

Tankless Water Heater Calculation Worksheet

Permit Number _____
Project Address _____

Date _____

In residential *occupancies*, *hot water* shall be supplied to plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. In nonresidential *occupancies*, *hot water* shall be supplied for culinary purposes, cleansing, laundry or building maintenance purposes. In nonresidential *occupancies*, *hot water* or *tempered water* shall be supplied for bathing and washing purposes.

The purpose of this calculation worksheet is for the property owner, plumbing contractor or design professional to calculate the required gallons per minute required to supply those fixtures declared to be those with the likelihood of simultaneous use. It is based on calculating the required water supply fixture units (W.S.F.U.) required by the code and converting them to gallons per minute to verify the installed unit(s) ability to adequately supply the required demand.

Section A

Equipment Information

Manufacturer _____ **Model #** _____

Type **Electric** **Voltage** _____ **Amperage** _____ **Gas** **Natural** **LPG**

Out Flow Rate @ 40° Temperature Rise^(a) _____ **X # Units** _____ = **Total System G.P.M.^(b)** _____

a - Calculate using 70° Average Supply Temperature (100° Minimum / 140° Maximum Outlet Temperature)

b - Must Equal or Exceed Total W.S.F.U. Required in Section C and Converted to G.P.M. in Section D

Section B

Total Number of Fixtures Connected to Hot Water System

Fixture Type	Total
Bathtub	
Lavatory	
Shower – Single Shower Head	
Shower – Multiple Body Sprays/Heads	
Bidet	
Clothes Washer	
Laundry Sink	
Kitchen Sink	
Dishwasher	
Other - List	
Other - List	
Other - List	
Other - List	

Section D

Total GPM Required Based on WSFU Demand^(a)

1 WSFU = 3 GPM	6 WSFU = 10.7 GPM	11 WSFU = 15.4 GPM
2 WSFU = 5 GPM	7 WSFU = 11.8 GPM	12 WSFU = 16.0 GPM
3 WSFU = 6.5 GPM	8 WSFU = 12.8 GPM	13 WSFU = 16.5 GPM
4 WSFU = 8 GPM	9 WSFU = 13.7 GPM	14 WSFU = 17.0 GPM
5 WSFU = 9.4 GPM	10 WSFU = 14.6 GPM	15 WSFU = 17.5 GPM

Notes: a – Apply Total WSFU calculated in Section C to GPM Conversion chart above. GPM must equal or exceed total system GPM in Section A.

Section C

WSFU Demand Calculation

Amount	Type	Hot Load ^(b)	WSFU Total
	Full Bathroom Group	1.5	
	Half Bath Group ^(c)	.5	
	Kitchen Group ^(c)	1.9	
	Laundry Group ^(c)	1.8	
	Bathtub	1.0	
	Lavatory	.5	
	Shower – Single Shower Head	1.0	
	Shower – Multiple Body Sprays/Heads	1.0 ^(e)	
	Bidet	1.5	
	Clothes Washer	1.0	
	Laundry Sink	1.0	
	Kitchen Sink	1.0	
	Dishwasher	1.4	
	Other – List ^(d)		
	Other – List ^(d)		
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	Other – List ^(d)		

Total Declared W.S.F.U. Demand

Notes: a – Enter only those fixtures that will use hot water simultaneously.
b – Per FBC-P E103.3(2) and/or FBC-R P2903.6
c – Residential calculations only
d – Used Proper table for additional fixtures
e – Per Body Spray and/or Head

Worksheet Prepared by : Design Professional

Plumbing Contractor

Homeowner

Print Name: _____ Signature: _____

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