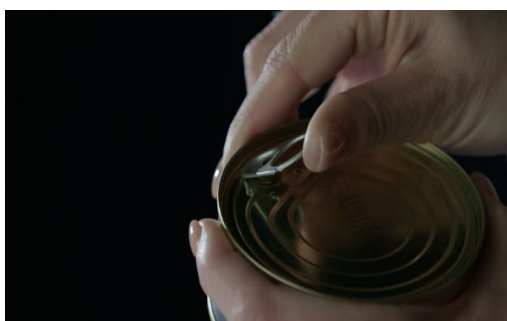




# Metal Cans

*Understanding  
the challenges  
and solutions for  
manufacturers.*

The Metal Cans category of packaging was invented in the beginning of the nineteenth century and has been used for more than 100 years. With time, its scale of use expanded into a variety of end-use commodity packing purposes such as food & beverage items, chemicals, oil etc. Over the years, many improvements have been made to the design: materials used for the cans such as aluminum, steel, tin and internal/external protective organic coatings; manufacturing equipment for 2 and 3 piece cans; chemical process monitoring; applications like food & beverage, edible oil, pharmaceutical industry, personal care and cosmetic products, industrial chemicals; and, quality control methods/instrumentation.



Today, due to the relentlessly growing global demand and production of millions of cans per day around the world, manufacturers are faced with the challenge of increasing production efficiencies to provide cost-efficient and scalable solutions. This means higher production speeds resulting in higher number of units being produced per minute and huge numbers being transported worldwide. The manifold manufacturing process in the can industry makes the entire metal can production complex and can involve quite a few machines from splitting to seaming.

The can manufacturing plants and their raw material suppliers are responsible for product integrity even before the distribution of the cans to the product manufacturers. Therefore, outgoing complete quality control of produced empty cans is an extensive practice at manufacturing locations. This control provides the possibility of eliminating package issues before they reach the filling process through scrupulous quality control procedures.



The quality testing of empty cans by manufacturers and of filled and finished cans help to act proactively by eliminating production challenges like:

- *Downtime during filling process, leaks and spillage.*
- *Lengthy production time: formerly tested packaging will help save time during the production process.*
- *Contamination and unsafe-to-use products leading to product recalls.*

Hence, both *empty can package testing* and *filled can quality testing* is an appropriate choice for manufacturers. This will help to offer safe and sterile products contained within the metal cans.

*Bonfiglioli Engineering* provides innovative solutions to the challenges facing the metal can industry. Our aim is to ensure that your metal can manufacturing, and delivery is seamless, right from empty can testing to filled composite and lidded can testing. We provide quick and reliable solutions for empty 2- and 3-piece cans that are directly installed at the can manufacturers' facilities to guarantee a smooth production process. We also offer equipment for filled and closed cans.



We provide *Non-Invasive, Non-Destructive* CCIT leak testing lab, in-process, in-line and combined solutions that are based on Vacuum Decay Method for *empty, filled and lidded containers*, with *zero alteration of container features during testing time*. Our solutions help ensure:

- ❑ Zero downtime
- ❑ Quality: elimination of leaking containers due to micro-holes, inappropriate sealing, or cracks.
- ❑ Safe products for the end-user and manufacturers; protection from financial loss due to recalls, lawsuits and potential adverse publicity.



*Bonfiglioli Engineering offers customized solutions from 100 ml up to 1000 ml in filled cans and up to 30 liters in empty cans and 100 to 600 containers per minute in filled cans and up to 1200*

Bonfiglioli Engineering provides numerous solutions for the can making industry. Other than leak detection solutions, handling of the container is guaranteed. Customized solutions from 100 ml up to 1000ml in filled cans and up to 30 liters. in empty cans and speeds ranging from 100 to 600 containers per minute in filled cans and up to 1200 containers per minute for empty cans.

The machines are designed for *easy bypass* and reduced downtime in case of interference thanks to *safety clutches* present in each testing chamber shaft and star wheel. They are also equipped with *quick format change* thanks to an automatic height adjustment feature.



### Testing method summary:



Container Closure Integrity Testing is a non-destructive measurement technology based on *Vacuum Decay Method* performed while the package is held within a hermetically sealed test chamber. It measures the loss of vacuum inside the testing chamber as a result of headspace gas leakage from the package. The monitoring of the vacuum level allows to identify microleaks and rejects faulty containers.

This equipment test method refers to and is approved by “American Standard Testing Method ASTM F2338” – “Standard Test Method for Non-Destructive Detection of Leaks in Packages”.

To learn more about your *metal can package inspection and leak detection options*, visit <https://www.bonfiglioliengineering.com/products/category/metal-cans-and-aerosols/>