Mikrosize®

ITM-SA300/SA500

Semi-automatic Charpy Impact Testing Machine

Contact us

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Features and Applications

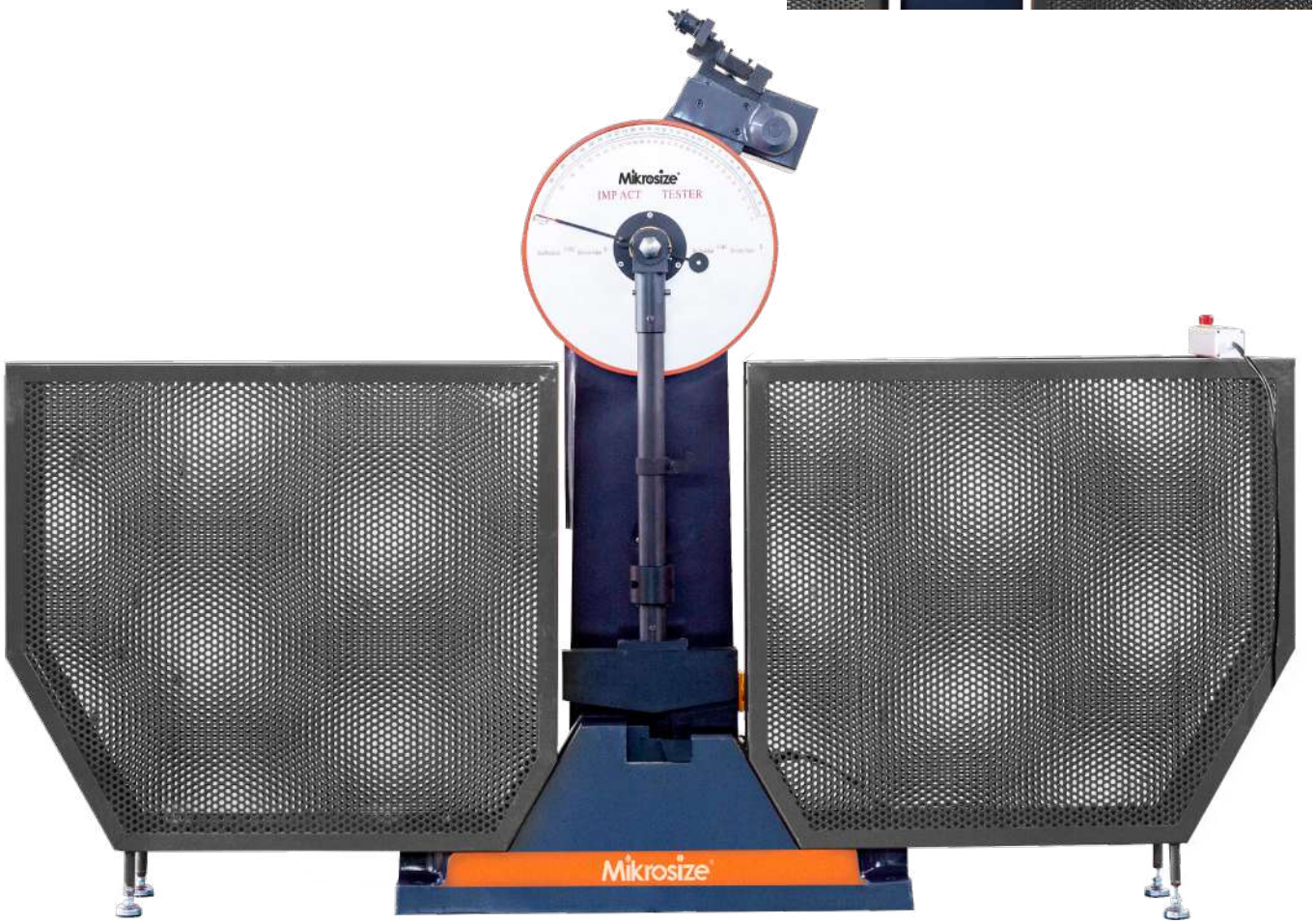
Product Features

- The main machine adopts a single supporting column structure and a cantilever-type pendulum hanging method.
- The impact knife is installed and fixed with screws for easy replacement.
- The sample is supported in a simply supported beam manner.
- The equipment is equipped with a safety pin to prevent the pendulum from falling accidentally.
- A wire protective net is equipped to prevent foreign objects from splashing and causing harm during the experiment.
- The equipment is controlled semi-automatically. Except for the need to manually place the sample, the pendulum lifting, pendulum hanging, impacting, and pendulum releasing are all electrically controlled.
- After breaking the sample, the remaining energy can be used to automatically lift the pendulum, preparing for the next experiment, which is suitable for continuous impact experiments.
- Equipped with a manual control box, allowing experimenters to control the equipment's actions from a relatively long distance, further ensuring personnel safety.
- The pendulum adopts a detachable design, which is convenient for replacing pendulums with different impact energies and expanding the application range of the equipment.
- The C-type pendulum design can reduce the frictional energy loss caused by air resistance.
- Equipped with a sample centering device to ensure the accurate placement of the sample and eliminate test errors caused by sample deviation.
- The experimental data is read using a dial pointer, with an accuracy of 0.5J.
- Can be matched with a low-temperature tank (optional) for low-temperature impact experiments.
- The equipment meets the standards of ISO 14556, ASTM E23, ISO 148, etc.

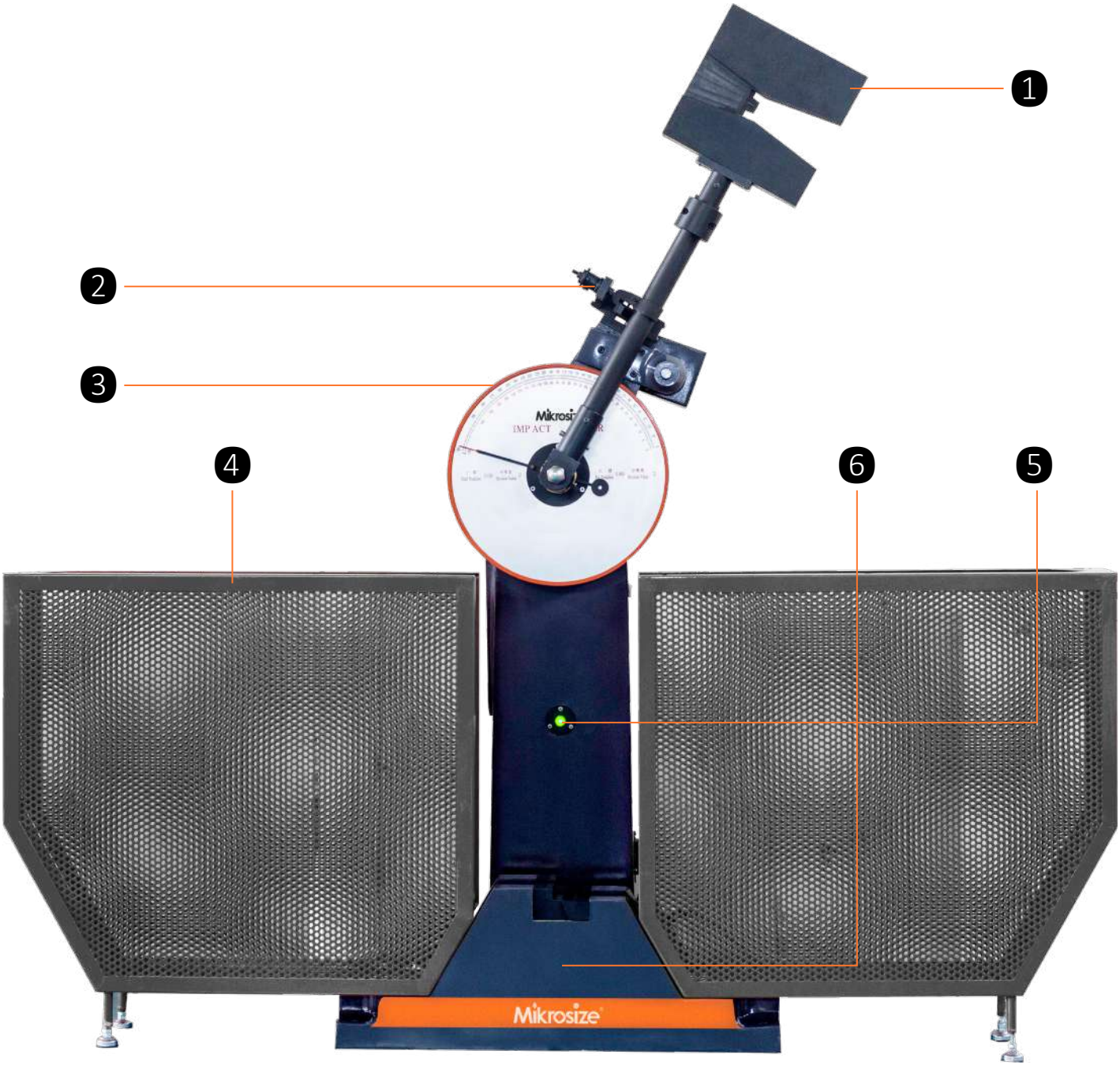
Features and Applications

Product Applications

- Impact resistance testing of metal materials.
- Impact load testing of core components in mechanical manufacturing, such as gears and shafts.
- Impact resistance testing of structural materials in the construction and infrastructure industry.
- Impact testing of key components in the aerospace and military industries.



Product Details



1.Pendulum	2.Pendulum Hanging Device	3.Dial
4.Protective Cover	5.Indicator Light	6.Base

Product Details

Detailed Display

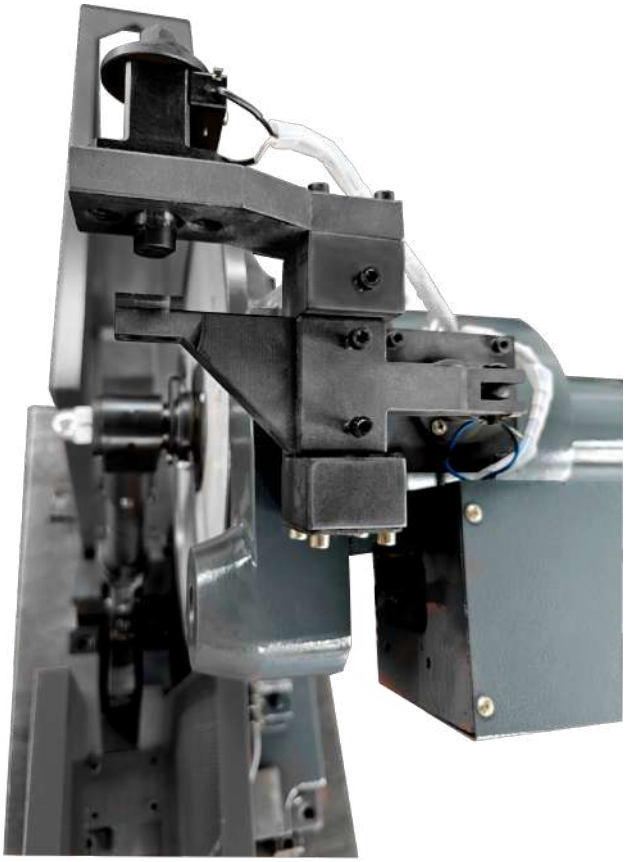
- Equipped with a pointer-type dial, the results are displayed directly, and the experimental results can be read directly, with a minimum resolution of ≥0.5J.

- A standard wire protective cover is equipped to prevent splashes generated during the experiment from causing harm to experimenters or the surrounding area.

Product Details

Detailed Display

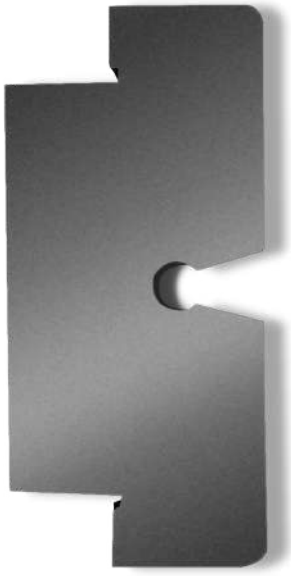
- Pendulum hanging device: after the pendulum is lifted, the safety pin pops out and cooperates with the pendulum hanging device to lock the pendulum, preventing the pendulum from falling accidentally.
- Controlled by electricity and equipped with a mechanical interlock device, the pendulum will be released only when the impact button on the manual control box is pressed.



- The pendulum adopts a replaceable design, and the application range of the equipment can be expanded by replacing the pendulum.
- The pendulum adopts a C-type design, which can reduce the energy loss caused by air friction resistance.

Product Details

Detailed Display



- Equipped with a span aligner and a sample centering hammer to ensure that the sample is placed at the preset standard test position and eliminate test errors caused by sample deviation.

- The wired remote control box can be used to control the equipment for experiments and is equipped with an emergency stop button.
- A knob switch is installed on the main machine of the equipment to control the on/off of the entire equipment. This switch needs to be turned on first before starting to use.

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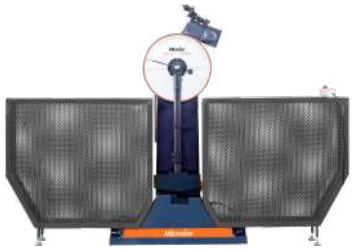
Technical Specification

Name	Semi-automatic Charpy Impact Testing Machine	
Model	ITM-SA300	ITM-SA500
Max Impact Energy	150J,300J	250J,500J
Effective Use Range	10%-90%FS	
Pendulum Pre-Lifting Angle	150°	
Distance From Pendulum Axis To Striking Center	750mm	800mm
Pendulum Moment	150J M=80.3848N.m 300J M=160.7695N.m	250J M=133.9746N·m 500J M=267.9492N·m
Impact Speed	5.2m/s	5.4m/s
Anvil Span	40mm	
Radius Of Anvil Fillet	R1-1.5mm	
Standard Sample Size	10×10×55mm,10×7.5×55mm,10×5×55mm,10×2.5×55mm	
Load Frame Dimension	Install protective net 2200×650 ×1900 mm (L*W*H)	
Power Supply	3P 380V±10%,50-60HZ,2kW	
N.W.	500kg	650kg
Operating Temperature	0 to +38° C (+32 to +100° F)	
Humidity Range	10% to 90% non-condensing	

Standard Delivery

Name	Qty	Photo
Host Frame	1 set	
150J and 300J Pendulum	2 sets	
Dial	1 set	
Manual Box	1 set	
Safety Screening	1 set	
Safety Mechanism	1 set	

Standard Delivery

Name	Qty	Photo
Motor	1 set	
Fastening Wrench	1 set	
Anchor Bolt	4 pcs	
Instruction Manual	1 copy	
Certificate of Qualification	1 copy	
Calibration Certificate	1 copy	
Warranty Card	1 copy	

Optional Delivery

Name	Photo
150J Simply Supported Beam Pendulum 300J Simply Supported Beam Pendulum 450J Simply Supported Beam Pendulum 750J Simply Supported Beam Pendulum	
Impact Knives Of Different Sizes (2mm, 8mm)	
Notch Projector	
Low-Temperature Tank	
Hydraulic Broaching Machine For Impact Sample Notches (Double Blades)	
Standard Impact Samples