



Blender INC.
Products

CHANNEL BLENDER CASE STUDY

HOSPITAL RETROFIT COLORADO SPRINGS



ROI

\$14.8k

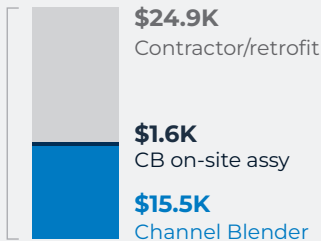
Annual savings
(Lower AHU
operating costs)

2.8Y

Simple
payback

INSTALLATION COSTS:

\$42K
Total



UTILITY RATES:

\$0.11

Blended electricity
(kWh)

\$0.68

Natural gas
(therm)

Annual cold weather energy costs:



\$15,973
Before Channel
Blender

After

BlenderProducts.com

info@blenderproducts.com

800.523.5705

INSTALLED:

November 2024

CONSTRUCTION TYPE:

Knockdown/Retrofit

AHU MANUFACTURER:

Nortek Air Solutions

RETRO-CX SERVICES:

Murphy Company

PROJECT OVERVIEW:

Retrofit installation at a hospital in Colorado Springs improved the air handling unit (AHU) efficiency by addressing airflow stratification issues. Installation of the Channel Blender enhanced air mixing, reduced peak velocity, and increased uniformity, cutting annual energy costs. The improved AHU operation is documented through pre- and post-installation temperature and velocity data.

Due to simultaneous heating and cooling, we determined we were spending a significant amount of money to keep the AHU's in operation due to poor mixing. Since the Channel Blender has been installed, we've been able to operate the AHU more efficiently, lower the operating costs, and increase airflow uniformity inside the AHU."

Senior Facilities Operations

BEFORE



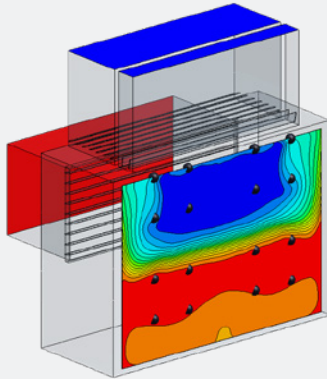
AFTER



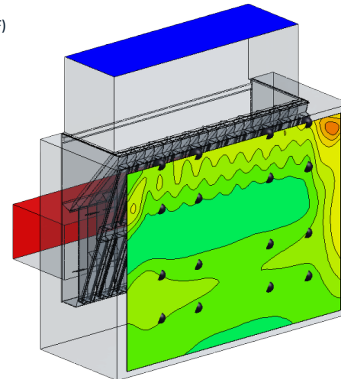
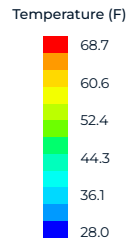
Airflow stratification resulted in freeze stat alarms and required simultaneous heating and cooling



Improved mixing effectiveness inside existing AHU mixing section



AIR (F)	27°	68.7°
OA		RA
TMIN (F)	28.0°	27.5°
Model		Measured
VELOCITY (FPM)	252	350
Average		Peak



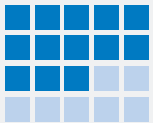
AIR (F)	27°	68.7°
OA		RA
TMIN (F)	46.1°	47.3°
Model		Measured
VELOCITY (FPM)	214	266
Average		Peak



Increased AHU operating costs due to poor mixing during cold weather



Estimated annual energy cost savings due to lower AHU operating costs



68% Coil surface area <300 FPM



100% Coil surface area <300 FPM

