Heating Appliance Worksheets – Retrofit

Building Department: 604-990-2480, building@dnv.org, fax: 604-984-9683

COMPLETION: To ensure legibility, please complete (type online) then print. Sign the printed copy and submit to the department and address indicated above.

Heating Load Worksheet – Square Foot Method	GAS	
Job Address		
Completed by		
Phone		Quality First #	
Signature		Date	

CALCULATIONS

Step 1 Calculate **Dwelling Heat Load =**

_____ sq ft X _____ BTUH/sq ft = [   ] BTUH A

Step 2 If home has a heated crawlspace, calculate **Crawlspace Heat Load** =

_____ sq ft X _____ BTUH/sq ft = [   ] BTUH B
(Total heated area of crawlspace)   (Crawlspace Heat Load Factor)

Step 3 Base Heat Load @ 55 ºF DTD   (Box A + Box B = Box C) = [   ] BTUH C

Step 4 Multiply Base Heat Load (Box C) by Regional Temperature Adjustment (RTA) Factor from Design Temperature Chart   X [0.96   ] D

Step 5 **Regionally Adjusted Base Heat Load** (Box C x Box D = Box E) = [   ] BTUH E

Step 6 Add thermostat **Setback Pick-up factor of 10%**

0.10 x _____ BTUH in Box E = [   ] BTUH F

Step 7 If dwelling heated with hot-water appliance, skip Step 8; proceed to Step 9.

Step 8 Add heat load due to outdoor air brought in for combustion (B149.1 & .2)
With 4" Ø duct and directly connected to R.A. Plenum

Add 3000 BTUH times TRA factor (Box D) = 3000 BTUH x _____ = [   ] BTUH G

Step 9 Add Box E + F + G =
Total BTUH for Appliance Selection = [   ] BTUH H

Document Number: 4067612

Heating Appliance Worksheets – Retrofit

Building Department: 604-990-2480, building@dnv.org, fax: 604-984-9683

COMPLETION: To ensure legibility, please complete (type online) then print. Sign the printed copy and submit to the department and address indicated above.

Heating Appliance Selection Worksheet – Forced Air Heating System	GAS

CALCULATIONS

Total Heated Floor of Dwelling = [ ] **Sq ft**

Step 1 (Box 4 – Heat Loss Summary Worksheet) = [ ] BTUH **A**

Step 2 Use manufacturer's specification tables to select an appliance with a BTUH output of at least the value of Box A (or one (1) size larger **only**).

Make _____ Input = [ ] BTUH **B**

Model _____ **Output** = [ ] BTUH **C**

High Altitude   Two-stage furnace-size to High-0Fire Input and Output

Step 3 Selected Appliance Air Circulation (CFM):

Duct static Pressure @ .3" W.C. External Static Pressure (ESP) [ ] **D**

Add ESP (inches W.C.) per manufacturer's data for installed Cooling Coil = [ ] **E**

Add ESP (inches W.C.) per manufacturer's data for installed High Efficiency Air Filter = [ ] **F**

Total System ESP (Box D + Box E + Box F) = [ ] **G**

Motor Speed Selected   @   ESP (Box G) = Heating CFM [ ] **H**

Step 4 Temperature Rise

$$\frac{\text{Furnace OUTPUT}}{\text{HEATING CFM X 1.1}} = \frac{\text{(Box C)} \qquad \text{BTUH}}{\text{(Box H)} \qquad \text{CFM x 1.1}} =$$ [ ] **F** **I**

TEMPERATURE RISE

Temperature Rise Range from Manufacturer's Technical Specifications (Box 1) MUST fall within this range = _____

Step 5 Duct System Designed for Cooling: _____ CFM [ ] CFM **J**

COOLING CFM

COOLING CAPACITY
@ 400 CFM/TON

Tons	1.5	2.0	2.5	3.0	4.00	5.00
CFM	600	800	1000	1200	1600	2000

Step 6 Retro-Fit Installation (Attach worksheets if required by Inspection Authority) Estimated Capacity of existing duct system = [ ] CFM **K**

RETRO-FIT CFM

Page 2 of 2

Document Number: 4067612