



Labstore Instruments LLC



INDUSTRY USES:-

Adhesives
 Aerosols
 Airports & Aviation
 Asphalt
 Automotive
 Beverages
 Bitumen
 Ball & Roller Bearings
 Chemicals
 Confectionery
 Cosmetics
 Dyes
 Electrical cables
 Engineering
 Fats & Foodstuffs
 Gas - Lpg & Natural
 Marine
 Motor vehicles
 Packaging & Transportation
 Paint, Varnish & Mastics
 Petroleum
 Pharmaceuticals
 Power generation
 Plastics
 Polishes & Waxes
 Printing & Inks
 Regulatory authorities
 Road research
 Rubber
 Solvents
 Water

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Labstore Instruments LLC

"Your one stop for high quality and affordable instruments. We supply instruments tailor-made for your testing and measuring needs, and guarantee your satisfaction."

Labstore Instruments is a manufacturer and distributes petroleum testing instruments. The company was founded in back in 1978; our trading partners are the major refineries all over the world, Testing Laboratories, Analysts, Oil Refineries, Universities, and R&D Laboratories. Labstore helps incorporate high quality and affordable instruments in today's leading petroleum testing industry.

VISION

Our vision is to meet and satisfy our customers' needs through our environmental friendly, high quality affordable instruments provide and exceed international standards through value added specialized services.

OUR VALUES

RESPECT - In all our business activities, we accord respects to our customers, our staff, our suppliers and our peers.

INNOVATION - We strive to develop products and services that meet's our customer expectations and the industry requirements.

SUSTAINABILITY - We make business decisions that respect safety and the environment.

RESULTS - We do not accept complacency, we take responsibility for our own performance and use teamwork for the best outcomes.

COMMITMENT - We respond to the needs of our customers and go the extra mile to deliver great service.

RELIABILITY - We are there when you need us!

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Distillation Tester (Automatic)
as per standards ASTM D 86, ISO 3405 and IP 123
Model: 44044-0



Standard

This distillation analyzer is fully automatic and as per standards ASTM D 86, ISO 3405 and IP 123, ASTM D 850 & ASTM D1078 for carrying out distillation of petroleum products.

Technical specifications:

- * Wide colour screen applicability.
- * Temp. range : 0-400 deg. °C, with accuracy +/-0.1 deg. °C.
- * Power supply : 220V \pm 10% AC, 50/60Hz.
- * Stores 40 distillation programs and 16 operation results.
- * Automatic calibration for temperature, volume and atmospheric pressure.
- * Built-in cooling unit and heating apartment with mandatory wind cooling system.
- * Connectivity with LIMS by RS-232C.
- * Automatic dry point detection (optional).
- * 1 to 20 automatic testers for distillation can be controlled by one computer.
- * Distillation control and data processing system run under Windows 2000/XP operation system with interface and displayed with curve and data at the same time.
- * With powerful and quick database. Distillation procedure can be easily listed, modified, memorized, and operated. The memorized result also be traceable and print out. The repeatability and reproducibility of distillation can be compared and calculated for many times. It can be displayed by curve and data and it is very easy for observing.
- * Different grade operator has different password and operation authority to ensure the safety of distillation and database.
- * The instrument is capable of distillation as per ISO 3405 and IP 123, ASTM D 850 & ASTM D1078 for carrying out distillation of petroleum products such as, gasoline, ethanol blended gasoline, kerosene, aviation fuels, diesel etc.
- * Heater adopted with quick, safe and reliable light parts with long life. So realize the timely correction of distillation rate and ensure it strictly.
- * The temperature detector in the bottom of flask and distillation Standard This distillation analyzer is fully automatic and as per standards ASTM D 86, ISO 3405 and IP 123, ASTM D 850 & ASTM D1078 for carrying out distillation of petroleum products.

Distillation Tester - Double (Manual)
as per ASTM D86, IP123, ISO3405, GB/T6536
Model: 44002-2



Purpose

This instrument is used to test distillation of gasoline, air gas, jet fuel, solvent with special boiling point, diesel oil and so on under a low temperature as per ASTM D86, IP123, ISO3405, GB/T6536 <Standard Test Method for Distillation of Petroleum Products>. Double tube, lowest temperature is 0°C, it is both suitable for single-tube test and double-samples test, more efficient.

Technical Specifications

Power Supply: AC 220 V 10% 50 Hz

Heating Power: 1000 W2 (adjustable, continuously)

Volume of Graduated Cylinder: 100 mm, graduation is 1 mm

Distilling Flask: 125ml, as per ASTM D86/IP123

With Centering Device.

Thermometer: whole immersed, Range: -2 ~ 300°C, -2 ~ 400°C

Heater : Made with Quartz Glass Coil

With heat Resistance ceran plate of $\phi 38$ & $\phi 50$ mm.

Temperature Controller: Range: ambient +10 ~ 60°C (suggest choosing

Model: 44003-3 if need refrigeration).

Total Power Consumption r: less than 2500 W

**Distillation Tester – Double – Low
Temperature (Manual)**
as per ASTM D86, ISO3405, IP123, GB/T6536
Model: 44003-3



Purpose

This instrument is used to test distillation of gasoline, air gas, jet fuel, solvent with special boiling point, diesel oil and so on under a low temperature as per ASTM D86, ISO3405, IP123, GB/T6536 <Standard Test Method for Distillation of Petroleum Products>. Double tube, lowest temperature is 0°C, it is both suitable for single-tube test and double-samples test, more efficient.

Technical Specifications

Power Supply: AC 220 V 10% 50 Hz

Heating Power: 1000 W2, adjustable

Volume of Graduated Cylinder: 100 mm; graduation is 1 mm

Distilling Flask: 125mL as per ASTM D86/IP123

With Centering Device.

Thermometer: whole immersed; Range 1: -2 ~ +300°C, Range 2: -2 ~ +400°C

Made with Quartz Glass Coil

Temperature Controller: Range: 0 ~ 60°C (adjustable); Accuracy: ± 0.5 %

Refrigerating System: by compressor

Distillation Tester (Manual)
as per ASTM D86, ISO3405, IP123, GB/T6536
Model: 44000-0



Purpose

This instrument is used to test distillation of gasoline, air gas, jet fuel, solvent with special boiling point, naphtha, diesel oil and so on as per ASTM D86, ISO3405, IP123, GB/T6536 <Standard Test Method for Distillation of Petroleum Products>.

Technical Specifications

Full SS body

Equipped with Voltage Adjusting Circuit to adjust heating power.

Heating Element: Enclosed in Quartz Glass tube.

Size of Water Bath: 244 × 167 × 176 mm, made with 1.5 mm high brass H62
 alternatively we can also provide SS tank.

Distilling Flask: As per ASTM D86, 125 ml.

With Centering Device.

Soft keys (latest introduction).

Open glass window door to handle and view flask.

Heating element is fixed on elevating platform which can be adjusted up & down to accommodate to different sizes of flasks.

Condenser Tube: made with $\phi 14 \times 1$ mm brass, alternatively we can provide SS tube.

With heat resistance CERAN plate of $\phi 38$ mm & $\phi 50$ mm.

Power Supply: AC 220V $\pm 10\%$, 50Hz.

Cleveland Open Cup Flash Point (Automatic)
as per ASTM D92, IP36, GB /T3536, GB /T267
Model: 10002-2



Flash Point

Purpose

This instrument is used to test the Open Cup Flash Point of petroleum products, indicate with LCD screen by mode of man-machine conversing, menu as a guide, as per ASTM D92, IP36, GB /T3536, GB /T267.

Technical Specifications

Has Update Software to revise error

Has function of prompting test date and time

Automatically calculate the average of air pressure

Test by differential coefficient, bias of system is revised Automatically

Scan, ignite, check, print by microprocessor Automatically

Be able to test the flash point of preventing fuel of oil

Ignite by electron

Range: 0 ~ 300°C

Ambient Temperature: 10 ~ 40°C

Relative Humidity: ≤85%

Power Supply: AC220 V±10%, 50 Hz

Cleveland Open Cup Flash Point (Manual)
as per ASTM D92, ISO2592, IP36, GB /T3536
Model: 10001-1



Purpose

This instrument is used for test the flash point as per ASTM D92, ISO2592, IP36, GB /T3536 <Standard Test Method for Flash Point of Petroleum Products (Cleveland Open Cup Method)>, except oil fuel and samples whose open cup flash point is below 79°C

Technical Specifications

Cleveland Oil Cup: Material: H62; Inner Diameter: 63.5±0.25 mm. Depth: 33±0.1 mm; Length from top edge: 9.5±0.5 mm. there is a line marked in inner wall.

Igniter: Diameter of Spout: ≤ 0.6 ~ 0.8 mm

Thermometer: -6 ~ 400°C, graduation is 2°C

Scans automatically at the press of a switch

Relative Humidity: ≤ 80%

Power Supply: AC 220V±10%, 50Hz

Flash Point (Pensky-Martens Closed Cup) Manual as per ASTM D93 and GB/T 261- 83(91) Model:10003-3



Purpose

This instrument is made and designed as per ASTM D93 and GB/T 261- 83(91), heating the sample in a hermetic oil cup. The steam what is generated from the sample oil combines with the air around. The lowest temperature of the experimental oil at when this mixed gas sparks just when it meets flame is just the flash point through Closed Cup Method.

Technical Specifications

Electric heater:

- * Stove: Carborundum, power is 600W, adjustable, continuously
- * Speed of temperature rising of test oil sample:1 ~ 12°C/min

Electric stirrer:

- * Constant speed motor: 45TCY, driven by soft shaft;
- * stirring vane size is 8×40(mm)

Standard oil cup:

- * Inner diameter: Φ 50.8 mm; depth: 56 mm
- * Depth from the mark line to bottom: 34.2 mm
- * Volume of experimental oil: approximately 70 ml

Fire device:

- * Fire source: butane gas
- * orifice: Φ 0.8 mm

Thermometer:

- * range: -5 ~ 110°C, ASTM 9°C
- * range: 90 ~ 370°C, ASTM 10°C

Power supply: AC220 V \pm 10% 50 Hz.

Flash Point (Pensky-Martens Closed Cup) Automatic as per ASTM D93, GB/T 261-83 Model:10004-4



Purpose

This instrument is used to determine the flash point of petroleum products as per ASTM D93, GB/T 261-83, indicating with LCD Display, guidance of menu makes your operation easy.

Technical Specifications

Display conversation operation panel in English, menu leads your input. The error-managing software has the function of prompting and revising entirely. With the function of prompting the parameters of testing date, testing time and so on. Calibrate the effect of air pressure and calculate the corrected value. Differential examination, calibrate the System's bias automatically.

Operating automatically: Stirring, uncovering, igniting, testing and printing.

Ignite by electron/gas, cooling forcefully by fan.

Range: 0-300°C.

Surrounding ambient temperature: 10-40°C relative humidity: <85%

Voltage of power supply: AC220V \pm 10% 50 Hz

Automatic Pensky-Martens Flash Point Tester as per ASTM D 93 A&B, IP 34 and ISO 2719

Model: 10007-7



Automatic Pensky Martin Closed Cup Flash point Apparatus as per ASTM D 93 A&B, IP 34 and ISO 2719 test methods.

Specifications:

- * A microprocessor controlled automatic version of PMCC
- * LCD display and menu key makes the operation easy (Error managing software has the function of promoting and revising entirely)
- * Keypad: Touch screen
- * Test time and date is displayed
- * Auto barometer correction
- * Choice of electrical ignition or LPG gas
- * Stirrer and shutter mechanism are operated by default program
- * Test is terminated after the flash is detected
- * Calibrate the effect of air pressure and calculate the corrected value
- * Differential examination, calibrate the system's bias automatically
- * Operating automatically - stirring, uncovering, igniting, testing and printing
- * Sample cup is cooled down by a forced air cooling after the test
- * Temp rang: 0-370°C, graduation: 0.1°C
- * Repeatability + 1°C at 100°C and 2°C above 100°C
- * Built in printer
- * RS-232 interface for connectivity to LIMS
- * Voltage: AC 220V + 10%, 50Hz
- * Working temp: 10-40°C at <85% humidity

The automated closed-cup flash-point tester is designed, manufactured and inspected in accordance with ASTM D93 A&B, IP 34 and ISO 2719 test methods and is suitable to test the flash point of fuel oil, lubricant, suspended solids, liquids that tend to form surface film under the test conditions and other liquids. This apparatus is controlled by a single-chip and has functions of automatic testing, colored LCD display, automatic diagnosis, record enquiry and printing, with following features:

Use 8-inch colored TFT LCD and touchpad for human-machine dialogue.

The interface has elegant design with prompting boxes and all operations are clearly indicated. The upper section displays the input and output state needed by the apparatus and the operator could know the action and state of the apparatus's actuator at any moment. The bottom section displays parameters of temperature and clock and the operator could know the change of system parameters at any moment. Automated testing: When the analyst has set the test parameters, the apparatus will control automatically the action of oil cup's shutter, electric igniter and stirrer (stop and start). Meanwhile, the apparatus will heat and inspect the oil sample automatically in accordance with the standard and don't need the operator's intervention. After the test is completed, the apparatus will store automatically the test results. The apparatus could store up to 100 test results. Results could be enquired and printed at any moment. The thermo-sensitive printer has advantages of fast printing and no noise.

The apparatus uses the hot-surface igniter. The hot-surface igniter is extensively applied to the automobile igniter industry and has successful experiences of stable application. Compared with other electronic igniters, the hot-surface igniter has advantages of long lifespan and easy to change. Compared with gas igniter, the hot-surface igniter has advantages of no need of gas supply, or adjustment of gas flow rate and 100% ignition success rate.

The apparatus adopts the thermocouple method for flashpoint inspection.

This apparatus adopts thermocouple method to inspect the flashpoint phenomena, featured of advantages of high sensitivity, long lifespan, strong resistance to interference, and high reliability.

The apparatus has a reasonably-designed actuator. It has advantages of compact structure, convenience to install and maintain, and elegant. The apparatus has online temperature adjusting function. It could correct effectively minor deviation of sensor readings caused by lead wires. The apparatus has high test precision. Has good repeatability and reoccurrence.

Viscosity (Engler)
as per ASTM D1665, IP212, GB /T266
Model:11006-6



Purpose

This instrument is used to test the relative viscosity of petroleum and other liquid as per ASTM D1665, IP212, GB /T266. The ratio of flowing time from Engler Viscometer to the flowing time of distilled water at 20°C is the relative viscosity.

Technical Specifications

Inner vessel is stainless steel

Standard Water Value: 51 ± 1 s

Test Temperature: 0 ~ 100°C

Temperature Control Accuracy: 0.2°C

Size of Graduated Flask: 100, 200ml

Power Supply: AC 220V $\pm 10\%$, 50Hz

Relative Humidity: greater than 85%

Viscosity (Engler)
Model:11001-1



Purpose

This instrument is used to test the Engler Viscosity of emulsified asphalt and coal asphalt. Respectively test the two samples for the time of that 50ml asphalt flow out through the orifice whose size has been regulated, and then display the average.

Technical Specifications

Receiving Bottle: 200 cc

Water Value: 51 ± 1 s

Temperature Control Range: ambient ~ 100°C

Temperature Control Accuracy: 0.2°C

Equipped with device for digital display

Power Supply: AC 220V $\pm 10\%$, 50Hz

Relative Humidity: less than 85%

**Kinematic Viscosity bath
as per ASTM D445, GB/T 265
Model:11002-2**



Purpose

This instrument is used to test the kinematic viscosity of liquid petroleum products under a fixed temperature as per ASTM D445, GB/T 265 <Standard Test Method for Kinematic Viscosity of Petroleum Products>.

Technical Specifications

Temperature controller: ambient ~ 100°C continuously

Single-layer water bath, LED, accuracy is $\pm 0.1^{\circ}\text{C}$, graduation is 0.1°C

Water bath with constant temperature: outside diameter is 240 mm

* height is 255 mm, volume: 12 L

Power supply: AC 220 \pm 10%, 50 Hz

Size and weight: 310 \times 300 \times 360 mm / 5 kg

**Kinematic Viscosity bath
as per ASTM D445, GB/T 265
Model:11003-3**



Purpose

This instrument is used to test the Kinematic viscosity of liquid petroleum products under a fixed temperature as per ASTM D445, GB/T 265 <Standard Test Method for Kinematic Viscosity of Petroleum Products>.

Technical Specifications

Temperature controller: range 0 ~ 100°C continuously, indicating with LED, ± 0.05 for the accuracy of temperature controlling (easy for thermometer to recognize the graduation of 0.1°C), a complete set of bath is made with Plexiglas as its external bath whose measurement is $\phi 360 \times 285$ mm and $\phi 300 \times 285$ mm glass round bath as internal one.

Heater: power of 600W for heating under controlling;

power of 1000W for auxiliary heating

Usage conditions: power supply: AC 220V \pm 10%, 50 Hz

Size and weight: 460 \times 430 \times 710 mm/30 Kg

**Kinematic Viscosity bath
as per ASTM D445, IP 71 and GB/T 265
Model: 11004-4**



Purpose

This instrument is used to test the Kinematic viscosity of liquid petroleum products under a fixed temperature as per ASTM D445, IP 71 and GB/T 265.

Technical Specifications

Temperature controller: range 0 ~ 100°C continuously, indicating with LED, ± 0.05 for the accuracy of temperature controlling (easy for thermometer to recognize the graduation of 0.1°C), a complete set of bath is made with Plexiglas as its external bath whose measurement is $\phi 360 \times 285$ mm and $\phi 300 \times 285$ mm glass round bath as internal one.

Heater: power of 600W for heating under controlling;

power of 1000W for auxiliary heating.

Usage conditions: power supply: AC220V $\pm 10\%$, 50 Hz

Size and weight: 460 \times 430 \times 710 mm/30 Kg.

**Kinematic Viscosity bath
as per ASTM D445, GB/T 265
Model: 11005-5**



Purpose

This instrument is able to determine the kinematic viscosity of liquid petroleum products (Newton liquid) under a fixed temperature environment as per ASTM D445, GB/T 265 <Standard Test Method for Kinematic Viscosity and Calculation Method for Dynamic Viscosity of Petroleum Products>.

Technical Specifications

Temperature range: ambient ~ 100°C

Controlling temperature accuracy: $\pm 0.01^\circ\text{C}$

Constant temperature bath: 20L, double walls

With timing device: graduation is 0.1s

Capillary viscometer: 13 nos in all, inner diameter are 0.4, 0.6, 0.8, 1.0, 1.2, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0mm (two kinds of which, 0.5's and 0.6's, without coefficients attached, calibrated by users)

Power supply: AC 220 $\pm 10\%$, 50 Hz

Heater power: Auxiliary heater: 1000 W

Control temperature heater: 600 W

Power for stirring: 25W, rotating speed: 1200 rpm

Kinematic Viscosity bath as per T 0619-93 Model:11007-7



Purpose

This instrument is used to determine the kinematic viscosity of asphalt in a regulated temperature point as per T 0619-93 <Standard Test Method for Kinematic Viscosity of Asphalt (Capillary Method)>. As per JTJ052-2000 "rules of asphalt mixture test of highway engineering"

Technical Specifications

Bath media should be silicon oil or glycerol or so on

Power Supply: Alternating Voltage: AC 220 V \pm 10%, 50 Hz

Choose proper capillary viscometer as per the experimental requirements

Testing Temperature: any point within ambient~135°C/180°C

Temperature Control Accuracy: \pm 0.1°C

Electric Heating Power: 1650 W (Auxiliary Heating Power: 1000 W)

Control Heating Power: 650 W)

Capillary No.: 4 nos

Reverse flow Capillary Viscometers

Kinematic Viscosity bath (Microprocessor) as per ASTM D445, IP 71 and GB/T 265. Model: 11000-0



Purpose

This instrument is used to test the Kinematic viscosity of liquid petroleum products under a fixed temperature as per ASTM D445, IP 71 and GB/T 265.

Technical Specifications

Temperature controller: ambient - 100°C, random set

Control temperature accuracy is up to 0.01°C

Heater: power:

600 W for temperature controlling;

1000 W for auxiliary heating power

Power supply: AC 220 \pm 10%, 50 Hz

Double aquarium, digit display temperature control, and cutoff one heater as per need. Color LCD displays test time and result. Automatic timing, set viscosity coefficient, calculate and print the test results.

Kinematic Viscosity bath (Low Temperature) as per ASTM D445, IP 71 and GB/T 265.

Model: 11008-8



Purpose

This instrument can be used to determine the Kinematic viscosity of the petroleum products under a fixed temperature as per ASTM D445, IP 71 and GB/T 265. Double compressors for condensation

Technical Specifications

Power supply: AC 220V \pm 10%, 50 Hz

Heating device: electric heater, power is 600 W

Refrigerating device: double compressors.

Electrical stirrer: inputting power: 25 W, rotating speed: 1200 r/min

Fixed temperature range: ambient ~ 60°C

Accuracy of temperature controlling: $\pm 0.1^\circ\text{C}$

Constant temperature bath: 5.8L, made with stainless steel

Available ambient environment:

* Temperature: less than 36%,

* Relative humidity: less than 85%

Temperature sensor: industrial platinum resistance

Illumination: 6 W / AC 220 V fluorescent lamp

Dynamic Viscosity of Asphalt (Vacuum Decompression Capillary Method)

as per T0620-2000

Model: 11011-11



Purpose

This instrument is used to determine the dynamic viscosity of dense petroleum asphalt by vacuum decompression capillary viscometer; is suitable for testing petroleum asphalt under 60°C by vacuum capillary viscometer, also suitable for testing other viscosity which is between 0.0036-20.000 Pa.s, as per T0620-2000 <Standard Test for Dynamic Viscosity of Asphalt (Vacuum Decompression Capillary Method)> and SH0557-93 <Standard Test Method for Viscosity of Petroleum Asphalt (Vacuum Capillary Method)>.

Technical Specifications

Power Supply: AC220 V \pm 10%, 50 Hz

Ambient Temperature: 5-50°C; Relative Humidity: less than 85%

Temperature Control Range: 10-100°C

Temperature Control Accuracy: $\pm 0.01^\circ\text{C}$

Range of Pressure: 300 \pm 0.5 mmHg

Timing Range: 0.0-999.9 s

Timing Accuracy: less than 0.05%

Testing Range: 4.2-580000 Pa.s

Sample No.: 4 nos.

Viscometer Bath for Asphalt as per T0621 Model: 11009-9



Purpose

This instrument is used to test the viscometer of liquid asphalt, coal asphalt and emulsification asphalt in the state of flowing as per T0621.

Technical Specifications

Constant Temperature Slot: less than 160 mm × 100 mm

Sample Tube: Inner Diameter: less than 40 mm;

Flowing Hole: less than 3 mm, less than 4 mm, less than 5 mm, less than 10 mm

Receiving Bottle: 100 ml

Temperature Control Range: ambient ~ 90°C

Temperature Control Accuracy: $\pm 0.2^{\circ}\text{C}$

Timing Mode: digital display

Power Supply: AC 220V $\pm 10\%$, 50Hz

Ambient: -5 ~ 35°C

Relative Humidity: less than 80%

Saybolt Viscometer for Heavy Oils as per T0623 Model: 11010-10



Purpose

This instrument is used to test the Saybolt viscosity of asphalt under some temperature point as per T0623 <Standard Test for Saybolt Viscosity of Asphalt (Saybolt Heavy Oil Viscometer Method)> of JTJ052.

Technical Specifications

Controlled by microprocessor, with high degree automation With a function of double-path determination, efficient Digital display, calculate average automatically Advanced and intelligent apparatus gives high accuracy of temperature controlling Microprocessor converts the result (Saybolt viscosity) to other 2 kinds of viscosity

Power Supply: AC 220 V $\pm 10\%$, 50 Hz

Working Mode: double-path determination; on process in-phase

Size of Sample Receiver: 60 ± 0.05 ml

Heating Power of Bath: 1000 W

Temperature of Bath: ambient ~ 240.0°C

Temperature Control Accuracy of Bath: $\pm 0.1^{\circ}\text{C}$

Timing Range: 0.0s ~ 999.9 s

Timing Accuracy: ± 0.1 s

Ambient Temperature: less than 35°C

Relative Humidity: less than 85%

Rotating Viscometer Model: 11012-12

Purpose

This is an instrument used to test the viscosity resistance of liquid and absolute viscosity of liquid. It has 4 rotors, cooperating with the rotate speed.

Technical Specifications:

Viscosity Range: 10 ~ 100000MPa•s

Testing Rotor: 4 types

Rotate Speed: 6r/min, 12r/min, 30r/min, 60r/min

Testing Error: $\pm 5\%$ (Newton liquid)



Rotating Viscometer Model: 11013-13

Purpose

It is a latest-model instrument used to test the absolute viscosity of all kinds of Newton liquids and apparent viscosity of non-Newton liquid.

Technical Specifications

Viscosity Range: 1 ~ 1000000MPa•s

Testing Rotor: II, III

Two groups of testing rotors and container

Rotate Speed: 750r/min, 75r/min, 7.5r/min

Testing Error: $\pm 5\%$ (Newton liquid)



Rotating Viscometer Model: 11014-14



Purpose

This is an improved instrument of 11013-13. It has a system of computercontrolled measurement and data processing technology. It is a realization of instrument's intelligence. LCD screen shows the number of rotor, rotate speed, temperature, viscosity and scale. The mini type printer prints the testing result.

Technical Specifications

Viscosity Range: 10 ~ 2000000MPa•s
 Testing Error: $\pm 5\%$ (Newton liquid)
 Rotate Speed: 8 levels
 Serial Number of Rotor: 1 ~ 4
 Weight: 7kg

Rotating Viscometer as per T0625-2000 Model: 11015-15

Purpose

This instrument is produced specially for determining the apparent viscosity of asphalt as per T0622000. It also can be used for determining the viscosity of various liquid of hot sol, paraffin, medicament and high polymer.

Technical Specifications

Testing Range: 100 ~ 200000 mPa.s
 Rotor: 21#, 27#, 28#, 29# total 4 nos.
 Rotor Speed: 5, 10, 20, 50 r/m
 Testing Mode: manual / automatic
 Temperature Control Range: ambient ~ 200°C
 Temperature Control Accuracy: $\pm 0.1^\circ\text{C}$
 Error: $\pm 1\%$ (Newton liquid)
 Internal Volume: 10 cc
 Suitable ambient environment :
 * Ambient: $5^\circ\text{C} \sim 35^\circ\text{C}$
 * Relative Humidity: $\leq 80\%$
 * Power Supply: AC 220 ± 10 V; 50Hz
 * Neither electromagnetic interference, nor concussion, nor corrosive air around instrument.



Rotating Viscometer Model: 11016-16



Purpose

This instrument is used to test the absolute viscosity of Newton Liquid and surface viscosity of non-Newton Liquid as per related standards, new type holds a large testing range and high accuracy, used in various realms of petroleum, highway, foodstuff, chemical, painting, cosmetic and so on.

Technical Specifications

Highly bright LCD screen, technique of microprocessor, access data automatically.

Equipped with portable printer supporting output, or by RS232 attach to PC.

Test Range: 10 mPa·s ~ 2000000 mPa·s (extend to 4000000 mPa·s).

Measurement of Rotor: 4 kinds of 21, 27, 28, 29 (rotors with enlarged range are selectable as per customer requirement).

Rotate Speed of Rotor: 0.5, 1, 2, 5, 10, 20, 50 r/min, gear 4.

Test Error: $\pm 2\%$ (F·S).

Test Forms: Manual and AUTO.

Temperature Control Range: ambient ~ 200°C.

Temperature Control Accuracy: $\pm 0.1^\circ\text{C}$.

Volume of Sample Holder: 20 ml.

Voltage: AC 220 V $\pm 10\%$, 50 Hz.

Ambient Temperature: 5°C ~ 35°C.

Relative Humidity: less than 80%.

Copper Corrosion Tester as per ASTM D130, ISO2160, IP154, GB/T5096 Model: 33000-0



Purpose

This instrument is used to test the extent of that copper being corroded by various petroleum products like air oil, turbo-fuel, car-used gas, spraying oil, solvent oil, kerosene, distillation fuel and so on, as per ASTM D130, ISO2160, IP154, GB/T5096 Standard Test Method for Corrosion of Copper by Petroleum Products. It has the functions of controlling temperature, timing and alarm.

Technical Specifications

Sample: 4 nos.

Temperature Control Range: ambient ~ 100°C

Temperature Control Accuracy: $\pm 1^\circ\text{C}$

Time Control Range: 1 min ~ 24 h

Display Mode of Time: digital display.

Heating Power: 600 W

Auxiliary Heating Power: 1000 W

Power Supply: 220 V $\pm 10\%$, 50 Hz

Relative Humidity: less than 80%

Ambient working surrounding: -5 ~ 35°C

Corrosion of Petroleum Product by Copper, Silver Strip as per ASTM D130, IP154, GB/T509685 (91)

Model: 33001-1

Purpose

It is a multifunctional analyzing instrument for petroleum products, it is not only used to test iron part in mineral oil, especially in steam turbine oil, as per <Standard Test Method for Characteristic of Rust-Resisting of Inhibited Mineral Oil under Water Existing>, also as per <ASTM D130, IP154, GB/T509685 (91) Standard Test Method for Corroding Copper by Petroleum Products> and <SH/T002390 (SY222376) Standard Test Method for Corroding Silver by Petroleum Products>.

Technical Specifications

Sample: 4 nos.
Temperature Control Range: ambient ~ 100°C
Temperature Control Accuracy: $\pm 1^\circ\text{C}$
Display mode: digital display
Temperature Sensor: Pt100
Time Control Range: 1 min ~ 24 h
Heating Power: 600 W
Auxiliary Heating Power: 1000 W
Power Supply: AC 220V $\pm 10\%$, 50Hz



Copper Corrosion Tester (LPG) as per ISO 6251, IP 411 and SH/T 0232-92

Model: 33002-2



Purpose

This instrument is designed and produced as per ISO 6251, IP 411 and SH/T 0232-92 <Liquefied petroleum gases - Corrosiveness to copper - Copper strip test>. It can be used to test the extent of the corrosion to the copper by liquid petroleum gas.

Technical Specifications

Available ambient temperature: $-10 \sim 35^\circ\text{C}$.
Relative humidity: less than 85%.
Sample: 2 nos
Control temperature range: ambient ~ 100°C
Control temperature accuracy: $\pm 0.5^\circ\text{C}$
Temperature sensor: Pt100
Timing range: 0.01 s ~ 99 h 99 m
Control heating power: 600 W
Auxiliary heating Power: 1000 W
Rotary speed of electric stirrer: 1400rpm
Power source: AC220V $\pm 10\%$, 50 Hz.

Water Separability of Petroleum Oils & Synthetic Fluids as per ASTM D1401, IP19, GB /T7305

Model: 33003-3

Purpose

This instrument is used to test the separability from water of petroleum & synthetic liquid as per ASTM D1401, IP19, GB /T7305 <Standard Test Method for Characteristic of Preventing Emulsification of Petroleum & Synthetic Liquid>.

Technical Specifications

Temperature Controlling:

* Control Range: 0 ~ 99.9°C;

* Control Accuracy: 1°C;

* Graduation: 0.1°C;

* Display Mode: digital display

Stirring Speed: 1500 r/min

Time Controlling:

* Control Range: 1s ~ 9min 59s;

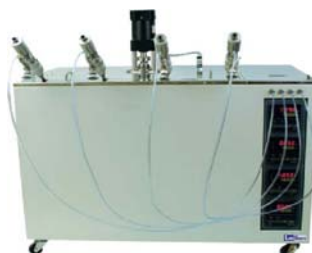
* Digital display

Power Supply: AC 220 V ± 10%, 50 Hz



Oxidation Stability of Lubricant Oil (Rotating Bomb Oxygen Tester) standard SH/T0193 & ASTM D2272

Model: 33008-8



Applicable standard

This apparatus is designed and manufactured in accordance with standard SH/T0193 & ASTM D2272 and is used to measure the oxidation stability of steam turbine oil (new, or in use) with the same ingredients (basic oil and additives) under this standard. It is also used to appraise new mineral insulating oil that contains 2,6-DBPC as the method for rapid appraisal of its oxidation stability.

Technical parameters

* Power: AC220V+10%, 50Hz

* Apparatus power: less than 3000W

* Main heating pipe's power: 1500W, automatically adjusted by the system based on current state power

* Auxiliary heating pipe's power: 1200W, automatically adjusted by the system

* Pressure range to measure: 0~1500Kpa

* Precision of pressure measurement: +2 %Kpa

* Oil bath temperature controlled between: 100°C~160°C (could be set at any temperature within this range)

* Oil batch temperature control precision: +0.1°C

* Specimen capacity: 50+0.5g

Oxidation Stability of Gasoline (Induction Period Method)

as per GB/T 8018-87

Model: 33007-7



Purpose

This instrument is used to test the oxidation stability of gasoline as it is being oxidized as per GB/T 8018-87 <Standard Test Method for Oxidation Stability of Gasoline (Induction Period Method)>.

Technical Specifications

Volume of Oxidation Bath: greater than 30 L

Heating Power: 2000 W

Test Temperature Range: 0.0 ~ 150.0°C

Temperature Control Accuracy: $\pm 0.2^{\circ}\text{C}$

Pressure Range: 1 atmosphere ~ 1500.0 kPa

Graduation of Pressure: 0.2 kPa

Sampling Time: 30 s

Max. Test Time: less than 24 h

Display Range of Curve Test: 120min/screen

Power Supply: AC220 V \pm 10%, 50 Hz

Total Power Consumption: less than 2200 W.

Rust Preventive Characteristics of Inhibited Mineral Oil in Water

ASTM D665, IP 135, GB/T 11143

Model: 33008-8



Purpose

This instrument is suitable to ASTM D665, IP 135, GB/T 11143, <Standard Test Method for Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water>, especially for testing the hard part of turbine oil when it is mixed with water, its also suitable for other oils, such as hydraulic fluid, cycle oil as well as other liquid which is heavier than water.

Technical Specifications

Control temperature range: ambient ~ 100°C continuously

Control Temperature accuracy: $\pm 1^{\circ}\text{C}$

Control heating power: 600 W

Auxiliary heating power: 1000 W

Timing range: from 1min to 24hours continuously

Rotating speed of stirring: 1000 r/min

Power supply: AC 220 V $\pm 10\%$, 50 Hz

Pour Point of Petroleum Product as per ASTM D97, IP 15, GB /T510-83

Model: 16000-0



Purpose

This instrument is used to test solidifying point of lubricating oil and heavy color petroleum products, except the technical of electric semiconductor refrigeration, as per ASTM D97, IP 15, GB /T510-83

Technical Specifications

Temperature Control Range: 0 ~ 51°C

Volume of Cold Trap: aperture: 46 mm, depth:125mm, double orifice: -51°C

Temperature Control Accuracy: $\pm 1\%$ (inside of cold bath)

Refrigerating Speed: less than 90 min

Timing: 60 s

Composed of controller and cooling case

Power supply is AC220 V $\pm 10\%$, 50 Hz

Size of Controller:180 × 300 × 400 mm

Size of Cooling Case: 380 × 380 × 245 mm

Cloud & Pour Point of Petroleum Product ASTMD97, ASTMD2500,

GB/ T6986, GB/T3535, GB/T510, SH/T0248

Model: 16001-1



Purpose

This instrument is suitable to the standards of ASTMD97, ASTMD2500, GB/ T6986, GB/T3535, GB/T510, SH/T0248.

Technical Specifications

Power: 1000W Single slot, double bath with same temperature

Temperature Bath: room temperature ~ -80°C

Accuracy: $\pm 0.5\%$

Cloud & Pour Point of Petroleum Product
as per ASTM D97, ASTM D2500, GB /T3535, GB /T6986
Model: 16003-3



Purpose

This instrument is used to test pour point and solidification point of lubricating oil and dark petroleum products, refrigerated by compressor, no cooling water, temperature decreases fast, no shaking, low power consumption, convenient for operation, as per ASTM D97, ASTM D2500, GB /T3535, GB/T6986

Technical Specifications

Refrigerating Device: compressor

Temperature Control Range: ambient ~ -70°C

Temperature Control Accuracy: $\pm 0.5^{\circ}\text{C}$

Power Consumption: 1000 W

With two baths, four holes

Power Supply: AC 220 V $\pm 10\%$, 50 Hz

Relative Humidity: less than 80%

**Cold Filter Plugging Point of Diesel
& Heating Fuels as per ASTM D6371
as per ASTM D97, ASTM D2500, GB /T3535, GB /T6986
Model: 16008-8**

This unit can also be used as

Purpose

This instrument is used to test pour point and solidifying point of lubricating oil and dark petroleum products, refrigerated by compressor, no refrigerating water, temperature decreases fast, no shaking, low power consumption, convenient for operation, as per ASTM D97, ASTM D2500, GB/T510-83

Technical Specifications

Temperature Control Range: ambient ~ -70°C

Temperature Control Accuracy: $\pm 1\%$

Power Consumption: 1000 W

Single bath, double holes, at the same temperature point.

Power Supply: AC 220 V $\pm 10\%$, 50 Hz

Relative Humidity: less than 80%

Ambient -5 ~ 35°C

Cloud & Pour Point of Petroleum Product



**Foaming Characteristics of Lubricating Oils
as per ASTM D892 (sequence I, II & III) , IP 146
and GB/T 12579, ASTM D6082
Model: 16005-5**

Purpose

This instrument is produced as per ASTM D892 (sequence I, II & III) , IP 146 and GB/T 12579, ASTM D6082 (sequence IV) <Standard Test Method for Foam-Resisting Characteristic of Lubricating Oil>, used to test motor lubricating oil, lubricating oil of gear and so on to examine the tendency of foam increasing and stability of foam standing in petroleum products.

Technical Specifications

Number of constant temperature baths: two.

Control temperature range: $24 \pm 0.5^\circ\text{C}$, $93 \pm 0.5^\circ\text{C}$ / $150 \pm 0.5^\circ\text{C}$

Heater power: 750 W, 1500 W.

Portable cooler (refrigerator) can be attached.

Refrigerating power: 500 W.

Power supply: AC 220 V $\pm 10\%$, 50 Hz.



Cloud & Pour Point, Solidification & CFPP 16010-10



Purpose:

The instrument is designed and is used to test the Pour Point, Solidifying Point, Cloud Point & Cold Filter Plugging Point as per ASTM D97, ASTM D2500, ISO3015, ISO3016 and Ip309.

Technical parameters

1. Power supply: AC 220V+10%, 50Hz
2. Controlling temperature for cold bath
 - (1) Cold bath I: 0°C, +0.5°C, Temperature in two baths are equal
 - (2) Cold bath II: 0°C, -17°C, +0.5°C, Temperature in two baths are equal
 - (3) Cold bath III: -17°C, -34°C, +0.5°C, Temperatures in two baths are equal
 - (4) Cold bath IV: Ambient temperature \sim - 70°C, +0.5°C, Temperature in two baths are equal
3. Refrigeration system: refrigeration system of new type
4. Ambient temperature: < 30°C
5. Relative humidity: < 85%
6. Total power consumption: not more than 1700 W

Vapor Pressure of Petroleum Product (Reid Method) as per ASTM D323, GB/T8017-87 Model: 25000-0

Purpose

This instrument is used to test the steam pressure of gasoline, volatile petroleum products as per ASTM D323, GB/T8017-87 <Standard Test Method for Steam Pressure of Petroleum Products (Reid Method)>. It is mainly composed of temperature control devices, pressure bomb, manometers and so on, easy for operation, portable for moving.

Technical Specifications

Volume ratio of air room and petrol room: 4:1
Heating Power: 1600W
Temperature Range: ambient ~ 90°C
Temperature Control Accuracy: $\pm 0.1^\circ\text{C}$
Accuracy of Manometer: $\pm 0.4\%$
Power Supply: AC 220 V $\pm 10\%$, 50 Hz
Relative Humidity: less than 80%



Penetration as per ASTM D323, GB/T8017-87 Model: 13000-0

Purpose

This instrument is used to test the penetration of needle and awl being penetrated into samples of asphalt, lubricating grease, gum, frozen sample, cream, curds, leavened sample, powder and so on, as per T0604-93, <GB/T4509-1998 Standard Test Method for Penetration of Asphalt>, GB/T269-91 <Standard Test Method for Needle-Penetration and Awl-Penetration of Lubricating Grease and Petroleum Grease>.

Technical Specifications

Time controlling: 5, 8, 10, 12, 30, 60 s
Time accuracy: 5 ± 0.1 s
Max. penetration: 620
Standard needle: 2.5 ± 0.05 g
Standard awl: 102.5 ± 0.05 g
Use gear belt to drive faster, digital display, convenient to operate, the support bracket can be raised adjustably, equipped with level adjusting device which ensures the worktable retains level
Power Supply: AC 220V $\pm 10\%$, 50 Hz
Relative Humidity: less than 80%



Penetration
as per T0604-93, GB/ T4509-1998
Model: 13001-1



Purpose

This instrument is used to test the penetration of needle and awl being penetrated into samples of asphalt, lubricating grease, gum, frozen sample, cream, curds, leavened sample, powder and so on, as per T0604-93, <GB/ T4509-1998 Standard Test Method for Penetration of Asphalt>, GB/T269-91 <Standard Test Method for Needle-Penetration and Awl-Penetration of Lubricating Grease and Petroleum Grease>.

Technical Specifications

Time Controlling: 5, 8, 10, 12, 30, 60 s

Time Accuracy: 5 ± 0.1 s

Max. In-degree: 620

Standard Needle: 2.5 ± 0.05 g

Standard Awl: 102.5 ± 0.05 g

Volume of Constant Temperature Bath: >0.5 L

Temperature Control Accuracy: $25 \pm 0.1^\circ\text{C}$

Equipped with controller which makes the temperature being under requirement, use gear belt to drive faster, digital display, convenient to operate, the support leg can be raised adjustably, equipped with reflector which is good for aiming at sample, also with level adjusting device which ensures the worktable maintains level

Power Supply: AC 220V $\pm 10\%$, 50Hz

Penetrometer
as per ASTM D5, GB/T4509, T0604-200
Model: 13004-4

Purpose

This instrument is produced as per ASTM D5, GB/T4509, T0604-200 <Standard Test Method for Penetration of Asphalt>. Measure the depth of that penetrating into the sample perpendicularly by standard needle in a regulated temperature and time.

Technical Specifications

Weight of Standard Needle and Attached Pole: $50 \text{ g} \pm 0.05 \text{ g}$

Weight: $50 \text{ g} \pm 0.05 \text{ g}$

Time Setup: 5, 60 s

Testing Range: 50mm (Penetration: 500)

Testing Accuracy: $\pm 0.1 \text{ mm}$ (Penetration: 1)

Volume of Constant Temperature Bath: > 0.5 L

Temperature for Working: $-10 \sim 95^\circ\text{C}$

Temperature Control Accuracy: $\pm 0.1^\circ\text{C}$

Refrigerate by compressor.

Power supply: AC 220V $\pm 10\%$, 50Hz



Penetrometer
GB/T269, GB/T4509 and T0604
Model: 13005-5

Purpose

This instrument is suitable to the standards of GB/T269, GB/T4509 and T0604.
 Test the plasticity of lubricating grease and the hardness of bitumen.

Technical Specifications

Time Setting: 5,8,10,12,30 and 60S

Accuracy: 5 ± 0.1 S

Measurement Range: 620 Pen Unit

Bitumen Needle: 2.5 ± 0.05 g

Full Scale Cone: 102.5 ± 0.05 g



Penetrometer
as per ASTM D5, GB/T 4509, T 0604-200
Model: 13002-2



Purpose

This instrument is produced as per ASTM D5, GB/T 4509, T 0604-200, measure the depth of that penetrating into the sample perpendicularly by standard needle in a regulated temperature and time. Equipped with device to control temperature within range, use rack to drive faster to measure depth, digital display, easy for operation, bracket adjusts up and down freely, equipped with viewfinder, all that gives good accuracy.

Technical Specifications

Weight of Standard Needle and Attached Stick: 50 ± 0.05 g

Weight: 50 ± 0.05 g

Times: 5, 60 s

Testing Range: 50 mm (Penetration: 500)

Testing Accuracy: ± 0.1 mm (Penetration: 1)

Volume of Constant Temperature Bath: > 0.5 L

Temperature Control Accuracy: 25 ± 0.1 °C

Power Supply: AC 220V $\pm 10\%$, 50Hz

Penetrometer
as per ASTM D5, GB/T4509, T0604-200
Model: 13003-3

Purpose

This instrument is produced as per ASTM D5, GB/T4509, T0604-200 <Standard Test Method for Penetration of Asphalt>. Measure the depth of that penetrating into the sample perpendicularly by standard needle under regulated temperature and time.

Technical Specifications

Weight of Standard Needle and Attached Pole: 50 ± 0.05 g

Weight: 50 ± 0.05 g

Times: 5, 60 s

Testing Range: 50 mm (Penetration: 500)

Testing Accuracy: ± 0.1 mm (Penetration: 1)

Volume of Constant Temperature Bath: > 0.5 L

Temperature Control Accuracy: 25 ± 0.1 °C

Penetration is indicated by percent separately. Graduation is 0.01mm

Power Supply: AC 220V $\pm 10\%$, 50Hz



Auto Penetrometer
as per GB/T 4509, GB/t 209 JTJ-052 (T0604) and ASTM D5
Model: 13007-7



Purpose:

The instrument is designed and made as per GB/T 4509, GB/t 209 JTJ-052 (T0604) and ASTM D5, suitable to determine the penetration of lubricating grease and bitumen.

Specification:

Measurement range: 0~600 penetration

Resolution: 0.1 penetration

Time setting: 0-99s random preset

Error: less than + 0.1 s

Controlling temperature accuracy: 25 ± 0.1 °C

Standard needle: 2.5 ± 0.05 g

Standard cone: 102.5 ± 0.05 g

Storage capacity: 30 tests data

Feature:

* Microprocessor control, auto test the penetration using needle and cone.

* With function of auto control temperature and magnetic stir

* LCD display data

* With microprinter, to print the test report

* With interface of computer, communicate to computer

Softening Point Tester as per ASTM D36, IP58, GB /T4507 Model: 38000-0

Purpose

This instrument is used to test the asphalt for transformation of being softened by heating as per ASTM D36, IP58, GB /T4507. Photoelectrical circuit records the softening temperature; heating power controlled by microprocessor ensures temperature rising speed is at $5 \pm 0.5^\circ\text{C}$ per minute stably.

Technical Specifications

Diameter of Steel Ball: 9.53 mm
Weight of Steel Ball: 3.5 ± 0.05 g
Volume of Container: 1000 ml
Temperature Rising Speed: $5 \pm 0.5^\circ\text{C}/\text{min}$
Test Accuracy: 0.1°C
Test Range: $5^\circ\text{C} \sim 90^\circ\text{C}$
Available Temperature: ambient $< 35^\circ\text{C}$
Temperature rising speed and access of data controlled by microprocessor.
Power Supply: AC 220V $\pm 10\%$, 50Hz



Softening Point Tester (Microprocessor) as per ASTM D36, GB /T4507, T0606-2000 Model: 38001-1

Purpose

This instrument is used to test the temperature at when the asphalt softened by heating has sagged down to 25 mm, as per ASTM D36, GB /T4507, T0606-2000. Photoelectrical circuit records the softening point; advanced technique of microprocessor ensures temperature rising speed is at $5 \pm 0.5^\circ\text{C}$ per minute stably. LCD screen indicates time and temperature for watch.

Technical Specifications

Diameter of Steel Ball: 9.53 mm
Weight of Steel Ball: 3.5 ± 0.05 g
Size of Container: 1000 ml
Temperature Rising Speed: $5 \pm 0.5^\circ\text{C}/\text{min}$
Test Accuracy: 0.1°C
Test Range: $5 \sim 90^\circ\text{C}$, $80 \sim 180^\circ\text{C}$
Available Temperature: ambient $< 35^\circ\text{C}$
Temperature rising speed and access of data controlled by microprocessor, equipped with RS232.
Power Supply: AC 220V $\pm 10\%$, 50Hz



Dropping Point of Lubricating Grease standard of GB270-80

Model: 38002-2

Purpose

This instrument is suitable to the standard of GB270-80. Tests the dropping point of lubricating grease and solid hydrocarbon, the temperature of which are above 100°C.

Technical Specifications

Diameter of the glass tube is 45mm

Length is 200mm. Well-proportional tube

Thickness 1 ~ 1.5mm. Spiral electrical heating apparatus (220V, 250W),

Light: glassware mantle outside. 220V, 9W H Fluorescence Light

Thermometer:

* 0 ~ 150°C graduation 1°C

* 100 ~ 150°C graduation 1°C



Dropping Point of Lubricating Grease As per ASTM D566, ISO2176, IP31, GB/T4929

Model: 38003-3

Purpose

This instrument is composed of oil bath, constant temperature vat, heater, stirrer, floodlight, control box and so on. Advantage is that it is convenient to control the rising speed of temperature, easy to observe dropping, and it is also suitable for test of double-tube dropping. As per ASTM D566, ISO2176, IP31, GB/T4929 <Standard Test Method for Dropping Point of Lubricating Grease>.

Technical Specifications

Oil Bath: with volume of 600 ml

Grease Cup: plated chromium brass. Inner Diameter: Ø9.92 mm;

Dropping Orifice: Ø2.8mm, Height: 12 mm

Test Tube: Inner diameter: Ø11.1 ~ Ø12.7 mm, there are three concave

troughs on the circumference which is 19mm far from bottom.

Thermometer: Range: -5 ~ 300°C; graduation is 1°C;

immersed depth: 76 mm; whole length: 390mm

Heater: tube-shape, power is 800 W/220V

Stirring Speed of Electric Stirrer: 60 r/m

Power Supply: AC 220 V±10%, 50 Hz



Ductility
As per ASTM D133, GB/T 4508 & T0506-93
Model: 38004-4



Purpose

This instrument is used to test the length of the asphalt under regulated conditions and temperature when it is just broken by pulling at a certain speed, viz. ductility. As per ASTM D133, GB/T 4508 & T0506-93, and unit is "cm". Driven by double poles, that ensures pulling stably and synchronically. System of the ductility test is controlled by SCM, digital display. Microprocessor records automatically and calculates the average.

Technical Specifications

Testing Range: Model 38004-4: 1.5 m Model 38004-4A: 2 m

Temperature Control Range: ambient ~ 50°C, adjustable.

Temperature Control Accuracy: $\pm 0.5^{\circ}\text{C}$

Test Accuracy: ± 1 mm

Stretch Speed: 50 ± 2.5 mm/min

Temperature and ductility are controlled by microprocessor, access data and calculate results.

Power Supply: AC 220V $\pm 10\%$, 50 Hz

Ductility
As per ASTM D133, GB /T4508 & T0506-93
Model: 38005-5



Purpose

This instrument is used to test the length of the asphalt when it is just ruptured by pulling at a certain speed under regulated conditions and temperature, viz. ductility. As per ASTM D133, GB /T4508 & T0506-93, unit is "cm"

Technical Specifications

Test Range: Model 38005-5: 1.5 m

Model 38005-5A: 2 m

Temperature Control Range: 0 ~ 50°C adjustable, continuously

Temperature Control Accuracy: $\pm 0.5^{\circ}\text{C}$

Test Accuracy: ± 1 mm; Pulling Speed: 10 ~ 50 mm/min

Refrigerated by compressor, stainless steel bath, adjustable speed and frequency, temperature and ductility are all operated by computer, digital display. Driven by single pole, ensure to pull stably and synchronically. Temperature can be fixed as per your need. The temperature in water bath is controlled to be a fixed point as per the requirement. Temperature controller indicates the figure, calculating the average, recording by microprocessor. Convenient operation.

* Power Supply: AC 220V $\pm 10\%$, 50Hz.

Ductility

As per ASTM D133, GB/T 4508 & T0506-93

Model: 38006-6



Purpose

This instrument is used to test the length of the asphalt under regulated conditions and temperature when it is just broken by pulling at a certain speed, viz. ductility. As per ASTM D133, GB/T 4508 & T0506-93, unit is "c m"

Technical Specifications

- * Test Range: 2 m
- * Power Consumption: 3 kW
- * Temperature Control Range: 0 ~ 50°C adjustable
- * Temperature Control Accuracy: $\pm 0.5^{\circ}\text{C}$
- * Stretch Speed: 10 ~ 50mm/min, adjust speed by frequency conversion
- * Test Accuracy: ± 1 mm
- * Pull Test Range: 0 ~ 100 kg
- * Pull Test Accuracy: ± 0.5 kg
- * Refrigerate by compressor, automatically indicate and print ductility, average, max. pull and its curve.
- * Power Supply: AC 220V $\pm 10\%$, 50Hz
- * Driven by single pole, ensure pulling stably and synchronically. The temperature can be set up as per your requirement. Temperature controller indicates temperature and ductility. Screen indicates results, equipped with device for testing strength. Convenient operation, microprocessor records automatically and calculates the average.

Asphalt Content (Ignition Method)

as per NCAT (ASTM D6307/98, AASHTO Tp53-95, BS DD250)

Model: 38007-7



Purpose

The Combustion Method is a new method to test the asphalt content. It has the advantages of environment protection, safety, nicety and shortcut etc. it is designed and produced as per NCAT (ASTM D6307/98, AASHTO TP 53-95, BS DD250).

Technical Specifications

- Max. Weight of Sample: 4500 g
- Weight of Commendable Sample: 1000-1500 g
- Accuracy of Scale: ± 0.1 g
- Range of Scale: 10 kg
- Combustion Chamber:
 - * Size: 350×440×330 mm
 - * Max Working Temperature: 800°C
 - * Standard Temperature: 538°C
- Auto-check tests the terminal, Accuracy: 0.10%
- Test Time: 20-30 min
- Power Supply: AC 380V three-phase, current less than 20 A

Frass Breaking Point as per 0613-1993 Standard Test Model: 38008- 8

Purpose

This instrument is used to test the Frass breaking point of various asphalt materials under a low temperature as per <0613-1993 Standard Test for Breaking Point of Asphalt (Frass Method)>.

Technical Specifications

Temperature Test Range: -30 ~100°C

Temperature Test Accuracy: 1°C

Size of Steel Sheet: 41×20×0.15 mm

Distance of Gap: 44 mm

Height Between Steps: 3.5 mm



Wax Content in Asphalt as per T 0615-2000, SH/T0425 Model: 38009-9

Purpose

This instrument is used to determine the wax content in asphalt by Standard Test Method of Decomposition & Distillation under a regulated condition as per T 0615-2000, SH/T0425.

Technical Specifications

Temperature Range: -20°C ~ +40°C

Temperature Control Accuracy: ±0.5°C

Refrigerating Power: 1000 W

It also can be used as constant temperature bath, refrigerating by compressor

Power Supply: AC 220V ±10%, 50Hz

Relative Humidity: less than 80 %

Ambient: -5 ~ 35°C



Rolling Thin Film Tester as per ASTM D2872, T0610-1993, GB/T 5304 Model: 38010-10

Purpose

This instrument is produced as per ASTM D2872, T0610-1993, GB/T 5304 <Standard Test of Rolling Thin Film Heating of Asphalt>, used to determine the loss of quality after heating by oven, and then estimate the characteristic of aging of asphalt.

Technical Specifications

Power Supply: 220 V \pm 10% 50 Hz AC
Ambient Temperature: 5 ~ 50°C
Relative Humidity: less than 85%
Heating Power: 3.5 kW
Workroom Temperature: 163°C
Temperature Control Accuracy: \pm 0.5°C
Turnplate Rotary Speed: 15 \pm 0.2 r/min
Airflow: 4 \pm 0.2 L/min
Sample No.: 8 nos.



Asphalt Aggregate Ratio (Centrifuge Method) as per standard T 0722-1993 Model: 38011-11

Purpose

This instrument is produced as per standard T 0722-1993, used to test the asphalt content of bituminous mixtures (asphalt aggregate ratio) by Centrifugal Method.

Technical Specifications

Power Supply: AC 220V \pm 10%, 50Hz
Power Consumption: 0.75 kW
Weight of Sample: 4.5 kg
Rotary Speed: 0 ~ 3500 rpm adjustable.



Carbon Residue and Trace Elements

as per SH/T0170

Model: 20000-0



Purpose

This instrument is used to test the residual carbon of lubricating oil, heavy liquid fuel and other petroleum products as per SH/T0170 <Standard Test Method for Residual Carbon (Electric Stove Method)>.

Technical Specifications

Heating Stove:

Diameter: $\Phi 312$ mm Steel Bath: diameter: ≤ 140 mm; height: 116 mm, four holes in it, each diameter is 38 mm, diameter of bottom: $\Phi 25$ mm, height is 80 mm.

Crucible Cover: made by stainless steel, outer diameter is 35 mm; diameter of orifice: 1.5 mm

Porcelain Crucible: outer diameter: 30 mm; bottom diameter: 20 mm; height: 41 mm

Cover of Steel Bath: made by ordinary carbon steel; Outer Diameter: 45 mm; use three groups of heating circuits, Power 1: 300 W (remain temperature);

Power 2: 600 W (uniform temperature); Power 3: 1000 W (accelerative temperature)

Heating Stove: made by carbon steel, outer diameter: 300 mm; height: 200 mm

Power Supply: 220 V $\pm 10\%$ 50 Hz; power is less than 1905 W

Carbon Residue (Conradson Method)

as per ISO 6615, ASTM D189, IP13 and GB/T 268

Model: 20001-1



Purpose

The instrument is designed and made as per ISO 6615, ASTM D189, IP13 and GB/T 268 < Petroleum products - Determination of carbon residue - Conradson method > to determine the amount of carbon residue, in the range of 0.01 % (m/m) to 30.0 % (m/m), left after evaporation and pyrolysis of an oil, and is intended to provide some indication of relative coke-forming tendency.

Technical Specifications

porcelain crucible: 30 ml

inner iron crucible: 75 ml

outer iron crucible: 190 ml

Mecker type burner for heating

Mechanical Impurities of Petroleum Product & Additives (Weight Method)

as per GB/T 511-88

Model: 20002-2



Purpose

This instrument is used to test the mechanical impurity of samples like light & heavy oil, lubricating oil and additive as per GB/T 511-88 <Standard Test Method for Mechanical Impurity of Petroleum Products and Additive (Weight Method)>. It is composed of glassware, temperature controlling bath, temperature controlling funnel, extracting pump and intelligent electronic temperature controller. Convenient and portable, especially the temperature controlling funnel

Technical Specifications

Power Supply: AC 220 V \pm 10%, 50 Hz

Heating Power: 1000 W

Temperature Control Range of Water Bath: ambient ~ 90°C (adjustable)

Temperature Control Accuracy of Water Bath: \pm 1°C

Temperature Control Range of Funnel: ambient ~ 90°C

Temperature Control Accuracy of Funnel: \pm 2°C

Relative Humidity: less than 80%

Ambient: -5 ~ 35°C

Ash Determination

as per GB/T 508-85

Model: 20003-3



Purpose

This instrument is used to test the ash of petroleum products as per GB/T 508-85 <Standard Test Method for Ash of Petroleum Products>, but it is neither suitable for samples containing raw additive, nor for the lubricating oil containing lead and bent axle box which has been used.

Technical Specifications

Power Supply: AC 220 V \pm 10%, 50 Hz

Total Power Consumption: 4.9 kW

Available Ambient Temperature: 10 ~ 40°C

Relative Humidity: less than 80%

Oxygen Bomb Calorimeter Model: 15001-1



Purpose

This equipment is used to test the heat of solid and liquid, such as coal, coke, oil and alcohol.

Technical Specifications

Single Chip Microprocessor

Digital Displays; Automatically time to test the temperature (30s)

Automatically record 32 testing results, no operation needed after press the "lighting".

Heat Power: 15kJ/K

Supportable Pressure: 20MPa

Accuracy: less than 0.2%

Oxygen Bomb Calorimeter (Microprocessor) Model: 15000-0



Purpose

Determining the caloric of solid and liquid, such as coal, coke, petroleum and alcohol. It usually applies to coal mine, heat engine plant, cement, glass factory, and colleges and universities.

Technical Specifications

Controlled by microprocessor

Auto control: Testing, data storing, result calculating and result printing automatically.

No operation needed during the process.

The data can be transferred to pc via the serial port on the rear panel.

It is the product with multi-function

Thermal capacity: 15kJ/K

Thermal capacity repeated error: less than 0.2%

Oxygen bomb enduring pressure: 20Mpa

Oxygen Bomb Calorimeter
(Computerized)
Model: 15002-2



Purpose

The instrument is used to test caloric of solid and liquid, such as coal, coke, petroleum and alcohol. Uses microprocessor to auto control, ignition, and print the caloric of the tested sample. Operation is more convenient, more short time.

Technical Specifications

Controlled by desk PC. Auto control the test process, includes the time of firing, the store of data, and result of measurement.

Caloric cubage: 10 ~ 15 kJ/K

Temperature resolution: 0.01%

Withholding pressure of oxygen bomb: 20MPa

Ambient: 20°C ± 5°C

Power supply: AC 220 V 50Hz

Size: and weight: 670×420×430mm/20kg

CPU: P4

Stirrer: 6W 220V 0.2A

Speed: 500r/min

Density of Petroleum Product (Hydrometer Method) as per the standard of ASTM D1298 and GB/T 1884-92

Model: 14000-0



Purpose

This instrument is used to test the density of petroleum and liquid petroleum products as per the standard of ASTM D1298 and GB/T 1884-92 < Standard Test Method for Density of Petroleum and Liquid Petroleum Products Hydrometer Method>.

Technical Specifications

Power supply: AC 220 V \pm 10%, 50 Hz

Size of water bath: 300×380 mm

Heater power: 700 W, 1000 W

Temperature controller

* Range: -20 ~ 100°C

* Accuracy: $\pm 0.25^\circ\text{C}$

* Temperature sensor: Pt100

Thermometer: completely immersed mercury thermometer with 0.2°C graduation

Volume of graduated cylinder: 1000 ml

The type LS-ZL-1 portable refrigerator is a preferable device while the test in conditions that the ambient temperature is below room temperature

A group with 0.6 ~ 1.1, total 10 hydrometers;

a group with 0.6 ~ 2.0, total 23 hydrometers

Ambient temperature: -10 ~ 40°C

Relative humidity: less than 85%

Only level worktable is available for it to set on. The ambient temperature must not change for more than 2°C, no strong airflow

Freezing Point of Jet Fuels as per ASTM D2386, IP 16, GB/T 2430 Model: 14001-1



Purpose

Freezing Point Tester is designed and produced as per ASTM D2386, IP 16, GB/T 2430 <Standard Test Method for Freezing Point of Jet Fuels> and SH// T0090 <Standard Test Method for Freezing Point of Refrigerated Motor Liquid>. It is used to test the freezing point of jet fuel, refrigerated fluid or enriched fluid in motor using different settings.

Technical Specifications

Power supply: AC 220 V \pm 10%; 50 Hz.

Cooling bath: stainless steel, double-deck and vacuum glass window for observing.

Control temperature of cooling bath: +25°C ~ -70°C.

Control temperature accuracy: \pm 0.5°C.

Fluid stirring: electric stirrer stirs automatically.

Refrigerating system: new type refrigerating compressor.

Sample stirring: stirring through electromagnetism for 0-120 times/m, stirring speed is adjustable.

Available ambient temperature: less than 30°C.

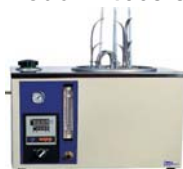
Relative humidity: less than 85%.

Power consumption: no more than 1000W.

With unified structure and beautiful pattern. With a large window which is easier to observe bath and more convenient to.

Intelligent temperature controller controls and display, with good accuracy. With electromagnetic stirrer, with an adjustable frequency, effective and wellproportioned.

Existent Gum of Special Gasoline & Aviation Fuels as per ASTM D381, GB/T8019 Model: 14003-3



Purpose

This instrument is used to test the existent gum of gasoline and aviation fuel as per ASTM D381, GB/T8019 <Standard Test Method for Existent Gum of Special Gasoline and Aviation Fuel (Evaporation Method)>. It is composed of evaporation bath, pressure-downward valve, rotor flowmeter, controller and so on, with compact pattern, high accuracy of controlling temperature, portable and easy for operation.

Technical Specifications

Power Supply: 220 V \pm 10%, 50 Hz, 2.5 kW

Evaporation Bath: aluminum sheet, less than 260×130 mm

Sample: 3 nos.

Size of Test Orifice: less than 51×70 mm

Working Temperature: 160-165°C

Temperature Control: Auto

Temperature Display: digital display

Display of Flow Volume: indicate by air rotor flowmeter

Air pressure-downward valve: 0.035 MPa

Air source: compressed air >110 L/min

Aniline Point Tester
as per ASTM D611, ISO 2977, IP 2 and GB/T 262
Model: 14004-4

Purpose

This instrument is designed and produced as per ASTM D611, ISO 2977, IP 2 and GB/T 262 <Standard Test Method for Aniline Point of Petroleum Products>.

Technical Specifications

Range for testing: room ~ 150°C

Stirring speed: 0 ~ 1200 r/min

Heating power: 25 W

Power Supply: AC 220 V ± 10%, 50 Hz

R.H.: less than 85%



Determination of Sulphur Content
(Combustion Lamp Method)
as per ASTM D1266, IP107 and GB/ T 380
Model: 28000-0

Purpose

The instrument is designed and made as per ASTM D1266, IP107 and GB/ T 380 <Determination of sulphur - Lamp combustion method>. And it is suitable to determine the sulphur content of liquid/light petroleum whose evaporation pressure (Reid Method) is not more than 600 mmHg, such as gasoline, coal oil, diesel oil and so on.

Technical Specifications

Ambient: 10 ~ 40°C

Relative Humidity: less than 85%

With three groups absorbers

Electromagnetic pump, airflow is adjustable

Power supply: AC 220 V ± 10%, 50Hz

Consumption power: 20W



Determination of Sulphur Content (Combustion Lamp Method) ASTM D1266, IP107 and GB/ T380 Model: 28001-1

Purpose

This instrument is suitable to the standard of ASTM D1266, IP107 and GB/T380.
Test the sulphur content of light petroleum products under Reid evaporation pressure 80000Pa.

Technical Specifications

Group of five absorption meter Volume of electromagnetic pump is adjustable
Electrical Source: 220V \pm 10%, 50Hz AC
Power: 20W



Sulphur Content of Heavy Color Petroleum Products as per GB/387 Model: 28002-2

Purpose

This instrument is suitable for heavy color petroleum products, to test the sulphur content as per GB/387 <Standard Test Method for Sulphur Content of Heavy Color Petroleum Products>.

Technical Specifications

Control temperature, Auto, fast, up to 900 ~ 950°C
Equipped with timing device, range: 1 ~ 100 s, hold, high accuracy
test quantity: two samples
heater: movable, convenient operation, Beautiful appearance, novel design, reliable working
Power Supply: AC 220 V \pm 10%, 50 Hz
Heating Stove: level, double tube
Resistance Stove: Diameter of Hearth: 22 mm
Heating Power: 1400 W \times 2
Available highest temperature: 950°C
Remove: ϕ 135 mm
Air Flow: 150 L/h
Max. of time set: 99min+53s



Water Content in Petroleum Product as per ASTM D95 and GB/T 260

Model: 12000-0

Purpose

This instrument is used to test the water content in petroleum products as per ASTM D95 and GB/T 260. <Standard Test Method for Water Content in Petroleum Products>, indicating the result by percent.

Technical Specifications

Volume of round-bottom flask: 500 ml.

Receiver: 0.03 ml for the graduation for the part which is below 0.3 ml; 0.1 ml for the graduation between 0.3 ml and 1.0 ml.

Length of straight-tubular condenser: 250 ~ 300 mm.

Power of the new arc-type electric heater is 350 W, durable



Water Content in Petroleum Product (Karl Fischer Method) as per ASTM D1744, GB/T 113

Model: 12002-2

Purpose

This instrument is designed and produced as per ASTM D1744, GB/T 113 <Standard Test Method for Water Content in Liquid Petroleum Product (Karl Fischer Method)>. it is suitable to determine the water content between 50 PPm ~ 1000 PPm in liquid petroleum products.

Technical Specifications

Range of burette: graduation is 0.05ml.

Power supply: AC220 V \pm 10%, 50Hz battery: two, No.1 DC1.5 V.

ND-D alternating servomotor, starting it steadily, continuously adjustable



Water Content in Petroleum Product as per ASTM D95 and GB/ T260

Model: 12001-1

Purpose

This instrument is suitable to the standard as per ASTM D95 and GB/ T260.
Test the water amount in petroleum products, The result shows in percent.

Technical Specifications

Volume of distilling flask: 500ml

Heating power: 1000W

Length of straight condensation tube: 250-3000mm



Water Content in Petroleum Product (Karl Fischer Method) as per ASTM D1744 and GB/T 11133-89

Model: 12003-3

Purpose

This instrument is designed and produced as per ASTM D1744 and GB/T 11133-89 <Standard Test Method for Water Content in Liquid Petroleum Products (Karl- Fischer Method)> With LCD screen, menu interface, examining and printing data automatically.

Technical Specifications

Test range: 1 μ g ~ 100 mg (10 μ g ~ 10mg for classical range)

Dropping speed: 2 mg/min(max)

Accuracy: 10 μ g ~ 1 mg \pm 3 μ g (ignoring the sampling effect)

Consumption power: 60W.

Power supply: AC220 V \pm 10%, 50 Hz



Water-Soluble Acid and Alkali Tester as per IP 449 and GB/T 259-88 Model: 12004-4



Purpose

Model: 12004-4 Water-Soluble Acid and Alkali Tester is designed as per IP 449 and GB/T 259-88 <Standard Test Method for Water-Soluble Acids and Alkalis in Petroleum Products>. It is suitable for testing water-soluble acids and alkalis in petroleum products, the chemical additive, lubricating oil, the paraffin wax and other chemical samples containing wax. This instrument extracts water-soluble acid or water-soluble alkali from the sample by distilled water or ethanol water solution. Then tests the changes of the color of the liquid extractive by methyl orange or phenolphthalein indicator, or determine its pH value by acidimeter to judge whether there is water-soluble acid or alkali existed.

Technical Specifications

Power supply: AC220V 50Hz

Heater power range of: 100 W ~ 1000 W

Range of acidimeter: 0 ~ 14.00 PH, accuracy: ± 0.01 PH

Separatory funnel: 250 ml

Glass funnel: $\leq 100 \sim 90$ m/m

Graduated cylinder: 100 ml, 50 ml

Test tube: ≤ 18 m/m 100 m/m

Conical flask: 100 ml

Acid Value of Petroleum Products as per ASTM D2896, ISO 3771, IP 276 and GB/ T 258-77 Model: 12005-5



Purpose

This instrument is produced as per ASTM D2896, ISO 3771, IP 276 and GB/ T 258-77 <Standard Test Method for Acidity of Gasoline, Kerosene and Diesel Oil>, GB/T 264-83 <Standard Test Method for Acid Value of Petroleum Products>. It can be used to determine the acidity of gasoline, kerosene or diesel oil what does not have ethylic fluid and the value of acid in petroleum products. First, extract the acid from the sample by ethanol, and then neutralize it with alkaline solution by dropping. This instrument is also suitable for GB/T 7599-87 <Standard Test Method for Acid Value of Transformer Oil and Turbo machine Oil on Process>.

Technical Specifications

Accuracy of dropper: graduation: 0.02 ml

Power range of electric heater: 100 W ~ 1000 W

Power supply: AC 220 V $\pm 10\%$, 50 Hz

Water content in crude oil as per GB/T8929 Model: 12006-6

Purpose

This instrument is used to test the water content in crude oil as per GB/T8929
<Standard Test Method for Water Content of Crude Oil> reported in percentage.

Technical Specifications

Composed of heating temperature controller and glass distillation assembly.
Heating device works proportionally, safe and reliable.
Alternating pressure adjusting circuit is built by triac.
Heater: by electricity, with adjustable power.
Distillation Flask: 1000 ml.
Water receiver: 5 ml graduation is 0.05 ml.
Condenser: 400±5 mm.
Ambient temperature: 10 ~ +35°C relative humidity less than 85%.
Power Supply: AC 220 V±10%, 50 Hz.
Ambient: -5 ~ 35°C



Color Comparator as per ASTM D1500, ISO 2049, IP Model: 40000-0

Purpose

This instrument is used to determine the colors of petroleum products just like lubricating oil, kerosene and diesel oil as per ASTM D1500, ISO 2049, IP 196 and GB/T 6540, SH/T 0168.

Technical Specifications

* Color No.: 1-25
* Standard light source: smooth light which is equal to north window light
* power supply: AC 220 V±10% 50Hz
* Relative humidity: less than 85%
* Ambient: 10 ~ 35°C



Viscometer Capillary Cleaner Model: 40001-1

Purpose

It is used to clean the capillary viscometer, the key accessories of the petroleum viscosity tester.



Acidity, Total Acid Number (Automatic Potentiometer)

Model: 12007-7



Automatic Potentiometer is a high precision laboratory analyzer, which is mainly used in chemical analysis in college, scientific research departments, petroleum chemical industry, pharmacy, medicine inspection and metallurgy. Features of the analyzer: With microprocessor technology, with liquid crystal display (LCD), test method concerned and measuring result can be displayed. With comfortable operating interface, with display, menu, quick key button etc. operating method. The analyzer has the function of protection from electricity cutting off. The stored data and parameter will be kept even if unusual electricity cutting off happens. Different electrodes are fitted with the analyzer to make pH measurement, acid and alkali titration, oxidation-reduction titration, precipitation titration, complex titration and non-water titration. The analyzer can generate special titration modes with the functions of pre-titration, preset end point titration, blank titration and manual titration. The operation range of the analyzer becomes larger. The transmission system has been improved and the noise has been reduced effectively. With PWM technology, the software adjust speed in stirring system. Applying the material of perchloric acid-proof, the titration system can make nonwater titration. The analyzer can be connected with (Model TP-16, TP-24 or TP-40) serial printers to print measuring data, titrating curve and calculating results. The computer communicating software is provided with the analyzer, titrating tension, one step and two steps derivative and graphs contrast analysis are instantly displayed on computer. Titration mode can be compiled and revised. The analyzer can be remote controlled. The results of the measurement can also be counted up.

Main Specifications and Performance

1. Measuring range	pH: (0.00~14.00)pH mV: (-1800.0~1800.0)mV temperature: (-5.0~105.0)°C
2. Resolution	pH: 0.01pH mV: 0.1mV temperature: 0.1°C
3. Electronic unit accuracy	pH: ± 0.01 pH 1 bit mV: $\pm 0.03\%$ (FS) temperature: $\pm 0.3^\circ\text{C}$
4. Burette volume accuracy	10ml burette: ± 0.025 ml 20ml burette: ± 0.035 ml
5. Dripping or feeding rate of burette	55 \pm 10s (burette FS)
6. Reproducibility of titration analysis	0.2%
7. Electronic unit reproducibility	less than 0.2mV
8. Electronic unit stability	± 0.3 mV ± 1 bit/3h
9. Sensitivity of controlling titration	± 2 mV
10. Normal operating conditions	ambient temperature: (5.0~35.0) °C relative humidity: d"80%
	power supply: (220 \pm 22)V, frequency: (50 \pm 1)Hz; Without disturbing by electron magnetic field except terrestrial magnetic field
11. Outside dimensions (mm)	340 \times 400 \times 400 (l \times w \times h)
12. Weight (kg)	about 10.

**Striking, Bearing Ratio (CBR), Modulus of Resilience Test
as per the road test standard
T0131-93 (Striking Test), Bearing Ratio Test
(CBR), T0134-93 (Modulus of Resilience Test)
Model: 40002-2**

Purpose

This instrument is designed and produced as per the road test standard T0131-93 (Striking Test), Bearing Ratio Test (CBR), T0134-93 (Modulus of Resilience Test), including light strike and heavy strike.

Technical Specifications

Weight of Striking Sinker: heavy type: 4.5 kg; light type: 2.5 kg
Height of Drop: heavy type: 450 mm; light type: 300 mm
Diameter of Sinker's Surface: 50 mm
Size of Test Cylinder: less than 152 mm, Φ 100 mm.
Striking Frequency: 30 t/m
Parameter of Electric Motor: 1440 r/min, 250 W 380 V
Power of Electric Motor: 550W three-phase
Times Set for Striking: within 0 ~ 99 t



**Wheel Track Molding Machine
as per JTJ056-2000
Model: 40004-4**



Purpose

This instrument is for highway, manufactured and exploited by our own. Comparing to others, it has a small vol., high automation, powerful function and convenient operation. Keeping ahead interiorly, generally equipped with track tester, for grinding and molding the asphalt mixture, as per JTJ056-2000.

Technical Specifications

Pressure of Roller: 0~20 KN, adjustable; controlled by hydraulic pressure.
Height Changing Range: 30 ~100mm, adjustable Clamping Device for Moulding: advanced, easy operating, on the safe side.
Automatically adjust Moulding in center. Small dolly can be stopped at anywhere according to your operation Small dolly stops when it grinds and presses for times that you order for, and reports the times of grinding at any time.
Rolling temperature may be set randomly according to test. It will AUTO stop heating while the temperature is up to preset the temperature point.
Moulding Size: 300 × 300 × (30 ~ 100) mm.
Radium of roll is 500 mm, width is 300 mm.
Speed of Rolling: 6 t/m.
Pressure of the rolling is within 0 ~ 20 KN, random adjustable (it is 9.0 KN before leaving the factory).
Plate for Sample Preheat: 20 ~ 200°C, randomly adjustable.
Size: 1750 × 1216 × 640 mm.
Total Weight: 300 Kg.
Power Supply: AC 380 V, 50 Hz, 3 kW.

Theoretic special gravity of asphalt mixture

Model: 40005-5



Purpose

This instrument is used to test the maximal theoretic special gravity of asphalt mixture. It can be used to proportion the asphalt mixture, support investigating communication, management and survey of highway construction, calculating special rate and extent of pressing.

Technical Specifications

Power Supply: AC 220V \pm 10% 50Hz
 Output Power: 150 W
 Operation Mode: AUTO / manual
 Volume: 5000 ml \times 2
 Vacuum Pressure: AUTO

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