

Location

Design Information

Weather: Auburn, AL, US

outside 99%/1% temps

Winter Design Conditions

Outside db 22 °F
Inside db 70 °F
Design TD 48 °F

Summer Design Conditions

Outside db 93 °F
Inside db 75 °F
Design TD 18 °F
Daily range M
Relative humidity 50 %
Moisture difference 45 gr/lb

thermostat set point (inside)

total heating load
at peak conditions

Heating Summary

Structure	58517 Btuh
Ducts	1713 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	60230 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

total house size

	Heating	Cooling
Area (ft²)	3552	3552
Volume (ft³)	37728	37728
Air changes/hour	0.37	0.19
Equiv. AVF (cfm)	233	119

Sensible Cooling Equipment Load Sizing

Structure	34536 Btuh
Ducts	837 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.98
Equipment sensible load	34665 Btuh

Latent Cooling Equipment Load Sizing

Structure	4388 Btuh
Ducts	367 Btuh
Central vent	0 Btuh
Equipment latent load	4754 Btuh
Equipment total load	39420 Btuh
Req. total capacity at 0.76 SHR	3.7 ton

total cooling load at
peak conditions

Hvac Manual J Calculation

George Dumas

A red circular graphic with a gradient, appearing as a stylized arrow or a partial circle, located to the right of the author's name.

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Table of Contents Hvac Manual J Calculation

1. Understanding the eBook Hvac Manual J Calculation
 - The Rise of Digital Reading Hvac Manual J Calculation
 - Advantages of eBooks Over Traditional Books
2. Identifying Hvac Manual J Calculation
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Hvac Manual J Calculation
 - User-Friendly Interface
4. Exploring eBook Recommendations from Hvac Manual J Calculation
 - Personalized Recommendations
 - Hvac Manual J Calculation User Reviews and Ratings
 - Hvac Manual J Calculation and Bestseller Lists
5. Accessing Hvac Manual J Calculation Free and Paid eBooks
 - Hvac Manual J Calculation Public Domain eBooks
 - Hvac Manual J Calculation eBook Subscription Services
 - Hvac Manual J Calculation Budget-Friendly Options
6. Navigating Hvac Manual J Calculation eBook Formats

- ePub, PDF, MOBI, and More
- Hvac Manual J Calculation Compatibility with Devices
- Hvac Manual J Calculation Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Hvac Manual J Calculation
 - Highlighting and Note-Taking Hvac Manual J Calculation
 - Interactive Elements Hvac Manual J Calculation
- 8. Staying Engaged with Hvac Manual J Calculation
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Hvac Manual J Calculation
- 9. Balancing eBooks and Physical Books Hvac Manual J Calculation
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Hvac Manual J Calculation
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Hvac Manual J Calculation
 - Setting Reading Goals Hvac Manual J Calculation
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Hvac Manual J Calculation
 - Fact-Checking eBook Content of Hvac Manual J Calculation
 - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
- 14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

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