

# Tankless Water Heater Calculation Worksheet

Permit Number \_\_\_\_\_  
Project Address \_\_\_\_\_

Date \_\_\_\_\_

## Section A

### Equipment Information

Manufacturer Name \_\_\_\_\_  
Model Number \_\_\_\_\_  
Type ☐ **Electric** Voltage \_\_\_\_\_ ☐ **Gas** ☐ Natural ☐ LPG  
Output Flow (per unit) \_\_\_\_\_ Gallons per minute @ 40° temperature rise<sup>(b)(c)</sup>  
Output Flow (Total) \_\_\_\_\_ X (Number of units installed) \_\_\_\_\_ = \_\_\_\_\_ Total System G.P.M.<sup>(a)</sup>  
Notes Section A  
(a) Must equal or exceed total WSFU @ peak demand calculated in Section C  
(b) Calculate using 70° Supply temperature  
(c) 100° minimum/140° maximum Outlet temperature  
(d) Effective Codes/Chapters FBC-Plumbing chapter #6 and FBC Residential 2, 3, 29

## Section B

### Total Number of Fixtures Connected to Hot Water

Note – This information is collected to detail the total size of the hot water system to be served by the tankless unit(s). This list does not affect the peak demand calculation in Section C.

Fixture Type	Total
Bathtub	
Bidet	
Clothes Washer	
Dishwasher	
Kitchen Sink	
Laundry Sink	
Lavatory (bath sink)	
Shower (multiple body spray/Heads)	
Shower (single shower head)	
Other List Below	

## Section C

### WSFU Demand Calculations

Hot water demand sizing in the FBC is by Water Supply Fixture Units (WSFU). Rating for output on tankless water heaters is by Gallons Per Minute (GPM). The tankless unit installed must supply the peak demand identified in this section. **Enter only those fixtures determined to be peak demand.**

Number <sup>(a)</sup>	Type	Hot Load <sup>(b)</sup>	WSFU Total
	Full Bathroom Group	1.5	
	Half Bath Group <sup>(c)</sup>	0.5	
	Kitchen Group <sup>(c)</sup>	1.9	
	Laundry Group <sup>(c)</sup>	1.8	
	Bathtub	1.0	
	Bidet	1.5	
	Clothes Washer	1.0	
	Dishwasher	1.4	
	Kitchen Sink	1.0	
	Laundry Sink	1.0	
	Lavatory (bath sink)	0.5	
	Shower (Multiple/ Per head/spray)	1.0	
	Shower (single shower head)	1.0	
	Other List below <sup>(d)</sup>		

## Section D

### Total GPM Required based on WSFU @ Peak Demand

Locate Total WSFU @ peak demand from Section C on this chart and the GPM shown must equal or exceed Total System GPM in Section 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 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 GPM
5 WSFU = 9.4 GPM	10 WSFU = 14.6 GPM	15 WSFU = 17.5 GPM

### Total WSFU @ Peak Demand

- Notes Section C  
(a) Enter only those fixtures that will use hot water at peak demand (at the same time)  
(b) Per FBC-Plumbing E103.3(2) and/or FBC-Residential P2903.6  
(c) Residential calculations Only  
(d) Use proper table for additional fixtures.

Worksheet Prepared by: ☐ Design Professional ☐ Contractor ☐ Homeowner

Print Name \_\_\_\_\_ Signature \_\_\_\_\_