wrightsoft

# Project Summary
*Entire House*

**Job:**
**Date:**
**By:**

## Project Information

For: ROGER & GINA BUSWELL
58 RED COAT DR, CAMERON, NC 28326

Notes:

## Design Information

Weather: Moore Co, NC, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 23 | °F |
| Inside db | 70 | °F |
| Design TD | 47 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 93 | °F |
| Inside db | 75 | °F |
| Design TD | 18 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 33 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 22303 | Btuh |
| Ducts | 7515 | Btuh |
| Central vent (115 cfm) | 5860 | Btuh |
| Outside air | | |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 35679 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 18244 | Btuh |
| Ducts | 6702 | Btuh |
| Central vent (115 cfm) | 2190 | Btuh |
| Outside air | | |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.98 | |
| Equipment sensible load | 26485 | Btuh |

### Infiltration

| | |
|---|---|
| Method | Simplified |
| Construction quality | Semi-tight |
| Fireplaces | 1 (Average) |

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 2334 | 2334 |
| Volume (ft³) | 19489 | 19489 |
| Air changes/hour | 0.34 | 0.15 |
| Equiv. AVF (cfm) | 111 | 49 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 2060 | Btuh |
| Ducts | 1391 | Btuh |
| Central vent (115 cfm) | 2502 | Btuh |
| Outside air | | |
| Equipment latent load | 5953 | Btuh |
| **Equipment Total Load (Sen+Lat)** | 32438 | Btuh |
| Req. total capacity at 0.70 SHR | 3.2 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | Carrier |
| Trade | CARRIER AIR CONDITIONING |
| Model | 25HBC542A00300 |
| AHRI ref | 9155624 |

| | | |
|---|---|---|
| Efficiency | 8.5 HSPF | |
| Heating input | | |
| Heating output | 42000 | Btuh @ 47°F |
| Temperature rise | 28 | °F |
| Actual air flow | 1400 | cfm |
| Air flow factor | 0.047 | cfm/Btuh |
| Static pressure | 0.50 | in H2O |
| Space thermostat | | |

Capacity balance point = 22 °F

Backup: Generic AFUE 100
Input = 10 kW, Output = 35551 Btuh, 100 AFUE

### Cooling Equipment Summary

| | |
|---|---|
| Make | Carrier |
| Trade | CARRIER AIR CONDITIONING |
| Cond | 25HBC542A00300 |
| Coil | FB4CNF042 |
| AHRI ref | 9155624 |

| | | |
|---|---|---|
| Efficiency | 12.0 EER, 14.5 SEER | |
| Sensible cooling | 29400 | Btuh |
| Latent cooling | 12600 | Btuh |
| Total cooling | 42000 | Btuh |
| Actual air flow | 1400 | cfm |
| Air flow factor | 0.054 | cfm/Btuh |
| Static pressure | 0.50 | in H2O |
| Load sensible heat ratio | 0.82 | |

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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## Design Information

Weather: Moore Co, NC, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 23 | °F |
| Inside db | 70 | °F |
| Design TD | 47 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 93 | °F |
| Inside db | 75 | °F |
| Design TD | 18 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 33 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 8889 | Btuh |
| Ducts | 2286 | Btuh |
| Central vent (40 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 11175 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 7867 | Btuh |
| Ducts | 1189 | Btuh |
| Central vent (40 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.98 | |
| Equipment sensible load | 8838 | Btuh |

### Infiltration

| | |
|---|---|
| Method | Simplified |
| Construction quality | Semi-tight |
| Fireplaces | 1 (Average) |

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 817 | 817 |
| Volume (ft³) | 7353 | 7353 |
| Air changes/hour | 0.31 | 0.14 |
| Equiv. AVF (cfm) | 39 | 17 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 569 | Btuh |
| Ducts | 487 | Btuh |
| Central vent (40 cfm) | 0 | Btuh |
| Equipment latent load | 1056 | Btuh |
| **Equipment Total Load (Sen+Lat)** | 9894 | Btuh |
| Req. total capacity at 0.70 SHR | 1.1 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Model | n/a |
| AHRI ref | n/a |
| Efficiency | n/a |
| Heating input | |
| Heating output | 0 Btuh |
| Temperature rise | 0 °F |
| Actual air flow | 0 cfm |
| Air flow factor | 0 cfm/Btuh |
| Static pressure | 0 in H2O |
| Space thermostat | n/a |

### Cooling Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Cond | n/a |
| Coil | n/a |
| AHRI ref | n/a |
| Efficiency | n/a |
| Sensible cooling | 0 Btuh |
| Latent cooling | 0 Btuh |
| Total cooling | 0 Btuh |
| Actual air flow | 0 cfm |
| Air flow factor | 0 cfm/Btuh |
| Static pressure | 0 in H2O |
| Load sensible heat ratio | 0 |

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Notes:

## Design Information

Weather: Moore Co, NC, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 23 | °F |
| Inside db | 70 | °F |
| Design TD | 47 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 93 | °F |
| Inside db | 75 | °F |
| Design TD | 18 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 33 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 9554 | Btuh |
| Ducts | 3724 | Btuh |
| Central vent (57 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 13278 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 10005 | Btuh |
| Ducts | 5116 | Btuh |
| Central vent (57 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.98 | |
| Equipment sensible load | 14757 | Btuh |

### Infiltration

| | |
|---|---|
| Method | Simplified |
| Construction quality | Semi-tight |
| Fireplaces | 1 (Average) |

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 1164 | 1164 |
| Volume (ft³) | 9312 | 9312 |
| Air changes/hour | 0.32 | 0.14 |
| Equiv. AVF (cfm) | 50 | 22 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 1278 | Btuh |
| Ducts | 694 | Btuh |
| Central vent (57 cfm) | 0 | Btuh |
| Equipment latent load | 1972 | Btuh |
| **Equipment Total Load (Sen+Lat)** | 16729 | Btuh |
| Req. total capacity at 0.70 SHR | 1.8 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Model | n/a |
| AHRI ref | n/a |
| Efficiency | n/a |
| Heating input | |
| Heating output | 0 Btuh |
| Temperature rise | 0 °F |
| Actual air flow | 0 cfm |
| Air flow factor | 0 cfm/Btuh |
| Static pressure | 0 in H2O |
| Space thermostat | n/a |

### Cooling Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Cond | n/a |
| Coil | n/a |
| AHRI ref | n/a |
| Efficiency | n/a |
| Sensible cooling | 0 Btuh |
| Latent cooling | 0 Btuh |
| Total cooling | 0 Btuh |
| Actual air flow | 0 cfm |
| Air flow factor | 0 cfm/Btuh |
| Static pressure | 0 in H2O |
| Load sensible heat ratio | 0 |

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Notes:

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Weather: Moore Co, NC, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 23 | °F |
| Inside db | 70 | °F |
| Design TD | 47 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 93 | °F |
| Inside db | 75 | °F |
| Design TD | 18 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 33 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 3861 | Btuh |
| Ducts | 1505 | Btuh |
| Central vent (17 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 5366 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 2391 | Btuh |
| Ducts | 1223 | Btuh |
| Central vent (17 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.98 | |
| Equipment sensible load | 3527 | Btuh |

### Infiltration

| | |
|---|---|
| Method | Simplified |
| Construction quality | Semi-tight |
| Fireplaces | 1 (Average) |

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 353 | 353 |
| Volume (ft³) | 2824 | 2824 |
| Air changes/hour | 0.47 | 0.21 |
| Equiv. AVF (cfm) | 22 | 10 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 213 | Btuh |
| Ducts | 210 | Btuh |
| Central vent (17 cfm) | 0 | Btuh |
| Equipment latent load | 423 | Btuh |
| **Equipment Total Load (Sen+Lat)** | 3950 | Btuh |
| Req. total capacity at 0.70 SHR | 0.4 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Model | n/a |
| AHRI ref | n/a |

| | | |
|---|---|---|
| Efficiency | n/a | |
| Heating input | | |
| Heating output | 0 | Btuh |
| Temperature rise | 0 | °F |
| Actual air flow | 0 | cfm |
| Air flow factor | 0 | cfm/Btuh |
| Static pressure | 0 | in H2O |
| Space thermostat | n/a | |

### Cooling Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Cond | n/a |
| Coil | n/a |
| AHRI ref | n/a |

| | | |
|---|---|---|
| Efficiency | n/a | |
| Sensible cooling | 0 | Btuh |
| Latent cooling | 0 | Btuh |
| Total cooling | 0 | Btuh |
| Actual air flow | 0 | cfm |
| Air flow factor | 0 | cfm/Btuh |
| Static pressure | 0 | in H2O |
| Load sensible heat ratio | 0 | |

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