

Technical Specifications of every equipment is in the below:

LH-210 Digital Display Shore A Hardness Tester with Test Stand



1.Application:

LH-210 Digital Display Shore Hardness Tester (Shore A) is applied to test the soft rubber, plastics and such substances. This hardness tester integrating measurement device and data processing, with the merits of compact, accurate measurements and easy to carry, beautiful modelling, light weight and easy to operate.

2.Specifications:

Model	LH-210
Test Scale Available	Shore A
Standards	DIN 53505, ASTM D2240, ISO 7619, JIS K7215.
Display	Hardness Result, Average Value, Max Value(Peak Value Lock),Battery Indication.
Measuring Range	0~100HA
Measurement Deviation	Within 20~90 HA, Error $\leq$ ±1HA
Display Resolution	0.1 HA
Operating Temperature	0~40 °C
Power Requirements	3×1.55V Button Batteries
Dimensions	170mm*56mm*42mm
Weight	300g

3.Features:

3.1.The maximum latches, average automatic calculation and under-voltage alarm function.

3.2.The machine carries communication cable,connection with it, can carry out data communication with the computer.

3.3.Automatically switch off.

3.4.Bright & clear LCD display.

3.5.With operating stand.

4.Basic Configuration:

4.1.Button Batteries 3*1.55V

4.2.Hardness Tester Operating Stand.

4.3.RS232 Communication Cable.

GS-230 Digital Display Shore A Hardness Tester with Test Stand



1.Function:

Shaw rubber hardness gauge is an apparatus to measure vulcanized rubber and plastic products. This apparatus has three models of Type A, Type C and Type D, and each model is subdivided into two types of single pointer and double pointer.

This hardness gauge conforms to the regulations.

2.Attention:

Type A: applicable to general rubber, synthetic rubber, vulcanized rubber, soft rubber, leather, wax, etc.

Type C: applicable to the hardness test of rubber microporous material.

Type D: applicable to hard rubber, hard resin, acrylic, glass, cushiony plastic cement, printing plates, fiber, etc.

Shore A Hardness Test Stand Operation Manual

One, the properties:

The testing principle of hardness tester is compact, more reasonable that makes the stability and the accuracy of the test, it has a further improvement. And the use of high rigidity metal platform instead of the traditional glass platform, avoid the shortcomings of fragile glass platform. Especially in the testing of hardness test D, the users do not need to equipped with special hardness blocks, make the testing more economic and convenient.

LAC-YJ type is adapted to LX-A, LX-C hardness tester of our company's, LD -YJ is adapted to our LX-D type hardness tester.

Three, the method of use:

1, Installation debugging:

- (1) The test frame should be placed in a stable smooth work stage, and then adjusted wishbone height. When operating, loose the bakelite star wishbone by right hand, promoting the wishbone by left hand to make the platform of sclerometer installation stem distance from circular bottom about 110mm, and tighten bakelite star handle (the hardness tester install stem should be installed at the center of circle platform.)
- (2) Unscrew the dust cap at the top of hardness tester, then revolving the hardness tester into the install stem of test stand, (tighten it but cannot too forcibly, otherwise it will damage hardness tester). If the hardness tester surface is not aim at operator after tightening, you can loosen the position adjustment knob on the top of weight, then turn hardness tester to the ideal azimuth and tighten the azimuth adjustment knob.
- (3) Loosening the bakelite star wishbone on the xarm, adjust the height of xarm again left hand, when pressing foot surface of hardness tester distance from the round test frame about 10mm, tighten handle of pressure testing, make presser foot and circular mesa completely contact, slowly turn round two fine-tune hand wheel until the durometer showed 100 degrees ($\pm 1^{\circ}$ c). This test stand and hardness tester installation ends.

2, Sample requirements:

Sample must level off and the thickness is no less than 6mm, enough area, the distance between the pressure needle and sample specimens contact position with the sample edge is not less than 12mm.

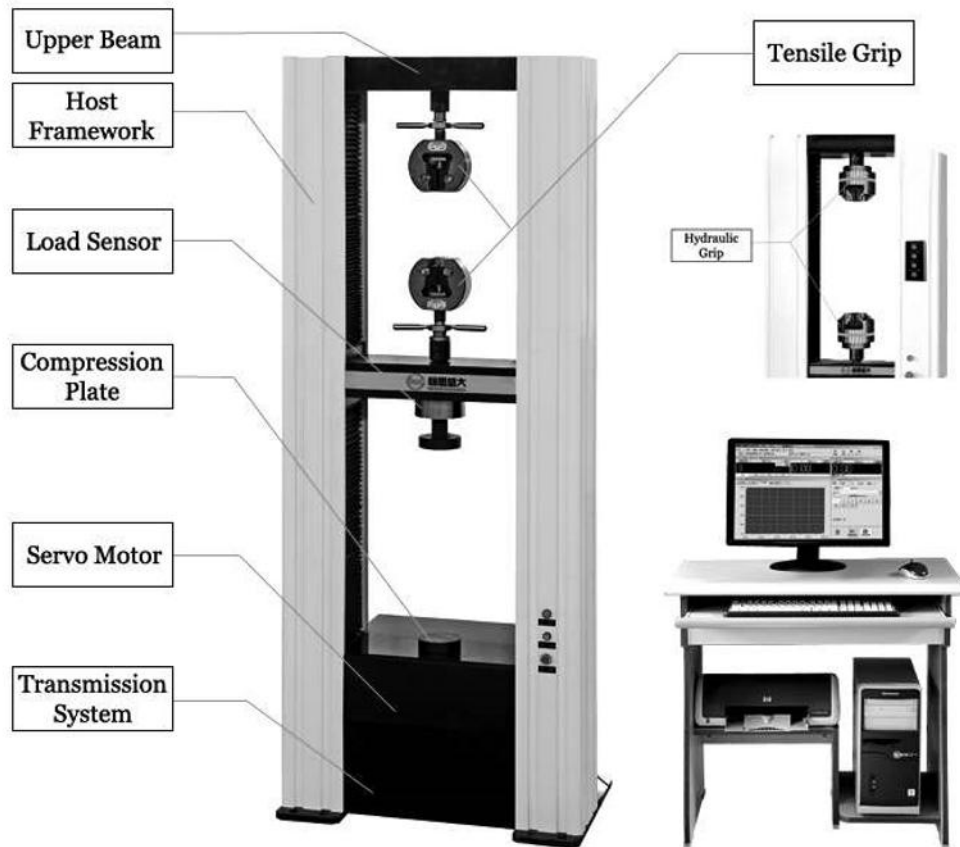
3, Method of hardness test of Rubber and Plastic sample

Put the sample on circular platform, loosen the Star handle in xarm, adjust the height of xarm, until the distance between the durometers pressure foot surface and the tested samples surface is about 5mm. Tighten the Star handle on the xarm. Under pressure to handle and make the pression foot of hardness test in the action of constant weight gravity complete contact with sample, and reading 1 seconds, and the numerical display of hardness tester is the numerical value of the hardness testing samples. In order to improve the accuracy of measuring, and testing different positions apart at least 6mm five times, take the average measurement.

Four, maintenance:

Often filling lube in various activities of test frame, you should wipe it after testing to prevent moisture, coating with a small amount of anti-rust oil.

DDS-30 30kN Computer Control Electronic Rubber Tensile Tester



1. Application:

It is applicable for wide range of material for tension, compression, bending, shearing and low cycle test. Suitable for metal, rubber, plastic, spring, textile, and components testing. It is widely used in the corresponding industries, research and development, test institutes and training centers etc.

2. Standard:

ASTM, ISO, DIN, GB and other international standards.

3.Main Technical Parameters:

Model	DDS-30
Max. load	30 kN
Structure	Four-column floor model, (upper is tensile and lower is compression; upper is compression and lower is tensile)
Control method	Computer control
Load accuracy	1 class/
Load range	1%~100%F·S
Resolution	1/300000
Measuring range of deformation	2%-100%
Accuracy Indication of deformation	±1%
Disp. indicating relative error	±1%
Displacement Resolution	0.01mm
Adjusting range of control rate of load	0.005~5%FS/S
Control precision of control rate of load	When rate < 0.05% FS/s, the precision is within ± 2% of setting value; When rate ≥ 0.005%FS/s, the precision is within ± 1% of setting value
Adjustment scope of deformation rate	0.005-5%FN/S
Accuracy of deformation rate	Test Speed<0.05%FN/s,within the ±2% of the preset value, Test Speed≥0.05%FN/s,within the ±0.5% of the preset value
Control precision of displacement rate	When rate < 0.5mm/min, within ± 1% of setting value; When rate ≥ 0.5mm/min, within ± 0.5% of setting value
Scope of the consistent load deformation and displacement control	0.5~100%FS
Accuracy of the consistent load deformation and displacement control	Preset value±10%FN, within the ±0.1% of preset value; Preset value<10%FN, within the ±1% of preset value
Speed rang of middle beam	0.05~500 mm/min
Effective Tensile space	700mm
Effective Compression space	700mm
Effective Testing width	400mm
Load Cell Configuration	One(max load), more load cells can be added according to customer requirement
Extend configuration	Large deformation extensometer, high or low temperature teste chamber, high temperature oven
Power supply	1,8kW

4. Main Unit Feature:

- 4.1 Adopt floor structure, High Stiffness, lower for tensile, upper for compression! upper for tensile, lower for compression, double space. The beam is step less lifting.
- 4.2 Adopting ball screw drive, realize no clearance transmission, make sure the precision control of the test force and deformation speed.
- 4.3 The shield plate with limit mechanism used to control the beam moving range, in order to avoid sensor damaged due to the moving distance is too large.
- 4.4 The table, moving beams is made of high quality precision machining steel plate, not only reduce the vibration generated by specimen fracture, but also improve the stiffness.
- 4.5 Three columns of mandatory orientation, make the main unit rigidity much improved, to further ensure the repeatability of measurement.
- 4.6 Adopt bolt type grip installation, make the grip replace easier.
- 4.7 Adopt AC servo driver and AC servo motor, with stable performance, more reliable. Have over-current, over-voltage, over speed, overload protection device.

5. Software Function

- 5.1 Defined function: according to different types of users, different material properties, different test standards, different languages, flexible setting the test program to meet the test requirements.
- 5.2 Input Function: Entry specimen parameters before the test, you can single input sample parameter, you can also batch input sample parameters, you can modify the sample parameters before the test, the specimen parameters can be modified after the test, fully satisfy your operating habits.
- 5.3 Data processing query functions: fully equipped data query function, print function, the export function to ensure the accuracy of the test data, reliability, real embody and reflect the nature and characteristics of the material test data.
- 5.4 Curve analysis function: All the material properties can be reflected by the data curve, so the powerful data curve analysis function can help you better mastery and understanding of the material test properties, which is your best helper to analyze the material.

6. Software Feature:

- 6.1 Auto zero clearing : when test begin to start, the system auto zero clearing.
- 6.2 Auto calibration. system can automatically realize the value accuracy of the calibration.
- 6.3 Auto return. finish test, the cross beam will auto return to the starting position.
- 6.4 Auto gear shifting (when choose classify gear test): According to the load size automatically switch to the appropriate range, to ensure the accuracy of the test data.
- 6.5 Auto speed changing. The cross beam moving speed can auto change during the test process according to the preset program, also can manual change.

6.6 Auto saving: adopting the the database management way, the test data and curve automatically saved after the test.

6.7 Auto calculating·when finish test, automatic calculate elastic modulus, yield strength and the percentage elongation stress, etc (Different test method, different analysis date.) , can auto analyze, also be artificial correction analysis results, improve the accuracy of the analysis.

6.8 Display way: Dynamic display of data and curves with the testing process.

6.9Result comparison: Multiple test curve can use different color superposition, reproduced, enlarge , presenting comparison of a set of sample.

6.10 Curve choice·can choose Stress - strain, force - displacement, force - time, displacement - time, and other curves to display and print; Can switch at any time to observe, zoom in and zoom out, horizontal or vertical movement, real-time high speed sampling.

6.11 Test standard: Integrated with about 40 kinds of national standard or test method, can meet the various test need of customers.

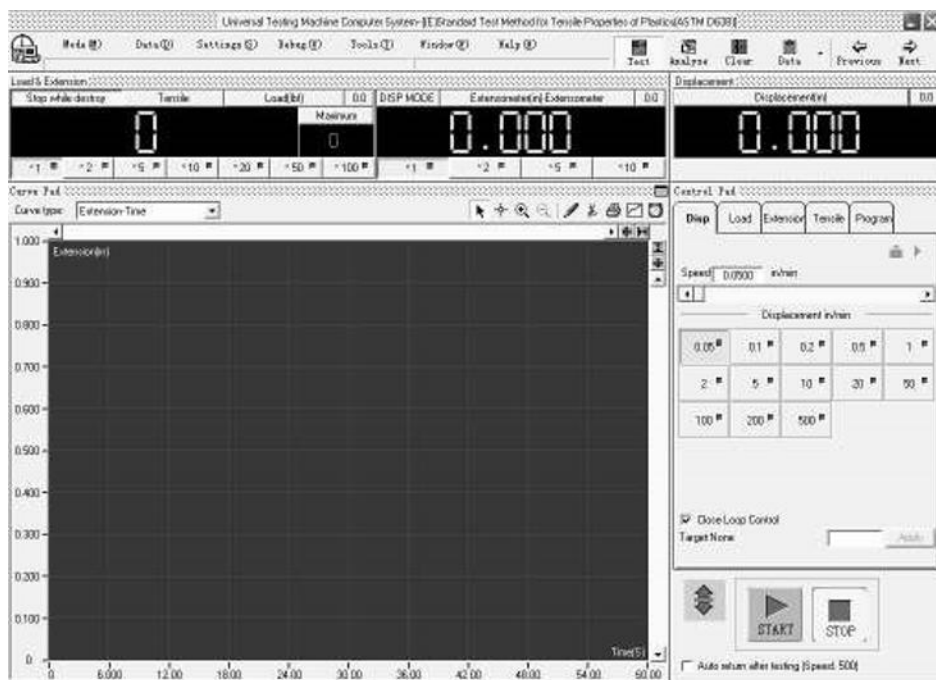
6.12 Test report: According to user required format to compile reports and can print bulk data.

6.13 Limit protection: with mechanical and Programmable two level limit protection function.

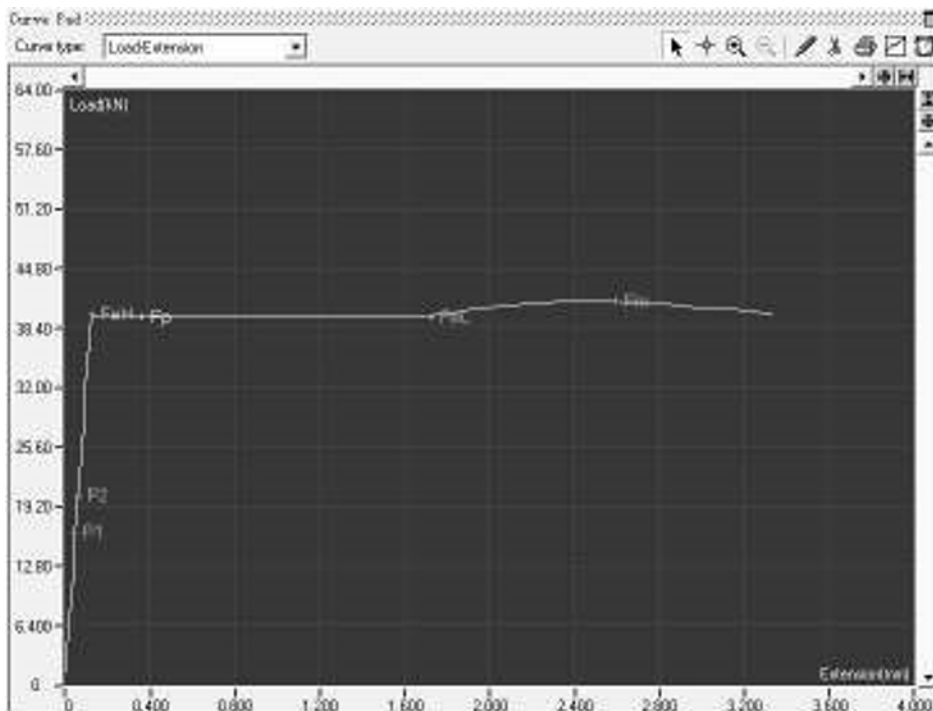
6.14 Overload protection: when the load exceeds the maximum file of 3-5%, automatic stop.

6.15 Other protection·with overload, over current, over voltage,displacement of the upper and lower limit and emergency stop protection function.

Software interface:



Load-extension, Force - time, force - displacement ect. more curve to choice



Excel, word and template test report, and the report can be edited customized.

7.Configurations:

7.1 High strength main unit-----1 set

7.2 High precision arc synchronous deceleration system----- 1 suit

7.3 High precision ball screw-----2 pcs

7.4 TaiWan TECOAC Servo motor and Control system(Panasonic optional V----- 1 suit



7.5 High precision load sensor^----- 1 pc

7.6 Tensile fixture -----1 suit

Round jaw·4-9mm, 9-14mm Flat jaw·0-7mm, 7-14mm

7.7 Compression fixture -----1 suit

Compression plate diameter is 100mm



7.9 Large deformation extensometer-----1 suit

Max deformation:800mm, Gauge Length:10mm Used for non-metal specimen: Rubber etc.



RTS-619 Computer Control Rubber No Rotor Rheometer



1. Application:

The machine is applied to determine the characteristics of vulcanized rubber,widely used in rubber processing industry, rubber quality control and basic research rubber.

2. Main Technical Parameters:

Model	RTS-619
Temperature control range	Room temperature~200!
Heating up time	~10min
Temperature fluctuation	~±0.3!
Temperature resolution	0.1!
Torque range	0~15N·m
Torque display resolution	0.01 N·m
Swing frequency	1.7 Hz^100r/minV
Swing angle	±0.5°
Air-pressure requirment	0.5Mpa--0.65MPa (user prepare the dia 8 trachea)
Compressed air	0.35-0.40Mpa
Vulcanization pressure	0.45 MPa
Power supply	1.8kW
Printing	date,time,temperature, vulcanization curve: ML,MH,ts1,ts2! temperature curve: t10,t50,t90,VC1,VC2

3.Main features:

Main functions:

The rubber no rotor rheometer used monolithic rotor control, which include: host, temperature measurement, temperature control, data acquisition and processing, sensors and electrical chains and other components. These measurements, temperature control circuit consists of a temperature control device, platinum resistance, heater composition, capable of automatic tracking power and ambient temperature changes, automatically correct PID parameters to achieve fast and accurate temperature control purposes. Data acquisition system and mechanical linkage to complete the rubber vulcanization process of force torch signal automatic detection, automatic real-time display of temperature and settings. After curing, automatic processing, automatic calculation, print vulcanization curve and process parameters. Show curing time, curing power Ju, also has a variety of audible alert.

The rubber no rotor rheometer controlled by computer, the computer setting the parameters of the direct control of test parameters rheometer. Display real-vulcanization curve and temperature curve, store test results, different adjustable comparison of test results and in a different color.

4. Features

1. This rubber no rotor rheometer is really confined mold cavity, and the United States Alpha (formerly Monsanto) has done. Repeatability, and test data comparable with the Alpha. At the international leading position in the same industry.

2. The non rotor rheometer development platform based on large databases, temperature control devices using the software to directly control and collection and processing. Instrument to overcome the general curing temperature of the shortcomings of using temperature controller (accuracy poor). The technical leadership of international new trend.

3. This instrument has statistics, analysis, storage and comparison functions. Humanized design, easy to operate

4. Using imported high-precision sensors.

5. How it works:

The rubber sample into the mold cavity is almost entirely enclosed and maintained at test temperature, the mold cavity are of two parts, of which the lower part with a small linear reciprocating movement (swing oscillation), oscillatory shear specimen produced strain determination is the reaction torque of the mold cavity (force), this torque (force) depends on the shear modulus of rubber.

Curing test specimens after the start of the shear modulus increases, the computer machine real-time display and record the torque (force), when the torque (force) rose to a stable value or the maximum as well as return to the state, they get a torque (force) and time curve, that is, curing curve (Figure 1), shape of the curve and test the temperature and plastic material characteristics.

1.The non rotor rheometer development platform based on large databases, temperature control devices using the software to directly control and collection and processing. Instrument to overcome the general curing temperature of the shortcomings of using temperature controller (accuracy poor).

2. This instrument has statistics, analysis, storage and comparison functions. Humanized design, easy to operate

3. Have the function of comparison and amplification curve

4. Computer controlled,application WINDOWS series operating system platform.

RTS-620 Computer Control Rubber Mooney Viscometer



1. Application:

RTS-620 Mooney Viscometer is used for measuring viscosity and relaxation of base rubber, raw rubber or rubber mass pre-vulcanization properties. It is also used for measuring viscosity in Mooney value for compounded or uncompounded unvulcanized natural, synthetic or regenerated rubber. Ideal experimental instrument of rubber industry and scientific research units.

Accord with GB/T1232 "Rubber unvulcanized -Determination of mooney viscosity", GB/T 1233 "Rubber, unvulcanized-Determination of pre-vulcanization characteristics-Shearing disk method", ISO289, ISO667 ect.

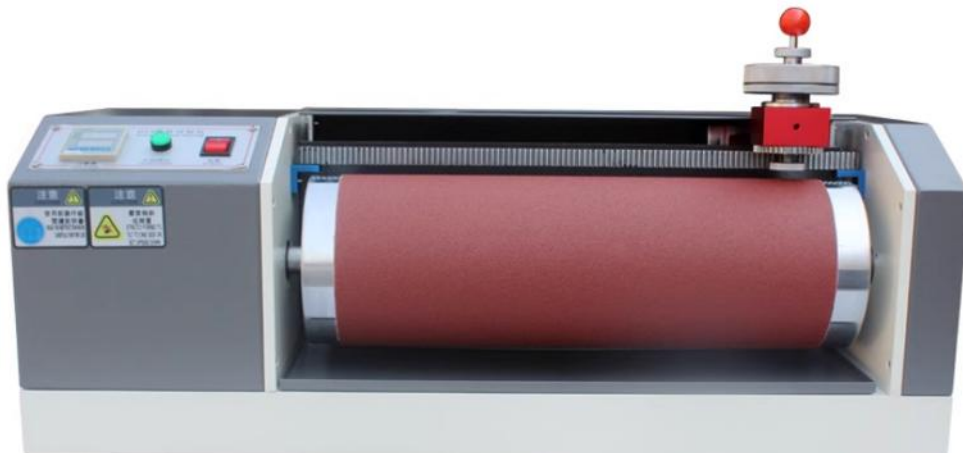
2. Features:

1. This instrument has excellent performances including automatic calibration, higher stability.
2. Computer controlled, interface board collect data.
3. This instrument has statistics, analysis, storage and comparison functions. Humanized design, easy to operate.
4. Intelligent digital control temperature, simple adjustment, wide range of temperature

3. Technical parameters:

Model	RTS-620 Computer Control Type Mooney Viscometer for Rubber
Temperature	room temperature to 200 Centigrade
Temperature fluctuation	±0.5°C
Mooney value measurement range	Full range 200 Mooney value
Mooney value resolution	0.1 Mooney value
Measurement accuracy	±0.5 Mooney value
Rotor speed	2±0.02 r/min
Power	1.6kW
Out size	660mm×570mm×1200mm
Weight	280kg

FZL-403 Abrasion Testing Machine



Overview

Used for abrasion resistance in elastic materials, rubber, tires, conveyor belts, shoe soles, soft synthetic leather, and other materials. Meets the requirements of standards such as DIN-53516, ISO/DIS-4649, BS903 PART9, and GB-9867.

Specification

Specimen load: $5\text{N} \pm 0.2\text{N}$, $5\text{N} \pm 0.2\text{N}$;

Lateral displacement of the clamp: $4.2 \pm 0.04\text{mm/roller revolution}$;

Roller diameter: $\Phi(150 \pm 0.2)\text{mm}$;

Roller length: 460mm;

Roller speed: $40 \pm 1\text{r.p.m}$;

Wear stroke: 40m (20m) equivalent to 84 (42) roller revolutions;

Wear speed: 0.32m/sec;

Inclination angle: 3° (angle between the specimen holder and the vertical plane of the roller);

Dimensions (approx.): 500mm x 310mm x 410mm;

Weight (approx.): 65kg;

Power supply: 55W