

ENERCON INDUSTRIES

**White Paper**

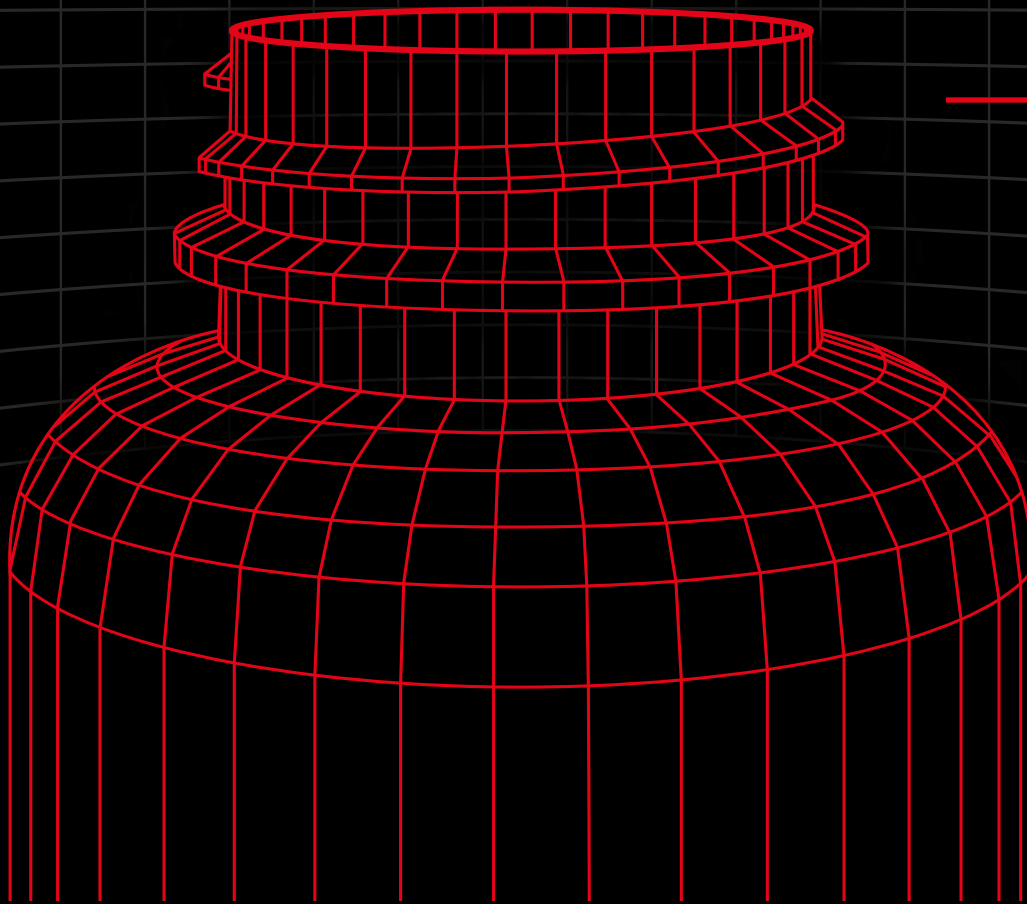
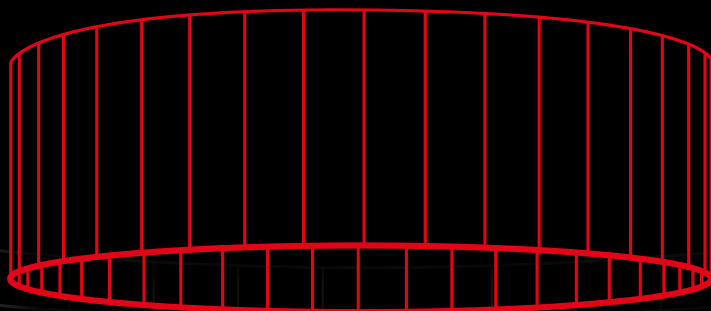
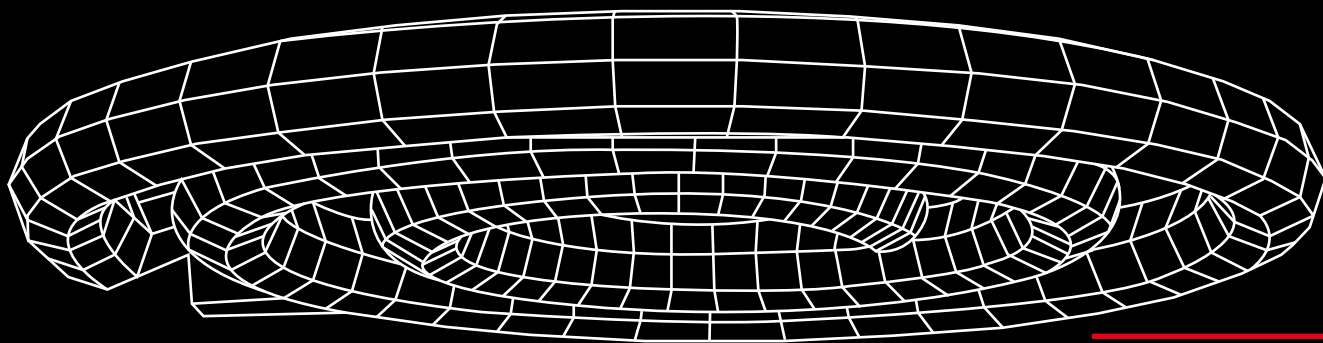


# A Beginner's Guide to Induction Cap Sealing



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THE GLOBAL LEADER IN INDUCTION CAP SEALING





## INDUCTION COIL

## BOTTLE CAP

## ALUMINIUM FOIL

## CONTAINER

# Induction sealing: **how does it work?**

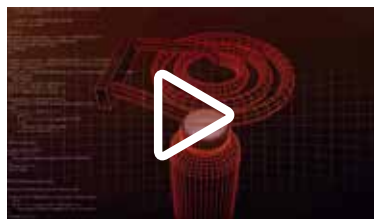
**Induction heat sealing, or cap sealing, as it is widely known, is a very simple and straight-forward process.**

Once the container has been filled and a cap (fitted with a foil liner) is applied, the container then passes under an induction sealer.

As it goes under the sealer, a controlled electromagnetic field transfers energy to the foil liner in the cap, creating heat.

This heat melts the sealing material on the foil liner.

Once this sealant cools, the liner adheres to the neck of the container creating a strong yet flexible hermetic seal. This airtight seal means the product cannot leak out and bacteria cannot get in. It also provides protection against tampering and counterfeiting.



**Click to watch our explainer video:**  
Why seal with foil?



# Why use induction sealing?

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## Prevents leaks

Induction seals can be used to prevent products from leaking. The technology used in induction sealing guarantees airtight sealing that can endure considerable pressure.

This ensures your product will not leak during storage, the transportation process or before your consumer is ready to use your product.

Many larger retailers and shipping companies – including Amazon – require a form of leak protection such as an induction seal.

## Extend shelf life and maintain product freshness

Induction liners act as hermetic seals which prevent oxygen and moisture transmission into the product.

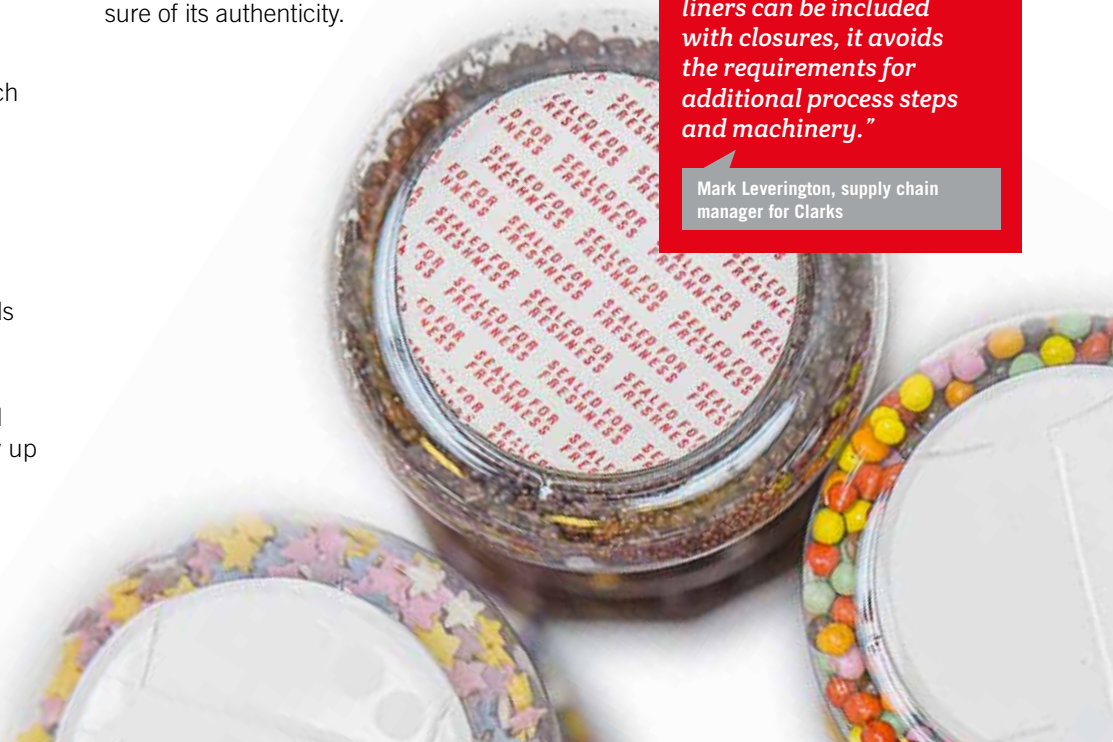
This helps preserve the product and extend shelf life – in some cases, by up to three months.

## Tamper evidence and counterfeit protection

Induction sealing can provide tamper evidence to its users as foils must be removed or destroyed in order to access the product. This is particularly important for the safety and satisfaction of the end users. Thanks to an intact seal, the end user knows the product has not been tampered with and can be sure of its authenticity.

*“It is important for our products to be fully sealed for both product integrity and tamper evidence, and for some products to maintain shelf life. Induction sealing offers a solution to both those problems and as foil liners can be included with closures, it avoids the requirements for additional process steps and machinery.”*

Mark Leverington, supply chain manager for Clarks





## Increased Productivity

Induction sealing technology is often praised by users for increasing productivity when compared to other sealing methods.

Induction sealing machines are able to work at high-speed and remove the need for touching or handling the product.

*"Induction cap sealing allows us to provide products of a high quality to our customer as a hermetic seal is proof to the user that the products are the same as when they leave our production lines."*

Opet Madeni Yağları

They can be powered on and ready to use instantly. Therefore no time is wasted by long warming up and cooling down periods, as experienced with conduction sealing where maintaining proper sealing temperature is necessary. Induction sealing only heats the foil liner.

Induction sealers are also easier to move from one production line to another as they can simply be wheeled into place over an existing section of conveyor. No time is wasted and production can go on without further interruption.

Enercon has specifically designed its induction sealers to include interchangeable sealing heads to allow for different product lines to be sealed without losing precious production time.

*"Conduction sealing and PET was not a good mix. Induction sealing is a superior technology. It produces more consistent seals and fewer failures. We haven't had a leak since installing the Enercon induction sealer."*

Henry Scott, Founder and CEO of Zipz Inc.







*“Induction sealing reduces the risk of glue contamination within a product. It is quick to setup and shut down too. It also gives us as a company the confidence that the product is fully sealed, stopping any of our wonderful flavours from escaping.”*

Lee Hull, Plant Manager at Beanies





### Virutally no maintenance

The latest range of air-cooled sealers require virtually no maintenance or consumables to continue to work effectively and efficiently.

In fact some of our customers describe their 20 year old machines as being 'like new'.

Unlike some sealing methods, an induction sealer does not need to be cleaned regularly as no contact takes place between the sealer and the containers.



### Eco-friendly

Induction sealing offers a solution that is friendlier to the environment, when compared with other sealing systems such as conduction, as it uses less energy.

By moving to induction sealing, many manufacturers are also able to reduce the thickness of the foil and the amount of plastic used in the closure and bottle.

### Cost reduction

Saving money is one of the first reasons manufacturers move to induction cap sealing. How they save money can be achieved in many ways:

1. The considerable energy savings and increased output from running the machine
2. The reduction in costs from recalled products that have leaked
3. Extended shelf life
4. Reduction in maintenance
5. Reduced downtime
6. Reduction in the amount of material used in the closure and container

*"The Enercon induction sealer is one of the most reliable machines on our line. After over 20 years of use the unit still works perfectly and looks like new."*

Jim Peace, Production Director of Shaws

*"Induction sealing has the added benefit of being environmentally friendly due to the reduction in plastic weight used in our packaging."*

Ronald Pollock, John Pollock and Sons



## Our industries



Pharmaceutical



Beverage



Food



Household



Dairy

Chemical &  
Argochemical

Automotive



Cosmetic

# Getting started

## What products can be induction sealed?

99% of all products from pharmaceuticals to food, protein powder to peanut butter, wine to water can be induction sealed in glass and plastic containers. Induction sealing applies to liquid products like beverages and automotive oil, hot ambient or chilled products, and dried products like coffee, herbs and powders.

## What material should my container be?

Both glass and plastic containers with a diameter of up to 140mm may be induction sealed. Traditionally containers needed to be round in order to be induction sealed, but over the years Enercon has developed its technology to allow for more unique shapes to be sealed.

Our success stories include oval-shaped containers and thin-rectangular postal packs designed for the healthcare industry. If you are unsure if your product can be sealed, contact our sealing specialists today by emailing [info@enerconind.co.uk](mailto:info@enerconind.co.uk)

## What foil liner do I need and where do I get them from?

There are many foil options available from a simple aluminium disc through to vented foils for chemical applications. The foils can be peelable with a tab for easy opening and the strength of peel is variable and can be to your preferred strength.

Your cap supplier can help you select the right foil to meet your requirements, although it is essential for the supplier to know the material of your container and if you are using a treating agent on its surface as the polymer of the foil must match the material it is being sealed to.

If you don't currently use a cap (or container) we can provide you with a list of manufacturers in your area.

Once you have your caps with foils, all you need is the Enercon sealer and you are ready to go.

## Choosing your induction cap sealer

Enercon has a range air-cooled models designed to fit different needs and production lines. Our range includes the handheld Super Seal™ Junior to the high performance Super Seal™ Max.

Contact us today and speak to one of our sealing specialists who will be able to help you select the model best suited to your needs.







# About Enercon

**Enercon Industries is the world leading cap sealing brand and largest supplier and installer of induction heat sealing technology across the globe.**

Over the past 40 years, Enercon has been installing its cap sealers into both large and small manufacturers on every continent, establishing itself as the principal provider of induction foil sealing systems.

From high speed production line cap sealers to manual handheld units - Enercon offers its customers the most diverse range of induction sealing technology on the market.

The Super Seal™ range of cap sealers is designed to give customers cutting edge technology at the lowest possible cost of ownership, delivered through high levels of reliability, low maintenance costs and reduced overheads.

Every day Enercon's induction heat sealing technology is trusted to seal over 90 million containers in Europe across the following industries: food and beverage, dairy, automotive, agrochemical, pharmaceutical, cosmetic, chemical and household and many more.

### Service and support

Enercon prides itself on sharing its extensive expertise with customers to help them reap the rewards of induction heat sealing.

To do this, Enercon has created an unmatched international representative network to ensure its customers can access local help – wherever they are in the world.

These highly knowledgeable professionals offer an unparalleled level of expertise for sales, service, technical support, training and consultancy to help improve productivity and safeguard customers' reputations.

Enercon works closely with customers before, during and after installation to ensure they achieve optimum productivity.

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### **Global HQ**

Enercon Industries Corporation  
W140 N9572 Fountain Blvd.  
Menomonee Falls, WI 53051  
United States of America

T: +1 262 255 6070

### **European HQ**

Enercon Industries Ltd  
62-64 Edison Road  
Aylesbury  
Bucks  
HP19 8UX  
United Kingdom

T: +44 (0) 1296 330 542  
E: [info@enerconind.co.uk](mailto:info@enerconind.co.uk)

### **Enercon Asia Pacific**

23/10, Elluvapalli  
Nallur, Bagalur Road - Hosur  
635103  
India

T: + 91 4344 314 141 / 291 447

[www.enerconind.co.uk](http://www.enerconind.co.uk)