

Easy Version

Easy Version mount a touch screen digital display with following features:

- > Pendulum control release and raise
- > Test parameter settings as specimen data informations
- > Calibration
- > Auto-feeding system control
- > Display real-time, striker angle, impact energy, toughness and other parameters



Conventional Version

Conventional Version has all the features from Easy Version but also has TestPilot ITM Software that is specifically designed for testing metals in accordance to following standards:

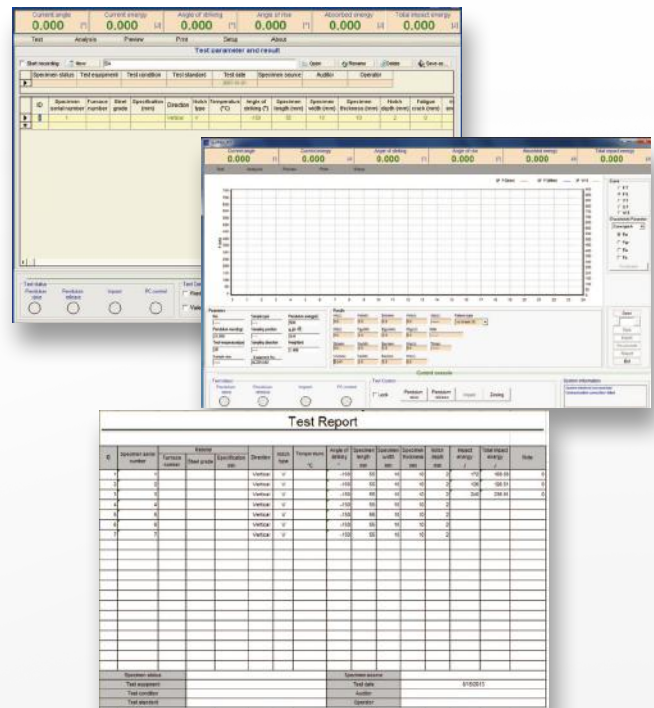
- > ASTM E23-07a Standard Test Methods for Notched Bar Impact Testing of Metallic Materials
- > ISO 148.1-2009 Metallic materials - Charpy pendulum impact test - Part 1: Test method
- > ISO 148.2-2008 Metallic materials - Charpy pendulum impact test - Part 2: Verification of testing machines
- > ISO 148.3-2008 Metallic materials - Charpy pendulum impact test - Part 3: Preparation and characterization of Charpy V-notch test pieces for indirect verification of pendulum impact machines

- > ISO14556-2000 Steel - Charpy V-notch pendulum impact test - Instrumented test method
- > ASTM E1820-2008 Standard Test Method for Measurement of Fracture Toughness
- > ASTM E2298-2009 Standard Test Method for Instrumented Impact Testing of Metallic Materials

Software provides a user-friendly method for calculations and storage of impact test results.

Channel display

- > Current angle: real-time pendulum angle value
- > Current energy: real-time pendulum initial energy
- > Striking angle: preset angle for impact test
- > Angle of rise: impact angle after impact test
- > Absorbed energy: absorbed energy after impact test
- > Total impact energy: absorbed energy for one batch of samples
- > Test results can be printed and exported to EXCEL files



Computer requirements

- > CPU: ≥1GHZ
- > Memory: ≥1GB
- > Hard disk storage: ≥10GB
- > CD-ROM drive: Only for software installation.
- > Graphic card: ≥1GB memory
- > Port: At least one COM port for communication. If some
- > Accessories requires RS232 communication with computer directly, more COM ports will be necessary.
- > Operating system: Microsoft Windows 7 or latest.

Instrumented Version

Instrumented Version has all the features from Conventional Version but also has the Instrumented Impact System composed by:

- > Striking knife with force transducer
- > Data sampling card
- > Signal conditioner
- > Advanced test software

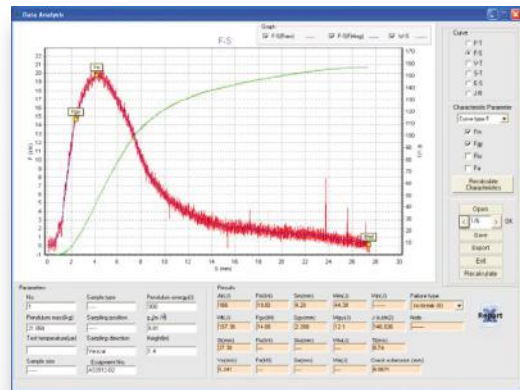


- > Force signal from striker transducer is transferred by high-speed signal conditioner.
- > Amplified signal is A/D converted by data sampling card, then transferred to the computer for storage and analysis.
- > After analysis of force and displacement curve, is possible define more sample characteristic, deformation and fracture properties.

Instrumented data analysis system - Software

The software with instrumented impact system allows perform automatic measures:

- > Automatic curve fitting of Force - Displacements
- > Automatically Fgy, Fm, Fiu, Fa and other characteristic parameter, after calculation Sgy, Sm, Siu, Sa, St, Wm, Wiu, Wa, Wt and others.
- > Fully automatic data processing allows to get test results and report, after each test, immediately.
- > Curve and raw data can be exported in EXCEL files.



Test Report				
Test standard	ASTM2290-2009	Equipment No.	AZ2040-02	
Test data	40120402	Specimen	256	50%
Specimen No.	56	Penetration mm (in)	21.250	0.84
Acceleration (g/9.81)	6.31	Impact velocity (m/s)	4.64012925	10.4
Total deflection (5%)	0.71mm	Absorbed energy (J)	0	0
Total time (S)	0.002s	Total impact energy (MJ)	0.014	0
	Fm	Fp	Fu	Fa
Load	50	0.00	---	---
Reflection	mm	0.00	---	---
Energy	J	0.00	---	---