








Getting to know our
highly innovative solutions

Analytical testing instrumentation
AMETEK Grabner Instruments develops and
manufactures innovative, fully automated testing
equipment for global laboratory, process,
and mobile applications.
















MINIVAP VP Vision	MINIVAP VPL Vision	VP Vision Pipeline Package	MINIVAP On-Line
			
<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Unmatched precision and accuracy for low volatility VP measurements Modern replacement of ASTM D2879 Isotenscope 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 	<ul style="list-style-type: none"> Pipeline package for MINIVAP VP Vision For pressures 2000 – 7000 kPa Tubing for 7000 kPa 250 ml floating piston cylinder Fixed pressure regulator Crude oil standard inlet 	<ul style="list-style-type: none"> 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 Return on investment possible within weeks

COCKPIT for Vision Analyzers



- PC software for Vision analyzers
- Worldwide analyzer uplink
- Automatic instrument recognition
- Remote device configuration
- Remote diagnostics
- Calibration check and history
- Easy LIMS configuration
- Statistical quality control (SQC) in full compliance with ASTM D6299

Samples

 Gasoline and gasohol	 Gasoline and gasohol	 High pressure pipeline samples	 Gasoline and gasohol
 Crude oil	 Jet fuels		 Crude oil
 Jet fuels	 Solvents		 Jet fuels
 LPG	 Chemicals		 Solvents
 Solvents			
 Chemicals			

Specifications

Test Methods	Test Method	Test Method	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	Floating Piston Cylinder	Temperature Range
0 - 120°C (32 - 248°F)	Max. Pressure: 7000 kPa, 250 ml Sample Volume	Max. Pressure: 7000 kPa, 250 ml Sample Volume	20 - 60°C (68 - 140°F)
Temperature Stability	Filling Tube	Filling Tube	Temperature Stability
±0.01°C (0.018°F)	Stainless Steel, max. 7000 kPa	Stainless Steel, max. 7000 kPa	±0.1°C (±0.2°F)
Pressure Range	Pressure regulator	Pressure regulator	Pressure Range
0 - 2000 kPa (0 - 290 psi)	Reduces pressure to < 2000 kPa	Reduces pressure to < 2000 kPa	0 - 1000 kPa (LPG: 0 - 2000 kPa)
Vapor/Liquid Ratio			Vapor/Liquid Ratio
0.02:1 to 100:1, selectable programmable			0.02:1 to 20:1 programmable
Sample Volume			Sample Volume
1 ml (2.2 ml per rinsing cycle)			1 ml (10 ml incl. rinsing)
Precision			Precision
r/R ± 0.13 / 0.20 kPa (0.19 / 0.03 psi)			r/R ± 0.3 / 0.7 kPa (0.04 / 0.10 psi)

Min 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 (1920x1080)

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MINISCAN IR Vision	MINIFLASH FP Vision	MINIFLASH FPH Vision	MINIFLASH FPA Vision	NAVIFLASH / MARFLASH
				
<ul style="list-style-type: none"> • Portable, fast FTIR spectrometer • Multi-fuel analyzer for gasoline, diesel, jet fuel and blends • Built-in density meter • Temperature and laser regulated • Fast and comprehensive analysis of 100+ fuel parameters • Test for alcohols, water, and adulterants 	<ul style="list-style-type: none"> • ASTM D6450 and D7094 • Excellent correlation to Pensky Martens Method ASTM D93 • Maximum safety: continuous closed-cup flash point testing with no open flame • Multiple patents for safety and performance features • Total connectivity with COCKPIT Software 	<ul style="list-style-type: none"> • ASTM D6450 and D7094 • Excellent correlation to Pensky Martens Method ASTM D93 • Maximum safety: continuous closed-cup flash point testing with no open flame • Multiple patents for safety and performance features • Total connectivity with COCKPIT Software 	<ul style="list-style-type: none"> • 12-Position Carousel • Small Footprint of only ~1.9ft² • The FPA can be combined with any Grabner Vision Series flashpoint analyzer • Total connectivity with COCKPIT Software via FP(H)V <p>* Above photo shows FP(H) Vision and FPA</p>	<ul style="list-style-type: none"> • ASTM D6450 and D7094 • US Marine aviation fuel acceptance protocols • US Navy fuel acceptance and dilution analysis (oil) protocols • Ideal for shipboard testing • NSN 6625-01-472-6783 (NAVIFLASH) • NSN 6630-01-534-1774 (MARFLASH)
<p>Samples</p> <ul style="list-style-type: none"> Gasoline, gasohol Diesel Jet Fuels Fuel Adulteration & Water Fuel grade alcohols 	<p>Samples</p> <ul style="list-style-type: none"> Petroleum, biofuels Chemicals Flavors and fragrances Lube and used oils Paints and varnishes 	<p>Samples</p> <ul style="list-style-type: none"> Petroleum, biofuels Chemicals Lube and used oils Paints and varnishes Solids and bitumen 	<p>Samples</p> <ul style="list-style-type: none"> Petroleum, biofuels Chemicals Flavors and fragrances Paints and varnishes Solids and bitumen 	<p>Samples</p> <ul style="list-style-type: none"> Marine fuels Diesel Jet fuels Lube and used oils
<p>Specifications</p> <p>Test Methods</p> <p>ASTM D5845, D6277, D7777, D7806; EN 238, EN 14078; ISO 15212</p> <p>Property Prediction Based on</p> <p>ASTM D86, D323, D445, D5191, D6378, D613, D2699, D2700, D56/3828, D1322, D1840, D2386/7153, D3948, D6379</p> <p>Temperature Stability</p> <p>±0.1°C (±0.2°F)</p> <p>Sample Volume</p> <p>Less than 25 ml</p> <p>Scanning Time</p> <p>80s (Multiple Scans)</p>	<p>Specifications</p> <p>Test Methods</p> <p>ASTM D6450 (SHT0768), D7094; excellent correlation to ASTM D93, ASTM D3828 A/B, IP 523/ IP 524</p> <p>Temperature Range</p> <p>0 to 120°C (32 to 248°F) without cooling Down to -25°C (-13°F) with water cooling</p> <p>Temperature Stability</p> <p>±0.05°C (±0.9°F)</p> <p>Sample Volume</p> <p>1 ml (ASTM D6450) 2 ml (ASTM D7094)</p> <p>Sample Throughput</p> <p>up to 12 samples/h</p> <p>Precision</p> <p>ASTM D6450: r/R ±0.4/0.9°C ASTM D7094: r/R ±0.5/0.7°C</p>	<p>Specifications</p> <p>Test Methods</p> <p>ASTM D6450 (SHT0768), D7094, excellent correlation to ASTM D93</p> <p>Temperature Range</p> <p>10 - 400°C (50 - 752°F)</p> <p>Temperature Stability</p> <p>±0.07°C (±0.13°F)</p> <p>Sample Volume</p> <p>1 ml (ASTM D6450) 2 ml (ASTM D7094)</p> <p>Sample Throughput</p> <p>up to 12 samples/h</p> <p>Precision</p> <p>ASTM D6450 r/R ±0.4/0.9°C ASTM D7094 r/R ±0.5/0.7°C</p>	<p>Specifications</p> <p>Test Methods</p> <p>ASTM D6450 (SHT0768) & D7094; excellent correlation to ASTM D93 ASTM D3828 A/B, IP 523/IP 524</p> <p>Temperature Range</p> <p>Measurements between -25 and 400°C (-13 and 752°F)</p> <p>Temperature Stability</p> <p>Not applicable</p> <p>Sample Volume</p> <p>1 ml (ASTM D6450) 2 ml (ASTM D7094)</p> <p>Sample Throughput</p> <p>up to 12 samples/h</p> <p>Precision</p>	<p>Specifications</p> <p>Test Methods</p> <p>ASTM D6450 (SHT0768), D7094</p> <p>Temperature Range</p> <p>MARFLASH: 0 - 200°C (32 - 392°F) NAVIFLASH: 0 - 400°C (32 - 752°F)</p> <p>Temperature Stability</p> <p>±0.1°C (0.2°F)</p> <p>Sample Volume</p> <p>1 ml (ASTM D6450) 2 ml (ASTM D7094)</p> <p>Sample Throughput</p> <p>up to 12 samples/h</p> <p>Precision</p>

Industry application



PETROLEUM & PETROCHEMICAL



TRANSPORTATION & STORAGE



ENERGY

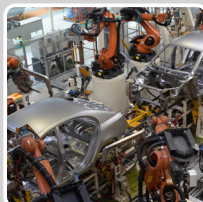


MILITARY

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AUTOMOTIVE



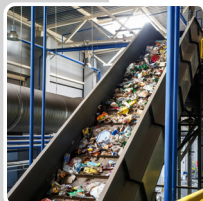
AVIATION



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