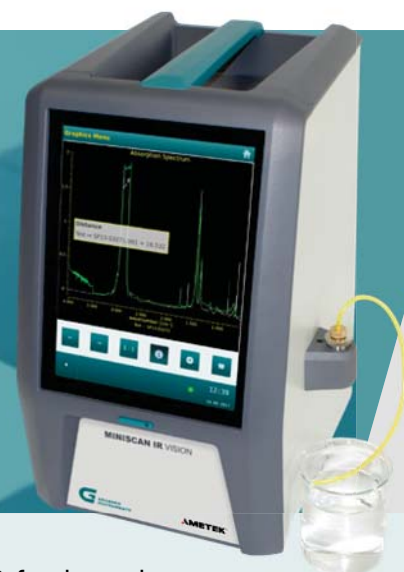


MINISCAN IR VISION

Top performer in portable fuel analysis



The MINISCAN IR VISION is a high speed, compact and robust FTIR fuel analyzer for the comprehensive and automatic measurement of gasoline, jet and diesel fuels. The analyzer is configured to measure more than 100 fuel parameters and components for fuel blending, for quality inspection and to check compliance with fuel specifications directly at the point of sale.

BENEFITS

100+ preconfigured parameters

Compound analysis is performed according to the international standards ASTM D5845 for oxygenates, ASTM D6277 and EN 238 for Benzene and EN 14078 for Biodiesel blends. Octane and Cetane Number, Distillation, Vapor Pressure and other fuel properties are automatically determined from the full IR spectrum using Partial Least Square (PLS) analysis and advanced chemometric models following ASTM E1655. Several thousand data points are used to achieve best prediction accuracy.

Fast and User Friendly Measurement

A high-performance processor allows results to be calculated within seconds. User friendly menu navigation utilizing a large button touchscreen design ensures immediate instrument response. The instrument facilitates worldwide remote support and service via secure VPN tunnel.

Mechanical Robustness

Durability makes the instrument ideal for the challenges encountered during field or mobile testing. The MINISCAN IR Vision incorporates Grabner's proven, robust and bubble free metal filling system. The instrument is protected by the shock and vibration tested Vision platform housing. The double interferometer is mounted with a self aligning mirror system, that allows automatic correction of intensity shifts after a rough drive over a bumpy road. A robust, 10" full color industrial touchscreen guarantees highest visibility and ease of use even under rough environmental conditions.

DATA BASED ON HUNDREDS OF GLOBAL FUELS, MANY COLLECTED AND ANALYZED BY SGS®

High Quality Portable Technology

MINISCAN IR Vision is unmatched in its class of portable fuel analyzers. The thermoelectric temperature regulation of the instrument's filling system, measuring cells and integrated density meter maximises accuracy in measuring volume and mass percent of fuel compounds. The analyzer resolution is superior over comparable FTIR analyzers.

KEY FEATURES

- Portable Fuel Analyzer for Gasoline, Diesel, Jet Fuel and Biofuel Blends
- Full Spectrum PLS Analysis using Superior Processing Power
- Smart 2+1 Cell Design
- Beam Splitter: Ge-Coated KBr
- Bubble Free Metal Filling System
- Thermoelectric Temperature Regulation of Filler, Density Meter and Cells
- 10" Industrial Full Color Touchscreen
- Remote Access. Anywhere. Anytime.



FUEL ANALYSIS

GASOLINE				DIESEL	
PROPERTIES		Range 1)		PROPERTIES	Range 1)
RON		70 - 110		Cetane Number	20 - 80
MON		65 - 105		Cetane Index	20 - 80
AKI		67 - 107		Kinematic Viscosity @40°C	0 - 10 mm²/s
RVP & DVPE		40 - 105 kPa		Dynamic Viscosity @40°C	0 - 10 mPas
Distillation / Evaporation		IBP, T10, T50, T90, FBP, E70/100/150(°C), E200/300(°F)		CFPP	-50°C to +20°C
Density		0 - 3 g/cm³ [r _{s,d} = 0.0005 g/cm³]		Distillation / Recovery	IBP, T10/50/65/85/90/95, FBP R250, R350
Driveability Index (DI), VOC emissions, Vapor Lock Index (VLI)				Density	0 - 3 g/cm³ [r _{s,d} = 0.0005 g/cm³]
COMPONENTS				COMPONENTS	Range 2)
Oxygenates	Range 2)	Aromatics	Range 2)	Total Aromatics	0 - 80 m%
MTBE	0 - 20 m%	Benzene	0 - 10 m%	Poly Nuclear Aromatics	0 - 50 m%
TAME	0 - 20 m%	Toluene	0 - 20 m%	Cetane Improver: EHN, IPN	0 - 10000 ppm
ETBE	0 - 20 m%	o, p, m-Xylene	0 - 20 m%	Biodiesel (FAME, FAEE)	0 - 40 v%
DIPE	0 - 20 m%	Ethylbenzene	0 - 20 m%		
Methanol	0 - 15 m%	Propylbenzene	0 - 20 m%	JET FUEL	
Ethanol	0 - 20 m%	Mesitylene	0 - 20 m%	PROPERTIES	Range 1)
Isopropanol	0 - 20 m%	Durene	0 - 20 m%	Flashpoint	-20°C to +100 °C
2-Butanol	0 - 25 m%	Naphtalene	0 - 10 m%	Freezing Point	-80°C to +20 °C
tert-Butanol	0 - 25 m%	Pseudocumene	0 - 20 m%	Kinematic Viscosity @-20°C	0 - 10 mm²/s
Sec-Butylacetate	0 - 10 m%	2-/3-/4-Ethyl toluene	0 - 20 m%	Distillation	IBP, T10/ 50/90/95, FBP, E10/50, R200
Iso-Butylacetate	0 - 10 m%	Other Aromatics	0 - 20 m%		
Dimethylcarbonate	0 - 10 m%	Anilines	Range 2)	Smoke Point	0 - 1000 mm
Dimethoxymethane	0 - 10 m%	Aniline	0 - 5 m%	Total Aromatics	0 - 40 m%
Acetone	0 - 25 m%	N-Me-Aniline	0 - 5 m%	Naphtalenes	0 - 5 m%
Other Oxygenates	0 - 20 m%	N,N-Dimethylaniline	0 - 5 m%	MSEP	60 - 100 %
Octane Boosters	Range 2)	o,p,m-Methylaniline	0 - 5 m%	Density	0 - 3 g/cm³ (r _{s,d} = 0.0005 g/cm³)
MMT/CMT (mg/l)	0 - 10000	Total Parameters	Range 1) 2)	COMPONENTS	Range 2)
Manganese (MMT)	0 - 2500	Total Oxygen	0 - 12 m%	Biodiesel (FAME)	0 - 0.12 m%
Manganese (CMT)	0 - 2500	Total Aromatics	0 - 80 m%	FUEL ETHANOL MODULE	
DCPD	0 - 15 m%	Total Olefins	0 - 80 m%	COMPONENTS	Range 2)
Nitromethane	0 - 9 m%	Di-Olefins	0 - 20 m%	Ethanol	20 – 100 v%
Other	Range 2)	Total Aniline	0 - 5 m%	Methanol	0 – 10 v%
Cyclohexane	0 - 100 m%	Total Esters	0 - 5 m%	Water	0 – 20 v%
				Denaturant	0 – 80 v%
TECHNICAL DATA					
Standards & Practices		ASTM D5845, D6277, D7777, D7806, E1655, EN 238, EN 14078, ISO 15212			
Correlation to		ASTM D86, D323, D445, D1319, D5191, D 6371, D6378, D613, D2699, D2700, D56/3828, D1322, D1840, D2386/D7153, D3948, D6379, ISO 3104, ISO 3405, ISO 5163, ISO 5164, ISO 5165, EN 116, EN 13016			
Spectrometer		Temperature and Laser Regulated, 2+1 Cell-FTIR			
Density Measurement		Temperature Regulated Oscillating U-Tube Cell			
Warm-Up / Scanning Time		<30s / 80s (Multiple Scans)			
Units of Measurement		v%, m%			
Display		10” full color touchscreen			
Interfaces		2x USB, 2x LAN			
Power Supply		100-264 V AC, 45-63 Hz, max. 130 W (auto-switching power supply). 12 V DC vehicle battery adapter available for field use			
Dimensions (WxHxD), Weight		293 x 390 x 280 mm (10.5 x 15.4 x 11 inch), 12 kg (26 lb)			

¹⁾ Range and quality of property prediction depends on database used ²⁾ The lowest concentration value is the Limit of Detection (LOD)