

Cap Sealing Equipment Upgrades

Pillar Technologies has engineered a variety of optional cap sealing equipment for our induction sealers to better suit your plant's unique sealing needs, enhance the functionality of your induction sealer, and optimize your production processes. These options will help you detect and deal with faulty seals, comply with FDA regulations for your products, and so much more.

Optional Equipment for Pillar Sealers:

- Allen Bradley Control Option
- Additional Sealing Coils
- Bottle & Cap Detection System
- In-Feed Bottle Stop
- Pneumatic Reject
- Conveyor System
- Stacked Light

Health and Beauty



Pharmaceutical and Nutraceutical Packaging



Food, Dairy, and Beverage



Allen Bradley Control Option

To better accommodate unique customer needs when it comes to programming your Induction Sealers, Pillar offers an upgradable control option over the microprocessor that comes standard with our flagship induction sealers. The microprocessor that comes standard with our iFoiler product line allows customers to run the induction sealers with pre-set programming from Pillar Technologies. For some customers, it is ideal to have the ability to program their own options into their induction sealers to better align with the other equipment on their line. Not only does the Allen Bradley PLC Control Option allow customers to better customize their sealer programming to better fit their specific needs, but it also adds an innovative upgrade to the iFoiler product family and enables the induction sealing line for Industry 4.0.

For customers choosing the Allen Bradley Control Option, you have the option of adding additional features to your induction sealer to better meet your unique application needs. With the optional **Motorized Lift**, the ability to raise and lower the induction sealer head is now programmable through the PLC - allowing you to raise and lower the induction sealer using a motor instead of manually turning a crank. And with the **Motorized Sealing Coil Angle**, users can program the sealing coil angle to change via a motor based on the product that is being run at that moment, instead of having to manually adjust the coil angle.

In addition to this, the Allen Bradley Control Option features state-of-the-art quality management solutions that are Industry 4.0 ready and provide the following features:

- Built-in web server with accessible onboard web site which allows event log scrolling, and downloadable project event log (Microsoft Excel Compatible)
- LAN Ethernet Connection
- Remote system control via SCADA or PLC systems: start/stop, power Level, overseal/underseal alarm limits, reject duration and delay
- Real-time remote data access: Set-point, Actual Power, Actual Current, Actual Voltage, Actual Frequency, Hour Meter, Line Speed/Encoder Rate, Total Bottles, Reject Errors Count, Stalled Bottle Rejects Count, High Cap Rejects Count, Missing Foil Rejects Count, Current Recipe Name, Power Mode (Constant, Proportional, Ethernet)



Additional Sealing Coils

Pillar Technologies offers additional sealing coils for manufacturers needing to seal different types of products, or to replace old coils. With three different types of coils available, Pillar's sealing coils are easily interchangeable and help to deliver high quality induction sealing. Whenever you need to switch from a flat top container to a spouted bottle, its as easy as loosening the thumb screws, removing the bracket, sliding out the previous coil, and replacing with the new one. Pillar's sealing coils are also fully serviceable, and repairs are generally half of the price of a new coil – saving you money on costly replacements.

Universal Sealing Coil

The Universal Sealing Coil is Pillar's most common sealing coil and is used in a majority of sealing applications. Designed to be used with flat caps and child-resistant closure (CRC) caps, the Universal Coil produces an electromagnetic field above the induction seal to heat the foil, melt the sealant, and ultimately seal the bottle. It also permits sealing of a wide range of cap sizes from 15 – 150mm, without having to constantly change coil sizes. It works by angling the coil with respect to the conveyor path, and the entire cap will pass through the electromagnetic field, no matter the cap size. While the Universal Coil is the best option for sealing products with flat caps, it is also capable of sealing child resistant caps. The benefits of CRC caps also create a larger gap between the sealing coil and the foil. To optimize induction sealing for CRC caps with the Universal Coil, packagers typically would reduce line speeds. In this case, Pillar Technologies would recommend the inFinity Tunnel Coil or a higher-powered sealer.



inFinity Tunnel Coil

For unique caps such as dispensing caps and CRC caps, which are too tall for a flat coil, Pillar offers two different versions of the inFinity Tunnel Sealing Coil. Unlike the Universal Sealing Coil which applies an electromagnetic field from above, the inFinity Tunnel Coil applies the electromagnetic field from the sides, with an open space above to allow for tall caps to pass through. This ensures that the electromagnetic field can reach the foil to heat it and create the perfect seal. The inFinity Tunnel Coil comes in two different adjustable sizes to better suit your unique production needs. The first coil size adjusts from 1" – 2 1/4" wide, while the second coil size adjusts from 2 1/4" - 3 1/2". When adjusting the Tunnel Coil, the indicator lines should be at the same level as your foil layer to ensure a proper seal every time.



C-Series Hand-Held Sealing Coil

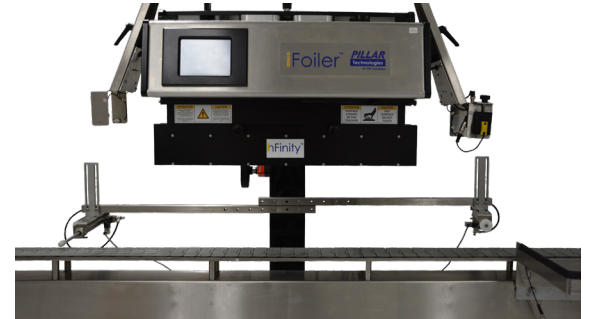
Available in two different sizes, the Hand-Held Sealing Coil is designed to be used with Pillar's own C-Series Hand-Held Induction Sealer to provide induction sealing for caps ranging from 10 – 120mm in size. The smaller Hand-Held Sealing Coil can be used to seal both flat caps and dispensing caps. A removable plug is placed in the center of the coil to make it flat for sealing flat caps, but if removed, creates space for tall caps to be inserted so that the foil is close enough to be heated and effectively sealed. The Hand-Held Sealing Coil is also easy to use by simply setting the output level and time, placing the coil firmly on top of a flat cap, or inserting a tall dispensing cap into the removable center, and then pressing the button to seal.



Bottle and Cap Detection System

Pillar offers a complete Bottle and Cap Detection system designed to significantly reduce the chances of shipping unsealed products. This comprehensive cap detection package employs the latest sensor technology to detect and remove bottles that have one of three fault conditions:

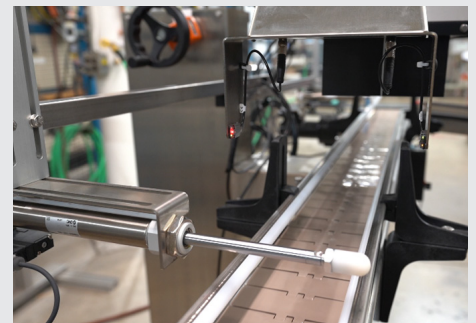
- **Missing Foil:** no inner seal was present under the cap, as detected by inductive sensor
- **Loose/Crooked Cap:** a laser sensor is used to check the height of each cap to detect when a cap is not securely torqued, and the liner may not be touching the lip of the bottle
- **Stalled Bottle Faults:** photoelectric eye and optional line speed encoder to alert for stalled bottles



You can choose to enable all three sensors, or simply pick the functions you need for your specific operation. The sensors are controlled by switches found behind the control panel which are easily activated and deactivated at your command. An optical encoder is also provided as part of the stalled bottle feature. It can be mounted onto the conveyor shaft at a convenient location, and is also connected to the display circuit board. The encoder reads pulses of the conveyor, notifying the power board if there is a delay or the conveyor goes into stop mode, which triggers the shut down of the power supply. Encoders can be purchased separately.

In-Feed Bottle Stop

The In-Feed Bottle Stop is an air-actuated gate that stops bottles from entering an inactive sealing area when the machine is in STOP mode, there is an alarm condition, the energy drops below the operator's output set point, or the power is turned off – ultimately eliminating the risk of unsealed products getting through production lines. This pneumatic in-feed gate works in conjunction with the built-in Loss-of-Seal Alarm to actuate a 4 inch (102mm) stroke cylinder that blocks the passage of bottles under the sealing head.



Pneumatic Reject

Pillar's Pneumatic Reject device works in conjunction with the Bottle and Cap Detection System to detect and remove stalled bottles, and bottles with missing foils or crooked caps from the conveyor. This Pneumatic Reject package includes two photoelectric sensors, a 12" x 12" reject tray to conveniently store discarded product for evaluation, and an air-actuated cylindrical "kicker" that pushes/kicks faulty products off the conveyor, as spotted by the verification sensors. This package is designed to ensure that problematic, unsealed bottles do not reach the end of the production line.



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Conveyor System

Pillar offers an optional, variable-speed conveyor that can be attached to the portable coil support of your induction sealing system. This stainless steel conveyor is approximately 6 feet (1.8m) long with a 4.5 inch (115mm) wide belt and includes single-high guide rails. It is available in either 120 VAC or 240 VAC input voltage which allows speed control from 0-60 FPM (0-18 m/min).



Stacked Light

The Stacked Light is a tower light that is mounted to the back of your induction sealer and indicates a Stop, Start, and Fault condition, and also includes a dual alarm mechanism – both visual and audible. The primary purpose of Pillar's stacked indicating light is to alert the operator that action is required due to a "Loss of Seal" condition, which occurs when the output power of the induction sealer drops below the set-point necessary to get an accurate seal. The stacked light allows operators to respond quickly to loss of seal conditions and also helps to avoid downtime from sending unsealed products through production lines.

Primary Features Include:

- Red = stop
- Green = coil field active
- Amber = visual "Loss of Seal" indicator
- Horn = audible "Loss of Seal" indicator

