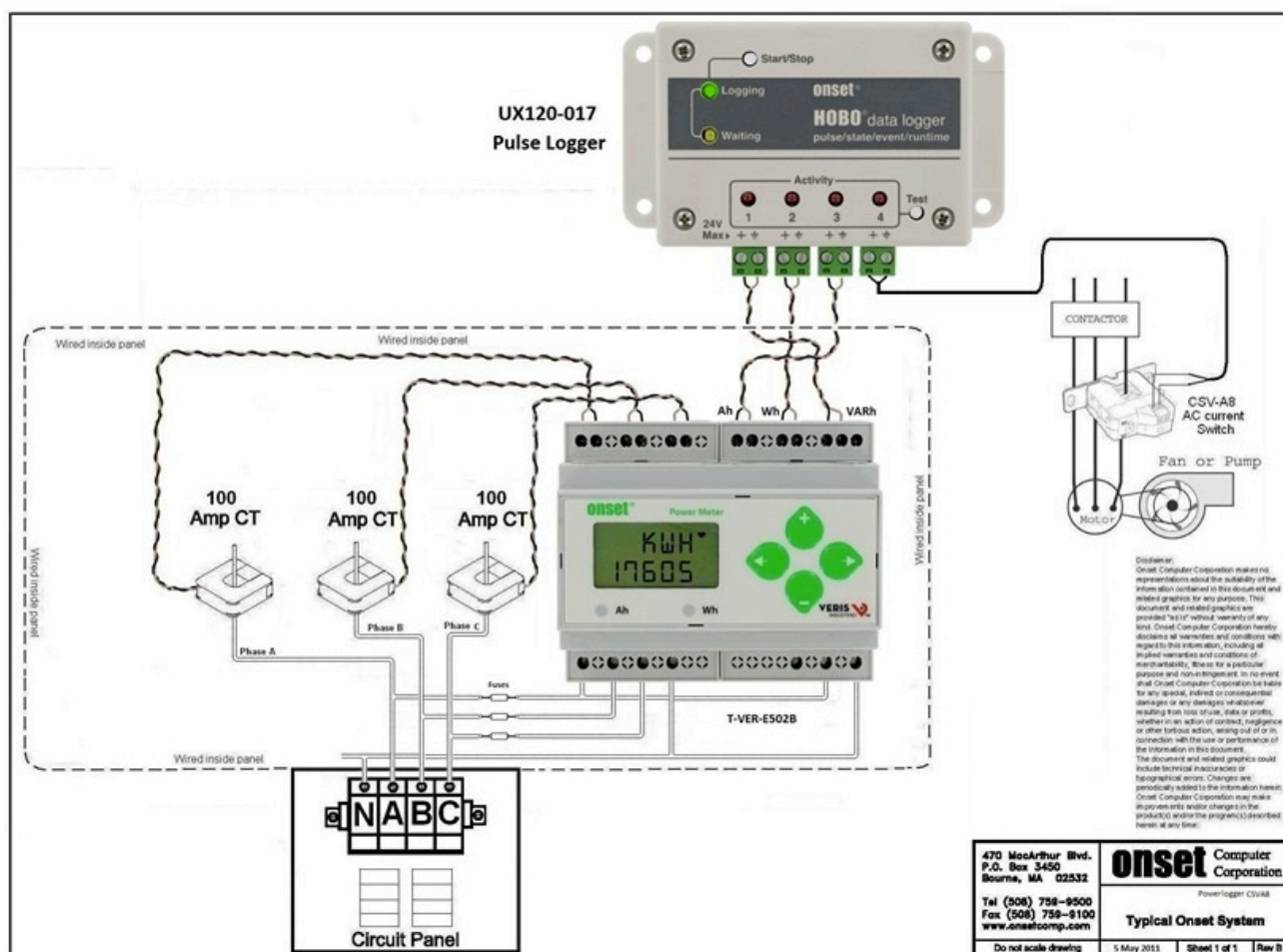


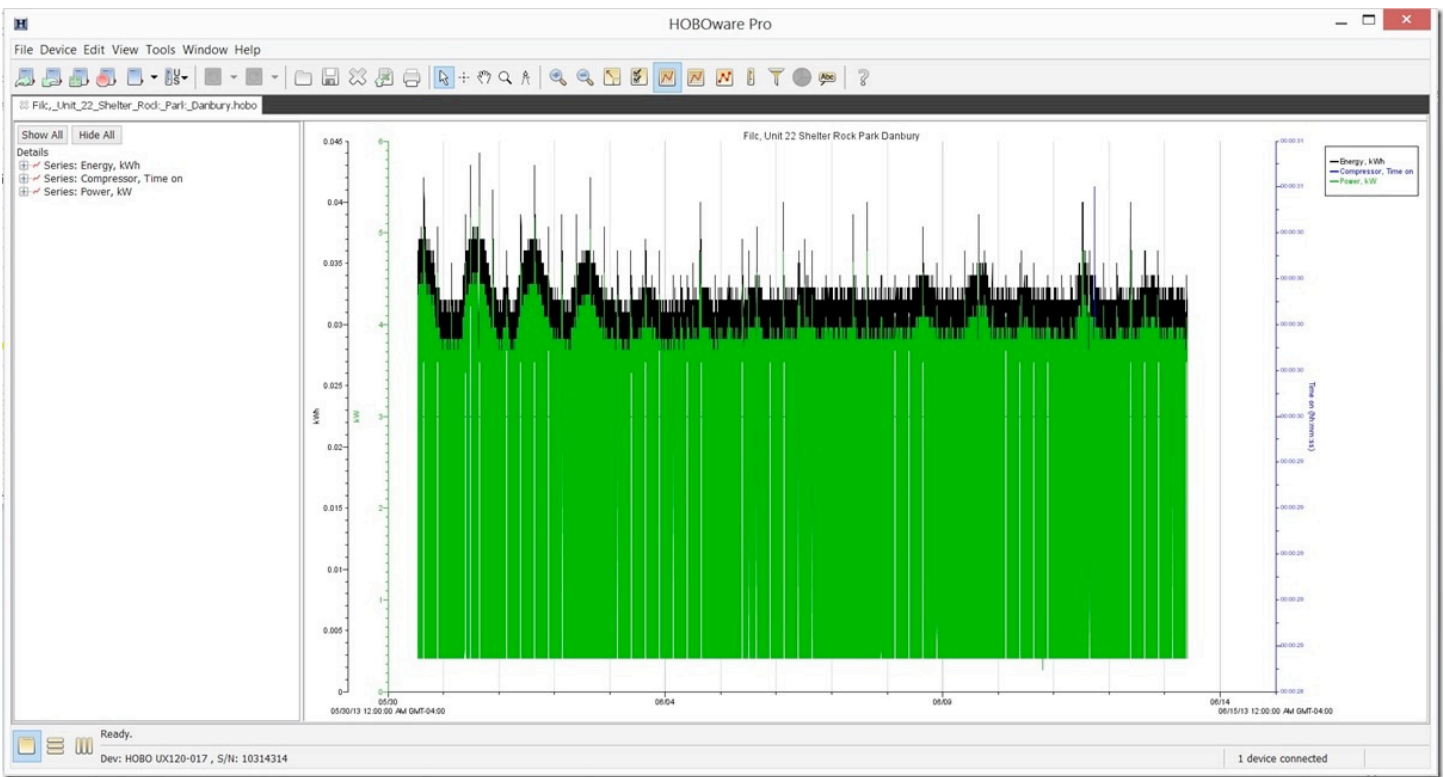
## CERMA BLUE ICE TEST

On 5/30/13 Cerma began a two-week monitoring of a walk in freezer cooled by a 5-ton 3PH 208V Freon compressor owned by Villarina's Pasta and Find Food of Danbury, CT. Since the freezer was indoors, the ambient temperature was constant. The first week we recorded existing energy consumption. Without disconnecting or stopping any monitoring equipment, on the seventh day we injected CERMA BLUE ICE into the Schrader Valve on the low pressure line and continued monitoring energy consumption for another week.

We used a power logging system to monitor the energy consumption before and after adding the CERMA BLUE ICE treatment. The system consisted of a HOB0 UX120 Pulse Logger, an E50B2 Energy and Power Meter, a 20 AMP Mini Split-core A/C Current Transformer, an A/C Current switch, and HOB0ware Pro Data Logger Software.

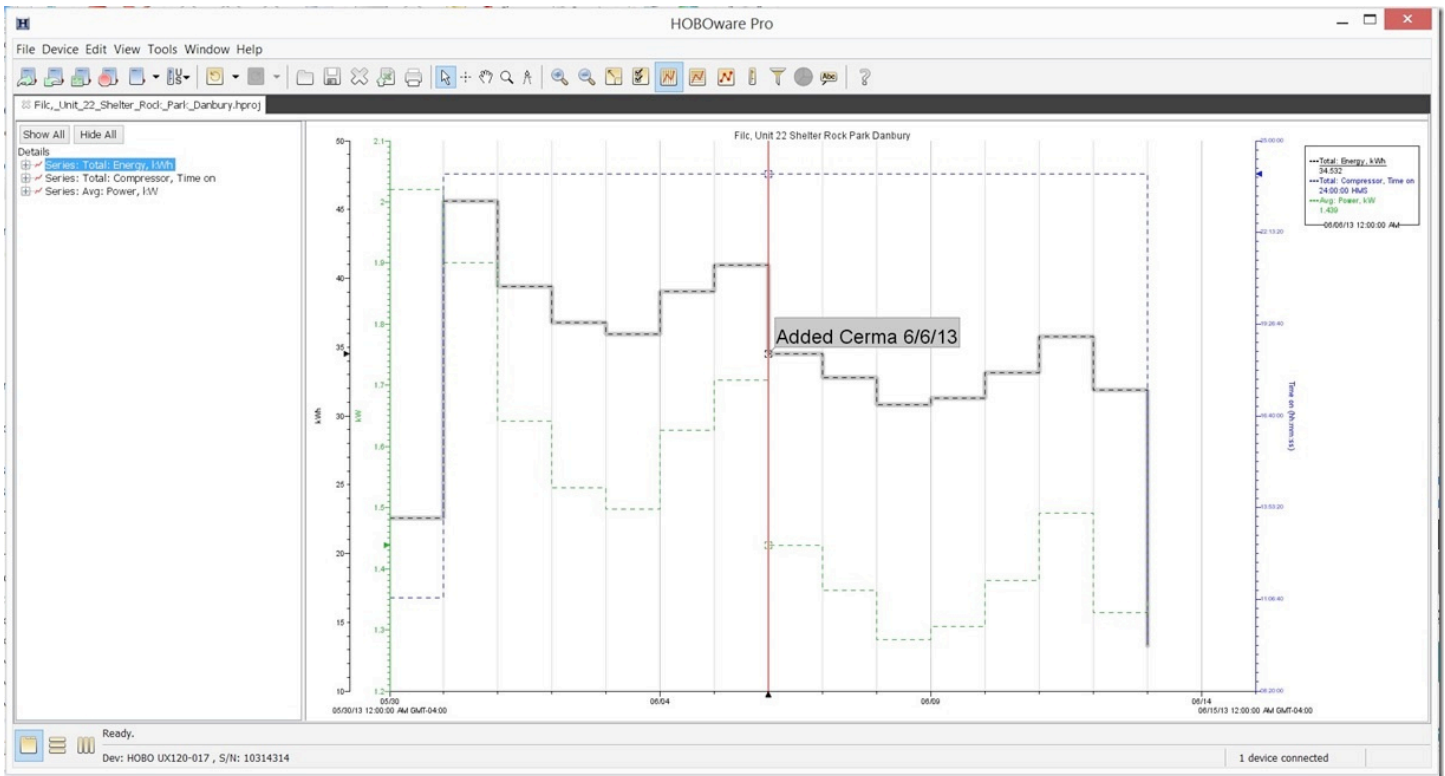


Upon initial retrieval, the data points can be almost overwhelming, resembling a “White Noise” type graph. We are recording Ah, Wh and VARh, which are computed into PF, Volts and Amps averaged across three phases, and data points are calculated and recorded every 30 seconds. This results in over 20,000 data points each week. The graph below represents the massive data stream:



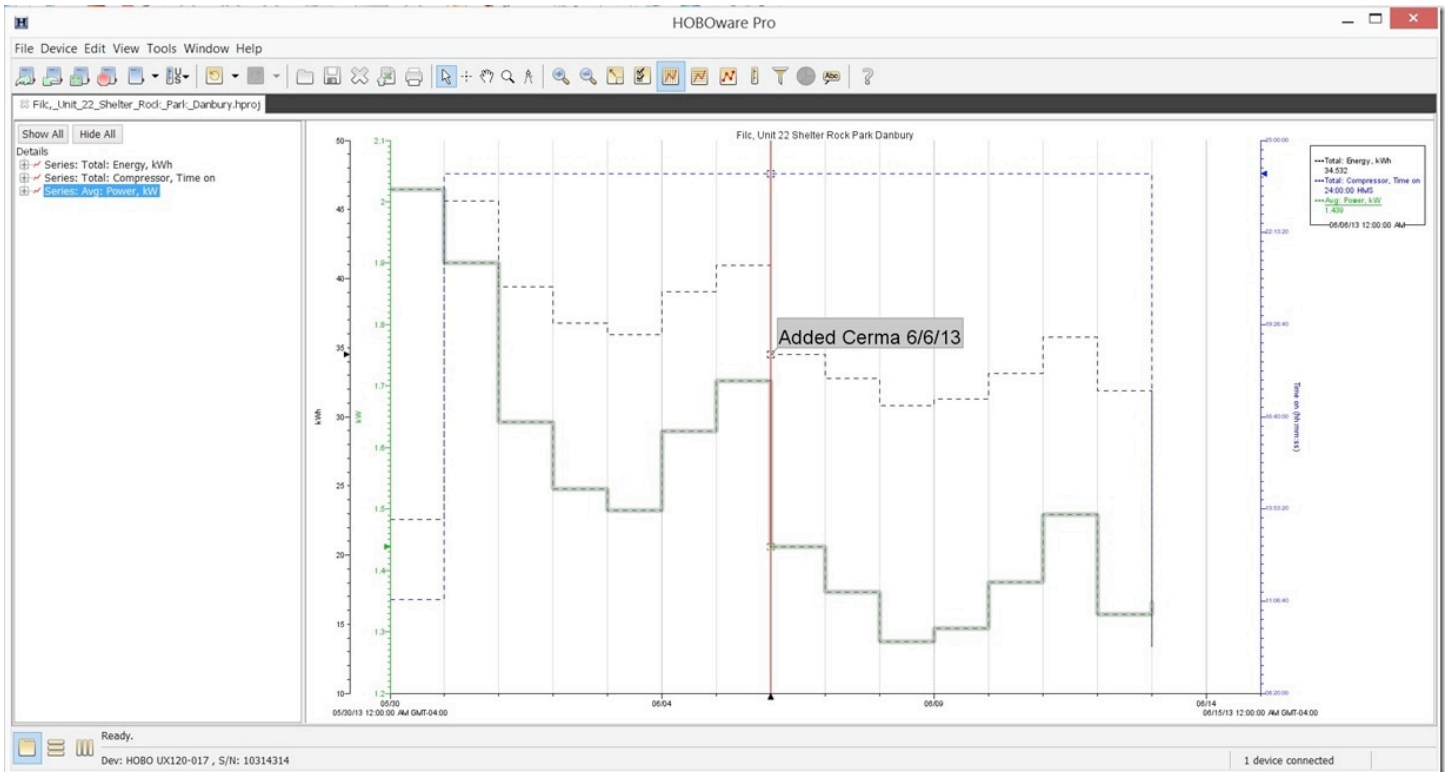
## TOTAL ENERGY per DAY in kWh

In order to understand the results, we apply filters to the data stream. The filters tabulate all data points within a one-day period and present a dashed line representing each day. The graph below starts on Thursday 5/30/13 and ends on Thursday 6/13/13. The vertical red line represents Thursday 6/6/13 when the **CERMA BLUE ICE** was injected into the system. The graph below tabulates Total Energy / day in kWh. It becomes graphically obvious that the second week's Total Energy / day is much lower than the first week's. The first day and last day kWh readings are artificially low because we only recorded a partial day. Those data points will be ignored in our summary results (actual daily numbers are presented in spreadsheet format at the end of this document).



### AVERAGE POWER per DAY in kW

Finally we take a look at Average Power in kW per day. Although we do not include the first and last partial days of data in the summary results, we actually could have, because kW readings are instantaneous instead of cumulative like kWh readings. Again, it is graphically obvious that the 2nd week's readings are much lower than the 1st week's readings both on a day-to-day comparison and on a week-to-week comparison.





**SUMMARY RESULTS**

To summarize our analysis, after disregarding the first and last day partial readings, the following results were present:

- Friday-to-Friday: Readings dropped 28%
- Saturday-to-Saturday: Readings dropped 21%
- Sunday-to-Sunday: Readings dropped 14%
- Monday-to-Monday: Readings dropped 7%
- Tuesday-to-Tuesday: Readings dropped 8%
- Wednesday-to-Wednesday: Readings dropped 22%

The varied percentages were based on how often the walk in freezer doors were opened forcing the compressor to recover the cold lost. The longer the doors were kept shut, the more stable the environment remained and readings dropped less because compressor demand remained low and stable. The more the doors were opened, the more loads were placed on the compressor, at which point it took advantage of the CERMA BLUE ICE and Cerma’s ability to increase efficiency. It is important to note that under all conditions, there were significant savings.

**Week-to-Week, THERE WAS A 17.69% REDUCTION IN ENERGY CONSUMPTION.**

The spreadsheet below represents the actual numbers of the data stream:

F-F or S-S...				F-F or S-S...				F-F or S-S...															
Day vs Day				WK1 vs WK2				Day vs Day				WK1 vs WK2				Day vs Day				WK1 vs WK2			
% reduction				% reduction				% reduction				% reduction				% reduction							
Filc, Unit 22 Shelter Rock Park Danbury																							
#		Date Time	Total: Energy, kWh			Total: Compressor, Time on (sec)									Avg: Power, kW								
1	Thursday	w/o Cerma 5/30/2013	22.558	Disregard partial data				11:10:00							2.02								
2	Friday	w/o Cerma 5/31/2013	45.6			24:00:00									1.9								
3	Saturday	w/o Cerma 6/1/2013	39.384			24:00:00									1.641								
4	Sunday	w/o Cerma 6/2/2013	36.794			24:00:00									1.533								
5	Monday	w/o Cerma 6/3/2013	35.938			24:00:00									1.497								
6	Tuesday	w/o Cerma 6/4/2013	39.018			24:00:00									1.626								
7	Wednesday	w/o Cerma 6/5/2013	40.983			24:00:00									1.708								
8	Thursday	with Cerma 6/6/2013	34.532			24:00:00									1.439								
9	Friday	with Cerma 6/7/2013	32.767	28.14%		24:00:00		0.00%							1.365								
10	Saturday	with Cerma 6/8/2013	30.81	21.77%		24:00:00		0.00%							1.284								
11	Sunday	with Cerma 6/9/2013	31.309	14.91%		24:00:00		0.00%							1.305								
12	Monday	with Cerma 6/10/2013	33.141	7.78%		24:00:00		0.00%							1.381								
13	Tuesday	with Cerma 6/11/2013	35.773	8.32%		24:00:00		0.00%							1.491								
14	Wednesday	with Cerma 6/12/2013	31.871	22.23%		24:00:00		0.00%	0.00%						1.328								
15	Thursday	with Cerma 6/13/2013	43.295	Disregard partial data				9:52:00							4.347								

*Handwritten annotations in red:*

- Day to Day reduction (between rows 6 and 7)
- Day to Day reduction (between rows 7 and 8)
- Although compressor cycled, a light, fan or something ran for 24 hours / day (between rows 7 and 8)
- Total reduction in kWh from week to week (between rows 7 and 8)
- Total reduction in kWh from week to week (between rows 14 and 15)
- 17.69% (circled, between rows 14 and 15)
- 17.68% (circled, between rows 14 and 15)



## ADDITIONAL BENEFITS

**CERMA BLUE ICE** will also greatly extend the life of the compressor, allow it to run much quieter, and dehumidify more efficiently because it eliminates the moisture trapped in the system and cleans the coils from the inside. As the **CERMA BLUE ICE** treatment penetrates the system over the first 90 days, energy savings will INCREASE even further.

**CERMA BLUE ICE** is not an additive, it is a metal treatment that is added to your cooling system's refrigerant. **CERMA BLUE ICE** is revolutionary in that it extends your system's life and boosts efficiency.

### Benefits:

- Reduces electrical costs by up to 50%.
- Improved lubrication and extends the life of the compressor.
- Removes oil fouling (oil deposits that clog your system's tubing preventing heat exchange and reducing efficiency).
- Faster delivery of colder vent air thanks to unhindered heat exchange, reducing the length of time your A/C needs to run in order to maintain temperature.
- Improves efficiency.
- Reduces compressor noise, vibration, and friction wear-and-tear.
- Lowers repair costs.
- Enhances SEER performance.
- Extends equipment life.
- Huge return on investment in the first year.
- Environmentally friendly, non-toxic, contains no hazardous materials.
- Does not void the warranty of any equipment

**CERMA BLUE ICE** is a one-time treatment covered by a 90-Day "Hassle Free" Money Back Guarantee. We can also supply MSDS sheets to show that it will NOT VOID ANY WARRANTIES OR TOLERANCES. You deserve nothing less.

For a detailed video on how **CERMA BLUE ICE** works:

[CERMA BLUE ICE Video](#) – click on link and then click on the CERMA A/C Video