

AIP® 艾普
Instrument System
专注全球电机测试



Qingdao AIP Intelligent Instrument Co., Ltd.



Catalogue

01 **Company introduction**

02 **Product introduction**

03 **Product application**



Company introduction



Total employee: 150

Technician No: 40 +

Cover area: 5000 m²



Branch office: 7 in China, 5 oversea

Company type: high-tech enterprise

Company positioning: focus on worldwide motor testing



Provide service: one-stop motor testing solution

Company principle: customer focus, dedicator oriented



Certificate



CE certificate

Industry hidden champion enterprise

ISO 9001 certificate

National IPR certificate

Province high-end manufacturing lead enterprise

Qingdao motor testing instrument manufacturing expert working station

Qingdao servo motor testing equipment expert working station

IPR: 15 patents, 21 software copyright





Development process



2009

Company founded and promote 1st generation comprehensive testing system, overturn traditional testing mode.

2011

Developed vacuum testing machine, supplied over 1000 unit in market up to now

2013

Developed BLDC motor load testing machine and exported to Hitachi Thailand, take leading position in industry

2015

Enter EV driving motor test industry, became industry benchmark

2018

Exported to 30 countries, mass supplied BLDC motor testing system to Welling and other well-known enterprises

2020

Solve surge test issue in testing high power motor, improve detection rate in full aspect



2012

Cooperate with Japan ES developed the die-cast rotor testing machine

2014

Promote 0.2% high accuracy dynamometer, marks milestone of industry

2017

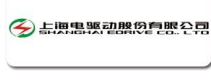
2nd generation motor testing system come out and developed international market with worldwide leading solutions,

2019

Solve industry difficulties in testing wrong winding and point damage, lead industry innovation

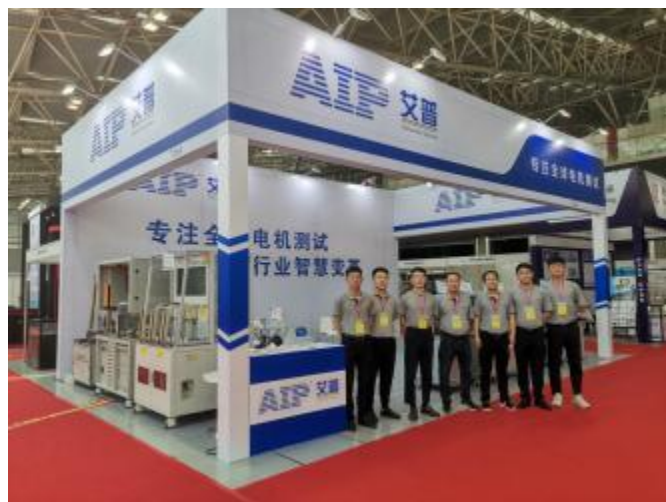


Clients view

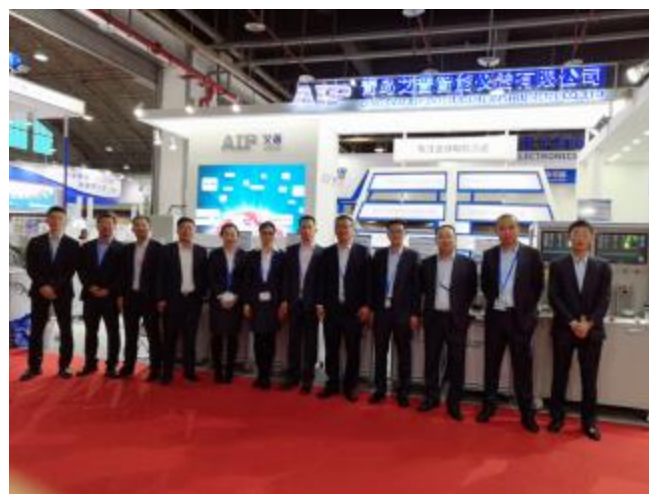




2021 exhibition



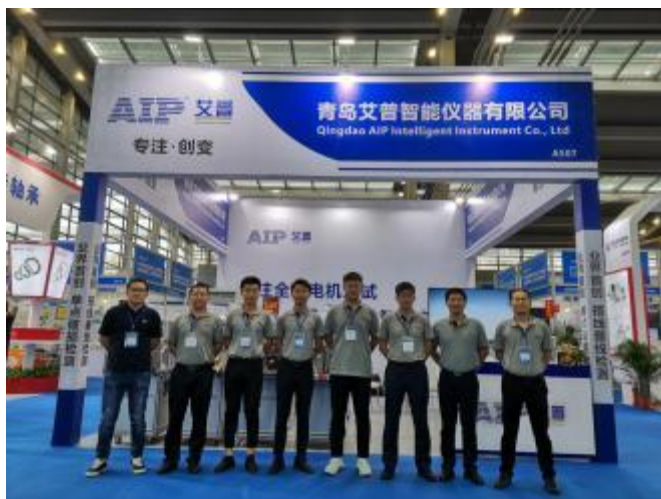
Changzhou CZMS



Shanghai SMTCE



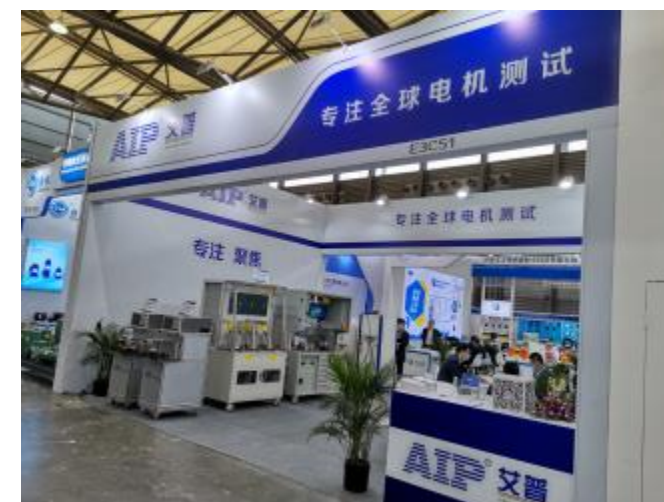
Shanghai BMC



Shenzhen MME



Taizhou Motor



China Refrigeration



Test application



BLDC motor
Testing solution



Home appliance motor
Testing solution



EV motor
Testing solution



Servo motor
Testing solution



Industrial motor
Testing solution



DC brushed motor
Testing solution



Compressor motor
Testing solution



Pump motor
Testing solution



Stepper motor
Testing solution



Fan motor
Testing solution



Catalogue

02

Product introduction



Most professional and comprehensive motor testing solution supplier

Stator test



Regular stator test



Stator BEMF test



Stator wrong winding test



Stator vacuum test



Coil point damage detect

Rotor test



Armature test



PM rotor test



Die cast rotor test



EV motor rotor test

Motor test



AC/BLDC motor test



3-ph asynchronous motor test



BLDC motor load test



Motor fix torque load test



Dynamometer test



Stator winding test



Test object

Applicable for motor stator of induction motor, brushed motor, brushless motor, stepper motor, servo motor etc.

Test item

AC Hipot, insulation resistance, DC winding resistance, surge, reverse winding, rotation

Features

- Test time: 4s for single speed stator
- Remote maintenance: support diagnose failure and upgrade program via remote control
- Modular design: each module run independently, module board easy to be assembled or changed
- Start-up diagnose: tester diagnose itself when start up, ensure its normal running
- High voltage output: high voltage output feedback ensures the voltage output accuracy and motor quality
- Data management: auto generate production data, auto save test data that can be queried or exported in the format of .CSV





Stator vacuum test



Sold 1000+, market share covers 85%



Test object

Applicable to vacuum test for stator winding of compressor motor, BLDC motor, automotive motor, induction motor etc. Vacuum negative pressure technology improves the detection rate compared with that under normal ambient.

Test item

AC Hipot, Insulation resistance, line to line resistance, surge, reverse winding, rotation

Features

- Vacuum degree: 0~-90KPa set as the tested stator
- Parallel test option: two stations work at the same time, improve efficiency
- Test fast: reduce time of vacuum pump extracting air, lower test time.
- Safety: equipped light curtain protection device ensures operator safety



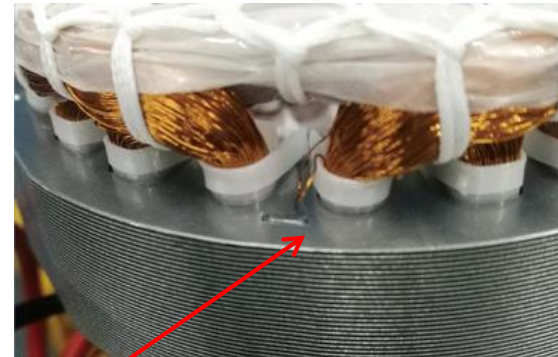
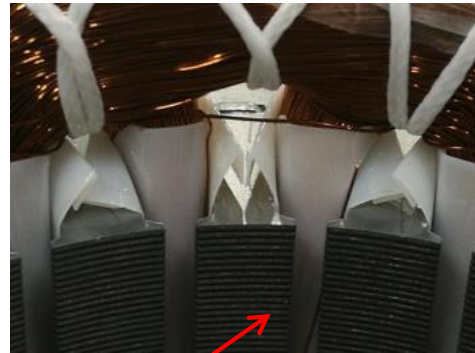
Stator wrong winding test



First developed in industry: coil and lamination contact test

Test object

Applicable for stator before insulation enameled. If the coil touches surface of lamination, no matter the coil is damaged or not, the tester would defect it effectively.





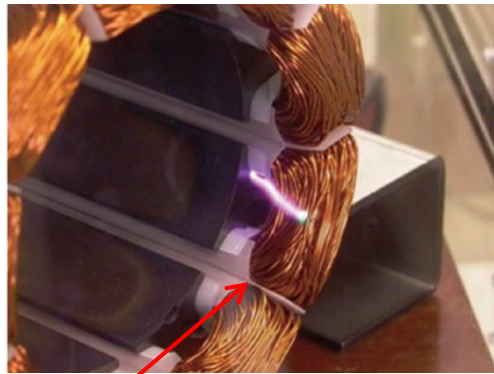
Coil point damage test



First developed in industry: replace salt solution test

Test object

Applicable for testing point damage of stator coil. Test result can be compared with salt solution test, but the testing method has no damage to stator and can be applied in the mass production line.





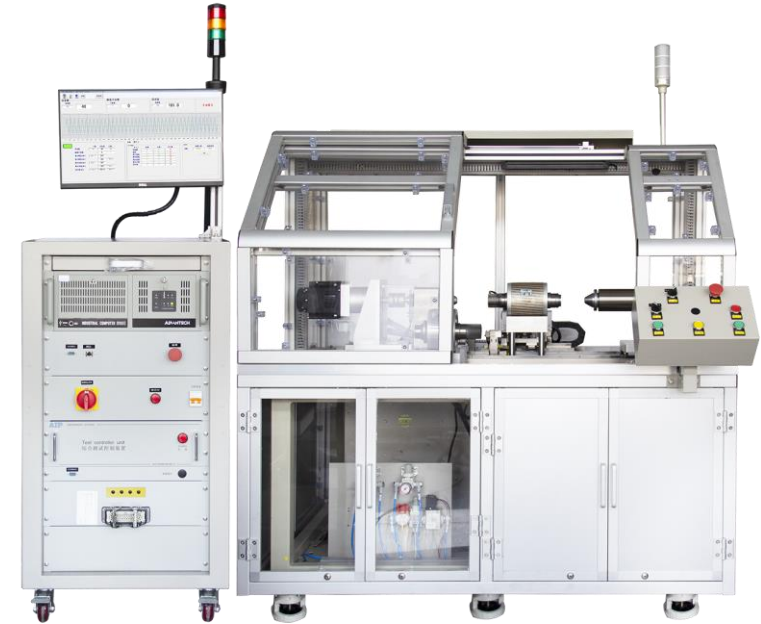
Die-cast rotor test



Regular die-cast rotor test



Full function rotor test



EV motor rotor test

Test object

Applicable for die-cast rotor for types of induction motors, include compressor motor, EV motor, home appliance motor etc.

Test item

Broken bar, thin bar, bubble, porosity, slot deviation, die-casting failure, end ring failure (optional)



Armature test



Test object

Applicable for armature of power tool motor, garden tool motor, automotive auxiliary motor, vacuum cleaner, mixer/blender and other small home appliance motor, other application brushed motor

Test item

Welding resistance, bar to bar resistance, diagonal resistance, AC Hipot, insulation resistance, surge

Feature

- Test time: 6s for 24 segments armature
- Welding to wrong segment: position the wrong welding point and display with graph
- Remote control maintenance, modular board design, start-up self diagnose, data management



Permanent magnetic rotor



Permanent magnetic inner rotor test



Permanent magnetic outer rotor test



Test object

Rotor of types of BLDC motor, permanent magnetic motor

Test item

BEMF, Hall, phase difference



Motor test



Test object

Applicable for testing complete motor of home appliance, pump, stepper motor, BLDC motor etc. All in 1 tester with high speed and accurate result.

Test item

AC Hipot, insulation resistance, DC winding resistance, surge, no-load, low voltage start, stall, rotation, PG

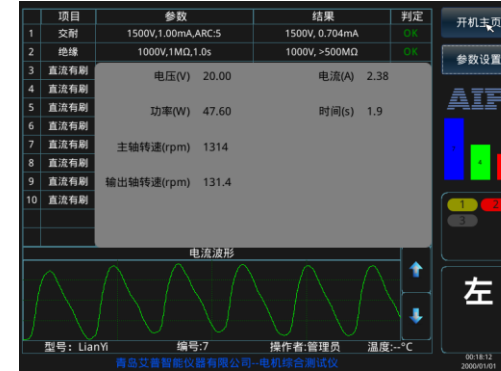
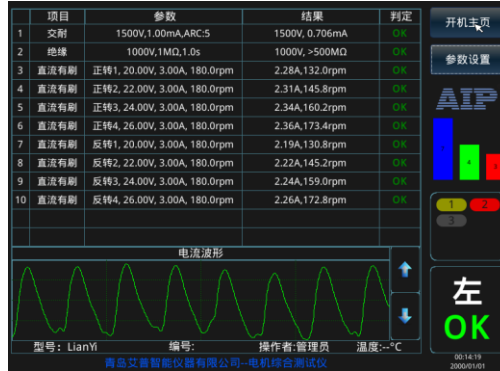
Features

- MES data exchange: test data exchange with MES(manufacturing execution system)
- Remote maintenance: support diagnose failure and upgrade program via remote control
- Modular design: each module run independently, module board easy to be assembled or changed
- Data management: auto generate production data, auto save test data that can be queried or exported in the format of .CSV





DC brushed motor test



Test object

Power tool motor, garden tool motor, automotive auxiliary motor, vacuum cleaner, mixer/blender and other small home appliance motor

Test item

AC Hipot, insulation resistance, voltage, current, power, speed, rotation, current graph

Features

- All in 1: all in 1 tester simplifies the test process and personnel, reduce cost for company
- Power module: built-in power module that could adjust voltage automatically, simplify operation and make test accurate.



3-phase industrial motor testing



Test object

Applicable for types of three-phase industrial motor

Test item

AC Hipot, insulation resistance, line to line resistance, surge, locked rotor(stall), no load (voltage, current, power)

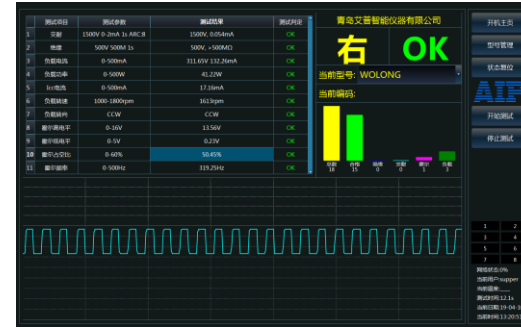
Features

Optional equipped with special surge function, which solves the industry difficulty in aspect of surge test for high power motors with low resistance and inductance.

- Options: multiple current measuring range options, equipped with test clamps, more flexible in connecting with tested motors
- High current for stall test: stall current up to 1200A
- Data management: auto generate production data, auto save test data that can be queried or exported in the format of .CSV



BLDC motor load test



Test item

AC Hipot, insulation resistance, load, Hall, BEMF, phase difference, phase loss, impedance voltage drop

Features

- Power filter: equipped the filter module ensures that there is no burr during power on and off
- Quick fix: customized mechanical fixture, auto fix in high efficient
- MES data exchange: test data exchange with MES(manufacturing execution system)
- Fix load: optional load torque 0.1-0.75Nm, communication control is stable and accurate



Motor load test



Mass production, multiple torque options, CW/CCW load test





Dynamometer



- High accuracy: 2‰
- Synchronous test: input/output and load is controlled by 1 unit, make sure test data accurate
- Easy switch: dynamometer brake switch can be done by transducer, AC/DC/BLDC motor switched by software



Generator dynamometer



- Power feedback for big motor, save energy and resources
- Loading and measuring range switch automatically, accurate feedback and control
- Network control system, digital process and control, improve anti-interference ability



Catalogue

03

Customer application



Application case



BLDC motor load test



BLDC auto line test



Power tool BLDC motor test



EV motor stator test



Industrial motor test



Die-cast rotor test



Application case



Stator winding test



Motor auto line test



Tester in Brazil



Armature test



Armature auto line test



Tester in Vietnam



Following Youtube channel "AIP Instruments" to watch more products videos!