HWAXEE

INTELLIGENT QUALITY
MANUFACTURING
FOR WATER PURIFIERS



HWAXEE

Dry Air Leak Testing for RO Water Purifiers

Detect Leaks Before Shipping

HX-108CQ RO Air Leak Detector for RO Systems

- **Patent No.**

  2021500738428 (In-Line Air Leak Testing System V1.0)
  2025SR0544587 (Water Purifier Leak Detection Control Software V1.0)

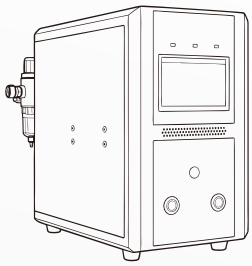
Dry air leak testing replaces water bath

High-speed tact time inspection

High and low pressure coverage



01 KEY FUNCTIONS



- **System leak detection** — Locates micro leaks in RO water lines without water immersion
- **Low-pressure leak test** — Checks seal performance under everyday working pressure
- **High-pressure test** — Tests pipe connections under high pressure to prevent loose hoses and blowouts
- **Auto pass/fail alarm** — Automatically determines OK/NG results based on pressure change
- **Data logging and export** — Saves complete test records with USB/PC export for full quality tracking

02 BENEFIT

Prevent water leak claims
Catches micro leaks before delivery to lower warranty and compensation costs

Faster line output
Quick air testing cycles speed up single-unit testing for fast assembly lines

Dry factory floor
Replaces wet water tanks to keep workstations clean, dry, and safe

Cut rework costs
Finds defects before filling water, saving tear-down labor and scrap parts

03 KEY SPECIFICATIONS

Target samples	Test method	Test pressure range	Test medium
RO water purifiers	Differential pressure decay method, DP sensor ±3000 Pa	100.0~600.0kPa	Dry clean air / bubble leak test
Inflation time	**Stabilization time**	**Test duration**	**Exhaust time**
1.0–999s adjustable	1.0–999s adjustable	1.0–999s adjustable	1.0–999s adjustable
Average test cycle time	**Supported peripherals**	**Data logging & storage**	**Power supply requirements**
10–20 seconds	Supports external RS232 serial barcode scanners)	Over 100,000 test logs stored; supports USB export	AC180~240V, 50/60Hz, <100W

04 WHERE TO USE

RO assembly lines, QC inspection bays, and final factory testing stations

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All-in-one end-of-line tester for RO water purifiers

Replace multiple inspection stations

HX-108CDS All-in-One RO Water Purifier In-Line Tester

- **Patent No.**

2021SR1043221 (HX-108BD Water Purifier Comprehensive Performance Testing System V1.0)
2025SR2335594 (HWAXEE Water Purifier Full-Unit Performance Testing Embedded Software V1.0)
2022100804498 (A Testing Method for Water Purifiers)





HX-108CDSG In-Line RO Water Purifier Functional Testing Bench

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HX-108CQ RO Air Leak Detector for RO Systems

Integrated pneumatic and electrical testing

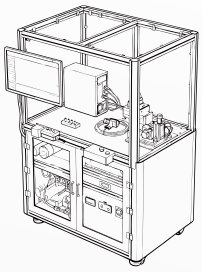
Complete inspection in a single setup

Quick module changeover

Smart data tracking and management

Seamless integration with automated production lines

01 KEY FUNCTIONS



- **Full-unit air leak testing** — Checks system and tubing seal integrity to pinpoint micro air leaks fast
- **Electrical component testing** — Verifies real-time working status for booster pumps, pressure switches, and inlet solenoid valves
- **Valve performance check** — Inspects functional response for flush combination valves and check valves
- **Water flow path verification** — Ensures clear lines for purified water and waste water to prevent assembly errors

02 BENEFIT

Boost production efficiency

Cuts testing cycle time from over 30 minutes in traditional wet testing down to 6–7 minutes per unit to speed up assembly line output

Lower quality risks

Fully verifies air tightness, electrical logic, and water flow paths before shipping to prevent field issues like leaks or no water output

Optimize workshop footprint

Reduces required test bays and operator input to maximize factory floor space utilization

Improve product hygiene

Minimizes internal water residue to prevent bacterial growth risks caused by leftover water

03 KEY SPECIFICATIONS

Target Samples	Test Method	Air Tightness Pressure	Operating Pressure Range
Complete RO Water Purifier Units	Air & Electrical Testing Integration	0.05–0.8 MPa Differential Pressure Decay (Accuracy: ±0.25% F.S.)	0.1–0.3 MPa / 0.1–0.6 Mpa

Water Flow Range	Time Setting Range	Time Setting Range	Power Supply
1–100 L/min Accuracy: ±1.5% F.S.	1.0–999s Adjustable	6–7 minutes per unit	AC 220V ±5%, 50Hz

Compressed Air Supply	Supported Peripherals	Data Logging & Storage	Operating Temperature Range
Air Pressure ⩾0.7 Mpa	External RS232 Serial Barcode Scanners	Stores over 100,000 test logs; supports USB export	0–40°C

04 WHERE TO USE

Pre-packaging assembly lines and final quality check stations.

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No need to wait 30 minutes for water testing

Fast-track factory functional verification for every RO water purifier

HX-108CDSG In-Line Water Purifier Functional Test System

- **Patent No.**

2025SR2335594 (HWAXEE Water Purifier System Performance Testing Embedded Software V1.0)
2022201974824 (Water Purifier Testing Apparatus)
2022100804498 (Water Purifier Testing Method)

Pneumatic functional testing

Rapid functional verification

Automated precision evaluation

Pneumatic quick-connect coupling



01 KEY FUNCTIONS



- **Component functional testing** — Inspects operational status of key components such as booster pumps, low-pressure switches, high-pressure switches, and inlet solenoid valves
- **Valve performance testing** — Verifies performance of hydraulic control components including flush combination valves and check valves
- **Water purification effect testing** — Measures purified water volume, wastewater volume, and recovery ratio post-purification
- **Electrical logic testing** — Evaluates operational logic across solenoid valves, pressure switches, booster pumps, and control PCBs
- **Data traceability** — Supports test data logging, query retrieval, and report export

02 BENEFIT

Boost production efficiency

Controls single-unit test time under 1 minute, dramatically reducing cycle times compared to wet testing

Reduce rework risks

Identifies functional defects and micro-leaks early to avoid difficult post-watering rework or circuit damage

Minimize labor dependency

Controls test parameters automatically to eliminate operator bias, missed I nspections, and false calls

Improve shop floor environment

Eliminates residual water hazards from traditional wet testing to enhance shop floor cleanliness

03 KEY SPECIFICATIONS

Test objects	Test method	Functional pressure	Flow rate measurement
Complete RO water purifier systems	Pneumatic simulated hydraulic functional testing	0.1–0.3 MPa / 0.1–0.6 MPa (high/low pressure valves)	1–100 L/min (accuracy ±1.5% F.S.)

Current measurement	Test cycle time
0–20 A (AC/DC selectable)	⩽1 min

04 WHERE TO USE

Water purifier assembly lines and final inspection stations

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One single test, early detection of future leakage risks

Validating product durability under frequent, long-term operation



HX-354BDL-4 Water Purifier Water Hammer Testing System

High-speed water hammer cycling

Rapid pressure data acquisition

Water leak alarm notification

Remote monitoring & management

Compliant Standard

Meets GB/T 30307-2023 for drinking water treatment appliances

Patent No.

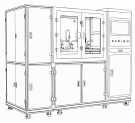
2021228756706 (Water Hammer Testing System and Testing Apparatus Therefor)
2021SR1201454 (HX-354BDZ Water Hammer Testing System V1.0)
2025SR1297029 (HUAXI Water Hammer & Hydrostatic Burst Testing Embedded Software V1.0)

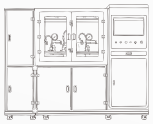






01 KEY FUNCTIONS





- **Cyclic pressure testing** — Repeats pressurization, pressure hold, and relief cycles to simulate long-term water shock
- **Alternating pressure control** — Runs automated cyclic tests based on pre-set pressure ranges and time parameters
- **Fatigue durability verification** — Inspects products for cracking, seepage, or pipe bursting under long-term pressure fluctuation
- **Temperature-controlled testing** — Performs pressure cycling at specified water temperatures to maintain testing environment consistency
- **Test data logging** — Supports saving pressure curves, recording cycle counts, and exporting test reports
- **Automated evaluation function** — Enables automatic leak detection with OK/NG result output

02 BENEFIT

Early fatigue failure detection
Simulates years of pressure changes to prevent post-launch water leaks caused by material aging

Reduced warranty repair costs
Filters out low-durability units in the laboratory stage to mitigate mass recall risks

Enhanced product reliability
Uses actual cycle tests to validate design lifespan and boost consumer confidence

R&D optimization support
Uses failure data to pinpoint structural, material, and sealing design issues

03 KEY SPECIFICATIONS

Water tank	Testing stations	Testing pressure	Test water temperature
One 200L tank SS304 stainless steel	4 stations	0.1–2.5 MPa (adjustable)	10–40°C (adjustable)

Pressurization time	Pressure hold time	Test cycle duration	Compressed air pressure range
0–999999 s (adjustable)	0–999999 s (adjustable)	1.2 s/cycle	0.6–1.0 Mpa

Test objects	Pressure transducer	Voltage range	Inlet water pressure
Complete water purifiers and components	0–2.5 Mpa accuracy ±1% F.S.	AC 380V ±10%, 50Hz	⩾0.2 Mpa

04 WHERE TO USE

Suitable for R&D and QA testing laboratories of water purifier manufacturers, used for new product reliability validation and batch quality sampling

HWAXEE

Don't let a single burst failure ruin your brand reputation.

Verify pressure limits early to block water leak risks before launch

HX-351BDZ-4 Hydrostatic Burst Pressure Test System

Compliant Standard

Meets GB/T 30307-2023 for Drinking Water Treatment Appliances

Safety Guard

Equipped with explosion-proof shielding, pressure relief protection, and safe operation design

Patent No.

2021228756833 (Hydrostatic Burst Testing System and Testing Apparatus Therefor)
Software Copyright: 2025SR1297029 (HWAXEE Water Hammer & Hydrostatic Burst Testing Embedded Software V1.0)



Integrated Water Hammer Testing

Remote Monitoring & Control

Precision Pressure Ramp Control

01 KEY FUNCTIONS





- **Hydrostatic burst pressure test** — Continuously increases water pressure to measure maximum burst resistance of complete units and components
- **Real-time pressure curve profiling** — Logs dynamic pressure changes to analyze sample structural integrity under stress
- **Pressure ramp rate control** — Applies water pressure at preset rates to comply with varying product testing standards
- **Automated pass/fail evaluation** — Supports instant OK/NG determination to speed up lab testing confirmation
- **Data traceability** — Supports automatic test logging, report exporting, and MES database integration

02 BENEFIT

Prevent safety hazards

Screens out low-strength units early to stop post-launch housing bursts and costly water damage claims

Guide structural design

Uses ultimate burst data to validate engineering solutions and speed up R&D design iteration

Cut warranty service costs

Uncovers structural flaws in laboratory stages to avoid mass recalls and customer complaints

Boost customer trust

Provides quantifiable pressure test data to prove safety margins and enhance buyer confidence

03 KEY SPECIFICATIONS

Testing Stations

4 stations (Configurable for 4 RO units or 2 central water purifiers, plus component testing); Features 4 independent chambers (600*500* 1300mm space each) with autonomous station operation

Water Tank	Hydrostatic Test Pressure	Pressure Ramp Speed	Pressure Transducer Range & Accuracy
One 200L tank, S304 stainless steel	0–3 Mpa	0.1–0.4 MPa/s	0–4 MPaAccuracy: ±1% F.S.

Pressure Hold / Test Duration	Power Supply Voltage Range	Inlet Water Pressure	Compressed Air Pressure Range
0–9999 s (Presetable)	AC 380V ±10%, 50Hz	⩾0.2 Mpa	0.6–1.0 Mpa

04 WHERE TO USE

R&D labs, QA testing rooms, and component certification stations

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Say goodbye to manual water temperature sampling

Faster, more accurate, and data-driven performance testing for every water dispenser.

Countertop Hot & Cold Water Dispenser Performance Tester

- **Patent No.**

  2021SR1043221 (HX-108BD Water Purifier Comprehensive Performance Testing System V1.0)
  2025SR2335594 (HWAXEE Water Purifier Full-Unit Performance Testing Embedded Software V1.0)

Automated communication control

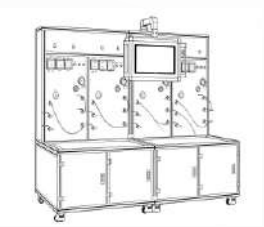
Automated precision measurement

Reduced manual labor dependency

Comprehensive performance validation



01 KEY FUNCTIONS



- **Water temperature profiling** — Measures hot and cold water discharge temperatures to verify thermal control performance
- **Water flow rate measurement** — Measures actual water discharge volume to verify dispensing performance
- **Power consumption monitor** — Tracks operating electrical power draw to verify working status compliance
- **Communication control testing** — Automates water dispensing across preset volume and temperature modes via protocol commands

02 BENEFIT

Faster inspection speed
Replaces manual sampling, temperature reading, and logging to speed up line tact time

Save labor costs
Reduces multi-operator testing requirements to lower QA labor input

Consistent quality checks
Automatically captures and evaluates key parameters to eliminate human error

Digital quality tracking
Generates direct inspection data to support technical quality analysis

03 KEY SPECIFICATIONS

Target Samples	Applicable Models	Water Volume Range	Water Temp Range
Countertop Hot & Cold Water Dispensers	Water dispensers with heating or cooling functions	0–999 mL	0–100°C, Class A Precision

Power Measurement	Test Scope
Class 0.5 Accuracy	Temperature, Flow Rate, Power Consumption

04 WHERE TO USE

Countertop water dispenser assembly lines and final functional test stations

HWAXEE

Don't let a faulty pump ruin an entire system

5 parallel testing stations evaluate full pump health status in 3 minutes

HX-267BD-5 Water Purifier Booster Pump Full Performance Test System

- **Proven Applications**

  Serving major RO water purifier OEMs (e.g., Haier) across incoming quality control (IQC) and QA testing laboratories

- **Patent No.**

  2021SR1057042 (HX-352BA Booster Pump Performance Test System V1.0)
  2025SR1297014 (HWAXEE Water Purifier Component Testing Embedded Software V1.0)



Rapid sample quick-change

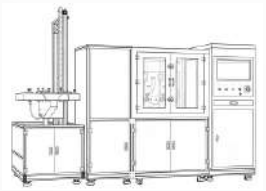
Automated high & low pressure proof testing

Full-parameter electrical testing

Constant pressure water supply for test accuracy

Modular expansion capabilities

01 KEY FUNCTIONS



- **Multi-point pressure flow testing** Measures water flow across various pressure levels to plot performance curves and evaluate pump output
- **Pressure ramp, relief & hold testing** Verifies startup response, pressure release, and holding stability to assess pressure ripple control
- **Thermal monitoring** Tracks operating electrical power draw to verify working status compliance
- **Automated pass/fail evaluation** Generates automatic pass/fail results against preset thresholds with audible/visual alarms and data lock for NG units
- **Data traceability & report export** Binds barcodes to sample IDs, auto-saves test logs, supports optional MES connectivity, and exports PDF/Excel reports

02 BENEFIT

Intercept defective pumps to lower warranty costs

Screens out low-flow, pressure-flawed, overheating, or locked-rotor pumps before assembly; prevents costly field claims like no water, slow production, high noise, or leaks

Protect RO membranes & purification efficiency

Maintains stable operating pressure to prevent membrane desorptive drop or physical damage, safeguarding system recovery rate and water quality

Mitigate water hammer leak risks

Filters out pumps with abnormal pressure spikes to protect filter housings and fittings from hydraulic shock during startup/shutdown

03 KEY SPECIFICATIONS

Inlet Pressure	Outlet Pressure	Water Flow Rate	Power Measurement
0–1.6 MPa Accuracy: ±0.25% F.S.	0–1.6 MPa Accuracy: ±0.25% F.S.	0–1800 L/h Test Accuracy: ±0.5% F.S.	0–20A Accuracy: Class 0.5 F.S.

Testing Stations	Applicable Pump Types	Power Supply Voltage	Operating Temperature Range
5 Parallel Stations	AC & DC Booster Pumps	AC 220V ±10%, 50Hz	Ambient (>0°C) to 45°C

Compressed Air Supply	Pressure	Water Supply Requirements
Clean dry air	0.4–0.6 Mpa	Pressure: 0.2 ± 0.05 MPa ,Flow Rate: ⩾ 45 L/min

04 WHERE TO USE

Pump factory QC departments for incoming material checks and outgoing product testing

One micro switch controls complete system startup and shutdown safety

Early testing prevents system control failures before shipping

HX-2311BDS Pressure Switch Life Cycle Tester

- **Patent No.**
  2025SR1297014 (HWAXEE Water Purifier Component Testing Embedded Software V1.0)

Pneumatic Water Circuit Simulation

High-speed multi-station testing

Precision pressure control

Complete performance verification



01 KEY FUNCTIONS



- **Actuation pressure test** Verifies whether high and low-pressure switches actuate and cut off normally under preset pressures
- **Electrical continuity test** Verifies switch contact response and electrical connectivity compliance
- **Proof pressure test** Tests maximum pressure resistance to verify operational pressure safety
- **Sealing integrity test** Inspects internal chambers and connection points for micro air or fluid leak risks

02 BENEFIT

Reduce full-system faults

Filters out pressure switch flaws early to prevent field issues like water tank overflow or no-water delivery

Protect core components

Stops continuous pump operation from switch failures to lower motor burnout and water leak risks

Improve supplier quality

Helps water purifier OEMs establish strict incoming quality control (IQC) standards for pressure switches

Reduce labor dependency

Automates pressure regulation and testing to ensure consistent inspection accuracy

03 KEY SPECIFICATIONS

Target Samples	Testing Stations	Test Medium	Pressure Ramp Rate
High/low pressure switch life cycle testing	10 independent testing stations	Clean compressed air	0–0.5 MPa/s (Adjustable)

Pressure Accuracy Margin	Air Pressure Range	Power-Loss Memory	Water Supply Pressure
0.005 MPa (±0.005 Mpa)	0.05–1.2 MPa (Automatic regulation)	Power-off data protection memory	0.050–0.800 Mpa

Test Scope	Pressure Dwell Time	Pressurization Speed	Exhaust Time
Switch performance, high/low pressure proofing, seal integrity, and electrical continuity	30s	0.2Hz	5s

04 WHERE TO USE

Switch factory QA labs and water purifier OEMs for component lifespan and reliability testing

5 stations each for inlet & wastewater solenoid valves sealing performance

Startup performance across multi-voltages, water flow rate under rated voltage

HX-264BD-10 Solenoid Valve Full Performance Test System

- **Patent No.**
  2025SR1297014 (HWAXEE Water Purifier Component Testing Embedded Software V1.0)



Automated clamping control

Multi-station testing

Multi-voltage verification

Comprehensive performance verification

01 KEY FUNCTIONS



- **Sealing performance test** Uses pressure testing to detect leaks across valve bodies, welds, quick connectors, and closed valve cores
- **On-off performance test** Verifies proper opening and closing of solenoid valves under varying voltage conditions
- **Flow rate performance test** Measures actual water discharge flow of solenoid valves under rated pressure and voltage
- **Proof pressure test** Validates the pressure-bearing capacity of solenoid valves as pressure-retaining components

02 BENEFIT

Prevent water leaks

Ensures complete valve seal integrity prior to shipping to lower field water damage risks

Low-voltage performance

Validates smooth startup and cut-off performance under fluctuating power supplies

Reduce rework costs

Filters out valve jams and micro leaks early to avoid costly field service calls

Cut labor costs

10-station parallel testing replaces manual fluid sampling to save labor time

03 KEY SPECIFICATIONS

Target Samples	Testing Stations	Test Medium	Test Pressure
Solenoid valves, return valves, and bypass valves	10 Stations (5 inlet stations, 5 wastewater stations)	Compressed air	0.1–1.6 MPa (adjustable)

Test parameters	Operating voltage	Voltage acquisition	Current acquisition
Sealing integrity, on-off operation, rated flow	1–50 V (adjustable, 3 voltage sets)	0–60 V, accuracy ±0.5% F.S.	0–1 A, accuracy ±0.5% F.S.

Power acquisition	Water pressure hold duration	Test Duration	Flow rate measurement
0.5–30 W, accuracy ±0.5% F.S.	1–999s (Adjustable)	1–999s (Adjustable)	0.1–10 L/min, accuracy ±1% F.S.

04 WHERE TO USE

Suitable for solenoid valve/return valve/bypass valve suppliers, OEM incoming quality control (IQC), and QA testing laboratories