

Buckle & Burst - Aerosol pressure - dome reversal

Description

As material costs continue to rise, companies need to reduce operating costs while maintaining high quality standards. To ensure that every aerosol can produced is within specifications, it is important to use accurate and repeatable measurement instruments that can monitor the product quality, locate any potential problems, record the measurement data and predict future trends.

Analog-based gauges are no longer sufficient in today's competitive environment. These gauges won't tell you which side of the can buckled first, and they can't monitor all three pressure points in one run (the two buckling pressures and the burst pressure). If you want to record and analyze the data, you need to write down each measurement and enter the data manually in to an SPC program.

Quality By Vision's new Aerosol Buckle & Burst Gauge is an accurate, user friendly and affordable system that **automatically** measures and records all pressure points on any size aerosol can. The system displays the pressure and volume graphs and allow the operator to see the exact point where the can buckles (dome reversal) and bursts - automatic detection determines the exact point where the top or bottom dome buckle.

The software provides easy to read information on the can and records the data in the built-in *Symphony* SPC system. There is no operator influence on the measurement process and the pressure test scenario (when to raise pressure, by how much, how long to hold, etc.) is completely programmable.



Buckle & Burst Gauge

Features

Modes of operation:

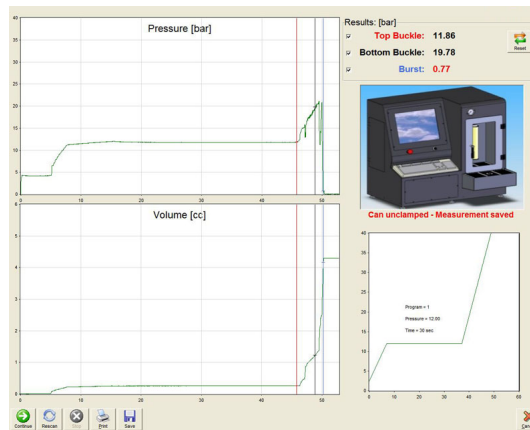
1. Raise pressure to a predefined value and hold for preset time
2. If the can withstands the pressure, the can "passes"
3. Raise pressure to burst
4. Detect all buckle (dome reversal) and burst points automatically

During the measurement, the operator can see the pressure and volume graphs as well as pressure level and other details.

The system **automatically** measures and saves the following values:

1. Top Buckle
2. Bottom Buckle
3. Burst
4. Pass or fail

Reports and graphs can be saved or exported to SPC systems.



Specification

Can type:	Aluminum or Steel
Can opening:	1" standard
Can Height:	50-300mm
Pressure range:	1-40 bar
Resolution:	0.01 bar
Open loop:	Automatically, pump with internal container
Closed loop:	Regular tap water
Cycle time:	Up to 60 seconds (programmable)
Test profiles:	User configurable!
Detection:	Automatic with optional operator manual override!
Online graphs:	Pressure and volume

Can type:	Aluminum or Steel
Can opening:	1" standard
Can Height:	2"-12"
Pressure range:	14-580 PSI
Resolution:	0.14 PSI
Open loop:	Automatically, pump with internal container
Closed loop:	Regular tap water
Cycle time:	Up to 60 seconds (programmable)
Test profiles:	User configurable!
Detection:	Automatic with optional operator manual override!
Online graphs:	Pressure and volume

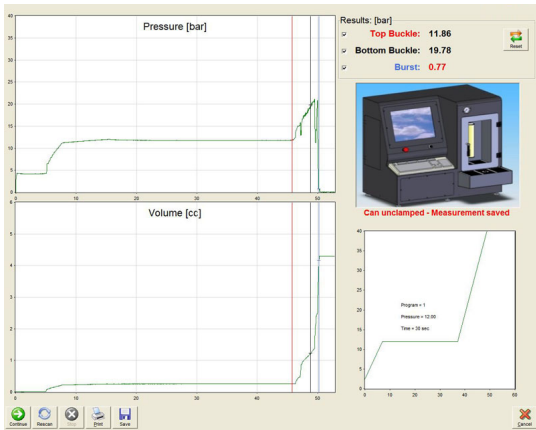
Pictures



Monobloc can tested by Buckle & Burst (bursts at 30 PSI)



Buckle and Burst unit



Measurement graphs

Head	Section	Bot Buckle	Pass	Burst	Top Buckle
1	1	21.18	0	20.86	15.79
1	2	18.95	1	20.16	11.25
1	3	17.23	1	20.86	15.79
2	1	21.18	0	20.86	15.79
2	2	14.79	1	20.86	11.76
2	3	19.87	0	19.39	14.51
3	1	21.18	0	20.86	15.79
3	2	19.44	1	9.43	16.20
3	3	21.18	0	20.86	15.79
4	1	17.23	1	9.23	11.28
4	2	19.78	1	9.77	14.86
4	3	21.18	1	20.86	11.79
5	1	21.18	0	20.86	15.79
5	2	21.18	0	20.86	15.79
5	3	21.18	0	20.86	15.79
6	1	21.18	0	20.86	15.79
6	2	21.18	0	20.86	15.79
6	3	21.18	0	20.86	15.79

Measurement table

Symphony report

Report: 2200
 Date: 13/11/2007 4:23:10 PM
 Job Name: BNB
 Heads: 4
 Sections: 3
 Tester: Martin H. Subag
 Customer: Pouchin Can
 End Diameter: Large

***** Score Residual Gauge *****

Head	Section	Bot Buckle [bar]	Pass	Burst [bar]	Top Buckle [bar]
1	1	21.18	1.00	20.86	11.86
1	2	21.18	1.00	20.86	11.86
1	3	21.18	1.00	20.86	11.86
1	Avg	21.18	1.00	20.86	11.86
1	StdDev	0.00	0.00	0.00	0.00
2	1	21.18	1.00	20.86	11.86
2	2	21.18	1.00	20.86	11.86
2	3	21.18	1.00	20.86	11.86
2	Avg	21.18	1.00	20.86	11.86
2	StdDev	0.00	0.00	0.00	0.00
3	1	21.18	1.00	20.86	11.86
3	2	21.18	1.00	20.86	11.86
3	3	21.18	1.00	20.86	11.86
3	Avg	21.18	1.00	20.86	11.86
3	StdDev	0.00	0.00	0.00	0.00
4	1	21.18	1.00	20.86	11.86
4	2	21.18	1.00	20.86	11.86
4	3	21.18	1.00	20.86	11.86
4	Avg	21.18	1.00	20.86	11.86
4	StdDev	0.00	0.00	0.00	0.00
Report summary	Avg	21.18	1.00	20.86	11.86
	StdDev	0.00	0.00	0.00	0.00
	Min	21.18	1.00	20.86	11.86
	Max	21.18	1.00	20.86	11.86
	Range	0.00	0.00	0.00	0.00

Measurement report



Buckle & Burst Gauge at Cannex 2007