

TYPICAL WATER HEATER OPTIONS [gas, 90° F rise]

capacity gallons	usable storage	BTU [1000]	recovery gallons	1 <sup>st</sup> hr rating gph
residential sizes				
50	35	50K	51	83
65	45.5	65K	60	105
75	52.5	75K	76	130
100	70	88K	85	155
commercial sizes				
75	53	125K	121	173
75		155K	147	199
80	60	190K	184	244
80		180K	175	231
100		250K	242	312
actual # vary so refer to specification sheet				
see the 3 sizing combination charts previously sent for other options				

## HOT WATER HEATER SIZING WORKSHEET

CAMP	County
license # address	number of showers number of occupants year showers built
<b>CONSTANTS</b> <span style="float: right;">"g.p.m." = gallons per minute; "sh" = showerhead</span>	
140°F hot water tank setting - 50°F well water supply = 90°F temperature rise 2 g.p.m. hot water + 1 g.p.m. cold water = 3 g.p.m. at the showerhead shower time = 5 minutes per person, "GPH" = gallons per hour maximum of 10 persons/showerhead/hour; for 50 minutes of shower use/hour	
<b>HOT WATER HEATERS</b>	
make & model #	make & model #
capacity input BTU [or Watts]	capacity input BTU [or Watts]
tank capacity X 70% rule = recovery rate GPH =	tank capacity X 70% rule = recovery rate GPH =
1 <sup>st</sup> hour rating =	1 <sup>st</sup> hour rating =
<b>CALCULATIONS</b>	
<b>A. First Hour Delivery of existing water heaters = [tank capacity X 70%] + recovery rate GPH =</b>	
<b>B. Sizing Adequate Supply of Hot Water for Showers</b>	
[example: 2 sh X 2 g.p.m. X 50 minutes = 200 GPH of 140°F water, for 20 occupants]	
insert actual camp # [sh & occupant minutes / sh]	
<b>C. Additional first hour gallons of 140°F water needed [B minus A = C]</b>	
date:	

## WATER HEATER SIZING COMBINATIONS

30 occupants

Fuel: LP Gas

Shower heads: 3 GMP

No. of Water Heaters	gallons capacity of each	BTU Input / hour	No. of Storage Tanks	gallons capacity of each	Usable storage gallons	Recovery GPH	1st hour gallons available	Approx storage recovery
1	75	300K	0	--	52	291	343	15 min
1	80	190K	1	80	120	184	304	52 min
1	80	180K	1	119	151	175	326	68 min
2	75	125K	0	--	105	242	347	37 min
2	100	88K	0	--	140	170	310	71 min
3	65	65K	0	--	136	180	316	65 min