# EcoArch Advantages

ENERGY EFFICIENT VENTILATION SYSTEMS

# Energy-Efficient Ventilation Systems by Avtec®

The EcoArch Ventilation System from Avtec can easily deliver an annual energy savings **exceeding 50%** making it—by fact—the most energy-efficient system on the market.

### HERE'S WHY THE ECOARCH IS THE BEST FOR THE JOB:

- Best in class for energy efficiency: Easy to exceed 50% in annual savings; perfect for "Green Building" solutions.
- Lower installation costs: Because less make-up air is required, duct work, fans, etc are smaller.
- **Best in class for performance:** Patent-pending arch design and high-velocity exhaust slot enable better capture & containment, and greatly reduce turbulence within the canopy.
- Improves work environment & worker productivity: Extremely quiet operation.
- Extremely easy to clean and maintain: The EcoArch's front-mounted exhaust plenum allows for safer, easier cleaning and / or replacement of the filter medium.
- Superior construction and stylized, contemporary look: Unlike competitors, front and top-of-hood mounted parts allow a very clean look from customer's point of view.
- EnviroSafe rated: Tougher standards for construction and performance.
- **Fastest payback:** Designed to significantly reduce HVAC energy costs, lower installation costs, and cost less to operate than competitors, with no adverse effect on performance or food safety.
- Full range of applications: Designs available to meet 400-700°F cooking applications in either wall-mounted or island-style configurations.
- Award winner: National Restaurant Association's 2008 Kitchen Innovations Award.

## COMPETITIVE ANALYSIS

| Product/Features                               | Exclusive<br>Arch Top? | High-Velocity<br>Slot Located at<br>Top of Hood? | Front Exhaust<br>Plenum? | Exceeds 50%<br>Energy Savings? | Easy and Safe<br>Access to Filter<br>Medium? |
|--|------------------------|--|--------------------------|--------------------------------|--|
| EcoArch<br>ENERGY EFFCIENT VENTILATION SYSTEMS | YES                    | YES  | YES                      | YES                            | YES  |
| GAVLORD  | Flat                   | Bottom Of<br>Hood                                | Rear                     | Industry<br>Standard           | Must Climb<br>Over Cooking<br>Equipment      |
| Halton   | Flat                   | Bottom Of<br>Hood                                | Rear                     | Some Energy<br>Savings         | Must Climb<br>Over Cooking<br>Equipment      |
|  | Flat                   | Bottom Of<br>Hood                                | Rear                     | Industry<br>Standard           | Must Climb<br>Over Cooking<br>Equipment      |
| GREENHECK<br>Building Volue in Air.            | Flat                   | Bottom Of<br>Hood                                | Rear                     | Industry<br>Standard           | Must Climb<br>Over Cooking<br>Equipment      |
| Food Service Equipment                         | Flat                   | Bottom Of<br>Hood                                | Rear                     | Industry<br>Standard           | Must Climb<br>Over Cooking<br>Equipment      |

Competitors answer "NO" across the board!



# **PERFORMANCE / DESIGN HIGHLIGHTS**

Patent-pending, aerodynamic arch – The height / design configuration of our exclusive arch-top hood is critical to minimizing turbulence and maximizing the amount of heated air that can be contained and immediately exhausted. Contaminated air is rolled away from the chef and directed to our front-located exhaust plenum where the vast majority of it is instantly exhausted out of the reservoir area. In contrast, when trapped, heated air hits the perpendicular surface of competitive, flat-top hoods it tends to "explode" in a turbulent, multi-directional manner adversely affecting performance.

### **Front-Mounted** Make-Up Air Plenum -

ENERGY FEEICIENT VENTILATION SYSTEMS

Make-up air is introduced to the kitchen space by way of a full length, make-up air plenum located along the front of the hood. Make-up air is introduced at low velocities so not to interfere with the hood's performance and to provide additional comfort for employees. The make-up air plenum can be mounted flush with the ceiling or extended down as shown, and, can be mounted next to the hood (as shown) or further away from the hood depending on job site conditions.

#### **ENERGY SAVINGS: CASE STUDY**

Location: Giapponese (sushi restaurant), Woodbury, MN Hood: 17'

Type of Cooking Equipment: Gas fryer, 6-burner gas range, 36" gas griddle, rice cooker, 3-hole gas wok

Cooking temperature: 600°F

Actual Exhaust CFM/FT: 125 vs. 300 for traditional hood Net from Room CFM/FT: 125 vs. 300 for traditional hood

#### High-Velocity Exhaust Slot –

The EcoArch's top-of-hood exhaust slot allows contaminated air to flow directly into the filter medium. It is designed to create a rate of speed faster than the updraft velocities developed during the cooking process. This higher rate of speed, in conjunction with the arch, is the key to successfully capturing contaminated air at very low exhaust requirements.



#### **Traditional Ventilation**

System – One reason traditional hoods don't perform as well as the EcoArch is because contaminated air is trapped in their flat hoods creating turbulence until it can be exhausted.

#### Savings:

58% reduction in exhaust rate! 58% reduction in exhausted net room air!

#### TOTAL ENERGY SAVINGS = 58% or \$3,355!

With this savings the EcoArch pays for itself in less than 15 months.





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