AZA LAB / MATERIAL TESTING EQUIPMENT

BITUMEN PRESSURE AGING VESSEL (PAV) SYSTEM

AZA1182 | TECHNICAL DATASHEET



AASHTO R28 • ASTM D6521 • EN 14769

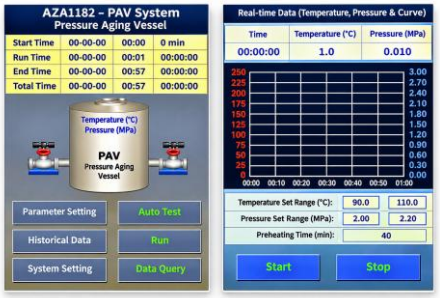
PRODUCT OVERVIEW

The AZA1182 Bitumen Pressure Aging Vessel (PAV) System is designed for laboratory conditioning of asphalt binders under controlled elevated temperature and air pressure to simulate long-term oxidative aging.

The system provides real-time temperature and pressure readings with graphical monitoring of their relationship during the aging process. The specified operating temperature range is 90–110 °C, with a nominal working pressure of 2.1 MPa ±0.1 MPa.

KEY CAPABILITIES

- Working temperature range of 90–110 °C with ±0.5 °C control accuracy
- Real-time temperature and pressure values with trend curves
- Working pressure 2.1 MPa ±0.1 MPa
- Actual pressure control accuracy ±0.02 MPa
- Pressure sensor range 0–3 MPa; stated accuracy 0.5% (±0.015 MPa)
- Automatic safety pressure relief above 2.5 MPa
- Compressed-air cylinder connection with pressure-reducing valve and hose



APPLICATIONS

Used for pressure-aging conditioning of bituminous binders before subsequent laboratory characterization, following applicable test methods and conditioning procedures.

TECHNICAL SPECIFICATIONS

01 / OPERATING SPECIFICATIONS

PARAMETER	SPECIFICATION
Model	AZA1182 — Pressure Aging Vessel (PAV)
Test standards	AASHTO R28 / ASTM D6521 / EN 14769
Working temperature range	90–110 °C
Temperature resolution	0.1 °C
Temperature control accuracy	±0.5 °C
Preheating time	40–60 min
Working pressure	2.1 MPa ±0.1 MPa
Actual pressure control accuracy	±0.02 MPa
Pressure sensor range	0–3 MPa
Pressure sensor accuracy	0.5% (±0.015 MPa)
Compressed-air supply	Cylinder air pressure >3 MPa
Safety pressure relief	Automatic above 2.5 MPa
Air connection	Reducing valve and high-pressure conversion hose
Power supply	220 V, 50 Hz
Overall dimensions	550 × 350 × 450 mm
Monitoring	Real-time temperature / pressure values and curves

02 / AIR SUPPLY & SAFETY

Requires compressed air from a cylinder at pressure greater than 3 MPa. Supplied with a high-pressure reducing valve and conversion hose for compatible industrial compressed-air cylinders. The safety valve automatically relieves vessel pressure when it exceeds 2.5 MPa.

03 / MONITORING & APPLICATION

Real-time display of temperature and pressure readings and their curve relationship • PAV conditioning of asphalt binders • Laboratory asphalt materials testing

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