



MGK ENDOCUBE TRIAL ELECTRICAL POWER CONSUMPTION REPORT 1

Thank you very much for your great support during our MGK Endocube Trial from 08. - 10. August 2016 in order confirm the Electrical Power Savings with MGK Endocube.

1. MGK Endocube Product Description

The MGK Endocube consists of a food simulant contained in a double-skinned enclosure. Once the MGK Endocube is placed on the refrigerator's thermostat sensor, it will use food temperature as the signal to control its refrigeration cycle rather than fluctuating air temperature. The effect is a more efficient refrigeration cycle, where the individual cycle lasts longer but the frequency is reduced by up to 80% which additionally increases the life span of your refrigeration units.

2. MGK Endocube Trial Setup and Testing Procedure

During the trial period from 08. - 10. August 2016, we installed the Ultimate Power Green Performance Measurement Device on the DB board in one of your Electrical Distribution Rooms. Hereby, we connected our Power Performance Measurement Device to each phase of your Walk-in Cooler RYB3 From 08.- 09. August 2016 (24 hours) we recorded your electrical power consumption for your Walk-in Cooler RYB3 **with** the MGK Endocube Device, whereas from 09. - 10. August 2016 (24 hours) we recorded your electrical power consumption for your Walk-in Cooler RYB3 **without** the MGK Endocube Device.

Measurement device:
Powergreen 3.0 from
Measurement
Technology

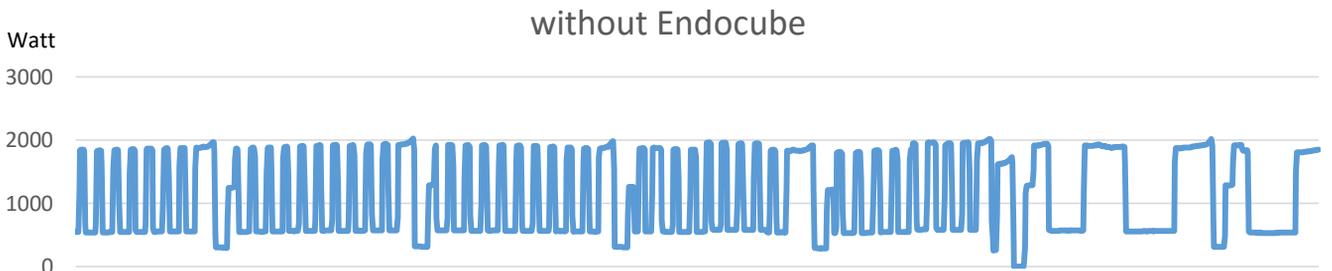


MGK Endocube



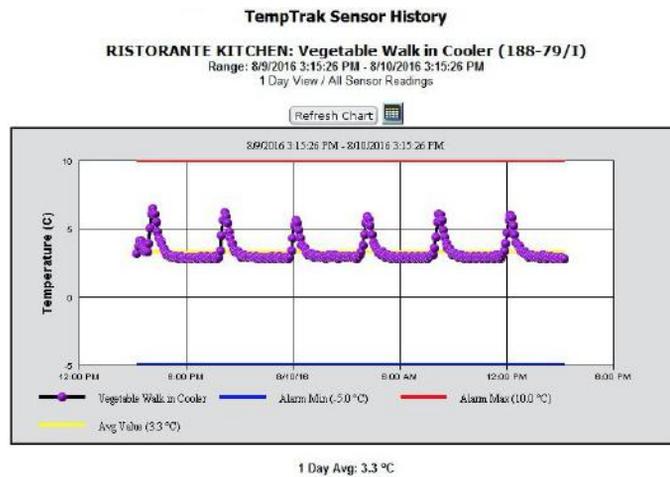


3. Power Green and Temptrak Measurement Results without MGK Endocube Device



Start:
09.08.16 at 15.00

End:
10.08.16 at 15.00

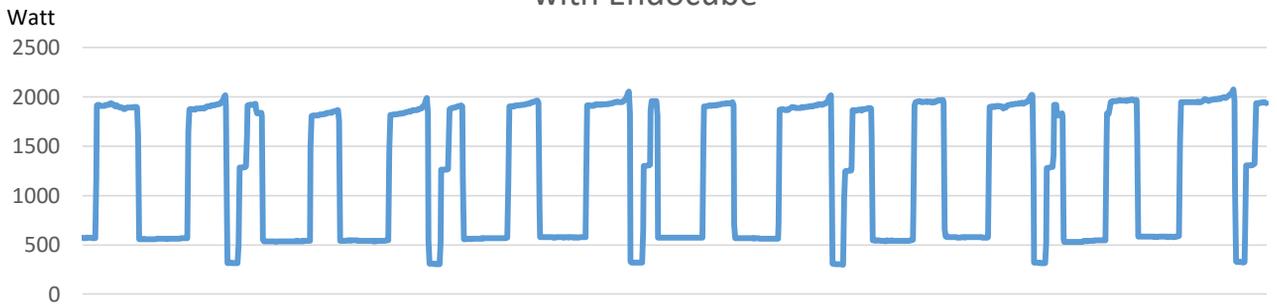


Summary of Measured Parameters without Endocube

Starts of Compressor	58 times
Average Temperature of Walk-in Chiller	3.3 °C
Average Power Consumption per Hour	1.10 kWh
Average Power Consumption per Day (24 hours)	26.46 kWh
Average Power Consumption per Year	9,657.90 kWh
Average Power Consumption per m ³ /year	776.98 kWh



4. Power Green and Temptrak Measurement Results with MGK Endocube Device with Endocube

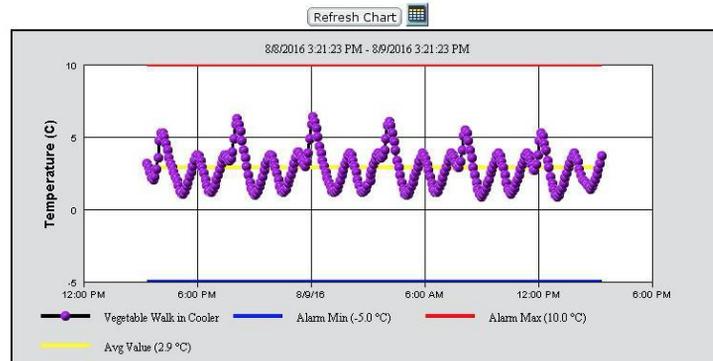


Start:
 08.08.16 at 16.30

TempTrak Sensor History

End:
 09.08.16 at 14.30

RISTORANTE KITCHEN: Vegetable Walk in Cooler (188-79/I)
 Range: 8/8/2016 3:21:23 PM - 8/9/2016 3:21:23 PM
 1 Day View / All Sensor Readings



1 Day Avg: 2.9 °C

Summary of Measured Parameters with Endocube

Starts of Compressor	18 times
Average Temperature of Walk-in Chiller	2.9°C
Average Power Consumption per Hour	0.77 kWh
Average Power Consumption per Day (24 hours)	18.55 kWh
Average Power Consumption per Year	6,770.75 kWh
Average Power Consumption per m ³ /year	544.71 kWh



5. Final Report Analysis and Savings with MGK Endocube

Parameters		
Total Power Consumption Savings per hour	0.329 kWh	0.1250 AED
Total Power Consumption Savings per day	7.910 kWh	3.005 AED
Total Power Consumption Savings per month	237.73 kWh	90.337 AED
Total Power Consumption Savings per year	2,852.76 kWh	1,084.04 AED
Total Power Consumption Savings per m ³ /year	227.67 kWh	86.514 AED

*Calculation based on 0.38 AED/kWh (DEWA)

6. Return on Investment Calculation for MGK Endocube

Parameters	
Costs for one MGK Endocube EC102 Device	395.00 AED
Total Power Consumption Savings per month for Walk-in Chiller	90.337 AED
Return on Investment	4.37 Months
Savings in percent	30.37 %



MGK ENDOCUBE TRIAL ELECTRICAL POWER CONSUMPTION REPORT

Thank you very much for your great support during our MGK Endocube Trial from 07. - 09. August 2016 in order confirm the Electrical Power Savings with MGK Endocube.

1. MGK Endocube Product Description

The MGK Endocube consists of a food simulant contained in a double-skinned enclosure. Once the MGK Endocube is placed on the refrigerator’s thermostat sensor, it will use food temperature as the signal to control its refrigeration cycle rather than fluctuating air temperature. The effect is a more efficient refrigeration cycle, where the individual cycle lasts longer but the frequency is reduced by up to 80% which additionally increases the life span of your refrigeration units.

2. MGK Endocube Trial Setup and Testing Procedure

During the trial period from 07. - 09. August 2016, we installed the Ultimate Power Green Performance Measurement Device on the DB board in one of your Electrical Distribution Rooms. Hereby, we connected our Power Performance Measurement Device to each phase of your Walk-in Chiller MK - 02. From 07. - 08. August 2016 (24 hours) we recorded your electrical power consumption for your Walk-in Chiller MK – 02 **without** the MGK Endocube Device, whereas from 08. - 09. August 2016 (24 hours) we recorded your electrical power consumption for your Walk-in Chiller MK – 02 **with** the MGK Endocube Device.

Measurement device:
 Powergreen 0.6 from
 Measurement
 Technology

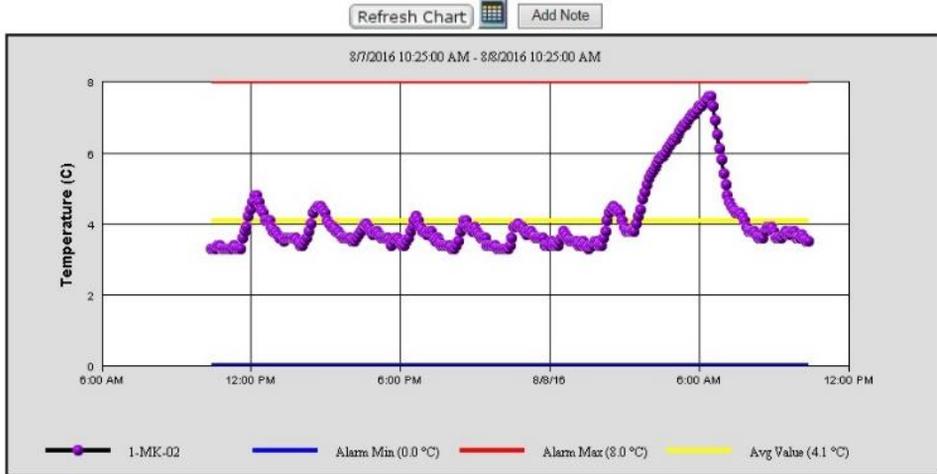
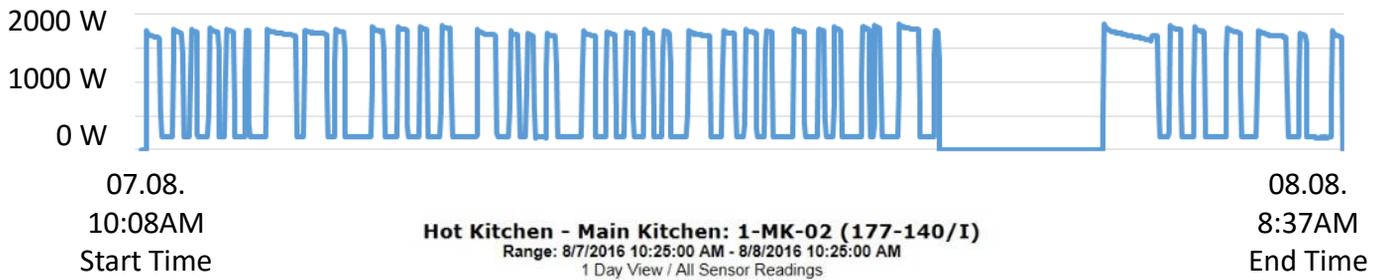


MGK Endocube





3. Power Green and Temptrak Measurement Results without MGK Endocube Device

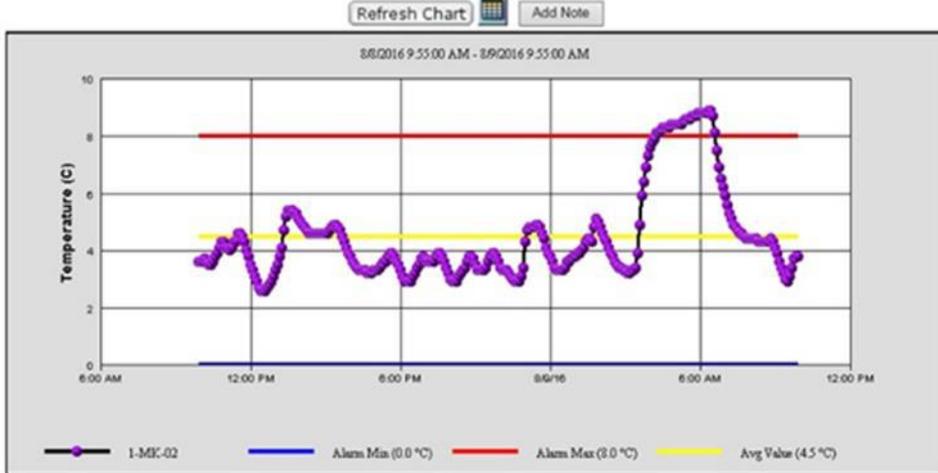


Summary of Measured Parameters without Endocube

Starts of Compressor	39 times
Average Temperature of Walk-in Chiller	4.1 °C
Average Power Consumption per Hour	0.76 kWh
Average Power Consumption per Day (24 hours)	18.31 kWh
Average Power Consumption per Year	6,683.15 kWh
Average Power Consumption per m ³ /year	242.81 kWh



4. Power Green and Temptrak Measurement Results with MGK Endocube Device



Summary of Measured Parameters with Endocube

Starts of Compressor	14 times
Average Temperature of Walk-in Chiller	4.5 °C
Average Power Consumption per Hour	0.55 kWh
Average Power Consumption per Day (24 hours)	13,25 kWh
Average Power Consumption per Year	4,836.25 kWh
Average Power Consumption per m ³ /year	175.68 kWh



5. Final Report Analysis and Savings with MGK Endocube

Parameters		
Total Power Consumption Savings per hour	0.21 kWh	0.0798 AED
Total Power Consumption Savings per day	5.06 kWh	1.9228 AED
Total Power Consumption Savings per month	151.80 kWh	57.684 AED
Total Power Consumption Savings per year	1,846.90 kWh	701.822 AED
Total Power Consumption Savings per m ³ /year	67.13 kWh	25.5094 AED

*Calculation based on 0.38 AED/kWh (DEWA)

6. Return on Investment Calculation for MGK Endocube

Parameters	
Costs for one MGK Endocube EC102 Device	395.00 AED
Total Power Consumption Savings per month for Walk-in Chiller	57.684 AED
Return on Investment	6.85 Months
Savings in percent	27.63%

MGK ENDOCUBE TRIAL ELECTRICAL POWER CONSUMPTION REPORT

Thank you very much for your great support during our MGK Endocube Trial from 09. - 11. August 2016 in order confirm the Electrical Power Savings with MGK Endocube.

1. MGK Endocube Product Description

The MGK Endocube consists of a food simulant contained in a double-skinned enclosure. Once the MGK Endocube is placed on the refrigerator's thermostat sensor, it will use food temperature as the signal to control its refrigeration cycle rather than fluctuating air temperature. The effect is a more efficient refrigeration cycle, where the individual cycle lasts longer but the frequency is reduced by up to 80% which additionally increases the life span of your refrigeration units.

2. MGK Endocube Trial Setup and Testing Procedure

During the trial period from 09. - 11. August 2016, we installed the Ultimate Power Green Performance Measurement Device on the DB board in one of your Electrical Distribution Rooms. Hereby, we connected our Power Performance Measurement Device to each phase of your Seafood Walk-in Chiller 80-142 from 09.- 10. August 2016 (24 hours) and recorded your electrical power consumption for your Seafood Walk-in Chiller 80-142 without the MGK Endocube Device, whereas from 10. - 11. August 2016 (24 hours) we recorded your electrical power consumption for your Seafood Walk-in Chiller 80-142 with the MGK Endocube Device.

Measurement device:
Powergreen 3.0 from
Measurement
Technology

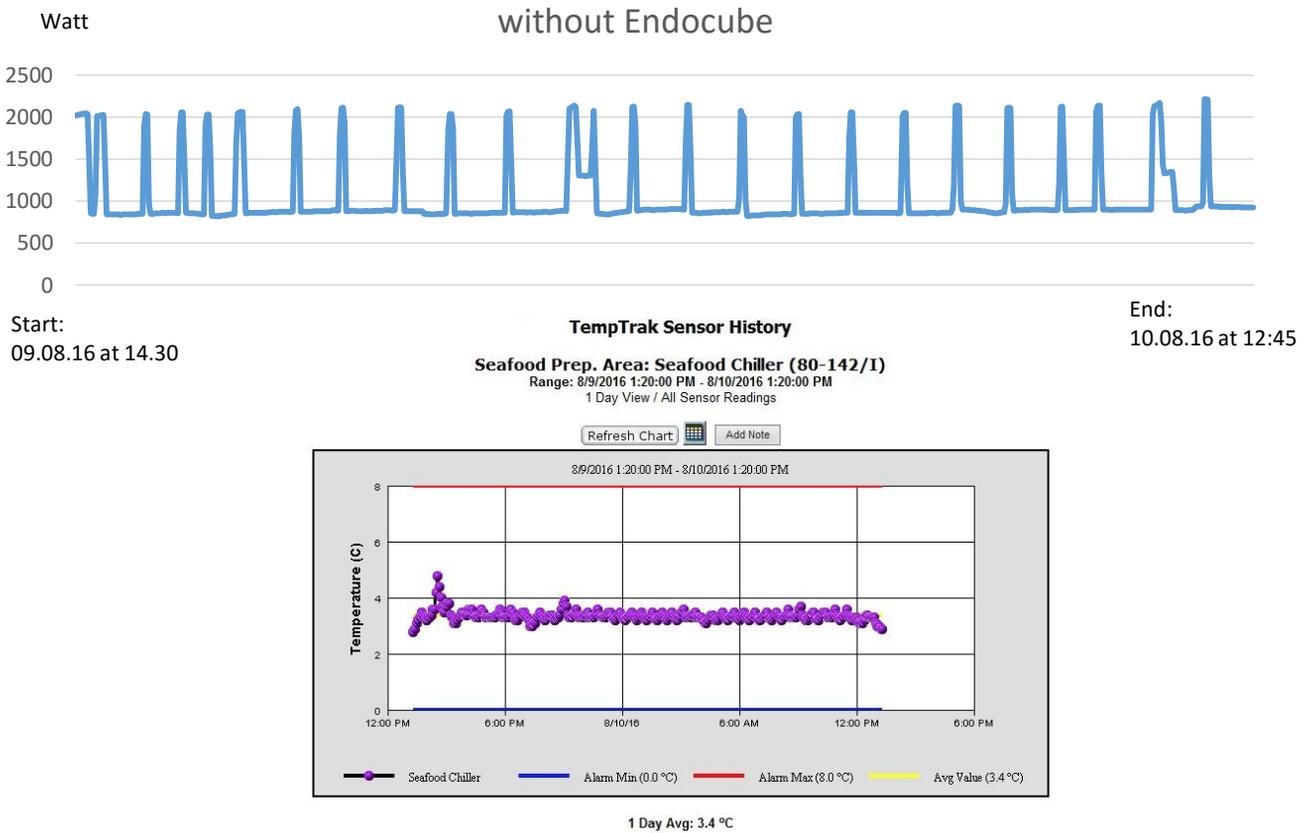


MGK Endocube





3. Power Green and Temptrak Measurement Results without MGK Endocube Device

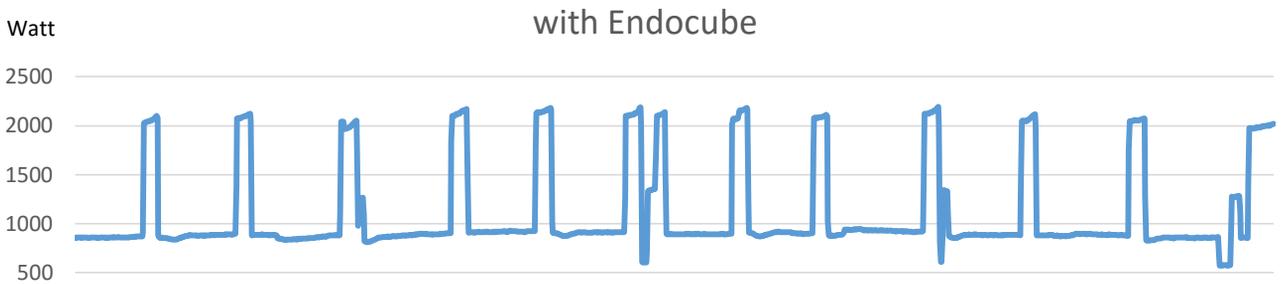


Summary of Measured Parameters without Endocube

Starts of Compressor	24 times
Average Temperature of Walk-in Chiller	3.4 °C
Average Power Consumption per Hour	1.12 kWh
Average Power Consumption per Day (24 hours)	27.05 kWh
Average Power Consumption per Year	9,873.25 kWh
Average Power Consumption per m ³ /year	658.22 kWh

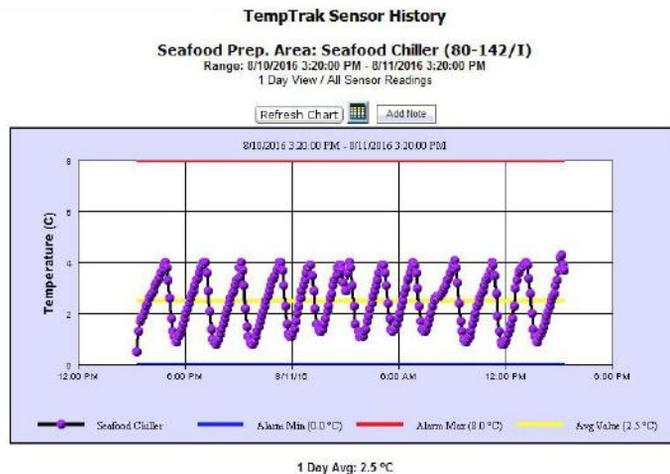


4. Power Green and Temptrak Measurement Results with MGK Endocube Device



Start:
10.08.16 at 13.20

End:
11.08.16 at 15.05



Summary of Measured Parameters with Endocube

Starts of Compressor	13 times
Average Temperature of Walk-in Chiller	2.5°C
Average Power Consumption per Hour	0.97 kWh
Average Power Consumption per Day (24 hours)	23.40 kWh
Average Power Consumption per Year	8,541.00 kWh
Average Power Consumption per m ³ /year	569.40 kWh

HTC

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HOTEL

5. Final Report Analysis and Savings with MGK Endocube

Parameters		
Total Power Consumption Savings per hour	0.152 kWh	0.057 AED
Total Power Consumption Savings per day	3.650 kWh	1.387 AED
Total Power Consumption Savings per month	109.50 kWh	41.610 AED
Total Power Consumption Savings per year	1,332.25 kWh	506.25 AED
Total Power Consumption Savings per m ³ /year	88.82 kWh	33.75 AED

*Calculation based on 0.38 AED/kWh (DEWA)

6. Return on Investment Calculation for MGK Endocube

Parameters	
Costs for one MGK Endocube EC102 Device	395.00 AED
Total Power Consumption Savings per month for Walk-in Chiller	41.610 AED
Return on Investment	9.49 Months
Savings in percent	13.49%

Christian Krauss
MGK Electromechanical Works LLC
Operations Manager