保定普世电器制造有限公司
Baoding Push Electrical Manufacturing Co,.LTD

01 Insulation Oil Breakdown Voltage Tester

Product overview

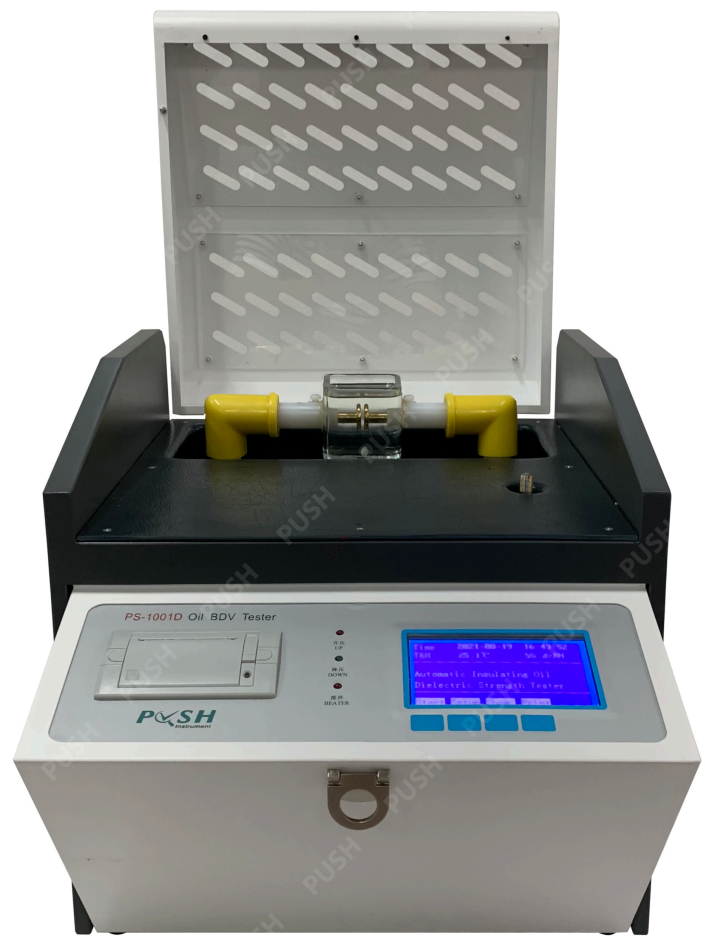
Insulation oil breakdown voltage tester is our company's scientific research and technical personnel, play its own advantages, after many field tests and long-term unremitting efforts, carefully developed high accuracy, full digital industrial instruments. The machine is easy to operate and beautiful in appearance. Due to the use of fully automatic digital computer control, the measurement accuracy is high, anti-interference ability is strong, safe and reliable.

Standard：IEC156、
ASTM D1816、
ASTM D877、
GB507-86 、
DL-T429.9.

Three Configuration of Single Cup

PS-1001

PS-1001B



PS-1001D

Technical indicators

Output voltage	0~80 kV(or 0-100kV)
THVD	<1%
Boosting rate	0.5~5.0 kV/s
Booster capacity	1.5 kVA
Measurement accuracy	±2%
Supply voltage	AC 220 V&127V±10%
Power frequency	50 Hz/60Hz
Power	200 w
Applicable temperature	0~45℃
Applicable humidity	<85 % RH

Functions and characteristics

- The instrument is controlled by a large capacity single chip microcomputer, and the working is stable and reliable.
- There is a wide range watchdog circuit in the instrument to eliminate the malfunction phenomenon.
- Various operation choices can be adapted to different users'multiple choices.
- The instrument using special one-time glass cup molding technology, preventing the occurrence of oil spills and other interference phenomenon.
- The unique high voltage terminal sampling design of the instrument allows test values to directly enter the A/D converter, avoiding the errors caused by analog circuits, and making the testing results more accurate.
- The instrument has the over current, overvoltage, short circuit protection function. It has very strong anti-interference ability and good electromagnetic compatibility.
- Portable structure, easy to move, easy to use both indoor and outdoor.

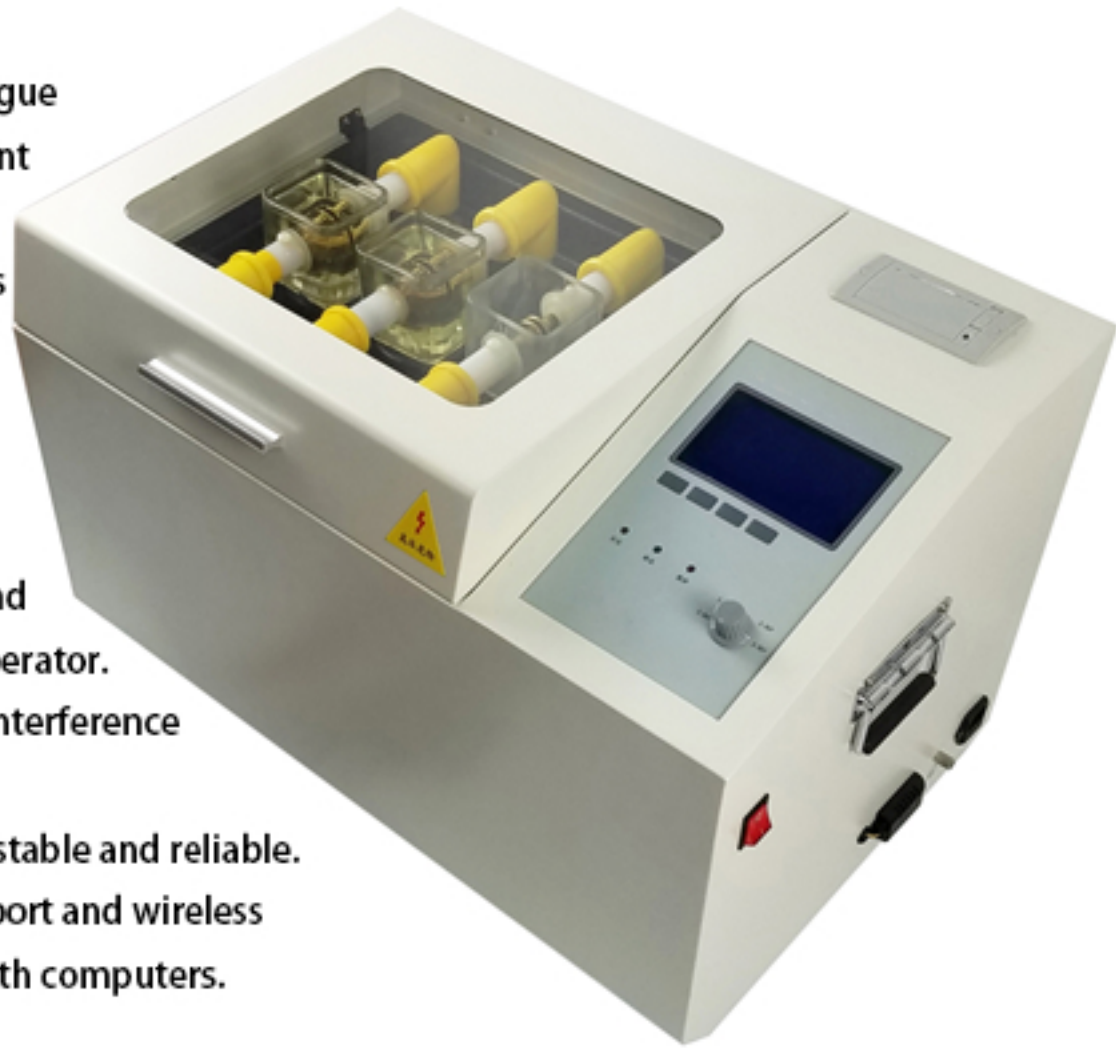
- The instrument using special one-time glass cup molding technology, preventing the occurrence of oil spills and other interference phenomenon.
- Cup volume: 200 ml, 300 ml, 500 ml.
- Cup Electrode:Disk Electrode, Mushroom(Shaped)Electrode, Spherical Electrode

1：Mushroom(Shaped)Electrode
2：Disk Electrode
3：Spherical Electrode

PS-1003 (Three cups)

Functions and characteristics

1、The instrument is designed for three cups.
2、5.4 inch LCD display, English menu man-machine dialogue is convenient, with temperature, humidity measurement and clock display function.
3、The operation is simple, and it automatically completes the operation of lifting, holding, stirring, static setting, calculation, data storage and printing and output.
4、It has the function of power loss and storage, and the test results can be saved automatically.
5、It has the function of overvoltage, over current, limit and grounding alarm to ensure the personal safety of the operator.
6、The unique waveform setting function eliminates the interference of the harmonic to the accurate measurement.
7、Controlled by dual CPU and PLC security instrument is stable and reliable.
8、The device can be equipped with 232, USB, Bluetooth port and wireless transmission function to facilitate data transmission with computers.



Technical indicators

Output voltage	0~80 kV(or 0-100kV)
THVD	<1%
Boosting rate	0.5~5.0 kV/s
Booster capacity	1.5 kVA
Measurement accuracy	±2%
Supply voltage	AC 220 V&127V±10%
Power frequency	50 Hz/60Hz
Power	200 w
Applicable temperature	0~45℃
Applicable humidity	<85 % RH
Width * height * depth	65×41×43(cm)
Net weight	~ 39kg

PS-1006 (Six cups)

Technical indicators

Output voltage	0~80 kV(or 0-100kV)
THVD	<1%
Boosting rate	0.5~5.0 kV/s
Booster capacity	1.5 kVA
Measurement accuracy	±2%
Supply voltage	AC 220 V&127V±10%
Power frequency	50 Hz/60Hz
Power	200 w
Applicable temperature	0~45℃
Applicable humidity	<85 % RH
Width * height * depth	77×68×75(cm)
Net weight	~ 70kg

02 Insulation Oil Dielectric Loss and Volumetric Resistivity Tester

Model: PS-2000A/2000B/2000C/2001A

Standard: IEC60247-2004、GB/T5654-2007

PS-2001A

PS-2000A/2000B/2000C

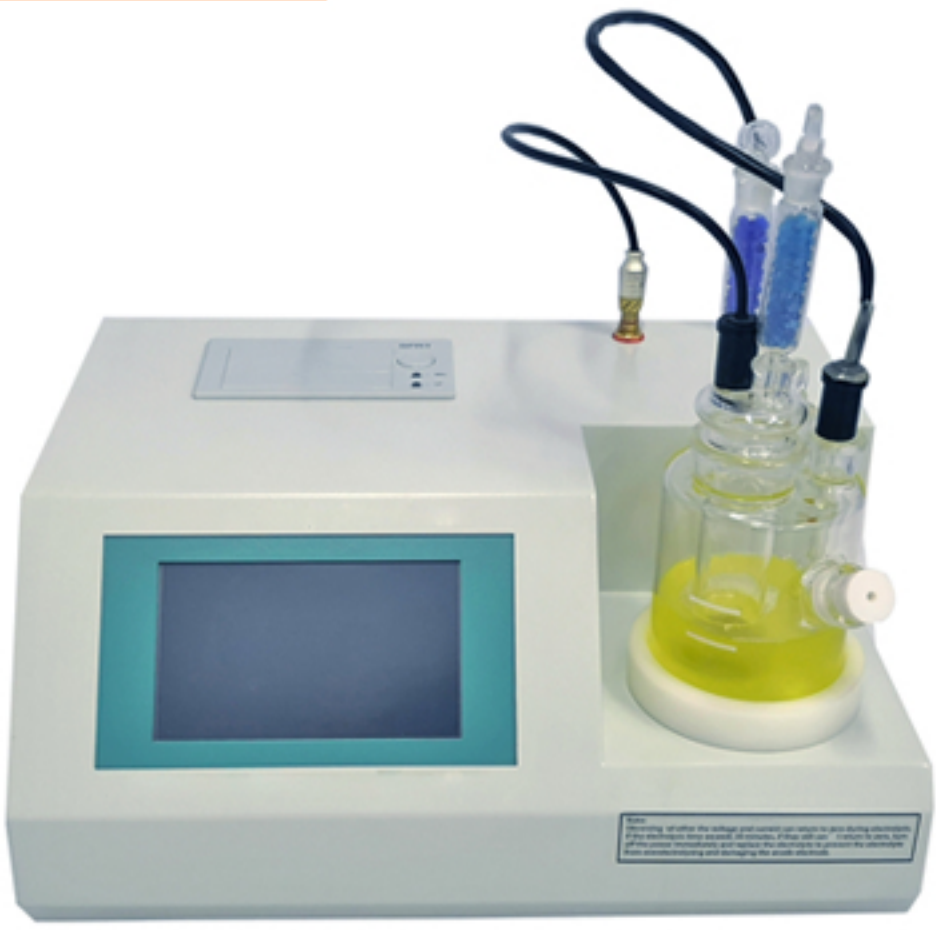
Model	PS-2001A	PS-2000A	PS-2000B	PS-2000C
Testing items	Dielectric loss resistivity both	Dielectricloss resistivity both	Dielectric loss soley	Resistivity soley
Difference between PS-2001A, PS-2000A	PS-2001A can automatically clean the oil cup without removing the oil cup.			

Technical indicators

Parameter		Index	Parameter		Index
measure Range	Capacitance	5pF～200pF	Resolution	Capacitance	0.01pF
	Dielectric loss	0.00001～100		Dielectric loss	10^{-5}
	Resistivity	2.5MOm～ 20TOm		Resistivity	0.001M
Measure accuracy	Capacitance	0.5%+1PF	Control accuracy		±0.5℃
	Dielectric loss	±(1%Reading+0.0001)	Temperature range		0～125 ℃
	Resistivity	±10%Reading	AC voltage		AC 0~2200V
			DC voltage		DC 0~600V
Ambient temperature		0～40℃	Ambient humidity		＜80%RH
Working power supply		AC 220V/127V ±10% 50Hz/60Hz	Size		420mm*380mm*385mm
Power		100 W	Weight		25Kg

03 Karl Fischer titrator (coulomb titration)

PS-KF106C



Standard:

IEC 60814、ASTM D1533、GB/T 7600-1987

Technical Parameter

Measuring range: 0μg-200mg
(Typical value: 10μg-100μg)
Measurement accuracy: 3μg-1000μg ≤±3μg
≥1000μg ≤±0.2%
Electrolysis current: 0-400mA
Resolving power: 0.1μg
Power: ≤35w
Applicable temperature: 10~40℃
Applicable humidity: <85% RH
Width xhigh x depth: 33 *26 * 22(cm)
Net weight : ~ 8kg

PS-K F 106A

Technical Parameter

Determination range: 0ug ~200mg
(typical value 10ug to 100ug)
Electrolysis current: 0-400mA
Sensitivity threshold: 0.1ug
Accuracy: 5ugH_2O~1mgH_2O ±2ug,1mg H_2O above 0.3%
(without sampling error, ambient humidity error)
Sample type: solid, liquid and gaseous
Display mode: 64K color high definition touch display
Data storage: 1000 test records
State indication: dynamic curve, text display
Stirring speed regulation:
sliding touch control panel speed regulation
Date time: ten years' normal running time of power off
Applicable temperature: 5~35℃
Applicable humidity: ≤85%

PS-K F 106

Automatic adding and discharging reagent

Standard:ISO 10337-1997、ASTM D4928、
ASTM D6304-2007 ASTM E1064-2008、
Titration:coulometric titration(Coulomb analysis)
Determination range: 0ug ~200mg (typical value 10ug to 100ug)
Electrolysis current: 0-400mA（Auto-Control）
Sensitivity threshold: 0.1ug
Accuracy: 10ug~1000ug±3ug 5ug
1mg H_2O above 0.3%
Keyboard: Touch Screen + Physical Keyboard
On-line: data can be transmitted with balance and computer
Printer: micro thermal printer, paper width 56mm
Power: <40VA
Applicable temperature: 5~40℃
The use of environmental humidity: ≤85%
Volume: 32×28×20(cm) **Weight:** about 2.5kg

Karl Fischer titration

04 Flash point tester

PS-BS303A Closed cup flash point tester

Standard: ASTM D93、GB/T 261-2008

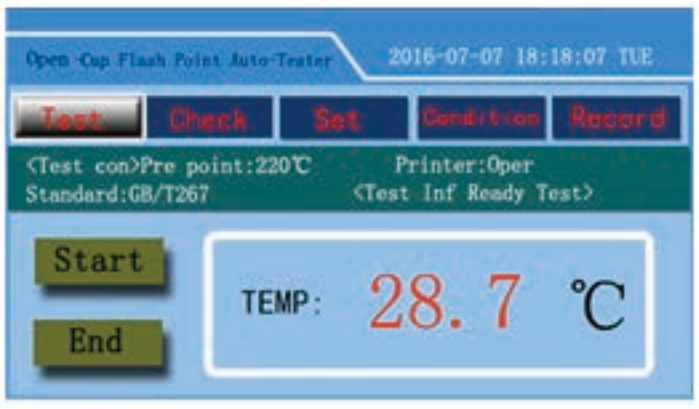
Test method	Pensky-Martens
Temperature Measurement	RT–400℃
Measurement Accuracy	≥110℃ ±2℃ ≤110℃ ±1℃
Repeatability	0.5%
Resolution	0.1℃
Supply Voltage	AC 220 V ±10%(Customizable)
Power frequency	50 Hz /60Hz±2%
Power	200 w
Applicable temperature	10~40℃
Applicable Humidity	<85 % RH
Width * high * depth	410mm*290mm*310mm

PS-KS403 Open cup flash point tester

Standard: ASTMD92 (GB3536-2008), GB267-88

Technical indicators

Test method	Cleveland	
Display mode	High definition color touch screen	
Range	40~400℃	
Resolving power	0.1℃	
Accuracy	±2℃	
Repeatability	±3℃	
Reproducibility	≤5℃	
Ambient temperature	5~40℃	
Relative humidity	10%~85%	
Power Supply	AC220V±10%	50Hz/60Hz±5%
Power	550W	



05 Automatic oleic acid value tester

Model：PS-2003/2006

Standard：GB/T 264-83

- Three cup(six cup) design is suitable for testing the acid value of transformer oil and turbine oil；
- It automatically completes the operation of extractant addition, neutralization titration and endpoint discrimination, acid value calculation, data storage and printout；
- It is not necessary to prepare self extracting liquid and neutralizing liquid, etc. the average test time of oil sample is about 2 minutes；
- The resistive touch screen is bright and elegant with accurate input parameters and stable and reliable performance；
- Power off storage function, which can store the latest 100 test results;
- The automatic calibration function of the standard acid can eliminate the system error and guarantee the accuracy of the determination result；
- Large capacity and high efficiency carbon dioxide and water purification system ensures the stability of neutralization liquid concentration；
- The design of the chassis is simple and reasonable, the size is small and exquisite, the appearance is elegant and generous；
- Equipped with USB and wireless transmission interface, easy to connect with computer.

PS-2003(Three cup)

PS-2006(Six cup)

Technical indicators

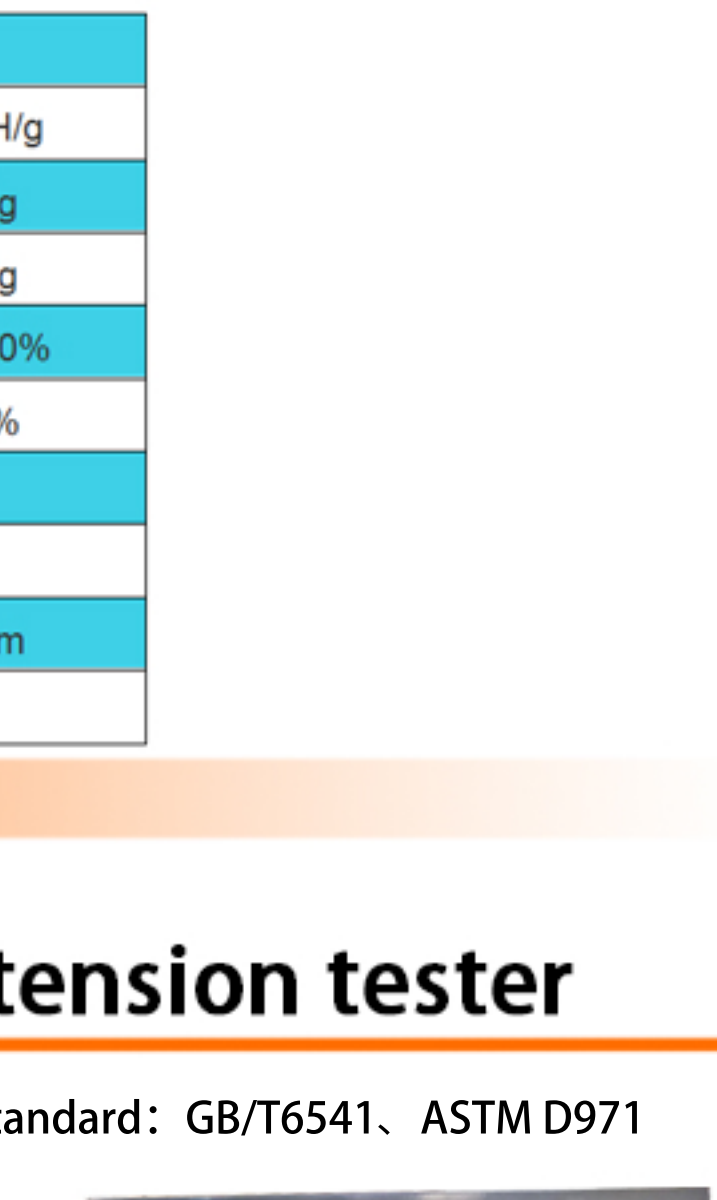
Name	Indicators
Range of acid value	0.001～1mg KOH/g
Minimum resolution	0.001 mg KOH/g
Indicator repeatability	0.002 mg KOH/g
Supply voltage	AC 220V/127V±10%
Power frequency	50 Hz/60Hz ±2%
Applicable temperature	0～45℃
Applicable humidity	＜85 % RH
Width * height * depth	420×190×340mm
Weight	～9kg

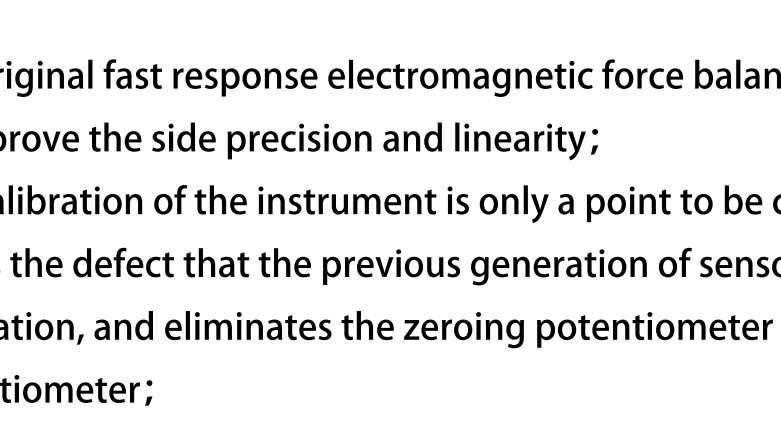
06 Automatic oil interface tension tester

Model：PS-ZL203

Standard：GB/T6541、ASTM D971

- The original fast response electromagnetic force balance sensor is used to improve the side precision and linearity；
- The calibration of the instrument is only a point to be calibrated, which solves the defect that the previous generation of sensors need multi point calibration, and eliminates the zeroing potentiometer and the full range potentiometer；
- The value of the equivalent tension and the current weight are displayed in real time；
- Integrated temperature detection circuit, automatic temperature compensation for the result of measurement;
- 240*128 dot matrix LCD display, no identification key, with screen protection function;
- A time - marked history record with up to 255 data stored；
- Built in high speed thermosensitive printer, printing beautiful, fast, with offline printing function.





Technical indicators

Name	Indicators
measuring range	0-200mN
Accuracy	0.1% reading ±0.1 mN/m
sensitivity	0.1 mN/m
Resolution	0.1 mN/m
supply voltage	AC 220 V ±10%
Power frequency	50 Hz ±2%
Power	≤20W
Applicable temperature	10~40℃
Applicable humidity	<85 % RH
Width * high * depth	200mm*330mm*300mm
Net weight	~ 5kg

07 Gas Chromatograph

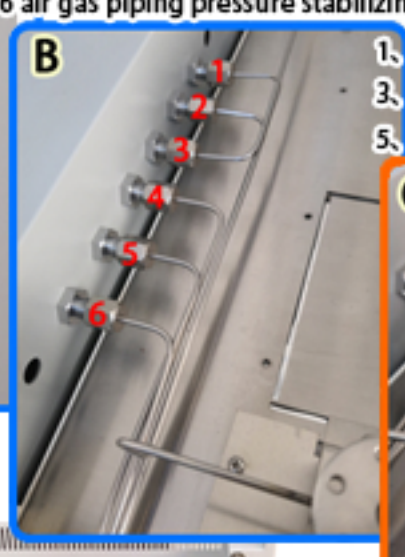
Model：PS-8001

HS code: 9027201100

- Temperature control area: 6 channels
- Temperature range:

  RT+5℃~400℃; incremental:1℃; Accuracy: ±0.1℃.
- Temperature programmed order: 16 order.
- Lift rate: 0.1~40℃/min.
- Control of gas path: choice of control mode of mechanical valve and control mode of electronic pressure flow.
- External events: 4 channels.
- Type of injector: filling column, capillary, six way valve gas injection, automatic headspace injection, etc.
- The number of detectors: 4; FID, TCD, ECD, FPD (optional).
- Start sampling: manual and automatic selection.
- Communication interface: Ethernet: IEEE802.3.

1、2 Carrier gas gas piping pressure stabilizing valve
3、4 hydrogen gas piping pressure stabilizing valve
5、6 air gas piping pressure stabilizing valve



1、2 Carrier gas gas piping,
3、4 hydrogen gas piping,
5、6 air gas piping

Sampling system: Gas Released from Transformer Oil after Oscillation are injected from here, and the carrier gas is pushed into the column.

column, When the sample in the vaporization state is carried by the carrier gas and enters the column, the components in the sample will be separated due to different flow velocity.

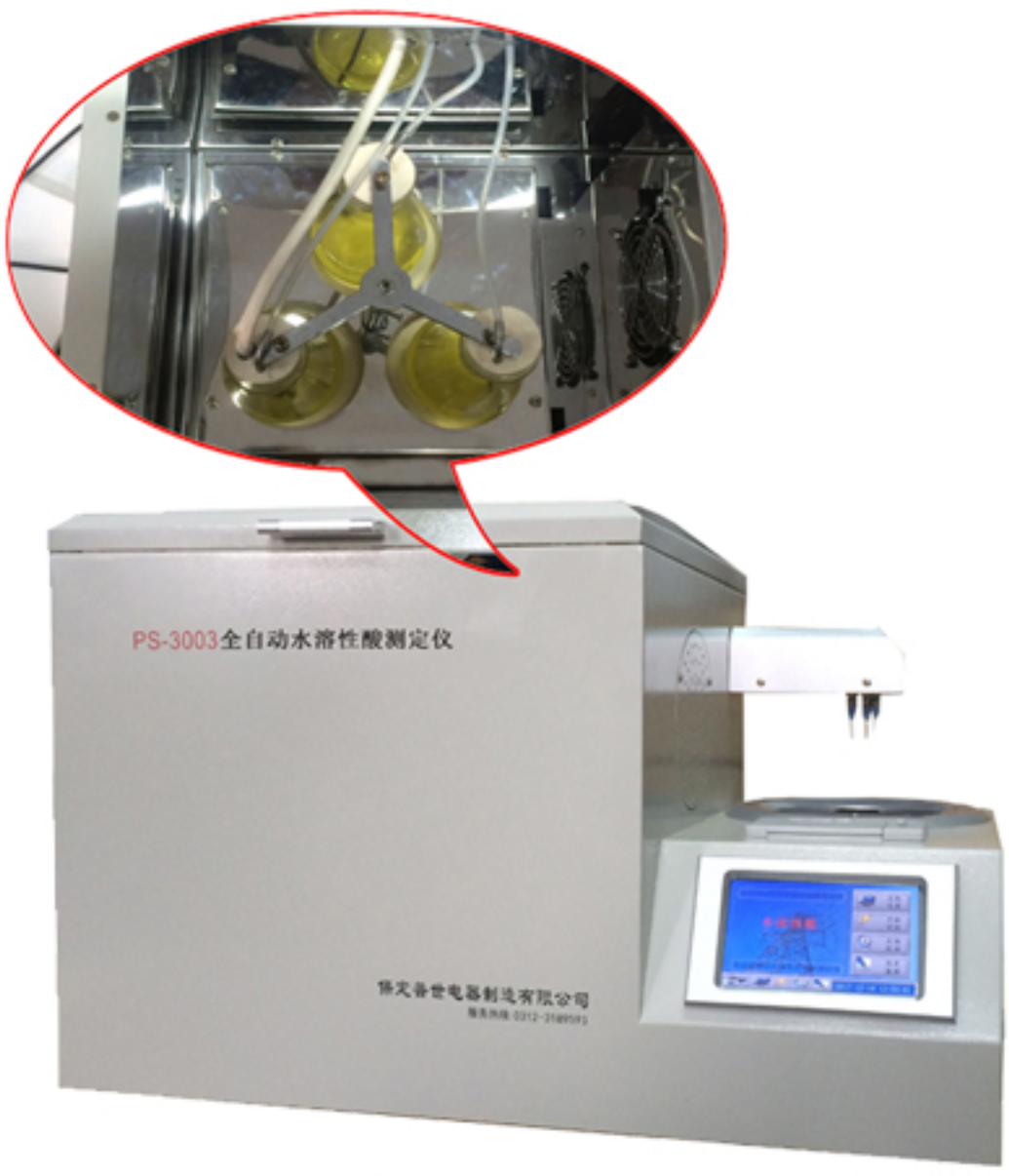
F:
Detector: when the different components of the sample are separated in the column, they will enter into the detector for detection.

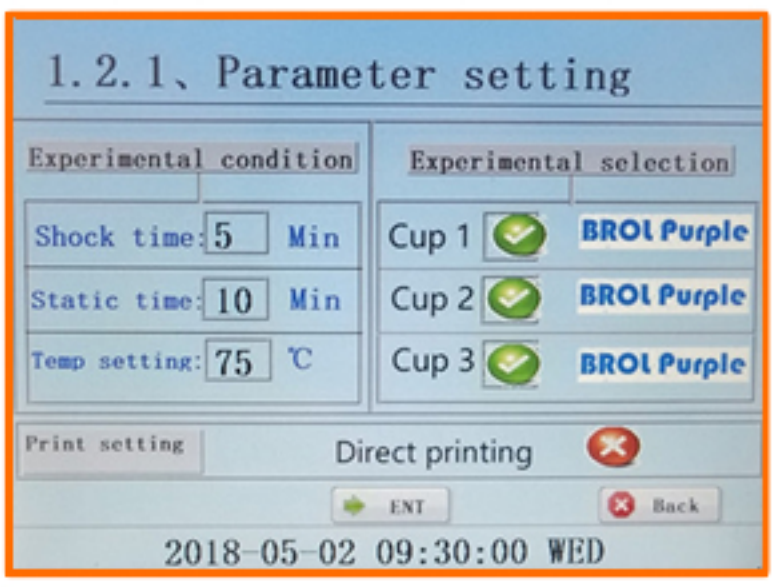
E:
1 is a converter.
2 is a thermal conductivity detector

08 Automatic water soluble acid tester

Model：PS-3003

Standard：GB/T7598-2008





Technical indicators

Name	parameter
Measuring range	3.6-7.0PH
Measurement error	≤± 0.1PH
Constant temperature precision	±2℃
resolution	0.1PH
Power voltage	AC 220 V /127V±10%
Power frequency	50 Hz/60Hz ±2%
power	≤35w
Ambient temperature	10～40℃
Relative humidity	< 85 % RH
Length * width * height	590mm*350mm*390mm
Net weight	～ 23kg

- It can measure 1-3 samples at one time.
- Large screen LCD display, controlled by microprocessor, is easy to operate.
- Simple operation, automatic completion of heating, constant temperature, oscillation, sampling, testing, cleaning, printing and other operations;
- It has the advantages of high measurement accuracy, fast speed and stable and reliable measurement data.

09 Automatic Viscometer

Model: PS-YN1300

Standard: ASTMD7279, D445, D446/GB265

- Highly automation. No need operator always standby the instrument.After operator drop the sample to the instrument, it automatically test,calculate, and store the results.The operator can do the other task during the test. The instrument can test up to 200 samples per day.
- Clean and dry step is very convenient,no need remove the tub from the instrument,no need separate dry oven. The volume of the detergent is about 20 mL per sample.It can save more than 90% detergent than tradition method. The total clean and dry step is about 2 to 3 min.
- The volume the sample is very little, and the test efficiency is very high. The volume of the sample is about 0.3 to 0.5 mL. The full test steps is from 3 to 10m minutes according to the sample viscosity.
- Equipped with vacuum pump , no need compressed air.
- The Hollow glass and special thermal insulation method ensure the stable temperature.

The usages			
Application field : The new lub oil and the used oil , including the the transparent,opaque and black liquids			
Range of measurements : 0.3-1000 mm2/s			
Test efficiency: Up to 60 samples / hour, (For VG320 oil, it' s about 24 samples / hour)			
The quantity of the Viscometers: 4 " S"viscometers in one instruments, the size of the viscometer is custom - made.			
Operation parameters			
Operation method: 10" touch screen.No need separated PC, No press button on the instrument.			
Drop sample style: Manually			
Sample volume: 0.2-0.6 mL			
Detergent: Solvent oil			
The volume of the detergent: about 20mL/sample			
Clean style: Drop 20mL detergent to the tube, it will take 2 to 3 minutes to complete the clean and dry step.			
Dry style: Completed the dry step without remove the viscometer tub from the instrument.			
Temperature control and timing accuracy			
Temperature scope	20 ~ 100℃ (If the test temperature below the 40℃, the freezer is needed)		
Temperature accuracy	0.01℃		
Timing accuracy	0.01s		
Other parameters			
Vacuum pressure	1 Bar		
Data storage	USB disc, or print		
Data transport	Com port,(wireless is option)		
Power supply	220V / 50Hz		
Power	Less than 2kW		
Dimensions	70cm, 32cm, 50cm		
Weights	30Kg		
Consumables			
Viscometer tub	Calibration oil	The tips of the pipette	detergent

Kinematic viscosity tester

Model: PS-YN1301

Standard: GB/T265-1988

- Using imported sensors and digital PID temperature control technology, the range of temperature control is wide and the temperature control precision is high.
- large screen color touch liquid crystal display, simple operation, convenient human-computer dialogue. room temperature to 130 degrees can be set at any temperature for temperature control.
- It can store the test results automatically, and can store 100 sets of data.
- No electricity calendar clock, start automatically display the current time.
- It has many advantages, such as high precision, fast speed, stable and reliable data.

Technical indicators

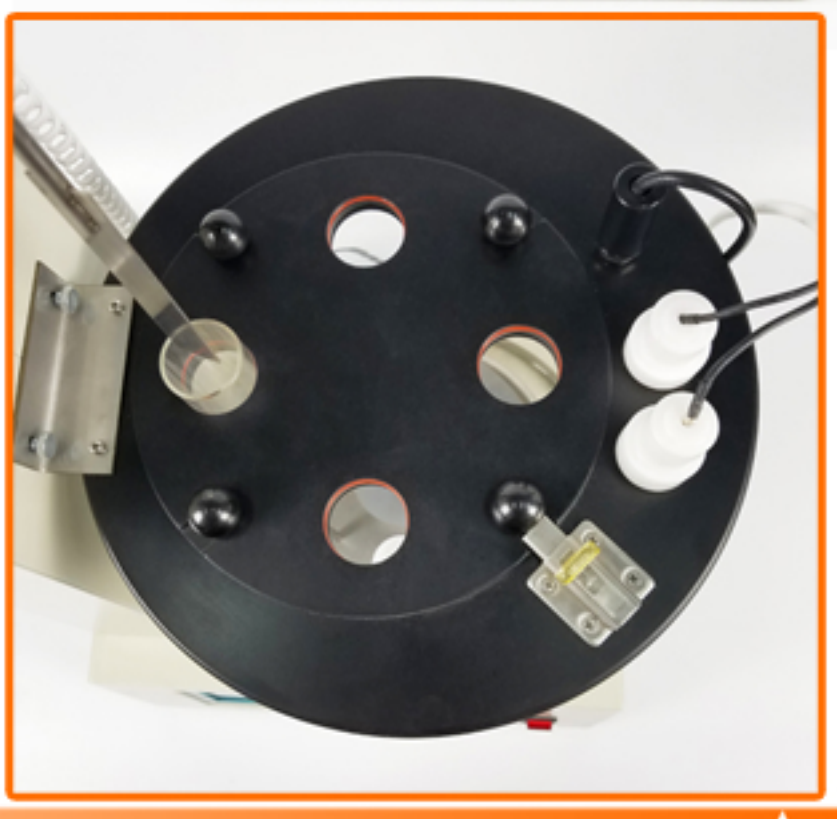
Number of liquid bath holes	4
Temperature range	RT-130℃
Constant	±0.1℃
Measurement accuracy	±0.01℃
Supply voltage	AC 220 V/127V ±10%
Power frequency	50 Hz/60Hz ±2%
Power	1500W
Applicable temperature	10~40℃
Applicable humidity	<85 % RH
Width*height * depth	390mm*260mm*240mm
Net weight	~ 18kg

10 Anti emulsifying tester

Model: PS-KR206

Standard: GB/T 7305-87 、GB/T 7605-87

- A color display with advanced micro computer technology and touch screen.
- With automatic lifting cylinder specimen mixing blade, automatic conversion, static, stirring time of automatic timing, automatic temperature control function of PID.
- The determination of the separation capacity of oil and synthetic liquid and water automatically.
- Determination of the separation capacity of turbine oil and water.
- It is an ideal instrument for measuring the anti emulsifying index in oil, chemical, transportation, national defense and other industries.



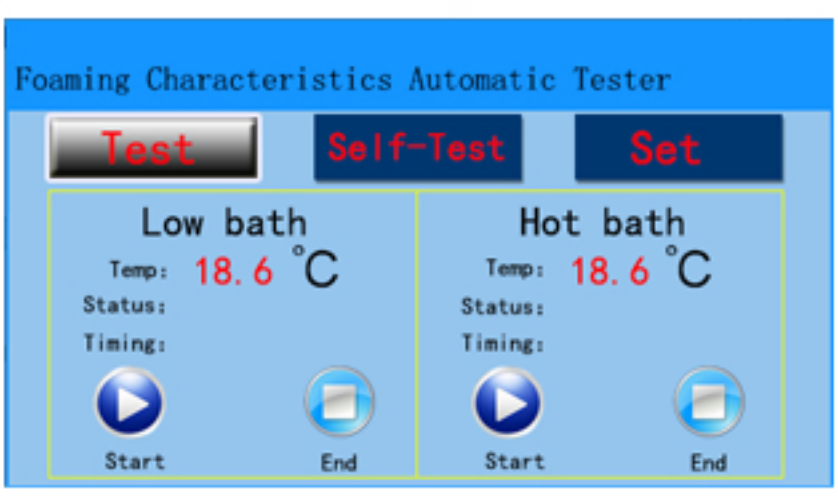
1, Display mode: LCD color large screen display, touch screen operation.
2, Temperature control range: room temperature - 100℃
3. The precision of temperature control: ±0.5 ℃
4. Timing accuracy: ±1S
5. Stirring speed: 1500 turn / minute
6. The number of sample holes: 4
7. Power supply: AC220V± 22 V 50Hz ±2.5 Hz
8. Power: < 1500W
9. Ambient temperature: 5℃ - 35 ℃

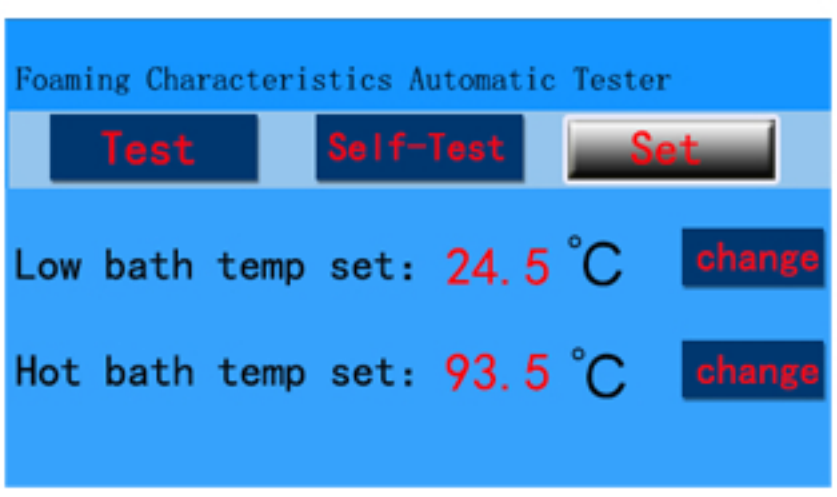
11 Foam characteristic tester

Model: PS-PM201

Standard: GB/T12579、ASTM D892

Temperature control range: low temperature bath 24℃
High temperature bath 93.5℃
Temperature control accuracy: ±0.5℃
Display: High-resolution color touch screen
Power: 3300W
Air flow: Each flow meter is controlled at 94±5ml/min
Gas diffusion head diameter: Φ25.4±0.02mm Maximum aperture ≤80μm
Diffusion head air permeability:
under 2.44Kpa (250mm water column) pressure:3000-6000ml/min
Power supply: AC 220V±5% Frequency 50Hz±5%
Ambient temperature: 10℃-35℃
Environmental humidity: ≤85%
Weight: 39KG





12 Solidifying Point of Petroleum Products Tester

Model：PS-QN601

Standard：GB510-83

Temperature testing : Platinum Resistance

Accuracy : ± 1℃

Resolution : 0.1℃

Testing scope :+10℃~ —70℃

Monitor: Blue LCD monitor (240 x 128)

Storage: 100 testing results

Clock display : Holding when power down

Cooling speed : temperature difference in 15 minutes ⩾ 60℃

Testing oil dosage: 20ml once

Requirement for cooling water: Pressure 4.9 X 101 － 4.9 X 105

Flux 1.5 liter/minute

Power: ⩽250VA

Environment temperature: 10--35℃

Environment humidity: ⩽85%RH

Weight: About 25kg

13 Air generator

Model：PS-2009

Working conditions：

Supply voltage：220V 50Hz

Ambient temperature：15-40C° relative humidity⩽70%

No large amount of dust and corrosive gas pollution.

Air purity: oil free three level purification.

Output flow： 0-2³/min

Output pressure：A output 0-0.4Mpa

B output 0-0.5Mpa

Noise：⩽42 Decibels

6)Power：150W

7)Size：465×235×360mm (L×W×H);

8)Weight：22Kg

14 Hydrogen generator

Model：PS-300

1）Supply voltage：220v 50Hz

2）Maximum power：150W；180W

3）Ambient temperature：0-40℃ Relative humidity<85%。

4）Environmental conditions: no large amount of dust and corrosive gases.

5）Purity of gas production：99.999 %（Relative oxygen content）

6）Output flow：0 -300 ml/min

7）Output pressure：0.4Mpa

8）Size:370×180×360mm (L×W×H)

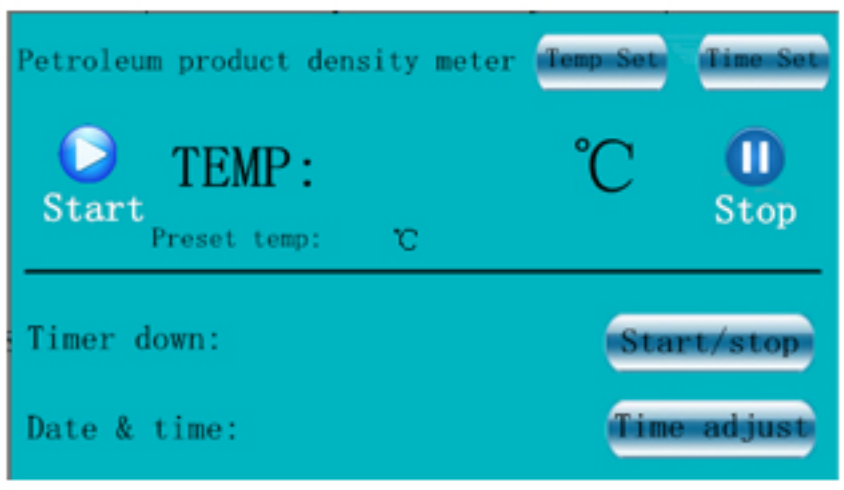
9）Weight: 12Kg;

15 Petroleum product density meter

Model：PS-MD201

Standard：GB/T1884-2000

1、Display device: color touch monitor
2、Temperature control range: 0-100℃
3、Control accuracy:± 0.05℃
4、 Heating power: 1500W
5、Plus cooling medium: water or ethanol
6、Cold bath hole number: 2 hole
7、Power source: AC220V±10%
8、Frequency: 50Hz ±2.5Hz



16 Automatic oscillating instrument

Model：PS-ZD501

Temperature control range：RT-110℃
Temperature control method：Digital PID
Temperature accuracy：±0.1℃
Shaker Frequency：275±3 times/min
Shaker Amplitude：35mm
Capacity：Syringe 100ml X8
Flask 250ml X 4（Optional）

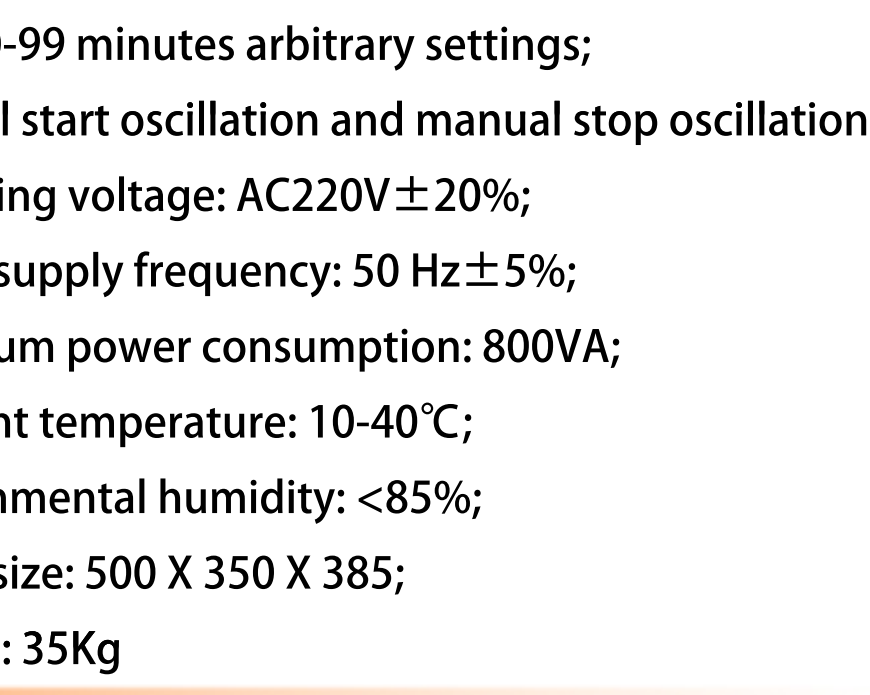
Operation mode：

1. Chromatographic degassing oscillation:
   Constant temperature 50℃;
   Oscillation for 20 minutes;
   Static for 10 minutes.
2. Water-soluble acid oscillation:
   Constant temperature 75℃;
   Oscillation for 5 minutes;
   Static for 0 minutes;
3. Other physical oscillations:
   Constant temperature 0 - 110℃ arbitrarily set;
   Oscillation is set at random for 0-99 minutes.
   Static 0-99 minutes arbitrary settings;
4. Manual start oscillation and manual stop oscillation
   Operating voltage: AC220V±20%;
   Power supply frequency: 50 Hz±5%;
   Maximum power consumption: 800VA;
   Ambient temperature: 10-40℃;
   Environmental humidity: <85%;
   Shape size: 500 X 350 X 385;
   Weight: 35Kg

17 Automatic Rust Tester

Model：PS-XS102

Standard：GB/T 11143



Monitor:color LCD display
Temperature control method : Digital PID control method
Temperature testing : Pt100 Platinum Resistance
Temperature control accuracy : ±0.2℃
Stirring speed: 1000 ± 50 rev/minute
Number of testing samples: 4
Clock displayed: Year, Month, Day, Hour, Minute
(not influenced when power down)
Power supply: AC 240V
Power frequency: 50Hz±2.5Hz
Power: 2500 W
Environment Temperature: 10℃--35℃
Environment Humidity: ⩽85%
Weight: 30 kg