SINGLE FAMILY DWELLINGS

Zone Pressure Diagnostics Testing: Purposes, Techniques, and Limitations

What is ZPD testing?

ZPD Testing

Definition

The process of measuring and using intermediate/transition compartment/zone and blower door pressures and flows to evaluate the relative leakage between the inside of a building and intermediate zones, and between the intermediate zones and the outside of the building for the purpose of determining which boundary/barrier to use as the air barrier.

What is a transition zone?

ZPD Testing

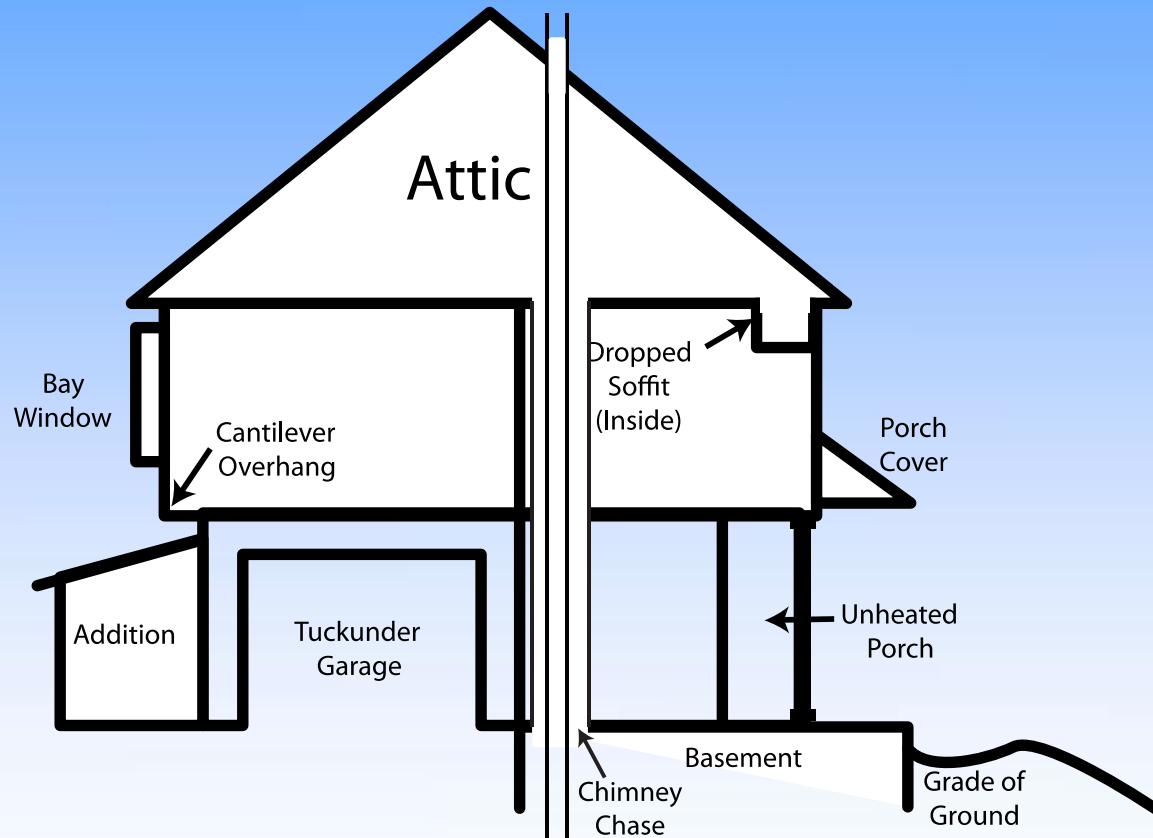◆ A **transition** or **intermediate compartment** or **zone**: an area that lies between the living space and the outside

Transition zone examples

ZPD Testing

- Attic
- Basement/crawl
- inside of interior & exterior walls
- attached garage esp. tuck under
- soffits/dropped ceilings
- Cantilevered/overhanging floor incl bay windows
- knee walls
- upper "half story" floors
- Cape Cod roof areas above the upper
- plumbing, electrical & ductwork/flue chases ways through wall plates
- masonry chimney surround chases
- stairways to attics/basements

- common walls in multilevel homes
- balloon frame walls
- exterior porch roofs
- cathedral or vaulted ceilings
- commercial style false dropped or "T" ceilings with removable ceiling
- ceiling soffits
- slant walls/roofs (mansard roofs)
- vanities or other cabinets with supply or drainage plumbing or other openings to the wall in them
- in-wall medicine cabinets
- electrical panel boxes
- built-in appliances or similar in-wall arrangements
- If you know of others, let me know as I want to add it to the list in my book

Transition Zones

ZPD Testing

Attic

Bay
Window

Cantilever
Overhang

Dropped
Soffit
(Inside)

Porch
Cover

Addition

Tuckunder
Garage

Unheated
Porch

Basement

Grade of
Ground

Chimney
Chase

More definitions

ZPD Testing

◆ **<u>Primary zone</u>** – zones with an opening (door, hatch, vent, etc.) such as attic, basement, crawlspace, or enclosed porch, whether the opening already exists or we install an opening

◆ **<u>Secondary zone</u>** – zones without an opening to them such as cantilevers, soffits, chases, and any of the other transition zones without a dedicated opening.

How can ZPD testing help us?

ZPD Testing

◆ Pre-retrofit air barrier location and tightness including alignment with thermal barrier

◆ Relative leakiness of intermediate/transition zone air barriers

◆ Select the best air barrier surfaces to use including prioritizing air sealing measures

◆ To evaluate the leakiness post-retrofit

◆ Some suggest not conducting ZPD tests if the building already meets a tightness standard.

When do we use ZPD testing?

ZPD Testing

- ◆ Garage/house   IAQ issues
- ◆ Crawlspace/house - warm humid areas
- ◆ Attic/house - cold weather areas
- ◆ Multiple other locations

Levels of ZPD testing

ZPD Testing

◆ <u>Level I</u> – Basic Pressure/Flow Test – <u>Relative leakiness only</u>

◆ <u>Level II</u> – Basic plus Open-a-Door or Open-a-Hatch or Hole – <u>Actual leakiness levels</u> vs. whole house leakage - prioritization

◆ <u>Level III</u> – <u>Level II plus software</u>

◆ Levels II & III are "advanced"

Basic or Level I ZPD testing

ZPD Testing

0 Pa   **-50 Pa**   **? Pa**   **0 Pa**

Blower Door ←

Outside   **Inside House**   **Zone**   **Outside**

H/O   **H/Z**   **Z/O**
House-to-Outside   House-to-Zone   Zone-to-Outside
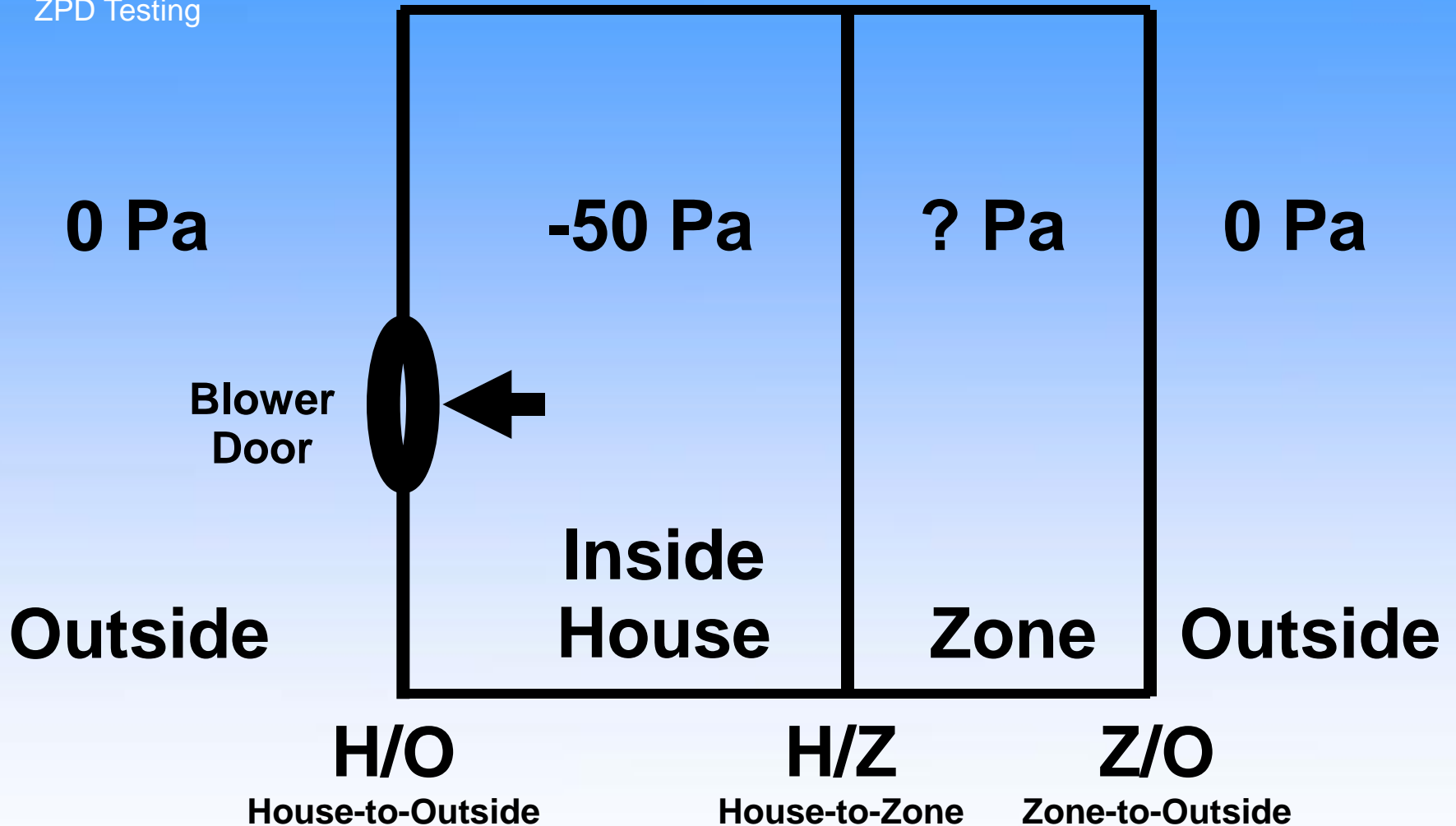
Basic or Level I ZPD testing

ZPD Testing

◆ Level I – Basic Pressure/Flow Test

◆ All zones except those with a hatch, etc. or not using an available opening

Basic or Level I ZPD testing

ZPD Testing
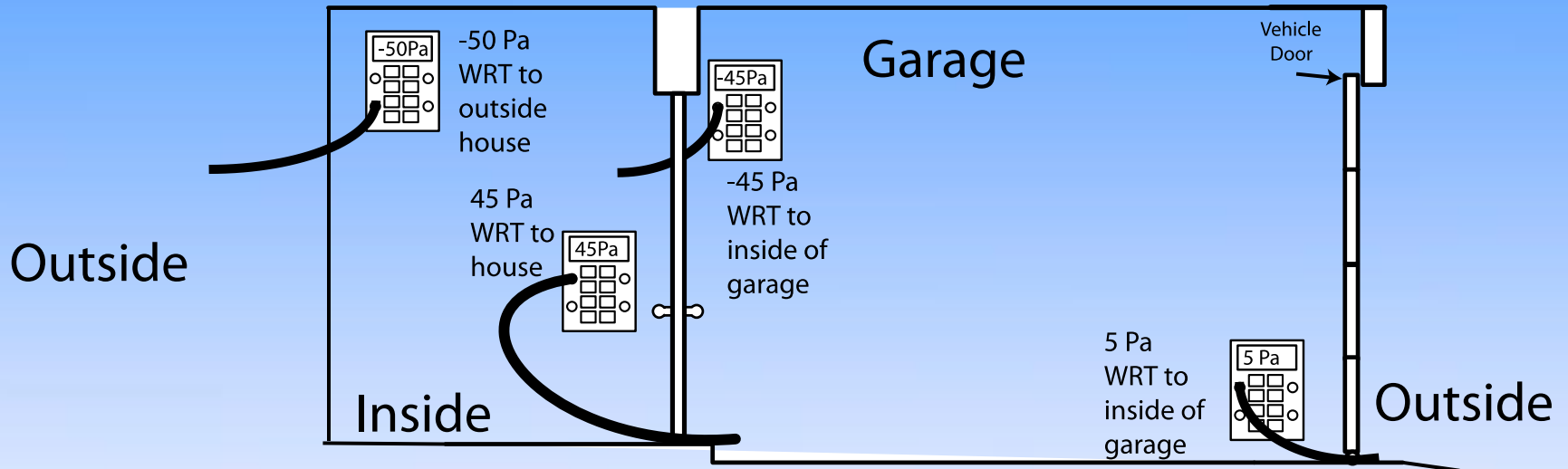
What measurement we get depends on where our pressure gauge is, where our hoses connect to it, and where our hoses go.
Some suggest that the test is more accurate if we always connect the Channel A Reference port to the outside (EC Green, RT Red) except when the pressure gauge is outside (see below)

Basic or Level I ZPD testing

ZPD Testing

◆ Baseline

◆ Blower door to -50

◆ Measure Flow

◆ Get H/Z pressure measurement – use small hand driven drill bit screwdriver style) near floor if no outlet edge to put small diameter (1/16 to 3/16") nonconducting pressure tube through (outlet cover off) – toothpaste(?), etc. to patch

◆ Determining relative leakiness of H/Z and   Z/O using Leakiness Ratio Chart

Basic or Level I ZPD testing

ZPD Testing

Step 1 - Establishing -50 Pa in the home using the blower door.
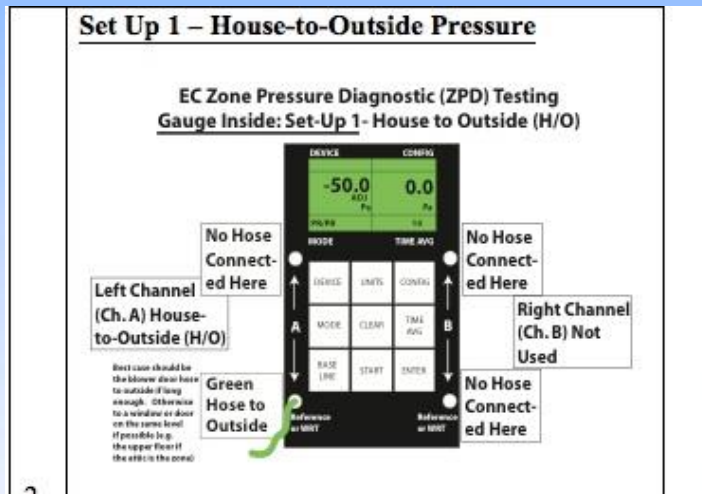
EC System

Retrotec

Basic or Level I ZPD testing

ZPD Testing

Step 2 - Reading the H/Z pressure.
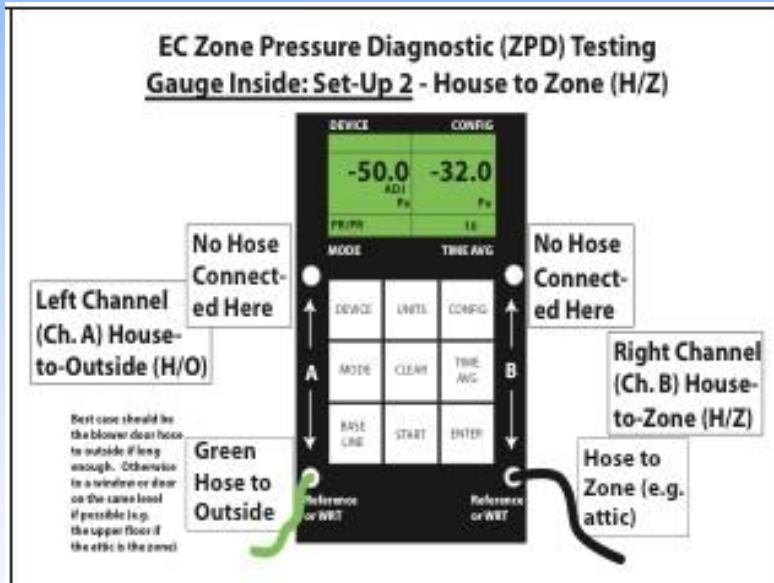
EC System   **Retrotec**

Basic or Level I ZPD testing

ZPD Testing

Leakiness Ratio
(Pressure Ratio Chart)

Zone Pressures		Relative Size Of Leaks	
Zone-to-House	Zone-to-Outside	Zone-to-House	Zone-to-Outside
12	38	2	1
25	25	1	1
37	13	1/2	1
41	9	1/3	1
45	5	1/4	1
48	2	1/8	1
49	1	1/13	1

Basic or Level I ZPD testing

Measuring Zone to Outside (Z/O) while standing outside if can't get H/Z

Example: A porch cover that does not have an electrical outlet on the wall between it and the house.

EC Zone Pressure Diagnostic (ZPD) Testing
Gauge Outside - Zone to Outside (Z/O)

Hose to Zone (e.g. cantilever)

DEVICE   CONFIG
-18.0   0.0
Pa   Pa
PR/PR   TD

No Hose Connected Here

No Hose Connected Here

No Hose Connected Here

MODE   DEVICE UNITS CONFIG
       MODE   CLEAR   TIME AVG
       BASE   START   ENTER
       LINE
Reference or WRT   Reference or WRT

Retrotec Zone Pressure Diagnostic (ZPD) Testing
Gauge Outside - Zone to Outside (Z/O)

No Red Hose   No Yellow Hose

No Green Hose

Blue Hose to Zone (e.g. cantilever, etc.)

PrA   12.2 Pa
PrB   0.0 Pa

DM-2

Connect any hose colors to the same colored taps on the back.

EC System   Retrotec

First Advanced or Level II ZPD

ZPD Testing

◆ Level II – Advanced Pressure/Flow Test – With a Door, Hatch Available (Primary Zone)

◆ All Zones with an opening (door, hatch, etc.) Garages, Crawlspaces, Basements, Attics

First Advanced or Level II ZPD

ZPD Testing

◆ Begins with Basic ZPD test

◆ Add opening hatch or door to get new blower door flow number

◆ Alternative – measuring opening when H/Z decreases by half

◆ Must maintain -50 Pa H/O pressure when getting readings

◆ Best results if >15 to 25 Pa H/Z pressure

◆ Can get an estimate of leakage "hole size"

First Advanced or Level II ZPD

ZPD Testing

Step 1 - Establishing -50 Pa in the home using the blower door.
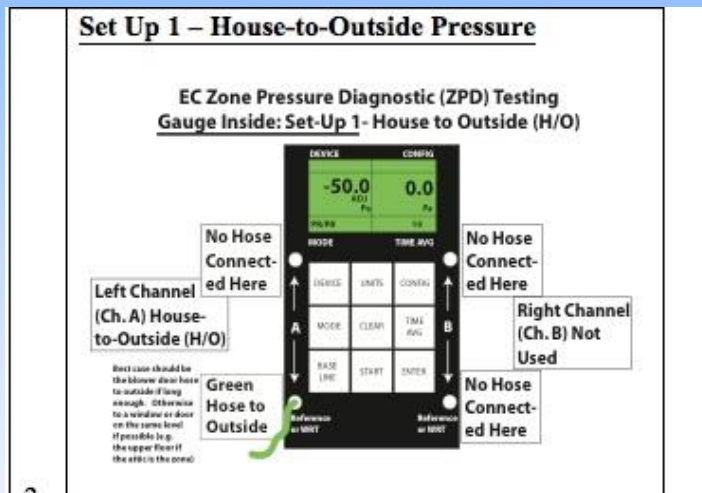
EC System

Retrotec

First Advanced or Level II ZPD

ZPD Testing

Step 2 - Reading the H/Z pressure before and after opening a door or hatch. Additional Option: Getting the EfLA
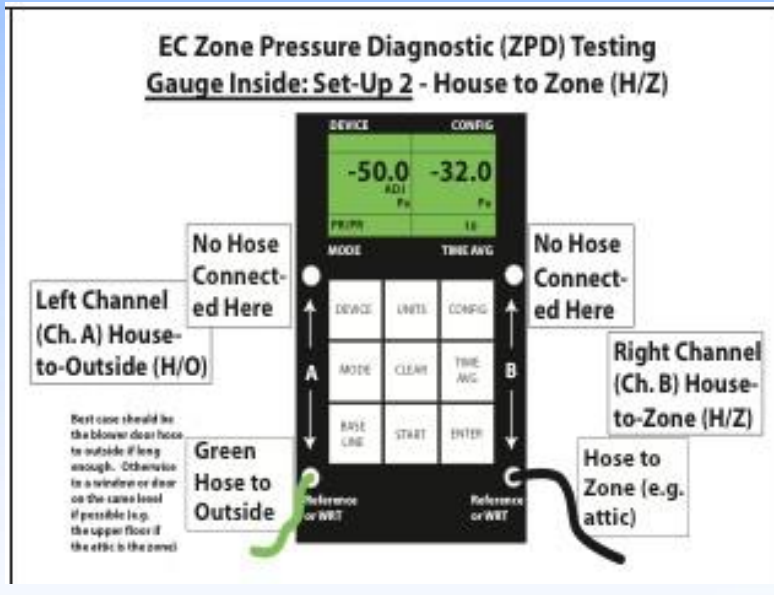
EC System

Retrotec

First Advanced or Level II ZPD

ZPD Testing

Step 2B - Additional Option: Getting the EfLA without further testing ("Low-Tech")

Slowly lodge open a door or hatch to the zone from the house (one way is to open a door or lift one edge of a hatch to one side of the opening while leaving the other edge of the hatch against the opening) until the house-to-zone (H/Z) pressure goes down to half of what it started at with the opening closed. Measure the opening you created to get half the pressure to find the effective leakage area of the H/Z barrier.

First Advanced or Level II ZPD

ZPD Testing

Step 2B - Additional Option: Getting the EfLA without further testing ("Low-Tech")
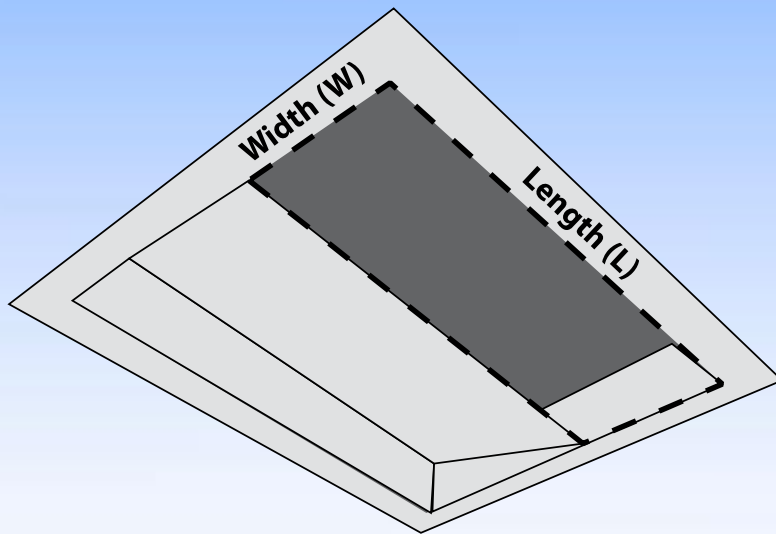
Hatch Setup - hatch door proppred up on to edge of insulation dam to one side

Width (W)

Length (L)
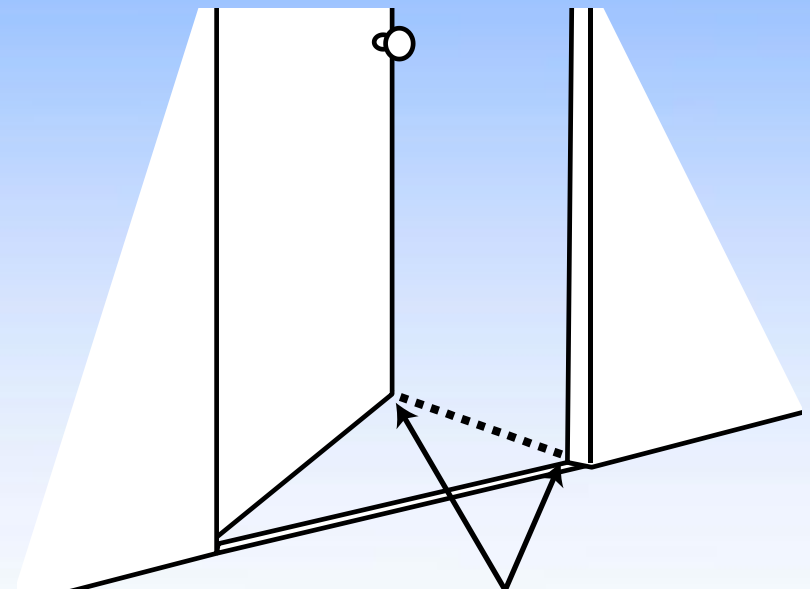
Distance From Edge of Door Side of Opening to Edge of Door to be Measured for Door Openings Opened Enough that Pressure Cut in Half

First Advanced or Level II ZPD

ZPD Testing

Step 3 - Reading the Z/O pressure.
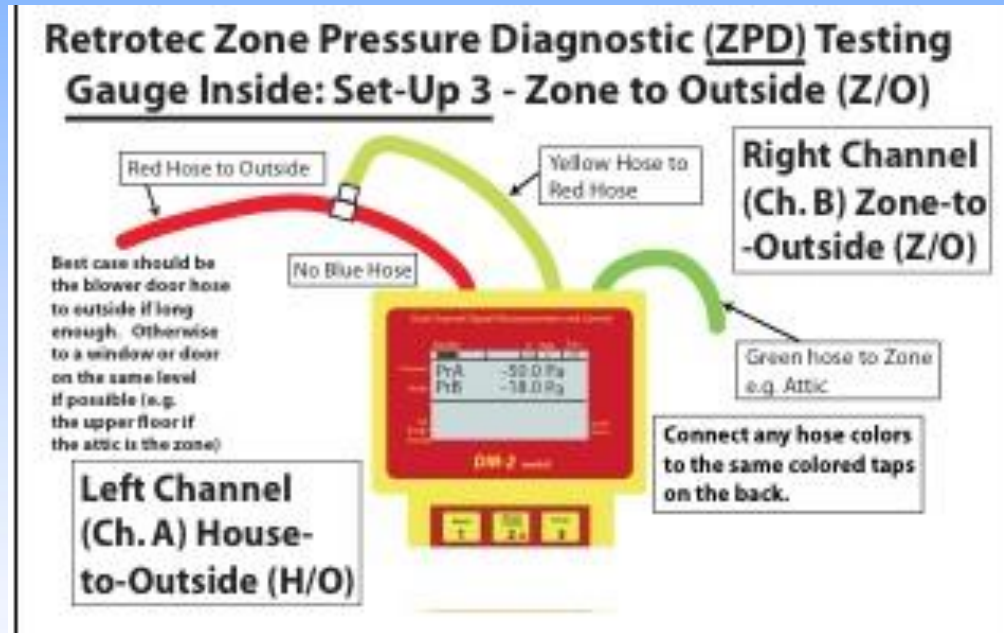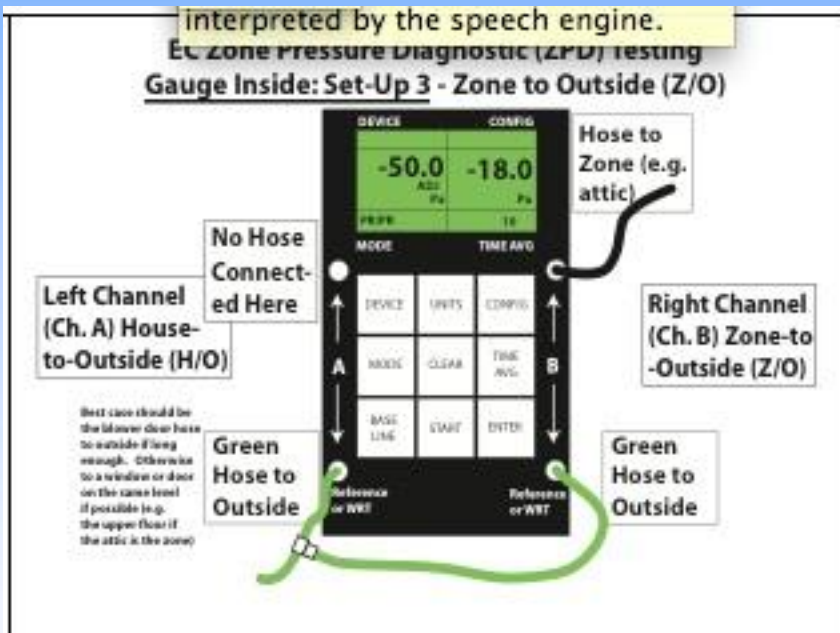
EC System   **Retrotec**

First Advanced or Level II ZPD

ZPD Testing

Open-A-Door Chart
Open the door in tightest barrier

Door closed pressure		multiply CFM50 change by:		
A	B	Internal	External	Combined
48	2	0.14	1.14	0.14
47	3	0.20	1.19	0.19
46	4	0.25	1.24	0.24
45	5	0.31	1.29	0.29
44	6	0.37	1.34	0.34
43	7	0.43	1.39	0.39
42	8	0.49	1.44	0.44
41	9	0.56	1.49	0.49
40	10	0.63	1.54	0.54
39	11	0.70	1.60	0.60
38	12	0.78	1.65	0.65
37	13	0.87	1.71	0.71
36	14	0.96	1.78	0.78
35	15	1.06	1.84	0.84
34	16	1.17	1.91	0.91
33	17	1.29	1.98	0.98
32	18	1.42	2.06	1.06
31	19	1.56	2.14	1.14
30	20	1.71	2.23	1.23
29	21	1.88	2.32	1.32
28	22	2.07	2.42	1.42
27	23	2.27	2.52	1.52
26	24	2.50	2.64	1.64
25	25	2.76	2.76	1.76

Following Collin Olson and Anthony Cox, 2006, following Michael Blasnik
Internal = multiplier for zone to house leakage
External = multiplier for zone to outside leakage
Combined = multiplier for total/combined path leakage

<u>Opening made in H/Z barrier:</u> - If you have opened a door from the house-to-zone (such as the house-to-garage door), use <u>Column A</u> of the Open-a-Door Chart below to find the <u>house-to-zone pressure before opening the door</u> (circle this pressure in Column A).
<u>Opening made in Z/O barrier</u> - If you have opened a zone-to-outside door (such as the garage-to-outside door), use <u>Column B</u> of the Open-a-Door Chart below to find the <u>house-to-zone pressure before opening the door</u> (circle this pressure in Column B).

First Advanced or Level II ZPD

ZPD Testing

Opening in H/Z barrier

For <u>Door Opening in Barrier Between House to Zone</u>:
   Use Column A to Match H/Z and Column B to Match Z/O
For <u>Door Opening in Barrier Between Zone to Outside</u>:
   Use Column B to Match H/Z and Column A to Match Z/O

Internal :_____ External: _____
Combined: _____
Now multiply each of the multipliers by the CFM difference recorded above to find out how much reduction, at a maximum, can be achieved by completely sealing either barrier (Combined):
Internal :_____ (multiplier) x _____ CFM Diff =
       _____ CFM50 H/Z
External: _____ (multiplier) x _____ CFM Diff =
       _____ CFM50 Z/O
Combined: _____ (multiplier) x _____ CFM Diff =
       _____ CFM50 maximum reduction available if either barrier perfectly sealed

Door closed pressure		multiply CFM50 change by:		
A	B	Internal	External	Combined
48	2	0.14	1.14	0.14
47	3	0.20	1.19	0.19
46	4	0.25	1.24	0.24
45	5	0.31	1.29	0.29
44	6	0.37	1.34	0.34
43	7	0.43	1.39	0.39
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Internal = multiplier for zone to house leakage
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Combined = multiplier for total/combined path leakage

First Advanced or Level II ZPD

ZPD Testing

For <u>Door Opening in Barrier Between House to Zone</u>:
    Use Column A to Match H/Z and Column B to Match Z/O
For <u>Door Opening in Barrier Between Zone to Outside</u>:
    Use Column B to Match H/Z and Column A to Match Z/O

Calculation Preliminaries

A Closed Door Pressure: House WRT Zone	B CFM50 Door Closed	C CFM50 Door Open	D CFM50 Difference (C-B)
25	1850	2200	350

Leakage from House-to-Zone

(D) CFM50 Difference	Multiplier	CFM50	Square Inches
350	2.76	966	96.6

Leakage from Zone-to-Outside

(D) CFM50 Difference	Multiplier	CFM50	Square Inches
350	2.76	966	96.6

Combined Path Leakage

(D) CFM50 Difference	Multiplier	Maximum CFM50 Reduction Available
350	1.76	616

Basement Leakage about 600 CFM
Maximum reduction is if we sealed either the H/Z or Z/O barriers perfectly. Reality will be that always less than that number.

Door closed pressure		multiply CFM50 change by:		
A	B	Internal	External	Combined
48	2	0.14	1.14	0.14
47	3	0.20	1.19	0.19
46	4	0.25	1.24	0.24
45	5	0.31	1.29	0.29
44	6	0.37	1.34	0.34
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40	10	0.63	1.54	0.54
39	11	0.70	1.60	0.60
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34	16	1.17	1.91	0.91
33	17	1.29	1.98	0.98
32	18	1.42	2.06	1.06
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Internal = multiplier for zone to house leakage
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Combined = multiplier for total/combined path leakage

First Advanced or Level II ZPD

Open-A-Hatch/Add-A-Hole Test

◆ Can't get H/Z pressure down to zero when open hatch or pull-down stairs, whereas you were able to or close to being able to do that with the "Open-a-Door" test.

◆ 6 Pascal minimum drop in differential pressure between the house and the zone when comparing the pre-opening (hatch closed) with the opening (hatch open) pressure differentials.

Hatch/Hole Opened in House to Zone (H/Z) or Zone to Outside (Z/O) Barriers

For Hatch/Hole Opening in House to Zone Barrier: Use A Column and Row to Match H/Z and Column and Row B to Match Z/O
For Hatch/Hole Opening in Zone to Outside Barrier: Use B Column and Row to Match H/Z and Column and Row A to Match Z/O

Following Anthony Cox and Collin Olson, 2006 following Michael Blasnik

First Advanced or Level II ZPD

ZPD Testing

Open-A- Hatch Chart

Opening made in H/Z barrier - If you have opened a hatch or hole from the house-to-zone (such as the house-to-attic hatch, house-to-crawlspace hatch), use Column A of the Open-a-Hatch Chart below to find the house-to-zone pressure before opening the hatch (circle this pressure in Column A). Then, use Row A to find the house-to-zone ending pressure after opening the hatch (circle this pressure in Row A). Find the multiplier at the intersection of these two circled items by going right across from the starting pressure and down from the ending pressure.

Hatch/Hole Opened in House to Zone (H/Z) or Zone to Outside (Z/O) Barriers

For Hatch/Hole Opening in House to Zone Barrier: Use A Column and Row to Match H/Z and Column and Row B to Match Z/O
For Hatch/Hole Opening in Zone to Outside Barrier: Use B Column and Row to Match H/Z and Column and Row A to Match Z/O

Following Anthony Cox and Collin Olson, 2006 following Michael Blasnik

First Advanced or Level II ZPD

ZPD Testing

Open-A- Hatch Chart

Opening made in Z/O barrier - If you have opened a hatch or hole from the zone-to-outside barrier (such as the roof to attic hatch, outside to crawlspace hatch), use Column B of the Open-a-Hatch Chart below to find the house-to-zone pressure before opening the hatch (circle this pressure in Column B). Then, use Row B to find the house-to-zone ending pressure after opening the hatch (circle this pressure in Row B). Find the intersection of these two circled items by going right across from the starting pressure and down from the ending pressure and record them in the equation below where the multiplier is expected to go.

Hatch/Hole Opened in House to Zone (H/Z) or Zone to Outside (Z/O) Barriers

For Hatch/Hole Opening in House to Zone Barrier: Use A Column and Row to Match H/Z and Column B to Match Z/O
For Hatch/Hole Opening in Zone to Outside Barrier: Use B Column and Row to Match H/Z and Column and Row A to Match Z/O

Start Press — Ending Pressure After Opening Hatch or Adding Hole in Barrier

A	B	44	42	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	1		0.35	0.29	0.25	0.22	0.20	0.18	0.17	0.15	0.15	0.14	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.09	0.09
48	2		0.68	0.54	0.45	0.39	0.35	0.32	0.29	0.27	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.17	0.16	0.15	0.15	0.15	0.14
47	3			0.84	0.68	0.58	0.51	0.45	0.41	0.38	0.35	0.33	0.31	0.29	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.20	0.19
46	4			1.23	0.96	0.80	0.68	0.60	0.54	0.49	0.45	0.42	0.39	0.37	0.35	0.33	0.32	0.30	0.29	0.28	0.27	0.26	0.25	0.24
45	5				1.30	1.05	0.89	0.77	0.68	0.62	0.56	0.52	0.48	0.45	0.43	0.40	0.38	0.37	0.35	0.33	0.32	0.31	0.30	0.29
44	6				1.76	1.36	1.12	0.96	0.84	0.75	0.68	0.63	0.58	0.54	0.51	0.48	0.45	0.43	0.41	0.39	0.38	0.36	0.35	0.34
43	7					1.76	1.41	1.18	1.02	0.90	0.81	0.74	0.68	0.63	0.59	0.56	0.53	0.50	0.48	0.45	0.43	0.42	0.40	0.39
42	8					2.28	1.76	1.44	1.23	1.08	0.96	0.87	0.80	0.73	0.68	0.64	0.60	0.57	0.54	0.52	0.49	0.47	0.45	0.44
41	9						2.20	1.76	1.47	1.27	1.12	1.01	0.92	0.84	0.78	0.73	0.68	0.65	0.61	0.58	0.55	0.53	0.51	0.49
40	10						2.80	2.15	1.76	1.49	1.30	1.16	1.05	0.96	0.89	0.82	0.77	0.72	0.68	0.65	0.62	0.59	0.56	0.54
39	11							2.65	2.11	1.76	1.51	1.33	1.20	1.09	1.00	0.92	0.86	0.81	0.76	0.72	0.68	0.65	0.62	0.60
38	12							3.32	2.54	2.07	1.76	1.55	1.36	1.23	1.12	1.03	0.96	0.90	0.84	0.80	0.75	0.72	0.68	0.65
37	13								3.09	2.45	2.04	1.76	1.55	1.38	1.26	1.15	1.07	0.99	0.93	0.87	0.83	0.79	0.75	0.71
36	14								3.83	2.93	2.38	2.02	1.76	1.56	1.41	1.28	1.18	1.09	1.02	0.96	0.90	0.86	0.81	0.78
35	15									3.54	2.80	2.33	2.00	1.76	1.57	1.42	1.30	1.21	1.12	1.05	0.99	0.93	0.89	0.84
34	16									4.35	3.32	2.70	2.28	1.98	1.76	1.58	1.44	1.33	1.23	1.15	1.08	1.01	0.96	0.91
33	17										3.98	3.14	2.61	2.24	1.97	1.76	1.59	1.46	1.34	1.25	1.17	1.10	1.04	0.98
32	18										4.86	3.70	3.01	2.54	2.20	1.95	1.76	1.60	1.47	1.36	1.27	1.19	1.12	1.06
31	19											4.42	3.49	2.89	2.48	2.18	1.94	1.76	1.61	1.48	1.38	1.29	1.21	1.14
30	20											5.38	4.09	3.32	2.80	2.43	2.15	1.93	1.76	1.61	1.49	1.39	1.30	1.23
29	21												4.86	3.83	3.18	2.72	2.38	2.13	1.92	1.76	1.62	1.50	1.41	1.32
28	22												5.89	4.48	3.63	3.05	2.65	2.34	2.11	1.91	1.76	1.63	1.51	1.42
27	23													5.30	4.18	3.46	2.96	2.59	2.31	2.09	1.91	1.76	1.63	1.52
26	24													6.41	4.86	3.94	3.32	2.87	2.54	2.28	2.07	1.90	1.76	1.64
25	25														5.75	4.52	3.74	3.20	2.80	2.49	2.25	2.06	1.89	1.76
24	26														6.92	5.25	4.25	3.57	3.09	2.73	2.45	2.23	2.04	1.89
23	27															6.19	4.86	4.02	3.44	3.01	2.68	2.42	2.20	2.03
22	28															7.43	5.64	4.55	3.83	3.32	2.93	2.63	2.38	2.18
21	29																6.63	5.21	4.30	3.67	3.21	2.86	2.58	2.35
20	30																7.95	6.02	4.86	4.09	3.54	3.12	2.80	2.54
19	31																	7.07	5.55	4.58	3.91	3.42	3.04	2.74
18	32																	8.46	6.41	5.17	4.35	3.76	3.32	2.97
17	33																		7.51	5.89	4.86	4.15	3.63	3.23
16	34																		8.98	6.79	5.48	4.61	3.98	3.51
15	35																			7.95	6.24	5.14	4.39	3.83
14	36																			9.49	7.18	5.79	4.86	4.20
13	37																				8.39	6.58	5.42	4.63
12	38																				10.00	7.56	6.10	5.12
11	39																					8.83	6.92	5.71
10	40																					10.52	7.95	6.41
9	41																						9.27	7.26
8	42																						11.03	8.33
7	43																							9.71
6	44																							11.54

Following Anthony Cox and Collin Olson, 2006 following Michael Blasnik

First Advanced or Level II ZPD

ZPD Testing

Open-A- Hatch Chart H/Z opening example

Before Hole
CFM50
1850 CFM
H/Z Pressure
37 Pascals

After Hole
CFM50
2500 CFM
H/Z Pressure
20 Pascals

Projected Leakiness/ELA
CFM50 Diff
650 CFM
Multiplier
1.38
Max. Reduction
897 CFM
Square Inches
89.7

Attic Leakage is about 900 CFM 37-20=17 Pa drop in pressure. Good! Meets minimum 6 Pa Drop for better accuracy.

Hatch/Hole Opened in House to Zone (H/Z) or Zone to Outside (Z/O) Barriers

For Hatch/Hole Opening in House to Zone Barrier: Use A Column and Row to Match H/Z and Column and Row B to Match Z/O
For Hatch/Hole Opening in Zone to Outside Barrier: Use B Column and Row to Match H/Z and Column and Row A to Match Z/O

Start Press	Ending Pressure After Opening Hatch or Adding Hole in Barrier

Ending Pressure After Opening Hatch or Adding Hole in Barrier chart with Start Press columns A (44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0) and B (6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50)

Following Anthony Cox and Collin Olson, 2006 following Michael Blasnik

First Advanced or Level II ZPD

ZPD Testing

Interconnectedness of two neighboring intermediate zones

If the neighboring zone changes pressure when you conduct the Level II test by opening a hatch or door, the neighboring zone may be too interconnected with the zone you are testing.

First Advanced or Level II ZPD

ZPD Testing

<u>Interconnectedness</u>

Example: Multiple space attics such as Cape Cod style attics where the upper ceiling attic is interconnected with the attic behind the knee wall by way of the angled upper level ceiling

Issue: We will think that by sealing leaks to the outdoors behind the kneewall we are eliminating all our leaks when, in fact, we would still have leaks to worry about in the upper ceiling attic space.

First Advanced or Level II ZPD
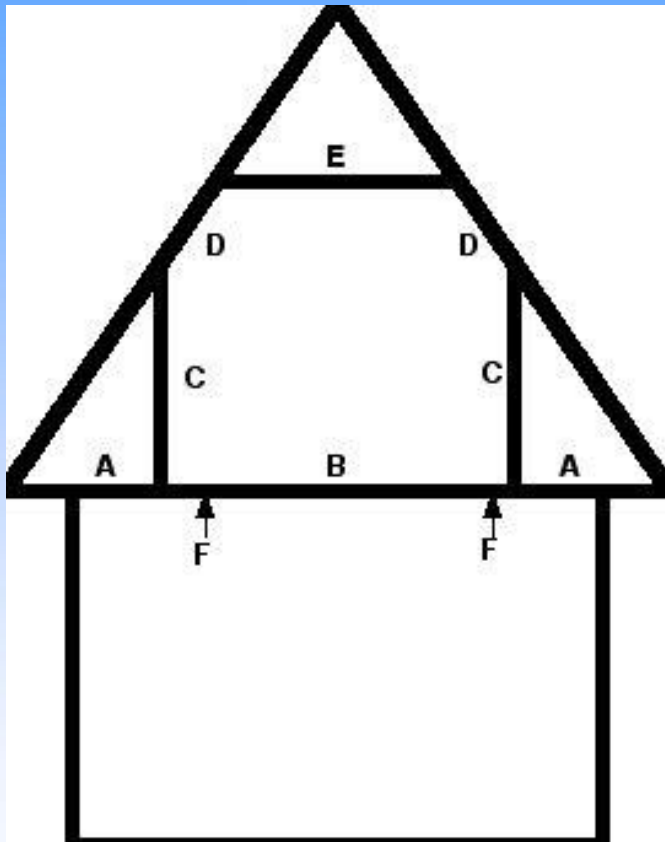
ZPD Testing

Zone A may be communicating with Zone E by way of spaces between ceiling joists in D.

First Advanced or Level II ZPD

ZPD Testing
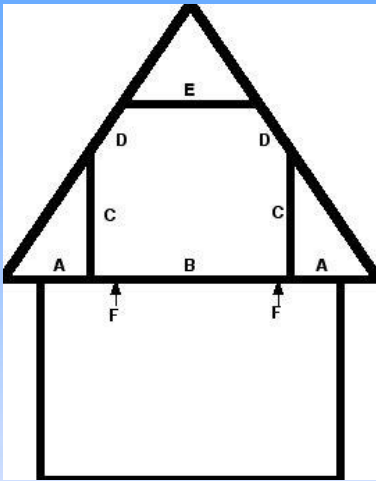
◆ We will be surprised, after sealing all the leaks from Zone A to the inside, that we are still getting measurable leakage from Zone E because we had not considered it as part of our test.

◆ Checking the pressure in Zone E - if it changes after opening the knee wall hatch, that tells us that there is interconnectedness between Zone A and Zone E

Fully Advanced or Level III ZPD

ZPD Testing

- ◆ Same as Level II ZPD test

- ◆ Add software to provide calculations and integrate correction factors into results

- ◆ Must maintain -50 Pa when getting readings

- ◆ Follow software instructions closely

Prioritizing Sealing Options

ZPD Testing

◆ If whole house leakage CFM is 1850

◆ If Attic leakage is 900 CFM

◆ If Basement leakage is 600 CFM

◆ Leakage in rest of the house (walls) is about 350 CFM

◆ Prioritize sealing attic and basement

◆ Do NOT replace the windows

Additional Limits

ZPD Testing

◆Doesn't work well when home is extremely leaky

◆Doesn't work well when windy

◆Time consuming

Step-by-Step ZPD Procedures

ZPD Testing

◆ Too short of a time to go over a detailed listing of step-by-step processes for both EC and Retrotech systems here. See:

◆ www.weatherizationschool.com

Step-by-Step Procedures

ZPD Testing

Retrotec Zone Pressure Diagnostic (ZPD) Testing Gauge Inside: Set-Up 1- House to Outside (H/O)

Red Hose to Outside

No Yellow Hose

Right Channel (Ch. B) Not Used

No Blue Hose

No Green Hose

PrA   -50.0 Pa
PrB   0.0 Pa

Left Channel (Ch. A) House-to-Outside (H/O)

DM-2

Connect any hose colors to the same colored taps on the back.

Place a hose to outside (typically red for Retrotec and green for EC). Preferably use a longer hose that is placed along the outside wall through the blower door screen so you can use the gauge throughout the house to take zone pressure measurements. If you are unable to do this, place the hose out a window or door on the same level near where you are checking the zone pressures.

Step-by-Step Instructions for all ZPD tests for both EC (Energy Conservatory) and Retrotec Systems

Thank you

ZPD Testing

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