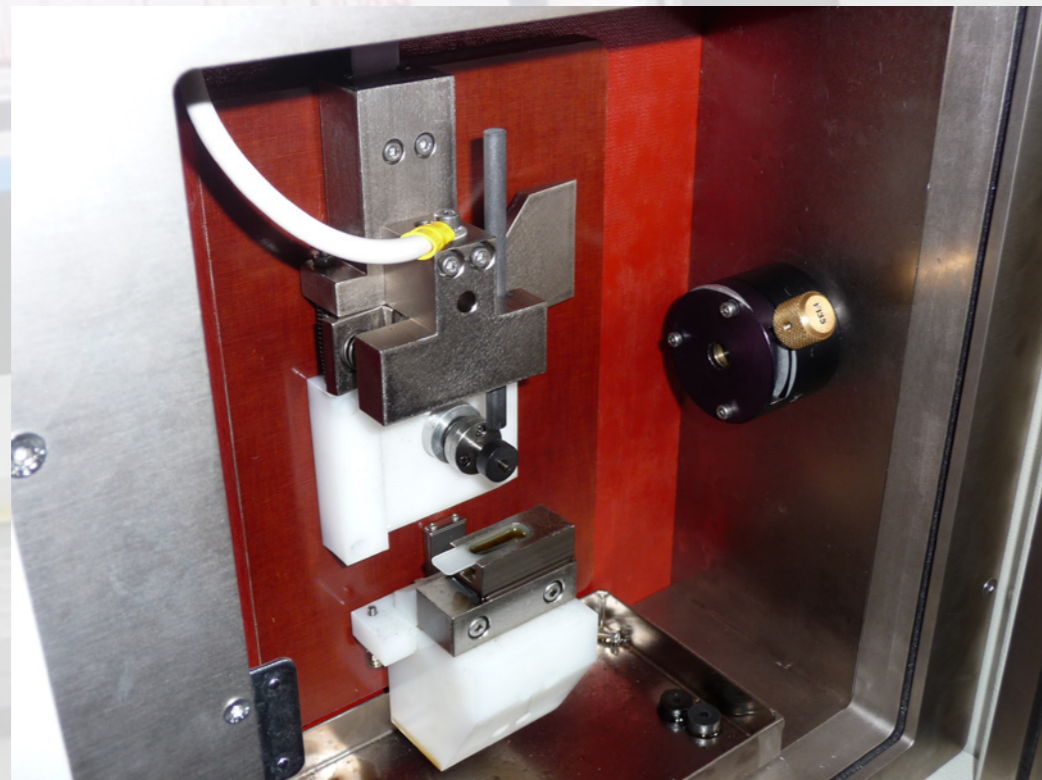


GNR Analytical Instruments Group, active in the market for more than 25 years, thanks to its high expertise in the field produced several analytical instruments able to give the best solution to the different metallurgical needs.

GNR ROTROIL spectrometer is compliant to the ASTM D6595-00 Standard Test Method for determination of Wear Metals and Contaminants in used lubricating oils or used hydraulic fluids by Rotating Disc Electrode Atomic Emission Spectrometry.

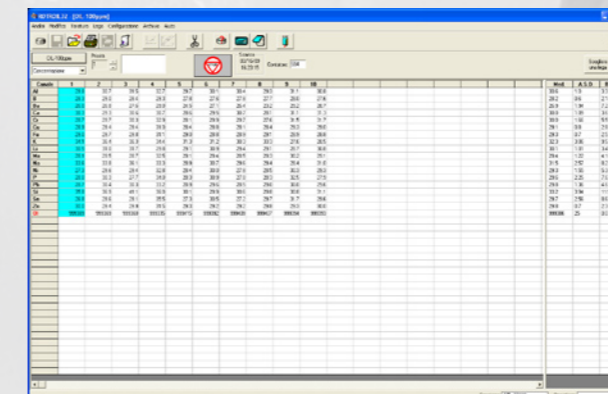
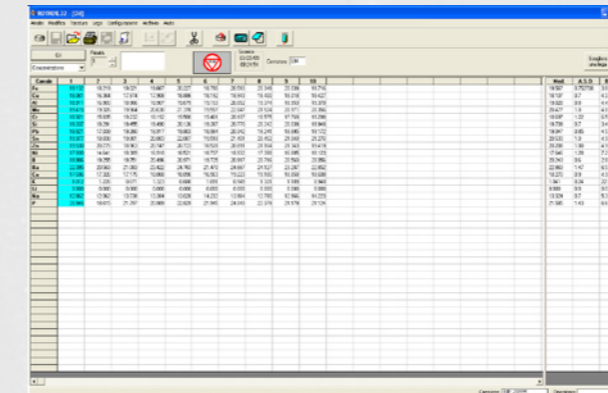
The determination of debris in used oil is a key diagnostic method practiced in machine condition monitoring programs. The presence or increase in concentration of specific wear metals can be indicative of the early stages of wear if there are baseline concentration data for comparison. A marked increase in contaminant elements can be indicative of foreign materials in the lubricants, such as anti-freeze or sand, which may lead to wear or lubricant degradation. The test method identifies the metals and their concentration so that trends relative to time or distance can be established and corrective action can be taken prior to more serious or catastrophic failure.

Details of the inside of sample's chamber.



The ROTROIL spectrometer can be used in correlation with both ASTM norms and DoD JOAP for oil conditions monitoring and failure prevention procedure.

Typical application field varies from Military Forces, Airlines, Railways, Marine Fleets, Public and Private transportation companies, Mines, Refineries, Power Plants, Oil Plants, Oil recycler, Manufacturing plants, Commercial laboratories, Racing Team and whenever there is the needs for elemental analysis of of lubricating oils, transmission fluids, fuels, hydraulic fluids and greases for wear metals, contaminants, additives and corrosive impurities for preventive maintenance and reducing cost.



Pos	Element	Prog N°1 WEAR METALS	Prog N°2 ADDITIVES
		PPM	PPM
1	Ag	0/900	
2	Al	0/900	
3	B	0/900	
4	Ba	0/900	900/5000
5	Ca	0/900	900/5000
6	Cd	0/900	
7	Cr	0/900	
8	Cu	0/900	
9	Fe	0/900	
10	Mg	0/900	900/5000
11	Mn	0/900	
12	Mo	0/900	900/5000
13	Na	0/900	900/5000
14	Ni	0/900	
15	P		900/5000
16	Pb	0/900	
17	Si	0/900	
18	Tn	0/900	
19	Ti	0/900	
20	V	0/900	
21	Zn	0/900	900/5000

Above some screenshot of analysis taken by RTL spectrometer using oil programs at 20 and 30 ppm level, possibility to print complete analysis report. ROTROIL is the latest generation and most advanced version of the traditional Rotrode Emission Spectrometer, thanks to the new compact design it's a very strong and reliable unit, able to be moved and transported to different locations where the analysis must be taken.

The new electronic board based on CCD detector improves the easiness and shorten the standard procedure to set up the unit and it allows simple future upgrade possibility with new elements and programs. The optic chamber of 500 mm focal length based on Paschen-Runge mounting represents the best solution to obtain the better resolution and maximum intensity in order to have the best performances achievable with Rotating Disc Electrode Spectrometry.

Example of typical analytical programs for the analysis and evaluation of Additive and Wear Metals. Additional elements (i.e. Na, K, As, Be, Bi, Ce, Cd, Co, In, La, Li, Mn, Sr, W, Y and other) can be added upon request.

- Key features:
- Rugged construction
 - NO Gas required
 - NO Sample preparation
 - NO special skills required
 - Analysis in 30 seconds
 - Easy upgrade possibility

