

WHOLE-HOUSE HEAT LOSS & GAIN WORKSHEET

PRELIMINARY ESTIMATE

Homeowner Name _____ Phone Number _____
 Address _____ Zip _____

DESIGN CONDITIONS

WINTER: Inside Design Temperature _____ minus Outside Design Temperature _____ = Heating Temperature Difference _____ (1)
 SUMMER: Outside Design Temperature _____ minus Inside Design Temperature _____ = Cooling Temperature Difference _____

TABLE A - HEATING - WINDOWS & DOORS

Window Type	Factor	x Area	=BTUH Loss
Obl. Hung Casement Or sliding	Single Glass	1.5	
	Double Glass	.9	
	Triple Glass	.7	
Fixed	Single Glass	1.4	
	Double Glass	.9	
	Triple Glass	.6	
Basement or Jalousie, w/storms	2.2		
Sliding Doors - Double Glass	2.0		
Other Doors w/storms	1.3		
TOTAL			

TABLE B - COOLING - WINDOWS & DOORS

Direction	Outdoor Design Temperature and BTUH/Square Foot												x Area	=BTUH Gain
	Single Glass				Double Glass				Triple Glass					
	90	95	100	105	90	95	100	105	90	95	100	105		
N or shaded	20	25	30	35	15	20	20	25	10	15	15	20		
NE & NW	35	40	45	55	30	35	35	40	25	25	30	30		
E & W	55	55	60	70	45	50	50	55	35	40	40	45		
SE & SW	45	50	55	60	40	40	45	45	30	30	35	40		
S	30	30	35	45	25	25	30	30	20	20	20	25		
Doors (Sliding glass doors treated same as windows)												15		
TOTAL														

CONSTRUCTION DATA		HEATING		COOLING	
DESCRIPTION	SQ. FT.	U Factor (3)	BTUH Loss	Cooling Factor (3)	BTUH Gain
Gross Walls					
Gross Walls					
Windows & Doors (From Table A or B)					
Net Walls					
Net Walls					
Ceiling					
Floor					
People (Assume two per bedroom)				300	
Appliances (Kitchen Load)					1200
Sensible Total					
Design Temp. Diff. For Heating Latent Load Factor for Cooling			X (1)		X1.3
SUB TOTAL LOSS/GAIN					
DUCT LOSS/GAIN MULTIPLIER (2)			X1.15		X1.10
TOTALS		Heating		Cooling	

(1) Multiply heating design temperature difference by total of heat loss shown on Sensible Total line.

(2) Calculate only if duct is in unconditioned space. Assume minimum 2" flexible or 1" rigid insulation.

SEE ACCA Manual J Tables 3 & 6 for other multipliers.

(3) Use factors from Table C on back. Additional factors can be obtained from ACCA Manual J.

*This worksheet is not recommended for a room-by-room calculation, which is necessary for proper duct design.