



Contact us at: info@urbansaqua.com
www.urbansaqua.com

Episode 12 Show Notes – Get High!

How efficient are the softeners you're selling? Why does it matter? Highly efficient softeners use less salt. Consumers will see salt savings and fewer backbreaking trips from the store to the brine tank. Environmentally there is less chloride discharge to the septic system or municipal waste system.

Discussion

Typically, 1 cf of resin yields 30,000-34,000 grains if you regenerate with 15 pounds. As regulators and consumers have become more environmentally conscious demand for softeners which use less salt has increased. Highly efficient (HE) softener design is proprietary to the OEM. Through the use of specially designed tanks, distributors and valves, these softeners get 4,300 grains of capacity with just 1 pound of salt.

The easiest way to explain this to think about the way a sponge is used. A sponge effectively cleans a surface when it is damp. If you use a sponge which is soaked with water the cleaning process is messy. The excess water will come out of the sponge onto the surface. The result would be a very wet surface which is only partially clean.

You don't need 15 pounds of salt to effectively regenerate the HE softener. There are diminishing returns. Using a 1 cubic foot softener here are the numbers:

- 4.5 pounds yields 4,311 grains per pound or 19,000 grains
- 6 pounds yields 3,800 grains per pound or 23,000 grains
- 15 pounds yields 2,255 grains per pound or 33,000 grains

As you see, you get more total grains when using 15 pounds. The problem with that 15 pounds is that you go through a bag of salt more quickly than if you use 4.5 pounds. A 50-pound bag of salt yields 3.3 regenerations when using 15 pounds per regeneration. Using that same 50-pound bag at 4.5-pound regenerations the yield is 11 regenerations.

⚠ Using less than 4.5 pounds of salt is not recommended. At lower rates the resin beads will not be sufficiently regenerated and shorter run lengths will result.

PO Box 434
Lima PA 19037-0434
610-365-7818



Contact us at: info@urbansaqua.com
www.urbansaqua.com

Calculations							Example		
Softener Size CF	Pounds/salt	Yield per Pound	Total Cap	Regens per 50 # Bag	Cost/50 lb. Bag of Salt	Salt Cost per Regeneration	Grains/gal	Gallons	Salt Savings - 1 Regeneration per Week - 1 year
1	4.5	4,311	19,400	11.1	\$ 10.00	\$ 0.90	8	2,425	46.80
1	6	3,800	22,800	6.7	\$ 10.00	\$ 1.50	8	2,850	78.00
1	15	2,255	33,825	3.3	\$ 10.00	\$ 3.00	8	4,228	156.00
1.5	6.75	4,311	29,099	7.4	\$ 10.00	\$ 1.35	8	3,637	70.20
1.5	9	3,800	34,200	5.6	\$ 10.00	\$ 1.80	8	4,275	93.60
1.5	22.5	2,255	50,738	2.2	\$ 10.00	\$ 4.50	8	6,342	234.00

This table demonstrates the salt savings. When you are offering a HE softener you will need to add additional savings such as:

- Water usage is greatly reduced
- Electrical savings – well water pump
- Impact on septic system is not as great
- Chloride discharge to municipal waste treatment plants is reduced.

These calculations are for demonstration purposes only. Not guarantee is express or implied.

PO Box 434
 Lima PA 19037-0434
 610-365-7818



Contact us at: info@urbansaqua.com
www.urbansaqua.com

Can an independent dealer buy a High Efficiency valve, tank and resin and make their own HE softener?

Not really. These systems have been designed and manufactured by OEM's who sell entire systems and not just the components. There are OEM's who sell HE softeners to independent dealers.

Can a High Efficiency softener be used if there is iron and manganese in the water?

In the northeastern U.S. we use water softeners to remove these contaminants. The species of iron and manganese are easily removed because there is low TDS and not much competition of other cations. (It's mostly a dissolved, low pH water.) These softeners are fondly called "salt hogs" because you need to regenerate with a lot of salt to drive the iron and manganese off of the resin.

A HE softener can be tweaked to increase the salt dosage to compensate for the iron and manganese. Rather than using the full 15 pounds of salt you can cut back to 10 pounds of salt.

How much of a premium is a high efficiency softener over a typical unit?

Based on our information only, we believe it's about 10% more for a high efficiency water softener. Please check with your supplier for more details.

Learn more about [Urbans Aqua](#)

Connect with Urbans Aqua on [LinkedIn](#)

Connect with Mike on [LinkedIn](#)

Connect with Denise on [LinkedIn](#)

PO Box 434
Lima PA 19037-0434
610-365-7818