

# BUILDING *performance* LAB

## Reheats While Cooling

### Measure Description

Typically, simultaneous heating and cooling is not advisable, as it uses extra energy. However, there are some cases where this may be needed. This measure is an example of this case, though it is still advisable to minimize it.

This measure is best used for a AHU/RTU with multiple zones with reheats. It monitors the MAT, SAT and Zone Temps to check that the SAT is not too low that the reheats are all on. It is important to put the zone temperature loggers closest to the discharge / terminal opening.

### Kit Contents

- (3+) HOB0® wireless temp/RH loggers: MX1101 – for MAT, SAT, Zone Temps
- Phone or tablet with Bluetooth (e.g. iPad)
- HOB0Connect® mobile app

### HOB0® wireless temp/RH logger

1. Configure: [https://youtu.be/sbUBDB2eg\\_U](https://youtu.be/sbUBDB2eg_U)
  - a. Best practice: Configure with 15-minute time intervals and “Wrap” recording
2. Install: <https://youtu.be/R9MDkohMD-E>
3. Extract data: <https://youtu.be/-vxr8pngulQ>
4. Use the HOB0Connect® mobile app to visualize data



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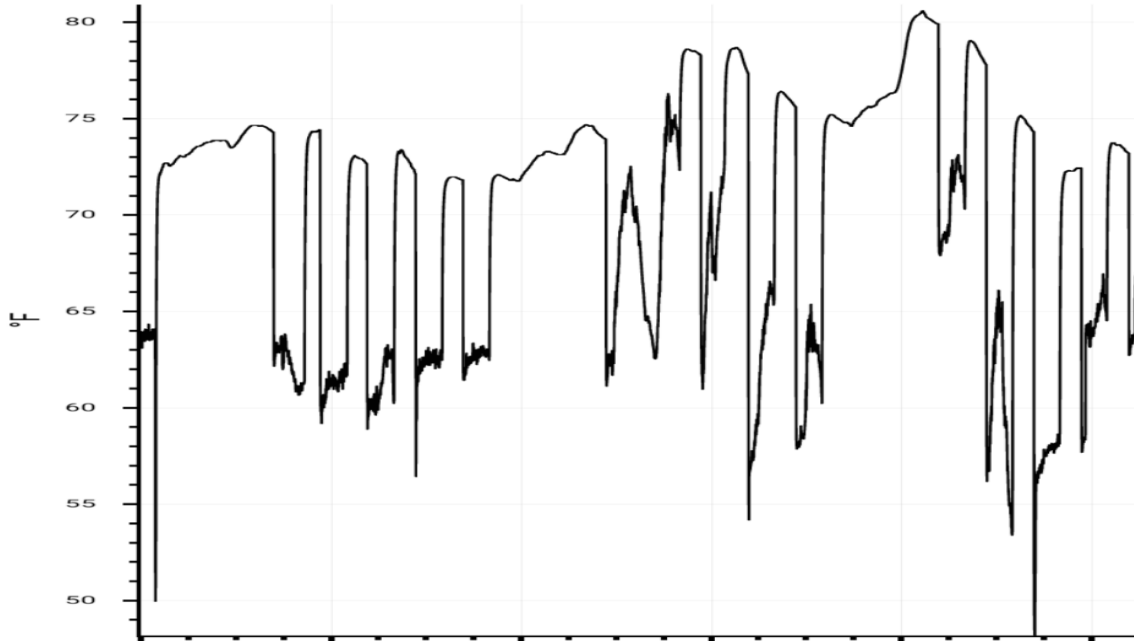
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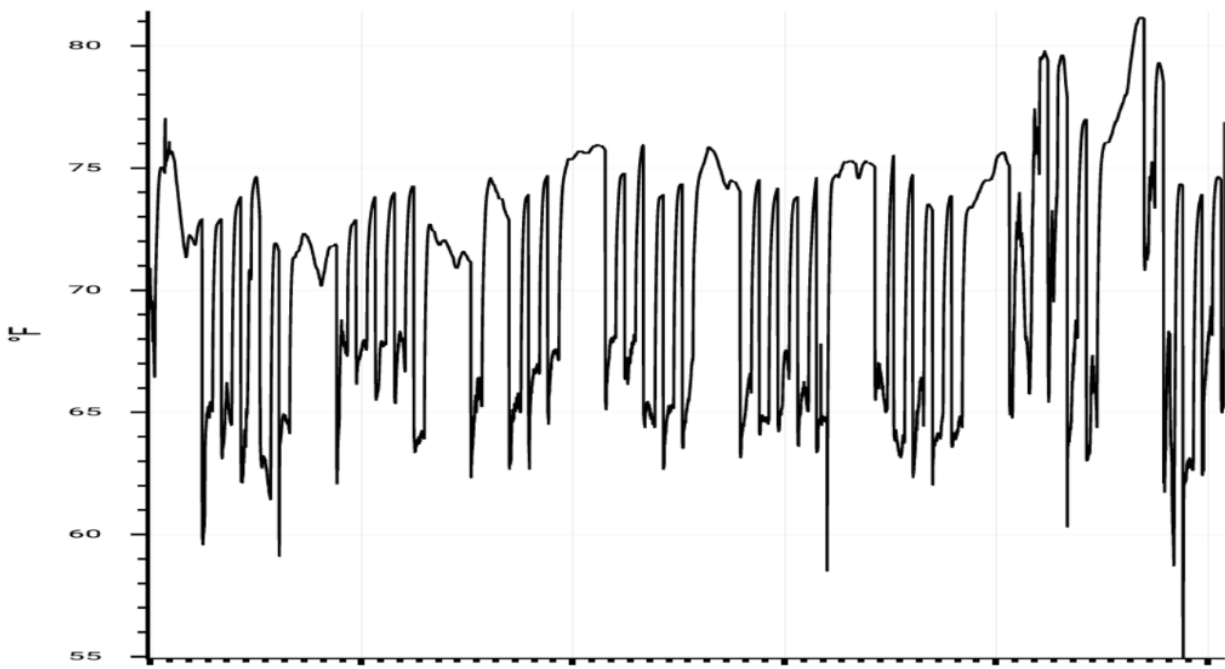
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## Trend Chart Example

MAT



SAT



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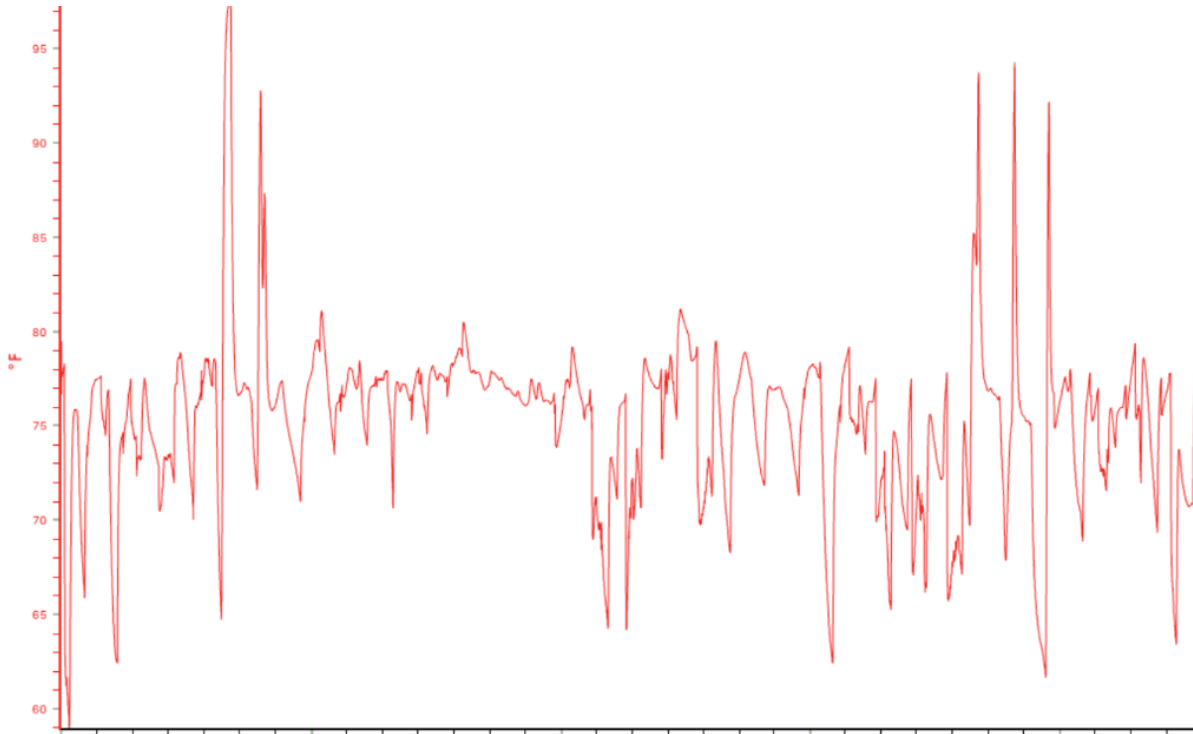
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## Zone Temp



## Analysis

Looking at the trend chart above, use the following Q&A to analyze the data for opportunities for energy savings.

1. Are more than half of the reheats usually active during cooling (SAT < MAT)?
  - a. If NO, then this is a good operation.
  - b. If YES, your SAT may be too low (all zones are satisfied and VAVs are all under 100%).
    - i. If so, in cooling mode, increase your SAT–SP incrementally, making sure that all of your ZT–SP are still being met when load is high. (1425.22)
    - ii. Ideally, in cooling mode, when serving 10 or more zones, implement an SAT reset based on zone conditions. (1425.13) For example, incrementally raise SAT–SP until two zones (adjustable) are not meeting ZT-SP, then reduce SAT-SP until zones are satisfied, then incrementally increase SAT-SP again, repeating the process. This will minimize the need for reheats.



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