

Blower Door / Duct Blaster Test Sheet

3/29/06

Date:

House Address:

Description/Comments:

Conditioned Floor Area: _____ ft² Envelope Floor Area: _____ ft²

Gross Wall Area: _____ ft² Attic Kneewall Area: _____ ft²

Flat Ceiling Area: _____ ft² Vaulted Ceiling Area: _____ ft²

sfbe: _____ ft²

Addl. Volume (vaults, etc.): _____ ft³ Total House Volume: _____ ft³

PREPARE House for Test 1:

Close and lock all doors, windows, storm windows, and crawlspace door. Open all interior doors.
Set any combustion appliances to "Pilot". (Leave car keys as a reminder). Turn thermostats "OFF", fan switch to "AUTO".
Seal up fireplaces, window a/c's if appropriate. Zero the gauges. Slowly bring on the BD fan. Do the readings make sense?
Is ACH₅₀ in reasonable range? The canvas should suck in / bulge out when depressurizing / pressurizing.
It is easy to measure fan pressure. The calibrated fan charts convert this fan pressure to flow.

TEST 1 Blower Door *Untaped* __Depressurize (__Pressurize)

House to Outside Pressure Difference: _____ Pa (usually 50 Pa)

Ring: Open A B Fan Pressure: _____ Pa, Fan Flow = _____ cfm (from chart)

{Can't Reach Fifty Factor: _____}

CRF Factor Chart

House Pressure (Pa):	50	45	40	35	30	25	20	15
CRF Factor:	1	1.1	1.2	1.3	1.4	1.6	1.8	2.2

CFM₅₀ = Fan Flow x CRF Factor = _____ cfm₅₀

ACH₅₀ = CFM₅₀ x 60 / (Total Volume) = _____ "N" = _____
chart on other side

ACH_{nat} = ACH₅₀ / N = _____ ELR = CFM₅₀ / **sfbe** = _____

PREPARE House for Test 2:

Use cardboard and masking tape to seal off all duct registers (supply and return). Follow preparation for step 1 above

TEST 2 Blower Door *Taped* __Depressurize (__Pressurize)

House to Outside Pressure Difference: _____ Pa (usually 50 Pa)

Ring: Open A B Fan Pressure: _____ Pa, Fan Flow = _____ cfm (from chart)

{Can't Reach Fifty Factor: _____} If needed, use *CRF Factor Chart*, above

CFM₅₀ = Fan Flow x CRF Factor = _____ cfm

Subtraction Method: (A crude estimate of duct leakage)

Untaped CFM₅₀
- Taped CFM₅₀
_____ cfm₅₀

PREPARE House for Test 3:

Attach DB to air handler or return air grille. Open door or window (or remove rings from the Blower Door) to ensure house and outside pressure difference is zero. Run the duct pressure tube to the supply register.

TEST 3 Duct Blaster *Total Leakage*

___ Pressurize (___ Depressurize)

HVAC System 1

Duct to House/Outside Pressure: _____ Pa
(usually 25 Pa)

Ring: Open 1 2 3 DB Fan Pressure: _____ Pa

DB Fan Flow = _____ cfm₂₅ (from chart)

HVAC System 2

Duct to House/Outside Pressure: _____ Pa
(usually 25 Pa)

Ring: Open 1 2 3 DB Fan Pressure: _____ Pa

DB Fan Flow = _____ cfm₂₅ (from chart)

PREPARE House for Test 4:

Reverse BD flow to pressurize house to 25 Pa (This may require physically turning BD fan around for leakier houses). Use the reference pressure hose to take all DB test readings or measure duct to house pressure difference.

TEST 4 Duct Blaster *Leakage to Outside*

___ Pressurize (___ Depressurize)

HVAC System 1

Duct to Outside Pressure Difference: _____ Pa
{Ducts to House Pressure ~ zero} (usually 25 Pa)

Ring: Open 1 2 3 DB Fan Pressure: _____ Pa

DB Fan Flow = _____ cfm₂₅ (from chart)

HVAC System 2

Duct to Outside Pressure Difference: _____ Pa
{Ducts to House Pressure ~ zero} (usually 25 Pa)

Ring: Open 1 2 3 DB Fan Pressure: _____ Pa

DB Fan Flow = _____ cfm₂₅ (from chart)

HVAC System 1 area served _____ ft²
% Duct Leakage
cfm₂₅ / area served = _____ %

HVAC System 2 area served _____ ft²
% Duct Leakage
cfm₂₅ / area served = _____ %

{DB Can't Reach 25 Factor: _____}

CR25 Factor Chart

Duct Ref. Pressure (Pa):	10	15	20	25
CR25 Factor:	1.81	1.39	1.16	1.0

CFM₂₅ = DB Fan Flow x CR25 Factor = _____ cfm

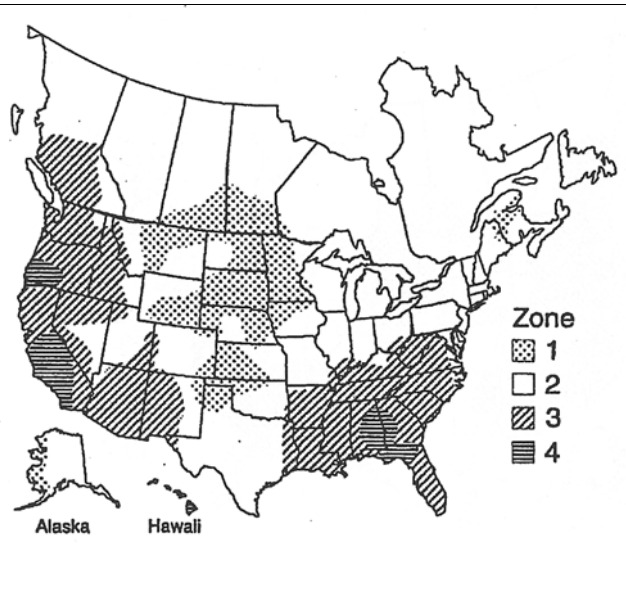


Chart for "N"

Zone	# of stories	1	1.5	2	3
1	Well-shielded	18.6	16.7	14.9	13.0
	Normal	15.5	14.0	12.4	10.9
	Exposed	14.0	12.6	11.2	9.8
2	Well-shielded	22.2	20.0	17.8	15.5
	Normal	18.5	16.7	14.8	13.0
	Exposed	16.7	15.0	13.3	11.7
3	Well-shielded	25.8	23.2	20.6	18.1
	Normal	21.5	19.4	17.2	15.1
	Exposed	19.4	17.4	15.5	13.5
4	Well-shielded	29.4	26.5	23.5	20.6
	Normal	24.5	22.1	19.6	17.2
	Exposed	22.1	19.8	17.6	15.4