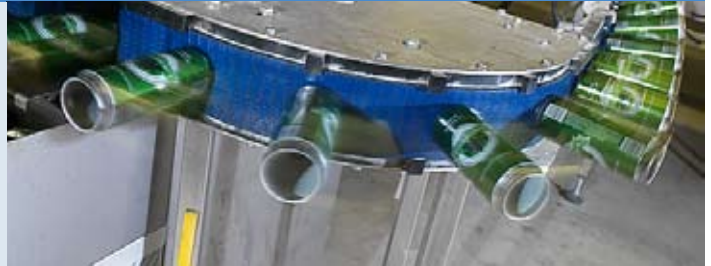


Can-making and filling



Aluminium sheet for drinks cans is alloyed with manganese and magnesium for strength and ductility, with slightly different alloys and thicknesses for can bodies and lids. The precision of the gauge achievable with aluminium has led to its use for the easy-open tab end of both steel and aluminium cans: when the metal is scored to break under pressure from the tab, a consistent thickness of metal beneath the score line is crucial to reliable performance, and aluminium provides this consistency .

The can-making process is fast and efficient, from the time the aluminium coil feeds into a press which cuts and forms shallow cups - ready to be drawn up into the familiar can shape - to the moment the decorated cans leave for the filling plant.

The pressed aluminium cups are forced through a series of tungsten carbide rings which raise, and thin, the aluminium walls of the can in a process known as 'ironing'.

The cans are then trimmed, washed and dried before the brand design is applied, starting with the application of a clear or pigmented base coat lacquer, and followed by up to six-colour printing. The cans are then varnished and oven dried, before the inside is spray lacquered and the can dried again.

The next process is the formation of the neck, where the diameter of the can wall is reduced and the top of the can flanged outwards to accept the lid, which can be applied once the can has been filled at the customer's plant.

An automatic-reject light tester checks each can for pinholes or fractures, and the cans are transferred to the warehouse to be palletised for despatch to the filling plant.

Can ends are similarly stamped from aluminium sheet fed from a coil, and the edges curled within the process. A very precise bead of compound sealant is then applied within the curl.

The separate pull tabs are cut and formed in two stages before being joined to the can end, after the ends have been scored to enable the metal to break under pressure.

The finished lids, ready for capping the filled cans, are packed in paper sleeves and palletised for shipment to the can filler.



Energy saving during distribution

Lightweight alucans pack more product into each truckload

More product per truck - fewer trucks

Fewer trucks - less fuel - less carbon dioxide emissions

Aluminium saves 9% of transport cost in every load



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The filling and lidding process

When the cans arrive on the filling line, they are cleaned in a high-pressure air and water process, which involves inverting them through 180 degrees, before returning them to the upright position for filling in a covered unit.

Carbon dioxide extracts all air from the can, and low juice syrups may be pasteurised immediately before filling.

Up to 2,000 cans a minute are then filled with the beverage, before the can ends are fed from a dispenser, to be sealed with an interlocking seam to the filled cans. Beers and high-juice drinks are then pasteurised in the can, before automatic checking of the finished product.

Coding and 'best before' dates are then printed on each can before packing, shrink-wrapping, palletising and shipment. The journey around the can filling plant is about a mile.

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