

# Case Study

Music instrument company dramatically reduces damages via Pregis solutions approach



Pregis custom, two-piece ChamberPak® inflatable cushioning and AirSpeed® HC inflatable hybrid cushioning

Due to the challenges in shipping via a growing ecommerce channel, a national distributor of stringed instruments (violins, violas, cellos, etc.) was experiencing damages on up to 25% of its shipments. With some of the instruments in the \$5K to \$10K price range, a damaged piece likely meant that the instrument was a total loss. As the damages began to mount, the distributor increased its claims with its parcel shipper. The shipper knew that the issue could be dramatically improved if the instrument company changed its protective packaging approach. That's when the shipper brought in Pregis, its packaging solutions partner. The shipper knew that if all three worked together, a better solution could be found. The goal was to significantly reduce damages and, as a result, minimize damage claims.

## Problem

The company shipped its instruments in three different cases—soft, semi-rigid and a carbon fiber rigid case, depending on the instrument type. Each instrument case was placed into a corrugated shipper. Wadded kraft paper was placed around it for protection. Unfortunately, the kraft paper failed to protect a significant number of the instruments during transit. This resulted in dents, scratches, and even cracks and breaks. To try to recoup some of these losses, the distributor started filing claims with the shipper. The parcel shipper knew that the damages could be significantly decreased with the right protective packaging solution and asked Pregis to help find a better alternative so that both the shipper and the music instrument company could benefit.

## Solution

Pregis visited the distributor to thoroughly review the entire process including packing operation, materials used and time per pack. In addition to reducing damages, the music instrument provider also wanted to improve its customer experience, minimize warehouse usage for packaging materials and improve pack times to reduce labor costs.

The Pregis team tapped into their years of creativity and package engineering experience to design a unique solution for this challenging product line. Based on instrument type, weight, shape, cost, **Pregis came up with two solutions:**

**For cellos,** Pregis recommended a custom, two-piece ChamberPak® inflatable cushioning solution. The patented design features a series of adjoining air tubes which are inflated to cushion and protect products during shipment. The tubes are connected via a series of patented one-way valves. If one



Reducing damages



Customer experience



Minimize warehousing

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chamber is punctured, the others remain inflated. The bottom of each cello case is inserted into a ChamberPak piece, and a second cushion is placed over the top. The two-piece solution envelopes the entire case for full “surround” protection.

**The solution for the rest of the instruments** was Pregis’ inflatable hybrid cushioning (HC) produced by the AirSpeed® HC Versa machine. HC is a proprietary pattern of square cushions which reduces material consumption, provides superior protection and creates a pleasing aesthetic look preferred by consumers. Three long sheets of HC are used, which are laid into the case in a “asterisk” pattern. The first is placed vertically and the second two are put down in an X-pattern to create the asterisk. The cased instrument is placed into the corrugated box. The remaining packaging materials are folded over the top of the instruments to protect all six sides during transit.

To ensure that the solutions would work as intended, the recommended packaging solutions were tested at Pregis’ innovation headquarters, called the Pregis IQ.

The Pregis IQ packaging engineers use a methodical step-by-step, total package analysis approach including design/consulting, material selection (sustainability), automation, testing and training. Products are evaluated to identify protection imperatives required in distribution operations, internet retail fulfillment and other shipping channels. Packaging options are considered with performance, yield and sustainability in mind. For this particular customer, ISTA 6A testing protocols were followed.

Testing was also executed and validated by the shipper at its packaging lab as another performance check for the suggested packaging solutions.

## Outcome

With all of the testing completed, the green light was given to convert the operation to the new Pregis solutions. Pregis and the shipper worked together to optimize freight and handling costs. The packaging materials are supported by the local Pregis distribution network. Additionally, Pregis put together a training program for the packers to improve efficiency and ensure the right pack methods were being used to maximum the chance of success.

**Here are the benefits that were realized:**

- Reduced damages from **25% to less than 3.5%**
- Annual **savings of approximately \$300K** as a result of eliminating the need to replace damaged product and removing associated logistics and customer service costs
- **Increase in production output by 50%** as speed to pack went from an average of 30 packages per hour to 45 per hour
- Annual labor **cost reduction of 23%**

**Learn more at: [www.pregis.com](http://www.pregis.com)**



**ChamberPak®  
inflatable cushioning**



**AirSpeed® HC inflatable  
hybrid cushioning**