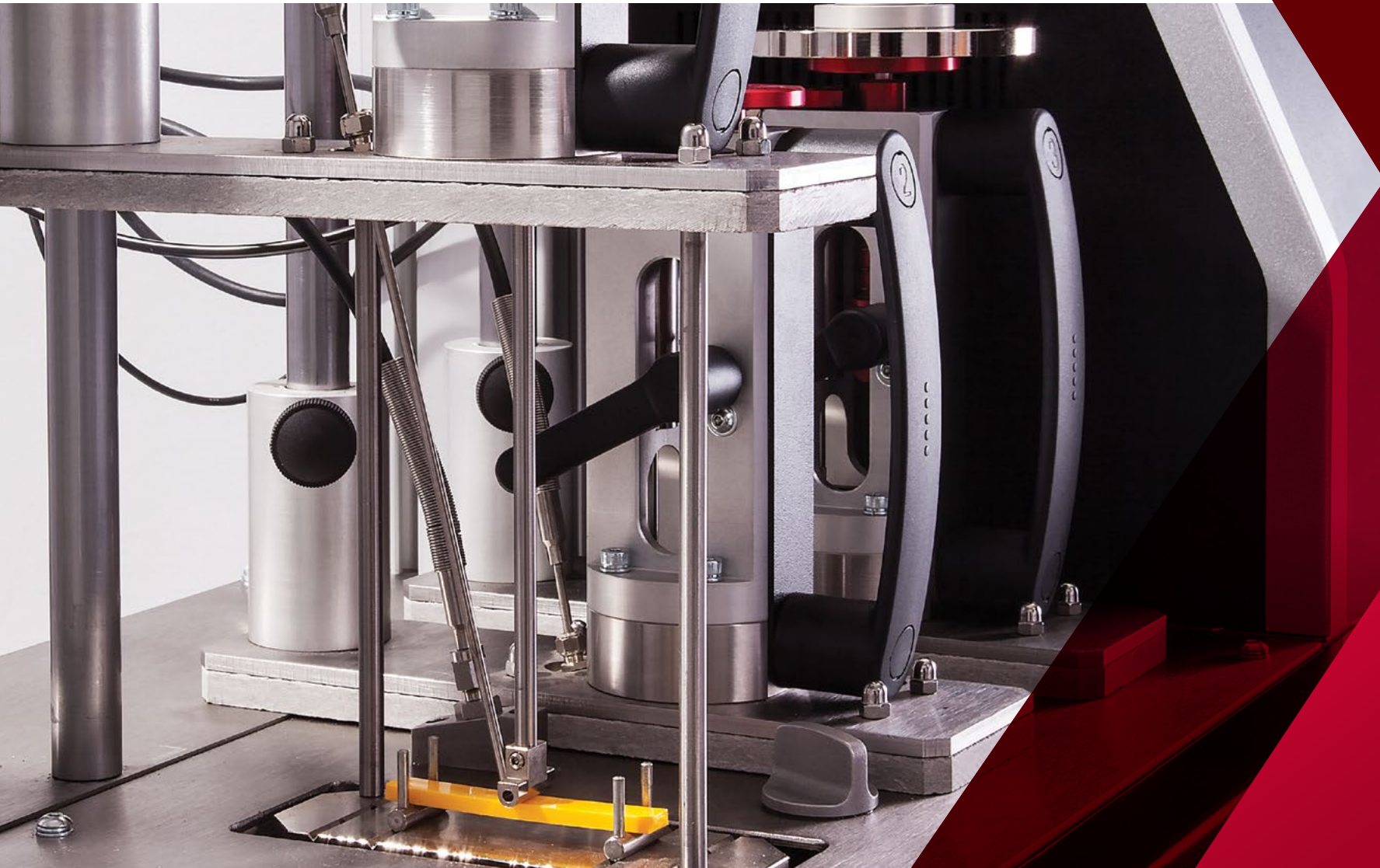


HDT AND VICAT TESTING SYSTEMS

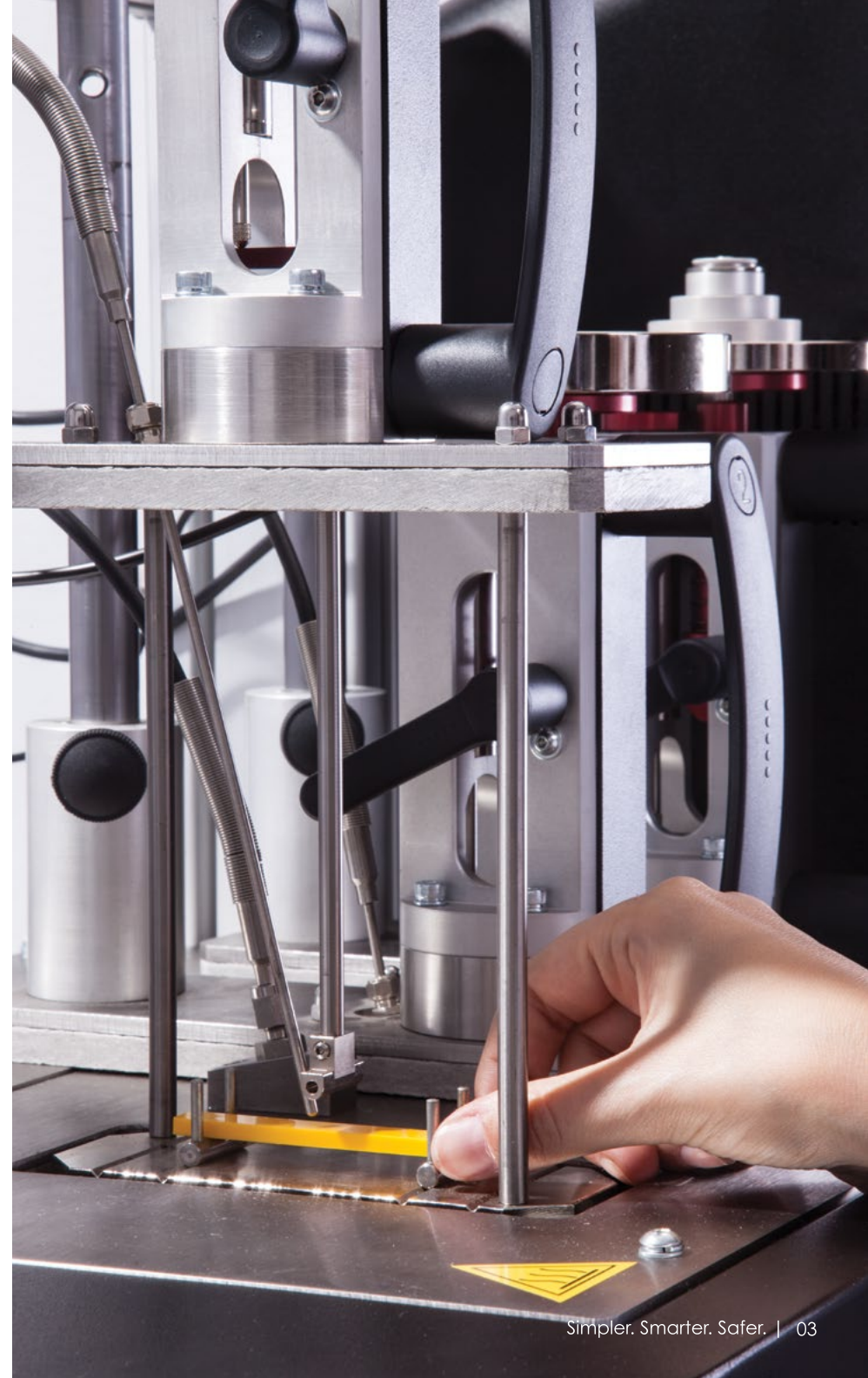
Introducing the HV Series Testing Systems



Instron brings over 50 years of experience in plastics and composites testing solutions to thousands of customers globally. Supported by a world class service team, we deliver the best solutions to laboratories that are looking to grow their business and efficiently verify the quality of their products.

| INTRODUCING
| THE HV SERIES

The design of the HV Systems and BLUEHILL® HV Software is based on the full understanding of customers needs for both an enhanced user-experience and outstanding productivity, making materials testing **SIMPLER, SMARTER, SAFER.**



SIMPLER

Fast and Effortless Workflow



Intuitive Weight Application

The intuitive design of weights eliminates the risk of selection mistakes. The weights are stackable and enable the user to handle them with confidence. A wide range of stress values can be achieved without the need for any additional tools.



Comfortable Handling of the Testing Stations

The smooth lifting mechanism of the stations, combined with the ergonomic position of the handle, allows the user of the HV3S to raise and lower the stations safely and easily.



Touch Screen Interface

The user-friendly touch screen has a simple and clean look and allows for operation without a computer. The workflow is intuitive and offers a seamless interaction with the system for a quick test setup and data export. The pre-formatted templates enable test run in a few simple touches.



Effortless Workflow

The optional Bluehill HV Software enhances the ease of use. The user can run tests, edit methods, analyze results or configure the system with a few clicks. The simplicity of the software allows the user to run tests with minimal effort increasing the laboratory efficiency and throughput.

SMARTER

Integrated Innovations for Efficient Tests



Compact design saves valuable laboratory space

Oil degradation control



The system constantly monitors the oil, alerts when the bath level is out of range and reports when oil degradation that could adversely affect test results has occurred. This feature helps reduce the risk of running invalid tests and increases productivity. It's a perfect solution to maintain recommended oil bath conditions and extend the life of the machine.

Advanced Electronic Technology



The advanced electronics on the HV Series automatically zero the position of the LVDT measuring sensors before starting a test, reducing test time and human errors. Correction factors are calculated and applied to compensate for the thermal expansion at each station ensuring accurate results.



Efficient Cooling

The HV Series is designed for superior cooling efficiency, rapidly returning the oil to the starting temperature after a test run. This allows the user to begin the next test with minimal wait time and reduces water consumption costs.



Small Footprint

As a result of increasingly limited space in laboratories, equipment is often squeezed into tight spaces, creating crowded and less functional laboratories. The HV Series compact design helps maximize valuable laboratory space resulting in enhanced testing efficiency.



Superior Results and Repeatability

Factory trained engineers provide comprehensive verifications, checking the dimensions of critical components and temperature behavior, to assure results are accurate and repeatable. The verification certificates provide full traceability, providing confidence in the laboratory's results.



Annual verification ensures accurate and repeatable results

SAFER

Safety without Sacrificing Throughput



Protection of the Test Area



The full shield on the HV6X model restricts access during test execution, protecting the user from moving parts. It is the ideal solution for open access workplaces, where many testing instruments are simultaneously in use and a risk of test interruption exists.

Maximum Temperature Control



The HV Series has a built-in temperature control system which limits the maximum temperature allowed for the oil bath. This helps conform to the specifications of each oil type, and prevents improper temperature settings that can generate dangerous fumes and inaccurate test results.

Secured Test Access



Bluehill HV Software secures the test methods, preventing inadvertent changes, to ensure repeatability and standards compliance, over multiple shifts and numerous operators. The software suite allows for creation of specific user profiles based on the operator's level of expertise. Bluehill HV is tailored to simplify the testing process and ensure data integrity.

Integrated Fumes Removal



The HV6X model has an optional integrated fume filtering and extracting system, which eliminates the need for expensive external hoods and provides flexibility for machine location. The system also alerts the user to change the filters when needed, helping to prevent hazardous conditions and plan maintenance.

Effective Training Program



Instron engineers offer comprehensive on-site training courses to minimize operators' exposure to risk, improve efficiency, optimize the system's capabilities and to support the laboratory's health and safety policies to enhance the ownership experience.



The filter ensures that oil fumes are safely vented to atmosphere

SIMPLER. SMARTER. SAFER.

The HV Series Testing Systems

The **HV SERIES**, designed to meet the most common standards (HDT: ISO 75, ASTM D648 and Vicat: ISO 306, ASTM D1525), offers two different bath dimensions: small to host up to 3 testing stations and large for up to 6 stations.

HV3S

Manual lifting station and weights application | up to 3 stations

The HV3S is a great choice for laboratories that perform HDT or Vicat tests at a low volume. The compact size and footprint make it an ideal system for busy laboratories with a lot of test equipment.



HV6M

Motorized lifting station and manual weights application | up to 6 stations

The HV6M is suitable for laboratories where the need for HDT or Vicat testing is part of the daily activity. The motorized lifting mechanism guarantees less operator effort.



HV6X

Motorized lifting station and weights application | up to 6 stations | Interlocked cover shield

The HV6X is suitable for laboratories where there is a continuous backlog of specimens to be tested and reduced time to test is essential. In addition, it fits perfectly in those work environments where safety procedures are extremely strict and system automation is necessary.



RUN A TEST IN A FEW STEPS

Laboratories receive various materials that need to be tested on a daily basis. Bluehill HV has touch tiles with easy access to test run, method or analysis. The Software is developed around a simple and customizable workflow that systematically guides the user through a test, minimizing set up time. Bluehill HV improves productivity with its analysis module and helps perform testing in an intuitive touch-friendly way.





Test Method Compliance

Create ISO and ASTM test templates with smart default values so the user is ready to test with minimal setup time, increasing laboratory efficiency. Bluehill HV Software provides the ability to test samples to different methods simultaneously, helping to optimize throughput.



Analysis of Test Results

Test data, graphs and inputs are shown in a single screen allowing the user to analyze results at a glance. Set acceptance criteria to automatically reject out of tolerance samples. Create report templates with minimal effort. Export and print test reports or send test data to LIMS or TrendTracker .

SPECIFICATION TABLE

Simpler. Smarter. Safer



HV3S

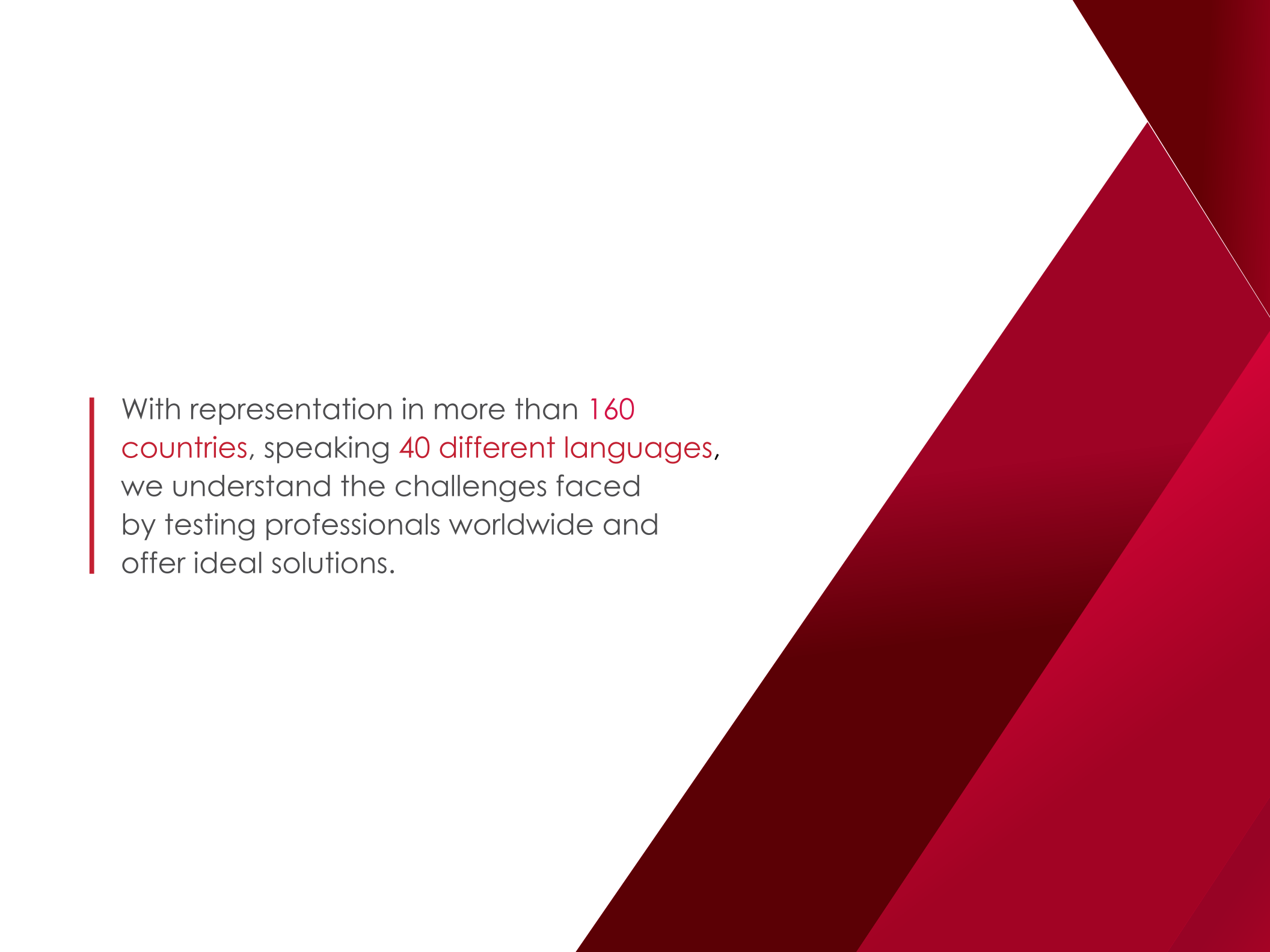


HV6M



HV6X

Number of testing stations	-	Up to 3 (includes 2)	Up to 6 (includes 2)	Up to 6 (includes 2)
Movement of the stations	-	Manual	Machine controlled	Machine controlled
Application of test weights	-	Manual	Manual	Machine controlled
Heat transfer medium	-	Silicone oil	Silicone oil	Silicone oil
Oil bath capacity	litres USA gal	9 2.4	16 4.2	16 4.2
Temperature range	°C °F	20 – 300 68 – 572	20 – 300 68 – 572	20 – 300 68 – 572
Temperature resolution	°C °F	0.1 0.18	0.1 0.18	0.1 0.18
LVDT resolution	mm in	0.001 0.00004	0.001 0.00004	0.001 0.00004
Dimensions (W × D × H)	mm in	938 x 480 x 713 36.9 x 18.9 x 28.1	1291 x 480 x 780 50.8 x 18.9 x 30.7	1291 x 550 x 900 50.8 x 21.6 x 35.4
Mass (without oil)	kg lb	80 176	140 309	160 353
Power supply	-	230 ±5%, 50/60 Hz 120 ±5%, 30A, 50/60 Hz Max 2800 W	230 ±5%, 50/60 Hz 120 V ±5%, 30A, 50/60 Hz Max 3200 W	230 ±5%, 50/60 Hz 120 V ±5%, 30A, 50/60 Hz Max 3200 W
Data connections	-	Ethernet (for PC) USB (for printer)	Ethernet (for PC) USB (for printer)	Ethernet (for PC) USB (for printer)



With representation in more than 160 countries, speaking 40 different languages, we understand the challenges faced by testing professionals worldwide and offer ideal solutions.



“True innovation occurs when our product designers and developers show relentless curiosity towards the needs of our customers. This builds an understanding that allows us to anticipate and create a new suite of solutions that are Simpler, Smarter, and Safer.”

Yahya Gharagozlou

Group President
ITW Test & Measurement