NAPCO

Internal Pressure Test

BTP-2000



Sales Catalog

Explore the Unique Features of Our Internal Pressure Tester



The NAPCO PET Internal Pressure Tester (Model PRPT) delivers a smart, precise and reliable solution for measuring the hydrostatic strength and burst threshold of polymer containers. Featuring a PLC control system, an HMI touchscreen and a safe protective enclosure, it enables both step and linear pressure testing. Fully compliant with the Iranian national standard ISIRI 11610 and backed by a guaranteed supply of spare parts, it is an ideal choice for quality evaluation of bottles on filling lines and in quality control (QC) laboratories.

A wide range of products across various industries — from carbonated beverages to sensitive dairy, detergent and pharmaceutical bottles — require accurate evaluation of hydrostatic strength and internal pressure tolerance to prevent shape deformation, leakage and bursting on filling and distribution lines.

Regardless of bottle size or volume, identifying structural weaknesses in the preform and determining the burst threshold of PET containers is a critical factor in ensuring packaging safety and the reliability of high-speed production lines.

At NAPCO, our internal pressure and burst testing solutions (Hydrostatic Burst Test) serve as a vital part of your quality management system, enabling seamless compliance with the national standard ISIRI 11610 and strict international requirements.



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PET Internal Pressure Tester

An advanced, precision instrument engineered to evaluate hydrostatic resistance and burst pressure threshold across various PET bottles and pressurized polymer containers. Powered by a robust PLC control system and an intuitive HMI touchscreen, this intelligent apparatus enables precise application of pressure ramp profiles and comprehensive analysis of container expansion behavior within a fully secured testing environment. The NEPCO PRPT Model Internal Pressure Tester delivers a modern, accurate, and reliable solution for elevating quality control standards in testing laboratories and production lines.



Key Features



Robust Housing (304 Steel)
The stainless steel body provides exceptional resistance to corrosion, moisture, and wear, guaranteeing the equipment's long service life in harsh industrial environments.

Fully Automated & Smart Testing
Automatically runs the test cycle from start to final result logging via the PLC system; this removes manual intervention and ensures accurate test repeatability.

10-Inch Touchscreen Display
Delta 10-inch display featuring an exceptionally smooth user interface and modern icons. Quick and easy configuration of test parameters with a simple touch of the menus.

Quick-Action Bottle Gripper
Ergonomic gripper design for effortless loading, locking, and secure clamping of various bottle types without the need for auxiliary tools; this feature accelerates test setup and minimizes operator fatigue during work shifts.

Customizable Test Parameters
Flexible definition and configuration of pressure ramp profiles, hold time, and loading rates to ensure strict compliance with diverse standards and proprietary QC methods.

Splash-Proof Safety Enclosure
Integrated transparent, high-strength enclosure designed to completely prevent water splashing and projectile debris during specimen burst, ensuring 100% operator safety and maintaining laboratory cleanliness.

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Dedicated Test Control Software

NEPCO Analytical Software: Intelligent Monitoring & Polymer Behavior Analysis

The true value of burst test data emerges when processed with utmost precision. The NEPCO Internal Pressure Tester (BTP) connects to dedicated PC software via a stable Ethernet link, providing a comprehensive, zero-latency workstation for bottle behavior analysis. Engineered for measurement accuracy and documentation, this software platform delivers vital capabilities to quality managers:

- Real-Time Pressure Graphing:
- High-speed Ethernet communication plots pressure curves instantaneously, enabling sub-second tracking of specimen behavior.
- Precise "Expansion Ratio" with System Error Compensation (Key Feature)
- In hydrostatic testing, hose and fitting expansion introduces measurement errors. The software features an intelligent calibration algorithm that calculates tooling compliance and automatically deducts it, ensuring the displayed value represents the true, net expansion of the bottle.



Real-Time Data Processing

Rapid and precise calculation of bottle deformation.

Human Error Elimination

Eliminates manual calculations and manual logging of test results.

Intuitive User Interface

User-friendly design to streamline operator workflow across production lines and laboratories.

Dedicated Test Control Software

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Comprehensive Monitoring Dashboard:

Provides the operator with complete process visibility at all times. Live display of test profiles (Ramp or Multi-Step), instantaneous pressure, peak pressure (Maximum Pressure), precise test execution stages, and real-time sensor status are all integrated into a unified panel.

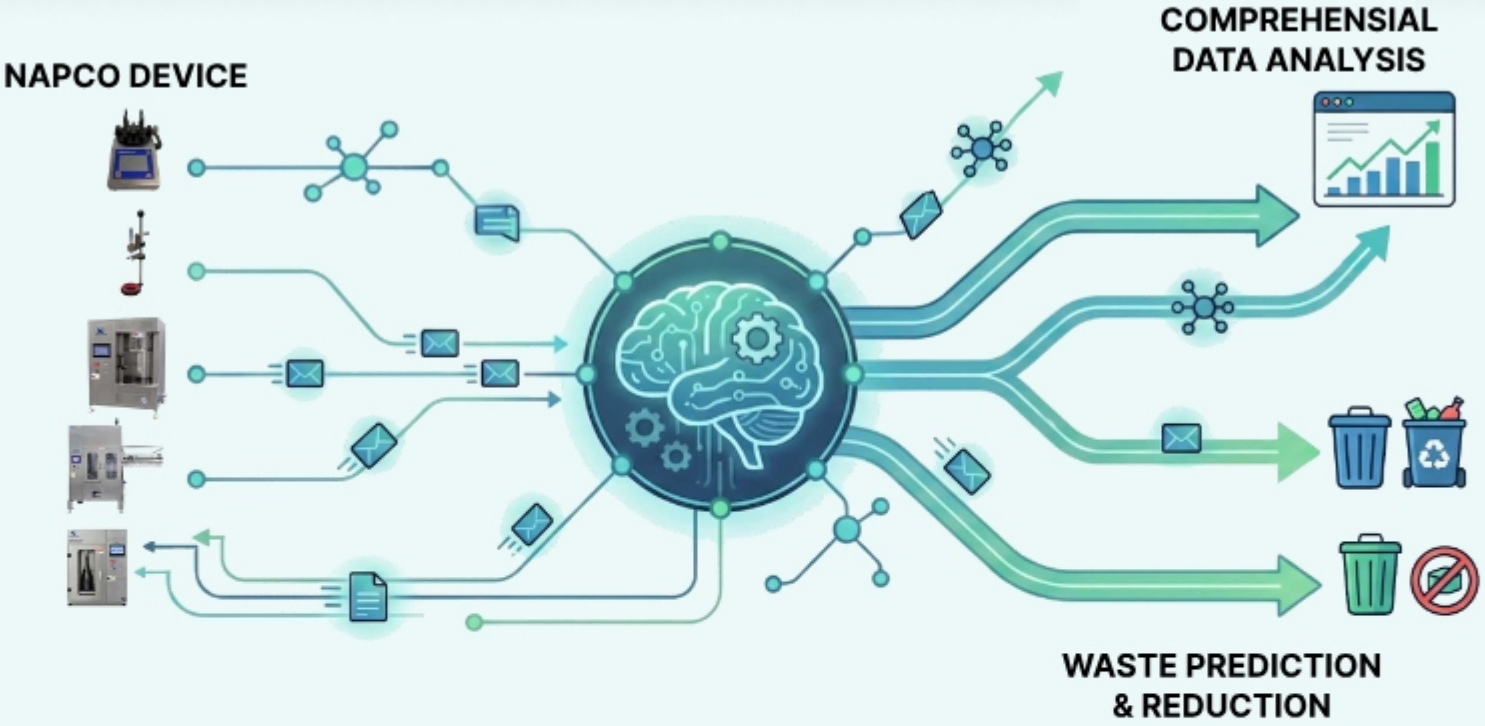
Database & Analytical Reporting (QMS Ready):

All test results are archived with complete graphical and numerical data in the software database. Historical test review, curve comparison, Excel data export, and standardized report generation .make quality audits fast and effortless



AI-Powered Quality Control System

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At NAPCO, modern QC goes beyond isolated test results. Our advanced instruments act as interconnected IoT nodes within the "NAPCO Smart Ecosystem." Powered by advanced AI, our platform networks all testing units to transform raw shop-floor data into predictive, actionable intelligence.

AI-Driven Predictive Analytics

Smart algorithms track your production trends over time to detect minor drifts in sealing torque or closure integrity, predicting machine wear and calibration shifts before mass defects occur.

Seamless IoT Connectivity

From leak testers to torque meters, all NAPCO devices connect via Wi-Fi or LAN to a centralized dashboard, giving plant managers full, real-time visibility across the entire production line.

Smart Early Warning System

Prevent costly batch rejections. The NAPCO app sends instant push notifications to QC managers' smartphones at the first sign of a negative quality trend, preventing major financial losses.

Specification	Parameter
BTP-2000	Product Code / Model
Multi-Step & Ramp Pressure Increase	Operating Modes
0 to 25 bar	Pressure Range
bar 0.01	Display Resolution / Accuracy
bar 0.05	Pressure Control Accuracy
-50 °C to +200 °C	Fluid Temperature Measurement Range
102 cm (H) × 83 cm (W) × 50 cm (L)	Dimensions (H × W × L)
mm to 180 mm 30	Bottle Diameter
130 mm to 380 mm	Bottle Height



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Calibration Kit

A standard add-on ensuring periodic calibration and operational accuracy of the PET tester. Using a simulated bottle chamber and precision analog gauge, it replicates actual sample behavior, allowing operators to evaluate and verify sensors without wasting bottles.



Test Reporting Software

A smart software solution for data logging, analysis, and digital test documentation. Connecting to the tester, it plots raw pressure and time data into real-time curves for visual analysis of mechanical behavior, yield points, and failure.



Report Printer

A direct print module for fast QC documentation. Directly connected to the tester, it prints results, key test parameters, and analytical curves right after test completion for instant attachment to product certificates and line records.



For over two decades, NAPCO has been a pioneer in designing and manufacturing quality control and precision instruments for the packaging and beverage industries. Driven by in-house engineering expertise and continuous technological development, we have delivered more than 40 specialized laboratory devices to production lines. NAPCO proudly partners with and equips leading industry brands, including Khoshgovar, Pepsi, Alis, Zamzam, and Super Cola. Looking ahead, our focus remains on continuous innovation and delivering advanced solutions to elevate measurement standards across industrial manufacturing.



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+98 915 302 4371

WWW.Napcoqc.com

LinkedIn