



Atmospheric Distillation of Petroleum Products and Liquid Fuels

VD10 – Automated Video Distillation



Methods:

ASTM D86, D850, D1078
ISO 3405, 918, 4626
IP 123, IP 195
DIN 51751
JIS K2254
GB/T 6536, GB/T 7534

- ▶ **Unmatched automation level**
- ▶ **User friendly touch screen interface**
- ▶ **Fully compliant with standard test methods**
- ▶ **No programming**
- ▶ **Intelligent automatic heater regulation assures:**
 - ▶ **Optimal initial heating to reach IBP**
 - ▶ **Perfect distillation rate**
 - ▶ **Appropriate final heating to FBP**
- ▶ **Enhanced traceability and reporting**
- ▶ **Highest safety level**

The Video Distillation **VD10** revolutionizes distillation testing by bringing **unmatched automation and precision** to the analysis of atmospheric distillation of petroleum products, biofuels, solvents. **Video camera assisted algorithm** (patent pending) applies optimum flask heating to respect standard method conditions for IBP, 5% timings and distillation rate control.

Like an experienced operator of a manual distillation in the past, the VD10 **monitors in real time** the sample behavior in the flask and powerful algorithm analyses **all phases of sample boiling** to anticipate and **predict the optimal heater settings**.

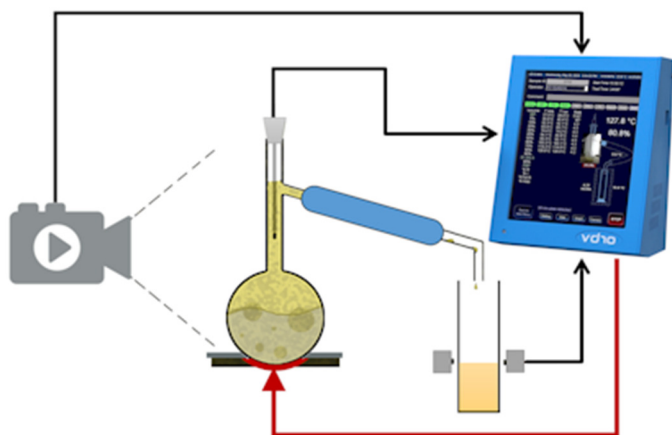
No need for any programming or optimization, perfect distillation run from a first shot even for unknown or difficult samples like biofuels.

Applications

Based on its advanced technology and reliability, the VD10 is perfectly suited for finished products (Gasoline, Kerosene, Aviation Turbine Fuels, Diesel Fuels, Industrial Solvents, ...), as well as for process streams, blending components, biofuels containing ethanol, and a research work.

Operation

Intelligent video system assists operator by checking proper installation of flask, probe, and heater plate. The VD10 advanced control algorithm uses image analysis to perfectly control the distillation run.



The entire test procedure is fully automated: position of the flask, temperature regulation of condenser and receiver, flask heating control, measuring vapor temperatures and volume, detecting IBP and FBP, rate control, barometric correction and recording all data. At test completion, the heater is automatically lowered and flask cooled down quickly. Results are displayed, saved, printed, sent to LIMS or USB.

Benefits

The VD10 is **the most advanced distillation instrument** available today. Developed by AD Systems, original imaging system makes the VD10 **truly automatic** distillation apparatus **not requiring any programming, drastically reducing operator time.**

Versatile data handling offers flexible reporting of user defined distillation points and **specification control.**

High quality components, precise sensors and robust construction assure **high reliability**, heavy-duty use with **minimum maintenance.**

User friendly interface contains all features for **traceability**, **quality assurance**, diagnostics, communication, and safety.

Safety

Without compromise, the VD10 is equipped with necessary safety features including built-in fire extinguishing system with automatic fire detection and external alarm connection. **A safety watchdog** permanently monitors for abnormal situations, preventing the operator or acting immediately if there is a risk for the operator or the equipment.

Ordering information

AA320-001	VD10 - Automated Video Distillation Delivered ready for operation
Technical specifications	Description
Methods	ASTM D86, D1078, D850, IP123, ISO 3405, GOST 2177, JIS K2254, GB/T 6536 and others
Vapor temperature	Pt100 class A Automatic probe ID detection 10 pts embedded calibration (user & factory) Range: 0 – 450°C, accuracy 0.1°C.
Heating system	Low mass/low voltage heater, automatic lift Automatic detection of heating plate Video camera assisted algorithm calculates optimum heating in real-time. Distillation rate range: 2-10 ml/min Special chimney design for fast fan cooling.
Condenser	Hybrid: Solid state/liquid cooled condenser. Sealed system for long life operation. Very fast temperature stabilization at a setpoint in the range of 0 – 65°C.
Receiver	Homogeneous tempering of receiver chamber in the range 10 to 45°C. Accurate optical volume measurement not affected by “smoky” product, accuracy 0.1 ml Normalized to 100% charge volume.
Ambient sensors	Barometric pressure sensor 50 to 110 kPa, accuracy 0.1 kPa can be located remotely Ambient temperature and humidity sensors supplied in standard.
User interface	Full-color touch screen; Multi-language; Smart operator assistance features
Communication	USB, RS232, Ethernet
Fire safety	UV sensor for fire detection. Built-in fire extinguisher manifold. External alarm connection.
Emission reduction	VOC extraction included in standard
Electrical	100-240 VAC 50/60 Hz
Physical	(WxDxH) 42cm x 48cm x 63cm; weight: 50 kg
Accessories	Dry point kits; printer
Operating conditions	Temperature 10°C – 35°C Humidity up to 90 %, non-condensing

We reserve the right to alter specifications without notification

Your local distributor:

For additional information:

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