



# SIZING DATA/TWO TEMPERATURE COPPER HEAT EXCHANGER SYSTEMS

**EQUIPMENT SELECTION CHART FOR TWO TEMPERATURE SYSTEMS**  
**Gas-Fired Copper Heat Exchanger Type With External Storage Tank**

**TABLE 1**

This type of equipment is an excellent way to generate hot water from the standpoint of operation and life of the equipment. Heaters HW-200 thru HW-670 employ the A. O. Smith "Shure-Temp System". This system stores water at 140°F and boosts it for dishwasher requirements to 180°F.

All equipment selections shown will recover storage tank within 3 hours. System components and accessories on reverse side.

MAX. MEALS	EQUIV. GALS. 140°F WATER REQUIRED	DISHWASHING PERIOD								
		ONE HOUR			TWO HOURS			THREE HOURS		
		MODEL	TANK	SYSTEM POTENTIAL	MODEL	TANK	SYSTEM POTENTIAL	MODEL	TANK	SYSTEM POTENTIAL
150	225	HW-200	80	238						
200	300	HW-200	200	322	HW-160	80	347	----	----	----
		HW-225	140	303						
		HW-300	80	329						
250	375	HW-200	350	427	HW-200	80	420	----	----	----
		HW-300	200	413						
		HW-399	80	419						
300	450	HW-200	400	462	HW-200	140	462	HW-160	80	492
		HW-225	350	450						
		HW-399	140	461						
		HW-420	120	466						
350	525	HW-200	500	532	HW-200	350	609	HW-200	80	601
		HW-399	350	608	HW-225	200	549			
		HW-520	80	529	HW-300	80	601			
		HW-670	80	665						
400	600	HW-300	500	623	HW-200	350	609	HW-200	80	601
		HW-420	350	627	HW-300	80	601	HW-225	80	670
		HW-520	200	613	HW-399	80	781			
		HW-670	80	665						
450	675	HW-399	500	713	HW-200	500	714	HW-200	200	685
		HW-520	350	718	HW-225	400	689	HW-225	120	698
		HW-670	120	693	HW-300	200	685	HW-300	80	874
					HW-399	80	781			
500	750	HW-300	750	798	HW-225	500	759	HW-200	350	790
		HW-520	400	753	HW-300	350	790	HW-225	200	754
		HW-670	350	854	HW-399	80	781	HW-300	80	874
					HW-420	80	820			
550	825	HW-399	750	888	HW-300	420	825	HW-200	400	825
		HW-670	350	854	HW-399	200	865	HW-225	350	859
					HW-520					
					HW-420	120	848	HW-300	80	874
			HW-670	80	1274					
600	900	HW-420	750	907	HW-225	750	934	HW-225	500	964
		HW-520	750	998	HW-399	350	970	HW-300	120	902
		HW-670	500	959	HW-520	80	1001	HW-399	80	1144
					HW-670	80	1274			
650	975	HW-399	1000	1063	HW-300	750	1070	HW-300	350	1063
		HW-420	1000	1082	HW-399	400	1005	HW-399	80	1144
		HW-520	750	998	HW-420	350	1009			
		HW-670	750	1134	HW-520	80	1001			
					HW-670	80	1274			
700	1050	HW-399	1000	1063	HW-300	750	1070	HW-300	350	1063
		HW-420	1000	1082	HW-399	500	1075	HW-399	80	1144
		HW-520	1000	1173	HW-520	200	1085			
		HW-670	750	1134	HW-670	80	1274			
800	1200	HW-670	1000	1309	HW-300	1000	1245	HW-300	750	1343
					HW-399	750	1250	HW-399	200	1228
					HW-520	400	1225	HW-420	80	1201
					HW-670	80	1274			
900	1350				HW-399	1000	1425	HW-300	1000	1518
					HW-520	750	1470	HW-399	400	1368
					HW-670	200	1358	HW-420	350	1390
1000	1500				HW-520	1000	1645	HW-300	1000	1518
					HW-670	500	1568	HW-399	750	1613
1200	1800				HW-670	1000	1918	HW-420	1000	1845
								HW-520	750	1943
									80	1883

Note: Systems listed will work provided the kitchen is sized based on the requirements given on B 001.0.

## A. O. SMITH TWO TEMPERATURE SYSTEMS

### SYSTEM COMPONENTS

#### Booster-Recovery

Heater (or Boiler)  
Storage Tank  
Safety Flow Switch 78168  
Safety Flow Switch 6229 (HW-160 Only)  
Tank Temperature Control 99058  
Operating Flow Switch 92587  
Flow Regulating Plug Cock  
Check Valve  
Thermometers, Angle 93155; Straight 93042  
Pressure Relief Valve  
T & P Relief Valve  
Gate Valves (if desired)  
Circulating Pump Per Heater or Boiler Capacity:

HW-160 - 85297	HW-399 - 9936
HW-200 - 85297	HW-420 - 9936
HW-225 - 85297	HW-520 - 9936
HW-300 - 85297	HW-670 - 9594

#### Shure-Temp Booster-Recovery

Heater or Boiler  
Storage Tank  
+ Dual Tank Temperature Control 86872-1  
+ Line Temperature Control 86871  
+ Safety Flow Switch 78168  
+ Safety Flow Switch 6229 (HW-160 Only)  
2 Flow Regulating Plug Cocks  
Check Valve  
+ Thermometers, Angle 93155; Straight 93042  
+ Pressure Relief Valve  
+ T & P Relief Valve  
Gate Valves (if desired)  
+ Six Terminal Junction Box 98202  
+ Circulating Pump Per Heater or Boiler Capacity:

HW-160 - 85297	HW-399 - 9936
HW-200 - 85297	HW-420 - 9936
HW-225 - 85297	HW-520 - 9936
HW-300 - 85297	HW-670 - 9594

**Note:** See diagrams in Section A for correct arrangement of components.

+ A. O. Smith provides accessory packages containing all items so marked in the Shure-Temp System.