

## BLOWER DOOR TEST (Sample Report)



### HOUSE DESCRIPTION

Home Address	1234567 Main St., Winnipeg, MB R1R 101
Building Type	House
Building Type	House: Single Detached
Storeys	One Storey
Front orientation	South
Year Built	2011
Ownership	Dwelling Private
Property Tax Roll #	1234567890

### CLIENT INFORMATION

Client	John and Jane Doe
Telephone	204-987-6543
Email Address	johnjane@email.com

Field Energy Advisor	Norman A. Garcia
NRCan Energy Advisor #	5916
Service Organization	CoEfficient Building Science
Evaluation Date	2022-11-19
Evaluation Time (start)	4:00 PM

### SUMMARY OF TEST RESULTS

Air-Changes/hr, ACH @ 50 Pa	4.09
ELA, (sq.in) @ 10 Pa	120.0
ELA Relative error %	3.0%
Flow exponent, n	0.6789
Correlation coefficient, r	0.9995

### NATURAL AIR INFILTRATION

House Volume (cu.ft.)	35,490.0	House Pa	Fan Pa	Flow Ranges	MURB Zone
Air Tightness type, if CGSB	Blower door test values	-50.00	275.00	B4	
Terrain	Suburban, forest	-45.00	250.00	B4	
AG height of highest ceiling (ft.)	30.00	-40.00	225.00	B4	
Guarded	<input type="checkbox"/>	-35.00	200.00	B4	
Test type	As operated	-30.00	175.00	B4	
Blower Test Type (if As Operated)	1 Blower Door - Whole House	-25.00	150.00	B4	
Barometric pressure (kPa)	101.30	-20.00	125.00	B4	
Initial static pressure (Pa)	0.0 (Baseline captured)	-15.00	100.00	B4	
Final static pressure (Pa)	0.0 (Baseline captured)				
Outside temperature	14 °C = 57 °F				
Inside temperature:	22 °C = 72 °F				
Weather conditions	Sunny				
Fan type	Retrotec 5000				
Manometer	DM-32				

### AIR LEAKAGE LOCATIONS

Tool used	Flir
Attic hatch	<input checked="" type="checkbox"/>
All ceiling penetrations	<input checked="" type="checkbox"/>
All wall penetrations	<input type="checkbox"/>
Exterior door (at least 1)	<input checked="" type="checkbox"/>
Exhaust vent	<input type="checkbox"/>
Sill & header	<input checked="" type="checkbox"/>
Service entry	<input checked="" type="checkbox"/>
Floor drain	<input type="checkbox"/>
Foundation crack	<input checked="" type="checkbox"/>
Electrical outlet (at least 1)	<input type="checkbox"/>
Window (at least 1)	<input checked="" type="checkbox"/>
Light fixture (at least 1)	<input type="checkbox"/>
Fireplace & chimney	<input type="checkbox"/>
Wall Adj to Enclosed Uncond Space	<input type="checkbox"/>

### EXHAUST DEVICES DEPRESSURIZATION TEST

Test status	Not applicable
<b>Preparation</b>	
Close interior doors	<input checked="" type="checkbox"/>
Open mech room door	<input checked="" type="checkbox"/>
<b>HRV Test</b>	
Δ Pa, HRV off (before test)	0.1
Δ Pa, HRV on	0.1
Δ Pa, HRV test result	0.0
HRV balanced?	HRV balanced
HRV pressurizes house?	No
<b>Exhaust Fans Test</b>	
HRV setting	HRV off
Δ Pa, Exhaust Fans CLOSED	0.1
Δ Pa, Exhaust Fans OPEN	3.6
Test result	-3.5
Test warning	below 5 Pa

## HOUSE VOLUME CALCULATIONS

	TOTAL	Basement	Header 1	Level 1	Header 2	Level 2	Header 3	Level 3
Perimeter (ft.)		40.00		44.00		44.00		44.00
Floor Area (sq.ft.)		1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Floor Height (ft.)		9.00	0.83	8.00	0.83	8.00	0.83	8.00
Floor Volume (cu.ft.)	35,490.00	9,000.00	830.00	8,000.00	830.00	8,000.00	830.00	8,000.00

## AIRTIGHTNESS TEST CHECKLIST

Item	Preparation Required	Before	After
<b>Vented fuel-fired appliances</b>			
Vented heating equipment	thermostat switch off	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Vented DHW	turn down / pilot position	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
No combustible products nearby	confirm	<input checked="" type="checkbox"/>	
Enclosed mechanical room	close door	<input checked="" type="checkbox"/>	
<b>Ventilation equipment</b>			
Exhaust and supply fans	switch off	<input checked="" type="checkbox"/>	
HRV/ERV	switch off/unplug	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HRV/ERV access cover	close and latch	<input checked="" type="checkbox"/>	
Motorized dampers	switch to closed	<input type="checkbox"/>	
Ventilation systems connected to other zones	seal	<input type="checkbox"/>	<input type="checkbox"/>
<b>Appliances</b>			
Clothes dryer	switch off	<input checked="" type="checkbox"/>	
Clothes dryer door	close	<input checked="" type="checkbox"/>	
Air-conditioner, window/portable	switch off	<input checked="" type="checkbox"/>	
<b>Windows &amp; doors</b>			
Windows	close and latch	<input checked="" type="checkbox"/>	
Windows (with crack in glazing)	seal cracks	<input type="checkbox"/>	
Missing/broken window or exterior door	cover and seal	<input type="checkbox"/>	
Exterior doors	close	<input checked="" type="checkbox"/>	
Interior doors	open	<input checked="" type="checkbox"/>	
<b>Unconditioned spaces</b>			
Doors and windows in attached structures	close	<input type="checkbox"/>	
Crawl space vent dampers	close	<input type="checkbox"/>	
Crawl space access	close	<input type="checkbox"/>	
Attic hatch	close	<input checked="" type="checkbox"/>	
Knee wall access doors	close	<input type="checkbox"/>	
No engines running	confirm	<input checked="" type="checkbox"/>	
<b>Plumbing</b>			
Floor drains	fill	<input checked="" type="checkbox"/>	
Plumbing traps	fill	<input checked="" type="checkbox"/>	
Central vacuum	switch off	<input type="checkbox"/>	
Do not use hot water	confirm	<input checked="" type="checkbox"/>	
<b>Solid-fuel burning appliance</b>			
Flue with damper	close	<input checked="" type="checkbox"/>	
Firebox doors	close	<input checked="" type="checkbox"/>	
Doors and air inlet dampers	close	<input checked="" type="checkbox"/>	
Ashes removed/contained	remove/contain	<input checked="" type="checkbox"/>	
Do not use appliance	confirm	<input checked="" type="checkbox"/>	

## BLOWER DOOR SETUP



## GLOSSARY

### Air-Changes/hr, ACH @ 50 Pa

The number of times per hour the entire heated volume of air in a house is replaced when the building envelope is subjected to an interior-exterior pressure differential of 50 pascals (Pa). The fewer air changes per hour, the more airtight the building envelope is.

### Airtightness test

A test method to measure the air leakage of the building under the test conditions.

### Blower door tests

Various tests using the blower door equipment that may be required for the Basic Service, Renovation Upgrade Service or the Construction Blower Door Service. These tests include the airtightness test, the air leakage locations procedure and the exhaust devices depressurization test.

### Correlation coefficient, r

The correlation coefficient "r" is a factor derived from the airtightness test results. In essence, the "r" indicates the reliability of the airtightness test results.

### Equivalent Leakage Area (ELA)

Represents the size of a single hole in your building envelope if all the individual air leakage holes or gaps were added together. ELA is expressed in sq.in. (or sq.cm.), through which would pass the same amount of air that passes through all of the air leakage holes in the building envelope at a pressure difference of 10 Pa (ELA@10Pa). The smaller the ELA, the less energy you will need to control the temperature of your home (but you will still need to ensure that you have adequate ventilation).

### Flow exponent, n

The exponent "n" is a correlation factor derived from the airtightness test results. It provides an indication of the size of and number of leakage holes, based on whether it is closer to 0.5 or 1.0. An "n" value approaching 1.0 indicates that the building envelope has many small holes; an "n" value approaching 0.5 indicates that the house has a few large holes.

### Heated floor area

The sum of the usable floor area of the building or unit, including all above-grade heated areas regardless of ceiling height, and all below-grade heated areas, such as basements, with a ceiling height of more than 1.2 m (4 ft.).

### Heated volume

The volume of heated space contained within the house during the heating season, as determined in accordance with the airtightness test.

### Relative error

Variance of each data point from the plotted curve derived from the airtightness test readings

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