

Permagreen

Report detailing the results
of air leakage tests
for KPH Construction
at

Scannell Dwelling
Well Road
Cork



21st December 2012

Retrotec Door Fan Test Report

Tester Information

Chris Barry
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Euro Innovation Park
Little Island
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Customer

Group Name KPH Construction
Contact Person Ivan McCarthy
Customer Phone 087 9888805

Building Under Test

Details Scannell Dwelling
Address Well Road
City Cork
State Co. Cork
ATTMA Building Type Dwelling – mechanically ventilated
Air Permeability Targets Best Practice : 3 , Normal : 5
Temporary Air Sealing Heat Recovery Ducting

Test

Test #: 7
Performed On 21/12/2012
Operator In the Room
Direction Depressurize
Standard ATTMA: TS-1
Notes: Previous Tests carried out on 2 separate days

Equipment Used

System	Certificate # 3586		
Fan Serial #	H02013	expires	01-09-2015
Room Gauge Serial #	102020A	expires	01-09-2015
Flow Gauge Serial #	102020B	expires	01-09-2015
Barometer #		expires	01-09-2015
External Temp Probe #		expires	01-09-2015
Internal Temp Probe #		expires	01-09-2015
Anemometer #		expires	01-09-2015

Environmental Conditions

	<u>Before</u>	<u>After</u>
Barometric Pressure	100700 Pa	100700 Pa
Wind Speed	1m/s	1m/s
Inside Temperature	16 °C	16 °C
Outside Temperature	7 °C	7 °C
Static Pressure	P01+ 0.0 Pa	P02+ 0.0 Pa
	P01- -3.13 Pa	P02- -3.12 Pa
	P01 -3.13 Pa	P02 -3.12 Pa

Baseline static pressure measured before test.

-3.1	-3.2	-3.2	-3.1	-3.1	-3.2	-3.1	-3.1	-3.1	-3.1
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Depressurize

Fan Range - C4

Room Pressure (Pa):	-53	-49.80	-47.30	-44.50	-42	-38.20	-35.50	-35.20	-29.60	-23.30
Corrected Room Pr (Pa):	49.78	46.58	44.08	41.28	38.78	34.98	32.28	31.98	26.38	20.08
Flow Pressure (Pa):	298	275	260	238	216	191	171	142	110	95.10
Corrected Flow Pr (Pa):	296.8	273.8	258.8	236.8	214.8	189.8	169.8	141.3	109.6	94.8
Measured Flow (m³/h):	1175.0	1142.7	1109.9	1060.2	1008.3	946.0	893.4	813.7	714.3	662.2
Best Fit Flow (m³/h):	1188.1	1134.0	1091.0	1042.0	997.3	927.8	876.9	871.2	761.2	628.7
Error (%):	-1.1	.8	1.7	1.7	1.1	1.9	1.8	-7.1	-6.6	5.1

Baseline static pressure measured after test.

-3.1	-3.0	-3.1	-3.1	-3.2	-3.2	-3.2	-3.1	-3.1	-3.1
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Data Analysis

	Slope (n)	Intercept (C) (m³/h)	Correlation (r²)
Best Fit: Least Squares Depressurize	0.701	76.7819	98.15

Zone Dimensions

Net Floor Area	267	m²
Envelope Area	1214	m²
Internal Volume	2037	m³

Results

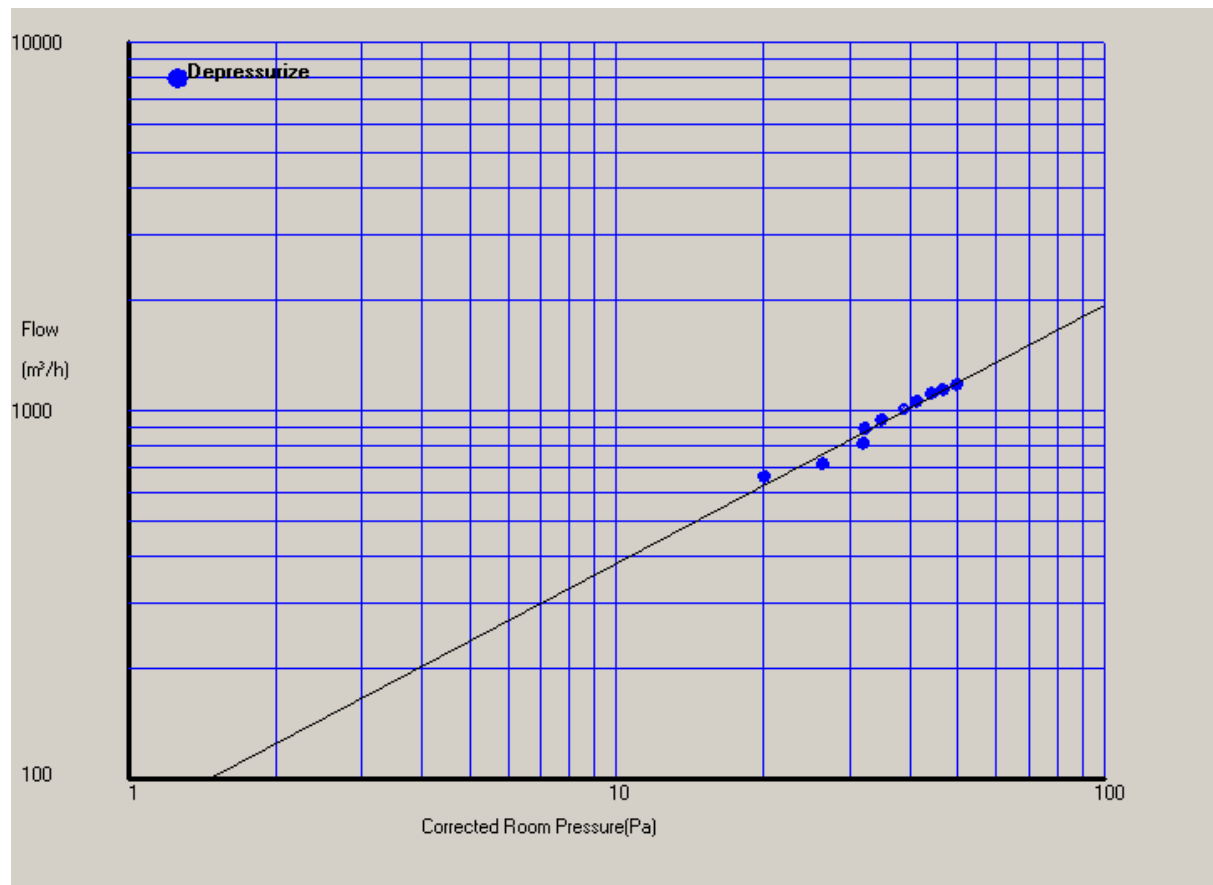
	Units	Depressurize
Air Flow Coefficient,CL	(m ³ /h)	76.782
Air Flow Coefficient,Cenv	(m ³ /h)	75.931
Air flow Exponent		0.701
Correlation Coefficient,r ²	(%)	98.15
Flow@ 50 Pa	(m ³ /h)	1191.87
Air Changes/Hour @ 50 Pa	(/hr)	0.585
Air Permeability@ 50 Pa	(m ³ /h/m ²)	0.98
Specific Leakage Rate @ 50 Pa	(m ³ /h/m ²)	4.46

Door Fan 3.0 Enclosure Leakage Analysis Software (Version 3.251)

By: Retrotec Energy Innovations Ltd (Canada).

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This software conforms to the ATTMA: TS-1 testing standard



Certificate of Building Air Permeability

This is to certify that

Scannell Dwelling
Well Road
Cork

Tested for Building Permeability on 21st December 2012
measured in accordance with CIBSE TM23 & ATTMA TS1
achieved a performance of

0.98 m³/hr/m² @ 50 Pa

&

0.585 Air Changes per Hour @ 50 Pa

Certificate Number: Perm/PDJ/10012013#1

Awarded by: Peter Jones FCIOB

Date: 10th January 2013

Signed:

