

Welcome to Evco Mechanical Corporation



Celebrating Over 30 Years of Design, Installation & Service Excellence



Evco is a Complete Solution Provider

- Mechanical Systems
- Electrical Systems
- Plumbing, Gas, Sprinkler
- CHP & Emergency Generators
- Controls & Monitoring
- 24/7 Service



Have Your Heard? NJ Boiler Plant Regulations are Changing

If your total steam or hot water boiler capacity is 100 HP or more:



You must employ a licensed boiler operator, and they must sign their logbooks twice daily



A licensed operator must be on-site 24/7, unless you have a BBPVC approved remote monitoring system

Contact us to learn how these, and other regulatory changes will impact your building. Evco provides BBPVC approved remote monitoring systems and mechanical room logbooks.



Evco's Shield™ Service: Defining Facility Services in the 21st Century

Evco's Shield Service combines 24/7 emergency & scheduled mechanical equipment services with modern technology

- Web-based dashboards for energy-use tracking, equipment monitoring and control system data logging
- Equipment inventory & service history tracking, with in-field QR codes and online inventory management
- On-line document storage with equipment inventory for manuals, certifications, plan sets and more



Evco's Shield Service Delivers Results

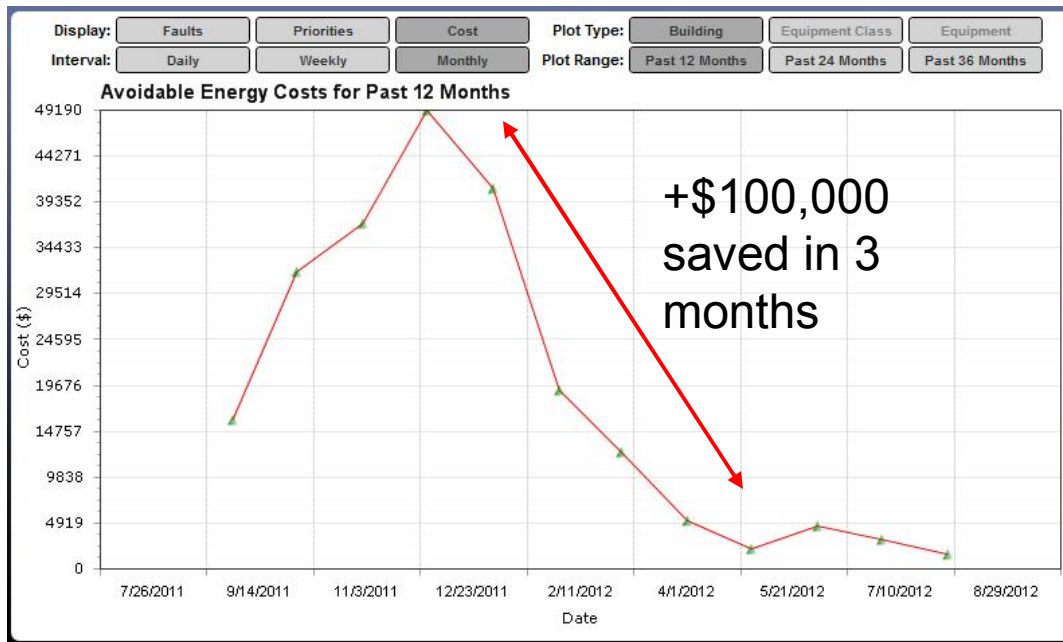
Equipment	Analysis	Start Date	Notes Summary	Cost (\$)	C	E	M
AHU01	AHU coil analys...	1/1/2012	AHU off, valve open. Heating and cooling valve issues. Simultaneous heating and cooling.	18483	0	10	6
AHU03	AHU coil analys...	1/1/2012	Heating and cooling valve issues. Simultaneous heating and cooling. Supply temp off setpoint.	7973	0	9	6

PROBLEM: COOLING OCCURING WHILE COOLING COIL VALVE IS CLOSED

- The cooling coil is performing cooling while the cooling coil valve control signal is off.

Possible Causes:

- Leaking or stuck cooling coil valve.



- Identify opportunities
- Prioritize work
- Focus response
- Validate resolution
- Demonstrate success

Shield Service: Definitive Building Monitoring

Diagnostic Results

identifies energy issues and sorts diagnostic results by cost, energy comfort & maintenance impact

Commissioning Dashboard

presents a high-level view of diagnostic results across building operations





Automated Diagnostic Results

Monitoring results, organized by building & equipment

Estimate energy savings per month

<u>Building</u>	<u>Equipment Class</u>	<u>Equipment</u>	<u>Analysis</u>	<u>Start Date</u>	<u>Notes Summary</u>	<u>Cost (\$)</u>	<u>C</u>	<u>E</u>	<u>M</u>	
BLDG	Air Handler	AHU01	AHU coil analys...	12/1/2011	Heating and cooling valve issues. Simultaneous heating and cooling.	24194	0	10	6	! L
BLDG	Air Handler	AHU03	AHU coil analys...	12/1/2011	Heating and cooling valve issues. Simultaneous heating and cooling. Supply temp off setpoint.	10919	0	10	6	! L
BLDG	Air Handler	AHU07	AHU coil analys...	12/1/2011	Heating and cooling valve issues. Simultaneous heating and cooling.	3163	0	4	6	! L
BLDG	Air Handler	AHU06	AHU coil analys...	12/1/2011	Heating and cooling valve issues. Simultaneous heating and cooling.	1499	0	2	6	! L
BLDG	Terminal Unit	Rm6169	VAV box analysi...	12/1/2011	Room temp off setpoint. Supply flow off setpoint. Leaky reheat valve.	525	10	10	4	! L
BLDG	Group	AH09 VAVsystem	VAV system stat...	12/1/2011	Low damper position. No static pressure reset. Static pressure off setpoint.	290	0	3	6	! L

Prioritize by Comfort, Energy, and Maintenance Value

The Shield Service uses new web-based technology to automatically diagnose & evaluate building deficiencies





Diagnostics Details

Notes: PROBLEM: COOLING OCCURRING WHILE COOLING COIL VALVE IS OFF

- The cooling coil is performing cooling while the cooling coil valve control signal is off.

Possible Causes:

- Leaking or stuck cooling coil valve.



PROBLEM: EXCESS OR SIMULTANEOUS HEATING AND COOLING

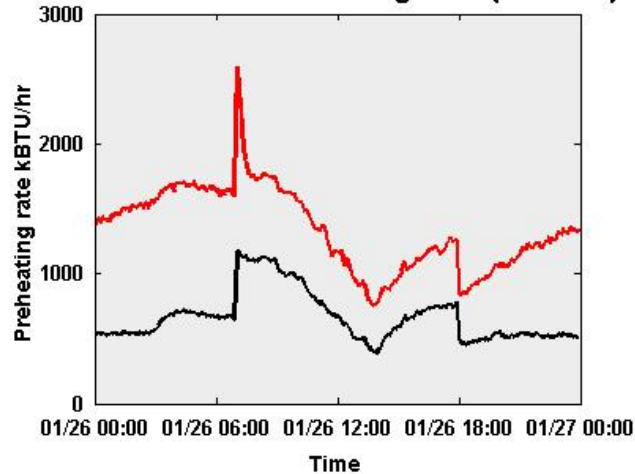
- The preheating coil and/or cooling coil are either providing excess heating or cooling or operating simultaneously.
- This may waste around \$395 and 31920 kBTUs over 1 day(s).

Possible Causes:

- Valve is not seating properly and is leaking.
- Valve is stuck.
- Temperature sensor error or sensor installation error is causing improper control of the valves.

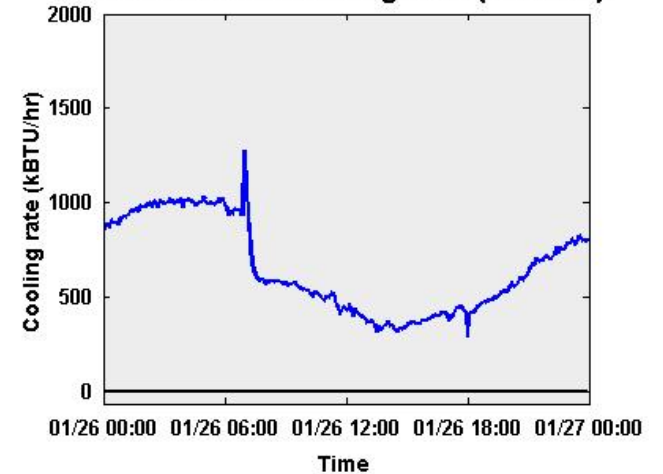
!
Results expressed
in plain text and
informative
graphics

Actual vs Ideal Preheating Rate (AHU On)



— Actual
— Ideal

Actual vs Ideal Cooling Rate (AHU On)



— Actual
— Ideal



Shield Service: Information Management

Documents

Store, tag, and share engineering & service documents online for easy access and viewing with building data



Equipment Profiles

Create 'profile' pages for equipment, and link them to QR codes in the field to make service access to Building Analytics easier and faster





Document Storage & Organization

Documents

The documents area is used to manage all your files. You can add, edit, download, tag, and view files.

File Browser | **File Manager** | File Tagger

The file manager allows you to add, edit, replace, and remove files.

Search Criteria

Building:

Equipment:

File Class:

File Type:

+ Add a file

Name	Extension	Size(MB)	File Type	Date Modified	
AH1-3-4-6-7_Sequence	.txt	8481	Equipment control sequence	10/18/2011 8:52:46 PM	
AHU1346UnitDetails	.PDF	396659	Equipment drawings	7/22/2011 2:20:37 PM	

Upload manuals, certifications, logs, and other important records and tag them to specific equipment.





Equipment Profiles

Equipment Profile: Chiller1

Image not available

Equipment **Chiller1** of Type **Chiller_Centrifugal** is located in **Chiller Mechanical Room** in Building **Buildin**

Description: 400 Ton Centrifugal Chiller with VFD. Chiller 1 was rebuilt by Trane in 2011.

Details [hide details](#)

Equipment Name: Chiller1
Building Name: Building
Manufacturer Name: Trane
Model Name: CV IF 10
Serial Number: L03K07248
Equipment Location: Chiller Mechanical Room
Equipment Description: 400 Ton Centrifugal Chiller with VFD. Chiller 1 was rebuilt by Trane in 2011.
Equipment Class Name: Chiller
Equipment Type Name: Chiller_Centrifugal

Additional Details [show additional details](#)

Equipment Variables [hide variables](#)

AmpsOnThreshold:
Value: 0
Description: Amperage threshold at which an equipment can be considered "on"

AnnualCostThreshold:
Value: 10000
Description: The annual cost for which a fault has the highest priority

ChillerEfficiencyPercentThreshold:
Value: 5
Description: Percent of an equipment's design efficiency under which an analysis will acknowledge a problem.

ChillerHeatBalancePercentThreshold:
Value: 0.05
Description: Percent deviation of a chiller's heat balance from ideal, over which an analysis will acknowledge a problem.

Profile Selection

*Building: Building
*Equip. Class: Chiller
*Equipment: Chiller1

Documents [go](#)

Reports [go](#)

External Links

No external links provided.

← Documents
← Data
← Links

CLOCKWORKS-CONNECT



Chiller1
Building

QR Codes

Easily access information and documents online while in the field, and link to other systems



Please Contact us for more information

● On the web: www.evcomechanical.com

● On the phone: 973-324-7000

● Come visit us:

44 Standish Ave.
West Orange, NJ
07052

