

» **ISSUE REPORTED**

Relative humidity (RH) remains high year-round and several units experienced various moisture-related issues ranging from mild to severe.

» **TYPE / CONSTRUCTION**

4BR Student housing, garden-style apartments

» **LOCATION**

Southern Coastal Texas

» **NOTES**

Student housing apartments often present challenges with high internal moisture generation. This particular property is also located beside a large body of water, adding to high concentrations of water vapor year-round.

IN-WALL DEHUMIDIFIER SYSTEM SAVES UP TO \$250,000 IN REPLACEMENT WINDOW COSTS

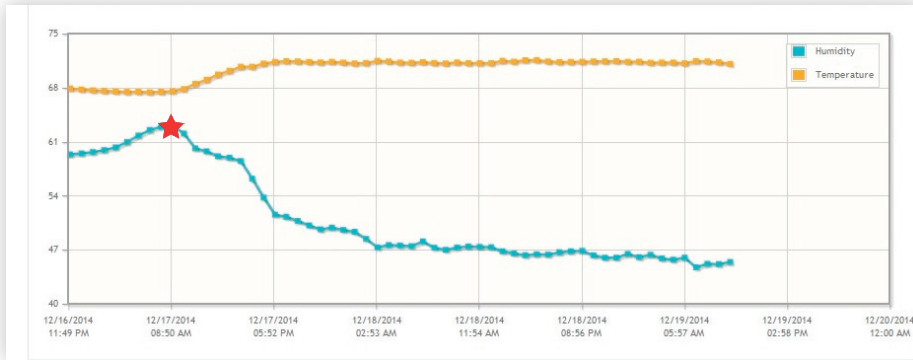
BACKGROUND

Two apartment units in the building that had moisture issues were selected for installation of trial dehumidification systems and mold prevention assessments to measure effectiveness of the IW-25. The intent of this study is to determine whether the IW-25 could sufficiently manage RH levels without the benefit of replacement windows.

PROCESS

The first IW-25 was installed in unit 619; a 4BR unit that had been updated with various enhancements including replacement windows. Installation of the IW-25 successfully brought RH down to acceptable levels within two hours. The second IW-25 was installed in unit 419; a 4BR unit without replacement windows. Building consultants in Houston, TX performed an inspection and completed a scope of work that included a number of envelope-related enhancements as well as the installation of IW-25 in-wall dehumidifiers.

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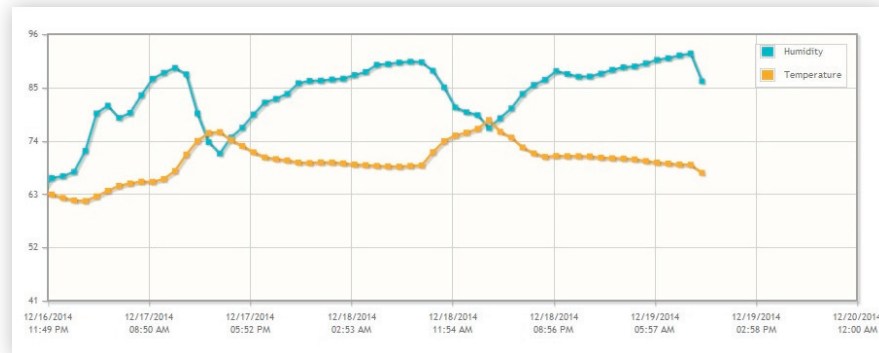


MONITORING UNIT 419

- Began Tuesday afternoon, December 16, 2014, using an iMonnit data logger.
- RH inside the apartment prior to installation remained at or above 60%.
- IW-25 was installed on Wednesday, December 17 at 8:50am.
- At 3:30pm on Wednesday, December 17, the IW-25 humidistat was set to 45% RH.
- Less than 12 hours later, RH in the unit had been reduced to 47%.
- Several hours later, RH in the unit was further reduced to 45%.

OUTDOOR MONITORING

Ambient humidity remained high at, or in excess of, 90% for a large duration of the sample period.



CONCLUSION

The results demonstrate the ability of the IW-25 to correct RH issues of 4BR student housing units both with and without replacement windows. Our client now has the option to postpone or eliminate window replacements on several hundred units, potentially realizing a savings of more than \$250,000 while still resolving issues related to excessive moisture and humidity. Our client's residents are also more comfortable as residents are typically comfortable at higher sensible temperatures when humidity is reduced, also known as apparent temperature effect.

For more information regarding the award-winning IW-25 in-wall dehumidifier or to request our assistance with measurement and monitoring of your multifamily housing property at no charge, contact us at (910) 579-3348 or email info@innovatedehu.com.