



DOBLE IN-SERVICE TESTING & ASSESSMENT

# MYRKOS 2

FIELD PACKAGE

PORTABLE DGA CHROMATOGRAPH

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Portable DGA Chromatograph

PRODUCT DESCRIPTION	
Portable DGA Chromatograph	Myrkos 2 DGA Chromatograph in rugged waterproof case with wheels, extendable handle and organized stowage
9-gases measured	H <sub>2</sub> (hydrogen), CO (carbon monoxide), CO <sub>2</sub> (carbon dioxide), CH <sub>4</sub> (methane), C <sub>2</sub> H <sub>2</sub> (acetylene), C <sub>2</sub> H <sub>4</sub> (ethylene), C <sub>2</sub> H <sub>6</sub> (ethane), O <sub>2</sub> (oxygen), N <sub>2</sub> (nitrogen)
Sampling methods	100 mL ShakeTest™ syringe for liquid samples <sup>1</sup> 10 mL glass syringe for gas samples from relay or headspace
Measurement time	2 minutes
Compatible liquids	Mineral oil, silicone liquid, natural and synthetic ester liquids
Software	PPMreport™ control software with customizable reports MyrkosView™ basic DGA analysis software Serial-number specific factory-optimized method files
Gas vessels	NIST traceable TALL CALGAS cylinder (920cc) Helium Carrier Gas Module with 42 hours operating autonomy
Calibration kit	Micro-flow gas regulator with dial gauge for TALL (920cc) CALGAS cylinder 2 gas-tight glass syringes (10cc) CO <sub>2</sub> trap
Oil sampling kit	2 ShakeTest™ syringes with carrying case Squirt-method kit 4 bags of 25 single-use oil traps CO <sub>2</sub> trap
Other items	ShakeTest™ syringe holder and support bracket Helium manifold with country-specific gas cylinder fitting and high-pressure filling line Universal power supply with country-specific power cable Tool kit
Warranty	30 month standard 1,2, and 3 year extended warranty options
Recommended Options	
Controller	Myrkos 2 portable controller with universal power supply Preconfigured with: <ul style="list-style-type: none"> <li>• PPMreport™ control software with customizable reports</li> <li>• MyrkosView™ basic DGA analysis software</li> <li>• Serial-number specific factory-optimized method files</li> </ul>
Battery	Factory-installed lithium-ion battery with status indicator 9 hours operating autonomy Intelligent charger with country-specific power cord
InsideView	DGA diagnostic software for fleetwide transformer health management
6 ShakeTest™ kit	6 ShakeTest™ syringes with carrying case
Syringe shaker	Simultaneous gas extraction for up to 3 ShakeTest™ syringes
Training	On-site or in-factory options available



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Measurement Performance				
Ranges				
	Dissolved gas in mineral oil		In gas phase (e.g. Buchholz relay)	
	LDL (ppm)	TOR (ppm)	LDL (ppm)	TOR <sup>4</sup> (ppm)
H <sub>2</sub>	5	60,000	33	4,000
CO	1	60,000	4	10,000
CO <sub>2</sub>	30	60,000	25	12,000
CH <sub>4</sub>	1	60,000	2	126,000
C <sub>2</sub> H <sub>2</sub>	1	60,000	1	12,000
C <sub>2</sub> H <sub>4</sub>	1	60,000	1	10,000
C <sub>2</sub> H <sub>6</sub>	1	60,000	1	11,000
O <sub>2</sub>	60	100,000	-	-
N <sub>2</sub>	500	100,000	-	-
Repeatability <sup>2</sup>				
	Dissolved gas in mineral oil		In gas phase (e.g. Buchholz relay)	
	greater of	or	greater of	or
H <sub>2</sub>	±2 ppm	±2%	±13 ppm	±2%
CO	±2 ppm	±2%	±9 ppm	±2%
CO <sub>2</sub>	±30 ppm	±2%	±25 ppm	±2%
CH <sub>4</sub>	±2 ppm	±2%	±4 ppm	±2%
C <sub>2</sub> H <sub>2</sub>	±2 ppm	±2%	±2 ppm	±2%
C <sub>2</sub> H <sub>4</sub>	±2 ppm	±2%	±1 ppm	±2%
C <sub>2</sub> H <sub>6</sub>	±2 ppm	±2%	±1 ppm	±2%
O <sub>2</sub>	±60 ppm	±2%	-	-
N <sub>2</sub>	±100 ppm	±2%	-	-
Accuracy <sup>3</sup>				
	Dissolved gas in mineral oil		In gas phase (e.g. Buchholz relay)	
	greater of	or	greater of	or
H <sub>2</sub>	±5 ppm	±6%	±33 ppm	±6%
CO	±1 ppm	±6%	±4 ppm	±6%
CO <sub>2</sub>	±30 ppm	±6%	±25 ppm	±6%
CH <sub>4</sub>	±1 ppm	±6%	±2 ppm	±6%
C <sub>2</sub> H <sub>2</sub>	±1 ppm	±6%	±1 ppm	±6%
C <sub>2</sub> H <sub>4</sub>	±1 ppm	±6%	±1 ppm	±6%
C <sub>2</sub> H <sub>6</sub>	±1 ppm	±6%	±1 ppm	±6%
O <sub>2</sub>	±60 ppm	±6%	-	-
N <sub>2</sub>	±100 ppm	±6%	-	-
Gas-in-oil specifications encompass instrument-to-instrument, syringe-to-syringe and gas extraction uncertainties in field operating conditions.				



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Normative	
CE mark	
IEC 60529: IP67 when closed, IP20 when open	
Safety: IEC/EN 61010-1	
EMI/EMC: IEC 61326-1, EN 55011, FCC part 15 Subpart B, ICES-003	
ISTA 3A: 1 m drop test	
Technical	
Shipping size	1066.8 X 54.6 X 47.6 CM (42.0 X 21.5 X 18.75 IN)
Shipping weight	42 KG (92 LBS)
Helium	99.999% purity, 80 psig
Operating temperature	0 to 50 °C
Storage temperature	0 to 75 °C
Humidity	5 – 95% non-condensing
Elevation	0-4,500 m (15,000 ft)
Cooling	Forced air
Connectivity	TCP/IP direct or networked
Consumables	
Calibration gas	NIST traceable TALL CALGAS cylinder (920cc)
CO <sub>2</sub> trap	For air runs and ShakeTest™ runs
Oil traps	Bag of 25 single-use oil traps
Accreditations	
ISO 9001:2015 quality management	
ISO/IEC 17025:2017 DGA laboratory	
ISO 17034:2016 by ANSI-ASQ National Accreditation Board for TrueNorth™ gas-in-oil standards	
Notes	
<ol style="list-style-type: none"> <li>1. The ShakeTest™ method is a variation of ASTM D3612-02 Method C and is also described in IEC 60567</li> <li>2. 95% confidence interval</li> <li>3. 95% confidence interval in comparison with Doble ISO/IEC 17025 accredited laboratory</li> <li>4. Gas sample top-of-range can be extended by diluting the sample in the gas syringe</li> </ol>	
Disclaimer	
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