



FOUR SEASONS RESORT  
*Dubai at Jumeirah Beach*

# INTELLI-HOOD®

## KEY SAVINGS

### Overview

The Four Seasons Hotel at Jumeriah Beach in Dubai, renowned for its luxurious accommodations and exceptional service, sought to enhance its energy efficiency in the commercial kitchen. With a commitment to sustainability and operational excellence, the hotel decided to install Intelli-Hood's Demand Control Kitchen Ventilation (DCKV) system in six of their commercial kitchens.

### Benefits of DCKV

Intelli-Hood's DCKV control system offers an intelligent solution to optimize kitchen ventilation, addressing the unique challenges of commercial kitchens. The benefits include energy savings, improved indoor air quality, and reduced environmental impact. By dynamically adjusting exhaust and supply airflow based on cooking activity, DCKV controls ensure optimal ventilation while minimizing energy consumption.

### Installation Process

This multi-kitchen installation was meticulously planned for to ensure minimal disruption to the hotel's daily operations. Recognizing the importance of uninterrupted service, the



**Total Energy Savings**  
\$123,359/Year



**Carbon Dioxide**  
1,047,557 lbs/Year



**Simple Payback Period**  
1 Year



**Operating Expense Reduction**  
50%

installation team worked during non-peak hours, such as late evenings and early mornings. This strategy helped minimize disturbances to guests and staff while ensuring the completion of the project within a reasonable timeframe.

### Annual Kitchen Hood Utility Costs (USD)

Figure A

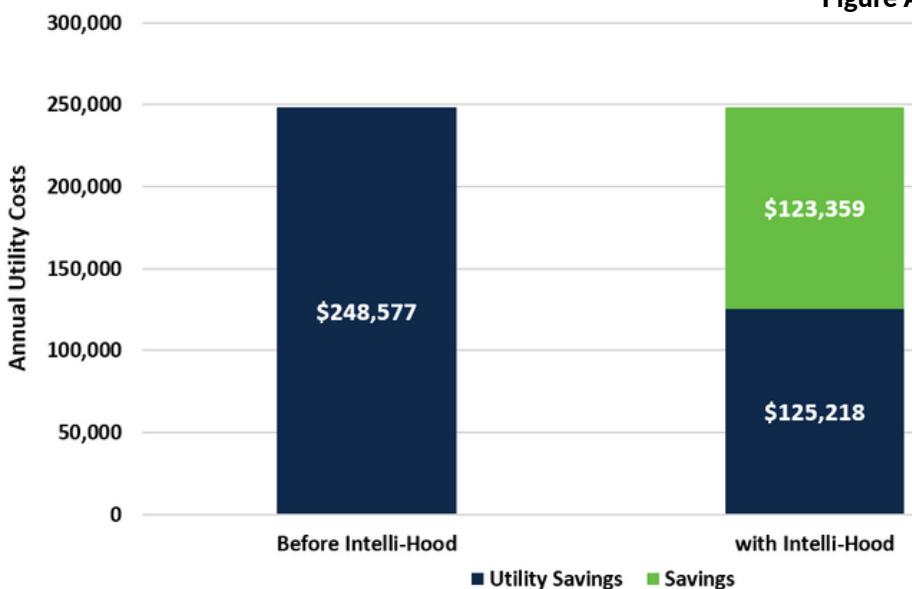


Figure A demonstrates the annual utility costs associated with the commercial kitchen at the Four Seasons Hotel in Jumeriah Beach, Dubai. The graph depicts the costs before the installation of Intelli-Hood's controls vs. after the installation of Intelli-Hood and the savings achieved by the hotel.

## Performance Results

Following the successful installation of Intelli-Hood's DCKV controls, the Four Seasons Hotel experienced remarkable performance improvements:

**Utility Cost Reduction:** The annual utility cost the Four Seasons's kitchen faced was \$248,577 prior to the installation of Intelli-Hood. After installing Intelli-Hood's DCKV controls, the annual utility cost decreased to \$125,218, demonstrating a remarkable 50% reduction (Figure A). This resulted in an annual utility savings of \$123,359.

**CO2 Emissions Savings:** The kitchen achieved a substantial environmental impact reduction, saving 1,047,557 lbs of CO2 emissions annually. This aligns with the Four Seasons' dedication to corporate social responsibility and sustainability, enhancing air quality for guests and staff and helping reduce their overall carbon footprint.

**Quick Payback Period:** With a simple payback period of just one year, the project demonstrated the efficiency of the investment. This swift return on investment establishes the Intelli-Hood system as a cost-effective solution for commercial kitchens.

**Optimized Fan Speeds:** The average fan speed consistently held at 68% (Figure B), showcasing the system's efficiency. The optimized fan speed helped reduce energy waste, ensuring the kitchen fans were optimized when needed instead of consistently running at full capacity.

## Conclusion

The successful integration of Intelli-Hood's DCKV control system at Four Seasons Hotel, Jumeriah Beach, not only optimized energy consumption but also showcased the commitment to providing a sustainable and comfortable environment for guests and staff. The project's swift payback period and substantial savings underscore the efficiency and effectiveness of Intelli-Hood's innovative solution in commercial kitchen ventilation.



Dining Room & kitchen at Four Seasons Hotel, Jumeriah Beach

## Four Seasons JBR Dubai UAE - Average Fan Speed

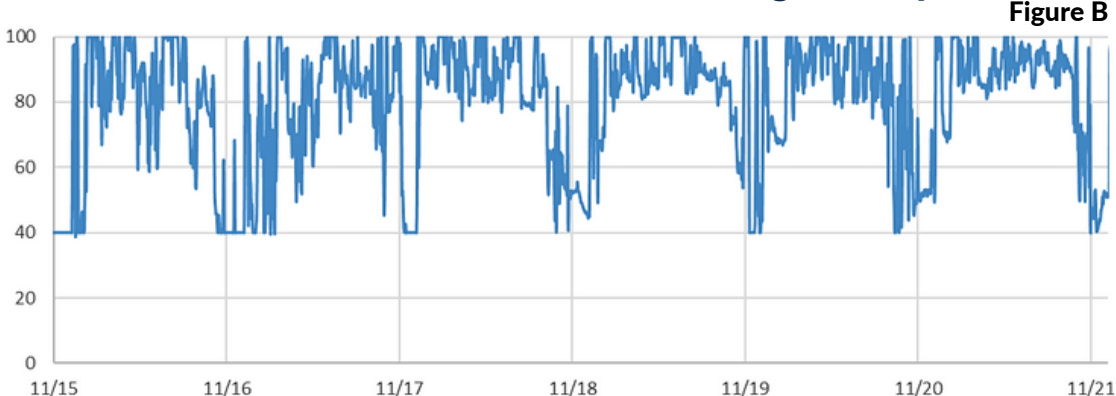


Figure B depicts the fan speed variations over a week of continuous operation. This multi-kitchen installation in the Four Seasons hotel operated at an average fan speed of **68%**, saving energy when cooking demand lessened. The variations in fan speed are a result of changing cooking demand in the commercial kitchen.