

Energy Efficient Kitchen Ventilation



40 King Street, Unit 1
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www.USAbalancing.com

Presented by Olaf Zwickau, CEM



If you can't take the heat, then get out of the kitchen!

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Is your kitchen too hot or too cold during the summer or winter ?

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- Reasonable winter temperature is > 68 Deg. F.

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- Hood make-up air can make a kitchen very cold if it is not heated
- “We don’t run our hood make-up air system because it is too hot in the summer and too cold in the winter”

The energy hog in your hotel

- Kitchens require a HUGE amount of electricity and gas
- The largest consumption of energy is within the kitchen ventilation criteria – How can we help you?

Retro-commissioning your kitchen ventilation system



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Steps to analyzing your kitchen ventilation system

- 1. measure all exhaust and supply air sources in the kitchen and / or dining area.
- 2. Obtain a total building pressure and kitchen pressure.

Offering a solution



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Offering a solution

- Different combinations of solutions are often feasible, but you must have an air balanced kitchen and you must understand the capacity of your current equipment.

Implementation of energy measures

- Kitchen needs to be perfectly air balanced.

Implementation of energy measures

- Install a demand ventilation system to reduce total air flow for exhaust and make-up air

Implementation of energy measures

- Install high efficiency motors for your fans.

Implementation of energy measures

- Verify good operating conditions of your hood system. (cleaning, obstructions, belts, bearings, etc.)

Implementation of energy measures

- Reduce total exhaust quantities (if possible)

Implementation of energy measures

- Reduce total make-up air quantities (if possible)

Implementation of energy measures

- Review your cooking equipment positioning in reference to the hood.

In conclusion

- “An energy efficient kitchen is a combination of people working efficiently by human comfort and measured energy efficiency by mechanical systems.”

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