

Model DG with Variable Air Volume

The opportunity to save energy is pushing the popularity of variable air volume (VAV) systems in kitchen ventilation designs. Greenheck’s low cost direct-gas make-up air model DG now has the availability to vary airflow throughout the day based on load conditions from varying cooking operations. Save money from reduced ventilation and tempering costs by using the VAV option in Greenheck’s model DG.

HOW IT WORKS

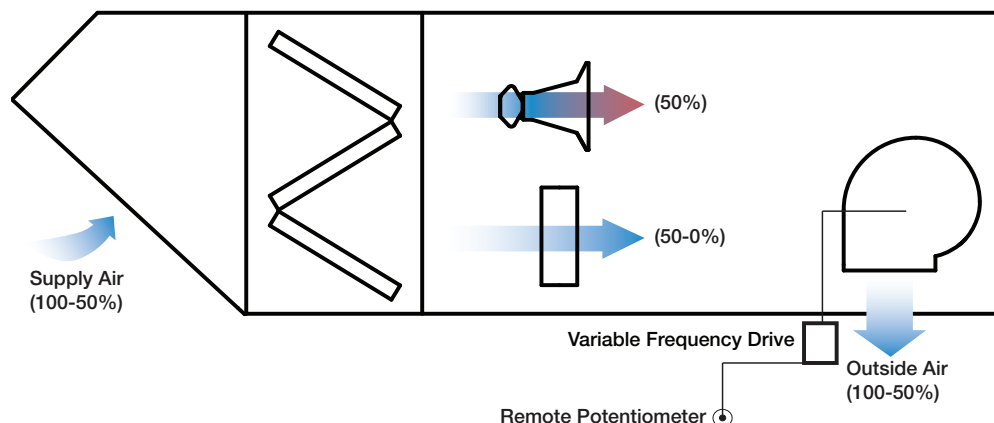
Specifically designed for kitchen VAV applications, a barometric bypass damper modulates to maintain consistent airflow across the burner allowing up to a 50% airflow turndown.

DESIGN FOCUS

- 800 – 16,000 cfm
- Market leading airflow turndown rate - up to 50%
- Economical first cost and competitive lead times
- Seamless integration with Vari-Flow or Melink® kitchen energy management systems
- Variable frequency drive (VFD) can be unit mounted or remotely mounted

OUR PRODUCT - MODEL DG

Features	Benefits
<ul style="list-style-type: none"> • 50% airflow turndown 	<ul style="list-style-type: none"> • Maximum fan energy savings and reduced gas costs
<ul style="list-style-type: none"> • Remote or unit mounted VFD configurations 	<ul style="list-style-type: none"> • Seamless integration with Vari-Flow and Melink® energy management systems
<ul style="list-style-type: none"> • High turndown burner ratio (25:1) 	<ul style="list-style-type: none"> • Consistent discharge temperature control (no burner cycling)
<ul style="list-style-type: none"> • 92% thermal efficiency 	<ul style="list-style-type: none"> • Energy savings from reduced gas consumption
<ul style="list-style-type: none"> • Compact footprint 	<ul style="list-style-type: none"> • Consumes less roof space
<ul style="list-style-type: none"> • Available with fan pack extension 	<ul style="list-style-type: none"> • Allows exhaust fan and make-up air unit to be mounted on a common curb reducing roof penetrations



Energy Cost Analysis

COMPETITOR PRODUCT

- Captive Aire’s model AD offers a 20% airflow turndown. Although this can provide the owner with gas and electrical savings, Greenheck’s model DG offers a 50% airflow turndown for superior energy savings.

OUR COMPETITIVE ADVANTAGE

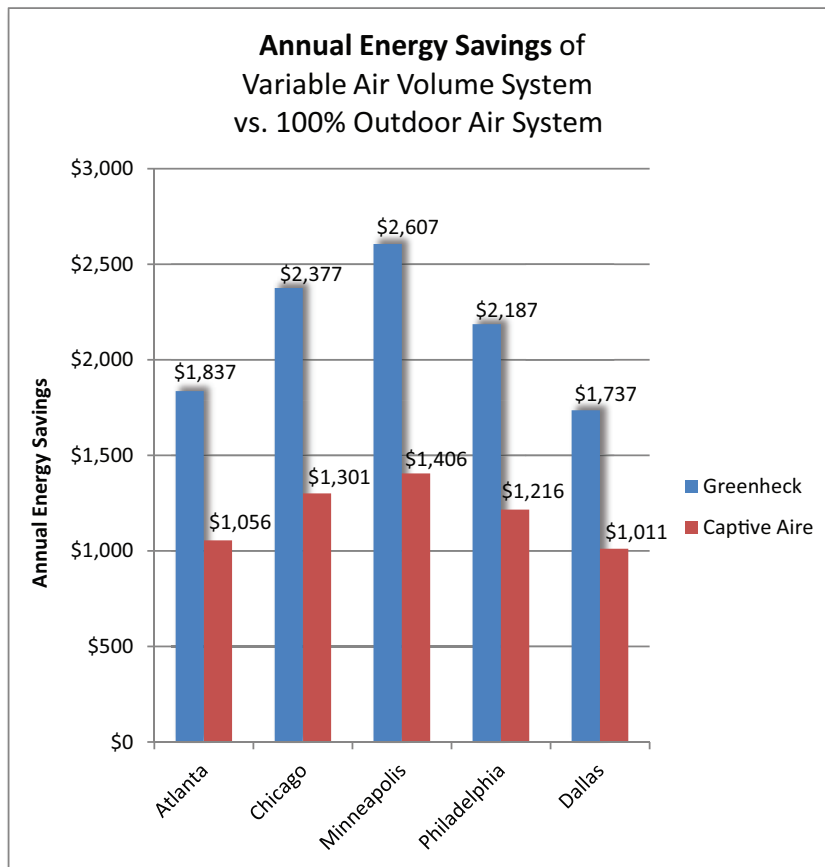
Greenheck’s model DG with VAV has a 50% airflow turndown that reduces energy costs during partial cooking operations in two ways:

1. Reduces motor speed which lowers necessary electric power input as cooking operations decrease.
2. Reduces gas consumption due to the reduced outdoor air volume needed.

Because of this wide operating range, the savings realized by using Greenheck’s model DG in a variable volume kitchen system exceed those of Captive Aire by an average of 65%.

ANNUAL ENERGY SAVINGS

The chart below is based on actual data taken from Taco Bell in Schofield, WI with a Vari-Flow kitchen system. This data was then applied to various cities across the country to estimate annual energy savings.



Greenheck	
% Rated RPM	% Run Time
100	26
90	12
80	10
70	13
60	17
50	22

Captive Aire	
% Rated RPM	% Run Time
100	26
90	12
80	62
70	0
60	0
50	0

Notes:

- Natural Gas
- \$0.10 / kWh
- \$0.95 / Therm
- Greenheck average motor speed = 75.1% capacity
- Captive Aire average motor speed = 86.4% capacity