

EasyLoadstm Version 3.0.3 (Revised 10/10/03)

A Residential Whole House Loads Program



N^{ith Ne}4 Practical



Inside This Manual

- How to set up design conditions and re-occurring data
- How to use EasyLoadstm
- Viewing & printing the summary
- How to calculate up to three systems in one home

EasyLoadstm Handbook \$5.95

Welcome to EasyLoads

The quick and easy way to do residential whole house loads.

Setup

From the Menu Bar select "*File*" then "*Company Setup*". The Company Setup Screen will pop up. Fill in your Company Information. This will print on the top of your Input Form.

The next step is to set the default settings. If you are using the *Electronic Consultant*tm, it is best to set your default settings when you are doing your company setup.

🛱 Company Setup			
	Compar	ny Setup Screen	
Company Name:	ABC Heating and Air Condition	ning	
Address:	123 N Main St.		
City:	Chicago	State:	Zip: 61334
Phone:	312-233-1234		Fax: 312-233-1235
Email:	sales@abcheat.com		
Sales Consultant	John Smith		
	Save		Close

Design Conditions

Set the design conditions for your area. If you are unsure of the conditions for your area, look in Manual "J" or the ASHRAE Handbook.

Capacity Multiplier

The Capacity Multiplier adjusts automatically for design temperatures other than the standard ARI rating of 95° outdoor ambient. The Capacity Multiplier may be overwritten, but is not recommended.

Moisture Removal % of Sensible Gain

The percentage you enter for your area will be multiplied by the Sensible BTUH Gain, to reflect the percentage of work needed to dehumidify the air, and obtain the Total BTUH cooling load for the house.

Note: *EasyLoads*tm was designed for typical, whole house applications and is not intended for zoning, atypical applications or room by room.

Save As Default Button

When setting up your system, it is best to review each page of the loads section and type in the values you want to be displayed each time you start the system.

Then click the **"Save As Default"** button.

The settings on the screen will come up each time you open the program.

You may change the default settings at any time.

asyLoads			
• About Exit			
Duct Loss/Gain, Infiltration	Summar	yY	Customer Information
General Input	Duct Loss/Gain. Infiltration Summary General Input Walls. Windows. Doors Design Conditions Arkansas Arkansas Little Rock AP Winter Outdoor Temp. Summer Outdoor Temp. Image: System I Image: System II C System III Software program is intended for Whole House Typical applications with out applicable to duct design and should not be used to size duct systems	Doors C	eiling, Floor, Skylights
1. Design Conditions	ttle Rock AP Summer Outdoor Te	Indoor Desig Winter mp. 70	n Conditions Summer
20 -	95	70 💌	15
		Moisture R	Removal %
G System I	of People Kitchens	of Sens	ible Gain
C System II	or reopie	30	
C System III	8	1 00	
This software program is inten not applicable to duct design a performed using a Room x Roc Equipment selection should ma the user to verify data entered	ed for Whole House Typical applicat nd should not be used to size duct s m software program. In Manufacturer's Performance Da n manually or altered within the prog	ions where equipment selection i ystems. Atypical and zoning app rta. (Latent and Sensible) It is the ram.	is desired and is lications should be
Progra	m Limitations and Guide Lines	Quick Start Guide	
Save as Default Custo	mize Data		Next



Customer Information Screen

EasyLoad

Entering Customer Information You may enter customer information

in different ways.

First, You may click on the "Open" button and select from the dropdown list if you previously saved the customer information.

Second, if you have entered the customer information in the Electronic Consultant, then you may click on the "Import" button and the fields will be populated automatically.

	Walls, Windows, Doors	Ceiling, Floor, Skylights
Load Calculation ain, Infiltration	Summary	Customer Information
e Load Calculation		
Jace Load Calculation		
ete Current File		
Date: 11/30/2000	Job#:	
npact Database		
Customer Name:		
and the second second		
Address:		
	/ /	
Address:		
City:	State:	∠ip:
Home Dhone:	Work Dhapat	
Flottle Photle	WOIK PHONE.	
Email:		
Sales Consultant:		
11		
Installation Mateo		
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Unstalligitor involes		
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installing of two issues		

General Input Screen

Entering Design Conditions

You should enter the specific design conditions for each job.

- 1. Select the State and the City
- 2. Enter the Indoor Design conditions
- 3. Select the system you're working on

4. Enter the number of people who live in this house.

5. Enter the number of Kitchens.

6. Enter the Moisture Removal % of Sensible Gain for your area.

7. Click "Next".

Duct Loss/Gain, Infiltration General Input	Summary Walls, Windows, Doors	Customer Information Ceiling, Floor, Skylights
Winter Outdoor Temp.	Summer Outdoor Temp.	Winter Summer 70 - 75 - Moisture Removal %
System I # of I System II System II	People Kitchens B 1	
not applicable to duct design and sh performed using a Room x Room so	twinder rodse rypical applications where equ ould not be used to size duct systems. Atypica ftware program.	ipment selection is desired and is al and zoning applications should be
Ins survaile program is interfielded to ord applicable to duct design and sh performed using a Room x Room so Equipment selection should match M the user to verify data entered in mar	I while house rypical applications where equi ould not be used to size duct systems. Atypica tware program. Ianufacturer's Performance Data. (Latent and usally or altered within the program.	ipment selection is desired and is al and zoning applications should be Sensible) It is the responsibility of

General Input Screen

Handa all Contant al Data	🖷 EasyLoads		
<u>How to add Customized Data</u>	Fie + About Exit		
Vou mov add additional building	Duct Loss/Gain, Infiltration	Summary	Customer Information
Tou may add additional building	General Input	walls, windows, Doors	Ceiling, Floor, Skylights
components and their specifications.	1. Design Conditions		
	Arkansas 👻 Little Ro	ck AP 🔹	indoor Design Conditions
Review Manual "J" or ASHRAE	Winter Outdoor Temp.	Summer Outdoor Temp.	Winter Summer 70 75
manuals for proper specifications.			Moisture Removal %
You will start by clicking on the "Customize Data" button located at the bottom of the General Input Screen.	System I System II System II System III System II System II System II System II System II	Kitchens Image: State of the st	of Sensible Gain 30 quipment selection is desired and is ical and zoning applications should be nd Sensible) It is the responsibility of
The Customize Data Screen will popup.	Program L// Save as Default Customize E	tations and Guide Lines	t Gude

<u>Customize Data Screen</u>

Adding Customized Data

1. Click on the tab of the building component that you want to modify.

2. Enter the data as outlined in your reference manuals (descriptions, U-Values, and HTM Values).

3. Click the Add/Update button to save your changes.

To proof the entries, you may wish to print the changes or new entries.

Click here to print/preview the active page.

Click here to print all the pages.

Click "Exit" to return to the General Input Screen.

Heat Transfer Multipliers			
Skylights	Walls Doors	Windows	Floors
(coming)		Dourout	1 1000
Туре # 🛛 🗛	Subtype 16		
General Type 16-0	eilings Under a Ventilated Attic (Dark	Colored Roof)	•
Construction Type	insulation		•
Heating U-Value 0.599	,		
10	deg F. 15 deg F. 20 de	g F. 25 deg F. 30 deg f	F. 35 deg F.
Cooling HTM 14.9	17 19.2	21.4 21.4	23.6
It is the	sole responsibility of the Us	ser to verify any data altered	a or entered.
Print Data	Delete	Add/Update	
Print All Data			Exit

Note: It is the sole responsibility of the user to verify any and all new or altered data entered into this system.

How to add data; Walls, Windows, Doors

Selecting the System

One of the new features in this program allows you to calculate up to three different systems in the same residence. To start, select system I, II, or III.

Walls

1. Select the Wall <u>Direction</u>, click the down arrow and select from the drop -down menu, do not type in the "Direction" box or in any of the walls, windows, or doors description fields.

2. Enter the <u>Wall ID</u> (optional).

3. Enter the <u>Wall Type</u> (If a basement wall, then below grade and above grade may apply).

- 4. Enter the Wall Construction
- 5. Enter the Wall Length

6. Enter the <u>Wall Height</u>

(Manual "J" considers the East wall and the West wall the same when calculating loads, so you may combine those walls if you prefer).

Windows

- 1. Enter the <u>Window Type</u>
- 2. Enter the type of <u>Window Frame</u>

3. Enter the window <u>Area</u> (Area is expressed in square feet).

Doors

1. Enter the **Door Type**

- 2. Enter the **Door Construction**
- 3. Enter the Door Area

Click the green <u>Add</u> button after completing each direction. The information will be added to the box at the bottom of the screen.

Duct Los	Sain Infiltratio	n Y	Sun	many		γ	Customer Inform	ation
Gen	eral Input		Walls, Winde	ows, Doors			Ceiling, Floor, Skyli	ghts
Direction 2. Walls		Wall ID 1N	oting 0 Cidu	@ Syst	em 1	C Syster	n 2 CSys	tem 3
Const	2 - Walls-W	ity insulation + 1/	2in Gynsum	Board	or other	ninsn		
		ity modution + n.	zin oypoun	Doard				
Height	8	= Area 520	÷	Htg U-V	Value	0.09	Clg HTM	2.1
3. Windows								
Туре	8 - Double pa	ane window						•
Frame 🖡	A - Clear Gla	ss Wood frame -	draperies of	r venetian	blinds			
Area	56 🖨	□ Include Storm in 3		Htg U-	Value	0.551	Clg HTM	13.6
4. Doors Type	10 - Wood D	oor						
Const	D - Solid Cor	e						
Area	21 🖨	Include Storm in :		Htg U-	Value 🛛	0.46	Clg HTM	10.9
Dir. Wall II	D Type	Const L	Н	Area	Htg	Clg	Window Frame	Area
N 1N	12 - Walls-	C - R-11 C; 65	8	520	0.09	2.1	3 - Double A - Clea	arG 56

Button Descriptions

Add Button

Click this button to add the selected information to the summary for each wall direction. It will be listed on the bottom of the screen.

The <u>Add/Clear</u> button will add the information on the screen to the summary and then clear the settings back to zero.

The **<u>Delete</u>** button will remove any line that is highlighted.

If you wish to change an entry, click on the desired wall direction from the list at the bottom, make the desired changes and click the <u>Update</u> button. You will be asked if this line is correct.

Walls, Windows, Doors Screen

File + About Exit									
Duct Lo	oss/Gain, Infiltration		Sum	mary		1	Custome	r Information	
Ge	eneral Input	`	Walls, Windo	ws, Doors	· 1		Ceiling, Flor	or, Skylights	
Direction	• •	Wall ID 1N		• Sys	tem 1	⊂ Syste	em 2	⊂ System (3
Туре	12 - Walls-Woo	od frame w/shee	ting & Sidin	g, veneei	or other	finish			•
Const.	C - R-11 Cavity	insulation + 1/2	in Gypsum	Board					•
Length Height	65 🖨 =	Area 520	•	Htg U-	Value	0.09	Clg H	гм 🔽 2	.1
3. Windows Type	3 - Double pane	e window							•
Frame	A - Clear Glass	Wood frame -	draperies o	r venetiar	n blinds				·
Area	56 🔷 🗆	Include Storm in S		Htg U-	Value	0.551	Clg H	FM 1:	3.6
4. Doors Type	10 - Wood Doo	or							·
Const.	D - Solid Core								<u>·</u>
Area	21 🖨 🗆	Include Storm in S		Htg U-	Value	0.46	Clg H	ГМ 1).9
Dir. Wal	IID Type Co	onst L	Н	Area	Htg	Clg	Window	Frame	Area
N 11	N 12-Walls- C	-R-11C: 65	8	520	0.09	2.1	3 - Double	A - Clear G	56
4		10		_					2
Add	Add/C	Xear De	aiete	Updat	e (Clear		Next	

The <u>Clear</u> button will return the settings to zero. Click the <u>Next</u> button to go to the next screen.

<u>Ceiling</u>

Select the <u>Ceiling Type</u> and then the <u>Ceiling Construction</u>

Enter the <u>Length</u> and <u>Width</u>. *(the area will be calculated automatically).*

Click on <u>Copy Dimensions</u> This will copy the length and width to the Floor Section and the Infiltration section.

Floor

Select the <u>Floor Type</u> and then the <u>Floor Construction.</u>

<u>Skylight</u>

To add a skylight, Select the <u>Type</u> and Frame, then Area.

Click the green **Add** button after completing each section. The information will be added to the box at the bottom of the screen.

<u>Ceilings, Floors, Skylights Screen</u>

a about Eut										
- Audut Exit	ict Loss/Gain Ji	ofiltration		Su	mmany		γ	Custome	Informat	ion
	General Inpu	nt		Walls, Wind	dows, Doors		γ ^L C	eiling, Flo	or, Skylic	hts
. Ceiling Type	 Syste 16 - Ceilings 	em 1 s Under a Ve	⊂ System 2 Intilated Atti	c (Dark C	⊂ System 3 olored Ro	of)		Copy Dim	nensions	
Const.	E - 6in-7in ir	sulation R-2	2	<u>``</u>		and a state of the				
Length Width	65 \$ 30 \$	= Area	1950	•	Htg U	-Value	0.048	Clg H	тм	1.84
. Floor Type	20 - Floors	over open cr	awl space (or garage	ŝ					
Length Width	65	= Area	1950		Htg L	I-Value	0.052	Clg H	тм	0.46
. <mark>Skyligl</mark> Type	h <mark>ts</mark> 7 - Double (Clear Glass								-
Frame Area	G - Wood F	rame / Inclin	ation angle	= U deg	Htg L	J-Value	0.665	Clg H	тм	143
eiling	Const	L W	Area	Htg	Clg	Floor	Const	L	W	Area
i - Ceiling B	E - 6in-7in i 👘 I	65 30	1950	0.048	1.84	20 - Floors	D - Hardwc	65	30	1950
6 - Ceiling E	E - 6in-7in i I	65 30	1950	0.048	1.84	20 - Floors	D - Hardwc	65	30	195
	Add	Add/Oper	Di Di	ajete	Linda	te	Clear		Next	

How to add data; Duct Loss/Gain & Infiltration

Infiltration

Click the tab for whichever system you are working on.

If you clicked the "Copy Dimension" button on the previous screen, the length and the width was filled in for the 1st floor.

This software allows you to add up to four floors, plus a basement.

You must add each floor of the building when figuring infiltration, even though you may have combined the walls.

If there is a basement, then enter the wall height that is <u>above</u> grade.

Structural Air Tightness

Click the down arrow and select from Poor, Average, or Best structural air tightness. See the <u>Building Component Envelope Evaluation</u> page in this manual for additional explanation.

Fireplace

Click the down arrow and select from Poor, Average, or Best.

of Fireplaces

Enter the number of fireplaces.

Air changes per hour will automatically be filled in.

Ductwork Location and Ductwork Insulation

Click the down arrow and select the duct location, then select the correct R-Value.

You will note two choices, Supply Air Temp Above 120 deg F. and Supply Air Temp Below 120 deg F. Your selection should be based on furnace type and/or heat pump.

Also, if you have ductwork located in more than one location that is in <u>unconditioned</u> space, then select the type that is the highest percentage being used.

Click Next to go to the Summary Screen.

Duct Loss/Gain, Infiltration Screen



Summary

Summary Screen

Review the Sensible and Latent calculations.

In the Heat Loss / Heat Gain columns, look for zeros or any unusually large or small amounts.

The box in the lower right hand corner displays the suggested size for the air conditioner and the gas or electric furnace.

Printing

You may print a summary from this screen, or wait until you print the Proposal to do it.



You are also able to print a blank input form for collecting the information needed to do a loads calculation.

Note:

Calculations are estimated values only. Please refer to our recommended room by room Loads Program for exact values.

Equipment selection should match Manufacturer's Performance Data for Latent and Sensible.

To calculate two or three systems in the same building

Assumption: Two story single family home over a crawl space. One kitchen on the first level. Two independent systems, one on each floor.

For the first level you must calculate the floor, and all walls exposed to outdoor ambient temperature. You do not need to add the ceiling, the second level is conditioned space. You must enter the first floor dimensions (W+L+H) on the Infiltration screen.

For the second level you must calculate the ceiling, and all walls exposed to outdoor ambient temperature. You do not need to add the floor, the first level is conditioned space. You must enter the second floor dimensions (W+L+H) on the Infiltration screen. Do not combine the wall height of the first and second floors.

If there are three systems on three different floors, one above the other, then the middle level would not have a ceiling or a floor due to both areas are conditioned space.

Usually the number of people occupying the house is estimated to be 2 per bedroom. When calculating two or more systems, only include the number of people in the area being occupied during peak load conditions, family dining room, etc.

Note: This software is not intended for Zoning. Room by room software is required.



Building Component Envelope Evaluation

Best:

<u>*Walls*</u>; Continuous infiltration barrier installed on outside of the walls which covers the entire wall area. All cracks and penetrations are sealed.

<u>Windows & Doors</u>: That are certified to have less than .25 CFM per running foot of crack.

<u>Fireplaces</u>: Combustion air from outdoors, air intake and flue equipped with tight damper and glass doors.

Ductwork: No duct leakage.

Average:

<u>*Walls*</u>; No infiltration barrier, some cuts and penetrations in plastic film vapor barrier.

<u>Windows & Doors:</u> That are certified to have between .25 and .5 CFM per running foot of crack.

<u>Fireplaces</u>: Combustion air from the conditioned space, flue equipped with tight damper and/or glass doors.

Ductwork; Some duct leakage to unconditioned space.

Poor:

Walls: No infiltration barrier or plastic vapor barrier.

<u>Windows & Doors</u>: That are not weather stripped and are not certified to have less than .5 CFM per running foot of crack.

<u>Fireplaces</u>: Combustion air from the conditioned space, no flue damper or glass doors, or poorly fitted damper.

Ductwork; Considerable duct leakage to unconditioned space.



EasyLoads Practice Exercise 1 Ranch Over Crawl Space

<u>General Input Screen</u>							
General Information		Winter	Summer				
Outdoor Temperature		20	95				
Indoor Design Temperature		70	75				
Number of People	6						
Number of Kitchens	1						
Moisture Removal % of Sensible Gain	30						
Walls, Windows,	and D	oors Scr	een				

<u>Walls, Windows, and Doors Screen</u> Ignore Wall ID

Direction	Length	Windows	Doors
North	65'	56'	21'
South	65'	60'	21'
East	30'	15'	
West	30'	40'	
Wall Height	8'		

Wall Type

Wood frame w/ sheathing & siding R-13 wall cavity w/ 3/4" beadboard

Window Type

Double Pane Clear glass w/Wood frame & drapes

Door Type

Solid Core Wood

Ceiling, Floor, Skylights

Ceiling:

under ventilated attic (dark roof) 6" - 7" insulation R-22

Floor:

Over open crawl space Hardwood + R=19

Skylights: None

<u>Duct Loss/Gain, Infiltration</u> <u>Structural Air Tightness:</u>

Average

<u>Fireplace:</u> Average

<u># of Fireplaces:</u> 1

Ductwork Location

- = Exposed to outdoor ambient
- = Attic, Garage, Open Crawl Space R-4
- = Percent of area in duct work location 100%
- = Supply air temp above 120 deg F. (fossil fuel)

Notes:



EasyLoads Practice Exercise 2 Ranch Over Basement

<u>General Input Screen</u>							
er							

<u>Walls, Windows, and Doors Screen</u> Ignore Wall D

Direction	Length	Windows	Doors
North	65'	56'	21'
South	65'	60'	21'
East	30'	15'	
West	30'	40'	
Wall Below Grade	4 1/2'		
Wall Above Grade	3 1/2'		
Wall Standard	8'		

<u>Wall Type</u>

Basement: Masonry w/1" foam (R-5) all **Standard:** Wood frame w/ sheathing & siding R-13 wall cavity w/ 3/4" beadboard

<u>Window Type</u>

Double Pane, Clear glass w/Wood frame & drapes Door Type

Solid Core Wood

Ceiling, Floor, Skylights

Ceiling: Under ventilated attic (dark roof) 6" - 7" insulation R-22

Floor: Basement only, Slab

Skylights: None

Duct Loss/Gain, Infiltration

<u>Structural Air Tightness:</u> Average

<u>Fireplace:</u> Average

<u># of Fireplaces:</u>

1

Ductwork Location

- = Basement
- = Located in conditioned area
- = No insulation
- = Percent of area in duct work location 100%
- = Supply air temp above 120 deg F. (fossil fuel)

Notes:



EasyLoads Practice Exercise 3 Two-Story Colonial w/basement, crawl space, & two systems

<u>General l</u>	<u>General Input Screen</u>				
General Information		Winter	Summer		
Outdoor Temperature		20	95		
Indoor Design Temperature		70	75		
Number of People	8				
Number of Kitchens	1				
Moisture Removal % of Sensible Gain	30				
Square Footage		1st Floor 1230	2nd Floor 918		

Walls, Windows, and Doors Screen

Direction	Length	Windows	Doors
North Basement Crawl Space 1st Floor 2nd Floor	34' 24' 58' 34'	0 0 48' 40'	42'
South Basement Crawl Space 1st Floor 2nd Floor	34' 24' 58' 34'	7.5' 0 24' 30'	
East Basement Crawl Space 1st Floor 2nd Floor	27' 8' 35' 27'	7.5' 0 48' 24'	21'
West Basement Crawl Space 1st Floor 2nd Floor	27' 13' 35' 27'	0 0 12' 12'	
<u>Masonry Wall</u> Below Grade Above Grade	Height 5.5' 2.5'		
Wall Standard 1st Floor 2nd Floor	8' 8'		

<u>Wall Type</u>

Basement: Masonry w/R-11 all

Standard: Wood frame w/ sheathing & siding R-13 wall cavity w/ 3/4" beadboard

<u>Window Type</u>

Double Pane, Clear glass w/Wood frame & drapes

Door Type

Solid Core Wood

Ceiling, Floor, Skylights

Ceiling under a vented attic (dark roof) Ceiling: 1st Floor = 24' x 13' R-19 2nd Floor = 34' x 27' R-19

Floor: 1st Floor = Basement only, Slab 1st Floor = Crawl Space 24' x 13' Hardwood R-11 (floor over open crawl space or garage)

2nd Floor = None

Skylights: None

Duct Loss/Gain, Infiltration Structural Air Tightness: Average

<u>Fireplace:</u> Average (1)

Ductwork Location

- = Crawl Space, Exposed in Unheated Space
- = Vented or Unvented Crawl Space = R-4
- = Percent of area in duct work location 25%
- = Supply air temp above 120 deg F. (fossil fuel)
- = 2nd Floor system = attic location, R-4



Summary: Ranch Style

Answers:

Total Loss/Gain: Total Heat Loss = 39,448 Total Heat Gain = 27,729

Capacity Multiplier 1.00 A/C Unit BTUH Rating = 27,729

AC = 2.5 Ton Furnace Output BTUH = 39,448 Electric Furnace KW = 11.6

Summary Screen: Ranch Over A Crawl Space

General Input		Walls, Windows, Doors Ceiling, Floor, Skylights				
Duct Loss/Gain, Infiltration		Summa	ry Customer	Information		
System 1		System	2 Syst	em 3		
.oss/Gain Summary	220 10 20					
	Heat Loss	Heat Gain	Total BTUH Gain	27729		
Walls	4576	2221		00		
Windows	4711	4926		.00		
Doors	966	458	A/C Unit BTUH Rating	27729		
Ceilings	4680	4095				
Skylights	0	0	Please refer to our Room by Room Loads			
Floors	5070	1560	Program for Duct Design value	es.		
People/Kitchen	0	3000	r			
Infiltration	14300	2288	Print Input Form			
Duct Loss/Gain	5145	2782	Print System II Summa	ry		
Total Sensible	39448	21330	A/C Unit Nom. Selection*	2.5		
Total Latent	0	6399	Furnace Output BTUH	39448		
Total Loss/Gain	39448	27729	Electric Furnace KW	11.6		
			1			

Answers:

Total Loss/Gain: Total Heat Loss = 43,723 Total Heat Gain = 25,372

Capacity Multiplier 1.00 A/C Unit BTUH Rating = 25,372

AC = 2.5 Ton Furnace Output BTUH = 43,723 Electric Furnace KW = 12.8

Summary Screen: Ranch Over A Basement

1 EasyLoads					
File * About Exit				~	
General Inpu	at	Walls, Windows, Doors Ceiling, Floor, Skylights		j, Floor, Skylights	
Duct Loss/Gain, Infilt	ration	Summa	ry	Custom	er Information
System 1		System	2	Sj	ystem 3
- Loss/Gain Summary					
	Heat Loss	Heat Gain	-		
Walls	12526	3749	- Total BTUH Gain 25372		25372
Windows	4711	4926	Capacity Multiplier 1.00		1.00 -
Doors	966	458	A/C U	nit BTUH Rating	25372
Ceilings	4680	4095			
Skylights	0	0	Please refer to our Room by Room Loads		
Floors	2340	0	Program for I	Juct Design Valu	es.
People/Kitchen	0	3000			
Infiltration	18500	3289		Print Input Form	1
Duct Loss/Gain				Print System I Sumr	narv
Total Sensible	43723	19517	A/C Unit	Nom. Selection*	2.5
Total Latent	0	5855	Furna	ce Output BTUH	43723
Total Loss/Gain	43723	25372	Elect	ric Furnace KW	12.8
*Equipment Selection	should match M	Manufacturers Pe	rformance Data	. (Latent and Se	nsible)

Summary: Two-Story Colonial w/Basement and Two Systems

System I Answers:

Total Loss/Gain: Total Heat Loss = 27,224 Total Heat Gain = 19,223

Capacity Multiplier 1.00 A/C Unit BTUH Rating = 19,223

AC = 2.0 Ton Furnace Output BTUH = 27,224 Electric Furnace KW = 8.0

Summary Screen System I

EasyLoads					
File - About Exit					
General Inpu	General Input Wal		Walls, Windows, Doors		Floor, Skylights
Duct Loss/Gain, Infilt	ration	Summ	nmary Customer Information		er Information
System 1	System 1		m 2 System 3		stem 3
Loss/Gain Summary					
101-11-	Heat Loss	Heat Gain	Tota	I BTUH Gain	19223
vvans	7353	25/6	Capaci	ty Multiplier	1.00 -
Windows	4050	4661	A/C Unit F		10222
Doors	1449	687	A/C UNIT E	STUH Kating	19223
Ceilings	827	718	Discoursefor to a	ur Doom by D	com Loodo
Skylights	0	0	Please refer to our Room by Room L		Join Loaus
Floors	2870	575	Program for buc	t Design value	· ·
People/Kitchen	0	3600		194100 1945	
Infiltration	10011	1780		Print Input Form	
Duct Loss/Gain	664	190	Pint	t System I Summ	aw
Total Sensible	27224	14787	A/C Unit Non	n. Selection*	2.0
Total Latent	0	4436	Furnace (Output BTUH	27224
Total Loss/Gain	27224	19223	Electric F	Furnace KW	8.0
*Equipment Selection	should match M	lanufacturers Pe	erformance Data. (L	atent and Sen	sible)

System II Answers:

Total Loss/Gain: Total Heat Loss = 17,465 Total Heat Gain = 11,973

Capacity Multiplier 1.00 A/C Unit BTUH Rating = 11,973

AC = 1.0 Ton Furnace Output BTUH = 17,465 Electric Furnace KW = 5.1

Summary Screen System II

Constal Inc.	, Y	Artalla Artinde	Dana Y	Coiling El	oor Chuliabte
Duct Loss/Gain Infil	General Input		m 1	Leiling, Floor, Skylights	
Duct Ebss/ cidin, milli		Junna		Customeri	nionidaon
System 1		System 2		System 3	
oss/Gain Summary					
	Heat Loss	Heat Gain	Total B	TUH Gain	11973
Walls	3101	1506			00
Windows	2921	3046	Capacity	Multiplier	.00
Doors	0	0	A/C Unit BTU	JH Rating	11973
Ceilings	2433	2111			
Skylights	0	0	Please refer to our Room by Room Load		m Loads
Floors	0	0	Program for Duct D	esign values	(
People/Kitchen	0	0			
Infiltration	6732	1346	Prir	nt Input Form	
Duct Loss/Gain	2278	1201	Print Sy	stem II Summar	y
Total Sensible	17465	9210	A/C Unit Nom.	Selection*	1.0
Total Latent	0	2763	Furnace Ou	tput BTUH	17465
Total Loss/Gain	17485	11973	Electric Fur	nace KW	5.1



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