

## Features

- Conforms to ASTM Standard Test Method D6595 requirements
- No sample preparation  
30 second analysis time
- Benchtop and transportable, small footprint
- Analyzes up to 32 elements simultaneously
- Always ready to analyze samples
- Simple to operate without special training or background
- Standard and readily available consumables
- Requires no special utilities or gases, only AC power
- Controlled by an External Computer
- Windows operating system
- Optional coolant analysis capability



## Spectroil Q<sup>100</sup> Oil Analysis Spectrometer



*“...the easiest and most expedient way to perform the rapid analysis of wear metals, contaminants and additives in lubricants, hydraulic fluids, and coolants”*

## Description

The Spectroil Q<sup>100</sup> is our newest and completely solid-state spectrometer designed specifically for the analysis of oil samples. It measures trace quantities of elements dissolved or suspended as fine particles in mineral or synthetic petroleum based products using the time-tested and reliable rotating disc electrode (RDE) technique.

The Spectroil Q<sup>100</sup> uses the same technology and design concepts that Spectro Incorporated has applied over the years to the Spectroil M family of spectrometers. All Spectro oil analysis instruments benefit from this technology, providing innovative features, ease of use and ruggedness that have made them the standard workhorse instrument at most commercial oil analysis laboratories throughout the world that require the rapid analysis of wear metals, contaminants and additives in lubricants. The Spectroil Q<sup>100</sup> fulfills the requirements of ASTM D6595 Standard Method for Determination of Wear Metals and Contaminants in Used Lubricating Oils or Hydraulic Fluids by Rotating Disc Electrode Atomic Emission Spectrometry.

The Spectroil Q<sup>100</sup> is the ideal spectrometer for the in-service oil analysis laboratory because technology has made it smaller and the addition of an innovative CCD optical system has made it more flexible for even the most exotic in-service oil analysis applications. An external computer with current Windows software controls the system. Additional capabilities to analyze engine coolants and water are available as options.

## Predictive Maintenance: In-service Oil Analysis

*The Standard Configuration of the Spectroil Q<sup>100</sup> Contains 22 Elements. Additional Elements can be Added at any Time.*

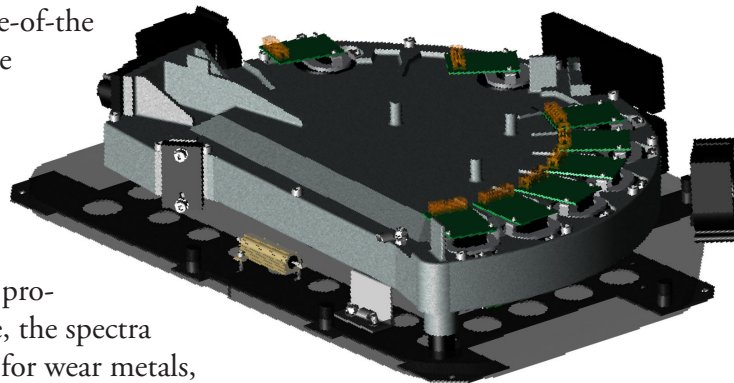
Wear Metals	Contaminants	Additives
Aluminum	Boron	Barium
Cadmium	Calcium	Boron
Chromium	Potassium	Calcium
Copper	Silicon	Chromium
Iron	Sodium	Copper
Lead		Magnesium
Magnesium		Molybdenum
Manganese		Phosphorus
Molybdenum		Silicon
Nickel		Zinc
Silver		
Tin		
Titanium		
Vanadium		
Zinc		

Spectrometric oil analysis is applicable to any closed loop lubricating system, such as those found in diesel and gasoline engines, gas turbines, transmissions, gear boxes, compressors and hydraulic systems. In practice, periodic oil samples are taken from the equipment being monitored. The spectrometer analyzes the sample for trace levels of metal worn from moving parts, as well as for extraneous contamination and additive element levels. The resulting data, when compared to previous analyses and allowable limits, may indicate a sound mechanism showing only normal wear, or it may point out a potentially serious problem in its early stages. With this advance warning, steps may be taken to correct the situation before serious damage or injury occurs.

## The Spectroil Q<sup>100</sup> CCD Optical System

The heart of the new Spectroil Q<sup>100</sup> is an innovative and state-of-the-art charge coupled device (CCD) optical system.

The Paschen-Runge design of the optical system provides the necessary resolution and light throughput to process, in a very short time, the spectra of in-service oil samples for wear metals, contaminants and additives. The Spectroil Q<sup>100</sup> optic contains a dual layer of CCD detectors making it a compact, yet extremely capable system. The design eliminates the need for photomultiplier tubes with their inherent instability and limited analytical expansion capabilities.



**SPECTROINC.**  
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## Benefits of Oil Analysis

- Reduce maintenance costs
- Reduce unexpected downtime
- Increase equipment availability
- Improve safety

## Typical Applications

- Commercial Laboratories
- Oil Companies
- Railroads
- Airlines
- Public Transportation Companies
- Electric Power Generation Companies
- Mines
- Refineries
- Construction Equipment
- Chemical Processors
- Steel Mills
- Manufacturing Plants
- Marine Fleets

## Dimensions (Approx.)

- Size (L x W x H)  
66 cm x 40 cm x 74 cm  
26 in. x 16 in. x 29 in.
- Weight 75 kg (165 lbs)

