THE R-VALUE CONTROVERSY

Injected foam R-values differ greatly in the market. Here are the differences. Before 1997 the State of Wisconsin allow parallel path calculations which did not take into account the heat loss from cross webs in masonry, with in turn skewed the R-values greatly. After 1997 the State of Wisconsin changed from Parallel path calculations to Series parallel with accounted for the cross web loss. A 1” insert block using parallel path was calculated at over a R-10, using series parallel it comes in at an R-2.38. A foamed block using Parallel path will come in at an R-16 which a lot of other States will accept. Not Wisconsin a standard foamed block at 140 density is at a R–5.08. The Guarded hot box tests confirm the Series parallel calculations are accurate.

Another area that is skewed is some manufactures give you a R-value based on a density of block which does not exist. A standard block in Wisconsin is 140 lb density, a medium weight 115 lb density, and a 105 lb true light weight. Some manufactures give you a density of 80 or 60 lb density which does not exist. This give a inaccurate R-value.

The following calculations are based on Series parallel calculations this will give you the R-values for all kinds of different block. These calculations can be check by the State of Wisconsin which they will accept.