Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445 Manual Kinematic Viscosity Bath

Overview

KN-445 Manual Kinematic Viscosity bath conforms the ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity).*** It is used to test the of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity, η, can be obtained by multiplying the kinematic viscosity, ν, by the density, ρ, of the liquid. Under certain constant temperature. The range of kinematic viscosities covered by this apparatus method is from 0.2 to 300 000 mm2/s at all temperatures

Features

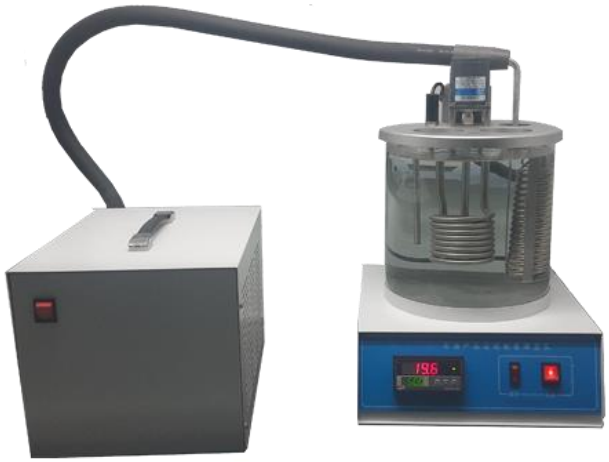
1. The apparatus is equipped with 4 advanced viscometer holders, easy to operate.
2. The apparatus adopts digital display temperature control with high temperature controlling precision.
3. The apparatus is equipped with heat preservation bath.
4. The rotational constant bath must be provided when the temperature is 20 °C.
5. Rational design with elegant structure and easy operation.

Technical parameters

1. Rated voltage: AC220V±10% 50Hz
2. Temperature control range: 20~100°C
3. Temperature control mode: Digital display temperature control
4. Precision of temperature control: ±0.1°C (±0.01°C)
5. Output power: 1800W
6. Ambient requirements: Temperature: 10~40°C; Humidity≤85%

Package Information

1. Dimension: 830*540*730mm
2. Volume: 0.33m^3
3. Weight: 40kg



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445BZ Semi-Automatic Kinematic Viscosity Bath

Overview

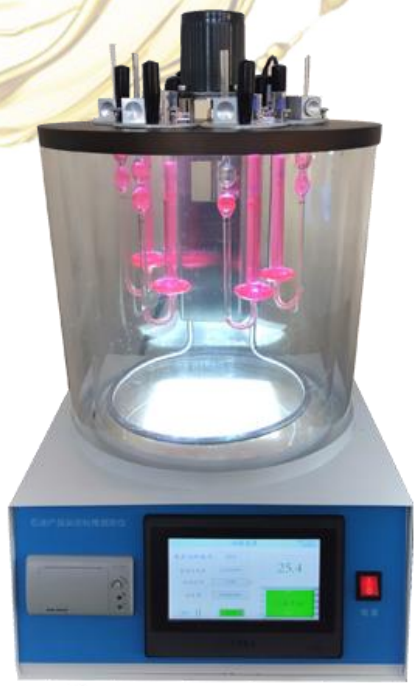
KN-445BZ Semi-Automatic Kinematic Viscosity bath conforms the ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity).*** It is used to test the of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity, η, can be obtained by multiplying the kinematic viscosity, ν, by the density, ρ, of the liquid. Under certain constant temperature. The range of kinematic viscosities covered by this apparatus method is from 0.2 to 300 000 mm2/s at all temperatures

Features

1. Large LCD, independent research and development of embedded temperature control system, plastic injection integrated display screen frame is attractive and reasonable. Meanwhile, it has the authority management function, which effectively prevents non-professionals from setting the key parameters of the analyzer.
2. Double-layer transparent round glass constant temperature bath, 20L glass cylinder which is heat preservation and explosion-proof.
3. With temperature correction function, the correction value will be lost after power off.
4. LED lighting, illuminating the capillary line, clear and not dazzling.
5. Dedicated viscometer holder, easy to operate
6. Automatic timing, calculation and convert to the viscosity index
7. Embedded thermal printer, it features quiet, fast and clear

Technical parameters

1. Temperature range: Ambient~100℃, adjustable
2. Accuracy: ±0.1℃
3. Heating power: 1.5KW
4. Test station: 4
5. Rated voltage: AC220V±10% 50Hz
6. Ambient temperature requirement: 5℃~ 40℃
7. Relative humidity: ≤85%



Package Information

1. Dimension: 830*540*730mm
2. Volume: 0.33m^3
3. Weight: 40kg

Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445L Low Temperature Kinematic Viscosity Tester

Overview

KN-445L Low Temperature Kinematic Viscosity Tester is suitable to the standard of ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)***.It is used to test kinematic viscosity 0°C and below 0°C for liquid petroleum products (Newtonian liquid).

Features

1. Digital display temperature controller, temperature control high precision, easy to adjust.
2. Using Dewar cold bath, transparency, good insulation properties.
3. H lighting equipment facilitate observation the sample of cold bath .
4. Import compressor, refrigeration compressor technology, cooling capacity, cooling speed.
5. Using motor stirrer, stir well, to make cold bath temperature constant.
6. Cold bath cover with two holes, with a new viscometer clip, easy to operate, while oil sample test can be done in parallel to improve efficiency.
7. Instrument reasonable structure, beautiful shape, easy to operate.

Technical parameters

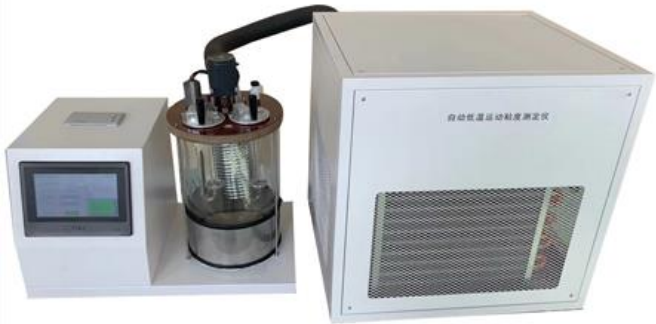
1. Rated voltage: AC 220V±10% 50Hz
2. Power: 1200W
3. Heating power: 800W
4. Cold bath volume: 8L
5. Temperature control: Digital display temperature control
6. Temperature range: 20 ~-60°C
7. Temperature accuracy: ±0.1°C
8. Temperature sensor: Pt100 (Platinum resistor)
9. Slot holes: Single Hole
10. Mixing method: Mixing motor, 1200r/min
11. Cooling time: ≤120min
12. Ambient temperature: ≤30°C Humidity≤80%

Package Information

1. Dimension:
   Main host: 580*350*570mm
   Cooling source: 330*570*650mm

2. Volume:
   Main host: 0.12m^3
   Cooling source: 0.12m^3

3. Weight:
   Main host: 20kg
   Cooling source: 55kg



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-7279B Automated Houillon Viscometer

Overview

KN-7929B Automated Houillon Viscometer conforms to ***ASTM D7279 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids by Automated Houillon Viscometer***. Many petroleum products and some non-petroleum products are used as lubricants in the equipment, and the correct operation of the equipment depends upon the appropriate viscosity of the lubricant being used. Additionally, the viscosity of many petroleum fuels is important for the estimation of optimum storage, handling, and operational conditions. Thus, the accurate determination of viscosity is essential to many product specifications.

The viscosity of used oils is a commonly determined parameter in the oil industry to assess the effect of engine wear on the lube oils used, as well as the degradation of the engine parts during operation.

The Houillon viscometer tube method offers automated determination of kinematic viscosity. Typically a sample volume of less than 1mL is required for the analysis.

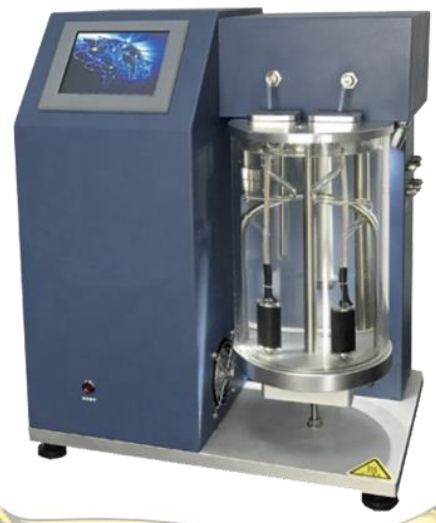
Features

1. Fast analysis, be able to get the results within 15s under the fast analysis mode. The results are generally obtained within 3 minutes. The whole process of sample injection, test, cleaning, drying, and result calculation generally takes no more than 7 minutes.
2. High automation. Be able to work continuously. Test, cleaning, drying, and result calculation are all done automatically
3. Be able to test transparent and opaque samples, including gasoline, diesel, kerosene, cutting fluid, heat transfer oil, additives, new oil for lubricating oil and oil in use and other Newtonian liquids
4. The measurement data is accurate. The tester has the function of secondary accurate quantification, automatically cuts the sample liquid column, precisely controls the sample volume, and no longer relies on micropipette quantification, avoids the limitations and deviations of pipette quantification, and ensures accurate data
5. Fully automatic cleaning, fast cleaning and low cleaning cost. A cleaning process generally consumes no more than 10 ml cleaning solution
6. The software is intelligent and user-friendly. Automatically select viscometers, rationally allocate sample test sequences, add samples, delete samples, and prioritize tests at any time. Automatically calculate the viscosity index if the conditions are met.
7. Many auxiliary functions: constant calibration, temperature calibration, internal clock timing verification, automatic conversion of kinematic viscosity to Enn's viscosity

8. Software and hardware dual over-temperature protection, over-temperature alarm function, anti-dry burning protection function, cleaning agent liquid level, waste liquid level alarm function
9. Adopts double-layer glass cylinder, the temperature is more uniform. Different temperature points can be tested and cleaned at the same time without affecting each other. Quick viscometer replacement without emptying the bath
10. Equipped with an air source power cabinet, once the test is completed, cleaning will be done at once
11. Adopt micro automatic sampling system, low failure rate, smooth sample injection, and small vibration
12. Adopts PT1000 high-precision temperature sensor, the temperature of the constant temperature bath is stable and accurate, and the temperature control accuracy reaches 0.005 ℃
13. Adopts advanced optical fiber amplifier, high temperature packaged optical fiber, it features higher signal stability and accuracy
14. Windows operating system, simple operation, friendly man-machine interface, can be connected to LIMS system, can be connected to an external scan code gun, and automatically enter sample information
15. It can be equipped with a disposable filter, which greatly reduces the workload of the operator on sample pretreatment

Technical parameters

1. Rated voltage: AC220V±10% 50Hz
2. Ambient temperature: 10~28℃
3. Relative humidity＜80%
4. Measuring range: 0.3~6000mm²/s, the measuring span of two viscometers is 100 times
5. Sample volume: 0.3~1ml
6. Bath capacity: 2L*2
7. Temperature control range: 20~100℃(chiller is optional, if the expected temperature is lower than 40℃)
8. Temperature control accuracy: 0.005℃
9. Timing accuracy: 0.01s
10. Repeatability: ≤0.05%
11. Total power: ≤600W
12. Dimension: 350*640*600mm
13. There should be no strong vibration, airflow, strong electromagnetic interference and corrosive gas around the laboratory



KN-7279A Automated Houillon Viscometer

Overview

KN-7929A Automated Houillon Viscometer conforms to ***ASTM D7279 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids by Automated Houillon Viscometer***. Many petroleum products and some non-petroleum products are used as lubricants in the equipment, and the correct operation of the equipment depends upon the appropriate viscosity of the lubricant being used. Additionally, the viscosity of many petroleum fuels is important for the estimation of optimum storage, handling, and operational conditions. Thus, the accurate determination of viscosity is essential to many product specifications.

The viscosity of used oils is a commonly determined parameter in the oil industry to assess the effect of engine wear on the lube oils used, as well as the degradation of the engine parts during operation.

The Houillon viscometer tube method offers automated determination of kinematic viscosity. Typically a sample volume of less than 1mL is required for the analysis.

Features

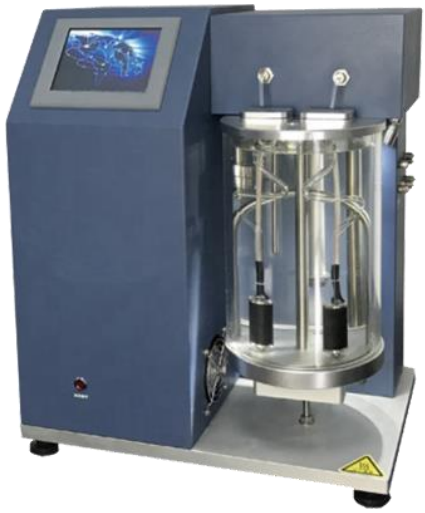
1. Fast analysis, be able to get the results within 15s under the fast analysis mode. The results are generally obtained within 3 minutes. The whole process of sample injection, test, cleaning, drying, and result calculation generally takes no more than 7 minutes.
2. High automation. Test, cleaning, drying, and result calculation are all done automatically
3. Be able to test transparent and opaque samples, including gasoline, diesel, kerosene, cutting fluid, heat transfer oil, additives, new oil for lubricating oil and oil in use and other Newtonian liquids
4. Fully automatic cleaning, fast cleaning and low cleaning cost. A cleaning process generally consumes no more than 10 ml cleaning solution
5. Many auxiliary functions: constant calibration, temperature calibration, internal clock timing verification, automatic calculation of viscosity index, automatic conversion of kinematic viscosity to Enn's viscosity
6. Software and hardware dual over-temperature protection, over-temperature alarm, anti-dry

burning protection function

7. The heating and cooling speed is fast. The fastest heating and cooling rate is 5℃/min
8. Adopts double-layer glass cylinder, the temperature is more uniform
9. Adopts PT500 high-precision temperature sensor, the temperature of the constant temperature bath is stable and accurate, and the temperature control accuracy reaches 0.01 ℃
10. It can be equipped with a disposable filter, which greatly reduces the workload of the operator on sample pretreatment
11. Quick viscometer replacement without emptying the bath
12. Be able to transmit data through WIFI, connect to LIMS system

Technical parameters

1. Rated voltage: AC220V±10% 50Hz
2. Ambient temperature: 10~28℃
3. Relative humidity＜80%
4. Measuring range: 0.3~6000mm²/s, the measuring span of two viscometers is 100 times
5. Sample volume: 0.3~1ml
6. Temperature control range: 20~100℃(chiller is optional, if the expected temperature is lower than 40℃)
7. Temperature control accuracy: 0.01℃
8. Timing accuracy: 0.01s
9. Repeatability: ≤0.05%
10. Total power: ≤400W
11. Dimension: 420*300*500mm
12. There should be no strong vibration, airflow, strong electromagnetic interference and corrosive gas around the laboratory



KN-7279 Automated Houillon Viscometer

Overview

KN-7929 Automated Houillon Viscometer conforms to ***ASTM D7279 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids by Automated Houillon Viscometer***. Many petroleum products and some non-petroleum products are used as lubricants in the equipment, and the correct operation of the equipment depends upon the appropriate viscosity of the lubricant being used. Additionally, the viscosity of many petroleum fuels is important for the estimation of optimum storage, handling, and operational conditions. Thus, the accurate determination of viscosity is essential to many product specifications.

The viscosity of used oils is a commonly determined parameter in the oil industry to assess the effect of engine wear on the lube oils used, as well as the degradation of the engine parts during operation.

The Houillon viscometer tube method offers automated determination of kinematic viscosity. Typically a sample volume of less than 1mL is required for the analysis.

Features

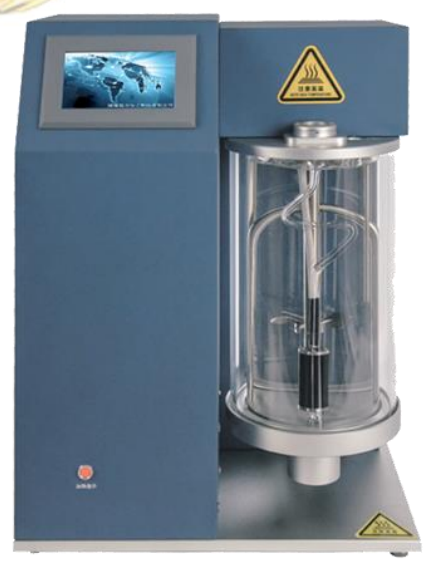
1. Fast analysis, be able to get the results within 15s under the fast analysis mode. The results are generally obtained within 3 minutes. The whole process of sample injection, test, cleaning, drying, and result calculation generally takes no more than 7 minutes.
2. High automation. Test, cleaning, drying, and result calculation are all done automatically
3. Be able to test transparent and opaque samples, including gasoline, diesel, kerosene, cutting fluid, heat transfer oil, additives, new oil for lubricating oil and oil in use and other Newtonian liquids
4. Fully automatic cleaning, fast cleaning and low cleaning cost. A cleaning process generally consumes no more than 10 ml cleaning solution
5. Many auxiliary functions: constant calibration, temperature calibration, internal clock timing verification, automatic calculation of viscosity index, automatic conversion of kinematic viscosity to Enn's viscosity
6. Software and hardware dual over-temperature protection, over-temperature alarm, anti-dry

burning protection function

7. The heating and cooling speed is fast. The fastest heating and cooling rate is 5℃/min
8. Adopts double-layer glass cylinder, the temperature is more uniform
9. Adopts PT500 high-precision temperature sensor, the temperature of the constant temperature bath is stable and accurate, and the temperature control accuracy reaches 0.01 ℃
10. It can be equipped with a disposable filter, which greatly reduces the workload of the operator on sample pretreatment
11. Quick viscometer replacement without emptying the bath
12. Be able to transmit data through WIFI, connect to LIMS system

Technical parameters

1. Rated voltage: AC220V±10% 50Hz
2. Ambient temperature: 10~28℃
3. Relative humidity＜80%
4. Measuring range: 0.3~6000mm²/s, the measuring span of a single viscometer is 10 times
5. Sample volume: 0.3~1ml
6. Temperature control range: 20~100℃(chiller is optional, if the expected temperature is lower than 40℃)
7. Temperature control accuracy: 0.01℃
8. Timing accuracy: 0.01s
9. Repeatability: ≤0.05%
10. Total power: ≤300W
11. Dimension: 330*200*450mm
12. There should be no strong vibration, airflow, strong electromagnetic interference and corrosive gas around the laboratory



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-5481 High-Temperature and High-Shear Rate Apparent Viscosity Tester (HTHS)

Overview

KN-5481 High-Temperature and High-Shear Rate Apparent Viscosity Tester (HTHS) conforms to **ASTM D5481** ***Standard Test Method for Measuring Apparent Viscosity at High-Temperature and High-Shear Rate by Multicell Capillary Viscometer***, it covers the laboratory determination of high-temperature high-shear (HTHS) viscosity of engine oil at a temperature of 150℃ using a multicell capillary viscometer containing pressure, temperature, and timing instrumentation. The shear rate for this test method corresponds to an apparent shear rate at the wall of 1.4 million reciprocal seconds (1.4 3 106s-1).This shear rate has been found to decrease the discrepancy between this test method and other high temperature high-shear test methods used for engine oil specifications. Viscosities are determined directly from calibrations that have been established with Newtonian oils with viscosities from 2 to 5 mPa-s at 150℃.

Features

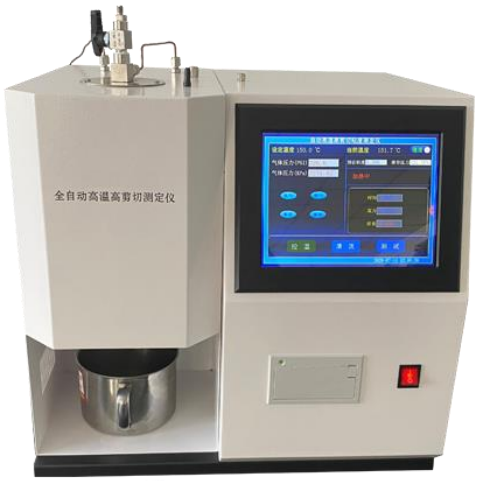
1. Touch screen operation, built-in standard computer calculation program, easy to operation
2. Imported needle valve, full time safe pressure detecting system
3. One button to start the test, easy and convenient to operate

Technical parameters

1. Applicable standard: ASTM D5481
2. Temperature control method: Electrical heating bar
3. Temperature control range: Ambient-150℃±0.1℃
4. Capillary tube dimension: ϕ0.15*18mm
5. Power: 700W
6. Pressure oxygen source: Oxygen, CO_2

Package Information

1. Dimension: 360*450*630mm
2. Volume: 0.1m^3
3. Weight: 45kg



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-5293 Cold Cranking Simulator (CCS) Viscosity Apparatus

Overview

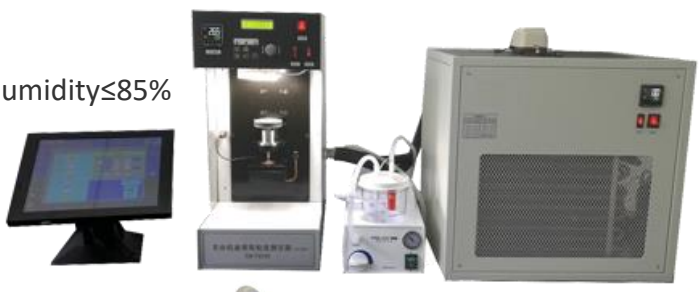
KN-5293 Cold Cranking Simulator (CCS) Viscosity Apparatus conforms to the ***SAE J300*** and ***ASTM D5293 Standard Test Method for Apparent Viscosity of Engine Oils and Base Stocks Between –5 and –35°C Using Cold-Cranking Simulator***, which used for determining apparent viscosity of engine oils and base stocks by cold cranking simulator (CCS) at temperatures between –5 and –35°C at shear stresses of approximately 50 000 to 100 000 Pa and shear rates of approximately 105 to 104 s^{-1} for viscosities of approximately 900 to 25 000mPa•s. The range of an instrument is dependent on the instrument model and software version installed. Apparent Cranking Viscosity results by this method are related to engine-cranking characteristics of engine oils.

Features

1. We use retro reflector to observe the experimental phenomenon
2. Total English version operation interface.
3. Omron temperature controller, Light touch button with convenient operation.
4. The apparatus can detect rotary speed automatically, use fine tuning knob to control current, reduce much manual operation error.
5. Equipped with double imported compressor as cooling system, refrigeration depth can reach -60℃.
6. The apparatus is equipped with imported click drive with good precision.
7. It can print and store test result.
8. The apparatus will calculate result automatically after calibrating with CANNON CL160 viscosity standards
9. We adopt embedded operating system with highly stable and reliable working application.
10. Second generation rotor, low torque testing condition with high repeatability
11. The apparatus will automatically shut down and start to heat after each experiment, this function is good for rapid clean.
12. The apparatus recommends refrigeration speed automatically.
13. The apparatus is equipped with digital rotary encoder to detect rotary speed automatically.
14. User can edit and store all standard oil's reference value
15. The apparatus has a capacity of storing over 1000 tests data, very easy to check.

Technical parameters

1. Rated Voltage: AC220V±20%
2. Power: 1500W
3. Temperature Range: external circulated alcohol bath temperature control range ~-60℃
4. Cooling Bath Temperature accuracy: ±0.1℃
5. Stator Temperature Accuracy: ±0.02℃
6. Viscosity Measuring Range: 1500~27000mPa.s
7. Ambient Requirements: temperature 10~40℃; humidity≤85%



Package Information

1. Dimension: 960*670*930mm
2. Volume: 0.6m³
3. Weight: 135kg

Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-4684 Yield Stress Apparent Viscosity of Engine Oils Apparatus

Overview

KN-4684 Yield Stress Apparent Viscosity of Engine Oils Apparatus is suitable to the standards of **ASTM D3829 and ASTM D4684**. It is used to predict the borderline pumping temperature and determine the yield stress apparent viscosity of engine oils at low temperature. Temperature controlled from -10~-40℃. All the testing processes controlled by the computer automatically.

Features

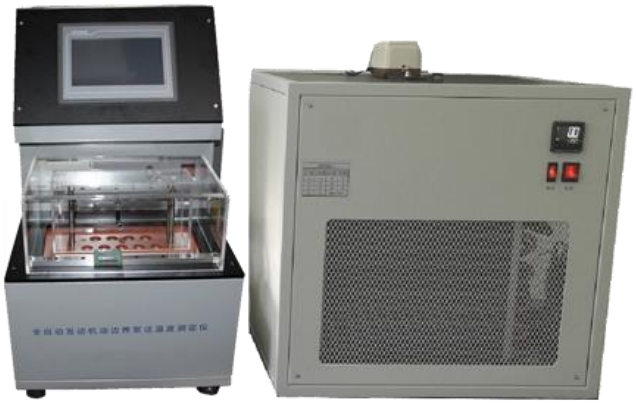
1. Touch screen operation, built-in CPU can control the temperature curve accurately
2. Adopts various kinds of method programs, one button operation, record the progress during the test
3. Built-in cleaning mode, easy to clean
4. Equip the dedicated cryostat and new special defrost system

Technical parameters

1. Rated voltage: AC220V±10% ,50Hz
2. Power: 1800W
3. Test temperature: -10~-40℃
4. Cleaning temperature: 20~80℃
5. Accuracy: ±0.1℃
6. Test holes: 5
7. Ambient requirement Temperature: 5~40℃, Humidity≤85%

Package Information

1. Dimension
   Main host: 300*420*470mm
   Cooling Source: 500*640*570mm
2. Volume
   Main host: 0.06m^3
   Cooling source: 0.18 m^3
3. Weight
   Main host: 20kg
   Cooling source: 26kg



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-4683 Apparatus for Viscosity by TBS

Overview

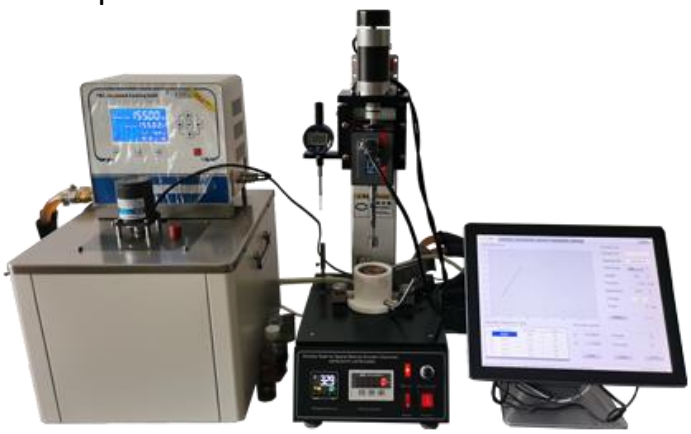
KN-4683 Apparatus for Viscosity by TBS conforms to ***ASTM D4683 Standard Test Method for Measuring Viscosity of New and Used Engine Oils at High Shear Rate and High Temperature by Tapered Bearing Simulator Viscometer at 150 °C*** and ***ASTM D4741 Standard Test Method for Measuring Viscosity at High Temperature and High Shear Rate by Tapered-Plug Viscometer***. The ASTM D4683 covers the laboratory determination of the viscosity of engine oils at 150℃ and 1.0·106s-1 using a viscometer having a slightly tapered rotor and stator called the Tapered Bearing Simulator (TBS) Viscometer.

Features

1. Heating method: high temperature oil bath
2. Test temperature: 100℃, 150℃
3. Test station: 5
4. Operating system: Windows 7
5. Results calculation: Dedicated software, Manual sampling, 5 tests per hour
6. Do not need solvent cleaning, only need little fresh sample to flush
7. Software will automatically calculates the calibration deviation of the standard oil
8. Be able to store and print the test results

Technical parameters

1. Rated voltage: 210~240V, 50Hz/60Hz
2. Shear rate： Lowest 50000s-1， highest can reach 7000000s-1 RPM （800~8000）
3. Safety control： Overheating, programmable temperature limit
4. Total power: 2.5KW
5. Sample volume: 50ml
6. Test time: 5~10min per sample
7. Bath temperature: 40~200℃ , ±0.1℃



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-4603 Inherent Viscosity Apparatus for PET Polyester

Overview

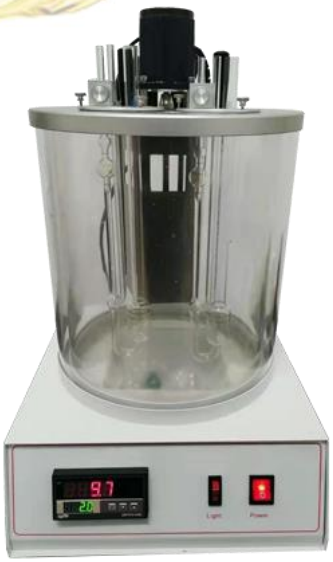
KN-4603 Inherent Viscosity Apparatus for PET Polyester conforms the ***ASTM D4603 Inherent Viscosity Apparatus for PET Polyester***. It is used to test the of liquid petroleum products, both transparent and opaque. It used for the determination of the inherent viscosity of poly (ethylene terephthalate) (PET) soluble at 0.50% concentration in a 60/40 phenol/1,1,2,2-tetrachloroethane solution by means of a glass capillary viscometer. Highly crystalline forms of PET that are not soluble in thsi solvent mixture will require a different procedure.

Features

1. Multifunction Viscometer Holder can hold the cannon ubbelohde viscometer (Size 1B)
2. The apparatus is equipped with ASTM 118C thermometer (for use at 30℃) Range:28.6℃~31.4℃, 0.5℃
3. The apparatus adopts digital display temperature control with high temperature controlling precision.
4. The apparatus is equipped with heat preservation bath.
5. The rotational constant bath must be provided when the temperature is 20 °C.
6. Rational design with elegant structure and easy operation.

Technical parameters

1. Rated voltage: AC220V±10% 50Hz
2. Temperature control range: 20~100°C
3. Temperature control mode: Digital display temperature control
4. Precision of temperature control: ±0.1°C (±0.01 °C)
5. Output power: 1800W
6. Ambient requirements: Temperature: 10~40°C; Humidity≤85%



Package Information

1. Dimension: 410*470*650mm
2. Volume: 0.13m^3
3. Weight: 25kg

Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-2983 Low Temperature Brookfield Viscometer

Overview

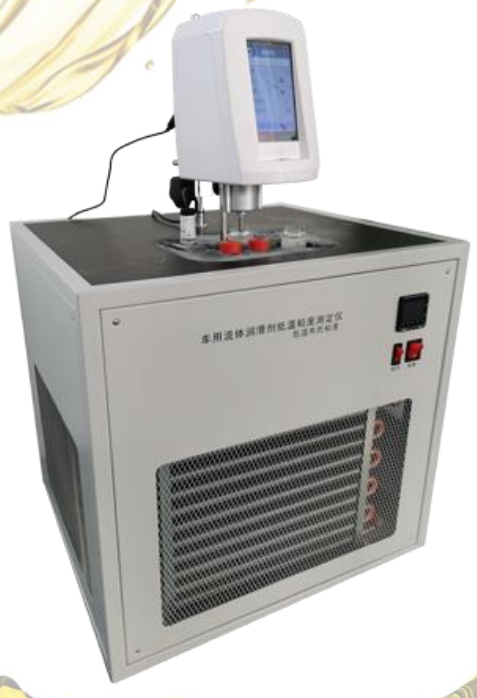
KN-2983 Low Temperature Brookfield Viscometer conforms to ***ASTM D2983 Standard Test Method for Low-Temperature Viscosity of Automatic Transmission Fluids, Hydraulic Fluids, and Lubricants using a Rotational Viscometer.*** It covers the use of Brookfield viscometers of appropriate torque for the determination of the low shear- rate viscosity of lubricants. The test is applied over the viscosity range of 500 to 900 000mPa·s within a low temperature range appropriate to the capacity of the viscometer head. Mainly used for testing liquid lubricants, such as gear oils, torque and tractor fluids, and industrial and automotive hydraulic oils

Features

1. Four precise Spindles strictly conforms to the standard, great repeatability
2. Semiconductor cooling bath with transparent observation. Inner LED light makes operation more convenient.
3. Standard Test Tube Stator, inner diameter 22~22.5mm,length: 120mm
4. Imported digital rotary viscometer, equipped with Seven gear spindle speed
5. Microcomputer temperature controller with PID control, temperature control range: normal temperature 40□, PT100 temperature sensor, with high precision.
6. Big Viscosity detection range: 1000~1000000mPa.s

Technical parameters

1. Applicable standards: ASTM D2983
2. Refrigerating method: semiconductor refrigeration
3. Temperature control method: digital PID temperature controller
4. Temperature control range: ambient temperature~-40±0.1□
5. Rotate speed:0.5~60r/min
6. Power:1200W
7. Rated voltage:AC220V 50HZ



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445Z Full Automatic Kinematic Viscosity Tester

Overview

KN-445Z Automatic Kinematic Viscosity Apparatus conforms the ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)***. It is used to test the of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity, η, can be obtained by multiplying the kinematic viscosity, ν, by the density, ρ, of the liquid. Under certain constant temperature. The range of kinematic viscosities covered by this apparatus method is from 0.2 to 300 000 mm2/s at all temperatures.

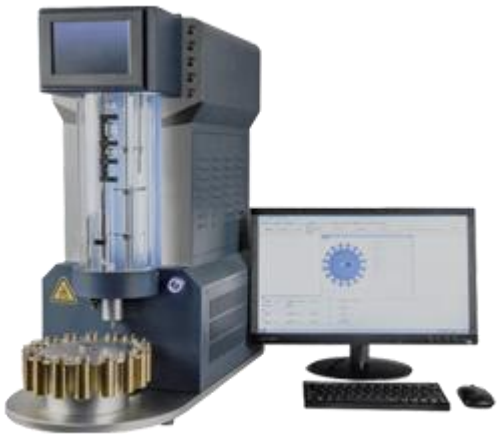
Features

1. Equipped with 16-bit sample tray, can work all day long. Intelligent preheat, inject, measure, clean, dry, calculate results and repetitive calculation.
2. The apparatus adopts photoelectric or thermal detection, can measure transparent and opaque samples, include Newtonian fluid such as gasoline, diesel, kerosene, cutting fluid, heat conducting oil, additive, fresh and in-use lubricating oils, etc.
3. With PTC sample intelligent preheating function.The apparatus can control preheating temperature automatically according to the expected temperature of the sample.
   Preheat temperature range: room temperature~120℃ Heating rate:15℃/min
   Reduce the sample thermostatic time greatly during testing.
4. Build-in Peltier refrigeration system.It uses thermostatic bath liquid as cooling medium directly, features fast cooling speed.
5. Apply the self-adaptive liquid level balance technology. It adapts to large-span adjustment of test temperature, can increase and decrease thermostatic medium automatically during heating and cooling process, keep the same immersion depth.
6. The apparatus build-in Windows operating system, easy to operate, can be connected to LIMS system and barcode scanner, input sample information automatically.

7. The system build-in automatic calibration function of the viscometer constant, and temperature calibration, internal clock timing calibration, also can convert Kinematic viscosity into Engler viscosity and calculate viscosity Index automatically and other functions
8. Overtemperature protection function of both software and hardware. Over temperature alarm, dry heat protection, cleaning solution insufficient prompt, waste liquid cleaning prompt and other functions, ensuring safe operation.
9. Double glass bath design,PT1000 high precision temperature sensor, double-blade stir, make the thermostatic bath keep stable and accurately, temperature precision is 0.005℃.
10. Automatic intelligent dual solvent cleaning function, cleaning mode can be customized.
11. With timing verification port, can do accurate time verification to the instrument through a standard time calibrator.

Technical parameters

1. Standard: ASTM D445, D446, ISO3104
2. Measuring range:0.3～10000mm^2/s,100 times measuring span of one viscometer tube
3. Number of sample loaded:16
4. Bath volume:3L
5. Temperature control range:20～100℃(built-in Peltier refrigeration)
6. Temperature control accuracy: 0.005℃
7. Timing accuracy: 0.01 S
8. Repeatability: ≤0.4%
9. Total Power: ≤1000 W
10. Main host dimension: 400 × 700 × 800 (mm)
11. Rated voltage:AC220V±10%　50HZ±10%
12. Ambient temperature:10～28℃　Relative humidity: <80%RH
13. Others: no strong vibration, airflow, strong electromagnetic interference and corrosive gas



Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445W Automatic Kinematic Viscosity Tester

Overview

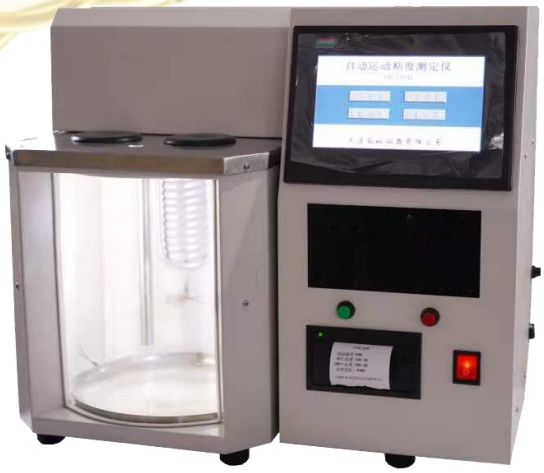
KN-445W Automatic Kinematic Viscosity Tester conforms the ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity).*** It is used to test the of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity, η, can be obtained by multiplying the kinematic viscosity, ν, by the density, ρ, of the liquid. Under certain constant temperature. The range of kinematic viscosities covered by this apparatus method is from 0.2 to 300 000 mm2/s at all temperatures

Features

1. User can choose Ubbelohde viscometer, or Cannon Fenske opaque reverse flow viscometer. All calibrated with certificates
2. Operating system adopts Windows Embedded Compact 7 real-time industrial control system
3. PT100 platinum resistance temperature sensor, high-precision AD converter, excellent linear mathematical model and special control algorithm
4. Random free floating test technology, which can quickly and accurately capture the sample movement moment and completely avoid the false inspection or missing inspection in the test process. Equipped with embedded thermal printer
5. Storage adopts Flash data storage, which can store more than 2000 experimental results
6. Two channels of samples can be simultaneously asynchronous automatic measurement.

Technical parameters

1. Water bath: 600W heating power
2. Temperature controlling range: Ambient temperature ~120℃(arbitrary setting)
3. Temperature controlling precision: 0.01℃
4. Timing range: 0 ~ 999.9S±0.01S
5. Testing stations: 2
6. Humidity: ≤85%
7. Rated voltage: AC220V±10%, 50Hz
8. Power: 1600W



Package Information

1. Dimension: 650*400*540mm
2. Volume: 0.14m³
3. Weight: 50kg

Kaycan Instrument Co., Ltd.

www.kaycantest.com

KN-445QZ Automatic Kinematic Viscosity Tester

Overview

KN-445QZ Automatic Kinematic Viscosity Tester conforms the ***ASTM D445 Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity).*** It is used to test the of liquid petroleum products, both transparent and opaque, by measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. The dynamic viscosity, η, can be obtained by multiplying the kinematic viscosity, ν, by the density, ρ, of the liquid. Under certain constant temperature. The range of kinematic viscosities covered by this apparatus method is from 0.2 to 300 000 mm2/s at all temperatures

Features

1. 7-inch color touch screen
2. Adopts imported photoelectric amplifier, equipped with high quality optical fiber head, which features high temperature resistance and waterproof
3. Accurate liquid level detection and high-frequency electronic timing unit to ensure the flow timing reliability
4. Adopts imported high-precision temperature control module, PID setting, high temperature control accuracy
5. The main host can store multiple viscometer constants, which can be recalled at any time during testing
6. Equipped with multiple sets of viscometers, select different type as per the different values of the sample
7. The main unit is equipped with 2 baths and 4 groups of test units, which are divided into low temperature bath for 40℃ and high temperature bath for 100℃. Be able to do 4 tester simultaneously.
8. One button operation
9. Microprocessor program control, the tester will do all the procedures automatically
10. Be able to get the viscosity index directly

Technical parameters

1. Temperature range: Ambient~100℃
2. Accuracy: ±0.01℃
3. Heating mode: Electronic heating rod
4. Heating power: 2000W
5. Timing Method: Electronic
6. Timing Accuracy: ±0.1s
7. Stirring mode: Motor stirring
8. Liquid level detection： Photoelectric sensor
9. Test station: 2 sets
10. Data storage: 200 pieces
11. Printing method: Micro printer
12. Rated voltage: AC220V±10%, 50Hz