Brochure 2017

Quality Control Instruments

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

CUSTOMER REFERENCE

Food and Beverage

Coca-Cola, pepsi, Vranken Pommery Monopole, Carlsberg, Danone, AB InBev

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

Cosmetic

L'Oréal Paris, L'Occitane en Provence, Dior, Chanel, Yves Saint Laurent, Louis Vuitton

Pharmaceuticals

Sanofi, Novartis, Schering-Plough, 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 (Arkema Group), global closure systems (Zeller Plastik)

Chemistry & Other

P&G, Reckitt Benckiser (Health · Hygiene · Home), Henkel, AES Laboratoire, intel, syngenta

AT2E
2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE
info@at2e.com Tél. : +33 (0)1 64 66 03 02

CE

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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 20 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).

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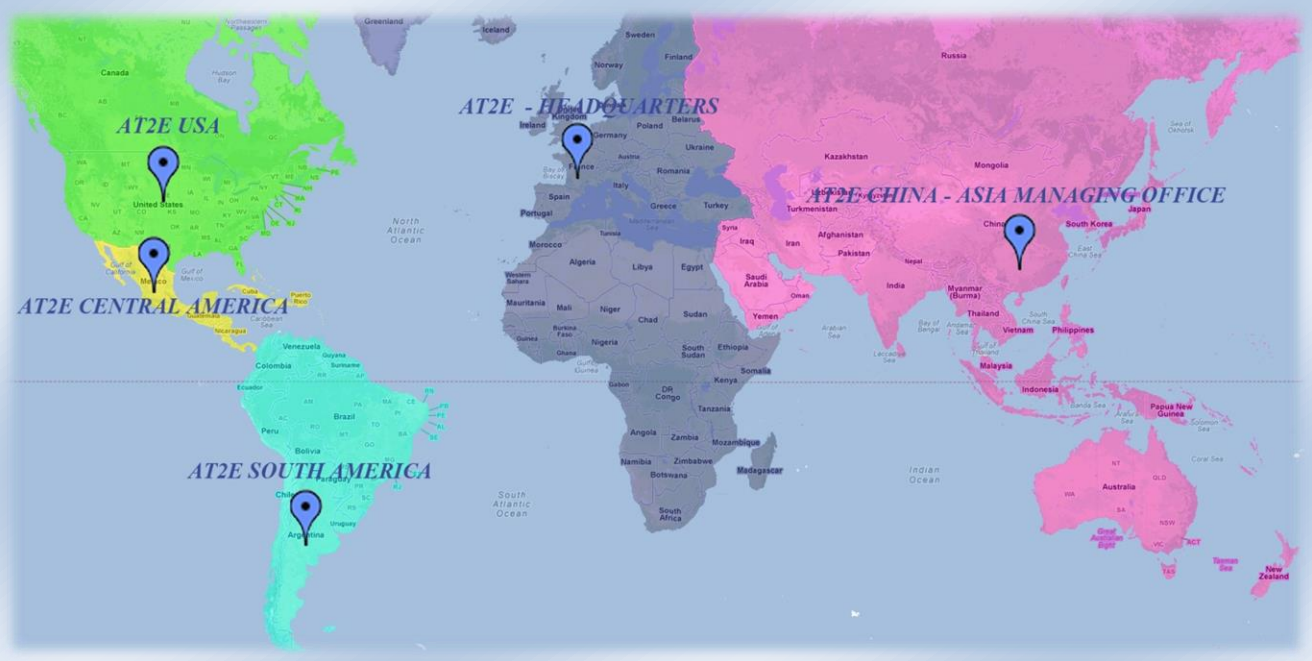
ABOUT AT2E

- 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.
- 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.

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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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 / daN.cm / 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 outputs: RS232 & mini USB (software & printer)
- Language: French / Italian / Spanish / English
- Delivered with ASTM calibration certificate
- 110 / 230 V - 50/60 Hz
- Transportation case

High resolution & color touch screen

User-friendly testing interface

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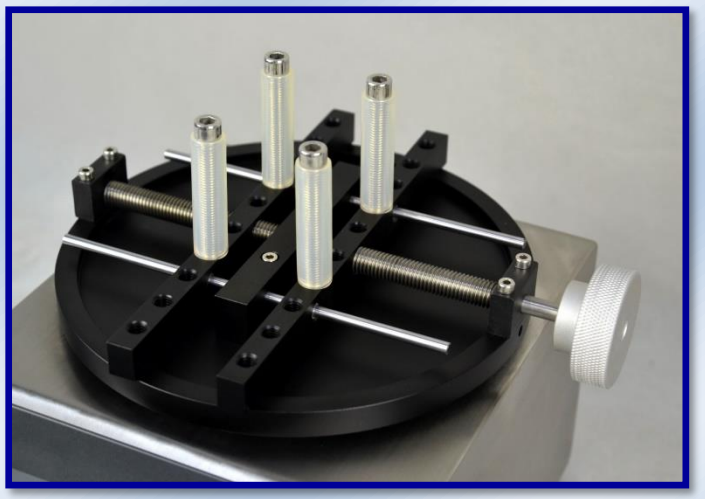


Enhanced agro table

Fast squeeze system

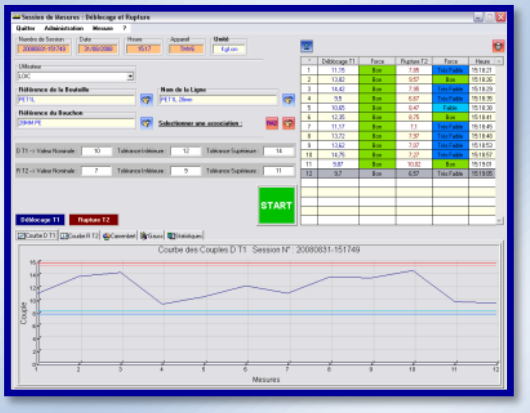
Mechanical specifications:

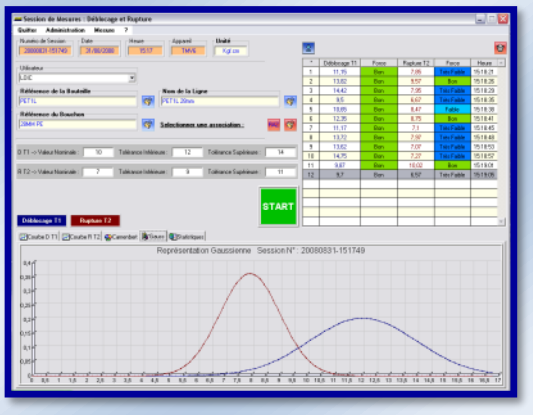
- Stainless steel frame
- Choice of measuring table: Agro / Fast squeeze system
- Dimensions: 370(L) x 215(W) x150 to 200(H) mm (according to measure table)
- Weight: 7 kg

Optional parts:

- QUALITORQ Software CFR 21- FDA (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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TMV5 - 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.

TMV5 with agro table

TMV5 with cosmetic table

Technical specifications:

- Touch screen display
- Measures opening and closing directions
- 0.080 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)
- Units: Kgf.cm / Inch.lbs / daN.cm / N.m / N.cm
- Accuracy: ± 0.5 % of full scale
- 100 product memory with 4 limits each
- 4 thresholds by product (V Low, Low, High, v High)
- 20 operators memory
- Setting of files by administrator code
- Store 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°
- 1 RS232 output for software & 1 printer output
- Language: French / Italian / Spanish / English
- Delivered with COFRAC calibration certificate
- 110 / 230 V - 50/60 Hz

Measuring interface

Mechanical specifications:

- Stainless steel frame
- Choice of measuring table: Agro / Cosmetic
- Optional battery
- Dimensions: 300 (L) x 180 (W) x 200 (H) mm
- Weight: 7 kg

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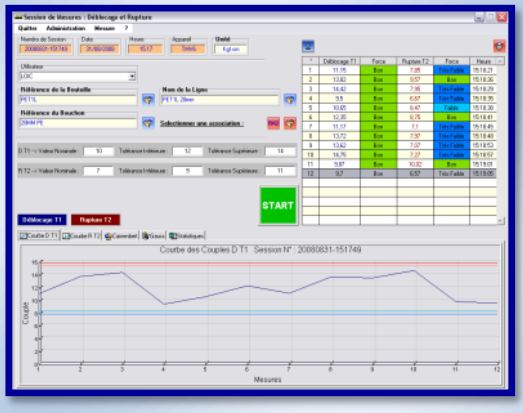
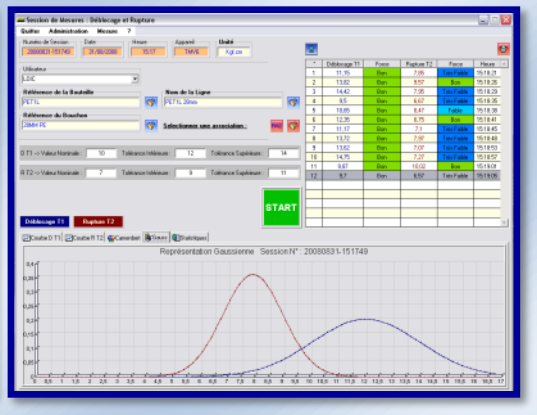
Optional parts:

- Mini printer
- QUALITORQ Software
- Easy / Safe opening bloc
- Calibration pack
- Portable case





QUALITORQ software (Optional)

Mini printer (Optional)

Easy opening bloc (Optional)

Portable case (Optional)

ADATMV - ECO Semi-Automated Torque Tester

Comply 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
- 3 measuring cycles (constant reading, Opening or Closing, Removal +Breaking)
- Units: Kgf.cm / N.m / Inch.lbs / N.cm
- Rotating speed adjustable
- Accuracy: ± 0.5 % of full scale
- 30 products memorization
- 10 thresholds (limits) option
- 10 operators memorization
- Configuration by protected password (administrator)
- Memorization up to 990 measures (transferable)
- Dynamic display: statistics / hour / date
- Display: product name / operator / batch N° / Sample N°
- 1 USB output and 1 printer output (software & printer)
- Language: English
- Delivered with calibration certificate COFRAC
- 110 / 230 V - 50/60 Hz

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Automated part:

- Automatic zero before restarting cycle
- Settable height of column for all samples
- Easy-fast selector for cycles
- Settable speed for screwing and unscrewing operations

Mechanical specifications:

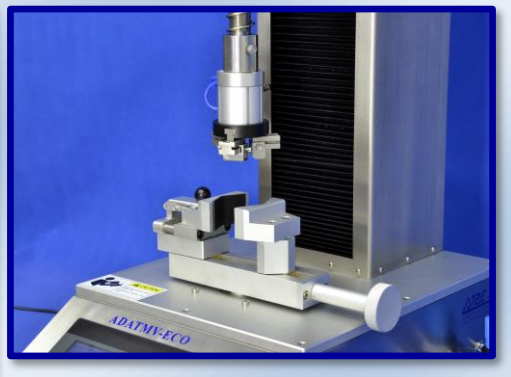
- Stainless steel Frame
- Choice of jaw, or bottle neck clamp
- Dimensions: 350 x 590 x 950 mm
- Weight: 50 kg

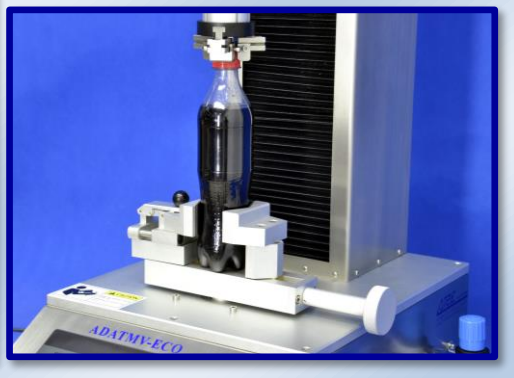
Optional parts:

- Pneumatic chuck version
- Mini printer
- QUALITORQ Software
- Calibration pack

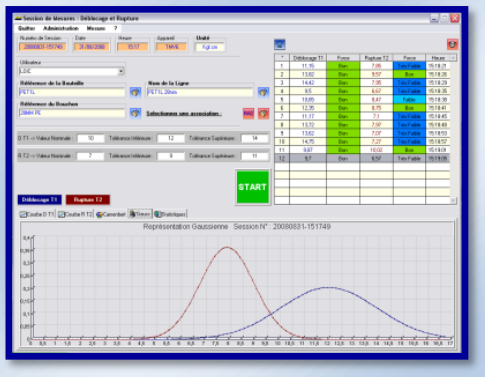
.• Dynamometric system

Mini printer (Optional)





ADATMV-ECO with pneumatic chuck version (Optional)



“QUALITORQ” Software (Optional)

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ADATMV5 - Monopost Automated Torque Tester

Comply with the requirements of FDA - CFR 21-11

Automated Clamping system & Customized clamps

6 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
- 6 measuring cycles: **Torque closing / Reach position / Release + break / Release + break + over screw / Non-destructive test / Cork extraction test**
- Units: Kgf.cm / N.m / Inch.lbs
- Rotating angle & speed adjustable under certain cycle
- Accuracy: ± 0.5 % of full scale
- 30 products memorization
- 10 thresholds (limits) option
- 10 operators memorization
- Configuration by protected password (administrator)
- Memorization up to 100 measures (transferable)
- Dynamic display: statistics / hour / date
- Display: product name / operator / batch N° / line N°
- 1 RS232 output and 1 printer output (software & printer)
- Language: English
- Delivered with calibration certificate COFRAC
- 110 / 230 V - 50/60 Hz

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Automated part:

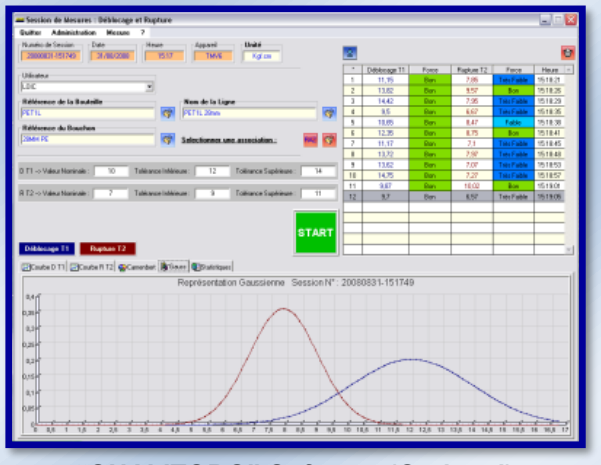
- Safety door
- Automatic zero before restarting cycle
- Settable height of column for all samples
- Easy-fast selector for cycles
- Settable speed for opening and closing operations
- Customized cycles
- Special pneumatic chuck available
- Special multi format system for both bottle and preforms
- Dynamometric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

Mechanical specifications:

- Stainless steel Frame
- Choice of measuring chucks: Beverage / Cosmetic / Pharmacy
- Dimensions: 610 (L) x 570 (W) x 1080 (H) mm
- Weight: 94 kg

Optional parts:

- Mini printer
- QUALITORQ Software
- Customized display & cycles
- Calibration pack
- Dynamometric system



"QUALITORQ" Software (Optional)

Calibration pack (Optional)

Mini printer (Optional)

Dynamometric system (Optional)

Automatic squeezing clamping system for PET packaging (Optional)

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ADATMV5-S On line Automated Torque Tester

OPENIG – CLOSING HEAD WITH CONE OR 3 JAWS PNEUMATIC CHUCK

OPTIONAL MODULE AUTOMATIC "BUBBLE POINT"

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Technical specifications: **CFR21-11 / FDA compatible**

- Free operator torque controller (on-line)
- Legal weighing control suitable in option
- Secure seal test suitable (automatic bubble point control)
- Using by touch screen
- Measures in opening and closing directions
- Measuring range: 00.00 to 99.00 Kgf.cm
- 6 measuring cycles: **Torque closing / Reach position / Release + break / Release + break + over screw / Non-destructive test /– MORE ON REQUEST**
- Units: Kgf.cm / Inch.lbs / daN.cm / N.cm / N.m
- Rotating angle & speed adjustable under certain cycle
- Accuracy: ± 0.5 % of full scale
- 30 products memory
- 10 thresholds (limits) option
- 10 operators memory
- Configuration by protected password (administrator)
- Memorization up to 100 measures
- 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
- Delivered with calibration certificate ASTM/ NIST/COFRAC/ DKD ENAC / UKAS
- Easy-fast selector for cycles
- Customized cycles
- Special pneumatic chuck available
- Auto-mode
- Special auto mode with head number – filler storage
- Special multi format system for both bottle and preform
- Dynamometric system
- 110 / 230 V - 50/60 Hz

Automated part:

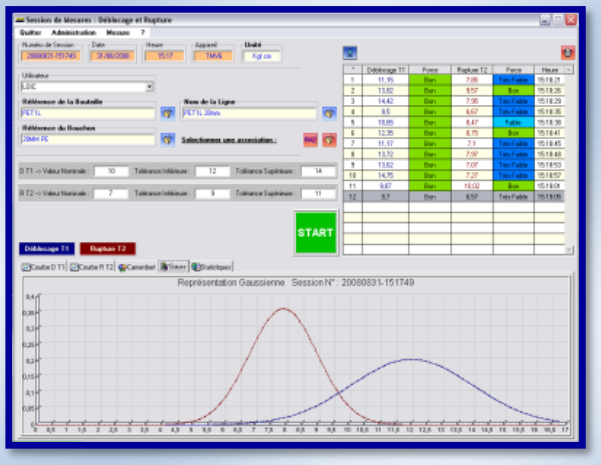
- Safety door
- Automatic zero before restarting cycle
- Settable height of column for all samples

Mechanical specifications:

- Stainless steel Frame
- Choice of measuring chucks: Beverage / Cosmetic / Pharmacy
- Dimensions: 1090 (L) x 710 (W) x 1120 (H) mm
- Weight: 120 kg

Optional parts:

- Mini printer
- QUALITORQ Software
- Customized display & cycles
- Calibration pack
- Dynamometric system



"QUALITORQ" Software (Optional)

Calibration pack (Optional)

Mini printer (Optional)

Dynamometric system (Optional)

Automatic squeezing clamping system for PET packaging (Optional)

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BT ETA TORQUE ECO - Dynamometric Torque Bottle

- Design to control torque on torque testers

Our Torque meters 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 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 BOTTLE 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

Custom made format

Allow to control calibration level on torque testers

Technical specifications:

- Adjustable torque from 1 to 15 Kgf.cm / Inch.lbs
- Measurements in opening and closing directions
- Delivered with calibration certificate (Option)
- No battery needed
- Transport case

Mechanical specifications:

- Aluminium made (Stainless steel on request)
- Dimensions: Customize
- Weight: 1- 4 kg

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BT ETA 5 - Touch Screen Dynamometric Torque Bottle

DESIGNED TO BE INSTALLED UNDER CAPPING HEADS

Our torque meters 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 influences on the measurement for maximum repeatability.

Stainless Steel Box

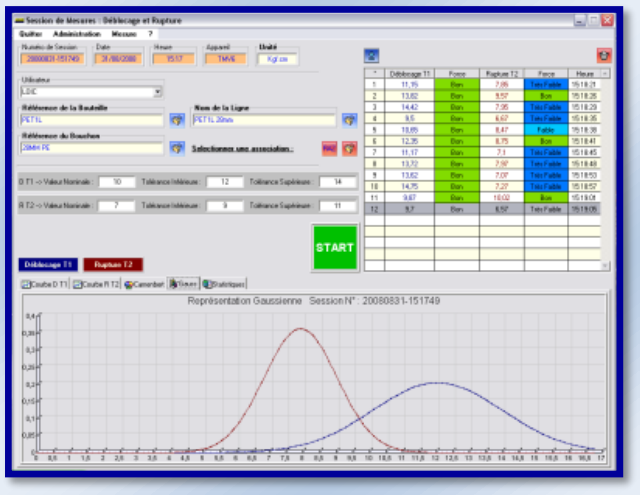
Bottle realized on measure

Technical specifications:

- Touch screen display
- Measurements in opening and closing directions
- Measuring range: 00.00 to 99.00 Kgf.cm
- 3 measuring modes (mean, peak, peak+info)
- Units: Kgf.cm / Inch.lbs / daN.cm / N.m / N.cm
- Accuracy: ± 0,2 % of full scale
- 50 product memory with 4 limits each
- 4 thresholds by product (Low, v Low, High, v High)
- 15 operator memory
- Setting of files by administrator code
- Store and transfer up to 990 measurements
- Message + bar-graf f(x) of torque value
- Dynamic display: statistics, hour, date
- Display: product name, operator, batch N°, line N°
- 2 RS USB output (PC – printer)
- Language: French, Italian, Spanish, English, German
- Delivered with calibration certificate COFRAC
- 110 / 230 V - 50/60 Hz

Mechanical specifications:

- Stainless steel frame / IP 64
- Choice of measuring table: Food/Cosmetic/Pharmacy
- Optional battery
- Dimensions: Customize
- Weight: 7 kg



QUALITORQ software (Optional)

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Optional parts:

- Mini printer
- Printing of results & statistics (hour + date)
- QUALITORQ Software
- Analog curve 10 000 pts / sec Software
- Analog output
- Customizable display
- PLC integration on request
- Easy / Safe opening bloc
- Calibration pack
- Transport case

Mini-printer (Optional)

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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 / N.cm
- Accuracy: ± 0.5 % of full scale
- Loading by USB (PC)
- Delivered with COFRAC certificate
- Transport case
- 110 / 230 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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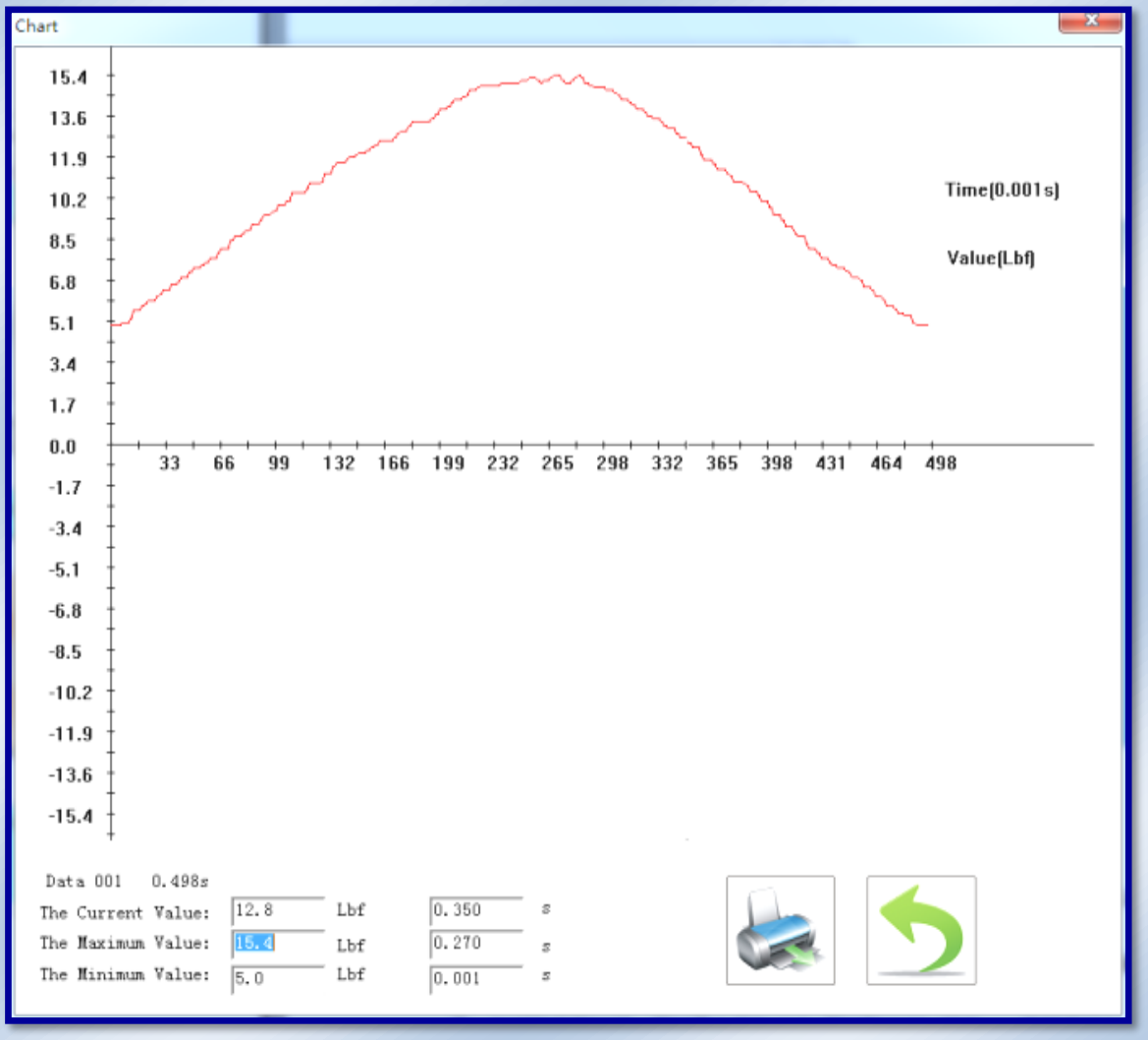
Using:

- 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 meters 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 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 a 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.

Technical specifications:

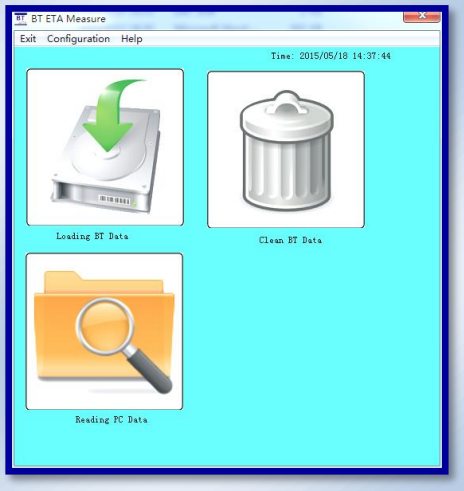
- Digital display
- Measures in opening and closing directions
- Measuring range: 00.00 to 60.00 Kgf.cm
- 2 Measuring modes (continue, peak)
- Units: Kgf.cm / Inch.lbs / N.m / N.cm
- Accuracy: ± 0.5 % of full scale
- measures memory with curves
- Loading / Transfer by USB (PC)
- Delivered with ASTM certificate
- Transport case
- 110 / 230 V - 50/60 Hz

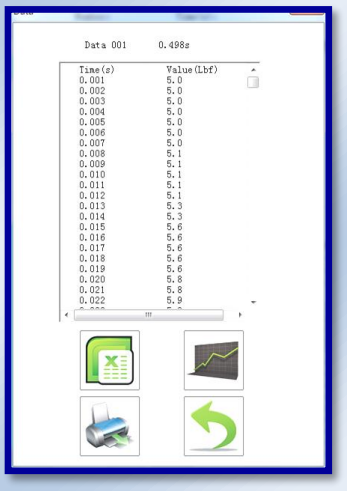
Mechanical specifications:

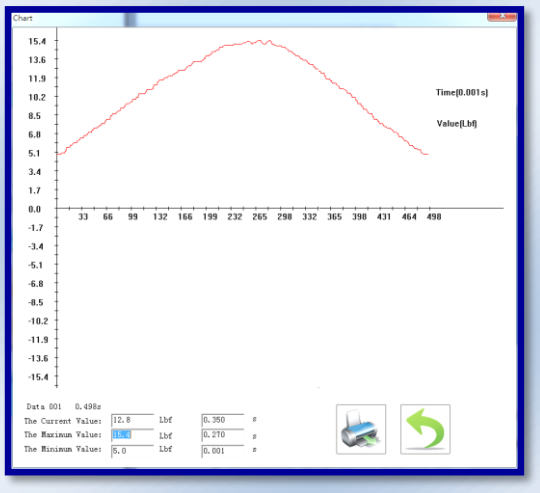
- Designed on request regarding customers' drawings
- Built-in battery 3H
- Size range: Minimum diameter 35 mm / Minimum height 60mm
- Weight: 0,5 kg

Using:

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







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VLT-ECO Vacuum Leak Tester (ECO Model)

(Air and water tight test box: vacuum test)

With Vacuum Generator

With Vacuum pump

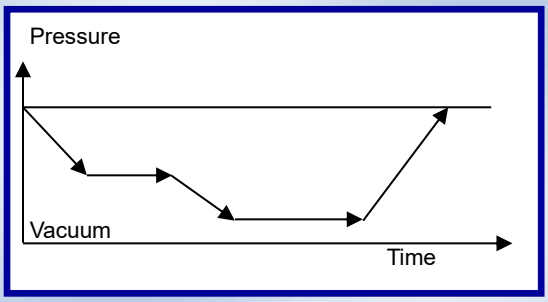
Tests on:

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 WITH OR WITHOUT STEP

Specifications:

- Vacuum adjustable up to - 999 mb
- 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: 0.5% of the measure
- Equipped with vacuum generator
- Runs with 6 bar network
- Quick and easy of verification and calibration
- Adjustable temporization to keep vacuum or pressure

VLT-ECO with immersion system

Optional parts:

- Immersion system
- High performance pump (vacuum -999 mb)

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VLT-ECO with shelf

Round VLT-ECO

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VLT-ST Vacuum Leak Tester (Standard Model)

(Air and water tight test box: vacuum test)

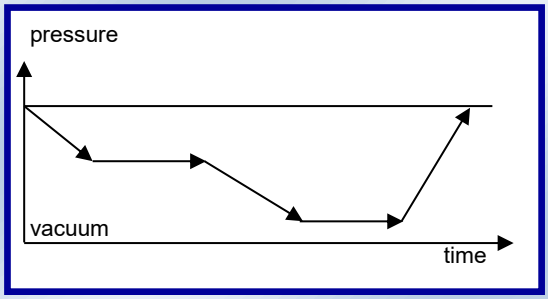
Tests on:

Bottles: Glass or PET and Preforms

Caps: Aluminium, other metal, plastic

Cans: Aluminium, others

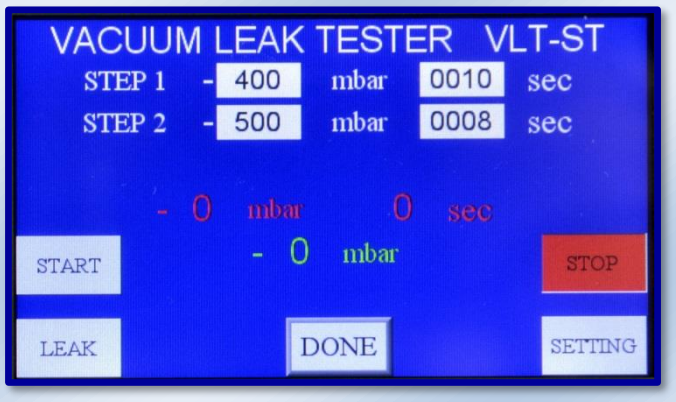
Pots: caps, film, blisters etc.



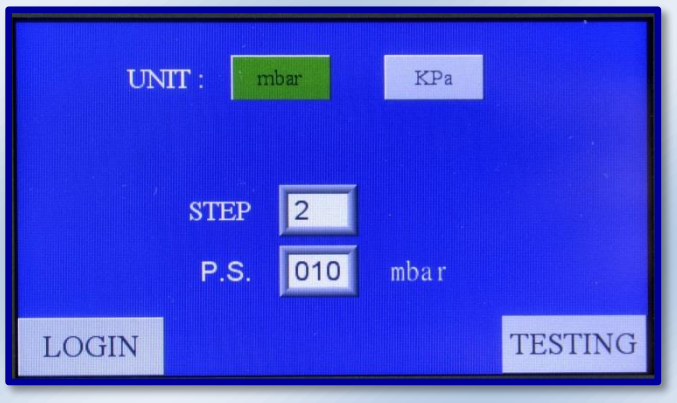
Test curve

LEAK DETECTION BY SETTING VACUUM WITH OR WITHOUT STEP

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



Test interface



Setting screen

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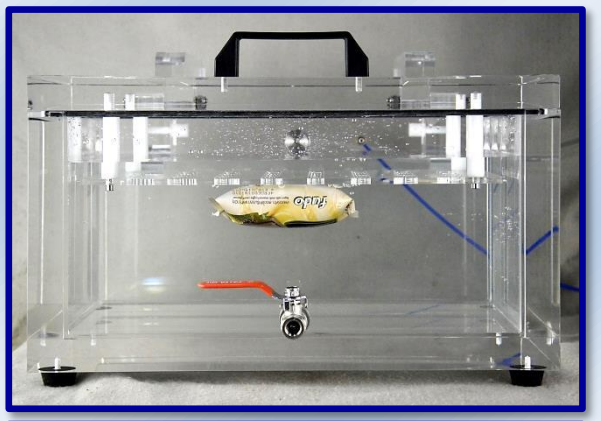
Specifications:

- Vacuum adjustable up to - 999 mb
- 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)
- Accuracy: 0.5% of the measure
- Delivered with vacuum generator
- Runs with 6 bar network
- Verification and calibration quick and easy

*Adjustable temporization to keep vacuum or pressure

Optional parts:

- Immersion system
- High performance pump (vacuum -999 mb)



Equipped with immersion system

Various size of box upon request

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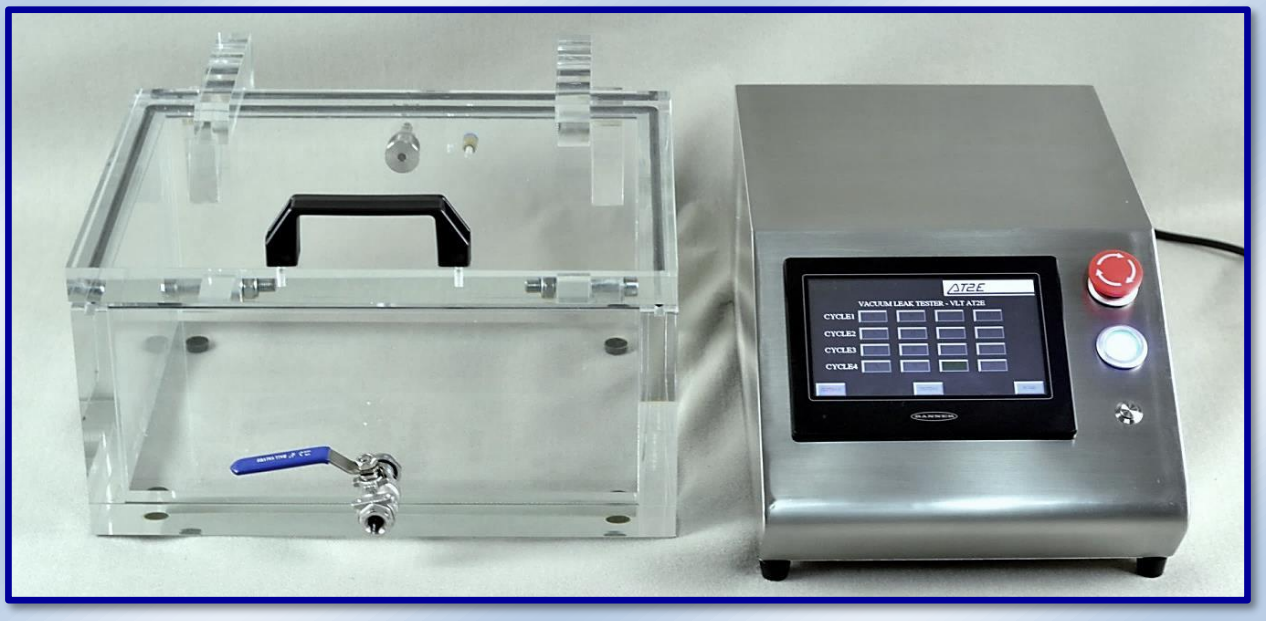
VLT-PLC Vacuum Leak Tester (PLC Model)

(Air and water tight test box: vacuum test)



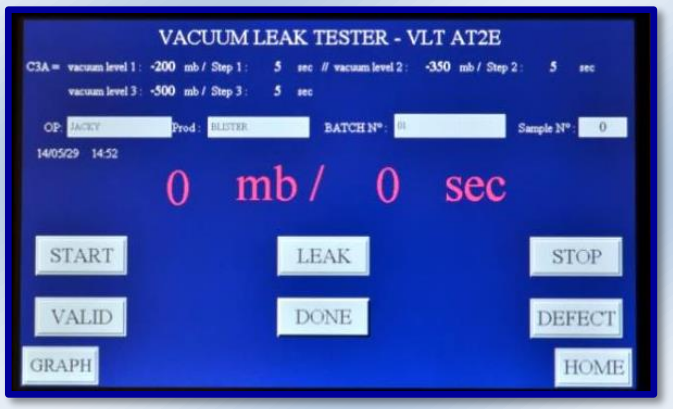
Tests on:

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 WITH OR WITHOUT STEP

Specifications:

- Vacuum adjustable up to - 999 mb pressure up to 1 bar
- 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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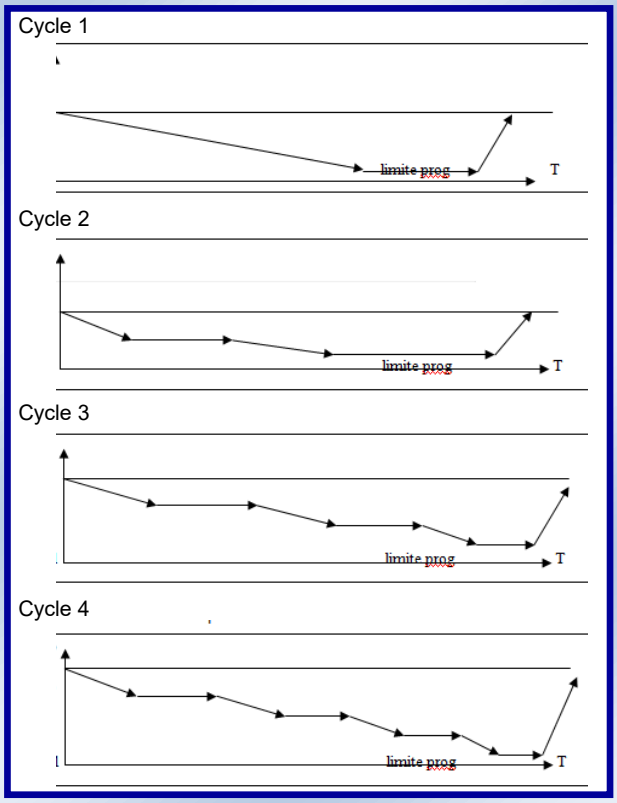
- User defined test cycle (up to 16 modes). Pre-define up to 4 steps of each test. Vacuum level and holding time adjustable
- For each step. Satisfies different kinds of testing request • Easy operation, only to select the pre-defined mode for starting a test no need to set the parameters every time
- 10 operators and 30 products memorisable
- Lot No. and Sample No. editable
- Review of the testing curve
- RS 232 C output
- Accuracy: 0.5% of the measure
- Delivered with high performance vacuum pump
- Runs with 6 bar network
- • Quick and easy verification and calibration



Test curve

Optional parts:

• Immersion Cart

• Mini-printer

Box with front door and shelves

Cylinder design

Box with immersion system

Mini-printer (Optional)

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SSA-ECO Secure Seal Analyzer (ECO Model)

(Leak test apparatus / Bubble point)

Left side view

Right side view

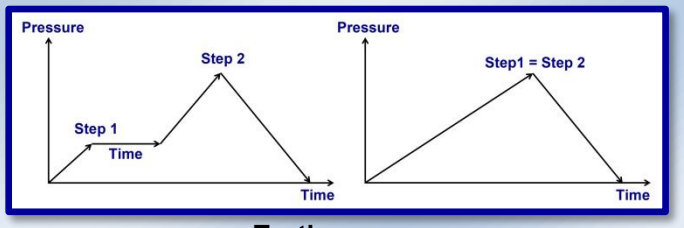
Control vavle and analog diaplay

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
- 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
- Overall size: 390 (L) x 550 (W) x 690 (H) mm
- Net weight: 25 kg

AT2E patent needle



Testing curve

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Optional parts:

- Cutting tool for cap test
- Cap holder
- Bottle support
- Typical screwed needle
- Optional model SSA-ECO-3

Cutting tool

Cap holder

Cap test

Typical screwed needle

Bottle Can Needle

Quick cutting tool

Optional 3 position model: SSA-ECO-3

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SSA-D Secure Seal Analyzer (Standard Model)

(Leak test apparatus / Bubble point)

Left side view

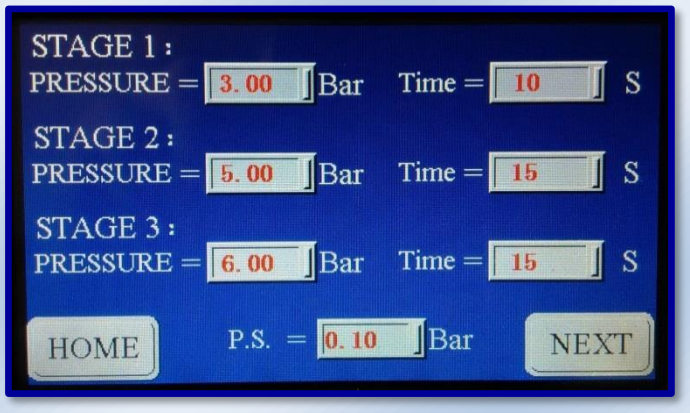
Right side view

Control panel

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). It's 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

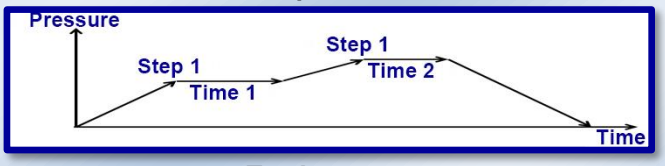
Technical specifications:

- Measuring range: 0 to 16.00 bar
- Resolution: 0.01 bar
- Tests on bottles, cans and preforms
- AT2E patent special needle
- Touching screen display
- Units: bar / Psi
- Stainless steel secured device
- Setting of the level of pressure (regulator)
- 2 stages of pressure and holding time setting
- 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
- Overall size: 390 (L) x 550 (W) x 750 (H) mm
- Net weight: 30 kg

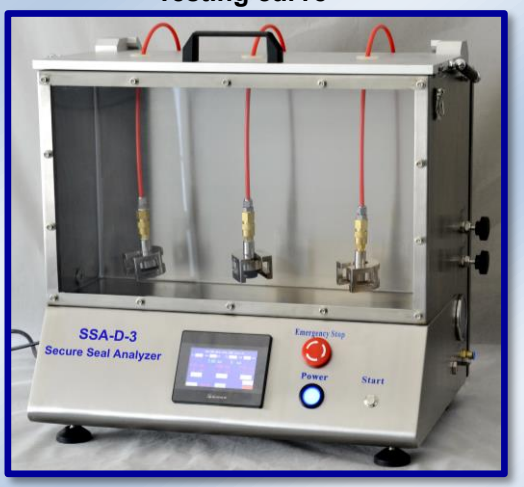
Optional parts:

- 3 stages of pressure and holding time setting
- Cutting tool for cap test
- Cap holder
- Bottle support
- Typical screwed needle
- Optional model SSA-D-3

AT2E patent needle



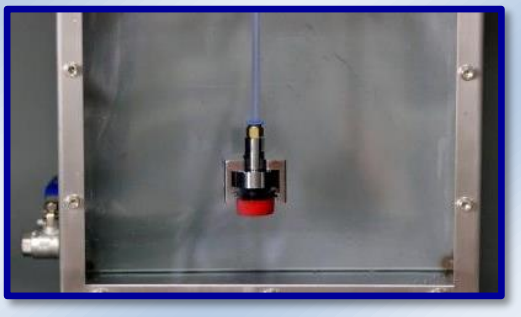
Testing curve



Optional 3 position model: SSA-D-3

Cutting tool

Cap holder



Cap test

Typical screwed needle

Bottle Can Needle

Quick cutting tool

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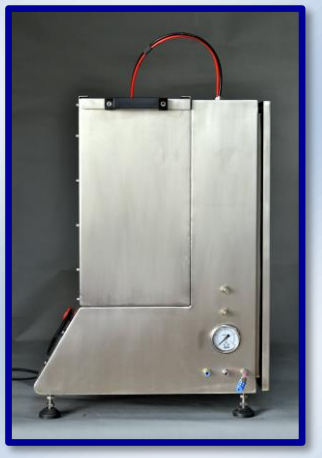
SSA-PLC Secure Seal Analyzer (PLC Model)

(Leak test apparatus / Bubble point)

Left side view



Right side view

Control panel

AT2E SSA-PLC 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-PLC 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.

SSA-PLC is equipped with a touching screen. It's visual and easy to operate. Adjustable pressure, pressurizing rate and holding time stage (up to 4 stages) setting meets different test requests of various products.

Test interface

Test cycle selecting screen

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

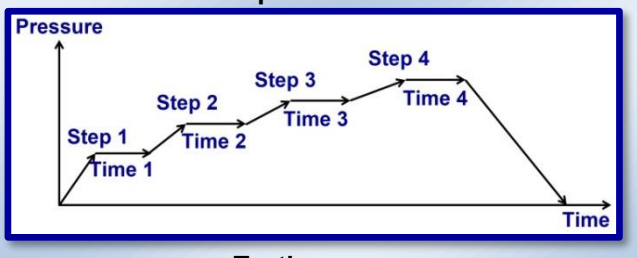
Technical specifications:

- Measuring range: 0 to 16.00 bar
- Units: bar
- Resolution: 0.01 bar
- Tests on bottles, cans and preforms
- AT2E patent special needle
- Touching screen display
- Stainless steel secured device: Resistant to explosions
- Up to 4 stages of pressure, pressurizing rate and holding time setting
- Testing curve review
- 30 products memorization
- 10 operators memorization
- Configuration by protected password (administrator)
- Dynamic display: statistics/hour/date
- Display: product name/operator/batch N°/sample N°
- Maximum pressure protection setting
- Compatible with typical screwed needles
- 5-8 bar pressure source for vacuum function
- 0-16 bar pressure source for testing
- RS232 output (used to connect to software)
- Overall size: 390 (L) x 550 (W) x 750 (H) mm
- Net weight: 35 kg

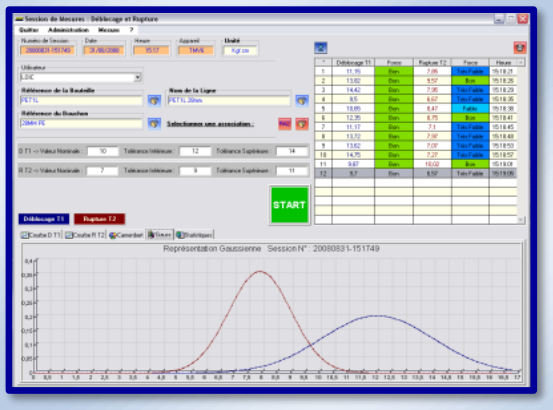
Optional parts:

- "QUALIPRESS" software
- Cutting tool for cap test
- Cap holder
- Bottle support
- Typical screwed needle

AT2E patent needle



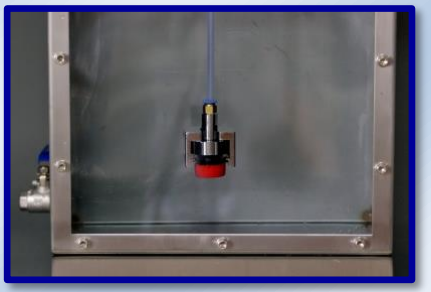
Testing curve



"QUALIPRESS" software (Optional)

Cutting tool

Cap holder



Cap test

Typical screwed needle

Bottle Can Needle

Quick cutting tool

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

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

The SSA-PLC-12 Secure Seal Analyzer (12 Positions) is a special instrument developed by AT2E for control of the secure seal performance of caps on preforms.

Attributes:

- Muilt-position design, more convenient and efficient.
- PLC control ensures the high accuracy and reliability.
- Stainless steel frame, more safe and duable.
- 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 data:

- Measure range: 00.00 – 16.00 bar
- Accuracy: ± 0.5 % F.S.
- Display resolution: 0.01 Bar
- Units: Bar, psi
- Sample range: cap
- 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)
- Dimension: 705×900×465 mm

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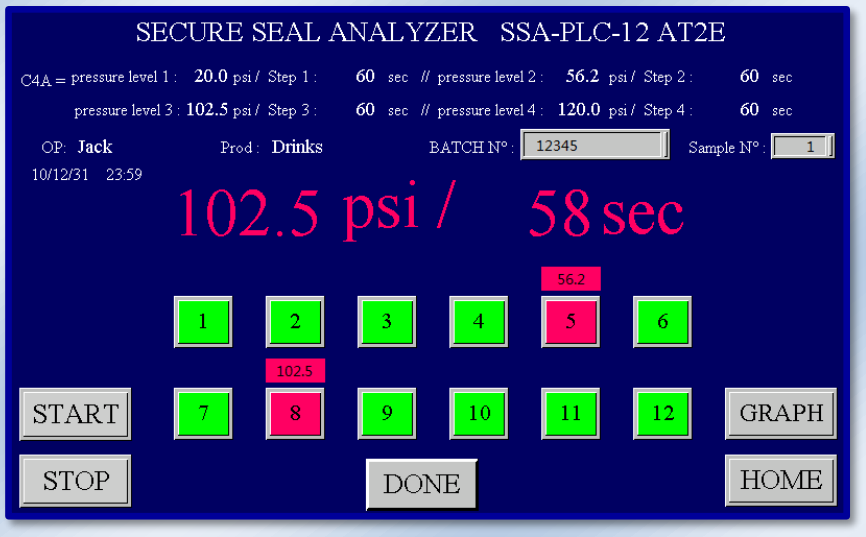
Testing procedure:

- 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 #5 and #8 positions leak, press the #5 and #8 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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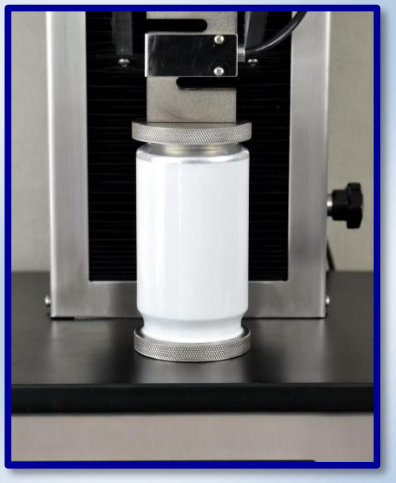
TCT-2 Traction and Compression Tester (Universal Tester)

PET Bottle test

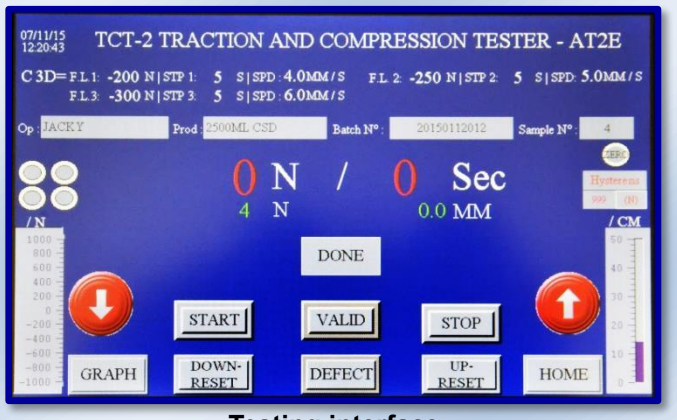


Can test

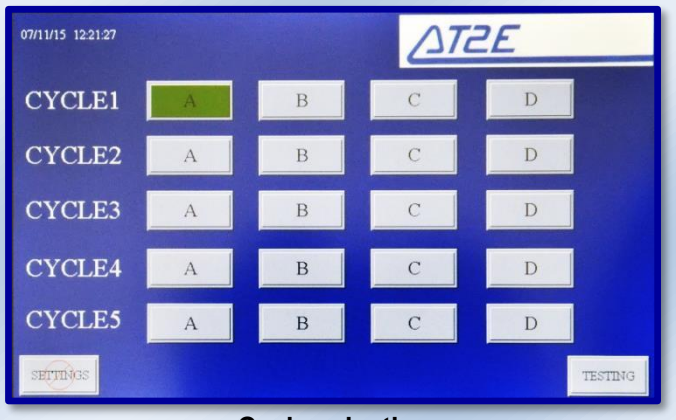
Control panel

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

Characteristic:

- Perfectly parallel plates
- Automatic record of the force
- Touch screen display
- Predefined the testing distance and testing speed
- 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)
- Easy installation of samples.
- Displays all the information during cycle: time, setting, operator, product, batch NO., Sample NO., value
- Reviews the real-time testing curve
- RS232 outputs
- Stainless steel design ensures the durability of tester
- Overload protected
- Safety design

Technical specifications:

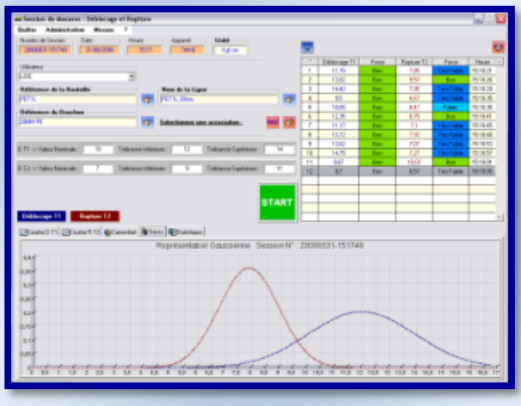
- Dimensions: 500 x 400 x 870 mm
- Measuring range: 0-1000 N (Bigger by order)
- Resolution: 1 N
- Power: 110/240 V, AC 50-60 Hz
- Weight: 50 kg

Optional parts:

- Calibration module
- Mini printer
- Custom-made fixture for sample
- “QualiForce” software

TCT-2 for Tube test (with optional fixture)

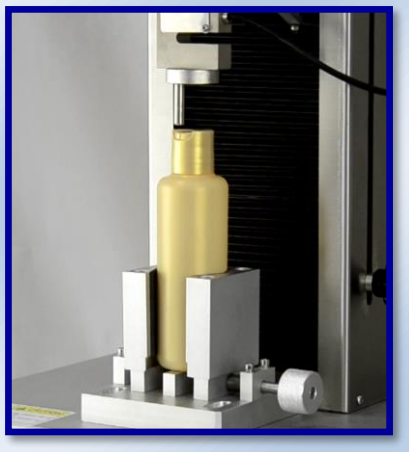
Mini printer (Optional)



“QualiForce” software

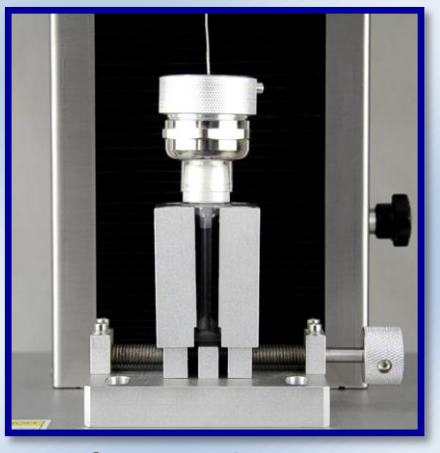
Fixtures for other tests:

Flip top test

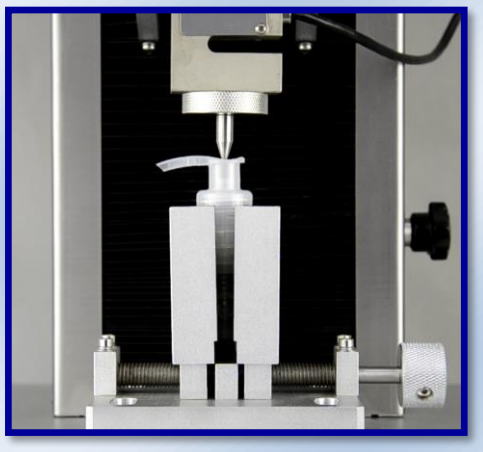


Disk top test

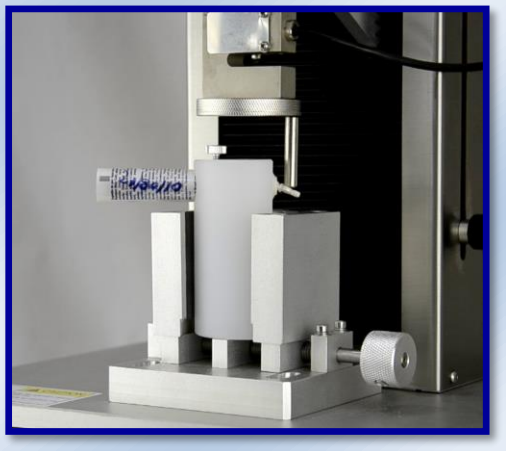
Push & Pull test



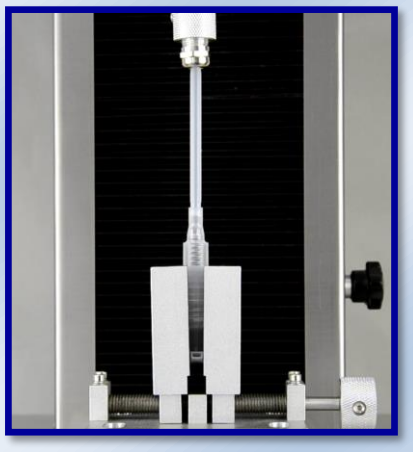
Cover opening test



Push test of pump force



Breaking test



Tube removal test

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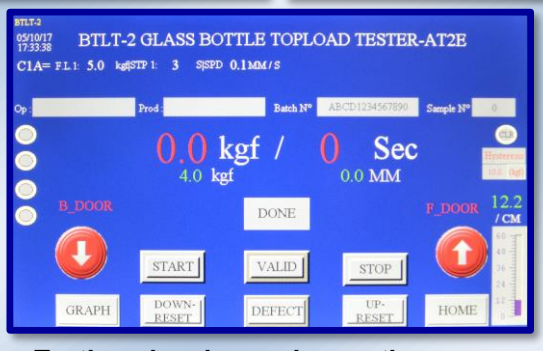
BTLT-2 Glass Bottle Top Load Tester

--- 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
- User define the product lot number and sequence number
- Reviews the real-time testing curve
- Custom-made inserts for different types of samples, easier for sample installation and more accurate on pressure point.
- Huge sample capacity, up to 600 mm high bottle
- Testing speed adjustable
- AT2E Patented trash bin design, more safety for operating and easier for scrap cleaning

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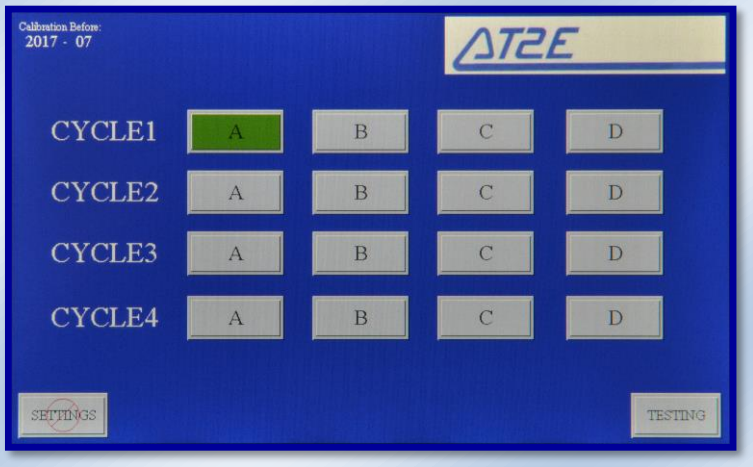
- Maximum top load force up to 2000 Kgf / 20000 N
- Stainless steel frame and aluminum parts, more sturdy and durable.
- Overload protection
- Advanced safe door design ensures the safety of operator during a test.
- RS232 output interface, can be connected to printer or data acquisition software

Technical specifications:

- Measure range: 0 – 20000 N (Others by order)
- Units: KN / Kgf
- Resolution: 0.01 KN
- Power: 220 V, 50-60 Hz
- Dimension: 744 (L) x 493 (W) x 1300 (H) mm
- Weight: 130 kg

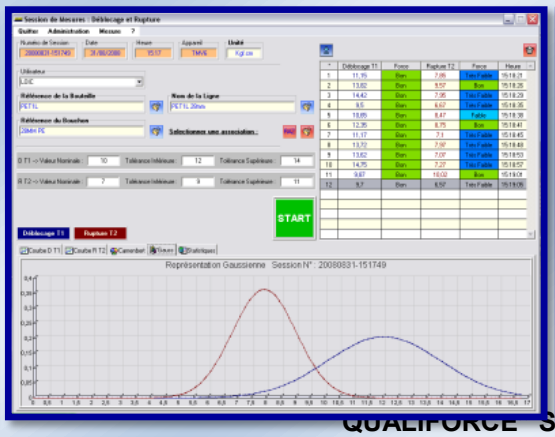


Easy cycle selection screen

Optional Parts:

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

Mini-printer



QUALIFORCE Software (Optional)

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DYNA-4000 Dynamometer

- Maximum top load tester for PET bottles & Cans

PET Bottle test

Can test

Control panel

The DYNA-4000 is an instrument for testing the resistance to top load effort on PET bottles or cans.

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
- User defines the batch number and sample number
- Review the real-time testing graph

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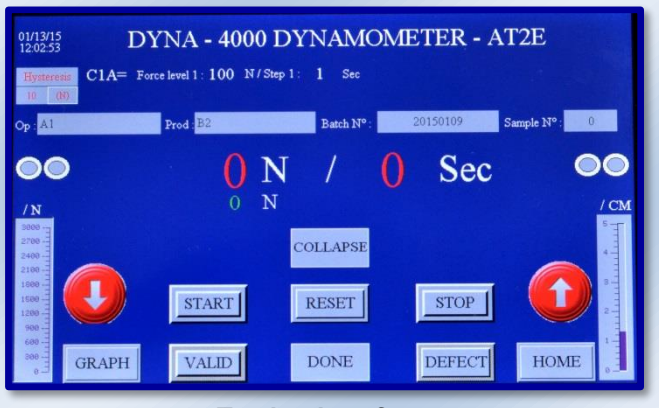
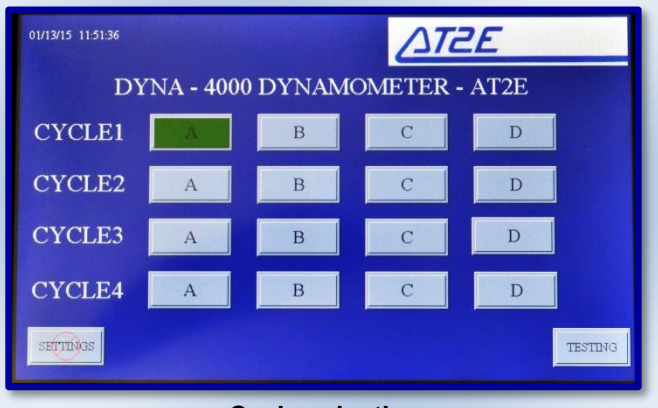


Testing interface



Cycle selection

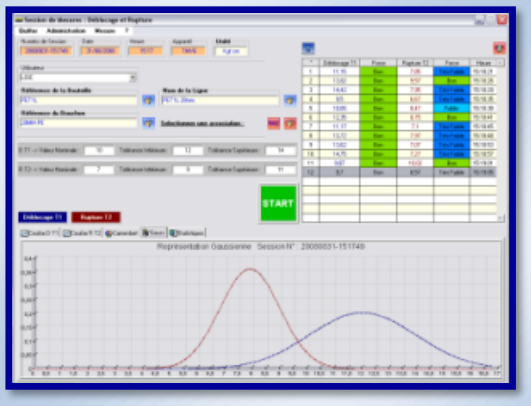
Technical specifications:

- Measuring range: 0-1000/0-3000/0-5000/0-10000 N (By order)
- Resolution: 1N under 5000N range / 10N at 10000N range
- Sample capacity: by order
- Power: 220 V, 50-60 Hz
- Dimension: 500 (L) x 440 (W) x 780 (H) mm
- Net weight: 50 kg

Optional part:

- High accuracy calibration unit
- Mini printer
- “QualiForce” Software

Mini printer (Optional)



“QualiForce” software

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GBIT - Glass Bottle Impact Tester

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.

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:	Φ20 -130 mm (clamps for other range available)
Max. impact energy:	2J
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:	530 mm *350 mm *700 mm

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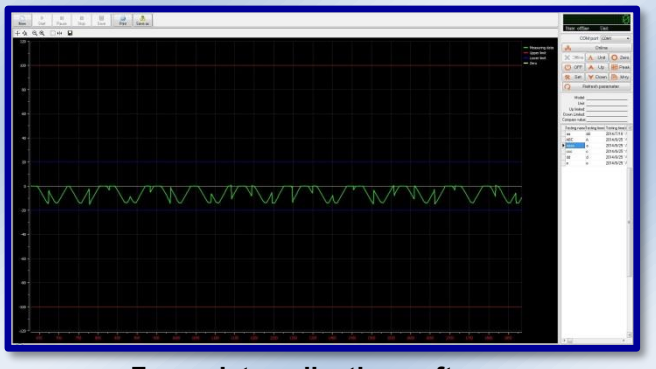
FT-1 Fatigue Tester

Electric cabinet



Force data collection software

The “FT-1 Fatigue Tester” is used to test and analyze the durability and quality of all packaging in compression or traction direction. It’s widely used in cosmetic, pharmaceutical and other industries.

It’s an automated tester and testing cycle is carried out by program. Testing process is as below:

- Select the testing direction (compression or traction direction)
- Place the sample under the force gauge
- Adjust the force gauge position by the top hand wheel
- Input the testing number of time
- Press the “START” button to start the test
- Observe the sample and analyze the force value after the test

Advantages:

- Full stainless steel & safety door design
- Ruler for sample adjusting
- Digital display of real-time or peak or average force value
- 4.3” LCD touching screen which offers a user-friendly interface for operation
- Test mode: compression or traction
- Choice of cylinder movement: both “manual” and “automatic” are available
- Equipped with data collection software for force value management

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Technical specifications:

- Sample range (Bigger by order):
  - For compression test: 200 mm in height
  - For traction test: 120 mm in height
- Digital display resolution: 0.1 N
- Force units: N / kgf / lbf
- Force accuracy: ±0.5% F.S.
- Force sensor measuring range: 0-200 N (Higher by order)
- Power : AC 220V
- Air source: 6-8 bar
- Language: English
- Dimensions: 410 x 250 x 590 mm
- Net weight: 25 kg

Optional part:

- Traction test assembly

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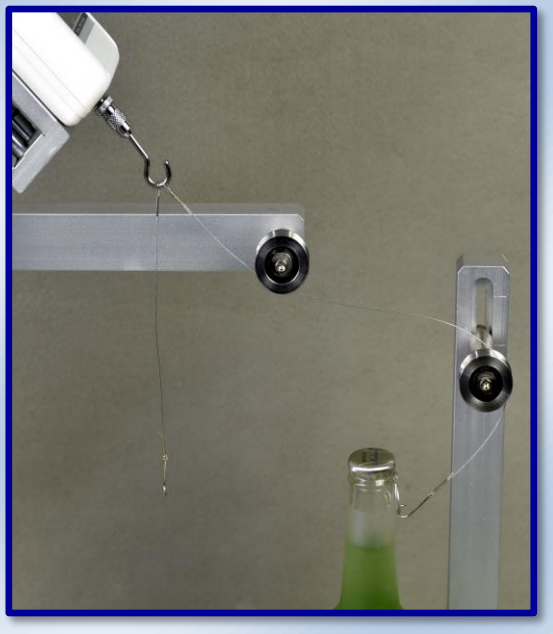
POT-1 Pull Off Tester

- *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 (this position is set at 45° but can be changed)
- 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 charge
- Data will be transferred to the software with curve

Machanical specifications :

- Dimensions: 500 x 250 x 600 mm
- Net weight: 15 KG

Automatic version (POT-2) available on request

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com **Tél. : +33 (0)1 64 66 03 02**

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	: 0.25% FS
Resolution	: 0.1 N
Speed rate	: 1000 Hz
Available	: Digital or analog gauge

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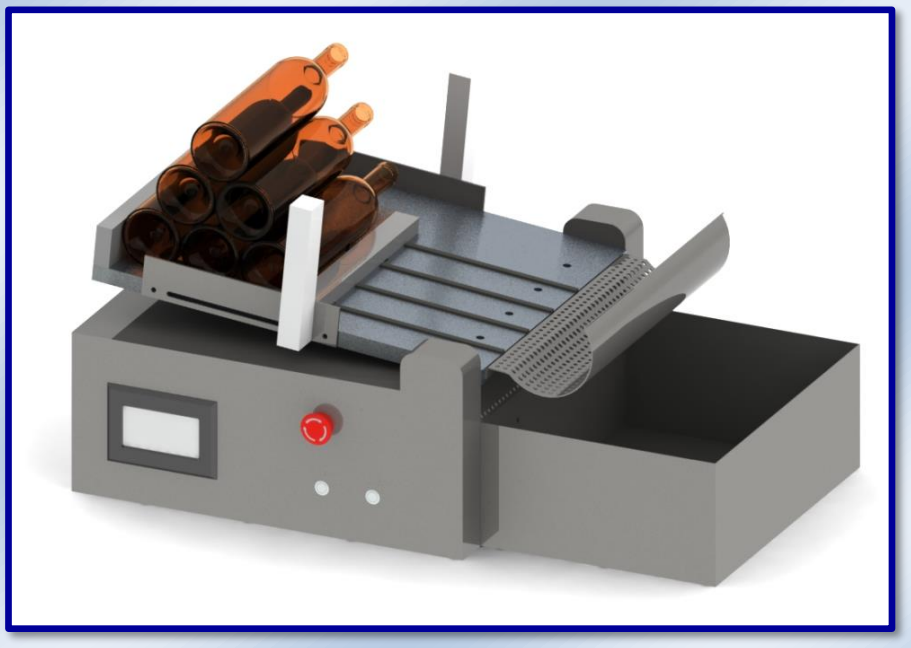
BTT-1 Bottle Tilt Tester



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 is touch screen control to start test, adjust tilt angle, and speed.

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

Breaking parts, liquid and bottles drawer built-in.

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 automatic detection
- Recuperation drawer
- Liquid compatible
- 220/110 V 50-60Hz
- CE marked

Dimensions : On request

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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
- 110 / 230 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 300.0 Kgf
- 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
- 110 / 230 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

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

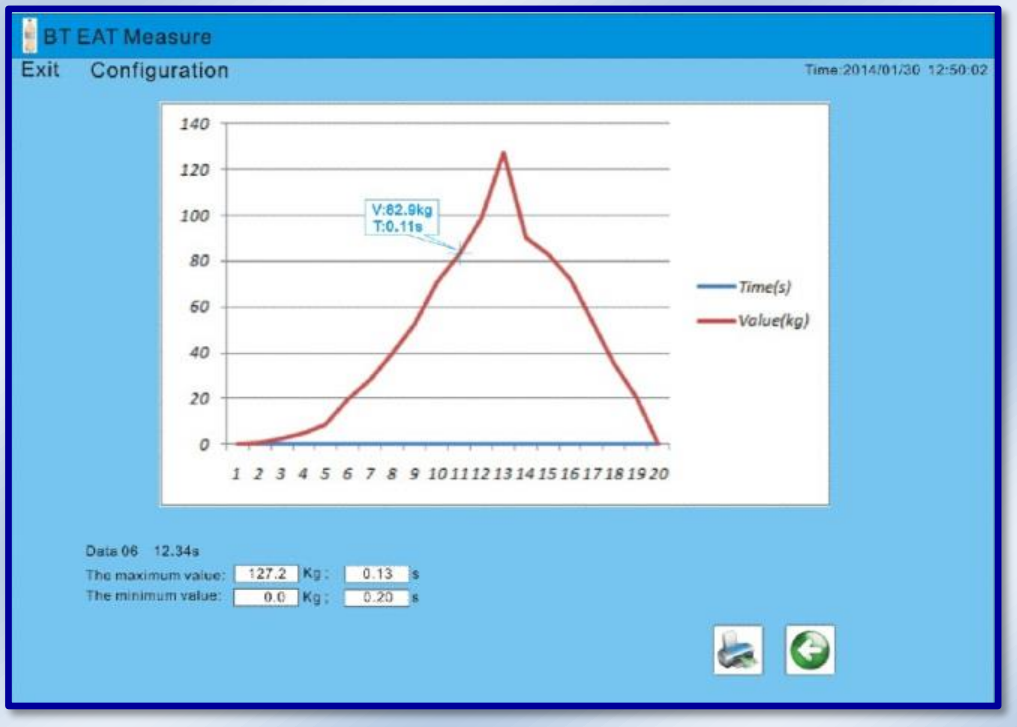
Using:

- Ready to be installed on line after filling machine
- Enables to control capping heads in real conditions (speed and top load)
- 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 FORCE Pack
Single sensor for different bottle format replacing



BT ETA Measure software

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

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

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

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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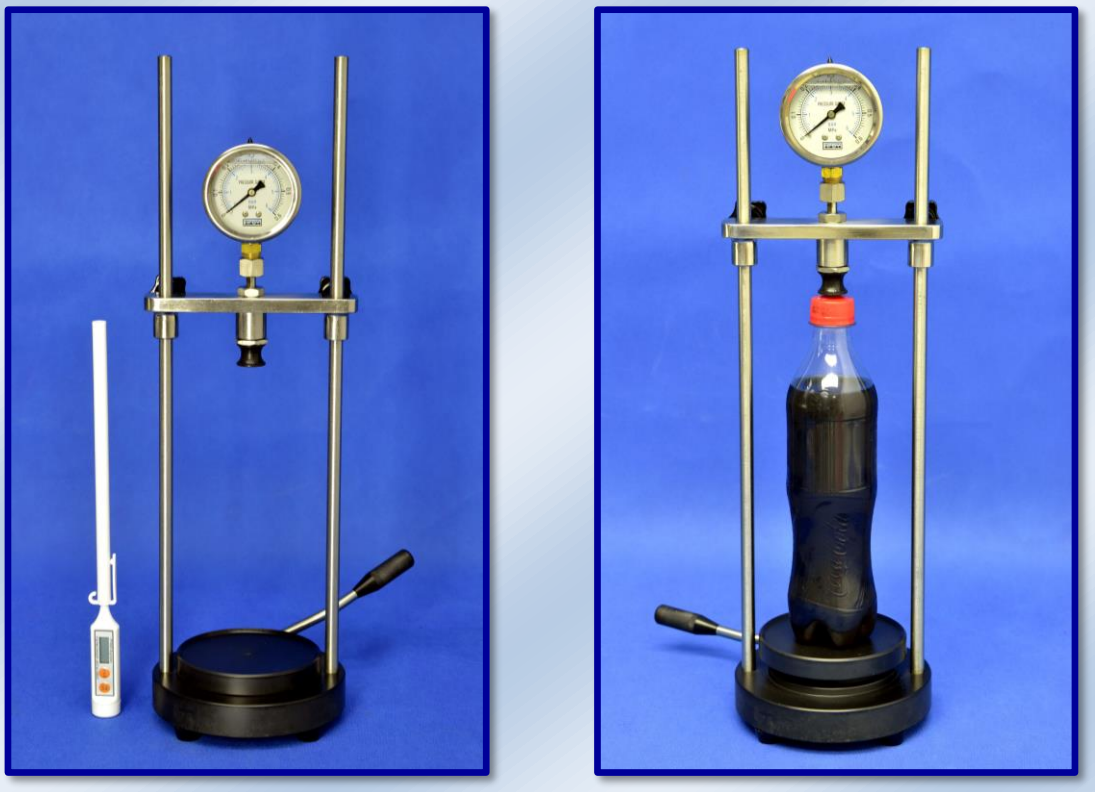
CO_2EASY / CO_2EASY-D CO_2 Measuring Device



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
- Temperature: 0 - 50 °c
- Resolution: 0.1°C
- Sample height range: 50 mm - 330 mm
- Bottle diameter: maximum 90 mm
- Dimension: 140 (L) x 200 (W) x 430 (H) mm
- Net weight: 2 kgPBBT

CO_2EASY-D with digital pressure indicator

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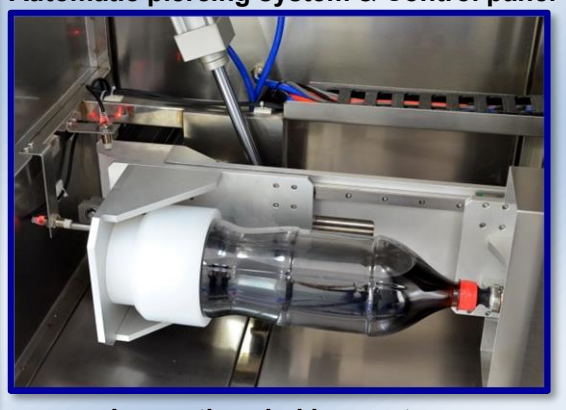
CO_2-CS Automatic CO_2 Calculating System

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: 230V/50Hz
- Sample range: up to 120mm in diameter / up to 360mm in height.
- CO_2 measuring range: 0 – 9.99 g/L.
- Temperature measuring range: -10 to 60 °C
- Pressure measuring range: 0 – 6 bar.
- Accuracy: ±0.01 g/L (CO_2), ±0.1 °C (temperature), ±0.01 bar (pressure).
- CO_2 content units: “g/L”, “Volume”, “Weight%” and “P20[kg/cm2]”.
- Temperature units: °F and °C
- Language: English / French / Spanish / Chinese.
- Overall size (L x W x H): 104x54x106 cm.
- Net weight: 100 kg.

Optional parts:

- Insert for different size of bottle
- Calibration pack

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

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, psi

Resolution: 0.001 bar

Precision: 0.1% 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: 5% F.S.

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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

CDP-1 Pressure Calibration Device

CDP-1 is a device for calibrating the pressure indicator. It allows operator to carry out a visual comparison between the calibrated indicator and the certified one. 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: 240 x 150 x 30 mm
- Net weight: 2.7 kg

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

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

Needles available:

- 2 mm
- 2.5 mm
- 4 mm

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	426 (L) x 401 (W) x 557 (H)mm
Light source	2 x 18 watt (Fluorescent lamps)
Main supply	220/240 or 110 volts

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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 moulding 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.

Optional for viewing area 350 x 350mm

Specifications	
Viewing area:	330mm x 150mm
Overall size:	400 (L) x 302 (W) x 305 (H) mm
Light source:	2 x 18watt (Fluorescent lamps)
Main supply:	220/240 volts

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

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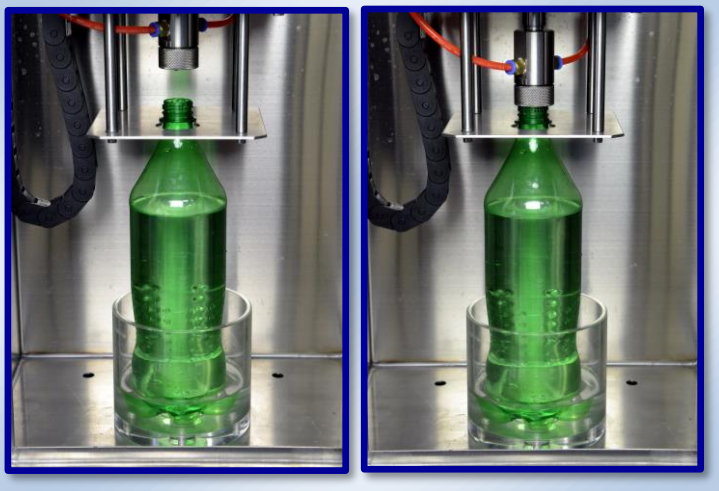
SCT-PLC Stress Crack Tester

– 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:

- 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)
- 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

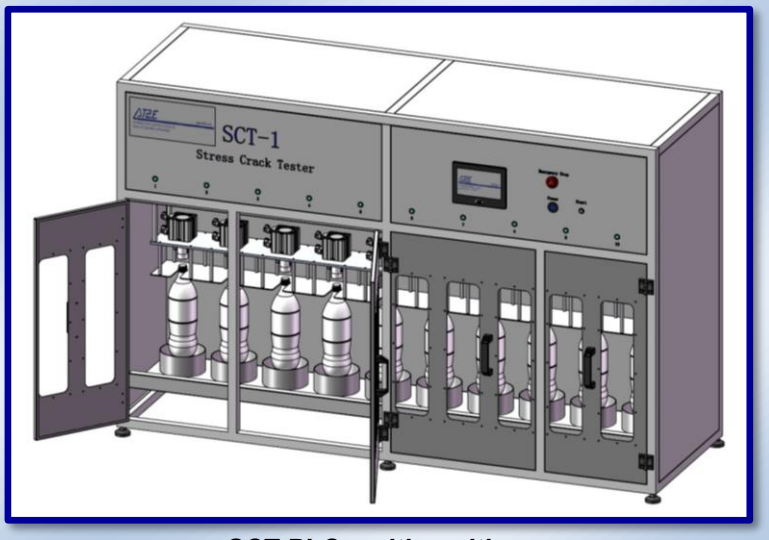
Technical data:

- 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)
- Main supply: 220 V
- Overall size: 190×66×123 cm
- Net weight: 260 kg

Optional parts:

- Mini printer

Mini printer (Optional)



SCT-PLC multi-position

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

SCT-D Stress Crack Tester (26 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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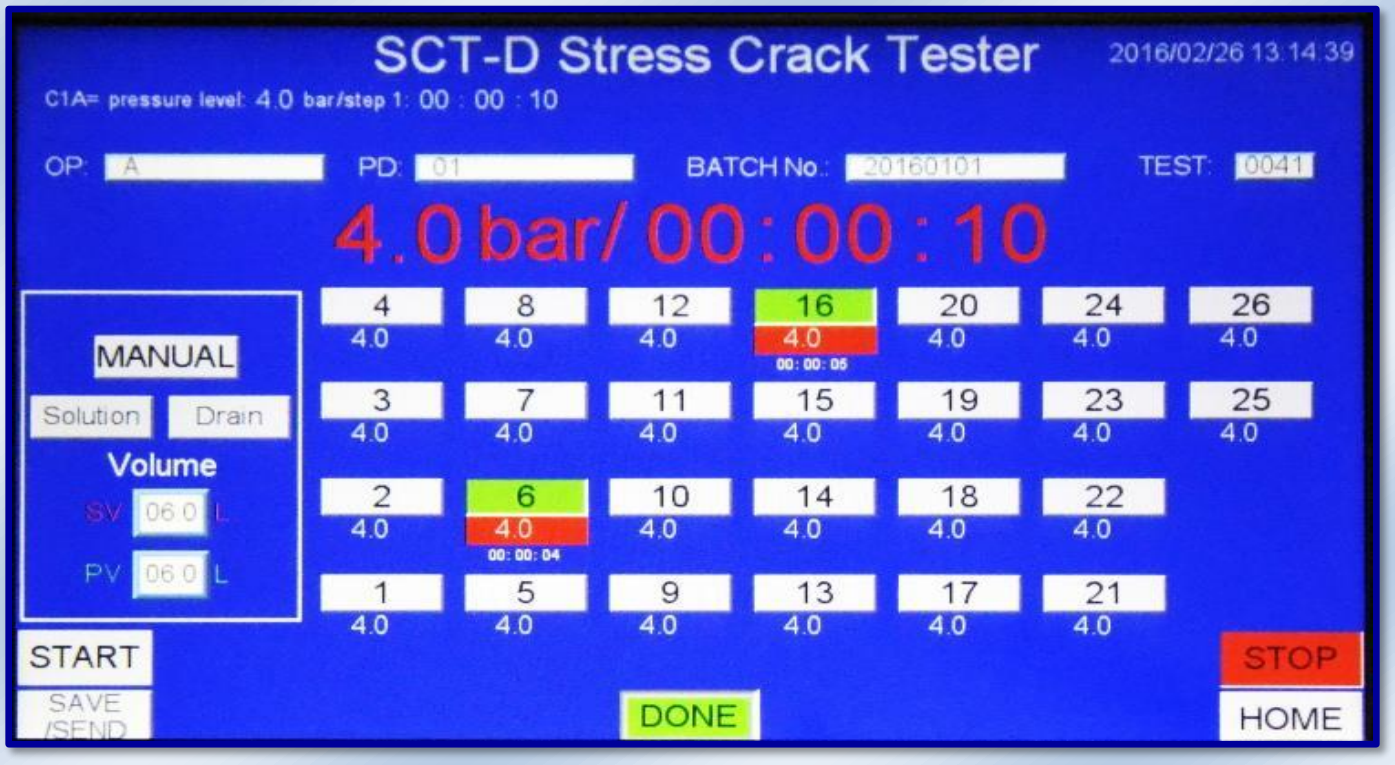
Testing screen:



As per the above screen shot, during the test, the bottles in #6 and #16 positions leak, the lights of positions #6 and #16 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. 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).
- 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 data:

- Testing pressure: 0 - 6 Bar (Please consult AT2E for higher pressure request)
- Display resolution: 0.1 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)
- 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: 220 V
- Overall size: 168 x 74 x 85 cm
- Net weight: 250 kg

Optional parts:

- Mini printer
- Software

Mini printer (Optional)

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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:

A. Left ascending button B. Left descending button C. Power switch D. Heating button E. Temperature controller F. Emergency stop button G. Right ascending button H. Right descending button

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Technical specifications:

- Digital display shows real-time temperature, optional for stop heating or thermostatic timing after reached target temperature.
- Temperature range: Ambient temperature – 70°C
- Resolution: 0.1°C
- Air supply: 5 – 8 bar
- Heating tube: 1.5 KW * 2
- Dimension: 700 x 495 x 780 mm
- Weight: 50kg
- Power supply: 220V AC/ 50Hz
- Power: 3.2 KW

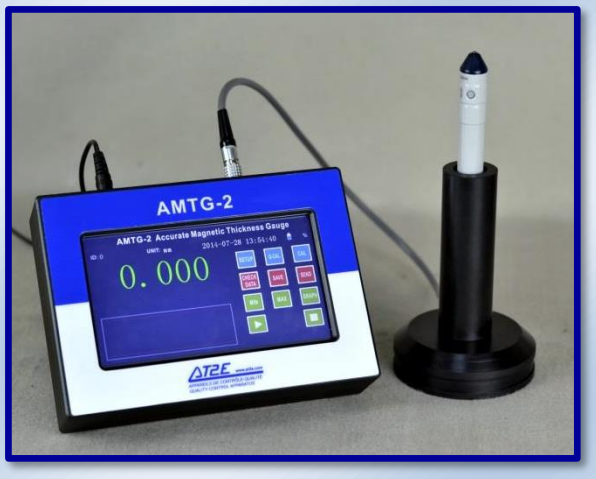
2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

AMTG-2 Accurate Magnetic Thickness Gauge

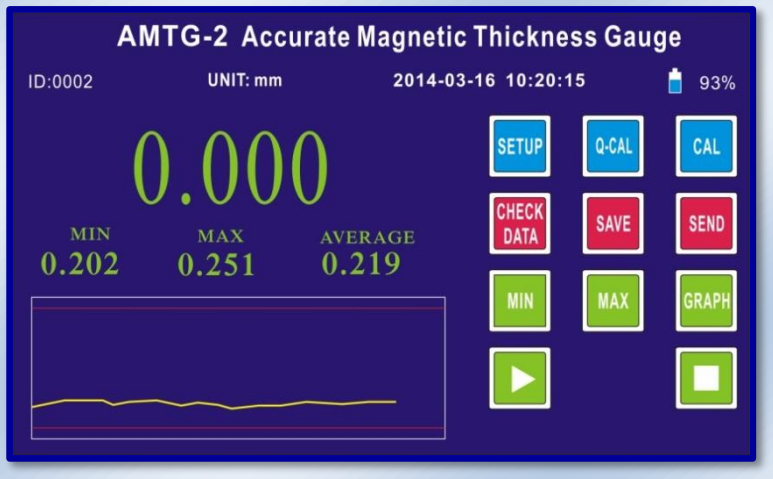
The "AMTG-2" is a portable feeler gauge. It is used to measure the thickness of non-magnetic materials, such as plastic, glass, ceramic, aluminum, titanium, copper etc... The accuracy of the measurement is not affected by the shape of the samples.

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

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

Advantages:

- Non-destructive measure
- High resolution 7” touching screen
- Dynamic display: measuring value / graph / date / hour / battery life
- Full 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 9999 measurement data

Technical characteristics:

- Measure mode: Normal / High accuracy
- Display mode: Real-time / Minimum or Maximum
- Resolution: 0.01 mm or 0.001 mm (0.001" or 0.0001")
- Display: TFT screen displays the real time reading, minimum reading, alarm status and data info
- Outputs: RS-232
- Calibration: Multi-point calibration (up to 13 points)
- Power: DC 8.4V
- Battery: Rechargeable lithium battery. Full loaded working time without charging is approx. 2-3 hours.
- 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 0-8 mm)

Steel Ball Dia.	Thickness upper limit	Accuracy
4.76mm	6.35mm	1% ±0.003
3.18mm	4.57mm	2%
1.59mm	2.29mm	3%

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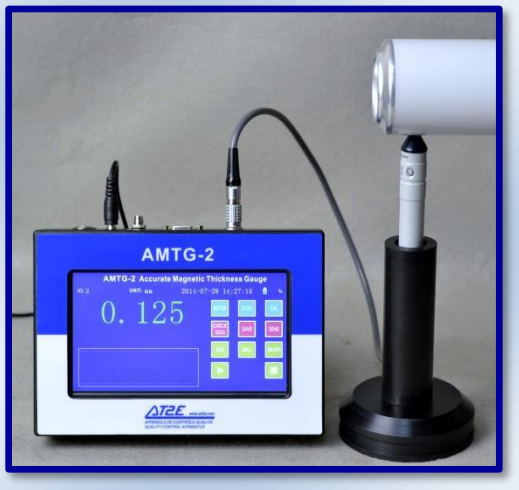
Plastic Measuring

Preform Measuring

Glass Measuring



Aluminum Measuring

Portable case

"QualiMesure" Software (Optional)

Standard configuration:

- Standard probe with cable and stand
- Using manual
- Charger
- Steel balls* and supports
- Foot switch
- Portable case
- Calibration blocks*

* Steel balls included: 1.59 / 3.18 / 4.76 mm

* Calibration blocks included: 0.23 / 0.5 / 1 / 2 / 3 / 4 / 5 mm (Custom-made thickness of block is available)

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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:

- Measuring range: 0 - 300 mm
- Resolution: 0.01 mm
- Accuracy: ± 0.02 mm
- Overall size: 200 (L) x 150 (W) x 495 (H) mm
- Net weight: 5.4 kg

Optional parts:

- Measuring range: 0 - 600 mm
- Calibration block (Length by order)

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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BTG-D Glass Bottle Wall Thickness Gauge

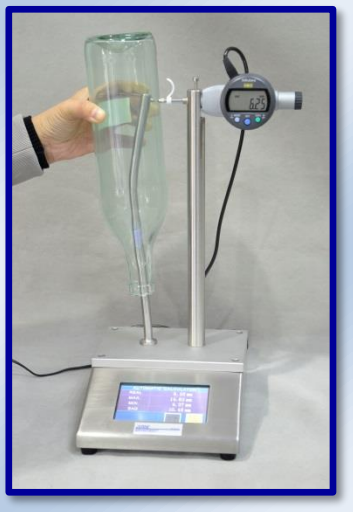
BTG-D Digital Glass Bottle Wall Thickness Gauge is a manual operating gauge which is used for measuring the wall thickness of glass bottles. It can offer quick and convenient way of thickness measurement for glass bottle production.

Technical specifications:

- Measuring range: 0-10mm
- 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

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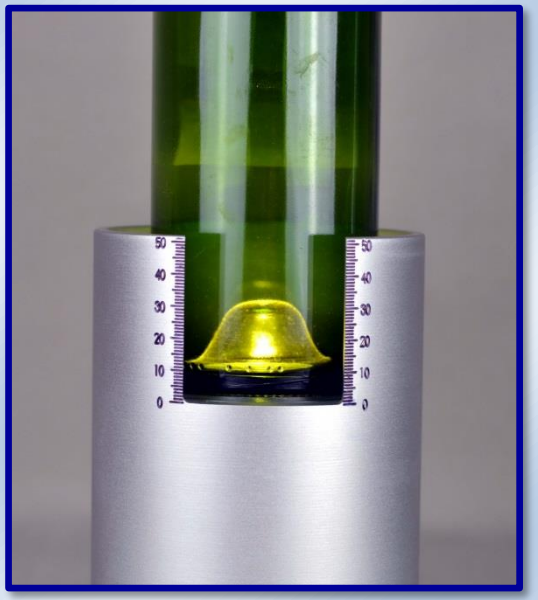
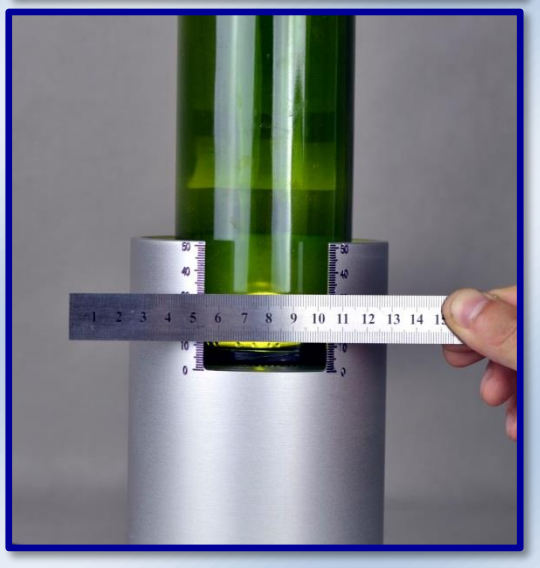
LS-1 Dome Height Lightening System for Glass Bottle

- 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

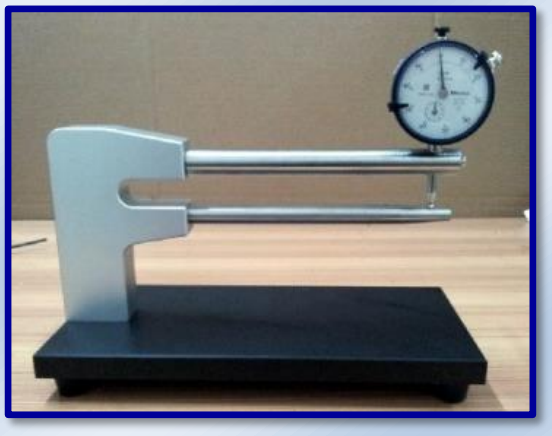
PTG Preform Thickness Gauge is used to measure the preform thickness.

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

Technical specifications:

- Measuring range: 0-10mm
- Accuracy: 0.01mm
- Dimension: 245(L) x 120(W) x 125(H) mm
- Weight: 2.4kg

Optional for PTG-A (Analogic indicator)



Preform Cutter

Model ECO

Model +

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UBPT-1 Universal Bottle Perpendicularity Gauge

UBPT-1 for PET Bottle

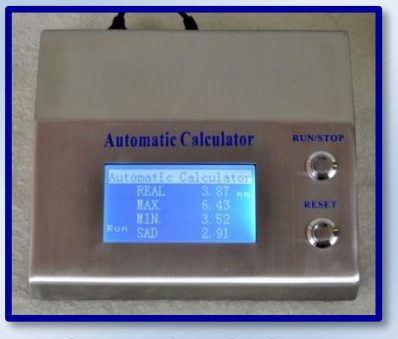
UBPT-1 for Glass Bottle

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.

Ruler allows accurate measuring position

Optional parts:



Automatic calculator

Calibration column

Technical specifications:

- Sample range: 50 - 120 mm in diameter (bigger by order)
  110 - 350 mm in height (bigger by order)
- Measuring range: 0 -10 mm
- Resolution: 0.01 mm
- Dimensions: 355 (L) x 250 (W) x 515 (H) cm
- 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-3 with 3 measuring heads (for mouth clearance, perpendicularity & height) and integrated double automatic calculators

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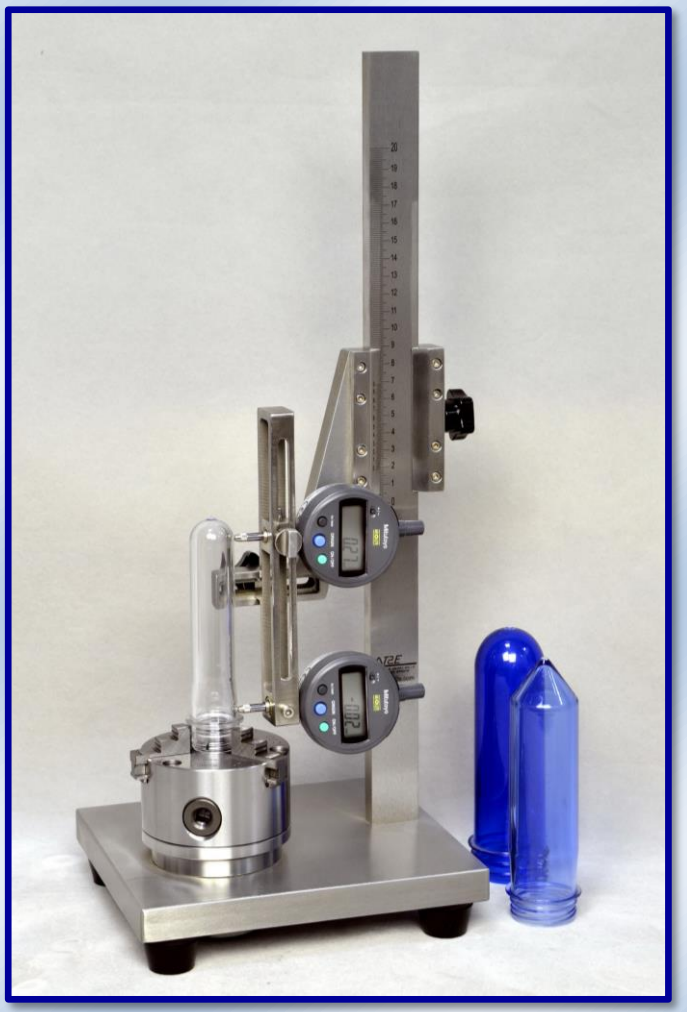
PPG-D Preform Perpendicularity Gauge



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: 2-38 mm finish outer diameter / 0-300 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
- Calibration column

PPG-A with analog gauge

Calibration column (Optional)

2-6 Rue des cours neuves, ZA – 77135 PONTCARRE FRANCE info@at2e.com Tél. : +33 (0)1 64 66 03 02

FHG - Fill Height Gauge

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. Rule may be raised or lowered to compensate for the thickness of various crown caps.

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.

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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.

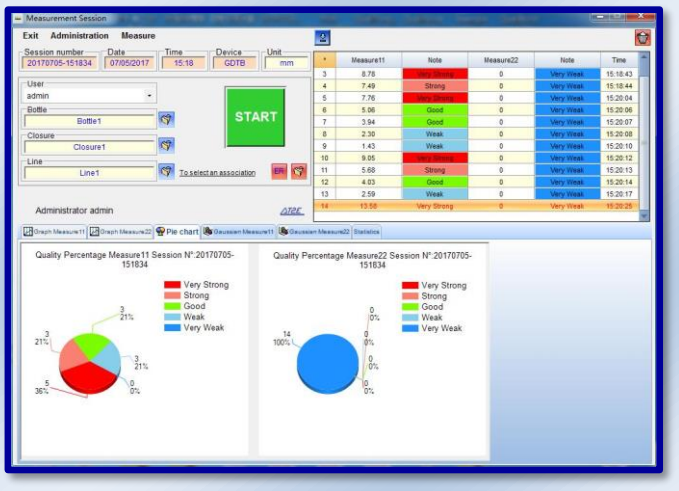
With GDTB-4 and "QUALIGAUGE" software, date can be transferred from any Mitutoyo digital gauges. User can review and manage all the saved data. Data report and graph are available with the "QUALIGAUGE" software which is very useful for data and result analyzing.

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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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.

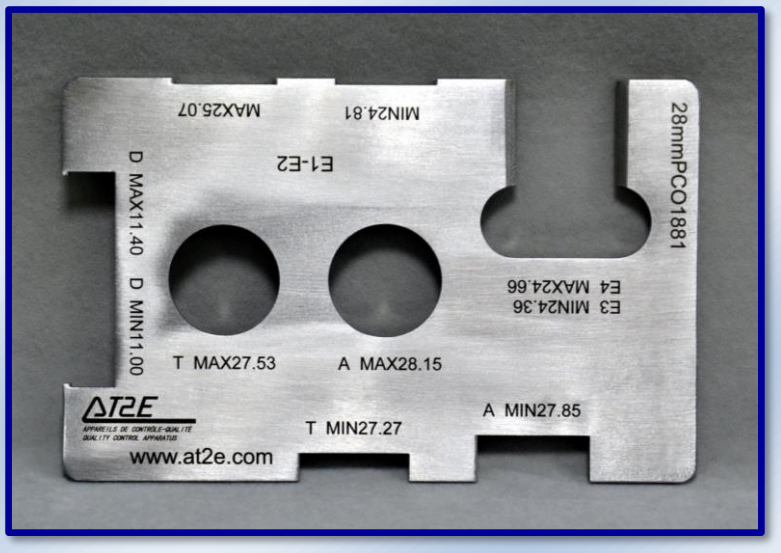
Technical specifications:

- Pressure range: Up to 12 bar (174PSI)
- Pressure source: N_2, CO_2 or compressed air
- Sample type: Crown cap
- Dimension: 250 (L) x 200 (W) x 300 (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



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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

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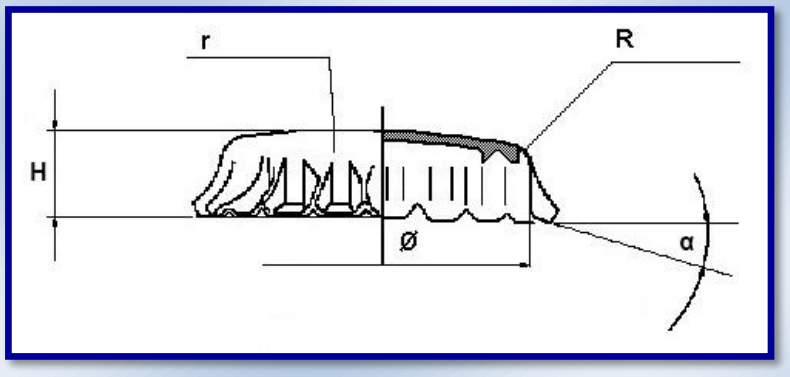
CCAG - Crown Cap Angle Gauge

- Angle Indicator for Crown Cap

This unit is used to get a rapid and accurate measure of angle α (see photo below) of the crown cap.



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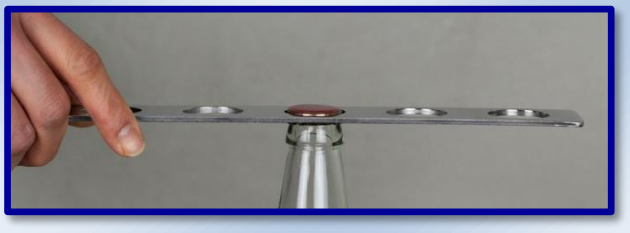
ODG-1 Outer Diameter Gauge

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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PBBT-2 PET Bottle Burst Tester

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

Automatic filling system

Testing interface

For PET bottles - Simulating filling process

PBBT-2 PET Bottle Burst Tester is specialized test equipment for testing the PET bottles. It's designed in accordance with the three international test methods 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, the process has been linearized and it increases to the predetermined point or the point of bursting.

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 way of saving water and avoiding the unsteady pressure of tap water which may influence a normal test.

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

Characteristics:

- Standard equipment for the PET bottle industry.
- 3 international test methods are available
- PLC integrated & Touch screen control
- Automatic clamping and filling system
- Can store 10 operators and 30 products
- 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 2.5 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

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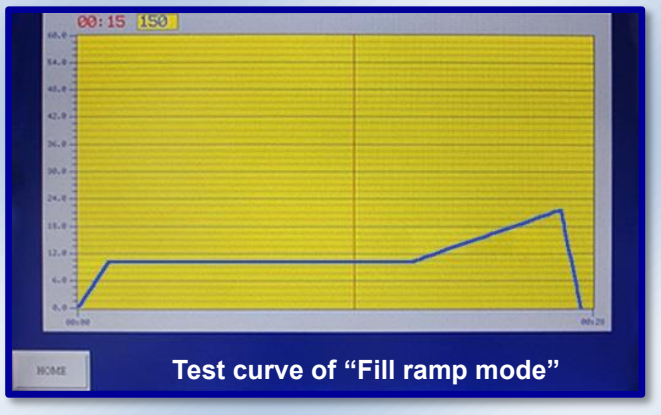
Modes details:

Fill ramp mode:

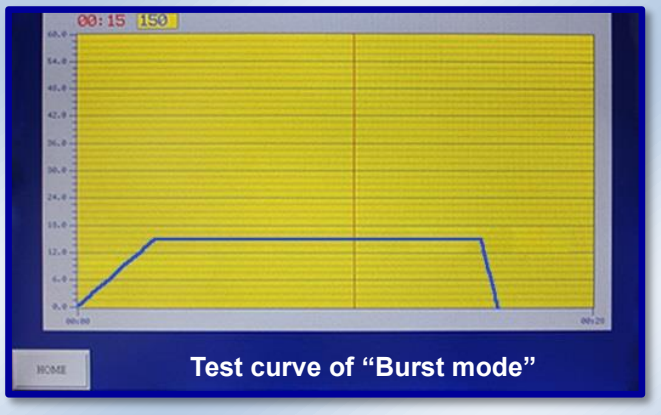
The filling ramp mode is designed to simulate the situation of filling lines of PET bottles. Under this mode, the PET bottles are pressurized rapidly to the initially preset pressure and maintained for a given time (for example 13 seconds). Then continue to increase the pressure with a speed of 0.1 bar/s until the outbreak of the bottle or reaching the max pressure or volume. Preset parameter includes: initial screening pressure, maximum pressure, and expansion of volume limit.



Test curve of "Fill ramp mode"

Burst mode:

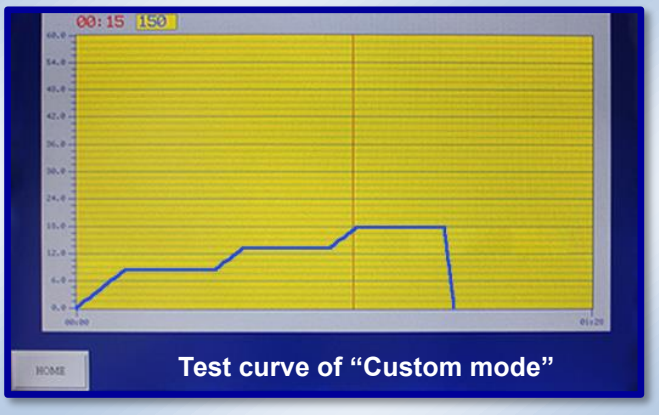
Under this mode, PET bottle will be pressurized rapidly to the initially preset pressure and maintained for a predefined period.



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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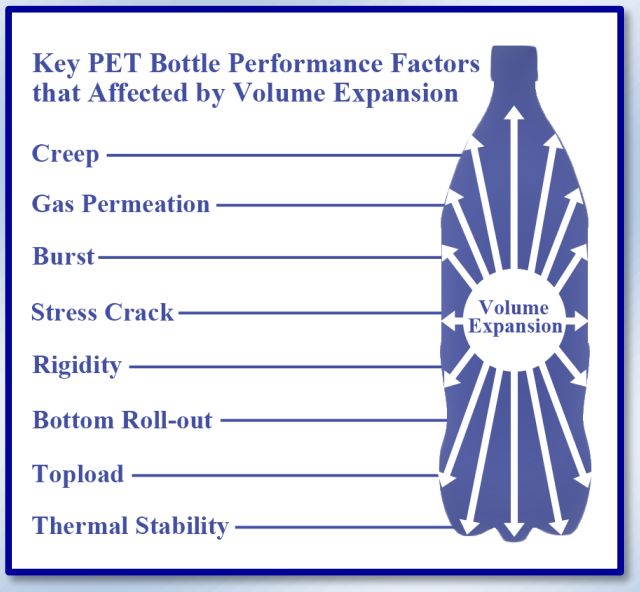
Technical specifications:

- Measuring range: 0 - 20 bar
- Resolution: 0.1 bar
- Sample range: Up to 2.5 L bottle
- Expansion in volume: Up to 2 L
- Power supply: 115/230V, 50 - 60Hz
- Pressure required: 3 bar water / 20 bar air source
- Temperature range: 0 to 50 °C
- Rear Panel: RS232 serial output
- Dimensions: 740 (L) × 500 (W) × 920 (H) mm
- Net weight: 70 kg



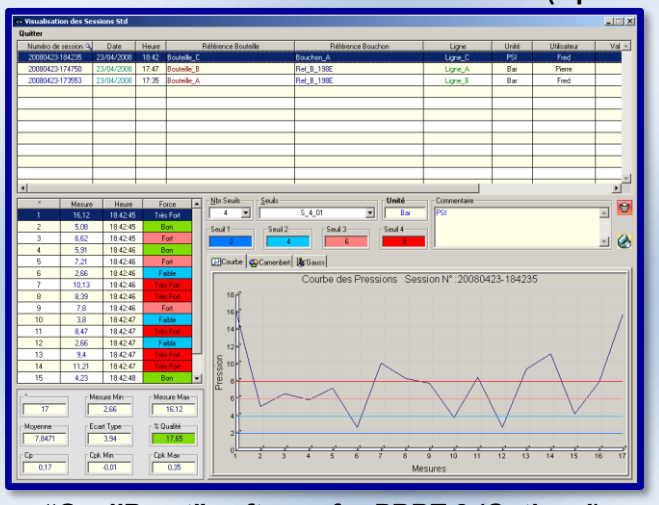
Optional parts:

- Water recycling system
- Additional booster
- Compatible clamping system
- Mini printer
- Calibration pack (including high accuracy pressure gauge for pressure calibration / calibration graduated flask / spacer)
- "QualiBurst" Software
- PABT version with hot water spraying system

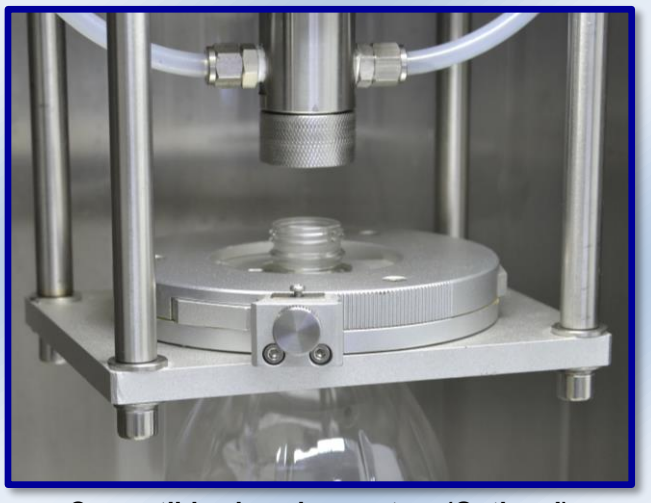
Water recycling system (Optional)

PABT with hot water spraying system (Optional)

Additional booster (Optional)



"QualiBurst" software for PBBT-2 (Optional)



Compatible clamping system (Optional)

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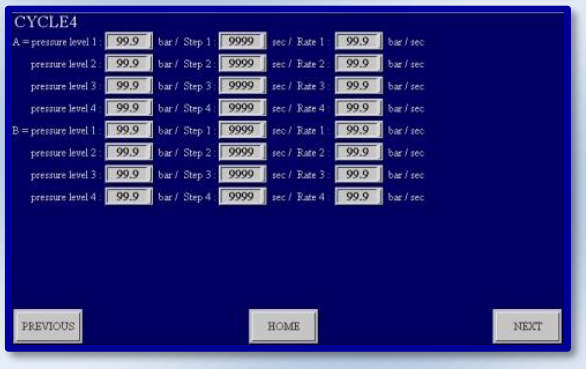
GBBT-1 Glass Bottle Burst Tester

(Explosion tester for glass bottles)



Cycle setting 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
- 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 filling & clamping system

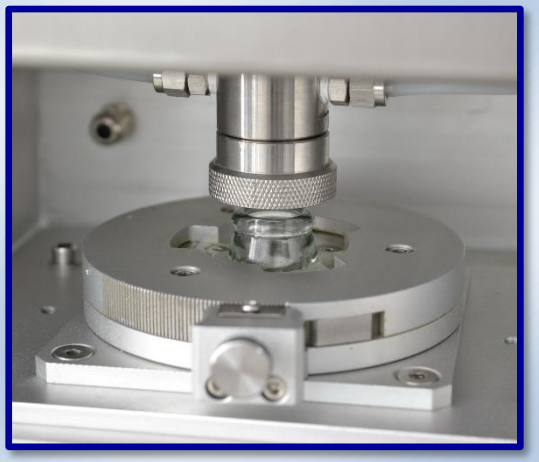
Trash bin design with silencing sifter

Technical specifications:

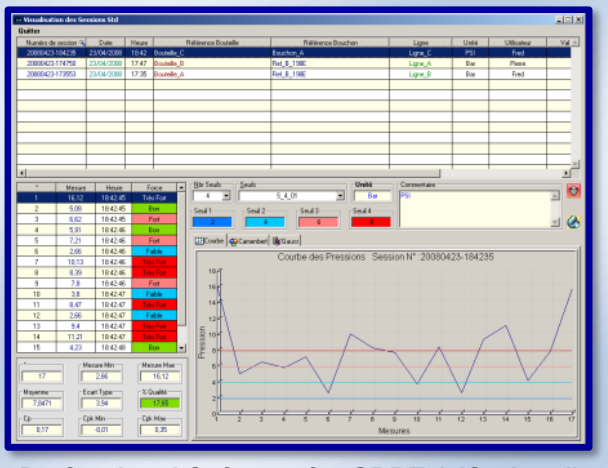
- Measuring range: 0-57 bar (each station)
- Resolution: 0.1 bar
- Sample range: by order
- Power: 115 V / 230 V, 50-60Hz
- Dimension: 620 (L) × 570 (W) × 820 (H) mm
- Net weight: 70 kg

Optional parts:

- Compatible clamping system
- Professional Software for GBBT-1



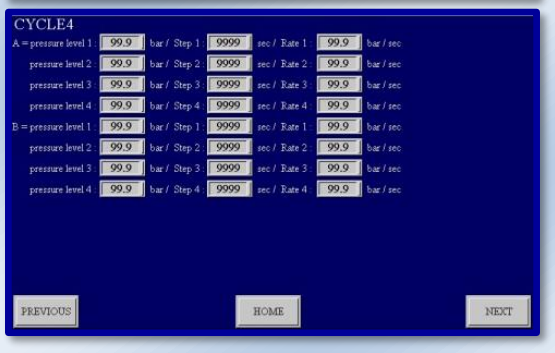
Compatible clamping system (Optional)



Professional Software for GBBT-1 (Optional)

GBBT-2 Glass Bottle Burst Tester

(Explosion Tester for Glass Bottle - Dual Stations)



Cycle setting 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
- 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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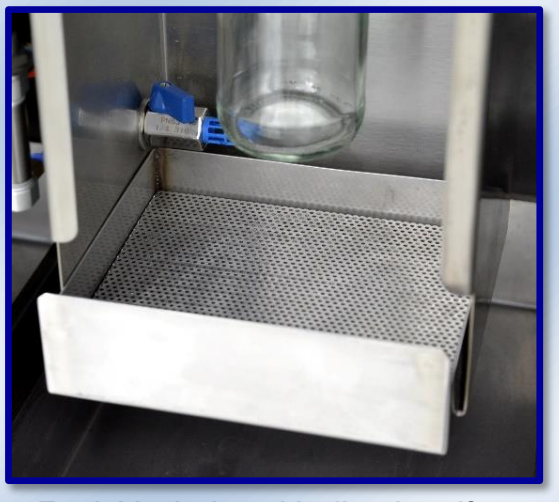
Efficient dual station design

Auto filling & clamping system



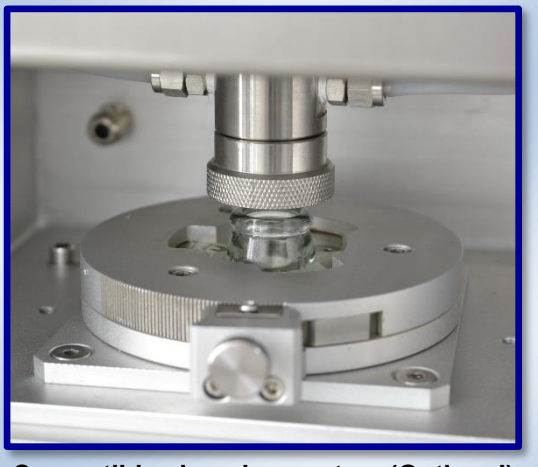
Trash bin design with silencing sifter

Technical specifications:

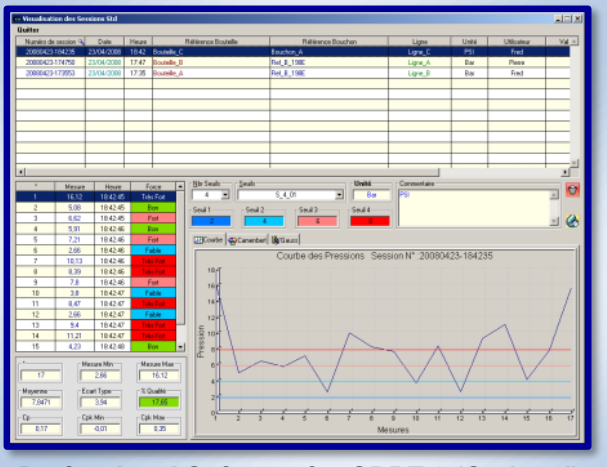
- Measuring range: 0-57 bar (each station)
- Resolution: 0.1 bar
- Sample range: by order
- Power: 115 V / 230 V, 50-60Hz
- Dimension: 930 (L) x 540 (W) x 820 (H) mm
- Net weight: 95 kg

Optional parts:

- Compatible clamping system
- Professional Software for GBBT-2



Compatible clamping system (Optional)



Professional Software for GBBT-2 (Optional)

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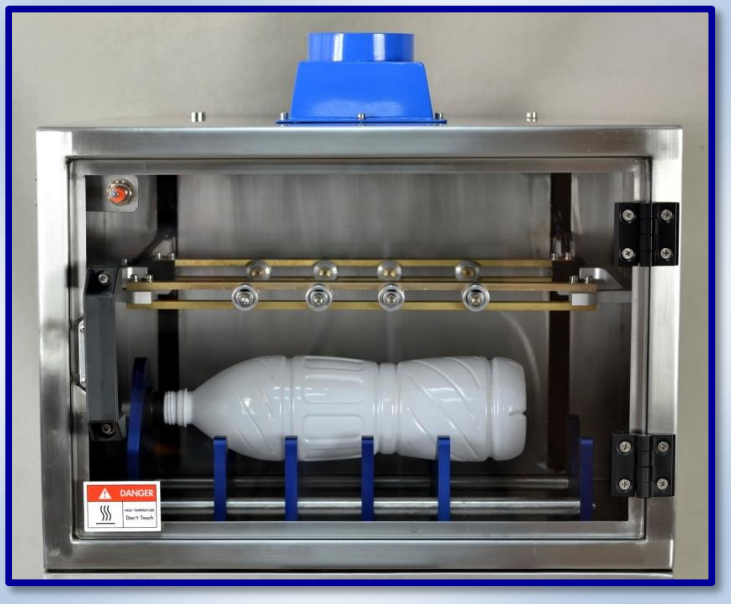
HWBC-2 Hot Wire Bottle Cutter

- Automatic device for PET bottle section weight analysis



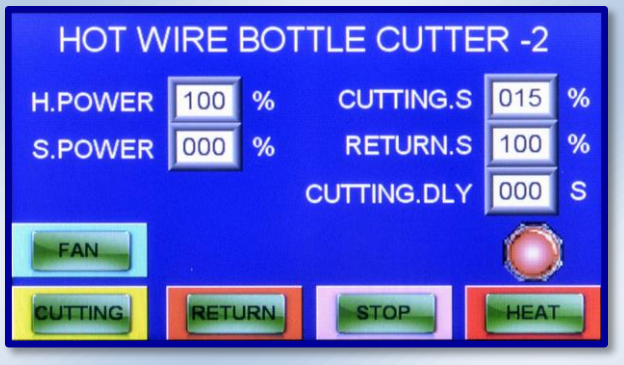
AT2E innovative HWBC-2 Hot Wire Bottle Cutter offers an automated and cost saving way for cutting containers for section weight analysis. A clean section without deformation will be obtained by a quick cutting of bottles through heated hot wires. A precision and repeatable cutting task is easy to achieve 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
- Mains supply: 220 VAC / 50 Hz
- Overall size: 500 (L) x 580 (W) x 600 (H) mm
- Net weight: 48 KG

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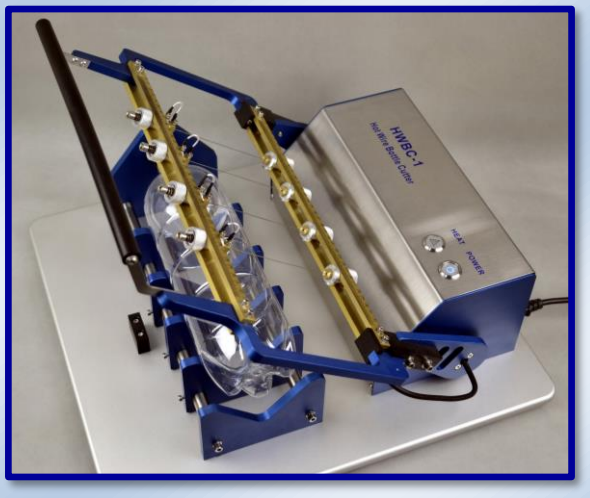
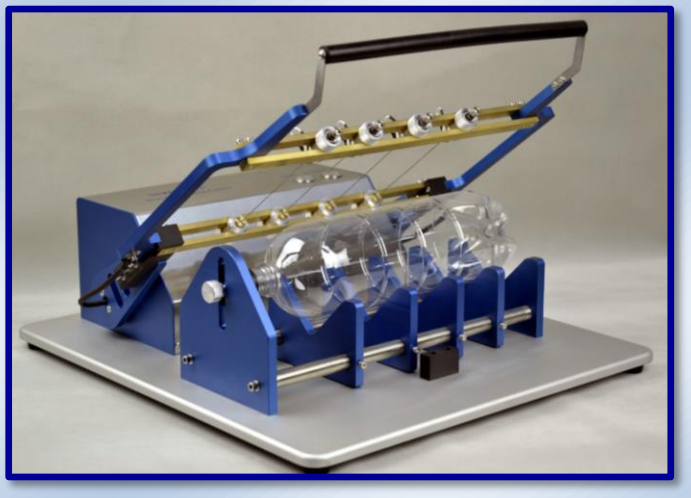
HWBC-1 Hot Wire Bottle Cutter

- 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
- Cutting up to 2 L bottle
- 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 (optional)
- 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 360 mm
  Maximum diameter 110 mm
- Power supply: 220 VAC / 50 Hz
- Dimension: 470 (L) x 510 (W) x 350 (H) mm
- Net weight: 18 KG

Control panel

Universal finish support

Optional part: Safety cover

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CE

Precision 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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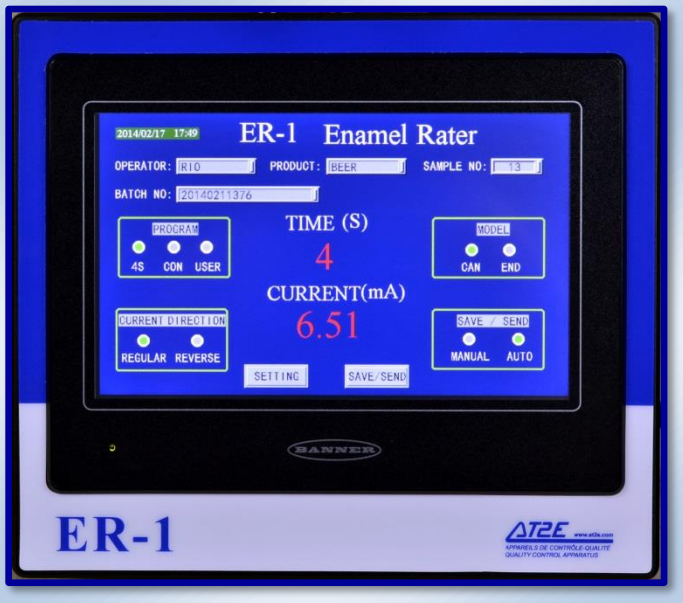
ER-1 Enamel Rater

ER-1 Enamel Rater with can holder



Main Frame

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.

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.

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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.

Technical specifications:

- Sample range: 2-pcs can, 3-pcs can, aerosol can, tube and different types of covers
- Can sample capacity: by order
- End sample capacity: by order
- Measuring range: 0 to 300 mA
- Resolution: 0.01 mA
- Accuracy: ± 5% F.S.
- Power supply: DC 12V
- Data output: RS232 serial output
- Main frame dimension: 212(L) x185(W) x150(H) mm
- Can holder dimension: 200(L) x 235(W) x 370(H) mm
- Net weight: 5 kg (including can holder)

Optional parts:

- Cover support (foot switch is equipped, vacuum source is not equipped)

Cover supports for various sizes of ends (optional)

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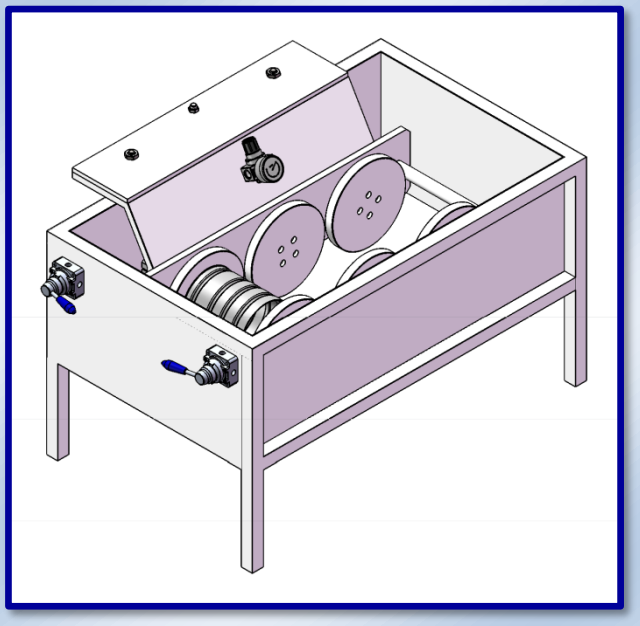
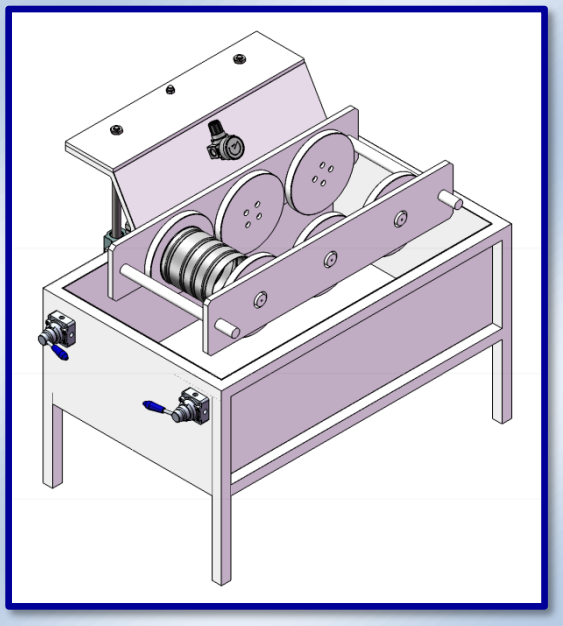
CLA-ECO Can Leak Analyzer (3 positions)





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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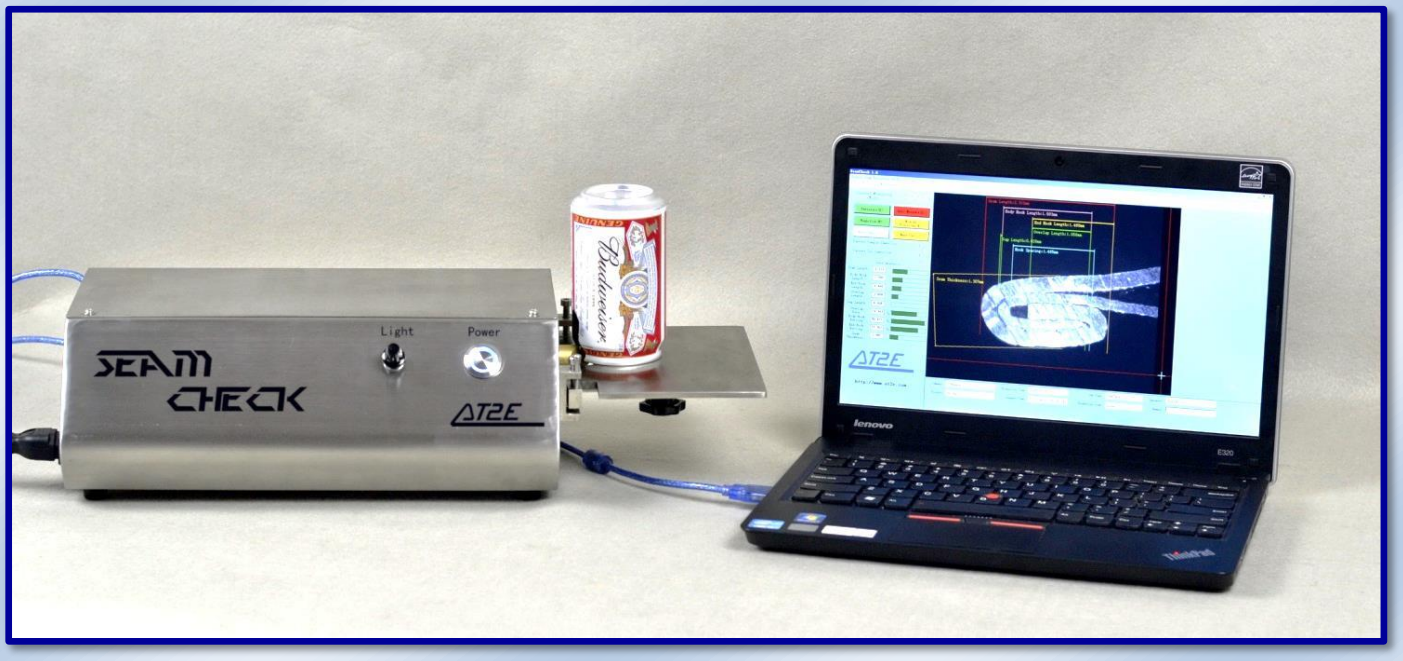
SeamCheck - Automatic Double Seam Projector



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 Automatic Double Seam Projector provides the most convenient way to accomplish the seam inspection.

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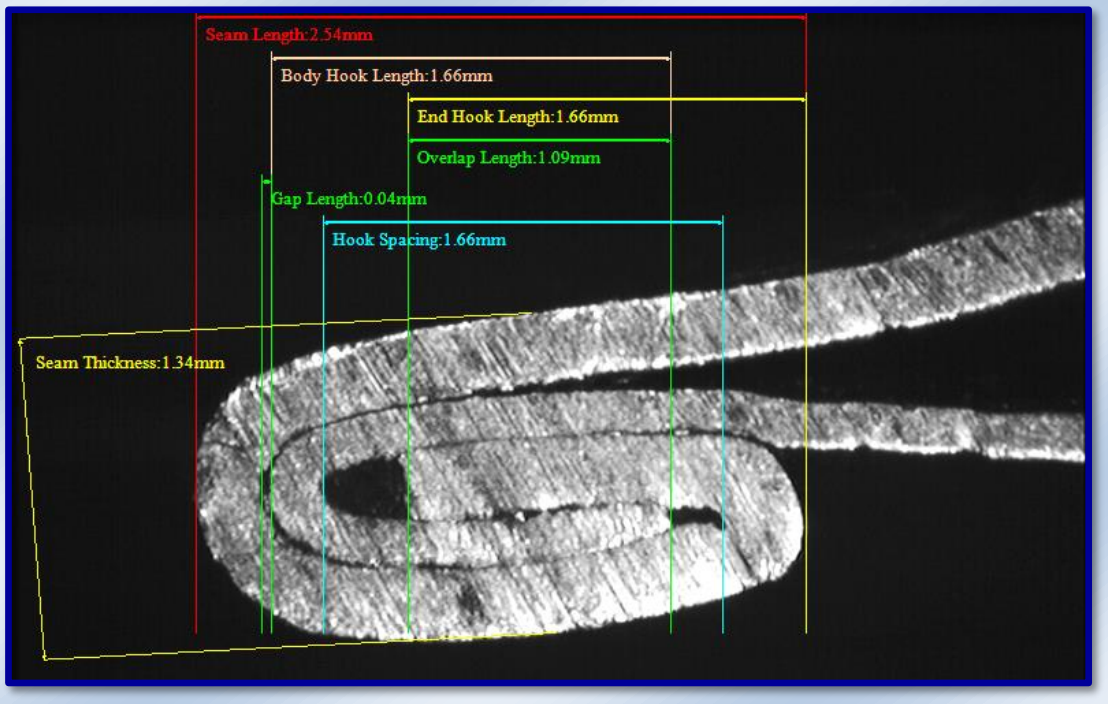
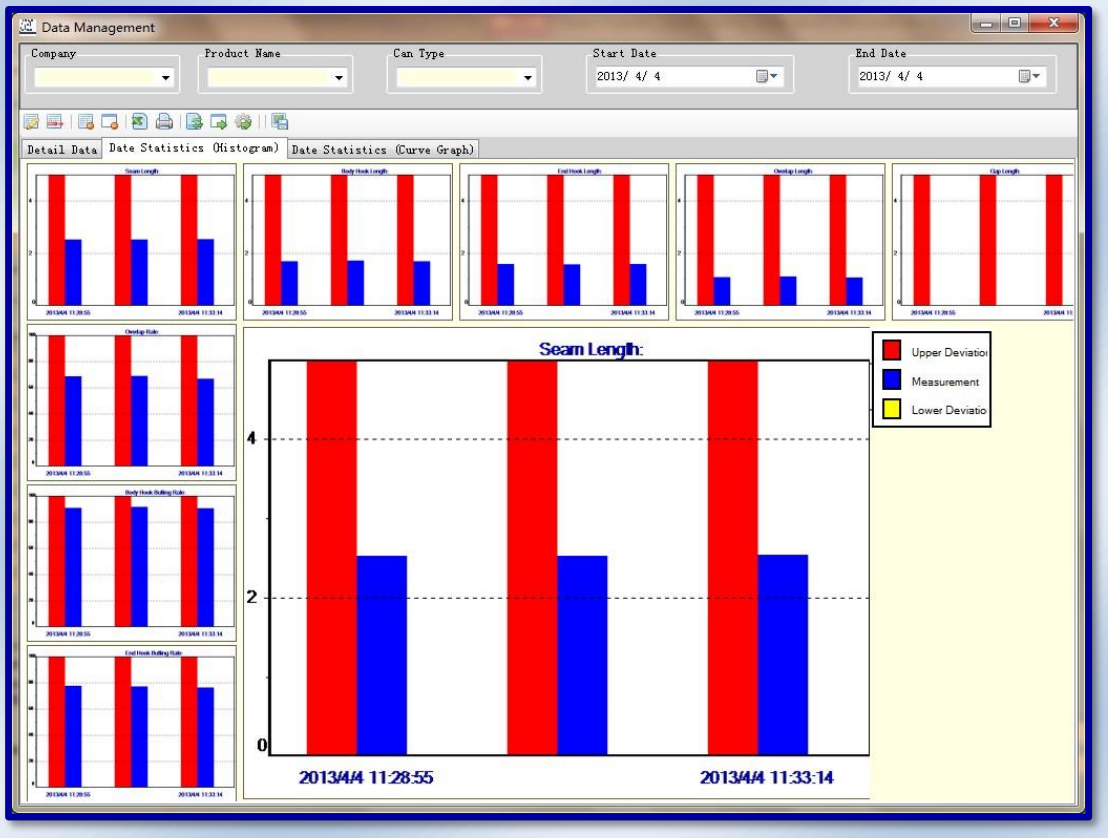
- Measured values are displayed in on-screen and alarm if values are not within specs
- Seam image can be printed and stored
- Provided with calibration piece, calibrate at any time
- Platform adjustable
- Light adjustable



Seam measuring screen



Data statistic screen

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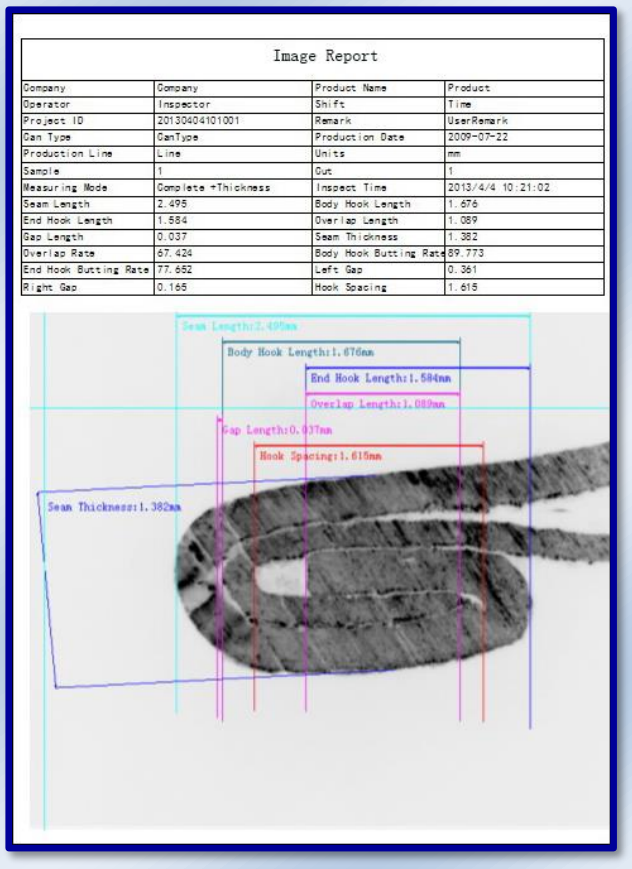
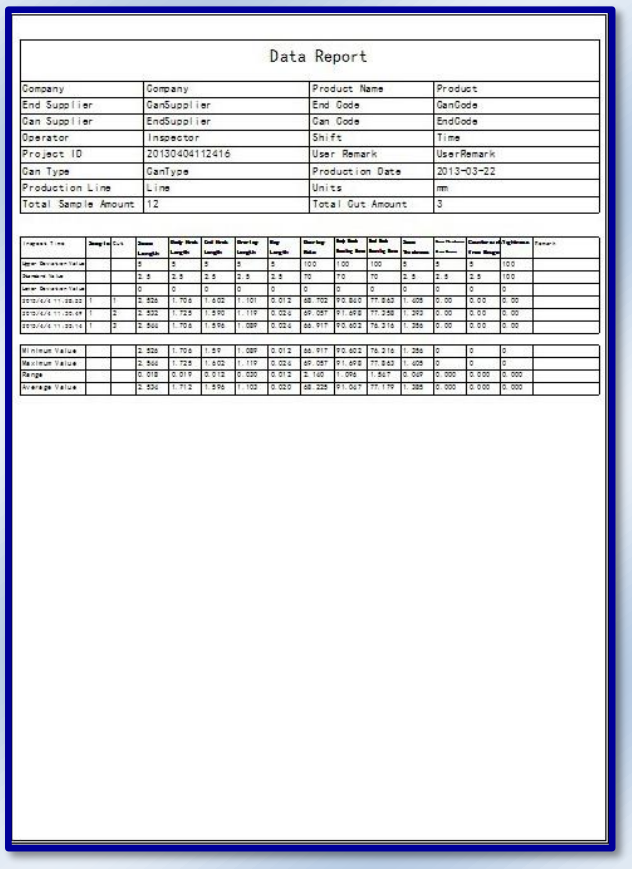


Image Report

Company	Company	Product Name	Product
Operator	Inspector	Shift	Time
Project ID	20130404101001	Remark	UserRemark
Can Type	CanType	Production Date	2009-07-22
Production Line	Line	Units	mm
Sample	1	Cut	1
Measuring Mode	Complete +Thickness	Inspect Time	2013/4/4 10:21:02
Seam Length	2.495	Body Hook Length	1.676
End Hook Length	1.584	Overlap Length	1.089
Gap Length	0.037	Seam Thickness	1.382
Overlap Rate	67.424	Body Hook Butting Rate	89.773
End Hook Butting Rate	77.652	Left Gap	0.361
Right Gap	0.165	Hook Spacing	1.615



Data Report

Company	Company	Product Name	Product
End Supplier	CanSupplier	End Code	CanCode
Can Supplier	EndSupplier	Can Code	EndCode
Operator	Inspector	Shift	Time
Project ID	20130404112416	User Remark	UserRemark
Can Type	CanType	Production Date	2013-03-22
Production Line	Line	Units	mm
Total Sample Amount	12	Total Cut Amount	3

Inspect Time	Seam Length	Body Hook Length	End Hook Length	Overlap Length	Gap Length	Overlap Rate	Body Hook Butting Rate	End Hook Butting Rate	Seam Thickness	Left Gap	Right Gap	Hook Spacing
Upper Deviation Value		5	5	5	5	5	100	100	100	5	5	5	100	
Standard Value		2.5	2.5	2.5	2.5	2.5	70	70	70	2.5	2.5	2.5	100	
Lower Deviation Value		0	0	0	0	0	0	0	0	0	0	0	0	
2013/4/4 11:20:32	1	1	2.526	1.706	1.602	1.101	0.012	68.702	90.840	77.863	1.405	0.00	0.00	0.00
2013/4/4 11:20:49	1	2	2.522	1.725	1.590	1.119	0.026	69.057	91.692	77.258	1.393	0.00	0.00	0.00
2013/4/4 11:20:16	1	3	2.506	1.706	1.596	1.089	0.026	66.917	90.602	76.316	1.386	0.00	0.00	0.00
Minimum Value			2.506	1.706	1.59	1.089	0.012	66.917	90.602	76.316	1.386	0	0	0
Maximum Value			2.566	1.725	1.602	1.119	0.026	69.057	91.692	77.863	1.405	0	0	0
Range			0.018	0.019	0.012	0.030	0.013	2.140	1.090	1.547	0.019	0.000	0.000	0.000
Average Value			2.536	1.712	1.596	1.103	0.020	68.225	91.047	77.179	1.395	0.000	0.000	0.000

Data Report

Equipment includes:

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

Technical specifications:

Power supply:	220 V
Serial interface:	RS 232
Resolution:	0.001mm
Accuracy:	0.005 mm
Magnification factor:	60 X
Line positioning magnification factor:	180 X
Platform capacity:	Up to 180 mm dia. can
Dimension:	470 (L) x 200 (W) x 125 (H) mm
Net weight:	5 kg

Optional parts:

- ANSS – Antinoise Seaming Cutting Saw / SS-1 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

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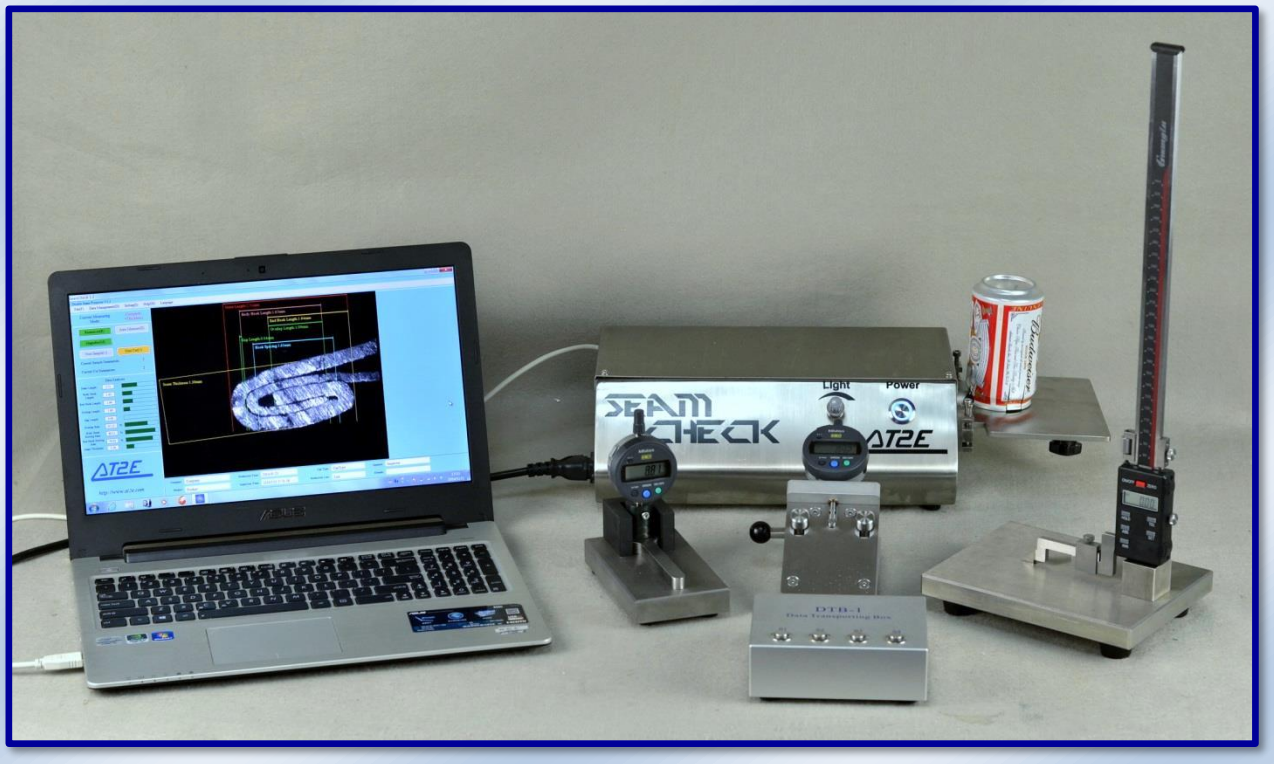
Optional seaming cutting saw: ANSS & SS-1



SeamCheck connecting with optional gauges through DTB-1

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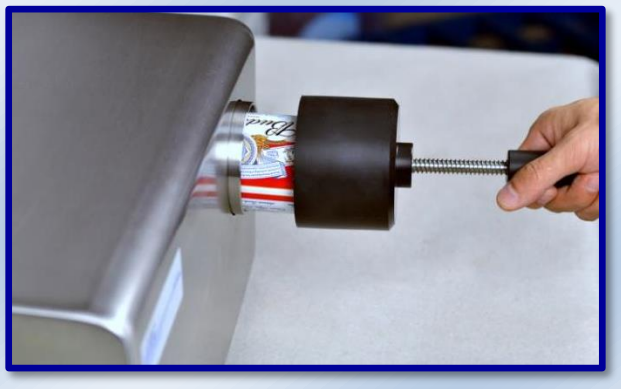
ANSS - Antinoise Seaming Cutting Saw

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 (65 mm diameter or less).

It can apply a speed of 1450 rev/min which enables the use of this saw on very simple cutting surfaces.

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



Easy & safe operating with handle

Custom-made handle for smaller size of can

Technical specifications:

- Sample range: 2-pcs and 3-pcs can with diameter up to 65 mm
- Blade dimension: 80x22x0.5 mm (160 teeth)
- Motor speed: approx. 1450 rev/min
- Working voltage: 220 V (others by request)
- Dimension: 390 (L) x 240 (W) x 200 (H) mm
- Net weight: 15 kg

Optional part:

- Additional handle for different size of can

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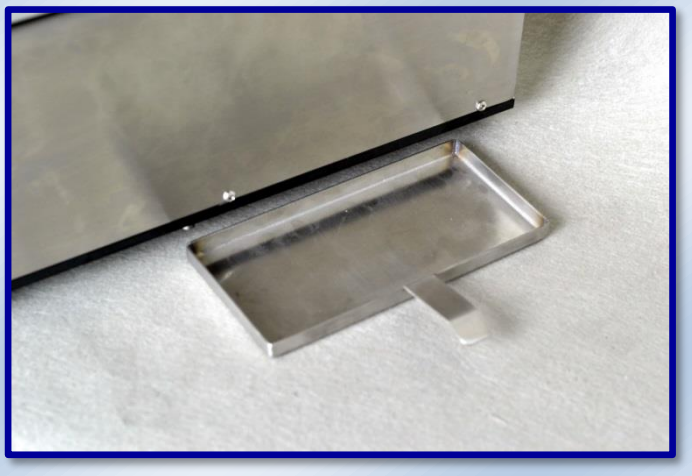
SS-1 Seaming Cutting Saw

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

Moving 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 with diameter up to 180 mm
- Blade dimension: 80x22x0.5 mm (160 teeth)
- Motor speed: approx. 1000 rev / min
- Working voltage: 220 V
- Dimension: 240(L) x 335(W) x170(H) mm
- Net weight: 20 kg

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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	: 0-6 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	: 180(L) x 103(W) x 108(H) mm
Net weight	: 1 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
Overall size	: 300(L) x 80(W) x 265(H) mm
Net weight	: 1 kg

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CIDG-1 Can Internal Diameter Gauge

Measuring

Compatible for different can sizes in one gauge

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
- Dimension: 282(L) x 120(W) x 90(H) mm
- Net Weight: 5 kg (including calibration rings)

Calibration for CIDG-1

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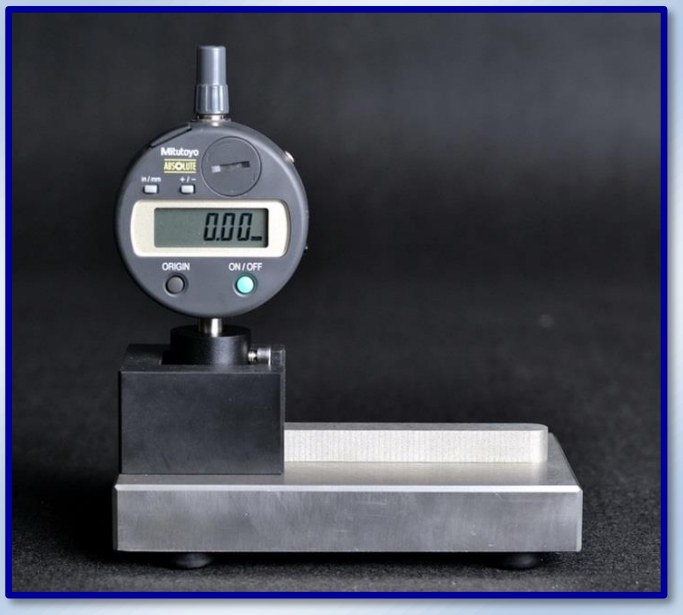
CG-D Countersink Gauge



Equipped with zeroization base

Measuring

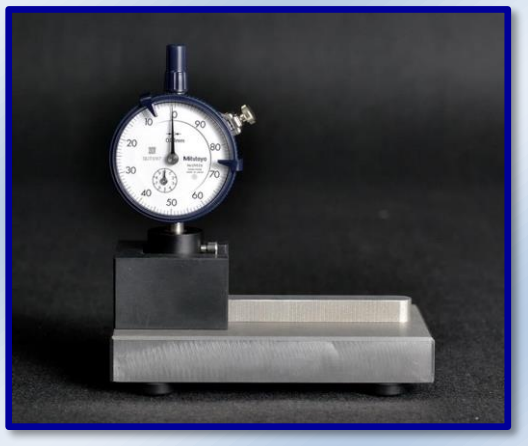
CG-D Countersink Gauge is a digital gauge for measuring countersink depth of can and end. For fast and easy measurement, the zeroization base is equipped.

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	: 180(L) x 103(W) x 108(H) mm
Net weight	: 1 kg

Custom made in large size

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CSM - Can Seam Micrometer

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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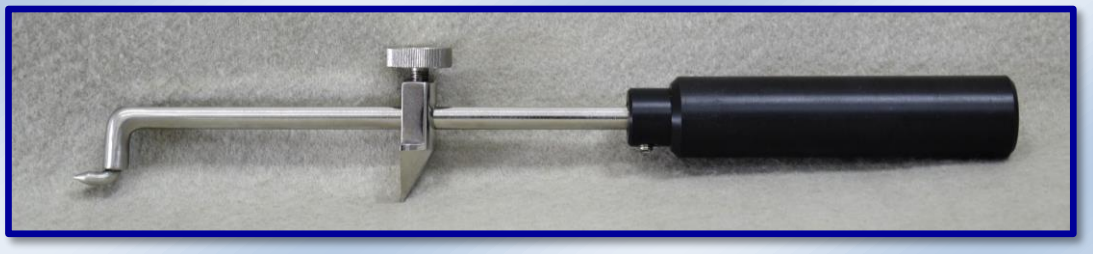
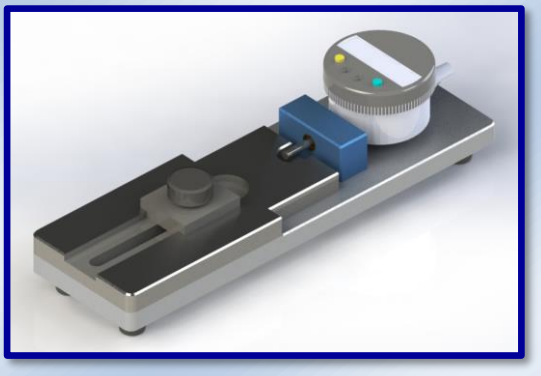
CO - Can Opener



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

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.

Technical specifications:

Measuring range	: Φ50-Φ110 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 195(H) mm
Net weight	: 2 kg

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	: 200(L) x 80(W) x 110(H) mm
Net weight	: 1 kg

AT2E

The Professional Quality Control Solution Around Your Side

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• Korea	• Lebanon	• France	• Canada	• Mali
• Pakistan	• Saudi Arabia	• Germany	• Chile	• Morocco
• Philippines	• The United Arab Emirates	• Greece	• Colombia	• Nigeria
• Thailand		• Italy	• Equator	• Senegal
• Vietnam		• Netherlands	• Guatemala	• South Africa
		• Poland	• Mexico	• Tunisia
		• Portugal	• Paraguay	
		• Russia	• Peru	
		• Serbia	• Uruguay	
		• Spain	• U.S.A.	
		• Switzerland	• Venezuela	
		• Ukraine		

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

AT2E-FRANCE
(Head Office)

6 rue des Cours Neuves, ZA de la peupleraie
77135 PONTCARRE, FRANCE
Tel: +33 01 64 66 03 02
Fax: +33 01 64 66 02 98
E-mail: info@at2e.com

AT2E-USA

3435 Wilshire Blvd.
Suite 2703, Los Angeles,
CA 90010 USA
Tel.: +1 231 597 3003
E-mail: sales@at2e.com

AT2E-CHINA

3040-41, Jimeiju, Lantian Road,
Duanzhou District, Zhaoqing,
Guangdong, China 526060
Tel: +86-758-2100039
Fax: +86-758-2581820
E-mail: info@at2e.com.cn