



Encirc







Encirc, established in 1998, manufacture glass containers for some of the world's most recognised brands. They have 21 flexible production lines using state-of-the-art technology which manufacture, fill and distribute glass containers for industries across the world. Glass containers are used to store beverages like wine, beer, spirits, water and soft drinks and also foods like chutneys and jams. Encirc have the capacity to produce 2.7 billion units per year from their 52,000m² automated bonded warehouse.

Glass is a unique packaging material in that it is 100% and infinitely recyclable with no loss of quality. This means it can be recycled time and time again and the new glass produced will be just as good as it was when it was first made with no diminish in quality in a cradle-to-cradle closed loop cycle.

Encirc's unprecedented success over the years has paved the way for expansion from their original grass roots facility in Co. Fermanagh, Northern Ireland, which was the first of its kind in NI for more than 30 years. In 2005 they opened a new facility in Cheshire, England, one of the largest of its kind in Europe. They now claim to hold the most sustainable and environmentally friendly supply chain in the industry.

By capturing more than 30% of the UK glass market they now generate around £150m a year for the Northern Ireland economy alone. Encirc's highly accredited sustainable production have been seen as a positive step towards a circular economy in the industry. Encirc's aim to close to loop is one part of addressing the wider sustainability issue of current traditional practice and models. In Britain this industrial sector accounts for around a quarter of the UK's greenhouse gas emissions.

The success of Encirc's business has been attributed to their unique 360° offer. With a sustainable supply of raw materials their production and supply chain is under the one roof bringing many benefits in terms of both cost and for the environment.

<p>GLASS MELTING</p> <p>The furnace melts cullet (crushed, recycled glass), sand, soda ash, limestone, and other raw materials together.</p>	
<p>GOB DISTRIBUTION</p> <p>At the end of the furnace, the glass stream plungers then intercept the stream of molten glass and cut gobs (lump of the substance) individually by mechanical shears, sent to blank moulds.</p>	
<p>CONTAINER FORMING</p> <p>Gobs of glass are delivered to blank moulds to form a parison (a rounded mass of glass,). It is then transferred to a mould machine, where compressed air and vacuum are applied, stretching & cooling it to the basic shape of the bottle or jar it will end up as.</p>	
<p>ANNEALING LEHR</p> <p>The glass containers are then submitted through a special type of oven called a Lehr. Glass is heated to a certain point and then slowly cooled to room temperature. This process relieves the internal stresses, making the glass much more durable.</p>	
<p>COLD END COATING</p> <p>After annealing, a layer of polyethylene wax, is applied. This makes the glass slippery, protecting it from scratching and stopping containers from sticking together when they are moved on a conveyor.</p>	
<p>COLD END INSPECTION</p> <p>All containers are monitored regularly throughout the production process to ensure it passes the most stringent health and safety standard requirements.. Rejected containers which are flagged as having faults e.g. cracks or bubbles are recycled back into the furnace.</p>	





What makes Encirc products and services green/circular

Refined manufacturing processes – Encirc are constantly innovating and have strong relationship with technology partners to utilise the best available machinery. This helps in reducing the environmental footprint of their work and, as a result, has created the bottle-to-bottle closed loop recycling system

Transport and Emissions – Encirc’s supply chain service reduces the amount of transportation needed to move products and materials reducing mileage and the resulting CO2 emissions from fuel consumption. Their recently commissioned £6 million rail head means that 50% of their raw materials can be delivered direct to their site by train saving 2 million road miles every year.

Energy-use – this year Encirc will invest in new gas furnaces across its two sites, which will help to improve carbon emissions and remove three large oil tankers from the road per day.



LFN Principles Supported

- Waste = Food – although food is not the outcome this principle is supported as the waste of one product is used to make a new one, with no loss of quality (technical cycle)
- Nature is adaptive – Encirc strive to improve and invest heavily in new technology and practice (such as their Encirc Academy) in order to become even more sustainable.

The UK glass market actually recorded increased production figures of 2.8% in the first six months of 2014, with growth looking set to continue as consumers become more aware of the health benefits associated with glass.

In the 25 years in the EU glass production has increased by 39.5%. The industry now produces 50 billion bottles and jars each year. This contributes around €9.5 billion to the annual European Gross Domestic Product (GDP). This has generated 125,000 direct and indirect jobs in the EU.

Nowadays bottles can now weigh up to 30% less than they did 20 years ago. This means less raw materials are needed to produce products that perform the same function but to no degradation of product quality and are better for the environment. Using 1 tonne of recycled glass saves 1.2 tonnes of virgin raw materials avoiding 60% of the associated CO₂ emissions.

On a global scale, the market for glass packaging is thriving due to increased demand for greener sustainable packaging solutions. Unlike plastic does not need a petroleum-based plastic layer or other chemical additives to preserve the taste of foods and beverages, prevent corrosion or decrease gas permeability.

Further support for the glass industry is gathering internationally and support by governments and councils is increasing. An increasing nicety for setting targets to help us move towards a circular economy has been helped by local funding for green initiatives, particularly in business and sectors which historically have a larger proportional environmental impact.

Despite the fact that glass bottles are 30 per cent lighter than they were 20 years ago, the weight of the final products and associated transportation costs may be seen as a reason to opt for plastic packaging. However, many more companies now realise the huge benefits in accounting the entire lifecycle of their products and the environmental consequences of its manufacture, rather than focusing on just one area of the entire process.

A study commissioned earlier this year by The European Container Glass Federation (FEVE) found that Europe's glass packaging industry is one of the most valuable contributors to the continent's social, environmental and economic prosperity.

For more information on Encirc and useful links visit:

<https://www.youtube.com/watch?v=-lGdTtOpZLs>

https://www.youtube.com/watch?v=ylyR_PzGYoQ

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Encirc has been accredited with CORE – the Standard for Responsible Business.



Encirc's initiatives have been recognised in a number of prestigious awards. In 2015, Encirc brought home The Manufacturer's MX Award for Sustainable Manufacturing and British Glass's Supply Chain Initiative of the Year Award.

