



An innovative change to VAV boxes with major impact on operating cost and HVAC system efficiency

## WHAT IS THE PRICE VANTAGE VAV?

The Vantage repositions the damper downstream of the water coil, while maintaining an upstream airflow measurement sensor.

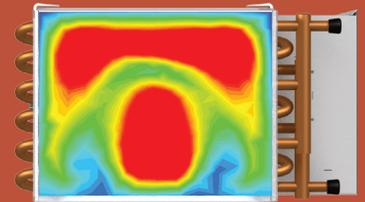
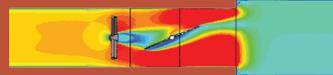
- + No impact on airflow measurement and control
- + Downstream damper improves air-to-water heat transfer
- + Reduced downstream temperature stratification
- + Same commodity cost
- + Marginal changes to acoustics and pressure drop
- + Marginal changes to equipment size
- + Option for round or rectangular duct connections

Product

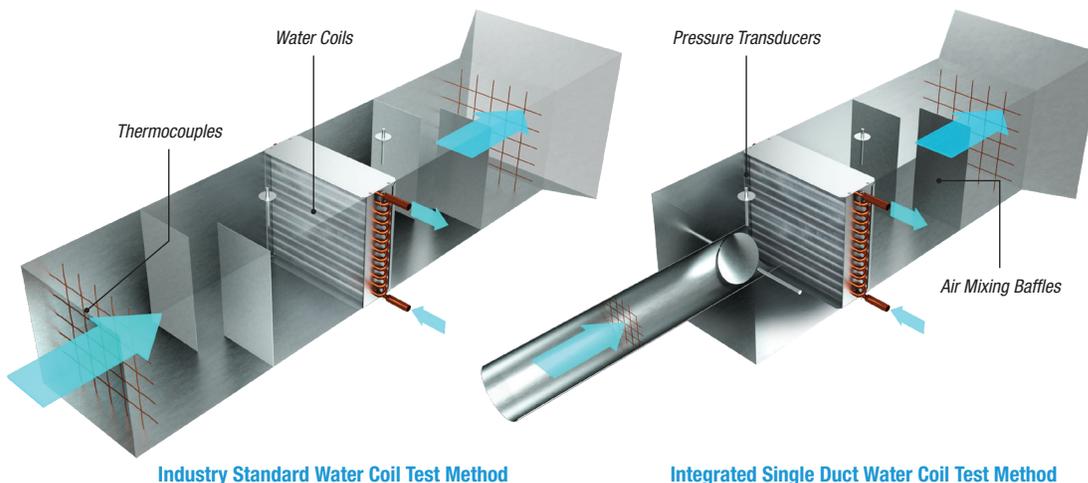
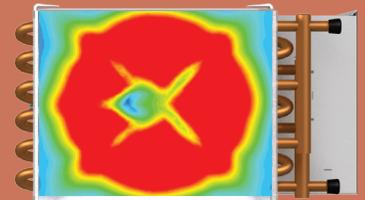
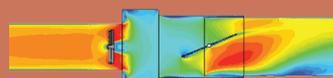
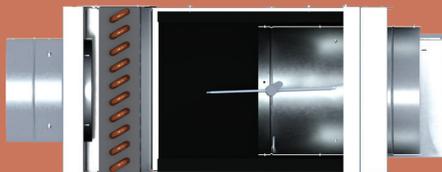
Damper CFD

Coil Face Area CFD

COMMODITY SINGLE DUCT



VANTAGE

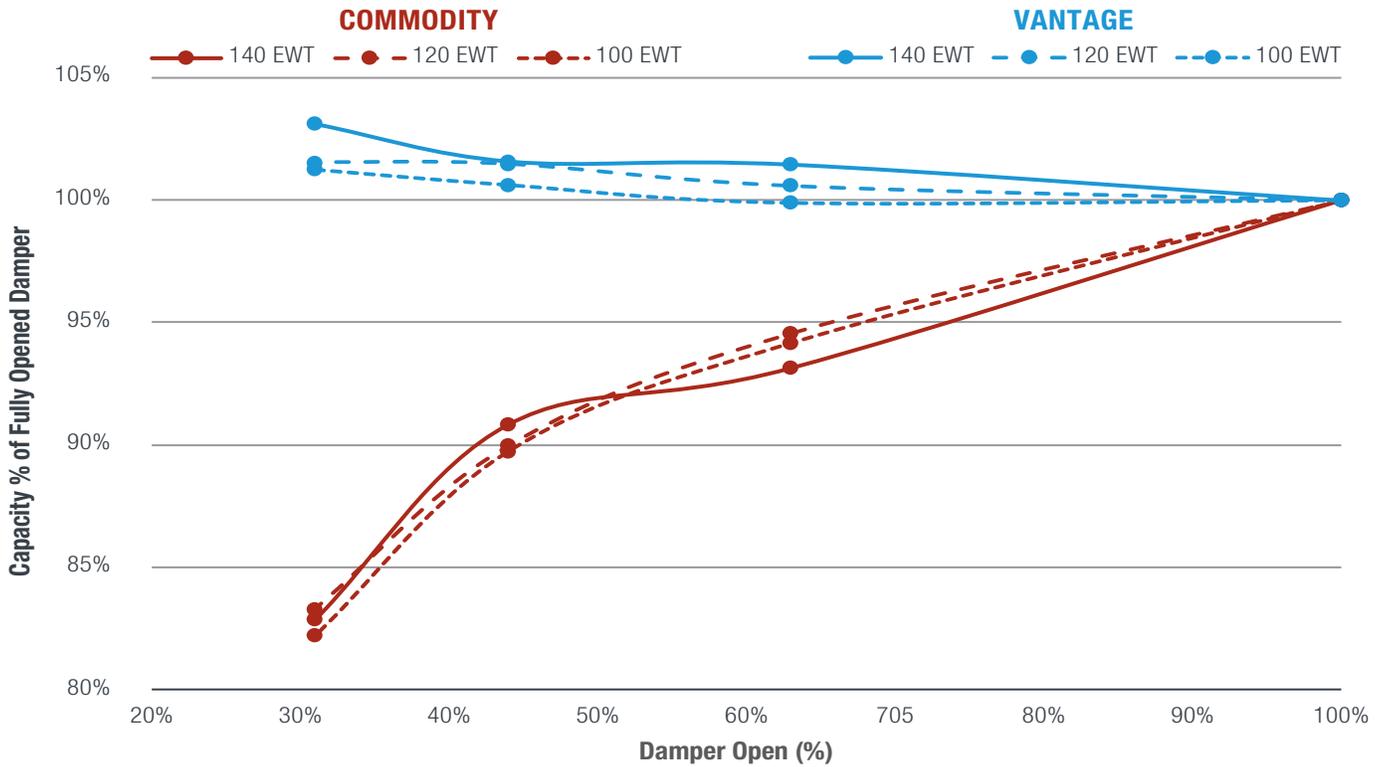


### Did You Know?

Water coil performance is traditionally tested with the coil removed from equipment. This can cover-up the influence of equipment specific performance caused by VAV box dampers.

## How does the Vantage Perform Compared to Commodity Single Duct Units?

The downstream damper results in more efficient water-to-air heat transfer throughout the entire operating range. The more closed the damper, the greater the benefit.



## How does the Vantage Perform Compared to Commodity Single Duct Units?

Laboratory testing and a 3rd party energy model (Spectrum LLC) illustrate the impact of this equipment modification. Existing LEED-certified elementary school (Baltimore, MD) 45,278 square feet of multizone VAV with reheat and Condensing Gas Boilers. Results from a one-year energy simulation and life-cycle cost analysis:

	$\Delta T$ (°F)	Water Flow (GPM)	FPD Avg. (ft. H <sub>2</sub> O)	APD Avg. (ft. H <sub>2</sub> O)
Commodity	9	155.9	3.6	0.36
Vantage	29	90.9	0.8	0.21
% Difference	<b>+222%</b>	<b>-42%</b>	<b>-78%</b>	<b>-42%</b>

**4%**

BUILDING ELECTRICITY SAVINGS

**8%**

BUILDING NATURAL GAS SAVINGS

**5%**

REDUCTION IN CO<sub>2</sub> EMISSIONS

**\$37K**

BUILDING ELECTRICITY SAVINGS

**\$61K**

LESS COST OVER THE LIFETIME OF THE BUILDING



PRODUCT PAGE

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