

Staycell ONE STEP™ 255 Foam Insulation Insulated Concrete Block Walls

R-Values	Non-insulated Concrete Block Walls	Concrete Block Walls with 1" thick Staycell ONE STEP™ 255
Outside air film	.2	.2
8" concrete block	1.0	1.0
ONE STEP™ insulation	0	5.5
Inside air film	.7	.7
Total	1.9 R	7.4 R
U factor = 1/R:	.526	.135

Annual Heating Loads

	Non-insulated Concrete Block Walls	Concrete Block Walls with 1" thick Staycell ONE STEP™ 255
Formula	$\frac{.526 \times 24 \times 6201^*}{.75} = 104,375$ BTUs/square foot	$\frac{.135 \times 24 \times 6201^*}{.75} = 26,788$ BTU's square foot
For 10,000 square feet of wall	1,043,750,000 BTUs	267,880,000 BTUs
Annual cost of natural gas**	\$10,438	\$2,679
\$7,759 (74%) annual savings		
<p>These calculations do not consider the reduction in air infiltration provided by the seamless Staycell ONE STEP™ 255 that can increase natural gas savings up to an additional 30%.</p>		

Payback Period

10,000 square feet of wall insulation @ \$1.50 per square foot = \$15,000 investment
\$7,564 annual gas savings = < 2 year payback period

*Formula: Annual heating load in BTUs per square foot of wall =

$\frac{\text{Heat loss (U Factor)} \times 24 \text{ hours} \times \text{Heating degree days (Cleveland, OH has 6,201 Heating Degree Days)}}{.75 \text{ (natural gas furnace efficiency)}}$

**Natural gas cost @ \$10.00 per 1,000 cubic feet (1,000,000 BTUs)

Disclaimer: This information is for illustration purposes only. Contact PSI for more information.

Staycell ONE STEP™ 255 Foam Insulation Insulated Concrete Block Walls

R-Values	Non-insulated Concrete Block Walls	Concrete Block Walls with 2" thick Staycell ONE STEP™ 255
Outside air film	.2	.2
8" concrete block	1.0	1.0
ONE STEP™ insulation	0	11
Inside air film	.7	.7
Total	1.9 R	12.9 R
U factor = 1/R:	.526	.0775

Annual Heating Loads

	Non-insulated Concrete Block Walls	Concrete Block Walls with 2" thick Staycell ONE STEP™ 255
Formula	$\frac{.526 \times 24 \times 6201^*}{.75} = 104,375$ BTUs/square foot	$\frac{.0775 \times 24 \times 6201^*}{.75} = 15,379$ BTU's square foot
For 10,000 square feet of wall	1,043,750,000 BTUs	153,784,800 BTUs
Annual cost of natural gas**	\$10,438	\$1,538
\$8,900 (85%) annual savings		
<p>These calculations do not consider the reduction in air infiltration provided by the seamless Staycell ONE STEP™ 255 that can increase natural gas savings up to an additional 30%.</p>		

Payback Period

10,000 square feet of wall insulation @ \$2.75 per square foot = \$27,500 investment
\$8,900 annual gas savings = 3 year payback period

*Formula: Annual heating load in BTUs per square foot of wall =

$\frac{\text{Heat loss (U Factor)} \times 24 \text{ hours} \times \text{Heating degree days (Cleveland, OH has 6,201 Heating Degree Days)}}{.75 \text{ (natural gas furnace efficiency)}}$

**Natural gas cost @ \$10.00 per 1,000 cubic feet (1,000,000 BTUs)

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