

# Frequently Asked Questions

## NRG Block Questions and Answers

### How are the block made?

We took great pains to minimize the differences in manufacturing NRG Block. The mold box and parts supplied as part of the license agreement retrofit into the manufacturer's machine (Besser) and the process is virtually the same. Most facades available from a licensed manufacturer are available in the NRG design.

### What is the R-Value of NRG Block?

For a normal weight block (125 lbs./ft<sup>3</sup>), the R-Value is 15, 19 and 24 respectively, for 10" and 12" blocks.

### How are R-Values calculated?

Values are calculated using the equivalent thickness method as recommended by the National Concrete Masonry Association (NCMA).

### Is this the same as the Parallel Method?

No, the Parallel Method typically results in higher R-Values, but is not considered accurate to be accepted by the building industry.

### How does the R-Value of NRG Block compare to common block?

A NRG Block is six to ten times higher in R-Value than a common block, which ranges from 1.5 to 2.5 depending upon the aggregate used.

### How does the R-Value compare to other insulated block?

Other block using inserts or hollow core block with poured insulation range between 5 and 6 for an 8" block.

### Is there any toxic material in the inserts?

No. It is non-toxic and contains no formaldehyde. Expanded polystyrene is the same substance used in Styrofoam coffee cups.

### Are any CFCs or other environmentally unsafe processes used in making the inserts?

Chlorofluorocarbons are not used in its production.

### What type of energy dollar savings can I realize over a year?

Niagara Mohawk, an electric company in upstate New York, estimated that a 10,000 sq. ft. commercial building would save \$500 annually. National Fuel Gas, a utility company in the same area, estimated an annual savings of \$300 for gas heat in a 6,700 sq. ft. office/warehouse complex.

### What is the percentage of recycled material in your inserts?

We are currently using 15% to 30% but would like to use more, up to 60%. Unfortunately, it is not readily available.

### Is there any toxic material in the inserts?

No. It is non-toxic and contains no formaldehyde. Expanded polystyrene is the same substance used in Styrofoam coffee cups.

### Can this block be used in both below-grade and above-grade applications?

Yes, below-grade applications often must use both horizontal and vertical reinforcement depending on the size of the block used and the soil conditions and code requirements in a particular area. NRG Block can accommodate most of these situations.

### Can this block be used in a firewall?

Yes, 10" NRG walls are rated at four (4) hours and 12" NRG walls are rated at four (4) hours.

### Does the block (the concrete aggregate) contain any recycled components?

Not necessarily, however, several manufacturers use up to 50% recycled aggregates and the federal government requires 15% fly ash in blocks used in federally funded projects.

### How do these R-Values relate to building codes in both residential and commercial projects?

Most residential building codes require a minimum of R-11 in the basement and R-19 in sidewalls. Most commercial codes address the energy efficiency of the building as a whole. This is known as the envelope. NRG Block's higher R-Value allows for trade offs, such as more windows or skylights.

### What is your insert made of?

Expanded polystyrene (EPS).

### Are the test results for the block available?

Yes, test results will be sent to licensed architects or engineers.

### How much does this block cost as compared to regular block?

Compared to un-insulated common blocks, NRG Block generally costs \$2.50 to \$2.75 more per block. However, on a Cost/Sq. Ft./R-Value, NRG Block always costs less.

### How does this block compare in cost with other insulated blocks on the market?

Most insulated blocks add \$.70 to \$1.50 to the cost of a common un-insulated block.



**Are there any cost comparisons (of various wall systems) available?**  
A Cost Comparison Study is available to architectural firms upon request.

**Compared to non-masonry, where can I pick up savings in using this type of wall system?**

NRG Block, like all masonry material, has high Thermal Mass and Heat Capacity, as well as Thermal Lag – all of which allow specification of smaller and less expensive heating and cooling units. Annual fire insurance premiums are also lower by as much as 60% with masonry construction.

**Does it only come in common block or are architectural styles available?**

NRG Block can be made in all types of architectural finishes, including split face, split rib, single and multi-scored, glazed, ground face and MESASTONE® finishes.

**Are there provisions for horizontal and vertical reinforcing?**

Yes, the top of the insert has slots to accommodate truss-style Dur-O-Wal. Vertical Reinforcing can occur with the 10" and 12" units as their masonry module can accept grouting.

**Is this a structural block?**

Yes, tests show that NRG Block meet or exceed the minimum standards set by ASTM C-90.

**What is the NRG Block wall system STC sound rating?**

The 8" block has a Sound Transmission Class (STC) of 51 and the 12" block has a STC of 55. We estimate that the 10" block has a STC of 53 based on direct interpolation. These results are better than Soundblox®, the leading sound absorbing masonry design sold in today's market. The NRG Block is the only block that has a solid facade, yet still will provide a superior noise barrier to any other block on the market.

**What size NRG Blocks are available?**

Currently, nominal 10" and 12" widths by 16" lengths and 8" height.

**Where is the block made?**

NRG Licensed block manufacturers produce and service a regional area. Licensees distribute the blocks through normal channels, such as dealers and building and masonry contractors. Northfield Block is the licensed manufacturer of NRG Block throughout the Midwest.

**Does NRG Block lay-up slower than ordinary block?**

The up-charge would indicate that the masons expect up to a 10% fall-off in production. However, we have observed that such a fall-off occurs during the learning curve phase, but approaches zero as they continue to lay-up the block.

**How do you handle this block?**

Handling is a matter of preference. After a short learning curve (3-4 hours), masons are comfortable handling the block. The thumbholes should be used and the laborer should always present the block with the same orientation to facilitate bundling.

**What do you do for specialty block such as corners and halves?**

NRG Block are made to standard dimensions and, therefore, can be mixed for easy coursing with standard hollow core block. NRG Reinforcing Units can be made with one end flush for use as corner or sash block.

**How do you handle electrical outlet requirements?**

Much the same way we handle vertical reinforcing. Additionally, surface-mount and baseboard electrical chases can be used where applicable. (Ask your sales representative to provide you with drawing details).

**Can NRG block be used as a backup block for brick veneer?**

Yes, a face brick veneer with an air cavity of 1" to 4" will increase the R-Value to 21.4 for a 10" NRG wall.

**Can NRG Block be used for single wythe applications?**

Yes, NRG's superior design allows for a cost-effective way to build with single wythe construction, yet double wythe benefits.

**Will the mason charge a premium to install NRG Block?**

Our experience is that up-charges range from 0 to 10%. We believe this to be reasonable and insignificant, as it pertains to the cost-effectiveness of a NRG wall.

