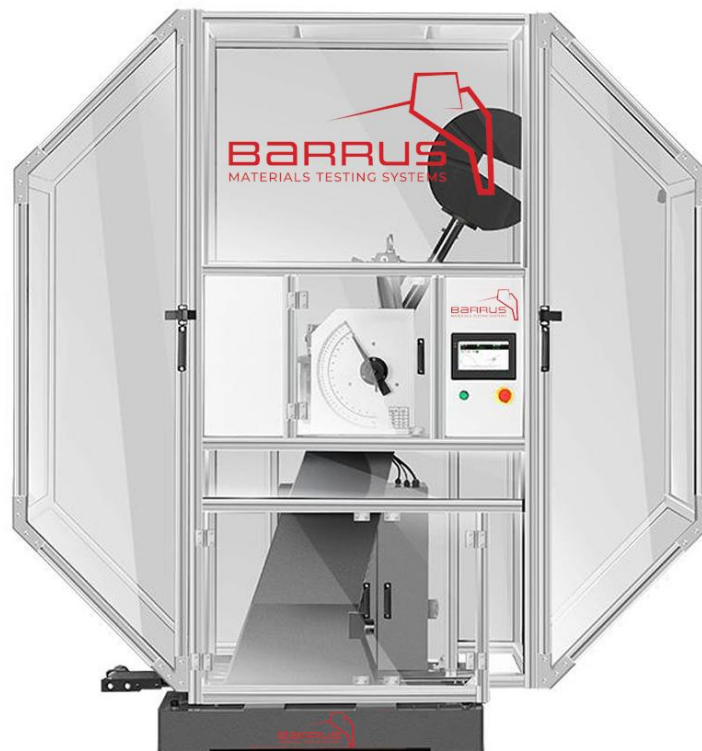


Barrus P450 Pendulum Impact Tester For Charpy and Izod Metal Testing



The **Barrus P450 Pendulum Impact Tester** is a high-precision, fully instrumented machine designed for **Charpy and Izod impact testing** of metals. Engineered for **accuracy and reliability**, it delivers consistent performance in measuring the toughness of metallic materials. From industrial QC labs to academic research centers, the Barrus P450 provides an **easy-to-use, safe, and standards-compliant** solution for critical impact testing needs.



Key Features and Benefits

- **Unmatched Precision & Reliability:** Built on a one-piece cast frame for maximum stability and rigidity, the Barrus P450 ensures extremely **accurate and repeatable results**. Its high-precision pendulum bearing system minimizes frictional losses, and a high-rigidity pendulum arm eliminates vibrations during swing. An advanced optical encoder and controller maintain a stable, reliable measurement system so every impact reading is trustworthy.
- **Compliance with International Standards:** The Barrus P450 Pendulum is fully compliant with **ISO 148-1, ASTM E23, EN 10045-1, and JIS Z 2242** impact testing standards. Whether you are performing Charpy V-notch tests or Izod impact tests, this machine meets all relevant global specifications, ensuring your results are **accepted worldwide** and **directly comparable** to international benchmarks.
- **Advanced Touch-Screen & Automated Operation:** Experience **user-friendly control** with the integrated touch-screen interface. The large, intuitive display provides real-time feedback of striker angle, impact energy, and toughness values, while allowing easy input of specimen information. The Barrus P450's **automated pendulum lock and electromagnetic release** mechanism streamlines the testing process – simply press a button to raise and release the pendulum with precision. This hands-free operation not only improves test consistency but also keeps the operator out of harm's way during the critical release moment.
- **Wide Impact Energy Range & Specimen Flexibility:** Accommodate a variety of materials and test requirements with **interchangeable pendulums** and fixtures. The Barrus P450 supports impact energies of **150 J, 300 J, and 450 J** using quick-change pendulum heads, so you can





easily test both lower-toughness and high-toughness materials on the same machine. It also accepts all standard Charpy specimen sizes (10×10 mm as well as sub-size 7.5 mm and 5 mm thickness samples) and can be configured for Izod testing, offering **full versatility** for different specimen types and geometries.

- **Comprehensive Safety Features:** Operator safety is paramount. The tester is enclosed in a **fully enclosed protective cover** that contains flying fragments and debris from broken specimens. A built-in **interlock door system** ensures the pendulum can only release when the chamber is closed – if the door is opened, the machine automatically locks out operation. These safety interlocks and the sturdy enclosure protect users and bystanders, allowing confident testing in any environment. Emergency stop functions and secure footing further reinforce a safe testing experience.
- **Versatile for Industrial & Laboratory Use:** The Barrus P450 Pendulum is engineered to excel in **industrial laboratories, research institutions, and quality control** departments alike. Its robust construction withstands heavy daily use, and its precision meets the demands of cutting-edge research. Whether you're certifying incoming materials in a factory or conducting experimental analysis at a university, the P450 delivers **reliable, professional-grade performance** every time.

Elevate Your Material Testing: The Barrus P450 Pendulum Impact Tester combines precision engineering, advanced features, and rigorous safety systems to ensure every impact test is performed **accurately and efficiently**. By investing in the Barrus P450, you equip your lab with a tool that **upholds the highest product standards**, providing absolute confidence in the toughness and quality of your materials. Experience the peace of mind that comes from knowing your impact testing results are accurate, repeatable, and compliant with the world's most demanding standards.



Technical Specifications

General technical data for Barrus P450

Parameter	Specification
Display Type:	Dial gauge and touch screen display
Maximum Impact Energy:	450J
Optional Pendulum Capacities:	150J, 300J
Pendulum Moment (150J):	80.3848 Nm
Pendulum Moment (300J):	150.7695 Nm
Pendulum Moment (450J):	241.1543 Nm
Distance Between Pendulum Shaft and Impact Point:	750 mm
Impact Speed:	5.24 m/s
Angle Resolution:	0.025°
Striking Angle:	150° ±1°
Support Span:	40 ±0.2 mm
Radius of Support Curvature:	R1 ~ 1.5 mm
Angle of Support Taper:	11° ±1°
Striking Edge Radius:	2 mm (R2) or 8 mm (R8)
Striking Thickness:	16 mm
Striking Tip Angle:	30°

Power Supply: 3-phase, AC 380V ±10%, 50Hz

Dimensions (L × W × H): 2220 × 900 × 2220 mm

Net Weight: 1000 kg

* The pictures for illustration only. Includes optional elements. The delivered outfit may differ.

