



## UNIVERSE PRECISION AUTOMATED DISTILLATION ANALYZER AZA1281

The AZA1281 Precision Automated Distillation Analyzer is a fully automated, high-accuracy system designed for determining the distillation characteristics of petroleum products in strict compliance with international standards.

Engineered for modern laboratories, refineries, and regulatory environments, the AZA1281 automates the complete distillation process—from controlled heating and vapor temperature measurement to volume recovery tracking and endpoint detection—ensuring maximum accuracy, repeatability, and operator safety.

### **Standards Compliance**

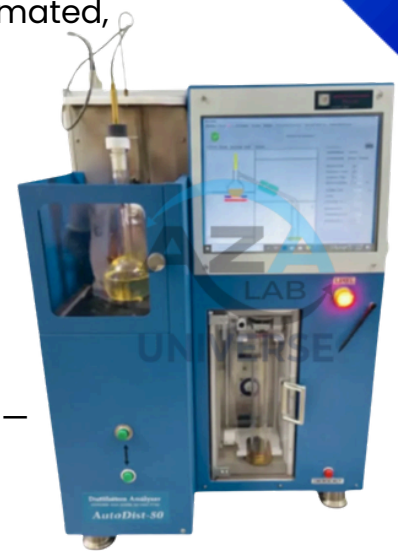
- ASTM D86
- ISO 3405
- IP 123

### **Measurement Capability**

- Heating Range: Ambient to 400°C
- Temperature Accuracy:  $\pm 0.1^\circ\text{C}$
- Volume Measurement Accuracy:  $\pm 0.1\text{ mL}$
- Distillation Rate: 2 to 15 mL/min (automatic control)
- Sample Volume: 100 mL (standard)

### **Applications**

- Petroleum refineries (fuel volatility analysis)
- Fuel blending and petrochemical industries
- Quality control laboratories
- Government and regulatory testing bodies
- Research & academic institutions





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### System Features

#### Automation & Control

- Fully automated distillation sequence
- Real-time monitoring of vapor temperature and recovery volume
- Automatic distillation rate adjustment
- Touchscreen or external PC operation (Windows-based software)
- Multi-user access with permission control

#### Heating & Cooling System

Function	Specification
Heating System	Low-voltage spiral heater with CERAN plate
Heating Control	Precision-controlled ramp with motorized lift
Cooling System	Peltier-based condenser (0–80°C)
Receiver Cooling	0–60°C
Cooling Type	CFC-free, forced-air assisted

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## UNIVERSE Safety & Protection System

Condition	System Response
Over-temperature	Alarm + automatic shutdown
Cooling system failure	Alert + test abort
Fire detection (IR sensor)	Auto extinguisher + power shutdown
Sensor/flask misplacement	System lock with error indication
Abnormal operation	Fail-safe shutdown

### Measurement & Sensor Specifications

Parameter	Specification
Vapor Temperature Sensor	PT100 Class A (accuracy 0.1°C)
Volume Detection	Optical sensor ( $\pm 0.1$ mL)
Distillation Rate	2–15 mL/min (automatic)
Pressure Compensation	Automatic (500–900 mmHg)
Calibration	Automatic before each run

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### What's Included

- 1 × AZA1281 Distillation Analyzer
- 1 × Distillation Flask Assembly
- 1 × Condenser System (Integrated)
- 1 × Receiver Chamber
- 1 × Calibration Certificate
- 1 × User Manual

### Optional Accessories:

- External PC software package
- LIMS integration module
- Spare sensors and glassware



## UNIVERSE Technical Specifications

Parameter	Specification
Model	AZA1281
Method Compliance	ASTM D86, ISO 3405, IP 123
Operation	Fully automated
Heating Range	Ambient to 400°C
Temperature Accuracy	±0.1°C
Volume Accuracy	±0.1 mL
Display	7-inch touchscreen
Data Output	USB / PC connectivity
Power Supply	230 V AC, 50 Hz
Power Consumption	~1.4 kW
Dimensions	480 × 590 × 690 mm
Weight	~80 kg