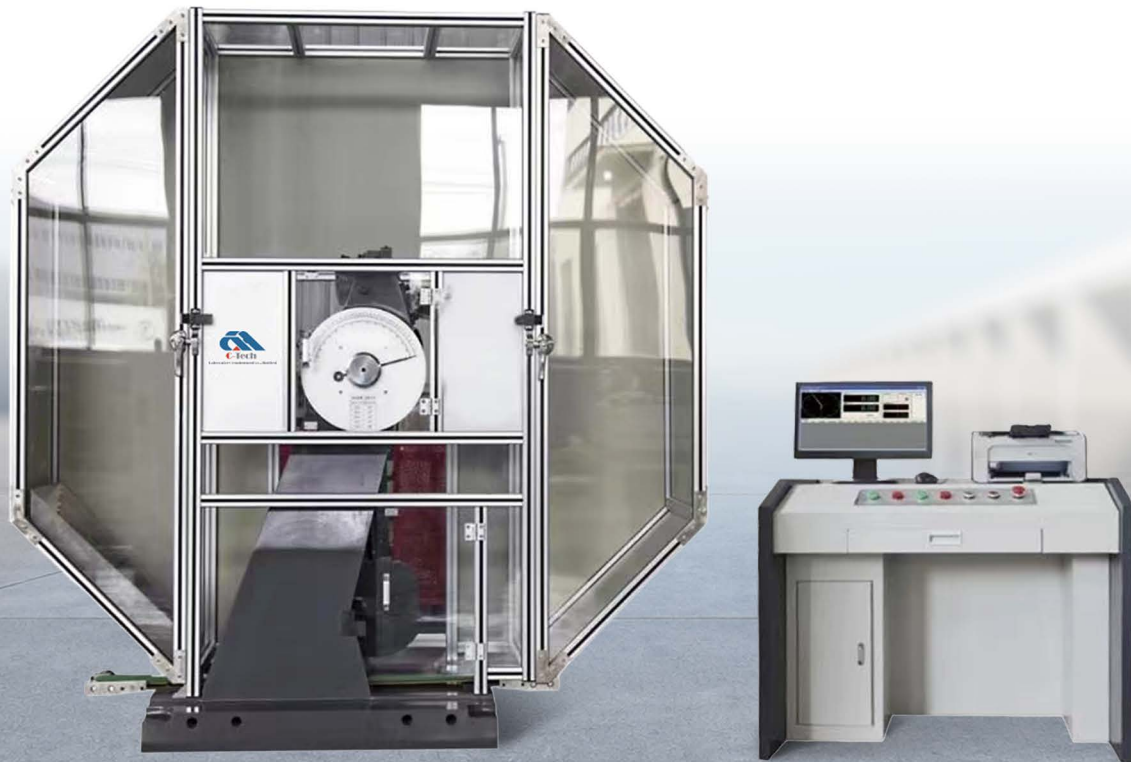


JBW SERIES CHARPY AND IZOD PENDULUM IMPACT TESTING MACHINE

STANDARD: ISO 148, EN10045, ASTM E23

This impact testing machine is used for determining the impact resistance of metallic materials under dynamic load and evaluating its toughness and brittleness. This equipment is controlled by a microcomputer and can automatically measure and record test data. The machine consists of five major parts - the main unit, the operation control system, the measurement & display system, the test accessories and the safety protection device. Its advanced structure, simple operation, and reliable performance make it an ideal equipment for materials research, development, process improvement, and quality control.



FEATURES

- ⊙ High rigidity and stability: The mainframe and base are designed and cast as an integral unit, eliminating the weak joint of split body-base connections. The test results are closer to the specimen's true absorbed work, making it especially suitable for high-energy impacts. All stressed components undergo finite-element analysis, precision machining and inspection.
- ⊙ Double-support frame structure: The pendulum spindle is supported by a simply-supported beam with a rational load distribution, effectively reducing lateral vibration during impact and bearing friction damage. Front and rear bearings share the load evenly to extend service life.
- ⊙ Precise measurement: The impact energy of PLC system is absorbed by high-precision photoelectric encoder (host embedded PLC LCD screen is required), which greatly improves the test accuracy of impact energy. The software features automatic calibration, testing and subtracting bearing-friction and air-resistance energy losses for more accurate results.
- ⊙ High automation control: The PLC system automatically controls the whole test process of lifting, hanging, impact and swinging back. The pendulum is controlled by the PLC according to the preset angle with accurate positioning and reliable operation, ensuring a constant initial impact energy (host embedded PLC LCD screen is required). After impact, the residual energy is reused to re-lift the pendulum automatically, greatly improving efficiency.
- ⊙ Safe and reliable: A safety pin automatically extends when the pendulum reaches the preset position to prevent accidental falling; a fully enclosed cover of aluminum-alloy frame and tempered glass stops broken specimens from flying out, while the door interlock cuts power and locks operation when open. Strong and weak currents are fully isolated for strong anti-interference capability.
- ⊙ Three energy display modes: dial, microcomputer display and LCD screen (host embedded PLC LCD screen is required), and the results can be compared with each other.

TECHNICAL SPECIFICATIONS

Model		JBW-300C	JBW-450C	JBW-750C
Main unit				
Maximum impact energy		300 J	450 J	750 J
Effective use range		20%-80% FS		
Pendulum pre-lifting angle		150°		
Distance from pendulum axis to striking center		750 mm	800 mm	750 mm
Attachment				
Pendulum hammer weight		214.3594 N	321.5391 N	535.8985 N
Pendulum moment		160.7696 N.m	241.1543 N.m	401.9239 N.m
Impact velocity		5.24 m/s		
Anvil span		40 mm		
Radius of anvil fillet		R1-1.5 mm		
Angle of inclination of anvil		11°±1°		
Impact edge angle		30°±1°		
Impact edge curvature radius	2 mm edge	2-2.5 mm		
	8 mm edge	/	8 mm±0.05 mm	
8 mm edge shoulder angular radius		/	0.1-1 mm	
Width of 8 mm impact edge		/	4 mm±0.05 mm	
Impact edge width		10-18 mm		
Thickness of impact knife		16 mm		
Specimen specification		10×10×55mm, 10×7.5×55mm, 10×5×55mm, 10×2.5×55mm		
Measurement system				
Angle measurement mode		Optoelectronic encoder		
Angle accuracy		0.06°		
Digital angular resolution		0.015°		
Digital energy resolution		0.12 J		
Minimum resolution of dial		≥0.5 J		
Energy display mode		Dial, computer display		Dial, computer display (optional host-embedded PLC screen)
Whole machine				
Outline dimensions	Main unit	2220×900×2220 mm (protective net included)		
	Electric cabinet	900×620×830 mm		
Weight	Main unit	Approx. 1500 kg		
	Electric cabinet	Approx. 100 kg		
Motor power		0.55 kW		
Power supply		Three-phase 380V±10%, 50Hz		
Working environment		No vibration and dust; room temp 15-25 C ; humidity < 70%		