ArdaghMetalPackaging



Beverage cans and ends

About Ardagh Metal Packaging

Ardagh Metal Packaging (AMP) is a leading global supplier of sustainable, infinitely recyclable, metal beverage cans to brand owners. A subsidiary of sustainable packaging business Ardagh Group, AMP is a leading industry player across Europe and the Americas with innovative production capabilities and known for its outstanding quality and customer service.

Why metal?

As metal is a permanent material, it has excellent environmental credentials. Permanent means that metal recycles forever. When metal products reach the end of their useful life, the materials are simply collected and recycled, again and again, with no loss of their inherent properties and so will always be available for future generations.

Today

76.1% 82.5%

of aluminium of steel beverage cans packaging

are recycled in Europe, making metal packaging one of the most recycled packaging.

Source: Metal Packaging Europe



have the highest scrap value out of all materials.

are one of the most recycled containers in the world.





Up to 80% of all metal

ever produced in the world is still available for use.

Sustainability

We are a leading supplier of inherently sustainable packaging. Our aim is to reduce any negative environmental impact whilst remaining economically sustainable and socially responsible.

Ardagh's packaging has a central role to play in helping our customers meet their sustainability objectives and commitments. Therefore, we have dedicated health & safety and sustainability teams around the globe working to continually improve our safety ratings, reduce energy and water consumption along with diverting waste to beneficial reuse. We actively set up and support local recycling activities, and help you with facts and figures.

Have a look at the sustainability report on our website for details on our management systems and our long-term targets.

Advantages of beverage cans



Recyclable

Beverage cans are made of metal which is fully and infinitely recyclable without loss of quality.



Light-proof

Beverage cans are absolutely light-proof, protecting the quality of light-sensitive beverages.



Hermetic seal

Being absolutely airtight, beverage cans keep oxygen out and carbonation in, allowing beverages to stay fresh for longer.



Unbreakable

Beverage cans are ideal for large events; they have a low risk of leaking or tearing during transportation.

Stackable

Cans can be stacked to make maximum use of storage.



Lightweight

The wall of today's beverage can is as thin as a human hair. Thanks to ongoing research and development, it is now possible to manufacture cans with far less material than before. Light and convenient, beverage cans are great for refreshment on the go.

-resh

Beverage cans chill quickly and feel extra fresh to the touch. The characteristic sound of a can opening is a unique indicator that the drink inside is absolutely fresh.



Dear customer, how can we help you?

Sales

You may have met our multi-national sales team: Cheerful and always out on the road. They can help you with contracts, pricing and lead times! Furthermore, they can help you differentiate your brand by suggesting brand enhancing value added products. They can also arrange innovation workshops should your brand require more unique solutions.

Graphics Service

for the perfect product design

Our graphics team is committed to provide the most convenient, reliable graphic end-to-end process in the industry and consists of a wide range of highly skilled experts across Europe. With locations in the UK, Germany, France, Poland, and Benelux, we are positioned close to our customers and speak their local language.

All in-house Graphics Service Centres offer:

- Artwork development consulting •
- Repro graphics
- 3D visualisation
- Ink development with ink supplier on site
- Print proofing.



We appreciated the cooperative approach of Ardagh's graphics team during the development process. They were professional, engaged and kept working to achieve the best possible results, and we are very satisfied with the final cans. - Julia Czyzykowska, Brand Manager Tatra, Grupa Zywiec



Templates and guidelines can be found in our Graphics Portal here

le wanted a premium, no-nonsense ook for the can, to reflect the simplicity of our drinks. We worked very closely with Ardagh's Graphics team who helped us select the right colours, and it was great to be able to test the designs on the can directly.

- Benno Fiorito, Director of Fiorito B.V.



Sample store

We are pleased to offer brands quick and easy access to our product portfolio via our online sample store. Order from a range of beverage cans and ends anytime and anywhere.

The sample store is free of charge and samples are typically delivered within 10 working days of your order.

ardaghmetalpackaging.com/samplestore

Customer Technical Service for high performance filling

Providing a professional Customer Technical Service (CTS) to more than 350 customers and issuing over 1,300 follow-up reports is enough of a reason to take a closer look at the filling line support we offer you. Our experts are local technicians who know our customers' needs, who are very familiar with our customers' production lines and who can speak your language. They know exactly where to look and how to make your filling plant even more efficient.

Our services:

- General support and regular visits
- Seam specialist training
- Line equipment services
 - » Seam control and adjustment
 - » Seamer start up assistance
- Audits
 - » Complete filling line
 - » OEE based audit
 - » Filled goods supply chain

State-of-the-art laboratory

for innovative and safe products

Our technical centre translates visions into products. An international team of highly gualified employees, including physicists, chemists, engineers, food and drink technologists and metallurgists, work constantly to improve Ardagh's beverage cans in terms of appearance, functionality and their environmental footprint.

In our state-of-the-art laboratory, a wide range of sophisticated test and analysis methods have been developed, including a complex beverage compatibility test that can provide reliable information on the expected shelf life of new beverages in only a few weeks.

You can use our pilot can filler to simulate production conditions, fill sample goods and test product behaviour.

- Project services (e.g. filling line performance improvement)
- Laboratory analysis
 - » Compatibility test
 - Test packs
 - » Seam integrity test
 - » Process water evaluation
 - » Can filling simulation
 - Detailed root cause analysis.



Cans on the rise

Due to shifts in consumer trends and preferences, beverage cans are gaining momentum in speciality drink categories.

Water

Carbonated and flavoured waters are successfully growing in cans; still waters are discovering the potential of this pack, too.

The progression of current filling technology together with our know-how makes it feasible to pack this vital drink and keep it fresh and safe.



BREWING CO

LONDON FOG NITRO

EARL GREY TEA OAT MILK LATTE

6

DAIRY FREE

USDA

7 FL OZ (207 ML)

Wine

This trendy combination has not only a high growth rate but is also widely accepted amongst consumers thanks to Ardagh's wine-safe solution from grape to can. Find our Wine Cans on page 30.



Coffee

Sensitive beverages require special cans, filling and processing. Ardagh's competence is well-known in the market and highly valued by our barista customers.

Premiumisation and indulgence? #GoNitro - see page 28.



Dairy and non-dairy alternatives

Not only is the beverage can safe, efficient and sustainable, its customisable format is an opportunity to revitalise the market for milk and plant-based drinks. As just one example, Ardagh's award-winning Nitro Earl Grey Tea Oatmilk Latte is already bringing a new level of excitement to the Nitro experience of plant based beverages.

> World BEVERAGE Innovation Awards 2020

Craft beer

The beverage can provides excellent packaging for craft beer: It protects delicate ingredients such as aromatic hops and spices against light and oxygen, thus fully preserving the beer's signature taste.

We provide comprehensive support from design development to can filling and provide customers with access to our wide network of contract fillers.



Our business development team supports and facilitates the emergence of speciality drink categories. We help you get started. Contact us at: beverage.cans@ardaghgroup.com.



Hard Seltzer

Seltzers are the new trend from USA and is the perfect summer drink. It's addressing consumers with a thirst for a healthier lifestyle - low carb and low alcohol.



Product portfolio

Overview of Ardagh's cans and ends

ň	
ranç	
e ca	
age	
2	

Standard

Fluorescent Impact....17 H!gh End......18

Size:	330ml	375ml	440ml	470ml	500ml	530ml	550ml	568ml
Aluminium	•	•	•	•	•	•	•	•
Steel	•				•			

Sleek				
Size:	250ml	300ml	330ml	355ml
Aluminium			•	•
Steel	•	•	•	•

Slim				
Size:	150ml	187ml	200ml	250ml
Aluminium	•	•	•	•

Standard

Bevel

Value added products

đ١

See the difference	Feel the difference	Promote your brand	Speciality cans
·	Variable Embossing24	Lasered Tabs27 Coded Tabs27	
Premium Print 1.0, 2.012	Embossed Shells26 Incised Shells26		
Variable Print 1.0, 2.0, 3.014 Premium White16	Punched Tabs26		

Innovation and Quality

Innovation within Ardagh Metal Packaging is more than a process, it's our culture

Innovation

"

Innovation is at the heart of everything we do, from design and development to raw material reduction and energy efficiency. We are committed to pioneering new packaging products and manufacturing processes. Together with significant investment in research and development, this is how we maintain our leading global position.

We continue to succeed in innovation by focusing closely on three areas: new market solutions, product optimisation such as lightweighting, and operational excellence.

Our aim is to deliver industry-leading product and process innovation to our customers.

Quality

Our quality objective is to have processes to target zero-defects across the organisation in order to deliver fit for purpose, interchangeable cans and ends to customer filling lines and to ensure a safe performance towards the final consumer.



Æ an U C Sleek SII 3

Innovation Quality

Matte Impact Enhanced aesthetics with premium appeal

Product benefits

- Unique finish draws consumer's eye at POS
- Visual and haptic enhancement
- Strong contrast to glossy competition
- Ease of implementation throughout supply-chain.

Technical specifications

- Available for aluminium and steel cans in all sizes
- Filling line trial recommended with CTS on-site.



Thermo Impact A hidden message appears at a defined temperature

Product benefits

- Encourages correct serving temperature
- Temperature-sensitive pigments change colour based on pre-defined metrics
- Facilitates interaction with consumers at POS
- Enhances design opportunities.

Technical specifications

- Available for aluminium cans in all sizes; steel can application on request
- White to colour: aqua, blue, goldenrod, green, magenta, orange, blue jay, grape or radiant orchid
- Colour to colour: yellow to green
- Customer can choose from standard temperature range.

Reveal Impact Hidden messages appear as temperature changes

Product benefits

- Temperature-sensitive pigments change colour based on pre-defined metrics
- The can displays a two-stage image or message
- Engages the consumer by a surprise effect.

Technical specifications

- Available for aluminium cans in all sizes
- Colour: blue.

We opted for Ardagh's appealing matte overvarnish to make the can stand out on the shelf. The visual excellence of the packaging not only catches the eye but reflects the all-natural, health- and environmentconscious product itself.

- Alex Wright, Founder of Dash Water







DA-

SH

WATER



WATER

SPREPRIE







*As can warms up

Premium Print For a sharper image

Product benefits

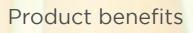
- High level of design contrast
- Finer details possible.

Print

Premium

Technical specifications

- Available for aluminium and steel cans in all sizes
- Resolution of up to 40 lines per cm / 102 lines per inch possible; please contact our graphics department for details.



Ability to produce compelling graphics that command attention

Print

emium

P

Enables photo-realistic images.

Technical specifications

- Available for aluminium and steel cans in all sizes
- Resolution of up to 54 lines per cm / 137 lines per inch possible; please contact our graphics department for details
- Laser-engraved plate technology
- Customised development process and proof cans required.

Perrier were looking for the ultimate in sharp, clear and beautifully coloured visuals for their high-end range of Perrier & Juice drinks.



Choosing Ardagh's cutting-edge print technology Premium Print 2.0 brought their graphics of crisp, fresh fruit and effervescing liquids to life.



We chose **Premium Print 2.0** for our brand älska as it enables us to have **photo-real fruits** printed on the cans – so our customers get the whole package: premium drink and premium design.

- Synne Nyland, Brand Manager, Product Developer and Head of Communication at The Swedish Cider Company







Variable Print Customise your packaging

Product benefits

- Effective response to on-going trend of mass customisation
- Allows brand to easily adapt to time-sensitive events
- Enables unique collectable promotions
- Cost-efficient and highly targeted print process.

Technical specifications

ROCK

JOHN

- Available for aluminium and steel cans in all sizes
- Contrast created through one printed colour with either the can basecoat or can metal colour.



Up to 24 different messages possible.

Print 1.0

iable

1.0 offers the appearance of alphanumeric characters in the colour of the can or the basecoat.

Up to 24 different messag	J
or icons possible.	

0

N

Print

ariable

2.0 offers the appearance of alphanumeric characters and simple images in the colour of the can or the basecoat or one printed colour.

ROCK

JOHN DE

Up to 24 different highresolution images possible.

3.0 offers the appearance of high-resolution images through the contrast of the can or the basecoat and one printed colour. Valora communicated the invigorating effect of its energy drink 'TASTES LIKE...' with **eight different designs,** using Ardagh's **Variable Print 2.0** technology on 250ml

slim cans.

<text>

14







WITH A MIX OF

ENERGY DRINK









nite

Premium White Impact

For an ultimate white

Product benefits

- Enhances the brand visibility
- Transports the premium feeling which is often associated with bright white. •

Technical specifications

- Available for aluminium cans in all sizes
- Colour: premium white.

16

Fluorescent Impact

Your cans shine under UV light

Product benefits

- Captures consumers' attention with an 'out-of-the-box' drinks experience
- Optimal on-premise solution to highlight elements of the can design •
- Opportunity to enter new markets with a nightlife tailored can.

Technical specifications

- Available for aluminium cans in all sizes
- Design proof required
- Colours: white or clear ink, fluoresces under UV light.





HIGHEND

H!ghlight your brand with the cutting edge H!GHEND, a versatile innovation series that allows high quality printing on the entire shell surface with one colour, one image or several designs enabling impactful branding, customisation and differentiation.

Product benefits

- 100% shell coverage
- HD printing
- Integration of end with can design
- Transparent or full coverage colours
- New area for information, logos, #hashtags, QR codes and branding
- Eye-catching, functional and stylish

Technical specifications

- Available for end diameters 202
- Random tab orientation
- CTS to support line qualifi cation
- Available for epoxy or BPANI







H!GHEND colour

- Full shell printing of one design
- Colours: CMYK + 2 spot colours
- Printing on side walls possible (e.g. text, logos, QR codes, #hashtags) with controlled distortion
- Random tab orientation

HIGHEND pro

with multiple designs

- Mixing multiple designs in one batch
- Colours: CMYK + 2 spot colours
- Printing on side walls possible (e.g. text, logos, QR codes, #hashtags) with controlled distortion
- Random tab orientation







H!GHEND image

- Eye-catching HD printed design
- H!GHEND image enables printing of one design on the

- Create novel, original and customised campaigns
- A new dimension for promotions enables novel, original and customised campaigns or brand activation.

Coloured Tabs



Product benefits

- Diverse and individualised design options for the end of the can
- Simple yet effective enhancement allows product to stand out from the crowd
- Eye-catching; gives the can its finishing touch.

Technical specifications

- Available for end diameters 200 and 202
- Colours: gold, black, copper, yellow, orange, magenta, blue, green and red
- Non-standard colours on request.



Radnor Hills has opted to make the most of Ardagh's Coloured Tab range by selecting different Coloured Tabs for each product for easy identification from above.

So many possibilities...





Embossed Feel Sculptured can surface

Product benefits

- Speciality look and feel
- Highlights key details in overall design
- Consumer's eye drawn to detailing; stands out at POS.

Technical specifications

- Available for aluminium cans
- Sizes: 330ml and 500ml standard cans (Non-beer drinks require qualification)
- Axial load is reduced
- Development process and production trials necessary
- Filling line trial required (recommended with CTS on-site).



Jupiler's can design features debossed flutes that not only mirror the design of the Jupiler glassware closely but also provide a functional benefit: research

produced by AB Inbev in collaboration with Diabatix, a Belgian company that specialises in generative thermal design, showed that, by reducing the surface area in contact with the drinker's hand, the recessed relief of the full-length flutes lowers heat transfer, and so keeps the beer colder for longer.



Feel

Embossed

FROID PLUS LONGTEM





The clean finish is juxtaposed with a series of **geometric** images, finely embossed into the can which adds texture and creates shadows around its circumference.

VELTINS' updated beverage cans show an elevated 'VELTINS' brand name and a tangible structure on the beverage can's surface.

Thereby, they link seamlessly to the VELTINS brand profile of the



relief bottle and the brand's crate, thanks to Ardagh's embossed technology.

Finely embossed lines





And Union opted for a design which evokes a minimalist message.



Variable Embossing

Customised sculptured can surface

Product benefits

- Effective response to on-going trend of mass customisation combined with speciality look and feel
- Highlights key details in overall design
- Enables unique collectable promotions.

Technical specifications

- Available for aluminium cans
- Sizes: 330ml and 500ml standard cans (Non-beer drinks require qualification)
- Up to 6 different designs within in one production run
- Axial load is reduced
- Development process and production trials necessary
- Filling line trial required (recommended with CTS on-site).



Tactile Feel Textured can surface

Product benefits

- Highlights specific design elements; attentiongrabbing
- Furthers brand-to-consumer engagement due to overall sensory experience
- On-shelf product differentiator.

Technical specifications

- Available for aluminium cans in all sizes
- Design proof required
- Filling line trial required (recommended with CTS on-site).



Ð
ja e
े में
Ū, Ū
E &
LL TO



Product benefits

• Additional space for brand or legal information.

Technical specifications

- Available for end diameters 200 and 202
- Development and customer approval required.



S () **(**)

Product benefits

- Speciality look and feel
- Haptic, bold brand communication
- Perfect for limited edition promotions.

Technical specifications

Development and customer approval • required.

Product benefits

- Reinforces brand communication
- A message or symbol on the tab boosts attention
- Extends consumers' behaviour from just • drinking to collecting.

Technical specifications

- Available for end diameters 200 and 202
- Tab colours: blue, black, red, green, orange and copper
- Mix of icons possible •
- Development and customer approval required.

Product benefits

- Entertains and engages consumers as it is something to discover and designed to excite
- Potential basis for a tab collection.

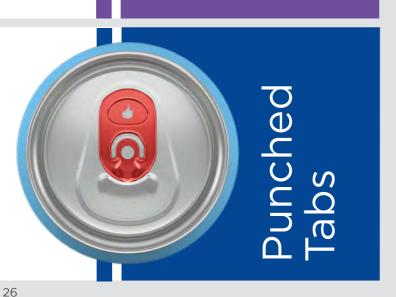
Technical specifications

- Available for end diameters 200 and 202
- Tab colours: silver, gold, black, copper, yellow, orange, magenta, blue, green and red
- Development and customer approval required.



Ŭ S S S

Ŭ С Ш 0 S Ň <u></u> \mathbf{G}



Coded Tabs

Product benefits

- Promotional tool that reveals a code hidden under the tab when the can is opened
- Strengthens consumers' loyalty: winning and drinking occurs simultaneously
- Reinforces intent to purchase.

Technical specifications

- Available for end diameters 200 and 202
- Tab colours: silver, gold, black, copper, yellow, orange, magenta, blue, green and red
- Mix of icons and codes possible.



If your Coded Tabs are linked to an interactive campaign, make your packaging part of it: Place a **QR code** on your can and build a bridge between the online and the offline world! Sizes and colour contrasts are defined in our graphics guidelines.









In-can widget offers nitro beverage lovers a compelling off-trade drinks experience

Product benefits

- Unique sound activated upon tab-opening
- Nitrogen release offers distinctive, cascading pour
- Technology delivers creamy foam with staying power
- Enhanced texture and mouth feel when consumed.

Technical specifications

- Material: aluminium with fixed widget •
- Sizes: 250ml slim cans. 330ml sleek cans and 500ml standard cans; other sizes on request
- Reduced fill level to accommodate the widget •
- Beverage compatibility test by CTS
- Filling line trial required (recommended with CTS on-site)
- Widget-compatible filling line required.



Car an Ú 5 itro

Consumers can replicate the effect of a traditional pub-poured beer at home

The UK's number one cocktail mixer company Funkin Cocktails uses Ardagh's technology to create bar-quality cocktails directly from the can.

> Infused with nitrogen, the Funkin Cocktails range delivers an attractive cocktail with a long-lasting foam head and a velvety-smooth finish.

> > - Ben Anderson. Marketing Director at Funkin Cocktails





Beyond beer, RTD cocktails and coffee, many other beverages can be enhanced with the **multi-powers of the** Nitro Can, creating new and exciting frothy drinks!

Learn how a Nitro Can works and watch our youtube video!

Do you need support getting started or finding a filler? Contact us at beverage.cans@ardaghgroup.com!





London Fog is a creamy, nitrogeninfused Oat Milk latte with black tea, celebrating the subtle flavors of Bergamot. The comforting taste of Earl Grey meets the deliciously smooth texture of a nitrogen-infused latte. DIRECTIONS: Open to unleash the roar, that's nitrogen making magic.

risebrewingco.com





Innovation in Tradition

Product benefits

- Single-serve and convenient
- Looks cool and stands out at POS
- Best protection for your wine: air-tight, lightproof, unbreakable
- Premium can with 12-month shelf-life
- Corrosivity test and support on the line by CTS.

Technical specifications

- Available for aluminium cans
- Sizes: 187ml, 200ml and 250ml slim cans
- Special specifications for optimum protection of your beverage throughout the entire supply chain
- Sealed with special wine end.





Conquering a new crowd



PET bottle that's most common in the on-trade and

The worldwide wine in can market is estimated at **490 million cans** by 2025*

Canned wine consumption continues to grow worldwide at 10.2% compound annual growth rate 2021-2025*

*Source: Euromonitor



GAT GATÃO VINHO BRANCO WHITE WINE

International <u>Canned</u> Wine Competition

'ÃO

support ensure constant quality for still, sparkling wine and wine-based

- Sandra Ehlen, Head of marketing and product development at Peter Mertes

- Jeremy May, Co-Founder of NICE

UK

PACKAGING AWARDS 2020

Ardagh's expertise

WINNER

EXCELLENCE

Our Wine Can specifications and technical know-how provide you with the **best** packaging and service solutions.



Follow us @ArdaghGroup For enquiries email: beverage.cans@ardaghgroup.com Vol: 4



ardaghmetalpackaging.com

ArdaghMetalPackaging