

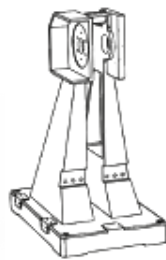
ITM-HF series

ITM-HF series impact tester for:

- Impact on metals, Charpy, both non-instrumented and instrumented
- Servo motor driven pendulum can stop at any position, realizing different angle/energy impact test for R&D use
- Standards: ASTM E23, ASTM E1820, ASTM E2298, ISO 148, EN10045, ISO 14556, JIS Z 2242, GOST 9454-78

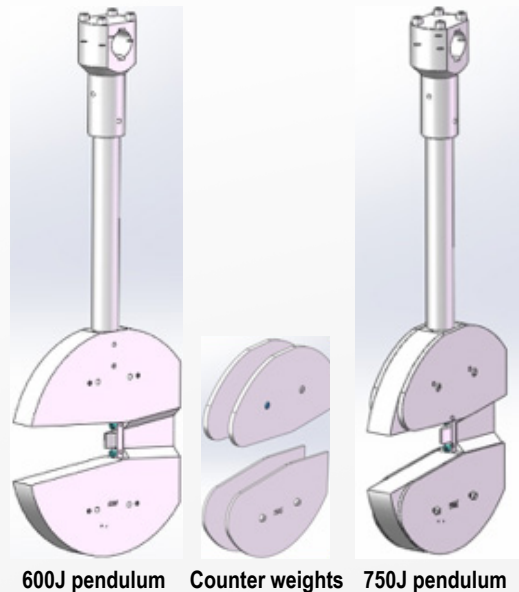
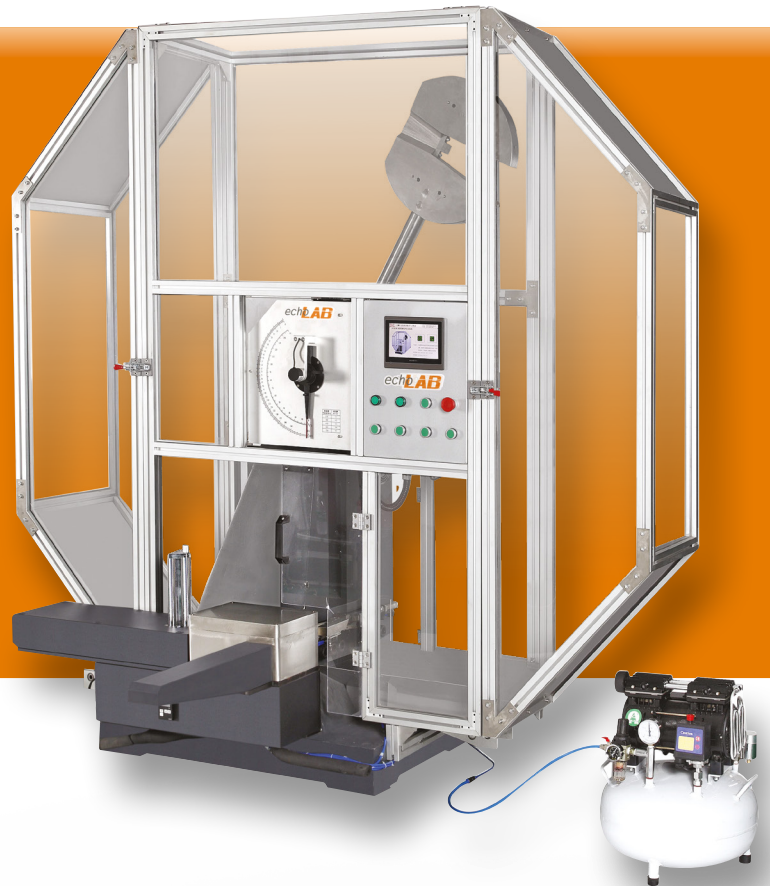
HIGH LOADS

- Heavy solid steel base machine structure for anvil and heavy-duty cast steel uprights supports.
- Structure designed to change different pendulums easily.
- Impact testing machines equipped with electromagnetic hammer release system and clutch for locking and raising to initial position, dumper to prevent strong bump.
- ITM-HF series equipped with Siemens PLC for tester controls and with high precision rotary encoder NEMICON, to measure the angle with resolution of 0.025° to ensure high accuracy of impact energy



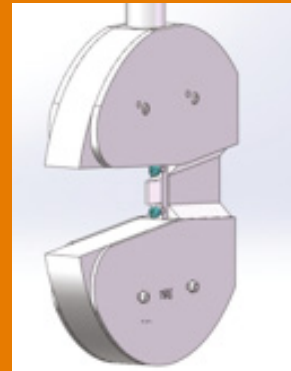
Three versions available:

- ITM-HFD with analogue dial gauge and touch screen display
 - ITM-HFC with computer connection and software echoTestPilot .
 - ITM-HFI with instrumented impact system consisting in striking knife with force transducer, data sampling card, signal conditioner and test software.
- For all versions are available, as optional, automatic specimen feeding systems and the related automatic cooling systems up to -180°C , combined with software allow fully automatic impact testing.
- High stiffness pendulum rod, no vibration after impact.
- 450J, 750J pendulum consists in 300J, 600J pendulum with two counter weights. This flexible design facilitates switching impact energy.



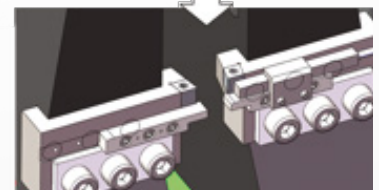
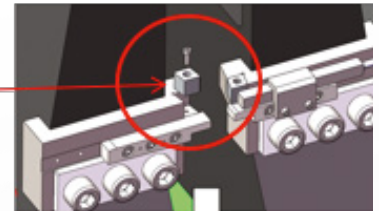
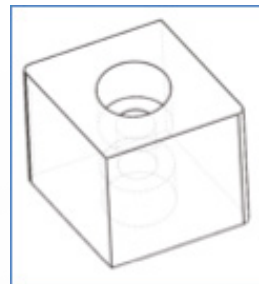
600J pendulum Counter weights 750J pendulum

- Striking knife is tightened by wedge block, simple to change. Striking knife is available with R2 and R8, fully complying with ASTM, JIS, DIN, GB, ISO, EN and other standards.
- Striking knife is made of anti-wearing high speed tool steel with hardening treatment, and hardness is larger than HRC60, with high strength, ductility and abrasion resistance.



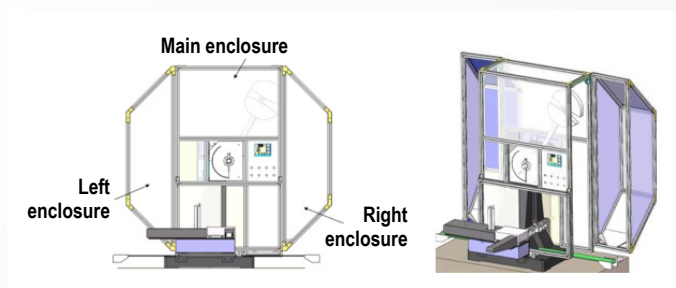
Supports and anvils:

- The anvil material is made high quality steel, the hardness is larger than HRC60, with high strength, ductility and abrasion resistance.
- It is very simple to change anvils with inner hexagon spanner. The anvil is machined by special process with high precision and good interchangeability.
- Anvil is exchangeable and can be used four times by changing mount directions, greatly improving the servicing life and saving cost.



Safety system

- This series of machine has fully closed protection shield to protect operator against specimen splitting during test, and to deny any access to the inside during test. Built-in door interlock further ensures operator safety. The protection shield is constructed with aluminum alloy profile for frame and fiber glass for easy observation. Split-type door design is simple to repair and change pendulum.



ITM-HF series

Model		ITM-HFD	ITM-HFC	ITM-HFI
Version		Easy	Conventional	Instrumented
Max Energy	J	750		
Analog display	-	Included	Included	Included
Touch screen	-	Included	Included	Included
Software and RS232 cable	-	N/A	Included	Included
Instrumented impact system	-	N/A	N/A	Included
Pendulum moment 150J	Nm	80.3848		
Pendulum moment 300J		150.7695		
Pendulum moment 450J		241.1543		
Pendulum moment 600J		321.5390		
Pendulum moment 750J		401.9238		
Angle resolution	°	0.025		
Striking angle	°	30-150 adjustable		
Distance from support axis to percussion center	mm	750		
Striking velocity	m/s	5.24		
Support span	mm	40		
Radius of support curvature	mm	1		
Angle of support taper	°	11±1		
Striking edge radius	mm	2 (R2) or 8 (R8)		
Striking thickness	mm	16		
Striking tip angle	°	30		
Specimen dimensions	mm	55x10x10		
	mm	55x10x7.5		
	mm	55x10x5		
Motor power	kW	1		
Power supply	V-Hz-ph	400-50/60-3		
Dimensions	mm	2200x800x2150		
Weight	kg	800		

Included accessories

SIEMENS PLC
 Full-closed protection cover
 Pendulum lock/release system
 Driving system
 Angle measurement system
 Servo motor
 Anchor bolt
 Charpy support and anvil compliance with ISO and ASTM
 Span block
 Specimen centering block
 Centering tongs
 Wedge block
 Specimen collection device

Accessories

Model	Description
PITM-HF30	Pendulum without striker knife 300J
PITM-HF45	450J pendulum counter weights assembled on 300J pendulum
PITM-HF60	Pendulum without striker knife 600J
PITM-HF75	750J pendulum counter weights assembled on 600J pendulum
CSKR2	Charpy striker knife ISO 148, R2 (For versions ITM-HFD and ITM-HFC)
CSKR8	Charpy striker knife ASTM E23, R8 (For versions ITM-HFD and ITM-HFC)
IISSE2I	Instrumented Charpy striking knife ISO 148, R2 with 30kN force transducer (For version ITM-HFI)
IISSE8I	Instrumented Charpy striking knife ISO 148, R8 with 30kN force transducer (For version ITM-HFI)

Instrumented impact system

Model	Description
Force transducer	kN 30/50
A/D sampling resolution	bits 16
Maximum sampling frequency	MHz 1.25
Frequency band width	kHz 500
Motor power	kW 0.1
Power supply	V-Hz-ph 230-50/60-1

Optional accessories**Automatic system**

Model	Description
AFS100	Automatic specimen feeding system to test 40 specimens at time continuously at room temperature
AFS180	Automatic specimen feeding system to test 12 specimens at time continuously at room temperature
ACS60	Cylinder liquid nitrogen cooling capacity 160L Automatic cooling system to use with model AFS100 Temperature range from environment to -60°
ACS100	Cylinder liquid nitrogen cooling capacity 160L Automatic cooling system to use with model AFS100 Temperature range from environment to -100°
ACS180	Cylinder liquid nitrogen cooling capacity 160L Automatic cooling system to use with model AFS180 Temperature range from environment to -180°
BMA 350	Motorized notching machine
NPP 50	Notch profile projector
CCS 65	Low temperature chamber -60°C
CCS 85	Low temperature chamber -80°C

