

# Thermo-Composite Casing Hygienius Construction

Featuring Annexair's Thermo-Composite casing, the Hygienius construction represents the best option for healthcare centers, educational institutions, grow-ops or greenhouses, natatoriums and any other buildings requiring corrosion resistance, high quality and hygienic HVAC requirements.

This revolutionary concept offers the best of both worlds: unsurpassed quality and economical pricing similar to conventional steel units.

## Thermo Composite Panel

- Double-wall polymer core with foam insulation, aluminum skin on both sides, and PVC trim
- 2-in thick with R-14 insulation factor
- Certified foam made of special polystyrene with 30% recycled content
- Exterior & interior finished with a PVDF 3000 hrs salt-spray resistant coating
- Monocoque construction to avoid internal mold or mildew

## New Framing

- Thermal-break extrusion profile with nylon inserts - eliminates all risks of condensation
- All junctions Welded for superior casing rigidity
- True thermal-break frame & panel assembly - "No Sweat Condensation"

## Features

- ETL listed per UL 1995
- R-14 Insulation with GREENGUARD® certified foam
- Superior acoustical properties versus steel casings
- Wipe down type construction
- Attractive contemporary look



Review warranty details for Thermo-Composite casings

## Advantages

- Longer lifespan
- Up to 40% lighter than steel unit casings
- Superior corrosion resistance
- Extremely rigid construction, casing deflection rating exceeding Class 1 requirements
- Fire Resistant panels, UL 723 / Class A, per ASTM E84
- Chemical resistant against all urban pollutants
- Great for low dew point applications

## Specifications\*

R Value	ASTM C518	R-14, 2" thick
Flame Spread/ Smoke Development	UL 723 / ASTM E84	Class A or 1
Fire Resistance	UL 94	5VA
Salt Spray Resistance	ASTM D117-94	3000 hrs no blister
Acid Resistance	ASTM D1308-87	Passed
Panel Deflection	SMACNA	L/1150 at 10 in wg
Casing leakage Rate	ASHRAE 111 Class 6	<1% at 8 in wg
Casing leakage Rate**	ASHRAE 111 Class 2	<0.5% at 10 in wg

\*Results based on third party testing

\*\* Available upon request



*"Changing the way we see  
air handling units"*

# Thermo-Composite Casing Ideal Applications

## Healthcare / Pharmaceutical



## Educational Institutions



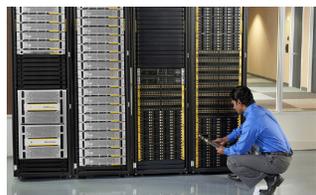
## Natatoriums / Coastal Environments



## Grow-Ops



## Data Center



## History behind the Thermo-Composite success!

Annexair was proud to launch the first Thermo-Composite unit back in 2010. Since then, Annexair has shipped more than one thousand units across North America and abroad.

The need for lighter units was a very important challenge! Steel prices have fluctuated drastically over the last 15 years, and the cost of structural steel related to roof installed HVAC equipment has also burdened design engineers for years.

Thermo-composite brings a much-needed reduction of weight to HVAC equipment, in addition, it offers superior corrosion resistance with an unmatched warranty. In fact, as the airline and automotive industry quickly learned, composite materials are not only lighter than conventional steel, they are proving to be much stronger and far more durable.



LEED (Leadership in Energy and Environmental Design) is an ecology-oriented building certification program run under the U.S. Green Building Council (USGBC). LEED concentrates its efforts on improving performance across key areas of environmental and human health.

When Annexair was in the initial years of R & D for the Thermo-Composite panel, they focused heavily on meeting LEED core attributes. The primary goal during the development was to make sure they used material that was made from recycled content that had minimal to no environmental impact. Few years later, Annexair did not only meet the LEED expectation, they were awarded the project for the USGBC head Quarter building in Washington DC!

Annexair was successful in its research and was very surprised how quickly the engineering community jumped on the Thermo-Composite bandwagon.

In the early years of production, the demand was higher than what they could supply. This forced Annexair to invest heavily in patented machinery to speed up production process and train their highly skilled technicians on new process methods while maintaining the high-quality standards.

Production capacity is now at an all-time high and they continue to Innovate the NEXT GENERATION of air handling units.

# Thermo-Composite Casing Quality Innovations

“ Our commitment to quality and innovation is more than just a statement, it is the central focus and culture of our organization ”

François Lemieux  
President

Annexair Innovation doesn't stop at Thermo-Composite. Visit [Annexair.com](http://Annexair.com) to see other advanced technologies that can go into a Thermo-Composite casing such as there highly efficient air-to-air energy recovery devices and V3 Variable Speed technology!

These technologies go through stringent validation testing in a unique State of the Art climate chamber. The climate chamber is designed to test peak load conditions, both air and power side to guarantee performance and reliability.

This commitment and unparalleled dedication by Annexairs' engineering is the main reason why they have advanced and become a leader in the HVAC community.



Climate Chamber



Energy Recovery Device



Enthalpy / Sensible Plate

