



DELTA TECHNOLOGY (CHONGQING) CO., LTD.



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»» COMPANY PROFILE

Delta Technology (Chongqing) Co., Ltd.

is a high-tech enterprise focusing on R&D, production and sales of

Electrical Testing Instrument and Fire Resistance Testing Instrument

Since safety is important to the electrical, construction and transportation industries, thus, Delta Technology is aim to help users testing the safety of transformers, high-voltage switches, cables, building materials, transportation materials, etc.

Since its establishment, Delta Technology has always adhered to the principles of "quality assurance and service priority", through years' development, our products sell well at home and abroad.

With the best products, best services and best reputation, Delta Technology is your reliable partner in the testing instrument!



CATALOGUE



Electrical Testing Instrument

[TTR-I] Transformer Turns Ratio Meter
[TTR-Z] Z Type Transformer Turns Ratio Meter
[WRT] Transformer Winding DC Resistance Tester
[TDT] Transformer Tan Delta / Power Factor Tester
[KFZ] Transformer Capacity, Load and No Load Loss Tester
[SFRA] Transformer Sweep Frequency Response Analyzer
[OLTC] Transformer On Load Tap Changer Tester
[ZJA] Transformer Oil Purifier
[BDV-II] 100kV Transformer Oil BDV Tester
[BDV-A] 80kV / 100kV Transformer Oil BDV Tester
[DLT] Transformer Oil Dielectric Loss Tester
[KF] Transformer Oil Water Content Tester
[CPT-I] CT PT Tester
[CPT-III] CT PT Analyzer

[PRT] Secondary Current Injection Test Set
[CBA] Circuit Breaker Analyzer
[CRT] Circuit Breaker Contact Resistance Tester
[ZKD] Circuit Breaker Vacuum Degree Tester
[SFP] SF6 Purity Tester
[SFA] Series SF6 Multi-parameters Analyzer
[DDP-P] Portable Partial Discharge Detector
[CFL-I] Cable Fault Locator
[VLF] Very Low Frequency Hipot Tester
[SYB] Oil Type AC DC Hipot Tester
[SLQ] Primary Current Injection Tester
[ZGF] DC High Voltage Generator



Fire Resistance Testing Instrument

[SCV] Single Cable Vertical Flame Tester
[BCV] Bunched Cable Vertical Flame Tester
[CCT] Cone Calorimeter
[SDB] NBS Smoke Density Chamber
[3MC] Electric Cable Smoke Density Tester
[CRA] IEC 60754 Cable Halogen Acid Gas Tester
[LOI] Electro-chemistry Limited Oxygen Index Tester
[LOI-A] Automatic Limited Oxygen Index Analyzer
[SBI] Single Burning Item
[FRP] Flooring Radiant Panel Tester
[SIT] ISO 11925-2 Single Flame Source Tester
[NCF] ISO 1182 Non-combustibility Tester
[XP-2] Building Material Smoke Density Tester

[CVT] ISO1716 Calorific Value Tester
[UL94] Flame Chamber
[IMO] ISO5658-2 Flame Spread Tester
[BS476-6] Building Material Fire Propagation Tester
[BS476-7] Building Material Flame Surface Spread Tester
[NFT] IEC60695-2-2 Needle Flame Tester
[GWT] IEC 60695 Glow Wire Tester



About Electrical Testing

Transformer Turns Ratio Meter

TTR-I

TTR-I is designed according to IEC76-1 and IEC60044 to measure the turns ratio of single phase or three phase transformer.



Z Type Transformer Turns Ratio Meter

TTR-Z

TTR-Z is specially designed for testing Z type transformer and other transformer whose zero-load current is relatively high.



Functions

/	CT	PT	single phase power transformer	three phase power transformer
Turns ratio	Yes	Yes	Yes	Yes
Phase angle	Yes	Yes	Yes	Yes
Polarity	Yes	Yes	Yes	Yes
Vector group	No	No	/	Yes

Main parameters

Parameters	TTR-I	TTR-Z
Ratio test range	1-10000	
Group test range	1-12	
Accuracy	1-2000: $\pm 0.2\%RDG$	2000-10000: $\pm 0.5\%RDG$
Power supply	AC220V $\pm 10\%$, 50Hz/60Hz	
Dimension	400mm*350mm*200 mm	325mm*278mm*188mm
Net Weight	7kg	7Kg

Transformer Winding DC Resistance Tester

WRT

WRT Series transformer winding DC resistance tester (micro-ohmmeter) is a high precision instrument for testing DC resistance of transformer winding.



Main parameters

Parameters	WRT-5	WRT-10	WRT-20	WRT-40	WRT-20S
Test current	5A	10A	20A	40A	single phase: 1A, 5A, 10A, 20A, 40A three phase: 1A, 5A, 10A, 20A
Range	1 μ Ω - 20kΩ	1 μ Ω - 20kΩ	1 μ Ω - 10kΩ	1 μ Ω - 10kΩ	single phase: 10mΩ-20Ω(1A) 1 mΩ-4Ω(5A) 1 mΩ-2Ω(10A) 1 mΩ-1Ω(20A) 1 mΩ-0.5Ω(40A) three phase: 10 mΩ-6Ω (1A,each phase) 1 mΩ-1Ω (5A,each phase) 1 mΩ-0.6Ω (10A,each phase) 1 mΩ-0.3Ω (20A,each phase)
Resolution	1 μ Ω				
Max. error	0.2%RDG+2D				
Voltage output	20V				
Resolution	1 μ Ω				
Power supply	AC220V \pm 10%, 50Hz/60Hz				

Transformer Tan Delta/Power Factor Tester

TDT

TDT is used to measure electrical loss tangent and capacitance of all kinds of high voltage electrical equipment.



Main parameters

Output voltage	0.5KV - 10KV / 0.1KV, 2% precision
Max. output current	200mA
Output capacity	2000VA
Self-excited power	AC 0V - 50V/15A, Automatic double frequency 45Hz/55Hz, 47.5Hz/52.5Hz 55Hz/65Hz, 57.5Hz/62.5Hz
Resolving power	tgδ: 0.001% Cx: 0.001pF
Measurement range	Tgδ: Unlimited Cx: 15pF<Cx<300nF 10KV: Cx<60nF 5KV: Cx<150nF 1KV: Cx<300nF CVT test: Cx<300nF
CVT range	10 - 10000, accuracy: 0.1%
Dimension	350mm*270mm*270mm
Weight	28kg
Power supply	AC 220V \pm 10%, 50Hz

Transformer Capacity, Load and No Load Loss Tester

KFZ

KFZ can measure following parameters of transformer: capacity, transformer type, no-load current, no-load loss, short circuit (load) loss and impedance voltage.



Main parameters

Capacity test range	10KV Dry type transformer	30kVA-3150kVA
	10KV Oil immersed transformer	30kVA-3150kVA
	35KV Oil immersed transformer	50kVA-31500kVA
	20KV Dry type transformer	50kVA-2500kVA
	35KV Dry type transformer	50kVA-2000kVA
AC voltage	Range: 10-650V	Accuracy: 0.2% \pm 0.001V
AC Current	Range: 0.5-60A	Accuracy: 0.2% \pm 0.001A
Frequency	Range: 45Hz-65Hz	Accuracy: 0.2% \pm 0.001Hz
Dimension	400mm*300mm*220mm	
Net weight	8kg	
Power supply	AC 220V \pm 10%, 50Hz/60Hz	

Transformer Sweep Frequency Response Analyzer

SFRA

SFRA is used to evaluate the core, winding and clamping structures of power transformers, by measuring their electrical transfer functions over a wide frequency range.



Main Features

Adopts advanced technical of dds.

Adopts high speed and advanced microprocessor.

Adopts double channels of ad chip of 16 bits.

With seven inch led touch screen.

With build-in thermal printer.

With pc software, with which we can operate, analyze data, Upload data and generate word document.

It can store 40 groups of data and also can be saved by usb flash disk.

Transformer On Load Tap Changer Tester

OLTC

OLTC can record switch operation waveform in overall process. It can test various parameters such as transition waveform, transition time, transition resistance and three phase synchronization.



Main Functions

Test transformers of type Y0, Y, Δ and display resistance value directly.

Automatically analyze waveform fault and mark the fault.

Automatically adjust resistance value and time range according to sampling data.

Transformer type Δ is able to display to synchronization status of three phase.

Be able to test with winding or without winding.

Continuous test to save time of power off.

It can store 1000 groups of data and also can be saved by USB flash disk.

Transformer Oil Purifier

ZJA

ZJA Series Oil Purifier is professional to purify transformer oil, it can efficiently remove water, gases, acid, particles, etc. from used transformer oil.



Main parameters

Parameters	Unit	ZJA1.8KY	ZJA3KY	ZJA6KY	ZJA9KY	ZJA12KY	ZJA18KY
Flow Rate	L/H	1800	3000	6000	9000	12000	18000
Working Vacuity	Pa	< 80					
Working Pressure	Mpa	< 0.5					
Temperature Range	°C	45-65					
Power Supply		3-Phase 4-Wire 50Hz 380V or as request					
Total Power	KW	18	36	70	100	150	200
Inlet/Outlet Diameter	mm	20/20	25/25	32/32	40/40	50/50	65/65
Length	mm	1600	1800	2200	2500	2800	3450
Width	mm	1250	1450	1600	1950	2150	2600
Height	mm	2000	2200	2450	2700	3000	3000
Weight	Kg	500	700	1460	1800	2400	4000

100kV Transformer Oil BDV Tester

80kV/100kV Transformer Oil BDV Tester

BDV-II

BDV-II has eight kinds of test modes for use:
IEC156, IS6792, Bs5874,
ASTM D1816, ASTM D877,
proof test,
5 minutes standard test and
manual test.



BDV-A

BDV-A has the same test modes as BDV-II.
It can also detect temperature of transformer oil to reduce the effect of oil temperature to test result.



Transformer Oil Dielectric Loss Tester

DLT

DLT is applied to measure dielectric loss angle and volume resistivity of insulating oil.



Transformer Oil Water Content Tester

BDV-A

It adopts Karl Fischer Coulometric method to accurately test trace water content in transformer oil.



Main parameters

Parameters	BDV-II	BDV-A
Output voltage	AC 0V - 100KV	AC 0V - 80KV or AC 0V - 100KV
Rate of voltage rise	0.5kV/s±5%, 2kV/s±5%, 3kV/s±5%, 5kV/s±5%	
Max. test times setting for user-defined mode	9	
Stir time setting for user-defined mode	0-999s	
Waiting time setting for user-defined mode	0-999s	
Test error	3%RDG+0.3%FS	
Temperature measurement range	/	0°C to 70°C
Max. storage capacity	100 groups of test data	
Power supply	AC220V±10%, 50Hz/60Hz	
Size	620mm*430mm*330mm	550mm*500mm*580mm
Weight	41kg	38kg

Main Parameters

It is integrated by oil cup, temperature controller, temperature sensor, test bridge for dielectric loss, AC trial electrical source, standard capacitor, high resistance meter and DC high voltage power etc.

Measurement Range	tgδ: Without Limit, Cx: 15PF-300PF, Rx: 10M-10T.
Dimension	450mm * 310mm * 360mm.
Net Weight	21kg

Main Parameters

Measuring range	3ug-200mg water
Water content range	3ppm-100%
Resolution	0.01ug water
Accuracy	10ug-1mg water, ± 0.2%; >1mg water, < ± 0.3%
Electrolysis speed	Max 2.4 mg/min
Electrolytic current	0-430mA
Dimension	320mm*240mm*180mm
Net weight	6kg

CT PT Tester

CPT-I

CPT-I can finish CT or PT transformation ratio test, CT or PT polarity test, volt-ampere feature curve drawing and CT error drawing.



CT PT Analyzer

CPT-III

CPT-III CT PT Analyzer is used to measure all kinds of current transformer and voltage transformer. It is one of the most advanced CT PT Analyzer in China.



Main parameters

Parameters	CPT-I	CPT-III
Test object	Power Transformer, CT, PT	Power Transformer, CT, PT
Test standard	IEC60044	IEC60044-1/2/5/6
Current measurement	0-5A	0-10A
Voltage measurement	0-2000V	0-200V
Turns ratio measurement	1-30000	1-30000
Voltage output	0-2000V	0.1-125V AC
Current output	0-5A	0.001-5A
Power output	3kVA	300VA
Dimension	450mm*340mm*300mm	450mm*360mm*150mm
Weight	43kg	15kg

Secondary Current Injection Test Set

PRT

Secondary current injection test sets are used for testing protection relay, there are 3 models for choice.

Parameters

PRT-I

PRT-PC3

PRT-PC6



Relay type it test	single phase relay	single phase and three phase relay	single phase, three phase and six phase relay
		Current output	
AC Setting range	0-10A, 0-100A	1 phase: 0-120A; 3 phase: 3*(0-40A)	1 phase: 0-180A; 3 phase: 3*(0-60A); 6 phase: 6*(0-30A)
DC Setting range	0-10A	1 phase: 0-30A; 3 phase: 3*(0-10A)	1 phase: 0-60A; 3 phase: 3*(0-20A); 6 phase: 6*(0-10A)
AC output power	1000VA	1 phase: 420VA; 3 phase: 3*300VA/W	1 phase: 1080VA; 3 phase: 3*400VA/W; 6 phase: 6*260VA/W
DC output power	80VA	1 phase: 80VA	1 phase: 780VA; 3 phase: 3*320VA/W; 6 phase: 6*180VA/W
		Voltage output	
AC Setting range	0-380V	3*(0-120V) or 0-240V	6*(0-120V) or 0-240V
DC Setting range	0-350V	3*(0-160V) or 0-320V	6*(0-160V) or 0-320V
AC output power	400VA	1 phase: 140VA; 3 phase: 3*80VA/W	3 phase: 3*140VA; 6 phase: 6*70VA
DC output power	960VA	1 phase: 140VA; 3 phase: 3*70VA/W	3 phase: 3*160VA; 6 phase: 6*80VA
Switch parameters input	1 channel	7 channels	10 channels
Switch parameters output	1 channel	2 channels	8 channels
Time measurement	1ms-9999s / 1ms	0.1ms-9999s/0.1ms	0.1ms-9999s / 0.1ms

Circuit Breaker Analyzer

CBA

CBA series are used for high voltage switches testing, there are three models for choice.

Parameters

CBA-I

CBA-II

CBA-III



Time measurement	6000ms, resolution 0.1ms	6000ms, resolution 0.1ms	400ms, resolution 0.1ms
Speed measurement	0-20m/s, resolution 0.01m/s	0-20m/s, resolution 0.01m/s	0-20m/s, resolution 0.01m/s
Travel measurement	250.0mm, resolution 1mm	600.0mm, resolution 1mm	600.0mm, resolution 1mm
DC power	DC20-230V, 0-10A	DC30-250V, 0-20A	DC30-250V, 0-20A
Dimension	360mm*280mm*300mm	360mm*280mm*300mm	360mm*280mm*300mm
Weight	7kg	10kg	10kg
Power supply	AC220V±10%, 50Hz/60Hz	AC220V±10%, 50Hz/60Hz	AC220V±10%, 50Hz/60Hz

Circuit Breaker Contact Resistance Tester

CRT

It is designed according to IEC62271
To test the contact resistance of
Circuit breaker or high current
Cable contacts



Main Parameters

Measurement range	0-1999.9μΩ Resolution:0.1μΩ
Measurement current	DC 100A, 200A, 400A, 600A for choice
Measurement precision	0.5%RGD+0.05%FS
Data storage	Save no more than 100 groups of data
Data connection	RS232 computer interface
Dimension	340mm*280mm*210mm
Weight	18kg

Circuit Breaker Vacuum Degree Tester

ZKD

ZKD can directly measure vacuum
degree of vacuum switch interrupter
It adopts new excitation coils and
data processing methods to achieve
the non-demolition measurement
of vacuum.



Main Parameters

Measurement range	10-5-10-1Pa
Magnetic field voltage	1700V
High voltage of pulsed electric field	30KV
Sampler	magnetic coil
Dimension	420mm*320mm*280mm
Weight	12kg

Sf6 Purity Tester

SFP

SFP can quickly and accurately measure the purity of SF₆ in SF₆ gas or mixed gas of SF₆ and N₂



Series Sf6 Multi-parameters Analyzer

SFA

SFA series can test various parameters in SF₆ gas, different models can test different parameters
 SFA-A: SF₆ purity, dew point, water content, SO₂, H₂S;
 SFA-B: SF₆ purity, dew point, water content, SO₂, H₂S, CO;
 SFA-C: SF₆ purity, dew point, water content, SO₂, H₂S, CO, HF;
 SFA-D: SF₆ purity, dew point, water content, SO₂, H₂S, CO, HF, CF₄;
 SFA-E: SF₆ purity, dew point, water content, SO₂, H₂S, CO, HF, CF₄, N₂, O₂;



Portable Partial Discharge Detector

DDP-P

It adopts non-intrusive detection method to detect and locate partial discharge defects in high voltage electrical equipment.



Cable Fault Locator

CFL-I

CFL-I is mainly used to test high voltage arcing fault, earthing high and low resistance, short circuit, breakage, poor contact, etc. of 1KV-35KV cable.



Main Parameters

Measurement range	0%-100%, Accuracy ±0.5%.
Measurement time	<2min.
Power supply	AC 220V and Built-in rechargeable battery.
Battery performance	Charging time more than 20 hours, can use 10 hours.
Dimension	250mm*100mm*300mm.
Weight	3kg.

Measurement Range

Purity	0%-100%.
Dew point	-80℃~+20℃.
H ₂ S	0-200ppm.
SO ₂	0-200ppm.
HF	0-20ppm.
CO	0-1000ppm.
Power supply, dimension and size is the same as SFP.	

Main parameters and features

Working principle	Ultra-high frequency method (UHF), ultrasonic method (UA) and terrestrial electric wave method (TEV).
Detection frequency range	UHF is 300-1500(MHz), ultrasonic is 20-200(KHz).
Measuring range	UHF is -80 to -20dBm, and ultrasonic is 0-90dB.
Data storage	1000 sets.
Power supply	Built-in 8.4V lithium battery, it can work continuously for 8 hours.
Dimension and weight	22cm*10cm*4cm, 1.5kg.

Main Parameters And Features

It uses low voltage impulse method and high voltage flash-over method to test kinds of fault of the cable, if equipped with sound locator, can accurately the position of the fault point.	
Longest measured distance	32km (100km for open wire).
Detection blind area	1 meter.
Reading resolution	1 meter.

Very Low Frequency Hipot Tester

VLF

VLF is designed for very low frequency with stand voltage testing of electrical equipment. It can be applied for 10kV, 35kV, 300MW thermal power machine, 10kV, 35kV power transformer and other electrical equipment.



Main Parameters

Model	Output frequency	Rated Voltage/current	Load Carrying Capacity	Power fuse wire	Booster
VLF-30	0.1Hz, 0.05Hz, 0.02Hz	30kV/20mA(Peak)	0.1Hz, 0.5 μ F-1.1 μ F 0.05Hz, 0.5 μ F-2.2 μ F 0.02Hz, 0.5 μ F-5.5 μ F	10A	30kV booster
VLF-50	0.1Hz, 0.05Hz, 0.02Hz	50kV/30mA(Peak)	0.1Hz, 0.5 μ F-1.1 μ F 0.05Hz, 0.5 μ F-2.2 μ F 0.02Hz, 0.5 μ F-5.5 μ F	20A	50kV booster
VLF-60	0.1Hz, 0.05Hz, 0.02Hz	60kV/30mA(Peak)	0.1Hz, \leq 0.5 μ F 0.05Hz, 0.5 μ F-1 μ F 0.02Hz, 0.5 μ F-2.5 μ F	9A	30kV + 30kV boosters
VLF-80	0.1Hz, 0.05Hz, 0.02Hz	80kV/30mA(Peak)	0.1Hz, \leq 0.5 μ F 0.05Hz, 0.5 μ F-1 μ F 0.02Hz, 0.5 μ F-2.5 μ F	12A	30kV + 50kV boosters

Oil Type AC DC Hipot Tester

SYB

The Hipot Tester is composed of 2 parts: oil type transformer and controller.



Main Parameters

Capacity KVA	SYB-50 Series		SYB-100 Series		SYB-150 Series	
	AC	DC	AC	DC	AC	DC
3kVA	50KV	70KV				
5kVA	50KV	70KV	100KV	140KV		
10kVA	50KV	70KV	100KV	140KV	150KV	210KV
15kVA	50KV	70KV	100KV	140KV	150KV	210KV
20kVA	50KV	70KV	100KV	140KV	150KV	210KV
25kVA	50KV	70KV	100KV	140KV	150KV	210KV
30kVA	50KV	70KV	100KV	140KV	150KV	210KV
50kVA	50KV	70KV	100KV	140KV	150KV	210KV

Primary Current Injection Tester

SLQ

SLQ is an essential equipment for electrical debugging to generate high current. It is widely used in power plants, power distribution stations, electrical plants, scientific research, laboratories and other units.



Main Parameters

Model	Capacity (KVA)	Junior Range		Secondary Range	
		V1	A1	V2	A2
SLQ-3/500	3	220	15	6	500
SLQ-6/1000	6	220	27	6	1000
SLQ-12/2000	12	380	31.6	6	2000
SLQ-15/2500	15	380	39.5	6	2500
SLQ-24/4000	24	380	63	6	4000
SLQ-30/5000	30	380	79	6	5000
SLQ-36/6000	36	380	95	6	6000
SLQ-48/8000	48	380	126	6	8000
SLQ-60/10000	60	380	158	6	10000

DC High Voltage Generator

ZGF

ZGF is an important equipment for DC voltage withstand testing and leakage current testing of surge arrester, cables and other high voltage device.



Main Parameters

Model	ZGF-60/2	ZGF-120/2	ZGF-120/5	ZGF-200/2	ZGF-200/3	ZGF-200/5	ZGF-300/2/3
Output Voltage	60kV	120kV	120kV	200kV	200kV	200kV	300kV
Output Current	2mA	2mA	5mA	2mA	3mA	5mA	2mA/3mA
Output Power	120W	240W	600W	400W	600W	1000W	600W/900W
Booster Size	145*500mm	145*800mm	145*800mm	145*1000mm	145*1000mm	145*1000mm	145*1300mm
Controller Size	350mm*260mm*245mm						
Total Weight	10kg	15kg	17kg	20kg	20kg	20kg	25kg
RippleCoefficient	Less than 0.5%						



About Fire Resistance

Single Cable Vertical Flame Tester

SCV

SCV is used to test the vertical flame propagation of a single insulated cable, to determine the fire resistance of a single cable against of a 1kW flame



Main Parameters And Features

Application field: Electric Cable.
Reference standard: IEC60332-1-1*3.
Stainless steel box, inner size is 1300mm(H) * 300mm (W) *450mm(D).
Two stainless steel rods, can bind single wire cable or optical cable sample.
1kW mixed standard burner, can provide the standard test fire source.
With Calibration kit for the testing flame.
Regulating gas and air flow rate of the rotor flow meters.
Pressure gauge and pressure relief valve to ensure that the pressure output is 0.1mPa
Four modes of time can be selected according to different sample diameters.
Dimension: 560 mm (W) x 380 mm (D) x 1400 mm (H).
Weight: 36kg.

Bunched Cable Vertical Flame Tester

BCV

BCV is used to test the vertical spread of flame of vertically installed bundled cables under specified conditions



Main Parameters And Features

Application field: Electric Cable.
Reference standard: IEC 60332-3-10, IEC 60332-3-21*25.
The size of the stainless steel test box is 1000mm(W) x 2000mm(D) x 4000mm(H).
There is a 800±20(W) *400±10(D) air intake space in the lower half of the front of the box.
There is a 300±30(W) *1,000±100(D) exhaust port on the top of the box to facilitate the removal of fume gas during the test.
Use the computer to automatically record all control and test conditions.
Steel ladder size for testing (vertical): 500(W) *3,500(H); Wide steel ladder size: 800 (W) *3,500 (H).
Burning surface size: (L) 257±(W) 4.5 mm.
Size: 1120 mm (W) *2200 mm (D) *5070 mm (H).
Weight: 500kg.

Cone Calorimeter

CCT

CCT is designed and manufactured according to international standards and mainly for building products and electric cable testing. The analysis cabinet can be moved, it can also be used in the large heat release rate test system such as Single Burning Item (SBI), cable burning test system, etc.



Main Parameters And Features

Application field:	Building products, railway, marine, cable and wire, etc.
Reference standard:	ISO 5660.
Cone heater rated power	5000W, heat output 0-100kW/m ² .
Paramagnetic oxygen analyzer measurement range:	0-25%.
Sample weighing range:	0-2000g
accuracy:	0.1g sample size can be up to 100mm*100mm *50mm.
Size:	1800mm*900mm*2650mm.
Weight:	350kg.

Test results include

Heat release rate;	Total oxygen consumption;
Flue gas flow rate;	Smoke release rate;
C coefficient;	Mass loss rate;
Time to ignition;	Effective heat of combustion;
Extinction time;	Rates of release of combustion gas (e.g. CO and CO ₂).

NBS Smoke Density Chamber

SDB

SDB Smoke Density Chamber is used for measuring specific optical density of the smoke from burning materials under flaming and non-flaming conditions. It can also be used for the extraction of toxic gas.



Main Parameters And Features

Application field:	Building Material, Electric Cable, Rail, IMO.
Reference standard:	ASTM E662, ISO 5659-2, NES711
Using ISO 5659 conical radiant heat furnace,	user can change the heating condition from 10KW/m ² to 100KW/m ² .
In the test of NES 711, there are non-flaming test and flaming test in test conditions different from ASTM E 662.	
19 analysis rack, 15 touch screen PC for the whole control and automatic testing.	
Dimension:	1900mm (H) * 1630mm (L) * 660mm (D).
Weight:	210kg.

Test Results Include

Light transmission;
Optical density;
Mass optical density(MOD);
Mass loss rate;
Clear-beam correction factor etc.

Electric Cable Smoke Density Tester

3MC

It is used to measure the emission when the cable is placed horizontally under the definite fire condition.



Main parameters and features

Application field:	Rail, Electric Cable.
Reference standard:	IEC 61034-1&2, BS 6853.
Outer test room (3m*3m*3m) should be built by the user, we only supply the extraction facilities, test system, fans, stands and sample mounting frames.	
The specified standard fire source (ethanol 90±1%, methanol 4±1% and distilled water 6±1%) 1L±0.01L is burned.	
Velocity of light:	2000 lm-3000 lm, and color temperature: 2800K-3200K.
Size:	3150 mm (W) x 3150 mm (D) x 3150 mm (H);
Weight:	240kg

IEC 60754 Cable Halogen Acid Gas Tester

CRA

CRA is used to determine the halogen acid gas evolved from cable during burning, by testing the pH and conductivity of the gas dissolved in the water.



Main Features

Application Field:	Electric Cable.
Reference Standard:	IEC60754-1&2.
1200°C Split-hinge Tube Furnaces For Horizontal Use.	
Heating Element Modules For Superior Radial And Linear Temperature Uniformity And Fast Heat Up And Cool Down.	
With Mode Conversion Switch, Test Method Of IEC 60754-1&2 Can Be Selected.	
Alarm Temperature Controller: Temp Controller To Protect Overheating Of Furnace.	
pH And Conductivity Measuring Instruments With Digital Display And Electrodes Stirrer.	
Mass Flow Meter Control The Flow Rate Of Air And Digital Display.	
Activated Charcoal (air Filtering): Filter For Filtering The Supplied Air (activated Charcoal).	

Electro-chemistry Limited Oxygen Index Tester

LOI

It adapts Electro-chemistry Type oxygen sensor which is precise and with low error rate, to measure minimum oxygen concentration during combustion of specimen.

The working principle is: Place the specimen into the testing chimney, filling with oxygen and nitrogen into the chimney, ignite the specimen, then measure the min. concentration of oxygen to support continuous combustion.



Main Features

Application field: Building Material, Rail, Automotive Interior.
Reference standard: ASTM D2863, ISO4589-2, NES714.
Electro-chemistry oxygen cell for assessing accurate oxygen (< 0.1%) levels.
Display of nitrogen and oxygen gas flow by flow meters.
Digital display of oxygen percentage in atmosphere during test (no calculations needed).
High temperature resistant quartz glass tube, can withstand a higher test temperature.
Oxygen sensor range: 0-100%.
Dimension: 370 mm (W) x 300 mm (D) x 480 mm (H).
Weight: 8kg.

Automatic Limited Oxygen Index Analyzer

LOI-A

LOI-A is an automatic LOI Analyzer for testing minimum oxygen concentration during combustion of specimen.

It adapts Paramagnetic type oxygen sensor which is precise, durable, with low error rate and reliable.



Main Parameters And Features

Application field: Building Material, Rail, Automotive Interior.
Reference standard: ASTM D2863, ISO4589-2, NES714.
Adopts England original Servomex Paramagnetic type oxygen sensor, it is much better than traditional electro-chemical sensor.
Equipped with 2pcs Mass Flow Controller(MFC) to control N2 and O2 mixing ratio.
It can connect with a computer to control N2 and O2 mixing ratio, read O2 concentration in mixing chamber, store or print out test results.
Stainless steel air channel design, equipped with one way fire-resistance valve, magnetic valve, fine filter, so, it is stable and safe.
Size: 600(W) x 310(D) x 545(H)mm.
Weight: 30kg.

Single Burning Item

SBI

SBI is used to test the change in oxygen concentration during the test, as well as the flue gas flow rate in the pipe and CO2 concentration, and calculate the heat release rate at a certain moment, and then measures the max value of the heat release rate and the time quotient during the test.



Main parameters and features

Application field: Building Material, Automotive Interior
Reference standard: BS EN 13823:2010
Imported rotameter with a range of 0-50L/min.
Paramagnetic oxygen analyzer with a range of 0-25%.
It can provide O2/CO2 analyzer calibration, Optical system calibration, Optical system calibration, Air volume calibration, Step calibration, Heptane calibration.
Size: 3000 mm (W) x 4500 mm (H) x 3000 mm.
Weight: 650kg.

Flooring Radiant Panel Tester

FRP

FRP Flooring radiant panel tester is used to measure the flame spread of the sample under thermal exposure using a radiant heat ignition source.



Main parameters and features

Application field: Building Material, Rail, Automotive Interior
Reference standard: ASTM E648, ISO 9239-1
The radiant panel generates a radiant energy flux distribution ranging from 10.9 kW/m2 to 1.1 kW/m2.
Dummy calibration specimen with holder, calibrated heat flux meter and mounting.
Heat Flux Meter: Range 0-50 kW/m2.
DIN 50055 standard smoke measuring system is mounted on a separate frame at the exhaust stack.
Automatic ignition of the radiant panel and safety cut-out.
Automatically moving T type ignition burner.
Size: 1900mm (H) x 750mm (L) x 1900mm (D).
Weight: 235kg.

ISO 11925-2 Single Flame Source Tester

SIT

It uses the German Kleinbrenner principle to determine the combustion properties of building materials under direct impact from a small vertical flame. It is applicable to building material categories of B, C, D, E, Bfl, Cfl, Dfl and Efl testing.



Main Parameters And Features

Application field: Building Material, Rail, Automotive Interior.

Reference standard: ISO 11925-2, DIN 5510-2, IEC 61730-2, DIN 4102-1-B2.

The combustion chamber is made from corrosion resistant stainless steel.

Specimen holder can hold 60mm thickness specimens.

With adjustable specimen support frame, so the flame can be applied either at the specimen centre position or at laterally spaced points.

Dimension: 750 mm (W) X 410 mm (D) X 810 mm (H).

Weight: 24KG.

ISO1182 Non-combustibility Tester

NCF

NCF is mainly used to test the non-combustibility of building materials, it is suitable for classification of combustion performance of Class A fireproof materials. It can also test UK building materials, railway materials and non-metallic products of vessel.



Testing Results Include

Mass Loss(g) and Rate(%);

Ignition Time(s) and Sustained Flaming(s);

Initial and Max. Furnace Temperature(°C);

Final Furnace Temperature(°C);

Max. Specimen Center Temperature(°C);

Final Specimen Center Temperature(°C);

Furnace Temperature Rise(°C);

Specimen Center and Surface Temperature Rise(°C);

Application field: Building Material, Rail, IMO.

Reference standard: BS 476-4&11, ISO 1182.

Dimension: 400 mm (W) x 400 mm (D) x 1300 mm (H).

Weight: 65kg.

Building Material Smoke Density Tester

XP-2

By detecting the loss of light transmission in test chamber, XP-2 can measure smoke density of burning and decomposition of building material during test.



Main Parameters And Features

Application field: Building Material.

Reference standard: ASTM D2843.

Light source is incandescent lamp, the photoelectric sensor is silicon photodiode, which has cosine calibration function.

Color filter is equipped to filter out ultraviolet light and infrared light.

Gas pressure of main burner is 256KPA, it is subjected to flame impact on test specimen.

Gas pressure of auxiliary burner is 138KPA, it can continue burn the moltdroplets.

The computer and test software are equipped.

Dimension: 900 mm (W) x 450 mm (D) x 900 mm (H).

Weight: 39kg.

ISO1716 Calorific Value Tester

CVT

CVT is used to measure the heat of combustion or calorific value of material by putting the specimen into the oxygen cell.



Main parameters and features

Application field: Building Material.

Reference standard: ISO1716.

Heat capacity: 10000J/K.

Test time: <15min.

Heat capacity repeatability<0.2%, precision<0.1%, temperature resolution 0.0001K.

Direct touch screen operation, without external computer, which is convenient for use.

With fault diagnosis function and built-in reminder will remind whether the ignition is successful.

Automatic water injection, no need to adjust the water temperature, just install the aerobic bomb into the barrel, then the instrument can automatically do all tests.

Flame Chamber

UL94

It can measure the burning rate of samples positioned either horizontally or vertically. Flammability, combustion speed, flame spread, the intensity of combustion can be tested automatically;



Main Parameters And Features

Application field: Building Material.

Reference standard: UL94, ISO 9772, ISO 9773, IEC 60695-11-10.

ASTM D 5025 standard burner, ASTM D 5207 burner calibration kit.

With simple angle adjustment (0°, 20°, 45°) and precision gas control system including gas flow meter, pressure regulator, pressure gauge, U type water column tube.

With auto specimen moving system and one testing timer.

Dimension: 800mm (W) x 900mm (H) x 700mm (D).

Weight: 58kg.

ISO5658-2 Flame Spread Tester

IMO

IMO is used to evaluate combustion characteristics of building materials and ship materials. It measures the spread rate of flame, flame for ignition by distances, CFE (Critical Flux at Extinguish) and total heat release.



Testing Results Include

Heat for sustained burning (MJ/m²)

Average heat for sustained burning (MJ/m²)

Heat for ignition (MJ/m²)

Critical flux at extinguishment (kW/m²)

Total heat release (MJ)

Peak heat release rate (kW)

Application field: Building Material, IMO

Reference standard: ISO 5658-2, IMO Resolution A. 653(16), ASTM E 1317

Dimension: 1650mm (W) x 810mm (H) x 1985mm (D).

Weight: 300kg.

Building Material Fire Propagation Tester

BS476-6

It is used to measure the flame propagation performance, mainly fire resistance of wall and ceiling linings.



Main Parameters And Features

Application field: Building Material, Rail.

Reference standard: BS476 Part 6 A1:2009.

Stainless steel box support frame; Calcium silicate board combustion chamber.

1000W quartz radiator devices to provide heat radiation to the sample.

T-type burner, which provides an open flame burning method for the sample.

The thermo-couple continuously records the difference between the temperature in the chimney and the room temperature.

The computer automatically processes data and can print test reports.

Gas supply: Standard test gas G112, as specified in BS 4947.

Flow: Gas flow for burner adjustable from 0 to 5 m³/min.

Pressure: 1kPa.

Building Material Flame Surface Spread Tester

BS476-7

BS 476-7 is mainly used to determine the flame extension on exposed surfaces of walls and ceilings.



Main parameters and features

Application field: Building Material

Reference standard: BS 476-7

Equipped with a water cooling circulation device, which can cool the sample rack to avoid damage caused by long time high temperature.

Equipped with a small flame ignition device, adopts electric spark ignition method.

The radiant panel is equipped with a high temperature detection device, if the radiant panel goes out, the gas source can be automatically cut off.

Equipped with an electrical control box, which can adjust the flow of gas and air, display the number of heat radiation flux.

Dimension: 1220 mm (W) x 550 mm (D) x 1920 mm (H).

Weight: 210kg.

IEC60695-2-2 Needle Flame Tester

NFT

It uses a $\Phi 0.9\text{mm}$ needle burner and butane as gas source to burn the specimen at 45° angle, then according to the specimen ignition and burning time and burning length to evaluate the fire hazard of the small flames.

It is widely used in low voltage electrical equipment, electrical instruments, electronic equipment, electrical connectors, motors, power tools, accessories and other electrical and electronic equipment and parts.



Main Parameters And Features

Application field: Electronics.

Reference standard: IEC60695-11-5, IEC60695-2-2.

Temperature range: 0-1000 Centigrade.

Flame temperature requirement: 100-700 Centigrade.

Flame height: 12mm.

IEC 60695 Glow Wire Tester

GWT

Glow wire testing simulates thermal stress caused by glowing elements or overloaded resistors in short time, to evaluate the risk of fire. It is applied to electrical and electronic products, plastic and non-metallic parts of insulating material such as switching shell relay socket, etc.



Main Parameters And Features

Application field: Electronics, plastic.

Reference standard: IEC60695-2-10-2013, UL746A, IEC829, DIN695, VDE0471.

Test chamber and controller is integrated, which is convenient for installation and debugging.

Out-shell of test chamber and important parts are made of stainless steel material which is smoke and gas corrosion resistance.

Adopts thyristor control system to adjust current automatically.

Dimension: 1200mm (W) x 1260mm (H) x 600mm (D).

Weight: 100kg.

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