Shanghai Dobetter

Instrument & Equipment Co.,Ltd

Petroleum Testing Instruments

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Company Profile

Dobetter group of corporations is a Chinese high-tech group which specializes in R&D, manufacturing, sales and service of intelligent and automated instruments in the fields of petroleum, asphalt, geology and viscosity. We own several quality plants leading the technology in these fields in China.

Our group is mainly engaged in five kinds of products: petroleum testing instruments, asphalt testing equipment, geological equipment, rotational viscometers and laboratory glassware. These products are widely used in the industrial fields such as oil fields, refineries, petroleum storage and transportation, chemical plants, power plants, machinery factories, steel works, metallurgic plants, pavement construction, automobile, aviation and geological survey. At the same time, the rotation viscometers are also applied in the civilian fields such as foods,medicines and cosmetics. The products we supply are designed and manufactured as per both domestic and international standards such as GB, SH, JTG, ISO and ASTM. Our products are in good sales in some countries and areas like Korea, Japan, Australia, South Africa, Nigeria, Brazil, Argentina, Chile, Singapore, Malaysia, Saudi Arabia, UAE, Kuwait, Iran, Turkey, Thailand, Vietnam, India, Pakistan, Bangladesh and Taiwan.

Our staff will maintain the philosophy of ‘Do better forever’ to regard our customer’s needs as our first importance with enthusiastic, honest, meticulous and efficient attitude. We will always devote ourselves to supplying the best cost-performance instruments and equipment with quality service to customers worldwide. Dobetter staff welcome our customers from any country to inquire. We are looking forward to cooperating and creating the future with you together.

GENERAL TEST INSTRUMENTS

Flash Point

SDB-3536 Cleveland Open Cup Flash Point Tester

Standards

GB/T 3536, ASTM D92

Application

The instrument is used to determine the flash points of the petroleum products with flash points above 79℃ and below 400℃ except fuel oils.

Main technical specifications

1. Power supply: AC（220±10%）V, 50Hz.
2. Maximum power consumption: 650W
3. Heating device: Quartz tube furnace heating, no naked fire, explosion prevented. The power is adjustable from 0W to 600W.
4. Test flame applicator: It applies the test flame automatically.
5. Thermometer: (-6～400)℃. ASTM 11C.
6. Igniting device: (1) Air source: coal gas(or civil gas)
   (2) Flame diameter is 3.2～4.8mm
7. Ambient temperature: (-10～50)℃
8. Relative humidity: ≤85%

Main technical features

1. It adopts special heating furnace to ensure the safety of test. The heating power is continuously adjustable.It can meet requirements of test.
2. The instrument adopts desktop structure.The stainless steel working table and furnace shell make it beautiful and elegant.
3. The instrument is fully self-contained complete.The operator can do determination as long as connecting with coal gas or other civil gas.

Flash Point

SDB-3536A Automatic COC Flash Point Tester

Standards

GB/T 3536, ASTM D92

Application

The instrument is used to determine the flash points of the petroleum products with flash points above 79℃ and below 400℃ except fuel oils.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：500W
3. Measurement range：Ambient ~ 400℃
4. Temperature precision：±0.1℃
5. Repeatability&reproducibility：In accordance with
6. Heat source：Civil gas
7. Heating rate：In accordance with GB/T 3536 and A
8. Data saving：120pcs of historical records
9. Printing： Built-in Printer
10. Cooling down：Forced air cooling
11.Ambient temperature：10℃~35℃
12.Relative humidity：≤85%

Main technical features

1. Colored touch-screen operation. Prompt menu and curve are shown on the screen.
2. The heating, test arm lifting-up, test arm lowering-down, flash point detecting and air cooling are all automatic.
3.This instrument can avoid the influence of atmospheric pressure and calculate the correction value automatically.

Flash Point

SDB-3536D Automatic COC Flash Point Tester

Standards

GB/T 3536, ASTM D92

Application

The instrument is used to determine the flash points of the petroleum products with flash points above 79℃ and below 400℃ except fuel oils.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：500W
3. Measurement range：Ambient ~ 400℃
4. Temperature precision：±0.1℃
5. Repeatability&reproducibility：In accordance wit
6. Heat source：Civil gas
7. Heating rate：In accordance with GB/T 3536 and
8. Data saving：120pcs of historical records
9. Printing： Built-in Printer
10. Cooling down：Forced air cooling
11. Ambient temperature：10℃~35℃
12. Relative humidity：≤85%

Main technical features

1. Colored touch-screen operation. Prompt menu and curve are shown on the screen.
2. RS232 port is equipped for communication with PC for long term data storage.
3. The heating, test arm lifting-up, test arm lowering-down, flash point detecting and air cooling are all automatic.
4. This instrument can avoid the influence of atmospheric pressure and calculate the correction value automatically.

Flash Point

SDB-261 Pensky-Martens Closed Cup Flash Point Tester

Standards

GB/T 261, ASTM D93

Application

This instrument is used to determine the flash points of petroleum products with flash points above 40℃

Main technical specifications

1. Power supply：AC (220±10%)V, 50Hz.
2. Heating device：The heating power is continuously adjustable from 0 W to 600W.
3. Heating rate：(1~12)℃/min；Controllable and adjustable.
4. Stirring rate： Procedure A: (90~120)RPM, Procedure B: (250±10)RPM
5. Oil cup：(1) Inner diameter: 50.7mm ~ 50.8mm.
   (2) Depth: 55.7mm ~ 56.0mm
   (3) The depth line of capacity of testing oil: 33.9mm ~ 34.3mm.
   (4) Capacity of testing oil:about 70ml
6. Igniting device：(1) Igniting source: gas(or other civilian fuels, the same below)
   (2) Electric ignition. Gas flame diameter:3.2mm～4.8mm
7. Thermometers：Mercury-in-glass thermometer. Specifications are as below:
   (1)Scale -5℃~110℃, division 0.5℃(Optional)
   (2)Scale 20℃~150℃, division 1℃(Standard)
   (3)Scale 90℃~370℃,division 2℃(Optional)
8. Ambient temperature：≤ 35℃
9. Relative humidity：≤ 85%
10. Maximum power consumption：650W

Main technical features

1. Digital displays the voltage value. Easy to control the heating rate.
2. Classical design. The performance is stable.

Flash Point

SDB-261A Automatic PMCC Flash Point Tester

Standards

GB/T 261, ASTM D93

Application

This instrument is used to determine the flash points of petroleum products with flash points above 40℃

Main technical specifications

1. Power supply： AC 220V±10%, 50 HZ
2. Maximum power consumption： 500W
3. Measurement range： 40 ~ 300℃
4. Temperature precision： ±0.1℃
5. Repeatability&reproducibility： In accordance with GB/T 261 and ASTM D93
6. Heat source： Civil gas
7. Heating rate： Procedure A： (5~6)℃/min
   Procedure B： (1~1.5)℃/min
8. Stirring rate： Procedure A： (90~120)RPM
   Procedure B： (250±10)RPM
9. Data saving： 120pcs of historical records
10. Printing： Built-in Printer
11. Cooling down： Forced air cooling
12. Ambient temperature： 10℃~35℃
13. Relative humidity： ≤85%

Main technical features

1. Colored touch-screen operation. Prompt menu and curve are shown on the screen.
2. The heating, lid opening, test arm lifting-up, test arm lowering-down, flash point detecting and air cooling are all automatic.
3. This instrument can avoid the influence of atmospheric pressure and calculate the correction value automatically.

Flash Point

SDB-261D Automatic PMCC Flash Point Tester

Standards

GB/T 261, ASTM D 93

Application

This instrument is used to determine the flash points of petroleum products with flash points above 40℃

Main technical specifications

1. Power supply： AC 220V±10%, 50 HZ
2. Maximum power consumption： 500W
3. Measurement range： 40 ~ 300℃
4. Temperature precision： ±0.1℃
5. Repeatability&reproducibility： In accordance with GB/T 261 and ASTM D93
6. Heat source： Civil gas
7. Heating rate： Procedure A： (5~6)℃/min
   Procedure B： (1~1.5)℃/min
8. Stirring rate： Procedure A： (90~120)RPM
   Procedure B： (250±10)RPM
9. Data saving： 120 pcs of historical records
10. Printing： Built-in Printer
11. Cooling down： Forced air cooling
12. Ambient temperature： 10℃~35℃
13. Relative humidity： ≤85%

Main technical features

1. Colored touch-screen operation. Prompt menu and curve are shown on the screen.
2. RS232 port is equipped for communication with PC for long term data storage.
3. The heating, lid opening, test arm lifting-up, test arm lowering-down, flash point detecting and air cooling are all automatic.
4. This instrument can avoid the influence of atmospheric pressure and calculate the correction value automatically.

SDB-265B Kinematic Viscosity Bath

Standard

GB/T 265

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior)

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：1400W
3. Temperature range：Ambient ~ 100℃
4. Temperature precision：±0.1℃
5. Test positions：2 holes
6. Ambient temperature：5℃~35℃
7. Relative humidity：≤80%

Main technical features

1. Digital temperature controller.
2. Double-layer glass bath.
3. Can test 2 samples.
4. A motor is equipped for stirring to keep the temperature uniform.

SDB-265C Kinematic Viscosity Bath

Standard

GB/T 265

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior)

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：1400W
3. Temperature range：Ambient ~ 100℃
4. Temperature precision：±0.1℃
5. Test positions：4 holes
6. Ambient temperature：5℃~35℃
7. Relative humidity：≤80%

Main technical features

1. Digital temperature controller.
2. Double-layer glass bath.
3. Can test 4 samples.
4. A motor is equipped for stirring to keep the temperature uniform.

SDB-265D Kinematic Viscosity Tester

Standards

GB/T 265, ASTM D445

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior)

Main technical specifications

1. Power supply: AC(220±10%)V, 50Hz
2. Maximum power consumption: 1800W
3. Temperature range: Ambient ~ 100℃, settable
4. Temperature precision: ±0.01℃
5. Temperature sensor: Pt100, RTD
6. Bath capacity: 20L
7. Test positions: 4 holes
8. Stirring motor: 6W, 1200r/min
9. Ambient temperature: 10℃~40℃
10. Relative humidity: ≤80%

Main technical features

1. Double layer structure, good temperature preservation. Easy to observe the sample clearly.
2. Desktop design. Good uniformity. Convenient to use.
3. Motor equipped for stirring. Keep the temperature uniformly.

SDB-265G(G-1) Low Temperature Kinematic Viscosity Bath

Standard

GB/T 265

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior)

Main technical specifications

1. Power supply: AC(220±10%)V, 50Hz
2. Temperature range: -40℃~ 20℃
   or -70℃~ 20℃(SDB-265G-1)
3. Temperature precision: ±0.1℃
4. Test positions: 2 holes
5. Dimensions: 900mm×530mm×530mm

Main technical features

1. PID temperature control system. Good temperature precision.
2. Danfoss brand of compressor. Good cooling performance.
3. Dewar vessel is equipped. No frost in the containner.

SDB-265H Semi-auto Kinematic Viscosity Bath

Standards

GB/T 265, ASTM D445

Application

This instrument is used to determine determine Kinematic viscosity of petroleum products.

Main technical specifications

1. Temperature range: Ambient to 150℃
2. Temperature precision: ±0.01℃
3. Test positions: 4 holes
4. Timing range: 0.0s ~ 999.9 s
5. Timing precision: 0.1s
6. Data saving: 500 pieces
7. Printing: Built-in printer
8. Power supply: AC220V±10%,50Hz
9. Maximum power consumption: 1600W
10. Ambient temperature: 10℃~40℃
11. Relative humidity: ≤80%

Main technical features

1. 7 inch colored touch LCD. Rapid operation response. Good user experience.
2. Intelligent PID temperature control. The temperature control precision is high.
3. Automatically temperature control, timing and calculation.
4. 500 pieces of test data can be saved. Easy for data checking.

Kinematic Viscosity

SDB-265H-1 Automatic Kinematic Viscosity Bath

Standards

GB/T 265, GB/T 11137, ASTM D445

Application

This instrument is used to determine determine Kinematic viscosity of petroleum products.

Main technical specifications

1. Viscometer tube: Ubbelohde viscometer (Dilution type)
2. Test positions: 2 holes
3. Temperature sensor: Pt1000, RTD
4. Temperature range: 15℃ ~ 120.0℃
5. Temperature precision: ±0.02℃
6. Timing range: 0.0s~999.9 s
7. Timing precision: ±0.1 s
8. Data saving: 100 pieces
9. Data printing: Built-in printer
10. Power supply: AC 220V±10%, 50 Hz
11. Maximum power consumption: 2100 W
12. Ambient temperature: 10℃~40℃
13. Relative humidity: ≤80%

Main technical features

1. 10.2 inch colored touch LCD. Micro-computer technology is adopt for the control unit. Good user experience.

2. This instrument can intelligently control the whole procedure of the test. It achieves the full automation of keeping temperature constant, time detection, viscosity calculation, viscometer tube cleaning and drying, and automatically print out test result.

3. This instrument has ability of fault identification and processing. It is convenient for user to analyze and judge the condition of instrument.

SDB-265-3 Capillary Viscometer Washing Apparatus

Application

The instrument is designed and made specially for washing the capillary viscometers, which are used for testing petroleum products. It can be used to wash glass capillary viscometer of various types, such as Pinkevitch viscometer, Ubbelohde viscometer, Cannon-Fenske routine viscometer, Cannon-Fenske opaque viscometer. It is high-efficient and time saving especially for the capillary viscometers, which are used for testing heavy oil with high viscosity.

Main technical specifications

1. Power supply: AC 220V±10%, 50 Hz
2. Maximum power consumption: 700 W
3. Temperature range: Ambient to 80 ℃
4. Ambient temperature: Room temperature~35℃
5. Relative humidity: ≤85%
6. Dimension of washer: 320mm×300mm×500mm
   (The aspirator is not included)
7. Net weight of washer: 10Kg

Main technical features

1. It adopts micro-controller control technology, program control, automatic washing.
2. It needs less solvent oil and it is convenient, efficient.
3. It can be widely used in the enterprises producing and using petroleum products, colleges and universities, and scientific research institutes and so on, where capillary viscometer are used.

SDB-265B-1 Kinematic Viscosity&Viscosity Index Bath

Standards

GB/T 265, GB/T 11137, GB/T 1995

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior) and viscosity index of lubricating oils.

Main technical specifications

1.Capacity of bath: Φ240mm×280mm

2.Temperature range: Ambient to 100℃

3.Temperature resolution: 0.01℃

4.Temperature control precision: ±0.05℃

5. Timing precision: ±0.1s

6. Display: 5.6 inch colored LCD

7. Sample amount: 2 samples

8. Power supply: AC(220±10%)V, 50Hz

9. Maximum power consumption: 750W

10. Working environment: Ambient temp.:（15~35）℃,RH＜85%

Main technical features

1. Multifunctional. It can determine the kinematic viscosity of liquid petroleum products (Newtonian liquids) and the kinematic viscosity of dark petroleum products. It can also be used to determine the viscosity index of lubricating oils.

2. Micro-processor control and colored LCD technology. Chinese-English bilingual menu. GUI touch screen. Easy to operate.

3. Advanced digital control and display. Automatic kinematic viscosity determination

4. It can test 2 samples at a time. The parameters such as temperature, time, coefficient of capillary viscometer tube can be inputted in or displayed on the screen.

5. New-type temperature sensor. The temperature resolution is 0.01℃. Temperature control precision is ±0.05℃. 6. It can save 99 coefficients of capillary viscometer.

SDB-265C-3 Kinematic Viscosity&Viscosity Index Bath

Standards

GB/T 265, GB/T 11137, GB/T 1995

Application

This instrument is used to determine the kinematic viscosity of liquid petroleum products (Newtonian flow behavior) and viscosity index of lubricating oils.

Main technical specifications

1.Capacity of bath: Φ240mm×280mm

2.Temperature range: Ambient to 100℃

3.Temperature resolution: 0.01℃

4.Temperature control precision: ±0.05℃

5. Timing precision: ±0.1s

6. Display: 5.6 inch colored LCD

7. Sample amount: 4 samples

8. Power supply: AC(220±10%)V, 50Hz

9. Maximum power consumption: 750W

10. Working environment: Ambient temp.:（15~35）℃,RH＜85%

Main technical features

1. Multifunctional. It can determine the kinematic viscosity of liquid petroleum products (Newtonian liquids) and the kinematic viscosity of dark petroleum products. It can also be used to determine the viscosity index of lubricating oils.

2. Micro-processor control and colored LCD technology. Chinese-English bilingual menu. GUI touch screen. Easy to operate.

3. Advanced digital control and display. Automatic kinematic viscosity determination

4. It can test 4 samples at a time. The parameters such as temperature, time, coefficient of capillary viscometer tube can be inputted in or displayed on the screen.

5. New-type temperature sensor. The temperature resolution is 0.01℃. Temperature control precision is ±0.05℃. 6. It can save 99 coefficients of capillary viscometer.

SDB-1884 Density Tester

Standards

GB/T 1884, ASTM D1298

Application

This instrument is used to determine the density, relative density and API gravity of petroleum products using a glass hydrometer.

Main technical specifications

1. Power supply: AC220V±10%, 50Hz
2. Maximum power consumption: 1900W
3. Temperature range: Ambient~100℃
4. Temperature precision: ±0.2℃
5. Test positions: 2 holes
6. Ambient temperature: 5℃~35℃
7. Relative humidity: ≤80%

Main technical features

1. Digital temperature controller.
2. Transparent hard glass bath makes it easy to observe the test procedure.
3. Cylinder holder is easy to be installed. The corrosion resistance is good.

SDB-1884A Density Tester(Low temperature)

Standards

GB/T 1884, ASTM D1298

Application

This instrument is used to determine the density, relative density and API gravity of petroleum products using a glass hydrometer.

Main technical specifications

1. Power supply: AC220V±10% 50Hz
2. Maximum power consumption: 1900W
3. Temperature range: 0~100℃(with a portable cooler)
4. Temperature precision: ±0.2℃
5. Test positions: 2 holes
6. Ambient temperature: 5℃~35℃
7. Relative humidity: ≤80%

Main technical features

1. Digital temperature controller.
2. Transparent hard glass bath makes it easy to observe the test procedure.
3. Cylinder holder is easy to be installed. The corrosion resistance is good.

Density&Kinematic Viscosity&Viscosity Index

SDB-1884B Density, Kinematic Viscosity, Viscosity Index Tester

Standards

GB/T 1884, GB/T 265, GB/T 1995

Application

This instrument is used to determine the density and kinematic viscosity of liquid petroleum products(Newtonian flow behavior), as well as the viscosity index of the lubricating oils.

Main technical specifications

1. Bath volume： Φ300mm×340mm
2. Temperature range： Ambient to 100℃
3. Temperature resolution： 0.01℃
4. Temperature precision： ±0.05℃
5. Timing precision： ±0.1s
6. Display： 5.6 inch colored LCD
7. Sample amount： 4 samples
8. Working power supply：AC(220±10%)V,50Hz
9. Maximum power consumption： 1500W

Main technical features

1. Multifunctional instrument. It can determine the density of crude oil and liquid petroleum products, kinematic viscosity of liquid petroleum products and viscosity index of lubricating oils.

2. Microprocessor and colored LCD technology. Chinese-English bilingual menu. Light-touch screen. Easy to operate.

3. Advanced digital control and display. Automatic kinematic viscosity determination. The density test uses standard GB/T 1884.

4. It can test 4 samples at a time. Two for kinematic viscosity test and another two for density test. Or 4 kinematic viscosity tests. The parameters such as temperature, time, coefficient of capillary viscometer tube and density value can be inputted in or displayed on the light-touch screen.

5. New-type temperature sensor. The temperature resolution is 0.01℃. Temperature control precision is ±0.05℃.

6. It can save 99 coefficients of capillary viscometer.

SDB-6536 Distillation Unit

Standards

GB/T6536, ASTM D86

Application

This instrument is used to determine the boiling range characteristics of such products as light and middle distillates, automotive spark-ignition engine fuels, aviation gasoline, aviation turbine fuels, diesel fuels, bio-diesel blends, marine fuels, special petroleum spirits, naphthas, kerosines, white spirits, etc.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power： 1000W,continuously adjustable
3. Cylinder capacity： 100ml， graduation 1ml
4. Distillation flask： 125ml
5. Thermometer： (-2~300)℃ and (-2~400)℃, division 1℃
6. Flask support board： SiC material. Φ38mm and Φ50mm
7. Ambient temperature： ≤35℃
8. Relative humidity： ≤85%
9. Maximum power consumption： 1100W

Main technical features

1. Stepless adjustable heating power. Easy to control the heating rate.
2. Special heating furnace is adopted to ensure the safety of the test.
3. The condensation water tank is made of stainless steel which is durable.

SDB-6536A Low Temperature Distillation Unit(Single-unit)

Standards

GB/T6536, ASTM D86

Application

This instrument is used to determine the boiling range characteristics of such products as light and middle distillates, automotive spark-ignition engine fuels, aviation gasoline, aviation turbine fuels, diesel fuels, bio-diesel blends, marine fuels, special petroleum spirits, naphthas, kerosines, white spirits, etc.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power： 1000W,continuously adjustable
3. Cylinder capacity： 100ml， graduation 1ml
4. Distillation flask： 125ml
5. Thermometer： (-2~300)℃ and (-2~400)℃, division 1℃
6. Flask support board： SiC material. Φ38mm and Φ50mm
7. Digital temperature controller： 0℃~60℃， ±0.5℃
8. Maximum power consumption： 2000W

Main technical features

1. Stepless adjustable heating power. Easy to control the heating rate.
2. Special heating furnace is adopted to ensure the safety of the test.
3. The condensation water tank is made of stainless steel which is durable.
4. Danfoss brand compressor. Good cooling performance.

SDB-6536B Low Temperature Distillation Unit(Double-unit)

Standards

GB/T6536, ASTM D86

Application

This instrument is used to determine the boiling range characteristics of such products as light and middle distillates, automotive spark-ignition engine fuels, aviation gasoline, aviation turbine fuels, diesel fuels, bio-diesel blends, marine fuels, special petroleum spirits, naphthas, kerosines, white spirits, etc.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power： 1000W×2, continuously adjustable
3. Cylinder capacity： 100ml， graduation 1ml
4. Distillation flask： 125ml
5. Thermometer： (-2~300)℃ and (-2~400)℃, division 1℃
6. Flask support board： SiC material. Φ38mm and Φ50mm
7. Digital temperature controller： 0℃~60℃， ±0.5℃
8. Maximum power consumption： 4500W

Main technical features

1. Stepless adjustable heating power. Easy to control the heating rate.
2. Special heating furnace is adopted to ensure the safety of the test.
3. The condensation water tank is made of stainless steel which is durable.
4. Danfoss brand compressor. Good cooling performance.

SDB-6536D Automatic Distillation Unit

Standards

GB/T6536，ASTM D86

Application

This instrument is used to determine the boiling range characteristics of such products as light and middle distillates, automotive spark-ignition engine fuels, aviation gasoline, aviation turbine fuels, diesel fuels, bio-diesel blends, marine fuels, special petroleum spirits, naphthas, kerosines, white spirits, etc.

Main technical specifications

1. Power supply：AC220V±10%, 50Hz
2. Power consumption：1200W
3. Temperature range：0~450℃
4. Temperature control precision：±0.1℃
5. Temperature sensor： RTD, Pt100
6. Initial boiling point appears： 5~15min
7. Distillation rate：4~5ml/min

(From initial boiling point to 95%recovery)

8. From 5mlresidue to end point：≤5min
9. Initial boiling point detection：Optical fiber sensor
10. Recovery measurement range：0～100ml
11. Recovery measurement precision：±0.1ml
12. Ambient temp.：10~40℃, RH ≤85%

Main technical features

1.SCM technology controls all test procedures automatically. The colored touch-screen displays all data and curves. The test results can be saved, inquired and printed out.

2.The liquid level tracking system is composed of America-imported stepping motor, ball-type positioning screw and straight-line laser tracker.

3.Danfoss brand compressor is equipped for refrigeration. Good cooling performance.

4.It can correct the temperature to the value under standard atmospheric pressure automatically.

Water Content

SDB-260 Water Content Tester(Single-unit)

Standards

GB/T 260, GB/T512, ASTM D95

Application

It is suitable to determine the base number of petroleum products, bituminous materials and lubricating greases.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power of electric furnace： 1000W
3. Heating control： Can be continuously adjusted by a silicon knob
4. Distillation flask： 500ml
5. Ambient temperature： ≤35℃
6. Relative humidity： ≤85%
7. Maximum power consumption： 1100W

Main technical features

1. The instrument is designed totally meeting the requirements of GB/T260.
2. The gripper of instrument is designed reasonably. The installation and dismantlement of condenser are convenient.
3. The heating power is continuously adjustable. The voltmeter displays the power intuitionally. The temperature control is reasonable.

SDB-260A Water Content Tester(Double-unit)

Standards

GB/T 260, GB/T512, ASTM D95

Application

It is suitable to determine the base number of petroleum products, bituminous materials and lubricating greases.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power of electric furnace： 1000W×2
3. Heating control： Can be continuously adjusted by a silicon knob
4. Distillation flask： 500ml
5. Ambient temperature： ≤35℃
6. Relative humidity： ≤85%
7. Maximum power consumption： 2000W

Main technical features

1. The instrument is designed totally meeting the requirements of GB/T260.
2. The gripper of instrument is designed reasonably. The installation and dismantlement of condenser are convenient.
3. The heating power is continuously adjustable. The voltmeter displays the power intuitionally. The temperature control is reasonable.

SDB-11133 Coulometric Karl Fischer Titrator

Standards

GB/T 11133, GB7600, GB/T606-2003, GB/T3727-2003, GB/8350, GB/8351, GB/T 6023, GB/T 6283, GB/T 11146-1999, SH/T 0246, ASTM D4928, ASTM D1533, ASTM D6304

Application

This instrument is used to determine the trace water content in liquid petroleum products.

Main technical specifications

1. Current range： 0~300mA. Automatically control
2. Measurement range： 10ug~20mg
3. Resolution： 0.1μg
4. Precision： 10ug~1mg: ±5ug, Over 1mg: ≤0.5%
5.Ambient temperature： 5~40℃
6.Relative humidity: ≤85%

Main technical features

1. Classical design. Easy to operate.
2. Digital display and control. Good test precision.

SDB-11133S-1 Coulometric Karl Fischer Titrator

Standards

GB/T 11133, GB7600, GB/T606-2003, GB/T3727-2003, GB/8350, GB/8351, GB/T 6023, GB/T 6283, GB/T 11146-1999, SH/T 0246, ASTM D4928, ASTM D1533, ASTM D6304

Application

This instrument is used to determine the trace water content in liquid petroleum products.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz±5%
2. Maximum power consumption： 50W
3. Maximum current： 400mA
4. Measurement range： 3μg~9999.9μg
5. Resolution： 0.1μg
6. Precision： 3μg: within ±20%, 10μg: within ±10%, 100μg: within ±1%, Over 100μg: within ±0.3%
7. Data saving： 496pcs
8. Built-in printer： Thermal printer
9. Calculation formula： 8 kinds can be selected.
10. Ambient temperature： 5~40℃
11.Relative humidity： ≤85%

Main technical features

1. Delicate streamline design makes the appearance very nice.
2. The electrolytic process is intelligently control completely. It can ignore the influences of air humidity and stirring rate.
3. It adopts real-time dynamic impedance method to detect the end point of titration. The test results are more accurate.
4. The end point is settable. It guarantees the adaptability of different solvents with different sensitivities.
5. All core components adopt American industrial grade data conversion chip which have perfect linearity and long term stability.
6. International famous brands below are used on the core components.

IC：ANALOG, TI, ISSI, CY, SAMSUNG, Toshiba. Industrial grade; Capacitance：Murata; Inductance：TDK, Murata; Solder：Alpha; Coupler：Molex, HRS, Omron; 0.5uL sample injector：Austrilian brand

SDB-11133S-2 Coulometric Karl Fischer Titrator

Standards

GB/T 11133, GB7600, GB/T606-2003, GB/T3727-2003, GB/8350, GB/8351, GB/T 6023, GB/T 6283, GB/T 11146-1999, SH/T 0246, ASTM D4928, ASTM D1533, ASTM D6304

Application

This instrument is used to determine the trace water content in liquid petroleum products.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz±5%
2. Maximum power consumption： 50W
3. Maximum current： 400mA
4. Measurement range： 3μg~9999.9μg
5. Resolution： 0.1μg
6. Precision： 3μg: within ±20%, 10μg: within ±10%, 100μg: within ±1%, Over 100μg: within ±0.3%
7. Data saving： 496pcs
8. Built-in printer： Thermal printer
9. Calculation formula： 8 kinds can be selected.
10. Ambient temperature： 5~40℃
11.Relative humidity： ≤85%

Main technical features

1. 7 inch WVGA(1024×600) high-definition colored touch screen. All operations can be done on the screen. It provides a perfect user experience.
2. Delicate streamline design makes the appearance very nice.
3. The electrolytic process is intelligently control completely. It can ignore the influences of air humidity and stirring rate.
4. It adopts real-time dynamic impedance method to detect the end point of titration. The test results are more accurate.
5. The end point is settable. It guarantees the adaptability of different solvents with different sensitivities.
6. All core components adopt American industrial grade data conversion chip which have perfect linearity and long term stability.
7.International famous brands below are used on the core components.

IC：ANALOG, TI, ISSI, CY, SAMSUNG, Toshiba. Industrial grade; Capacitance：Murata; Inductance：TDK, Murata; Solder：Alpha; Coupler：Molex, HRS, Omron; 0.5uL sample injector：Austrilian brand.

Sulfur Content

SDB-387 Sulfur Content Tester(Quartz-tube Method)

Standards

GB/T 387, ASTM D1551

Application

This instrument is used to determine the sulfur content in dark petroleum products which the sulfur content being more than 0.1% (m/m).

Main technical specifications

1. Power supply: AC 20V±10%, 50Hz; Power consumption is lower than 1000W
2. Oven type and quantity: Horizontal type; parallel double tubular oven
3. Chamber diameter of oven: Φ22mm
4. Heating power: 800 W
5. Max temperature of oven: 950℃
6. Movement distance of oven: ≥135 mm
7. Air flow rate: ≥(2×500)ml /min

Main technical features

1. Single chip microcomputer control system. The detection time, oven movement and timing alert are all controlled automatically.
2. It can determine two samples at a time. High efficiency and reliable results.

Sulfur Content

SDB-0253 Microcoulometry Total Sulfur and Chlorine Analyzer

Standards

GB/T 11061.4, GB/T 6324.4-1986, GB/T 12688.6-1990, GB/T 11141, SH/T 1757-2006, GB/T 18612-2011, GB/T 3208-2009, SH/T 1147-2008, SH/T 0253, SH/T 0254, SH/T 0657, ASTM D3120, ASTM D3246, ASTM D5808-03, ASTM D5808-09a, ASTM D5194-06.

Application

This instrument is used to determine the mass% of total sulfur and chlorine in petroleum products.

Main technical specifications

1. Bias voltage range： (0～496)mV
2. Measurement range：

S ： (0.2～5000) ng/μL (high concentration can be diluted)

Cl ： (0.3～5000) ng/μL (high concentration can be diluted)

3. Air source requirements： nitrogen and oxygen
4. Measurement precision：

Concentration (ng/μL)	Volume (μL)	RSD (%)
0.2	10	35
1.0	10	10
100	5	5
1000	5	2

4. Temperature range and precision： Ambient～1000℃, ±1℃
6. Power supply： AC(220±10%)V, 50Hz
7. Maximum power consumption： 3500W
8. Kinds of sample： solid, liquid and gas.

Main technical features

1. Wide application scope and good adaptation. It can be used to determine the sulfur or chlorine in liquid, gas or solid. Note: Solid sample injector and gas sample injector are optional.
2. It can finish the data collection, processing , saving automatically.
3. Only 10 μl sample is used for each test. The test is rapid. Only 1-2 minutes for each sample.

Sulfur Content

SDB-0689 Ultraviolet Fluorescence Total Sulfur Analyzer

Standards

SH/T 0689 -2000, ASTM D5453 -2006

Application

The instrument is used to determine the total sulfur in liquid hydrocarbons, boiling in the range from approximately 25° C to 400° C, with viscosities between approximately 0.2 and 20cSt (mm2/S) at room temperature. It can be widely used in petrochemical, electricity, coals, food and environment field, especially suitable to be used to test the gasolines and diesel oils.

Main technical specifications

1. Sample amount needed： (1～20)mg--solid,
   (5～20) μL--liquid,
   (1～5)mL--gas
2. Measuring range： (0.2～10000)mg/L
3. Temperature control： Ambient～1100℃,±5℃
4. Gas source： Argon(99.999% purity)
   or oxygen(99.999% purity) .
5. Ambient temperature： ≤30℃

(Should be installed in a room with air conditioner)

6. Relative humidity： ≤85%
7. Power supply： AC 220V±10V, 50Hz±0.5Hz
8. Maximum power consumption： 1500W

Main technical features

1. PC cpntrol technology. It can control all test procedures automatically(data collecting, processing, saving and printing). The operation is easy. The result is good and reliable.
2. European brand of fluorescence source, film dryer and light filter. Metal packaged photomultiplier. The test sensity is rapid and stable.
3. Advanced temperature control system is equipped. The heating is rapid and stable. The temperature control precision can reach to ±5℃ in full range.
4. Both solid and liquid sample can be tested. Gas sample can also be tested by this instrument. The application range is wide.
5. The needed sample amount is little. The analyzing speed is rapid, The analyzing period for each sample is about 2min.

Sulfur Content

SDB-17040-1 XRF Sulfur-in-Oil Analyzer

Standards

GB/T 17040, ASTM D4294

Application

1. It can be used to determine mass% of total sulfur in the crude petroleum, petroleum, heavy oil, diesel oil, and naphtha.

2. It can be used to determine total sulfur content in the products of coal chemical industry, such as primary benzene.

3. It can be used to determine total sulfur or sulfide in other liquid or solid powder samples.

Main technical specifications

1. Power supply: AC220V±20V, 50Hz
2. Power consumption: 30W
3. Measurement range: 20 ppm to 5%
4. Precision: Repeatability (r): ＜0.02894（X+0.1691)
   Reproducibility (R): ＜0.01215（X+0.05555）
5. Sample amount: 2~3mL(Means the depth is about 3~4mm)
6. Measurement period: 60s, 120s, 240s, 300s, 600s. Settable.
7. One sample test times: Once, twice, 3 times, 5 times, 10 times. Settable. It gives the average value and standard deviation after measurement.
8. Calibration curve numbers: 10 pieces of curves can be saved.
9. Ambient temperature: 5～35℃
10. Relative humidity: ≤85%（30℃）
11. Dimension: 430mm×250mm×240mm, Net weight: 10kg

Main technical features

1. With electrical, mechanical and microprocessor integration design, so it is compact and beautiful;

2. It can determine various products and in a wide measurement range. It is rapid for analysis and it only need little standard sample.

3. Adopts fluorescence intensity ratio analysis methods, it can make correction to temperature

and pressure automatically and it can also make correction to ratio of carbon and hydrogen (C/H).

4. 1027*768 colored touch LCD for display and operation.

5. It has self-diagnostic function, so it can determine its working state and electric parameters by making counting measurement and energy spectrum measurement using reference samples.

6. Equipped with a RS232 serial port, it can connect with any computer(the software is optional).

7. It takes disposable sample cell with Mylar film, so it can avoid cross contamination. The sample cell is made by a multifunctional pressure shaping device, so it is rapid and convenient.

8. It can save large quantity of test data. You can browse test data and calibration curves at any time.

9. It can choose the curve automatically. No need of manual selection.

10. Its safe X-ray protection measures can keep people from injury of X-ray radiation.

Nitrogen Content

SDB-0657 Chemiluminescence Total Nitrogen Analyzer

Standards

SH/T0657, ASTM D4629, ASTM D5762

Application

This instrument is used to determine the total nitrogen content in crude oil, distillate oil, petroleum gas, petrochemical products, plastics, food and water.

Main technical specifications

1. Measuring range：0.1mg/L～10000mg/L

2. Gas source：Argon(99.999% purity) or oxygen(99.999% purity)

3. Sample status：Solid, liquid or gas. All status can be tested.

4. Temperature control：Ambient～1100℃,±3℃

5. Measuring precision：

0.1mg/L≤X<1.0mg/L:≤±0.1 mg/L,

1.0mg/L≤X<10mg/L:Cv≤ 1 0%,

X≥10mg/L: Cv ≤5%.

6. Instrument configuration: Host and temperature control system, automatic sampling device, etc.

Main technical features

1. PC control technology. It can control all test procedures automatically(data collecting, processing, saving and printing). The operation is easy. The result is good and reliable.

2. Imported photoelectric multiplier tube and filter. The test sensity is rapid and stable.

3. Both solid and liquid sample can be tested. Gas sample can also be tested by this instrument. The application range is wide.

4. The needed sample amount is little. The analyzing speed is rapid, The analyzing period for each sample is about 2min.

5. The cooling fan will be on and off automatically. No need to wait to switch off the instrument after test.

Nitrogen Content

SDB-0689N Total Sulfur and Nitrogen Analyzer

Standards

SH/T 0689-2000, GB 17930-2011, GB 19147-2009, ISO 20846-2011, BS EN 15486-2007, EN ISO 20846:2004, ASTM D 5453, ASTM D5762

Application

This instrument is used to determine the the mass% of total sulfur and nitrogen by ultraviolet fluorescence and chemiluminescence method.

Main technical specifications

1. Power supply：AC220V, 50Hz
2. Test methods：Ultraviolet Fluorescence -- Sulfur.
   Chemiluminescence -- Nitrogen.
3. Measuring range：(0.2～5000) ppm
   (Can be diluted when concentration is high)
4. Sample needed：solid(1～20)mg, liquid(5～20) μL, gas(1～5)mL
5. Gas source：Oxygen(99.999% purity) , Argon(99.999% purity)
6. Temperature range and precision： Ambient～1100℃, ±3℃
7. Maximum power consumption：2000W
8. Test sample status： Solid, liquid and gas.

Main technical features

1. Can test both Sulfur and Nitrogen with one instrument.
2. PC software provided. Automatically controls the test procedures.
3. The fluorescence source, film dryer, optical filter and metal wrapping photo-multiplier are all international famous brand.
4. Solid and gas sample injectors are optional.

Salt Content

SDB-0536 Microcoulometry Salt Content Analyzer

Standard

SH/T 0536

Application

The instrument is used to determine the salt content in oil products and chemical products. It can also be used for the determination of salt content in heavy oil, residual oil, chemical products, all kinds of industrial water and discharge water, and is suitable for the determination of inorganic chloride ion in various samples.

Main technical specifications

1. Titration method：Microcoulometry titration
2. Endpoint detection method： Automatic discrimination of the instrument by means of indicating the reference electrode
3. Detection sensitivity： 0.1ngNaCl/ul
4. Measuring range： Salt content(0.2～10000)ngNaCl/ul
5. Measuring time： Less than 3 minutes per sample (without sample treatment)
6. Ambient temperature： (10～40)℃
7. Relative humidity： ≤85%
8. Working power supply： AC220V,50Hz

Main technical Features

1. It adopts the principle of microcoulometry analysis, independent research and development of operating software and test software, the test is accurate, the analysis precision is high.
2. The instrument has a wide range of detection, high sensitivity, strong adaptability, and 0.1ngNaCl/uL sensitivity, and the test results are in line with the requirements of the international common method.
3. Test samples less. Only 1g for each time. The test time is fast, each test time is about 3 minutes.

SDB-1792A Automatic Mercaptan Sulfur Analyzer

Standard

GB/T 1792

Application

This instrument is used to determine mercaptan sulfur in the jet fuels, gasolines, kerosenes and light diesels.

Main technical specifications

1. Measuring range： 0.0003%～0.01 %(mm)/(3～100) μg/g(ppm)
2. Basic bias of electronic unit： 0.1%±0.5Mv
3. Input impedance： ≥1×1012Ω
4. Burette volume： 10ml
5. Burette precision： ±0.1%(F•S)
6. Potential measuring range： 0～±1999.5mV
7. Power supply： AC 220V±10V, 50Hz±0.5Hz
8. Dimension： 350*280*178(mm)
9. Net weight： 10kg

Main technical features

1. Windows operation system is provided on PC.
2. Metrohm brand titration unit is equipped.
3. Little sample needed for each test(≤5g) and rapid test speed(about 5 min)
4. Automatic end point detection. Automatic false end point filtering.
5. Data saving and printing.
6. Multi-parameter setting and revising.
7. Liquid feeding at set value.
8. Automatic cleaning.

SDB-0162 Automatic Basic Nitrogen Analyzer

Standards

SH/T0162, SH/T 0413

Application

The instrument is used to determine the basic nitrogen content in the petroleum products and liquid paraffin with potentiometric titration method.

Main technical specifications

1. Measurement range：>3mg/g
2. Measurement bias：<5%
3. Potential measurement range：0∽±1999.5mv
4. Electronic unit basic error：0.1%F•S±0.5mv
5. Capacity of burette：10ml
7. Resolution of burette：0.01ml
8. Precision of burette：±0.1%F*S
9. Input impedance：>1x1012Q
10. Power consumption：≤60W

Main technical features

1. Windows OS, easy to operate.
2. High degree of automation, accurate analysis results.
3. Titration apparatus adopts imported key components （ Metrohm ） .Stable and reliable performance, low noise.
4. Automatic cleaning, automatic constant liquid.
5. Automatically determine the end point, without indicator. Suitable for a variety of petrochemical products in the light and dark oil basic nitrogen analysis. The titration results and automatic data storage, automatic printing, and can provide a complete analysis of titration data for use。
6. Double high impedance input, the electrode potential stability, reliability.
7. Less sample is needed. Only 1g~50g will be used according to the detailed test range. Fast test period. Only 5 minutes will be used for each sample.

SDB-264 Acid Number Tester(Double-unit)

Standards

GB/T 264，GB/T 258

Application

The instrument is used to the determine the acid value and acidity in petroleum products.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power： 500W, adjustable rate
3. Flask： 250～300ml
4. Condenser： 300mm length
5. Burette： 2ml
6. Ambient temperature： ≤35℃
7. Relative humidity： ≤85%
8. Power consumption： ≤1200W

Main technical features

1. Anti-explosion glass fibre heating mode. No naked fire. Safe to use.
2. The heating rate can be adjusted with a rotary knob.
3. The condensers are supported by stainless steal holders.
4. Double unit design. Can test 2 samples at a time.

SDB-264S-1 Automatic Acid Number Tester

Standards

GB/T 264, GB/T 7599

Application

This instrument is used to determine the acid number of liquid petroleum products such as transformer oil, fire resistant oils and turbine oils. It can meet the needs in refineries, power plants and scientific research institutions.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Maximum power consumption： 100W
3. Measurement range： (0.001～1.000)mgKOH/g
4. Resolution： 0.001mgKOH/g
5. Repeatability： 0.02mgKOH/g (Range 0.00～0.1mgKOH/g),
   0.05mgKOH/g (Range 0.1～0.5mgKOH/g),
   0.07mgKOH/g (Range 0.5～1.0mgKOH/g),
   0.10mgKOH/g (Over 1.0mgKOH/g)
6. Test sample amount： 6 samples
7. Ambient temperature： 5℃~35℃
8. Relative humidity： ＜75%

Main technical features

1. 7 inch WVGA（1024×600）high-definition colored touch screen. All operations can be done on the screen. It provides a perfect user experience. It can test 6 samples at a time. 500 pcs of test results can be saved and printed.
2. PTFE material is used for the high precision plunger pump. It has a long life time and protects the precision of the instrument.
3. A super subdivided step motor is equipped on the precise injection pump. The single-step titration resolution can reach to 0.01ul.
4. Dynamic differential method judge the end point. It avoids the influence of the ambient light.
5. It realizes the full automation in all test procedures. No need for human intervention.

TAN/TBN

SDB-264B Automatic Total Acid and Base Number Analyzer

Standards

GB/T 7304, GB/T 18609, NB/SH/T 0836, ASTM D664, ASTM D2896

Application

This instrument is used to determine the total acid number or base number of liquid petroleum products such as gasoline, diesels, engine oil, transformer oil, fire resistant oils,etc.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Potentiometric measurement：(0～±1999.5)mV
3. Basic error of electronic unit：0.1%±0.5mV(F·S)
4. Impedance：Ri≥1×1012Ω
5. Capacity of burette：10ml
6. Precision of burette：±0.1%(F·S)
7. Titrating time：(60±20)s(F·S)
8. Measurement range：3～100μg/g(ppm)
9. Measurement precision：Can meet requirements of GB 7304, GB/T 18609, NB/SH/T 0836 and ASTM D664.
10. Overall dimension：350mm×280mm×178mm(PC is not included)
11. Net weight：14Kg(PC is not included)
12. Ambient temperature： 5℃~35℃
13. Relative humidity： ≤80%

Main technical features

1. Windows operation system is provided on PC.
2. Metrohm brand titration unit is equipped.
3. Little sample needed for each test(≤5g) and rapid test speed(about 5 min)
4. Automatic end point detection. Automatic false end point filtering.
5. Data saving and printing.
6. Multi-parameter setting and revising.
7. Liquid feeding at set value.
8. Automatic cleaning.

SDB-5096 Copper Strip Corrosion Tester

Standards

GB/T5096, ASTM D130

Application

It is used to determine the corrosiveness to copper of aviation gasoline, aviation turbine fuels, automotive gasoline, tractor fuels, washing solvent, kerosene distillate, lubricating oil, and other petroleum products.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz±5%
2. Temperature sensor： RTD, Pt100
3. Temperature range： Ambient to 200 ℃,can be set at will
4. Temperature precision： ±0.5℃
5. Temperature display： Digital display
6. Heating power： 2000W
7. Timing range： 1min～24hour, can be set at will
8. Sample holes： 4 holes
9. Ambient temperature： 5～35℃
10. Relative humidity： ≤85％
11. Maximum power consumption： 2100W

Main technical features

1. Stainless steel bath and test bomb. The corrosion resistance is good. Easy to clean.
2. Digital temperature controller is equipped. The temperature control performance is good.
3. ASTM color scale is provided for comparison.

Aniline Point

SDB-262 Aniline Point Tester

Standards

GB/T 262, ASTM D611

Application

This instrument is used to determine the aniline point of both transparent and dark petroleum products.

Main technical specifications

1. Temperature range： Ambient to 200℃
2. Temperature precision： ±1℃
3. Motor power： 15 W
4. Heating power： 2 KW
5. Power supply： AC（220±10%）V, 50Hz
6. Detection method： U-shape tube
7. Ambient temperature：10℃~35℃
8. Relative humidity：≤85%

Main technical features

1. Electric heating. Manual control. Continuously adjustable.
2. PID temperature control. The temperature precision is high.
3. Transparent bath. Suitable to test both transparent and dark petroleum products.

Aniline Point

SDB-262A Automatic Aniline Point Tester

Standards

GB/T 262, ISO2977, ASTM D611

Application

This instrument is used to determine the aniline point of petroleum products.

Main technical specifications

1. Temperature control range： Ambient to 170℃
2. Computer communication： Configuration software
3. Determination tube： Glass U-shape tube
4. LCD screen： Touch screen
5. Heating tube： 20W
6. Temperature detection： Pt10Ω
7. Aniline point detection：Optical fiber
8. Program control： PLC
9. Stirring motor： Electronic speed regulation, 6W
10. Printer： Built-in thermal printer

Main technical features

1. Microprocessor control, touch screen displays and sets. Imported electrical parts detection, automatic heating, automatic detection, test results automatically print.
2. Glass measuring pool structure, easy to clean.
3. Complete safety device: when the heating temperature exceeds the expected aniline point 10 degrees Celsius or 170 degrees Celsius has not been measured aniline point, the instrument stopped heating, and alarm.
4. Temperature correction through the touch screen. Prompt menu operation, easy for adjustment.

SDB-511B Mechanical Impurities Tester

Standard

GB/T 511

Application

This instrument is used to determine mechanical impurities in hydrocarbons, heavy oils, lubricating oils, and additives.

Main technical specifications

1. Power supply: AC(220±10%)V, 50Hz
2. Heating power: 2000W
3. Temperature control range: Ambient to 90℃
4. Temperature display: LED digital display
5. Temperature control precision: ±1℃
6. Overall dimension: 800×335×490(mm)
7. Ambient temperature: ≤35℃
8. Relative humidity: ≤85%
9. Maximum power consumption: 2100W

Main technical features

1. The instrument mainly consists of glassware, controlled water bath, temperature control funnel, suction pump, motor automatic mixing and intelligent electronic control equipment. The advantages of small size, light weight, convenient installation and use, flexible and fast heating up.
2. The instrument is designed according to the standard, the temperature control funnel is small and light, which can shorten the operation time and save the solvent.

SDB-511D Mechanical Impurities Tester

Standard

GB/T 511

Application

This instrument is used to determine mechanical impurities in hydrocarbons, heavy oils, lubricating oils, and additives.

Main technical specifications

1. Power supply: AC(220±10%)V,50Hz
2. Heating power: 2000W
3. Temperature control range: Ambient to 95℃
4. Temperature display: LCD
5. Temperature control precision: ±0.2℃
6. Overall dimension: 300×400×420(mm)
7. Ambient temperature: ≤35℃
8. Relative humidity: ≤85%
9. Maximum power consumption: 2100W

Main technical features

1. PID temperature control system provides high control precision.
2. Application of a strong heat pump, so that the temperature control liquid circulation to the transparent glass funnel layer, to ensure that the test sample does not condense.
3. The filtering process is safe, reliable and intuitive.
4. Dual vacuum filter system. It can test two oil samples. The working efficiency is high.

SDB-268 Conradson Carbon Residues Tester

Standards

GB/T 268, ASTM D189

Application

This instrument is used to determine the amount of carbon residue left after evaporation and pyrolysis of petroleum products. And it can provides some indication of relative coke-foaming propensities.

Main technical specifications

1.Porcelain crucible: Totally glazed. Wide mouth. Capacity 30±1mL.

2.Sheet-iron hood: Φ125mm, 52mm(Lower part)

Φ50mm, 53mm (Upper part)

3.Insulator: Φ160mm; Φ89mm(top), Φ83mm(bottom), 34mm(thickness)

4.Burner: Φ24mm

Main technical features

1.Simple design. User can do test easily with household fuel gas(or other civil gas) after buying the instrument.

2.As a matter of convenience, a nozzle for LPG is provided(already equipped on the burner) because some users choose LPG as the gas source. A nozzle for fuel gas is also provided. If user choose fuel gas as the gas source, please remove the nozzle for LPG and install the nozzle for fuel gas.

Carbon Residues

SDB-0170 Carbon Residue Tester (Electric Furnace Method)

Standard

SH/T 0170

Application

The instrument is used to determine the carbon residues of lubricating oils, heavy fuels and other kinds of petroleum oils.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating mode： Electric furnace
3. Heating power： 1500W
4. Temperature range： Ambient to 520℃
5. Temperature precision： ±5℃
6. Sample test positions： 4 test positions
7. Maximum power consumption： 2000W

Main technical features

1. A digital temperature controller is equipped for stable temperature control. Easy to use.
2. Four samples can be tested at a time. The test efficiency is high.

Carbon Residues

SDB-0170A Carbon Residue Tester (Electric Furnace Method)

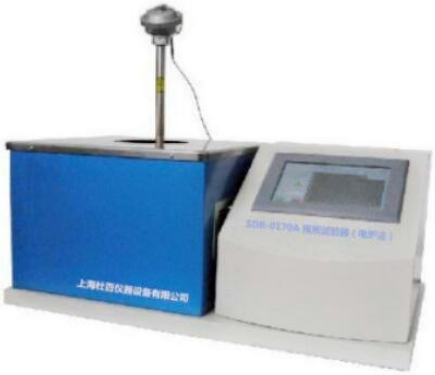
Standard

SH/T 0170

Application

The instrument is used to determine the carbon residues of lubricating oils, heavy fuels and other kinds of petroleum oils.

Main technical specifications



1. Power supply： AC(220±10%)V, 50Hz
2. Heating mode： Electric furnace
3. Heating power： 2000W
4. Temperature range： Ambient to 600℃
5. Temperature precision： ±5℃
6. Sample test positions： 4 test positions
7. Maximum power consumption： 2100W

Main technical features

1. All-in-one design. Colored touch-screen operation. Easy to use.
2. Built-in temperature control system with main and auxiliary heating function. Easy to control the temperature according to test need.
3.Four samples can be tested at a time. The test efficiency is high.

Carbon Residues

SDB-17144 Automatic Carbon Residue Tester(Micro Method)

Standards

GB/T 17144, ASTM D4530

Application

This instrument is used to determine the petroleum products which carbon residue values in a range from 0.10 % to 30 % (m/m).

Main technical specifications

1. Temperature of coking oven ： 500℃±2℃
2. Dimension of coking oven： Φ85mm×105mm(D*H)
3. Heating power：1500W
4. Test samples amount：12
5. Flow rate：100ml~ 1000ml/min, 150ml/min and 600 n automatic switching
6. Ambient temperature：5℃~35℃
7. Power supply：AC220±10%V, 50Hz
8. Maximum power consumption：1600W

Main technical features

1. The instrument is composed of two parts: control case and coking case. The structure is simple and reasonable.
2. Single chip microcomputer control system controls the whole process of the test automatically.
3. Touch LCD screen, easy to communicate, to provide the current state of work as well as the operation can be carried out.
4. Automatically controls the nitrogen flow rate, temperature set and heating rate.
5. Automatically collect the test data and calculate the results of the test. The test data can be saved and printed.
6. The measuring range of this instrument is: 0.10% (m/m) ~ 30% (m/m). Equivalent to the results of the determination of carbon residue more than 0.10% (m/m) of petroleum products which using test method GB/T 268.
7. Samples expected to be below 0.10 weight % (m/m) residue should be distilled to remove 90 % (V/V) of the flask charge. The 10 % bottoms remaining is then tested for carbon residue by this instrument.

SDB-508 Ash Content Tester(Muffle Furnace Method)

Standards

GB/T 508, ASTM D482

Application

This instrument is used to determine the ash in the range 0.001-0.180 mass %, from distillate and residual fuels, gas turbine fuels, crude oils, lubricating oils, waxes, and other petroleum products, in which any ash-forming materials present are normally considered to be undesirable impurities or contaminants.

Main technical specifications

1. Electric Muffle furnace

(1) Power supply: AC220V±10%, 50 Hz

(2) Rated power: 2.5 kW

(3) Controlled temperature: (775±25)℃

(4) Temperature rising time of empty chamber: ≤50 min

(5) Furnace temperature uniformity: ≤15℃

(6) Size of furnace chamber: 200mm×120mm×80mm

(7) Dimension: 490mm×490mm×450mm

(8) Net weight: 35kg

2. Temperature controller

(1) Rated controllable power: 5000W

(2) Power supply: AC(220±10%)V, 50Hz

(3) Maximum control temperature: 1200℃

(4) Dimension: 500mm×300mm×235mm

(5) Net weight: 5kg

3. Electric heating plate

(1) Rated power: 1500W

(2) Power supply: AC (220±10%) V, 50Hz

(3) Rated temperature: 400℃

(4) Heating power: (1～6) grades, continuously adj

(5) Diameter of heating plate: Φ85mm

(6) Dimension: 280mm×250mm×90mm

Main technical features

1. The instrument is composed of a muffle furnace, a temperature controller and an electric heating plate. It is small size and needs less land.

2. The muffle furnace adopts all-in-one structure. Special fire-resistant material and heating components. The heating time is short and it has a long lifetime.

3. An adjustable LED is equipped on the temperature controller is. The overshoot is small and temperature control is stable.

4. The size of heating plate is Φ85mm. Small size and good durability.

FULES TEST INSTRUMENTS

SDB-DW300T Gasoline Octane Number Tester

Standards

GB/T 503, ASTM D2699(MON) and GB/T 5487, ASTM D2700(RON)

Application

This instrument is used to determine the octane number of gasolines by MON or RON method.

Main technical specifications

1. Range of measurement：40~120.
2. Inner diameter of cylinder：82.55mm.
3. Piston stroke：114.3mm.
4. Range of compression ratio：4:1~18:1.
5. Rotate speed of engine：900±9r/min(Mon),
   600±6r/min(Mon)
6. Maximum power consumption：8.0kw.

Main technical features

1. The test result can be obtained automatically by one key operation.
2. Equipped with DWG-CFR gasoline engine,self-lubrication,avoid daily maintenance.
3. Equipped with 4 sample tanks,and one of which contains a cooling jacket.
4. Detonation sensor DT30DS can be interchangeable without debugging.
5. Monitoring environmental pressure real-time , automatic compensation.

Using a laser sensor to measure the compression ratio, and engine phase be measured accurately by a rotary encoder.

6. Equipped with a special plug-in modular controller, stable and reliable, and can be connected to LIMS.
7. The ONmanager® software supports English and Russia and designed strictly according to standard operating procedures.

SDB-DW600T Diesel Cetane Number Tester

Standards

GB/T 386, ASTM D613

Application

This instrument is used to determine the cetane number of diesels.

Main technical specifications

1. Measurement Range：30~65
2. Inner diameter of cylinder：82.55mm,
   Piston stroke：114.3mm
3. Range of compression ratio：8:1~36:1
4. Rotate speed of engine：900±9r/min
5. Flow rate of oil sprayer：13.0±0.2ml/min
6. Maximum power consumption：8.0kw

Main technical features

1. The standard diesel engine DWD-CFR use a dual-balanced design to reduce vibration and noise.
2. Combustion sensor DT60DS can be interchangeable without debugging.
3. A precision operation knob is used to adjust the speed of the spray.
4. Using a laser sensor to measure the handwheel reading, a rotary encoder precision measures the engine phase.
5. With a special plug-in modular controller, stable and reliable, and can be connected to LIMS.
6. The ONmanager® software supports English and Russia and designed strictly according to standard operating procedures.

Octane Number&Cetane Number

SDB-131 Octane Number and Cetane Number Analyzer

Standards

GB/T 503, ASTM D2699, GB/T 5487, ASTM D2700；GB/T 386, ASTM D613

Application

This instrument is used to determine the octane number of gasolines and cetane number of diesels.

Main technical specifications

1. Measurement range of octane: 40~120
2. Permissible error of octane per unit: ≤±0.5
3. Measurement range of cetane: 20~100
4. Permissible error of cetane per unit: ≤±1
5. Measurement duration: <20s
6. Sample amount: 70ml
7. Display: LED. The result is printable.
8. Power consumption: 30W

Main technical features

1. This instrument can measure both of the octane values of gasolines (print the result of RON,MON and AKI) and the cetane values of diesels.

2. Rapid and precise measurement, user-friendly operation, screen with Chinese/English language, EL background light make it clear under dark environment.

3. Upper and lower limits presetting are available, the monitor will display when it is beyond the limit, which is convenient for the users.

4. Auto-off function can save energy and realize low power consumption. There are 4 reliable batteries for recycling charging.

Octane Number&Cetane Number

SDB-QX-G Octane Number and Cetane Number Analyzer

Standards

GB/T 503, ASTM D2699, GB/T 5487, ASTM D2700；GB/T 386, ASTM D613

Application

This instrument is used to determine the octane number of gasolines and cetane number of diesels.

Main technical specifications

1. Measurement range of octane: 50~120
2. Permissible error of octane per unit: ≤±1.5
3. Measurement range of cetane: 25~75
4. Permissible error of cetane per unit: ≤±2.5
5. Measurement duration: <60s
6. Sample amount: 150ml
7. Display: Colored touch LCD. The result is printable.
8. Power consumption: 50W

Main technical features

1. This instrument can measure both of the octane values of gasolines (print the result of RON,MON and AKI) and the cetane values of diesels. The cetane value index can be also calculated after input standard density and middle boiling point.
2. Rapid and precise measurement, user-friendly operation, colored touch LCD screen with English language.
3. Automatic assignment calibrating technology is adopted for easy calibration. The calibrating progress is easy. The calibration result is reliable.
4. The instrument adopts regression test technology to achieve the value transfer from standard CFR tester. It improves the test precision.

SDB-384 Oxygen Bomb Calorimeter

Standards

GB/T213, GB/T384

Application

This instrument is suitable for measuring calorific value of coal, oil, coke, paraffin and other combustible materials, suitable for thermal power, smelting, cement, chemical and other industries as well as the relevant scientific research institutes and institutions of higher learning.

Main technical specifications

1. Heat capacity: 14400-14500J/K
2. Oxygen bomb: capacity: 300ml. Oxygen filling pressure: 2.8-3.0MPa. Hydraulic pressure: 20Mpa. Weight: 2.5kg. Dimension: Φ86.2*181(mm)
3. Outer cylinder capacity: 51L
4. Inner water capacity: 2.1L
5. Display range: 0.000-40.000℃
6. Response time: ＜4S
7. Resolution: 0.001℃
8. Power supply: AC 220V,50Hz
9. Maximum power consumption: 30W
10. Ignition voltage: AC 24V
11. Ignition time: 5s

Main technical features

1.Careful calculation procedures, so that the measurement accuracy is greatly improved.

2.LCD display, full Chinese display, easy to operate.

3.Automatic control of the measuring process, automatic water injection, drainage, automatic ignition, mixing, calculation, printing the calorific value of the material being measured, the results of the experiment at a glance, the operation is simple and convenient.

SDB-11132 Liquid Petroleum Products Hydrocarbon Types Tester

Standards

GB/T 11132, ASTM D1319

Application

The instrument is suitable for the determination of the volume percentage content of the main hydrocarbons (aromatics, olefins and saturated hydrocarbons) in liquid petroleum products.

Main technical specifications

1. Power supply: AC220V±5%, 50Hz
2. Pressure regulating range of reducing valve: (0～400)kPa
3. Electric agitator: Independently controlled for each way
4. Ultraviolet light source: 1220mm in length, wavelength is 365mm±5nm
5. Illuminating lamp: 1220mm in length, power is 40W
6. Air supply: Nitrogen cylinder (or air compressor, compressed air bottle)
7. Ambient temperature: (5～35)℃
8. Relative humidity: ≤85%

Main technical features

1. UK brand of precision adsorption column and USA brand of fluorescence indicator are provided.
2. This instrument is composed of air circuit system, vibration unit, scale indicator, illumination and UV-light detecting component.
3. Sheltered UV-light source. No human body radiation .
4. Oil free low noise air compressor. No noise disturbance
5. The pointers in carbon types area are moveable. Convenient for operation.

SDB-8017 Vapor Pressure Tester(Reid Method)

Standard

GB/T 8017

Application

This instrument is used to determine the vapor pressure of gasoline, volatile crude oil and other volatile petroleum products(not suitable for determining the vapor pressure of liquefied petroleum gas).

Main technical specifications

1. Power supply： AC(220±10%)V,50Hz
2. Heating power： 1600W
3. Temperature range： Ambient to 90℃
4. Temperature precision： ±0.1℃
5. Pressure gauge precision： ±0.4%
6. Ambient temperature： (-10~35)℃
7. Relative humidity： ≤85%
8. Maximum power consumption： 1700W

Main technical features

1. Floor type structure design. Stainless steel material is used. Easy to operate and use.
2. A digital temperature controller is equipped to control the temperature in high precision which can meet the test requirements.
3. Two precise pressure gauges are equipped to detect the gas pressure inside the pressure bombs.
4. Two sets of single opening-end steam pressure bombs are equipped which can be placed in the instrument at the same time for synchronous test.

Reid Vapor Pressure

SDB-8017A Automatic Vapor Pressure Tester(Reid Method)

Standard

GB/T 8017, ASTM D323

Application

This instrument is used to determine the vapor pressure of gasoline, volatile crude oil and other volatile petroleum products(not suitable for determining the vapor pressure of liquefied petroleum gas).

Main technical specifications

1. Power supply：AC220V±10%,50Hz
2. Test bombs：3 bombs
3. Temperature control：37.8℃
4. Temperature precision：±0.1℃
5. Temperature range：Ambient to 80℃,settable at will
6. Automatic rotation：350°
7. Display and operation：Colored touch screen
8. Pressure display：0.01Kpa
9. Ambient temperature: (5～35)℃
10. Relative humidity: ≤85%

Main technical features

1. Full stainless steel water bath. Good corrosion resistance.
2. Digital displays the pressure and temperature. Adjustment and calibration functions are set.
3. Full stainless steel test bombs. Horizontal design. Automatically rotate at 350° 。
4. High automation degree. The test procedures are all controlled automatically.The performance is stable.
5. A built-in microprinter is equipped for printing the result.A stirring pump with big circulation mode is equipped makes the temperature in the bath uniform.

SDB-8018D Automatic Oxidation Stability Tester

(Induction Period)

Standards

GB/T 8018, ASTM D525

Application

This instrument is used to determine the oxidation stability of gasoline by induction period method.

Main technical specifications

1.Power supply: AC220V, 50Hz

2.Heating power: 1300W

3.Temperature control: 100℃±0.2℃

4.Pressure range: 0~1600kpa

5.Pressure sensor precision: ±2‰

6.Test bombs: 2pcs

7. Ambient temperature: (5～35)℃

8. Relative humidity: ≤85%

Main technical features

1.The instrument adopts advanced technology abroad, the operation is simple, the whole test process without personnel on duty, high degree of automation.

2.During the test, all the parameters of the system are displayed on the interface of the IPC. The pressure curves of the two oxygen bombs are drawn out in real time, and the test results are clear at a glance.

3.Traditional water bath for metal bath, no pollution, no need to feed water. The operation is more convenient.

4.The design of the thermal insulation system is highly improved. It saves energy and avoids the risk of scald to the operator.

5.The integrated design of the test oxygen bomb assembly shortens the oil and gas pressure test pipeline, and ensures the good seal of the oxygen bomb in the test process, so that the test result is more reliable.

SDB-0175 Distillate Fuel Oils Oxidation Stability Tester (Accelerated Period)

Standards

SH/T 0175, ASTM D2274

Application

The instrument is used to determine the oxidation stability of distillate fuel oils with accelerated method.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Maximum power consumption： 3000W
3. Temperature range： Ambient to 100℃
4. Temperature precision： ±0.1℃
5. Flow rate control： 50ml/min ± 5ml/min
6. Sample amount： 6 units
7. Ambient temperature: (5～35)℃
8. Relative humidity: ≤85%

Main technical features

1. Floor type structure. Stainless steel workbench. A shading case is equipped. Touch-screen operation. Easy to use.
2. Metal bath. No need to add water during determination. No pollution and energy saving.
3. 6 units of independent flow control. It can test 6 samples at a time. The efficiency is high.
4. Built-in PID temperature control system makes the temperature stable.

Gum Content

SDB-8019-3 Existent Gum Tester

Standards

GB/T 8019, ASTM D381

Application

It is used to determine the existent gum content of motor gasoline.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Maximum power consumption： 1800W
3. Temperature controller： Digital display
4. Temperature control point： 162℃
5. Temperature control precision： ±2℃
6. Temperature of evaporation bath： 160～165℃
7. Test holes in metal bath： 3 holes
8. Air flow： 1000±150ml/s
9. Ambient temperature： 20～30℃
10. Relative humidity： ≤85%

Main technical features

1. Metal bath is equipped for heating. The heating rate is faster and temperature uniformity is better.
2. Three independent test holes are designed. The test efficiency is high.
3. Independent flow meter is equipped for each test hole to adjust the air flow. The flow rate control is precise and reliable.
4. An air compressor and an air purifier are provided with this instrument.

Gum Content

SDB-8019-5 Existent Gum Tester

Standards

GB/T 8019, ASTM D381

Application

It is used to determine the existent gum content of motor gasoline.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Maximum power consumption： 1800W
3. Temperature controller： Digital display
4. Temperature control point： 162℃
5. Temperature control precision： ±2℃
6. Temperature of evaporation bath： 160～165℃
7. Test holes in metal bath： 5 holes
8. Air flow： 1000±150ml/s
9. Ambient temperature： 20～30℃
10. Relative humidity： ≤85%

Main technical features

1. Metal bath is equipped for heating. The heating rate is faster and temperature uniformity is better.
2. Five independent test holes are designed. The test efficiency is high.
3. Independent flow meter is equipped for each test hole to adjust the air flow. The flow rate control is precise and reliable.
4. An air compressor and an air purifier are provided with this instrument.

SDB-2430 Freezing Point Tester

Standards

GB/T2430, ASTM D2386

Application

The instrument is suitable to determine the freezing point of aviation fuels or engine coolants at low temperatures.

Main technical specifications

1. Power supply: AC220V±10%, 50Hz
2. Temperature range: 20℃ to -70℃
3. Temperature precision: ±0.5℃
4. Sample mixing: 0～80 times/min, adjustable.
   Mechanical drive, automatic.
5. Test positions: 2 holes
6. Maximum power consumption: 1000W
7. Ambient temperature：≤30℃
8. Relative humidity：≤85%

Main technical features

1. Danfoss brand of compressor. Good cooling performance.
2. Equipped with different accessories, it can be used to test freezing point of aviation fuels or engine coolants and condensation liquids. It is a kind of multifunctional freezing point tester.
3. Desktop structure. Simple design. Easy to operate.

SDB-510-1 Solidifying Point and Cold Filter Plugging Point Tester

Standards

GB/T 510, SH/T 0248

Application

This instrument is used to determine solidifying point and cold filter plugging point of petroleum products.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：800W
3. Cooling bath：One chamber with two test holes.
4. Temperature range：Ambient to -43℃
5. Temperature precision：±0.2℃
6. Refrigeration compressor：Danfoss brand
7. Timing unit：Digital timer
8. Ambient temperature：≤30℃
9. Relative humidity：≤85%

Main technical features

1. Danfoss brand compressor. Good cooling performance.
2. Metal-block cryostat makes the cooling rate faster.
3. Desktop structure. Easy to operate.
4. CFPP unit is equipped for CFPP test.

SDB-510F-2 Multifunctional Low Temperature Tester

Standards

GB/T 510, GB/T 3535, GB/T 6986, SH/T 0248

Application

This instrument is used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：1500W
3. Cooling bath：Two chambers with four test holes.
4. Temperature range：Ambient to -70℃
5. Temperature precision：±0.2℃
6. Refrigeration compressor：Danfoss brand
7. Timing unit：Digital timer
8. Ambient temperature：≤30℃
9. Relative humidity：≤85%

Main technical features

1. Danfoss brand compressor. Good cooling performance.
2. Desktop structure. Easy to operate.
3. It can do multifunctional tests for solidifying point, pour point, cloud point and cold filter plugging point.

SDB-510F-4 Multifunctional Low Temperature Tester

Standards

GB/T 510, GB/T 3535, GB/T 6986, SH/T 0248

Application

This instrument is used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

Main technical specifications

1. Power supply：AC 220V±10%, 50 HZ
2. Maximum power consumption：2800W
3. Cooling bath：Four chambers with eight test holes.
4. Temperature range：Ambient to -70℃
5. Temperature precision：±0.2℃
6. Refrigeration compressor：Danfoss brand
7. Timing unit：Digital timer
8. Ambient temperature：≤30℃
9. Relative humidity：≤85%

Main technical features

1. Danfoss brand compressor. Good cooling performance.
2. Desktop structure. Easy to operate.
3. It can do multifunctional tests for solidifying point, pour point, cloud point and cold filter plugging point.

Low Temperature Flowability

SDB-510FR40 Rapid Multifunctional Low Temperature Tester

Standards

GB/T 510, GB/T 3535, GB/T 6986, SH/T0248, ASTM D97, ASTM D2500

Application

This instrument is used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

Main technical specifications

1. Power supply: AC220V 50Hz
2. Cooling bath: Two bath with two test holes
3. Temperature range: Ambient to -40.0℃
4. Temperature precision: ±0.1℃
5. Cooling time: ≤20min
6. Inner size of metal bath: 200*90*120(mm)

Main technical features

1. Colored touch-screen control. Metal-block bath for cooling. No need to use alcohol or other cooling medium. The cooling is fast and temperature control is stable.
2. The bath and the test tube holder can be inclined at 45° to meet test requirements.
3. The sample is tilted with the bath tank to reduce the temperature loss of the moving sample.
4. Multifunctional. It can be used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

Low Temperature Flowability

SDB-510FR70 Rapid Multifunctional Low Temperature Tester

Standards

GB/T 510, GB/T 3535, GB/T 6986, SH/T0248, ASTM D97, ASTM D2500

Application

This instrument is used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

Main technical specifications

1. Power supply: AC220V 50Hz
2. Cooling bath: Two bath with two test holes
3. Temperature range: Ambient to -70.0℃
4. Temperature precision: ±0.1℃
5. Cooling time: ≤20min
6. Inner size of metal bath: 200*90*120(mm)

Main technical features

1. Colored touch-screen control. Metal-block bath for cooling. No need to use alcohol or other cooling medium. The cooling is fast and temperature control is stable.
2. The bath and the test tube holder can be inclined at 45° to meet test requirements.
3. The sample is tilted with the bath tank to reduce the temperature loss of the moving sample.
4. Multifunctional. It can be used to determine solidifying point, pour point, cloud point and cold filter plugging point of petroleum products.

SDB-510Z-1 Automatic Solidifying Point and Pour Point Tester

Standards

GB/T 510, GB/T 3535

Application

This instrument is used to determine solidifying point and pour point of light petroleum products with good flowability such as gasoline, diesel, transformer oil and other lubricating oils with low kinematic viscosity.

Main technical specifications

1. Display： LED
2. Repeatability： 2° C(Solidifying point) and 3° C(Pour point)
3. Cooling limit： -70° C
4. Pressure of cooling water： 0.5kg/cm2
5. Sample amount： 50mL each time
6. Ambient temperature： 5～40° C
7. Relative humidity： 10%～80%
8. Power supply： AC220V±10%, 50Hz±5%
9. Maximum power consumption： 350W

Main technical features

1. It adopts micro-electronics control and semiconductor refrigeration. LED display. Easy to operate.

2. All procedures are automatic including automatic refrigeration and automatic measurement. No need of manual intervention.

3. The test speed is fast. It has good precision and reliability.

SDB-0248A Automatic Cold Filter Plugging Point Tester

Standards

SH/T 0248, ASTM D6371

Application

The instrument is used to determine the cold filter plugging point (CFPP) temperature of diesel and domestic heating fuels.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Power consumption： 2000W
3. Temperature range： Ambient to -45℃
4. Temperature precision： ±0.1℃
5. Temperature sensor： Ptl00,RTD
6. Test mode： Can test two samples at at time.
7. Ambient temperature： 5～40° C
8. Relative humidity： 10%～80%

Main technical features

1. Danfoss brand of compressor is equipped for cooling. Good cooling performance.
2. Built-in Windows CE system. Touch-screen operation. Easy to use.
3. A built-in printer is equipped for printing.

Density of LPG

SDB-0221 LPG Density Tester

Standards

SH/T 0221, ASTM D1657, ISO 3993

Application

The instrument is used to determine the density or relative density of light hydrocarbons including liquefied petroleum gases (LPG) having Reid vapor pressures exceeding 101.325kPa (14.696 psi).

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Heating power： 1500W
3. Cooling power： 300W
4. Temperature controller： Digital controller
5. Temperature range： 10 ~ 25℃
6. Temperature precision： ±0.1℃
7. Stirring mode： Circulation pump
8. Working condition： 15～30℃, RH≤85%

Main technical features

1. Digital temperature controller provides stable temperature control.
2. The heating output adopts SSR. No touch point or spark. Safe to use.
3. A stainless heater is equipped to provide a fast heating rate.
4. A Danfoss brand of compressor for cooling. The performance is good.
5. Pump stirring. The temperature is uniform. No noise.

SDB-0232 LPG Copper Corrosion Tester

Standards

SH/T 0232, ASTM D1838, ISO 6251

Application

The instrument is used to detect the presence of components in liquefied petroleum gases which can be corrosive to copper

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Power consumption： 1500W
3. Temperature range： Ambient to 100℃
4. Temperature precision： ±0.5℃
5. Temperature controller： Digital controller
6. Temperature sensor： Pt100,RTD
7. Test bombs： 2
8. Stirring rate： 1200r/min
9. Working condition： 15～30℃, RH≤85%

Main technical features

1. Digital temperature controller provides stable temperature control.
2. Double-bomb design. It can test two samples at a time. The efficiency is high.
3. The bath adopts stainless steel material. Good corrosion and rust protection.

Vapor Pressure of LPG

SDB-6602 LPG Vapor Pressure Tester

Standards

GB/T 6602, ASTM D1267

Application

The instrument is used to test the vapor pressure of liquefied petroleum gases in the temperature range of 37.8～70℃.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Heating power： 1500W
3. Temperature range： Ambient to 100℃
4. Temperature precision： ±0.1℃
5. Temperature controller： Digital controller
6. Test bombs： 2
7. Stirring way： Circulatory pump
8. Pressure range： 0～1.6MPa
9. Working condition： 15～30℃, RH≤85%

Main technical features

1. Digital temperature controller provides stable temperature control.
2. The heating output adopts SSR. No touch point, no spark, no noise. Safe to use.
3. Stainless steel heater makes the heating speed fast.
4. Double-bomb design. It can test two samples at a time. The efficiency is high.
5. Circulatory pump stirring. Good uniformity. No noise.

SDB-7509 LPG Residue Tester

Standards

SY/T 7509, ASTM D2158

Application

This instrument is used to determine the extraneous materials weathering above 38 °C that are present in liquefied petroleum gases. The extraneous materials will generally be dissolved in the LPG, but may have phase-separated in some instances.

Main technical specifications

1. Power supply： AC220V, 50H
2. Heating power： 2000W
3. Temperature controller： Digital
4. Temperature control of the cooling bath： 30～-60℃, ±0.1℃
5. Temperature control of the water bath： 38℃, ±0.1℃
6. Sensors： Pt100
7. Stirring： Motor stirring. 1350r/min
8. Ambient temperature： 15~30℃
9. Relative humidity： ≤85%

Main technical features

1. The digital temperature controller makes it easy to control the temperature. The temperature precision is high.
2. The heating output adopts solid state relay, no contact, no spark, no noise, long life, safe and reliable.
3. The heater adopts stainless steel material. The heating speed is rapid. The life is long.
4. The bath adopts stainless steel material. Good corrosion resistance and oxidation resistance. Suitable for the use of various media.
5. The compressor is used in composite refrigeration. The cooling speed is fast and the stability is good.

LUBRICATING OILS TEST INSTRUMENTS

Water Separability

SDB-7305 Petroleum Oils and Synthetic Fluids

Water Separability Tester

Standards

GB/T 7305, ASTM D1401

Application

This instrument is used to determine the ability of petroleum oils or synthetic fluids to separate from water. Although developed specifically for steam-turbine oils having viscosities of 28.8 – 90 mm2/s at 40 ° C, this test method may be used to test oils of other types having various viscosities and synthetic fluids at other test temperatures.

Main technical specifications

1. Power supply： AC (220±10%) V, 50Hz
2. Temperature range： Ambient to 100℃
3. Temperature precision： ±1℃
4. Temperature display： Digital
5. Timing range： 0~ 99min
6. Time display： Digital
7. Timing set： Digital control
8. Stirring rate： (1500±15) r/min
9. Heating power： 2000W
10. Ambient temperature： 5~ 40℃
11. Relative humidity： ≤85％

Main technical features

1. This instrument adopts small bath and desktop structure. It is easy to operate and good-looking.
2. It adopts electric motor to stir automatically. The temperature is uniform. It can do determination for 5 samples one by one.
3. The lifting of stirring device is convenient. The stirring paddle has good concentricity with cylinders. No tremble or touching the cylinder wall.

Water Separability

SDB-7305A Petroleum Oils and Synthetic Fluids

Water Separability Tester

Standards

GB/T 7305, ASTM D1401

Application

This instrument is used to determine the ability of petroleum oils or synthetic fluids to separate from water. Although developed specifically for steam-turbine oils having viscosities of 28.8 – 90 mm2/s at 40 ° C, this test method may be used to test oils of other types having various viscosities and synthetic fluids at other test temperatures.

Main technical specifications

1. Power supply： AC (220±10%) V, 50Hz
2. Temperature range： Ambient to 110℃
3. Temperature precision： ±0.05℃
4. Stirring time： 0~ 99m,settable
5. Timing range： 0~ 99h,settable
6. Stirring rate： (1500±15) r/min
7. Heating power： 2000W
8. Ambient temperature： 5~ 40℃
9. Relative humidity： ≤85%

Main technical features

1. 5 inch colored touch LCD. Easy to operate.
2. Four samples can be test at the same time.
3. PID control technology. The temperature control precision.
4. The stirring unit rises up and lowers down automatically. The mechanical motion is noiseless. Stable and reliable.
5. Imported brand of Pt100 temperature sensor. The temperature precision is high.
6 . Parameters can be set and saved. 500pcs of test data can be stored.

SDB-12579 Lubricating Oils Foaming Characteristics Tester

Standards

GB/T 12579, ASTM D892, ISO 6247

Application

This instrument is used to determine the foaming characteristics(foaming tendency and stability) of lubricating oils at medium temperatures.

Main technical specifications

1. Power supply： AC220V±10%, 50Hz
2. Heating power： 2000W
3. Temperature range： Ambient to 100℃
4. Temperature precision： ±0.1℃
5. Air flow： 94mL±5mL/min, with flowmeters.
6. Timing unit： 0~99min59s, resolution 1s
7. Control system： Single chip microcontroller
8. Ambient temperature： 5~ 40℃
9. Relative humidity： ≤85％

Main technical features

1. Colored LCD. Touch-screen.It supplies better user experience.
2. 24℃ bath and 93.5℃ bath are equipped. Flow rate can be controlled separately.
3. A buzzer prompts automatically when test finish.

Rust-preventing Characteristics

SDB-11143 Lubricating Oils Rust-preventing Characteristics Tester

Standards

GB/T 11143, ASTM D665

Application

This instrument is used to determine the ability of inhibited mineral oils, particularly steam-turbine oils, to aid in preventing the rusting of ferrous parts should water become mixed with oil. It can also be used to determine other oils, such as hydraulic oils, circulating oils and heavier-than -water fluids.

Main technical specifications

1. Power supply: AC(220±10%)V,50Hz
2. Temperature range: Ambient~100℃
3. Temperature precision: ±1.0℃
4. Temperature display: Digital, PID control
5. Test quantity: 4 samples
6. Timing range: 1min~1h
7. Sample stirring speed: (1000±50)r/min
8. Heating power: 1000w(temperature control)+600v
9. Ambient temperature： 5~ 40℃
10. Relative humidity： ≤85％

Main technical features

1. PID technology controls the temperature. The temperature precision is high and the response is rapid.
2. Independent holder ferrules are set to ensure no shaking during test.
3. 4 samples can be tested at the same time. The test efficiency is high.

Rust-preventing Characteristics

SDB-11143A Lubricating Oils Rust-preventing Characteristics Tester

Standards

GB/T 11143, ASTM D665

Application

This instrument is used to determine the ability of inhibited mineral oils, particularly steam-turbine oils, to aid in preventing the rusting of ferrous parts should water become mixed with oil. It can also be used to determine other oils, such as hydraulic oils, circulating oils and heavier-than -water fluids.

Main technical specifications

1. Power supply： AC (220±10%) V, 50Hz
2. Temperature range： Ambient to 100℃
3. Temperature precision： ±0.05℃
4. Stirring time： 0~ 99h,settable
5. Stirring rate： (1000±20) r/min
6. Heating power： 2000W
7. Ambient temperature： 5~ 40℃
8. Relative humidity： ≤85%

Main technical features

1. 5 inch colored touch LCD. Easy to operate.
2. Four samples can be tested at the same time.
3. PID control technology. The temperature control precision.
4. The stirring and temperature control are both automatic. It can prompts the operation. The automation degree is high.
5. Imported brand of Pt100 temperature sensor. The temperature precision is high.

6 . Parameters can be set and saved. 500pcs of test data can be stored.

Noack Evaporation Loss

SDB-0059A Noack Evaporation Loss Tester(Procedure A)

Standards

SH/T 0059, ASTM D5800 procedure A

Application

The instrument is used to determine the evaporation loss of lubricating oils by procedure A of Noack method(particularly engine oils).

Main technical specifications

1. Power supply：AC220V±10%, 50Hz
2. Operation mode：Colored touch screen operation. PID
3. Temperature control range：Ambient to 250℃
4. Temperature control precision：±0.5℃
5. Heating mode：Wood-metal bath
6. Pressure adjustment：High precision needle valve
7. Filtering mode：Vacuum pump
8. Differential manometer：International brand
   (inclined manometer is optior
9. Maximum power consumption: 1.6Kw

Main technical features

1. Wood-metal bath heating unit provides good heating performance.
2. International brand differential manometer ensures the correct pressure.
3. Vacuum filtering system is equipped.
4. A digital timer is built in for recording the test time.
5. The evaporation crucible can meet requirement of ASTM D5800
6. International brand needle valve and precise pressure regulation system make the flow correct.
7. Colored touch LCD operation. Easy to use.

Noack Evaporation Loss

SDB-0059B Noack Evaporation Loss Tester(Procedure B)

Standards

SH/T 0059, ASTM D5800 procedure B

Application

The instrument is used to determine the evaporation loss of lubricating oils by procedure B of Noack method(particularly engine oils).

Main technical specifications

1. Power supply： AC220V±10%，50Hz
2. Temperature control range： Ambient to 500℃
3. Temperature control precision： ±0.5℃
4. Heating unit： Non-Woods metal. Environment friendly.
5. Vacuum system： Vacuum pump and manometer
6. Pressure range： 0～25mmH20
7. Pressure precision： ±0.2mmH20
8. Maximum power consumption： 2.0KW

Main technical features

1. No need of Wood metal during the test. It avoids the environment pollution and human damage.
2. Built-in system with high-speed microprocessor. Colored touch LCD operation. Easy to use.
3. A large amount of EPROM is built in the instrument. They record the temperature, pressure in a real time. The instrument has self diagnosis procedure and kinds of alert systems.

SDB-0193 Automatic Lubricating Oils Oxidation Stability Tester

(RPVOT/RBOT)

Standards

SH/T 0193, ASTM D2272

Application

The instrument is used to determine the oxidation stability of steam turbine with the same composition (oil base oil and additive) . It can also be used to determine new mineral insulating oil containing 2, 6-BHT.

Main technical specifications

1. Power supply： AC(220±10%)V, 50Hz
2. Heating power： 2500W
3. Pressure sensor： 0～1.6MPa, precision±2‰
4. Temperature range of oil bath： Ambient to 200.0℃,adjustable.
5. Temperature precision： ±0.1℃
6. Test mode： Two-bomb design can do parallel test.
7. Motor： (100±5)r/min
8. Included angle between oxygen bomb and water level： 30°
9. Volume of oil bath： 30L

Main technical features

1. It controls the test procedures automatically. Curves and data will be displayed and recorded automatically. The inflection point will be detected automatically. No need for human interference.
2. Temperature and pressure can be calibrated in real time to ensure the test precision.
3. Two samples can be tested at a time. The test efficiency is high.
4. Imported brand of rotation unit. The stability is good and noise is small.

SDB-0193A Automatic Lubricating Oils Oxidation Stability Tester

(RPVOT/RBOT)

Standards

SH/T 0193, ASTM D2272

Application

The instrument is used to determine the oxidation stability of steam turbine with the same composition (oil base oil and additive) . It can also be used to determine new mineral insulating oil containing 2, 6-BHT.

Main technical specifications

1. Power supply： AC220V±10%
2. Heating power： 2500W
3. Pressure sensor： 0～1.6MPa, precision±2‰
4. Temperature range： Ambient to 200.0℃, adjustable
5. Temperature precision： ±0.1℃
6. Motor： 100±5r/min
7. Included angle between oxygen bomb and water level

Main technical features

1.The metal block bath is used to decrease the smelly gas during the test. No need to use liquid medium.

2.Single bomb is tested independently. 4 instruments can be operated separately at most at the same time. The efficiency is highly improved.

3.The ventilation is easy. No need to put the instrument into the fume cupboard. The exhaust gas can be moved out by a plastic pipe.

4. The temperature of sample can be tested by the temperature sensor during the test.

SDB-6538 Engine Oils Apparent Viscosity Tester(CCS)

Standards

GB/T 6538, ASTM D5293

Application

This instrument is used to test the apparent viscosity of engine oils and base stocks by cold cranking simulator (CCS) at temperatures between -10 ℃ and -35 ℃

Main technical specifications

1. Temperature range of circulatory cooling bath：Ambient to -60℃
2. Temperature precision of cooling bath： ±0.1℃
3. Temperature precision of stator： ±0.05℃
4. Viscosity measurement range： 1500～27000mPa.s
5. Repeatability&reproducibility： Can meet ASTM D5293 (Repeatability ≤2.6%, reproducibility ≤7.3%)
6. Data saving：1000 groups. Can be printed.
7. Ambient temperature： 10℃～40℃
8. Relative humidity： ＜85%
9. Maximum power consumption： 2.5KW
10. Power supply： AC220V±20%
11. Oil standards： standards with certificates: CL190(50ml), CL250(50ml)×2, CL320(50ml)

Main technical features

1. Touch-screen IPC with WINDOWS system.
2. Omron brand temperature controller. Light touch key operation.
3. Automatically detect rotation speed. Knob controls the current slightly. The manual operation error is small.
4. Danfoss brand compressor. The cooling performance is good.
5. A high precision motor is equipped.
6. Automatically calculate the result after calibrated with oil standards.
7. Automatically stop working and temperature rising after the test finish for rapid cleaning.
8. Built-in operation system. Stable performance.
9. Improved rotor. Low torque status.
10. The parameters of all oil standards can be edited and saved.

SDB-6538D Engine Oils Apparent Viscosity Tester(CCS)

Standards

GB/T 6538, ASTM D5293

Application

This instrument is used to test the apparent viscosity of engine oils and base stocks by cold cranking simulator (CCS) at temperatures between -10 ℃ and -35 ℃

Main technical specifications

1. Temperature range of circulatory cooling bath：Ambient to -60℃
2. Temperature precision of cooling bath： ±0.1℃
3. Temperature precision of stator： ±0.05℃
4. Viscosity measurement range： 1500～27000mPa.s
5. Repeatability&reproducibility： Can meet ASTM D5293 (Repeatability ≤2.6%, reproducibility ≤7.3%)
6. Data saving：100 groups. Can be printed by a built-in printer.
7. Ambient temperature： 10℃～40℃
8. Relative humidity： ＜85%
9. Maximum power consumption： 2.5KW
10. Power supply： AC220V±20%
11. Oil standards ： standards with certificates: CL120(50ml), CL140(50ml), CL160(50ml), CL220(50ml), CL250(50ml)×2, CL320(50ml), CL480(50ml), CL600(50ml), CL740(50ml)

Main technical features

1. 8 inch colored touch LCD screen. Convenient to use.
2. Automatically detect speed and control current to reduce the error of manual operation.
3. Imported Danfoss compressor with cascade refrigeration.The performance is stable. The imported motor has high precision.
4. Automatically calculate the result. The result can be printed by a built-in microprinter at the end of the test. It will stop and raise temperature automatically after the test for cleaning.
5. Improved rotor at low torque test condition.
6. The Instrument will recommend cooling temperature automatically.
7. A rotary encoder will detect the speed during the test.
8. It can edit and store all the parameters of the standard oils.

SDB-H1705 High-Temperature and High-Shear Rate Apparent Viscosity Tester(HTHS)

Standards

SH/T 0703, ASTM D5481

Application

This instrument is used to determine the high-temperature high-shear (HTHS) viscosity of engine oils at a temperature of 150 ° C.

Main technical specifications

1. Power supply： AC220V, 50Hz
2. Heating mode： Electrical heater
3. Temperature control range： Ambient to 150℃
4. Temperature control precision： ±0.1℃
5. Working units： 5 units
6. Pressure display： Digital display
7. Time display： Digital display

Main technical features

1. This instrument is national initiative.
2. Colored touch screen. Digital displays pressure and time.
3. Specialized HTHS viscosity calculation software is provided.
4. Each unit of sample tube has a plug valve.
5. 15~20 samples can be tested per hour.
6. Specifications of glass capillary tube: OD 0.15mm, length 16mm.

SDB-H1706 High-Temperature and High-Shear Rate Apparent Viscosity Tester(HTHS)

Standards

SH/T 0703, ASTM D5481

Application

This instrument is used to determine the high-temperature high-shear (HTHS) viscosity of engine oils at a temperature of 150 ° C.

Main technical specifications

1. Power supply： AC220V, 50Hz
2. Heating mode： Electrical heater
3. Temperature control range： Ambient to 150℃
4. Temperature control precision： ±0.1℃
5. Working units： 1 unit
6. Test control： LCD screen

Main technical features

1. This instrument is national initiative. Aluminium material is used for manufacturing.
2. Colored touch screen. Digital displays pressure and time.
3. Specialized HTHS viscosity calculation software is provided.
4. Excel form can be generated for the test result.
5. The instrument can run continuously for 24 hours per day in 365 days.
6. Specifications of glass capillary tube: OD 0.15mm, length 16mm.

SDB-9171 Engine Oils Yield Stress and Apparent Viscosity Tester

(Mini Rotary Viscometer)

Standards

GB/T 9171, ASTM D4684

Application

This instrument is used to determine the yield stress and viscosity of engine oils after cooling at controlled rates over a period exceeding 45 h to a final test temperature between –10 °C and –40 °C.

Main technical specifications

1. Power supply： AC220V, 50Hz
2. Temperature range： -70～100℃
3. Temperature precision： ±0.1℃
4. Data printing： Built-in Printer
5. Standard oil： A set of standard oils with certificates. 100ml/bottle (N105B).

Main technical features

1. Danfoss brand compressor. Good cooling performance.
2. Built-in precise circuit monitoring temperature, period and rotor motion.
3. The test can begin immediately without pre-cooling.
4. Improved pulley provides better stability and sensitivity.
5. Built-in operation system. All-in-one design. Save more spaces.
6. Specific cooling curve is allowed to be designed at will as per different oils.
7. Improved light alloy rotor. The tip is not easy to be broken and out of shape.Easy to clean.
8. Improved rotor heat preservation cover avoids frosting and provides better test precision.
9. Nitrogen purging function improves the test precision of yield stress and apparent viscosity.
10. Automatic temperature control. It will run for 48-53 hours after the estimated time as per ASTM D4684.

SDB-3535 Pour Point Tester

Standards

GB/T 3535, ASTM D97

Application

This instrument is used to determine the pour point of petroleum products.

Main technical specifications

1. Power supply： AC 220V±10%, 50 HZ
2. Maximum power consumption： 1000W
3. Cooling bath： Two chambers with two positions in each
4. Temperature range： Ambient to -70℃
5. Test precision: ±0.5℃

Main technical features

1. Danfoss brand compressor. Good cooling performance.
2. Alcohol medium cryostat makes the cooling uniformity good.
3. Digital temperature temperatures are equipped for accurate temperature controlling.

SDB-0030 Vehicle Gear Oil Channel Point Tester

Standards

SH/T 0030, FTMS 791B 3456.1 MOD

Application

This instrument is used to determine the channel point of vehicle gear oils.

Main technical specifications

1. Power supply：AC 220V±5%, 50Hz
2. Temperature control：-60℃ to 50℃, ±0.5℃
3. Heating power：800W
4. Cooling power：600W
5. Overall dimension：750×550×960mm

Main technical features

1. Advanced imported built-in temperature control system is adopted in this instrument. Large LCD screen displays and operation.
2. The cooling system adopt cascade unit. The parts are all imported(German compressor, Italian cooling agent and Canadian fan condenser). The cooling speed is good and the noise is low.
3. The cooling and heating are both in one metal-block bath. The temperature control is controlled precisely. And no need to move the sample.
4. Digital displays the timing and alarm. It will prompt the end of the test.

SDB-12577 Refrigerator Oil Floc Point Tester

Standards

GB/T 12577, DIN 51351

Application

This instrument is used to determine the floc point of refrig

Main technical specifications

1. Power supply: AC220V, 50Hz
2. Temperature range: Ambient~-75℃
3. Temperature precision: ±1℃
4. Temperature control mode: Digital temperature contro
5. Maximum power consumption: 2000W

Main technical features

1. Separate structure reduces the error caused by the vibration of the instrument.
2. Cascade refrigeration compressor Danfoss, imported brand, stable performance.
3. Glass Dewar cold bath, good insulation effect.

Crankcase Simulation Test

SDB-0300 Internal-combustion Engine Oil

Crankcase Simulation Tester

Standard

SH/T 0300

Application

This instrument is used to evaluate the thermal oxidation stability of the additives and the additives contained internal combustion engine oils.

Main technical specifications

1. Working condition: Painting, coking
2. Temperature range: Ambient to 350℃
3. Temperature precision: ±2℃
4. Timing range: 0~99 hours
5. Input power: 1000W
6. Working power supply: AC220V, 50Hz

Main technical features

1. The crankcase simulation test instrument is composed of two parts, the control unit and the host computer.

2. The control unit part has two digital temperature controllers which control the temperature of the fuel tank and the test board respectively.

3. The time relay achieves the total work time and controls the motor start and shut down automatically.

4. The main part of the machine is made of stainless steel, which is simple in shape, beautiful in appearance with good corrosion resistance.

5. Can be used for both coking and painting working conditions. It is a dual-purpose machine. It will power off at the end of test automatically.

Air Release Properties

SDB-0308 Air Release Properties Tester

Standards

SH/T 0308-92, ASTM D3274-75

Application

This instrument is used to determine the air release properties of turbine, hydraulic and gear oils.

Main technical specifications

1.Measuring range: 0～99min

2.Timing precision: ±1s

3.Temperature range: Ambient to 99℃

4.Temperature precision: ±0.2℃

5.Air control precision: ±2℃

6.Pressure range: 0～0.2MPa

7.Power supply: AC220V 50Hz

8.Maximum power consumption: 800W

9.Ambient temperature: 5℃～40℃

10.Relative humidity: ≤85%

Main technical features

1.Micro computer processing and PID auto tuning technique.

2.The air temperature and water temperature can be controlled precisely at the same time.

3.The error caused by temperature differences among the water bath, air flow and densimeter can be overcomed.

4.Blue-colored LCD. Man-machine dialogue. The operation is simple.

5.It has advantages of stable performance, accurate data and good repeatability.

SDB-421 Insulating Liquids Relative Permittivity, Dielectric Dissipation Factor and D.C. Resistivity Tester

Standards

GB/T 5654-85, DL/T 421-91, IEC 60247

Application

This instrument is used to determine the relative permittivity, dielectric dissipation factor at power frequency and volume resistivity of insulating liquids.

Main technical specifications

1. Testing mode： Standard and user-defined are selectable
2. Electrode cup： Three-end cup made from stainless steel.Inner electrode measures the temperature.
3. Testing voltage： 500 VDC. Maximum error 0.5 %
4. Measuring range： 2×10^{5}~$2\times10^{14}\ \Omega\cdot M$
5. Repeatability： ≤10%(when the result≤$1\times10^{10}\ \Omega\cdot M$),
   ≤15%(when the result≥$1\times10^{10}\ \Omega\cdot M$)
6. Temperature range： 5～100℃
7. Temperature precision： ±0.1℃
8. Display and operation： 7-inch high-definition toucl
9. Printing： Built-in thermal printer
10. Serial port： RS232, USB
11. Working environment： Ambient:10～40℃, RH≤
12. Power supply： AC220V±10%, 50Hz
13. Maximum power consumption： 400W

Main technical features

1. 7-inch high-definition touch screen. YTOS special ec
experience excellent.
2. Original DC high voltage soft loading technology avoids the high voltage interference from the source.

3. High voltage resistant ceramic is used as the material of electrode cup.The insulativity is great.

4. Original composite temperature control technology. Hermetic heating mantle.It only cost 12min from room temperature to 90℃. The time is short and no electric leakage.

5. The oil adding, testing, removing, cleaning are all finished automatically.The working efficiency is high.

6. The cooling and heating are in one unit.The temperature conrol range is wide. It is suitable for different kinds of oils.

7. 1000 groups of data can be saved.Easy to call out and print at any time.

SDB-507S-1 Insulating Oil Breakdown Voltage Tester

Standards

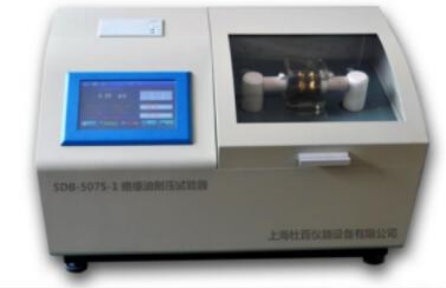
GB/T 507-2002, DL4291, DL/T 846.7-2004, IEC 156:1995

Application

This instrument is used to determine the dielectric strength of various of insulating oils applicable to railway, aviation, power plant and oil industry.

Main technical specifications

1. Voltage booster capacity: 1.2 kVA
2. Voltage lifting speed: 1.0 kV/s～10 kV/s , settable.
3. Output voltage: 0～80KV
4. Detection accuracy: 0.01KV
5. Distortion rate of high voltage power supply: ＜1%
6. Display: 7 inches WVGA high-definition colored LCD
7. Ambient temperature: 0～40℃
8. Relative humidity: ≤85%
9. Power supply: AC 220V±10%, 50±5 Hz
10. Maximum power consumption: ＜200 W



Main technical features

1. 7-inch high-definition TFT touch screen. YTOS special equipment operating system makes the user experience excellent. AVR Series of SCM controls the whole test operation fully automatically.
2. 0～80KV range of volatage test can be done. The voltage lifting rate can be adjusted.
3. After the test is completed, the value of the breakdown voltage and the average value can be printed, and 500 pcs of data can be stored.
4. Automatic and manual operation mode can be selected, flexible and practical.
5. Over-voltage, over current, automatic return to zero and other protective devices are set to protect the personal safety of the operator.
6. Breakdown detection by current mutation detection and wavelet analysis combined with double capture technology, ensure the reliable detection of breakdown voltage and avoid the miss and false detection.

SDB-6541 Automatic Interfacial Tension Tester

Standard

GB/T 6541-86(1991)

Application

This instrument is used to measure the non-equilibrium conditions of mineral oil in water interfacial tension (Liquid-liquid interface). It can also be used to determine surface tension of various liquids (Liquid-gas interface).

Main technical specifications

1. Display: 240*128 LCD
2. Button: No marking buttons on the menu
3. Measuring range: (2~400)mN/m
4. Sensitivity: 0.1mN/m
5. Accuracy: 0.1mN/m
6. Resolving power: 0.1mN/m
7. Repeatability: 0.3%
8. Applicable temperature: (10～40)℃ (Typical value: 25℃)
9. Power supply: AC220V, 50Hz
10. Maximum power consumption: 100W

Main technical features

1. An electromagnetic balance sensor is adopted to improve the measurement accuracy and linearity.
2. In the calibration process, only one point need to be calculated to make it simple and convenient for calibration.
3. Integrated temperature detection circuit makes the temperature compensation for the results automatically to solve the effect of the temperature on the results.
4. It displays the equivalent tension value and the weight in real time. It can be used as an electronic balance.
5. The zero adjustment, data measurement, calculation, printing are all automatically controlled. 300pcs of data can be saved.
6. Can be connected with PC to realize the network management.

Degassing Oscillation

SDB-17623 Multifunctional Automatic Degassing Oscillator

Standard

GB/T 17623-1998

Application

The instrument is suitable for the determination of diss

Main technical specifications

1. Display method: Large-screen LCD display
2. Temperature range: Ambient to 120℃
3. Temperature precision: (Ambient~50)℃,±0.2℃
   (50~100)℃,±0.3℃
   (100~120)℃,±0.5℃
4. Oscillation frequency: (275±3) times / min
5. Oscillation amplitude: 35mm
6. Time control: (Degassed chromatographic oscilla

minutes resting thermostat 50 ℃,(Water-soluble acid oscillation) shaken for 5 minutes, the thermostat 75 ℃,(Custom) standing oscillation time (0 to 99) minutes arbitrarily set,set to any temperature in (0 to 100)℃

7. Sample amount: 100ml or 50ml syringe injector (optional),(chromatography degassing oscillation)
8. Power supply: AC220V, 50Hz
9. Ambient temperature: 5~50℃, humidity≤85%

Main technical features

1. Large-screen LCD. Easy to operate.
2. Overvoltage, overcurrent, overheating automatic power-off protection, safe and reliable.
3. Imported linear motor, fatigue resistance, low noise.
4. Outside thermometer jack for observation and comparison.
5. PT1000 temperature sensors. Self-tuning PID temperature control. The temperature control precision is high.

LUBRICATING GREASES TEST INSTRUMENTS

SDB-2801C Penetrometer

Standards

GB/T 269, GB/T 4509, JTG E20-2011/T0604, ASTM D217, ASTM D5

Application

The instrument can be used to determine the cone penetration of lubricating greases or needle penetration of asphalt.

Main technical specifications

1. Cone： ① Full scale: Weight of cone: 102.5±0.05g. Weight of movable attachments: 47.5±0.05g.

② 1/2 scale cone: Weight of cone: 37.5±0.05g. Weight of movable attachments: 15±0.025g.

③ 1/4 scale cone: Total weight of cone and movable attachments: 9.38±0.025g.

Note: 1/2 scale cone and 1/4 scale cone are optional.

2. Grease worker： ① Full scale: working route 71mm

② 1/2 scale: working route 35mm

③ 1/4 scale: working route 14mm

Note: 1/2 scale worker and 1/4 scale worker are optiona

3. Measurement range： 0 ~ 600 penetration.

4. Cone releasing route： Over 62mm

5. Reading precision of digital scale： ±0.01mm

6. Timing range： 5s

7. Timing bias： ≤0.02s

8. Repeatability： ＜2+0.03P， P is the mean value of t

9. Power supply： AC220±10%, 50Hz±2%

10.Dimension： 530mm×290mm×360mm

Main technical features

1. Fine adjusting knob and rough adjusting knob are equipped with self-locking function. Easy to operate.

2. The digital scale can be adjusted during the test.

3. Good manufacturing technology to make the cone releasing smoothly.

4. Needles for testing asphalt or wax are optional.

SDB-269 Mechanical Grease Worker

Standards

GB/T 269, ASTM D217

Application

It is used to the determine the consistence changes after the work of mechanical shear to judge the mechanical stability of lubricating grease.

Main technical specifications

1. Power supply： AC220V±10%，50Hz
2. Power consumption： 370W
3. Stroking rate： 60±10 strokes per min.
4. Rotating speed： 1400r/min
5. Reducer： Double shaft reducer
6. Transmission ratio : 25：1

Main technical features

1. Motor drives the reducer to ensure the 60 times/min shearing speed.
2. It displays the stroking times on a small counter.
3. A coupler connects the worm speed reducer to make the speed reach up to 1400r/min.
4. Grease worker： Installed on the side bases of reducer. 60±10 strokes per min.

SDB-4929A Dropping Point Tester

Standards

GB/T 4929, ASTM D566

Application

The instrument is used to determine the dropping point of lubricating greases.

Main technical specifications

1. Power supply：AC220V±10%, 50Hz

2. Oil bath：High temperature glass cylinder, the content is about 1000 ml

3. Test tube： Heat resistant boron silicate glass test tube with edge, the inside diameter is Φ 11.1mm to Φ 12.7mm, three grooves on the circumference of the bottom 19mm are used to support the cup.

4. Thermometer：(-5~300) ℃, division 1℃.

5. Heater： Tubular, 1000W.

6. Stirring motor：500r/m.

7. Ambient Temperature：(-10~+40)℃

8. Relative humidity：≤85%

Main technical features

1. The oil bath is composed of heat resistant beaker, heater and electric motor. The heating power can be adjusted continuously. The temperature in oil bath is uniform.。

2. Desktop structure. Easy to operate.

SDB-3498 Lubricating Grease Dropping Point Tester

(Over Wide Temperature Range)

Standards

GB/T 3598, ASTM D2265

Application

This instrument is used to determine the dropping point of lubricating grease over wide temperature range.

Main technical specifications

1. Power supply： AC 220V±10%, 50Hz
2. Temperature range： Ambient to 350℃
3. Control points： 121℃,232℃,288℃,343℃. Settabl
4. Temperature precision： ±3℃
5. Maximum power consumption： 800W
6. Test holes： 6 holes
7. Ambient Temperature： (-10~+40)℃
8. Relative humidity：≤85%

Main technical features

1. Metal-block bath is used for heating. The heating performance is good.
2. Digital temperature controller is used. Easy to control the temperature correctly.
3. Illumination light is equipped for easy observation.

SDB-7326 Lubricating Grease Copper Corrosion Tester

Standards

GB/T 7326，ASTM D4048

Application

This instrument is used to determine the tendency of lubricating grease to corrode copper under specific static conditions.

Main technical specifications

1. Power supply： AC220V±10%,50Hz
2. Temperature sensor： Pt100, RTD
3. Temperature range： Ambient to 100℃,can be set at will
4. Temperature precision： ±1℃
5. Temperature display： LED
6. Heating power： 600W(Temperature control)+1000W(Auxiliary heating)
7. Timing range： 1min ~ 24hour,can be set at will
8. Time display： LED
9. Sample test hole： 4 sample holes
10. Sample test amount：4~12pcs
11. Ambient Temperature： (-10~+40)℃
12. Relative humidity：≤85%
13. Maximum power consumption： 1800W

Main technical features

1. The bath and bath lid are made of stainless steel, good corrosion resistance.
2. Digital temperature controller ensures the temperature accurate and stable, no overshoot.
3. Motor stirring makes the bath temperature uniformity good.
4. The timer will beem at the end of the test.

SDB-7325 Lubricating Grease Evaporation Loss Tester

Standards

GB/T 7325, ASTM D972

Application

This instrument is used to determine the loss in mass by evaporation of lubricating greases and oils for applications where evaporation loss is a factor.

Main technical specifications

1. Temperature range: Ambient to 200℃
2. Temperature precision: ±0.5℃
3. Timing device: 0 ~ 100hours
4. Stirring motor: 25W
5. Power supply: AC220V±10%, 50Hz
6. Maximum power consumption: 2000W
7. Ambient Temperature： (-10~+40)℃
8. Relative humidity：≤85%

Main technical features

1. The bath is made of stainless steel, corrosion resistant, long life.
2. Digital temperature controller, easy to adjust and intuitive temperature to make the temperature stability good.
3. An air pump with a flow meter quantifies the flow rate of the test.
4. Compact instrument structure, stable and reliable performance.

SDB-0109 Lubricating Grease Water Washout Characteristics Tester

Standards

SH/T 0109, ASTM D 1264

Application

The instrument is used to determine the water washout characteristics of lubricating grease.

Main technical specifications

1. Power supply：AC220V, 50Hz
2. Temperature range and precision：Ambient to 100℃,±3℃
3. Control point：38℃ and 79℃
4. Power consumption：300W
5. Ambient Temperature： (-10~+40)℃
6. Relative humidity：≤85%

Main technical features

1. The instrument is composed of bearing assembly and water washout testing unit. The bearing assembly can be installed and disassembled easily.
2. The water washout testing unit is composed of a bath, flow control valve, water pump and motor.
3. A digital temperature controller is equipped for stable temperature control.
4. A water pump controls the water sprays onto the bearing at a required flow rate.
5. A timer is equipped inside. It will buzzing after test time over.

Roll Stability

SDB-0122 Lubricating Grease Roll Stability Tester

Standards

SH/T 0122, ASTM D 1831

Application

The instrument is used to determine the changes in the consistency, as measured by cone penetration,of lubricat-inggreases when worked in the roll stability test apparatus.

Main technical specifications

1. Power supply： AC220±10%，50Hz
2. Temperature range in the tank： Ambient to 80℃
3. Rolling rate： 165±15r/min
4. Amount of rolling cylinder： 2 cylinders
5. Roller： Φ90×180mm，5kg, stainless steel
6. Heating mode： PTC ceramic heating.
7. Timing unit： Digital timer

Main technical features

1. Microcomputer temperature controller.
2. Digital display. ±5℃ precision.
3. Digital timer records the working time with a buzzer.
4. Belt drives the rolling. Two cylinders can be tested at a time.
5. A thermometer holder is on the cover. Locating ring is equipped on the free-rolling wheel to control the rolling cylinders work normally.

SDB-0325 Automatic Lubricating Grease Oxidation Stability Tester

Standards

SH/T 0325, ASTM D942, IP142

Application

This instrument is used to measure the net change in pressure resulting from consumption of oxygen by oxidation and gain in pressure due to formation of volatile oxidation by-products.

Main technical specifications

1. Control mode: Automatically controlled by SCM technology
2. Heating method: Electric heating tube
3. Temperature range: Ambient to 99℃
4. Temperature precision: ±1℃
5. Temperature control mode: PID temperature controller
6. Sample amount: 2pcs
7. Pressure display: LCD displays the curve
8. Results processing: SCM automatic calculation
9. Power supply: AC220V, 50Hz
10. Maximum power consumption: 2200W

Main technical features

1. LCD screen. Man-machine dialogue.
2. Metal rack containing 18% chromium and 8% nickel. The entire test is controlled by computer without human operation.
3. Test procedure has curve display.
4. The test results can be automatically saved at the end of the test.
5. 5pcs of sample can be loaded in one test vessel.
6. Stainless steel electric heater and test bath.
7. The instrument can automatically check for gas leaks and alarm.

SDB-0326 Automotive Wheel Bearing Greases Leakage Tendencies Tester

Standards

SH/T 0326, ASTM D1263

Application

This instrument permits differentiation among products having distinctly different leakage characteristics.

Main technical specifications

1. Power supply: AC220V, 50Hz
2. Heating bath: Metal-block bath
3. Temperature control mode: Import PID temperature control
4. Temperature range: Ambient to 150℃,±0.5℃
5. Timekeeping: A digital counter
6. Timing range: 0.01s～99h99m
7. Motor speed: 660r/min±30r/min
8. Maximum power consumption: 1000W

Main technical features

1. Instrument with integrated design, simple structure, easy to operate.
2. Unique heat pipe rod inserted casting box heating system, so that rapid heating rate, temperature control and high accuracy.
3. Imported motor rotation, low noise, speed and stability, good mechanical properties and small wear.
4. Compact rotating hub and the shaft assembly structure, end clearance small, bearings are used imported components, reliability and wear resistance guaranteed.
5. Microcomputer temperature controller, digital display, accuracy ± 0.5 ℃, PT100 sensor.
6. Digital timer records the test time.
7. A thermometer hole is set on the shaft assembly.

SDB-3142 Lubricating Fluid and Grease Wear Preventive Characteristics Tester(Four-Ball Method)

Standards

GB/T 3142, SH/T 0189, SH/T 0202, SH/T 0204, ASTM D2266, ASTM D4172

Application

This instrument is used to determine the relative wear-preventing properties of greases under the test conditions and if the test conditions are changed the relative ratings may be different.

Main technical specifications

1. Power supply: AC380V, 50Hz
2. Temperature range: Ambient to 75℃
3. Temperature precision: ±2℃
4. Spindle speed: 1000 ~ 1800r / min, adjustable
5. Test load: 15Kg, 40Kg
6. Maximum load: 800Kg
7. Microscope: 40 times and 100 times are selectable.
8. Division value: 0.01mm
9. Maximum power consumption: 2500W

Main technical features

1. The bracket is made from sheet steel. The height of base can be adjusted for easy placement and leveling.
2. The test balls are installed on the main rotating shaft by spring clamps. Easy for disassembling.
3. Lever balance principle is adopted in the loading system to make small weight produce large test load.
4. The temperature control table displays and controls the temperature of the test oil container to make it meet test requirements.
5. The measurement system is composed by a micrometer eyepiece, an objective lens and auxiliaries. The oil container can be placed directly on the system platform to measure. Easy and accurate.
6. Built-in timer. the rotation of the spindle motor will automatically stop at the end of the experiment. The accuracy of test time is improved.
7. Built-in overload protection device. When the ball 4 sintered, the instrument automatically stops the motor. More convenient to use.
8. Instrument design is reasonable, convenient loading and unloading the load. High precision spindle, small wear scar errors. Wear scar measurements quickly, easily and accurately.

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