

# Shanghai Dobetter Instrument & Equipment Co.,Ltd

Petrochemical Testing Instruments

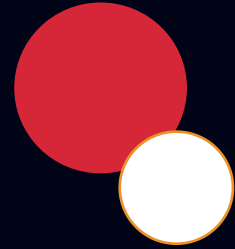
# Company Profile



Shanghai Dobetter Instrument & Equipment Co.,Ltd is a high-tech corporation who specializes in R&D, sales and service of intelligent and automated instruments in the analyzing fields of petrochemicals, asphalt and viscosity. Meanwhile we also provide quality lab solutions for our clients as per their different needs.

Our company mainly manage four kinds of products: petrochemical testing instruments, asphalt testing equipment, rotary viscometers and lab 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 and aviation. At the same time, the rotary 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 the countries and areas like Germany, Japan, Australia, South Africa, Nigeria, Brazil, Argentina, Chile, Singapore, Malaysia, Saudi Arabia, UAE, Kuwait, Iran, Turkey , Thailand , Pakistan , India and Taiwan.

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



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# General Test



## Automatic COC Flash Point Tester



**Model : SDB-3536A Standards : GB/T3536, ASTM D92**

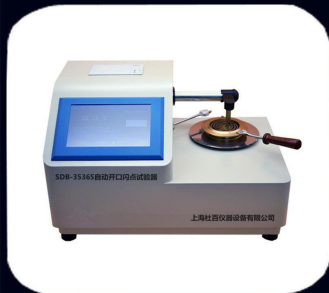
### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 400°C , resolution 0.1°C.
- 2 ) Ignition : Gas source is needed. A electronic igniter is used for ignition.
- 3 ) Colored touch LCD control. Man-machine dialog with prompt menu.
- 4 ) All test procedures are automatic except manual ignition. Air cooling will run after the test.
- 5 ) 120 groups of data can be saved. A built-in printer is equipped.

**Model : SDB-3536E Standards : GB/T3536, ASTM D92**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 400°C , resolution 0.1°C.
- 2 ) Ignition : Gas source is not needed. Automatic electronic ignition.
- 3 ) Colored touch LCD control. Man-machine dialog with prompt menu.
- 4 ) All test procedures are automatic. Air cooling will run after the test.
- 5 ) 3000 groups of data can be saved. A built-in printer is equipped.



**Model : SDB-3536S Standards : GB/T3536, ASTM D92**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 300°C , resolution 0.1°C.
- 2 ) Ignition : Electronic ignition and gas ignition can be selected.
- 3 ) 7 inch colored touch high-definition LCD gives perfect user experience.
- 4 ) All test procedures are automatic. Air cooling will run after the test.
- 5 ) 1000 groups of data can be saved. A built-in printer is equipped.

# General Test



## Automatic PMCC Flash Point Tester



**Model : SDB-261A Standards : GB/T261, ASTM D93**

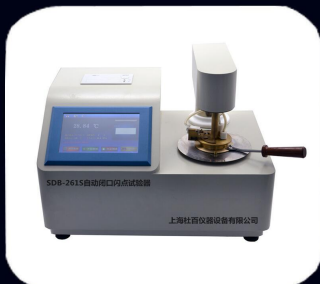
### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 300°C , resolution 0.1°C.
- 2 ) Ignition : Gas source is needed. A electronic igniter is used for ignition.
- 3 ) Colored touch LCD control. Man-machine dialog with prompt menu.
- 4 ) All test procedures are automatic except manual ignition. Air cooling will run after the test.
- 5 ) 120 groups of data can be saved. A built-in printer is equipped.

**Model : SDB-261E Standards : GB/T261, ASTM D93**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 300°C , resolution 0.1°C.
- 2 ) Ignition : Gas source is not needed. Automatic electronic ignition.
- 3 ) Colored touch LCD control. Man-machine dialog with prompt menu.
- 4 ) All test procedures are automatic. Air cooling will run after the test.
- 5 ) 3000 groups of data can be saved. A built-in printer is equipped.



**Model : SDB-261S Standards : GB/T261, ASTM D93**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 300°C , resolution 0.1°C.
- 2 ) Ignition : Electronic ignition and gas ignition can be selected.
- 3 ) 7 inch colored touch high-definition LCD gives perfect user experience.
- 4 ) All test procedures are automatic. Air cooling will run after the test.
- 5 ) 1000 groups of data can be saved. A built-in printer is equipped.

# General Test



## Automatic Kinematic Viscosity Bath



**Model : SDB-265H Standards : GB/T265, ASTM D445**

### Main technical specifications and features

- 1) Temperature range and precision : Ambient ~ 150°C ,  $\pm 0.02^\circ\text{C}$ .
- 2) Timing range and precision : 0 ~ 999s , 0.1s.
- 3) Colored touch LCD control. Man-machine dialog with prompt menu.
- 4) 4 samples can be tested at a time. Average value will be calculated after test.
- 5) 2000 groups of data can be saved. A built-in printer is equipped.

**Model : SDB-265H-1 Standards : GB/T265, ASTM D445**

### Main technical specifications and features

- 1) Temperature range and precision : Ambient ~ 100°C ,  $\pm 0.1^\circ\text{C}$ .
- 2) Timing range and precision : 0 ~ 999s , 0.1s.
- 3) 2 pieces of Ubbelohde viscometers with photoelectric component are equipped for automatic detection.
- 4) Automatic sample feeding. Automatic result measurement. Automatic capillary tube cleaning and drying. A built-in printer is equipped. All test procedures are automatic.



**Model : SDB-265C-3 Standards : GB/T265, ASTM D445**

### Main technical specifications and features

- 1) Temperature range and precision : Ambient ~ 100°C ,  $\pm 0.1^\circ\text{C}$ .
- 2) Timing range and precision : 0 ~ 999s , 0.1s.
- 3) Colored touch LCD control. Man-machine dialog with prompt menu. A built-in printer is equipped.
- 4) It has a function of testing the viscosity index (VI) of lubricating oils.

# General Test



## Automatic Distillation Tester

**Model : SDB-6536D Standards : GB/T6536, ASTM D86**

### Main technical specifications and features

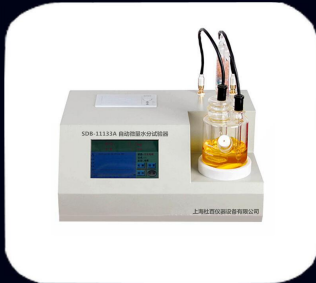
- 1 ) Temperature range and precision : 0~450°C ,  $\pm 0.1^\circ\text{C}$ .
- 2 ) Time period from heating start to initial boiling point : 5 ~ 15min.
- 3 ) Distillation rate (From initial boiling point to 95%) : 4-5ml/min.
- 4 ) Time period from 5ml residue in flask to final boiling point :  $\leq 5\text{min}$ .
- 5 ) Initial boiling point detection : by optical-fiber sensor.
- 6 ) Receiving range and precision : 0 ~ 100ml ,  $\pm 0.1\text{ml}$ .
- 7 ) Colored touch screen controls all test procedures and displays data and curves.
- 8 ) The liquid level tracking system is composed of A high-subdivision step motor, ball screw and linear laser tracker.
- 9 ) Mechanical refrigeration is used in this instrument. Danfoss brand of compressor is equipped. The cooling medium can be added every two years.
- 10 ) It can save and print the test result.



# General Test



## Automatic Karl Fischer Titrator



**Model : SDB-11133A Standards : GB/T 11133, GB/T 7600, SH/T 0246, ASTM D4928, ASTM D1533, ASTM D6304**

### Main technical specifications and features

- 1 ) Electrolytic current : Max 400mA.
- 2 ) Measurement range :  $3\mu\text{g} \sim 100\text{mgH}_2\text{O}$ .
- 3 ) Measurement precision :  $\leq 3\mu\text{g}$  (  $5\mu\text{g} \sim 1\text{mgH}_2\text{O}$  ) .  
 $\leq \pm 0.3\%$  ( over  $1\text{mgH}_2\text{O}$  ) .
- 4 ) A piece of dynamic curve displays electric potential. Automatically judge the end point and buzzing prompt.
- 5 ) 5 kinds of calculation formula can be selected.
- 6 ) 255 groups of test data can be saved. A built-in printer is equipped.
- 7 ) 0.5ul sample injector adopts Austrilian brand for good precision.

**Model : SDB-11133S-1 Standards : GB/T 11133, GB/T 7600, SH/T 0246, ASTM D4928, ASTM D1533, ASTM D6304**

### Main technical specifications and features

- 1 ) Electrolytic current : Max 400mA.
- 2 ) Measurement range :  $3\mu\text{g} \sim 9999.9\text{mgH}_2\text{O}$ .
- 3 ) Measurement precision :  $\leq \pm 20\%$  ( below  $3\mu\text{gH}_2\text{O}$  )  
 $\leq \pm 10\%$  (  $3\mu\text{gH}_2\text{O} \sim 10\mu\text{gH}_2\text{O}$  )  
 $\leq \pm 1\%$  (  $10\mu\text{gH}_2\text{O} \sim 100\mu\text{gH}_2\text{O}$  )  
 $\leq \pm 0.3\%$  ( over  $100\mu\text{gH}_2\text{O}$  )
- 4 ) The electrolytic procedure was intelligent controlled. It avoids the effect of ambient humidity and stirring rate.
- 5 ) The end point of titration can be set. 8 kinds of calculation formula can be selected.
- 6 ) 496 groups of data can be saved. A built-in printer is equipped.
- 7 ) The core components are all adopts chips at industrial grade of America. 0.5ul sample injector adopts Austrilian brand.





# General Test



## Sulfur-in-Oil Analyzer



**Model : SDB-17040 Standards : GB/T 17040, ASTM D4294**

### Main technical specifications and features

- 1 ) Analyzing method : X-ray fluorescence.
- 2 ) Measurement range : 20ppm ~ 5%.
- 3 ) Sample amount : 2 ~ 3ml(depth in cup: 3mm ~ 4mm).
- 4 ) Analyzing period : 60, 120, 240, 300, 600s , settable.
- 5 ) Analyzing times : 2, 3, 5, 10, 50 times, settable.
- 6 ) 9 pieces of calibration curves are saved. 5 of them are linear. The other 4 of them are parabola.
- 7 ) LCD screen. Man-machine dialog. A built-in printer is equipped.
- 8 ) 200 pieces of Mylar films(American or Japan brand) and 200 disposable sample cups are provided.

**Model : SDB-0689 Standards : SH/T 0689, ASTM D5453**

### Main technical specifications and features

- 1 ) Analyzing method : Ultraviolet fluorescence.
- 2 ) Measurement range : (0.2 ~ 10000)mg/L.
- 3 ) Sample amount : (1 ~ 20)mg (solid), (5 ~ 20) $\mu$ L (liquid),  
(1 ~ 5)mL (gas).
- 4 ) Temperature control : Ambient ~ 1100°C ,  $\pm$ 5°C.
- 5 ) Gas source : Argon(99.999% purity) or oxygen(99.999% purity) .
- 6 ) Analyzing period : about 2mins.
- 7 ) European brand of fluorescence source, film dryer and light filter. Metal packaged photomultiplier.
- 8 ) PC control technology. It can control all test procedures automatically.
- 9 ) Large amount of data storage. Test results and working curves can be checked at any time.



# General Test



## Automatic Acid Number Tester

**Model: SDB-264B Standards: GB/T 7304, GB/T 18609, NB/SH/T 0836, ASTM D664**

### Main technical specifications and features

- 1) Analyzing method: Potentiometric titration.
- 2) Acid number measurement range: 3~100 $\mu$ g/g(ppm).
- 3) Potential measurement range: (0~ $\pm$ 1999.5)mV.
- 4) Burette capacity and precision: 10ml,  $\pm$ 0.1%(F·S).
- 5) Titration time: (60 $\pm$ 20)s(F·S).
- 6) Windows system with man-machine dialog. Easy to operate.
- 7) Metrohm brand of titration unit is equipped.



8) Automatically clean and compensate liquid. Feeding liquid at set number. Automatically judge the end point and get rid of the false end point. Automatically save the test results.

**Model : SDB-264S-1 Standards : GB/T 264, GB/T 7599**

### Main technical specifications and features

- 1) Analyzing method: Neutralization extraction.
- 2) Measurement range : 0.001mg KOH/g ~ 1.000mgKOH/g.
- 3) Resolution : 0.001mg KOH/g.
- 4) Test samples : 6 samples.
- 5) 7 inch colored touch high-definition LCD gives perfect user experience.
- 6) Super subdivision step motor drives a precise injection pump. The titration resolution can reach 0.01ul.
- 7) The plunger pump adopts PTFE material. It is not easy to be broken.
- 8) Dynamic differential method is adopted for judging the end point to avoid the affect of ambient light.
- 9) All test procedures are automatic. No need of manual intervention.



# General Test



## Carbon Residue Tester (Micro Method)

**Model : SDB-17144 Standards : GB/T 17144 , ASTM D4530**

### Main technical specifications and features

- 1 ) Temperature of coke tank : 500°C.
- 2 ) Temperature precision :  $\pm 2^{\circ}\text{C}$ .
- 3 ) Flow rate adjustment : 100ml ~ 1000ml/min.  
( Switchable between 150ml/min and 600ml/min automatically )
- 4 ) Test samples : 12 samples.
- 5 ) Colored touch LCD control. Man-machine dialog with prompt menu.
- 6 ) All test procedures are automatic.



## Mechanical Impurities Tester

**Model : SDB-511D Standard : GB/T 511**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 95°C.
- 2 ) Temperature precision :  $\pm 0.2^{\circ}\text{C}$ .
- 3 ) Temperature control mode : Built-in temperature control system.
- 4 ) Test samples : 2 samples
- 5 ) Colored touch LCD control. Easy to operate.
- 6 ) A strong heat resistance circulating pump is equipped. The filtering amount of each sample can be adjusted separately.



# Fules Test



## Octane Number /Cetane Number Tester

**Model : SDB-DW300T Standards : GB/T503, ASTM D2699 ( MON ) ; GB/T5487, ASTM D2700 ( RON )**



### Main technical specifications and features

- 1 ) Measurement range : 50 ~ 120.
- 2 ) Inner diameter of cylinder : 3.5inch(82.55mm).
- 3 ) Range of compression ratio : 4 : 1 ~ 18 : 1.
- 4 ) Valve clearance : 0.20mm(inlet) , 0.25mm(outlet).
- 5 ) Rotating speed of motor : 900±9rpm(MON) , 600±6rpm(ROn).
- 6 ) Designed and manufactured as per ASTM standards strictly.

7 ) Adjustable touch-screen console. Working curves are set in. The test result can be output and connected into the LIMS system.

8 ) ONmanager® software. The status are prompted clearly and in time.

**Model : SDB-DW600T Standards : GB/T 386, ASTM D613**

### Main technical specifications and features

- 1 ) Inner diameter of cylinder : 3.5inch(82.55mm).
- 2 ) Route of piston : 4.5inch(114.3mm).
- 3 ) Range of compression ratio : 4 : 1 ~ 36 : 1.
- 4 ) Rotating speed of motor : 900±9rpm.
- 5 ) Flow rate of oil sprayer : 13.0±0.2ml/min.
- 6 ) Designed and manufactured as per ASTM standards strictly.

7 ) Adjustable touch-screen console. Working curves are set in. The test result can be output and connected into the LIMS system.

8 ) ONmanager® software. The status are prompted clearly and in time.



# Fules Test

## → Octane Number /Cetane Number Tester (Portable)



**Model : SDB-LAB131 Standards : GB/T503, ASTM D2699, GB/T5487, ASTM D2700 ; GB/T 386, ASTM D613**

### **Main technical specifications and features**

- 1 ) Measurement of octane number : 40 ~ 120 ,  $\pm 0.5$ .
- 2 ) Measurement of cetane number : 20 ~ 100 ,  $\pm 1$ .
- 3 ) Measuring period :  $\leq 20$ s.
- 4 ) Sample amount : 70ml.
- 5 ) LCD display. Chinese language and English language are selectable.

6 ) The instrument has a completed database after a long time of data collection. It can measure different kinds of oils as per different needs.

**Model : SDB-QX-G Standards : GB/T503, ASTM D2699, GB/T5487, ASTM D2700 ; GB/T 386, ASTM D613**

### **Main technical specifications and features**

- 1 ) Measurement of octane number : 50 ~ 120 ,  $\pm 1.5$ .
- 2 ) Measurement of cetane number : 25 ~ 75 ,  $\pm 2.6$ .
- 3 ) Measuring period :  $\leq 60$ s.
- 4 ) Sample amount : 150ml.
- 5 ) Small desktop design. Colored touch LCD.
- 6 ) Cetane index can be get after input normal density and mid-boiling point.
- 7 ) The instrument has an automated regression technology based on the test results of ASTM-CFR test machine. The reliability of the test results are highly improved.



# Fules Test



## Automatic Vapor Pressure Tester (Reid Method)

**Model : SDB-8017A Standards : GB/T 8017, ASTM D323**

### Main technical specifications and features

- 1 ) Temperature range : Ambient~100°C ( control at 37.8°C ) .
- 2 ) Temperature precision :  $\pm 0.1^{\circ}\text{C}$ .
- 3 ) Pressure sensor : High precision sensor with 0.01kPa resolution.
- 4 ) Test vessels : 2 vessels ( 3-vessel design is selectable )
- 5 ) Colored touch LCD. The test procedures are automatic.
- 6 ) 2000 groups of data can be saved. A built-in printer is equipped.



## Automatic Oxidation Stability Tester (Induction Period Method)

**Model : SDB-8018D Standards : GB/T 8018, ASTM D525**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 100°C ( control at 100°C ) .
- 2 ) Temperature precision :  $\pm 0.1^{\circ}\text{C}$ .
- 3 ) Pressure range : 0~1600kPa ,  $\pm 2$ .
- 4 ) Test vessels : 2 vessels
- 5 ) Laptop ( or IPC ) control. The test procedures are automatic.



# Fules Test

## → Multifunctional Rapid Low-temperature Tester

Model : SDB-510FR70 Standards : GB/T 510, GB/T 3535, SH/T 0248, ASTM D97

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ -70°C.
- 2 ) Temperature precision :  $\pm 0.5^{\circ}\text{C}$ .
- 3 ) Cooling speed :  $\leq 15\text{min}$ .
- 4 ) Test positions : 2 test positions
- 5 ) Colored touch LCD. Metal-block cooling bath. Danfoss brand of compressor.
- 6 ) Multifunctional use. It can do pour point test, solidifying point test and CFPP test.



## → Oxygen Bomb Calorimeter

Model : SDB-384 Standards : GB/T213, GB/T384

### Main technical specifications and features

- 1 ) Heat capacity : 14400 ~ 14500J/K.
- 2 ) Temperature displays : 0.000 ~ 40.000°C.
- 3 ) Temperature precision :  $\pm 0.003^{\circ}\text{C}$ (within every 5°C).
- 4 ) Test bomb : Stainless steel material.
- 5 ) Capacity of inner and outer vessels : 2.1L(inner) and 51L(outer).
- 6 ) Digital LCD. Button operation. All test procedures are automatic except manual oxygen feeding.



# Fules Test (LPG)



## Density Tester

**Model : SDB-0221 Standards : SH/T 0221, ASTM D1657**

### Main technical specifications and features

- 1 ) Temperature range : 10 ~ 25°C.
- 2 ) Temperature precision :  $\pm 0.1^\circ\text{C}$ .
- 3 ) Temperature controll : Digital temperature controller
- 4 ) Stirring control : Circulating pump
- 5 ) Danfoss brand of compressor is equipped.



## Vapor Pressure Tester (LPG Method)

**Model : SDB-6602 Standards : GB/T 6602, ASTM D1267**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 100°C.
- 2 ) Temperature precision :  $\pm 0.1^\circ\text{C}$ .
- 3 ) Temperature controll : Digital temperature controller.
- 4 ) Stirring control : Circulating pump.
- 5 ) Test vessels : 2 vessels.
- 6 ) Pressure range : 0 ~ 1.6MPa.



## Residues Tester

**Model : SDB-7509 Standards : SY/T 7509, ASTM D2158**

### Main technical specifications and features

- 1 ) Temperature control of cooling bath : 30 ~ -60°C ,  $\pm 0.1^\circ\text{C}$ .
- 2 ) Temperature control of water bath : 38°C ,  $\pm 0.1^\circ\text{C}$ .
- 3 ) Temperature controll : Digital temperature controller.
- 4 ) Stirring control : Motor stirring , 1350rpm.
- 5 ) Danfoss brand of compressor is equipped.





# — Lubricating Oils Test



## Foaming Characteristic Tester

**Model : SDB-12579 Standards : GB/T 12579, ASTM D892, ISO 6247**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 100°C.
- 2 ) Temperature precision :  $\pm 0.1^{\circ}\text{C}$ .
- 3 ) Air flow :  $94\text{mL} \pm 5\text{mL}/\text{min}$ .
- 4 ) Timing range : 0 ~ 99m59s , resolution 1s.
- 5 ) Colored touch LCD. Easy to operate.
- 6 ) 24°C bath and 93.5°C bath are equipped. Flow rate can be controlled separately. A buzzer prompts when test finish.

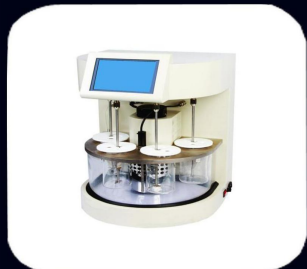


## Rust-Preventing Characteristics Tester

**Model : SDB-11143 Standards : GB/T 11143, ASTM D665**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 100°C.
- 2 ) Temperature precision :  $\pm 0.3^{\circ}\text{C}$ .
- 3 ) Stirring rate :  $(1000 \pm 20)\text{r}/\text{min}$ .
- 4 ) Test samples : 4 samples.
- 5 ) LCD sets and controls. Easy to operate.
- 6 ) 4 groups of test channels are designed. Parameters of each channel can be set independently. 4 samples can be tested at at time.



# — Lubricating Oils Test



## Noack Evaporation Loss Tester

**Model : SDB-0059A Standards : SH/T0059-procedure A, ASTM D5800-procedure A.**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 250°C.
- 2 ) Temperature precision :  $\pm 0.1^{\circ}\text{C}$ .
- 3 ) Pressure adjustment : High precision needle valve and pressure gauge.
- 4 ) Filtering control : Vacuum pump.
- 5 ) Colored touch LCD. Built-in temperature control system.
- 6 ) Designed as per procedure A of SH/T 0059 and ASTM D5800. The heating bath adopts Wood's metal. Good heat conduction.



**Model : SDB-0059A Standards : SH/T0059-procedure B, ASTM D5800-procedure B.**

### Main technical specifications and features

- 1 ) Temperature control : Ambient ~ 500°C ,  $\pm 0.5^{\circ}\text{C}$ .
- 2 ) Pressure control :  $0 \sim 25\text{mmH}_2\text{O}$  ,  $\pm 0.2\text{mmH}_2\text{O}$ .
- 3 ) Vacuum control : Vacuum pump and pressure gauge.
- 4 ) Colored touch LCD. Built-in temperature control system.
- 5 ) It records temperature and pressure value in real time.
- 6 ) It has functions of self-diagnosis and kinds of alarms.
- 7 ) Designed as per procedure B of SH/T 0059 and ASTM D5800. No need of Wood's metal in the heating bath.



# — Lubricating Oils Test



## Automatic Oxidation Stability Tester (RPVOT)

**Model : SDB-0193A Standards : SH/T 0193, ASTM D2272**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 200°C.
- 2 ) Temperature precision :  $\pm 0.1^\circ\text{C}$ .
- 3 ) Pressure sensor : 0 ~ 1.6MPa ,  $\pm 2\%$ .
- 4 ) Speed of rotating unit :  $100 \pm 5/\text{min}$ .
- 5 ) Laptop control. It can control at most 4 sets of tests at a time or separately.
- 6 ) Metal-block bath. No need of liquid medium.



## Engine Oils Apparent Viscosity Tester (CCS Method)

**Model : SDB-6538 Standards : GB/T 6538, ASTM D5293**

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ -60°C (the cooling bath).
- 2 ) Temperature precision :  $\pm 0.1^\circ\text{C}$  (cooling bath) and  $\pm 0.02^\circ\text{C}$  (stator).
- 3 ) Viscosity measurement range : 1500 ~ 27000mPa.s.
- 4 ) Colored touch-screen IPC control. Windows system. Easy to operate.
- 5 ) Danfoss brand of compressor. Cascade refrigerating unit.
- 6 ) Automatically detect the rotating speed. Rotating knob controls the electric current.



# — Lubricating Oils Test

## → High-Temperature and High-Shear Rate Apparent Viscosity Tester

Model : SDB-H1705 Standards : SH/T0703, ASTM D5481

### Main technical specifications and features

- 1 ) Temperature range : Ambient ~ 180°C.
- 2 ) Temperature precision :  $\pm 0.1^\circ\text{C}$ .
- 3 ) Pressure display : Digital pressure gauge.
- 4 ) Time display : Digital timer.
- 5 ) Working units : 5 units.
- 6 ) Measurement efficiency : 15~20 samples per hour.
- 7 ) Calculation : Appropriative HTHS viscosity calculation software.
- 8 ) Initiate design in China.



# — Lubricating Oils Test (Power Plant)

## → Automatic Interfacial Tension Tester

**Model : SDB-6541 Standard : GB/T 6541**

### **Main technical specifications and features**

- 1 ) Measurement range : (2 ~ 400)mN/m.
- 2 ) Measurement precision :  $\pm 0.1$ mN/m.
- 3 ) Repeatability : 0.3%.
- 4 ) LCD screen with none-label buttons.
- 5 ) Electromagnetic balance sensor provides good precision and linearity .
- 6 ) Only one point is needed to be calculated during calibration. Easy to operate.
- 7 ) All test procedures are automatic. 300 groups of test data can be saved. A built-in printer is equipped.



## → Insulating Oil Breakdown Voltage Tester

**Model : SDB-507S-1 Standards : GB/T507-2002, DL4291, DL/T846.7-2004**

### **Main technical specifications and features**

- 1 ) Capacity of voltage booster : 1.2 kVA.
- 2 ) Boosting rate : 1.0 kV/s—10 kV/s , settable.
- 3 ) Voltage output : 0 ~ 80 kV.
- 4 ) Test precision : 0.01kV.
- 5 ) 7 inch colored touch high-definition LCD gives perfect user experience.
- 6 ) AVR series of SCM control. Single cup structure. All test procedures are automatic.
- 7 ) The breakdown voltage value and the average vallue can be printed after each test. 500 groups of test data can be saved.



# — Lubricating Greases Test



## Dropping Point Tester

**Model : SDB-4929 Standards : GB/T 4929, ASTM D566**

### Main technical specifications and features

- 1 ) Oil cup : 600ml.
- 2 ) Grease cup : Chromium-plated brass material
- 3 ) Test tube : Heat resistance borosilicate glass tube
- 4 ) Stirring motor : 60rpm.
- 5 ) Small desktop structure. Can test 2 samples at a time.



## Penetrometer

**Model : SDB-2801C Standard : GB/T 4509, GB/T269, JTG E20-2011/ T0604-2011, ASTM D217, ASTM D5**

### Main technical specifications and features

- 1 ) Measurement range : 0 ~ 600 penetration.
- 2 ) Reading resolution : 0.1 penetration.
- 3 ) Cone releasing route :  $\geq 62\text{mm}$ .
- 4 ) Timer : 5s,  $\pm 0.02\text{s}$ .
- 5 ) Bitumen needles are optional for bitumen penetration test.
- 6 ) Both coarse and fine adjusting knobs are equipped. Self-locking function is set. Easy to operate.



## Mechanical Grease Worker

**Model : SDB-269 Standard : GB/T269 , ASTM D217**

### Main technical specifications and features

- 1 ) Stroking rate :  $60 \pm 10$  strokes per min.
- 2 ) Rotating speed : 1400rpm.
- 3 ) Worm speed reducer : Double shaft reducer.
- 4 ) Transmission ratio : 25 : 1.
- 5 ) It displays the stroking times on a counter.



# — Lubricating Greases Test



## Roll Stability Tester

**Model : SDB-0122 Standards : SH/T 0122, ASTM D1831**

### Main technical specifications and features

- 1 ) Temperature range in the tank : Ambient ~ 80°C.
- 2 ) Stainless steel cylinder : Speed  $165 \pm 15$ rpm. Double cylinder design.
- 3 ) Roller :  $\Phi 90 \times 180$ mm , 5kg.
- 4 ) Heating mode : PTC ceramic heating.
- 5 ) A built-in timer is equipped. It will buzzer after reach to specified test time.



## Water Washout Characteristics Tester

**Model : SDB-0109 Standards : SH/T 0109, ASTM D1264**

### Main technical specifications and features

- 1 ) Temperature range : Amient ~ 100°C.
- 2 ) Temperature precision :  $\pm 3^\circ\text{C}$ (control at 38°C and 79°C).
- 3 ) A water pump controls the water sprays onto the bearing at a required flow rate.
- 4 ) A built-in timer is equipped. It will buzzer after reach to specified test time.



## Load Carrying Capacity Tester ( Four Balls Method )

**Model : SDB-269 Standards : GB/T 3142, SH/T 0189, SH/T 0202, SH/T 0204**

### Main technical specifications and features

- 1 ) Temperature control : Ambient ~ 75°C ,  $\pm 2^\circ\text{C}$ .
- 2 ) Rotating speed of the principal axis : 1000 ~ 1800rpm , adjustable.
- 3 ) Test load : 15Kg , 40Kg.
- 4 ) Max. load : 800Kg.
- 5 ) Microscope : 40 times and 100 times are selectable.
- 6 ) A built-in timer can stop the motor after test finish.
- 7 ) A built-in overload protection unit is equipped. It will stop the motor automatically when the four balls sintering.



# Crude Oil Test



## Crude Oil Distillation Tester

Model : SDB-26984B Standard : GB/T 26984

### Main technical specifications and features

- 1) Temperature range : 0 ~ 80°C.
- 2) Temperature precision :  $\pm 0.1^\circ\text{C}$ .
- 3) Temperature control : Digital temperature controller.
- 4) Distillation flask : 125mL.
- 5) Measuring cylinder : 100mL , scale division 1mL.
- 6) Double unit design.



## Wax, Gum, Asphaltene Content Tester

Model : SDB-7550 Standards : ZBE 21002, SY/T7550

### Main technical specifications and features

- 1) Temperature range of cooling bath : 0 ~ -30°C.
- 2) Temperature range of water bath : Ambient ~ 90°C.
- 3) Temperature precision :  $\pm 0.2^\circ\text{C}$ .
- 4) Temperature control : Digital temperature controller.
- 5) Power of heat compensater : 400W.



## Oil Sampler

Model : SDB-CY Standards : GB/T 4756, GB/T 6680



## Sampling Rope





# Asphalt Test



## Ductility Test Machine

**Model :** SDB-4508G **Standard :** GB/T 4508 , JTG E20-2011/T0605, ASTM D113

### Main technical specifications and features

- 1 ) Ductility distance : 1.5m (  $\pm 10$ mm ) .
  - 2 ) Ductility precision : 1mm.
  - 3 ) Test speed : 10 mm/min , 50mm/min. Selectable.
  - 4 ) Temperature range : 0~60°C.
  - 5 ) Temperature precision :  $\pm 0.1^\circ\text{C}$  ( within 60min ) .
  - 6 ) Color touch screen. Can stand by in 360°. All parameters and curves can be displayed on the screen.
- Ductility test of 3 samples and force test of 2 samples can be done in the same time. 100 groups of data can be saved. A built-in printer is equipped for printing.



## Softening Point Tester

**Model :** SDB-2806H **Standard :** GB/T 4507 , JTG E20-2011/T0606, ASTM D36

### Main technical specifications and features

- 1 ) Temperature range : 5 ~ 180°C.
- 2 ) Temperature precision :  $\pm 0.2^\circ\text{C}$ .
- 3 ) Heating rate : (  $5 \pm 0.5$  ) °C/min.
- 4 ) Pt100 temperature sensor is equipped.
- 5 ) 4 samples can be tested at a time.
- 6 ) LCD screen. A built-in printer is equipped for printing.



## Rolling Thin Film Oven

**Model :** SDB-0610 **Standard :** JTG E20-2011/T0610, ASTM D1754

### Main technical specifications and features

- 1 ) Test temperature : 163°C.
- 2 ) Test precision :  $\pm 0.5^\circ\text{C}$ .
- 3 ) Rolling rate of circular metal carriage : (  $15 \pm 0.2$  ) r/min.
- 4 ) Air flow rate : (  $4000 \pm 200$  ) ml.
- 5 ) 8 samples can be tested at at time.
- 6 ) A digital temperature controller is equipped. An air compressor is built inside. Low noise. The timer is built inside to control the test time. It will sound a music after the test time is over.



# Asphalt Mixture Test



## Automatic Asphalt Extractor

Model : SDB-0722A Standard : JTG E20-2011/T0722

### Main technical specifications and features

- 1 ) Sample capacity : 1000~3000g.
- 2 ) Extracting precision : 0.1%.
- 3 ) Extracting interval : 20~40min/time.
- 4 ) Extracting speed : 6000rpm.
- 5 ) LCD screen shows the test status in real time.
- 6 ) Built-in cooling circulation system saves water. No need to remove water manually during the test. The instrument can do extraction, recycle the trichloroethylene and mineral powder automatically.



## Marshall Stability Test Machine

Model : SDB-0709C Standard : JTG E20-2011/T0709

### Main technical specifications and features

- 1 ) Lifting rate of the sample holder :  $50 \pm 5$ mm/min.
- 2 ) Moving distance of the sample holder : Max 70mm.
- 3 ) Force testing range and precision : 0~50.00kN,  $\pm 0.1$ kN.
- 4 ) Displacement testing range and precision : 0~20.00mm,  $\pm 0.01$ mm.
- 5 ) The instrument can load, stop working, collect and display test data, judge and maintain the peak value, print test result automatically.



## Wheel Tracking Test Machine

Model : SDB-0719C Standard : JTG E20-2011/T0719

### Main technical specifications and features

- 1 ) Temperature precision in the test case :  $\pm 0.2^{\circ}\text{C}$ (45min) ,  $\pm 0.1^{\circ}\text{C}$ (60min).
- 2 ) Temperature precision in the water trough :  $\pm 0.5^{\circ}\text{C}$ (30min) ,  $\pm 0.2^{\circ}\text{C}$ (45min).
- 3 ) Displacement testing range precision :  $\pm 0.01$ mm ( $\pm 0.05$ mm in big ranges).
- 4 ) Round-trip speed of the wheel tracking : 42 times/min.
- 5 ) Surface hardness of the wheel tracking :  $78 \pm 2$  (  $60^{\circ}\text{C}$  ) .
- 6 ) Load of the wheel tracking :  $0.7\text{MPa} \pm 0.05\text{mpa}$  ( before leaving factory )
- 7 ) Sample amount : 3 pcs
- 8 ) Automatically control temperature, generate , save and print test result.



# — Lab Glassware



No.	Category	Products
1	Test tube	Kinds of test tubes.
2	Funnel	Kinds of funnels.
3	Flask	Kinds of flasks and beakers.
4	Measuring vessel	Measuring cups, measuring cylinders, burettes...
5	Capillary viscometer tube	Pinkevitch, Ubbelohde, Cannon-Fenske Routine, Cannon-Fenske Opaque...
6	Thermometer	Standard thermometers, kinds of petrochemical thermometers, ASTM thermometers...

# — Lab Furniture



No.	Category	Products
1	Test bench	Instrument bench, balance bench, center test bench, unilateral test bench...
2	Fume cupboard	All-steel fume cupboard, PP fume cupboard...
3	Function cupboard	Drug ( Sample ) cupboard, vessel cupboard, gas cylinder cupboard...
4	Other auxiliary	Water tank, water faucet, lab seat...



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E-mail : sales01@dobetter-china.com

service01@dobetter-china.com

Website : www.dobetter-china.com