

PDC TEST SYSTEM

PENDULUM, DROP, AND COMPRESSION

Humanetics' advanced test systems redefine ATD certification with cutting-edge automation, compact design, and integrated safety features. By combining multiple test benches into a single system, these solutions streamline workflows, reduce operational complexity, and enhance precision.

The Next Gen PDC Test System accelerates ATD certification by combining five essential tests in a single, compact system, enhancing efficiency through automated workflows, improved accuracy, and advanced Pendulum Deceleration technology for superior repeatability. The PDC Test System (Pendulum, Drop, and Compression) unites multiple test benches into a single, space-efficient system, enabling efficient and precise execution of neck pendulum tests, foot impact tests, head drop tests, rib drop tests, and various compression tests as well as aPLI bending and FlexPLI bending and pendulum tests. Designed for ergonomic operation, it optimizes working heights, provides intelligent storage solutions, and enhances overall efficiency with a user-friendly control system.

The touch panel interface serves as the user-friendly gateway to ATD-BaseWare™, which controls the machine, executes tests, and guides users step by step through the certification process. By ensuring alignment with the latest manuals and standards, ATD-BaseWare™ enhances repeatability, reduces human error, and streamlines certification workflows. The PDC system is modular and future-proof, allowing seamless adaptations for evolving certification requirements and new dummy types.

KEY FEATURES



Multi-Test Capability – Supports Neck, Foot, Head, and Rib-Drop tests in a single compact system



Pendulum Deceleration Control allows for 13x higher repeatability than conventional honeycomb methods



Ergonomic Design with optimized working heights and safety features



Modular & Future-Proof – Easily adaptable for upcoming certification requirements



ATD-BaseWare™ – Controls Test Systems, automates test execution and report generation

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Additionally, the system ensures enhanced data integrity and ISO compliance, guaranteeing tamper-free workflows with complete traceability. It meets IATF 16949 and ISO 17025 standards, providing reliable, auditable certification processes.

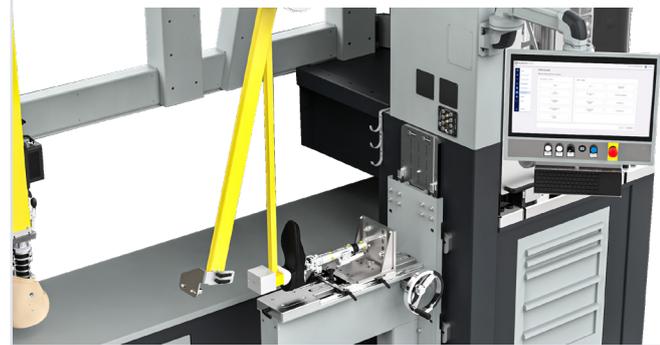
Traditional honeycomb-based pendulum deceleration methods suffer from variability due to inconsistencies in material hardness across different brands and batches. Humanetics introduces Pendulum Deceleration Control (PDC) as a superior alternative, replacing honeycomb deceleration with a high-precision linear motor system. This innovation allows for adjustable deceleration profiles, ensuring consistent and repeatable test results.

The system achieves 13x higher repeatability compared to conventional honeycomb solutions, delivering precise control over the pendulum's deceleration curve. Operators can effortlessly set target parameters using an intuitive software slider, eliminating the manual effort of handling and replacing honeycomb materials. With an impact velocity of up to 7.2 m/s, the system ensures precise test execution across all ATD certification scenarios. Additionally, the Pendulum Deceleration Control can be retrofitted into existing test stands, offering a cost-effective upgrade for legacy systems.

EXEMPLARY PDC TEST SYSTEM



EXEMPLARY FOOT IMPACT



PENDULUM DECELERATION CONTROL

