

**DOUB RESIDENCE
DOMESTIC LOADS**

**DHW
ANNUAL LOAD**

Owner Values

TAG	QTY	TIME	GAL/MIN	GAL/LOAD	GAL	TEMP	TEMP IN	BTU
SH	14	7	1.6		8153.6	110	55	3,735,572
SH	14	5	1.6		5824	110	55	2,668,266
CW	4			20	4160	110	55	1,905,904
DW	5			5	1300	110	55	595,595

19,438 gal/year 8,905,336 Btu/yr

does not include kitchen prep, hand/face washing, cleaning, baths 24,398 Btu/day

ASHRAE Applications Values

"typical family" 1921 gal/month
23052 gal/yr
10,573,952 Btu/yr
use ASHRAE values-> 28,970 Btu/day

**HOT TUB
ANNUAL LOAD**

Start up	qty	gal	temp out	temp in	Btu/yr
	2	360	103	55	287,885
Maintain Temp	hrs used per week	sf	avg. annual OA temp	Btu/h	
	3.5	16	10.5	51.8	8,602
Heat loss from sides	2.1% percent of week				1,565,491
	U	A	Tout	Tin	
wall/botton	0.036	64	51.8	103	117
top	0.056	16	51.8	103	46

7.481 gal/ft3
0.133672 ft3/gal

48 CF
3 feet deep

Total Loss (Tub)

3,277,224 Btu/yr
8,979 Btu/day

TOTAL (DHW + TUB)

13,851,176 Btu/day

