

INSTRUMENTS AT A GLANCE

VAPOR PRESSURE



MINIVAP VP Vision

- VP measurement according to all relevant standards for gasoline, crude and lpg
- Highest precision and accuracy
- Pressure range: 0 - 2000 kPa
- Certified for robustness and durability
- Calibration history and backup
- Best-in-class sampling Pro Valve Design
- Total connectivity with COCKPIT Software

MINIVAP VPL Vision

- Unmatched precision and accuracy for low volatility VP Measurements
- Modern replacement of ASTM D2879 Isoteniscope Method
- Static triple expansion method
- Pressure range: 0 - 150 kPa
- Only 1ml sample (excl. rinsing)
- 5 minutes measuring time
- Sampling Pro Valve Design
- Total connectivity with COCKPIT Software

VP Vision Pipeline Package

- Pipeline package for MINIVAP VP Vision
- For pressures >2000 kPa
- Tubing for 7000 kPa
- 250 ml floating piston cylinder
- Fixed pressure regulator
- Crude oil standard inlet

MINIVAP On-Line

- ASTM compliant, direct VP measurement
- RVPE, DVPE, TVP, $T_{(V/L)} = 20$
- Unmatched process accuracy
- Up to 2 sample streams
- 7 minutes cycle time
- Automatic calibration
- Variable V/L ratio
- Fast and easy maintenance
- Amortization within weeks

Samples



Gasoline and gasohol



Crude oil



Jet fuels



LPG



Solvents



Chemicals



Gasoline and gasohol



Jet fuels



Solvents



Chemicals



High pressure pipeline samples



Gasoline and gasohol



Crude oil



Jet fuels



Solvents

Specifications

Test Methods		Test Method	
ASTM D5188, 5191, 6377, 6378, 6897; EN 13016; IP 394, 409, 481; GOST 52340, KIS K2258-2, SHT 0769; ASTM D4953 and D323 equivalent	ASTM D5191, D5188, D6378; EN 13016-1+2, IP 394, 409, JIS K2258-2, SHT 0769	ASTM 6377, D6897	ASTM D5188, 5191, 6377, 6378, 6897; EN 13016; IP 394, 409, 481; ASTM D323 and D4953 equivalent
Temperature Range		Floating Piston Cylinder	
0 - 120°C (32 - 248°F)	0 - 120°C (32 - 248°F)	Max. Pressure: 7000 kPa, 250 ml Sample Volume	20 - 60°C (68 - 140°F)
Temperature Stability		Filling Tube	
± 0.01°C (0.018°F)	± 0.01°C (0.018°F)	Stainless Steel, max. 7000 kPa	±0.1°C (±0.2°F)
Pressure Range		Pressure regulator	
0 - 2000 kPa (0 - 290 psi)	0 to 150 kPa (0 to 21.8 psi)	Reduces pressure to < 2000 kPa	0 - 1000 kPa (LPG: 0 - 2000 kPa)
Vapor/Liquid Ratio			
0.02/1 to 100/1, selectable	0.02/1 to 100/1, selectable		0.02/1 to 20/1
Sample Volume			
1 ml (2.2 ml per rinsing cycle)	1 ml (2.2 ml per rinsing cycle)		1 ml (10 ml incl. rinsing)
Precision			
$r/R \leq \pm 0.2 / 0.5$ kPa	$r/R \leq \pm 0.2 / 0.5$ kPa		$r/R = \pm 0.3 / 0.7$ kPa

FUEL ANALYSIS



MINISCAN IR Vision

- Portable, fast FTIR spectrometer
- Multi-fuel analyzer for gasoline, diesel, jet fuel and blends
- Built-in density meter
- Temperature and laser regulated

100+ Fuel Parameters Analyzed

- Fast and comprehensive analysis of 100+ fuel parameters
- Oxygenates (ASTM D5845), aromatics, benzene (D6277, EN 238), PNA, olefins, saturates
- Biodiesel (D7806, EN 14078)
- Octane boosters, MMT, DCP
- Anilines
- Cetane improver concentration
- Octane number, AKI
- Cetane number, cetane index
- Distillation and vapor pressure
- Flashpoint, viscosity, smoke point and CFPP

Samples



Gasoline, Gasohol



Diesel



Jet Fuels



Fuel Adulteration

Specifications

Test Methods

ASTM D5845, D6277, D7777, D7806; EN 238, EN 14078; ISO 15212

Property Prediction Based on

ASTM D86, D323, D445, D5191, D6378, D613, D2699, D2700, D56/3828, D1322, D1840, D2386/7153, D3948, D6379

Temperature Stability

±0.1°C (±0.2°F)

Sample Volume

Less than 25 ml

Scanning Time

80s (Multiple Scans)

GREASES



MINITEST FFK

- Automatic detection of flow pressure
- Fast 2-stage-Peltier cooling
- No cryostate needed
- Fit for field use
- Highest accuracy
- Easy handling
- Portable design

Samples



Greases

Specifications

Test Method

DIN 51805 (Kesternich Method)

Temperature Range

-50 to +30°C (-58 to +86°F)
Tap Water Cooling for below -30°C (-22°F)

Temperature Resolution

±0.01°C (±0.02°F)

Pressure Range

0 - 200 kPa (0 - 30 psi)

Pressure Resolution

±0.01 kPa

SUPPORT PACKAGES

CALCHECK
Calibration Service

CALPLUS
Preventive Maintenance
Check & Calibration

CALCHECK

- 1 calibration service
- Loaner unit available at charge

CALPLUS

- 1 preventive maintenance check and calibration; exchange of consumables and sealings included
- Loaner unit available at charge

Order

Order / activate through G-TICKET system or purchase order

Remote Support

Telephone or web-based support calls (max. 1 hour per call)

Calibration Service

Calibration Service (excl. costs for IR calibration liquids) *

Maintenance

—	Preventive Maintenance Check, including consumables and seals
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Loaner unit

Loaner unit available at charge (€ 990,- per incident)

* Surcharge for IR Vision Calibration Liquids: Gasoline - € 690 | Diesel - € 690 | PRO - € 1100

DISTILLATION



MINIDIS ADXpert

- D7344 true boiling point
- Delivers D86 results
- Tests B100 biodiesel
- Tests unknown samples
- Detects dry point
- 6 ml sample volume
- Highest safety: no glassware, no open flame
- 15 min. Distillation time
- Automatic filling and cleaning
- Automatic heat adjustment
- Fast and portable for field use

Samples



- Petroleum and biofuels
- Fuel contamination
- Chemicals
- Solvents

Specifications

Test Methods

ASTM D7344; correlation to ASTM D86, D1160, D850, D1078; ISO 3405

Temperature Range

0 to 400°C (32 to 752°F)

Temperature Stability

±0.1°C (±0.2°F)

Sample Volume

6 ml

Measuring Time

15 min. on light samples

FIELD ANALYSIS



Mobile Fuel Lab

Choose Instruments from a Large Selection of On-Board Fuel Analyzers:

- Gasoline, diesel and jet fuel analyzer
- Flashpoint tester
- Vapor pressure tester
- Distillation tester
- Lube oil and grease tester
- Many more uses, according to your needs!

Equipped with

Water and Power Supply, Air Condition System

Shock Proof

Shock proof installation of instruments, fit for rough roads

SOFTWARE



COCKPIT for Vision Analyzers

- PC software for Vision analyzers
- Worldwide analyzer uplink
- Automatic instrument recognition
- Global results download, collaboration and audit
- Visual measurement inspections
- Remote device configuration
- Remote diagnostics
- Remote online support
- Calibration check and history
- Remote user management and training
- Universal database support
- Web-based software distribution
- Easy LIMS configuration
- Network printing
- Multi-format results export (csv, PDF)

IR Database Tool

- PC software to optimize IR Vision analyzer performance
- Analysis measurement quality
- Development, cloning, training and deletion of methods
- Methods performance improvement
- Creation and deletion of calibration groups
- Turing of measurements into calibration measurements
- Merge and distribution of databases

Minimum System Requirements

OS

Microsoft® Windows® 7, 64 bit, SP1 or higher

CPU

min. i3, 4th generation, 1 GHz

RAM

2 GB, 64 bit

Free disk space

min. 1 GB

Display

Full-HD preferred (1920 x 1080)

OS

Microsoft® Windows 7® or higher

CPU

Intel Core i3 or higher

RAM

min. 2 GB RAM

Free disk space

min. 1 GB

Interfaces

USB-communication interface

FLASHPOINT



MINIFLASH FLP/H/L

- ASTM D6450 and D7094
- No bias to ASTM D93A
- Best precision
- Highest safety: no open flame
- Smallest sample size: 1 or 2 ml
- Fast peltier cooling
- Portable, durable design
- Easy to clean
- Approved by US DOT, RCRA, NATO, US Navy
- Worldwide standard for flavors & fragrances
- NSN 6630-25-145-3256 (FLPH)

NAVIFLASH / MARFLASH

- ASTM D6450 and D7094
- US Marine aviation fuel acceptance protocols
- US Navy-specs protocols
- Contamination detection
- F-76 Fuel Dilution of 9250 Oil
- JP-5 Fuel Dilution of 9250 Oil
- JP-5, JP-8, Jet A1, Diesel and DF-2 Specs
- Ideal for shipboard testing
- NSN 6625-01-472-6783 (NAVIFLASH)
- NSN 6630-01-534-1774 (MARFLASH)

MINIFLASH FP Vision

- ASTM D6450 (SHT0768) and D7094
- Excellent correlation to Pensky Martens Method (ASTM D93), ISO 2719, DIN 51758, IP 34, JIS K 2265, TAG Closed Cup Method (ASTM D56), Abel Closed Cup Method (ISO 13736), IP 170
- Maximum safety: continuous closed-cup flash point testing with no open flame
- Fuel dilution flash point testing
- Advanced Peltier cooling and ignition protection technologies
- Intuitive menu navigation on 10" color touchscreen
- Industry 4.0-ready and scalable
- Compatible with COCKPIT Software for Vision analyzers

MINIFLASH FPH Vision

- ASTM D6450 (SHT0768) and D7094
- Excellent correlation to Pensky Martens Method (ASTM D93), ISO 2719, DIN 51758, IP 34, JIS K 2265, TAG Closed Cup Method (ASTM D56), Abel Closed Cup Method (ISO 13736), IP 170
- Maximum safety: continuous closed-cup flash point testing with no open flame
- Flash point testing from 10°C to 400°C (50 to 752°F)
- Fast sample output: up to 16 samples per hour
- Industry 4.0-ready and scalable
- Compatible with COCKPIT Software for Vision analyzers

- Petroleum, biofuels
- Chemicals
- Flavors and fragrances
- Lube and used oils
- Paints and varnishes
- Solids and bitumen

- Marine fuels
- Diesel
- Jet fuels
- Lube and used oils

- Petroleum, biofuels
- Chemicals
- Flavors and fragrances
- Paints and varnishes

- Petroleum, biofuels
- Chemicals
- Lube and used oils
- Paints and varnishes
- Solids and bitumen

Specifications

Test Methods			
ASTM D6450 (SHT0768), D7094; excellent correlation to ASTM D93, D56, ISO 2719	ASTM D6450 (SHT0768), D7094	ASTM D6450 (SHT0768) & D7094; excellent correlation to ASTM D93 ASTM D3828 A/B, IP 523/IP 524	ASTM D6450 (SHT0768) & D7094; excellent correlation to ASTM D93
Temperature Range			
FLP: 0 to 200°C (32 to 392°F) FLPH: 10 to 400°C (50 to 752°F) FLPL: -25 to 100°C (-13 to 212°F)	MARFLASH: 0 - 200°C (32 - 392°F) NAVIFLASH: 0 - 400°C (32 - 752°F)	0 to 120°C (32 to 248°F) without cooling Down to -25°C (-13°F) with water cooling Down to -45°C (-50°F) with external cooling	10 to 400°C (50 to 752°F)
Temperature Stability			
±0.1°C (±0.2°F)	±0.1°C (±0.2°F)	±0.05°C (0.09°F)	±0.07°C (0.13°F)
Sample Volume			
1 ml (ASTM D6450) 2 ml (ASTM D7094)	1 ml (ASTM D6450) 2 ml (ASTM D7094)	1 ml (ASTM D6450) 2 ml (ASTM D7094)	1 ml (ASTM D6450) 2 ml (ASTM D7094)
Sample Throughput			
up to 12 samples/h	up to 12 samples/h	up to 12 samples/h	up to 12 samples/h

PRODUCT ADVANTAGES



HIGHEST PRECISION.



FAST MEASUREMENTS.



SMALL. LIGHT. PORTABLE.



HIGHEST SAFETY.



AUTOMATIC MEASUREMENTS.



MINIMUM SAMPLE.



ROBUST.

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