WANCE®
Do Our Best for Your Test

Pendulum Impact | Charpy | PIT Series Type D

Impact energy:

150J, 300J, 450J, 600J, 750J

Functions:

This machine is used for measuring the Charpy impact resistance of metal and other materials

Standards:

ISO 148, EN10045, ASTM E23, GB/T 229, GB/T 12778, GOST 9454

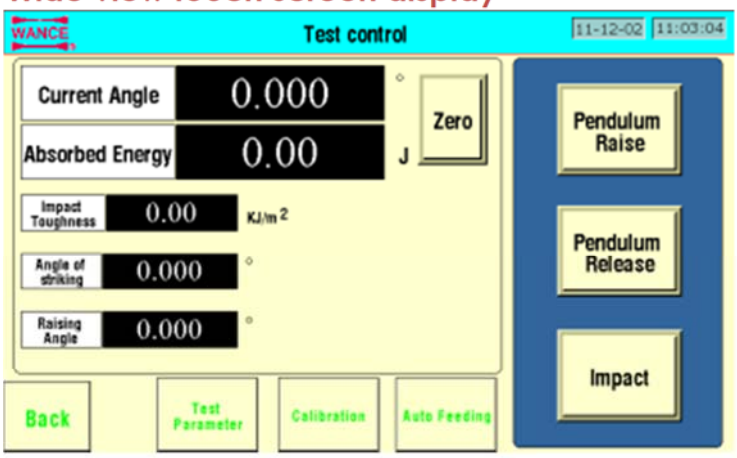
Features:

- One-body cast frame design of seat and column provide high stability and rigidity
- Front and rear columns are symmetrical. Pendulum arm is designed of cantilever beam support, with simple structure and high machined precision
- Apply high precision bearing with small friction. Absorbing energy without loading is less than 0.3%
- Double reduction gear system replaces old style drive system with high efficiency and avoiding transmission failure
- Round pendulum head design reduces windage losses to the most
- High rigid pendulum arm prevents axial and transverse vibrations
- Exchangeable pendulum is simple to change to satisfy impact energy of 150J, 300J, 450J, 600J, 750J
- Electromagnetic release of pendulum hammer and electromagnetic clutch for locking the pendulum and raising it to its initial position. A damper is equipped to prevent strong bump when clutching
- Full-closed enclosure with high safety to prevent broken sample from splitting. Protective screening has interlock door. When the door opens, most operations can't work to avoid any wrong operation
- Apply SIEMENS industrial PLC to control pendulum, and high precision Japanese made NEMICON rotary encoder to measure striker real time position. The whole system is stable, reliable and accurate
- A big touch screen monitor may real-time displays striker angle, impact energy, toughness, and other parameters. User can input specimen data and other information such as company information into this monitor. When connected to a printer, user input information and test results will be printed
- Optional computer with software control is available to realize semiautomatic operation. Operator only need charge specimens. Others can be controlled by software
- Optional specimen feeding system is available. Combined with computer and software, fully automatic operation can be realized
- Optional cooling system is available to satisfy cold specimen test down to -180℃

Specimen collection and filtering device

- Motorized device is used for collecting broken specimens after impact, instead of manual cleaning, which fully prevents striker from getting stuck
- Unique specimen filtering function: automatically judge and transport qualified and unqualified specimens to different collecting box

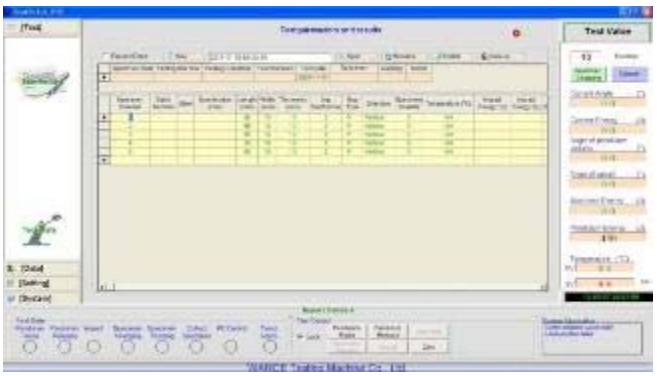
Wide view touch screen display



Professional test software

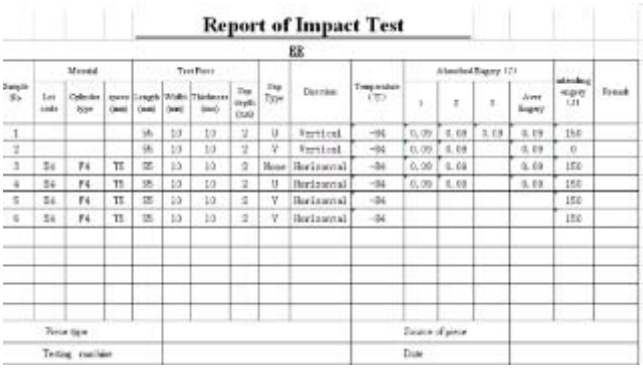
This software is designed specifically for testing metals to Charpy standards. Software provides an easy-to-use method for gathering, calculating and storing impact test results. The test result can be printed and exported to EXCEL for review.

Display Features



- Status of system limits
- Real-time display of hammer status
- Hammer set up and verification allows for hammer weight input
- Displays potential/impact energy
- Displays theoretical velocity
- Encoder resolution of 0.025°

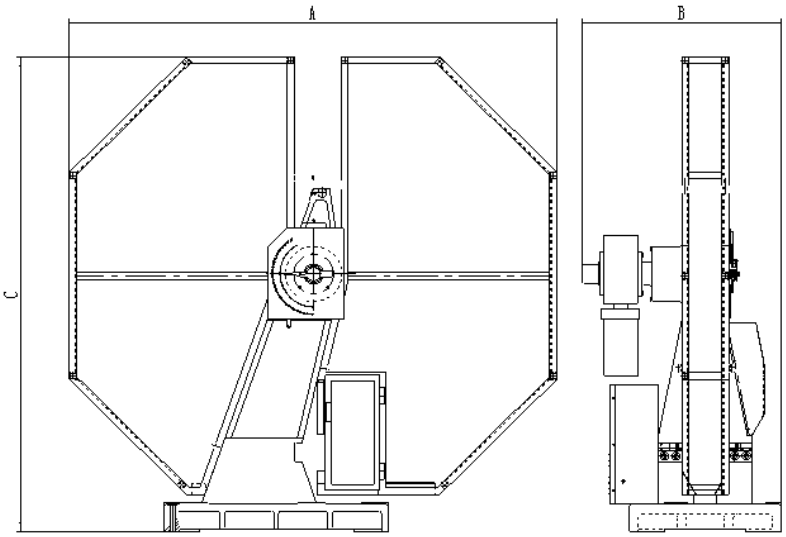
Test report



- Template can be customized according to requirements
- The report can be exported to EXCEL for review

Specifications

Model		PIT452	PIT752
Type		Type D	
Maximum energy		450J	750J
Optional pendulum		150J, 300J	300J, 450J, 600J
Angle of striking		150°±1°	
Angle measurement resolution		0.025°	
Distance from the axis of support to the center of percussion		750mm	
Velocity of striking		5.24m/s	
Support	Support span	40mm	
	Radius of curvature of supports	1mm	
	Angle of taper of supports	11°±1°	
Striking knife	Radius of striking edge	2mm	
	Angle of striking tip	30°	
	Thickness of striker	16mm	
Specimen dimension		55×10×10mm 55×10×7.5mm 55×10×5mm	
Weight		900kg	
Dimension(A x B x C) Including protection shield		2200×800×2050mm	
Dimension(A x B x C) equipped with auto feeding system		2200×1450×2050mm	
Power requirements		3-phase, 5-line, AC 380V±10% 50Hz 1.5kW	
Pendulum moment	150J	80.3848 Nm	
	300J	150.7695 Nm	
	450J	241.1543 Nm	
	600J	321.5390 Nm	
	750	401.9238 Nm	



Standard configurations

Name	Description	Model		
		PIT452D-2 PIT752D-2	PIT452D-3 PIT752D-3	PIT452D-4 PIT752D-4
Framework	Frame	√	√	√
	Pendulum lock/release system	√	√	√
	Driving system	√	√	√
	Angle measurement system	√	√	√
	SIMENS PLC control	√	√	√
	Dial gauge display	√	√	√
	Touch screen	√	√	√
	Protection shield	√	√	√
Software			√	√
Communication cable to PC	RS232		√	√
Accessories	Span block Specimen centering block Centering tongs inside-hexagonal spanner Anchor bolts wedge block	√	√	√
Instrumented impact system (model: IIS105)	Data sampling card Data Conditioner Instrumented test software			√

Optional pendulums

Name	Description	Compatible Model
Charpy pendulum & specimen support (striking knife: R2/R8)	150J	PIT452D
	300J	PIT452D, PIT752D
	450J	PIT452D, PIT752D
	600J	PIT752D
	750J	PIT752D
Please specify ISO striker or ASTM striker		

Optional instrumented pendulums

Name	Description	Compatible Model
Instrumented Charpy pendulum & specimen support (striking knife with 30kN force transducer: R2/R8)	150J	PIT452D-4
	300J	PIT452D-4, PIT752D-4
	450J	PIT452D-4, PIT752D-4
	600J	PIT752D-4
	750J	PIT752D-4
Please specify ISO striker or ASTM striker		

Optional cooling system

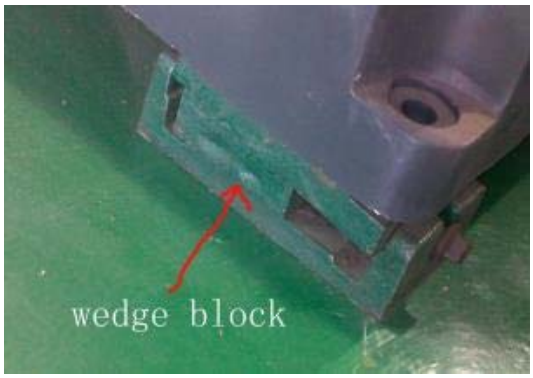
Name	Model	Description	Accessories
Low temperature specimen auto-feeding system	LTC601A-2	-60℃~ambient Cooling method: air compressor	Specimen auto-feeding system Low temperature chamber Air compressor
	LTC102B-2	-100℃~ambient Cooling method: liquid nitrogen	Specimen auto-feeding system Low temperature chamber Liquid nitrogen cylinder
	LTC182B-2	-180℃~ambient Cooling method: liquid nitrogen	
Manual cooling system	LTC601A-1	-60℃~ambient Cooling method: air compressor	Low temperature chamber Air compressor
	LTC801A-1	-80℃~ambient Cooling method: air compressor	
	LTC102B-1	-100℃~ambient Cooling method: liquid nitrogen	Low temperature chamber Liquid nitrogen cylinder
	LTC182B-1	-180℃~ambient Cooling method: liquid nitrogen	

Optional notch broacher

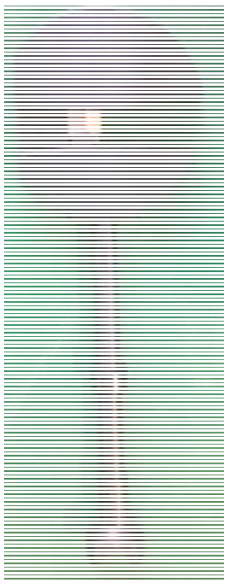
Name	MODEL
Notch making machine	NSM201B

Shipping information

Name	Crated dimension (mm)	Crated weight (kg)
Main machine	1220x1080x1860	850
Full-closed protection shield	2060x550x1250	150
Main machine with specimen feeding system	1700x1600x1860	900
Nitrogen cylinder	660x660x1790	100



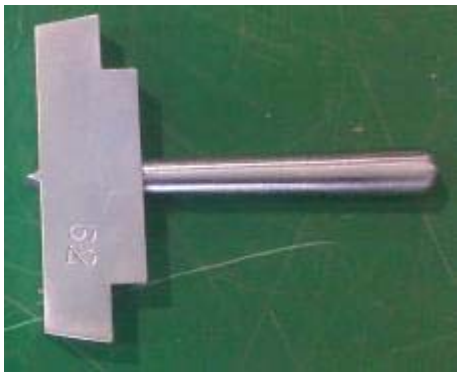
Foundation bolt



Pendulum

Anvil & support

Span block



Specimen centering block

Centering tongs

Inside-hexagonal spanner

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