

ZT5610A Automated Hydraulic Pressure Calibrator



Fast, Easy

Measuring range: (0-60)MPa

Description

Integrated a number of patented technologies, ZT5610A is an original-creating high-tech products in China. Whole process of pressure gauge testing is automatic by using precision digital pressure source instead of manual pressure generation, high-performance computer instead of manual calculation.

Built-in patented digital pressure source system; Measuring range is (0-60) MPa; Simple, fast testing for pressure gauge, pressure switch, etc.; In cooperation with the software, it achieves automatic pressure control, data recording, qualifying, saving. Particularly manual testing is supported, and without computer it can test semi-automatically by operating touch screen, as well as save testing data and generate test result.

The operator only needs to install the pressure gauge, selects matching type and inputs relevant measuring parameters in software, then the system tests automatically in accordance with relevant regulations and standards after click the "Start" button. The test records are saved automatically after testing is completed. The operator feels that the former heavy work becomes much easier now.

Measure ordinary pressure gauges, precision pressure gauges, digital pressure gauges, pressure gauges with electric connectors, pressure sensors, pressure transmitters, pressure controllers; Ideal for calibration and management of pressure gauges in metering, oil, chemical, electric power, metallurgical, military, pressure gauge manufacturing industry, etc.

Features

- 1. Multi-function:** In accordance with the newest regulations and standards, measure ordinary pressure gauges, precision pressure gauges, digital pressure gauges, pressure gauges with electric connector, pressure sensors, pressure transmitters, pressure controllers, etc.
- 2. Big color touch screen:** The operation is very simple and easy with clear touch screen and powerful software; With functions of test points setting & recording & saving, automatic test is also supported without computer, which improves test efficiency.
- 3. Artificial intelligence:** Digital pressure source system controls pressure(boosting and depressurization) accurately without manual generating pressure or micro adjustment; The system automatically acquires & processes data, generates test result and prints test report without manual sampling and calculation.
- 4. Quick error recording function:** When the system pressure is stable in each test point, without manual reading and inputting indication value of testing pressure gauge, the operator only need to choose the deviation value from default table which is the gap between test object and standard pressure gauge. The operation is simple and easy, moreover the testing efficiency is significantly improved.
- 5. Powerful data management:** the powerful software processes the testing data automatically, and keeps all test records, particularly they can be queried, displayed and printed anytime.
- 6. Newest standard:** Adherence to the newest standards, it conforms to relevant metrological verification regulations
- 7. High speed:** It generates the stable pressure fast by high-performance pressure generator. The test points can be set at will, moreover the testing efficiency can be improved by reducing test points. 8 seconds per test point under quick mode, and 15 seconds per test point under accurate mode
- 8. Intelligent software:** The test points can be set at will. Based on intelligent recording function, the machine can execute test according to previous testing setting for the same type of pressure gauge.

Technical advantages

Digital pressure source(National patent):

Precision pressure control is achieved by using 0.05 level sensor and pressure generator controlled by a precision stepper motor. For example, 10MP test pressure can be stabilized within 10±0.005MP.

Pressure medium is transformer oil. Oil-free pneumatic gauges can be tested with an oil-water isolator.

Do not need manual fine adjustment for pressure by using patented regulator valve(Patent No.: ZL 2012 20327118.1).

Functions

1. Automatically measure ordinary pressure gauges, precision pressure gauges, digital pressure gauges, pressure gauges with electric connectors, pressure sensors, pressure transmitters, pressure controllers according to the newest regulations and standards.
2. Semi-automatic testing function for stained pressure gauges.
3. Process and qualify the testing data automatically.
4. Can display and print former test results and test reports including error sheet or curve of measuring points and deviation values compared to specified standard.
5. Can query and manage the test records according to object type, manufacturer, manufacturing number, inspector, submitted institution, equipment number, inspection date, effective date, etc.
6. Can print multiple selected test records or test certificates from database at a time.
7. Can export test data to the Word file.
8. Can customize the format of test report and test certificate according to the requirements of customers(optional).

Parameters

Testing range	(0-60)MPa
Test object	Ordinary pressure gauges, precision pressure gauges, digital pressure gauges, pressure gauge with electric connectors, pressure sensors, pressure transmitters, pressure controllers, etc.
Test quantity	2pcs per time
Test speed	8 seconds per test point under quick mode 15 seconds per test point under accurate mode
Pressure stabilization time	≥20 seconds
Pressure fluctuation	<0.005%FS
Electrical measurement	2 Channels, 2 levels of voltage test: (0~±1)V and (0~±30)V, Accuracy ±(0.02%RD+0.005%FS); Current testing range (0~±30)mA, Accuracy ±(0.02%RD+0.005%FS)
Electric output	2 Channels, Output voltage DC24V, Accuracy ±2%F-S, Max load capacity 50mA; Output current 1.5mA, Accuracy ±2%F-S, Max load capacity 14kΩ
Pressure medium	Transformer oil
Input voltage	220V 50Hz
Operating environment	Temperature (20±5)℃, relative humidity ≤85%
Special design	Leak-proof, filter, easy to dismantle
Dimension, weight	(650 ×450 ×225) mm, 50 kg

Configuration

Standard configuration

- | | |
|---|-------|
| 1. Host machine | 1 pc |
| 2. Connector | |
| Quick connector for radial direction pressure gauge | 2 pcs |
| Quick connector for axial direction pressure gauge | 2 pcs |
| 3. Cables | 1 set |
| 4. User manual | 1 pc |
| 5. Product certification and Warranty card | 1 set |

Optional configuration

- | | |
|--|-----------|
| 1. Testing software | 1 set |
| 2. Standard pressure gauge | |
| ZT550 precision digital pressure gauge | 1 pc |
| ZT560 intelligent digital pressure gauge | 1 pc |
| 3. Desktop computer | 1 set |
| 4. HP laser printer | 1 pc |
| 5. Summer or winter laboratory uniform | 1 of each |

ZT5640 Automated Micro-Pressure Calibrator



Description

ZT5640 Automated Micro-Pressure Calibrator is a dual-use instrument for testing both positive pressure gauges and negative pressure gauges; The function conversion is simple and reliable; It is the high-tech product for testing micro-pressure.

Time of pressure generation&stability is controlled accurately by stepper motor; The test records can be saved and printed by operating via touch screen; The operator only needs to install the pressure gauge and input measuring pressure in software, then the system tests each test point automatically in accordance with relevant regulations and standards after click the "Start" button. The test records are saved automatically after testing is completed. The operator feels that the former heavy work becomes much easier now.

The machine provides pressure for testing micro differential pressure gauges and micro differential pressure transmitter. It is mainly used in laboratory of metering, aerospace, military, electric power, petrochemical, metallurgy industry, as well as pressure measurement and scientific research institutes.

Features

1. Dual-use for testing both positive pressure gauges and negative pressure gauges; Simple and reliable function conversion.
2. Fast pressure generation: Pressure reaches setting value about 20s.
3. Stable pressure: accuracy ± 0.1 Pa.
4. Overload protection.
5. The powerful software processes the testing data automatically, and keeps all test records, particularly they can be queried, displayed and printed anytime.
6. Adherence to the newest standards, it conforms to relevant metrological verification regulations.

Technical advantages

Precision pressure control is achieved by using precision sensor and pressure generator controlled by precision stepper motor. For example, 10MP test pressure can be stabilized within 10 ± 1 MP, additionally automatic pressure compensation ensures stable and reliable pressure supply.

Pressure medium is radiation-free and pollution-free air. Micro-solenoid valve together with filter ensures reliability of pressure generation system.

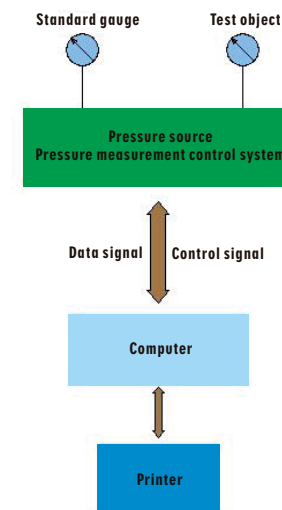
Test data of each test point can be saved and printed.

Working principle

ZT5640 Automated Micro-Pressure calibrator includes pressure source (pressure generation system), HMI, standard pressure gauges, test object, test software, computer, printer, etc.

ZT5640 generates pressure accurately by digital pressure source, then, comparing test object's value to the one from precision digital sensor (in standard pressure gauge), in accordance with relevant regulations it processes the data automatically, finally generate the test report.

After start testing, the system controls precision digital pressure source system to generate required pressure fast and accurately, then, it automatically stabilizes required pressure for 20s at each test point; The test data is saved automatically after test is completed, finally test result with data sheet can be displayed and printed.



ZT5640 structure principle

Parameters

Testing range	Pneumatic pressure (-10~10)kPa
Test object	Micro differential pressure gauges, micro differential pressure transmitters
Pressure fluctuation	<0.005%FS
Test speed	<25 seconds
Pressure stabilization	≥ 20 seconds
Electrical measurement	2 Channels, 2 levels of voltage test: (0~ ± 1)V and (0~ ± 30)V, Accuracy $\pm (0.02\%RD + 0.005\%FS)$; Current testing range (0~ ± 30)mA, Accuracy $\pm (0.02\%RD + 0.005\%FS)$
Electric output	2 Channels, Output voltage DC24V, Accuracy $\pm 2\%FS$, Max load capacity 50mA, Output current 1.5mA, Accuracy $\pm 2\%FS$, Max load capacity 14k Ω
Pressure medium	air
Input voltage	220V 50~60Hz
Operating environment	Temperature (20 ± 5) $^{\circ}C$, relative humidity $\leq 85\%$
Dimension, weight	(450 $\times$ 350 $\times$ 220) mm, 18 kg

Configuration

Standard configuration

- | | |
|--|-------|
| 1. Host machine | 1 pc |
| 2. ZT550 precision digital pressure gauge | 1 pc |
| 3. Cables | 1 set |
| 4. User manual | 1 pc |
| 5. Product certification and Warranty card | 1 set |

Optional configuration

- | | |
|--|-----------|
| 1. Testing software | 1 set |
| 2. Desktop computer | 1 set |
| 3. HP laser printer | 1 pc |
| 4. Summer or winter laboratory uniform | 1 of each |

ZT500 Series of Manual Pressure Comparator



ZT500 Manual Hydraulic Pressure Comparator



ZT501 Manual Pneumatic Pressure Comparator

Description

ZT500 Series of Manual Pressure Comparators: it is easy to reach max pressure of test object by using manual pressure generation system and pressure adjustment system. With innovative structure design, this series of products generate stable pressure fast and simply, and they are ideal for testing various types of pressure gauges and equipments.

ZT500 Series of Manual Pressure Comparators are made from stainless steel with bench mount design. Consisting of lever type hand pump, unloading valve, shut-off valve and pressure regulating tank, they generate pressure easily and simply. Particularly ZT501 Manual Pneumatic Pressure Comparator is built in with valve for conversion of positive and negative pressure

ZT500 Serie provides pressure generation for measurement of ordinary pressure gauges, precision pressure gauges, pressure transmitters, differential pressure transmitters, pressure sensors, pressure switches, and is widely used in laboratory and fieldwork of electric power, metallurgy, chemical, oil, metering industry, etc.

Features

1. Simple structure, easy operation and easy to learn and use. Friction is small because the piston of pressure adjustment tank does not rotate while pressure adjustment, so it is laborsaving and timesaving
2. High reliability and extremely micro leakage. ZT501 is long lifespan with stable and reliable performance by using special high-pressure sealing materials.
3. Large range of pressure adjustment, and stable pressurization & depressurization. Problem of pressure control in reverse measuring is solved, so it can supply stable & adjustable high pressure.
4. 2 pressure output ports are M20×1.5 quick connectors
5. With 3 quick connectors, it is easy and fast to install and remove pressure gauges.
6. With portable case: it is convenient for fieldwork or storage in laboratory

Parameters

Item No.	ZT500	ZT501
Testing range	(0~60) MPa	(0~6) MPa
	(0~100) MPa	(-0.095~0) MPa
Adjustable fineness	0.1 kPa	10 Pa
Pressure medium	Transformer oil	Air
	/Dicholesteryl Sebacate	
Dimension	(450×405×140)mm	(500×370×210)mm
Weight	15kg	14kg

Configuration

- | | |
|--|-------|
| 1. ZT500 Manual Hydraulic Pressure Comparator | 1 pc |
| or ZT501 Manual Pneumatic Pressure Comparator | 1 pc |
| 2. Quick connector for radial direction gauges | 1 pc |
| 3. M20 end-cap | 1 pc |
| 4. Rubber sealing gasket | 1 set |

ZT500 Series of Handheld Pressure Pump



ZT505 Handheld Pneumatic Pressure Pump



ZT505B Handheld Pneumatic Pressure Pump



ZT506 Handheld Hydraulic Pressure Pump



ZT507 Handheld Micro Pressure Pump

Description

ZT500 Series of Handheld Pressure Pumps are comprehensive pressure sources; They are dual-use instruments for testing both negative pressure gauges and positive pressure gauges; Function conversions of them are simple and reliable.

ZT500 Series provides pressure generation for measurement of pneumatic/ hydraulic pressure gauges, including universal pressure gauges, precision pressure gauges, pressure transmitters, differential pressure transmitters, pressure sensors, pressure switches. ZT500 Series is mainly used in laboratory and fieldwork of electric power, aerospace, chemical, oil, metering, food industry, etc.

Parameters

Item No.	ZT505	ZT505B	ZT506	ZT507
Testing range	(0~2.5) MPa,	(0~1) MPa,	(0~60) MPa,	(0~40) kPa,
	(-0.095~0) MPa	(-0.095~0) MPa	(-0.09~0) MPa	(-40~0) kPa
Adjustable fineness	0.01 kPa	0.1 Pa	0.1 kPa	0.1 Pa
Pressure medium	Air	Air	Transformer oil	Air
Connection port	M20×1.5 (2pcs)			
Dimension	290×140×125 (mm)	275×260×130 (mm)	260×145×125 (mm)	240×180×120 (mm)
Weight	2.5kg	4kg	2kg	2kg