

APPENDIX F:

HOURLY HOT WATER DEMAND TABLE

FACILITY _____ DATE _____

ADDRESS _____

Fixtures	Dimensions	# of Units per Facility	Gallons per sink Section		# of Sections per Sink		Gallons per hour
Utensil Sinks	18"x18" 24"x24"	_____	14	×	3	=	
			25	×	3	=	
Bar Sinks			6	×	3	=	
Handwash Sinks			5	×	1	=	
Pre Rinse Units	Hand Spray Type		45	×	1	=	
Clothes Washers	9-12lb 16lb	_____	45	×	1	=	
			60	×	1	=	
Food Preparation Sinks			5	×	1	=	
Employee Shower			20	×	1	=	
Janitorial Sinks and Garbage			15	×	1	=	
Custom Fixtures							
Add up the gallons of water used by the above fixtures to determine the gallons per hour (GPH) needed							

Multiply GPH needed _____

By Sizing for facility type (use 1.0 or 0.6 or 0.4) × _____

Adjusted Total GPH = _____

FORMULA - ELECTRIC WATER HEATERS:

Adjusted Total GPH (_____) × 0.15 = _____ KW input required _____ KW (provided by the unit)

FORMULA - GAS WATER HEATERS :

Adjusted Total GPH (_____) × 660 = _____ BTU input required _____ BTU (provided by the unit)

SIZING REQUIREMENTS FOR STORAGE WATER HEATERS (Not instantaneous water heaters)

- Food facilities with multi service eating utensils, heavy use (serving 3 meals a day): 1.0 GPH
- Food facilities with multi service eating utensils, moderate use: 0.6 GPH
- Food facilities with only single-service eating utensils or don't use utensils at all: 0.4 GPH

Custom or other fixtures that use hot water: Refer to manufacturer's specifications for the equipment or NSF® listing. Calculate gallons per section using this formula: Length (ft.) X Width (ft.) X Depth (ft.) X 7.5 = gallons per section or compartment.

INSTANTANEOUS WATER HEATERS: Instantaneous water heaters are flow dependent. The higher the water flow, the lower the temperature output. Subtract the cold water temperature from the desired hot water temperature (120°F minimum) to get the required temperature rise.

Instantaneous hot water heaters must be sized to provide hot water at a rate of at least two gallons per minute (GPM) to each fixture. For example, a handwash sinks must receive at least ½ GPM. Six (6) GPM is generally the requirement for a small restaurant.

Note: 110 volt units are only good for hand sinks; 220 volt units can supply a few sinks in very small restaurants with no dishwasher (two units may be required). Gas units are required for most food facilities. An instantaneous water heater may be required exclusively for the warewashing machine. NSF listings can help to determine the minimum G.P.M. hot water demand for automatic dishwashers.

The following is an example:

1 Three-Compartment Sink:	2 GPM
1 Janitorial Sink	2 GPM
1 Food prep Sink	2 GPM
Handwash Sink (1/2 GPM x #)	1-2 GPM

Each facility will have at least two handwash sinks or more

Total = 7-8 GPM

Recirculation Pumps: Where fixtures are located more than sixty feet from the water heater, a recirculation pump must be installed. It may be more practical to install a separate, smaller water heater for remote fixtures, such as for restroom handsinks.