



Project Address: _____ Owner: _____

Fan Coil

Heated Area of Occupancy: _____ sq. ft. **(A)**

Heating Demand from Acceptable Heat Loss Calculations or sq. ft. Method: _____ Btu/hr. **(B)**

Minimum Fan Coil Required: _____ Btu/hr. **(B)** — _____ Btu/hr. x 1.15 = _____ Btu/hr. **(C)**

Selected Fan Coil Btu/hr. Capacity at _____ E.W.T. = _____ Btu/hr. **(D)**

Make: _____ Model: _____ CFM at .3" ESP: _____

Domestic Demand

Minimum Demand as per Table 5-HUD-FHA (below): _____ Baths _____ Bedrooms

_____ Gal. Storage _____ Btu/hr. Input **(E)** _____ Gal. 1st hr. Draw **(F)**

Combo Water Heater

_____ Gal. **(F)** — _____ Gal. = _____ Gal. **(G)**
Domestic 1st hr. Draw Selected Storage Capacity Domestic Recovery Necessary

_____ Gal. **(G)** X 830 Factor for Conversion Gal. to Btu/hr. = _____ Btu/hr. Output **(H)**

_____ Btu/hr. Output. **(H)** ÷ _____ Heater Efficiency = _____ Btu/hr. Input **(I)**

Available for Fan Coil Use

_____ Btu/hr. Input — _____ Btu/hr. Input **(I)** = _____ Btu/hr. Input **(J)**
Selected Water Heater

_____ Btu/hr. Input **(J)** X _____ Heater Efficiency = _____ Btu/hr. Output **(K)**

_____ Btu/hr. **(K)** Output available for fan coil must be equal to or greater than **(D)**

Table 5 HUD-FHA Minimum Water Heater Capacities for One- and Two-Family Living Units											
No. of Baths	1 to 1.5			2 to 2.5				3 to 3.5			
No. of Bedrooms	1	2	3	2	3	4	5	3	4	5	6
Gas:											
Storage Gal.	20	30	30	30	40	40	50	40	50	50	50
1000 Btu/hr. Input	27	36	36	36	36	38	47	38	38	47	50
1-h Draw, Gal.	43	60	60	60	70	72	90	72	82	90	92
Recovery, gph	23	30	30	30	30	32	40	32	32	40	42

Note: All volume calculations are in U.S. gallons.

Domestic Heat Exchanger/Boiler Sizing

(Domestic Demand – from tables below)

_____ Bath (A) _____ Bedrooms (B) _____ Gal. Storage (C)
 _____ Gal. 1st hr. Draw (D)

Exchanger Demand

$$\frac{\text{Required 1}^{\text{st}} \text{ hr. Draw}}{\text{Gal. (E)}} \times 820 \text{ Btu per Gal. of Storage} = \frac{\text{Btu (F)}}{\text{1}^{\text{st}} \text{ hr. Draw}}$$

$$\frac{\text{Storage Provided}}{\text{Gal.}} \times 70\% \text{ of Volume} = \frac{\text{Usable Storage}}{\text{Gal. (G)}}$$

$$\frac{\text{1}^{\text{st}} \text{ hr. Draw - Usable}}{\text{Gal. (G)}} \times 830 \text{ Btu per Gal. of Storage} = \frac{\text{Btu (H)}}{\text{Usable Storage}}$$

$$\frac{\text{1}^{\text{st}} \text{ hr. Recovery by Boiler}}{\text{Gal. (E minus G)}} \times 830 \text{ Btu per Gal. of Storage} = \frac{\text{Exchanger Demand}}{\text{Btu (I)}}$$

Note: (H) plus (I) must not be less than (F).

Boiler Load Summary

$$\frac{\text{Exchanger Demand}}{\text{Btu (I)}} + \frac{\text{Baseboard}}{\text{Btu}} + \frac{\text{Radiant}}{\text{Btu}} + \frac{\text{Other Boiler Loads}}{\text{Btu}} = \frac{\text{Boiler Output}}{\text{Btu}} +$$

$$10\% \text{ for Pipe Losses} = \frac{\text{Required Net Boiler Output}}{\text{Btu (J)}}$$

$$\frac{\text{Boiler Net Output}}{\text{Btu (J)}} \div \frac{\text{Boiler Efficiency}}{\text{Btu}} = \frac{\text{Required Boiler Input}}{\text{Btu (K)}}$$

Contractor: _____ **Date:** _____

Mailing Address: _____ Postal Code

Signature of Contractor: _____
By signing I am acknowledging the above information complies with the BC Building Code

Table 5															
HUD-FHA Minimum Water Heater Capacities for One- and Two-Family Living Units															
No. of Baths	1 to 1.5			2 to 2.5				3 to 3.5				Modified			
	1	2	3	2	3	4	5	3	4	5	6	4	5	6	7
No. of Bedrooms	1	2	3	2	3	4	5	3	4	5	6	5	6	6	7
Gas:															
Storage, Gal.	20	30	30	30	40	40	50	40	50	50	50	60	70	80	90
1000 Btu/hr. Input	27	36	36	36	36	38	47	38	38	47	50	-	-	-	-
1-h Draw, Gal.	43	60	60	60	70	72	90	72	82	90	92	92	102	112	122
Recovery, gph	23	30	30	30	30	32	40	32	32	40	42	-	-	-	-

- Note:
1. All volume calculations are in U.S. gallons.
 2. Add 10 Gal. storage for each bathroom over 3.5 in Table 5. (Modified Table)
 3. Add 10 m Btu per bathroom over 3.5 in Table 5. For 1st hr. Draw (Modified Table)
 4. Add storage/Btu for special items such as large bathtubs. (See Boiler Summary)