

จำหน่ายเครื่องมือวัดอุตสาหกรรม บริการงานสอบเทียบ

Precision Tool Measuring Instruments



NSK INSTRUMENT CO.,LTD.
บริษัท เอ็นเอสเค อินสตรูเมนต์ จำกัด

EX-100 Universal Length Machine



Main Subjects to be Measured:

1. Shaft, hole, plug gauge, ring gauge, clip gauge, length bar, cone, cylindrical workpiece, lower-grade block gauge, workpiece with parallel planes etc.
2. Pitch diameter of internal thread, thread, thread ring gauge, thread plug gauge.

EX-100 is equipped with a data processing system. This system consists of a computer and data processing software, digital display hardware. The measuring results can be output by a printer.

1. Measuring Range (mm)

a) External Dimensions:

Absolute measuring range 0~100
Relative measuring range 0~700

b) Internal Dimensions:

Small-size measuring accessories (maximum penetrating depth 12, maximum wall thickness 50): 10~430
Using large measuring accessories (maximum penetrating depth 50, maximum wall thickness 85): 30~400

Using electrical measuring accessories:

- a) Electrical measuring accessories 1~60
- b) Universal measuring accessories 14~112

Thread measuring accessories:

- a) Thread pitch diameter measuring
Max. 200mm Pitch 0.5~6
- b) Internal thread pitch diameter measuring
Using small-size measuring accessories [small diameter 13~30] Using large measuring accessories [small diameter from 31~(70- wall thickness×2) Pitch 1~6

2. Reading mode and display value: digital display, display value 0.1μm

3. Measuring Force (N) 0, 1.5, 2.5

- #### 4. Display Value Variability
- For external dimensions $2\sigma \leq 0.3\mu\text{m}$
 - For internal dimensions $2\sigma \leq 0.5\mu\text{m}$

- #### 5. Instrument Accuracy
- For external dimensions, accuracy better than: 0.5μm ($20^\circ\text{C} \pm 0.2^\circ\text{C}$) dimensions, accuracy better than: 1μm

- #### 6. Universal Worktable
- Installation area approximately 160×160mm²
 - Height adjustment range (0~100)mm
 - Transversal stroke 25 mm
 - Tilting around Y-axis $\pm 3^\circ$
 - Worktable rotation $\pm 4^\circ$
 - Admitted load 10kg

7. Fitting dimension for inner diameter of the measuring cap-shaped accessories: Φ6H7

8. Outer diameter for the rod fitting with the inner diameter of the measuring cap-shaped accessories: Φ6g6

9. Instrument Size: Length×width×height 990×390×450 (mm)

Optical Profile Projector



EP-1 optical profile projector is designed for all kind of measurement in mould & die making, form tools making, screw manufacturing, gear manufacturing, electric, electronic and pneumatic components etc...

EP-1 High Precision optical Profile Projector Provides accurate 2D measurement for all common geometric features such as circle, line, angle, distance, intersection points etc... all measured results can be printed directly or transferred to computer for further processing.

Manufactured with top class components, under high standard of workmanship, EP-1 achieves very high measurement accuracy, the accuracy is $(3+L/100)\mu\text{m}$, where L is the measured length in mm. The total contour distortion is less than 0.08%.

EP-1 equipped with the ES-10P or ES-12P measuring system to assure high accuracy measurements and provide easy operations.

MODEL NO.	EP-1 1510	EP-1 2010	EP-1 2515
Table dimensions	300×170mm	350×170mm	420×250mm
Glass dimensions	175×127mm	230×120mm	290×190mm
X measurement travel	150mm	200mm	250mm
Y measurement travel	100mm	100mm	150mm
Z focusing travel	90mm		
XY readout resolution	0.001mm		
Axial measuring accuracy	$(3+L/100)\mu\text{m}$		
Screen diameter	315mm		415mm
A readout range	0-360 degree		
A readout resolution	0.01 degree		
Max. Contour distortion	0.08%		
Magnifications Lens	10×, 20×, 50×		

Portable 2010 Vision Measurement Machine



MODEL NO.	Portable 2010
X,Y Measurement Travel	200x100x70 mm
Overall Dimensions	50x50x70 cm
Machine Weight	40 kg
Repeatability	± 2μm
Max Table Load	20 kg
Operation Model	Manual
Resolution	1μm
X,Y,Z Measurement Accuracy	(4+ L/200) μm
Light source system	Software controlled adjustable 4 zone surface light and straight adjustable contour light
Structure	Cast iron
Lens	High precision Tele-centric lens
Magnification	Optical enlarging rate 0.7-4.5x, image enlarging rate 22-141x
Vision System	1/3" CCD

C Series 2D Vision Measurement Machine



MODEL NO.	C-2010	C-3020	C-4030
X,Y,Z measurement travel	200x100x150 mm	300x200x150 mm	400x300x150 mm
Machine Weight	150 kg	250 kg	350 kg
Repeatability	2 micron		
Max Table Load	25 kg		
Operation mode	Manual		
Resolution	1μm		
X,Y measurement precision	(4+ L/200) micron		
Light source system	LED surface & contour light system, brightness adjust by buttons		
Structure	granite base and mast		
Lens	Ultra-low distortion, can zoom in and zoom out		
Magnification	Optical enlarging rate 0.7-4.5x, image enlarging rate 30-200x		
Vision system	1/3" CCD video camera		

L Series 2D Vision Measurement Machine



MODEL NO.	L-2515	L-3020	L-4030
X,Y,Z measurement travel	250x150x150 mm	300x200x200 mm	400x300x250 mm
Overall Dimensions	100x60x140 cm	120x72x160 cm	120x72x160 cm
Machine Weight	170 kg	280 kg	410 kg
Repeatability	2 micron		
Max Table Load	25 kg		
Operation mode	Manual high speed and trusty USB connect with computer		
Resolution	0.5μm		
X,Y measurement precision	(3+ L/200) micron		
Light source system	software controlled adjustable 6 ring 8 zone surface light and straight adjustable contour light		
Structure	granite base and mast		
Lens	Ultra-low distortion, can zoom in and zoom out		
Magnification	Optical enlarging rate 0.75-4.5x, image enlarging rate 25-125x		
Vision system	1/3" High resolution CCD lens		

EV Series 3D High Performance Manual Vision Measurement Machine



EV series has a high capability / price ratio. Auto focus and Auto zoom function as standard configures in this series. It uses high precision marbles as the machine base stand. High precision working table and 0.1μm high resolution optical scales installed in the X,Y,Z axis increase the measuring accuracy to (2.5+L/200)μm.

The electronic system of the EV series is advanced, it uses the new multi-axial, light motor controlling card developed by Easson, in this way the controlling system very succinct. Special processor reduce electronic circuitry and connectors, improve stability greatly. Super high speed reading ability, work with our latest high accuracy absolute reading scale make sure high resolution and high accuracy measurement. And use super high speed and high trusty Ethernet connect with computer.

All the EV series can install the Renishaw touch probe and 3D software for 3D measurement.



MODEL NO.	EV-2515	EV-3020	EV-4030
X,Y,Z measurement travel	250x150x150 mm	300x200x200 mm	400x300x250 mm
Overall Dimensions	135x72x155 cm	135x72x165 cm	146x89x175 cm
Machine Weight	170 kg	280 kg	380 kg
Repeatability	2 micron		
Max Table Load	25 kg		
Operation mode	X Y Manual, Z motorized (control by mouse, keyboard or joystick) Super high speed and high trusty Ether net connect with computer		
Resolution	0.1μm		
X,Y,Z measurement precision	(2.5+ L/200) micron		
Light source system	software controlled adjustable 6 ring 8 zone surface light and straight adjustable contour light		
Structure	00 grade granite base and mast		
Lens	High precision Tele-centric motorized auto-zoom lens		
Precision measuring head	English RENISHAW precision touch probe		
Magnification	Optical enlarging rate 0.7-4.5x, image enlarging rate 25-145x		
Vision system	High resolution CCD lens (SONY CCD sensor & special SPC)		

SPARTAN Series 3D Super High Performance Automatic Vision Measurement Machine



SP3-3020



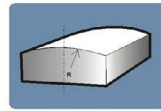
SP3-4030



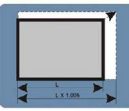
SP3-6050H

MODEL NO.	SP3-3020	SP3-4030	SP-4030H	SP-6050H
X,Y,Z measurement travel	300x200x200 mm	400x300x250 mm	400x300x250 mm	600x500x300 mm
Overall Dimensions	135x72x165 cm	146x89x175 cm		170x136x185 cm
Machine Weight	280 kg	410 kg		1700 kg
Repeatability	2 micron			
Max Table Load	30 kg			50 kg
Operation mode	Automatic CNC control, by mouse, keyboard or joystick, Super high speed and high trusty Ethernet connect with computer			
Resolution	0.1μm			
X,Y,Z measurement precision	(2.5+ L/200) micron	(2.5+ L/150) micron		(3+ L/150) micron
Light source system	software controlled adjustable 6 ring 8 zone surface light and straight adjustable contour light			
Structure	00 grade granite base and mast			
Lens	High precision motorized Tele-centric auto-zoom lens & 0.5x, 1.5x, 2x attached lens			
Probe system	English RENISHAWprecision touch probe			
Magnification	Optical enlarging rate 0.75-4.5x, image enlarging rate 12-290x after install attached lens			
Moving system	X/Y/Z servo motor drive system		Japanese Panasonic AC servo motor & driver	
Vision system	High resolution CCD lens (1/2" SONY CCD sensor & special SPC)			

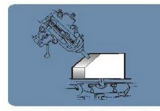
ES-8 Digital Readouts



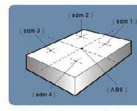
R function



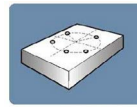
SHRING shrinkage calculation funtion



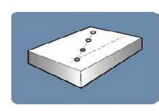
INCL In clined machining function



SDM 199 subdatum memory function



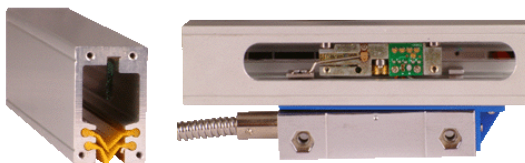
PCP Pitch circle Diameter function



LHOLE line Hole positioning function

Function		Model	General machine use						Special machine use		
			ES-8M miller	ES-8B borer	ES-8G grinder	ES-8L lather	ES-8E EDM	ES-8W wirecut	ES-8P projector	ES-8G3 3X grinder	ES-8T toolsetter
Axis	Two Axes		•	•	•	•		•	•		•
	Three Axes		•	•	•	•	•			•	
Resolution			5µm	1µm	1µm	5µm	5µm	5µm	1µm	1µm	1µm
Enhanced EMI algorithm							■	■			
Basic function	-Clear zero										
	-centering (1/2)										
	-in/mm display										
	-coordinate entry										
	-abs/inc		■	■	■	■	■	■	■	■	
	-power off memory										
	-199 subdatum										
	-REF memory										
Built in calculator			■				■				
PCD pitch circle diameter			■	■			■				
LHOLE line hole positioning			■	■			■	■			
INCL inclined machining			■				■				
SHRINK shrinkage calculation			■								
R function	Simple R		■								
	SmoothR		■								
Linear error compensation			■	■	■	■	■	■	■	■	■
None linear error compensation				■	■				■		■
Vibration filtering					■						
XZ axes summation						■					
Z relay output							■				
Rotary encoder readout										■	
RS232 output									■		■
Geometric calculation									■		■
Zero guage setup											■

Easson GS linear optical scales



Glass polishing



Scales machining



Double sealing lips



Reader heads

Model		GS10	GS11	GS12	GS13	GS20	GS21	GS22	GS23	GS30	GS31	GS32	GS33
Measuring Standard		Glass Scale-Grating period:20um(0.020mm)											
Optical Detecting System		Transmissive Infrared system -: wavelength : 880nm											
Slide Carrier System		Vertical five bearings supporting system				45' five bearings supporting system				Vertical five bearings supporting system			
Resolution		5µm	1µm	5µm	1µm	5µm	1µm	5µm	1µm	5µm	1µm	5µm	1µm
Measurement Length	100-1200mm	Every 50mm per length specification								Every 50mm per length specification upto 500mm			
	1300-3000mm					Every 100mm per length specification							
Accuracy	100-450mm	±6µm	±4µm	±6µm	±4µm					±6µm	±4µm	±6µm	±4µm
	500-800mm	±10µm	±8µm	±10µm	±8µm								
	1050-1200mm	±15µm	±12µm	±15µm	±12µm								
	1300-3000mm					±25µm							
Repeatability		2um(0.002mm)											
Hystersis		3um(0.003mm)											
Protection		DIN 40050 IP53											
Power Supply		DC 5V ±5%											
Output Signals		TTL		ELA-422-A		TTL		ELA-422-A		TTL		ELA-422-A	

Polish and Grinding Machine

MODEL MP-2B



Technical specifications

- Diameter of sand paper: $\Phi 230\text{mm}$
- Grinding disk: $\Phi 220\text{mm}$
- Abrasive wheel speed: 100-1500r/min(stepless)
- Motor: BY802-4variable frequency motor 0.75KW, three phase 220V 0~70Hz
- Outer Dimension: 730x650x300mm
- Net Weight: 55Kg

Structure:

MP-2B type is stepless speed change polishing and grinding machine; the power source is acted by frequency changer and BY802-4 frequency conversion motor that is transmitted to the subpanel by the O shape triangle belt, making the disc rotate. Power switch and frequency conversion button installed on the side of the body and board, there is connecting to the power and press the frequency conversion button, there can choose the various speeds, which is the abrasive wheel speed and indicated on the frequency conversion, double of polishing as the grinding disc speed.

Application :

In the process of metallographic specimen, it is very important for polish and grind, as usual, it is adopted to metallographic pre-grinding machine and polish machine. Our company designs a new type stepless polish-grinding machine MP-2B, it is can finish different rough, fine, dry, wet grinding and processes of polish. The polish-grinding discs are larger than of the same kind machine of domestic, it is increased the effective 20%-30% working surface, adapted to different kinds of material make

Low speed Precise Specimen Cutting Machine

MODEL DTQ-5

Model DTQ-5 Low speed precise specimen cutting machine is suitable for the precise cutting of various hard materials. It is especially suitable for the precise cutting of all kinds of small metal, non-metal pieces and various electronic components. This machine can be equipped with diamond saw blade and other resin blade so as to meet the demands of cutting of various specimens. Many specimen clamping grippers are equipped with this machine and it can realize the positioning cutting at best angle for the workpieces. It can also realize workpiece processing without being watched. The main shaft features high running speed and the horizontal feeding position of the workpiece being processed can be adjusted precisely. It is the ideal metallography specimen preparing instrument for using in factories, scientific research institutes and laboratories of colleges.



Technical specifications

- Movable stand travel: 25mm
- Positioning accuracy: 0.01mm
- Rotating speed of main shaft: 0-700 rpm.
- Diameter of blade: $\Phi 100\text{mm}$ - $\Phi 150\text{mm}$
- Power supply: 220V/110V, 50Hz
- Dimensions: 35 x 35 x 20 cm
- Weight: 18.5 Kg

Precision Cutting Machine

MODEL GTQ-5000



Technical specifications

- Feed speed: 0 ~ 30mm/min (adjusted step length 0.1mm)
- Grinding wheel speed: 300 ~ 5000rpm
- Maximum cutting diameter: $\phi 60\text{mm}$
- The largest travel: X-axis 220mm; Y-axis 25mm
- Cutting blade size: 200mm(diamond)
- Cutting power: 1500W
- Power supply: 220V 50HZ
- Dimensions: 800mm $\times$ 720mm $\times$ 600mm
- Weight: 135kg

It is suitable for metal, electronic components, ceramic materials, crystals, carbide, rock samples, ore samples, concrete, organic materials, biological materials (teeth, bone) and other materials for precise cutting without distortion .

The device can be a continuous sheet cutting; positioning accuracy is high; speed range large; cutting ability; built-in cooling system; can be pre-set feed speed; menu-driven control; liquid crystal display; There are two locations you can clamp; nine kinds of Fixed cutting method, the user can freely define one kinds of cutting methods; enclosed cutting chamber with safety switch. Is the industrial and mining enterprises, research institutes, high-quality sample preparation is one of the ideal equipment.

Precision Cutting Machine

MODEL GTQ-5000B

This machine is suitable for metal, electronic components, crystal, hard alloy, rock, ore, concrete, organic material, biological material(tooth, bone) and other materials, so, it's an ideal equipment for the industrial and mining enterprises and the scientific research institute.



Technical specifications

- Feed speed: 0-30mm/min (adjust 0.1mm)
- Wheel speed: 300-5000rpm
- Max. cutting diameter: $\Phi 60$ mm
- Max. stroke: Y 200mm
- Cutting blade diameters: 100mm, 150mm, 200mm
- Cutting power: 1100W
- Power supply: 220V, 50Hz
- Dimension: 700 x 720 x 410mm (L x D x H)
- Weight: approx. 170kg

Features:

- Set high precision location and have large speed range
- Cutting ability is strong
- Built-in recirculating cooling System
- Preset feed speed and menu control with touch screen
- There are 9 kinds of fixed cutting methods and 1 kind of cutting method defined by user freely
- Closed cutting room with safety switch

Metallographic Specimen Cutting Machine

MODEL METACUT-100

Technical specifications

- Max. cutting diameter: $\Phi 100$ mm
- Rotating speed of main shaft: 2300 rpm
- Sand wheel specification: 350 x 2.5 x 32mm
- Automatic feeding speed: 0-180mm/min
- Cutting disc upward and downward moving distance: 0-50mm
- Forward and backward moving distance: 0-340mm
- Working table size: 430 x 400 mm
- Motor power: 3 KW
- Power supply: 380V, 50Hz (three phases)
- Dimensions: 970 x 940 x 650mm
- Weight: approx. 307kg.



Features:

- Quick clamping vice.
- LED lighting system
- Main shaft of cutting disc is movable upward and downward
- Two working modes of Intermittent cutting and continuous cutting
- 60L water cooling system

Model METACUT-100 Metallographic specimen cutting machine can be used to cut various metal and non-metal materials so as to get specimen and observe the metallographic or lithofacies structure. It is a kind of Manual/Automatic cutting machine and can be switched between Manual and Automatic modes at will. Under automatic working mode, the cutting can be finished without human operation. The machine has large work table and long cutting length which make it possible to cut large samples. The main shaft of cutting disc can also move upward or downward which can prolong the using life of cutting disc greatly. The machine has cooling system so as to clear up the heat produced during cutting and avoid to burn the metallographic or lithofacies structure of specimen because of superheat. This machine features easy operation and reliable safety. It is the necessary specimen preparing instrument for using in factories, scientific research institutes and laboratories of colleges.

Metallographic specimen grinding & polishing machine

MODEL MP-2



Technical specifications

- Diameter of grinding disc: $\Phi 230$ mm, rotating speed 450 rpm (or customized)
- Diameter of polishing disc: $\Phi 200$ mm, rotating speed 600 rpm (or customized)
- Motor power: 370W
- Power supply: Single phase, 220V, 50Hz
- Dimensions: 70 x 60 x 28 cm
- Net weight: 40Kg

Model MP-2 Metallographic specimen grinding & polishing machine is equipped with double discs, and it can finish grinding or polishing with two different speeds. The rotating speed of left disc (pre-grinding disc) is 450 rpm and right disc (polishing disc) is 600 rpm. With double disc and different grinding and polishing materials, it can realize the process of rough grinding, fine grinding, rough polishing and finishing polishing. This machine features easy operation and economical applying. It is the ideal specimen preparing instrument for using in factories, scientific research institutes and laboratories of colleges.

Metallographic Specimen Grinding & Polishing Machine

MODEL MP-2B



Technical specifications

- Digital display of rotating speeds of grinding and polishing discs
- Diameter of grinding disc: Ø230mm, rotating speed 50-1000 rpm
- Diameter of polishing disc: Ø200mm, rotating speed 50-1000 rpm
- Diameter of sand paper: Ø200mm
- Motor: 550W
- Power supply: Single phase, 220V, 50Hz
- Dimensions: 70 × 60 × 28 cm
- Net weight: 45 Kg



Model MP-2B Metallographic specimen grinding & polishing machine is equipped with double discs and features stepless speed changing grinding and polishing. It can finish the whole process of rough grinding, fine grinding, rough polishing and finishing polishing for specimen preparing. By adjusting the transducer, it can realize the rotating speed of grinding and polishing disc adjustable from 50 to 1000 rpm. This bring this machine with much more extensive applying and make it become the necessary metallographic specimen preparing instrument for using in factories, scientific research institutes and laboratories of colleges.

Specimen Mounting Press (Timer)

MODEL XQ-2B METALLOGRAPHY

Model XQ-2B Metallography specimen mounting press is suitable for the thermohardening plastic pressing of the small metallography specimen which is not idiomorphic or hard to take. After forming, it will be very easy to process the grinding, polishing of the specimen and it is also convenient to process measuring of metallographic structure under metallographic microscope. The machine may work stably under the following working condition:

- 1.The temperature of surrounding medium can not be less than 10 °C and more than 40 °C;
- 2.The relative humidity of air should be no more than 85% (20 °C);
- 3.There should be no obvious vibration source around;
- 4.There should be no current conducting dust, explosive and corrosive air.

Technical specifications

- Diameter of specimen: Ø22×15mm, Ø30×15mm, Ø45×18mm
- Heater: 650W, 220V
- Temperature adjusting range: 100-180 °C
- Control power supply: 220V 50Hz. The voltage fluctuation should be no more than 15%.
- Dimensions: 34 × 27 × 40 cm
- Net weight: 33Kg



Metallographic Specimen Cutting Machine

MODEL Q-100B MANUAL / AUTOMATIC



Model Q-100B manual / automatic metallographic specimen cutting machine is equipped with big cutting room and movable T-shape work table. Therefore this machine has the ability of cutting rectangle and large specimens. Also the equipped separate type vice is very convenient for operator to clamp various heterotypic work pieces.

Technical specifications

- Various cutting data can be displayed on high definition backlight type LCD screen.
- Cutting diameter: Ø5-100mm
- Cutting volume: Ø100mm x 200mm
- Manual cutting and automatic cutting means can be switched at will
- Large cutting chamber, tempered glass observing window
- Equipped with 60L cooling liquid water tank.
- Non-burning loss swing type cutting means that improved the cutting quality
- Automatic withdraw function after cutting is finished
- Bidirectional feeding means increase the length of deep cutting
- Cutting speed: 2.25, 3, 4, 5, 7, 9, 12, 15mm/min.
- Sand wheel rotating speed: 2100rpm
- Sand wheel specification: 350 x 2.5 x 32mm
- Display: LCD with high resolution backlit dot matrix
- Power: three phases with four cables, 380V, 50Hz.
- Dimensions: 930 x 700 x 610mm
- Net weight: 220 KG

Metallographic Specimen Cutting Machine MODEL SQ-80



Technical specifications

- Power supply: 380V, 50Hz (three phases)
- Rotating speed of main shaft: 2800 rpm
- Max. cutting diameter: Ø80mm
- Sand wheel specification: 250 x 1.2 x 32mm
- Motor: Y2-1001-2, 3.0 KW



Model SQ-80 Metallography specimen cutting machine can be used to cut various metal and non-metal materials so as to get specimen and observe the metallography or lithofacies structure. The equipped cooling system can clear up the heat produced during cutting so that it will avoid the metallography or lithofacies structure deforming of specimen because of heating fluence. This machine features easy operation and reliable safety. It is the necessary specimen preparing instrument for using in factories, scientific research institutes and laboratories of colleges.

Automatic Metallography & Lithofacies Specimen Mounting Press MODEL ZXQ-1

Model ZXQ-1 Automatic mounting press is used to inlay small specimens, specimens in irregular shapes, or specimens which are not easy to hold. It is the convenient process before grinding and polishing metallurgical or rock specimens. The inlaying operation serves to facilitate the grinding and polishing operations of the specimens and the routine observation of the composition of the material under the metallurgical microscope.

This machine is heated, and intensified with pressure automatically. After the formation of the specimen under pressure, it stops the operation and discharges the pressure also in an automatic way. With another press of the knob, the machine automatically turns up the specimen, which may be taken away. Note: It is only for the hot solid materials (such as urea-formaldehyde moulding powder and bakelite powder) with the temperature automatically regulated and controlled.



Technical specifications

- Diameter of specimen: Ø22mm or Ø30mm or Ø45mm
- Power supply: 220V, 50Hz
- Heater: 650W
- Transducer: 300W
- Max. power consumption: 1000W
- Dimensions: 38 × 35 × 42 cm
- Net weight: 50Kg

Automatic Metallography & Lithofacies Specimen Mounting Press MODEL ZXQ-5

Model ZXQ-5 automatic metallography specimen mounting press is a kind of full automatic mounting press, equipped with in-out water cooling system. It is suitable for the heat mounting (thermo-hardening & thermoplastic) for all kinds of materials. After the parameters such as heating temperature, heat preserving time and applied force etc. are set up, put the specimen and mounting material into the machine, close the cover and press the start button, then the machine will finish the job automatically. It is not necessary for the operator to be on duty. According to different requirements of the material, there are four kinds of moulds that can be chosen to meet the demands at will. Also it is available to prepare two pieces of specimens at the same time, the capacity is doubled.



Technical specifications

- Diameter of specimen: Ø25mm, Ø30mm, Ø40mm, Ø50mm
- Power supply: 220V, 50Hz
- Max. power consumption: 1800W
- Setting range of system pressure intensity: 0-2MPa (corresponding preparing pressure intensity: 0-72MPa)
- Temperature setting range: 0-300 °C
- Heat preserving time: 0-99m99s
- Dimensions: 615 × 510 × 500 mm
- Net weight: 110Kg
- Cooling method: water cooling

CCD Image Processing System

- The CCD image processing system can finish the process automatically: measurement of the diagonal length of indentation, hardness value display, testing data and image saving, etc.
- It is available to preset the upper and lower limit of hardness value, the testing result can be inspected whether it is qualified automatically.
- Proceed hardness testing on 20 test points at one time (preset the distance between test points at will), and save the testing results as one group.
- Converting between various hardness scales and tensile strength
- Inquire the saved data and image at any time
- Customer may adjust the accuracy of the measured hardness value at any time according to calibration of Hardness Tester



MicroHardness Tester

MODEL HV-1000A

Features:

- Automatic turret shifting between penetrator and object lens.
- Built-in printer
- RS232 interface
- High resolution and high brightness LCD display

Specifications:

- Hardness measuring range: 5-3000HV
- Test force: 0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N (10, 25, 50, 100, 200, 300, 500, 1000 gf)
- Magnifications of the measuring system: 400X, 100X
- Measuring resolution: 0.25 μ m
- Depth of throat: 110 mm
- Dimensions: 470 x 320 x 500 mm
- Max. height of test piece: 75 mm
- Power supply: 220V/110V AC, 50Hz
- Weight: approx. 40 kg

Main accessories:

- Coordinate anvil: 1 pc.
- Thin plate anvil: 1 pc.
- Large V-notch anvil: 1 pc.
- Diamond pyramid penetrator: 1 pc.
- Thin shaft anvil: 1 pc.
- Flat nose pliers: 1 pc.
- Small V-notch anvil: 1 pc.
- Micro-Vickers standardized block: 2 pcs.



Digital Display MicroHardness Tester

MODEL HVS-1000A

Features:

- Automatic turret shifting between penetrator and object lens.
- Built-in printer
- RS232 interface
- High resolution and high brightness LCD display
- Inside light source color can be changed as per customer's demands

Specifications:

- Hardness measuring range: 5-3000HV
- Test force: 0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N (10, 25, 50, 100, 200, 300, 500, 1000gf)
- Magnifications of the measuring system: 400X, 100X
- Measuring resolution: 0.025 μ m
- Depth of throat: 110 mm
- Dimensions: 470 x 320 x 500 mm
- Max. height of test piece: 75 mm
- Power supply: 220V/110V AC, 50Hz
- Weight: approx. 50 kg

Main accessories:

- Coordinate anvil: 1 pc.
- Thin plate anvil: 1 pc.
- Large V-notch anvil: 1 pc.
- Diamond pyramid penetrator: 1 pc.
- Thin shaft anvil: 1 pc.
- Flat nose pliers: 1 pc.
- Small V-notch anvil: 1 pc.
- Micro-Vickers standardized block: 2 pcs.



Video Measuring Apparatus

MODEL SP-5

Features:

- Direct indentation image display on LCD and direct hardness measurement through LCD.
- Double functions are optional for measuring microscope.
- SP-5 can be mounted onto our Vickers and micro-Vickers hardness testers (200HV-5, 200HVS-5, 310HVS-5, HV-1000A, HV-1000B, HVS-1000A and HVS-1000B etc.)

Specifications:

- SP-5 is equipped with digital microscope (with rotary encoder) and combined with 40X objective lens: Resolution: 0.01um
- SP-5 is equipped with manual microscope (without rotary encoder) and combined with 40X objective lens: Resolution: 0.125um
- SP-5 is equipped with digital microscope (with rotary encoder) and combined with 10X objective lens: Resolution: 0.04um
- SP-5 is equipped with manual microscope (without rotary encoder) and combined with 10X objective lens: Resolution: 0.5um
- Measuring range: Combined with 40X objective lens: 0.8 mm
- Combined with 10X objective lens: 1 mm
- Optical system: Total magnification: 400X (measurement)
100X (measurement)
- CCD system:
 - Horizontal definition: 570 lines
 - Display mode: Black and white
 - Input voltage: DC12V±10%
- LCD display system:
 - Screen size: 8"
 - Input voltage: DC12V±10%
- Voltage stabilizer input voltage: 220V, 50Hz
- Power consumption: ≤20W
- Dimensions: Ø47×170mm
- Weight: 1 kg

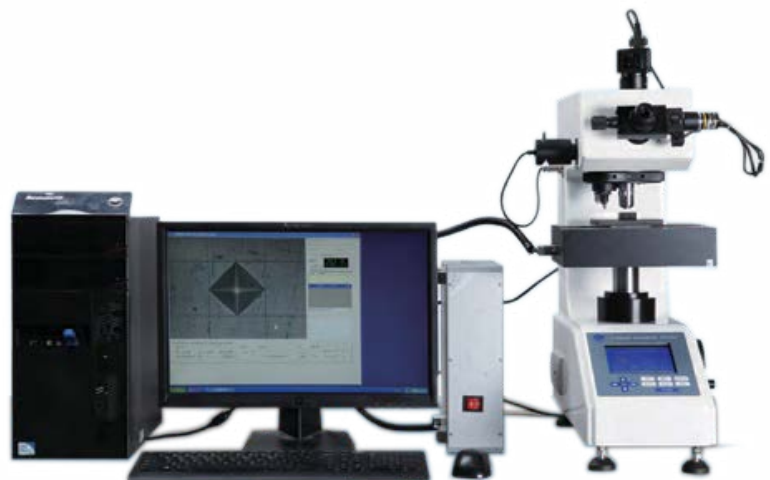


Semi-automatic/Automatic hardness tester

MODEL AHVD-1000XY/AHVD-1000XYZ

Features:

- Automatic control the hardness
- Automatic test, measure, save and output excel
- Program & save measure project
- Customizable interface and function
- Locklogin image and analysis
- Optional measure methods various output type
- Various control methods of large bottom plate



Model	AHVD-1000XY	Shift object lens to indenter	Automatic
Scale	HV0.01-HV0.2	Accuracy	≤1μm(distance of object lens to indentation)
Conversion Scale	free	Specimen size	Max length:85mm Max depth:120mm
Force	10g-1kg	Size&weight	490*185*515(L*W*H)mm , 45KG
Mini.unite	0.01μm	Light	LED cold light source (constant use ,1 million hours work service)
Test range	1-4000HV	Power	220V+5%, 50/60Hz
Total Magnification	1600X	Automatic bottom plate	200*200mm
Loading Method	Automatically	output	Word, excel, PDF
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 Pc : Diamond indenter, Flat Fixture; Small Parts Fixture; case; measure software;CCD sesor; objective stable;documents 2 Pc: Hardness block		

Multifunction digital micro hardness tester

MODEL MHVD-1000AP



Features:

- Convenient and fast test, outstanding accuracy and repeatability
- Imported elements, stable performance
- Smooth lifting shaft, less errors
- Show the hardness tester value of specimen directly on the screen
- 5.6 inch screen more information
- Coating adopted car paint technology with white color.
- Built-in printer



Model	MHVD-1000AP	Shift object lens to indenter	Automatic
Scale	HV0.01-HV2	Accuracy	≤1μm(distance of object lens to indentation)
Conversion Scale	free	Specimen size	Max length:85mm Max depth:120mm
Force	10g-1kg	Size&weight	490*185*515(L*W*H)mm , 45KG
Mini.unite	0.01μm	Light	LED cold light source (constant use ,1 million hours work service)
Test range	1-4000HV	Power	220V+5%, 50/60Hz
Total Magnification	100X, 400X	Automatic bottom plate	100*100mm
Loading Method	Automatically	output	Built-in printer.RS-232interface
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 piece: 10X Omron digital micro eyepiece; 10X&40X objective lens; Vickers indenter; X-Y Testing Table; Flat Fixture; Small Parts Fixture; Level bubble vail; Power Cable; Dust-proof cover; Instruction Book; Certificate of quality; Warranty Card; Accessory case software CD; 2 pieces: Standard block of hardness; 4 pieces: horizontal adjusting screw		
Optional purchase parts	Image Analysis Software; Metallographic Structure device; Knoop Indentor; Knoop Hardness Block; 15X micrometer eyepiece; 2.5X Objective lens; 20X Objective lens; 60X Objective lens		

Multifunction double indenters digital micro Knoop hardness tester

MODEL MHVKD-1000MP/MHVKD-1000AP

Features:

- Have Vickers and Knoop hardness tester
- Double indenters and object lens
- Imported elements ,stable performance
- Smooth lifting shaft ,less errors
- Show the hardness tester value of specimen directly on the screen
- 5.6 inch screen more information
- Coating adopted car paint technology with white color.
- Built-in printer



Model	MHVKD-1000AP	Shift object lens to indenter	Automatic
Scale	HV0.01-HV2/HK0.01-HK2	Accuracy	≤1μm(distance of object lens to indentation)
Conversion Scale	free	Specimen size	Max length:85mm Max depth:120mm
Force	10g-1kg	Size&weight	490*185*515(L*W*H)mm , 45KG
Mini.unite	0.01μm	Light	LED cold light source (constant use ,1 million hours work service)
Test range	1-4000HV(HK)	Power	220V+5%,50/60Hz
Total Magnification	100X, 400X	Automatic bottom plate	100*100mm
Loading Method	Automatically	output	Built-in printer.RS-232interface
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 piece: 10X Omron digital micro eyepiece; 10X and 40X objective lens; Vickers &Knoop indenter; X-Y Testing Table; Flat Fixture; Small Parts Fixture; Level bubble vail; Power Cable; Dust-proof cover; Instruction Book; Certificate of quality; Warranty Card; Accessory case software CD; 2 pieces: Standard block of hardness; 4 pieces: horizontal adjusting screw		
Optional purchase parts	Image Analysis Software; Metallographic Structure device; Knoop Indentor; Knoop Hardness Block; 15X micrometer eyepiece; 2.5X Objective lens; 20X Objective lens; 60X Objective lens		

Multifunction Digital Micro Vickers Hardness Tester

MODEL MHVD-10MP/30MP/50MP(MHVD-10AP/30AP/50AP)



Features:

- Precision Sensor, Accurate
- Wide scale of testing, More Experiment
- Imported elements, stable performance
- Show the hardness tester value of specimen directly on the screen
- Coating adopted car paint technology with white color.
- Built-in printer



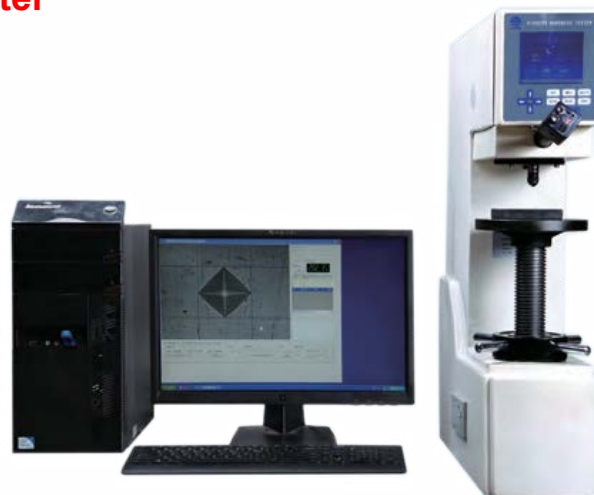
Model	MHVD-10AP	Shift object lens to indenter	Automatic
Scale	HV0.5-HV10	Accuracy	$\leq 1\mu\text{m}$ (distance of object lens to indentation)
Conversion Scale	free	Specimen size	Max Height:220mm Max depth:150mm
Force	500g-10kg	Size&weight	560*185*635(L*W*H)mm , 55KG
Mini.unite	0.02 μm	Light	LED cold light source (constant use, 1 million hours work service)
Test range	1-4000HV	Power	220V+5%, 50/60Hz
Total Magnification	100X, 400X	Sensor	Accuracy:0.005 Sensitivity:1.0mv/V
Loading Method	Automatically	output	Built-in printer.RS-232interface
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 piece: 10X Omron digital micro eyepiece; 10X and 40X objective lens; X-Y Testing Table; Flat Fixture; Small Parts Fixture; Level bubble vail; Power Cable; Dust-proof cover; Instruction Book; Certificate of quality; Warranty Card; Accessory case software CD; 2 pieces: Standard block of hardness;Hardness tester block; 4 pieces: horizontal adjusting screw		
Optional purchase parts	Image Analysis Software; Metallographic Structure device; Knoop Indentor; Knoop Hardness Block; 15X micrometer eyepiece; 2.5X Objective lens; 20X Objective lens; 60X Objective lens		

Multifunction Image Brinell Hardness Tester

MODEL MHBD-3000IS

Features:

- Customizable interface and function
- Optional measure methods various output type
- Precision Sensor, Accurate
- Operation by only a key ,more convenient and fast
- 5.6 inch screen more information
- Strong and Stable
- Imported elements, stable performance



Model	MHBD-3000IS	Scale	HBW2.5/62.5-HBW10/3000
Hardness value	8-650HBW	Specimen size	Max Height:220mm Max depth:130mm
Conversion Scale	free	Size&weight	550*210*750(L*W*H)mm , 120KG
Force	62.5-3000kg	Light	LED cold light source (constant use ,1 million hours work service)
Mini.unite	0.00125mm	Power	220V+5%,50/60Hz
Total Magnification	20X	Shift lens to indenter	Automatic
Loading Method	Automatically	output	Word ,excel, pdf.
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 piece: 10X Omron digital micro eyepiece; 10X and 40X objective lens; X-Y Testing Table; Flat Fixture; Small Parts Fixture; Level bubble vail; Power Cable; Dust-proof cover; Instruction Book; Certificate of quality; Warranty Card; Accessory case software CD 2 pieces: Standard block of hardness;Hardness tester block 4 pieces: horizontal adjusting screw		
Optional purchase parts	Image Analysis Software; Metallographic Structure device; Knoop Indentor; Knoop Hardness Block; 15X micrometer eyepiece; 2.5X Objective lens; 20X Objective lens; 60X Objective lens		

Digital universal hardness tester

MODEL HBRVD-187.5



Features:

- Brinell, Rockwell, Vickers
- Precision Sensor, Accurate
- Imported elements, stable performance
- 5.6 inch screen more information
- Built-in printer



Model	HBRVD-187.5	Scale	HBW2.5/31.25, HBW2.5/62.5, HBW5/62.5, HBW2.5/187.5 HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HV30, HV100
Hardness value	8-650HBW	Specimen size	Max Height:170mm Max depth:140mm
Conversion Scale	free	Size&weight	465*180*655(L*W*H)mm , 95KG
Force	500g-10kg	Accuracy of sensor	0.001mmm
Total Magnification	37.5X, 75X	Power	220V+5%,50/60Hz
Loading Method	Automatically	output	Built-in printer:RS-232
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	Rockwell diamond indenter 1 piece, Vickers diamond indenter 1 piece, Φ 1.588mm, Φ 2.5mm, Φ 5mm, hard alloy ball indenter 1 piece, measuring microscope 1 set(install in the machine), large, medium, "V" shape, and slide test platform each 1 piece, hardness block 5 pieces, accessory box 1 set, dust-proof cover 1 set, power cable 1 piece, manual instruction, certificate of quality, warranty card each 1 piece.		
Optional purchase parts	Image Analysis Software; Metallographic Structure device; Hardness Block; 15X micrometer eyepiece; 2.5X Objective lens; 20X Objective lens; 60X Objective lens		

Digital Rockwell hardness tester

MODEL HRS-150D

Features:

- Automatic,Stable
- Precision Sensor, Accurate
- 5.6 inch screen more information
- Built-in printer
- Coating adopted car paint technology with white color



Model	HRS-150D	Scale	HRA,HRB,HRC,HRD,HRE,HRF,HRG,HRH,HRR,HRL,HRM
Hardness value	Standard	Specimen size	Max Height:170mm Max depth:140mm
Conversion Scale	free	Size&weight	465*180*655(L*W*H)mm , 85KG
Force	60kg-150kg	Accuracy of sensor	0.001mmm
Basal	10kg	Power	220V+5%,50/60Hz
Loading Method	Automatically	output	Built-in printer:RS-232
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	Diamond Rockwell Indenter one piece, 1.588mm diameter Hard Alloy Steel Ball Indenter 1 piece, 1.588 mm diameter steel ball 5 pieces, Large Testing Table 1 piece, Medium Testing Table 1 piece and V-shaped Testing Table 1 piece, Standard Hardness Blocks 3 pieces, accessory case 1 piece, dust-proof cover 1 piece, instruction 1 piece, certification 1 piece and warranty card 1 piece.		
Optional purchase parts	Indenter ,block		

Portable Leeb Hardness tester

MODEL SHL-360



Features:

- Wide measuring range. It can measure the hardness of all metallic materials.
- Automatically identify the type of impact devices.
- Upper and lower limit can be preset. It will alarm automatically when the result value exceeding the limit.
- Large capacity memory could store 500 groups
- USB port with the PC humanity multi-functions data proceeding software.
- Thermal printer supports the immediate printing function. It can save data permanently.



Model	SHL-360	Scale	HL,HB,HRA/B/C,HV/HS
Angle	free	Measuring range	HLD (170-960) HLD, (17-68.5)HRC,(19-651)HB
Screen	LED 128x64	Printing paper	width is (57.5±0.5) mm, diameter is 30mm
Oversize	212x80x32mm	Power	Battery pack: 6V NI-MH Battery charger: 9V/500mA
Dwell Time	1-99s	criterion	GB/T4340,ASTM E384&E92,EN-ISO 6507,JIS B-7734)
Normative parts	1 pc;D type impact device,Standard test block,Cleaning brush ,Small support ring,Paper for		
Optional purchase parts	printing,Manual,software CD,Communication cable,Instrument case		

Black Granite Surface Plate

Product description;

CVA234

EAST STAR black granite surface plate precision please refer advanced leading countries standard flatness tolerance

ACCORDING TO (JB/T7975-1999)STANDARD

GRADE000= $1 \times (1+d/1000) \mu\text{m}$ GRADE00= $2 \times (1+/1000) \mu\text{m}$

GRADE0= $4 \times (1+d/1000) \mu\text{m}$ GRADE1= $8 \times (1+d/1000) \mu\text{m}$

(d is diagonal mm)

(measuring temperature $20 \pm 2^\circ\text{C}$)

Inspection surfaceplate Precision



Dimension (mm)	Weight (kg)	Lenght of Diagonal(mm)	grade000 (μm)	grade00 (μm)	grade0 (μm)	grade1 (μm)
300×200×50	9	360	1.5	3	5.5	11
300x300x70	19	424	1.5	3	5.5	11
400x250x70	21	472	1.5	3	6	12
400x400x100	48	568	2	3.5	6.5	13
630x400x100	76	746	2	3.5	7	14
630x630x130	155	891	2	4	8	16
800x500x130	156	943	2	4	8	16
1000x630x150	284	1182	2.5	4.5	9	18
1000x750x150	338	1250	2.5	4.5	9	18
1000x1000x150	450	1414	2.5	5	10	20
1200x800x150	432	1442	2.5	5	10	20
1600x1000x200	960	1887	3	6	12	24
2000x1000x250	1500	2136	3.5	6.5	13	26
2000x1600x300	2880	2561	3.5	7	14	28
2500x1600x300	3600	2968	4	8	16	32
3000x2000x400	9000	3605	4.5	9	18	36
4000x2500x500	15350	4717	6	11.5	23	46

SL-E02 Salt Spray Tester



Material:

- Laboratory using PVC sheet, thickness 5 mm the temperature reaches 80 degree Celsius
- Laboratory closure with high impact acrylic sheet 6 mm thick
- Supplementary bottles of reagents attached to the water level perspective with hidden windows clean easy not to break
- Saturated air barrel using SUS #304 stainless steel barrel high pressure barrel insulation is best
- Laboratorybasketball adopt flat indexing frame adjustable angle surrounded by mist side down exactly the same place the large number of test pieces

Specifications:

Salt spray test; NSS, ACSS laboratory; 35°C±1°C
Saturated air drums; 47°C±1°C
Corrosion test NSS, ACSS laboratory; 50°C±1°C
Saturated air drums 63°C±1°C

Capacity: 108L

Testing standards

CNS3627, 3885, 4159, 7669, 8886, JIS Do201, H8502, H8610, K5400, Z2371, ISO3768, 3769, 3770, 9227, ASTM B117, B268



3D Vision Measuring Machine YMM-HT/YMM-HVT Series

This machine is suitable for all 2D measurements. It is widely used in the industries of machinery, electronics, watch, plastic, module etc.

Its functional YR-T and YR-E measuring software can realize the functions of all 2D flatness measurements, on the map, profile scanning, special SPC statistics, manual CNC, Macroscopic measurement and so on.



Model Item	YMM-3020HT	YMM-4030HT	YMM-5040HT	YMM-3020HVT	YMM-4030HVT	YMM-5040HVT
X.Y.Z axis Travel (mm)	300x200x200	400x300x200	500x400x200	300x200x200	400x300x200	500x400x200
X.Y.Z Resolution	0.0005mm			0.001mm		
A X.Y Axis ccuracy	(3+L/200)um					
Z axis Error	≤0.01mm					
Repeatability	3μm					
Probe System	British “Renishaw” MCP10 probe (Φ 2 and Φ 3 probe head each)			-		
Measuring mode	Video + Probe			Video type		
CCD Camera	SBK-HC595 1/3' 700TVL colorful high definition CCD camera (Band white balance function)					
Magnification	24X-158X (2X and 0.5X objective is available)					
Zoom Lens	0.7 ~ 4.5X High definition stepped zoom lens					
Working distance	115mm (video)					
Measuring Software	YR-T 3D measuring software (it can realize the flatness measurement and the accurate measurement of Z axis)			YR-E measuring software (it can realize the flatness measurement and the accurate measurement of Z axis)		
Lifting Column	Stable granite column					
Instrument Base	000 grade stable granite base					
Illumination System	Surface and contour illumination both use brightness adjustable LED shadowless lam, contour uillumination adds condenser to realize parallel illumination					
Dimension (LxWxH) (mm)	750x1300x1500	750x1300x1500	900x1400x1500	750x1300x1500	750x1300x1500	900x1400x1500
Table Glass Size (mm)	240x150	340x250	440x350	240x150	340x250	440x350
Stage Loading Weight	25kgs					
Machine Weight (Kgs)	160	170	260	Approx. 160	Approx. 170	Approx. 260

Automatic Grinder / Polisher PLATO-HA Series



Come with three different kinds of springs for different kinds of sample materials.



MODEL NO.	FS-A	FRS-A
No. of Sample	3 / 5	3 / 5
No. of Platen	1	2
Motor Power	250W / 250W / 750W	250W / 250W / 370W
Sample Size	Ø32mm	Ø32mm
Platen Diameter	Ø200 / Ø250 / Ø300mm	Ø200 / Ø250 / Ø300mm
Machine Size (WxDxH)	450x450x600mm (Ø200 / Ø250) 500x800x670 (Ø300)	750x690x660mm (Ø200 / Ø250) 850x750x660mm (Ø300)
Weight	54 / 56 / 76kg	90 / 95 / 135kg
Grinding Method	Auto	
Power Supply	AC110 / 220V-1Ø	
Special Sample Size	A3 : Ø20 ~ Ø40mm A5 : Ø20 ~ Ø32mm	

SPECIAL SAMPLE SIZE CAN BE ORDERED

WDW Common Electromechanical Universal Testing System PLATO-HA Series



Max. load(kN)	5/10/20	50/100/200
Measuring range	2%~100%	
Load accuracy	±1% of the reading	
Load resolution	1/100000	
Position resolution(mm)	0.01mm	
Displacement accuracy	1%	
Load speed(mm/min)	0.01-200	
Speed accuracy	±1%	
Max. Tensile space	800	
Column spacing (mm)	420	600
Dimension (mm)	600x450x1800	800x700x2150
Weight(kg)	200kg	300kg
Power Supply	1 phase, 220V/110V, 50Hz/60Hz	3 phases, 380V/220V, 50Hz/60H
Power	0.4/0.75KW	1.3/2/3

ETT Series Electromechanical Horizontal Tensile Testing Machine



Max. load(kN)	1kN~600kN
Effective measuring range of load	2-100% of F.S.
Load accuracy	≤±1%
Displacement resolution	0.01mm
Max. tensile space	customized upon request
Net spac between columns	customized upon request
Test speed	0.1~250/500 mm/min
Structure	center ball screw driven
Control mode	Close-loop servo and motor control.
Power	380V/220VAC, 50Hz/60Hz
System safety features	Emergency stop control, Automatic overload protection



Model		WDW-S1/2/5	WDW-0.5/1/5/10/20	WDW-25/30	WDW-50/100	WDW-200/250/300	WDW-500/600	WDW-1000
Max. load	kN	1/2/5	0.5/1/5/10/20	25/30	50/100	200/250/300	500/600	1000
	kgf	100/200/500	50/100/500/1,000/2,000	2,500/3,000	5,000/10,000	20,000/25,000/30,000	50,000/60,000	100,000
Load measuring range		0.4%(1/250) ~100%(1/1)FS; 0.2%(1/500) ~100%(1/1)FS (option)						
Load accuracy		±0.5% Class 0.5 (better than ASTM E4, ISO 7500-1, EN 10002-2, BS1610, DIN51221)						
Deformation measuring range		0.4%(1/250) ~100%(1/1)FS;						
Deformation accuracy		±0.5% Class 0.5 (better than ASTM E83, ISO 9513, BS 3846, EN 10002-4)						
Position resolution		0.025 μm						
Position accuracy		±0.2 mm or 0.1 of displacement (whichever is geater)						
Crosshead moving speed (mm/min)		0.001-500/0.005-1000 (option)				0.001-250/0.001-500 (option)		0.001-250
Crosshead moving speed accuracy		±0.5 of set speed (zero or constant load)						
Vertical test space (mm) ¹⁾		990	1270	1330	1450	1500		2260
Total crosshead travel (mm)		900	1180	1230	1350	1400		1960
Column spacing (mm)		/	420	500	570	590	650	600x400
Max. tensile space (mm) ²⁾		560	750	640	650	500		1000
Max. compression space (mm) ³⁾		740	990	1070	1050			800
Tensile jaw for round specimen (mm)		/ ⁴⁾	Ø4~Ø14	Ø4~Ø20		Ø8~Ø32	Ø12~Ø40	Ø20~Ø60
Tensile jaw for flat specimen (mm)		0~8	0~14	0~21		0~27	0~30	0~40
Width x height of jaw (mm)		40 x 60	35 x 55	40 x 55		50 x 75	70 x 90	110 x 110
Compression platen diameter (mm)		Ø50	Ø100					Ø150
Bending fixture span (mm)		/ ⁵⁾	10-240	20-320	20-400	30-420	30-450	50-500
Length of bending roller (mm)		/	70		100	140		160
Diameter of bending roller (mm)		/	Ø10	Ø20		Ø30		Ø50
Hight of bending supporter (mm)		/	55	90		100		180
Power supply		1 phase, 220V/110V, 50Hz/60Hz				3 phase, 380V/220V, 50Hz/60Hz		
Power (kW)		0.4		0.7	0.8/1.5	2/3	5	28
Dimension (mm) ⁶⁾		385x550x1415	780x500x1737	840x600x1944	970x630x2070	1100x730x2390	1210x880x2560	1420x870x3590
Weight (kg)		55	140	230	700	1500	2400	5000
Shipping dimension		1600x900x500	1930x900x700	2120x1160x1050	2240x1450x1000	2650x1250x1100	3150x1500x1250	4200x1800x1100

Note: ¹⁾ Vertical test space means the distance from bottom surface of moving crosshead to top surface of lower working table, which can be referred when adding other fixtures;

²⁾ Max. Tensile space means the tensile distance when equipping with standard tensile grip;

³⁾ Max. Compression space means compression distance when equipping with standard platens;

⁴⁾ Single column machine equips with screw action parallel grip for flat specimens;

⁵⁾ Bending fixture is not included in standard supply, it can be specially offered;

⁶⁾ Frames with other dimensions (extra height or width) & capacities can be offered upon request.

Appearance and specifications are subject to change without prior notice.

JB-A Automatic Type Pendulum Impact Testing Machine



Applied Standard:

ASTM E23, ASTM E1820, ASTM E2298, ISO 148, EN10045, GB/T 3808, GB/T 229, JIG145, JIG 609

Application:

JB-450/750A Automatic type pendulum impact testing machine is used to determine the impact resistance of metal materials under dynamic load and capable of doing a large number of impact tests continuously. It can display the impact absorbed energy, impact toughness, rotation angle of the pendulum, all the testing report can be printed out. JB-450/750A can be equipped with fully automated sample feeding system, which greatly improve the test efficiency, and reduce labor intensity; cryogenic cooling device is available for low temperature impact testing, the minimum temperature is down to -196°C. It is essential quality control equipments for metal material manufacturer and QC department, and also a necessary instrument of research institutes for new materials research.

Specifications:

- Maximum energy: 450/750J
- Angle of striking: $150^{\circ} \pm 1^{\circ}$
- Velocity of striking: 5.24m/s
- Anvil span: 40mm
- Radius of curvature of supports: $R1 \sim 1.5\text{mm}$
- Radius of striker: $R2/R8\text{mm}$
- Angle of striking tip: 30°
- Thickness of striker: 16mm
- Specimen dimension: $55\text{mm} \times 10\text{mm} \times 10/7.5/5\text{mm}$
- Load frame dimension: $2100 \times 830 \times 2100\text{mm}$
- Weight: 900kg



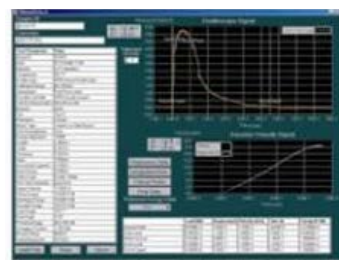
JB-A Automatic Type Pendulum Impact Testing Machine

Application:

DWTT series drop weight impact testing system is suitable for drop weight tear test of various kinds of ferrites, especially for the test of DWTT for pipeline steel as ASTM-E 436, API-RP 5L3, ASTM-E 208 and DIN EN 10274. DWTT integrates mechanical, electrical, and automatic control technology, achieving full automation of feeding, hammer lifting, impact, and fracture specimen collection etc; The load frame is with a four-column design, features in stable support structure, rigid, dual sliding rails; it equipped with a positioning mechanism, anti-dumping mechanism, safety mechanism, hydraulic buffer devices and security guard net. The impact energy is determined by the lifting height and configuration of different dead weight. It is essential quality control equipment for pipeline manufacturers, steel mills, iron and steel enterprises, and is also widely used for research institutes.

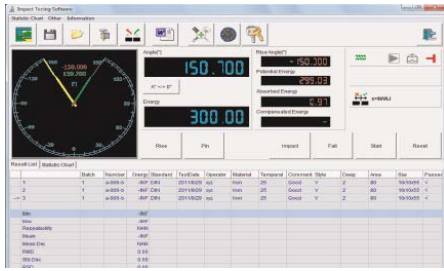
- Buffer device is equipped to avoid the second impact, and absorb the residual energy after breaking the specimen to protect the weight and anvil from destroying. The installation of safety mechanism, buffer device, and security guard net will effectively secure the testing machine and its operation, thus extending the service life.

- Configuration of the specimen-feeding system, anti-second impact device, and specimen centering mechanism will guarantee a quick, accurate and reliable test.



Model	DWTT-20000	DWTT-30000	DWTT-40000	DWTT-50000	DWTT-80000	DWTT-100000
Max. impact energy (J)	20,000	30,000	40,000	50,000	80,000	100,000
Max. lifting height (mm)	3,000	2,800	2,500	2,000	3,000	3,000
Max. impact velocity (m/s)	7.6	7.4	7	7	7.5	7.5
Curvature radius of weight (mm)	RS25	RS25	RS25.4 $\pm$ 2.5	RS25	RS25	RS25
Curvature radius of anvil (mm)	RS25	RS25	RS14.3 $\pm$ 1.59	R15.5	R15	R15.5
Hardness of weight and anvil	$\geq$ HRC58	$\geq$ HRC58	$\geq$ HRC58-65	$\geq$ HRC58-65	$\geq$ HRC58-65	$\geq$ HRC58-65
Distance between support (mm)	254	254	254	254	254	254
Centering deviation of specimen (mm)	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$
Indicating deviation of lifting height (mm)	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$	$\leq \pm 1$
Height of the load frame (mm)	5,500	5,500	5,700	5,700	6,800	7,000

JB-(C/D) Common Type Metallic Pendulum Impact Testing Machine



Application:

JB-(C/D) common type metallic pendulum impact testing machine is the basic model for impact testing machine. It is used to determine the impact resistance of metal materials under dynamic load and capable of doing a large number of impact tests continuously. The display method for the models is different, respectively there are analog, digital and computer display. For the later two models, it can display the impact absorbed energy, impact toughness, rotation angle of the pendulum, all the testing report can be printed out. It is essential quality control equipments for metal material manufacturer and QC department, and also a necessary instrument of research institutes for new materials research.



Model	JB-300/300D/300C	JB-500/500D/500C	JB-800/800D/800C
Max. impact energy (J)	300	500	800
Impact velocity (m/s)	5.2	5.4	5.9
Raised angle (°)	150		
Anvil span (mm)	40		
Round angle of jaws (mm)	R1-1.5		
Round angle of striking edge (mm)	R2-2.5/R8		
Size of specimen (mm)	10 x 10 x 55		
Power supply	3phs, 380V, 50Hz or 220V,60Hz		
Dimensions (mm)	2124x600x1340	2144x736x1390	2450x1200x 2455
Net weight (kg)	450	650	2300

JB-(C/D) Non-metallic Materials Pendulum Impact Testing Machine

Application:

JB-(C/D) series non-metallic materials pendulum impact testing machine is to determine the impact toughness of plastic, glass steel, plastic pipe, strong nylon, china, clay rock and anti-electric materials. It can do Charpy, Izod, tensile impact, Charpy & Izod, Charpy & Izod & tensile impact test by different anvils and pendulums as the standards of ISO179/180, ASTM D256, JB8761 and ISO9854 etc. Pendulum can carry out the full range of impact tests. A complete range of fully interchangeable hammers and vises allow the operator to perform Charpy, Izod and Tensile impact test at different impact velocities and energies.

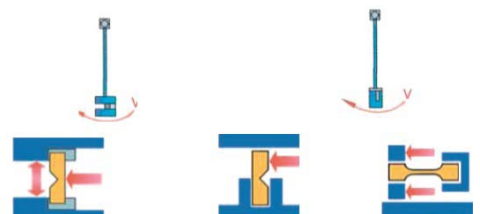
Specifications:

Span of the Charpy Anvil: 40mm, 60mm, 70mm & 95mm

Pre-elevation angle: 160°

Model	Type	Display	Energy(J)	Impact speed(m/s)
JB-I 2.75	Izod	Dial	1, 2.75	3.5
JB-I 5.5			1, 2.75, 5.5	3.5
JB-I 22			2.5, 11, 22	3.5
JB-I 2.75D	Izod	Digital	1, 2.75	3.5
JB-I 5.5D			1, 2.75, 5.5	3.5
JB-I 22D			5.5, 11, 22	3.5
JB-5	Charpy	Dial	1, 2, 4, 5	2.9
JB-25			7.5, 15, 25	3.8
JB-25Z			1, 2, 4, 5/7.5, 15, 25	2.9/3.8
JB-50			7.5, 15, 25, 50	3.8
JB-5D	Charpy	Digital	1, 2, 4, 5	2.9
JB-25D			7.5, 15, 25	3.8
JB-25ZD			1, 2, 4, 5/7.5, 15, 25	2.9/3.8
JB-50D			7.5, 15, 25, 50	3.8
JB-IC5	Izod	Dial	1, 2.75	3.5
	Charpy		1, 2, 4, 5	2.9
JB-IC2522	Izod	Dial	5.5,11, 22	3.5
	Charpy		7.5, 15, 25	3.8
JB-IC25(D)	Izod	Digital	1, 2.75, 5.5, 11, 22	3.5
	Charpy		1, 2, 4, 5/7.5, 15, 25	3.8
JB-IT50(D)	Izod	Digital	1, 2.75, 5.5, 11, 22	3.5
	Charpy		1, 2, 4, 5/7.5, 15, 25, 50	2.9/3.8
	Tensile		15J	

Hammers:



DWC Series Temperature Chamber for Impact Specimen



Model	DWC-30	DWC-60	DWC-80	DWC-100
Temperature range (°C)	Room to -30	Room to -60	Room to -80	Room to -100
Accuracy (°C)	≤±0.5			
Effective working space (mm)	120x120x80			
Specimen dimension (mm)	10x10x50			
Specimen quantity (mm)	More than 60 pcs.			
Cooling media	Alcohol or other			
Power supply (kW)	1.0	1.5	1.5	2.0
Dimension (mm)	800x510x480	800x510x750	800x510x480	1200x700x800

Notes: Room temperature down to -150°C/-196°C cooled by liquid nitrogen can be specially ordered according to user's requirement

DWCT Temperature Chamber for Impact Specimen In Drop Weight Testing

Temperature range	Room to -80°C
Temperature control accuracy	± 2°C
Temperature fluctuation	± 0.5°C
Size of chamber	600x400x200mm
Specimen quantity	18 pcs
Cooling method	Multiple compressors for cooling.
Cooling medium	Absolute alcohol or others



TE-UV2 Manual / Hydraulic Notch Cutter for Impact Specimen

	V type	U type
Notch type	2mm	2mm
Size of specimen	10×10 (7.5 or 5) ×55mm	
Travel of cutting knife	340mm	
Cutting speed	2.5m/min(hydraulic type)	
Dimension	400x350x700 mm	600x500x1200 mm
Weight	100 kg	200 kg



Non metallic Specimen Preparation Equipment

Model CPJ-25 Sheet-punching Machine

This machine is used for machining test samples, such as nonmetallic soft sheets and thin films. Using various kinds of standard cut-off knives, it can accurately and swiftly prepare the required samples.

- Max. travel: 25mm.
- Max. thickness of punching: 2mm.



Model QK-20 Notch Sampling Machine

Specimen prepared by QK-20 Notch Sampling Machine confirms to ISO179, ISO180, GB/T1403, GB/T1483, GB/T8814 requirements on non-metallic specimen preparation;

- Dimensions of the cutters:
- A: 45°C±1°C R0.25
- B: 45°C±1°C R1
- C: 2±0.2



Model ZQK-20 Automatic Notch Sampling Machine



Application:

It is special sampling equipment for automatically preparing notch for non-metallic specimen such as plastic & rubber, and composite etc which can be done impact test by using Charpy, Izod impact testing machine. It is designed according to the requirements of standards such as ISO179, GB/T1043, GB/T1843 etc. it features sample structure, convenient operation etc.

- Milling cutter length: 60mm
- Milling cutter spindle rotary speed: 460rpm Motor power: 180W
- Dimensions of the cutter:
 - ▶ A: $45^{\circ}\text{C} \pm 1^{\circ}\text{C}$ $R0.25 \pm 0.05$
 - ▶ B: $45^{\circ}\text{C} \pm 1^{\circ}\text{C}$ $R1 \pm 0.05$
 - ▶ C: 2 ± 0.2
 - ▶ D: 0.8 ± 0.1
- Outside dimension: 400×350×500mm



Hydraulic Servo Control Compression Testing Machine (Dual Column) TYE-D Series

Application:

This series compression testing machine is mainly designed for compression test of building material items, such as concrete cube, cement specimen, paver materials and related component, etc. With new design idea and advanced technology, this series have more advantages in appearance, operation & applications. It is ideal test equipment for quality control at industry & mineral enterprises, educational teaching in high schools, and technology searching at scientific institutes.



Applicable specimen size:

Extensive ranges for Cubic sample: 100mm, 150mm, 200mm and more; Rectangular sample: 400x200x200mm, 400x200x400mm etc; Cylindrical sample dia.150x300mm, dia.100x200mm, dia. 200x400mm or others as per customer required.

Remark: test space & compression platen can be custom-ized according to specified specimen size.



Model	TYE-1000/2000D	TYE-3000D
Max. Load (kN)	1000/2000	3000
Load measuring range	2-100% of F.S.	
Load accuracy	$\pm 1.0\%$	
Constant loading rate	1-50kN/s (can be adjusted)	1-99kN/s (can be adjusted)
Displacement reading error	0.01mm(can be customized)	
Test space adjusting mode	By dual action actuator	
Upper compression platen (mm)	$\Phi 220$	$\Phi 300$
Lower compression platen (mm)	$\Phi 220$	$\Phi 300$
Distance between two platens (mm)	315/505	505
Distance between columns (mm)	275/385	420
Actuator stroke (mm)	250	
Max. Moving speed of piston	100mm/min	
Power supply	1-phase, 220V, 0.75kW	3-phase, 380V, 2.2kW
Overall dimension of load frame & hydraulic power pack (mm)	620x630x1740 600x600x1030	700x 700x185 0 600x760x1430
Weight	1800kg	2800kg

SCT Series Servo Control Drainpipe Compression Testing Machine

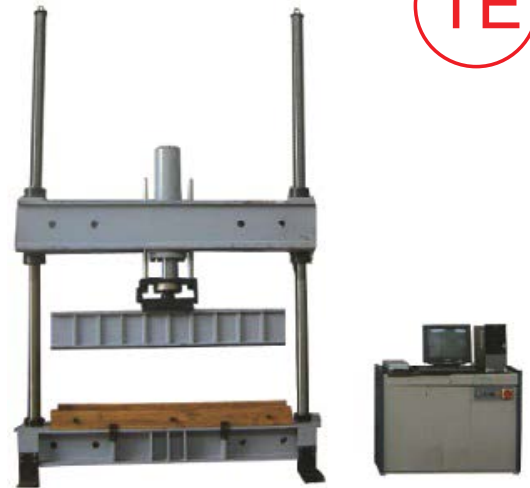


Application:

The cement pipe compression testing machine is designed for the radial compression test of drainpipe and other cement pipes which accords with "Test method of concrete and ferroconcrete drainpipe", concrete and ferroconcrete drainpipe". It is also suitable for the compression test of other metal and non-metal material. This testing machine consists of load frame, oil source, computer and servo unit. The structure is compact and it is very easy to operate.

Load frame:

The load frame has dual columns with top actuator. The base of the load frame is made of steel plate and it is convenient to take in and off the specimen (drainpipe and other concrete pipe). The oil power source is with constant servo with flow 4.1L/min, 26Mpa. The servo valve is Moog or Atos. Load is measured by load cell. The deformation can be measured through two digital dial indicators



Model	SCT-100	SCT-200	SCT-500	SCT-600	SCT-700
Max. Load (kN)	100	200	500	600	700
Load measuring range (kN)	2-100	4-200	10-500	12-600	14-700
Load measuring method	Load cell				
Precision grade	±1%				
Test space (mm)	1000		2000		
Upper platen size(mm)	1000×100×120 (with rubber base plate of 25-30mm, Shore hardness is 45-60)		2000×120 ×30, (with rubber base plate of 25-30mm, Shore hardness is 45-60)		
Lower platen size(mm)	1000×60×30 (With 2 wooden supporting beam, each dimension 1100x60x80mm. The net space between two beams is 1/12 of the diameter of pipe)		2000x(130-300)x150 (With 2 wooden supporting beam, each dimension 1100x60x80mm. The net space between two beams is 1/12 of the diameter of pipe)		
Compression platens for concrete(mm)	Ø230		Ø230		
Piston Stoke (mm)	200		200		
Space between two Columns (mm)	1200		2200		
Load speed(mm/min)	0.5-100		≥50		
Power	3 phases, 380V, 50Hz				
Dimensions(mm)	1400x350x1950		2770x800x4300		
Weight (kg)	Approx. 1800		Approx. 4500		

YAW-G3000 Computer Servo Control Testing Machine for Rock Stiffness

Application:

This testing machine is used for compression static and fatigue test for concrete & rock material under different control parameters. The test includes compression, shearing test, fatigue test, three-point bending testing & fatigue test. Meanwhile, it can also realize the automatic control, measuring, data processing; curve analyzing, result displaying and test report printing in the process of various tests. This system can do full process test under stress-strain.

Specifications:

- Max. Load capacity : 3000KN
- Measuring range : 60-3000KN
- Load Accuracy: ±0.5% (Under the condition of less than 1000kN loading, it adopts pressure transducer mounted on oil cylinder used for measuring oil pressure); ±1% (Under the condition of more than 1000kN loading, it adopts load transducer mounted under compression plate used for measuring test load)
- Max. load speed: 400mm/min.
- Displacement resolution: 0. 01mm
- Deformation accuracy: 0.0001 (Adopting Japanese imported differential transformer)
- Max. Stroke of piston: 200mm
- Size of compression plate: φ300mm



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