

In accordance with ACCA Manual J

Report Prepared By:**Arthur G. Hewett****For:**

Actual sample of a home

, North Carolina

Design Conditions: Charlotte**Indoor:**

Summer temperature: 75
 Winter temperature: 72
 Relative humidity: 50

Outdoor:

Summer temperature: 95
 Winter temperature: 22
 Summer grains of moisture: 98
 Daily temperature range: Medium

| Building Component | | Sensible Gain (BTUH) | Latent Gain (BTUH) | Total Heat Gain (BTUH) | Total Heat Loss (BTUH) |
|---|---------------------|-------------------------|-----------------------|---------------------------|---------------------------|
| Whole House | 1,200 sq.ft. | 11,650 | 3,969 | 15,619 | 25,124 |
| Upper Level | | 11,650 | 3,969 | 15,619 | 25,124 |
| All Rooms | 1,200 sq.ft. | 11,650 | 3,969 | 15,619 | 25,124 |
| Infiltration | | 2,464 | 2,589 | 5,053 | 14,080 |
| - Tightness: Poor; Winter ACH: 1.6 ; Summer ACH: .7 | | | | | |
| Duct | | 0 | 0 | 0 | 1,196 |
| - Supply above 120; Enclosed in unheated space; R-6 | | | | | |
| People | 6 | 1,800 | 1,380 | 3,180 | 0 |
| Floor | 1,200 sq.ft. | 0 | 0 | 0 | 0 |
| - Over conditioned space | | | | | |

Manual J allows 15% of Sensible Gain added to Total Heat Gain for air conditioning.

4 - 6 air changes per hour should be required. Why? below 4 changes one is subject to the air being stale or stagnant. A conservation test done by a utility company found then had to induce air to the too well conserved home.

| Building Component | | Sensible Gain (BTUH) | Latent Gain (BTUH) | Total Heat Gain (BTUH) | Total Heat Loss (BTUH) |
|---|---------------------|-------------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|
| N Wall | 416 sq.ft. | 884 | 0 | 884 | 1,872 |
| - Wood frame, with sheathing, siding or brick; R-113 1/2 in.; none | | | | | |
| E Wall | 384 sq.ft. | 816 | 0 | 816 | 1,728 |
| - Wood frame, with sheathing, siding or brick; R-113 1/2 in.; none | | | | | |
| Window | 32 sq.ft. | 2,304 | 0 | 2,304 | 794 |
| - Double pane; Vinyl frame; Clear glass | | | | | |
| - No inside shading; Coating: None (clear glass); No outside shading. | | | | | |
| S Wall | 310 sq.ft. | 658 | 0 | 658 | 1,395 |
| - Wood frame, with sheathing, siding or brick; R-113 1/2 in.; none | | | | | |
| Door | 18 sq.ft. | 234 | 0 | 234 | 495 |
| - Wood; Hollow; No storm | | | | | |
| W Wall | 352 sq.ft. | 748 | 0 | 748 | 1,584 |
| - Wood frame, with sheathing, siding or brick; R-113 1/2 in.; none | | | | | |
| Ceiling | 1,200 sq.ft. | 1,742 | 0 | 1,742 | 1,980 |
| - Under ventilated attic; R-30 (8 - 9 inch); Dark | | | | | |
| Whole House | 1,200 sq.ft. | 11,650 | 3,969 | 15,619 | 25,124 |