

Sole Testing Equipment

GT-KB02 Rubber Abrasion Tester

Determine the resistance to abrasion of vulcanized rubber or other compounds, or both, used for the soles and heels of footwear. It is not recommended for materials less than 2.54 mm (0.1 in.) in thickness.

Standards

ASTM D1630, SATRA TM 221



GT-KB03 DIN Abrasion Tester

It is used to determine wear performance test of materials like elastic material, rubber, tires, conveyor belts, conveyor belts, shoe soles.

Standards

DIN-53516, ASTM D5963,
EN ISO 20344 section 8.3, ISO 4649, ISO20871
AS/NZS 2210.2 section 8.3, JIS-K6369, JIS K6264-2
SATRA TM174, SATRA TM 193, BS903-A9 Method A,
GB/T 20991 section 8.3, GB/T 20265, GB20266-2006, GB/T 9867, QB/T2884,



GT-KD-DM68 Drill Machine

This machine is a mini bench drill, mainly used as a auxiliary tool sample drilling tool for shoe testing. It is applicable for metal, plastic, rubber and other materials
Optional accessory for GT-KB03 DIN Abrasion Tester



GT-KB04 AKRON Abrasion Tester

To determine wear resistance of vulcanized rubber and elastic material products, like shoes sole, tires, vehicle tracks, by measuring its wear volume caused by rubbing between specimen and sandwheel. And it need to test with balance.

Standards

GT-KB04A: GB/T1689
GT-KB04B: JIS K6264
GT-KB04B: BS-903-A9 Method B



GT-KB05A ROSS Flexing Tester

To determine rectangular bending test of rubber products, shoe soles, PU, PVC, TPR foam and other materials. And inspect its degree of damage, cracking and reduced decline by continuously stretch and bending.

Standards

GT-KB05A-1 model: ASTM D1052

GT-KB05A-2 model: SATRA TM60, BS5131 : 2.1,

ISO 5423, ISO4643,

HG/T2411, GB 20265



GT-KB05B Low Temperature ROSS Flexing Tester

Used to determine rectangular bending test of rubber products, shoe soles, PU, PVC, TPR foam and other materials. And inspect its degree of damage, cracking and reduced decline by continuously stretch and bending.

Standards

ASTM D1052, SATRA TM60, BS5131 : 2.1,

ISO 5423, ISO4643

GB 20265 section 4.2, HG/T2411



GT-KB05D Whole Sole ROSS Flexing Tester

To determine right angle flexing resistance for whole sole of rubber, PU, PVC, TPR foam and other materials. And inspect its degree of damage, cracking and reduced decline by continuously stretch and bending.

Standards

ASTM D1052

SATRA TM60, BS5131 : 2.1,

ISO 5423, ISO4643, HG/T2411, GB 20265,



GT-KB05E Low Temperature ROSS Whole Sole Flexing Tester

To determine right angle flexing resistance at low temperature for whole sole of rubber, PU, PVC, TPR foam and other materials. And inspect its degree of damage, cracking and reduced decline by continuously stretch and bending.

Standards

ASTM D1052, SATRA TM60,

BS5131 : 2.1, ISO 5423, ISO4643

GB 20265 section 4.2, HG/T2411



GT-KB06 Sole Flexing Tester

This tester is used to measure the flexing resistance of shoe soles under continuous movement. Before test, plunge some holes at the maximum bending position, and mount specimen at both grips, one fixed, one movable. Specimen runs flexing owing to the movement of machine. After a certain test cycles, remove the specimen and check its difference of incision length.

Standards

SATRA TM161, AS/NZS 2210.2 section8.4.2
ISO 17707, ISO20344 section8.4.2, ISO20347 section 5.8.4,
GB/T 20991section8.4.2, QB/T 2885, DIN 53543



GT-KB07 Fiberboard Flex Tester

To determine flex test for shoe insole fiberboard and applicable for common leather shoes and sneaker insole fiberboard, but not for toe cap, counter-heel, semi-back and special leather shoes and sneaker insole fiberboard.

Standards

BS 5131: 4.2, SATRA TM3
QB/T 1472



GT-KB08A DeMattia & Upper Flexing Tester

To determine bending resistance of rubber, leather, synthetic leather, shoe sole and other materials. And inspect its flex cracking resistance, resistance to cracking and crack growth degree by repeatedly flexing in certain times and stroke.

Standards

HG/T2873, ISO 7854-Method A, EN ISO 2023,
ASTM D813, D430, ISO132,133, BS-903-A10, GB/T13934,13935, JIS-K6301
Annex E, BS 3424:Part9, GB/T 12586 Method A



GT-KB08B DeMattia & Upper Flexing Tester

To determine bending resistance of rubber, leather, synthetic leather, shoe sole and other materials. And inspect its flex cracking resistance, resistance to cracking and crack growth degree by repeatedly flexing in certain times and stroke.

Standards

HG/T2873
ASTM D813, D430, BS 3424: Part9, BS-903-A10,
ISO132,133, ISO 7854-Method A, EN ISO 2023, Annex E
GB/T13934,13935, GB/T 12586 Method A, JIS-K6301



GT-KB08C Low Temperature DeMattia Flexing Tester

To determine bending resistance of rubber, leather, synthetic leather, shoe sole and other materials. And inspect its flex cracking resistance, resistance to cracking and crack growth degree by repeatedly flexing in certain times and stroke.

Standards

ISO 7854 - Method A ,ISO132,133,
GB/T 12586 - Method A, GB/T13934,13935,
EN 511-5.2, BS-903-A10, ASTM D813, D430,
JIS-K6301,



GT-KB09 Rubber Upper Flexing Tester

To determine bending resistance of rubber materials. And inspect its flex cracking resistance, resistance to cracking and crack growth degree by repeatedly flexing in certain times and stroke.

Standards

EN ISO 20344-2004 section 6.5.1
AS/NZS 2210.2 section 6.5.1
GB/T 20991 section 6.5.1



GT-KB11 Penetration-Resistant Inserts Flexing Tester

To determine the flex resistance of penetration-resistant inserts for safety shoes.

Standards

EN ISO 20344 Section 5.9
AS/NZS 2210.2 Section 5.9
GB/T 20991 Section 5.9



GT-KB12A Safety Footwear Compression and Puncture Tester 30KN

To measure the compression strength for safety shoes toecap and puncture-resistant performance for sole steel plate.

Standards

GB/T 20991 section 5.5 and 5.8, GB/T12017
ISO 20344 section 5.5 and 5.8, ISO 20345
AS/NZS 2210.2 section 5.5 and 5.8 CSA Z 195-2 section 5.3.1
EN12568 section 5.2.3 and 7.2, EN 344-1 section 5.4 and 5.6
EN 388 section 6.4
BS-953 section 5



GT-KB14 Heel Impact Tester

This test is used to determine the impact strength of heels of ladies' shoes, and the result provides an assessment of the liability to failure under the occasional heavy blows received during wear.

Standards

BS-5131-4.8, ISO 19953, QB/T 2863

SATRA TM20



GT-KB15 Heel Fatigue Tester

The 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 subjected to blows, each of specified energy, delivered by a pendulum once a second. Testing continues until failure of the heel takes place or until satisfactory fatigue resistance is obvious.

Standards

BS-5131 4.9, ISO 19956, SATRA TM21

QB/T2864

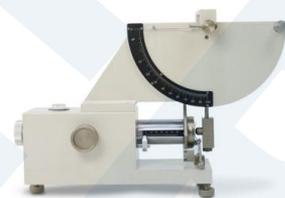


GT-KB18 Resilience Elasticity Tester

The tester is used to measure the impact resistance of elastic material and flexible cellular materials. The test results of this tester can be used for understanding the difference between different materials, and can be used to measure the change of elasticity after specimen being aged. This would be a good reference for purchase or for quality research and improvement.

Standards

DIN 53512, DIN53573, ISO 4662, GB/T 1681



GT-KB21 Compression Rebound Tester

To determine the compression rebound property of a material. This is a measure of retention of shape and elastic properties, and the percentage change in thickness of a test specimen is calculated after it has been compressed by a predefined pressure for a set time and allowed to recover for a further set time. The method is mainly applicable to solid and cellular footwear solings materials, but can be used with any type of compressible material.

Standards

SATRA TM64, ASTM D395 Method A



GT-KB22 Compression Deformation Tester

It's used especially to test the static compression for rubber. Place one standard specimen between parallel flat plates, revolve the screws then compress it a certain range of percentage and then put into the oven under the specified temperature for a certain time period then take it off cooling for 30 minutes to measure its thickness for calculating its permanent deformation rate.

Standards

CNS-3560, 10487; JIS-K6301; ASTM D395 Method B,
GB/T 7759, GB/T 6669; ISO 815, ISO 1856



GT-KB24 Heat Resistance Contact Tester

This tester is used to determine the ability of shoe materials to withstand the heat due to shoe making operation such as embossing, crimping, toe and seat flagging, hot blasting etc. Place the specimen in contact with a hot metal surface under a constant pressure for a short fixed period of time to assess visually if there is any damage to its surface.

Standards

EN-344-1 section 5.18, SATRA TM49, BS 5131 Part2.11
ISO 20344 section 8.7 ,
AS/NZS 2210.2 section 8.7
GB/T 20991 section 8.7



GT-KB35 Outsole Belt Flexing Tester

This machine is to determine the resistance of a component or material to crack initiation and growth due to repeated flexing.

Standards

SATRA TM133



GT-KB36 James Slip Resistance Property Tester

This tester is used to determine the dry static coefficient of friction of shoe sole and the heel materials. Under the specified load on a controlled walking surface, calculate its tangent and perpendicular forces to get the static coefficient of the friction.

Standards

ASTM F489



GT-KB43 Slip Resistance Tester

To determine static slip resistance of outsole, heel and related outsole materials of footwear.

Standards

ASTM F 609

HG/T 3780



GT-KB45 Insole Backpart Stiffness Tester

This tester is used to measure the stiffness in the longitudinal direction of steel shanks used for the reinforcement within footwear and it applicable to steel shanks for all styles of footwear.

Standards

SATRA TM 58, BS-5131-4.18, ISO 18896,

QB/T1812, QB/T1813, GB/T 3903.34



GT-KB46 Steel Shanks Fatigue Resistance Tester

To determine fatigue resistance of shoes steel shank. Fix two ends of steel shank by respectively clamps, exert a certain force on upper fixture, flex the shank in frequency of 4 cycles per second and inspect the damage degree of sample after certain times.

Standards

GB/T 3903.35, GB 28011, ISO18895, EN 12958



GT-KB49 MARK II Slip Resistance Tester

- It is to determine maximum static friction of test specimen and floor by ratio of load horizontal force and vertical force.
- It is to test slip resistance of shoe sole and heel materials.
- It is portable and suitable for dry, wet or contaminated and other floor materials.

Standards

ASTM -F1677



GT-KB57 Sample Buffing Machine

It can grind the surface of material and get the required thickness of materials for testing.

Operated by wrench, it could be adjusted to the position of up / down, left / right, back /forth,for trimming.

Standards

UL 158

NIKE



GT-KC07 Insole / Insock Absorption And Desorption

This tester is used to determine the water absorption and desorption of insole and insock for various shoes. The specimen, placed onto a wet base plate, is submitted to repeated flexing during under a given pressure (in the same manner as the insole of a shoe during working).

Standards

EN ISO 20344 section 7.2 GB/T20991 section 7.2
EN ISO20347 section 5.7.3 AS/NZS 2210.2 section 7.2
ISO5404



GT-KC39 Thermostatic Oil Bath Tester

To determine the oil resistance for all kinds of materials and the length change rate under the oil temperature for PE, PVC etc.

Standards

GB/T1690, CNS3562, ASTM D471, DIN53521, ISO1817



GT-KC46 Impact Scuff Tester

- Impact scuff for upper leather

This test gives an indication of the resistance of a footwear upper material to scuffing, surface damage which occurs when the upper of a shoe is grazed against a rough surface.

The methods is applicable to all upper leather and some synthetic upper materials.

- Floor impact scuff test

This test is intended to assess the risk of a shoe bottom material marking floorings during wear. It is applicable to all types of soles and heels taken from whole shoes, pre-moulded units or sheet materials.

Standards

SATRA TM38 , QB/T 1810
SATRA TM 223



GT-KC49 Cellular Rubber Hardness Tester

Compress the specimen placed between upper and bottom compression plates. Then, the specimen' s area divided by load will give the compression hardness of the material.

Standards

ASTMD1056, JIS K6401, JIS K6767, ISO2439



GT-KC50 Cellular Plastic Reciprocating Compression Tester

This machine is designed for determining the deformation set of cellular plastics. The deformation set is calculated when the specimen is repeatedly compressed and have been placed for a given time. Users can set the number of tests, and it will stop automatically when the number of tests has been reached.

Standards

JISK6767, ISO7214



GT-KC67 Melt Flow Tester

This machine adopts new generational manual smart instrument and on-off time relay output control, the period of constant temperature of instrument is short and overshoot is minimum. The part of temperature control adopts molding temperature control unit table to make the precision of temperature control and the stability of product get the effective guarantee.



GT-KD04 Density Balance & Densimeter

In accordance with GB/T 533, T1033, ISO 2781, 1183, DIN 53479, ASTM D 297, D792, standards, and by adopting the buoyancy method of Archimedes principle, the machine can accurately and directly show the density of sample.



GT-KD05 Proportion Detector

This machine is used to test the sole specific gravity for rubber, plastics, EVA foam materials etc.



GT-KD09 Shore A Durometer Test Stand

It is specialized for Shore Durometer with dedicated calibration weights to measure the hardness of rubber and Microporous material.

- GT-KD09-1 is used for Shore A Durometer, Shore AO Durometer, and Shore C Microporous Material Durometer
- GT-KD09-2 is used for Shore D Durometer
- GT-KD09-3 is used for Shore AM Durometer



GT-KD09-LX Shore Durometer

It is designed for testing the hardness of vulcanized rubber and plastic products.

- The A scale for rubbers in the normal-hardness range
Standards: GB/T531.1, ISO7619-1, ASTM D2240-Type A
- The AM scale for thin rubber test pieces in the normal-hardness range
Standards: GB/T531.1, ISO7619-1, ASTM D 2240-Type M
- The AO scale for rubbers in the low-hardness range and for cellular rubbers
Standards: GB/T531.1, ISO7619-1
- The C scale for testing the hardness of foam, sponge, shoe microporous material, etc
Standards: HG/T2489
- The D scale for rubbers in the high-hardness range
Standards: GB/T531.1, ISO7619-1, ASTM D 2240-Type D
- The OO scale for special-soft rubber harness test.
Standards: ASTM D 2240-Type OO



GT-KD11 LED Scale Loupe

To measure size, angle etc for small objects. It is to measure the change of incision dimension for shoe sole after bending durability test.

Adaptation machine

- GT-KB05 ROSS Flexing Tester
- GT-KB06 EN Sole Flexing Tester
- GT-KB08 DeMattia & Upper Flexing Tester

