



## CASE STUDY:

# Replacement of Hanging Sheets with Bottom-Supported Fill



### Hanging Sheet Upgrade

**Location:** Ohio, USA

**Products Installed:** XF75, XF Support System, XF150MAx, XF600 Drift Eliminator Supports, AccuGrid, Utility Angles

**Results:** Improved fill performance & drift elimination

### Overview

After years of operation, a factory-assembled crossflow cooling tower in Columbus, Ohio, was due for an upgrade. The owner partnered with a reputable cooling tower contractor to choose a fill supplier that could meet the tower's needs and improve performance. The contractor turned to Brentwood, having worked together on numerous successful projects, for their quality products and applications expertise.

### Problem

The single-cell cooling tower, servicing a metals manufacturing company, utilized OEM hanging sheet fill material – in a fill area of roughly 16' H x 13.5' W x 4' D (4.88m H x 4.11m W x 1.22m D) – with integral drift eliminators. The fill was beginning to deteriorate, and the tower was experiencing drift issues due to the combination of a high fan velocity and integral drift eliminators.

Additionally, the OEM hanging fill sheets were experiencing stresses from fouling, causing them to stretch and pull downward from their supports.

### Solution

Based on the cooling tower information provided by the contractor, Brentwood recommended a high efficiency, bottom-supported fill with stand-alone drift eliminators.

XF75 was chosen to manage high water loadings and air velocities, providing a rigid pack solution. It also offered an upgrade over the OEM hanging sheets because of its bottom-supported design, reducing the stress imparted on the product by supporting it over more surface area.

Stand-alone drift eliminators were strongly suggested to improve upon drift issues, which led to the selection of Brentwood's XF150MAx. This product's high surface area and nesting design minimize pressure drop while maximizing performance, reducing drift as well as maintenance costs for mechanical equipment.

To round out the installation, AccuGrid panels and utility angles were also incorporated.

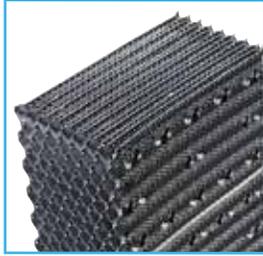
### Results

The fill, drift, and related components were successfully installed, restoring the tower's capability and improving performance for many more years of operation.

## Brentwood Inside: Products Installed for the Hanging Sheets Upgrade

### XF75

Brentwood's XF75 utilizes a proven herringbone surface design that evenly distributes water for high thermal performance. The packs feature honeycomb bonded edges and interlocking offsets that space the sheets to form strong, stackable packs.



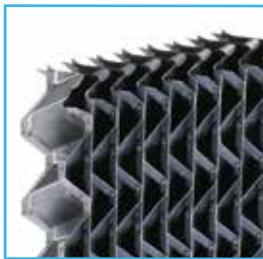
### XF Support System

The XF Support System is designed specifically to support XF75 fill, offering a heavy-duty, easy-to-install solution. It allows for maximum weight distribution and ensures ease of access for basin cleaning and maintenance.



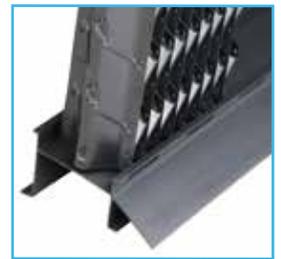
### XF150Max

XF150Max provides a cost-effective solution with drift loss of 0.001%. Its high surface area and nesting design provide maximum performance at minimum pressure drop.



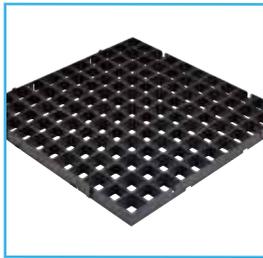
### XF600

XF600 Drift Eliminator Supports are a simple, cost-effective way to support drift eliminator panels in crossflow towers.



### AccuGrid

AccuGrid's interlocking panels protect underlying cooling tower media from surface loading and hydraulic impact. It covers the entire media surface to offer complete system access during installation and maintenance and can also be used as an intermediate interface in cross-flow installations.



### Utility Angles

Brentwood Utility Angles are a simple, safe solution for use in non-structural cooling tower applications, such as perimeter sealing. Made from extruded PVC, they offer an economical alternative to standard FRP products.

