DWT-1800 Computer Controlled Drop Weight Impact Testing Machine

The drop weight impact testing machine is an essential tool for testing the impact resistance of both metal and non-metal materials. This machine is specifically designed for determining the non-plastic transformation temperature of ferritic steel, which includes plates, profiles, cast steel, and forged steel. With computer control, this machine has exceptional reliability, versatility, adaptability, and strong expansibility, making it an excellent investment for those who need to perform these types of tests regularly.

In addition to its robust capabilities, the NextGen DWT-1800 drop weight impact testing machine conforms to a variety of industry standards, including UL651, UL1, UL360, UL1660, UL797, UL6, UL1242, UL1569, UL2239, UL514C, and UL514D. These standards ensure that you can trust the accuracy and consistency of the test results obtained with our Drop Weight testing solution.

Overall, the drop weight impact testing machine is a reliable and easy-to-maintain tool that will provide you with accurate test results for your materials, giving you the confidence you need to make informed decisions about their impact resistance.

DWT-1800 Drop Weight Impact Testing Machine Working Principle and Machine Structure

The NextGen DWT-1800 impact testing equipment is designed with precision and safety in mind. It is made up of a sturdy guide rail, base, anvil, hammer, and lifting mechanism. The guide rail is perpendicular to the base and ensures that the hammer falls freely while staying parallel. The beam is adjusted up and down through the anchor chain, allowing the hammer body to move with ease. To ensure the safety of the operator, the hammer body is equipped with a manual iron block safety insurance mechanism and protective devices to prevent debris from flying when the specimen breaks.

The drop weight impact tester is equipped with a microcomputer-controlled impact energy pre-set system. This system allows for the pre-setting of the hammer mass and test energy. The machine then automatically raises the hammer to the required height for testing. The safety protection devices are monitored throughout the testing process, further ensuring operator safety.

This impact tester also has an electric lifting mechanism located at the bottom right of the frame. This mechanism reduces the overall height of the machine, making it more stable and easier to maintain. This equipment is a reliable and efficient solution for drop weight impact testing in a variety of industries.

DWT-1800 Technical Specifications:

Specifications	Values
Impact Hammer – Heavy Hammers	180kg, 272kg (600lb)
Impact Hammer – Light Hammers	9.1kg, 34kg, 1.36kg, 4.54kg, 22.7kg, 2.72kg
UL Standard Impact Hammers	**Right Cylindrical (Flat Face)** Diameter = 1" Diameter = 1-1/8" Diameter = 2", Diameter = 6" **Rectangular** ¾" x 6" (Width is 3/8") (Polyurethane) 2" x 6" 3" x 6"
Sample Seat	According to Customers Requirements following UL Standards
Impact Hammer Knife Radius	R25mm or R50mm (Produced according to customer's requirement)
Deviation Between Central Line of Drop Hammer and Sample Seat	≤±2.5mm
Lifting Height of Falling Weight	100mm-3350mm
Precision of Falling Weight Lifting Height	±0.5%
Rockwell Hardness of the Drop Hammer Blade, the Supporting Table	HRC≥50
Machine Size	1280×1300×4500mm (approx.)
Machine Weight	5511 lbs / 2500kg. (approx.)

(Max. impact energy: 1800J, Max. weight: 600lb, Max. hammer lifting height: 3.35m)

DWT-1800 Operation Steps

The drop weight impact test machine is equipped with a specially designed measurement and control system that accurately displays impact energy. This system is capable of controlling the lifting height of the falling hammer and displaying energy levels after the hammer has impacted, providing precise and reliable test data.

The entire test system is carefully designed and optimized for functionality. The interface features a beautiful and user-friendly touch screen, making it easy to operate. The system frame is composed of an encoder, A/D data acquisition system, data analysis system, and more. See Figure 1 below for a functional diagram.

To use the machine, simply input the necessary parameters into the computer display menu or command button. These parameters include drop weight, local gravitational acceleration, and preset energy. Once entered, the computer will automatically calculate the impact height required.

Click the raise button and the computer will signal the control switch of the hammer lift motor. As the hammer is lifted, it will automatically stop at the pre-calculated height. Once the material is in place, click the "Impact" button on the panel to drop the hammer and perform the impact test

Please note that custom solutions with varying impact energy, weight and lift heights are available and customizable based on your requirements.

*** Request a formal quotation or send an e-mail to sales@nextgentest.com for the most up-to-date pricing and applicable discounts and incentives.**