

## NEW CONSIDERATIONS

### BELT LENGTH

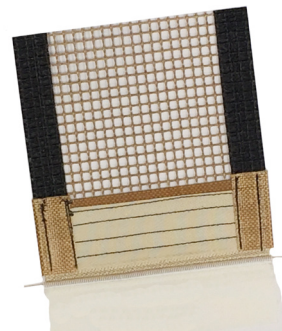
All belts with a MICRO PEEK spiral seam must be ordered to an exact belt length. Be careful when using a belt length derived from a previous order for a belt designed to be heat sealed. These belts are often ordered several feet longer than needed. They are designed to be cut to the final length at the customer's site, just before heat sealing. AFC can assist the end user to accurately measure the belt length.

### ORIENTATION

A MICRO PEEK seam will be marked with DIRECTION OF TRAVEL and THIS SIDE UP. It is possible to put a MICRO PEEK spiral seam on backwards

### PULLING THE BELT INTO THE OVEN

Installing the first PEEK seam in an oven will require a means to attach the new seam to an old belt or perhaps to a rope. AFC can provide a low cost disposable attachment piece as shown. The attachment puller piece is removed just before the belt is assembled by inserting the pin. The puller attachment is not usable as a high temperature seam. The piece is re-usable as a puller only.



### AFC's TEST PROGRAM

The MICRO PEEK spiral seam has been in service at a test site since December 2013. The end user is a major manufacturer of aluminum beverage cans. After 18 months of successful operation, AFC is now confident of the long term performance of this new seam.

### DO I STILL NEED A HEAT SEALER?

Normal installation of belts will not need a heat sealer. AFC does suggest that a heat sealer be available to handle the following situations:

- Belt repairs such as small holes or edge tears can be easily accomplished using an AFC heat sealer. A belt repair video is available at [www.afcvideos.com](http://www.afcvideos.com).
- Many end users have more than one oven and there may be several different belt lengths. In rare cases an end user may need to cut off the PEEK spiral from a longer belt for use on a shorter oven, The belt will need a full width heat sealed seam.

For the opposite situation, an end user can stock a "Dutch piece" . . . a short belt section with PEEK spiral at both ends. This will allow a short belt to be used on a longer oven. The belt will have two seams.

## TRAINING & TECH SUPPORT

AFC offers an array of training and tech support to end users, distributors and belt service organizations. Included are:

- On line video instructions
- Portable heat sealers shipped from stock
- Heat sealer repairs
- Sealing materials and supplies
- Belt life analysis....aka "belt failure analysis"
- Detailed written instructions for many procedures
- Dot tackers and pressure rollers from stock
- Training seminars at end users location
- Telephone support
- Field sales staff capable of local tech support

# AFC **Advanced Flexible Composites**



## Micro PEEK Spiral Seam For Can Manufacturing

### TECHNICAL SUPPORT SERIES



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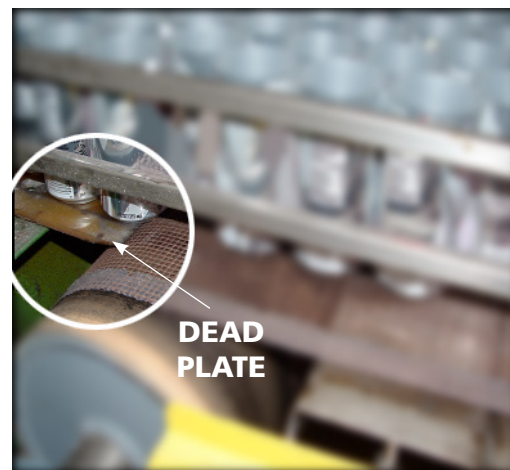
## WHAT IS A PEEK SPIRAL SEAM?

AFC has engineered a very special seam for use in the can manufacturing market. The seam is a non-metallic plastic (PEEK) spiral with an integral PEEK attachment band. The spiral is only 0.85 inches thick. This allows for very tight gaps at dead plate transfers

When switching from a heat sealed overlap seam, most ovens will be able to avoid re-adjusting the dead plates.

## WHAT IS A DEAD PLATE?

Dead plate transfers are often used for aluminum beverage can manufacturing lines. The dead plate is located between two conveyors. The cans must slide across the dead plate without tipping over. A small gap between the belt and the dead plate is critical to good performance.



## WHERE TO USE THIS SEAM

Within the can manufacturing market there are two oven types that will be well served by this seam:

- **IBO's** also known as internal bake ovens or IC (internal coating) ovens. This oven bakes (cures) the epoxy coating on the inside of the can. Virtually all aluminum beverage can manufacturers will have an IBO. Most ovens in the US have been converted to use a PTFE coated fiberglass belt. A few ovens may still have flat wire (steel) belts. Most ovens have been converted to save energy. AFC recommends our 27-30 for this application.

Steel can manufacturing will also occasionally have an IBO. Many steel can lines will use magnetic transfers instead of a dead plate. Some steel can lines use pre-coated steel stock so there is no IBO at all. In these two cases, the new MICRO PEEK spiral is of no value. These ovens can use traditional clipper or alligator lacing.

- **Can Washer Dry Off Ovens.** This belt is in the oven that immediately follows the can washer. The belt does not go thru the can washer itself. This oven is a very wet oven. AFC recommends product # 57027 for this application. This material is PTFE coated Kevlar
- **Lid Manufacturing** such as screw-on steel lids used for baby food jars will benefit from this new seam. The lids are transported thru an oven that cures a plastisol sealant inside the lid. Dead plate transfers are common to this application.  
Very large lids, such as 5 gallon pail lids, can use a metallic seam.

## FEATURES OF THIS SEAM

### QUICK INSTALLATION

Average heat sealing time for an 8 ft wide belt is about 4 hours. Average pin insertion time is about 10 minutes. Unexpected downtime is often costed at \$1000 per hour or more. The elimination of downtime can sometimes approach the cost of the belt.

### BELT SQUARENESS

Heat sealing depends on the expertise of the installer to keep the belt square. A pin seam is made square at the factory. Belts that are not square may not track well.

### REUSABILITY

Machine maintenance often requires the removal of the belt. Heat sealing a used belt is difficult if not impossible. A belt with a PEEK seam that is less than a year old may be re-usable after oven repairs are completed.

### ELIMINATION OF HEAT SEALING ERRORS

Many IBO belts last for 2 or 3 years. Maintenance personnel may change or lose their expertise in that time. Poor heat seals can result. A PEEK seam eliminates heat sealing errors.

### FLEXIBILITY

PEEK seams are extremely flexible. They are reinforced with Kevlar. The improved flexibility often results in longer belt life.

## WHAT IS PEEK?

PEEK is a high temperature polymer (plastic). It has a service temperature of 500 F. The full name is PolyEther Ether Ketone.

### COMPETITION?

The MICRO PEEK spiral is made exclusively for AFC. Other suppliers are limited to a seam that is 50% thicker.

### PUTTING THE PIN IN

Most end users will question the amount of time it takes to put the pin into such a tiny spiral.

Any PEEK seam over 3 ft wide will need a pin and leader kit to facilitate putting the pin in. A pin and leader kit consists of a stiff metal pin with a florescent green tip. Attached to the tail end is a PEEK monofilament pin.

The PEEK portion is about 20 ft long. This allows the kit to be used twice for an 8 ft wide belt.

AFC can demonstrate a pin insertion in an 8 ft wide belt, in a total elapsed time of about 10 minutes.

An 8ft wide practice seam is available for live demonstrations at the customer's site.

An online video is available showing the same 10 minute pin insertion.

Go to [www.afcvideos.com](http://www.afcvideos.com) to view all of AFC's tech support videos.

