

Channel Blender®

Freeze protection, without the footprint



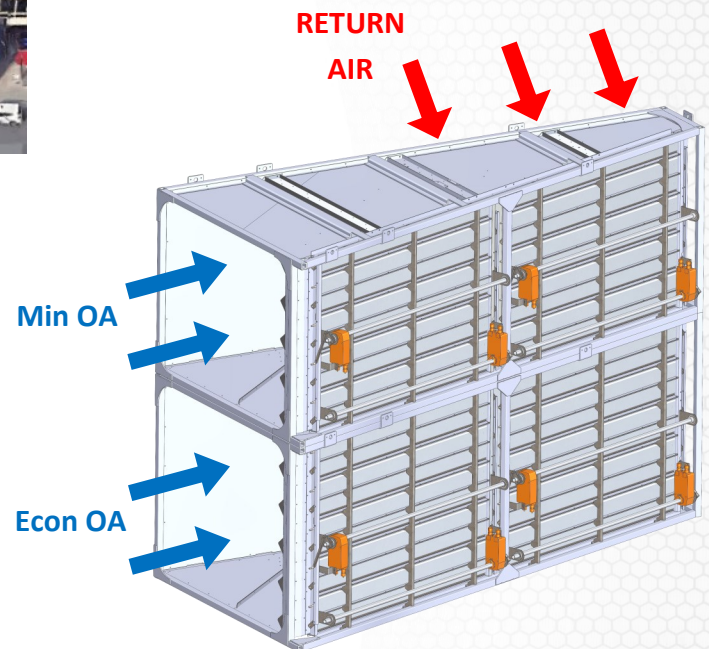
“Our largest AHUs experienced air stratification issues resulting in numerous freeze stat alarms and poor humidity control. The Channel Blender has allowed us to operate at higher OA levels without interruption to our surgical rooms and other critical hospital spaces.”

Randy Barber
Supervisor Plant Ops.
SPHP



Project Overview

- ◆ St. Peter's Health Partners - St. Peter's Hospital
- ◆ Albany, NY
- ◆ Installed October 2019
- ◆ Construction Type: Retrofit
- ◆ AHU Manufacturer: Nortek Air Solutions
- ◆ Retro-Cx Services: GPI
- ◆ Blender Rep: R.F. Peck Company



Challenges

- ◆ Air stratification inside two AHUs resulted in uneven coil loading and poor humidity control for areas inside the hospital
- ◆ Eliminate freeze stat trips in cold weather environment and maintain 30% minimum OA air flow requirements
- ◆ Improve mixing effectiveness inside existing AHU without increasing tunnel length
- ◆ Traditional mixing technologies would have increased tunnel length by over 80”



Channel Blender Solution (AHU 1 & 2)

- ◆ Qty. (2) Channel Blenders installed in mixing section of each AHU
- ◆ SA Flow: 44,000 CFM
- ◆ Min. OA Flow: 13,200 CFM
- ◆ Mixing Box Dimensions: 102”H x 147”W x 118”D
- ◆ CB Module Dimensions: 94”H x 133”W x 66”D
- ◆ OA Design Temp: -5°F
- ◆ See back page for performance information

Channel Blender[®] Retrofit Project

St. Peter's Hospital AHU-1 & AHU-2 Retro Commissioning

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- ◆ Number of recorded freeze stat trips after the channel blender was installed during normal operations of AHU.

42

- ◆ Minimum air temperature (°F) downstream of Channel Blender as predicted by CFD modeling (at design conditions, front page). Additional heating required to maintain SA temperature at 55°F.

0.65

- ◆ Pressure drop (in. wc) across the mixing device and integrated dampers at 100% OA flow condition.

2,124

- ◆ Estimated number of hours the Channel Blender[®] is able to extend economizing hours annually.

(Channel Blender performance data only shown for AHU-1)

