Uson by PAC

ASTRA DASH

Enhancing Scalability and Demystifying Leak Testing

The Astra Dash is the world's first modular, multichannel leak tester with pneumatically isolated, asynchronous channels. It represents a dramatic leap forward for instrument uptime, technical accessibility, and flexible, scalable manufacturing.

With the Astra Dash, manufacturers gain a powerful tool to improve operational efficiency, enhance product quality, and reduce costly, unplanned downtime. Leak testing is a critical step in ensuring the performance, safety, and long-term reliability of finished products. Whether verifying the efficacy of medical devices, the integrity of automotive fluid circuits, the strength of electric vehicle battery seals, or the freshness of consumer goods packaging, the Astra Dash delivers the precision and consistency essential to your quality assurance program.

Key Features

Modular Channel Boxes

- Any channel box can be run at any time with a different model type in each slot.
- Single-Minute Exchange of Die (SMED) methodology.
- Easy to duplicate or swap between systems and production sites.

Independent Channels

- Enables *any product, any time* manufacturing.
- Operate synchronously or asynchronously.
- Flexible configuration for diverse applications.
- Each channel box functions as an independent leak tester.

Widgets and Wizards

- Test method wizards take the guesswork out of new applications.
- Production screen 'widgets' customize the data shown for each channel.
- Accelerate implementation of systems and programs for new users.

Designed for Uptime

- Failure of any one channel does not impact the others.
- Modularity and independence facilitate hot-swap servicing.
- Widgets for diagnostics and data visualization aid decision making.

Supported Test Methods

- Pressure Decay
- Vacuum Decay
- Pressure Burst
- Vacuum Burst
- Crack (Pressure)
- Crack (Flow)
- Sealed Component
- Differential Pressure Decay
- Differential Vacuum Decay
- Occlusion
- Creep
- Mass Flow
- Back Pressure Flow

Demystifying Leak Testing

Channel Boxes

The heart of the Astra Dash is the channel box. Designed for easy and safe mounting, dismounting, and transport, each channel box is an independent leak tester in its own right. Docking and undocking can be performed in 3 simple steps with safety interlocks to control the order of operations. Each channel box is factory configured to the application independent of the configuration of the other installed channel boxes. Configuration options include a variety of needs such as an electronic regulator for ramping pressure, coupling actuation ports, high-flow valves, and pressures from vacuum all the way to 750 psi.

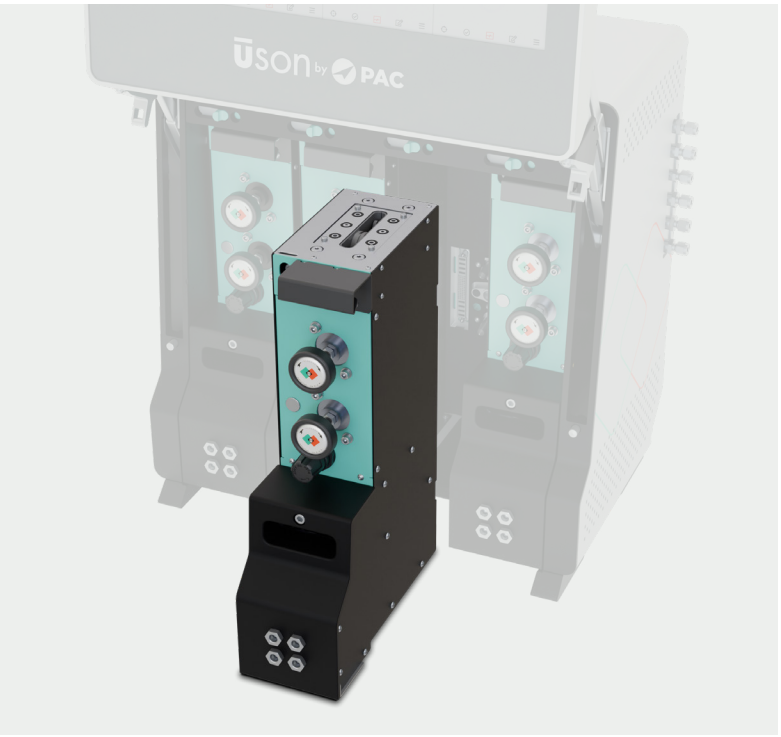
Channels can be run independently in channel mode or made to run in a sequence to enable result dependent linking of programs within one or across multiple channels. Or channels could be configured to test multiple aspects of a part in series using individual step results across channels. Of course, they can also run concurrently on the same part or multiple without impact from other channels or tests.

01
Safety interlocked manifold attachment & energizing

02
Rugged grips for safe extraction & transport

03
Optional electronic regulator for pressure ramping methods

04
Affirmative data & power connection maintained by captive drawbar

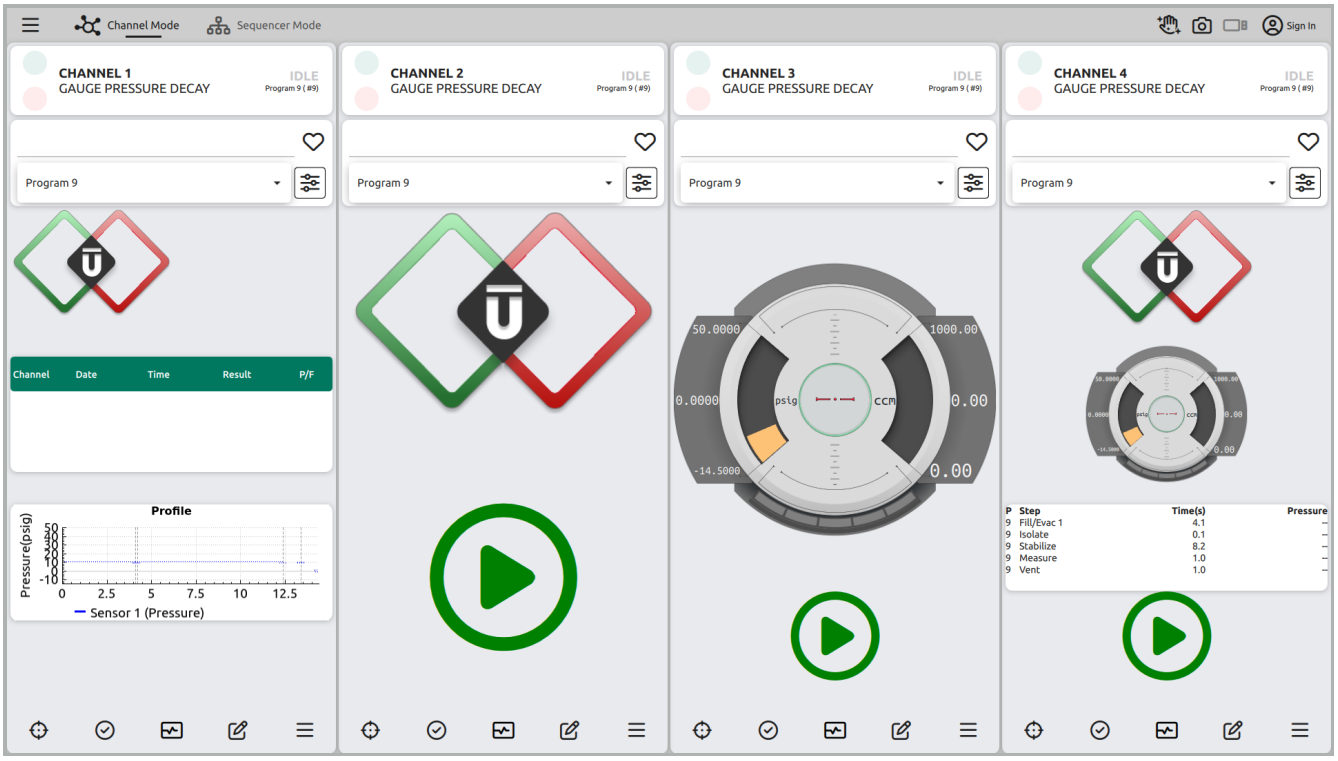


Modularity

Each instrument can be configured with up to 4 channel boxes, each with 1 test port and up to 3 auxiliary ports configured according to the test method. An Astra Dash channel box can be thought of as a single leak instrument unto itself. With this modular design, a user can essentially have up to 4 leak or flow instruments running simultaneously. The channel box can be swapped in just one minute to accommodate a different test type or pressure range. Alternatively, a spare channel box can be quickly substituted during calibration or service, ensuring flexible operations and unbeatable uptime. This feature is a game changer for anyone who needs to test different products at various times using the same instrument.

User Interface

The simplicity and widget functionality of the software will allow for customers to modify the home screen to only display information they find important before, during, or after a test. Test method wizards step the user through the critical parameters of setting up a new program, increasing the accessibility and streamlining the process for new or inexperienced users. Throughout the user interface, tool tips are available to guide users and explain features and concepts, putting the knowledge right at the point of use.



Services, Support, and Training

Our individualized instrument service programs help our customers ensure maximum quality and repeatability while complying with standards and regulatory requirements.

In addition to service programs, we also offer individual services for preventative maintenance, calibration, and relocation services. Our service repair centers, located around the world, are ISO-9001 accredited. All work is performed by skilled certified service technicians. PAC offers a wide selection of training and educational programs to support our customers throughout the range of industries that our instruments serve. Our training programs may occur in one of our PAC facilities worldwide or at the customer's facility. We also offer webinars of some of our key technologies online.

Technical Information

Equipment Specifications

Dimensions	Control Core: 22” (55.9cm) W x 23” (58.5cm) H x 13.25” (33.7cm) D
	Channel Box: 4.7” (11.9cm)W x 18” (45.7cm)H x 12” (30.5cm) D
Weight	Control Core: 100 lbs (46 kg)
	Channel Box: 20-50 lbs (11-23 kg) depending on configuration
Pneumatics	Up to 4x isolated and configurable test channels
Test Ports	1 test port per channel, 3 aux. ports configured by test method, 1/8” NPT*
Couple Ports	3 and 4-way coupling ports available
Input Pressure Range	Standard: Vacuum to 150 psi (1,035 kPa)
	High Pressure: 150 to 750 psi (5,170 kPa)
Regulator Type	Manual or Electronic
Flow	Up to 20 L/min @ +/- 1% of full scale per channel
Pressure	Vacuum to 750 psig @ 0.255% of full scale
Display	22” full HD PCAP multi-touch touchscreen (glove compatible)
Program Storage	2000+
Languages	English, Spanish, Czech, French, German, Hungarian, Chinese, Japanese, Korean
Data Outputs	USB, Native Ethernet IP, Ethernet TCP/IP, RS-232 Serial (with converter), printer or Windows share, Rest API
Digital I/O	16 In/16 Out discrete digital I/O per channel and 16 In/16 Out Global, All configurable
Communication	USB, Ethernet, Serial RS 232, Digital I/O, Fieldbus, and Barcode. Support for other peripherals
Power Supply	Input: 100-240VAC 47-63Hz
	Operating Voltage: 24VDC
Certifications	CE, RoHS II Compliant
Calibration	NIST Traceable, ISO 17025 available
Options	Remote Start/Stop Button, Leak Master, Barcode, Footswitch, IQ/OQ Templates, Wall-Mount Kit, Barcode Scanners, Fieldbus Translators

About Uson

Uson is the premiere global provider of leak testing solutions for industries including medical devices, automotive, electric vehicles, and packaging. Since 1963, Uson has adapted NASA-developed technology for a wide range of automated assembly applications. Our premium leak testers are designed to serve customers' specific applications from day one, ensuring precision and reliability.

Uson is a part of PAC. PAC empowers global customers across various industry sectors, enhancing their efficiency through innovative solutions by designing, manufacturing, and marketing advanced lab and online analytical instruments, along with a digital platform for real-time analytics.

Contact us today to learn more about Astra Dash

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