WORKSHEET FOR CALCULATING MINIMIM HOT WATER REQUIREMENTS (Tank-type Water Heaters)

		Three compartment sink calculation of water usage:							
		1. Measure	dimensions	of each comp	partment.	. If compartme	nts are not th	e dimensions, s	ee note below.
		2. Insert me	asurements	into equatio	n	**************************************		•	
			•						•
		(Χ	X		X 3 X 375)	± 231 =		
		Length	.Wi	dth	Depth	X 3 X .375)	. 251	er Usage (gal)	
				•			*****	ici oʻzage (gai)	
		Note: If all the calculation is used in the si	aone for e	ment sizes of ach compartr	the sink a nent. The	re not the sam volumes are a	e, then 3 is to dded to obta	aken out of the oin the total gallo	equations, and the ons per hour of h
1	h.	Utensil soak	cink.				•		
•		1. Measure o		of sink	•			•	•
				into equatio	••				
	•	c. moert mee	iani emėmo	iiito equatioi	15			*	
	(,	(×		2751 - 221 -		•	
	,	Length	Width	^	^ . h	.375) ÷ 231 = _	Water Usage	- /i\	
				Dep		100	water Usage	e (gar)	
. с	. [Dishmachine	and convey	or pre-rinse	water ne	300			
	ι	Jse manufact	urer's ratin	g in gallons p	er hour	.,	•	•	•
				5 84.101.5 P	Cr rioui				•
d	. c	lothes wash	er water us	age:					• :
					for 0 12 n	ound woobox	42 CDU 5	16 pound wash	
. CALCU		:				water (gph) red	uired by all f	ixtúres:	
				OT WATER U					
ii gas v	vate	r neater is us	ea, go to Si	ep a; if electr	ic, Step b	•			
	_								
			If						•
a.	ac	is Water Hea ljusting the to evation, 20%	otal water r	equired by al	r is to be I fixtures	used, calculate by altitude. Th	e the maximu e altitude adj	m hourly water ustment is 4% p	for the facility by er 1000 feet of
а.	eld Us	ijusting the to evation, 20% e these equa 4 X	otal water r at 5000 fee ations to de	equired by al et. termine wate ÷ 1000)	ll fixtures er usage fo + 1 =	by altitude. Th	e altitude adj heater:	m hourly water ustment is 4% p	for the facility by er 1000 feet of
a.	eld Us	ijusting the to evation, 20% e these equa 4 X	otal water r at 5000 fee ations to de	equired by al et. termine wate ÷ 1000)	ll fixtures er usage fo + 1 =	by altitude. Th	e altitude adj heater:	m hourly water ustment is 4% p	for the facility by er 1000 feet of
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a.	eld Us (.0	ijusting the to evation, 20% e these equa 4 X elevati	at 5000 fee at 5000 fee ations to de ion of facilit	equired by al et. termine wate ÷ 1000)	Il fixtures er usage for + 1 =	by altitude. Th or a gas water djustment fact	e altitude adj heater: or	m hourly water ustment is 4% p	for the facility by
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For exa	Us (.0	e these equal 4 X elevation	at 5000 feed tions to design of facility and the sector by all gallons per	equired by all the state water in the state water refixtures (calc hour usage for the state water refixed water	er usage for the state of the s	by altitude. The pragas water distinct fact maximum ove) water	e altitude adj heater: or hourly hot usage	ustment is 4% p	er 1000 feet of
For exam adjustm	Us (.0	e these equal elevation elevation elevation elevation.	at 5000 feed tions to de	equired by all the termine water in the termine water in the termine water responsible to the termine water responsible to the termine water heat in the termine water heat	er usage for the same state of	by altitude. The property of a gas water distinct fact and a maximum ove) water ablishment at a 20 GPH recove	e altitude adj heater: or hourly hot usage in elevation or	ustment is 4% p f 5000 feet us 1 be required.	er 1000 feet of
For exa adjustm	Us (.0	e these equal 4 X elevation for the total factor is 1.2, ctric Water H	at 5000 feed tions to design of facilities X _actor	equired by all the termine water in the termine water in the termine water refixtures (calchour usage for a water heat in electric water in the termine wate	er usage for the state of the s	by altitude. The property of a gas water distinct fact and a maximum ove) water ablishment at a 20 GPH recove	e altitude adj heater: or hourly hot usage in elevation or	ustment is 4% p f 5000 feet us 1 be required.	er 1000 feet of
For exa adjustm	Us (.0	e these equal 4 X elevation for the total factor is 1.2, ctric Water Fine as the total	at 5000 feed tions to destions to destion of facilities and the sector by all gallons per Therefore, leater: If and water recompany to the sector by all gallons per the sector by all gal	equired by all the termine water in the termine water refixtures (calc hour usage for a water heat in electric water uired by all fixed.	er usage for the second	by altitude. The pr a gas water djustment fact maximum ove) water ablishment at a 20 GPH recove is to be used,	e altitude adj heater: or hourly hot usage in elevation or ry rate would	of 5000 feet us 1 be required.	oer 1000 feet of OO GPH, the
For exa adjustm	Us (.0	e these equal 4 X elevation for the total factor is 1.2, ctric Water Fine as the total	at 5000 feed tions to destions to destion of facilities and the sector by all gallons per Therefore, leater: If and water recompany to the sector by all gallons per the sector by all gal	equired by all the termine water in the termine water refixtures (calc hour usage for a water heat in electric water uired by all fixed.	er usage for the second	by altitude. The pr a gas water djustment fact maximum ove) water ablishment at a 20 GPH recove is to be used,	e altitude adj heater: or hourly hot usage in elevation or ry rate would	ustment is 4% p f 5000 feet us 1 be required.	oer 1000 feet of OO GPH, the
For exa adjustm	Us (.0	e these equal and a service water factor is 1.2, ctric Water Fine as the total at this value in this value in the service water is the total at the	at 5000 feed tions to destions to destions to destion of facilities. X actor by all gallons per Therefore, deater: If are all water reconding the equations of	equired by all the termine water in the termine water refixtures (calc hour usage for a water heat in electric water in the termine by all for to calculate.	er usage for the second	by altitude. The pr a gas water djustment fact maximum ove) water ablishment at a 20 GPH recove is to be used, inimum Kilow	e altitude adj heater: or hourly hot usage in elevation o ry rate would the maximum	ustment is 4% p of 5000 feet us 1 be required. In hourly usage for	oer 1000 feet of OO GPH, the

the minimum recovery rate of the water heater which should be provided for the facility.

3. CALCULATE THE MINIMUM BTU OR KILOWATT RATING OF WATER HEATER:

(X 100 X 8.33)	÷=		
maximum hourly	thermal efficiency	minimum BTU rating	
usage as calculated above	rating		
		•	•
. Panan alastota and a total			
 For an electric water heater, calcula 	te the minimum Kilowatt r	ating:	•
(X 100 X 8.33) -	÷ 3412 =		• . •
maximum hourly	minimum Kilo	owatt rating	·
usage as calculated above		•	
Select water heater based above BTL	J or Kilowatt rating.		•
		•	
lake:	Model :		

TABLE TO CALCULATE TOTAL WATER REQUIRED BY ALL FIXTURES

Plumbing Fixture	Water Usage	Number of Fixtures	Maximum hourly water usage per type of fixture (gph) 50	
example: dishmachine	50	1 .		
example: handsinks	5 .	4	(5x4) = 20	
3-compartment sink				
3-compartment-sink		· · · · · · · · · · · · · · · · · · ·		
(bar)				
Utensils soak sink				
Dishmachine				
Dishmachine conveyor				
pre-rinse				
Clothes washer				
Hand operated pre-	22			
rinse sprayer	32		. '	
Handsinks (including	5			
restrooms)	,			
Mop sink	7			
Garbage can washer	35			
Employee showers	14			
Hose bib used for				
cleaning	35			
Total water (gph) required by all fixtures				