AutoTap Water Saving Test

The following is a description and results of a test conducted by AutoTap to demonstrate the water saving potentials of our product. For this purpose, four separate tests were conducted under the same conditions*. Each test consisted of washing or rinsing equal number of items that would be used by an average family of four in one day (one dishwasher load).

Manual washing and rinsing

The first column represents the most common and least efficient way most people wash their dishes. In this test, hot water was running constantly while washing and rinsing the dishes.
The second column represents washing the dishes using AutoTap. In this test, the intention was to wash without wasting water and energy in the process. It is important to emphasize that the water saving potentials of AutoTap is proportional to the desire and the intention of the user to save water and energy.

	I	II		
Items washed	**Without AutoTap**	**Using AutoTap**	**Water saved**	**Percent saving**
12 Diner plates	6.13 Gal	1.73 Gal	4.40 Gal	71%
10 Bowls	4.24	1.11	3.12	73%
16 Glasses + 4 cups	6.62	2.06	4.56	68%
8 Fruit & desert plates	2.68	.94	1.74	65%
35 Utensils	5.15	1.17	3.98	77%
3 Pots + 3 frying pans	3.75	.97	2.78	74%
1 Blender	1.27	.41	.86	67%
Washing hands	.44	.16	.24	54%
Total	**30. 28 Gal**	**8.55 Gal**	**21.68 Gal**	**69% avg.**

Rinsing dishes for the dishwasher

The third column represents the most common way and least efficient way people rinse their dishes prior to placing them in the dishwasher. In this test, the hot water was running constantly while rinsing the dishes. In the forth column, AutoTap was used to rinse the dishes prior to placing them in the dishwasher. No water was wasted in this operation.

	III	IV		
Items washed	**Without AutoTap**	**Using AutoTap**	**Water saved**	**Percent saving**
12 Diner plates	2.98 Gal	.94 Gal	2.04 Gal	68%
10 Bowls	2.08	.58	1.50	72%
16 Glasses + 4 cups	2.78	.70	2.08	75%
8 Fruit & desert plates	1.58	.32	1.26	79%
35 Utensils	2.80	.44	2.36	84%
3 Pots + 3frying pans	1.38	.42	.96	69%
1 Blender	.48	.10	.38	79%
Total	**14.08 Gal.**	**3.5 Gal.**	**10.58 Gal.**	**75% avg.**

***Note: A modest 1.1 GPM flow rate was used for all tests.**

AutoTap energy saving potential

Since almost all of our dishwashing chores are done using hot water, each year we spend a substantial sum of money on energy to raise the water temperature. The more hot water we use or waste, the higher our energy bill. We cannot eliminate the need for hot water but we can eliminate its waste. Since each gallon of water requires a certain amount of energy to raise its temperature, the less water we waste, the less we have to pay for energy. If it takes an average of 458.48 BTU or 134 watts of energy to raise the temperature of one gallon of water to 120 degrees Fahrenheit (recommended water heater temp.), then the water saving potential of AutoTap for washing dishes manually could translate into the following energy savings.

For manually washing and rinsing

Mode	Water used	BTU factor.	Total energy used
Without AutoTap	30.28 Ga	30.28 x 458.48	13,882 BTU / 4,067 W
Using AutoTap	8.55 Gal	8.55 x 458.48	3,920 BTU / 1,148 W

Daily energy saved by using AutoTap …….. 9,962 BTU or 2,918 watts = 71%

Rinsing for the dishwasher

Mode	Water used	BTU factor.	Total energy used
Without AutoTap	14.08	14.08 x 458.48	6,455 BTU / 1891 W
Using AutoTap	3.50	3.50 x 458.48	1,604 BTU / 469 W

Daily energy saved by using AutoTap …… 4,851 BTU or 1,421 watts = 75%

AutoTap Accumulative Water Savings Potential for a City

The figures below are based on daily water savings by washing dishes manually using AutoTap. Taking into consideration the dining out habits of modern families, a 25 days per month and 300 days per year was used for these calculations.

Households family of 4	Gals/ day per day	Gals/ month 25 days	Gals/ year 300 days
1	21.68	542	6504
100	2,160	54,200	650,400
1000	21,600	542,000	6,504,000
5000	108,400	2,710,000	32,520,000
10,000	216,800	5,420,000	65,040,000

Accumulative Energy Savings Potential of AutoTap

The figures below are based on daily water savings by washing dishes manually using AutoTap.
Taking into consideration the dining out habits of modern families, a 25 days per month and 300 days per year was used for these calculations.

Households	kw / day	kw / month	kw / year
1	3 kw	75k kw	900 kw
100	300 kw	7,500 kw	90,000 kw
1000	3,000 kw	75,000 kw	900,000 kw
5000	15,000 kw	375,000 kw	4,500,000 kw
10,000	30,000 kw	750,000 kw	9,000,000 kw