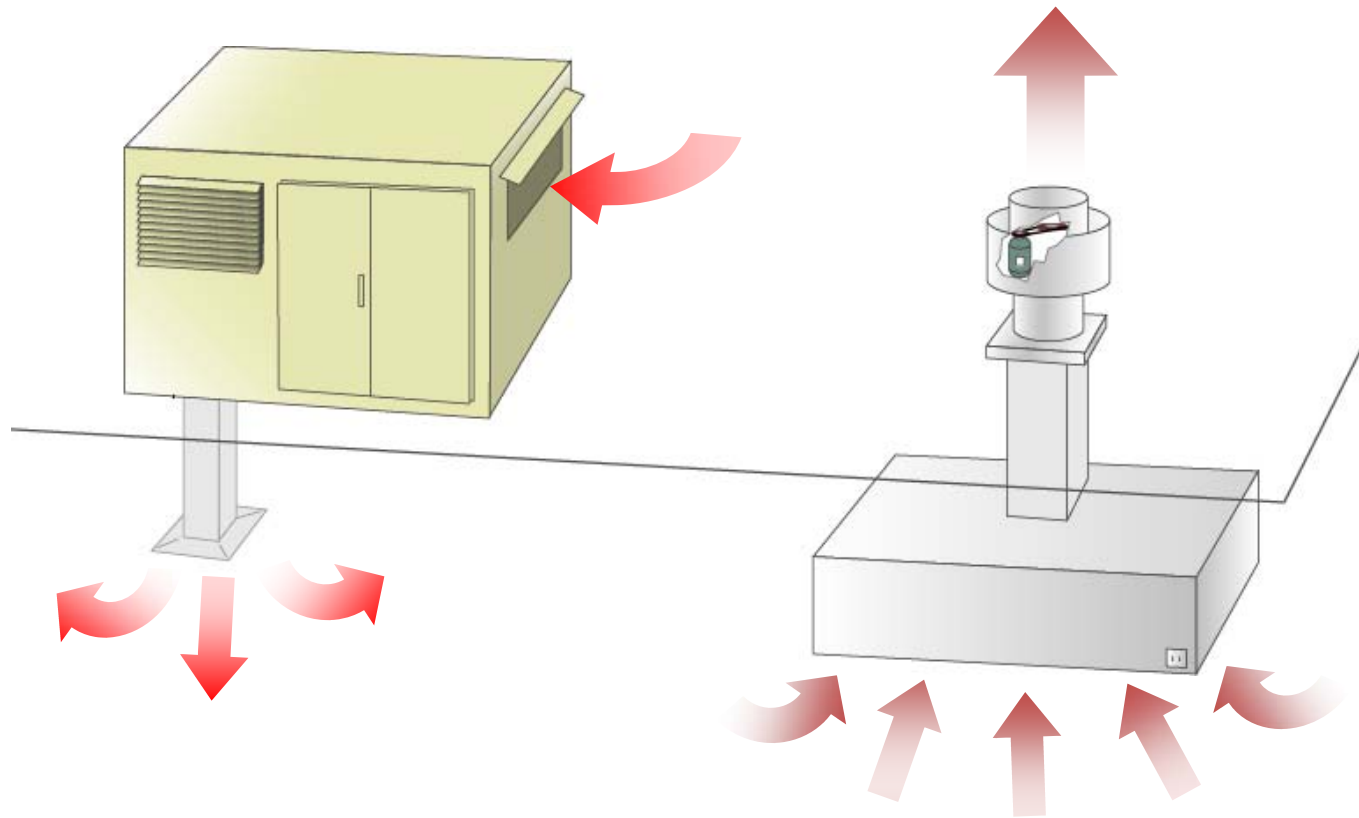


AEE CHAPTER MEETING
Demand Control Ventilation
DCV
February 18, 2016



Solves the problem of all-or-nothing ventilation

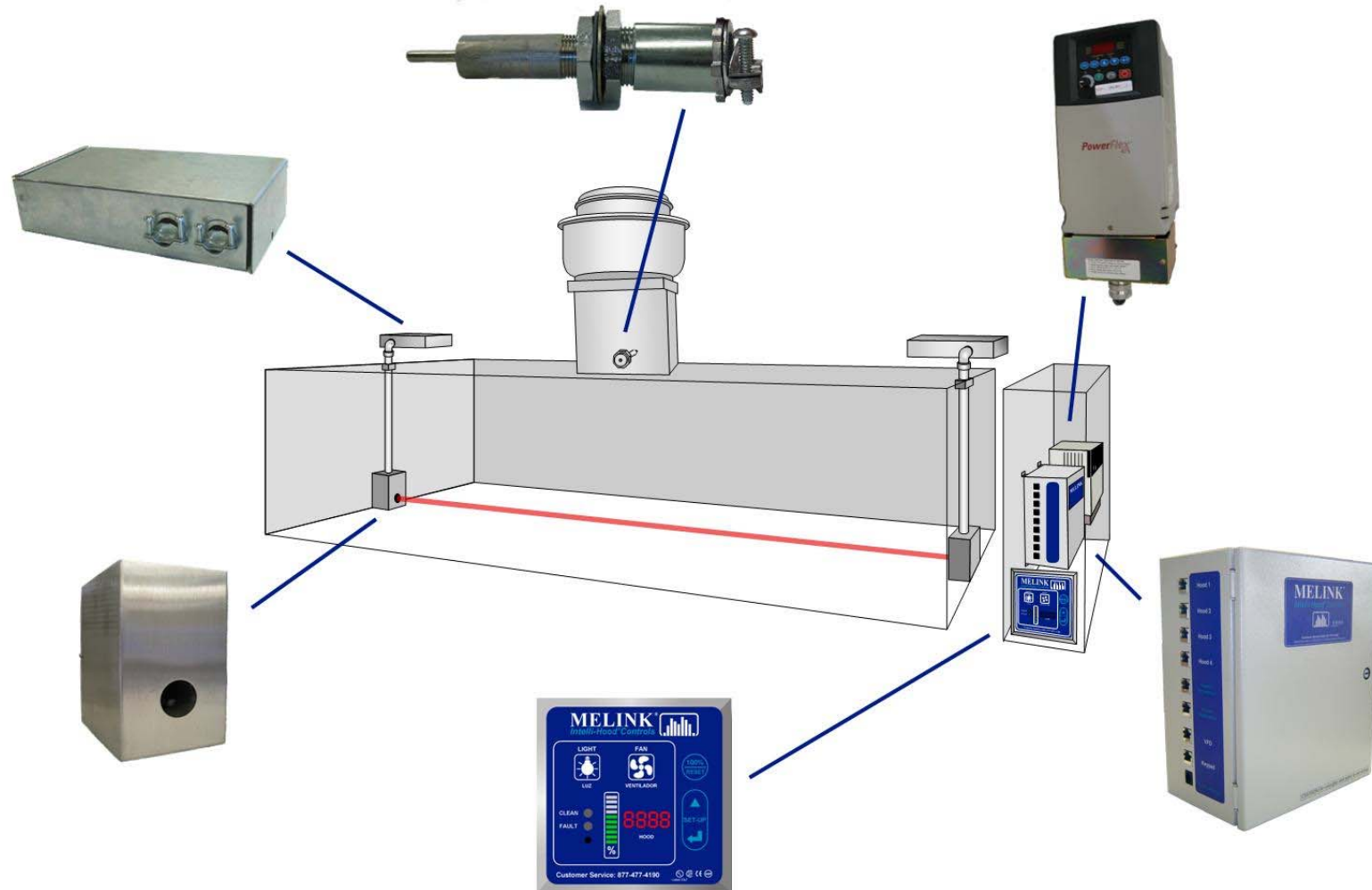


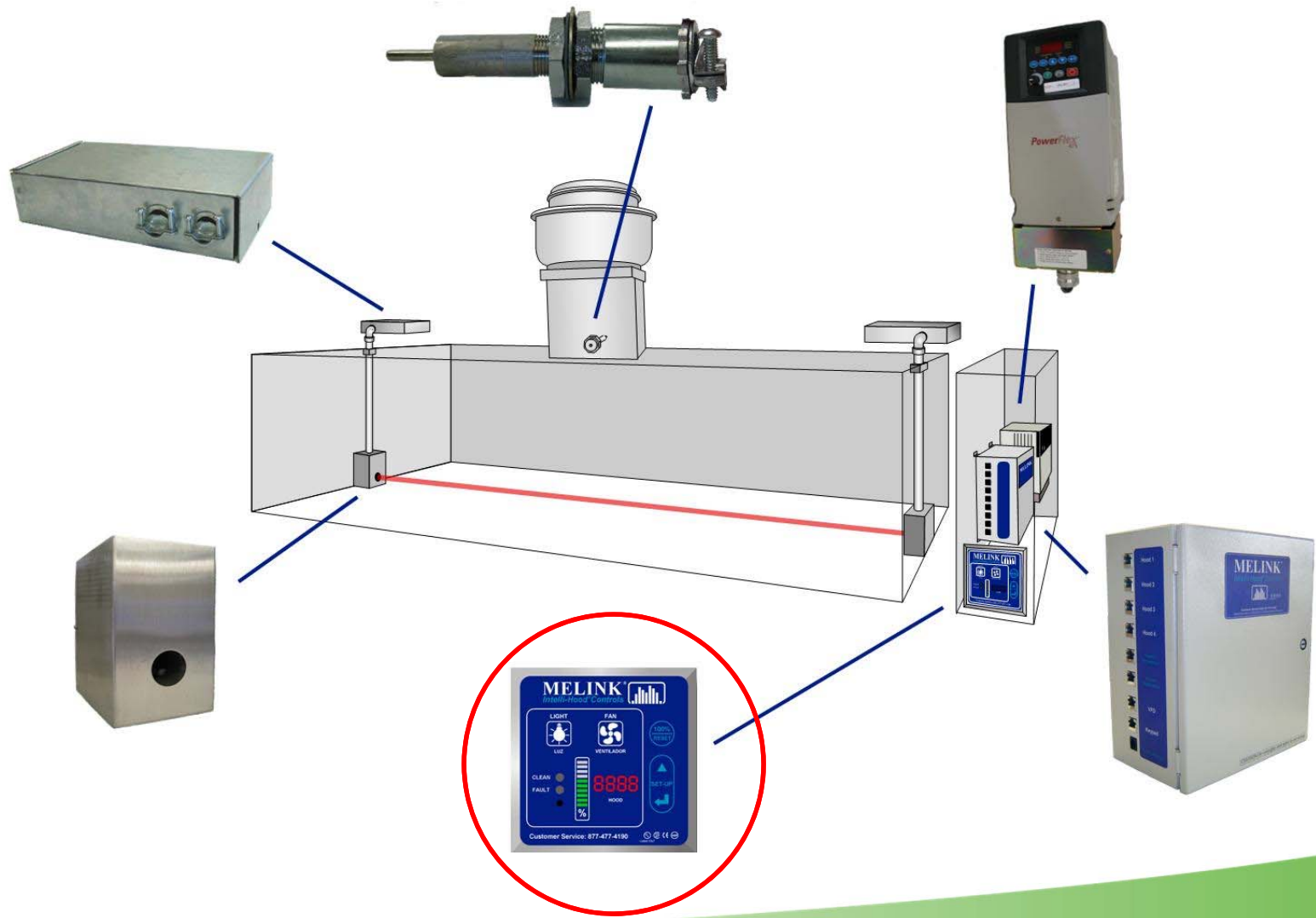
Types of systems

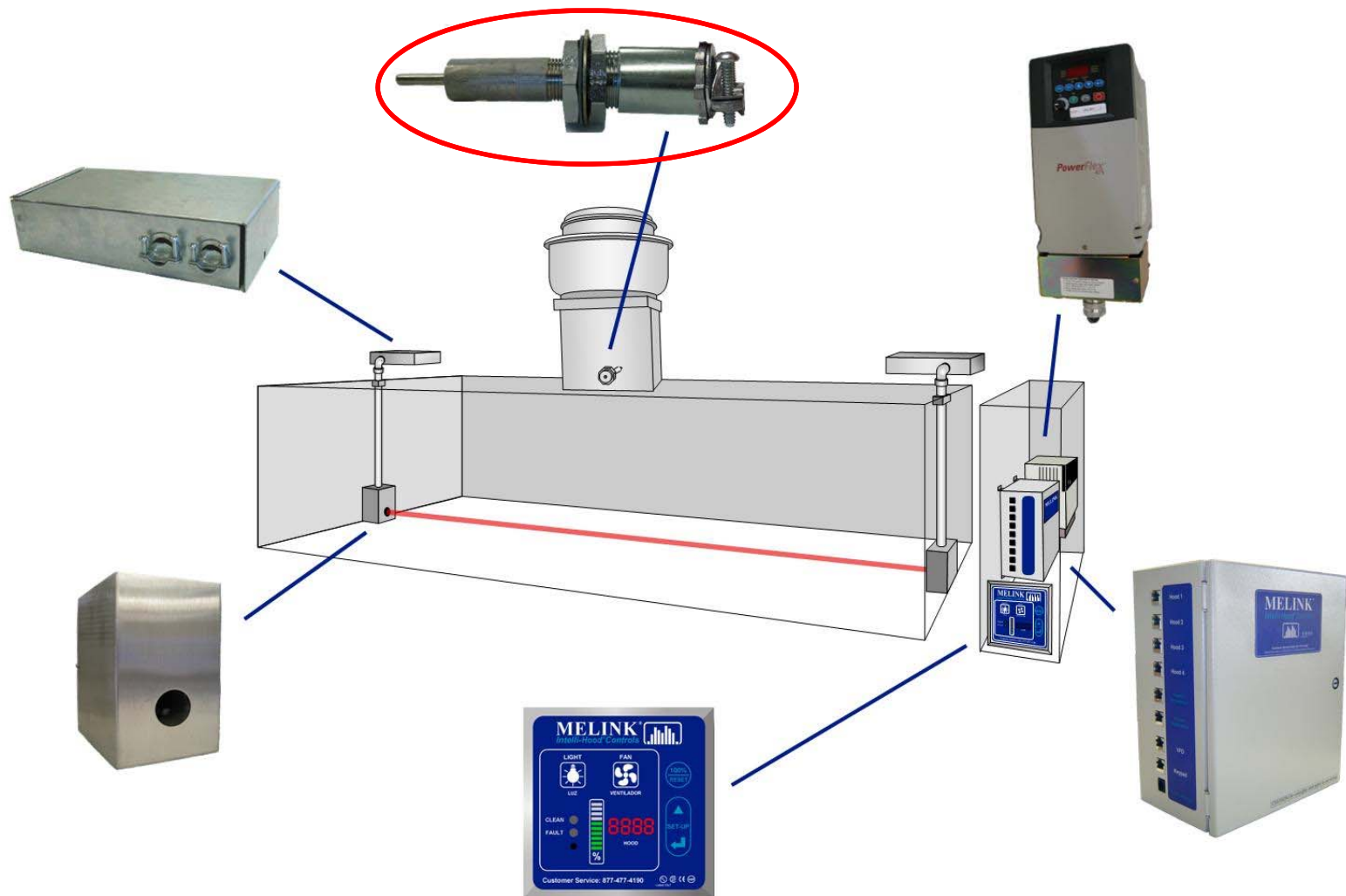
- Temperature only
- Optics and temperature

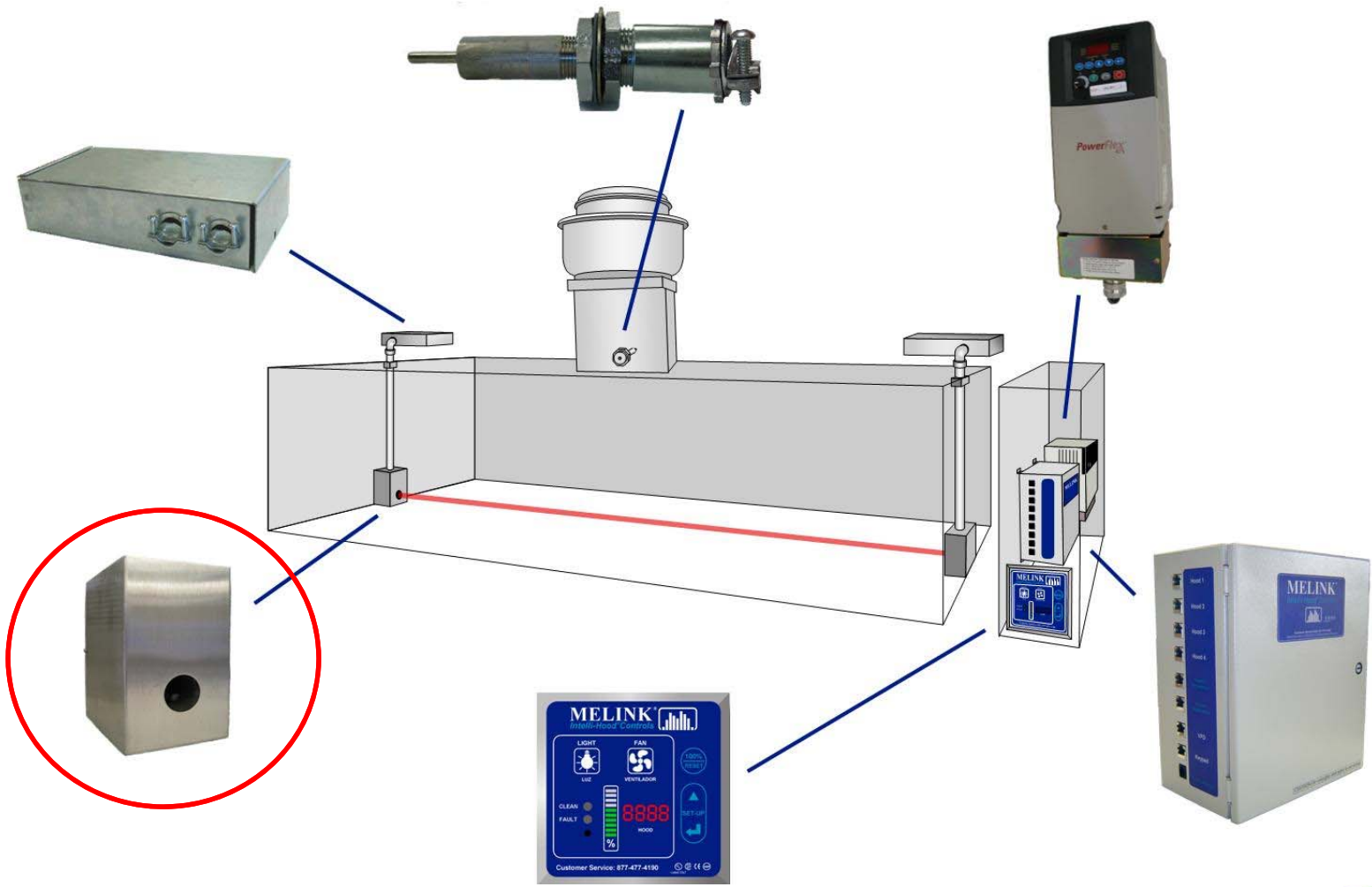


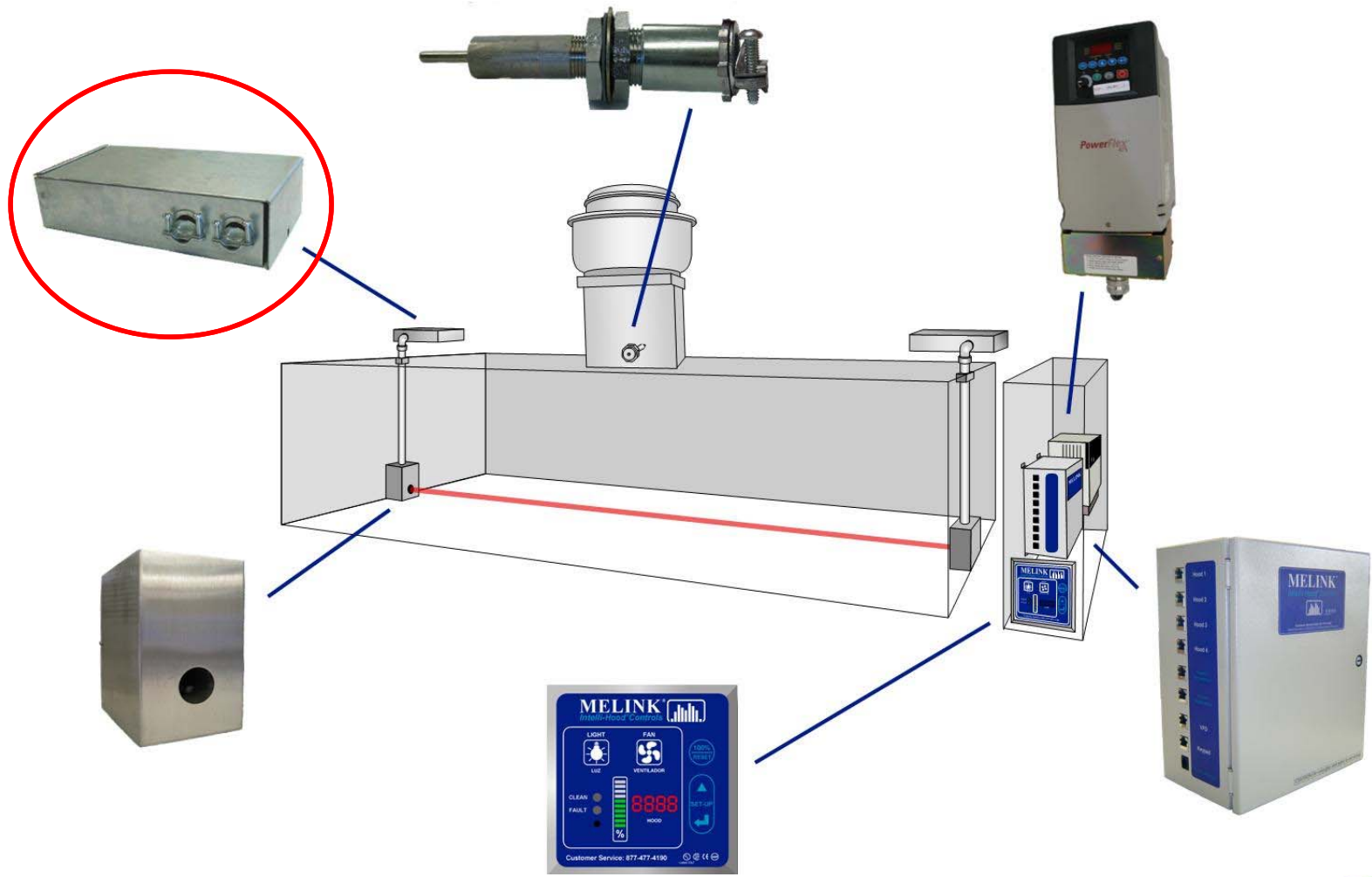
Typical System[®] Components

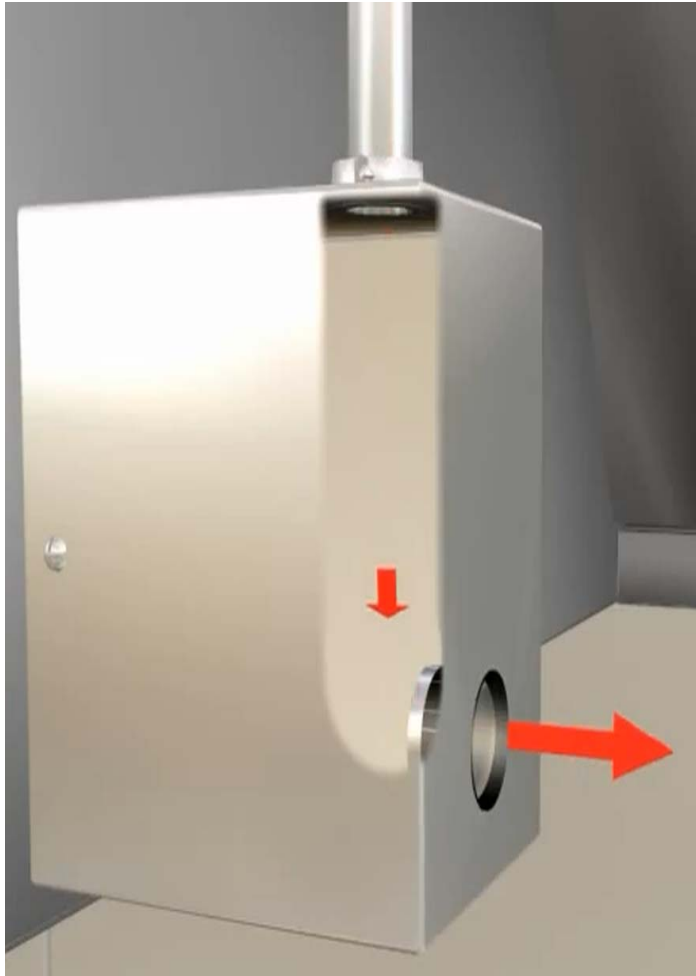


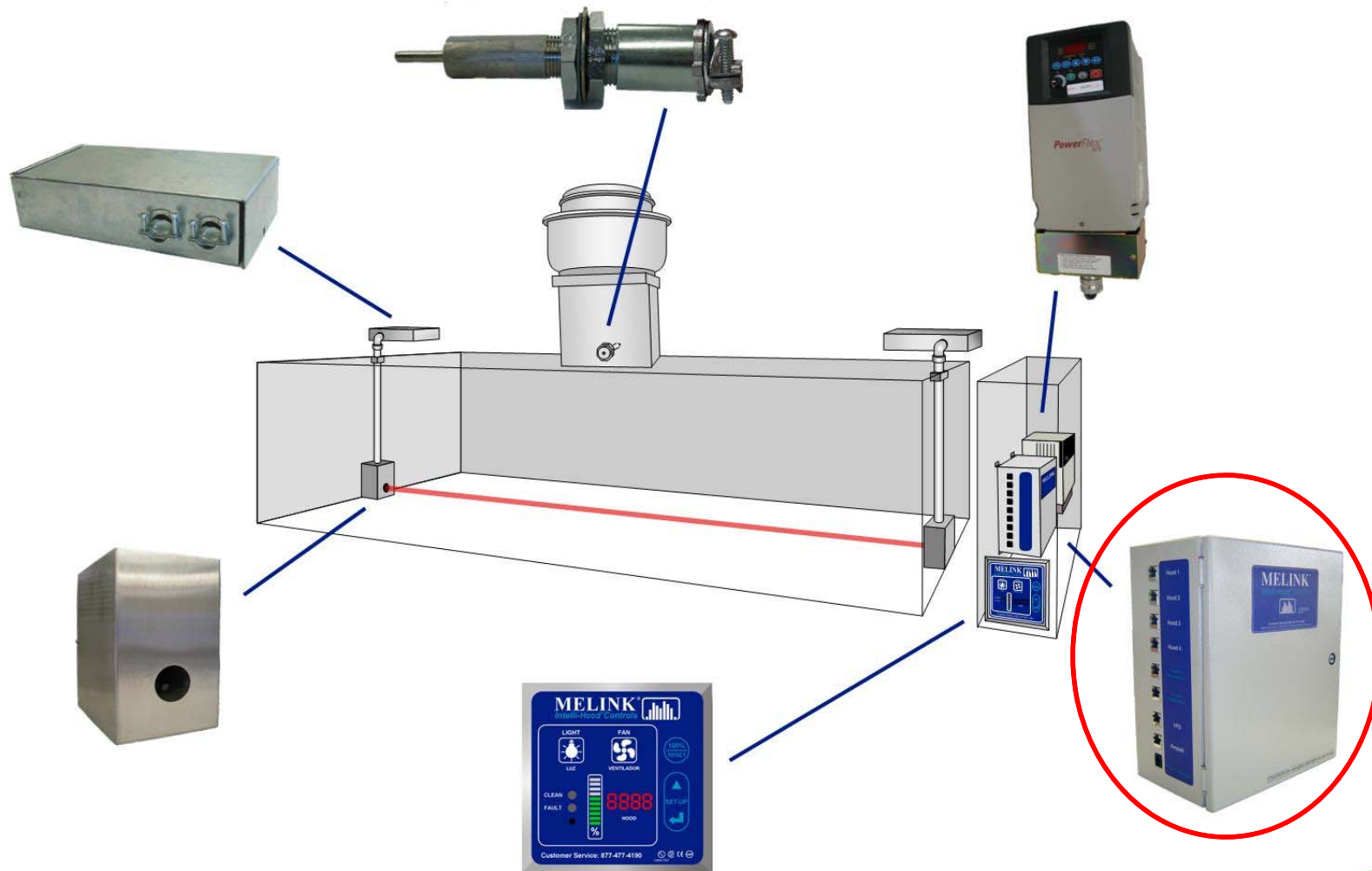


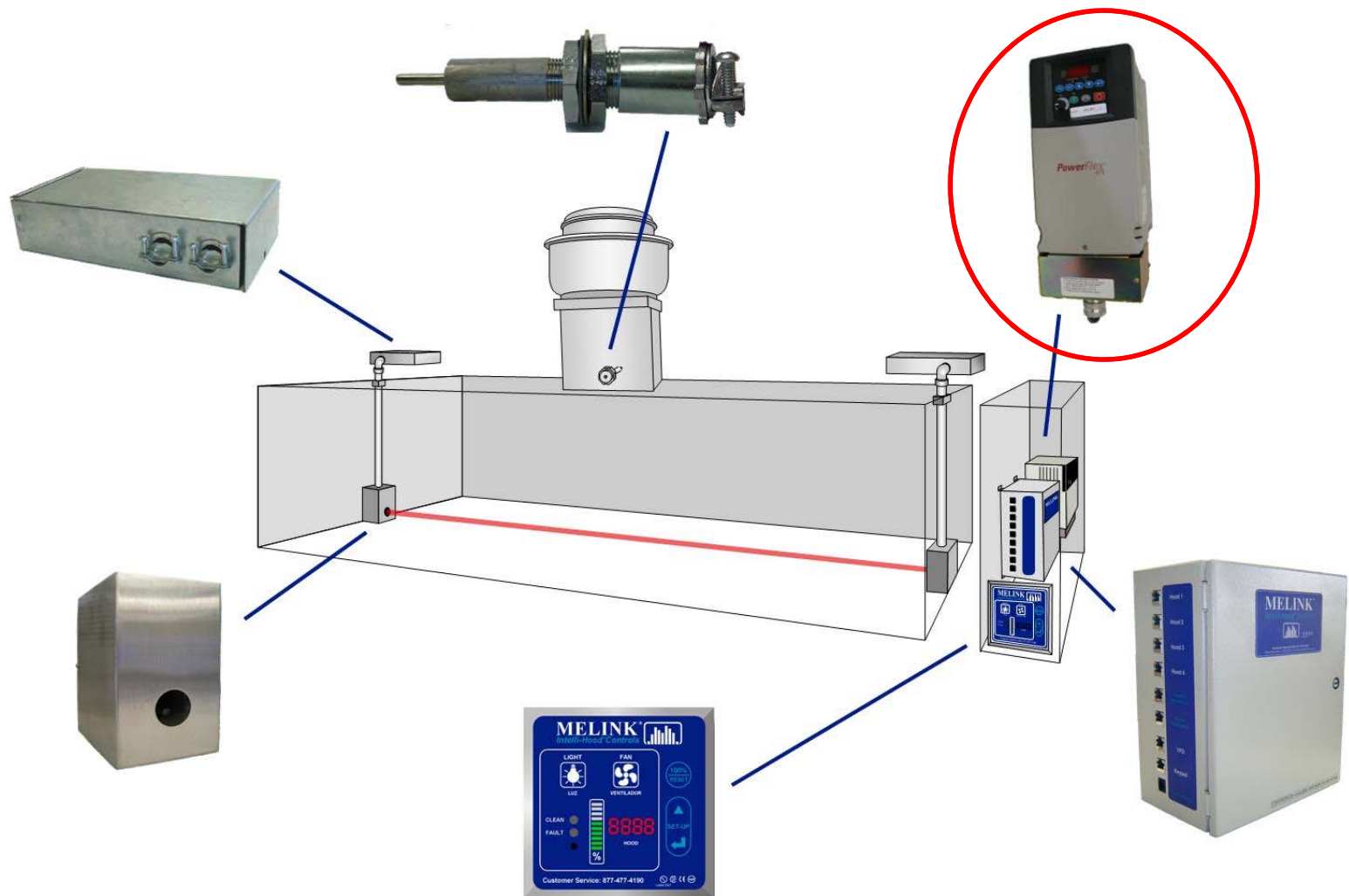




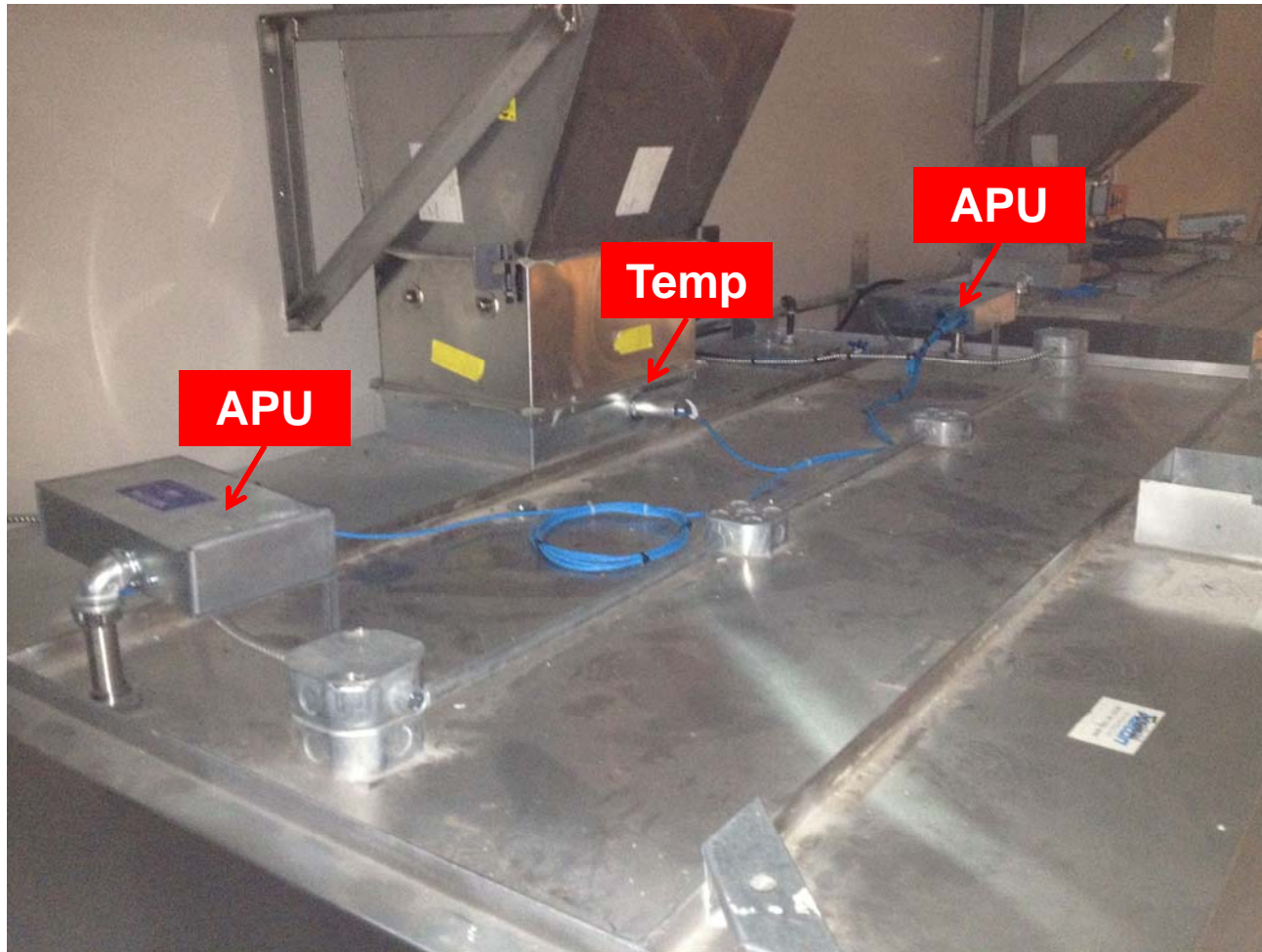













Typical Savings

- Payback: 1-3 yrs (3-6 for Corp Office) typical
- Save \$5,000 to \$20,000 per site each year
- Conditioned air savings: \$3 / CFM / Year
- Internal Rate of Return = 20% to 50%
- Improve overall hood efficiency by up to 50%
- Fan energy savings: 20% speed reduction = 50% savings



Code Compliance

- NFPA 96 – duct air velocity reduced 1500 fpm to 500 fpm
 - UL, ULC, and CE approved controls
 - IMC - engineered or listed variable-speed systems allowed
 - Letters of acceptance from inspectors across the U.S
- 

Case Study: Hotel

Scenario:

- Major Las Vegas hotel
- 4 hoods
- Retrofit
- Install time: 3 Nights



Case Study: Hotel

Investment/ROI

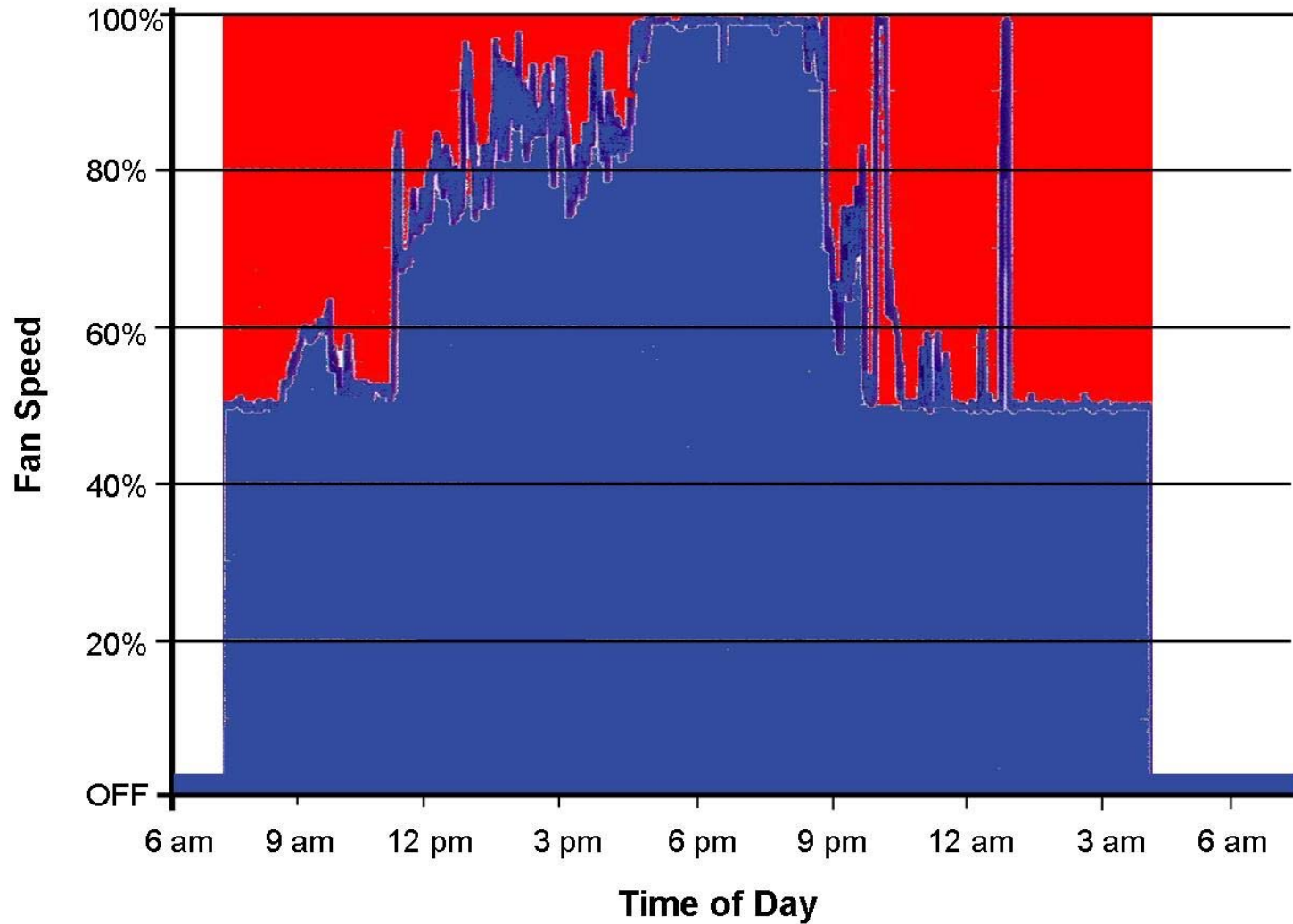
- Installed cost: \$25,425
- Motor Operating Savings: \$17,328/yr
- Heating Savings: \$ 131/yr
- Cooling Savings: \$ 1,655/yr

Total Savings: \$19,114/yr

Payback Period: 1.3 years



Hotel 1-Day Profile



Case Study: University

Scenario:

- A Florida university
- 3 hoods
- Retrofit
- Install time: 2 Nights



Case Study: University

Investment/ROI

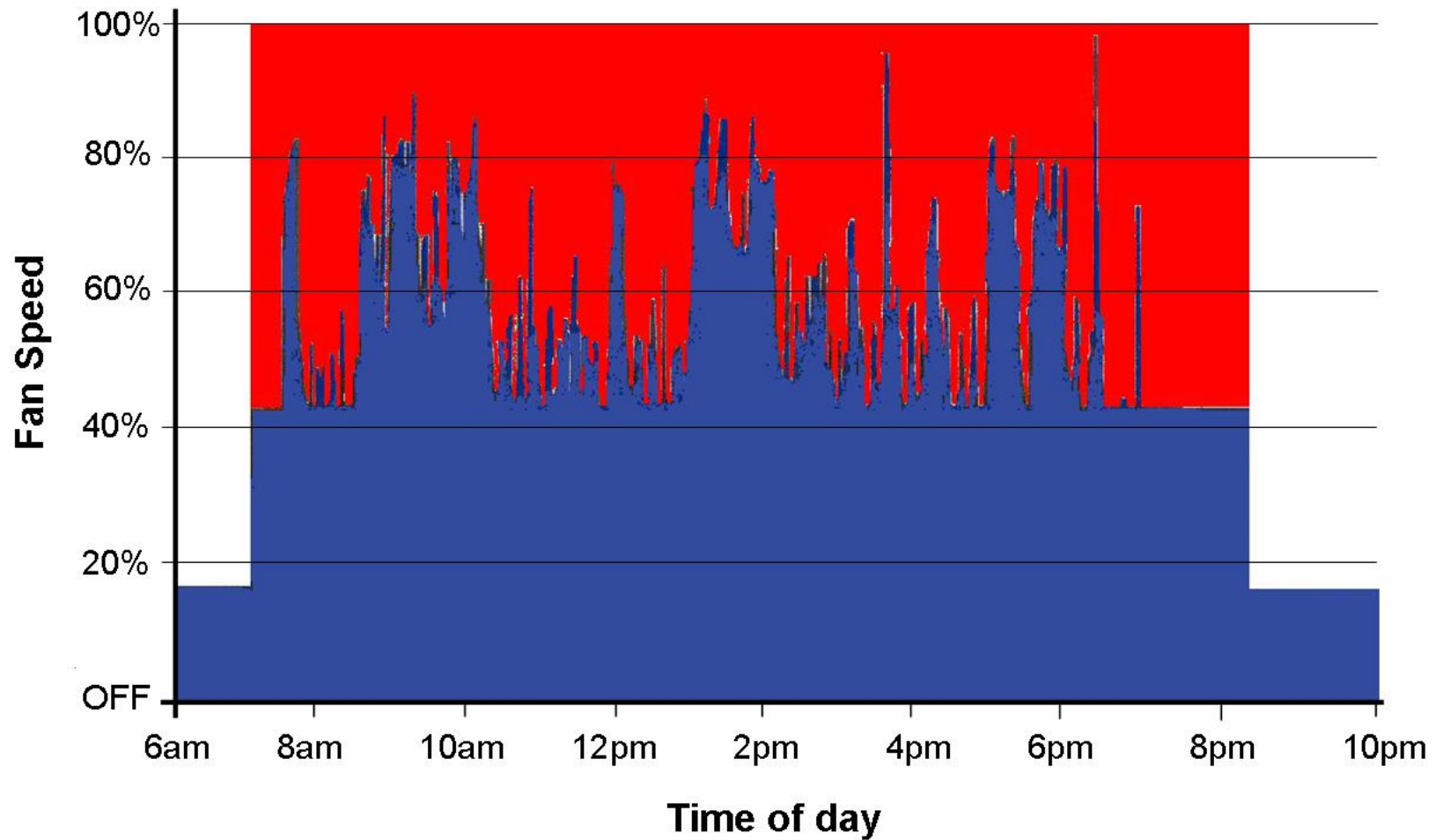
- Installed cost: \$19,250
- Motor Operating Savings: \$ 4,900/yr
- Heating Savings: \$ 123/yr
- Cooling Savings: \$ 5,100/yr

Total Savings: \$10,100/yr

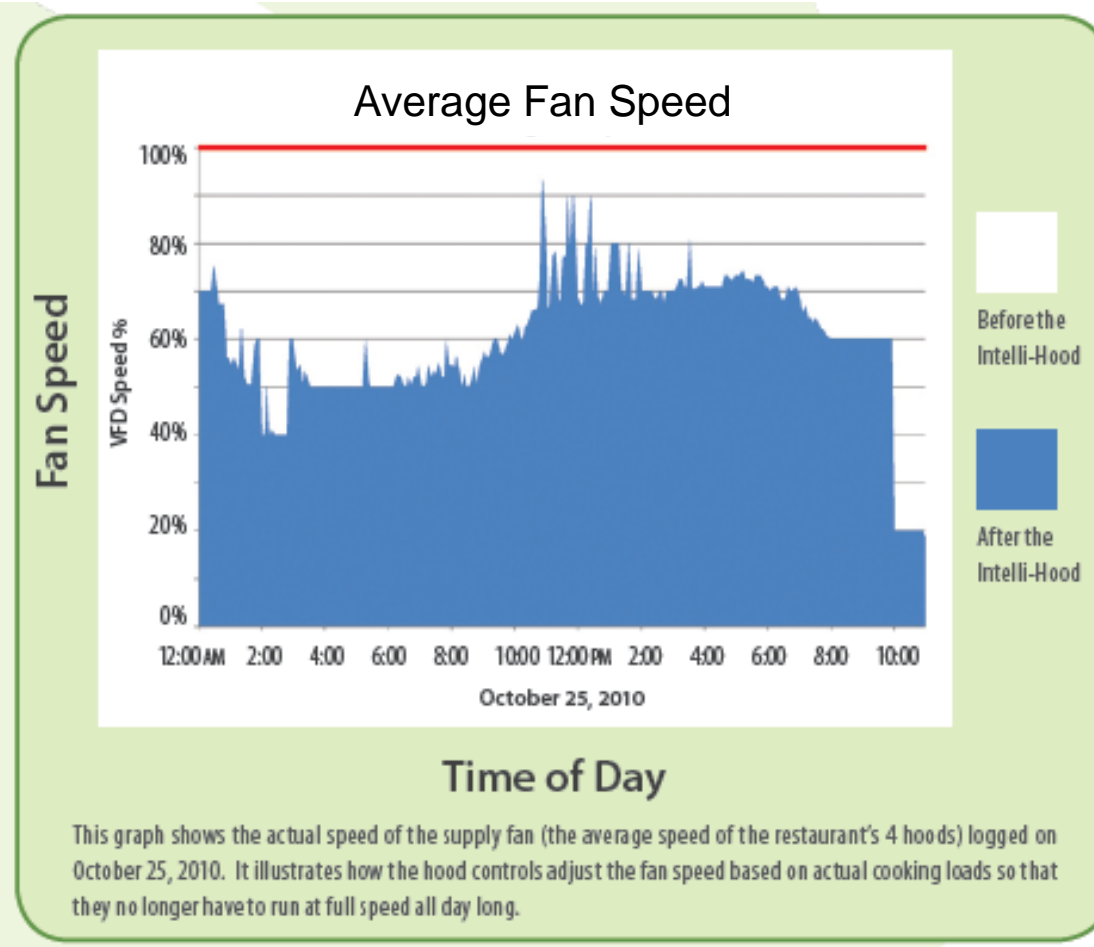
Payback Period: 1.9 years



University 1-Day Profile



Restaurant 1-Day Profile



Questions?



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