

Technical Specifications

Myrkos Instrument

Performance

Measurement technology	Dual-channel gas chromatograph Micro-machined injectors and TCD detectors Shake Test® sampling and gas extraction ¹
Gases measured	H ₂ (hydrogen) CH ₄ (methane) C ₂ H ₆ (ethane) C ₂ H ₄ (ethylene) C ₂ H ₂ (acetylene) CO (carbon monoxide) CO ₂ (carbon dioxide) O ₂ (oxygen) N ₂ (nitrogen)
Gas-in-oil* measurement range	H ₂ : 5 - 60,000 ppm Other fault gases: 1 - 60,000 ppm O ₂ : 60 – 100,000 ppm N ₂ : 500 – 100,000 ppm
Gas-in-oil* repeatability ²	H ₂ : greater of ±2 ppm or ± 2% CO ₂ : greater of ±10 ppm or ±2% Other fault gases: greater of ± 2 ppm or ± 2% O ₂ : ±60 or ±2% N ₂ : ±500 or ±2%
Gas-in-oil* accuracy ³	H ₂ : greater of ± 5 ppm or ±6% CO ₂ : greater of ±10 ppm or ±6% Other fault gases: greater of ±2 ppm or ± 6% O ₂ : ±60 ppm or ±6% N ₂ : ±500 ppm or ±6%

* Gas-in-oil specifications encompass instrument-to-instrument, syringe-to-syringe and gas extraction method uncertainties.

Resolution	All gases: 1 ppm
Measurement time	2 minutes
Calibration	Morgan Schaffer CALGAS with NIST traceability
Sampling	100 ml Shake Test® syringe for oil samples 10 ml glass syringe for gas samples from relay, tank or PTFE membrane. Room temperature injection
Sample integrity	Used as directed, individual syringes ensure no gas loss and no cross contamination Automatic line purging with internal sampling pump
Gas filtering	Disposable oil traps (5µm) Replaceable particle trap (10µm)

Communication & Data

Connectivity	Direct or networked TCP/IP Ethernet
Interface software	Morgan Schaffer PPMreport 3 (Win 98, 2000, NT, XP, Vista, 7) Provides instrument control, data acquisition, data management, DGA diagnostic tools, and customizable PDF reports

Operation

Power supply	Inline power adaptor with IEC 60320/C14 receptacle Input: 100 – 240 VAC, 50/60 Hz, 100 W, 1Ø Output: 24 VDC, 6.2 A 8 ft power cord with IEC 60320/C13 to NEMA 5-15P
Gas requirements	99.999% He, 80 psig
Operating temperature range (standard)	0 to 50°C
Storage temperature range	0 to 75°C
Humidity range	5 – 95%RH non-condensing
Altitude	Up to 4,500 m (15,000 ft)
Cooling	Forced air convection
Maintenance	Annual visual inspection
Expected operating life	> 10 years

Construction

Width x Height x Depth	250 x 155 x 420 mm (9.8 x 6.1 x 16.5 in)
Weight	10 kg / 22 lbs
Enclosure	Cast aluminum frame, aluminum covers, powder coat paint, carrying handle
Ruggedness	Drop tested to 1 m

Conformities

Directives	Low Voltage Directive 2006/95/EC EMC Directive 2004/108/EC CE Marking
Safety	IEC /EN 61010-1:2001
EMC	IEC 61326-1:2005 EN 61326-1:2006 CISPR 11:2003 / EN 55011:1998 + A1:1999 + A2:2002

Standard Package

Myrkos Analyzer	Myrkos portable DGA MicroGC PPMreport 3 interface software, certificate, user manual
Myrkos Calibration Kit	Gas tight glass syringe (10 cc) NIST traceable CALGAS cylinder (500 cc) Micro-flow regulator with dial gauge CO ₂ trap for air run
Myrkos Oil Sampling Kit	Shake Test [®] syringe (100 cc) Bag of oil traps (25/bag) CO ₂ trap for Shake Test [®]
Myrkos Squirt Method Kit	Squirt stopper Squirt tube
Other Accessories	Shake Test [®] syringe holder Tool and connection kits

Warranty & Support

Morgan Schaffer's Myrkos analyzer is backed by a 2-year factory warranty. Myrkos and other MS instruments are available through Morgan Schaffer's worldwide network of authorized distributors and agents.

Notes:

- 1 – The Shake Test[®] Method is a variation of ASTM D3612-02 Method C, and is also described in the international standard IEC 60567.
- 2 – 95% confidence interval
- 3 – 95% confidence interval in comparison with Morgan Schaffer's ISO/IEC 17025 accredited laboratory. Product improvements since the writing of IEC 60567: 2005 have lead to the improved accuracy specifications provided here.

Continuing research and improvements may result in specification or appearance changes at any time.

