

# BUILDING LEAKAGE TEST

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Date of Test: 12-6-2011  
Test File: Lemkecraighton

Technician: Donald Jahnke

Customer: Dean Lemke  
976 Finch Ave  
Hampton, IA 55031  
Phone

Building Address: 976 Finch Ave  
Hampton, IA 55031

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## Test Results

- Airflow at 50 Pascals:  
(50 Pa = 0.2 w.c.)  
546 CFM ( +/- 0.2 %)  
0.75 ACH  
0.12 CFM per ft<sup>2</sup> floor area
  - Leakage Areas:  
51.3 in<sup>2</sup> ( +/- 2.0 %) Canadian EqLA @ 10 Pa  
25.9 in<sup>2</sup> ( +/- 3.1 %) LBL ELA @ 4 Pa
  - Minneapolis Leakage Ratio: 0.07 CFM50 per ft<sup>2</sup> surface area
  - Building Leakage Curve:  
Flow Coefficient (C) = 34.2 ( +/- 4.8 %)  
Exponent (n) = 0.708 ( +/- 0.012 )  
Correlation Coefficient = 0.99927
  - Test Settings:  
Test Standard: = CUSTOM  
Test Mode: = Depressurization  
Equipment = Model 3 Minneapolis Blower Door
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## Infiltration Estimates

- Estimated Average Annual Infiltration Rate:  
35.7 CFM  
0.05 ACH  
8.9 CFM per person  
(using bedrooms + 1)
  - Estimated Design Infiltration Rate:  
Winter: 51.6 CFM  
0.07 ACH  
Summer: 23.5 CFM  
0.03 ACH
  - Recommended Whole Building Mechanical  
Ventilation Rate: (based on ASHRAE 62.2) 75.7 CFM
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## Cost Estimates

- Estimated Cost of Air Leakage for Heating: \$ 105 per year heating
- Estimated Cost of Air Leakage for Cooling: \$ 1 per year cooling

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### Building Conditions

Inside Temperature:	70 deg F	Heating Fuel:	Propane
Outside Temperature:	15 deg F	Heating Fuel Cost:	\$1.85/gallon
# of Stories	2.0	Heating Efficiency:	92.00
		Heating Degree Days:	7910
Wind Shield:	M	Cooling Fuel Cost:	\$0.080/kwh
# of Occupants	3.0	Cooling SEER:	16.0
		Cooling Degree Days:	267
# of Bedrooms:	3.0		
Volume:	43881 ft3	Ventilation Weather Factor:	1.01
Surface Area:	8158 ft2	Energy Climate Factor:	17.0
Floor Area:	4570 ft2		
Design Winter Wind Speed:	13.0 mph	Design Winter Temp Diff:	81 deg F
Design Summer Wind Speed:	7.0 mph	Design Summer Temp Diff:	13 deg F

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### Comments

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### Data Points:

Nominal Building Pressure (Pa)	Fan Pressure (Pa)	Nominal Flow	Temperature Adjusted Flow	% Error	Fan Configuration	Baseline Std Dev (Pa)
-2.8	n/a					+/- 0.11
-37.9	59.6	460	435	0.9	Ring B	
-43.7	70.8	501	474	-1.2	Ring B	
-47.7	82.9	542	513	0.2	Ring B	
-53.0	97.2	586	555	0.2	Ring B	
-58.8	112.1	629	595	-0.3	Ring B	
-62.6	124.1	661	626	0.1	Ring B	
-67.3	138.4	698	661	0.1	Ring B	+/- 0.10
-1.3	n/a					