ΔT2E

Safety • Efficiency • Flexibility • Reliability...

Quality Control Instruments

afaq ISO 9001 Qualité AFNOR CERTIFICATION

V. 10102062025093721

For - BEVERAGE & FOOD / COSMETIC / PHARMACEUTICALS / CHEMISTRY / METROLOGY

CUSTOMER REFERENCE

Food and Beverage

Coca-Cola, pepsi, Vranken Pommery, Carlsberg, DANONE, AB InBev

Heineken, Nestlé, Moët Hennessy, BACARDI, Pernod Ricard, Refresco

Cosmetic

L'OREAL PARIS, L'OCCITANE EN PROVENCE, Dior, CHANEL, YVES SAINT LAURENT, LOUIS VUITTON

Pharmaceuticals

SANOFI, NOVARTIS, Schering-Plough, gsk GlaxoSmithKline, Pfizer, Pierre Fabre

Packaging

NOVEMBAL a Tetra Pak company, Guala Closures Group, BERICAP FRANCE, REXAM, Sidel, GRAHAM PACKAGING EUROPE

ALCAN, amcor, appe, S.B.E.C.M., RESINOPLAST, global closure systems

Chemistry & Other

P&G, Reckitt Benckiser, Henkel, AES Laboratoire, intel, syngenta

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SUMMARY

ABOUT AT2E

AT2E was established in May 1989 by Mr. Alain DESVEAUX in the Paris suburb.

AT2E means "Application of technologies in electrical and electronic ". Since AT2E has never changed her name and been known for a long time, we are experienced for more than 30 years as a leading company in quality control instruments.

The first job of AT2E was to program PLC and install wiring cabinet, electrical motor system and gear boxes.

From 1990, AT2E had decided to import some quality control equipment such as torque testers and force gauges.

In relation with the knowledge in PLC system, AT2E has been contacted by Coca-Cola in 1990 to integrate a manual torque tester into a half automated system permitting to avoid human influence on torque measure.

Then from this date on, AT2E decided to produce her own range of torque tester (further to a L'Oreal request). The first prototypes had been sold immediately in beverage, cosmetic and pharmaceuticals industries.

Today, AT2E has developed many others equipment in leak testing, force testing, dimensional measuring, torque testing, burst testing, etc... Basing on the quality products and excellent service, AT2E has established a good reputation in customers from food, beverage, cosmetic, pharmaceuticals and packaging industries.

Nowadays, AT2E has her offices in Europe, America, South America, Central America and Asia. More than 30 resellers are working closely with AT2E in over 30 countries all over the world to satisfy customers' various request of quality control.

Important dates of AT2E:

- 1989: establishment of AT2E
- 1990: first sale for torque testing.
- 1990: first automated torque tester.
- 1991: AT2E made her own range of torque testers.
- 1992: AT2E developed and sell the first "bubble test" leak tester to Heineken (partnership).
- 1993: AT2E started selling in all the target industries: Beverage, food, cosmetic, pharmaceuticals, chemical and packaging.
- 1996: First star wheel system for torque testing.
- 1997: First automated bubble test machine.

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ABOUT AT2E

- 1997: AT2E web site was on line.
- 1998: AT2E started selling in foreign countries.
- 2003: AT2E began contacting with resellers in many countries all over the world.
- 2007: AT2E was able to provide technical service in many countries by her resellers' partnership.
- 2010: AT2E USA office was established in Georgia.
- 2013: AT2E Asia (China) office and plant was established in south China.
- 2013: AT2E Central America was established in Mexico.
- 2013: AT2E South America was established in Argentina.
- 2014: AT2E online automated torque tester with weighing option totally redesigned and launched to the market.
- 2017: AT2E USA relocated to Los Angeles.
- 2017: AT2E seminar first held in China.
- 2018: AT2E French head office and plant renewed.
- 2018: AT2E seminar held in France.
- 2020: AT2E China R&D and manufacturing center officially put into operation
- 2021: AT2E China obtained the High-tech Enterprise certification of China

AT2E's mission:

- Supplying high technology and best quality products
- Listening to customer's need and developing the requested machine, improving our system to answer their need
- Prompt answer to request.
- Increasing our presence in our main target markets: Packaging, beverages, food, cosmetic, pharmaceuticals, and chemical industries

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ADAITS Online Automated Integrated Tester for Bottled Beverage

The ADAITS Online Automated Integrated Tester for Bottled Beverage is a fully automatic quality control system specially developed for bottled beverages launched by AT2E based on her years of instrument design and production experience, and responding to the application requirements of customers. The ADAITS consists of different testing modules, which can be integrated to test the torque, weight, application angle, secure seal performance, inner-pressure, top load, etc., and each testing modules can be freely combined according to the demand to meet the different testing requirements of customers. Fully automatic testing process and provides testing data for instant inspection, the entire testing process is free of human intervention, which CANCELS the operators' influence factors so as to provide the optimal quality control with more accurate and reliable results and better reproducibility.

The system can be chosen to install online with automatic sampling or install in the laboratory as a semi-automatic quality control system with manual sample installation, providing flexible solutions for customers' quality control management.

Customized operation screen

Customized CYCLES - Meets different test requests

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Features:

- Stainless steel frame with safety door design
- Online testing, unattended test process, cancels all the operators' influence factors during the test process, much higher reproducibility
- Servo control and auto sample detection system with PLC and touch screen control
- Customized operation screens and multiple test cycles
- Compatible design with quick-changing bottle adapting inserts and clamps for a variety of different bottle types
- Self-define up to 30 product information, 30 groups of thresholds (limits) and 10 operators' information. Test information displays on screen, such as test cycle / product information / operator / batch N° / sample N° etc.
- Configuration by password (administrator)
- Auto recording of measurement data during the test process (up to 1000 groups of records), send out real-time data or records.
- RS232C output for printer or data acquisition system or AT2E data management software. The software has data statistics and analysis functions, can generate special charts and reports. The software complies with CFR21-11 / FDA
- Language: English / French / Chinese
- Special auto mode with head number - filler storage according to the sample entering order
- Three different alarm alerts - buzzer, indication light and on-screen text alerts to notify the operator at the first place in case of any abnormal situation
- Precision balance integrated for weighing control, accurate and easy maintenance
- Application angle controlling module adopts the AT2E latest developed *AngleVIS* visual inspection system, AI auto inspection with self-developed exclusive inspection model, phenomenal compatibility and great extendibility
- Torque control by dual servo system, with the special developed *CapWIS* cap clamping system, higher accuracy and reliability for measurement data
- Neck piercing and auto leak detection system for secure seal performance control, inner-pressure measuring module can be integrated, with the general water immersion testing way, visualized and reliable

Weighing control

Application angle control

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Torque control

Inner-pressure control

Secure seal performance control

Optional testing modules:

- Torque controlling module (non-destructive control applicable)
- Weighing controlling module
- Application angle controlling module
- Inner-pressure controlling module
- Secure seal performance controlling module
- Top load performance controlling module
- Other customize controlling modules

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Technical specifications:

Function	Description	Specifications
Torque control (Torque controlling module equipped)	Measure range	00.00 to 102.04 Kgf.cm (10 N.m)
	Accuracy	±0.5% F.S.
	Resolution	0.01 kgf.cm
	Torque angle accuracy	±10′
	Units	Kgf.cm / Inch.lbs / N.cm / N.m
Weighing control (Weighing controlling module equipped)	Weighing range	0 to 4000g
	Resolution	0.01g
	Unit	g
Application angle control (Application angle controlling module equipped)	Measure range	0 - 360°
	Resolution	0.1°
	Accuracy	±1°
Inner-pressure control (Inner-pressure controlling module equipped, subject to integrated modules)	Measure range	Stand-alone: 0 to 6.00 bar Integrated: 0 to 16.00bar
	Accuracy	Stand-alone: ±0.05bar Integrated: ±0.5% F.S.
	Resolution	0.01bar
	Unit	bar
Secure seal performance control (Secure seal performance controlling module equipped)	Measure range	0 to 16 bar
	Resolution	0.01 bar
	Accuracy	±0.5% F.S.
Top load control (Top load controlling module equipped)	Measure range	0-1500 N (other range by order)
	Resolution	1 N
	Accuracy	±0.5% F.S.
Instrument	Column stroke	240mm (customize is available)
	Column speed	5 - 20 mm/s (customize is available)
	Star wheel speed	0.1 - 4 rpm (customize is available)
	Measure head rotation speed	0.01 - 10 rpm (customize is available)
	Air supply	5 - 8 bar (subject to the integrated modules, max. 16 bar)
	Power supply	220VAC@50 Hz (optional for 110 VAC@60Hz)
	Rated power	1800W
	Output	Standard RS232 serial port, able to connect to PC or printer

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TMV7 Touch Screen Electronic Torque Tester

Our torque testers are designed with a special mechanical system for measuring torque which cancels most non-coaxial and top load influences on the measurement. These features cancel most operator induced influences on the measurement for maximum repeatability.

TMV7 with agro table or fast squeeze system

Technical specifications:

- 7" Touch screen color display
- Measures opening and closing directions
- 0.030 to 4.000 Kgf.cm in high accuracy mode
- Measuring range: 00.00 to 99.00 Kgf.cm
- 3 measuring modes (mean, peak, peak+infos)
- Special mode RELEASING & BREAKING Torque
- Units: Kgf.cm / Inch.lbs / N.m / N.cm
- Accuracy: ± 0.2 % of full scale
- 30 product memory with 4 limits each
- 4 thresholds by product (V Low, Low, High, v High)
- 10 operators memory
- 8 Access levels with code (op, Super op, admin)
- Storage and transfer up to 990 measurements
- Message + bar graph of torque value
- Dynamic display: statistics, hour, date
- Display: product name, operator, batch N°, line N°
- Last measure curve
- 2 RS232, 1 for mini-printer and 1 for software
- Language: French / Italian / Spanish / English
- Delivered with calibration certificate COFRAC
- AC 110 - 240 V 50/60 Hz
- Transportation case

High resolution & color touch screen

User-friendly testing interface

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Enhanced agro table

Fast squeeze system

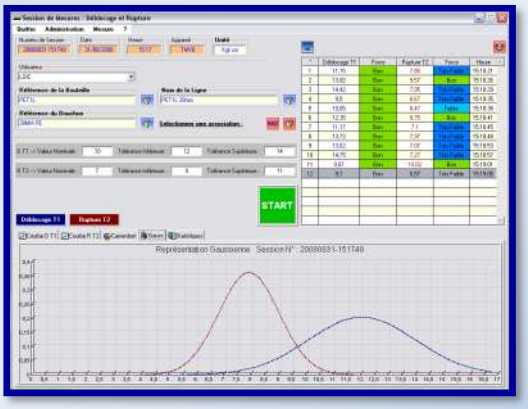
Mechanical specifications:

- Stainless steel frame
- Choice of measuring table: Agro (sample range 25 - 180 mm, other range by order)
  Fast squeeze system (sample range 25 - 100 mm, other range by order)
- Dimensions: 370(L) x 252(W) x255 mm (agro table)
  370(L) x 252(W) x282 mm (fast squeeze system)
- Weight: 7 kg

Optional parts:

- QUALITORQ Software FDA - CFR 21-11 (For data storage and statistics analysis)
- Easy / Safe opening bloc
- Mini printer
- Calibration pack
- Portable case
- Battery

Mini printer (Optional)



QUALITORQ software (Optional)

Easy opening bloc (Optional)

Portable case (Optional)

Calibration pack (Optional)

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TMV8 Electronic Torque Tester

Our torque testers are designed with a special mechanical system for measuring torque which cancels most non-coaxial and top load influences on the measurement. These features cancel most operator induced influences on the measurement for maximum repeatability.

Control panel

Product measuring

Technical specifications:

- Measures opening and closing directions
- Measuring range: 00.00 to 99.00 Kgf.cm
- Accuracy: ± 0.5 % of full scale
- 2 measuring modes (continue and peak)
- Units: Kgf.cm / In.lbs / N.m / N.cm
- Storage and print up to 999 measurements
- Data record: maximum, minimum and average value
- Display the given torque threshold
- RS232 for mini-printer
- Delivered with calibration certificate COFRAC
- AC 110 - 240 V 50/60 Hz
- Transportation case

Easy opening bloc (Optional)

Mechanical specifications:

- Stainless steel frame
- Measuring table: Agro table (sample range 25 - 155 mm, other range by order)
- Dimensions: 320(L) x 215(W) x170 (H) mm
- Weight: 8 kg

Mini printer (Optional)

Optional parts:

- Easy / Safe opening bloc
- Mini printer
- Calibration pack
- Battery

Calibration pack (Optional)

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TMV-ECO Spring Torque Tester

Model TMV-ECO is full mechanical mechanism and free of electricity, which makes it more compatible and adaptable to different working environments

Technical specifications:

- Measures opening and closing directions
- Measuring range: 0 to 25 Inch.lbs
- Units: Inch.lbs / N.m
- Accuracy: ± 2% of full scale
- Delivered with COFRAC calibration certificate

Mechanical specifications:

- Stainless steel frame
- Choice of measuring table:
  Agro (sample range 20 - 155 mm, other range by order)
  Cosmetic (sample range 10 - 100 mm, other range by order)
- Dimensions: 330 x 230 x 175 mm
- Weight: 7 kg

Optional parts:

- Easy / Safe opening bloc
- Calibration pack
- Portable case

Easy opening bloc (Optional)

Calibration pack (Optional)

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ADATMV - ECO Semi-Automated Torque Tester

Software complies with the requirements of FDA - CFR 21-11

Quick clamping system

Operation Screen

Technical specifications:

- Using by touch screen display
- Measures in opening and closing directions
- Measuring range: 00.00 to 99.00 Kgf.cm
- Sample range: 30 - 110 mm in diameter / 80 - 370 mm in height (other range by order)
- 2 measuring cycles (Opening or Closing, Removal +Breaking)
- Units: Kgf.cm / N.m / Inch.lbs / N.cm
- Measure head rotating speed adjustable (0.3 - 10.0 rpm)
- Accuracy: ± 0.5 % of full scale
- 30 products memorization
- Up to 8 thresholds (limits) option (according to cycle)
- 10 operators memorization
- Configuration by protected password (administrator)
- Operation pressure monitoring, auto warning for insufficient operation pressure
- Memorization up to 990 measures (transferable)
- Dynamic display: statistics / hour / date
- Display: product name / operator / batch N° / Sample N°
- 1 RS232 & 1 mini-printer interface
- Language: English
- Delivered with calibration certificate COFRAC
- 5 - 8 bar air network
- AC 110 - 240 V 50/60 Hz

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Automated part:

- One key start, just press the start button to carry out the test process
- Automatic zero before restarting cycle
- Height of measure head auto adjust according to the samples
- Easy-fast selector for cycles
- Settable speed for screwing and unscrewing operations
- Pneumatic cap clamping chuck

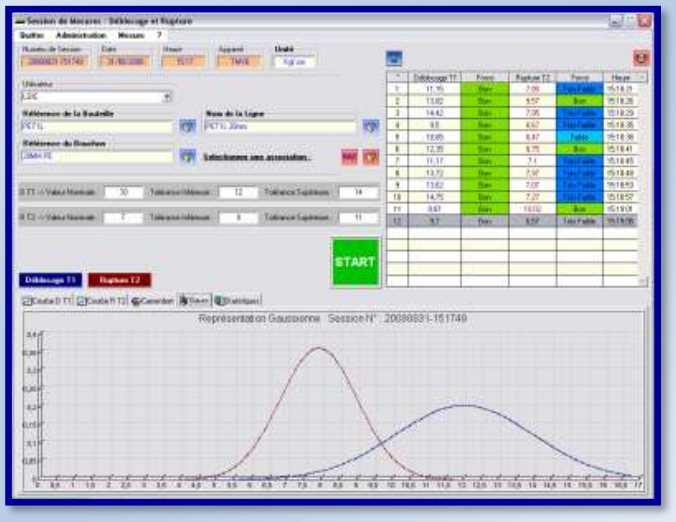
Mechanical specifications:

- Stainless steel Frame
- Choice of jaw, or bottle neck clamp
- Dimensions: 385 (L) x 600 (W) x 1050 (H) mm
- Weight: 56 kg

Optional parts:

- Mini printer
- QUALITORQ Software
- Calibration pack
- Dynamometric system

Mini printer (Optional)



"QUALITORQ" Software (Optional)

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ADATMV5 Monopost Automated Torque Tester

Software complies with the requirements of FDA - CFR 21-11

Automated Clamping system & Customized clamps

7 cycles available – satisfy various of products test request

Technical specifications:

- Using by touch screen display
- Measures in opening and closing directions
- Measuring range: 00.00 to 99.00 Kgf.cm
- Sample range: 50 - 90 mm in diameter / 110 - 350 mm in height (other range by order)
- 7 measuring cycles: **Torque closing / Reach position / Release + break / Release + break + over screw / Non-destructive test / Cork extraction test / Removal + breaking + strip torque + close**
- Units: Kgf.cm / N.m / Inch.lbs / N.cm
- Rotating angle & speed adjustable under certain cycle
- Accuracy: ± 0.5 % of full scale
- 30 products memorization
- Thresholds (limits) settings for each product
- 10 operators memorization
- Configuration by protected password (administrator)
- Memorization up to 1000 measures (transferable to mini-printer)
- Dynamic display: statistics / hour / date
- Display: product name / operator / batch N° / line N°
- 1 RS232 output and 1 printer output (software & printer)
- Language: English, French, Spanish, Chinese, others on request
- Delivered with calibration certificate COFRAC
- AC 220V (AC 110V optional)

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Automated part:

- Safety door
- Automatic zero before restarting cycle
- Settable height of column for all samples
- Easy-fast selector for cycles
- Settable speed for opening and closing operations
- Customized cycles
- Special pneumatic chuck available
- Special multi format system for both bottle and preforms
- Dynamometric system

Mechanical specifications:

- Stainless steel Frame
- Choice of measuring chucks: Beverage / Cosmetic / Pharmacy
- Dimensions: 610 (L) x 560 (W) x 1140 (H) mm
- Weight: 94 kg

Optional parts:

- Mini printer
- QUALITORQ Software FDA - CFR 21-11
- Customized display & cycles
- Calibration pack
- Dynamometric system
- Starwheel system

“QUALITORQ” Software (Optional)

Calibration pack (Optional)

Mini printer (Optional)

Automatic squeezing clamping system for PET packaging (Optional)

Dynamometric system (Optional)

Starwheel system (Optional)

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BT ETA TORQUE ECO Dynamometric Torque Bottle

- Design to control torque on torque testers

Our torque testers are designed with a special mechanical system for measuring torque which cancels most non-coaxial and top load influences on the measurement. These features cancel most operator induced influences on the measurement for maximum repeatability.

The new AT2E BT ETA TORQUE ECO has been developed in order to allow operators and calibration team to check in a fast way the accuracy of any torque testers.

Easy to use, just install the BT ETA TORQUE ECO on the torque tester's measurement table and turn slowly and smoothly in opening or closing direction.

Then just compare the value on your equipment to the BT ETA TORQUE ECO torques setting

Standard BT ETA TORQUE ECO and Cap adaptor

BT ETA TORQUE ECO with Cap adaptor

Allow to control calibration level on torque testers

Technical specifications:

- Optional torque from 1 to 15 Inch.lbs (Other range by request)
- Accuracy: ±0.5 inch.lbs @ 25±10°C
- Measurements in opening and closing directions
- Delivered with calibration certificate (Option)
- No battery needed
- Transport case

Mechanical specifications:

- Aluminium and steel made (other material on request)
- Dimensions: Customize
- Weight: 1- 4 kg

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BT ETA TORQUE Dynamometric Torque Bottle

DESIGNED TO BE INSTALLED UNDER CAPPING HEADS

AT2E's BT ETA TORQUE is built in with special mechanism permitting to avoid top load influence on measurement. It's also built in a high speed electronic reading of measurements. Device can be custom-made according to different bottle or can profile. Using with our BT ETA Measure software, it's very convenient for users to save, manage and analyse the data.

Technical specifications:

- Digital display
- Measures in opening and closing directions
- Measuring range: 00.00 to 60.00 Kgf.cm
- 2 Measuring modes (continue, peak)
- Units: Kgf.cm / Inch.lbs / N.m
- Accuracy: ± 0.5 % of full scale
- Loading by USB (PC)
- Delivered with COFRAC certificate
- Transport case
- AC 110 - 240 V 50/60 Hz
- Save up to 24 groups of data or 120 seconds of continued data

Mechanical specifications:

- Designed on request regarding customers' drawings
- Built-in battery 3H
- Dimensions: Customized
- Size range: Minimum diameter 35 mm / Minimum height 60mm
- Weight: 1-2 kg

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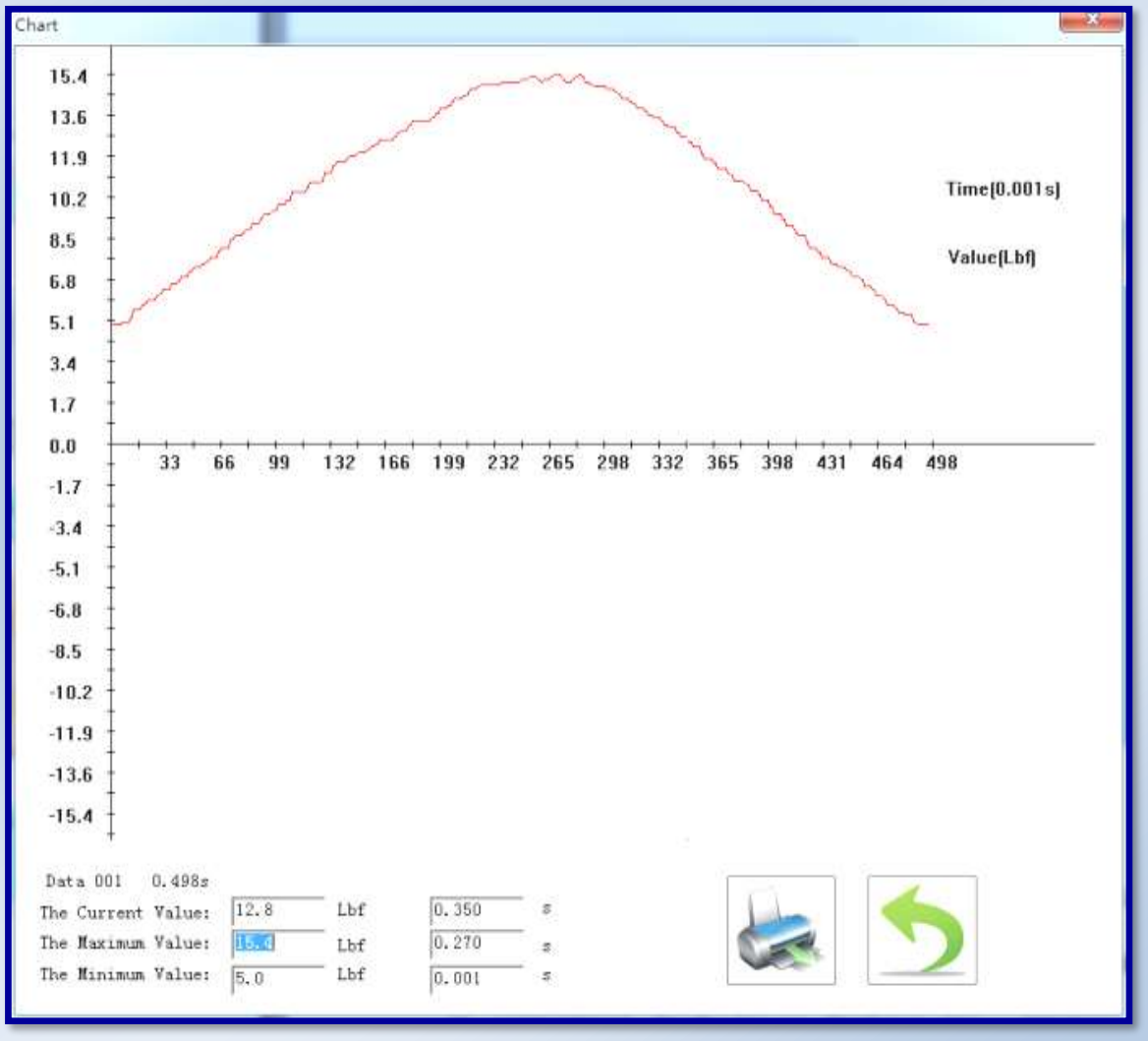
Using:

- Ready to be installed on line after filling machine
- Enables to control capping heads in real conditions (speed and top load)
- No more dismantling
- Interchangeable formats

Feature of software:

- Transfer the data from device to software
- Review the saved data
- Create and view the graph
- Export as data report and graph report
- Export as an Excel file
- Language option: French / English / Chinese

BT ETA TORQUE Pack
Single sensor for different bottle format replacing



BE ETA Measure software

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TORQUE CHECK Hand Held Torque Controller

Our torque testers are designed with a special mechanical system for measuring torque which cancels most non-coaxial and top load influences on the measurement. These features cancel most operator induced influences on the measurement for maximum repeatability.

The TORQUE CHECK has been developed in order to allow operators to control the torque, calibration team to check in fast way the accuracy of any torque testers and maintenance to control and adjust torque directly on capping heads.

Easy to use, just install TORQUE CHECK on the torque tester, on the cap or under the capping head and turn slowly and smoothly in opening or closing direction.

Our TORQUE CHECK can be equipped with custom-made cones for different sizes of caps.

TORQUE CHECK on bottle

TORQUE CHECK on torque tester

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Technical specifications:

- Digital display
- Measures in opening and closing directions
- Measuring range: 00.00 to 60.00 Kgf.cm
- 2 Measuring modes (continue, peak)
- Units: Kgf.cm / Inch.lbs / N.m
- Accuracy: ± 0.5 % of full scale
- measures memory with curves (by software)
- Loading / Transfer by USB (PC)
- Transport case
- AC 110 - 240 V 50/60 Hz

Mechanical specifications:

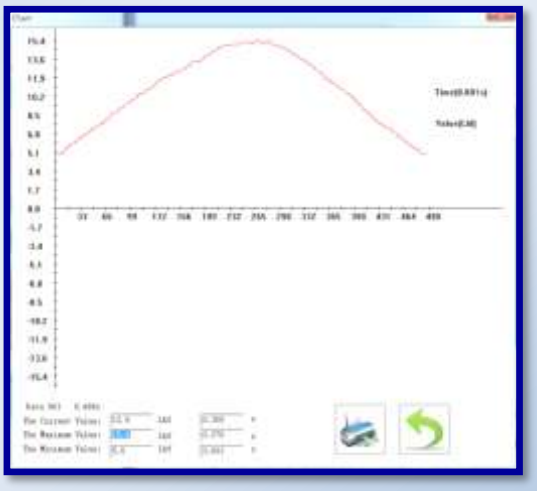
- Designed on request regarding customers' drawings
- Built-in battery 3H
- Weight: 0.5 kg

Using:

- Ready to be installed on torque tester, cap or under capping head
- Enables to control capping heads
- No more dismantling

Optional part:

- Additional cone
- BT ETA MEASURE software



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LT-ECO Leak Tester (ECO Model)

(Air and water tightness test box: vacuum and pressure test)

With Vacuum Generator

With High performance Vacuum pump

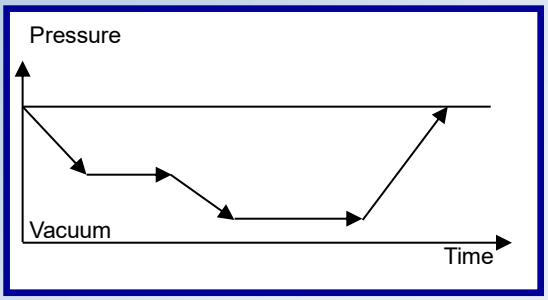
Tests on:

Bottles: Glass or PET and Preforms

Caps: Aluminium, other metal, plastic

Cans: Aluminium, others

Pots: caps, film, blisters etc.



Test curve

LEAK DETECTION BY SETTING VACUUM OR PRESSURE WITH OR WITHOUT STEP

Specifications:

- Vacuum adjustable up to - 999 mbar
- Box with dimensions upon request
- Box made of polished transparent PMMA (very rugged)
- Easy to use and safe
- Equipped with manometer
- Equipped with 3-directions valve for controlling the flow
- Accuracy: ±2.5% F.S.
- Equipped with vacuum generator
- Runs with 6 bar network
- Quick and easy of verification and calibration
- Adjustable temporization to keep vacuum or pressure

Optional parts:

- Immersion system
- Shelf structure
- Stainless box
- Pressure or pressure and vacuum model (pressure up to 1000 mbar)
- Oil-free vacuum pump (vacuum -900 mbar)
- High performance pump (vacuum -999 mbar)

LT-ECO with immersion system

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LT-ECO with shelf

Round LT-ECO

Oil-free vacuum pump

Stainless box

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LT-ST Leak Tester (Standard Model)

(Air and water tightness test box: vacuum and pressure test)

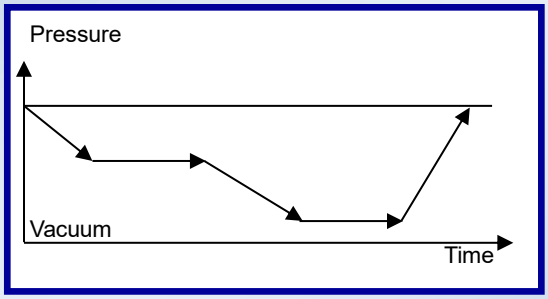
Tests on:

Bottles: Glass or PET and Preforms

Caps: Aluminium, other metal, plastic

Cans: Aluminium, others

Pots: caps, film, blisters etc.

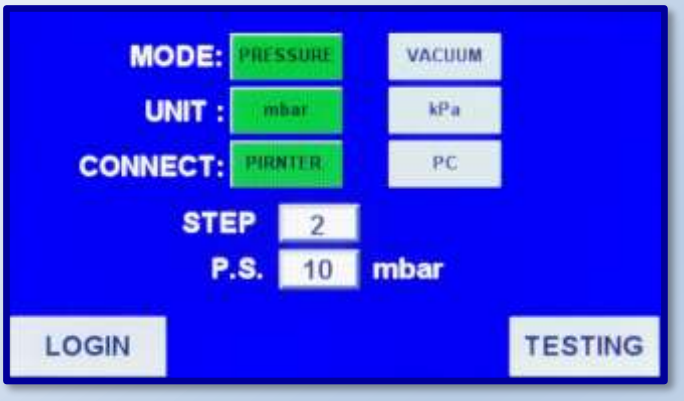


Test curve

LEAK DETECTION BY SETTING VACUUM OR PRESSURE WITH OR WITHOUT STEP

LT-ST is equipped with a touching screen. It's visual and easy to operate. Adjustable vacuum or pressure and holding time stage setting, meets different test requests of various products.

Test screen



Setting screen

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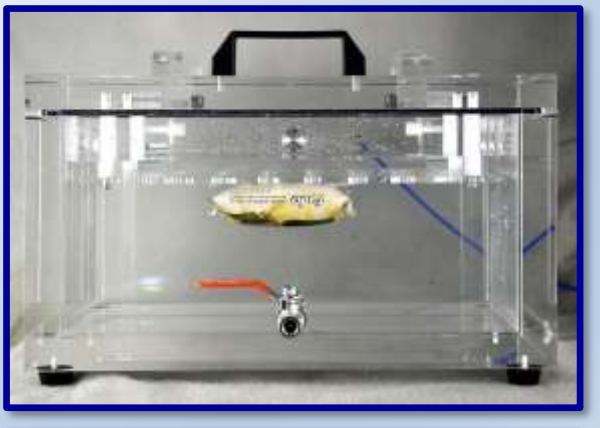
Specifications:

- Vacuum adjustable up to - 999 mbar
- Box with dimensions upon request
- Box made of polished transparent PMMA (very rugged)
- Easy to use and safe
- Touching screen display
- 2 stages of vacuum and holding time setting
  (Optional for 3 stages by order)
- Configuration protected by administration passwords
- Accuracy: ±0.5% F.S.
- Resolution: 1 mbar
- Delivered with vacuum generator or vacuum pump
- Runs with 6 bar network (vacuum generator model)
- Verification and calibration quick and easy
- Adjustable temporization to keep vacuum or pressure
- Power supply:
  Vacuum pump model: AC 220V (AC 110V optional)
  Vacuum generator model: AC 110 - 240 V 50/60 Hz

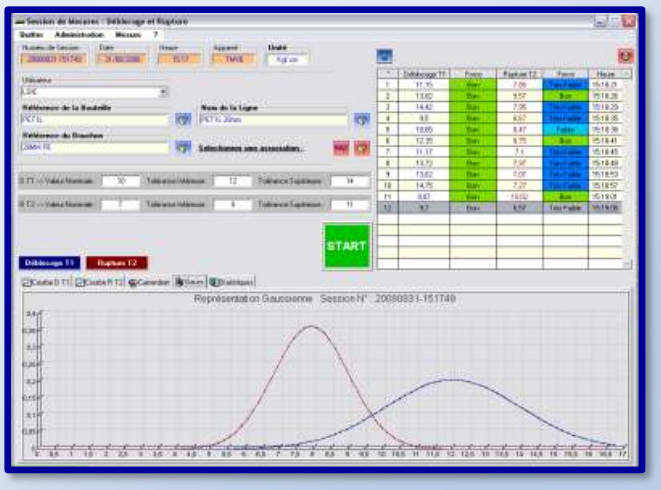


Equipped with immersion system

Optional parts:

- Immersion system
- Shelf structure
- Stainless box
- Vacuum generator model
- Pressure or pressure and vacuum model (pressure up to 1000 mbar)
- Oil-free vacuum pump (vacuum -900 mbar)
- High performance vacuum pump (vacuum -999 mbar)
- Mini-printer
- Software QualiPress

Mini-printer (Optional)



Software QualiPress (Optional)

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Cylinder design

Box with front door and shelves

Box with immersion system

Pressure and vacuum Stainless box

Pressure and vacuum box with small piercing needle

Oil-free vacuum pump (Optional)

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LT-PLC Leak Tester (PLC Model)

(Air and water tightness test box: vacuum and pressure test)

Tests on:

Bottles: Glass or PET and Preforms

Caps: Aluminium, other metal, plastic

Cans: Aluminium, others

Pots: caps, film, blisters etc.

Testing screen

Cycle selecting screen

LEAK DETECTION BY SETTING VACUUM OR PRESSURE WITH OR WITHOUT STEP

Specifications:

- Vacuum adjustable up to - 999 mbar
- Box with dimensions upon request
- Box made of polished transparent PMMA (very rugged)
- Easy to use and safe by touch screen PLC Control Panel
- Dynamic display: Testing status / Date and time
- Display: Product name / Operator / Lot No. / Sample No.

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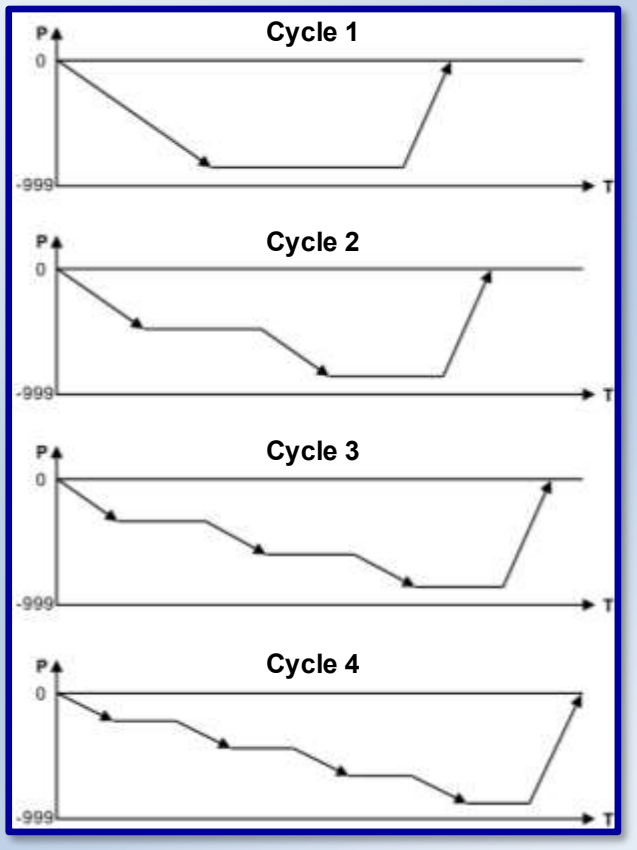
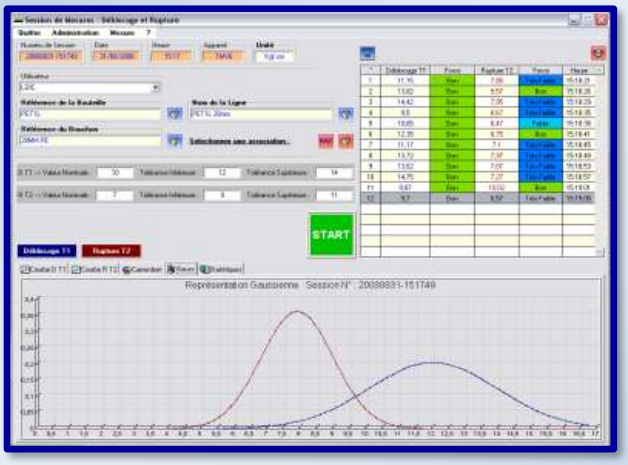
- User defined test cycle (up to 16 modes). Pre-define up to 4 steps of each test. Vacuum level and holding time adjustable for each step. Satisfies different kinds of testing request
- Configuration protected by administration passwords
- Easy operation, only to select the pre-defined mode for starting a test no need to set the parameters every time
- 10 operators and 30 products presettable
- Lot No. and Sample No. editable
- Review of the testing curve
- RS 232 C output
- Resolution: 1 mbar
- Accuracy: ±0.5% F.S.
- Delivered with high performance vacuum pump or run with 6 bar network with vacuum generator
- Quick and easy verification and calibration



Test curve

Optional parts:

- Immersion system
- Shelf structure
- Stainless box
- Vacuum generator model
- Pressure or pressure and vacuum model (pressure up to 1000 mbar)
- Oil-free vacuum pump (vacuum -900 mbar)
- High performance vacuum pump (vacuum -999 mbar)
- Mini-printer
- Software QualiPress



Software QualiPress (Optional)

Box with front door and shelves

Mini-printer (Optional)

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Cylinder design

Box with immersion system

Stainless box
with front door and shelves

Pressure and vacuum Stainless box

Pressure and vacuum box
with small piercing needle

Oil-free vacuum pump (Optional)

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AMVT-1 Automatic Vacuum Leak Tester

Comply with the requirements of FDA - CFR 21-11

The AMVT-1 automatic vacuum leak tester is specially designed for testing the sealing performance of containers such as vials, bottles, caps and cans made of glass, plastic, aluminum or other metal materials. Its stainless steel frame design meets the standards for industrial applications.

The instrument is equipped with software, user-friendly operation interface design, real-time display of measurement data curve during the measurement process, so that the operation process is more intuitively and simply.

Measuring principle:

AMVT-1 automatic vacuum leak tester tests the sealing performance of samples by the vacuum difference. The sample will be placed in the test chamber, then the instrument generates the vacuum to make the test chamber reach a target vacuum level and hold it for a predefined period. The vacuum difference in the test chamber will be monitored during the holding process. The maximum vacuum difference will be compared with the set threshold, then the sealing performance of the sample under vacuum condition will be judged automatically.

Technical specifications:

- Tests on: Vials, Bottles, Caps and Cans made of glass, plastic, aluminum or other metal materials
- Sample capacity: 2 - 50 ml (standard model, other range by order)
- Vacuum level adjustable. The instrument is equipped with a built-in vacuum pump, vacuum level can reach up to -900 mbar.

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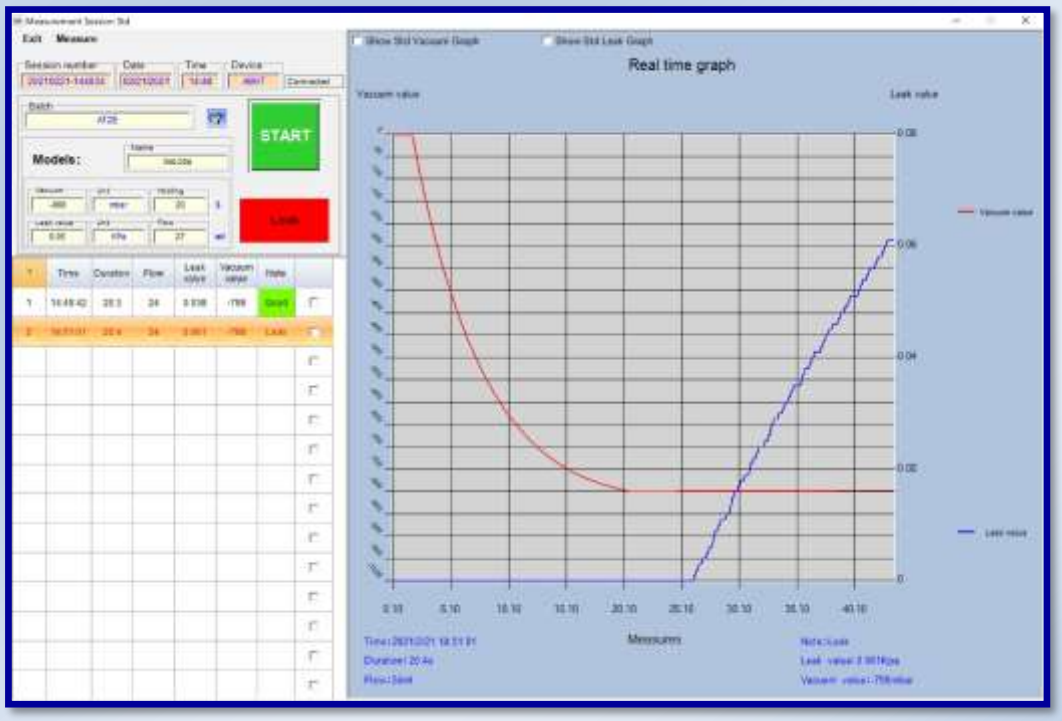
- Automatic adjustment of vacuum level and test time
- Testing sensitivity: 2ml, leakage hole diameter ≥ 5μm
- Auto leakage detect
- Size of test chamber customizable according to sample
- Dynamic display: test status, date, time
- Display: Cycle settings, batch number, sample number, test result
- Easy to operate, operator can select the preset test parameters and press the test button to carry out the test, no need to set the parameters every time
- Product batch number editable
- Connect to the software, print out test data

Test chamber

Mechanical specifications

- Stainless steel frame
- Dimensions: 400 (L) x 370 (W) x 382 (H) mm
- Weight: 25 kg



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SSA-ECO Secure Seal Analyzer (ECO Model)

(Leak test apparatus / Bubble point)

Left side view

Right side view

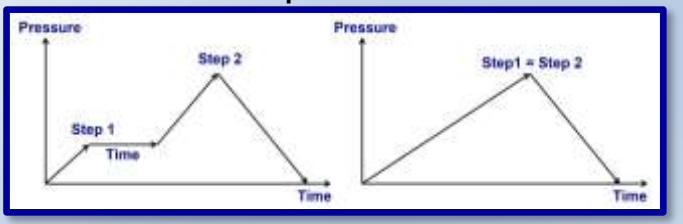
Control vavle and analog diaplay

AT2E SSA-ECO secure seal analyzer is for testing the secure seal performance of products. With AT2E patent needle, it makes the installation and piercing very quick and easy in any medium. By vacuum technology and special design, the needle uses a function of self-holding on the tested products. However, the SSA-ECO can be compatible with using the needle of the classic Secure Seal Tester (typical screwed needle). It's stainless steel design makes it resistant of any explosion during the test and ensures the safety of the operator.

Technical specifications:

- Measuring range: 0 to 16.00 bar
- Test pressure accuracy: ±2.5% F.S.
- Resolution: 0.5 bar
- Tests on bottles, cans and preforms
- AT2E patent special needle
- Analog display
- Units: bar / Psi
- Stainless steel secured device
- Setting of the level of pressure (regulator)
- Resistant to explosions
- Setting maximum pressure: 16 bar
- Compatible with typical screwed needles
- 5-8 bar pressure source for vacuum function
- 0-16 bar pressure source for testing
- Sample range: max. Ø126 x 365 (H) mm
- Overall size: 400 (L) x 520 (W) x 770 (H) mm
- Net weight: 25 kg

AT2E patent needle



Testing curve

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Optional parts:

- Cutting tool for cap test
- Cap holder
- Can test assembly (design subject to can type and can type amount)
- Bottle can needle
- Anti-burst frame
- Typical screwed needle
- Optional model SSA-ECO-3

Can test assembly

Specialized piercing unit for PET bottle

Cap holder

Cap test

Typical screwed needle

Bottle Can Needle

Quick cutting tool

Anti-burst frame

Optional 3 position model: SSA-ECO-3

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SSA-D Secure Seal Analyzer (Standard Model)

(Leak test apparatus / Bubble point)

SSA-D Secure Seal Analyzer (Standard model)

AT2E SSA-D secure seal analyzer is for testing the secure seal performance of products. With AT2E patent needle, it makes the installation and piercing very quick and easy in any medium. By vacuum technology and special design, the needle uses a function of self-holding on the tested products. However, the SSA-D can be compatible with using the needle of the classic Secure Seal Tester (typical screwed needle). Its stainless steel design makes it resistant of any explosion during the test and ensures the safety of the operator.

SSA-D is equipped with a touching screen. It's visual and easy to operate. Adjustable pressure and holding time stage setting meets different test requests of various products.

Test interface

Pressure and holding time setting interface

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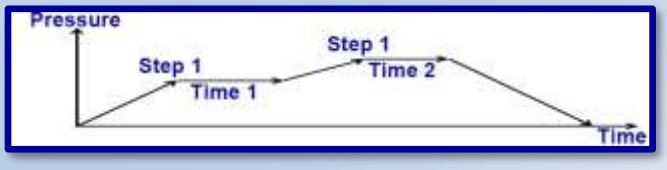
Technical specifications:

- Measuring range: 0 to 16.00 bar
- Test pressure accuracy: ±0.5% F.S.
- Resolution: 0.01 bar
- Tests on bottles, cans and preforms
- Touching screen display
- Units: bar / Psi
- Stainless steel secured device
- Stages pressurizing rate adjustable (regulator)
- 2 stages of pressure and holding time setting
- Resistant to explosions
- Setting maximum pressure: 16 bar
- 5-8 bar pressure source for vacuum function
- 0-16 bar pressure source for testing
- Sample range: max. Ø126 x 365 (H) mm
- Power supply: AC 110 - 240 V 50/60 Hz
- Overall size: 630 (L) x 450 (W) x 660 (H) mm
- Net weight: 52 kg

AT2E patent needle



Testing curve

Optional parts:

- AT2E patent special needle
- Specialized piercing unit for PET bottle
- QualiPress data management software
- 3 stages of pressure and holding time setting
- Cutting tool for cap test
- Cap holder
- Can test assembly (design subject to can type and can type amount)
- Bottle can needle
- Anti-burst frame
- Typical screwed needle
- Optional model SSA-D-3

Specialized piercing unit for PET bottle

Cap test

Quick cutting tool

Cap holder

Can test assembly

Typical screwed needle

Bottle Can Needle

Anti-burst frame

Optional 3 position model: SSA-D-3

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SSA-PLUS Secure Seal Analyzer (Automated Model)

(Leak test apparatus / Bubble point)

SSA-PLUS is an advanced model of Secure Seal Analyzer for testing the secure seal performance on products. Optimum design, which is easy operation and maintenance.

One-button start to finish the complete inspection process, automatic piercing, process control and leak detection. Inner pressure measuring function is integratable, increases the inspection efficiency and cost effective.

Touching screen operation, visual and easy to operate. Adjustable pressure, pressurizing rate and holding time stage (up to 12 stages) setting meets different test requests and standard of various products.

To make the inspection process easier and more accurate, AT2E has specialized the design of the instrument for different type of products.

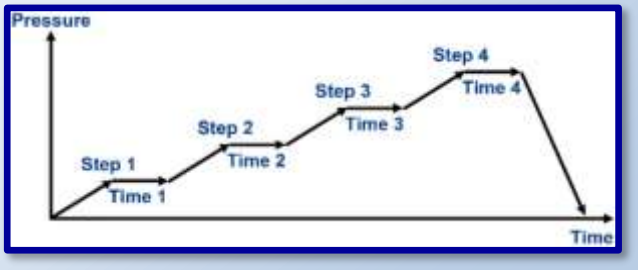
Features:

- Automatic inspection process and leak detection
- Tests on bottles, cans and preforms
- Inner pressure measuring function is integratable
- Multi-positions model is optional, higher efficiency
- Touching screen display
- Stainless steel structures, safe and durable
- Automatic or manual testing mode compatible
- Up to 12 stages of pressure, pressurizing rate and holding time setting
- Testing curve review
- 30 products memorization
- 10 operators memorization
- Up to 1000 test results memorization
- Configuration by administration passwords
- Dynamic display: Real-time pressure / Pressure holding time / hour / date

  Pressure holding time / hour / date
- Display: product name / operator / batch N° / sample N°
- Maximum pressure protection setting
- RS232 output (used to connect to software)

Operation screens*

***There may be differences in the operation screen for different models of instrument**



Illustrative Testing curve

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SSA-PLUS-P - Neck piercing model, applicable to soft materials like plastic, aluminum bottles and easy open cans

SSA-PLUS-P neck piercing mode of Secure Seal Analyzer, with the neck piercing solution, no operations are required on the cap position, which avoids the influences that introduced during the operation process, further improves the reliability of measurement data, and the precision auto leak detection is available. Fully automatic leak detection, micro-leakage can also be detected accurately.

SSA-PLUS-P Neck piercing solution - micro-leakage can also be detected accurately

SSA-PLUS-P Multi-positions

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SSA-PLUS-G - Top piercing model, applicable for rigid materials like glass bottles

SSA-PLU-G Top piercing model of Secure Seal Analyzer, with AT2E specially designed piercing device, it allows automated installation. By vacuum technology and special design, the needle uses a function of self-holding on the tested products. The pressure-differential method is used in assisting the automatic leak detection.

Sngle size clamp or universal clamp for SSA-PLUS-G

SSA-PLUS-G Multi-positions

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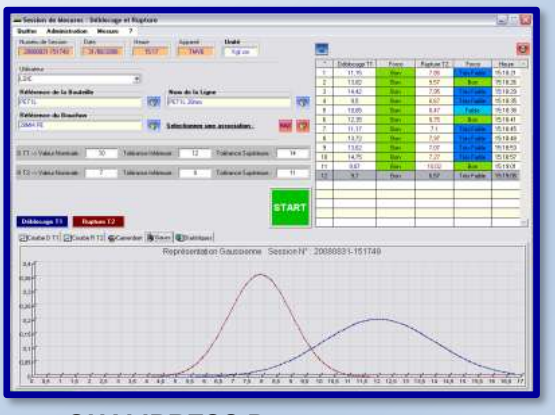
Technical specifications:		
Model:	**SSA-PLUS-P**	**SSA-PLUS-G**
Piercing way:	Neck piercing	Top piercing
Piercing unit:	Neck piercing unit	Vacuum piercing unit
Leak detection:	Specialized Leak Detection unit	Pressure-differential method
Applicable to:	Plastic, aluminum bottles and easy open cans	Glass bottles
Sample range:	Max. height: 350mm, Max. diameter:120mm	
Test range:	0 to 16.00 bar	
Pressure accuracy:	±0.5% F.S.	
Inner pressure measuring range:	0 to16 bar (optional)	
Inner pressure measuring accuracy:	±0.5% F.S.	
Pressure unit:	bar / psi / kpa	
Resolution:	0.01 bar (0.1 psi / 1 kpa)	
Pressure source:	0 to16 bar	
Power supply:	200V AC / 50Hz (110V AC / 60Hz optional)	
Over all size:	630(L) x 600(W) x 1050(H) mm	610(L) x 550(W) x 1050(H) mm
Weight:	85 kg	

Optional accessories	**SSA-PLUS-P**	**SSA-PLUS-G**
	Custom-made clamp according to sample neck size	Compatible clamping system (26-35 mm neck diameter, others on request)
	Can test assembly (design subject to can type and can type amount)	
	“QUALIPRESS” Data management software	
	Inner pressure measuring module	
	Multi-position model	
	External booster	

Can test assembly (optional)

External booster (optional)



QUALIPRESS Data management software (optional)

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SSA-PLC-12 Secure Seal Analyzer (X Positions)

- For control of the secure seal performance of caps on preforms

The SSA-PLC- Secure Seal Analyzer (x Positions) is a special instrument developed by AT2E for control of the secure seal performance of caps on preforms.

Attributes:

- Multi-position design, more convenient and efficient.
- PLC control ensures the high accuracy and reliability.
- Stainless steel frame, safer and durable.
- Flexible position selection, each position can be controlled separately by system, users can choose to enable the positions (from 1 to 12) according to their needs.
- Linear pressurizing, able to set up to 4 pressurization steps, and hold the pressure according to the predefined period.
- Auto pressure compensation during test process
- Special designed clamping device, enhanced the sealing performance of test.
- Anti-explosion and clear observation window, safe and easy to observe the sample status during tests.

Technical specifications:

- Measure range: 00.00 - 16.00 bar
- Accuracy: ± 0.5 % F.S.
- Display resolution: 0.01 Bar
- Units: Bar, psi
- Sample range: cap
- Preform range: max. diameter 39mm, max. height 170mm
- 7” LCD touch screen
- Up to 4 pressurization steps (4 target pressure)
- Max. testing pressure: 16 Bar
- Air supply: 0-16 Bar (Air supply ≥Max. testing pressure)
- Dimensions: 1100 (L) x 600 (W) x 1150 (H) mm

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Testing procedure:

- Install the preform with cap

- Test the preform in the water bath

Testing screen:

Test example:

As per the above screen shot, during the test, the sample in #11 position leaks, press the #11 button, the button on screen will become red and system will stop pressurizing, and display the leak pressure value above the button. System will generate a data table for each test to record the test pressure of every position. In the table, the red button position will be display as “NG”, and with the leakage pressure value, green button (normal) position will be display as “OK”, and with the target testing pressure. The data table can also be printed out through the micro printer.

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CTLT Cosmetic Tube Leak Tester

AT2E CTLT Cosmetic Tube Leak Tester is for testing the secure seal performance of the cosmetic tube products. With the special design, use a seal rubber to form a temporary sealed condition from the tube bottom, then apply a certain pressure level to test the secure seal ability of the tube. Controlled by touching display, it's visual and easy to operate. Adjustable pressure and holding time stage setting meets different test requests of various products. Its stainless-steel frame and enclosed test chamber design makes it resistant of any explosion during the test and ensures the safety of the operator.

Its easy operation provides a simple and convenient solution for customers.

Technical specifications:

- Sample: Plastic or Metallic tube
- Sample diameter: 25 - 50 mm (other range by order)
- Touch screen display
- Measure range: 0 - 2.00 bar
- Resolution: 0.01 bar
- Unit: bar / Psi
- Stages pressurizing rate adjustable (regulator)
- 2 stages of pressure and holding time setting
- Resistant to explosions
- Stainless steel secured device
- Air supply: 0 - 8 bar
- Power supply: AC 110 - 240 V 50/60 Hz
- Overall size: 340 x 430 x 880 mm (W x D x H)
- Weight: 38 kg

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TCT-2 Traction and Compression Tester (Universal Tester)

PET Bottle test

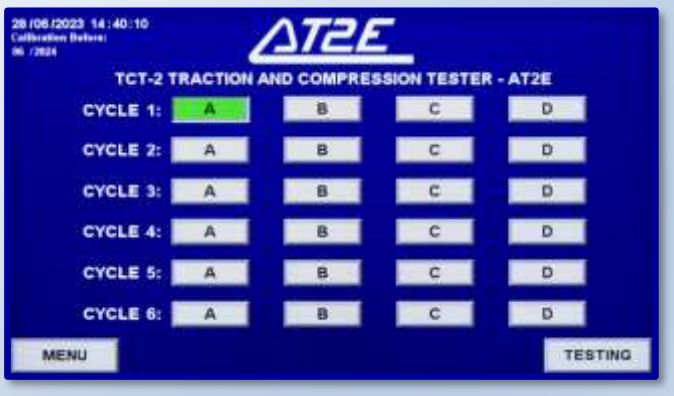
Can test

Control panel

AT2E TCT-2 measure the resistance to tear or top load force (traction or compression) for all kind of packaging. Sample installed on the support and the force is raised in tear or top load direction gradually. The distance between the gauge and the support plate and column can be adjusted on request. The sample will be compressed or tore until the maximum force or respecting the settings of testing distance. The value is read on the touch screen and a report is printed.

TCT-2 complies with the **ISBT** voluntary standard test methods for PET bottles. With the user-defined test cycles, it can be widely compatible for any in-house standards from customers on different test requests.

Testing interface



Cycle selection

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Characteristic:

- Perfectly parallel plates
- Automatic record of the force
- Touch screen display
- Predefined the testing distance and testing speed
- Test with preload force or pre-stretching distance
- Available for both compression (top load) test the traction (pull) test
- User-defined test cycle (up to 4 steps of force and holding time) satisfies different test request
- Memory of 30 products, 10 operators, batch number, sample number (all by password)
- Memorization up to 1000 test results
- Easy installation of samples.
- Displays all the information during cycle: time, setting, operator, product, batch N°., Sample N°., value
- Reviews the real-time testing curve
- RS232 outputs
- Stainless steel design ensures the durability of tester
- Overload protected
- Safety design

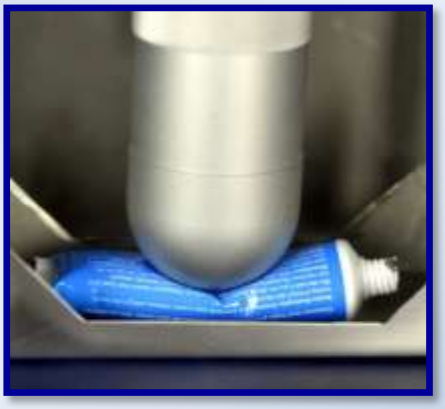
Technical specifications:

- Dimensions: 500 (L) x 400 (W) x 910 (H) mm
- Sample range: 130mm max. diameter, 420mm max. height (Bigger by order)
- Measuring range: 0-1500 N (larger by order)
- Traction range: 0-500 N (larger by order)
- Resolution: 0.01 N
- Accuracy: ±0.5% F.S.
- Power supply: AC 220V (AC 110V optional)
- Weight: 50 kg

Optional parts:

- Calibration pack
- Mini printer
- Custom-made fixture for sample
- "QualiForce" software

TCT-2 for Tamper Evident band breaking test (with optional fixture)



TCT-2 for Tube test (with optional fixture)

Mini printer (Optional)

"QualiForce" software

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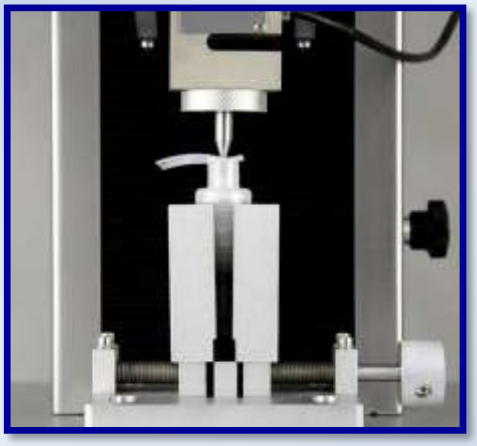
Fixtures for other tests:

Flip top test

Disk top test

Push & Pull test

Cover opening test



Push test of pump force

Breaking test

Tube removal test

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TLT-1 Tube Leakage Tester

TLT-1 Tube Leakage Tester was designed to test the sealing performance of tubes by compression via top load force. By controlling the compression force during the time set for the test, the tube sealing performance can be evaluated accordingly. Tests can be carried out with full or empty tubes.

With a fully mechanical design, using a pneumatic system, which avoids the need for electricity, this device is easy to operate and maintain. It has a safety door designed to guarantee the safety of operators.

Test Chamber

Testing samples

Technical Specifications:

- Sample size:
  - Tube diameter: up to 60 mm
  - Tube length: up to 250 mm

  (other sizes under request)
- Air supply: 4 to 8 bar
- Test force / pressure: 393 to 1178 N (2 to 6 bar)
- Accuracy: 0.1 bar
- Test time: from 0 to 30 seconds
- Dimensions: 310 x 260 x 475 mm
- Weight: 20 kg

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CTC - Cosmetic Tube Cutter

CTC Cosmetic Tube Cutter is a preparation instrument for cutting the plastic or metallic tubes for quality controls. Cutting with the CTC, the tubes can be easily and accurately cut into different sections with predetermined size.

Characteristics :

- Exclusive cutter for different types of samples, ensures the cutting accuracy of the sections
- Changeable and easy operating system to switch from one diameter to another
- Metallic machine casing
- Enclosed cutting chamber with transparent plexiglass door
- Protective hinge design to prevent operators from accessing to the cutter from outside
- Power-operated door

Technical specifications:

- Sample: Plastic or metallic tube
- Sample diameter: 25 - 50 mm (other diameter by order)
- Air supply: 4 - 8 bar
- Dimensions: 275 x 210 x 375 (W x D x H)
- Weight: 12 kg

Optional parts :

- Cutting sets for different sample diameters

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BTLT-2 Glass Bottle Top Load Tester

--- Maximum Top Load Resistance Tester for Glass Bottles

Testing chamber and operating screen

The BTLT-2 is an instrument for testing the resistance to Top load effort on glass containers. It has been widely used by the glass container manufacturers and users. As a standard testing instrument for the glass container industry, it offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Designed for easy operation and maintenance, comply with the testing standard of ISO 8113:2004.

The top load test of containers is made up to a predefined pressure point (trial test) or until destruction.

Characteristics:

- User defined test cycle (up to 4 steps of pressure and holding time) satisfies different test request
- PLC integrated & Touch screen control
- Easy operation
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User define the product lot number and sequence number
- Reviews the real-time testing curve
- Custom-made inserts for different types of samples, easier sample installation and more accurate on pressure point.
- Huge sample capacity, up to 600 mm in bottle height (custom-made model)
- Testing speed adjustable
- AT2E Patented trash bin design, more safety for operating and easier for scrap cleaning

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- Maximum top load force up to 20 KN
- Stainless steel frame and aluminum parts, more sturdy and durable.
- Overload protection
- Advanced safe door design ensures the safety of operator during a test.
- RS232 output interface, can be connected to printer or data acquisition software

Technical specifications:

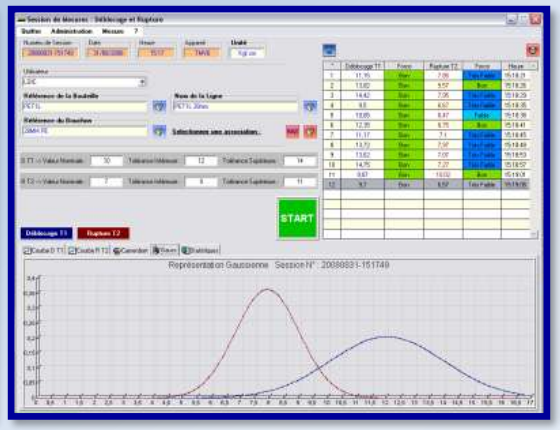
- Measure range: 0 - 20 KN (Others by order)
- Sample height: 125 - 400 mm (standard model, other range by order)
- Sample diameter: 160 mm max. (standard model, other range by order)
- Units: KN (Or Kgf, please specify when order)
- Resolution: 0.01 KN
- Power supply: AC 220V (AC 110V optional)
- Dimensions: 744 (L) x 493 (W) x 1160 (H) mm
- Weight: 130 kg

Optional Parts:

- Trash bin
- Mini printer
- High accuracy calibration unit
- Data management software

Easy cycle selection screen

Mini-printer



"QUALIFORCE" Software (Optional)

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DYNA-4000 Dynamometer

- Maximum top load tester for containers in different materials

The DYNA-4000 is an instrument for testing the resistance to top load effort on containers in different materials.
Designed for easy operation and maintenance, and fully conform to tests requirements according to international standards. The pressure test of containers is made up to a predefined pressure point (trial test) or until destruction.

Characteristics:

- PLC integrated
- User defined test cycle (up to 4 steps of force and holding time) satisfies different test request
- Full Stainless steel and aluminum machine
- Various safety design.
- RS232C Output
- Touch screen LCD
- Dynamic display: statistics / hour / date
- Display: product name / operator / batch N° / sample N°
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User defines the batch number and sample number
- Review the real-time testing graph

Can test

Glass tube test

Control panel

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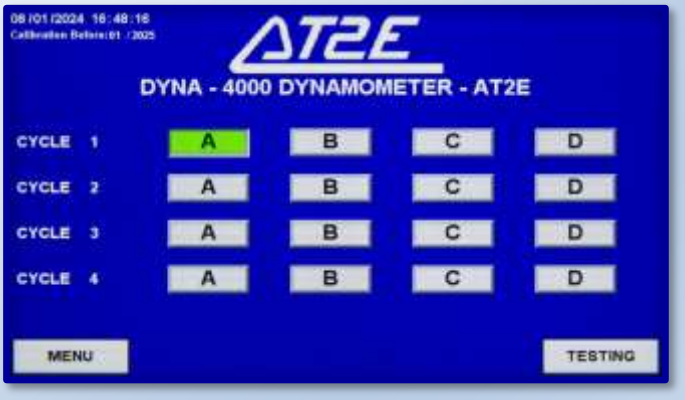
Testing interface



Cycle selection

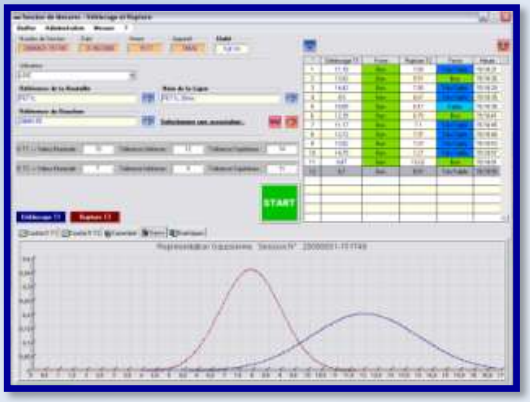
Technical specifications:

- Measuring range: 0-3000/0-4000/0-5000 N (By order)
- Resolution: 1N
- Sample capacity: by order
- Power supply: AC 220V / 50Hz (AC 110V / 60Hz optional)
- Dimension: 500 (L) x 440 (W) x 780 (H) mm
- Net weight: 50 kg

Optional part:

- High accuracy calibration unit
- Spacers with safety chamber
- Mini printer
- “QualiForce” Software

Mini printer (Optional)



“QualiForce” software

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GBIT Glass Bottle Impact Tester

Standard GBIT

GBIT with Safety frame (Optional)

Special instrument for testing the impact resistance ability of various glass bottles and jars.

Attribute

- The sample clamp is able to move flexibly on vertical or horizontal direction, convenient for adjusting the sample position.
- Instrument design accord with the law of the conservation of energy, ensured the testing accuracy and test reliability.
- Stable and accurate pendulum able to rotate and release freely.
- With stainless steel safety shield.
- User-friendly design, easier for operation.

Standard Energy scale

Principle

Base on the law of conservation of energy conversion, the energy that pendulum impact on the bottle is determined by its potential energy where it was hung. When the pendulum was hung on a certain angle, its potential energy is corresponding to a certain value, and the impact energy on the bottle is also corresponding to a set value. According to the conversion relationship of pendulum hanging angle and its impact energy, to pre-define a certain energy value of the pendulum by defining the hanging value, then release it to impact on the bottle, and observe whether the bottle was damaged or not, so that to judge the impact resistance of the bottle.

Specification

Sample diameter range:	Φ30 -130 mm (clamps for other range available)
Impact height:	5 - 305 mm (5 - 200 mm when impact point in bottom of bottle, other range by order)
Max. impact energy:	2.6 J
Resolution:	0.1J for each lattice (when impact energy larger than 0.6J) 0.05J for each lattice (when impact energy less than 0.6J)
Energy loss:	≤1.5%F.S.
Dimensions:	580 mm *350 mm *850 mm

With additional impact speed scale (optional)

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POT-1 Pull Off Tester

- *Strength pull off cap tester*

POT-1 has been studied and developed to be able to open step by step the pull off caps for carbonated beverages.

The POT-1 includes an accurate dynamometer tester and semi-automatic cycle.

Angle of the both steps is adjustable. And it's been designed for testing different height of bottle with cap.

Features:

- Easy to use
- High repeatability in testing
- Built-in dynamometer with software

Step to perform test:

- Install the hook on the cap ring and the wire into the lower position rail.
- Move the pneumatic valve to testing position and the pull system will test at a stable speed and dynamometer will measure the force.
- Change the wire from lower position to higher
- Move the pneumatic valve to testing position and the pull system will test at a stable speed and dynamometer will measure the force
- Return the system to the initial position and start a new test.

Dynamometers specifications:

- Range: 50 / 200 / 1000 N (Please specify when ordering)
- Measure tensile & compressive strain
- Digital display and reversible
- Programming menu.
- Measurement Mode : Continuous / Peak / PC Link
- Recalibration of the zero touch
- Accuracy: 0.05 N
- Display threshold (limit)
- Choice of unit: kgf. / Lbf / N
- Integrated battery with charger
- Data will be transferred to the software with curve

Machanical specifications :

- Air supply : 0 - 6 bar
- Dimensions: 550 x 250 x 600 mm
- Net weight: 15 KG

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POT-AUTO Automated Pull Off Tester

- *Automated Strength pull off cap tester*

Special hook for ring tab

Testing screen

POT-AUTO Automated Pull off Tester is an automatic testing instrument developed by AT2E for testing the tear and tear off force of pull off caps. Operator only need to install the sample to the clamping unit and hook the ring tab properly, then press start to complete the test. The automated testing process avoids the influence that introduced by manual testing. The auto angle correction unit can automatically correct the horizontal pulling angle to ensure the reliability and reproducibility of the testing data

Features:

- One-key start, easy to operate
- Automated testing process to avoid the influence of human factors, high reliability
- Higher repeatability
- Settable Pulling angle
- Auto angle correction unit, corrects the horizontal pulling angle automatically
- Integrated PLC control and touch screen
- Auto record and display the peak force and force distance of the tear and tear off force
- RS232 communication port, can receive data via data acquisition software
- Stainless steel frame, sturdy and durable
- Compatible with a variety of samples of different sizes with different spacers

Sample holder with auto angle correction unit

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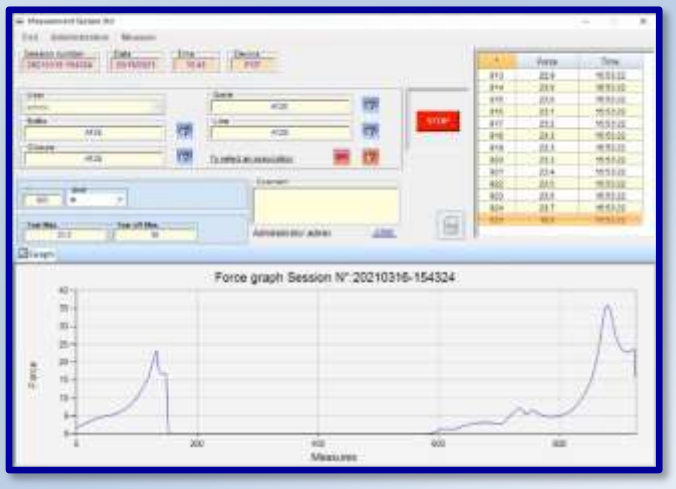
Technical specifications:

- Force range: 0 - 20.00kgf (0 - 196 N) (Other range by order)
- Sample diameter range: Ø 50 - 80 mm
- Sample height range: 150 - 275 mm
- Angle correction range: ±12°
- Test mode: Peak / PC Link
- Resolution: 0.01 kgf or 0.1 N
- Accuracy: ±0.5% F.S.
- Units: kgf / Lbf / N
- Data output: RS232, connect mini-printer or software
- Air supply: 5 - 8 bar (73 - 120 psi) clean and stable air supply
- Power supply: 220V AC / 50 Hz (optional 110V AC / 60 Hz)
- Dimensions: 550 x 510 x 890 mm (L x W x H)
- Weight: 85 kg

Optional:

- Spacers for different sample sizes
- QualiForcePlus software



Software QualiForcePlus (Optional)

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APCC-1 Automated Pull-off Cap Capper

Cap on finish

Capped

APCC-1 Automated Pull-off Cap Capper is a laboratory instrument designed for capping the pull-off caps. The capped bottles can be used for quality inspection of the bottle and their matching caps, or other relevant tests. Desktop design, small size and convenient to use in laboratory. One-key auto capping.

Attribute & benefit:

- Adjustable compression force to meet different test requirements
- Touch screen control, one-key auto capping, easy to operate
- Integration of the capping head that using in the production line is possible (Capping head to be supplied by user)
- Stainless steel frame, sturdy and durable
- Desktop design, small size and convenient to use in laboratory

Technical specifications:

- Compression range:1000N to 4500N
- Accuracy: ±0.5% F.S
- Sample range: Max. 295 mm in height
  Max. 85 mm in diameter (Customized spacers are required according to bottle diameter)
- Air supply: 5 - 8 bar
- Power supply: 220V AC / 50 Hz (optional 110V AC / 60 Hz)
- Overall size: 400 x 445 x 1120 mm
- Weight: 70 kg

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STS-1 Swing Top Stopper Tester

- *Strength swing top stopper tester*

STS-1 has been studied and developed to be able to test the opening and closing force of swing top stopper on bottles.

The STS-1 includes two accurate dynamometer testers and semi-automatic cycle.
Testing position is adjustable. And it's been designed for testing different height of bottles.

Features:

- Easy to use
- High repeatability in testing
- Built-in dynamometer with software

Step to perform test:

- Install the bottle into the clamp and adjust the swing top stopper position, then tighten the clamp.
- Move the pneumatic valve of opening force testing to testing position and the pull system will test at a stable speed and dynamometer will measure the force. Then move the pneumatic valve back to standby position when test is done.
- Move the pneumatic valve of closing force testing to testing position and the compress system will test at a stable speed and dynamometer will measure the force. Then move the pneumatic valve back to standby position when test is done.

Dynamometers specifications:

- Range: 0-50 / 0-100 / 0-200 N (Please specify when ordering)
- Measure tensile & compressive strain
- Digital display and reversible
- Programming menu.
- Measurement Mode Continuous / Peak / PC Link
- Recalibration of the zero touch
- Accuracy: 0.01 N (0-50N) / 0.05 N (0-100N) / 0.1N (0-200N)
- Display threshold (limit)
- Choice of unit: kgf. / Lbf / N
- Integrated battery with charge
- Data will be transferred to the software with curve

Machanical specifications :

- Air supply : 0 – 6 bar
- Dimensions: 700 x 350 x 650 mm
- Net weight: 21 KG

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CET-1 Cork Extraction Tester

CET-1 Cork Extraction Tester is a force test system. It has been designed for wine producer and cork manufacturing industries. Easy to use, it allows to measure cork extraction or insertion and permits to improve the cork products and assembly/sealing process.

CET-1 ensures a repeatedly and accurate measure to check the push-in or pull-off force necessary to insert or extract the cork from bottles.

This is a standard test to ensure the Cork manufacturer or wine producer to let the end consumer open easily the bottle. It also allows to maintain the wine quality.

Operating:

- Insert the corkscrew into the cork.
- Install the bottle into the adapted support.
- Hook the extractor into the corkscrew.
- Apply a linear tensile action to the cork.
- Release the cork from the bottle, while the bottle is hold firmly.
- Maximum pull out/ push in force displays on the force gauge.

Features:

- robust and reproducible tester
- Handle allows an easy operation
- Bottles range: (75cl, 50cl).
- Column with height adjustment
- linear guide ensures axial guidage
- Calibration certificate

Technical data:

- Capacity : 100, 200, 500N
- Accuracy : 0.5% FS
- Resolution : 0.1 N
- Speed rate : 1000 Hz
- Available : Digital or analog gauge

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BTT-1 Bottle Tilt Tester

Fallen angle test

Slide angle test

Bottle Tilt Tester is a standard equipment to measure and evaluate the bottles resistance to tilt
Mainly used by glass, beverages, pharmaceutical, cosmetic industries.

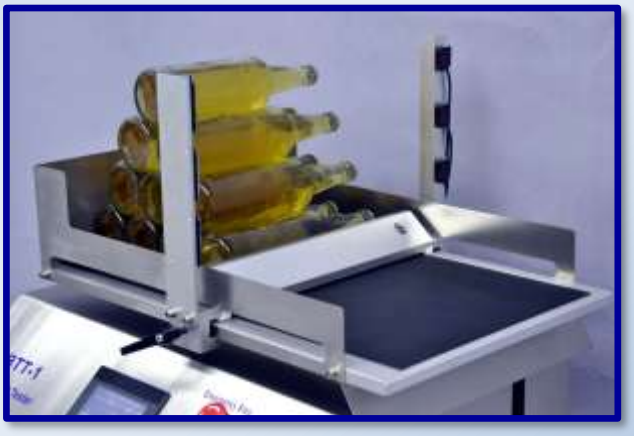
BTT-1 is friendly use with its touch screen control to start test, adjust tilt angle, and speed.

BTT-1 automatically detects falls or slides during test. It's equipped with non-contact visual sensors.

Specifications:

- Stainless steel frame
- Control and setting by touch screen
- Tilt angle adjustable
- Tilt speed adjustable
- Adjustable bar to install up to 10 bottles
- Falls or slides automatic detection
- Recuperation drawer (Optional)
- Liquid compatible
- Sample range: Max. diameter 86 mm
  Max. height 500 mm for slide angle
  Max.height 340 mm for fallen angle
- Max. load capacity: 12 kg
- AC 110 - 240 V 50/60 Hz
- CE marked

Dimensions : On request



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PLS - Production Line Simulator

The PLS Production Line Simulator allows to simulate in a reproducible and accelerated way the friction on a packaging line.

The testing process simulates the abrasions associated with contacts between bottles, typical of packaging lines.

It is the ideal device for determining the build quality of glass bottles as well as their coatings, decorations and labelling.

Applications :

- Simulation of the packaging line for bottles and cans
- Evaluation of the quality of the coating of the bottles
- Evaluation of wear and abrasion of bottle labels
- Assessment of abrasion on returnable bottles

Characteristics

- Easy operation, use in laboratory
- Adjustable cycle time and speed
- Adjustable conveyor border spacing from 50 to 150 mm
- Stainless steel construction
- Adjustable and swiveling water nozzle

Technical specifications :

- Sample: Bottles and cans of different materials (Glass, Plastic, Aluminum, etc.)
- Sample diameter: 50 - 150 mm
- Rotation speed: 0 - 20 rpm (0 - 1m/s converying speed at the position of 1000 mm diameter)
- Air supplyer: 5 - 8 bar
- Power supply: AC 220V (AC 110V optional)
- Dismensions: 1210 x 1355 x 1110 mm (W x D x H)
- Weight: 230 kg

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PBDT-1 PET bottle drop tester

PBDT-1 PET bottle drop tester, allows a repeatable drop testing. Referenced to the ISBT requirements, bottles up to 150 mm in diameter, can be dropped from 800 to 1950 mm height

AT2E PBDT-1 includes also an angle adjustment for special test.

The walls are movable and adjustable to fit any kind of bottles from 150 ml to 2.5 L

PBDT-1 allows testing in vertical or horizontal position.

Safe conception and stainless steel structure ensure durability and easy cleaning.

A front door gives an easy access to see the test and retrieve the bottles after impact.

Advantages:

- Vertical or Horizontal drop test
- Test repeatable with height adjustment ruller
- Transparent safety door for easy observation and removal sample
- Visible test and fall
- stainless steel design safe and easy to clean
- Position limit baffle adjustable, compatible with products with different sizes

Specifications:

- Bottle range : round or square from 150ml to 2.5L
- Max. bottle diameter: 150mm
- Max. bottle height: 400mm
- Max. Drop Height: 1950 mm
- Min. Drop Height: 800 mm
- Dimensions: 950mm x 960mm x 2050mm (W x L x H)
- Weight: 220 kg

Optional Parts:

- Model with angle adjustment

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BIT-1 Ball Impact Tester

BIT-1 Ball Impact Tester is an instrument developed and produced by AT2E for testing the impact resistance of different kinds of plastic closures. It provides an important technical support and reference for beverage bottlers and cap manufacturers to maintain and improve product quality and performance.

Test Principle:

It is used to test the impact resistance of plastic closures under the impact of a steel ball at a certain height.

A steel ball of specified size and mass is placed in a guiding tube at a certain height, and the ball is allowed to fall freely and impact the closure, followed by observation of the closure to determine the impact resistance of the closure. The impact force is determined by the length of the guiding tube and the weight of the steel ball.

Features:

- Safety design with enclosed test chamber
- The instrument design complies with the law of conservation of energy, which ensured the test accuracy and reliability.
- Suitable for glass and PET bottles
- Bottle support adjustable, compatible with the bottles of different size
- Impact height adjustable with different height of guiding tube
- Impact position adjustable
- High repeatability

Technical specifications:

- Sample height: 0 - 350 mm (Higher by order)
- Sample diameter: Φ0-100 mm (larger by order)
- Guiding tube height: 762 - 1000 mm (Higher by order)
- Steel ball diameter: Φ41±0.2 mm
- Steel ball weight: 286±2 g
- Overall size: 700 (W) x 385 (D) x 1250 (H) mm
- Net weight: 25 kg

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BT ETA FORCE SHF Dynamometric Force Bottle

DESIGNED TO BE INSTALLED UNDER CAPPING HEAD - SCREW CAP -PILFER PROOF - SECURE CHILD

Our dynamometers include a special mechanical design permitting to avoid all influence from non-coaxial efforts. Also built-in a high speed electronic reading of measurements.

Technical specifications:

- Separate digital display
- Measures compression (top load)
- Measuring range: 000.0 to 500.0 Kgf
- 2 Measuring modes (continue, peak)
- Units: Kgf / lbf / N
- Accuracy: ± 0.5 % of full scale
- Loading by USB (PC)
- Reversible display)
- Delivered with COFRAC certificate
- Transport case
- AC 110 - 240 V 50/60 Hz

Mechanical specifications:

- Designed on request according to customers' drawings
- Built-in battery 20H
- Dimensions: diameter mini: 50 mm / height: 104mm
- Weight 3 kg

Using:

- Ready to be installed on line after filling machine
- Enables to control capping heads in real conditions (speed and top load)
- No more dismantling!!
- Interchangeable formats

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BT ETA FORCE Dynamometric Force Bottle

DESIGNED TO BE INSTALLED UNDER CAPPING HEAD - SCREW CAP -PILFER PROOF - SECURE CHILD

AT2E's BT ETA FORCE includes a special mechanical design permitting to avoid all influence from non-coaxial efforts. It's also built in a high speed electronic reading of measurements. Device can be custom-made according to different bottle or can profile. Using with our BT ETA Measure software, it's very convenient for users to save, manage and analyse the data.

Technical specifications:

- Digital display
- Measures compression (top load)
- Measuring range: 000.0 to 650.0 Kgf (other range please consult to AT2E)
- 2 Measuring modes (mean, peak)
- Units: Kgf / lbf / N
- Accuracy: ± 0.5 % of full scale
- Loading by USB (PC)
- Delivered with COFRAC certificate
- Transport case
- AC 110 - 240 V 50/60 Hz
- Save up to 24 groups of data or 120 seconds of continued data

Mechanical specifications:

- Designed on request according to customers' drawings
- Built-in battery 3H
- Dimensions: Customized
- Size range: Minimum diameter 35 mm / Minimum height 60mm
- Weight 1-2 kg

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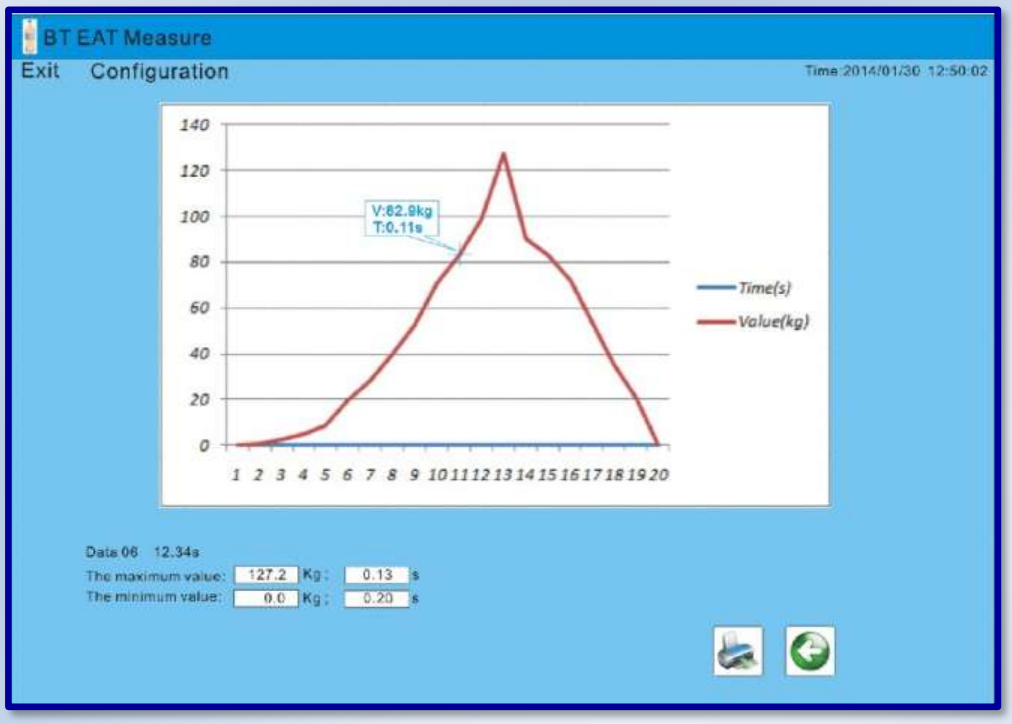
Using:

- Ready to be installed on line after filling machine
- Enables to control capping heads in real conditions (speed and top load)
- Interchangeable formats

BT ETA FORCE Pack
Single sensor for different bottle format replacing

Feature of software:

- Transfer the data from device to software
- Review the saved data
- Create and view the graph
- Export as data report and graph report
- Export as an Excel file
- Language option: French / English / Chinese



BT ETA Measure software

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Dynamometers

Resistance to tensile or compression

DYNAMOMETER WITH AT2E MECHANIC
Range: 20, 100, 200, 500N
Please specify when ordering
Measure tension and compression.
Reading on the dial needle
Zero Recalibration by a touch
Accuracy: 0.1% of full scale
Choice of unit: kgf. / N
Storage case and tools (hooks, etc.)
Weight: 560 g
Dimensions: 230x60x50mm
Supplied with calibration certificate and PV

Analog Model

DYNAMOMETER DIGITAL AT2E
Range: 50, 200, 1000 N
Please specify when ordering
Measure compressive strain
Digital display and reversible
Programming menu.
Measurement Mode Continuous / Peak / PC Link
Recalibration of the zero touch
Accuracy: 0.05 N
Display threshold (limit)
Choice of unit: kgf. / Lbf / N
Integrated battery with charger
Storage case and tools (hooks, etc.)
Weight: 560 g
Dimensions: 230x60x50mm
Supplied with calibration certificate and PV

Digital Model

=> Included in dynamometers:
Hook M6 Diameter
Point M6 length
Support system dish diameter 19 mm M6
rechargeable battery
Calibration certificate

THESE MODELS ARE AVAILABLE WITH REMOTED GAUGE: 1KN, 2KN, 5KN, 10 KN 2000kN

HP graph digital Model

SOFTWARE DATA ACQUISITION AND CURVES AVAILABLE

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CO_2-P CO_2 Purity Tester

The CO_2-P CO_2 Purity Tester is a special instrument which is for calculating the purity of CO_2. The principle is based on absorption burette to measure the impurities (O_2 and N_2 e.g.) of CO_2 in a mixture of gases.

The CO_2-P CO_2 Purity Tester is widely used in breweries, the laboratory measurement of CO_2 recycling and purchasing.

Technical specifications:

- Measurement range: 99.0~99.999% v/v CO2
- Accuracy:
  - 99.00%~99.75%: 0.05 % v/v
  - 99.80%~99.97%: 0.01 % v/v
  - 99.980%~99.999%: 0.001 % v/v
- Volume: 105ml KOH (NaOH)
- Dimensions: 250mm×250mm×80mm
- Weight: about 0.75kg
- Alkali liquor: 30% g/v KOH (NaOH)

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CO_2EASY / CO_2EASY-D CO_2 Measuring Device

CO_2EASY with analog pressure indicator

For a constant quality and taste of all kinds of carbonated drinks, the critical parameter is the CO_2 (carbon dioxide) content in the liquid.

Our CO_2 measuring device is a standard equipment and widely used in breweries and in the non-alcoholic beverage industry for frequent measuring of the CO_2 content during production.

Allows a fast and accurate determination of the CO_2 content in beer and carbonated drinks after drilling.

Technical specifications:

- Pressure units: Bar / MPa (dual graduation)
- Temperature units: °C
- Measuring range: 0 - 6 Bar
- Resolution: 0.1 Bar / 0.01 Bar
- Pressure indicator precision:
  - Analog: ±2.5% F.S.
  - Digital: ±0.5% F.S.
- Temperature: 0 - 50 °c
- Temperature Resolution: 0.1°C
- Temperature precision: ±1°C
- Sample height range: 50 mm - 330 mm (larger by order)
- Bottle diameter: maximum 105 mm (larger by order)
- Dimensions: 200 (L) x 192 (W) x 475 (H) mm
- Net weight: 2 kg

CO_2EASY-D with digital pressure indicator

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CO_2EASY-DA Automatic CO_2 Calculator



For a constant quality and taste of all kinds of carbonated drinks, the critical parameter is the CO_2 (carbon dioxide) content in the liquid.

Our CO_2 measuring device is a standard equipment and widely used in breweries and in the non-alcoholic beverage industry for frequent measuring of the CO_2 content during production.

With the automatic CO_2 calculator, the CO_2 content in beer and carbonated drinks can be calculated automatically after drilling.

Technical specifications:

- Measuring range:
  - CO_2: 0.00 to 9.99 g/l
  - Temperature: 0 to 60 °C
  - Pressure: 0 to 6 bar
- Accuracy:
  - CO2: ± 0.5% F.S.
  - Temperature: ±0.5% F.S.
  - Pressure: ± 0.5% F.S.
- Resolution:
  - Temperature: 0.1 °C
  - Pressure: 0.01 bar
- Units:
  - CO2: g/L, Vol, %b.w, P20[kg/cm^2]
  - Pressure: bar, psi
  - Temperature: °C, °F
- Sample height range: 50 mm - 330 mm (larger by order)
- Bottle diameter: max. 105 mm (larger by order)
- Powe supply (for adapter): AC 110 - 240 V 50/60 Hz
- Battery chamber for 18650 is available (Battery is not supplied)
- Dimension: 220(L) x 250(W) x 480(H) mm
- Net weight: 3 kg

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CO_2DA Automatic Shaker & CO_2 Calculator

AT2E CO_2DA - Automatic Shaker & CO_2 Calculator is a special instrument which is for calculating the carbon dioxide content in the filled drink in glass/PET bottles and cans. The simple operation which also guarantees high reproducibility makes it become a significant equipment of quality control in the beverage industry.

Operation:

- Place the sample drink
- Piercing the sample
- Press the start button to test
- Obtain the carbon dioxide content after shaking

Features:

- Instead of manual shaking, motor shaking guarantees high reproducibility
- Stainless steel design
- High resolution touch screen with user-friendly interface
- Settable shaking speed and time
- High accuracy
- Calculate the CO_2 content automatically and rapidly
- Good repeatability
- Simple and easy piercing & operation
- Applicable for most of the glass bottle, PET bottle and can

Control panel

Technical specifications:

- Measuring range:
  - CO_2: 0.00 to 9.99 g/l
  - Temperature: 0 to 60 °C
  - Pressure: 0 to 6 bar
- Accuracy:
  - CO_2: ± 0.5% F.S.
  - Temperature: ±0.5% F.S.
  - Pressure: ± 0.5% F.S.
- Resolution:
  - Temperature: 0.1 °C
  - Pressure: 0.01 bar
- Sample range:
  - Maximum diameter: 120 mm
  - Maximum height: 380mm
- Units:
  - CO_2: g/L, Vol, %b.w, P_{20}[kg/cm^2]
  - Pressure: bar, psi
  - Temperature: °C, °F
- Power supply: AC 110 - 240 V 50/60 Hz
- Dimension: 730(L) x 450(W) x 460(H) mm
- Net weight: 52 kg

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CO_2-CS Automatic CO_2 Calculating System

Automatic piercing system & Control panel

Innovative shaking system

CO_2-CS Automatic CO_2 Calculating System is an innovative and full automatic CO_2 content calculating system which is newly developed by AT2E. With the innovative shaking system and design, it will be safer for operator. Integrate touching screen design offers a user friendly operating process and abundant measuring information.

Features:

- Full automatic system – easy to get the CO_2 content only by putting the sample into the system and the whole process including puncture, sealing, shaking, displaying and venting will be carried out automatically.
- Stainless steel design – which is more durable and steady when testing.
- Innovative shaking method – Allow the shaking of sample and the CO_2 evolution to be more complete. Thus, the measure result will be more accurate. Meanwhile, with the innovative design, it avoids any mechanical maintenance problems which may occur on typical rotary shaker.
- Safety design – the whole shaking process is carried out inside the chamber which may avoid the potential danger to operator.
- PLC & Touch screen is equipped – which enable the more accurate measure and customized measure request. Shaking time and shaking speed can be set according to operator's demand.
- Abundant information – operator, product name, batch number and sample number can be edited and saved with the system.
- 2 formulas – for alcohol drink and soft drink, 2 different CO_2 calculating formulas could be selected as per demand.
- Threshold display – results which are higher and lower than the standard will be displayed.
- SPC connected is available.
- Easy clean for leftover drink in shaking system.

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Technical specifications:

- Power supply: AC 220V (AC 110V optional)
- Sample range: up to 120mm in diameter / up to 360mm in height.
- CO_2 measuring range: 0 – 9.99 g/L.
- Temperature measuring range: 0 to 60 °C
- Pressure measuring range: 0 – 6 bar.
- Accuracy: ± .5% F.S.
- CO_2 content units: “g/L”, “Volume”, “Weight%” and “P_{20}[kg/cm^2]”.
- Temperature units: °F and °C
- Language: English / French / Spanish / Chinese.
- Overall size (L x W x H): 1040 x 540 x 1060 mm
- Net weight: 100 kg.

Optional parts:

- Insert for different size of bottle
- Calibration pack
- Data analyze and management software

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ABSD-1 Automated Beverage Sampling Device

- For beer & soft drink

In beer and soft drink industries, reproducible and proper samples from bottles and cans are required for various of quality control processes. The AT2E "ABSD-1 Automated Beverage Sampling Device" is designed to be the smart, easy and safe device for this requirement.

With the ABSD-1, operator can have an automated sampling process. For example: operator firstly adjust the inserting depth of the sampling pipe, then install the sample, close the door and press the button on the touching screen. Afterwards, the piercing and sampling process will be done automatically and the sample will be forced out into the sample line for the upcoming CO_2, O_2 and other analyze and test.

Attribute & benefit:

- Safe, easy and rapid sampling process comparing to manual sampling device.
- Compatible for different kind of package, including glass bottle, plastic bottle and can.
- User-friendly touching screen design. Easy adjustment for different size and kind of packages.
- Work with other brands of instruments.

Technical specifications:

- Sample range: from 80 to 400 mm in height
  from ø 45 to ø 125 mm in diameter
- Connection: ø 8 mm for pressure pipe
  ø 4 mm for sampling pipe
- Pressure requirement: 5 - 8 bar
- Overall size: 368 x 428 x 1168 mm
- Weight: 25 kg

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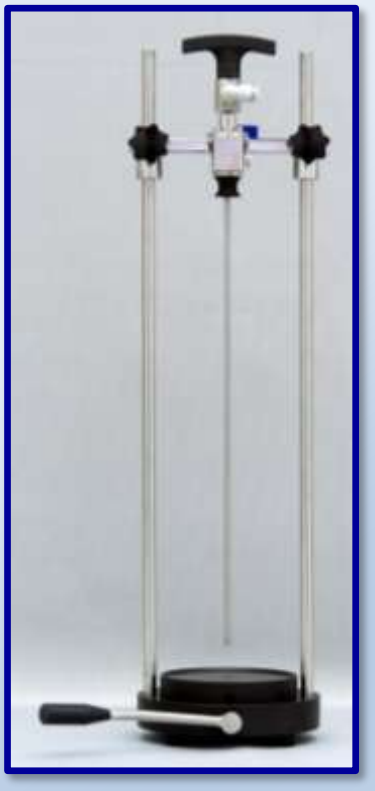
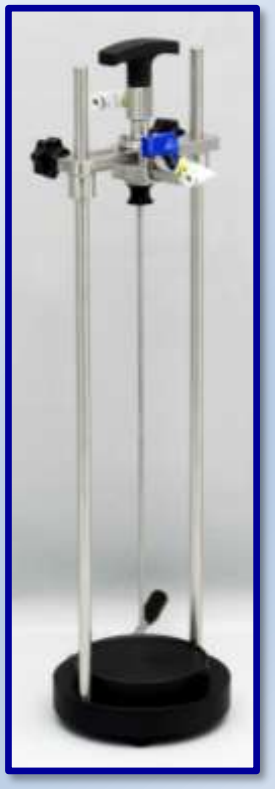
BSD-1 Beverage Sampling Device

- For beer & soft drink


BSD - Piercing and" Beverage Sampling Device" allows sampling bottled or canned products.

With very easy operation, connect the pressurizing pipe to pressure source, install the beverage onto the base, lift up the handle and the piercing will be performed. Down the piercing needle up to the bottom of sample, then open the tap to raise pressure into sample's airspace, with pressure effect, liquid will flow into the measuring instrument installed beside.

Several applications in analysis suitable depending on the analysis instrument linked to your products.

Mainly used in Beer and soft drink industries.

Technical specifications:

- Pipe: ø 6 mm
- Bottle / Can Height: min. 40 mm, max. 380 mm
- Bottle / Can Diameter: max. 110 mm
- Pressure requirement: 0 - 2 bar
- Dimensions: 130 X 465 mm (Diam x H)
- Weight: 2kg

Sampling of various types of products

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AD-1/AD-2 Automated Degasser

- For quick degassing of carbonated beverages

AD series Automated Degasser is an instrument developed by AT2E for quick degassing of the dissolved CO2 gas in carbonated beverages in order to test the degassed samples accordingly.

The instrument consists of degassing unit and vacuum pump. The stirring time of the degassing unit can be set according to the characteristics.

Working principle

- AD-1 to stir the carbonated beverage with the high-speed stirrer
- AD-2 to vibrate the carbonated beverage with the ultrasonic

Both models could make the dissolved CO_2 gas release rapidly, then generate the vacuum condition with a vacuum pump to exhaust the released CO_2 gas from chamber, thus achieving the purpose of quick degassing of the sample.

Technical specifications:

Item	Degassing unit		Oil-free Vacuum pump
Model	AD-1	AD-2	AD-1/AD-2
Power Supply	220V	220V	220V
Rated power	1000W	100W	180W
Dimension	220×250×490 mm	460×250×350 mm	315×135×210mm
Weight	13 kg	6 kg	10 kg
Remark	Stirring time：0-9999 s	Vibrating：0-9999 s	Pumping speed：30L/min
Sample specifications: Temperature: 5 - 40 °C, Volume: 400 - 1200 ml			

Optional model AD-D with dual degassing units

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BRD-1 Bottle Rotating Device

BRD-1 Bottle Rotating Device is a fine designed instrument for the shaking process of bottled products by the means of rotation. The compatible clamping unit can clamp bottles with diameters from 55 - 125 mm, bottle heights up to 350 mm. Rotation speed and time is adjustable which is more flexible for different test requirements. Cover design ensures the safety of operators.

Features:

- Rotation speed adjustable
- Rotation time adjustable
- Touch screen control, user-friendly and easy operation
- Stainless steel frame and cover design, safe and durable
- 6-position capacity

Technical specifications:

- Bottle diameter: 55 - 125 mm (other range by order)
- Bottle height: max. 350 mm (other range by order)
- Rotation speed: 10% - 99% (4 - 40 rpm)
- Rotation time: 1 - 999 sec.
- Power supply: AC 220V (AC 110V optional)
- Dimensions: 780 x 500 x 650 mm (L x W x H)
- Weight: 75 kg

Safety frame for BRD-1 (Optional)

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BS-1 Bottle Horizontal Shaker

BS-1 Bottle Horizontal Shaker is a fine designed instrument for the shaking process of bottled products by the means of horizontal shaking. The compatible shaking platform can hold bottles with diameters from 0 - 240 mm, bottle heights up to 335 mm, and total loads up to 15 kg. Shaking speed and time is adjustable which is more flexible for different test requirements.

Features:

- Shaking speed adjustable
- Shaking time adjustable
- Touch screen control, user-friendly and easy operation
- Stainless steel frame, safe and durable
- Up to 15 kg capacity

Control panel

Technical specifications:

- Bottle diameter: 0 - 240 mm (other range by order)
- Bottle height: max. 335 mm (other range by order)
- Shaking speed: 10% - 99% (12 - 120 times/min.)
- Shaking time: 1 - 999 sec.
- Max. load capacity: 15 kg
- Power supply: AC 220V (AC 110V optional)
- Dimensions: 510 x 570 x 565 mm (L x W x H)
- Weight: 80 kg

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PVG Series Pressure or Vacuum Gauge

(Simple Pressure or Vacuum Tester for Can and Bottle)

The "PVG" is used to measure pressure or vacuum of can or bottle.

Simply place the sample under the entity manometer or vacuum meter and lower the lever. Then read the value.

PVG-D Pressure and Vacuume gauge

Advantages:

- Easy to use
- Measure both vacuum and pressure
- Different accuracy class
- Fits all kinds of samples

Specifications:

- Measure range: -1 to 6 bar
- Units: kgf.cm^2, Mpa, Kpa, Bar, mbar, psi, inHg, mmHg
- Resolution: 0.001 bar
- Precision: 0.5% F.S.
- Weight: 3 Kg

Analog model PVG-A Pressure or Vacuum gauge:

- Vacuum range: -1 to 0 bar / -14.5 to 0 psi (Analog)
- Pressure range: 0 – 6 bar
- Precision: ±2.5% F.S.

PVG-DS Pressure and Vacuum gauge for sport cap products

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Portable model PVG-P:

"PVG-P" is the portable model for measuring pressure or vacuum into bottle.

Install the PVG-P under the finish neck and adjust the needle on the cap's center, then screw the nut.
The needle will pierce the cap without leakage and check the pressure or vacuum value.

PVG-P (Digital)

"PVG-P" on PET bottle

Pocket model PVG-S

The "PVG-S" is a pocket model for measuring pressure or vacuum into bottles or cans.

Just pierce the sample with needle of PVG-S and obtain the pressure or vacuum of the sample.

Analog model PVG-SA

Measure with PVG-SA

Digital model PVG-SD

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CDP-1 Pressure Calibration Device

CDP-1 is a device for calibrating the pressure indicators or Instruments that use pressure for testing. It allows operator to carry out a visual comparison between the pressure indicator or the instrument that use pressure for testing and the certified indicator.

It is available for analog and digital indicator with different screw thread.

Technical specifications:

- Testing range: 0-8 Bar (Higher by order)
- Pressure input: 0-8 Bar
- Overall size: 250 (L) x 150 (W) x 295 (H) mm
- Net weight: 2.7 kg

BVPT-1 Bottle Vacuum-Pressure Tester

BVPT-1 Bottle Vacuum-Pressure Tester is a device for controlling the result of vacuum or pressure action on bottle and check the potential deformation. It allows operator to carry out a visual comparison. Calibrated digital vacuum-pressure indicator allows an accurate and easy reading. With the high precision pressure regulating valve, users can easily adjust the target vacuum or pressure value.

Technical specifications:

- Testing range: -1/+6 Bar
- Pressure input: 4-6 Bar
- Overall size: 300 (L) x 265 (W) x 285 (H) mm
- Net weight: 4 kg

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CORK APHROMETER

Presentation:

This aphrometer is designed to check the pressure after the disgorging process of sparkling wines.

It measures the pressure in the champagne bottles topped on with a wire-hood and a cork.

Its strong mechanism allows it to pierce easily the wire-hood and the cork to check.

The cork ensures the airtightness during the test.

Advantages:

- Strong mechanism.
- Stainless steel manometer: (0/10) Bar.
- Quality made.
- Especially designed to pierce wire-hoods and corks
- Can be used for cider bottles topped on with a wire-hood and a cork.

NB: Do not hit, do not drop.

CROWN CAP APHROMETER

Presentation:

This aphrometer is designed to check the pressure during the secondary fermentation.

This Champagne pressure gauge checks instantaneously the pressure in the bottles topped on with a crown cap with or without plastic shutter.

A gasket ensures the airtightness between the aphrometer and the crown cap.

Finish type available:

- Finish type: crown 26 mm
- Finish type: crown 29 mm
- Finish type: crown 36 mm (jeroboam)
- Finish type: screw cap

Advantages:

- Strong and reliable mechanism.
- Stainless steel Manometer: (0/10) Bar.
- Can check several batches.
- Customizable aphrometer.
- Quality made.

NB: Do not hit, do not drop.

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SIMPLIFIED APHROMETER

Presentation:

The simplified Aphrometer is designed to check the pressure and the vacuum in the bottles of still wine (Bordeaux bottles, Burgundy bottles).

Thanks to its sting this pressure gauge pierces corks and some synthetic corks, but it cannot pierce crown caps or all other metallic shutters.

The cork ensures the airtightness.

Stainless steel Manometers available:

- (-1/+1,5) Bar (default manometer)
- (0/4) Bar
- (0/6) Bar

Advantages:

- Reliable mechanism.
- Checks the pressure and the vacuum.
- Quality made.
- Can check several batches.
- Stainless steel manometer.
- **Customizable aphrometer.**

NB: Do not hit, do not drop.

PERMANENT APHROMETER

Presentation:

This aphrometer checks the evolution of the pressure during the secondary fermentation.

Remove one bottle without cap from the filling machine and put the aphrometer on the bottleneck.

The permanent aphrometer will remain on the bottleneck during the entire secondary fermentation.

A gasket ensures the airtightness between the aphrometer and the bottleneck.

This aphrometer can be adapted to the following bottlenecks:

- Jeroboam.
- Special bottles.

Stainless steel Manometer: (0/10) Bar.

Advantages:

- Checks the evolution of the pressure.
- Stainless steel manometer.
- Customizable aphrometer.
- Quality made.

NB: Do not hit, do not drop.

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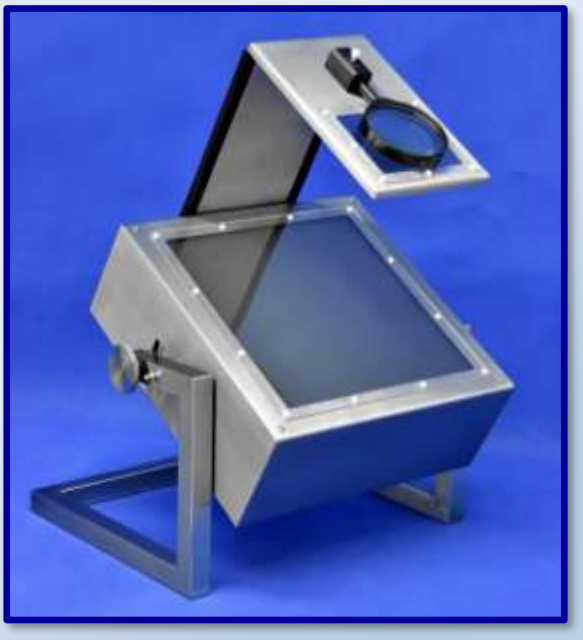
PL-G Polarization Light for Glass
(Glass Stress Viewer)



- Adjusted working space 250-500 mm.
- 530nm tint plate provides full color stress representation.
- Removable magnifier for examining small samples
- Angle adjustable design for operator comfort

Stress introduced during the manufacture of glass components has an important effect on the strength of the product. This effect can be detrimental or beneficial in that it may contribute to failure in service, or to an increase in strength. It is clearly important for quality control to monitor the residual stresses that are present.

The “PL-G” Glass Stress Viewer has been designed for the qualitative inspection of glass components including tableware, small bottles, jars, scientific glassware and ampoules.

The adjustable working space and sloped design accommodate a wide range of products with the option of a magnifier to aid the inspection of small parts.

Equipped with a magnifier

View by PL-G

Specifications

Viewing area	125 mm x 105 mm
Overall size	450 (L) x 490 (W) x 650 (H)mm
Light source	2 x 18 watt (Fluorescent lamps)
Power supply	AC 220V (AC 110V optional)

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PL-P Polarization Light for Preform
(PET Preform Stress Viewer)

Many of the defects found in PET container preforms can be detected by using the PL-P. Preforms viewed in polarized light exhibit a colored birefringence pattern.

The birefringence is a result of the polymer flow lines (molecular orientational strain) produced during the injection molding process.

The colored pattern observed with preform held at 45° to the polarizing axis is known as an isochromatic fringe indicating the amount of birefringence.

When the preform is held parallel to the polarizing axis a black isoclinic can be seen indicating the direction of the molecular orientational strain.

By correctly interpreting these flow patterns many preform defects can be detected.

With angle adjusting design, operator can view the preform as their most convenience angle. And the upgraded wider viewing area and sample platform, more preforms could be placed and viewed in the same time. It also frees the hands of operator.

Standard Specifications:

Viewing area:	330mm x 150mm
Overall size:	400 (L) x 302 (W) x 315 (H) mm
Light source:	45 watts (LED lights)
Power supply:	AC 220V (AC 110 V optional)

Parallel view and 45° view of preform by PL-P

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Optional models:

Viewing area 350 x 350mm

APL - With preform support, auto or manual rotation

APL is a model that with auto rotation design, preforms are able to rotate freely, view in 360°. Multi-positions of preform finish support, able to observe multiple samples at the same time, higher efficiency and more convenient

Specifications APL-24P (other positions by order):	
Viewing area:	380mm x 164mm * 3
Overall size:	525 (L) x 420 (W) x 850 (H) mm
Light source:	81 watts (LED lights)
Power supply:	AC 220V (AC 110 V optional)

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SCT-PLC Stress Crack Tester

– For test of internal stress in bottle base

Automatic water and solution filling system

User-friendly testing interface

The AT2E Stress Crack Tester is designed to test the internal stress in bottle base and for determining the stress crack resistance of blow-molded PET carbonated soft drink bottles by measuring the propensity for base cracking upon exposure to an aqueous sodium hydroxide solution under a controlled environment, so that to estimate the long term behavior of bottles.

Testing procedure ("PS" mode):

- Install and clamp the sample bottle on each position then close the door
- Affusion head will seal and fill the bottle automatically with target volume of water then pressurize the bottle to predefined pressure and stay for a target time (like 5 minutes). At same time of water filling and pressurizing, system will fill the solution into each posistion
- After target staying time is up, all the testing positions descend until the predefined distance and bottle base will be coverred by the solution completely
- Record the time and pressure for each bottle to failure until predefined time
- Test stops after the predefined time

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Attributes:

- Muilt-position design, more convenient and efficient (Please consult AT2E for other position reqeust)
- 2 test modes: “SP” & ”PS” mode. “SP” mode is to auto fill the samples with water and fill the vessels with solution, then lifting units descend to the predefined distance and then pressurize the samples according to the CYCLE setting. “PS” mode is to auto fill the samples with water and fill the vessels with solution, then pressurize the sample first and hold for the preset time, then the lifting units descend to the predefined distance and keep pressuring the sample according to the CYCLE setting
- PLC control ensures the high accuracy and reliability
- High quality stainless steel frame, more safe and duable
- Flexible position selection, each position can be controlled separately by system. Users can enable the positionsaccording to their test reqeust
- Automatic affusion system
- Auto pressure compensation during test process
- Suitable for testing various bottle size
- Corrosion-resistant design
- Anti-explosion and clear observation window, safe and easy to observe the sample status during tests
- Various safety design

Technical specifications:

- Testing pressure: selectable from 0 - 6 Bar (Please consult AT2E for higher pressure request)
- Display resolution: 0.01 Bar
- Pressure units: Bar / psi
- Testing time: selectable from 0 - 200 minutes (Please consult AT2E for longer testing time request)
- Sample range: 60 - 120 mm in diameter / 150 - 350 mm in height (Please consult AT2E for bigger sample)
- 7” LCD touch screen
- Recommended solution: Sodium Hydroxide (NaOH) Solution 0.200%
- Recommended operating temperature: 2 - 50 °C
- Communication port: RS232
- Air supply: 0-8 Bar (Air supply ≥Max. testing pressure)
- Water supply: tap water (≥ 1.5 bar)
- Power supply: AC 220V (AC 110 V optional)
- Overall size:
  700(L) × 620(W) × 1835(H) mm (Single position)
  3050(L) × 620(W) × 1660(H) mm (12 positions)
- Net weight: 175 kg (Single position) / 750 kg (12 pisitions)

“QualiCrack” Software (Optional)

Mini printer (Optional)

Optional parts:

- Mini printer
- SCT-PLC Multi-positions
- “QualiCrack” Software

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Multiple positions design:

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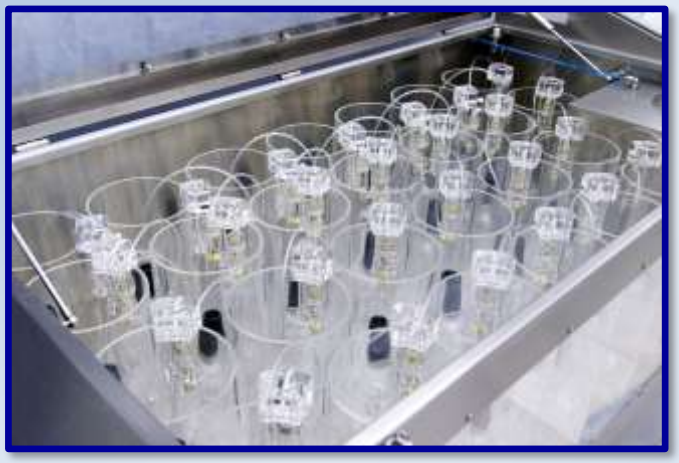
SCT-D Stress Crack Tester (x Positions)

– For testing the Stress Crack Resistance of Carbonated Soft Drink Bottles

The AT2E SCT-D Stress Crack Tester is designed to test the internal stress in bottle base and for determining the stress crack resistance of blow-molded PET carbonated soft drink bottles by measuring the propensity for base cracking upon exposure to an aqueous sodium hydroxide solution under a controlled environment, so that to estimate the long term behavior of bottles.



Multi-position design

Control panel

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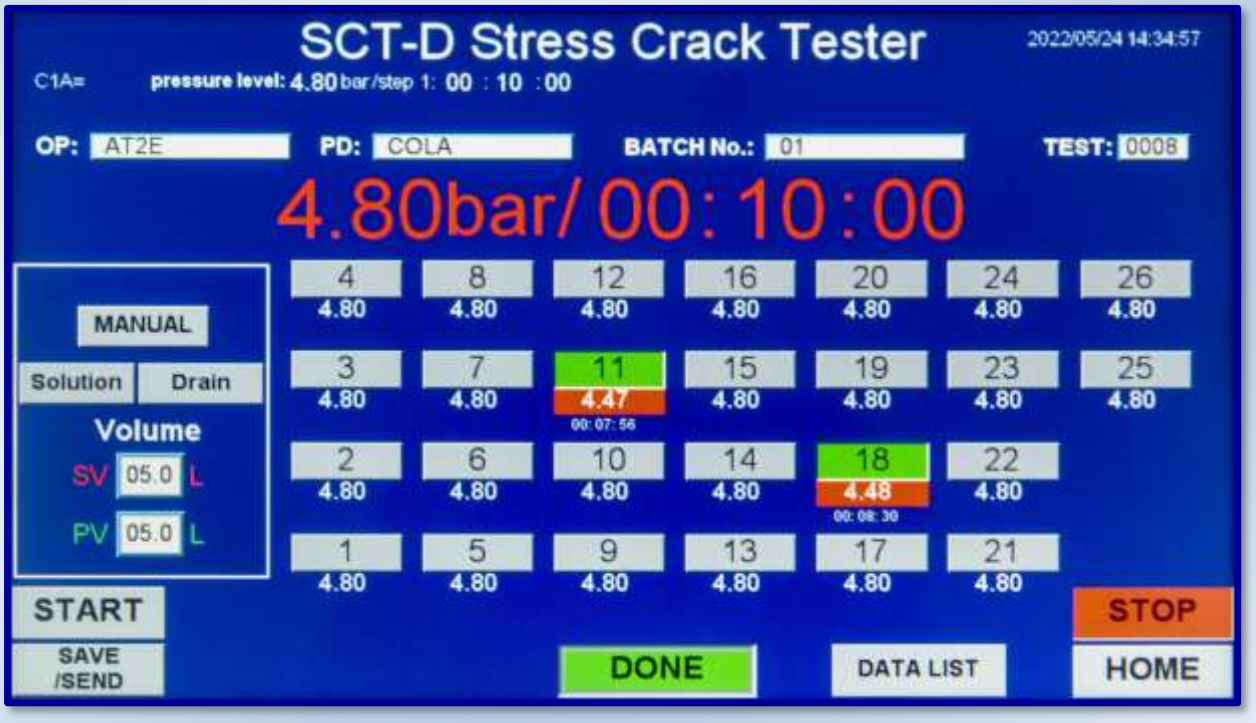
Testing screen:



As per the above screen shot, during the test, the bottles in #11 and #18 positions leak, the lights of positions #11 and #18 will become green automatically and system will stop pressurizing the corresponding positions.

Or, operator can press the position button to stop pressurizing if any tiny leakage occurs by observation. Leak pressure value and time will be displayed below the button.

System will also generate a data table for each test to record the test pressure of each position when pressing the "SAVE/SEND" button after test is completed. In the table, position with green light will be displayed as "NG" with the leakage pressure value. Normal position will be displayed as "OK" with the predefined pressure value. The data table can also be printed out through the mini printer.

Attributes:

- Multi-position design, more convenient and efficient (Please consult AT2E for other position request).
- 2 test modes: "SP" & "PS" mode. "SP" mode is to auto fill the vessels with solution, then pressurize the samples according to the CYCLE setting. "PS" mode is to pressurize the sample first and hold for the preset time, then auto fill the vessels with solution, then keep pressuring the sample according to the CYCLE setting
- Automation control ensures the high accuracy and repeatability.
- High quality stainless steel frame which is safe and durable.
- Superior controlling components ensures the accuracy and durability.
- Flexible position selection - each position can be controlled separately by system. Users can enable the positions (from 1 to 26) according to their test request.
- Automatic pressure compensation during the test process.
- Suitable for testing various size of bottle.
- Corrosion-resistant design
- Anti-explosion and clear observation window which is safe and easy to observe the sample status during a test.
- Various safety designs.

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Technical specifications:

- Testing pressure: 0 - 6 Bar (Please consult AT2E for higher pressure request)
- Accuracy:
  Testing pressure: ± 0.5% F.S.
  Solution Volume: ± 3% F.S.
- Display resolution: 0.01 Bar
- Pressure units: Bar / psi
- Testing time: Up to 100 hours per each step (Please consult AT2E for longer testing time request)
- Sample range: 60 - 120 mm in diameter / 150 - 350 mm in height (Please consult AT2E for bigger sample)
- 10" LCD touch screen display
- Recommended solution: Sodium Hydroxide (NaOH) Solution 0.200%
- Recommended operating temperature: 5 - 50 °C
- Communication port: RS232
- Air supply: 5-8 Bar (Air supply ≥Max. testing pressure)
- Power supply: AC 110 - 240 V 50/60 Hz
- Overall size: 1740 x 840 x 1100 mm
- Net weight: 250 kg

Optional parts:

- Mini printer
- "QualiCrack" Software

Mini printer (Optional)

"QualiCrack" Software (Optional)

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SCT-ECO Stress Crack Tester (x Positions)

- For testing the Stress Crack Resistance of Carbonated Soft Drink Bottles

Multi-position design

Control panel

The AT2E SCT-ECO Stress Crack Tester is designed to test the internal stress in bottle base and for determining the stress crack resistance of blow-molded PET carbonated soft drink bottles by measuring the propensity for base cracking upon exposure to an aqueous sodium hydroxide solution under a controlled environment, so that to estimate the long term behavior of bottles.

Attributes:

- Multi-position design, more convenient and efficient (Please consult AT2E for other position request).
- High quality stainless steel frame which is safe and durable.
- Superior controlling components ensures the accuracy and durability.
- Flexible position selection - each position can be controlled separately manually. Users can enable the positions (from 1 to 12) according to their test request.
- Suitable for testing various size of bottle.
- Total mechanical design and electricity free, more compatible and adaptable to different working environments
- Corrosion-resistant design
- Anti-explosion and clear observation window which is safe and easy to observe the sample status during a test.
- Various safety designs.

Technical specifications:

- Testing pressure: 0 - 6 Bar (Please consult AT2E for higher pressure request)
- Accuracy: Testing pressure: ± 2.5% F.S.
- Display resolution: 0. 2 Bar
- Pressure units: Bar / psi
- Sample range: 60 - 125 mm in diameter / 160 - 350 mm in height (Please consult AT2E for larger sample)
- Recommended solution: Sodium Hydroxide (NaOH) Solution 0.200%
- Recommended operating temperature: 5 - 50 °C
- Air supply: 7 - 8 Bar (Air supply ≥Max. testing pressure)
- Overall size: 1100 x 860 x 1150 mm (W x D x H)
- Net weight: 130 kg

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TWB-1 Thermostatic Water Bath

The TWB-1 Thermostatic Water Bath is a thermostatic water bath equipment that developed by AT2E. It is use to perform the thermostatic tests for products in various field, so that to provide reliable data for estimating the product quality.

Control by the electric cabinet:

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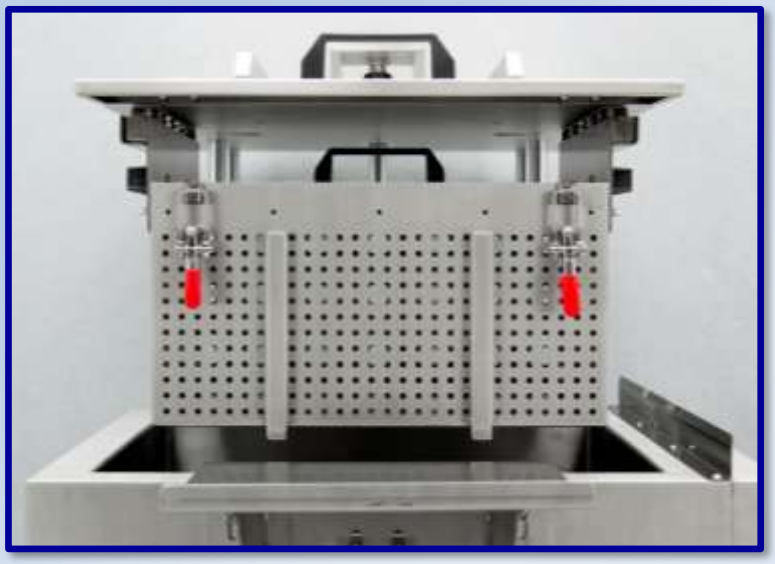
Technical specifications:

- Digital display shows real-time temperature, optional for stop heating or thermostatic timing after reached the target temperature.
- Temperature range: Ambient temperature to 80°C
- Resolution: 0.1°C
- Air supply: 5 - 8 bar
- Heating tube: 2 KW * 2
- Power: 4.2 KW
- Power supply: 220V AC/ 50Hz
- Dimension: 950 x 775 x 780 mm
- Weight: 137 kg



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PBMS-AUTO Fully Automatic Preform and Bottle Measuring System

The PBMS-AUTO Fully Automatic Preform and Bottle Measuring System is a fully automatic instrument designed for measuring the overall dimensions & profile of preforms and bottles (PET/Glass bottles). This system integrates advanced technologies such as AI recognition, automated operations through gripping mechanisms or robotic arms, optical character recognition, and visual measurement software. It is designed to deliver efficient, fully automated, and unattended high-performance measurement and inspection capabilities. By helping manufacturers to effectively control the quality of their packaging containers, it facilitates standardized measurement and inspection, automated sorting, and rapid, accurate quality data feedback—helping reduce production waste and minimize labor costs.

The system adopts a combination of double large viewing field telecentric lens and telecentric light, a high pixel and large CMOS camera is used to ensure that the features and details of the edge of the object to be measured are preserved as much as possible. Then through the Gaussian sub-pixel algorithm, it accurately calculates the edge contour, which greatly reduces the measurement error caused by the inaccurate value of ordinary algorithms in the transition zone of the edge of the contour. Together with the AI algorithm model, it can achieve the text recognition, defect identification, and other customized requirements for special recognition functions of the measured object.

Wall thickness measuring by the laser confocal principle. It employs a laser light source and a confocal lens system to obtain high-resolution measurement data through precise optical focusing and detection.

The PBMS-AUTO system has a flexible combination of functional modules which can be configured according to different requirements:

Standard Module: Used for measuring bottle body dimensions, finish inner diameter and perpendicularity, suitable for both bottles and preforms.

Thickness Measurement Module: Can be configured to measure either bottles or preforms (if both bottles and preforms need to be measured, two thickness measurement modules are required).

This modular design allows the PBMS-AUTO system to flexibly meet various measurement needs, providing a more comprehensive and accurate solution.

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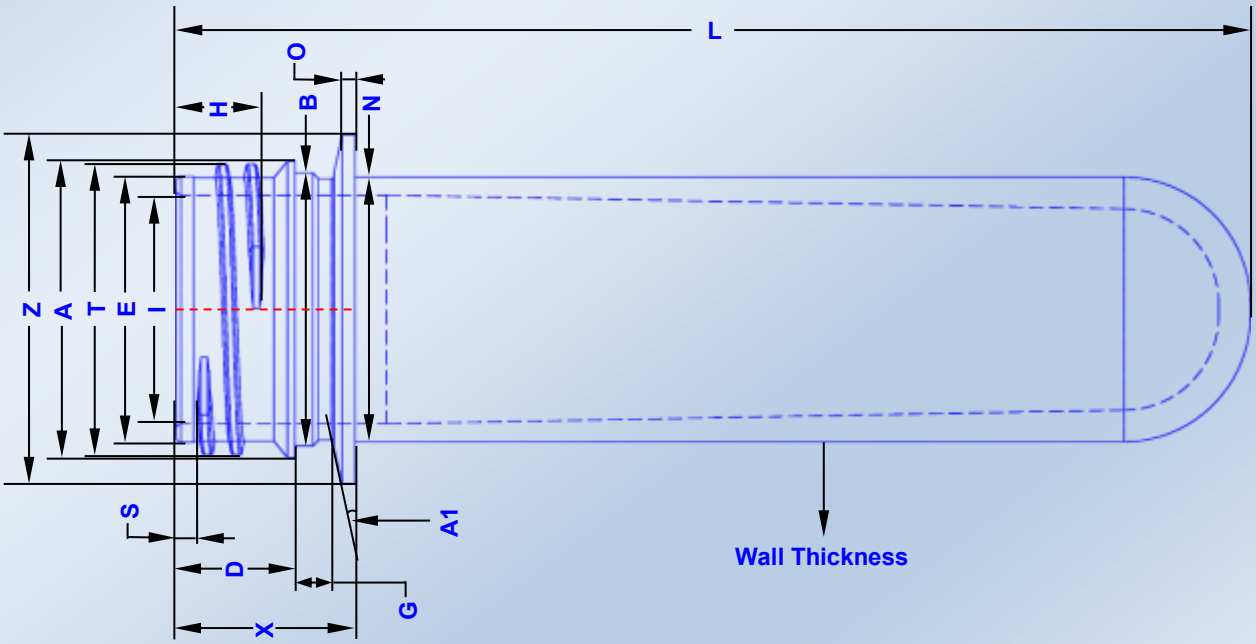
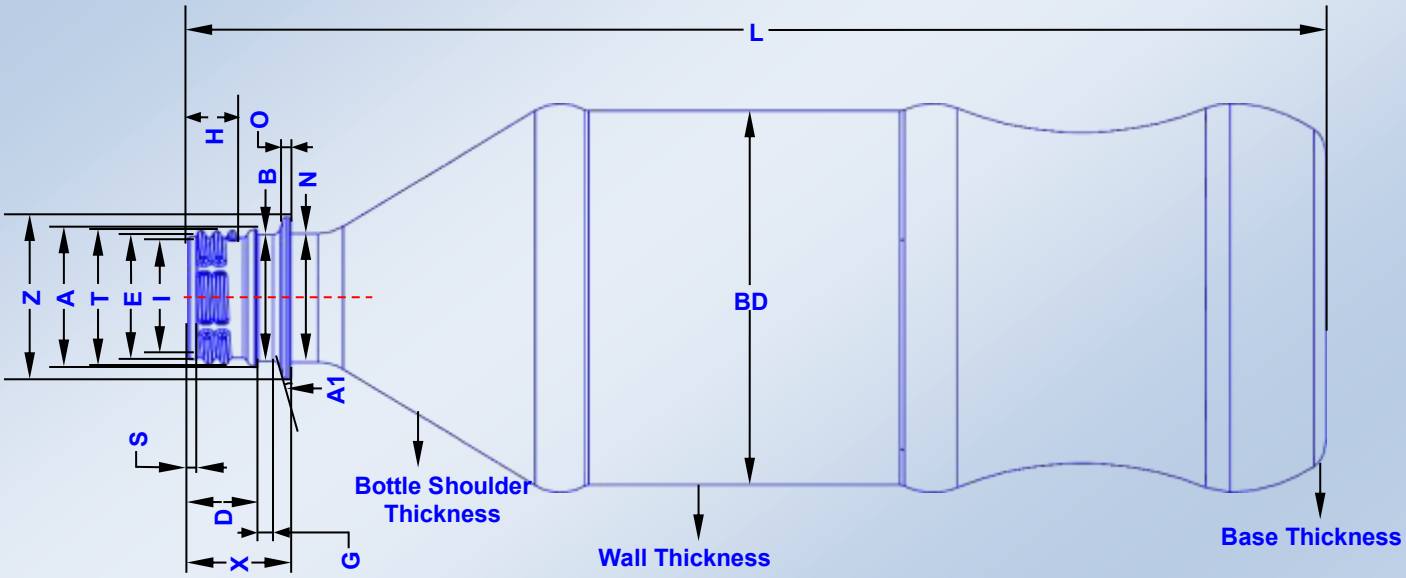
Preform parameters:



A - Tamper Band Dia.	**B -** PP Band Diameter	**C -** Thread Projection	**D -** Distance Tamper Band	**E -** Neck Dia.
G - PP Band Clearance	**H -** Distance Thread End	**L -** Overall height	**O -** OD Band Thickness	**S -** Distance Thread Start
T - Thread Dia.	**V -** Thread Tip Width	**W -** Concentricity	**X -** Finish Height	**Z -** OD Band Dia.
Y - Thread Angle (Define as required)	**I -** Finish Inner Dia.	**A1 -** OD Band Slope	Preform Wall Thickness (Wall Thickness module is required)	

Bottle parameters:



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A - Tamper Band Dia.	**B -** PP Band Diameter	**C -** Thread Projection	**D -** Distance Tamper Band	**E -** Neck Dia.
G - PP Band Clearance	**H -** Distance Thread End	**BD -** Bottle body Outer Dia.	**L -** Overall height	**O -** OD Band Thickness
S - Distance Thread Start	**T -** Thread Dia.	**V -** Thread Tip Width	**W -** Perpendicularity	**X -** Finish Height
Z - OD Band Dia.	**Y -** Thread Angle (Define as required)		**A1 -** OD Band Slope	**I -** Finish Inner Dia.
Bottle Shoulder Thickness (Thickness module is required)	Wall Thickness (Thickness module is required)	Base Thickness (Thickness module is required)		

Standard Module
For measuring bottle outer dimensions, finish inner diameter and perpendicularity

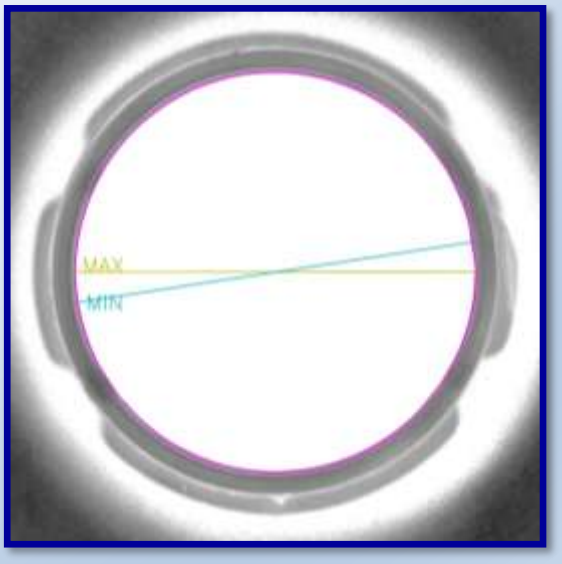
Thickness Measurement Module

Technical specifications:

- Sample dia.: ≤ Ø115mm (other range by order)
- Finish dia.: ≤ Ø52mm (other range by order)
- Sample height range: 50 - 350mm (other range by order)
- Measure scope:

  Preform: Overall dimensions (With different module combinations, the wall thickness, finish inner diameter, thread angle, etc., of the preforms can be measured)

  Bottle: Overall dimensions (With different module combinations, the wall thickness, finish inner diameter, thread angle, etc., of the bottles can be measured)
- Display: 10" Touch Screen
- CCD Display: 15.6" Touch Screen



Finish inner diameter measuring

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Finish dimension measuring

- Lighting: Parallel backlight
- Resolution: 0.01mm
- Measuring Accuracy: ±0.01mm
- Repeatability accuracy: ±0.03mm
- Storage Capacity: 1TB
- Output Format: Csv, Excel (data only)
- Interface Type: USB 2.0/3.0, 10/100BaseT(X) (RJ45)
- Operation System: Windows
- Languages: English / Chinese
- Power Supply: AC 110V / 220V 50Hz/60Hz
- Working Ambient Temperature: 10 - 30°C
- Working Ambient Humidity: 20 - 70% Rh, No Condensation
- Dimension: 1145 (L) x 1030 (W) x 1950 (H) mm

Cavity No. recognition

Outer diameter measuring

Optional:

- Bottle Wall Thickness Measurement Module
  (Thickness Measurement Range: 0.04mm to 1.4mm)
- Preform Wall Thickness Measurement Module
  (Thickness Measurement Range: 0.3mm to 8mm)
- Custom-made finish spacer
- PBMS-Lab Automatic Preform and Bottle Measuring System (Lab Type)
- PBMS-LabP Automatic Preform Measuring System (Desktop Type)

Custom-made Finish spacer

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PBMS-Lab Automatic Preform and Bottle Measuring System (Lab Type)

The PBMS-Lab Automatic Preform and Bottle Measuring System is an automatic instrument designed for measuring the overall dimensions & profile of preforms and bottles (PET/Glass bottles). This system integrates advanced technologies such as AI recognition and optical character recognition. The system adopts a combination of double large viewing field telecentric lens and telecentric light, a high pixel and large CMOS camera is used to ensure that the features and details of the edge of the object to be measured are preserved as much as possible. Then through the Gaussian sub-pixel algorithm, it accurately calculates the edge contour, which greatly reduces the measurement error caused by the inaccurate value of ordinary algorithms in the transition zone of the edge of the contour. Together with the AI algorithm model, it can achieve the text recognition, defect identification, and other customized requirements for special recognition functions of the measured object.

Wall thickness measuring by the laser confocal principle. It employs a laser light source and a confocal lens system to obtain high-resolution measurement data through precise optical focusing and detection.

The PBMS-Lab system has a flexible combination of functional modules which can be configured according to different requirements:

Standard Module: Used for measuring bottle body dimensions, finish inner diameter and perpendicularity, suitable for both bottles and preforms.

Thickness Measurement Module: Can be configured to measure either bottles or preforms (if both bottles and preforms need to be measured, two thickness measurement modules are required).

This modular design allows the PBMS-Lab system to flexibly meet various measurement needs, providing a more comprehensive and accurate solution.

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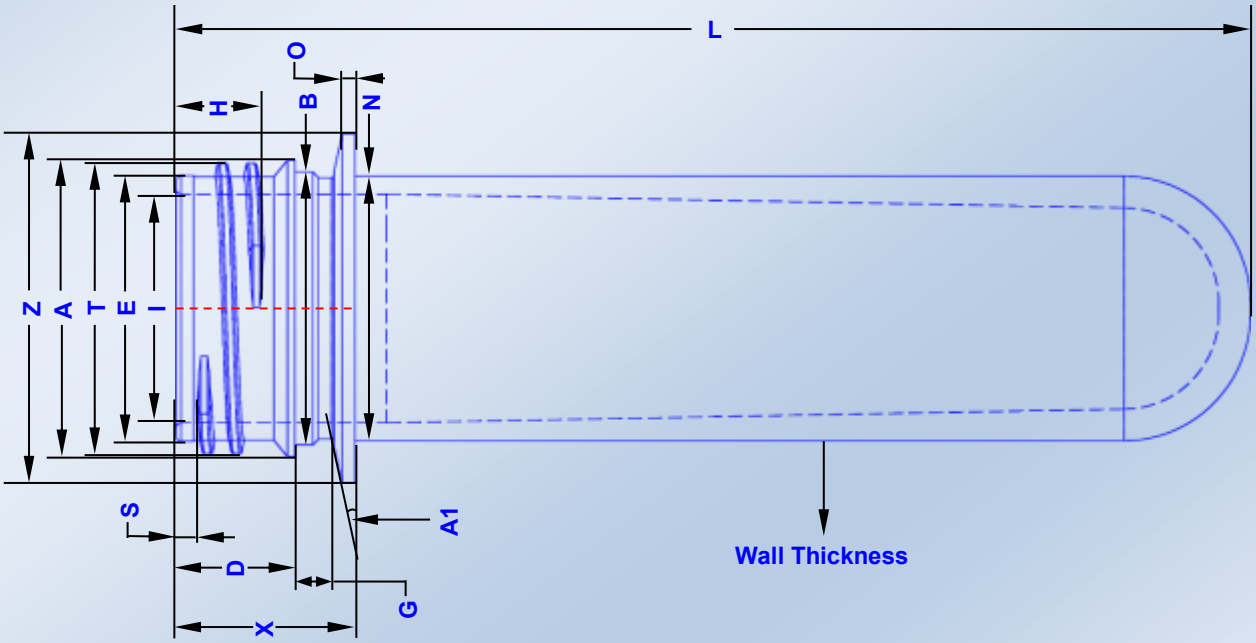
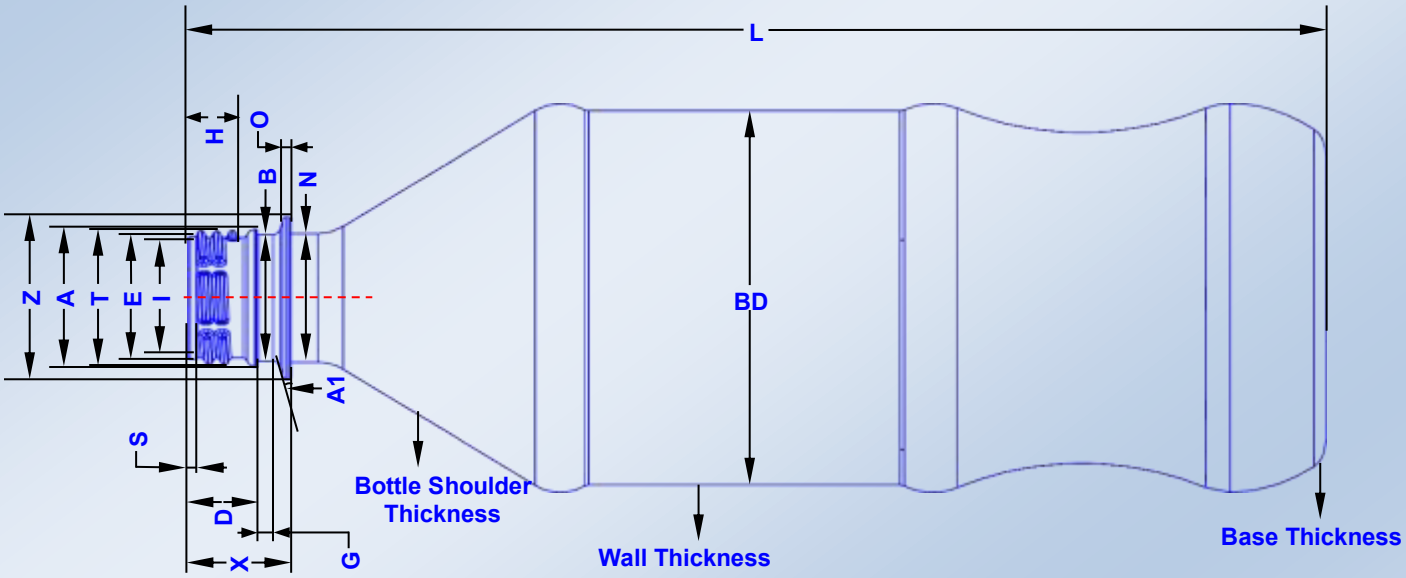
Preform parameters:



A - Tamper Band Dia.	**B -** PP Band Diameter	**C -** Thread Projection	**D -** Distance Tamper Band	**E -** Neck Dia.
G - PP Band Clearance	**H -** Distance Thread End	**L -** Overall height	**O -** OD Band Thickness	**S -** Distance Thread Start
T - Thread Dia.	**V -** Thread Tip Width	**W -** Concentricity	**X -** Finish Height	**Z -** OD Band Dia.
Y - Thread Angle (Define as required)	**I -** Finish Inner Dia.	**A1 -** OD Band Slope	Preform Wall Thickness (Wall Thickness module is required)	

Bottle parameters:



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A - Tamper Band Dia.	**B -** PP Band Diameter	**C -** Thread Projection	**D -** Distance Tamper Band	**E -** Neck Dia.
G - PP Band Clearance	**H -** Distance Thread End	**BD -** Bottle body Outer Dia.	**L -** Overall height	**O -** OD Band Thickness
S - Distance Thread Start	**T -** Thread Dia.	**V -** Thread Tip Width	**W -** Perpendicularity	**X -** Finish Height
Z - OD Band Dia.	**Y -** Thread Angle (Define as required)		**A1 -** OD Band Slope	**I -** Finish Inner Dia.
Bottle Shoulder Thickness (Thickness module is required)	Wall Thickness (Thickness module is required)	Base Thickness (Thickness module is required)		

Standard Module

For measuring bottle outer dimensions, finish inner diameter and perpendicularity

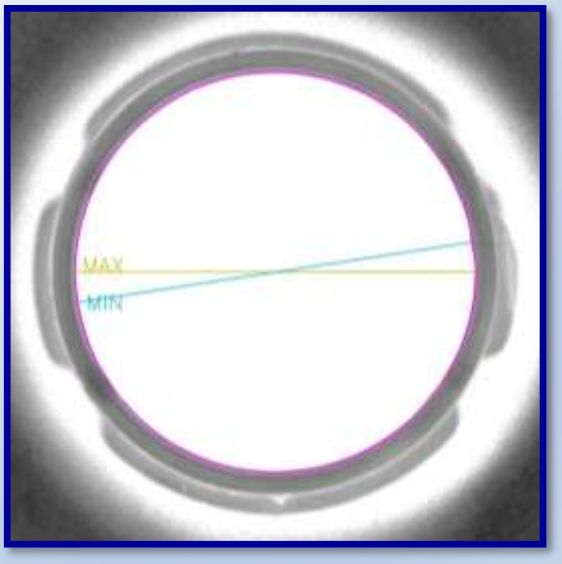
Thickness Measurement Module

Technical specifications:

- Sample dia.: ≤ Ø115mm (other range by order)
- Finish dia.: ≤ Ø52mm (other range by order)
- Sample height range: 50 - 350mm (other range by order)
- Measure scope:

  Preform: Overall dimensions (With different module combinations, the wall thickness, finish inner diameter, thread angle, etc., of the preforms can be measured)

  Bottle: Overall dimensions (With different module combinations, the wall thickness, finish inner diameter, thread angle, etc., of the bottles can be measured)
- Display: 7" Touch Screen
- CCD Display: 15.6" Touch Screen



Finish inner diameter measuring

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Finish dimension measuring

- Lighting: Parallel backlight
- Resolution: 0.01mm
- Measuring Accuracy: ±0.01mm
- Repeatability accuracy: ±0.03mm
- Storage Capacity: 1TB
- Output Format: Csv, Excel (data only)
- Interface Type: USB 2.0/3.0, 10/100BaseT(X) (RJ45)
- Operation System: Windows
- Languages: English / Chinese
- Power Supply: AC 110V / 220V 50Hz/60Hz
- Working Ambient Temperature: 10 - 30°C
- Working Ambient Humidity: 20 - 70% Rh, No Condensation
- Dimension: 1600 (L) x 660 (W) x 1850 (H) mm

Cavity No. recognition

Outer diameter measuring

Optional:

- Bottle Wall Thickness Measurement Module
  (Thickness Measurement Range: 0.04mm to 1.4mm)
- Preform Wall Thickness Measurement Module
  (Thickness Measurement Range: 0.3mm to 8mm)
- Custom-made finish spacer
- PBMS-AUTO Fully Automatic Preform and Bottle Measuring System
- PBMS-LabP Automatic Preform Measuring System (Desktop Type)

Custom-made Finish spacer

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AMTG-2 Accurate Magnetic Thickness Gauge

The "AMTG-2" is a portable feeler gauge. It is used to measure the thickness of non-magnetic materials, such as plastic, glass, ceramic, aluminum, titanium, copper etc... The accuracy of the measurement is not influenced by the shape of the samples.

It's designed by basing on the method of the Hall Effect. Simple and rapid measure as below:

- Place the steel ball on one side of the sample and the probe on the opposite side
- Move the sample and let the probe to be the tested position
- The steel ball will be drawn by the probe automatically
- The Hall Effect sensor on the probe measures the distance between the probe tip and the steel ball

AMTG-2 with probe

Main interface

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Advantages:

- Non-destructive measure
- High resolution 7" touching screen
- Dynamic display: measured value / graph / date / hour / battery level
- All-aluminum frame
- Fast and accurate measurement of the thickness
- Achieving accurate thickness measurement in corners, small radius and some irregular shape.
- Display real-time measurement value
- Max. and Min. mode: Automatic capture of the maximum or minimum value
- Value difference function: Display the value difference between preset value and actual measured value
- "CYCLE" function: Record the Max, Min, Average value & Graph during a predefined time. "Delayed start & Auto-stop" function frees the hands of operator and it's convenient for large-size sample measuring.
- Alarm function: Programmable, warns the high or low preset value by sound or visual indication
- Password function enables the safety of the calibration data and measuring data.
- Can store 4950 measurement data

Plastic Measuring

Preform Measuring

Technical characteristics:

- Measure mode: Normal / High accuracy
- Display mode: Real-time / Minimum or Maximum
- Resolution: 0.01 mm or 0.001 mm (0.001 inch or 0.0001 inch)
- Display: TFT screen displays the real time reading, minimum reading, alarm status and data info
- Outputs: RS-232
- Calibration: Multi-point calibration (up to 21 points)
- Power supply: AC 110 - 240 V 50/60 Hz
- Units: mm / Inch
- Language: English
- Dimensions: 210 x 150 x 65 mm
- Net weight: 2 kg (Package weight: 5 kg)
- Measure range and accuracy (Custom made for range 0-4 mm or 0-8 mm or 0-10 mm)

Glass Measuring

Aluminum Measuring

Steel Ball Dia.	Thickness upper limit	Accuracy
5.00mm	10.00mm	1% ±0.003
4.76mm	6.00mm	1% ±0.003
3.18mm	4.00mm	2%
1.59mm	2.00mm	3%

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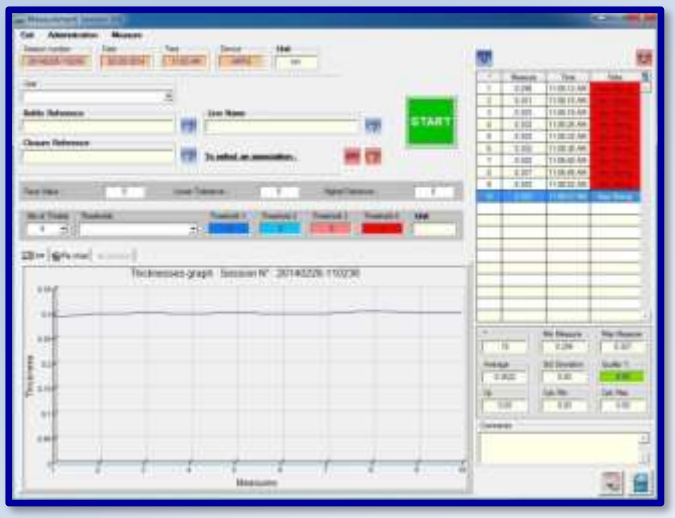
Standard configuration:

- Standard probe with cable and stand
- Charger
- Foot switch
- Portable case
- Using manual
- Steel balls* and supports
  *Steel balls included: 1.59 / 3.18 / 4.76 mm
  (3.18 / 4.76 / 5.00 mm for 0-8 mm and 0-10mm model)
- Calibration blocks*
  *Calibration blocks configuration to be subject to the measure range
  - 0-4mm measuring range: 9pcs of block gauge
  - 0-6mm measuring range: 13pcs of block gauge
  - 0-8mm measuring range: 17pcs of block gauge
  - 0-10mm measuring range: 21pcs of block gauge

Options:

- "QualiMesure" data management software
- Preform holder

Portable case



"QualiMesure" data management software (Optional)

Preform holder (Optional)

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IBMS-1 Internal Bottleneck Measuring System

IBMS-1 Internal Bottleneck Measuring System is used to measure the internal diameter of bottleneck.

The bottleneck profile is an important parameter for bottle manufacturers, cork stoppers producers and wineries to control. With AT2E IBMS-1, customer can detect the bottleneck roundness or ovality easily. The IBMS-1 can collect the bottleneck internal diameter at up to 7 angles (0° / 15° / 30° / 45° / 75° / 90°) and any depth (0-55 mm) from the bottle finish by operating on the touching screen. With it's convenient and high repeatable design, the value and bottleneck profile are visible on the touching screen. Data can be transferred to the optional software for further analyse and management.

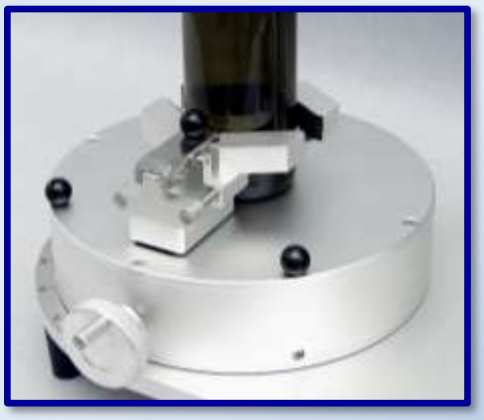
It's applicable for various sizes of bottle with the special design of clamping and rotatory system.

Technical specifications:

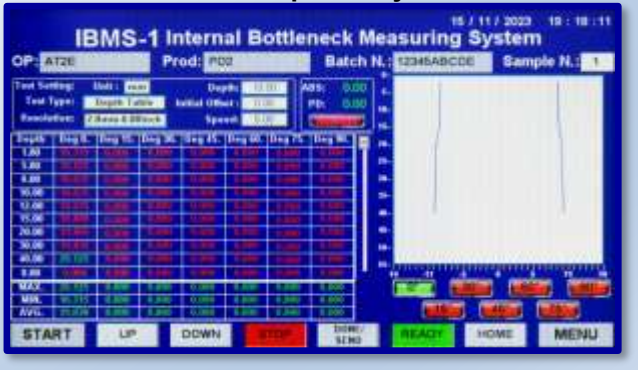
- Sample range: 70 - 150mm in diameter (Bigger by order)
  100 - 500mm in height (Bigger by order)
- Measure range: Neck internal diameter: 10 - 30 mm
  Depth: 0 - 55 mm
- Resolution of depth: 0.5 / 1.0 / 2.0 / 5.0 mm
- Measure angles: 0° / 15° / 30° / 45° / 75° / 90°
- Unit: mm / inch
- Resolution of internal diameter: 0.005mm / 0.0002 inch
- Resolution of depth: 0.01mm / 0.001 inch
- Measuring accuracy: ±0.05mm
- Power supply: 100 - 240V@50 / 60 Hz
- Over all dimensions: 850 × 370 × 850mm
- Weight: 38 kg

Optional parts:

- QualiIBMS Data management software



Rotary chuck with angle scale and fast squeeze system



Measuring screen

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HG-1 Height Gauge

HG-1 Height Gauge which is equipped with a measuring platform can be used to measure the height of bottle, can and other packaging.

The gauge can be connected to AT2E “SeamCheck” software or SPC system via the adapter and cable.

Technical specifications:

- Sample range: up to 150 mm in diameter (larger by order)
- Measuring range: 0 - 300 mm
- Resolution: 0.01 mm
- Accuracy: ± 0.04 mm
- Overall size: 250 (L) x 150 (W) x 595 (H) mm
- Net weight: 9 kg

Optional parts:

- Measuring range: 0 - 600 mm
  Sample range: up to 250 mm in diameter (larger by order)
  Resolution: 0.01 mm
  Accuracy: ± 0.05 mm
  Overall size: 350 (L) x 180 (W) x 890 (H) mm
- Calibration block (Length by order)

Metal Can measuring

PET Bottle measuring

Glass Bottle measuring

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CM - CircoMeter

CM CircoMeter is for measuring the outside circumference and diameter of different kinds of products like cables, plastic pipe, bottles, etc.

Specification:

- Circumference range: 60 - 950 mm
- Diameter range: 20 - 300 mm
- Material: Steel
- Resolution: 0.1 mm

Digital Caliper

Measure range: 0-150mm, 0-200mm, 0-300mm

Magnifying Glass

The most proven illuminated pocket magnifiers with new design and improved features

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BCG - Base Clearance Gauge

Supply with Zero-setting base

The BCG - Base Clearance Gauge is specifically designed for measuring the dome height in the bottom of PET containers. The Base Clearance Gauge adopted with a high accuracy Mitutoyo digital indicator with built-in port for serial communications. The ultra-flat measurement base ensures the high accuracy of measuring.

Applicable for various sizes of bottles

Feature:

- Reliable and simple to use
- Ideal for on-site measurements near the blowing line.

Technical specifications:

- Sample range: Up to 120mm diameter PET bottle
- Measuring range: 0-10 mm
- Resolution: 0.01 mm
- Overall size: 125mm in diameter × 140mm in height (Including calibration base)

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GCG Gate Center Gauge

- For quick and easy verify of the centricity of the injection point of a blown bottle

The GCG Gate Center Gauge is for quick and easy verify of the centricity of the injection point of a blown bottle. The adjustable centering clamp and easy-observing scale enables the quick and easy operation.

Technical specifications:

- Bottle diameter range: up to 85 mm (Please consult AT2E for bigger diameter)
- Weight: 4 kg

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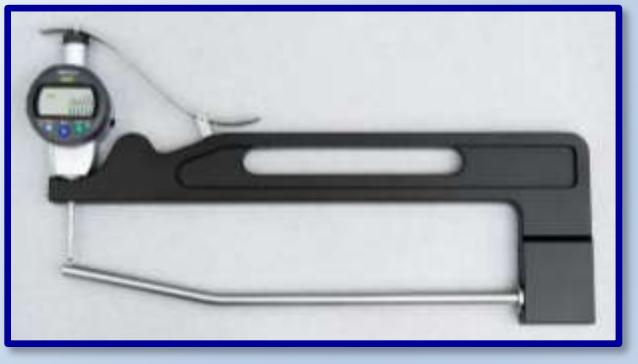
BTG-D Glass Bottle Wall Thickness Gauge

BTG-D Digital Glass Bottle Wall Thickness Gauge is a manual operating gauge which is used for measuring the wall thickness of glass bottles. It can offer quick and convenient way of thickness measurement for glass bottle production.

Technical specifications:

- Measuring range: 0-10mm (range 0-20mm optional)
- Resolution: 0.01mm



Optional for BTG-A (Analogic indicator)

BTG-D-S (integrated model with Automatic calculator)

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LSS - Lightening System (Small)

- A convenient device for quick check of glass bottle during production.

Features:

- Stainless steel design with white glass and LED light
- Button on/off
- Adjustable light intensity (Optional)
- Bottom light (Optional)

Technical specifications:

- Power source 230V/50 HZ or other on request
- Dimensions on request

LSL - Lightening System for Line (viewing area 1500 x 400 mm)

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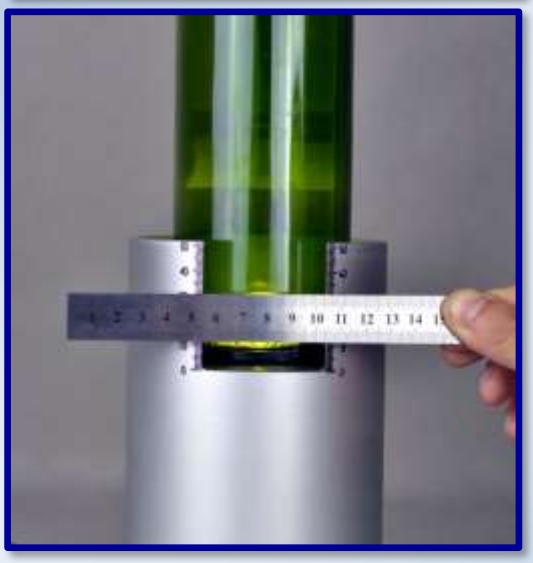
LS-1 Dome Height Lightening System for Glass Bottle

- A convenient device for quick check of dome height of a glass bottle



Features:

- Aluminium and water-proof design
- LED light equipped
- Graduation equipped
- Button on/off

Technical specifications:

- Power source 230V/50 HZ or other on request
- Sample capacity: ø89 mm
- Overall size: ø110x175 mm

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PTG-A / PTG-D Preform Thickness Gauge

PTG-D

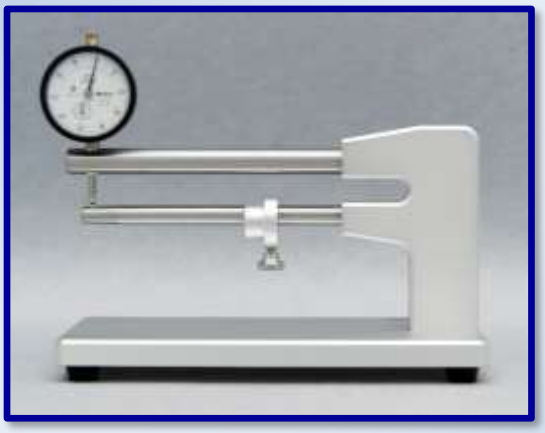
PTG Preform Thickness Gauge is used to measure the preform thickness.

It's easy to operate and applicable for various sizes of preform (various supports for different sizes of preform).

Technical specifications:

- Sample range
  Preform diameter 20 - 65 mm (larger by order)
  Preform inner diameter 14 - 65 mm (larger by order)
  Max. Preform length 140 mm (larger by order)
- Measuring range: 0-10mm
- Accuracy: 0.01mm
- Dimensions: 255(L) x 120(W) x 210(H) mm
- Weight: 2.4kg

Optional for PTG-A (Analogic indicator)



Preform Cutter

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PPS-1 Preform Profile Saw

The PPS-1 Preform Profile Saw is suitable for cutting different kinds of preforms for quality control of material distribution, especially for multi-layer preforms. Total mechanical design and electricity free, more compatible and adaptable to various working environments.

Features:

- Easy operation, cut by the ratchet wrench
- Exclusive spacers to ensure the smooth cutting surface
- Blade holder design, prevent the holder from slipping accidentally

Technical specifications:

- Preform height: Max. 125 mm (higher by order)
- Spacer: Customize
- Dimension: 280 x 380 x 640 mm (W x D x H)
- Weight: 31 kg

Optional parts:

- Exclusive spacers according to preform size

Vertical profile

Horizontal profile

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UBPT-1 Universal Bottle Perpendicularity Gauge

UBPT-1 for PET Bottle

UBPT-1 for Glass Bottle

UBPT-1 Universal Bottle Perpendicularity Gauge is used to measure the perpendicularity (deviation) of bottle and it's a standard equipment for packaging and beverage industries.

It's applicable for various sizes of bottle with the special design of clamping and rotatory system. With automatic calculator, data can be sent to the calculator and read easily. The MAX, MIN, and SAD (Sum of absolute difference between "MAX" and "MIN") values will be displayed on the calculator which is very convenient for the operator.

Improved position adjusting unit for easy measurement positioning

Optional parts:

Automatic calculator

Verification column

Technical specifications:

- Sample range: 50 - 120 mm in diameter (bigger by order)
  110 - 380 mm in height (bigger by order)
- Measuring range: 0 -10 mm
- Resolution: 0.01 mm
- Digital gauge accuracy: ±0.01mm
- Perpendicularity repeatability: 0.1mm
- Dimensions: 355 (L) x 250 (W) x 520 (H) mm
- Net weight: 20 kg

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More choices for perpendicularity measurement:

UBPT-1S with integrated automatic calculator

UBPT-2 with 2 measuring heads (for mouth clearance and perpendicularity)

UBPT-2S with 2 measuring heads (for mouth clearance and perpendicularity) and integrated automatic calculator

UBPT-3 with 3 measuring heads (for mouth clearance, perpendicularity & height) and integrated double automatic calculators

UBPT-3C Custom with 4 measuring heads (for mouth clearance, perpendicularity, roundness & height) and integrated double automatic calculators

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PPG-D Preform Perpendicularity Gauge

Model "PPG-D" (With digital indicator)

The PPG-D Preform Perpendicularity Gauge is used to measure the perpendicularity (deviation) of the preform, it's a standard equipment for PET and beverage industries.

With the high accuracy three jaws chuck, it can ensure the accurate measurement of different sizes of preform.

Technical specifications:

- Sample range: 0-39 mm finish outer diameter / 0-250 mm height / 0-45 mm body diameter
- Resolution: 0.01 mm
- Dimension: 300 (L) x 250 (W) x 450 (H) mm
- Net weight: 15 kg

Optional parts:

- PPG-A with analog gauge
- Verification column
- Automatic calculator for PPG-D

Automatic calculator

PPG-A with analog gauge

Verification column

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FHG / FHG-D - Fill Height Gauge

FHG

FHG-D

Simple and useful measuring tool for fill height measurement. It's designed for all size bottles. Gauge may be preset in inches or millimeters to check fill height level on production line or may be used to measure exact fill point of bottle and then compared to standard.

Technical information

- Measuring range: 0 to 150 mm
- Graduation: mm / inch

FHS Fill Height Syringe

FHS Fill height syringe is used to adjust water level in a bottle to a pre-determined fill height.

It's a useful tool for accurate and quick checking the content of bottle.

Max. suction volume: 65 ml

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GDTB-4 Gauge Data Transportation Box

GDTB-4 Gauge Data Transportation Box is a data process box specially developed for collecting the data from Mitutoyo digital gauges. With the GDTB, users are able to collect the Mitutoyo digital gauges' data and send to data acquisition system or AT2E's "QUALIGAUGE" software. It is able to connect up to 4 gauges.

With GDTB-4 and "QUALIGAUGE" software, date can be transferred from any Mitutoyo digital gauges. User can review and manage all the saved data. Data report and graph are available with the "QUALIGAUGE" software which is very useful for data and result analyzing.

Technical specifications:

- Overall size: 140 x 105 x 55 mm
- Number of the ports for Mitutoyo gauge: 4 (Please consult AT2E for other request)
- Main supply: USB

Optional parts:

- "QUALIGAUGE" software

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GDTB-1 Gauge Data Transportation Box

GDTB-1 Gauge Data Transportation Box is a data process box specially developed for collecting the data from Mitutoyo digital gauges and sending to PC directly.

With GDTB-1, operator just needs to press the button to transfer the data from any Mitutoyo digital gauges to lots of files in PC instead of keyboard typing, available for “Word file”, “Excel file’, “txt” file and so on… It will be much more efficient and it can avoid typing errors.

Technical specifications:

- Overall size: 70 x 45 x 25 mm
- Equipped with transferring cable

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CCLT Crown Cap Leak Tester

- Crown Cap Sealing Tester

Used for testing the air-tightness of the crown cap. Stainless steel design ensures the durability of the tester during test.

Cap the crown cap on the neck of the bottle mold, plunge the cap in the water tank, then increase the internal pressure and observe if there are air bubbles coming out, so that to test the air tightness of the caps.

Widely used in breweries, beverages and caps manufacturing industries.

Technical specifications:

- Pressure range: Up to 12 bar (174PSI)
- Pressure source: N_2, CO_2 or compressed air
- Sample type: Crown cap
- Dimensions: 210 (L) x 150 (W) x 225 (H) mm
- Net weight: 3 kg

PGNG Go-no-Go Gauge

Quality control gauges for checking the threaded tops of glass and plastic containers. Check the threads, outside diameter, spacing, etc.

Comb. Finish Gauge 28mm-PCO-1816 PET
Comb. Finish Gauge 28mm Pet/28-969-1716
Comb. Finish Gauge 38mm Glass/38-1663
Comb. Finish Gauge 38mm Pet/38-1690
Comb. Finish Gauge 28mm Glass/28-1650RE
Comb. Finish Gauge 28mm-PCO-1810 PET
Comb. Finish Gauge 28BPF

Optional:
CGNG for caps

PGNG for finishes

CGNG for caps

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HDC - Height and Thickness Gauge of Crown Cap

This unit has an excellent basis for measuring. It's easy to use. Crown cap height and thickness are measured by analog indicator. It is widely used in crown cap, brewery and beverage industries.

Technical specifications:

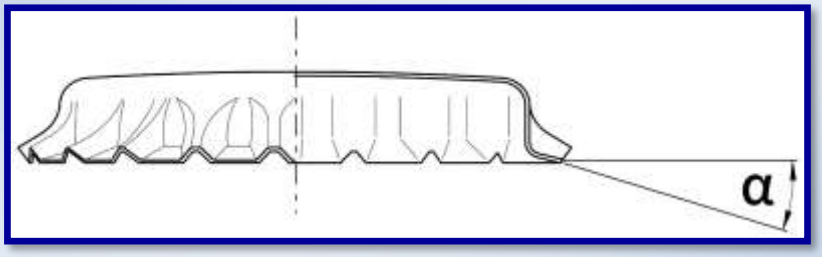
- Measuring range: 0 - 10mm
- Resolution: 0.01 mm
- Dimension: 100 (L) x 100 (W) x 160 (H) mm
- Net weight: 2 kg

CCAG - Crown Cap Angle Gauge

- Angle Indicator for Crown Cap

AT2E's CCAG – Crown Cap Angle Gauge is used to obtain a fast and accurate α angle measurement for crown caps. It is supplied with a standard crown cap support for Ø26 mm caps (other sizes under request).

CCAG is a standard device and it is widely used in breweries non-alcoholic beverage industry and crown cap manufactures.



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ODG-1 Outer Diameter Gauge

The aim of this unit is to test whether the outside diameter of the tested sample is within standard or not.

- Judgment of reference: the samples must adapt to the larger hole, while the samples must not adapt to the small hole.
- It can be custom-made as different diameters in numbers of holes.

For bottle finish ("GO" or "NO-GO")

For cap

IDG-1 Internal Diameter Gauge

The aim of this unit is to test whether the internal diameter of the tested sample is within standard or not.

- Judgment of reference: the small end must adapt to the internal circle of the samples, while the larger end should not adapt to the internal circle of the samples.
- It can be custom-made as different diameters.

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ACCC-1 Automated Crown Cap Capper

The AT2E ACCC-1 is an automated crown cap capper for laboratory using purpose.

Features:

- Pneumatic controlled.
- Various of safety design.
- Fully automatic capping, the capping process will be accomplished when operator closes the door.
- Customize bottle spacer according to the sample dimensions.
- Stainless steel frame, strong and durable.
- Efficient cap preload design, up to 12 caps can be preloaded.

Technical specifications:

- Bottle size: Max. diameter: 110 mm
  Max. height: 300 mm
  (Other size on request)
- Air supply: 5 - 8 bar
- Overall size: 490 x 360 x 735 mm
- Net weight: 30 kg

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APKC-1 Automated Plastic Keg Capper

The AT2E APKC-1 is an automated plastic keg capping device for laboratory using purpose.

Features:

- Pneumatic controlled.
- Various of safety design.
- Full automatic capping, the capping process will be accomplished when the operator closes the door.
- Customize bottle spacer according to the sample dimensions.
- Stainless steel frame, strong and durable.

Technical specifications:

- Air supply: 5 - 8 bar
- Overall size: 400 x 450 x 756 mm
- Net weight: 25 kg

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PBBT-2 PET Bottle Burst Tester

(Equipment for Control of Resistance to Expand and Explosion of PET Bottle)

Automatic sealing and filling system

Testing interface

For PET bottles - Simulating filling process

PBBT-2 PET Bottle Burst Tester is a specialized test equipment for testing the internal pressure resistance of PET bottles. It's designed in accordance with the three industry's test methods (Fill ramp mode, Burst mode and Custom mode) which are commonly used. Users can choose the test method basing on their requirement. The PBBT-2 is capable to test the capacity of resilience under certain pressure or the rupture test of the PET bottle.

Through the reproduction of the pressurization, PBBT-2 can authentically simulate the pressurization situation that the PET bottle experienced during the counter-pressure filling process, which reflects the performance of PET bottle against the instant pressure impact.

After selecting the test program, the cycle will start automatically depending on the settings. The touch screen displays the pressure value in real time and record the maximum pressure and burst pressure.

Optional part water recycling system could provide a way of saving water which is environmental-friendly and avoiding the unsteady pressure of tap water which may influence a normal test. Extra water temperature control unit is optional for the water recycling system, allows the test to be run under the water with controlled temperature.

Additional booster could be chosen. It may help the PBBT-2 free of high pressure source.

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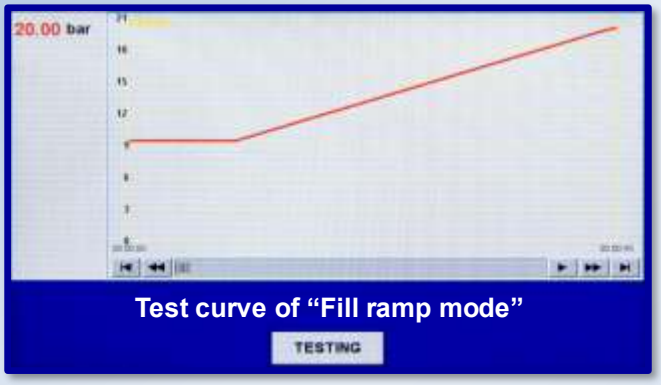
Characteristics:

- Standard equipment for the PET bottle industry.
- 3 commonly used industry's test methods are available
- PLC integrated & Touch screen control
- Automatic sealing and filling system
- Can store 10 operators and 30 products
- Memorization up to 100 test results
- User defines the product lot number and sequence number
- Display curves of pressure and volume expansion during the test
- Monitors and records the temperature of the water during the test
- Applicable to 3 L bottle (consult us for bigger size)
- Stainless steel design ensures the durability of tester
- RS232C data output: connected to either printer or software
- Integrated calibration function

Modes details:

Fill ramp mode:

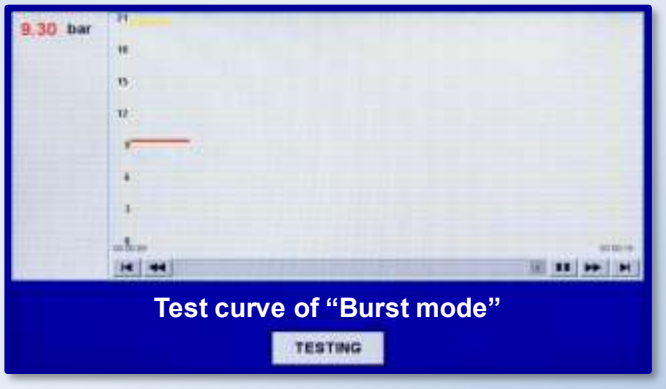
The filling ramp mode is designed to simulate the situation of filling lines of PET bottles. Under this mode, the PET bottles are pressurized rapidly to the initially preset pressure and maintained for a given time (for example 13 seconds). Then continue to increase the pressure with a speed of 0.7 bar/s (speed is settable) until the outbreak of the bottle or reaching the max pressure or volume. Preset parameter includes: initial pressure, Hold time, pressure limit and ramp speed.



Test curve of “Fill ramp mode”

Burst mode:

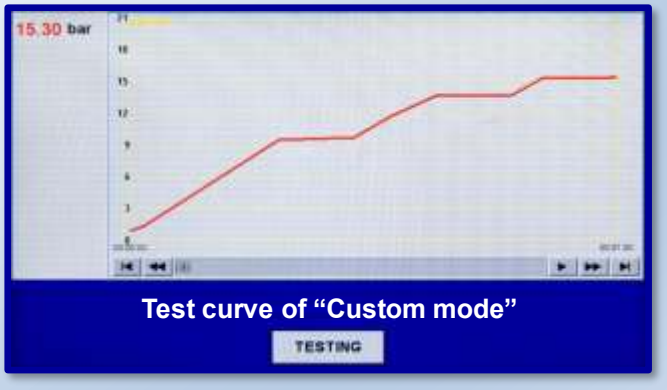
Under this mode, PET bottle will be pressurized rapidly to the initially preset pressure and maintained for a predefined period. Preset parameter includes: initial pressure, Hold time and Expansion limit.



Test curve of “Burst mode”

Custom mode:

Under this mode, user is able to create the pressure curve to meet the particular conditions of control. Users can define the pressure curve by steps, after the adjustment is made, the corresponding curve will be displayed on the user interface.



Test curve of “Custom mode”

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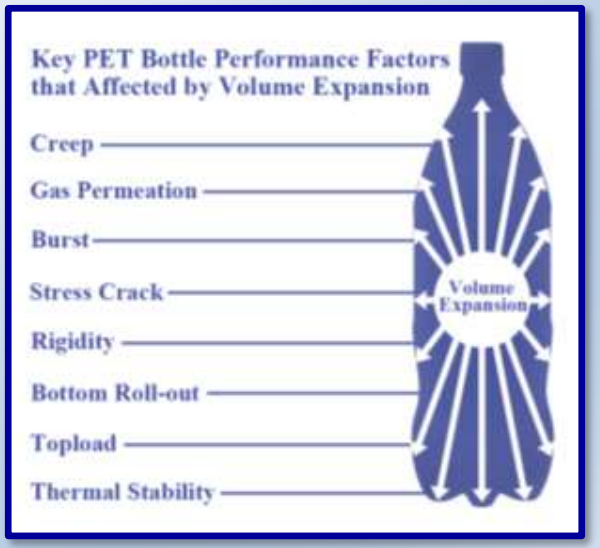
Technical specifications:

- Measuring range: 0 - 20 bar
- Accuracy: ±0.5% F.S.
- Resolution: 0.01 bar
- Pressure Unit: bar, psi
- Sample range: max. dia. 130mm, max. height 360mm
- Sample volume: Up to 3 L bottle (larger by order)
- Expansion in volume: Up to 3 L (larger by order)
- Compatible clamping system: Neck dia. 25 - 38 mm
- Power supply: AC 220V (AC 110V optional)
- Pressure required: ≥1.5 bar water / 20 bar air source
- Temperature range: 0 to 50 °C
- Temperature unit: °C, °F
- Rear Panel: RS232 serial output
- Language: English / French / Spanish / Portuguese / Polish / Chinese
- Dimensions: 770 (L) × 650 (W) × 960 (H) mm
- Net weight: 120 kg

Optional parts:

- Water recycling system
- Temperature control unit for water recycling system
- Additional booster
- Custom-made clamps
- Mini printer
- Calibration pack (including precision pressure gauge for pressure calibration / graduated calibration flask / spacer)
- "QualiBurst" Software



"QualiBurst" software for PBBT-2 (Optional)

Compatible clamping system

Water recycling system (Optional)

Mini printer (Optional)

Additional booster (Optional)

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Optional parts:

- PABT version with hot water spraying system
- PBBT-2-K Keg model
  - Sample volume: Up to 20 L
  - Expansion in volume: Up to 35 L
- PBBT-2-P Advance model
  - Ultra ramp speed controlling unit, linear ramping speed up to 5 bar/sec (72 psi/sec)
  - Data list for testing records, statistics for the failure samples, calculates the max., min. and avg. failure pressure.
  - Additional bottle status description screen, further describes the bottle status after test cycle is completed.

PABT with hot water spraying system (Optional)

PBBT-2 Keg model

PBBT-2-P Operation screens

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PBBT-ECO PET Bottle Burst Tester

(Equipment for Control of Resistance to Expand and Explosion of PET Bottle)

PBBT-ECO PET Bottle Burst Tester is a specialized test equipment for testing the internal pressure resistance of PET bottles. It provides a high pressure, rapid pressurization testing function for the PET bottles. The PBBT-ECO is capable to test the capacity of resilience under certain pressure or the rupture test of the PET bottle.

Using and maintenance of PBBT-ECO are easy and simple. It's free of electricity, which makes it more compatible and adaptable to different working environments. It's suitable for both plastic container manufacturers and users.

Additional booster could be chosen. It may help the PBBT-ECO free of high pressure source.

Characteristics:

- Electric free and easy for maintenance
- Applicable to 3.3 L bottle (consult AT2E for bigger size)
- Adaptable for different finish with compatible clamping system (optional).
- Stainless steel design ensures the durability of tester
- Ramp pressure adjustable by regulator
- Various of safety design

Control panel

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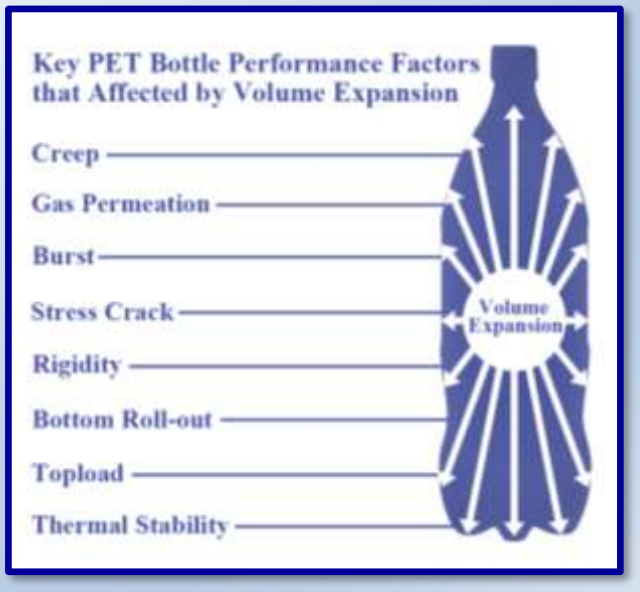
Technical specifications:

- Measuring range: 0 - 20 bar (0 - 300psi),
- Resolution: 0.5 bar / 5 psi
- Sample volume: Up to 3 L bottle (larger by order)
- Sample range: max. dia. 130mm, max. height 360mm
- Compatible clamping system: Neck dia. 25 - 38 mm
- Pressure required:
  Water > 1.5 bar
  Inlet pressure 0-22 inlet pressure should
  higher than the test pressure by 2 bar or more
- Temperature range: 4 to 50 °C (40 - 122° F)
- Dimensions: 500 (L) × 725 (W) × 1010 (H) mm
- Net weight: 85 kg



Optional parts:

- Additional booster
- Custom-made clamps
- Precision pressure gauge for pressure calibration

Compatible clamping system

Additional booster (Optional)

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GBBT-1 Glass Bottle Burst Tester

(Explosion tester for glass bottles)

Testing screen

Cycle selecting screen

The GBBT-1 is an instrument for testing the internal pressure resistance of glass containers. It has been widely used by the glass container manufacturers and users. As a standard testing instrument for the glass container industry, it offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Designed for easy operation and maintenance, comply with the testing standard of ISO 7458:2004.

The pressure test of containers is made up to a predefined pressure point (trial test) or until destruction.

Characteristics:

- PLC integrated & Touch screen control
- User defined test cycle (up to 4 steps of pressure and holding time) satisfies different test request
- Automatic clamping and filling system
- Easy operation
- Easy sample installing, with auto clamping and water filling system
- Linear pressurization
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User defines the product lot number and sequence number
- Reviews the real-time testing curve
- Stainless steel design ensures the durability of tester
- Advanced safe door design ensures the safety of operator during a test.
- Special trash bin design makes the glass trash collection easily.
- RS232 output
- Can be connected to either printer or software

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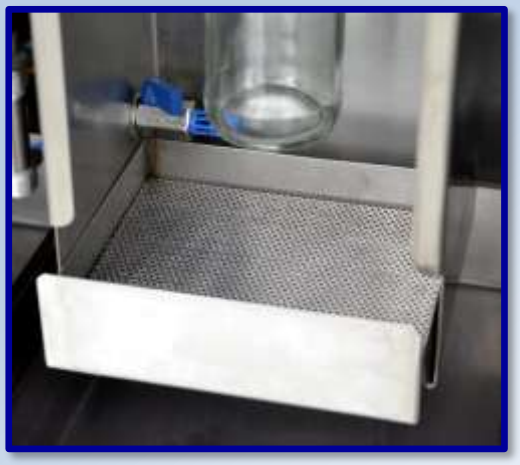
Control panel

Testing Chamber

Auto sealing & filling system



Trash bin

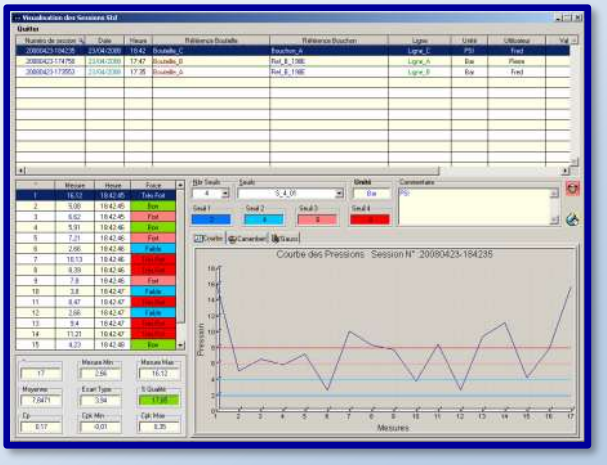
Technical specifications:

- Measuring range: 0-60 bar
- Resolution: 0.1 bar
- Accuracy: ±1% F.S.
- Sample range: by order
- Power: AC 220V (AC 110V optional)
- Dimension: 620 (L) × 570 (W) × 820 (H) mm
- Net weight: 70 kg

Optional parts:

- Compatible clamping system (Neck diameter 24 - 32mm and subject to the structure of transfer bead)
- Professional Software for GBBT-1

Compatible clamping system (Optional)



Professional Software for GBBT-1 (Optional)

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GBBT-2 Glass Bottle Burst Tester

(Explosion Tester for Glass Bottle - Dual Stations)

Quick cycle selecting screen

Testing screen

The GBBT-2 is an instrument for testing the internal pressure resistance of glass containers. It has been widely used by the glass container manufacturers and users. As a standard testing instrument for the glass container industry, it offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Designed for easy operation and maintenance, comply with the testing standard of ISO 7458:2004.

The pressure test of containers is made up to a predefined pressure point (trial test) or until destruction.

Characteristics:

- Dual station which is more efficient and convenient for uninterrupted test
- PLC integrated & Touch screen control
- User defined test cycle (up to 4 steps of pressure and holding time) satisfies different test request
- Automatic clamping and filling system
- Easy operation
- Easy sample installing, with auto clamping and water filling system
- Linear pressurization
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User define the product lot number and sequence number
- Reviews the real-time testing curve
- Stainless steel design ensures the durability of tester
- Advanced safe door design ensures the safety of operator during a test.
- Special trash bin design makes the glass trash collection easily.
- RS232 output
- Can be connected to either printer or software

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Efficient dual station design

Auto sealing & filling system

Trash bin

Compatible clamping system (Optional)

Technical specifications:

- Measuring range: 0-60 bar (each station)
- Resolution: 0.1 bar
- Accuracy: ±1% F.S.
- Sample range: by order
- Power: AC 220V (AC 110V optional)
- Dimension: 930 (L) x 540 (W) x 820 (H) mm
- Net weight: 95 kg

Optional parts:

- Compatible clamping system (Neck diameter 24 - 32mm and subject to the structure of transfer bead)
- Professional Software for GBBT-2
- GBBT-2 with stand model (use with fragment collection containers)

Professional Software for GBBT-2 (Optional)

GBBT-2 with stand model (Optional)

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GBBT-2-FD-V & GBBT-2-FD
Glass Bottle Burst Tester
(Internal pressure resistance tester for Glass Bottles - Dual Stations - Floor-standing version)

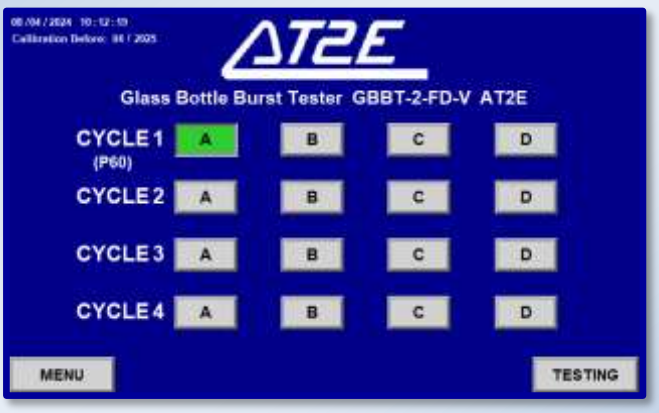
Efficient dual station design

Fragments collection bin

The GBBT-2-FD-V / GBBT-2-FD is an instrument for testing the internal pressure resistance of glass containers. It has been widely used by the glass container manufacturers and users. As a standard testing instrument for the glass container industry, it offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Designed for easy operation and maintenance, comply with the testing standard of ISO 7458:2004.

The pressure test of containers is made up to a predefined pressure point (trial test) or until destruction.



Quick cycle selecting screen

Testing screen

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Characteristics:

- Dual station design with independent control and both stations can run simultaneously or separately, which is more efficient and convenient for uninterrupted test, but also more flexible
- PLC integrated & Touch screen control
- User defined testing cycles (up to 4 steps of pressure and holding time) satisfy different test requests
- Smart door design (GBBT-2-FD-V), auto pop open when test process is completed
- Automatic sealing and water filling system
- Easy operation with preset parameters
- Easy sample installation
- Different chuck options, flexible with samples in various types
- Linear pressurization
- Stores up to 10 operators and 30 products
- Stores up to 1000 groups of test data and data is transferable
- User define the product lot number and sequence number
- Reviews the real-time testing curve
- Stainless steel structure ensures the durability of tester
- Advanced safe door design ensures the safety of operator during a test
- Overload protection
- Special fragments collection bin design, easier for fragments handling, contains up to 20L for a single bin
- RS232 output
- Can be connected to either printer or software

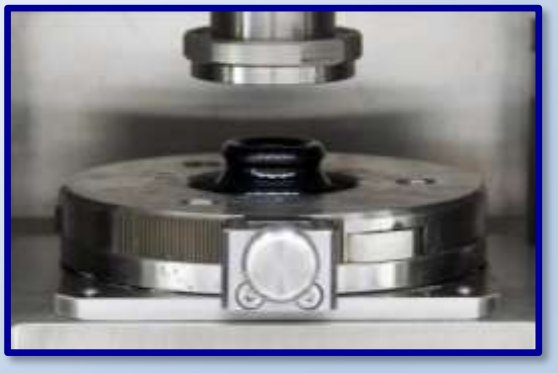
Technical specifications:

- Measuring range: 0-60 bar (each station)
- Air supply: 6 - 8 bar
- Resolution: 0.1 bar (1 psi / 0.1 kg/cm2)
- Water supply: Tap water, ≥1.5 bar
- Accuracy: ±1% F.S.
- Sample range: by order
- Power: AC 220V (AC 110V optional)
- Dimension: 970 (L) x 580 (W) x 1710 (H) mm
- Net weight: 270 kg

Auto sealing & filling system

GBBT-2-FD-V Smart door design

GBBT-2-FD General door design



Compatible clamping system (Optional)

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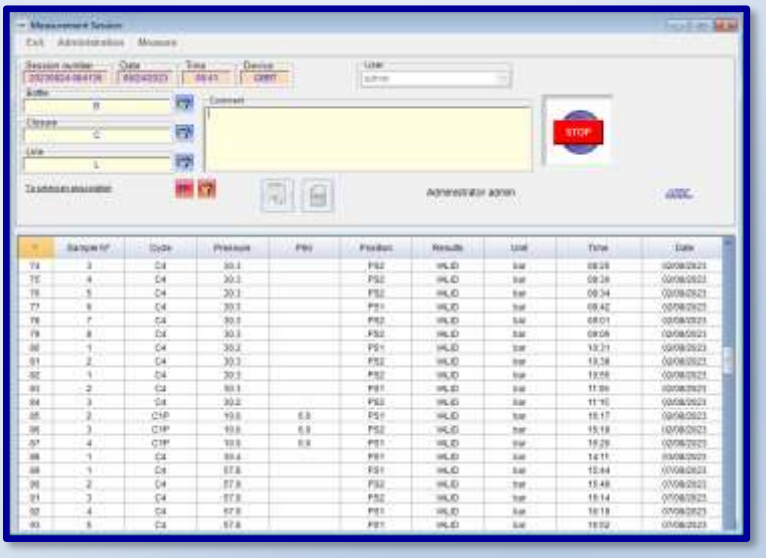
Optional parts:

- Compatible clamping system (Neck diameter 24 - 32mm and subject to the structure of transfer bead)
- Glass fragments filter for draining port
- Fragments cart
- Professional data management software



Professional data management software (Optional)

Fragments cart (Optional)

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GBBT-AUTO Automated Glass Bottle Burst Tester

GBBT-AUTO Automated Glass Bottle Burst Tester is a full-automatic instrument for testing the internal pressure resistance of glass containers. The GBBT-AUTO adopts full automated controlling system, no operator is required during the test process, and the test data will be sent to the data acquisition system automatically, making the test procedure easier and more efficient.

Designed for easy operation and maintenance, comply with the testing standard of ISO 7458:2004.

The pressure test of containers is made up to a predefined pressure point (pass test) or until destruction or reaches the maximum test pressure. Pressure ramping rate customizable makes it more flexible towards different test requirements. Different cycle settings, up to 16 pre-stored cycles, users can select the corresponding cycle rapidly according to different products without modifying the settings. It is able to set up to 4 steps for the tests.

As a standard quality control instrument for the glass container industry, it offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Testing and Menu screen

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Characteristics:

- Auto testing, unattended process, cost effective and more efficient.
- Results auto send to software or data acquisition system, more accurate and reliable
- PLC integrated, using by touch screen, simple and intuitive
- Different cycle settings, up to 16 pre-stored cycles. It is able to set up to 4 steps (4 pressure level and holding time, the pressure level and holding time is customizable), more flexible towards different test requirements.
- Pre-stored cycles, easy selection and convenient
- Linear pressurization
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User defines the product lot number and sequence number
- Reviews the real-time testing curve
- Stainless steel design ensures the durability of tester
- Advanced safety door design, ensures the safety of operator
- Overload protection

Automatic clamping and filling system

Technical specifications:

- Measuring range: 0-60 bar
- Resolution: 0.1 bar
- Units: bar/psi
- Power: 220 V / 50Hz
- Power dissipation: 1000 VA
- Air supply: 6~8 bar
- Water supply: Tap water, ≥1.5 bar
- Sample range: Max capacity: 3.5 L
  Finish Dimension: Inner dimension: 15 mm,
  Outer diameter: 32 mm
  Neck dimensions: 25-33 mm
  PLEASE CONSULT AT2E FOR OTHER RANGES

Automatic sample detection and deliver system

- Data output: Standard serial port, connect PC or AT2E specified mini-printer
- Dimensions: 1020 x 800 x 1250 mm (Tester only, conveying system should be subject to actual situation)
- Net weight: 230 kg (Tester only, conveying system should be subject to actual situation)

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FHT-1 / FHTT-1 Fill Height Tester

The FHT-1 Fill Height Tester is an instrument developed by AT2E for measuring the fill height volume and brimful volume in different containers. The automated measuring process which provides higher repeatability and reproducibility.

The FHT-1 Adopts high-precision liquid level detection system, which detects the liquid level in real time and auto switches the water filling rate accordingly, then obtains the weight through precision balance once the filling process is completed. Measurement result will be displayed on the screen after the measuring process is finished, and the test report can be printed out directly by the AT2E specified mini-printer.

The accuracy of FHT-1 meets the requirements of ISO 8106, while the flexible mode settings of the instrument is widely compatible with various in-house standards that being established according to the measuring requirements of the enterprises.

Working principle

- Auto positioning according to bottle height
- Auto water filling, fill height and/or brim full
- Auto weighing
- Auto calculation of fill height volume and/or brimful volume

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Testing screen

Mode selection screen

Features

- Auto detection of bottle height, liquid level, fill volume, etc.
- Auto water temperature monitoring and recording
- Auto volume correction according to water density and temperature relation
- Auto record and display measure results
- PLC integrated & Touch screen control
- Three measuring modes:
  - Brim full volume
  - Fill height and brim full volume, measures the fill height according to the pre-defined fill volume, and choose to enable/disable the brim full volume measuring
  - Fill capacity and brim full volume, measures the fill capacity according to the pre-defined fill height, and choose to enable/disable the brim full volume measuring
- Auto filling rate control according to bottle specifications, improves measurement efficiency and ensures measurement accuracy
- Integrated module of the motion unit, high running speed and stability, easy maintenance
- Rich extension of optional accessories, including water recycling unit, mini-printer and QualiVol data management software
- Memory of 30 products, 10 operators, batch number, sample number (password protected)
- Easy installation of samples with auto centering design
- Displays all the information during cycle: time, setting, operator, product, Batch No., Sample No., Result
- RS232 output
- Stainless steel design ensures the durability of tester
- Overload protection

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Technical specifications:

- Sample range
  - Diameter: 55 - 203 mm
  - Height: 150 - 440 mm
  - Mouth diameter: 16 - 53 mm
- Measure range: 0 - 3000 ml (other range by order)
- Balance weighing range: 0 - 5000 g (other range by order)
- Height resolution: 0.1 mm
- Volume resolution: 0.01 ml
- Accuracy: ±0.5% F.S.
- Air supply: 5 - 8 bar
- Power supply: AC 220V (AC 110V optional)
- Dimensions: 695 x 675 x 1060 mm (L x W x H)
- Weight: 125 kg

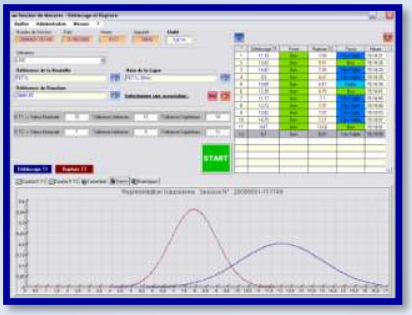
Model FHTT-1 with Top Load tester integrated

Optional parts:

- Model FHTT-1 with Top Load tester integrated
- Calibration pack
- Mini-printer
- Water recycling unit
- QualiVol data management software

Mini printer (Optional)

Water recycling unit (Optional)



"QualiVol" software

Working Environment

- Clean tap water (water pressure ≥ 1.5 bar)
- Air supply: 5 - 8 bar (proper filtered clean and dry compressed air)
- Power supply: AC 220V (AC 110V optional)

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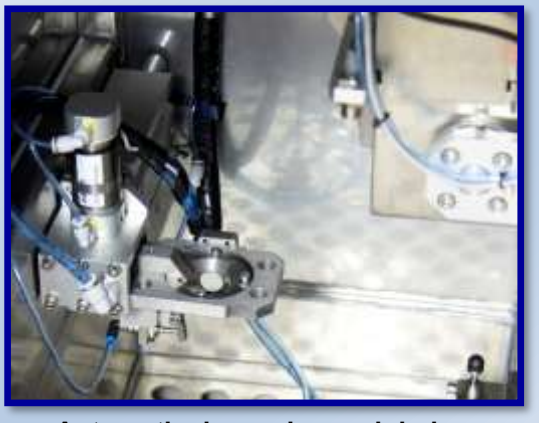
BWCS-A Bottle Weight Control System



Automatic decapping and drying

Star-wheel sample conveying unit

BWCS-A Bottle Weight Control System is an automatic system for controlling the bottle weight of crown capped products. It is able to auto measure the gross weight of the samples then measure the net weight of the bottles after they were emptied.

Multi-position design, higher efficiency and better repeatability. Measure data can be sent out to Data Acquisition Software for better data analysis and management.

Technical specifications:

- PLC integrated, using by touch screen
- Multi-position design, higher efficiency
- Weighing range:0-4000.00g
- Weighing resolution: 0.01 g
- Power supply: AC 220V (AC 110V optional)
- Rate power: 650 W
- Units: g
- Air supply: 5 - 8 Bar
- Water supply: tap water (≥ 1.5 bar)
- Communication port: RS232
- Sample capacity: 10 samples max. (Please consult AT2E for other capacities)
- 10 operators memorization
- 30 products memorization

Testing screen

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- Screen display: Real-time weighing value / Product name / Operator / Batch N° / Sample number
- Able to pre-store 30 batch numbers for each of the two production lines
- Configuration protected by administration passwords
- Language: English / French

Automated part:

- Safety door
- Star-wheel for sample conveying
- Robot arm for auto sample grabbing, then returns the emptied bottle to the star-wheel after sample was decapped and dried.
- Auto obtain the weighing data from balance and send out to Data Acquisition Software or system
- Auto zero before restarting cycle

Mechanical specifications:

- Stainless steel Frame
- Dimensions: 1085 (L) x 860 (W) x 1035 (H) mm
- Weight: 170 kg

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ACWD-1 Automatic Bottle Cutting & Weighing Device

The AT2E ACWD-1 Automatic Bottle Cutting & Weighing Device offers an automated and cost saving way for cutting containers for section weight analysis. Automatic cutting and weighing, automated process controlling, ensures the cutting accuracy and repeatability, increases the analyzing accuracy, provides a better solution for bottle section weight analysis and more reliable data.

With ACWD-1, a PET bottle could be cut up to 6 predetermined sections and auto weighing to each section.

Features:

- Full automatic control, auto positioning for accurate cutting
- Automatic section cutting and weighing
- Able to perform circumferential cutting for deep dome bottles
- Data could be reviewed on screen or through software
- Motor control, hot wire cutting
- Cutting way for each section can be set separately
- Threshold settings for each section

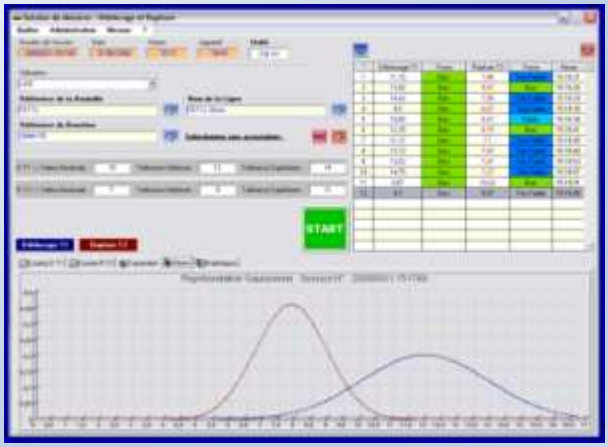
Operation screen

Technical specifications:

- Sample range: Height up to 360 mm
  Diameter 30 - 115 mm
  Finish inner diameter 20 - 33 mm
- Section range: 7 - 135 mm (other range by order)
- Power supply: AC 220V (AC 110V optional)
- Weighing range: 0 - 500 g
- Weighing resolution: 0.01 g
- Air supply: 5 - 8 bar
- Data interface: RS232
- Overall size: 725 (L) x 650 (W) x 1050 (H) mm
- Net weight: 100 kg

Optional:

- Data analyze and management software



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Optional model with INCREMENTAL weighing system ACWD-2S

The new INCREMENTAL weighing design of model ACWD-2S, unlike the weighing process in ACWD-1, instead of pushing out the cut section each time after weighing data is obtained, the ACWD-2S will weigh each cut section until the complete cutting and weighing process is done then push them out at one time.

With the new weighing design, the weighing efficiency increased by about 8 - 15% (depends on the amount of cut sections) compares to the original design

Cut sections are collected below instead of the side of the instrument, an alternative option for different requirements

Incremental weighing design

Features:

- Incremental weighing process, higher efficiency
- Section range 7 - 250 mm, better compatibility
- Full automatic control, auto positioning for accurate cutting
- Automatic section cutting and weighing
- Able to perform circumferential cutting for deep dome bottles
- Data could be reviewed on screen or through software
- Motor control, hot wire cutting
- Cutting way for each section can be set separately
- Threshold settings for each section

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Optional model with auto sample conveying module ACWD-A:

Features:

- Unattended operation process, cancels all the operators' influence factors during the process, higher reproducibility
- PLC control, which ensures the measuring accuracy and repeatability
- Automated cutting process control, auto positioning the cutting point precisely
- Auto sample conveying, section cutting and weighing
- Multiple cutting modes in option, compatible for various bottle types
- Sample conveying module is customizable according to the sample specifications and sample quantities
- High-speed motion module integrated, greatly reduced the inspection duration
- Configuration by password (administrator)
- Auto recording of measurement data during the test process (up to 990 groups of records), send out real-time data or send out records from data list.
- Measurement data can be recorded in system for reviewing or in the data acquisition software for data management
- Three different alarm alerts - buzzer, indication light and on-screen text alerts to notify the operator at the first place in case of any abnormal situation

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HWBC-2 Hot Wire Bottle Cutter

- Automatic device for PET bottle section weight analysis

AT2E innovative HWBC-2 Hot Wire Bottle Cutter offers an automated and cost saving way for cutting containers for section weight analysis. A clean section without deformation will be obtained by a quick cutting of bottles through heated hot wires. A precision and repeatable cutting task is easy to achieve and it's necessary for a proper analysis.

With HWBC-2, an automatic and steady cutting process will be carried out after pressing the button. With exhaust fan and safety door design, the exhaust gas will be away from the operator during cutting.

With HWBC-2, a PET bottle could be cut up to 5 predetermined sections under a steady force and excellent section plane could be obtained. Each section will be checked to ensure that it conforms to the exact weight assigned.

Features:

- Automatic and accurate cutting process offers a very easy way of operation
- Heating power / Standby power / Cutting speed / Return speed of wire / Cutting delay are adjustable
- Universal finish support, compatible for the bottle finish diameters from 17 to 40 mm
- Energy saving design
- Durable stainless steel design
- Touching screen offers easy and user-friendly operation
- Up to 5 sections cut and suitable for up to 2 L bottle
- Safety door and exhaust fan design which exhausts gases away from the operator
- Excellent repeatability
- Adjustable supports for bottles during the cutting process
- Graduated rulers allow accurate positioning of wires

Operating Interface

Universal finish support

Technical specifications:

- Sample range: Maximum height 360 mm
  Maximum diameter 110 mm
- Power supply: AC 220V (AC 110V optional)
- Overall size: 500 (L) x 580 (W) x 600 (H) mm
- Net weight: 48 KG

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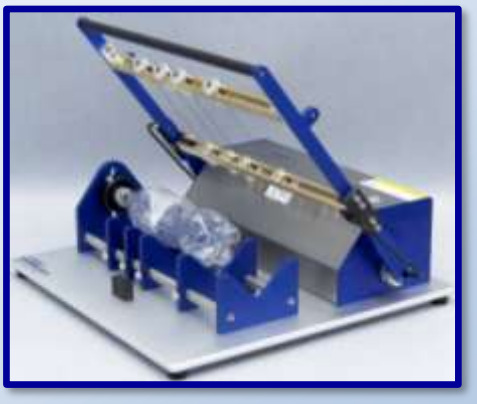
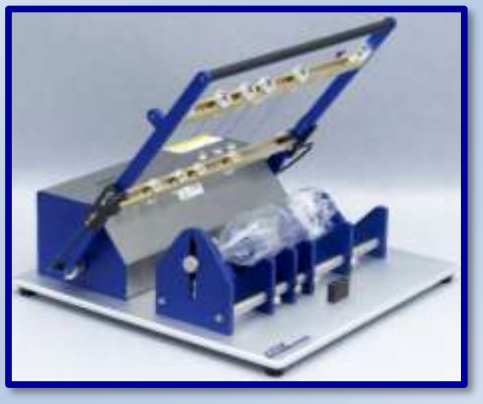
HWBC-1 Hot Wire Bottle Cutter

- For PET bottle section weight analysis

The HWBC-1 Hot Wire Bottle Cutter offers an easy and cost saving way for cutting containers for section weight analysis. A clean section without deformation will be obtained by a quick cutting of bottles through heated hot wires. A precision and repeatable cutting task is easy to achieve and it's necessary for a proper analysis.

With HWBC-1, a PET bottle could be cut up to 5 predetermined sections, each section will be checked to ensure that it conforms to the exact weight assigned.

Attributes:

- Durable design & Easy to operate & Excellent repeatability
- Bottle cut with accuracy up to 5 sections cut
- Universal finish support, compatible for the bottle finish diameters from 17 to 40 mm
- Adjustable supports for bottles during the cutting process
- Graduated rulers allow accurate positioning of wires
- Safety cover design which exhausts gases out of face of the operator
- Rapid warming the wires
- Dual heating mode saves energy and extends the life of wires
- Adjustable heating power allows operator to select the correct power according to different bottle and prolong the life time of the wire.

Technical specifications:

- Sample range: Maximum height 410 mm
  Maximum diameter 125 mm
- Power supply: AC 220V (AC 110V optional)
- Dimension: 535 (L) x 515 (W) x 400 (H) mm
- Net weight: 20 KG

Control panel

Universal finish support

Optional part: Safety cover

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SSC-1 Simple Section Cutter

- For PET bottle section weight analysis

The “SSC-1” Simple Section Cutter is a simple tool for section cutting of a plastic bottle. It provides a fast and repeatable cutting process for section weight control. Operator just needs to inset the bottle to the cutter, press the lever to let knife piece into the cut position and twist the bottle. Then the demanded section can be obtained.

Please provide the bottle drawing and demanded section dimension upon order.

Advantages:

- Easy and simple to use
- High repeatability and accurate cutting
- Safe and avoid harmful gas
- Cost saving of maintenance comparing to electrical model
- Portable device

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Precision Weighing Balance

- Many typical laboratory functions have been expanded to include a clear graphics screen, which shows the relevant information visually and makes it significantly easier to operate and read the weights off the display
- Navigation pad for super quick navigation through the menus
- 40 memories for each mode
- Extensive print formats - up to 20 lines with fixed and variable texts
- High mobility: thanks to rechargeable battery operation (optional), compact, low weight construction, it is suitable for use in several locations (laboratory, production, quality testing, commissioning...)
- Ring-shaped draft shield optional, weighing space ØxH 90x53 mm
- Hook for underfloor weighing to weigh hanging loads standard

Functions:

- Capacity display
- Dispensing assistance (subtractive, additive)
- Piece counting with reference
- Automatic reference optimization
- Tare deduction from the memory unit
- Input of item or batch description, operator etc. from the memory unit
- Freely programmable weighing unit, e. g. display directly in special units such as length of thread g/m, paper weight g/m2, or similar
- Date/time in the display
- Individual printout configuration

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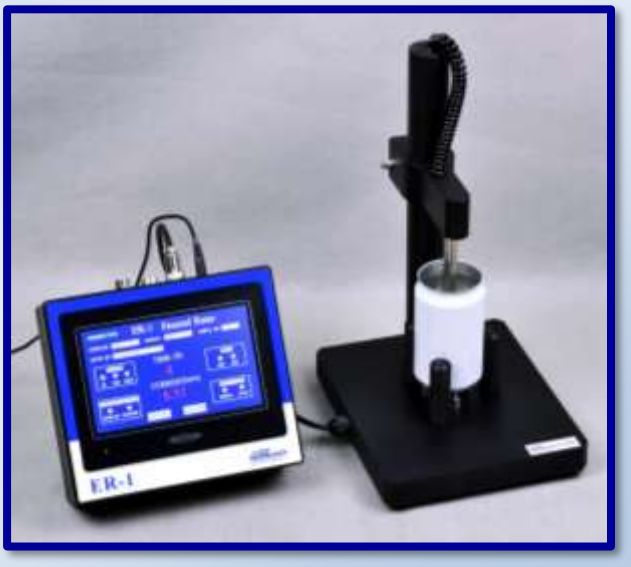
ER-1 Enamel Rater



ER-1 with can holder

End holder of ER-1

AT2E ER-1 Enamel Rater offers a fast and accurate method to measure the integrality of internal coating of containers. A measuring will be started automatically when the electrical probe is inserted and contacts the solution inside the container. Result can be record from the screen or transfer to data acquisition system via RS232 serial port.

The position of exposed metal can be detected visually by pressing the “REVERSE” button. Bubbles of gas come out on the exposed points.

Measuring principle:

The instrument applies a constant micro-voltage across the can body and an electrode immersed in the electrolytic water filled, and measuring the resulting current. Voltage during the test is 6.3 V DC. The operating range is 0 to 300 milliampere with an accuracy of resolution of 0.01 milliampere.

The cover support comprises a container mounted on a pivot. The cup is beveled to make a tight seal on the can cover. An electrode and the connection to the vacuum in the container are mounted. On the base, a valve for creating a vacuum and a movable arm, complete the electrical circuit when the assembly is inverted.

Measuring modes:

- 4 second mode: The reading will be displayed only at 4 seconds.
- Continuous mode: The changing current reading will be displayed during all the measuring time. It will not stop displaying until operator’s order.
- User-defined mode: The reading will be displayed at the setting time by operator.

Operation Screen

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Characteristics:

- Test the coverage of the enamel coating inside canned food, beverages, tubes and aerosols as well as the different types of covers.
- Displays an index of the amount of metal exposed by incomplete enamel coverage.
- Integrated 7" LCD touch screen and user friendly interface offers the easy-operation.
- Operator, product, sample & batch number can be memorized
- RS 232 output.
- User self-calibration.
- Detect the exposed position of metal.
- Enhanced End holder, vacuum is not required anymore and higher compatibility

Technical specifications:

- Sample range: 2-pcs can, 3-pcs can, aerosol can, tube and different types of covers
- Can sample capacity: Ø80x250(H) mm (other range by order)
- End sample capacity: by order
- Measuring range: 0 to 300 mA
- Resolution: 0.01 mA
- Accuracy: ± 2% F.S.
- Power supply: AC 110 - 240 V 50/60 Hz
- Data output: RS232 serial output
- Main frame dimensions: 212(L) x185(W) x150(H) mm
- Can holder dimensions: 230(L) x 235(W) x 400(H) mm
- Net weight: 5 kg (including can holder)

Optional parts:

- Tube holder
- End holder (including foot switch)
- Plate holder (including foot switch)

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CLA-ECO Can Leak Analyzer (3 positions)

CLA-ECO Can Leak Analyzer is specifically designed for analyzing the secure seal ability of the empty 3-pieces tinplate cans. Water bath design with free rotating can holders allows a 360° observation on the can body (especially welding position) for air bubbles. It also ensures no defect spot can be missed and provides reliable test result.

Features:

- Pneumatic design which allows the tester be free from electricity
- Stainless steel water bath
- Semi-automated immersion
- Multiple testing positions (please consult AT2E for different position request)
- Applicable for most sizes of 3-pcs can
- Easy installation of samples

Test procedure:

- Place the samples against the magnetic holding plate
- Clamp the samples by the manual valve
- Submerge the holding unit into water bath by manual valve until samples immerse into water completely
- Apply pressure to samples until target value and hold
- Observe the sample to see whether air bubbles come out constantly
- Rotate the holding plate to observe different parts of the can body
- Test finishes, record down the results.

Technical specifications:

- Measure range: 0 - 6 bar
- Resolution: 0.1 bar
- Sample range: 3-pieces tinplate can with 50 - 200 mm in diameter & up to 240 mm in height
- Overall size: 910 x 650 x 825 mm
- Net weight: 60 kg

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ACBT-1 Aerosol Can Burst Tester

Testing screen

Sample installation

The ACBT-1 is an instrument for testing the internal pressure resistance of aerosol can (for both 3-pcs aerosol can and mono-block aerosol can). It has been widely used by the aerosol can manufacturers and users. It offers an important technical reference to the manufacturers for maintaining or improving the product quality and performance.

Test process:

- Install the can sample under the affusion head and seal the sample
- Close the safety door
- Press the start button to start the test
- The affusion head will fill the sample automatically and start to pressurize when the bottle is full filled
- Pressurize the sample till the cone deforms
- Keep pressuring till the dome deforms
- Keep pressurizing till the can bursts
- The deform and burst value will be recorded automatically and display on the screen
- Stop pressurizing
- Open the door and take out the sample

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Characteristics:

- PLC integrated & High resolution touch screen control
- Three test cycles (Fill ramp mode, Burst mode and Custom mode) satisfies different test request
- Easy operation
- Easy sample installing with auto clamping and water filling system
- Linear pressurization
- Can store 10 operators and 30 products
- Memorization up to 1000 test results
- User defines the product lot number and sequence number
- Review the real-time testing curve
- Stainless steel design ensures the durability of tester
- Advanced safe door design ensures the safety of operator during a test
- RS232 output

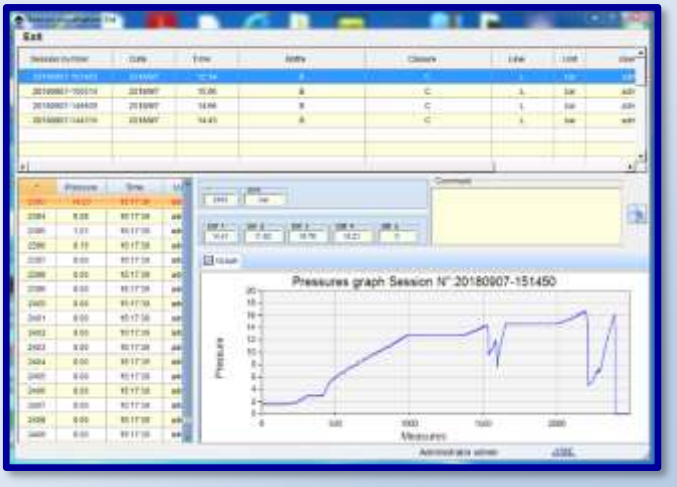
Technical specifications:

- Testing range: 0-40 bar
- Resolution: 0.01 bar / 0.1 psi / 0.01 kg/cm^2
- Accuracy: ±0.5% F.S.
- Unit: bar / psi / kg/cm^2
- Sample range: 25.4 (1") aperture, standard 3-pcs and mono-block aerosol can
  Max. diameter: 66 mm
  Max. height: 300 mm
- Air supply: 5 - 8 bar
- Output: RS232
- Power: AC 220V (AC 110V optional)
- Dimensions: 730 (L) x 500 (W) x 870 (H) mm
- Net weight: 80 kg

Optional parts:

- Mini printer
- QualiBurstPlus professional software

Mini printer (Optional)



"QualiBurstPlus" professional software (Optional)

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CHG - Contact Height Gauge

CHG-D

CHG-A

CHG - Contact Height Gauge is specifically designed for measuring the contact height of aerosol cans with 25.4mm (1") aperture. Adopted with Mitutoyo indicator, available for analog model (CHG-A) and digital model (CHG-D).
Reference standards: EN 14850, EN 14847, EN 15006

Technical specifications:

- Measure range: 3 - 5 mm
- Resolution: 0.01 mm
- Sample range: Tinplate or aluminum aerosol cans with 25.4mm (1") aperture
- Overall size: 60 x 57 x 97 mm
- Weight: 0.5 kg

Calibration ring (Included)

Measuring

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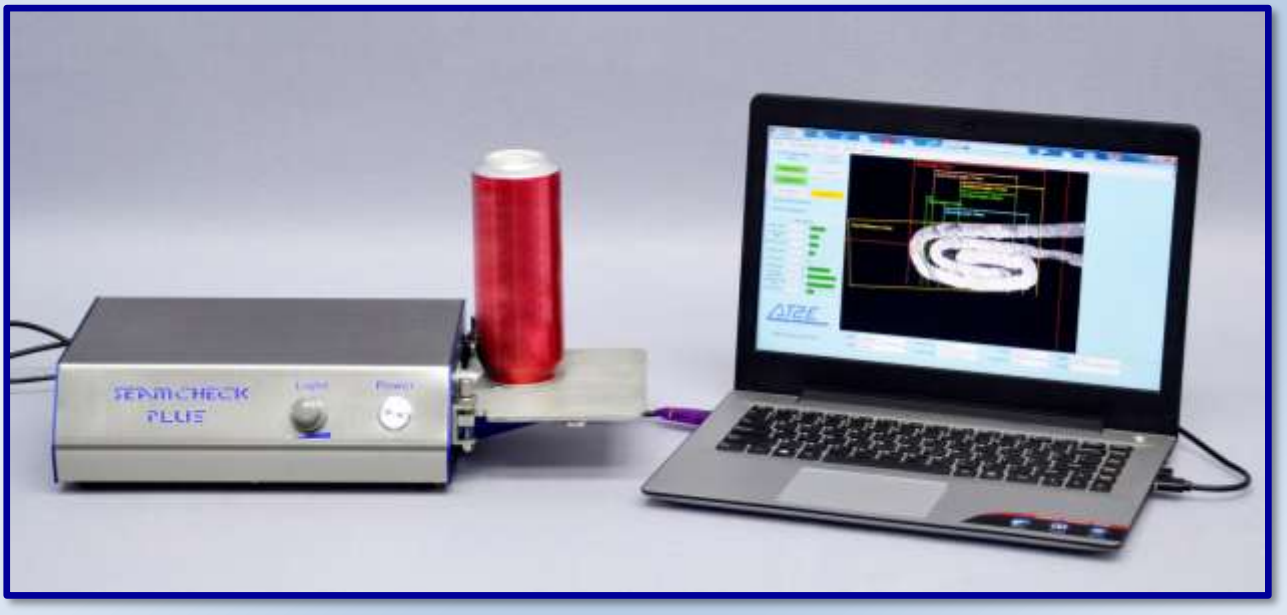
SeamCheck Plus - Automatic Double Seam Projector



Seaming quality is critical and important for can inspection. And it's the one of the most concerned point for can, beverage and food manufacturing companies. AT2E SeamCheck Plus Automatic Double Seam Projector provides the most convenient way to accomplish the seam inspection. Optimized design, the projector is smaller in size and more flexible in space set up. The latest UHD CCD camera which provides higher image resolution and definition, with the further enhanced image contrast, the SeamCheck Plus is able to obtain a better seam profile image.

Using with AT2E seam saw, a clear seam section image could be obtained. Along with professional SeamCheck software, a fast and accurate seam measurement could be done.

Characteristics:

- Automatic line positioning (auto-measure function), measurement will be done in 1 second
- Equipped with advanced video capture device which interference-free of external light source and ensured the high image definition
- Software adopted database management system, measuring results and images can be saved in the database and users can review the saved data at any time
- 9 measuring parameters: Seam Length, Body Hook Length, End Hook Length, Overlap, Seam gap, Overlap rate, Body Hook lapping rate, End Hook lapping rate, On-screen Seam Thickness. (Able to extend to 12 parameters through extra gauges, included actual Seam Thickness, actual countersink and Tightness)
- SPC compatible, use a data adapter to collect the data from Mitutoyo Digital Indicator (Actual Seam Thickness; Actual countersink; Actual can height, Actual flange width)
- Data can be exported as an Excel file
- Report format can be customized, flexible for different report styles of different companies
- Predefine various qualification standards, auto judge and warn whether the results are qualified in every measure
- Measurement results and label lines mark directly on the image, results will also display in corresponding field on the screen
- Graph chart statistic function, automatically analyze and compare the measurement results
- Magnifier option enable users to magnify the testing image for a more accurate line positioning

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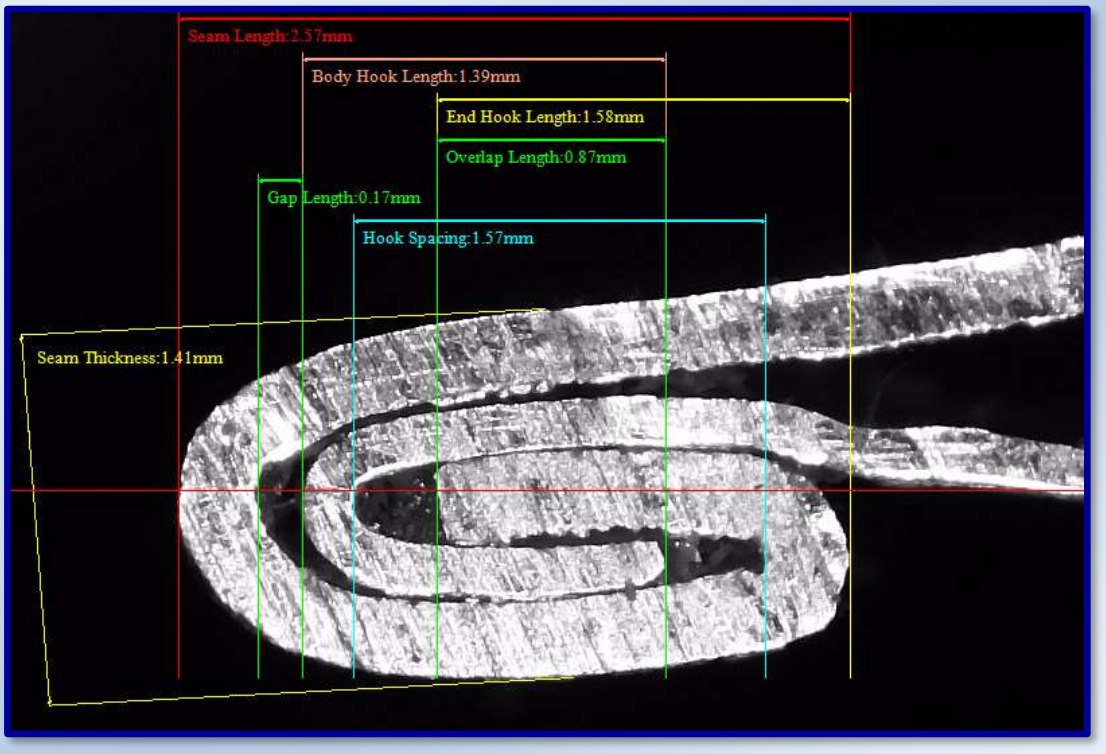
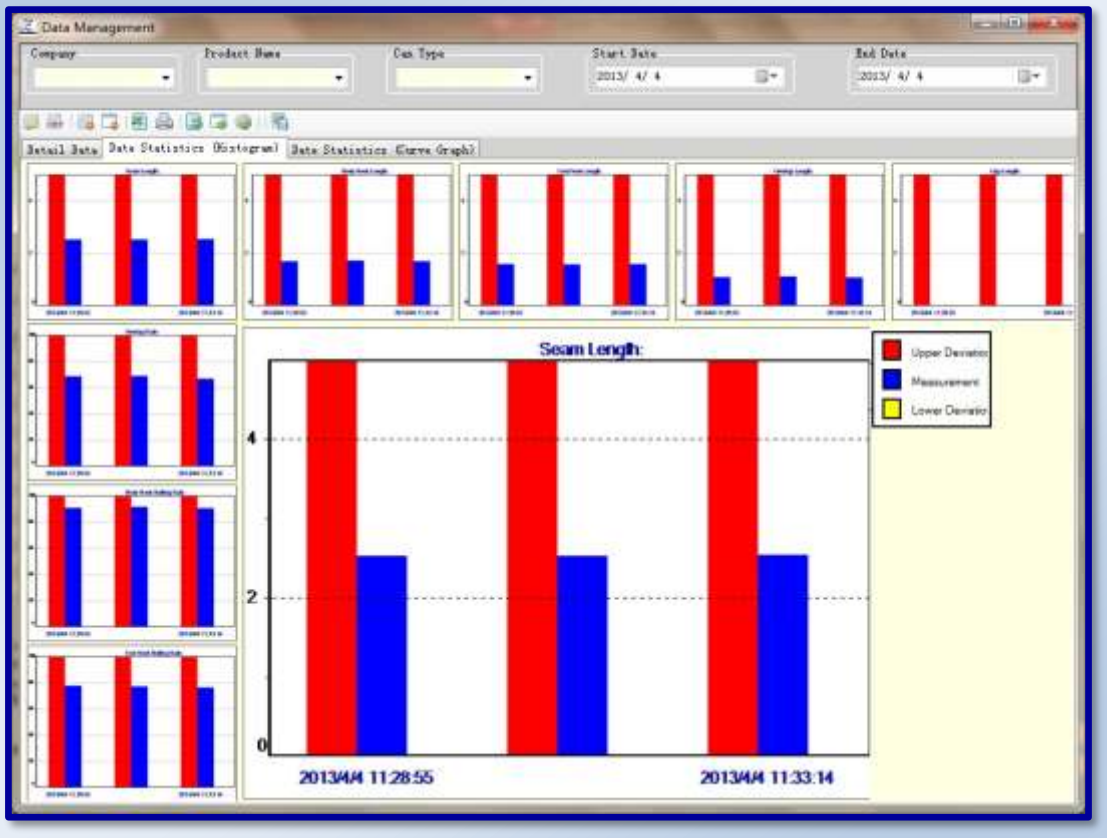
- Measured values are displayed in on-screen and alarm if values are not within specs
- Seam image can be printed and stored
- Provided with calibration piece, calibrate at any time
- Platform adjustable
- Light adjustable



Seam measuring screen



Data statistic screen

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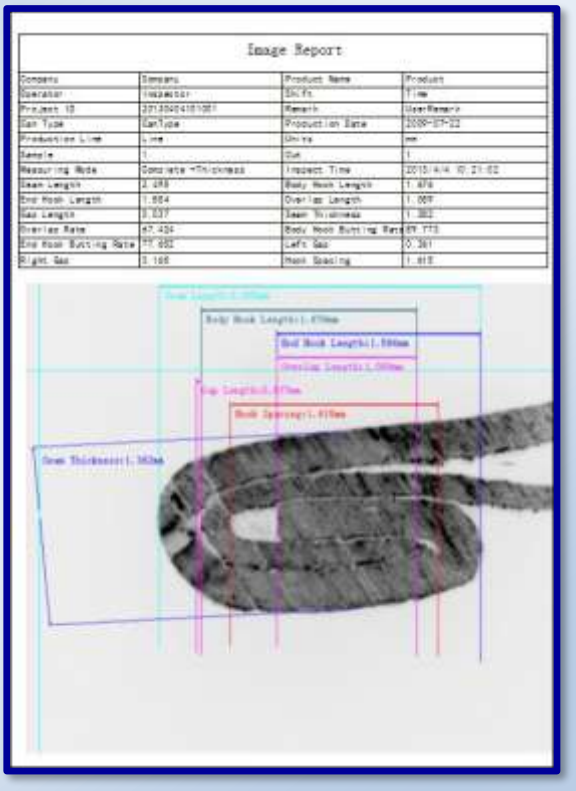
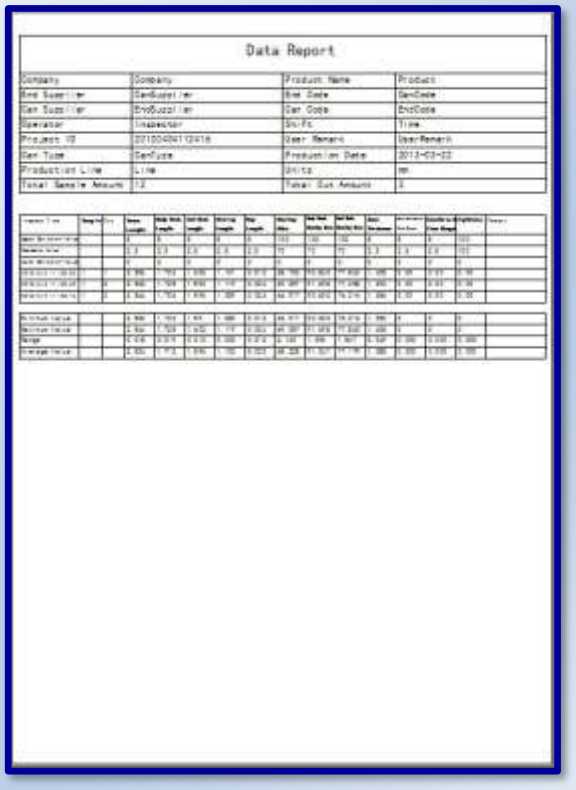


Image Report



Data Report

Equipment includes:

1. SeamCheck Plus video seam projector
2. SeamCheck 1.2 professional seam measurement software
3. 2 mm calibration piece

Technical specifications:

- Power supply: 100 - 240 V / 50 – 60 Hz
- Device power supply: DC 5V / 1A
- Video signal interface: USB 2.0
- Resolution: 0.01 or 0.001mm
- Accuracy: 0.005 mm
- Magnification factor: 60 X
- Line positioning magnification factor: 180 X
- Seam Thickness range: 0 - 2.6 mm (other range by order)
- Seam Length (Seam Height) range: 0 - 3.6 mm (other range by order)
- Platform capacity: Can diameter up 165 mm (other can diameter by order)
- Dimension: 420 (L) x 200 (W) x 95 (H) mm
- Net weight: 5 kg
- Operation system requirement:
  Windows 7 SP1 or above, Windows 8/10
  CPU: Dual core 1.5 GHz or above
  RAM: 4 G or above
  HDD Capability (where software is installed): 120 GB or above

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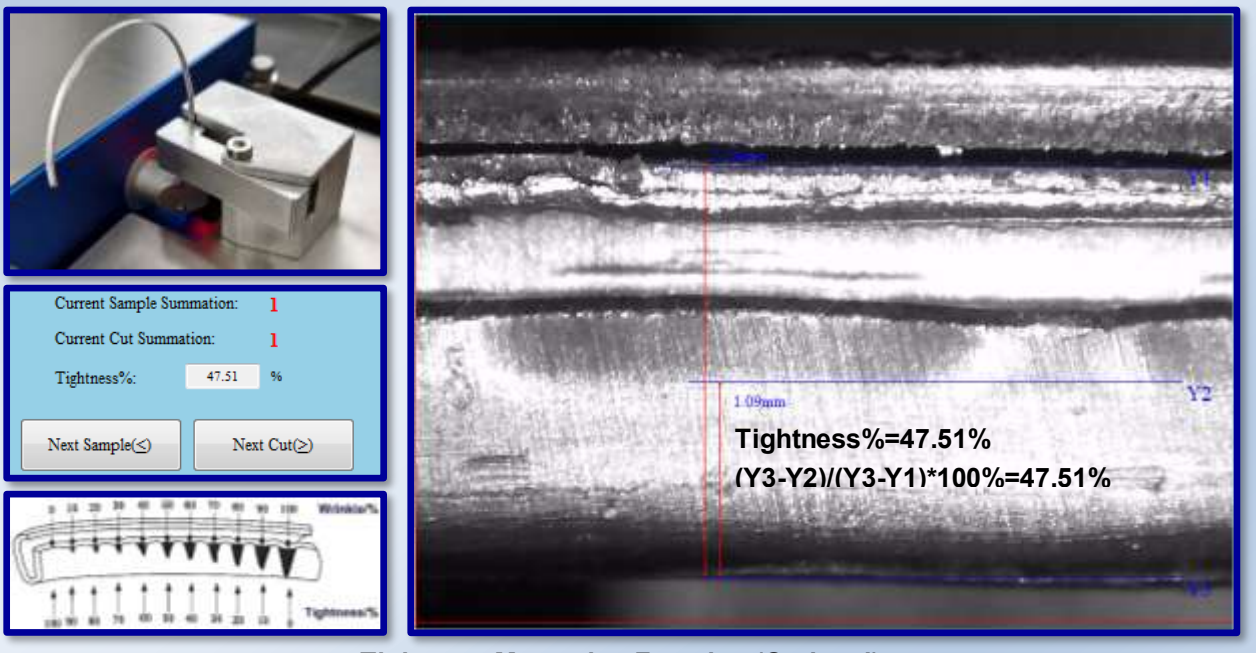
Optional parts:

- ANSS-2 Antinoise Seaming Cutting Saw / SS-1 or SS-2 Seaming Cutting Saw
- STG-1 Seam Thickness Gauge (digital)
- CG-D Countersink Gauge (digital)
- FWG-1 Flange Width Gauge
- HG-1 Height Gauge
- DTB-1 Data transporting Box with cables
- Tightness Measuring Function

Optional seaming cutting saw: ANSS & SS-1

SeamCheck Plus is able to connect with optional gauges through DTB-1



Tightness Measuring Function (Optional)

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ANSS-2 Antinoise Seaming Cutting Saw

The Antinoise Seaming Cutting Saw is a saw with a noise resistant design and a double blade for double seaming inspections. It has been specially designed for 2-pcs can and 3-pcs can (66.5 mm diameter or less).

It can apply a speed of 1350 rev/min which enables the use of this saw on very simple cutting surfaces.

With ANSS-2, a clear seam section will be obtained which is very necessary and important for a reliable double seam inspection.

Cutting can 66 mm diameter

Cutting cans with Can diameter adapting spacer

Technical specifications:

- Sample range: 2-pcs and 3-pcs can with diameter up to 66.5 mm
- Blade dimension: 80x22x0.5 mm (240 teeth)
- Motor speed: approx. 1350 rev/min.
- Working voltage: AC 220V (AC 110V optional)
- Dimension: 420 (L) x 240 (W) x 200 (H) mm
- Net weight: 14 kg

Optional part:

- Additional Can diameter adapting spacer

Can diameter adapting spacer and operation handle

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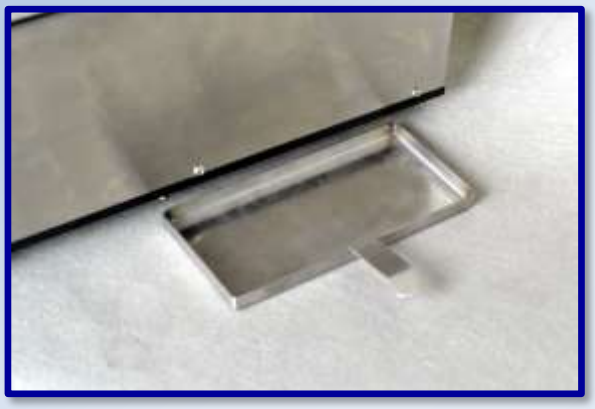
SS-1 Seaming Cutting Saw

SS-1 Seaming Cutting Saw is a specially designed saw for seam cutting purpose. Equipped with linear guide rail, cans' moving during cutting will be very precise and accurate in track. Comparing to typical seam saw, a clearer seam section will be obtained.

SS-1 Seaming Cutting Saw

Movable platform



Trash bin

Characteristics:

- Applicable for 2-pcs, 3-pcs and aerosol can
- Equipped with linear guide rail
- Easy to collect the trash

Technical specifications:

- Sample range: 2-pcs can, 3-pcs can and aerosol can
- Sample diameter: 40 - 130 mm (custom-made up to 180 mm)
- Blade dimension: 80x22x0.5 mm (240 teeth)
- Motor speed: approx. 1000 rev / min
- Working voltage: 220 V
- Dimension: 340(L) x 340(W) x185(H) mm
- Net weight: 20 kg

Optional part:

- Model SS-2

Model SS-2 for vertical cutting is available

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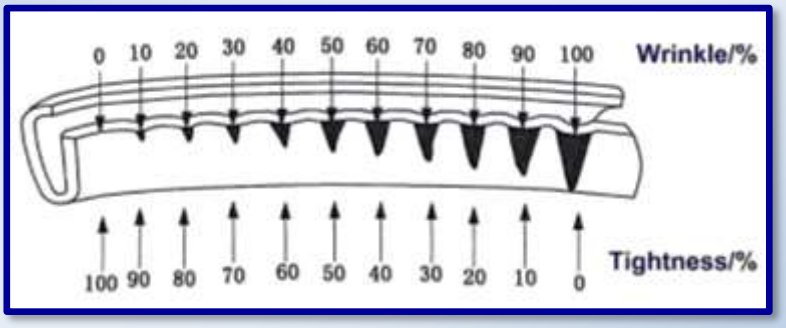
STR-1 Seam Stripper

The STR-1 Seam Stripper is designed for quick cutting and stripping the double seam of both aluminum and steel cans in a single motion. Thanks to the unique configuration of the roller cutters, only the cover hook will be cut. The body hook and cover hook are in perfect condition for measurement or visual inspection.

Attribute

- Various of safety design
- Fast and safe teardown operation without damaging or distorting the cover hook
- Durable structure to ensure the instrument stability



Tightness and Wrinkle rating in %

Technical specifications:

- Sample Size: Ø50-90mm (Larger size available)
- Sample type: Aluminum and steel cans
- Power supply: AC 220V / 50Hz
- Dimensions: 400 x 320 x 460 mm
- Weight: 19 kg

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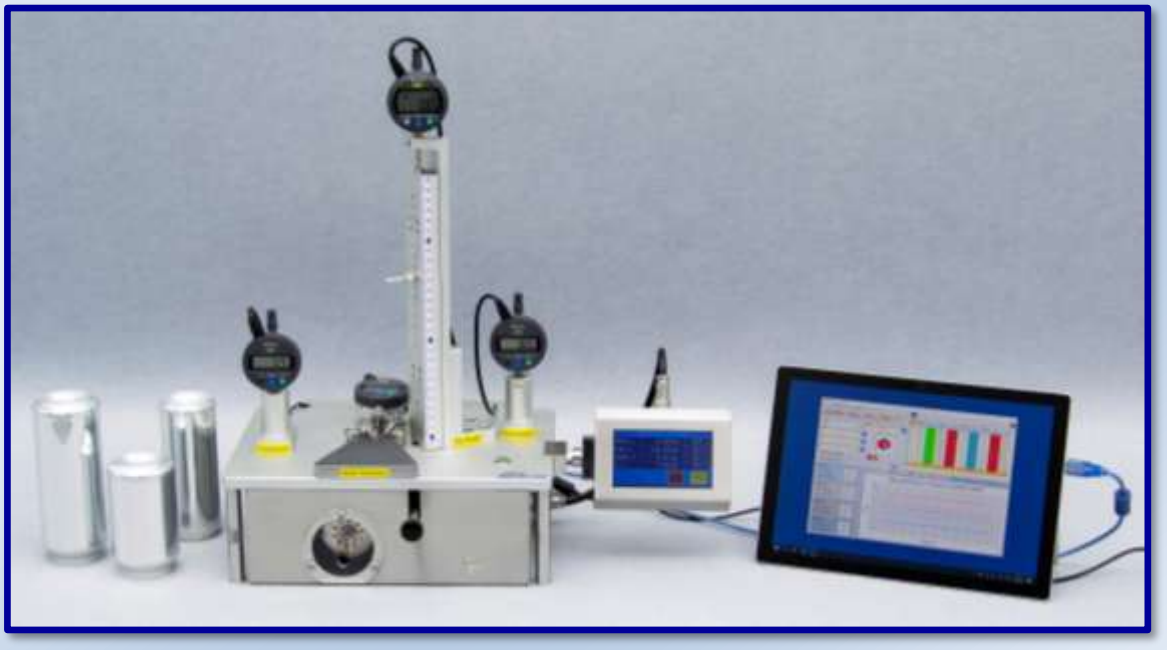
DSMM-1 Double Seam Measuring Minidesk

- For measuring the 4 double seam parameters in one time shortly



The AT2E DSMM-1 Double Seam Measuring Minidesk is designed to measure the seam thickness, seam length (seam height), countersink and height of a can in one time and one second. Operator just needs to position the can on the desk and all the measurement will be obtained. It provides a fast, repeatable and accurate method for operator.
The DSMM-1 can work for both beverage can and food can. With data transporting box, all measurement result can be sent to data collection software or AT2E special software or AT2E SeamCheck software.

Technical specifications:

- Measuring range: Seam Thickness: 0-4 mm
  Seam length (seam height): 0-4 mm
  Countersink: 0-8 mm
  Can height: 80-250 mm
- Accuracy: 0.02 mm
- Display resolution: 0.01 mm
- Sample range: 50-101 mm in diameter
  80-250 mm in height
  (Please consult AT2E for larger samples)
- Overall size: 495 x 295 x 520 mm
- Net weight: 11 kg

Optional parts:

- Data collector with cables
- Software

Data collector

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STG-1 Seam Thickness Gauge

STG-1 Seam thickness gauge is used to measure the Seam thickness of cans.

Easy-operation design offers a fast and accurate measurement of seam thickness.

With measure angle compensation and adjusted center measure point, the can could be auto-positioned in the center easily during measuring. The gauge is applicable for different kinds of cans.

When using the double seam projector, the seam structure may have a slight deformation after cut by the seaming cutting saw, the seam thickness measured on the projector therefore will have a certain deviation. While using the seam thickness gauge, it is able to measure the actual seam thickness value.

In order to avoid the manual recording error, the gauge can be connected to SPC system or AT2E “SeamCheck” software with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to SPC system or “SeamCheck” software through DTB-1 and cable.

Technical specifications:

- Measuring range : 0-5 mm
- Resolution : 0.01 mm
- Accuracy : ±0.01 mm
- Sample range : 3-pcs & 2-pcs can
- Sample capacity : 50 mm to 101 mm dia. can (Bigger by order)
- Overall size : 320(L) x 100(W) x 100(H) mm
- Net weight : 2 kg

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SLG-1 Seam Length Gauge

SLG-1 Seam Length Gauge is for quick measure of the Seam length (Seam height)

Easy-operation design offers a fast and accurate measurement of the Seam length (Seam height).

Reliable design, invariable measuring pressure and measuring angle which enable the operators perform the measurement accurately. The can body was aligned vertically, measurement results are more reliable. Applicable for different types of cans.

In order to avoid the manual recording error, the gauge can be connected to SPC system or AT2E “SeamCheck” software with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to SPC system or “SeamCheck” software through DTB-1 and cable.

Technical specifications:

- Measuring range : 0-7 mm
- Resolution : 0.01 mm
- Accuracy : ±0.01 mm
- Sample range : 2-pcs & 3-pcs can
- Can diameter : 35-190mm
- Overall size : 325(L) x 80(W) x 255(H) mm
- Net weight : 2 kg

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CIDG-1 Can Internal Diameter Gauge

Measuring

The CIDG-1 Can Internal Diameter Gauge is for quick checking the internal diameter of necked-in cans. For each diameter, a corresponding calibration block will be supplied along with the gauge.

It can be custom made to compatible for different can sizes in one gauge. Please specify when inquiring.

Technical specifications:

- Sample range : 2-pcs can and 3-pcs can
- Resolution : 0.01 mm
- Accuracy : ± 0.01 mm
- Dimensions : 310(L) x 100(W) x 120(H) mm
- Net Weight : 5 kg (including calibration rings)

Calibration for CIDG-1

Compatible for different can sizes in one gauge

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CG-D Countersink Gauge

Equipped with zeroization base

Measuring

CG-D Countersink Gauge is a digital gauge for measuring countersink depth of can and end. For fast and easy measurement, the zeroization base is equipped.

In order to avoid the manual recording error, the gauge can be connected to “SPC” system or AT2E “SeamCheck” software with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to “SPC” system or “SeamCheck” software through DTB-1 and cable.

Technical specifications:

- Measuring range : 0-12 mm
- Resolution : 0.01 mm
- Accuracy : ±0.01 mm
- Sample range : 3-pcs, 2-pcs can & ends
- Overall size : 147(L) x 81(W) x 153(H) mm
- Net weight : 1 kg

Optional model CG-A with analog indicator:

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FWG-1 Flange Width Gauge

FWG-1

Measuring

FWG-1 Flange Width Gauge is used to measure the flange width of empty cans.

Easy-operation design offers a fast and accurate measurement of flange width.

In order to avoid the manual recording error, the gauge can be connected to SPC system or AT2E “SeamCheck” software with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to SPC system or “SeamCheck” software through DTB-1 and cable.

Technical specifications:

- Measuring range : 0-5 mm
- Resolution : 0.01 mm
- Accuracy : ±0.01 mm
- Sample range : 3-pcs & 2-pcs can
- Sample capacity : 50 mm to 90 mm dia. can (Bigger by order)
- Overall size : 185(L) x 115(W) x 120(H) mm
- Net weight : 1 kg

Custom made in large size

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CSM - Can Seam Micrometer

- with fine tuning

CSM-A for Tin can (Food can)

CSM-B for Aluminum can (Beverage can)

CSM-C for Aerosol can

CSM Can Seam Micrometers is used for a quick measurement of seam thickness and seam length. It's an easy-operated tool and widely use in canning industry.

Technical specifications:

- Measuring range : 0-13.00 mm
- Resolution : 0.01 mm
- Accuracy : ± 3µm
- Sample range : 3-pcs can & 2-pcs can & Aerosol can
- Net weight : 0.2 kg

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CDDG-1 Can Dome Depth Gauge

CDDG-1 Can Dome Depth Gauge is specifically designed for measuring the dome depth of beverage can. With the quick changing spacers, it is easily compatible with cans of different diameters.

Technical specifications:

- Zero block is included
- Measure range: 0 - 13 mm (longer by order)
- Resolution: 0.01 mm
- Sample range: Beverage cans (please specify the can diameters when ordering)
- Overall size: Ø130 x 140 mm
- Weight: 2 kg

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CO - Can Opener

A simple and convenient tool used to remove the center section of the can end while keeping the double seam intact.

Sample can diameter: 40-300 mm 3-piece cans

PTG-1 Plate Thickness Gauge

PTG -1 Plate Thickness Gauge is for quick checking of the thickness of plates.

Easy-operation design offers a fast and accurate measurement of the plate thickness.

In order to avoid the manual recording error, the gauge can be connected to SPC system or AT2E “SeamCheck” software with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to SPC system or “SeamCheck” software through DTB-1 and cable.

Technical specifications:

- Measuring range : 0-6 mm
- Resolution : 0.001 mm
- Accuracy : ±0.001 mm
- Overall size : 190(L) x 100(W) x 95(H) mm
- Net weight : 1 kg

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PATT-1 Pop and Tear Tester

AT2E PATT-1 Pop and Tear Tester provides a complete solution for easy open ends inspection. It is able to measure the pop and tear force of different types of easy open end with different test modes. It has been widely used in can, food and beverage industry.

PATT-1 has adopted a high definition touching screen, with the user-friendly program design, it is very easy and convenient to use. Operators just need to install the end, hook on the tab then press the start button to finish a test. The PATT-1 system will auto detect the pop and tear force during the test process, and review the test curve in graph window.

With the AT2E professional software, it is able to transfer the test data to software for further analysis and management.

Technical specifications:

- Applicable sample type: RPT / SOT / EO / OVAL / FSE / APOE.
- Testing range:0-100N
- Resolution:0.1N
- Units: N / kgf / lbf
- Power supply:230V/50Hz
- Data output: RS232
- Dimension:400 x 490 x 910 mm
- Weight: 55kg

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CEBT-1 Can and End Buckle Tester

Can test

End test

The AT2E CEBT-1 Can and End Buckle Tester was designed for testing the pressure resistance performance of the can dome and ends, it can also perform the missile test for ends.

Full automated design, just press the start button after the sample was placed, then the test process will be accomplished automatically and results to be shown on screen.

Optimum designs, no need to change the clamps when testing the necked-in cans with same diameter but different height, while for the necked-in cans with different diameters, just a few simple steps to change the sealing unit and clamps. User-friendly operation interface, makes it simpler in operation and maintenance.

Attributes:

- Optimum designs, simple in operation
- PLC integrated & Touch screen control
- Easy sample installation
- No need to change clamps for necked-in cans with same diameter but different height
- Pressurization speed adjustable, able to set different target pressure by steps
- Optional external pneumatic booster, able to increase the inlet pressure up to 2 times.
- Stainless steel frame, strong and durable
- Overloaded protection and various safety designs
- Test result displays directly on screen. Able to review previous test results, auto calculate the average, maximum and minimum value.
- RS232C data output
- With calibration interface

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Technical specification:

- Sample: Beverage can, can ends
- Measure range: 0-10 bar (1 Mpa)
- Accuracy: ±0.5% F.S.
- Resolution: 0.01 bar
- Data output: RS232C
- Power supply: AC 220V (AC 110V optional)
- Air supply: 5 - 10 bar
- Dimensions: 715 x 500 x990 mm
- Weight: 90kg

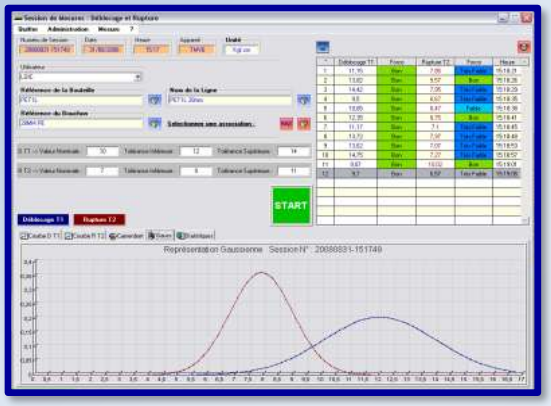
Optional parts

- Missile test unit
- External pneumatic booster (increase the inlet pressure up to 2 times)
- Mini-printer
- "QualiBurst" or "QualiPress" software

Missile test unit (Optional)

External pneumatic booster (Optional)

Mini printer (Optional)



"QualiBurst" software (Optional)

"QualiPress" software (Optional)

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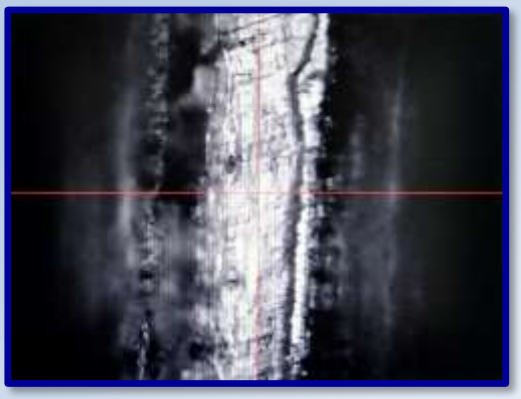
SRG-1 Score Residue Gauge



AT2E SRG-1 Score residue gauge is used to measure the score residue of can ends.

Adopted with the high precision optical components, which ensures the high definition of the score profile images and measure accuracy. Equipped with long working distance lens which is more compatible to different types of end with different score positions.

Applicable for the score measurement of various kinds of can ends. Such as RPT, SOT, EO, etc.

Technical specifications:

- Applicable sample type: RPT, SOT, EO
- Measure range:0-10mm
- Resolution:0.001mm
- Reproducibility: 0.002mm
- Lens working distance: 8.2mm
- Magnification: 1000 X
- Size: 280 x 350 x 610 mm
- Weight:19kg

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ECDG-1 End Curl Diameter Gauge

ECDG-1 End Curl Diameter Gauge is for quick measure of the Curl Diameter of ends

Easy-operation design offers a fast and accurate measurement of the Curl Diameter. For each end type, a corresponding calibration block will be supplied along with the gauge.

In order to avoid the manual recording error, the gauge can be connected to SPC system with DTB-1 Data Transporting Box and cable. So that, the data can be transferred to SPC system DTB-1 and cable.

Measuring

Equipped with calibration block

Technical specifications:

- Measuring range : Ø 50-110 mm
- Resolution : 0.01 mm
- Accuracy : ±0.01 mm
- Sample End Type : 113# - 401# (larger by order)
- Overall size : 265(L) x 80(W) x 67(H) mm
- Net weight : 2 kg

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AT2E --- "Application of technologies in electrical and electronic ".

AT2E's mission:

- Supplying high technology and best quality products
- Listening to customer's need and developing the requested machine, improving our system to answer their need
- Prompt answer to request.
- Increasing our presence in our main target markets: Packaging, beverages, food, cosmetic, pharmaceuticals, and chemical industries

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