



CHARPY IMPACT TESTER TT-PIT750

Charpy Impact Tester TT-PIT750 is designed for testing the impact resistance of materials, featuring a 750J pendulum, advanced control systems, and high-precision data processing for accurate and reliable results.

APPLICATIONS

This machine is designed to test the impact resistance of metal materials under dynamic loads. It can perform numerous metal impact tests continuously with fully automated control. The system uses a programmable logic controller (PLC) and is operated via computer software to manage the pendulum and oversee the entire testing process. It displays results such as impact absorption, toughness, pendulum hammer rotation angle, and generates test reports. The machine is easy to operate, safe, reliable, and efficient. It comes with a protective net cover to ensure safe operation. This testing instrument is essential for measurement, quality inspection, and technical supervision in industries such as metallurgy, steel, machinery manufacturing, pressure vessels, automobile production, as well as in academic and research institutions. It is also crucial for scientific research units conducting studies on new materials.

Applicable standards

1. **ASTM E23-2018:** Standard Test Methods for Notched Bar Impact Testing of Metallic Materials (meets standards with the American Standard Pendulum)
2. **ISO 148.1-2016:** Metallic Materials – Charpy Pendulum Impact Test – Part 1: Test Method
3. **ISO 148-2:2016:** Metallic Materials – Charpy Pendulum Impact Test – Part 2: Verification of Test Machines
4. **ISO 148.3-2016:** Metallic Materials – Charpy Pendulum Impact Test – Part 3: Preparation and Characterization of Charpy V-Notch Test Pieces for Indirect Verification of Pendulum Impact Machines
5. **ISO R83:** Steel – Charpy Impact Test (U-Notch)
6. **GB/T 229-2007:** Metallic Materials – Charpy Pendulum Impact Test Method

- 7. **GB/T 3808-2018**: Verification of Pendulum-Type Impact Testing Machines
- 8. **JJG 145-2007**: Pendulum Impact Testing Machines

FEATURES

- The main frame and base of this machine are designed as a single integrated unit, providing high stability and excellent rigidity.
- The circular pendulum design minimizes the impact of wind resistance on test results.
- The pendulum is suspended, which reduces noise during operation and extends the equipment's service life.
- The machine uses a standard two-stage reducer transmission system, offering a simple structure, easy maintenance, and long durability.
- The design includes three different ways to display test results, preventing invalid results due to human error.
- An automatic sample recovery device is incorporated to significantly enhance work efficiency.
- The machine is fitted with a fully enclosed protective net and an advanced interlocking mechanism to ensure the utmost safety for operators.
- It is equipped with Panasonic PLC controller, a high-precision rotary encoder, and other data acquisition and processing hardware, along with self-developed control software, ensuring highly accurate test results.

TECHNICAL SPECIFICATIONS

Charpy Impact Tester TT-PIT750						
Machine model		TT-PIT750				
Impact energy		150J	300J	450J	600J	750J
Dial scale range and indexing value	Energy range	0-150J	0-300J	0-450J	0-600J	0-750J

Indexing value for each cell	1J	2J	3J	4J	5J	
Pendulum torque	M=80.3848N·m		M=160.7695N·m	M=241.1543 N·m	M=321.5390 N·m	M=401.9238 N·m
Pendulum angle	150°					
Pendulum shaft center of rotation to the impact point distance (sample center)	750mm					
Impact speed	5.24m/s					
Specimen support	40mm					
Round corner of support jaw	R (1.0~1.5)mm (1mm is special ordered.)					
Blade curvature radius	R (2.0~2.5)mm (8mm is special ordered.)					
Specimen holder support surface angle	11°±1°					
Impact blade angle	30°±1°					
Impact blade thickness	16mm					
Measuring angle range	0-360°					
Angle resolution	≤0.06°					
Specimen dimension	10×10×55 mm (Thickness 7.5mm, 5mm is special ordered.)					
Machine weight	900kg					
Voltage	Three phase four-wire, 380V 50Hz 1.5KW					

Dimensions

Charpy Impact Tester TT-PIT750

Model	Machine outline dimension: W×C×H	Base outline dimension: A×B
Charpy Impact Tester TT-PIT750	2100×835×2200mm	650×960mm

Standard Configurations

1. One set Main unit
2. One set machine equipped with a dial
3. One set control cabinet
4. One piece Charpy pendulum hammer (750J)
5. One set Charpy test fixture (including jaw and anvil)
6. One set specimen recovery device
7. One set PC
8. One set A4 color inkjet printer
9. One set of SmartTest special test software (attached CD)
10. One piece alignment device
11. One piece specimen centering device
12. One piece pliers-type centering device
13. One piece hexagon wrench (machine equipped special tool)
14. Four piece anchor bolts (for fixing machine base)



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