

PRODUCT INFORMATION SHEET

Z345 Colour Inspection System powered by X-Rite®

Email: tms.sales@torus-group.com
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Global brand image and decoration quality is becoming increasingly important, particularly on aluminum and steel beverage cans. Ensuring colour quality is correct and consistent, independent of the manufacturing plant, is paramount. Unfortunately, human ability to perceive and interpret colour is subjective and influenced by many factors, such as, age, fatigue, environment, illumination and observation angle.

The industry recognised Ci64 Spectrophotometer from X-Rite provides quantifiable colour measurement. A photometric device utilising a specific illuminator and receiver to obtain the spectral reflectance of the sample under inspection. This spectral reflectance is processed and compared against known traceable standards for accurate colour measurement.

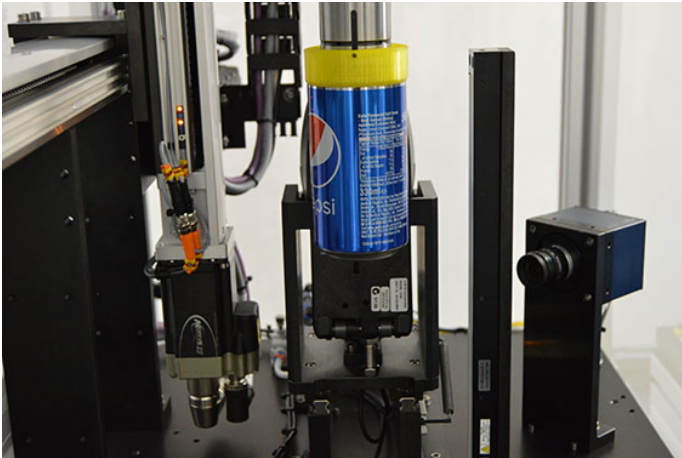
Torus Measurement Systems' NEW Z345 is the first Automatic Colour Inspection System powered by X-Rite. Capable of inspecting "200" – "300" body diameter, straight walled and finished cans with minimal change parts. Cans may be loaded in any orientation either onto an automatic in-feed conveyor or directly from the production line. A high resolution colour scan camera reads and 'unwraps' the label and aligns it to a master image using GaugeXplorer's sophisticated pattern match software. The can is then accurately presented to the Ci64 for inspection at pre-defined, user selected locations, with unmatched positional repeatability.



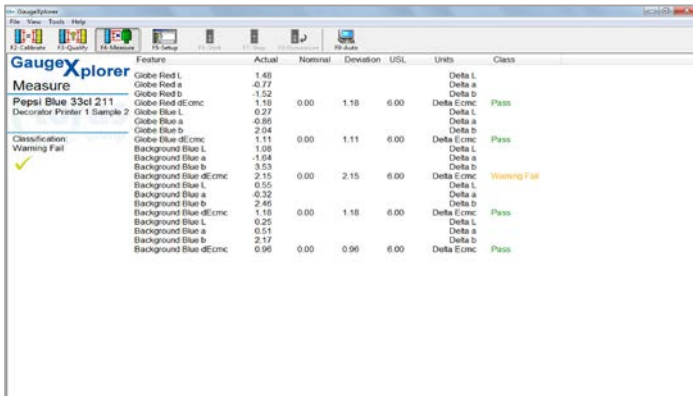
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The Z345 Colour Inspection System significantly reduces labour time and removes human error to deliver fast, reliable and accurate colour inspection of the decorated aluminum or steel beverage can. Providing complete L*, a*, b*, Ecmc, E2000 and E94 data for full traceability, utilising early warning limits so decorators can be adjusted before colours go out of tolerance.



Feature	Actual	Nominal	Deviation	USL	Units	Class
Globe Red L	1.48				Delta L	
Globe Red a	4.77				Delta a	
Globe Red b	-1.52				Delta b	
Globe Red dEcmc	1.18	0.00	1.18	6.00	Delta Ecmc	Pass
Globe Blue L	0.27				Delta L	
Globe Blue a	-0.89				Delta a	
Globe Blue b	2.04				Delta b	
Globe Blue dEcmc	1.11				Delta Ecmc	
Background Blue L	1.08	0.00	1.11	6.00	Delta L	Pass
Background Blue a	-1.04				Delta a	
Background Blue b	3.53				Delta b	
Background Blue dEcmc	2.15	0.00	2.15	6.00	Delta Ecmc	Warning Fail
Background Blue L	0.55				Delta L	
Background Blue a	-0.32				Delta a	
Background Blue b	2.46				Delta b	
Background Blue dEcmc	1.18	0.00	1.18	6.00	Delta Ecmc	Pass
Background Blue L	0.25				Delta L	
Background Blue a	0.51				Delta a	
Background Blue b	2.17				Delta b	
Background Blue dEcmc	0.98	0.00	0.98	6.00	Delta Ecmc	Pass

GaugeXplorer - Numerical Data

TECHNICAL SPECIFICATION

Component Range
 Body Diameter (202-307)
 Trimmed Height Range from 85mm - 250mm
 Straight Walled and Finished Can compatible

Features Measured

- I* value Light-Dark
- a* value Green (-a) - Red (+a)
- b* value Blue (-b) - Yellow (+b)
- c value Chromo / Saturation
- h value Hue
- Delta E Change in total colour from nominal reference
- DeltaEcmc Change in total colour in accordance with cmc tolerancing from nominal reference