



Located in Temecula, CA, Temecula Valley HS opened in 1985. In its first year the school's attendance consisted of 350 students and 17 teachers and currently attendance has increased to over 3,000 students. As the school has grown, so has the need for improvements. In August 2007 a new multimillion dollar gym, in May 2013 a multimillion dollar performing arts center and in June 2015 a new two-story science classroom building and adjacent culinary arts building. The culinary arts building is an 8,300 SF facility that includes: a full teaching kitchen, prep stations baking areas, a chef's cook area and a Captain's Room. The new buildings added a much needed expansion to the High School campus and created a quad and enhanced curriculum connections.

#### TEMECULA VALLEY HIGH SCHOOL CULINARY ARTS BUILDING

##### Culinary Arts Building

- 8,300 square foot facility
- 7 hours average daily operation

##### Gaylord's Project Scope

- Install AirVantage demand control ventilation controls to monitor and adjust exhaust & makeup air fan speeds (44HZ to 60 HZ modulation)
- Reduce overall energy costs
- Save HVAC and fan operational costs
- Optimize HVAC and fan efficiency
- Improve kitchen comfort and noise levels

#### CULINARY ARTS BUILDING KITCHEN EQUIPMENT

##### Exhaust Hoods

- 27' & 4' ELX Wall Mounted Canopy Hood
- (4) 5' & 15'6" ELX Back To Back Canopy Hood
- 7'6" ELX-BBC-CL Single Island Hood
- 3'6" & 6" Type 2 VH2 Vapor Hood

##### Grease Filters

- Gaylord High Efficiency XGS Extractors

##### Exhaust Blower

- Loren Cook, 3HP

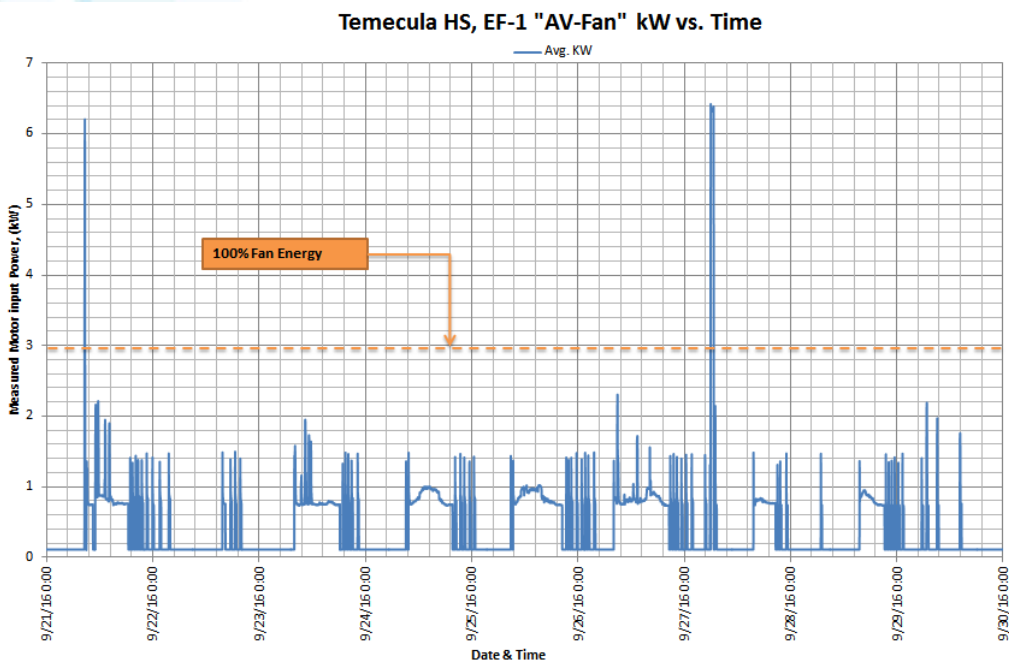
##### Supply/Dedicated Makeup Air

- Reznor, 3HP



# AirVantage: Temecula Valley HS Case Study Data

## Study Result Information Data



Source: Location: Temecula High School - 14-1514. Data taken from 9/20/2016 to 9/30/2016 (11 days). Submeter - (3) Dent ElitePro. Average Usage per working day 7:40 hours/min. 230 Days per Year. Heat/yr: 117,424,000.00 BTU/yr-NickleFisher \$0.15 /kWh. Cool/yr: 158,798,000.00 BTU/yr – NickleFisher \$1.04 /Therm. Cooling Set point 72F. Heating Set point 68F.

### Without Gaylord AirVantage Controller Installed

Total Maximum Design Exhaust Ventilation Rate	8,640	CFM
Exhaust and Makeup Fan Power	7.04	kW
Exhaust and Makeup fan Energy (Kwh/day)	41.10	kWh
Annual Cost at 100% - Exhaust & Supply Fans (\$0.18/kWh)	\$ 1,416.68	(\$)
Annual Cooling cost at 100% - COP 3.5 (512,942kBtu/yr.)	\$ 1,256.70	(\$)
Annual Heating cost at 100% - (8,161,253 kBtu/yr.)	\$ 770.27	(\$)

### With Gaylord AirVantage (DCV-AV) Controller Installed

Average Exhaust Rate Reduction, (%)	42.0%	%
Average Fan Energy Consumption Reduction	73.3%	%
Average Supply and Exhaust Fan load Reduction	1.2	kW
Average Supply and Exhaust Fan Energy Reduction, (kWh/day)	11	kWh/day
Average Estimated yearly heating Reduction, (kBtu)	31,077	kBtu/yr
Average Estimated Yearly Cooling Reduction, (kBtu)	66,695	kBtu/yr

### Operational Energy Savings

Average Estimated Yearly Fan energy Savings, (\$)	\$ 1,038.42	(\$)
Average Yearly Heating Cost Reduction, (\$/yr.)	\$ 527.81	(\$)
Average yearly cooling cost Reduction, (\$/yr.)	\$ 323.51	(\$)
Average Total Yearly Savings*	\$ 1,889.75	(\$)