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**Castline Systems**

# **Heat Loss Calculator**

**For Windows**



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# Overview

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## About Heat Loss Calculator

### Specification

Heat Loss Calculator for Windows (HLC) produces heat loss calculations for the design of heating systems, using the methods described in CIBSE guide A3 'Thermal Properties of Building Structures'. Copies of this guide may be obtained from The Chartered Institution of Building Services Engineers: Delta House: 222 Balham High Road: London SW12 9BS.

### Windows 95/NT 32 Bit

Heat Loss Calculator for Windows will only operate in a 32-bit environment - Windows 95, Windows 98, Windows NT.

Heat Loss Calculator for Windows will **not** operate in Windows 3, Windows 3.1 or Windows for Workgroups.

### Resolution

For best results set your screen resolution for 800 x 600 or higher. 640 x 480 is not recommended.

### Database

Heat Loss Calculator for Windows (32 bit) uses Microsoft Access Database Engine Version 3.



# Getting Started

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## Before you begin

If you require additional help whilst using Heat Loss Calculator for Windows, just press the **F1** key at any time to bring up either a help screen related to the area of the programme that you are using, or the main Heat Loss Calculator for Windows help index. To return to the list below after reading each of the items, just click on the **Back** button below the menus. Finally, to exit Help and go back to the programme itself, press **Alt & F4** or click on the **File** menu then choose **Exit**.

# Printing

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## Setting Your Printer

Before printing you may wish to check that the settings for your particular printer are correct. Choosing **Printer Set-up** will display the standard *Windows* Printer Control Box and allow you to change any required settings. However, in most cases this should not be necessary.

The printer should be set for A4 paper 210 x 297mm in portrait orientation.

# User defaults

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## Watts

You may perform calculations to give results in either Watts or Btu's. To calculate for Watts select 'Watts' from the 'Preferences' drop down menu.

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## Btu/hr

You may perform calculations to give results in either Watts or Btu's (British thermal units). To calculate for Btu/hr select 'Btu/hr' from the 'Preferences' drop down menu.

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## Outside temperature

The default outside temperature is  $-1^{\circ}\text{C}$ .

You may change this default value to any figure between  $-20^{\circ}\text{C}$  to  $+20^{\circ}\text{C}$ .

To change the outside temperature default, select 'Outside temperature' from the 'Preferences' drop down menu. The current outside temperature is displayed in the menu.

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## Intermittent firing

The default intermittent firing is 15%.

Intermittent firing relates to the allowance made for the intermittent firing of the boiler or any other additional margins that need to be taken into account such as losses through pipes.

You may adjust the default intermittent firing default value to any figure between 0 and 20%.

To change the intermittent firing default select 'Intermittent firing' from the 'Preferences' drop down menu. The current intermittent firing percentage is displayed in the menu.

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# Step by step Guide

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## Setting up a database entry

Before attempting any calculation you will need to set-up a database entry.

- 1) Add a new customer.

Click on button labelled '**premises**' to reveal the premises screen. Click '**add**' to create a new blank entry. Fill in the name and address etc. and then click '**update**'. Click '**close**' to return to the main calculation screen.

- 2) Add a new room

Ensure that the new customer details has been selected by clicking on the bottom left 'data' arrows to locate the project that you have just created.

On the right hand side click on '**new**' to create a calculation entry.  
Set the Building Structure items from the 'Building Structure' Tab  
Set the room details from the 'Room Details' Tab.

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## Data entry

Generally work along the tabs at the bottom of the calculation screen from left to right.

- 1) Select the Tab labelled 'Building Structure' and set the outside wall, inside wall, window, floor and ceiling parameters for the structure.
- 2) Select the tab labelled 'Room Details' and select the room category for the room and then select the rooms above and below from the drop down list boxes. Fill in the room dimensions and window area.
- 3) Click the 'Calculate' button
- 4) Click on the calculate button to perform the calculation. The results will be displayed on the right hand side of the screen for all of the heat losses for the room, with the heat requirement displayed at the bottom. To print the individual calculation results click on the 'Print' button.
- 5) When you have completed the project you may view the totals by selecting the 'Project' tab. To print the project results click on the 'Print' button.

# Troubleshooting Guide

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## Where to look for answers

If the computer will not print, or you have other problems of this nature, refer to **Computer Related Problems**. If you are having problems in using the programme we recommend that you refer to **Heat Loss Calculator for Windows Getting Started** featured earlier.

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## Computer or Printer Related Problems

### Prints over two or more pages:

Ensure that the printer has been configured to A4 portrait (see **Printing**).

**Make sure your computer is configured for the correct printer and that it is set for use with A4 paper.**

Make sure that your printer will print to the bottom of the page. Some printers will only print to within 1" (25mm) of the bottom of the page. If this is the case the only alternative is to replace your printer.

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## Operation problems

If your computer hangs, jumps out of the programme or keeps throwing up error codes then it is best to re-boot the computer. Our experience has found that this cures most problems.

**The following list of error codes may give an insight to some of the more obvious problems.**

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## Error codes

5	Illegal function call	55	File already open
6	Overflow	57	Device I/O error
7	Out of memory	58	File already exists
9	Subscript out of range	61	Disk full
11	Division by zero	67	Too many files
13	Type mismatch	68	Device unavailable
28	Out of stack space	70	Permission denied
48	Error in loading DLL	71	Disk not ready
51	Internal error	74	Can't rename with different drive
52	Bad file name or number	75	Path / File access error
53	File not found	76	Path not found
54	Bad file mode		

Most of the above errors are self evident but care must be taken to input the correct data, omitting data may cause the programme to error.

Error numbers 5 to 51 are mathematical / data errors

Error numbers 52 to 76 are disk / file / path errors

Printer Errors should be trapped by the operating system







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