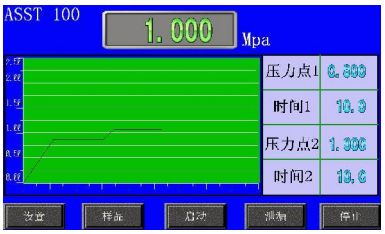
CanNeed-ASST-100 Automatic Secure Seal Tester

--- To evaluate the secure seal quality of beer and beverage easily



Advantages:

- Simple operation: place the samples, press the testing button, auomatically finish the test.
- Say goodbye to the piercing trouble, especially for crown caps, no need to wory about the piercing difficulty
- Vacuum piercing head, easy to operate, avoiding failure in measurement caused by untight seal.
- No need to worry gas leakage caused by lever of the tube which connect to the piercing head.
- Digital display and save measuring data.
- RS232C interface, data can be automatically output to SPC.
- Programmed pressure, detection limits can be adjusted - the time to reach the max pressure can be adjusted.

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The “CanNeed-ASST-100 Automatic Secure Seal Tester” is used to test the seal integrity after packaging. By detecting gas leakage, it effectively controls the seal integrity after packaging. It is used to test PET bottles, glass bottles and cans, also can be used to test crown caps and caps of PET bottles.

Standards of Qualified Sealing Integrity:

PET bottled beverage without gas, such as mineral water or tea beverage : 0.2 Mpa

PET bottled beverage with gas, such as Cola : 1.0 Mpa

Glass bottle-Crown cap, such as beer : 1.0 Mpa

Glass bottle-Plastic cap and Aluminium twit-off cap, such as sauce and spirit : 0.2 Mpa

Canned food or Canned beverage : 0.2 Mpa

The “CanNeed-ASST-100 Automatic Secure Seal Tester” is used to test the seal integrity,it effectively controls the sealing propertyand prevent gas leakage,therefore it is widely used in beverage industry. Place the sample into water and take pressure charge,then observe if there is gas leakage to judge the seal integrity.

Advantages:

1)Simple operation: place the samples, press the testing button, auomatically finish the test.

2)Say goodbye to the piercing trouble, especially for crown caps, no need to wory about the piercing difficulty.

3)Vacuum piercing head, easy to operate, avoiding failure in measurement caused by untight seal.

4)No need to worry gas leakage caused by lever of the tube which connect to the piercing head.

5)Digital display and save measuring data.

6)RS232C interface, data can be automatically output to SPC.

7)Programmed pressure, detection limits can be adjusted - the time to reach the max pressure can be adjusted.

8)Before going up to the max pressure (SP-2),the time of the pressure maintaning at the pre-setting

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pressure (SP-2) can be adjusted.

9)Two adjusting valve are used to adjust the speed of the 2 pressure rise.

10)Adopt various safety precautions.

11) Equipped with famous brand control valve,joint connector,pipe,and etc.So good Quality that can be compared with any similar product all over the world.

12) High sensitivity and accurate readings.

13) Take pressure charge with compressed air or CO2.

14)Made of aluminum oxide,stainless steel and plastics,sturdy and durable

15) Measuring pressure range: 0-16 bar (1.6 Mpa).

16) The max. dimension of the measuring samples: 330 × 150mm (height × diameter)

Application 1: Pressurizing Test: the seal integrity of PET bottle cap

The seal integrity for cap is very important for PET bottles.Many companies are buying this ASST-100 Secure Seal Tester to test the seal integrity.It effectively controls the seal integrity by detecting gas leakage,and it is widely used in beverage industry.This text mainly introduce the testing standard and testing method for PET bottle caps.

1. Indicators of Qualified Sealing Integrity of PET Bottle Cap

	100psi 125psi 150psi 175psi		
	<100psi		>175psi
Leakage	Unacceptable (correct)	Acceptable (But may indicate trend. Look for cause and correct)*	Acceptable (typical value)

*100psi＝0.69Mpa

Some inspectors may change the above inspection indicators based on their needs.

2. Inspection Methods:

1)Fill the water tank to approximately 10cm from top of tank. This level assures the closure will be covered with water.

2)Place the sample in the station and use the clamps to fix it,close the door and press the testing button.

3)The piercing head automatically get down and impale the cap.

4)The tailor-made piercing needle pierce a hole on the cap,then automatically operate the vacuum system,to make sure the needle and cap are completely sealed.

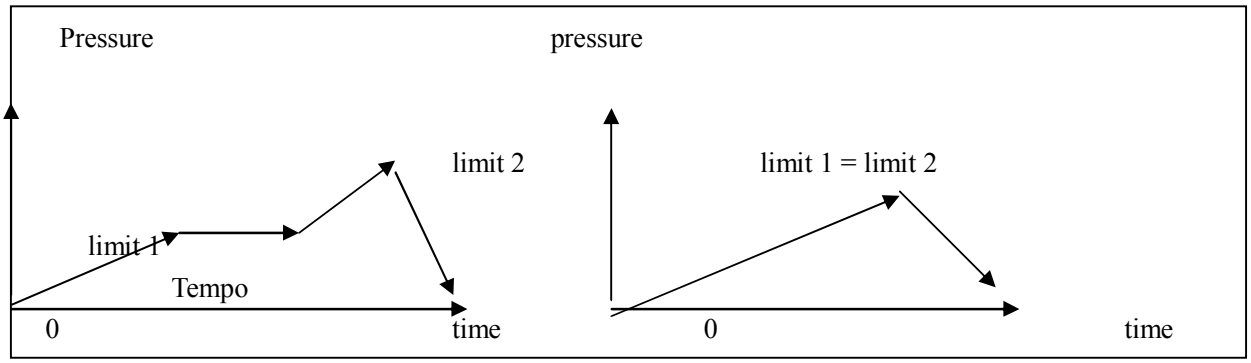
5)The water tank go up and up,and the sample will be immersed in the water,then take pressure automatically

6)The pressure in the bottle will go up and up according to the pre-setting speed,until achieve the first pre-setting upper limit (SP-1)

7)Then the timer will maintain the pressure in the bottle.After finishing the pressure maintaining,pressure will continue to go up and up as to the pre-setting speed,until achieve the pre-setting max pressure.

8)If bubbles are found during the testing procedure,pls press stop button,at mean time the max pressure will show on the display.

9)Data output via RS port.



10)After the test,the pressure in the bottle will reduce to zero, and the water tank automatically get down,while the piercing head go up and up,therefore automatically separate from the sample.

11)Open the door and take the sample out.

The frequency of testing filled product with the ASST-100 needs to be developed by each individual bottler .Factors which could affect the frequency of testing are condition of the roll-on capper, line speed, number of different vendors used for closures and containers, and the frequency of preventative

maintenance of the capper.

3. Suggested Testing Frequency and Methods:

1)Remove three containers from each capper head at the beginning of each shift. Observe all three samples from each head for visual thread definition. Test on sample from each head in the CanNeed-ASST-1000 and record the results. If any of the containers fail the CanNeed-ASST-100, test the remaining two containers from specific capper head which failed the CanNeed-ASST-100. If either of the remaining two containers fails the CanNeed-ASST-100, corrective action should be taken.

2)Containers should be tested after each capper head adjustment.

3)Containers should be checked in the CanNeed-ASST-100 when changing to a new lot of containers or closures,or when switching to a different vendor of either closures or containers.

4)Containers should be checked after any “jam-ups” in the capper.

5)Routine testing frequency on the CanNeed-ASST-100, when neither 3 or 4 above has occurred, needs to be developed by the individual bottler; however, we recommend a test frequency of every other hour as outlined in #1 above.

PS：These values have been established by many users as sufficient to provide assurance of a secure seal with above containers and closures. Individual bottlers may choose to modify the test procedures outlined according to their needs. Examine all defects and retest packages as required to determine the causes for lack of a secure seal. Corrective action should be taken immediately when leakage is observed on the ASST-100.

4.Theory of Operation:

The CanNeed-ASST-100 Secure Seal Tester is a set of equipment used to evaluate the seal of an aluminum roll-on type closure to either glass, plastic containers and cans. The test is preformed by inducing gas, at a controlled rate, into the headspace of a bottle which is submerged in water bath. The internal pressure build-up is meant to exceed normal conditions present in a carbonated beverage container. This excess pressure tests the security of the container finish-to-closure relationships, i.e., thread definition.

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Containers which are securely sealed will accept the excess pressure and show no signs of gas leakage. Containers which are not securely sealed will be revealed by the emission of small bubbles coming from the closure area. These bubbles can be easily seen by the operator. The ability to observe gas leakage rather than liquid leakage provides for a maximum degree of test sensitivity.

The gas pressure which is produced in a test container is controlled by a regulator and flow control valve. The ability to regulate the pressure permits the user to determine the maximum pressure a closure or container can withstand before gas leakage occurs. By controlling to flow rate a more accurate simulation of container pressure build-up is given.

Many safety features have been built into the CanNeed-ASST-100 Secure Seal Tester. Some of these safety features are the series safety valve, the aligning hole arrangement in the lid, and the rapid venting characteristic. Others include the secure lid latch, the regulator relief valve and the concept that the test container is submerged in water surrounded by a cylindrically-shaped tank. However, some cautionary measures should be taken to ensure the complete safety of the user.

CanNeed-ASST-100 Secure Seal Tester is a statistical quality control tool and does not guarantee defect-free package leaving the filling lines. It is a useful part of capping quality control system, but it is not a substitute for other elements of such a system, as recommended by the manufacturers and suppliers of cappers, containers and closures. Interpretation of the CanNeed-ASST-100 results is at the discretion of the user.

5.Comparison:

①The old testing way is so tedious that new hands usually fail in piercing.

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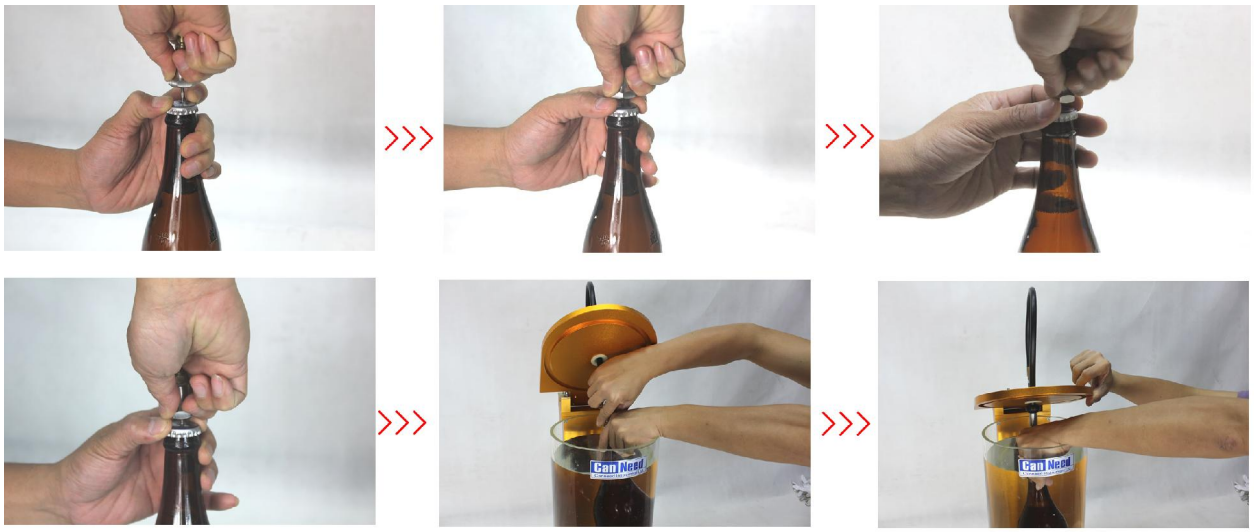

②The new testing way is quite easy to operate.After placing the sample,and press the button,the machine will finish measuring automatically.