

燃气热水器综合测试系统

Gas Water Heater Comprehensive Testing System

国家实用新型专利，国家重点新产品
Utility Model Patent and Key New Product of the Country

1. 设备名称：燃气热水器综合测试系统
Product Name: Gas Water Heater Comprehensive Testing System

2. 用途：参照GB6932-2001《家用燃气快速热水器标准》开发设计，主要用于燃气热水器、燃气采暖热水炉热功能的测试。包括热负荷准确度、热效率、热水产率等性能指标的测试。
Application: Developed and designed by reference with GB6932 – 2001 Standard for Household Gas Quick Water Heaters, and mainly used for testing of thermal functions of gas water heaters and gas-fired heating and hot water combi-boilers, including the testing of performance indicators such as heat load accuracy, thermal efficiency and hot water productivity

3. 主要功能和特点

Functions and Specifications

- 系统记录热水器数据参数，并可保存所有的测试结果
The system records data parameters of the hot water heater, and saves all testing results
- 采用国外进口元件，测试精度高，使用寿命长
Imported elements, with high testing accuracy and long service life
- 实时显示压力、流量、温度、时间等参数
Real-time display of parameters including pressure, flow, temperature and time
- 温度、压力、流量修正，保证数据准确性
Amending temperature, pressure and flow to ensure data accuracy
- 安全账户管理模式，参数设置、普通操作分别进行
Safety account management mode, parameter setting and usual operation are carried out separately
- 测试结果可输出打印
Testing results can be printed
- 工件安装可采用自动抬升方式
Work-pieces can be loaded automatically
- 系统安装简单，使用方便，人机界面友好，完全实现自动化检测
Simple system installation, easy use, friendly human-machine interface, complete realization of automatic detection

4. 规格参数

Parameters

进水温度 Cold in water temperature	0 ~ 50℃	测试精度 ± 0.2% F.S. Testing accuracy ± 0.2% F.S.
出水温度 Hot out water temperature	50 ~ 100℃	测试精度 ± 0.2% F.S. Testing accuracy ± 0.2% F.S.
供暖出水温度 Heating effluent water temperature	50 ~ 100℃	测试精度 ± 0.2% F.S. Testing accuracy ± 0.2% F.S.
供暖回水温度 Heating backwater temperature	30 ~ 80℃	测试精度 ± 0.2% F.S. Testing accuracy ± 0.2% F.S.
水流量 Water flow rate	2m³/h	测试精度 ± 0.5% F.S. Testing accuracy ± 0.5% F.S.
燃气流量 Gas flow rate	0.2 ~ 80L/min	测试精度 ± 0.5% F.S. Testing accuracy ± 0.5% F.S.
燃气压力 Gas pressure	0.5 ~ 5kPa	测试精度 ± 0.25% F.S. Testing accuracy ± 0.25% F.S.
水压力 Water pressure	0 ~ 500kPa	测试精度 ± 0.5% F.S. Testing accuracy ± 0.5% F.S.
环境温度 Ambient temperature	5 ~ 40℃	测试精度 ± 0.5% F.S. Testing accuracy ± 0.5% F.S.

5. 型号选择

Model selection

RZCX-①②

① 设备种类

Equipment type

记号 Marking	含义 Meaning
1	两用型热水器 Dual-purpose water heater
2	供水型热水器 Hot water heater
3	供暖型热水器 Heating water heater

② 类型选择

Type Standard

记号 Marking	含义 Meaning
0	标准 Standard
1	非标(注1) None Standard(note1)

注1：非标设备根据具体要求从表一、表二中选择测试项
Note 1: For non-standard equipment, select testing items from Tables 1 and 2 according to specific requirements.



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表一
Table 1

记号 Marking	热水器性能测试 Testing of water heater properties
1	热负荷准确度试验 Thermal load accuracy test
2	热效率试验 Thermal efficiency test
3	热水产率试验 Hot water productivity test
4	热水温升试验 Hot water temperature rise test
5	停水温升试验 Water-stop temperature rise test
6	加热时间试验 Heating time test
7	热水稳定时间试验 Hot water stable time test
8	水温超调幅度试验 Water over setting temperature test
9	水温显示精度试验 Water temperature display precision test
10	防过热安全装置试验 Over-heat resistance device safety test

表二
Table 2

记号 Marking	供暖性能测试 Testing of heating properties
1	最高出水温度试验 Highest effluent hot water test
2	水温控制偏差试验 Water temperature control error test
3	最低启动温度试验 Lowest start temperature test
4	供暖热效率试验 Heating thermal efficiency test
5	供暖热输出准确度试验 Heating thermal output accuracy test
6	防过热性能试验 Over-heat resistance performance test



快速接头
Quick Connector



内部构造
Internal Structure



侧面悬挂热水器
Lifting of Gas Water Heater

6. 核心器件：干式气体流量计、电磁流量计等 Main Instruments: Dry Test Gas Meter, Electromagnetic Flow Meter



干式气体流量计
Dry Test Gas Meter



电磁流量计
Electromagnetic Flow Meter