Abrasion/Slip Testing

Akron Abrasion Tester BS903, GB/T 1689

This tester is designed to use together with a special balance for testing the abrasive consumption of sole, tire, belt of tank etc. of rubber products.

Technical Specifications

Specimen	: External dia 2.5" internal dia 0.5, Thickness 0.5, Circumference 220mm, Hardness 60 ~ 70 °
Grinding Wheel	: External dia 150mm (W)25mm, 36# grit, grade P
Specimen Slanted Range	: 0 ~45 ° (Test angle 15 °)
Specimen Rotating Speed	: (BS) 250±5r/min, (GB) 76±2r/min
Load	: 2.6 lb
Balance Weight	: 2.5kg
Counter	: LED 0 ~ 999,999

Ref. No : RG10 B001
Model : RG-M302-A

Martindale Abrasion Tester

This machine is ideal for determining the abrasion existence of upper. lining socking, and similar types of shoe materials, particularly those made of fabric. The specimens are capably tested for your pieces per time and rubber over the abrassive in all directions in a complex, repetitive pattern (a lissajous figure) and, at the same time, the holder rotates.

Technical Specifications

Specimen	: ϕ44±lmm*4
Load	: 595g, 795g
Counter/time	: LED ~ 999,999

Ref. No : RG10 B002
Model : RG-M303-M

Taber Type Abrasion Tester (DIN 53754, 53799, 53109, 52347, TAPPI T476, ASTM D3884 ISO 5470 1)

Use for cloth, paper, paints, plywood, leather, tile, glass, rubber etc. The testing method is executed to make specimen carrying a pair of grinding wheels and adding required loads. When the specimen is revolving which can drive grinding wheels to abrade specimen. The weight of abradion loss is the difference of weight for specimens before and after testing.

Technical Specifications

Specimen	: Interior : dila, (D)3mm
Grinding Wheel	: ϕ2" (Max.45mm)(W) 1/2"
Space Between Grinding Wheels	: 63.5mm
Grinding Wheel and plate's Space	: 37 ~ 38mm
Grinding Trail	: External dia3'/", Interior dila,2'/ area 30mm'
Rotating speed	: 60/72r/min
Load	: 250,500,1000g
Counter	: LED 0 ~ 999,999
Distance Between Specimen and Hose	: 3mm

Ref. No : RG10 B003
Model : RG-M304-T

NBS Rubber Abrasion Tester- ASTMD1630

A load will be put on the specimen to be ground with grinding paper stuck onto a rotating drum to check the consumption.

Technical Specifications

Specimen	: 25.4 x 25.4 x (D) 6.35mm
Load	: 2265g, 3 sets
Drum Dia	: ϕ150mm
Rotating	: 45±5r/min
Grinding paper	: 40#grit
Counter	: LED, 0 ~ 999,999
Dust suction	: 2.1kg/cm²

Ref. No : RG10 B004
Model : RG-M305-N

Shoe Abrasion Resistance Tester-GB/T 3903-2

This tester is applicable to determine the abrasion resistance of the sole and shaping sole of a shoe, utilise the revolving grinding wheel pressing vertically onto the specimen at the specified load and speed to assess its abrasion trace when to reach a certain time.

Technical Specifications

Grindbing wheel	: ϕ20±0.1min, 4±0.1mm(thickness)
Rotate speed	: 191±5r/min (100~300r/min)
Test time	: 20 min (adjustable)
Load	: 4.9 N
Counter	: LED 0 ~ 999,999
Dial indicator	: 0.01 ~ 1mm
Weighing range/accuracy	: 5000g, 5g

Ref. No : RG10 B005
Model : RG-M306-GB

Shoe Lace Abrasion Tester- Din-4843, QB/T2226, SATRA DM 154, ADIDAS

This tester simulates the lace under the reciprocal abrasion at a specified tension to determine its life cycle. The movable lace forms an isosceles triangle at the crossing point with the stationary lace and the parts of the lace are at an angle of 52.5±5°. The load on the stationary site is 250g. The movable site is driven by motor at 60r/min to create reciprocating horizontal movement with a stroke of 35mm. The test should be performed until a test piece breaks and or reaches the pre-set number of cycles.

Technical Specifications

Model	DIN-4843	QB/T 2226	SATRA DM 154	ADIDAS
	345mm(max.), 310mm(min.)			314mm(max.)
Space Between Moveable & Stationary Site				301mm(min.)
Test Stroke	35±2mm	35±2mm	35±5mm	40mm
Test Speed	60±3r/mm	60±3r/mm	60±6r/mm	60±3r/mm
Weight	250±10g	250±10g	2.54±0.03N	250g&1500g
Spacer	4 sets			
Template	Angle 52.2°C Space 120mm			
Counter	LED 0 ~ 999,999			

Ref. No : RG10 B006
Model : RG-M307-E

Scott Type Crease-Flex Abrasion Tester - JIS-K6328,L 1005

Clamp test samples in grips crossly. For various materials of test samples exert appropriate compression force. During test, this tester creases and flexes test samples. After a specified number of abrasion, take off test samples to check if they are cracked, wrinkled or discolored. This tester automatically counts and stops.

Technical Specifications

Specimen	: 100 x 25mm, 2 pieces
Distance between guips	: 40mm
Compression force	: 0.5 ~ 5kg adjustable
Test stroke	: 50mm, adjustable
Test speed	: 120cpm
Counter	: LED 0 ~ 999,999

Ref. No : RG10 B007
Model : RG-W212

Din Abrasion Resistance Tester - DIN 53516, ISO 4649, GB/T 9867

The determination of the abrasion of elastomers, rubber, soft synthetics, leather and similar materials is of special importance for the classification of the resistance to abrasive wear its with characters of high efficiency, good reproducibility and easy operation.

Technical Specifications

Specimen	: ϕ16mm, thickness 6 ~ 15mm
Test Load	: 5N, 10N
Grip Lateral Displacement	: 4.2mm (per rotation of drum)
Dia.of.Drum	: 150mm
Length of Drum	: 460mm
Speed of Drum	: 40rpm
Abrasion path	: 40m(20m) correspond to rotations of the drum
Abrasion speed	: 0.32m/sec
Inclination	: 3° angle between the shaft of specimen support and the vertical of the drum.

Ref. No : RG10 B008
Model : RG-M301-D

Toplift Abrasion Tester

Place the toplift onto the abrasion paper mounted on this tester. Abrade the specimen under the specified load at a certain abrasion times to access its abrasion degree.

Technical Specifications

Load	: 1400g, 1700g, 2200g
Abrasion distance	: 100mm
Rubbing hammel	: 38 x 36mm
Counter	: LED 0 ~ 999,999

Ref. No : RG10 B009
Model : RG-S402-C

Sample Buffing Machine

This machine will be able to grind the surface of the material and take the necessary thickness of materials for testing. Operated by wrench, it could be adjusted to the position of up/down, left/right, back/forth, for various tests.

Technical Specifications

Grinding wheel	: 36# , ϕ6"
Speed	: 50Hz ~ 1420 r.p.m. 60Hz ~ 1720 r.p.m.

Ref. No : RG10 B010
Model : RG-M308

Slip Test (articulated strut)- ASTMF1677

This tester, the protable inclinable articulated strut slip tester, Is used to determine the slip resistance of footwear sole, heel or related materials against planar walkway surface or walkway surrogates under dry, wet or contaminated conditions.

Technical Specifications

Load	: 10 lb
Slide Guiding rod	: 12mm
Specimen Size	: 3" x 3" (76.2 x 76.2mm)
Test Surface	: Above 4" x 4"
Thickness of main frame	: 3/4"
Thickness of rotating suppn	: 1.25" (31.8mm)
Ground limitation	: Applicable to a level rigid ground
Drop height	: 1/8" ~ 1/4" (by increasing/decreasing pads for control; measured by the thickness gauge)

Ref. No : RG10 B011
Model : RG-Q901-M2

Computer System Non-Slip Property Tester

The machine tests coefficients of friction of sole and determine non-slip property of shoes. It's also capable of making a comparison among different coefficients of friction during compounding rubber materials and or adding the additives in quantity and a variety of non-slip chemicals as the base of developing chemicals.

Technical Specifications

Test speed : 50 ~ 250mm/min
Test travel : 200mm
Load : 1kg x 1, 2kg x 2, 5kg x 1, 10kg x 2
Friction platform : 600 x 250mm
Surface of road : Cement, asphalt, plank (to be wet freely)

Ref. No : RG10 B012
Model : RG-Q901-PC

Appearance

Super Daylight - JIS-Z8724, CIE-30

Due to the different light source, illumination, it is not easily to get a uniform environment. And this is specially designed to offer the standard & objective illumination in order to facilitate accurately color matching and adjudging.

Technical Specifications

Light kinds	: Artificial daylight to D_{65}	6500° K	2pcs
	Standard light type A	2800° K	2pcs
	High energy fluorescent light TL84	4000° K	2pcs
	Ultra-violet light long wave	360 nm	1pcs
Accum. Timer	: 0 ~ 1000 (hour)		
Interior (WXDXH)	: 60cm X 50cm X 46cm		

Ref. No : RG10 C001
Model : RG-S401

Crock Meter - ASTM-D2054-63,AATCC-8-52, 1961,1972,ISO-105-C06

To test dyed textile, decolored extnt of leather after abrasion. At first, coat abrasive hammer with dry or wet white cotton cloth then abrade repeatedly to specimen clamped on testing table for ten times within 10 seconds to examine grade of colour dying firmness.

Technical Specifications

Ref. No	**RG10 C002**	**RG10 C003**
Model	**RG-S402-STM-A**	**RG-S402-STM-B**
	Motor/double hammers	Manual/single hammer
Specimen	140x50mm	140x50mm
Load	9N	9N
Motor	1/4HP	-
Rubbing speed	60 c.p.m.	-
Rubbing space	100mm	100mm
Rubbing hammer	Ø16 or 19x25mm optional	Ø16 or 19x25mm optional
Counter	LED 0 ~ 999999	0-9999 mechanical counter

Dyeing Rubbing Tester - JIS-L0801,0823, 0849,1006,1084,K6328,P8136

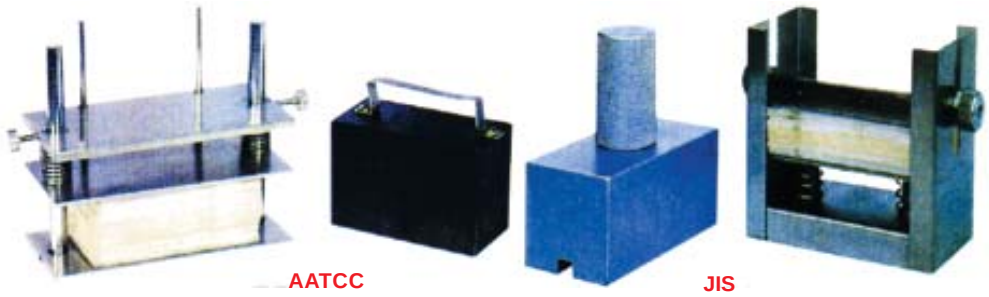
Ref. No : RG10 C004
Model : RG-S403

Coat surface of abrasive hammer of the tester with dry or wet white cotton cloth then abrade colored specimen with a certain loading and fixed times to get color-dying abrasive firmness. Also, the abrasion test or organic solvent can also be executed.

Technical Specifications

Specimen : 22 x 3cm
White cotton cloth : 5 x 5cm
Rubbing speed : 30 c.p.m.
Rubbing hammer load : 200g
Supplementary load : 300g
Rubbing hammer size : 2 X 2cm (R) 45 X 45mm
White cotton cloth stain area : Approx. 1cm
Rubbing space : 100mm
Counter : LED 0 ~ 999999

Perspiration Meter - AATCC-RR52, ISO-105E04,JIS-L0822, 0846,0847,0854



Completely and averagely soak specimen into acid and alkaline artificial sweat liquid for 30 minutes, use the meter to press it then put into oven at temperature of 37°C for 4 hours. Take out specimen from oven to appraise grade of dry-endurance against comparison of grey scale mark after dry.

Technical Specifications

Specification	Specimen	Acrylic plate	Load
ISO	40 x 100mm	115 x 60 x (D)1.5mm	5kg
ANSI	50 x 57mm	76 x 64 x (D)6mm	10 lb(4.536kg)
JIS(A)	60 x 60mm	115 x 63 x (D)1.5~3mm	4.6kg
JIS(B)	40 x 100mm	115 x 63 x (D)1.5~3mm	5.1kg

Ref. No : RG10 C005
Model : RG-S407

9 Step Chromatlc Transference Scale (made in USA)

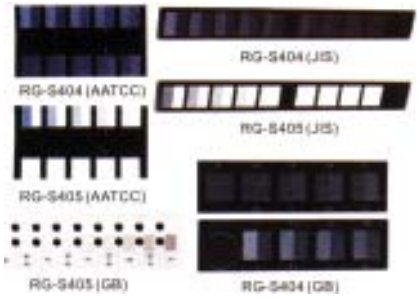
Contrast and judge the fading and or dirty degree of colored specimen after firmness of dyeing test.

Technical Specifications

Grade : 5, 5.4, 4, 3.5, 3, 2.5, 2, 1.5, 1,
Dimension : 165 x 240mm

Ref. No : RG10 C006
Model : RG-S406

RG-S404 Gray Scale (to access color change)
RG-S405 Gray Scale (to access color stain)
ISO-R105/1, JIS-L0804, L0805



RG-S404 for assessing specimen's change in color after color fastness test.
RG-S405 for assessing specimen's stain degree after color fastness test.

Technical Specifications

Grade : 5, 4 ~ 5, 4, 3 ~ 4, 3, 2 ~ 3, 2, 1 ~2, 1,
Dimension : 60 x 235mm

Ref. No	Model
RG10 C007	RG-S404
RG10 C008	RG-S405

Bursting Strength Tester-ASTM-D2210, TAPPI-T403,JIS-P8112,L1018, L1004, L8131,GB/T6545

RG-2701-AD

RG-2701-A1

This machine is fit for products which are packaged by corrugated by corrugated paper such as electronic instruments, electric wire, hard wares, bike, valise, food, shoe, furniture, …etc., to test the bursting resistance strength of paper box; it can also test the cloth and synthetic leather. The RG-Z701-AD type of bursting strength tester is adopted with signal output of pressure. While specimen is breaking, the max breaking value will be kept with the alarm buzzer & alert light automatically. It's accuracy has promoted 20 times more than the traditional gauge.

Technical Specifications

Ref. No **Model**	**RG10 D001** **RG-Z701-A1**	**RG10 D002** **RG-Z701-AD**
Sensing method Indicating method Pressure gauge diameter	Pressure gauge Needle indication ϕ4"	Pressure transducers LED digits -
Capacity (optional) High pressure Low pressure	 0 ~ 20, 0 ~ 50kg/cm² 0~3,0~6,0~12,0~15 kg/cm²	 0 ~ 100 kg/cm² (0.1kg/cm²) 0 ~ 16 kg/cm² (0.2kg/cm²)
Hydraulic Speed High pressure Low pressure	 170 ± 10ml/min 95 ± 10ml/min	
DIA OF Clamp Ring Upper ring Lower ring	 High pressure ϕ31.5mm, Low pressure ϕ30.48mm High pressure ϕ31.5mm, Low pressure ϕ31.75mm	
Hydraulic Oil	Glycerine 85% Distill 5%	

Safety Footwear Impact Tester-ANSI-Z41, EN344,CSA-Z195,LD50

This machine, incorporating a steel striker adaptered to fall freely on vertical guides from a predetermined height to give the required impact energy to the toe of safety footwear for measuring the degree of the dent. In addition, the toecap should not develop any cracks on the test axis which go through the material.

Technical Specifications

Drop weight : (EN) 0 ~ 1300mm
Impact energy : (EN) 200J, (BS,ANSI) 100±2J
Striker : (EN,LD)r3±0.1mm, (ANSI) ϕ25.4mm
Striker weight : (EN) 20±0.2kg, (BS,ANSI) 22.7kg, (LD) 23±0.2kg, 5±0.1kg

Ref. No : RG10 D003
Model : RG-J610-H

Digital Drop-Impact Tester

It is used to test plastic pipe impact resistance. Suitable for plastic and construction material input resistance test.

Features

- Automatic
- Able to prevent second impact from rebound

Technical Specifications

Impact Energy : 300J
Testing Height : 2m
Max sample size : ϕ400mm
Accuracy : ≤ ± 1%
Impact Head Weight : 2.5 – 15Kg
Input Dimension : R5mm, R10mm, R30mm

Ref. No : RG10 D004
Model : RXL-300

Heel Fatigue Tester-BS-5131

This tester is used to determine the resistance of medium and high heels of ladies shoes under repeated small impacts to the heel tip. A heel is subject to blows, each of specified energy, delivered by a pendulum under a specified frequencies. Testing continues until failure of the heel takes place, or until satisfactory fatigue resistance is obvious.

Technical Specifications

Impact Energy	: 0.68J/blow
Impact Frequency	: 60blows/min
Impact Shaft	: ϕ12.5mm
Pendulum Bob	: ϕ57mm, 20mm (thickness)
Striker Head	: 20X6X35mm(WXDXL) 3mm (radius)
Adjustable range of base clamp	: ~ 90mm(H), ~ 80mm(W), 0 ° ~ 180 ° (angle)
Test Angle	: 90 °
Counter	: LED, 0 ~ 999999

Ref. No : RG10 D005
Model : RG-610-HF

Charpy / Izod Digital Impact Tester

Charpy/ izod impact tester is used to evaluate impact resistance of material.

Technical Specifications

	Charpy					Izod		
Ref. No	**RG10 D006**	**RG10 D007**	**RG10 D008**	**RG10 D009**	**RG10 D010**	**RG10 D011**	**RG10 D012**	**RG10 D013**
Model	**RXJ-300**	**RXJ-150**	**RXJ-30**	**RXJ-15**	**RXJ-7. 5**	**RXJ-30**	**RXJ-15**	**RXJ-7.5**
Impact energy	300J	150J	30J	15J	7.5J	30J	15J	7.5J
Speed	5.2m/s	5.2m/s	3.8m/s	3.8m/s	3.8m/s	3.35m/s	3.35m/s	3.35m/s
Sample size	10x10x55	10x10x55	(3-10) x 15 x 120			(4-12.7) x 12.7 x 6.35		

Pipe Busrting Strength - Digital Display

It is used to perform hydrostatic test for plastic pipes under specified temperature and pressure.

Features

- Computer control.
- Digital Display

Technical Specifications

Pressure range	: 10 Mpa-80 Mpa (Selectable)
Accuracy	: ±1%
Temperature	: (Room Temp.) 95°C without cooling system, 15°C - 95°C with cooling system
Timer	: 1 min – 10000h
Testing multiple	: 3 (selectable)

Ref. No	Model
RG10 D014	REM-A
RG10 D015	REM-B

Automatic Torsion Testing Machine

Ref. No : RG10 D016
Model : RNJ-1000

Ref. No : RG10 D017
Model : RNJ-5000

This machine is mainly applicable to the torsional strength test for all materials, and with additional accessories, the torsion test for parts and components, making it indispensable to quality inspection units, universities and colleges, research institutes, and industrial and mining enterprises.

Features

- Torsional angle resolution: 0.001;
- Minimum torque resolution: 1/500000 of the full range of the sensor;
- With a microcomputer and small angle measurement mechanism, the torsion modulus and 0.2 can be determined precisely;
- Simple operation, safe and stable;

Technical Specifications

Ref. No Model	RG10 D016 RNJ 5000	RG10 D017 RNJ 1000
Model and specification (N.M)	10 – 5000	2 – 1000
Relative error of measuring torqur (%)	±1	±1
Measuring range of distortion angle (°)	0 - 100000	0 - 100000
Relative error of measuring distortion angle (%)	±1	±1
Maximum distance between grips (mm)	1500	550
Distortion speed (° / min)	0.01 - 1000	0.01 – 1000
Specimen (mm)	ϕ60	ϕ6 - ϕ12

Environmental Tester

Discoloration Meter - ASTM D1148

Model : RG-H503-U

Model : RG-H503-UB

Simulate the circumstances of sunshine radiation in containers to test the resistance to discoloration of shoes materials. In this way, chemical formula of shoes materials may be improved and determined.

Technical Specifications

Ref. No Model	RG10 F001 RG-H503-UA	RG10 F002 RG-H503-UB
Light source	1 sunlamp	2 germicidal lamp
Specimen pan	ϕ 30cm (revolving) 3±1r/min	
Temp.	Room Temp ~+120°C	
Heating method	Hot-air circulation	
Heat reserving material	Glass fiver	
Light irradiance	Adjustable	
Timer	LED display 0~999,999 hr	LED display 0~999,999 hr
Motor	1/4HP	
Interior (WxDxH)	50 x 50 x 60cm	50 x 30 x 36cm

Aging Oven - ASTM-D2436, CNS3556,742

To make the deterioration of vulcanized rubber for figuring the changing rate of pulling and elongation before/ after heating. In general, the fest for a whole day is executed in aging oven within 70°C to be equivalent to the specimen having been using for six months in natural environment.

Technical Specifications

Ref. No Model	RG10 F003 RG-H501-M	RG10 F004 RG-H501-L
Interior	40 x 40 x 45cm	50 x 50 x 60cm
Max. Temp.	Room temp~200°C or 300°C	Room temp~200°C or 300°C
Swivel Speed of Rack	5 ~ 10r/min	5 ~ 10r/min
Electricity	3KW	4.5KW

Environmental Tester

RG-H505 Single Stage Temperature & Humidity Tester
RG-H505B Programmable Temperature & Humidity Tester

It's also called environment tester for testing functions of heat endurance, wet-endurance suitable for quality control of factories of electronics, electric appliance, foodstuffs, automobiles, metal, chemicals plywood etc.

Features

LED display 0.1°C, resolution fix point P.I.D. Control.

Technical Specifications

Ref. No Model	RG10 F005 RG-H505-AM	RG10 F006 RG-H505-AL	RG10 F007 RG-H505-BM	RG10 F008 RG-H505-BL	RG10 F009 RG-H505-CM	RG10 F010 RG-H505-CL
System	Balanced temperature & humidity control system					
Humid. Range	30 95%R.H					
Temp. accuracy	±0.3°C					
Humid. Accuracy	±2.5%R.H					
Temp. uniformity	±0.7°C					
Humid. Uniformity	±3%					
Temp.range	-70°C + 100°C(+150°C as instructed)		-40°C + 100°C(+150°C as instructed)		-20°C + 100°C(+150°C as instructed)	
Heating up	-70°C + 100°C within 60min		-40°C + 100°C within 45min		-20°C + 100°C within 35min	
Heating down	+20°C - 70°C within 60min		+20°C - 70°C within 60min		+20°C - 70°C within 60min	
Interior dimension (WxDxH)	50 x 75 x 60	60 x 85 x 80	50 x 75 x 60	60 x 85 x 80	50 x 75 x 60	60 x 85 x 80

Ref. No Model	RG10 F011 RG-H505-A7M	RG10 F012 RG-H505-A7L	RG10 F013 RG-H505-A7X	RG10 F014 RG-H505-A4S	RG10 F015 RG-H505-A4M	RG10 F016 RG-H505-A4L
System	Balanced temperature & humidity control system					
Humid. Range	20 ~ 98%R.H					
Temp. accuracy	±0.3°C					
Humid. Accuracy	±2.5%R.H					
Temp. uniformity	±0.7°C		±1.0°C	±0.7°C		
Humid. Uniformity	±3%		±5%	±3%		
Temp.range	-70°C + 100°C(+150°C as instructed)			-40°C + 100°C(+150°C as instructed)		
Heating up	-70°C + 100°C within 60min			-40°C + 100°C within 45min		
Heating down	+20°C - 70°C within 60min			+20°C - 40°C within 60min		
Interior dimension (WxDxH)	50 x 75 x 60	60 x 85 x 80	100 x 100 x 80	50 x 60 x 60	50 x 75 x 60	60 x 85 x 80

Ref. No Model	RG10 F017 RG-H505-A4X	RG10 F018 RG-H505-A2M	RG10 F019 RG-H505-A2L	RG10 F020 RG-H505-A2X
System	Balanced temperature & humidity control system			
Humid. Range	20 ~ 98%R.H			
Temp. accuracy	±0.3°C			
Humid. Accuracy	±2.5%R.H			
Temp. uniformity	±1.0°C	±0.7°C		±1.0°C
Humid. Uniformity	±5%	±3%		±5%
Temp.range	-40°C + 100°C(+150°C as instructed)	-20°C + 100°C(+150°C as instructed)		
Heating up	-40°C + 100°C within 45min	-20°C + 100°C within 35min		
Heating down	+20°C - 40°C within 90min	+20°C - 20°C within 60min		
Interior dimension (WxDxH)	100 x 100 x 80	50 x 75 x 60	60 x 85 x 80	100 x 100 x 80

Salt Spray Tester-ISO-3768, 3769, 3770 ASTM-B117, B268 JIS-D0201, H8502, H8610, K5400, CNS.

The salt spray tester is used to test the anti-erosion quality of the surface of all materials after the rust-proof of painting, coating, electroplating, anoding and rust-proof of greasing.

Technical Specifications

Ref. No Model	RG10 F025 RG-H510-M	RG10 F026 RG-H510-L
Test chamber	270L	108L
Test chamber	NSS.ACSS 35°C±1°C/CASS 50°C±1	
Saturation tank	NSS.ACSS 47°C±1°C/CASS 63°C±1	
Interior dimension (WxDxH)	96 x 60 x 50cm	60 x 45 x 40cm
Test water	25 L	15 L

Thermal Shock Test Chamber

Features

- High temperature chamber : +80°C ~ +200°C
- Low temperature chamber : -10°C ~ -35°C/-60°C/-70°C
- Testing temperature chamber : +60°C ~ +150°C
  - 10°C ~ -35°C/-55°C/-65°C
- Accuracy of temperature distribution : - ±2°C
- Duration of temperature conversion : - 5 ~ 15min.

Technical Specifications

Internal chamber dimension	External chamber dimension	Testing temperature range
A) 35 x 35 x 40	160 x 190 x 140	1) -10°C ~ -35°C
B) 50 x 40 x 40	180 x 200 x 140	2) -10°C ~ -55°C
C) 60 x 40 x 45	190 x 210 x 140	3) -10°C ~ -65°C
D) 65 x 60 x 65	220 x 245 x 200	

Ref. No : CK10 F031

Vacuum Cold Plate System

Ref. No : CK10 F032

LCF System

Ref. No : CK10 F033

Highly Accelerated Stress Test Chamber

Technical Specifications

Temperature range : 105°C ~ 162°C
Humidity range : 75% RH ~ 100%RH
Accuracy : ±0.5°C (100% RH) , ±0.7°C(75% RH)
Working Pressure : 0.2`0.4kg/cm² (5.0 amt)

Sample program : The condition of end is natural cooling and end mode

Ref. No : CK10 F034

Walk-in Environmental Test Room

Technical Specifications

Temperature range : 70°C ~ -40°C
Humidity range : 30% RH ~ 90%RH
Accuracy : ±0.3°C, ±2.5%RH

Ref. No : CK10 F035

Walk-in Burning Test Room

Technical Specifications

Temperature range :
Ambient +10°C ~ -70°C

Ref. No : CK10 F036

Laboraroty Temperature & Humidity Controller

Technical Specifications

Temperature range : 20°C ~ 30°C
Humidity range : 40% RH ~ 70%RH

Ref. No : CK10 F037

Flexibility / Endurance / Water Resistance

Ross Flexing Tester - ASTM D1052,ISO5423,4643

Specially test the flex-endurance of rubber, sole, PU……etc. materials. Observe whether the specimen develop the damage and crack at right angle after repeated bending.

Technical Specifications

Specimen : (L) 6" x(W) 1'(D) sole0.25", rubber 1/2" ~ 1/8"
Grips : 6 (sets), it can test 12 pieces
Flexing angle : MAX. 90°
Test speed : 100±3 r/min
Counter : LED 0 ~ 999,999

Ref. No : RG10 G001
Model : RG-W203-R

Shoe Flexing Tester - ISO5423,4643

This machine is designed to test the bending durability and inspect the breakage nature of shoes so as to improve the quality.

Technical Specifications

Shoe no : 18 – 45
Flexing angle : 45°, 60°, 90° (adjustable)
Test speed : 100±3 r/min
Counter : LED 0 ~ 999,999

Ref. No : RG10 G002
Model : RG-W201-S

Dematttia Flex-Cracking Tester - JIS K6260, ISO 132, ASTM D813, D430, BS-903, GB/T 13934, GB/T 13935

Clamp the specimen in grip and flex it constantly, then observe the crack degree to realize or compare its flex-endurance after flexibility fatigued. The machine is suitable for cracking test or rubber, leather, EVA, sole,….etc.

Technical Specifications

Specimen : (L) 140 ~ 155x (W) 20 ~ 25x (D) 6mm
Grip space : 19 ~ 75mm, 57 ~ 75mm (optional)
Test speed : 300 r/min
Counter : LED 0 ~ 999,999

Ref. No : RG10 G003
Model : RG-W205-D

Freexing Tester

This machine test cold-endurance of rubber, plastic, shoe, synthetic leather…… etc. It's helpful for analyzing both materials and products properties in the cold environment. The test chamber can be equipped with a variety of flexing/ bending grips which are made by stainless steel. There are the following models to dynamically test the specimens in cold environment. The system employees electrical LCD counter whose capacity is from 0 to 9999999.

Technical Specifications

Ref. No **Model**	**RG10 G004** **RG-H504-D30**	**RG10 G005** **RG-H504-D50**
Temp. range	Room temp ~ -30°	Room temp ~ -50°
Shoe no	18 ~ 45	18 ~ 45
Interior	60 x 50 x 60cm	
Temp accuracy	±0.3°C	
Temp uniformity	±1°C	
Cooling down	Within 60 min	Within 70 min
Refrigerator system	Air cooled. Digital temp. controller, Single stage, hermetic compressor	
Refrigerator	AJB-7510 JXD, 1ϕ , AC 220V	
Refrigerant	R-404	R-404, R-23
Volume of refrigerant	0.5 ~ 0.8kg	

Vertical Type Freezing Tester - ASTM D1790,D1593, JIS K6545

This machine test cold-endurance of rubber, plastic, shoe, synthetic leather… etc. it's helpful for analyzing both materials and products properties in the cold environment. The test chamber can be equipped with a variety of flexing/bending grips grips which are made by stainless steel. There are the following models to dynamically test the specimens in cold environment. The system employees electrical LCD counter whose capacity is from 0 to 9999999.

Technical Specifications

Ref. No **Model**	**RG10 G006** **RG-H504-V30**	**RG10 G007** **RG-H504-V50**
Temp. range	Room temp~ -30°	Room temp ~ -50°
Shoe no	18 ~ 45	
Interior	50 x 50 x 60cm	
Temp accuracy	±0.5°C	
Temp uniformity	±1°C	
Cooling down	Within 60 min (approx.)	
Refrigerator system	Single stage, hermetic compressor	
Refrigerant	With environmental protection	

Bally Leathers Flexing Tester - BS-3144, JIS K6545

Place the specimen in position and bend it repeatedly until it breaks. Record the bending times. This device is suitable to test thin leather products for vamp, dress cloth and bags.

Technical Specifications

Grips (optional)	: (A) 6 sets, (B) 12 sets
Specimen	: 70 x 45mm
Flexing Angle	: 22.5°
Counter	: LED 0 ~999,999
Speed	: 100±5 cycles/min

Ref. No : RG10 G008
Model : RG-W202

Shoe Flexing Tester-GB/T3903.1

This tester Is used to determine the flexing durability for shoe or shoe sole at room temperature. Flex the specimen under a specified angle and frequency to assess its cracking degree and observe the change of it's upper.

Technical Specifications

Grips	: 2 sets
Flexing Angle	: 50° ± 1° (0° ~ 50°, adjustable)
Test speed	: 230±10r/min (100 ~ 300r/min adjustable)
Counter	: LED 0 ~999,999

Ref. No : RG10 G009
Model : RG-W207-GB

Upper Material Flexing Tester

It is used to assess the tendency of all type of shoe upper materials such as leather, poromeric, fabrics, plastic-coated fabrics and upholstery coverings to crack or break as a result of flexing in wear. It allows 4 samples to be tested simultaneously.

Technical Specifications

Specimen	: 64 x 64mm
Fixture	: 40°, V-shape, Arc-radius 6.4mm
Flex speed	: 300±30 cycles/min
Flex space	: 19±0.5mm
Sampling	: 12pcs
Counter	: LED 0 ~999,999

Ref. No : RG10 G010
Model : RG-W208-E

Outsole Belt Flexing Tester-SATRA TM133

The belt flexing machine provides one of the best indications of cracking of shoe sole due to flexing in wear. The sole forepart is attached to an endless belt which passes around two pulleys, the large one provides the rotation whilst the small one determines the severity of the flexing action. It is supplied with three small pulleys of varying diameters to increase or decrease the amount of flexing.

Technical Specifications

Belt length	: 1930±50mm
Belt speed	: 90 cycles/min
Dia. Of large roller	: ϕ225mm,
Dia. Of small roller	: ϕ60mm, ϕ90mm, ϕ120mm
Sampling	: Max. 6 pcs
Counter	: LED 0 ~999,999

Ref. No : RG10 G011
Model : RG-W204-STM

Whole Sole Flexing Tester- EN 344, SATRA TM161

This machine is used to determine the resistance of materials to cut growth during repeated flexing. It's especially applicable to outsoles of footwear including sole constructions. Use a cutting tool to pierce the specimen between the cleats at three points along the line of maximum bending stress. By the specified speed and times of 90 bending action to inspect the cut's growth with a measuring.

Technical Specifications

Bending angle	: 90°
Mandrel diameter	: ϕ30mm
Bending speed	: 125 ~ 150 cycles/min
Width of grips	: 144mm
Sampling	: 3pcs
Counter	: LED 0 ~999,999

Ref. No : RG10 G012
Model : RG-W206-E

Shoe Flexing Waterproofness Tester-SATRA PM77

It determines the water resistance and durability of flexing for shoe immersed in water. It will stop automatically after the preset numbers or predetermined time are reached. It's also adopted with advanced sensor to detect and indicate even the water being permeated inside the footwear lightly to avoid the judging errors by naked eyes.

Technical Specifications

Test range	: USA size from children's shoe No. 12 up to adult's No. 13
Test volume	: 2 pieces (individually detected)
Flexing speed	: 60/140r/min (optional)
Flexing angle	: 10°,20°,25°,35°
Counter/ Timer	: LED 0 ~999,999
Water content	: 7.6 litre

Ref. No : RG10 G013
Model : RG-W209-SW

Maeser Water Penetration Tester-ASTM-D2099,SATRA PM-34,ALCA-E56

The shoe upper leather maser water penetration tester is complied with ASTM-D2099 standard; place magnetic stainless steel balls into the specimen and measurement of penetration of specimen by flexing action. Operation will be automatically stopped and displayed the time and count when the water has permeated inside of the specimen or while preset time or count is reached.

Technical Specifications

Sampling	: 1 ~ 4 sets
Specimen	: 4" x 4" ±0.125" (101.6 x 101.6±3.2mm)
Load	: Steel ball ϕ1/8"(3mm) Total weight 135±5g each specimen Is required about 1000pcs.
Storke	: 1"(approx.29°)
Speed	: 90cpm
Counter	: 4 sets LED 0 ~999,999

Ref. No : RG10 G014
Model : RG-W210-MW

Bally Waterproofness Tester-DIN-53338

Test various of shoe upper material of leather, synthetic leather, cloth……etc. for water penetration, which is taking the specimen, immersing in water and flexing at a constant speed.

Technical Specifications

Test specimen	: 4 sets
Storke	: 2,3,4,6mm settable
Speed	: 60cpm
Counter	: LED 0 ~ 999,999
Time	: LED 1 ~ 999 hr.

Ref. No : RG10 G015
Model : RG-W211-DW

Fibreboard Flexing Tester- BS 5131,QB/T1472

Ref. No : RG10 G016
Model : RG-Q906-F

This machine is used for testing the fibreboards such as insole foreparts and stiffener that are flexed or deformed in wear to measure its quality and durability. During test, the specimen is rotated through 180° (90° each side of vertical) back and forth under a certain load until it breaks. In the meantime the number of flexes to failure of each specimen will be displayed on each individual counter.

Technical Specifications

Specimen	: 80 x 10mm
Upper grip	: 6 sets
Weight/lower grip	: 2kg x 6
Flexing speed	: 60r/min
Counter	: LED 0 ~999,999 (7 sets)

Shoe Peeling Strength Tester-GB/T3903.3

It's used to determine the peeling strength between the sole and the upper of a shoe. By peeling blade, peel the upper of the shoe from its sole to get the peeling force. Then, based on the blade's width to calculate its peeling strength.

Technical Specifications

Blade's width	: 20±0.1mm, 10±0.05mm
Speed of blade	: 20±2mm/min (0 ~ 123.5mm/min adjustable)
Space between fixed/ pulling rod	: 50 ~ 70mm adjustable
Dial gauge	: 0.01 ~ 1mm
Moving range for test stand	: 1mm ~ 40mm

Ref. No : RG10 G017
Model : RG-Q905-GB

Shoe Dielectric Resistance Tester- ANSI Z41,CSA Z 195, GB12011

This tester is used to determine the isolatiln character of the shoe material. By slowly increase the voltage on the sole to the specified value, check if it can withstand that value in the prescribed time period.

Technical Specifications

Test voltage	: 1kv/sec up to prescribed voltage
Capacity	: 0.5KVA
Input voltage	: AC 220V
Output voltage	: AC 20KV
Test freq & time	: 60Hz, 1 minute
Metal sphere	: ϕ3mm
Depth of inner electrode	: At least 30mm
Metal test plate	: 40 x 20mm
Test space (L x D x H)	: 58 x 38 x 54cm

Ref. No : RG10 G018
Model : RG-Q902-E

Insole Backpart Stlffness Tester-BS-5131/4,18,QB/T1812,1813

This tester is used to measure the stiffness in the longitudinal direction of steel shanks used for the reinforcement of the waist region of shoes. The shank is clamped at its heel end and bent as a cantilever beam by masses added to its forward end. The amount of bending is measured and used to calculate the flexural rigidity of the shank.

Technical Specifications

Depth of lower jaw	: 32mm
Beveled angle of front ridge of lower jaw	: 10°
Rotation angle of lower jaw seat	: 30°
Length of measuring clip	: 60±0.02mm
Depth of clamp for front end	: 12mm
Dial gauge	: 0 ~ 100mm (min graduation 0.01mm)
Dead weight	: 200±1g x 4

Ref. No : RG10 G019
Model : RG-Q904

Slide Fasteners Reciprocating Tester- QB/T2171,CNS 1083

This is used for the slide fastener in a strength process of lateral and longitudinal, it could be test it's bearing ability in reciprocating motion for a regulation time. When rest, this tester lead the puller of slide fasteners in a equal-speed to do the reciprocating motion for thirty times of per min & last until regulated times up.

Technical Specifications

Reciprocating ange	: 75 mm
Width of late gnppers	: 25 mm
Weights of longitudinal clamps	: 0.28 ~ 0.34kg
Space of two longitudinal clamps	: 6.35mm
Specimen closing angle	: 60°
Open angle of test	: 30°
Counter	: LED 0 ~999,999

Ref. No : RG10 G020
Model : RG-Q916

Water Vapour Permeability Tester

This tester is used for determining the breathability of leather and non-leather upper materials (both outers and linings). For testing a variety of standards, it is necessary to install this equipment in an area of controlled temperature.

Technical Specifications

Specimen Dia.	: ϕ34mm
Specimen Pan Speed	: 75±5 cycles/min
Mouth Dia.	: Approx. 30mm
Fan Dimension (L x W)	: 90x75mm, 3pcs
Fan angle	: Inclined at 120° with each other
Fan speed	: 1400 cycles/min
Distance	: Max. 15mm
Tester Environment	: Temp.20°C, relative humidity 65%

Ref. No : RG10 G021
Model : RG-H507-E

Leather Softness Tester

This tester is used to ensure that the leathers in the same pack are of a similar softness or assess that the softness across a skin or hide in everywhere is uniform.

Technical Specifications

Load	: 500g (Drived by miniature pneumatic damper)
Dial	: 0.1 ~ 10mm

Ref. No : RG10 G022
Model : RG-Q907

Heat-Deflection Temperature Bath
RHV-A303- Micro-computer controlled
RHV-B303- Digital

It is used to test plastic deflection temperature.

Technical Specifications

Testing temperature	: Room temp. 300°C
Accuracy	: ±1°C
Resolution	: 0.1°C
Deflection accuracy	: ±0.01mm
Deflection range	: ±2mm
Deflection resolution	: 0.01mm

Ref. No	Model
RG10 G023	RHV-A303
RG10 G024	RHV-B303

Portable Hardness Tester

Ref. No : TM10 H001
Model : TH130

Ref. No : TM10 H002
Model : TH132

Ref. No : TM10 H003
Model : TH134

Ref. No : TM10 H004
Model : TH150

TH132 is suitable for testing the hardness of surface hardened components, coatings, thin walled or impact sensitive components. TH134 is suitable for testing the hardness in extremely confined spaces, the base of grooves and of special components such as gear wheels. The portable hardness tester Impact is designed for the universal use in the laboratory or in workshops.

Features

Typical application

- Heavy individual parts or machine parts
- Testing in a production line, material identification
- Measurements on parts with difficult access.
- Hardness Scales: HRC, HRB, HRA, HV, HB, HS & HL
- Integrated universal impact device D
- Statistics: mean value, number of readings.
- Test at any position even up-side-down.
- Real time printing or batch printing.
- Memory up to 256 (TH150)
- Display backlight (TH150)

Range (Impact Device D)

- HRC 20 to 68 - HRB 13 to 100
- HRA 59 to 86 - HB 30 to 680
- HV 80 to 970 - HS 32 to 100
- HL 200 to 900

Technical Specifications

Ref. No	TM10 H001	TM10 H002	TM10 H003	TM10 H004
Model	TH130	TH132	TH134	TH150
Impact Device	D	C	DC	D2
Accuracy	±1%	±1.5%	±1.5%	±6HLD

Portable Hardness Tester

Ref. No : TM10 H005
Model : TH140B

Portable Hardness Tester TH160 is suitable for testing the hardness of all metals, and can be applied in many areas of industry. Hardness Tester TH160/TH140B is an advanced hand-held hardness tester distinguished by its high accuracy, wide measuring range, and simplicity of operation. It is suitable for testing the hardness of all metals. Typical applications: parts / components of machines, mould surface of a die, rolls for rolling mills, pressure vessels, crank shafts, cylinder blocks, material identification etc.

Features

- Dot matrix LCD with adjustable backlight
- Improved keypad and menu arrangement
- 7 available impact devices for one main body
- Types of impact devices auto-identification
- Extended Testing Range
- Memory up to 128 datqa (TH140B)
- Memory up to 240-1000 groups of data (TH160)
- Statistic Function
- Upper/lower limits setting and alarm
- Calibration setting enable for user
- RS 232 data output
- Build-in printer

Technical Specifications

Hardness scale	: HL, HB, HRB, HRC, HV, HS convertible/ HRA (TH160)
Measuring range	: 170-960 HLD
Impact device	: D (standard), DC/ D + 15/C/G/DL (optional)
Accuracy	: Within ±0.5 % (HLD=800)
Statistics function	: Average/Max./Min. value calculation, Limits setting and alarm
Workpiece Max. hardness value	: 940HV (Impact device D/DC/DL/D+15/C)650HB (Impact device G)
Workpiece radius (convex / concave)	: Rmin=50mm (Rmin=10mm with special support ring)

Impact device	D/DC/DL	D+15	C	G	E
Max measuring range	940/940/950 HV	940HV	1000HV	650HB	1200HV
Min. weight of test piece					
Direct/Stable support/coupling	5kg/2kg/0.1kg	5kg/2kg/0.1kg	1.5kg/0.5kg/0.02kg	15kg/5kg/0.5kg	5kg/2kg/0.1kg
Min. Thickness of test piece					
Compact coupling	3mm	3mm	1mm	10mm	3mm

Ref. No : TM10 H006
Model : TH160

D DC DL C D+15 E G

Application of impact devices

D/DC/DL	D type for measuring general piecesDC type for hole or cylinderDL type for long and narrow channel or hole
D+15	D+15 type for measuring in grooves or recessed surfaces
C	C type for measuring light and small pieces and surface hardened layer
G	G type for measuring heavy and rough cast and forged piece
E	E type for very hard material

Webster Hardness Tester

Webster Hardness Tester is available in three models for testing material such as aluminum, brass, copper and mild steel.

Ref. No	Model
WS10 H009	B
WS10 H010	B75
WS10 H011	BB75

Barber Colman Impressor

Impressor Hardness Tester is intended for the testing of aluminum, soft metals, plastics, fiberglass, rubber and leather.

Ref. No	Model
BC10 H012	GYZJ934-1 (25-50 Brinell)
BC10 H013	GYZJ935 (softer plastic)
BC10 H014	GYZJ936 (very soft items)

Portable Brinell Hardness Tester

This tester can be used to determine the Brinell hardness of ferrous metals whose elasticity moduli approximate to 2×10^5 MPa.

Technical Specifications

Measuring range: 100-400HBS
Impact capacity : 4.9J
Dimensions : Φ55 × 370mm
Weight: approx. : 3.3kg

Ref. No : HY10 H015
Model : HBX-0.5

Hammer Hitting Type Brinell Hardness Tester

This tester can measure the Brinell hardness of ferrous and nonferrous metals and tensile strength of steel.

Technical Specifications

Measuring range : <450HBS
Diameter of steel ball : 10mm

Ref. No : HY10 H016
Model : HBC

Time TH300-Rockwell Hardness Tester
Time TH320-Rockwell/Superficial Hardness Tester

Features

- Horizontal Protrudent nose design
- Testing on surfaces difficult to reach
- Testing internal surface of ring parts whose diameter is not less than 23mm
- Testing external surface of round bars whose diameter is not less than 3mm
- Automatic test process
- Simple and easy selectable operation menu
- RS-232 data output

Ref. No : TM10 H017
Model : TH300

Ref. No : TM10 H018
Model : TH320

Technical Specifications

Ref. No	TM10 H017	TM10 H018
Model	**TH300**	**TH320**
Hardness scales	Rockwell A,B,C,D,E,F,G,H,K,L,M,P,R,S,V. Totally 15 scales	Rockwell A,B,C,D,E,F,G,H,K,L,M,P,R,S,V. 15N, 30N, 45N, 15T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y. Totally 30 scales
Resolution	0.1 Rockwell unit	0.1 Rockwell unit
Application standard	ISO6508-1999, ASTME-18	ISO6508-1999, ASTME-18
Testing space	Vertical: 220mm, Horizontal: 150mm	Vertical: 220mm, Horizontal: 150mm
Load duration	1-50 seconds	1-50 seconds

Pre-load Total load

TH300 : 98.07N/10kgf588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf

TH320 : 98.07N/10kgf, 29.42N/3kgf, 588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf, 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf

Functions

TH300 : Upper/lower hardness limits setting and alarming
Data statistics: Ave., Max., Min., S,R
Scales' conversion: convert tested value to Vickers, Brinell, Leebs,Rockwell superficial,
Curvature correction: cylinder and sphere

TH320 : Upper/lower hardness limits setting and alarming
Data statistics: Ave., Max., Min., S,R
Scales' conversion: convert tested value to Vickers, Brinell, Leebs, Knoops Curvature correction: cylinder and sphere

Rockwell Digital Hardness Tester

To determine the Rockwell hardness of ferrous, nonferrous metals, nonmetal materials and their finished parts.

Technical Specifications

Measuring range	**:** 20-88HRA, 20-100HRB, 20-70HRC
Test force	**:** 588.4, 980.7, 1471N (60, 100, 150kgf)
Max. height of test piece	**:** 170mm
Depth of throat	**:** 130mm
Unit for display	**:** 0.1HR

Ref. No : HY10 H019
Model : HRS-150

Superficial Rockwell Digital Hardness Tester

This tester can be used to determine the superficial Rockwell hardness value of steel, alloy steel, hard alloy, plated coating, carburized, nitrided and cyanided layers.

Technical Specifications

Measuring range	**:** 70-94HR15N, 42-86HR30N, 20-77HR45N, 67-93HR15T, 29-82HR30T, 10-72HR45T
Test force	**:** 147.1, 294.2, 441.3N (15, 30, 45kgf)
Max. height of test piece	**:** 150mm
Depth of throat	**:** 120mm
Unit for display	**:** 0.1HRN(T)

Ref. No : HY10 H020
Model : HSRS-45

Rockwell Hardness Tester

HR-150A/150B

Used to determine the Rockwell hardness of hard alloy, quenched and unquenched steels.

Technical Specifications

Measuring range	: 20-88HRA, 20-100HRB, 20-70HRC
Test force	: 588.4, 980.7, 1471N (60, 100, 150kgf)
Max. height of test piece	: 170mm (HR-150A) 400mm (HR-150B)
Depth of throat	: 135mm (HR150A), 160mm (HR 150B)
Min. scale value	: 0.5HR

Ref. No	Model
HY10 H021	HR-150A
HY10 H022	HR-150B

Semi-auto Rockwell Hardness Tester

HRD-150

Used to determine the Rockwell hardness of ferrous, nonferrous metals, nonmetal materials and their finished parts.

Technical Specifications

Measuring range	: 20-88HRA, 20-100HRB, 20-70HRC
Test force	: 588.4, 980.7, 1471N (60, 100, 150kgf)
Max. height of test piece	: 170mm
Depth of throat	: 130mm
Min. scale value	: 0.5HR

Ref. No : HY10 H023
Model : HRD-150

Semi-auto Plastic Rockwell Hardness Tester

XHRD-150

Used to determine the Rockwell hardness of plastic, composite materials and all kinds of friction materials, soft materials, nonmetal soft materials.

Technical Specifications

Measuring range	: 70-100HRE, 50-115HRL, 50-115HRM, 50-115HRR
Test force	: 588.4, 980.7, 1471N (60, 100, 150kgf)
Max. height of test piece	: 150mm
Depth of throat	: 135mm
Min. scale value	: 0.5HR

Ref. No : HY10 H024
Model : XHRD-150

Semi-auto Superficial Rockwell Hardness Tester

HSRD-45

Used to determine the superficial Rockwell hardness of steel, alloy steel, hard alloy, plated coating, carburized and nitrided layers.

Technical Specifications

Measuring range	: 70-94HR15N, 42-86HR30N, 20-77HR45N, 67-93HR15T, 29-82HR30T, 10-72HR45T
Test force	: 147.1, 294.2, 441.3N (15, 30, 45kgf)
Max. height of test piece	: 150mm
Depth of throat	: 120mm
Min. scale value	: 0.5HRN(T)

Ref. No : HY10 H025
Model : HSRD-45

Brinell Hardness Tester

HB-3000B

Used for determining the Brinell hardness of unquenched steels, cast iron, nonferrous metals and soft bearing alloys, etc

Technical Specifications

Measuring range : 8-450HBS, 8-650HBW
Test force : 1838.8, 2451.8, 7355.3, 9807, 29421N (187.5, 250, 750, 1000, 3000kgf)
Max. height of test piece: 230mm
Depth of throat : 120mm

Ref. No : HY10 H026
Model : HB-3000B

Digital Low Load Brinell Hardness Tester

HBS-62.5

Used for determine the Brinell hardness of cast iron, steel, nonferrous metals and soft metals, etc.

Technical Specifications

Measuring range : 4-450HBS, 4-650HBW
Test force : 9.807, 49.03, 98.07, 153.2, 294.2, 612.9N (1, 5, 10, 15.625, 30, 62.5kgf)
Max. height of test piece : 180mm
Depth of throat : 125mm
Magnifications of the measuring microscope : 125X, 50X
Min. scale value of the measuring microscope : 1ì m

Ref. No : HY10 H027
Model : HBS 62.5

Digital Brinell Hardness Tester

HB-3000C

Used for determining the Brinell hardness of unquenched steels, cast iron, nonferrous metals and soft bearing alloys, etc.

Technical Specifications

Measuring range : 4-450HBS, 4-650HBW
Test force : 612.9, 980.7, 1225.9, 1838.8, 2451.8, 4903.5, 7355.3, 9807, 14710.5, 294212N (62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf)
Max. height of test piece : 240mm
Depth of throat : 150mm

Ref. No : HY10 H028
Model : HB-3000C

Brinell & Vickers Hardness Tester

HBV-30A

Technical Specifications

Measuring range : 4-450HBS, 10-3000HV
Test force : 9.807, 24.52, 49.03, 98.07, 196.1, 294.2N (1, 2.5, 5, 10, 20, 30kgf)
Max. height of test piece : 160mm
Depth of throat : 127mm
Magnifications of the measuring microscope : 500X, 125X
Min. scale value of the measuring microscope : 0.25ì m

Ref. No : HY10 H029
Model : HBV-30A

Digital Vickers Hardness Tester

HVS-50

Used for determining the Vickers hardness of ferrous, nonferrous metals and hard alloys, carburized and nitrided layers.

Technical Specifications

Measuring range	: 5-2900HV
Test force	: 9.807, 49.03, 98.07, 196.1, 294.2, 490.3N (1, 5, 10, 20, 30, 50kgf)
Max. height of test piece	: 180mm
Depth of throat	: 125mm
Magnifications of the measuring microscope	: 125X, 50X
Min. scale value of the measuring microscope	: 1ì m

Ref. No : HY10 H031
Model : HVS-50

Vickers Hardness Tester

HV-50A

Used to determine the Vickers hardness of ferrous and nonferrous metals, hard alloys, carburized and nitrided layers.

Technical Specifications

Measuring range	: 5-2900HV
Test force	: 49.03, 98.07, 196.1, 294.2, 490.3N (5, 10, 20, 30, 50kgf)
Max. height of test piece	: 170mm
Depth of throat	: 140mm
Magnifications of the measuring microscope	: 125X, 50X
Min. scale value of the measuring microscope	: 1ì m

Ref. No : HY10 H032
Model : HV-50A

Digital Low Load Vickers Hardness Tester

HVS-5

Technical Specifications

Measuring range	: 5-3000HV
Test force	: 1.961, 2.942, 4.903, 9.807, 19.61, 24.52, 29.42, 49.03N (0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5kgf)
Max. height of test piece	: 130mm
Depth of throat	: 100mm
Magnifications of the measuring microscope	: 500X, 125X
Min. scale value of the measuring microscope	: 0.025ì m

Ref. No : HY10 H033
Model : HVS-5

Low Load Vickers Hardness Tester

HV-5

Technical Specifications

Measuring range	: 5-3000HV
Test force	: 1.961, 2.942, 4.903, 9.807, 19.61, 24.52, 29.42, 49.03N (0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5kgf)
Max. height of test piece	: 130mm
Depth of throat	: 100mm
Magnifications of the measuring microscope	: 500X, 125X
Min. scale value of the measuring microscope	: 0.25ì m

Ref. No : HY10 H034
Model : HV-5

Digital Display Microhardness Tester

HVS-1000

For measuring the Microhardness of thin, small metal test pieces and the brittle materials.

Technical Specifications

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)
Max. height of test piece : 75mm
Depth of throat : 100mm
Magnifications of the measuring microscope : 500X, 125X
Min. scale value of the measuring microscope : 0.025ì m

Ref. No : HY10 H035
Model : HVS-1000

Image Processing MicroHardness Tester

HVT-1000

Technical Specifications

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)
Max. height of test piece : 75mm
Depth of throat : 100mm
Magnifications of the measuring microscope : 500X, 125X
Min. scale value of the measuring microscope : 0.025ì m

Ref. No : HY10 H036
Model : HVT-1000

Standardized Hardness Block

Ref. No : HY10 H030
Model : Hardness Block

Technical Specifications

Description	Range of hardness	Dimensions (mm)
Brinell Standardized block	200 ± 50HBS 100 ± 25HBS	100 × 80 × 16 100 × 80 × 16
Rockwell Standardized block	80-88HRA 85-95HRB 20-30HRC 35-55HRC 60-70HRC	60 × 40 × 10
Vickers Standardized block	200 ± 25HV5 450 ± 50HV5 450 ± 50HV10 450 ± 50HV30 750 ± 50HV10	60 × 40 × 10
Superficial Rockwell Standardized block	89-91HR15N 42-50HR30N 75-80HR30N 37-61HR45N 87-93HR15T 70-82HR30T	60 × 40 × 10
Portable Brinell Standardized block	200 ± 50HBS	75 × 75 × 22
Hammer-hitting type Brinell Standardized block	175-225HBS	150 × 12 × 12
Micro-Vickers Standardized block	200-300HV0.05 200-300HV0.1 400-500HV0.1 400-500HV0.2 700-800HV0.2 700-800HV0.5 700-800HV1	Φ25 × 5
Leeb Standardized block	790 ±40HLD	Φ90 × 55

Hardness - Rubber / Plastic

TH200 Shore-A Rubber Hardness Tester
TH210 Shore-D Rubber Hardness Tester

Ref.No : TM10 J001
Model : TH200

Ref.No : TM10 J003
Model : TH210

Ref.No : TM10 J002
Model : THS-200S

Optional Accessories: RS232 communication cable, Operating Stand

Technical Specifications

Ref. No	TM10 J001	TM10 J002
Model	TH200	TH210
Test scales	Shore A	Shore D
Standards	DIN53505, ASTM D2240, ISO 7619, JKS K 6253	
Display	Hardness result: Average, Max., Peak	
Measure range	0HA ~ 100HA	0HD ~ 100HD
Accuracy	Within 20 ~ 90 HA(HD), error ≤ ± 1HA(HD)	
Resolution	0.2unit	0.2unit
Data Output	RS-232	RS-232

Durometer Hardness Tester

Model : Durometer

Used for the determination of indentation hardness of rubber, tire, sponge, plastic and felt etc.

Technical Specifications

Ref. No	Model	TYPE	Applicable Standard	Meas Object	Weight Application
NS10 J005 NS10 J006	WR-102NA# WR-202NA*	NA NA	JIS K 6301	Ordinary rubber	539-8,379mN (55-855gf)
NS10 J007 NS10 J008	WR-106NC# WR-206NC*	NC NC	JIS K 6301	Hard rubber	940-44,100mN (100-4,500gf)
NS10 J009 NS10 J010	WR-104A# WR-204A*	A A	JIS K 6253 ISO 7619 ASTM D2240	Ordinary rubber	550-8,8,050mN (56.1-821.1gf)
NS10 J011 NS10 J012	WR-105D# WR-205D*	D D	JIS K 6253 ISO 7619 ASTM D2240	Hard rubber	0-44,450mN (0-4,533gf)
NS10 J013 NS10 J014	WR-107E# WR-207E*	E E	JIS K 6253	Soft rubber	550-8,050mN (56.1-821.1gf)
NS10 J015 NS10 J016	WR-1037A# WR-2037A*	7A 7A	JIS K 7215 ISO R 868A ASTM D2240A	Plastic	549-8,061mN (56-822gf)
NS10 J017 NS10 J018	WR-101SA# WR-201SA*	SA SA	SRIS 0101 JIS K 6050	Soft rubber	539-8,385mN (55-855gf)

Type : standard
* Type : with two-pointer

Hardness indication : one degree for one graduation
Accuracy : ±1 deg.,
Weight : abt. 280g

Paper Test

RG-Z705-PC Micro-Computer Container Compression Tester

This machine is equipped with a high accurate load cell and a CPU. Due to these devices, user can directly read the test value of force on the display. It's the most convenient for compression test for container, carton,…etc.

Technical Specifications

Capacity (optional) : 2 ton, 5 ton
Unit : kg/N Switchable
Resolution : 1/10000
Accuracy : Within ± 1%
Test space : 1200 × 1200 × 1000 mm or optional
Crosshead motor : ½ HP
Hydraulic motor : 1 HP
Speed of compression : Variable speed (Common 10±3mm/min)

Ref. No : RG10 K001
Model : RG-Z705-PC

RG-Z703-B1 Drop Tester

It simulates the drops/falls of the finished product with the packing to evaluate its damage degree. All the rhombohedrons, angles and faces of the package container can be tested.

Technical Specifications

Raise range	: 400 ~ 1760mm
Area of wing	: 300 × 760mm
Base area	: 1200 × 1400mm
Adjustable space (W×D×H)	: 60 ~ 1080 ×760×400 ~ 1760mm
Maximum specimen weight	: 60kg (approx.)

Ref. No : RG10 K002
Model : RG-Z703-B1

RG-Z711 Elmendorf Tearing Strength Tester - TAPPI-T414, JIS-P8116

Use the segment pendulum to tear the specimen and then read the tearing strength on the scale.

Technical Specifications

Specimen	: 76 × 63mm, 16 pieces
Capacity	: 0 ~ 100g
Grip	: Width 25mm, Depth 12mm

Ref. No : RG10 K003
Model : RG-Z711

RG-Z704 Micro-Computer Ring Crush Tester - TAPPI-T472, JIS-P8126, GB/T2679.8

This tester is equipped with a high accurate load cell and a CPU user can directly read the strength of specimen on the display. It test the ring crush strength (vertical, horizontal) and adhesion strength of paper board.

Technical Specifications

Capacity	: 200 kg
Resolution	: 1/10000
Accuracy	: ±1%
Press Plate	: 100 × 100 mm or based on dia. of specimen
Distance	: 180mm
Specimen	: 152.4 x 12.7mm
Groove Depth	: 6.35mm
Test speed	: 12.7mm/min

Ref. No : RG10 K004
Model : RG-Z704

RG-Z704-A Adhesive Strength Tester Accessories - GB/T6548, JIS-Z0402

This attachment is used for determining the adhesive strength of corrugated board. Insert the pins in the grooves of corrugated board. Place it between two press plates of ring crush tester.

Technical Specifications

Model	Specimen	Dia. of pin	Pitch	Dimension	Weight
A	50×150mm	ϕ3.56mm	17.64mm	125×76×30mm	500g
B	50×150mm	ϕ2.03mm	12.00mm	91×76×30mm	350g
C	50×150mm	ϕ3.05mm	15.00mm	109×76×30mm	400g

Ref. No : RG10 K005
Model : RG-Z704-A

RG-Z704-B Clumn Compression Testing Grip

The grip is working with ring crush tester to test the column compression strength

Technical Specifications

Dimension (W×D×H) : 15×10.5×6.5cm

Ref. No : RG10 K006
Model : RG-Z704-B

RG-Z704-C Flat Crush Cutter

Use this cutter to get a standard specimen for horizontal ring crush test. Put the circular specimen between two pressing plates of ring crush tester. Then ring crush strength can be determined.

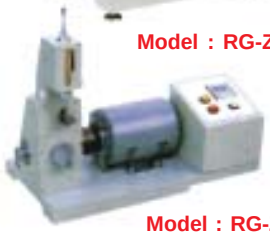
Technical Specifications

Model	A	B	C
Dia. after cut (optional)	ϕ90.6±0.5mm	ϕ112.8±0.5mm	ϕ60±0.5mm
Area of specimen	64.5cm	100cm	32.2cm
Dimension (W×D×H)	ϕ14cm, H 15cm	ϕ14cm, H 15cm	ϕ14cm, H 15cm

Ref. No : RG10 K007
Model : RG-Z704-C

RG-Z111 Mit Folding Endurance Tester - TAPPI-T423PM, ASTM-D2176, JIS-P8115, GB/T2679.5

Model : RG-Z111-A



Model : RG-Z111-B

This tester is used for determining the folding endurance strength of paper and paper board. Test method specimen is clamped by upper and lower grips. Exert the specimen is vertically placed against the ground surface and is folded to two sides by lower grip. Record the numbers of folding after specimen's fracture.

Technical Specifications

Ref. No Model	RG10 K008 RG-Z111-A	RG10 K009 RG-Z111B
Specimen	15×150mm	15×150mm
Load Method	Hang type weight 500g×3	Adjustable type spring 0.5 ~ 1.56kgf
Folding angle	±135°	±135°
Folding speed	175cpm	175cpm
Counter	LED, 0 ~ 999999	LED, 0 ~ 999999

RG-Z708 Puncture Tester - TAPPI-T803, JIS-P8134, GB2679.7

This tester is used for determining the puncture strength of corrugated board, fibre board, plastic and plywood board.

Technical Specifications

Specimen : 300×300mm
Punch Head : Height 1" Radius 1.5mm
Capacity : (A) Scale 0 ~ 53.5kg-cm
(B) Scale 0 ~ 107kg-cm
(C) Scale 0 ~ 214kg-cm
(D) Scale 0 ~ 428kg-cm
(E) Scale 0 ~ 26.75kg-cm

Ref.No : RG10 K010
Model : RG-Z708

RGD/RGW Tensile Testing Machine

This machine is applicable to the testing and analysis of the mechanical property of such tests as tensile, tear and peel for various materials, including rubber, plastics, aluminum-plastic tube, composite, waterproof material, textile, yarn, fiber, wire and cable, paper, tinsel, elastic spring, wood, packaging material and tape. Parameters such as tensile strength, yield strength, extension percentage, constant extension stress and constant stress elongation and modulus of elasticity can be determined based on such standards as GB, JIS, ASTM and DIN. Therefore the machine is an ideal device for enterprises to test their products and colleges to conduct their teaching and research.

Features

1. The full process is computer-controlled. With automatic data saving and analysis, and report curves printing;
2. The measurement accuracy is within 0.5% of the reading;
3. With its flexible and diversified interfaces and control modes, the machine is capable of performing a number of tests such as tensile, compression, bend, shear, tear, puncture, burst and friction;
4. The modular design facilitates function expansion;
5. The seven-step magnification widens the measuring range to support 0.2% - 100% full load of the sensor;
6. The control survey unit can either be built in for simple appearance and smaller space, or external to facilitate upgrading and maintenance, in which case the unit can be operated independent of a computer;
7. Multiple protection modes ensure safe and stable running of the test;
8. High sampling rate (100 times/sec) ensures accuracy of the test data;
9. The ingenious desktop two-column structure gives a decent look, and operation by seat makes one feel at ease.

Technical Specifications

Ref. No **Models**	**RG10 L001** **RGW**	**RG10 L002** **RGD-L**	**RG10 L003** **RGD-H**
Force measurement range (kN)	0-1	0-5	0-5
Force measurement by steps	1%, 2%, 5%, 10%, 20%, 50%, 100%		
Force measurement resolution	1/500,000 of the full measuring range of the sensor		
Force measurement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading	
Crosshead speed	0.5-500mm/min (stepless)	1-500mm/min (stepless)	
Speed Accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading	
Deformation measurement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading	
Displacement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading	
Crosshead travel	300mm (after mounting the tensile grip)	500mm (after mounting the tensile grip)	800mm (after mounting the tensile grip)

RG-L101-DE/AE Tensile/Compression Tester

Ref. No : RG10 L004
Model : RG-L101-DE

Ref. No : RG10 L005
Model : RG-L101-AE

Specially designed to test various materials of sole, tire, rubber hoses, rubber belt, PVC cloth, PVC board, package film, acrylic, FRP, ABS EVA, PU.. etc. Products, semi-Products or dumbbell specimens on their tensile strength, elongation, tearing adhesive, stress-strain, peeling, shearing, adhesion to metal and rubber.

Technical Specifications

Ref. No **Model**	**RG10 L004** **RG-L101-DE**	**RG10 L005** **RG-L101-AE**
Capacity (optional)	10,20,50,100,200,500kg	10,20,50,100,200kg
Unit(switchable)	N, kg, lb	N, kg, lb
Load Resolution	1/10.000	1/10.000
Load Accuracy	± 1%	± 1%
Stroke (exclude the grips)	1100mm	1000mm
Method of Speed input	Knob	Knob
Test Speed	1-500mm/min adjustable	25-500mm/min adjustable
Sampling Rate	600Hz	600Hz
Indicator	Display elongation value, Test values, max, values & break values	Display test values, max. values & break values
Motor	AC Servo Motor	AC Motor
Dimension (WxDxH)	55x39x186 cm	47x37x182cm

RGL/RGT Universal Testing Machine

Ref. No : RG10 L006
Model : RGL 0-30

Bench Type

Ref. No : RG10 L007
Model : RGT 0-30

Floor Type

Technical Specifications

Ref. No Model	RG10 L006 RGL 0-30	RG10 L007 RGT 0-30
Force measurement range (kN)	0-30	0-30
Force measurement by steps	1%, 2%, 5%, 10%, 20%, 50%, 100%	
Force measurement resolution	1/500,000 of the full measuring range of the sensor	
Force measurement accuracy	Within ± 0.5% of the reading	
Crosshead speed	0.01-500mm/min (stepless)	
Speed Accuracy	Within ± 0.5% of the reading	
Deformation measurement accuracy	Within ± 0.5% of the reading	
Displacement accuracy	Within ± 0.5% of the reading	
Crosshead travel	800mm (after mounting the tensile grip)	
Effective test width	400mm	340mm
Power	AC220V 400W	AC220V 400W

The accessories such as the different grips, elongation measuring-devices...etc, are equipped according to the requirements specified in the contract

Grip Series of Applicable Test Devices

Bending grip (length of span : 100mm)
Max Load : 30kN
Functionality : Three-point bending test for all kinds of materials

Surface binding intensity measuring grip
Max Load : 10kN
Functionality : Surface-binding intensity measuring test for artificial boards

100mm(waveform) Tensile grip
Max Load : 2kN
Functionality : Tensile test for light-weight cloth and braid

Tensile grip
Max Load : 5kN
Functionality : Tensile test for the materials such as paper and film

Lever-type (air-operated) tensile grip
Max Load : 3kN, Use : tensile test for steel wire, thread, rope and tinsel shorter than ϕ 1

Tensile grip
Max Load : 5kN
Use : Tensile test for steel wire, thread, rope and tinsel shorter than ϕ 1

Tensile grip
Max Load : 30kN
Functionality : Tensile test for safety belt and strength strap

(geotextile) Bursting grip
Max Load : 20kN
Functionality : Geotextile tensile test

Tensile grip
Max Load : 30kN
Functionality : Tensile test for ropes shorter than ϕ 16

(wedge-shaped) Tensile grip
Max Load : 5kN
Functionality : tensile test for plastic plates and aluminum foil materials

(wedge-shaped) Tensile grip
Max Load : 30kN
Functionality : tensile test for metal plates, non-metal plates and bars

(lever) Tensile grip
Max Load : 5kN
Functionality : aluminum foil tensile test and adhesive-layer shear intensity test

(single-eccentric-wheel) Tensile grip
Max Load : 5kN
Functionality : rubber tensile test

(lever) Tensile grip
Max Load : 5kN
Use : plate tensile test and adhesive-layer shear intensity test

Tensile Grip
Max Load : 1kN
Functionality : tensile test for film, paper and leather

Air-operated grip
Max Load : 0.5kN
Functionality : tensile test for rubber, film and leather

(sole) Puncture grip
Max Load : 5kN
Functionality : sole puncture test

(air-operated) Tensile grip
Max Load : 1kN
Functionality : tensile test for rubber, film and leather, etc.

Co-clamp grip
Max Load : 3kN
Functionality : tensile test and peeling test for cloth and braid

Forcipated grip
Max Load : 5kN
Functionality : tensile, tear and peeling test for flake materials

Air-operated grip
Max Load : 5kN
Functionality : tensile test for steel wire and thread materials

Tensile grip
Max Load : 10kN
Functionality : tensile test for woven ties

Tensile grip
Max Load : 5kN
Functionality : tensile test for rubber and woven belts

(double-eccentric-wheel) Tensile grip
Max Load : 5kN
Functionality : rubber tensile test

RGM Universal Testing Machine

This machine can be used to test and analyze the mechanical property of metals, non-metals and composites of various fields, such as aviation and space flight, petrochemical engineering, machinofacture, automobile making, wire and cable, textile and fiber, plastics and rubber, ceramics, food, medical packaging, aluminum-plastic tube, plastic door and window, geotextile, thin film, wood, paper, and metal material and products. Parameters such as maximum test force, break force, yield strength, upper/lower yield point, tensile strength, all extension strength, all extension percentages, compression strength, bend deflection, modulus of elasticity constant extension stress and constant stress elongation can be determined based on such standards as GB, JIS, ASTM, DIN and ISO.

Features

1. The full process is computer-controlled. With automatic data saving and analysis, and report curves printing;
2. The measurement accuracy is within 0.5% of the reading;
3. With its flexible and diversified interfaces and control modes, the machine is capable of performing a number of tests such as tensile, compression, bend, shear, tear, puncture, burst and friction;
4. The modular design facilitates function expansion;
5. The seven-step magnification widens the measuring range to support 0.2% - 100% full load of the sensor;
6. The control survey unit can either be built in for simple appearance and smaller space, or external to facilitate upgrading and maintenance, in which case the unit can be operated independent of a computer;
7. Multiple protection modes ensure safe and stable running of the test;
8. High sampling rate (100 times/sec) ensures accuracy of the test data;
9. The ingenious desktop two-column structure gives a decent look, and operation by seat makes one feel at ease.

Technical Specifications

Ref. No Model	RG10 L032 RGM-500	RG10 L033 RGM-600
Force measurement range (kN)	0-500 (various force available)	0-600 (various force available)
Force measurement by steps	1%, 2%, 5%, 10%, 20%, 50%, 100%	
Force measurement resolution	1/500,000 of the full measuring range of the sensor	
Force measurement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading
Crosshead speed	0.01-500mm/min (stepless)	1-500mm/min (stepless)
Speed Accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading
Deformation measurement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading
Displacement accuracy	Within ± 0.5% of the reading	Within ± 1% of the reading
Crosshead travel	600mm (after mounting the tensile grip)	
Effective test width	650mm	650mm

RWES Hydraulic Universal Testing Machine

This machine is mainly applicable to the tensile, compression bend and shear tests for metal materials, and the tensile, bend and compression tests for non-metal materials such as plastics, concrete and cement. With additional functional accessories, the machine can perform various mechanical property tests for tape, chain, steel wire, welding electrode and other components.

Features

With advanced electronic technology, hydraulic loading, microcomputer control and measurement, the machine can test the deformation of specimens with different forces. The force-deformation and force-time curves can be drawn. Test data can be processed by the computer and test results can be printed.

Ref.No : KY10 P004
Model : Catch-1

Technical Specifications

Ref. No Model	RG10 L034 RWES–100B	RG10 L035 RWES–300B	RG10 L036 RWES–600B	RG10 L037 RWES–1000B
Load range (kN)	100	300	600	1000
Wiredraw roomage (mm)	550	620	600	600
Compress roomage (mm)	500	550	600	600
Holding diameter of round specimen (mm)	ϕ6-ϕ12	ϕ10-ϕ32	ϕ13-ϕ40	ϕ20-ϕ60
Holding thickness of flat specimen (mm)	0-12	0-15	0-30	0-40
Holding width of flat specimen (mm)	70	70	75	80
Maximum spacing interval of bend supporting roll	400	600	700	800
Shear diameter (mm)	ϕ10	ϕ10	ϕ10	
Zygomorphism support interval	400	528	618	720

RWHY Hydraulic Compression Tester

To test concrete, brick or building material

Technical Specifications

Ref. No Model	RG10 L038, L039, L040 RWHY – (100, 200, 300)	RG10 L041, L042 RWHY–(500, 600)	RG10 L043 RWHY-2000	RG10 L044 RHWY-3000
Capacity (KN)	0- (100, 200, 300)	0- (500, 600)	0-2000	0-3000
Measurement step (%)	10	20	50	100
Accuracy (%)	± 1	± 1	± 1	± 1
Top compression plate (mm)	115	145×145	280×280	280×280
Bottom compression plate(mm)	190×190	255×255	400×400	400×400
Spacing between plate (mm)	280	280	350	350
Spacing between support(mm)	290	320	470	470
Stroke (mm)	120	150		

RG-F111 Foam Rubber Reciprocating Compression Tester - ISO-7214, JIS-K6767, JIS-K6382

Measure accurately the thickness of the specimen and put it between compression plates. Compress the specimen to 50% of its original thickness with the reciprocating compression speed of 60 time per minute till reaching 80000 times. Then, take out and put aside the specimen for 30 minutes later to measure the thickness of the specimen as well as calculate its permanent deformation rate.

Technical Specifications

Specimen : 50×50×25mm
Compression speed : 60 cpm(1Hz)
Stroke : 0 – 50mm (adjustable)
Between compression plate : About 200mm (adjustable)
Area of compression plate : 30×30 cm
Upper compression plate : 289 holes, pitch of holed19mm
Lower compression plate : V-typexhaust groove, pitch of grows 19×19
Counter : LED 0 – 999.999 (6 digits)
Motor : 1/3 HP

Ref.No : RG10 L045
Model : RG-F111

RG-Q917 Compression and Deformation Tester - JIS-K6262, ASTM D395, GB 7759

Specially test rubber on static compression. Place one standard specimen between parallel flat plate, revolve the screws then compress it to a certain range of percentage and then put into the oven under a certain temperature for a specified compression time. Then, take off it for cooling to measure its thickness for calculating its permanent deformation rate.

Technical Specifications

Specimen : Rubber ϕ 28.68 (D) 12.7mm
Foam plastic (L)50 × (W)50 × (D)25mm
Dimension (W×D×H) : 20×12×10cm
Weight : 11kg

Ref.No : RG10 L046
Model : RG-Q917

RG-Q918-A Foam Rubber Hardness Tester - ASTM D1056, GB 10807, ISO2439, JIS K6401, JIS K6767

Compress the specimen which placed between upper and bottom compression plates of the tester about 25% for 20 seconds. Then divide the load by specimen area to get the compression hardness of the material.

Technical Specifications

Specimen : ϕ 300mm, 20 mm thick
Capacity : 100kg
Sensor : Load cell
Indicator : RG-U10
Resolution : 1/10,000
Compression Plate : ϕ 200, (hole) ϕ 6, (space) 19mm
Motor : 1/2HP

Ref.No : RG10 L047
Model : RG-Q918-A

RG-Q903-E Safety Footwear Compression Tester - EN 344, LD50

This tester simulate a specified load to compress the toecap of the safety shoe to assess the safety clearance between toes and the toecap.

Technical Specifications

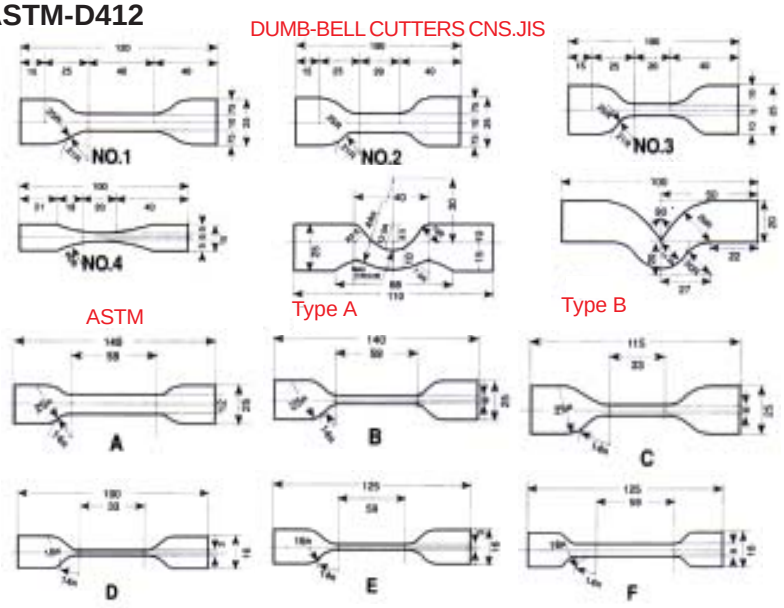
Compress Force	: (EN)15±0.1KN
Compress Speed	: (EN)5±2mm/min
Compress Platens	: (EN)60HRC
Sensor	: Load cell
Pressure Resolution	: 1/10000
Motor	: 100W

Ref.No : RG10 L048
Model : RG-Q903-E

RG-F118 Cutter Press- JIS-K6301, UL-1581, ASTM-D412

Ref.No : RG10 L049
Model : RG-F118-A

Ref.No : RG10 L050
Model : RG-F118-B



Descriptions

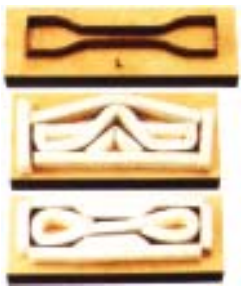
This machine is to take out a standard specification of specimen after grinding the piece for the purpose of testing.

Technical Specifications

Ref. No Model	RG10 L049 RG-F118-A	RG10 L050 RG-F118-B
Cutter	CNS, JIS, ASTM (standards)	
Dimension (W×D×H)	20×70×80cm	ϕ 41×H72cm

*Not including cutter

RG-F119 Laser Cutter - ASTM-D 638, JIS-K6301, K7113



High-tech Laser cutter is produced by exerting advanced precise technique which incorporate the computer system and laser equipments. The foam around the cutter can rebound the specimen after cutting as well as it can protect the user from injuries.

Technical Specifications

Cutting Accuracy	: ±0.1 – 0.2mm
Blade thickness	: 0.7mm
Cutter	: All ASTM & JIS series or the others
Application	: Rubber, PVC, leather, paper, etc.
Dimension (W×D×H)	: 140.5 x 50.4 x 20.4mm (ASTM:C)

Ref.No : RG10 L051
Model : RG-L119

Digital Ultrasonic Flaw Detector

Digital ultrasonic flaw detector is a convenient, tough and affordable Ultrasonic Flaw Detector. It can fast and accurately detect various defects (cracks, entrainments, air holes) in the work piece with nondestructive method. It is widely used in laboratories and production fields, such as inspection and quality control of manufacturing, welding, material processing and petrochemical industry. It is also used in safety inspection, life evaluation of aerospace industry, railway system and pressure vessels.

Features

- Easy to upgrade and convenient maintenance
- Wide and high bright EL display screen, brightness adjustable
- A scan, B scan mode
- Automatic creation of DAC curve with use of standard test block
- Gate setting and alarm indication function
- 100 A-scan data memory and 10000 Thickness data memory
- RS232 interface; Printing of screen display; thickness data and wave report

Technical Specifications

Min. & Max. Range (mm)	: 2.5-9999
Frequency Range (MHz)	: 0.2-1 / 0.6-4 / 1-10
Gain (dB)	: 0-110 in steps of 0.0, 0.2, 0.5, 1, 2, 6, 12
Vertical linearity error	: ≤ 5%
Dynamic range	: ≥ 26dB
Horizontal linearity error	: ≤ 2%
Rectification	: Positive half wave, Negative half wave, Full wave, RF
Reject	: 0-80% in steps of 1%
Pulse shift	: -20 - + 34000us
Surplus sensitivity	: ≥ 20 dB
Probe delay (us)	: 0.0-99.99 in steps of 0.01
Operating mode	: single probe (receive/transmit), Dual probe (receive and transmit)

Ref.No : TM10 M001
Model : TUD-200

Magnetic Test Equipment
AC Hand Yoke - Handy-Magna MP-A2

Features

- AC, Strong Magnetic Field
- Compact size and light weight
- Power: 220V/60Hz, 2.1A
- Magnetic power : Over 5.45kg
- Length between poles: 130mm
- Weight: 2Kg

Ref.No : KY10 M002
Model : MP-A2

DC Hand Yoke - Handy-Magna MP-A2D

Features

- DC, Strong Magnetic Field
- 12V battery
- Waterproof, anti rust
- Power : DC 12V/2.8A
- Magnetic power: Over 10.1Kg
- Length between poles: 130mm
- Weight : Equipment - 2Kg, Battery - 1.3Kg, Battery charger - 1.6Kg

Ref.No : KY10 M003
Model : MP-A2D

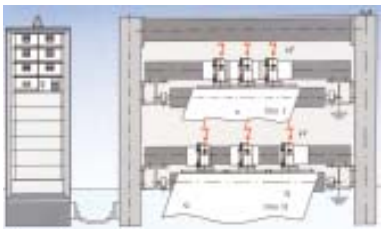
Super Black Light - BD-70

Features

- Portable, Light weight, High brightness
- Power: AC220V/60Hz, 0.5A
- Ultraviolet ray: 7,800 ì W/cm²
- Lamp: Metal Halide Lamp

Ref.No : KY10 M004
Model : BD-70

On-line Pinhole Detection System



Ref.No : KY10 M005
Model : CPD

On-line pinhole detection in all flat foils and sheets made of plastic, glass - packaging films for pharmaceutical, medical and for alimentary products, membranes, garbage foils and etc. The CPD is employing rectified high-voltage testing principle.

Features

- detection of holes, tears and slits > 10 µm diameter
- nearly 100% testing over complete material width
- repeatability higher than 98%
- practically no false readings
- pinhole detection even in transparent films
- pinhole detection in laminates as well

Technical Specifications

Detection range : material thickness 30µm - 8mm, width 3m and speed maximum 200m/min (depending on material)

NDT (Thickness)

Digital Ultrasonic Thickness Gauge

Ref. No	Model
TM10 N001	TT100
TM10 N004	TT130

Ref.No : TM10 N003
Model : TT120

Ref.No : TM10 N002
Model : TT110

Basic Operating Principle

The principle of ultrasonic wave in the thickness measurement is similar to that of optical wave. The ultrasonic wave pulses transmitted by the probe reach the object to be measured and propagate in the object. And when they reach the interfaces, they are reflected back. The thickness of the object is determined by precisely measuring the time the ultrasonic wave travels in the object.

Features

- Auto zero point calibration
- Five preset sound velocities
- Stores 10 readings
- Strong and reliable construction

Technical Specifications

Measuring range	: 1.0mm-225.0mm (in steel with standard probe)
Resolution	: ±0.1mm (TT100/TT110/TT120), ±0.01mm (TT130)
Accuracy	: ±(1% T+0.1)mm, T is the actual object thickness.
Sound velocity range	: 1000-9999m/s (TT100/TT130), Fixed 5900m/s for steel (TT110/TT120)

- TT110: measures the thickness of steel. Fixed sound velocity: 5900m/s
- TT120: The functions of TT110 plus measurement under high temperature up to 300°C

Optional Probes

Type of probe	Working Frequency	Measuring Thickness Range(mm)	Min. Size of Measuring Pipe	Characteristics
5Pϕ10	5MHz	1.2-225	ϕ 20×3	Strait probe
5Pϕ10/90 degree	5MHz	1.2-225	ϕ 20×3	Bent probe
7Pϕ6	7MHz	0.75-60	ϕ 15×2	Test thin material
SZ2.5P	2.5MHz	3-300		Test thin material with rough surface
ZW5P	5MHz	4-80		Test under high temperature u to 300°C

Ultrasonic Thickness Gauge - TT300

Ref.No : TM10 N005
Model : TT300

Features

- Two-point calibration
- Backlight on/off switch
- Min. mode for minimum thickness measurement
- Bidirectional RS232 interface
- Large internal memory of 500 readings
- TA220S printer connectable

Technical Specifications

Measurement	: 0.75mm-300.00mm depending on probes, materials, surface condition and temperature.
Material Velocity Range	: 1000m/s-9999m/s
Resolution	: 0.1mm/0.01mm
Accuracy	: 0.75mm-9.99mm: ±0.05mm 10.0mm-99.99mm: (±0.5%H+0.01)mm 100.0mm-300.0mm: (±1%H+0.1)mm

Wall Thickness Gauge

Wall Thickness Gauge that measures thickness of :
- All non-magnetic materials e.g. plastics, glass, ceramics, non- ferrous metals and etc.
- Hollow parts of various kinds e.g. bottles, cups, cans, bowls and etc.
- Plates, car body parts, glass panels and etc.

Measuring method :
The instrument uses a small steel ball. A magnetic probe is placed on one side of the material to be measured and the target steel ball follows the probe on the other side. The distance between the two is the material thickness. Continuous measurement is possible by sliding the probe across the surface and the target ball will follow the line, e.g. in order to find the thinnest spot.

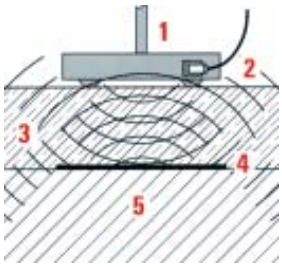
Features
- Statistical evaluation; n, mean, s, kvar, max, min (Minitest FH4100) cp, cpk, and histogram on Miniprint
- Interface RS 232C to Miniprint / PC

Technical Specifications

Ref. No Model	EP10 N004 Minitest FH4100	EP10 N005 Minitest FH 2100
Range	0 to 2mm /(1.5mm)/+/-(5µm + 1%rdg)	
Steel Ball Dia.	0 to 4mm /(3.0mm)/+/-(10µm + 1%rdg)	
Accuracy	0 to 8mm /(5.0mm)/+/-(20µm + 1%rdg)	
Memory	10,000 rdg (FH 2100 single series)	
	10,000 rdg (FH 4100 in max 500 series	

Road Surface Thickness Gauge

Ref.No : EP10 N006
Model : StratoTest 4100



Road Surface Thickness Gauge is designed for the measurement of all coatings in building activities as bituminous mix, slag, concrete etc. It offers many advantages i.e. non-destructively provide immediate thickness readings and the tests are repeatable as required. As compared to core drill method, where it is destructive, time-consuming, costly and inaccurate.

Test principle and description :
Before the road surface is laid down, a reflector is placed over the foundation layer, either longitudinally or transversely to the carriage way. As the measuring probe approaches the buried aluminum sheet, the disc-shaped probe senses the foil, the gauge then read the road surface thickness in cm or inch.

Features
- Statistical evaluation: n, mean, s, kvar, min, max.
- Offset can be added in a measuring position.
- Memory 6000 data.
- RS 232C interface to Miniprint or PC.

Technical Specifications

Ref. No	**: EP10 N008**
Model	**: Stratotest 4100**
Range	: 0 to 30cm (with probe N300ST)*standard
	: 0 to 10 cm (with probe N100ST)
	: 0 to 100cm (with probe N1000ST)
Resolution	: 0.01cm (0-3cm), 0.1cm (3-30cm)
Accuracy	: 0.1cm + 2% rdg.

Remarks
1. Measuring probe.
2. Electro-magnetic field.
3. Coating material to be measured e.g. road surface.
4. Reflector - aluminium foil or 1m x 0.3m plate.
5. Base material e.g. foundation layer.

Residuary Brick Thickness Gauge

Ref.No : EP10 N007
Model : StratoTest 4100C

Residuary Brick Thickness Gauge is for measurement of residuary brick thickness in industrial furnaces e.g. cylindrical rotary kilns for cement, lime kilns, crucible furnaces and etc.

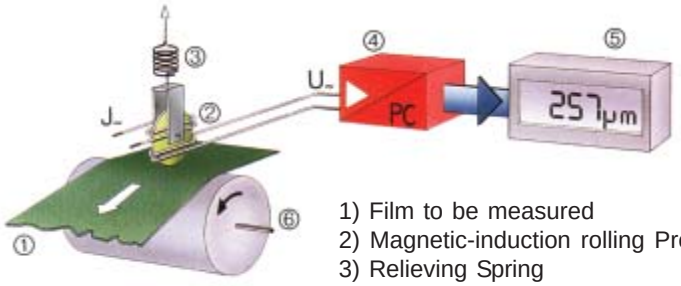
Advantages:
- A non-destructive electronic measurement with immediate display of reading
- It eliminates all influences from infiltrations and microstructural changes
- Simple determination of the lining state without time-consuming preparation and leads to shorter furnace shutdown.

Technical Specifications

Ref. No	: **EP10 N009**
Model	: **Stratotest 4100 C**
Range	: 0 to 30cm
Resolution	: 0.1cm
Accuracy	: 0.5cm + 3%rdg

*Due to the measuring technique, residuary brick thickness measurement is not possible at the endplate or in the installation of sheets. It is for non-conducting fireproof bricks.

Continuous Thickness Meter



1) Film to be measured
2) Magnetic-induction rolling Probe
3) Relieving Spring
4) Electronic Processing Unit
5) Display
6) Ferromagnetic Roller

Ref.No : EP10 N008
Model : CTM

CTM system are designed for non-destructive and continuous thickness measurement controlling deviation from tolerance limits for documentary proof of quality. The system are suitable for all non-magnetic materials in the form of webs or films such as:

- PF, PP, PET, ABS, HDPE, HIPF, PVC, co-extruded film.
- Vulcanised and unvulcanised rubber.
- Coated and uncoated textiles such as leather cloth, rubber blankets, etc.
- Felt, non-woven textiles.
- Paperboard, paper, ceramic, glass, sealing material, pasty material (food stuff).

The CTM incorporates a ferro-magnetic measuring roller over which the web or film passes. A suitable arc of wrap of the film or web ensures a good contact to the surface line of the measuring roller to prevent fluttering effects. The active rolling probe scans over the surface line of the film to perform immediate and continuous thickness measurement. The readings are displayed in µm, mm ,mils or inch. Compared to mechanical distance meters or inductive displacement transducers such as optical systems or air gauges, the patented sensor is not affected by eccentricities of the measuring roller or changes in distance of the mechanical parts caused by variation in temperature.

Technical Specifcations

Measuring range	**:** 10µm - 15 mm
Accuracy	**:** +/- 1%
Maximum measurable traversing speed	**:** 60 m/min

Radiation Survey Meter

Ref.No	Model
KY10 P001	RSM 100
KY10 P002	RSM 200
KY10 P003	RSM 300

RSM Series supply in 3 types of energy compensated GM-tube, for low radiation measurement, RSM-100E, for high radiation measurement RSM-200E, and wide range measurement (from the background level to max. 1 Sv/h) RSM-300E.
Reference : Nuclean power plan, Industrial, Hospital, Institute, Army, Fire station, Police station.

Features

- 20 segment bar-graph.
- Selection switch of the unit (Sv/h,R/h).
- Back light.
- Battery status bar-graph.
- Measurement range (~20m Sv/h).
- Buzzle function (audible effect).
- Calibration factor (by calibration model).
- Freeze the result for notice.
- Statistics tolerance displayed relative value (%).

Technical Specifications

Response of Radiation

Measure Object	: Gamma, X ray
Detector type	: Energy compensated GM-Tube
Measurement range	: RSM – 100: B.G Level ~ 20 mSv/h
	: RSM – 300: B.G Level ~ 1 Sv/h
Accuracy	: ≤ ±10%
Energy Dep.	: ≤ ±20%, 60 keV ~ 1.2 MeV
Angular Dep.	: ≤ ±20%, (within ± 80°)
Response Time	: Auto Adj./ fast react, fast collect, algorit
Standards	: ANSI N42. 17A, IEC 61000-4-2, 4-8, 4-3

Radiation Alarm Monitor

Technical Specifications

Radiation detected	**:** X-Ray and Gamma, Hard Beta
Energy range	**:** 30KEV to 1.25 MEV
Detector	**:** G.M. Tube
Signal	**:** Audible and LED: Indicator light
Sensitivity (typical for cesium-137) :	
Background	: 1 Bleep Per 10 ~ 20 min
	: 1mR/h:3 Bleeps/min
	: 10mR/h:30 Bleeps/min
	: 1R/H and Up continuous tone

Ref.No : KY10 P004
Model : Catch-1