



Standard & Hi-Perm  
Hybrid Insulation System

## HY-Fi® Hybrid Insulation System

- High System R-Values at Lower Cost
- Less Waste - No Shaving Foam
- Building Code Compliant
- Improved Productivity
- LEED and other Green Building Credits

Fi-Foil's innovative HY-Fi hybrid insulation system enhances the thermal performance of any air space in the building envelope. It is compatible with all types of insulation including spray foam and fiberglass batts.





A multi-layer reflective insulation intended for use with mass insulation for high performance in wall cavities.

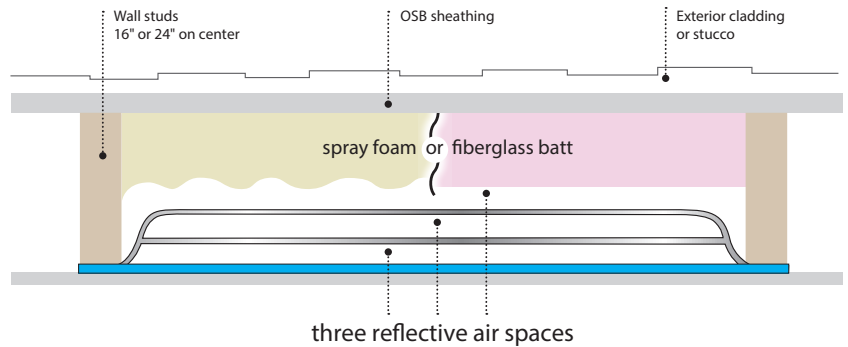
## What is a Hybrid Insulation System?

Hybrid refers to an insulation system that combines the best properties of different insulating products or technologies to create a superior insulating system. Mass insulation in conjunction with reflective insulation addresses the most dominant forms of heat transfer.

## How Does it Work?

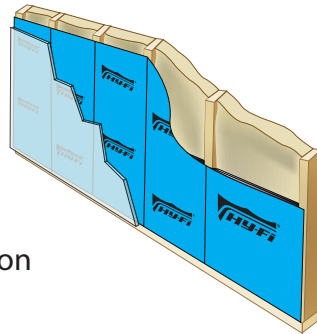
HY-Fi enhances the performance of the building envelope by maximizing open air spaces in the wall cavity. HY-Fi insulation addresses the dominant form of heat transfer, radiation, with layers of high reflectance and low emittance materials. In addition to reducing heat flow by radiation, HY-Fi's multiple layers also reduce convective heat transfer.

Air based mass insulation products ("open cell" spray foam, fiberglass batts, cellulose, etc.) address heat transfer in the building envelope by reducing convection. Gas-based ("closed cell") spray foam products can also reduce conduction. All of these types of products however have high emittance surfaces which do not reduce radiant heat transfer. Spray foam and high density batts also have a high cost per R-value. Combining HY-Fi's superior radiation protection with traditional insulation in a hybrid system creates superior resistance to heat transfer and also reduces material costs.



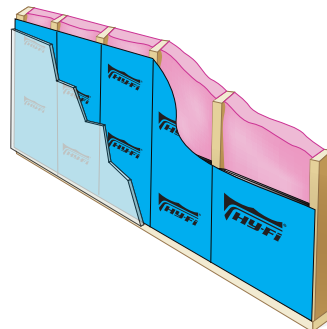
## HY-Fi vs. other Hybrid Systems

Mass insulation in conjunction with reflective insulation addresses the most dominant forms of heat transfer, convection and radiation.



### With Open and Closed Cell Foam

HY-Fi<sup>®</sup> works exceptionally well with all types of spray foam insulation and reduces the amount of spray foam insulation required to achieve the desired R-value. For example, HY-Fi can be combined with 2" of medium density spray foam to achieve R-21 in 2" x 4" wall cavities, significantly reducing framing costs. HY-Fi can also be combined with 4" of 0.5 lb. foam in a 2" x 6" wall cavity to achieve R-21.



### With Fiberglass, and other Insulation

HY-Fi<sup>®</sup> is highly complementary to fiberglass batt insulation due to its unique thermal and radiant insulation properties. For example, Instead of high density fiberglass batts in 2" x 6" walls, HY-Fi can be combined with standard un-faced fiberglass R-13 batts to achieve R-21. In addition, the HY-Fi fiberglass hybrid system gives installers the option of a vapor retarder.

For additional system R-value examples and calculations, visit our website.