

Pressure Aging Vessel PAV3



**The Next Generation of an Innovative System for
Simulated Aging of Asphalt Binder**

Features

The new **PAV3** from ATS has been designed to simulate in-service oxidative aging of asphalt binder according to ASTM D5621, AASHTO R-28, and EN 14769 standards and now offers customizable options to accommodate a broad spectrum of users.

The PAV3 consists of a vertical stainless steel pressure vessel in a stainless steel cabinet with encased band heaters, a precision sample holder for simultaneous testing of ten specimens, a set of ten TFOT specimen trays, a pressure controller, temperature controller, pressure and temperature measurement devices, temperature and pressure recorder, and a specimen loading and unloading tool.

System Features Include:

- Benchtop design with integral pressure vessel
- Seven inch full-color touch-screen display
- Tilted screen design for greater visibility
- Network-ready modem enables the PAV to be controlled with mobile devices and PCs when connected to a network
- Programmable temperatures from 50°C - 150°C
- Programmable pressure duration from 1 hour – 99 hours
- Built-in timer to accumulate out-of-range time (out-of-range time for the ATS PAV is typically less than 10 minutes during a 20-hour test)
- Data acquisition: time, temperature, and pressure
- Data downloadable in .csv file via USB port on the front of the PAV3
- View real-time graphs from touch-screen controller
- Languages included: English, German, Spanish, French, Italian, Russian, Chinese, and Arabic
- Optional battery backup system prevents test interruption or data loss due to power failure or line voltage fluctuations



Remote Capabilities

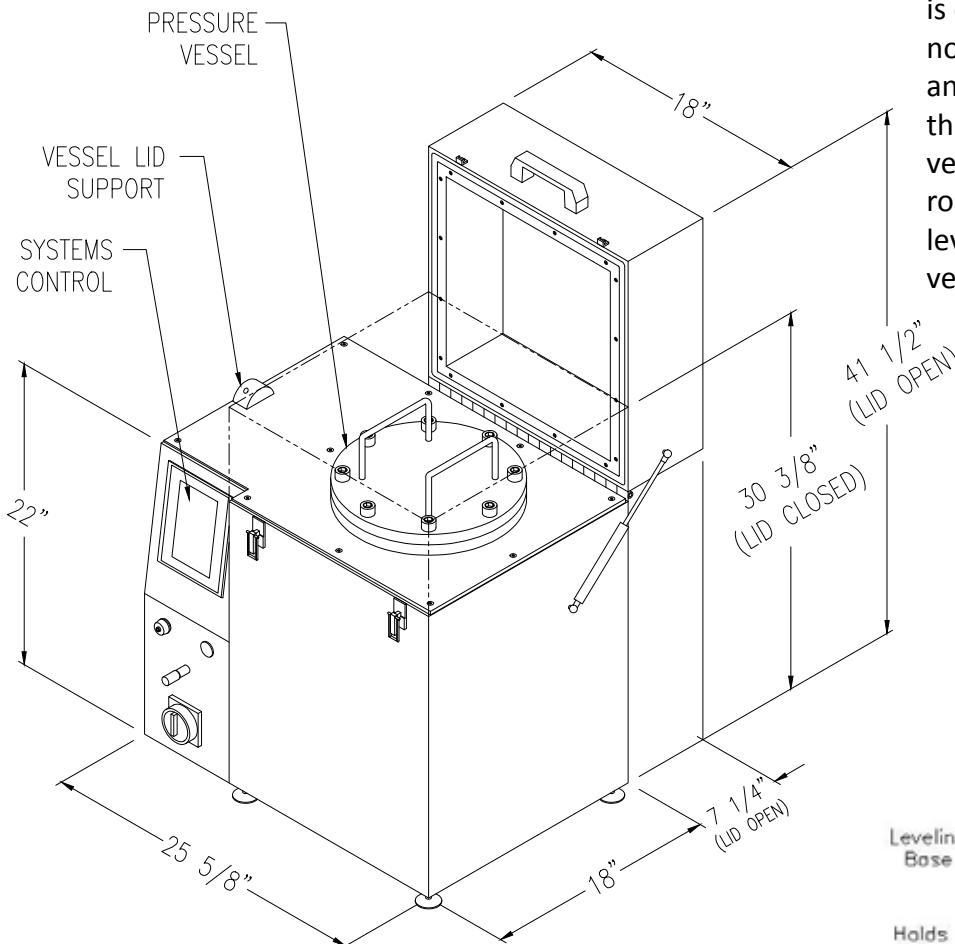
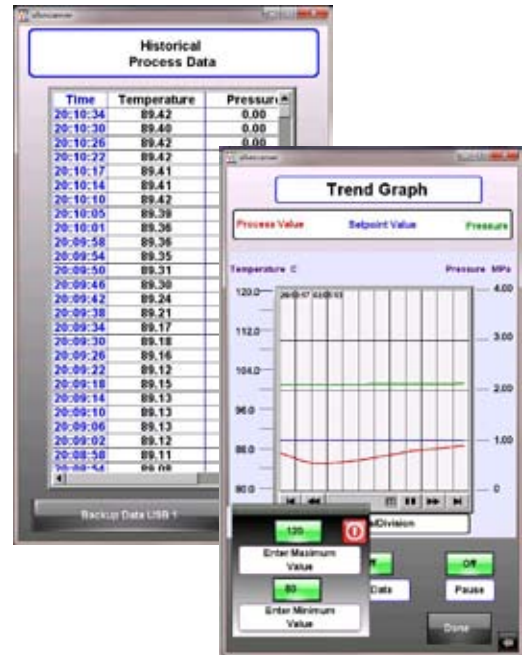
- Every PAV3 includes a network-ready modem. Connection to the internet will permit the user to access the PAV3 with a mobile device or PC using a VNC viewer app program. VNC connection will enable the user to connect, monitor, and control the PAV3 from a remote location. The PAV3 can be programmed with a custom IP address, so the number of PAV3s on a single network is essentially endless.



Features

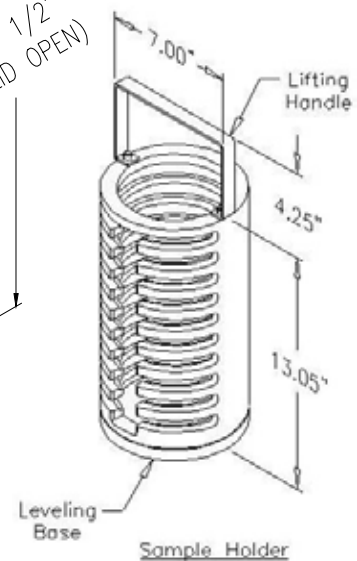
Data Acquisition - Temperature, pressure, and time data are collected throughout the aging process. The PAV3 enables the user to view the data from the touch-screen display in the form of raw data or graphs. Once the aging process is complete, a .csv file can be created and saved via the USB port on the front of the PAV3. Once the .csv file has been created, it can easily be manipulated in Microsoft Excel® or other spreadsheet programs.

More Control Options - Temperature is programmable from 50°C - 150°C, and between 80°C to 115°C the tolerance is well within $\pm 0.1^\circ\text{C}$. Pressurization is programmable from 1 hour to 99 hours. This enables AASHTO R28, ASTM D5621, and EN 14769 specifications to be met without any special programming and also enables greater freedom for research and development projects.



PAV Sample Holder

is one solid piece with no assembly required and is easy to level with the leveling ring in the vessel. There is also room for a small bubble level between slots for verification purposes.



Holds (10) TFOT sample trays (included with system) parallel to within 0.002 in. (0.05mm)

Features

Language Options



Each PAV3 comes standard with eight different language options. At any time a language can be selected from English, German, Spanish, French, Italian, Russian, Chinese, or Arabic from the controller itself or a connected remote device.

Retrofits Available

ATS can retrofit any previous version of our ATS PAV and upgrade it to a PAV3!
Contact Sales for more information and a quotation.

Specifications

GENERAL

Construction	Benchtop unit with integral vessel/oven design
Specimen Capacity	10 (TFOT sample trays included)
Vertical Loading w/ Fixture	Parallel within 0.002 in. (0.05mm)
Front Panel Display	7-inch full-color touch-screen display
Battery Backup System (Optional)	4 hours minimum backup at full load 60-day advance notification of end of useful battery

TEST PARAMETERS

Operating Pressure	2.10 ±0.05 MPa (304 psi)
Temperature Range	80°C to 115°C ±0.1°C Programmable from 50°C to 150°C
Temperature Control	Microprocessor-based with Platinum RTD
Temperature Control Resolution	±0.1°C from 80°C - 115°C
Test Temperature Uniformity	±0.5°C
Time to Setpoint	3 hours from ambient
Return to Setpoint	120 min. after preheating and loading of specimens
Over-Temperature Protection	Thermal shut-down switch (170°C/338°F)

PRESSURE VESSEL

Specifications	Per ASME code section VIII, division 1; 1992 A 93
Maximum Pressure	325 psi (2.24 MPa) at 120°C (250°F)
Pressure Safety Release	325 psi (2.24 MPa)
Air Inlet	1/4 in. male NPT

REQUIREMENTS

Power Requirements	230VAC 50/60Hz
Compressed Air Requirements	A source of compressed air with a pressure of at least 325 psi (2.24 MPa) is required
Approximate Shipping Weight	425 lbs. (195kg)

Specifications subject to change without notice

How to Contact ATS



154 East Brook Lane
Butler, PA 16002 USA

Phone: +1 (724) 283-1212
Toll-Free: +1(800) 441-0215

Fax: +1 (724) 283-6570
sales@atspa.com
<http://www.atspa.com>



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