

涵普电力

HANPU POWER TECHNOLOGY

HANPU



www.zhejianghanpu.com

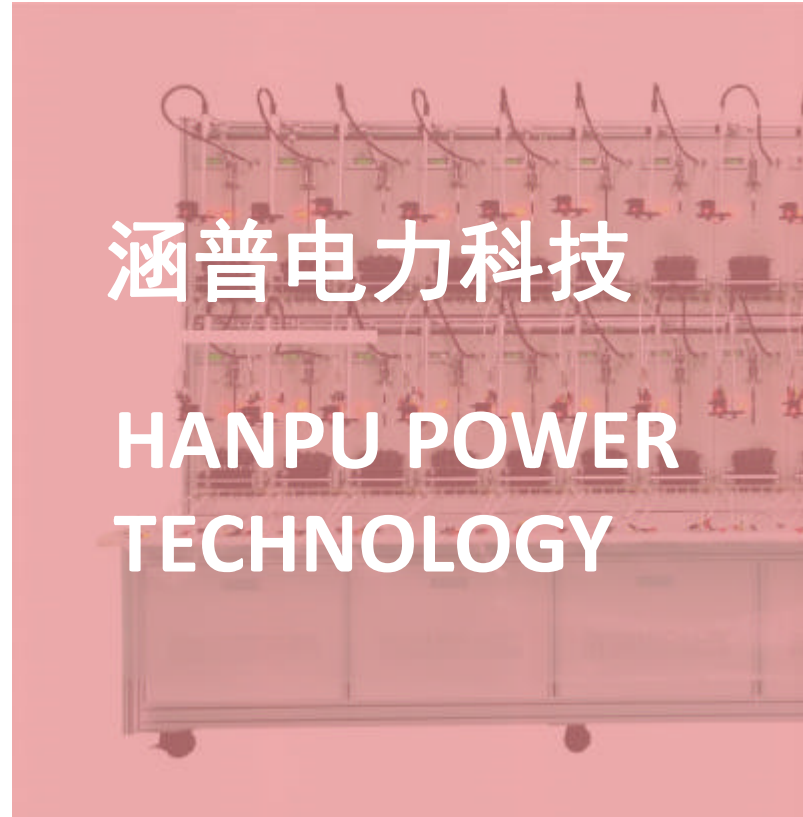


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Zhejiang Hanpu Power Technology Co., Ltd. is a holding subsidiary of Xiamen RED PHASE Power Equipment Co., Ltd. (stock code 300427) with a registered capital of 20 million US dollars. It has a modern industrial plant of 69,000 square meters and more than 500 employees.

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ABOUT US

了解我们



『COMPANY PROFILE』

公司简介

Hanpu, established in 1992, is a high-tech enterprise that integrates research and development, manufacturing, and sales of devices and systems for the production, measurement, testing, and calibration of Electric/kWh/Smart Smart Meters. Currently, we have over **500 dedicated employees** who are committed to delivering the highest quality precision. We operate three R&D centers located in Haiyan, Suzhou, and Ningbo respectively. Additionally, our company boasts a domestic first-class electric automation R&D team consisting of more than **100 R&D engineers** with independent intellectual property rights.

The customers we serve globally include utility companies, accredited test laboratories, national metrology centers, and manufacturers of electric Smart Meters.

The provision of professional services at critical moments is crucial. **Our online service provides us with a competitive edge in this industry.** We offer various accessibility options, including online/on-site and remote support, to meet your specific needs. Our comprehensive services include spare part availability, maintenance and reliability checks, as well as warranty extensions.

Hanpu offers a wide range of products for testing and calibrating Smart Meters. Our product line includes portable instruments capable of testing single or three-phase electric Smart Meters, as well as customized semi-automatic test benches with over 40 test positions.

Test Function of Hanpu Device

- Warming-up • Creeping/No load test • Starting test
- Basic error • Reverse phase sequence test
- Forward active energy/Reverse active energy
- Forward reactive energy/Reverse reactive energy
- Influencing quantity test • Voltage unbalance test
- High voltage test • 2nd - 21st harmonics
- Repeat test • Max demand test • Power consumption
- Frequency influencing quantity test • Constant test
- Harmonic/Sub-harmonic/Odd-harmonic • Day error
- Harmonic influencing quantity test, etc.



1PH Smart Meter Test Bench

单相电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8125M Single Phase Smart Meter Test Bench.
Reference Standard: 0.1/0.05/0.02 class
Imax: 120/200A Meter Position: 8/12/20/24/48

The meter test system is constructed according to:
IEC 60736 Testing equipment for electrical energy meters.
Allows testing of electrical meters according to: IEC 60145/IEC 62053-11/IEC 62053-22/IEC 62053-23/IEC 62052-11/IEC 62052-21 Electricity metering equipment (AC), 0.2S Class/0.5S Class/0.5 Class/1 Class/ 2 Class meter.

According to the different requirements of customers such as Meter Manufacturer, and provincial metrology centers, we can provide customized, combined flow design, installation, commissioning, and full-time operation and maintenance services with single-phase, three-phase meter test bench.

1PH Smart Meter Test Bench

单相电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8125M Single Phase Smart Meter Test Bench.
 Reference Standard: 0.1/0.05/0.02 class
 Imax: 120/200A Meter Position: 10/20

The meter test system is constructed according to:
 IEC 60736 Testing equipment for electrical energy meters.
 Allows testing of electrical meters according to: IEC 60145/IEC
 62053-11/IEC 62053-22/IEC 62053-23/IEC 62052-11/IEC
 62052-21 Electricity metering equipment (AC), 0.2S Class/0.5S
 Class/0.5 Class/1 Class/ 2 Class meter.

According to the different requirements of customers such as Meter
 Manufacturer, and provincial metrology centers, we can provide
 customized, combined flow design, installation, commissioning, and
 full-time operation and maintenance services with single-phase,
 three-phase meter test bench.

1PH/3PH ANSI Meter Test Bench

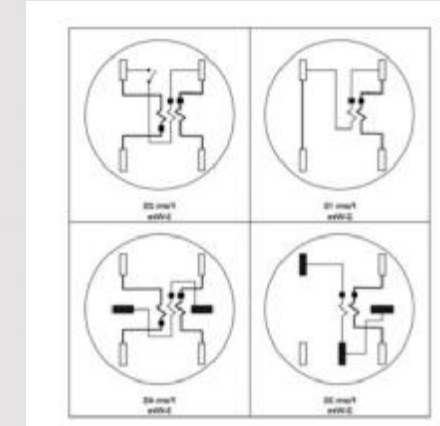
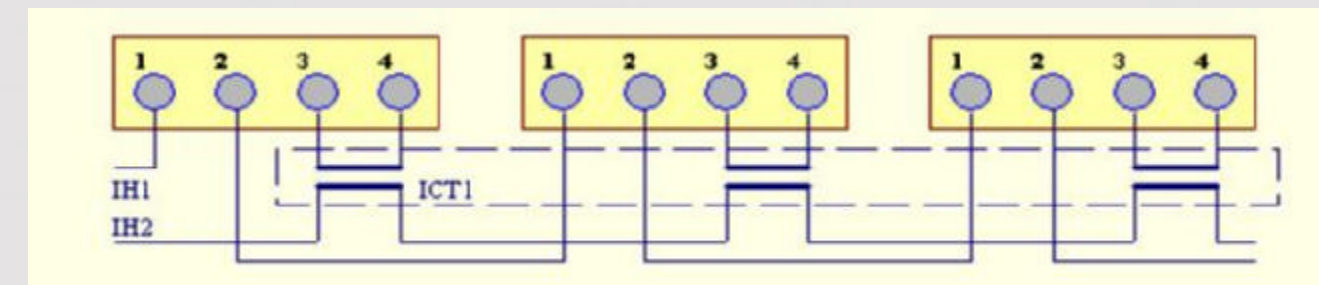
单/三相 ANSI 电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8125E (ANSI 1S-4S) Single Phase ANSI Meter Test Bench.
 PTC-8320E (ANSI 9S/12S/16S) Three Phase ANSI Meter Test Bench.
 Reference Standard: 0.05/0.02 class
 Imax: 120/200A Meter Position: 12/24



With specialized ANSI meter tool &
 air-drive fixing system, convenient and
 efficient to test FORM-1S/2S/3S/4S/9S
 meter, etc. Using the PWM, technology to
 amplify voltage/current output, the high
 efficiency at >85%, and lower the heat.

Semi-automatic 1PH/3PH Meter Test Bench 单/三相电表校验装置



『PRODUCT INTRODUCE』

产品简介

Semi-automatic Single/Three Phase Smart Meter Test Bench.
Reference Standard: 0.1/0.05/0.02 class
Imax: 120A Meter Position: 16/ 20

Semi-automatic 1PH/3PH Smart Meter Test Bench with air Cylinder pressure realizes that all meters are fixed by the cylinder at the same time, which is time-saving, convenient and fast. The terminal connector adopts pneumatic crimping form, which can be quickly adapted to the testing of the electric meter, with good contact and no need to fix meter by manual, only need a gas source of no less than 1MPa, and the diameter of gas source tube is 8mm.

3PH Smart Meter Test Bench 三相电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8320E Three Phase Smart Meter Test Bench
Reference Standard: 0.1/0.05/0.02 class
Imax:120A/ 200A Meter Position: 8/10/16/20

The meter test system is constructed according to:
IEC 60736 Testing equipment for electrical energy meters.
Allows testing of electrical meters according to: IEC 60145/IEC 62053-11/IEC 62053-22/IEC 62053-23/IEC 62052-11/IEC 62052-21 Electricity metering equipment (AC), 0.2S Class/0.5S Class/0.5 Class/1 Class/ 2 Class meter.

According to the different requirements of customers such as Meter Manufacturer, and provincial metrology centers, we can provide customized, combined flow design, installation, commissioning, and full-time operation and maintenance services with single-phase, three-phase meter test bench.

3PH Smart Meter Test Bench 三相电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8320E Three Phase Smart Meter Test Bench.
Reference Standard: 0.1/0.05/0.02 class
Imax: 120A Meter Position: 8/10/16/20/32/40
Imax: 200A Meter Position: 8/10/16/20

The meter test system is constructed according to:
IEC 60736 Testing equipment for electrical energy meters.
Allows testing of electrical meters according to: IEC 60145/IEC
62053-11/IEC 62053-22/IEC 62053-23/IEC 62052-11/IEC
62052-21 Electricity metering equipment (AC), 0.2S Class/0.5S
Class/0.5 Class/1 Class/ 2 Class meter.

According to the different requirements of customers such as Meter Manufacturer, and provincial metrology centers, we can provide customized, combined flow design, installation, commissioning, and full-time operation and maintenance services with single-phase, three-phase meter test bench.

3PH Smart Meter Test Bench 三相电表校验装置



『PRODUCT INTRODUCE』

产品简介

PTC-8320H High Accuracy Three Phase Smart Meter Test Bench
Reference Standard: 0.02 class
Imax:120A/ 200A Meter Position: 1/3

Using **Linear Power Amplifier**, the output power has high stability and reliability, and the standard electric energy method (comparison method) is used to verify the error of the electric Smart Meter, and the wide-range multi-function standard electric Smart Meter is used as the calibration device of reference meter.

According to the different requirements of customers such as Meter Manufacturer, and provincial metrology centers, we can provide customized, combined flow design, installation, commissioning, and full-time operation and maintenance services with single-phase, three-phase meter test bench.

3PH IR46 Smart Meter Test Bench

三相 R46 电表校验装置



『PRODUCT INTRODUCE』

产品简介

Three-phase IR46 Smart Smart Meter Test Bench PTC-8320H
 Reference Standard: 0.02 /0.05 class
 Imax:120A/ 200A Meter Position: 10/12/16/20

Using Linear Power Amplifier

- Harmonic test: It has the test function of harmonic influence quantity such as sub-harmonic, odd-order harmonic, square top wave, sharp top wave, zero-crossing point wave and pulse wave;
- Support the initial inherent error test and start-up test of a new generation of smart Smart Meters;
- Support the high-order harmonic sweep test of the voltage and current loops of a new generation of smart Smart Meters;
- Support the voltage sag and short-term interruption test of a new generation of smart Smart Meters;
- Support the rapid change test of the load current of a new generation of smart Smart Meters;

On-site Smart Meter Calibrator

现场电表测试仪



『PRODUCT INTRODUCE』

产品简介

On-site Meter Test Equipment is used for testing various electronic inductive single/three-phase active, reactive energy mete and all kinds of multi functional Smart Meters on site. It is suitable for waveform and harmonics measurement of voltage and current and analyzing of power supply and utilization quality.

HPU3030, HPU3030B, HPU3612, PTC-8101D, etc are optional.



Reference Standards 标准电能表



『PRODUCT INTRODUCE』

产品简介

1Ph Reference standard 0.05 class 120A HC3101A/HC-3101B
 1Ph Reference standard 0.02 class 120AHC-3101H
 3Ph Reference standard 0.05 class 120A HC-3100A/HC-3100H
 3Ph Reference standard 0.02 class 120A/200A
 HC-3100H/HC-3300L /HC-3300H

Single phase/Three phase multifunction reference standard is the intelligent high accuracy reference standard using high accuracy ADC and DSP high speed processor as its core.

It can simultaneously measure and display three phase voltage (V), current (A), active power (W), reactive power (var), frequency (Hz), power factor (PF), phase angle (θ), apparent power (S) and other power, and output active or reactive energy pulses; Support the rapid change test of the load current of a new generation of smart Smart Meters;

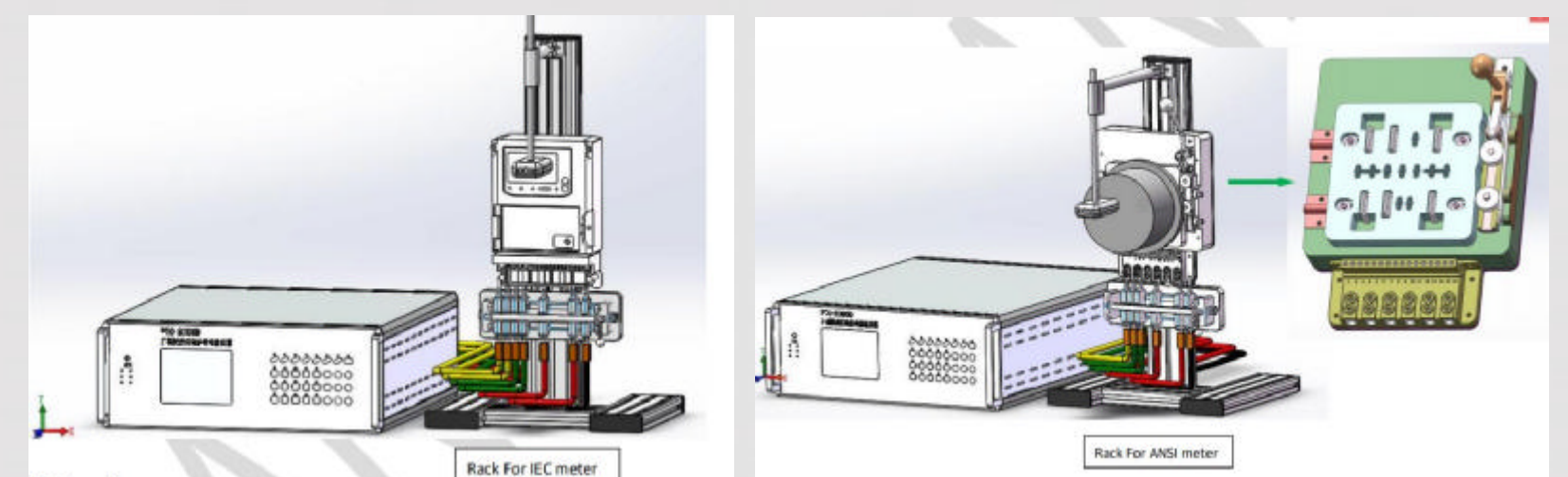
Portable Meter Test System 便携式电表校验装置



『PRODUCT INTRODUCE』

产品简介

Single Phase Portable Meter Test System
 PTC-8100D 0.05 class I max: 120A
 Three Phase Portable Meter Test System
 PTC-8300D 0.05 class I max: 120A



Portable Meter Test System

便携式电表校验装置



Design A



Design B

『PRODUCT INTRODUCE』

产品简介

Single Phase Portable Meter Test System with 3 Meter Positions
 PTC-8100D 0.05 class I max: 120A

Three Phase Portable Meter Test System with 3 Meter Positions
 PTC-8300D 0.05 class I max: 120A

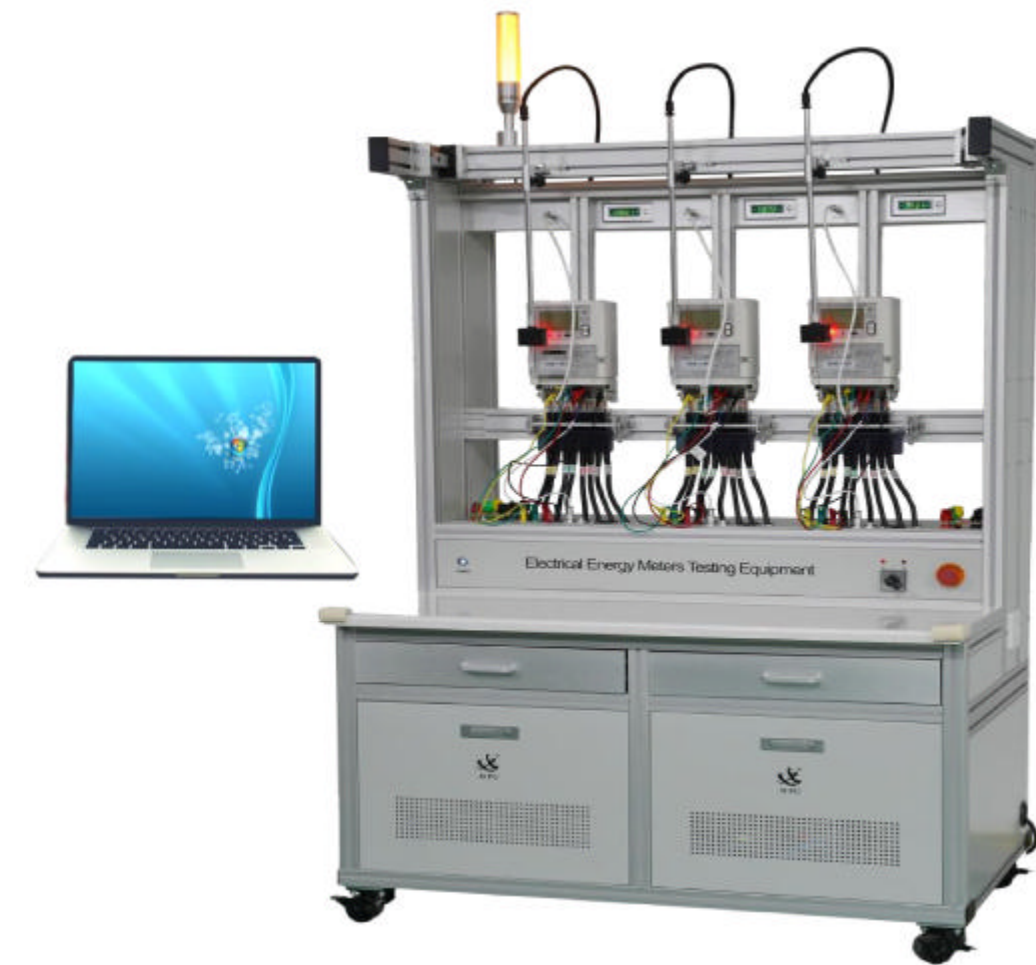
Design A is for R&D lab.

Design B is simple version for lab.

It can simultaneous test 3pcs of Single Phase Close-link Smart Meters, or 3pcs of Three Phase Open-link Smart Meters simultaneously, or 1pcs of Three Phase Close-link Smart Meter simultaneously.

IR46 Smart Meter Lab Test Bench

IR46 电表实验室测试装置



『PRODUCT INTRODUCE』

产品简介

Reference Standard: 0.05 class

PTC8300M 0.05class I max: 120A Meter Position: 3

The testing requirements in relevant standards for the new IR46 standard Smart Meters differ from the conventional meters, as outlined below,

- Harmonic influence test has been enhanced by adding high-order peak wave and square top wave test items.
- A higher harmonic test (sweep frequency test) has been introduced.
- Limit working voltage test has been included.
- Durability testing is now part of the standard requirements.
- Load current rapid change test has been intensified.
- Neutral current abnormal event test (single-phase and three-phase direct type) has been incorporated.
- Software checks and verification tests have been added to ensure protection of metrology performance.
- Harmonic Smart Metering (forward and reverse directions) is now considered in the standard specifications.

AC/DC EV Charging Station Test Device 交/直流充电桩测试装置



『PRODUCT INTRODUCE』

产品简介

PTC-8180 Test System for DC Charging Stations

Accuracy class: 0.05class, 0.1class, 0.2class

Output voltage range: 30V, 100V, 300V, 600V, 1000V

Maximum current of DC current out put: 500A;

Output current range: 1A, 5A, 10A, 100A, 500A

PTC-8100D Test System for AC Charging Stations

Accuracy class: 0.05class, 0.1class, 0.2class

Voltage output: 220V

Current output: 0.1-100A

HPU-3670 Portable AC EV Charging Station Test Device

HPU-3670 Portable Non-vehicle Charger Virtual Load Test Device

『HIGHLIGHTS』

关键工艺



Metrology Lab

COM5003 0.005 class,

At present only 3 units available in China, HANPU is one of the owners.

COM3003 0.01 class, RX-3 0.01 Class, DC HPU3900 0.01class, PTC-8320H 0.01 class, 3330A 0.01 class, as our Reference Master are High Precise Comparator which offers the opportunity to calibrate the accuracy class.

SMT

SMT is the most popular technology and process in the electronic assembly industry. SMT refers to the abbreviation of a series of technological processes that are processed on the basis of PCB.



Aging Lab

The Aging Lab simulates a high-temperature special test environment for high-performance electronic products, and is an important production process to improve product stability and reliability.

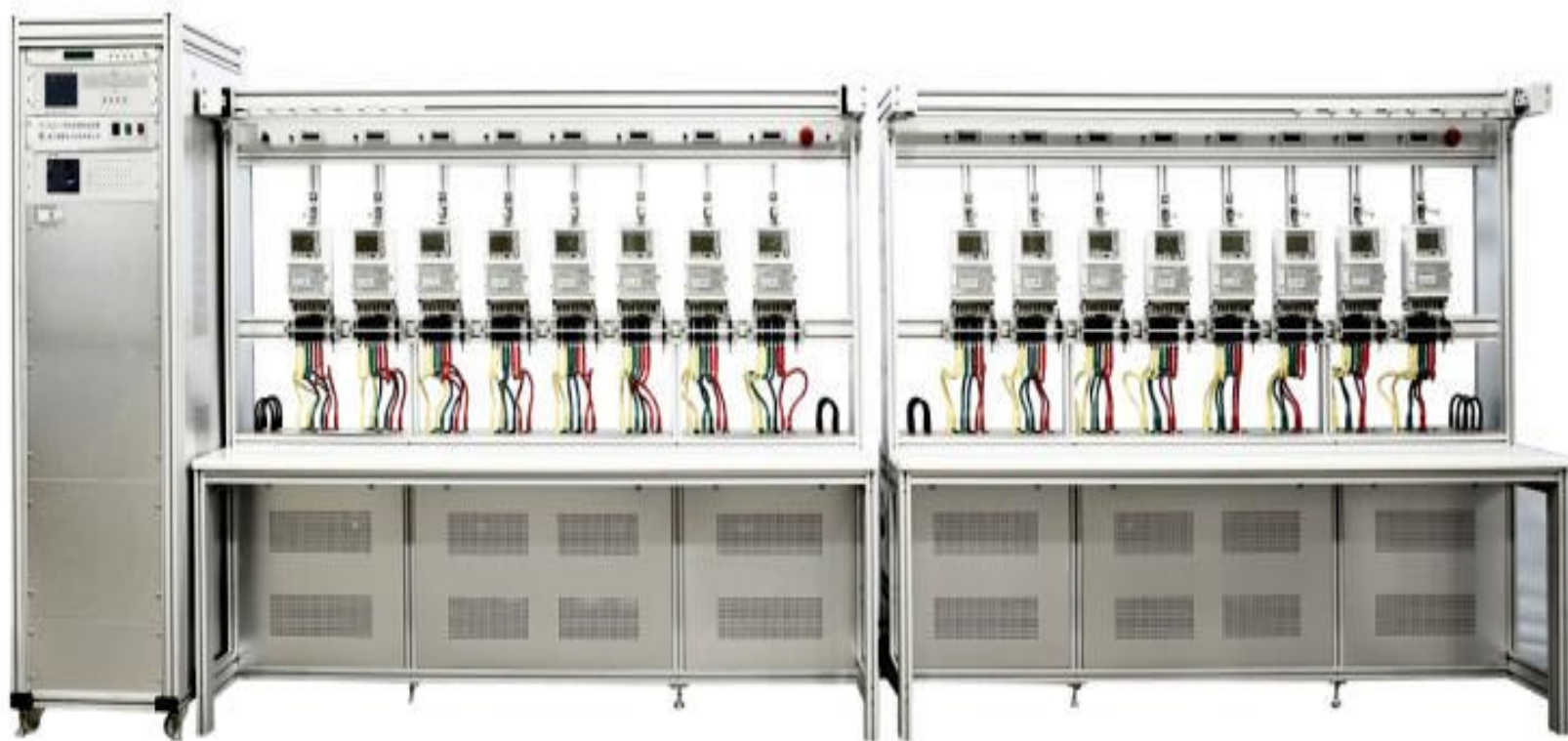
With around 600,000USD investment for the Aging Lab which is critical process for high accuracy device.

『Some International cases』

部分国际案例



1PH/3PH Meter
Test Bench



1PH/3PH Meter
Test Bench



3PH Meter Test Bench



3PH Meter
Test Bench



**3PH Meter High Accuracy
 0.01/0.02 Class Test Bench**



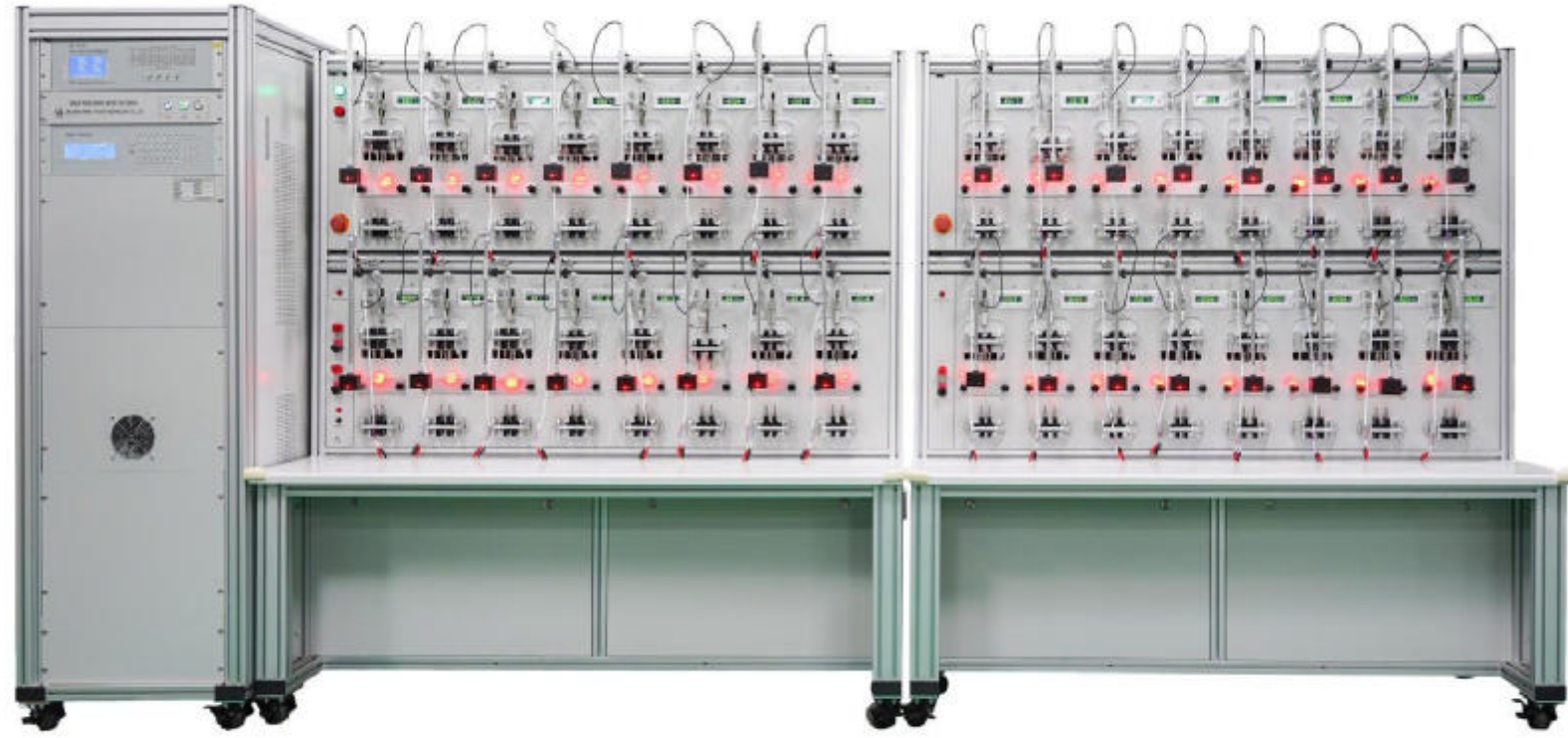
**3PH Meter Test Bench
 for R&D lab**



**1PH/3PH High
 Voltage Meter Test
 Bench**



**3PH Meter Test
 Bench for R&D lab**



1PH Din Rail Meter
Test Bench for R&D lab



3PH Meter Test Bench



3PH Meter Test Bench



3PH 0.01 Class Meter
Test Bench



3PH Meter Test Bench



1PH Semi-automatic
Smart Meter Test
Bench

Hanpu Test Benches are at clients' lab

涵普校验台在客户工厂及实验室实拍



Korea lab



European lab

Hanpu Test Benches are at clients' lab

涵普校验台在客户工厂及实验室实拍



Malaysia lab



European lab

Hanpu Test Benches are at clients' lab

涵普校验台在客户工厂及实验室实拍



Germany lab



Australian lab

Hanpu Test Benches are at clients' lab

涵普校验台在客户工厂及实验室实拍



International lab



International lab

Automated Assembly Line

自动化流水线案例



ISO/CE/SGS/BV Certificate

ISO/CE/SGS/BV 证书



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