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Please note: This item is not available for same day shipping. Use the chat feature or give us a call at 864-284-1801 for further information. Navigating the Path to Clean Water Published: Are you experiencing clogged pipes, mineral deposits, dry skin and hair, or dingy laundry? Your water softener may not be working properly. Water softeners are crucial for removing hardness minerals like calcium and magnesium from water, but they require routine maintenance and can have operational issues. It’s important to ensure that your water softener is performing as it should and identifying any potential problems before they harm your plumbing system. Luckily, there are several methods to test your water softener’s effectiveness. From soap tests to laboratory analysis, we’ve compiled a list of six ways to test your water softener’s performance and identify any potential issues. By utilizing these testing methods and performing routine maintenance, you can ensure that your water softener is working properly and providing you with the best quality water for your home. Let’s dive into the world of water softeners and learn how to keep them working their best. Key Takeaways – Water softeners require routine maintenance and can have operational issues that can cause problems if not working properly.– Testing and maintenance are important for monitoring water softener performance and identifying problems before they harm the plumbing system.– High-quality salt can prevent salt mushing, and fouled resin should be cleaned with resin cleaning solutions if brownish/rust colored scale is present.– Excessively hard water can overwhelm the water softener and may require a larger water softener or additional tank. Water Softeners 101 If you’re not familiar with water softeners, they work by exchanging hardness ions for sodium to soften water. This process helps eliminate the buildup of mineral deposits in your plumbing system, which can cause clogged pipes, dingy laundry, and dry skin and hair. Additionally, water softeners can improve the efficiency and lifespan of your appliances, such as water heaters and dishwashers, by reducing the amount of mineral buildup in their components. Despite the benefits of using a water softener, there are some common misconceptions about them. For instance, some people believe that softened water tastes salty or has an unpleasant flavor. However, the amount of sodium added during the softening process is usually minimal and shouldn’t affect the taste of your water. Additionally, some people worry that softened water may be harmful to their health. However, sodium levels in softened water are generally not a concern for healthy adults, and the benefits of using a water softener often outweigh any potential risks. Testing Methods To evaluate how well your water softening system is functioning, try using soap tests, hardness test strips, TDS meters, or laboratory analysis. Soap tests involve dissolving soap in water and observing how much lather is produced. Hard water requires more soap to produce lather, so if you notice that your soap isn’t lathering as much as it should, your water softener may not be working properly. TDS meters measure the total dissolved solids in your water, including minerals like calcium and magnesium. If the TDS reading is high, it may indicate that your water softener isn’t effectively removing these minerals. When using soap tests or TDS meters, it’s important to follow the manufacturer’s instructions carefully to ensure accurate results. Additionally, it’s a good idea to test your water regularly to catch any potential issues before they cause damage to your plumbing system. If you suspect that your water softener may not be working properly, it’s always a good idea to consult a professional for further testing and maintenance. Maintenance and Troubleshooting Regular maintenance and troubleshooting are crucial for ensuring your water softening system operates efficiently and effectively. Neglecting these tasks can lead to a range of issues, including clogged pipes, mineral buildup, and poor water quality. To prevent such problems, it’s important to follow the manufacturer’s recommendations and perform routine checks on your system. One of the most common problems with water softeners is insufficient salt levels. Without enough salt, the system cannot properly regenerate the resin beads and remove hardness minerals from the water. Checking and maintaining salt levels should be part of your regular maintenance routine. Other troubleshooting tips include inspecting the resin beads for signs of fouling or wear, adjusting the brine dose as needed, and ensuring the regeneration cycle is neither too long nor too short. With proper maintenance and troubleshooting, you can keep your water softener running smoothly and enjoy the benefits of soft, clean water in your home. Conclusion So, is your water softener working as it should? With the help of the testing methods outlined in this article, you can easily determine if your system is effectively removing hardness minerals from your water. From simple soap tests to more advanced laboratory analysis, there are options for every level of testing. Remember, routine maintenance and troubleshooting are also important to ensure your water softener is operating efficiently and not causing any damage to your plumbing system. By regularly checking for leaks, cleaning the system, and addressing any operational issues, you can prolong the life of your water softener and enjoy the benefits of soft water for years to come. Discover the top 5 best pitcher water filters of 2024, ensuring your water is pure and clean with every sip; find out which made the list.Read more Are you concerned about lead contamination in your drinking water? With the increasing awareness of the harmful effects of lead on human health, it’s important to invest in a high-quality water pitcher filter. In this article, we will explore the top water pitcher filter brands for lead removal and provide you with the information you…Read more As we approach 2023, concerns over the safety of New York City’s tap water persist. Reports of lead leaching, chlorine byproducts, and other contaminants have raised questions about the long-term safety of the city’s water supply. 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In-Stock Speciality Plumbing & Filtration Comprehensive online catalog of filters, fittings, and filtration systems over 18,000 Items in-stock certified experts on-hand and eager to help all of your filtration & treatment needs, all in one place. Our warehouse locations in South Carolina and Utah allow for rapid nationwide delivery Expedited Orders Ship Same Day Most in-stock items arrive in 2 -5 days! With warehouses in both South Carolina and Utah, we are able to reach all of the USA. Thousands of Products In Stock We have over 18,000 products stocked and ready to ship when you need them! Technical Support & Solutions Need a little bit of help or an entire solution designed? We have you covered. Call us toll-free at (877) 930-7295. Subscriptions Filters at your door when you need them, so you don't have to think about it Page 2 - out of results found in s Sorted by Relevance Most popular Name A-Z Name Z-A Cheapest first Most expensive first You can tell if your new water softener is working properly by testing the water and observing what’s happening in your home. Here are ten signs to look out for:A water hardness test that shows little or no mineral presenceSoap that lathers well with waterNo mineral buildup on faucets, pipes, and toiletsImproved laundry performanceWater that doesn’t taste saltyWater that doesn’t cause skin dryness or itchinessConsistent water pressureBetter-looking fruits and veggiesAppliances without limescale or stainsA quiet water softener, unless it’s regeneratingThe best way to know whether your device is softening water is to conduct a water hardness test. You can do this easily and cost-effectively using a water hardness test kit.Water softeners remove minerals like calcium, magnesium, iron, and manganese from water. If your device isn’t working properly, the water hardness test will reveal the presence of these minerals.You can simply wash your hands with soap to see whether your water softener’s effectiveness. Alternatively, collect some water in a bucket or bowl, add soap, and mix it to see if it lathers.If your softening device isn’t working properly, you’ll have hard water, and it’ll be difficult to work up a lather.When the sodium salts in soaps interact with mineral molecules like calcium and magnesium, it forms a precipitate called scum instead of a lather.If scum forms in the soap solution you made, you’re still getting hard water.If you’re not sure, continue looking out for other signs of hard water. If your investigations point to hard water, contact a professional to check your device.Mineral buildup is a common problem in well water across the United States, potentially affecting faucets, pipes, and toilets with limescale and rust. If your water softener is functioning properly, you won’t see scaling around your pipes and faucets.If your water softener isn’t doing its job, you might see white spots on your faucets. Even the color of the water might change, giving you a scare.Good-looking, soft laundry is one of the signs that your water-softening device is working properly.Hard water can make new garments look dull. Moreover, powdered detergents contain sodium salts that react with mineral molecules and form scum. Washing laundry in scummy water will result in stains and streaks.Your washing machine will also perform better with soft water. A high level of minerals in laundry water might clog the filters and pipes inside the appliance. This will reduce its efficiency and may cause it to break down. Softened water helps washing machines operate effectively.The jury is still out on whether soft water tastes better than hard water, but there’s one thing we know for sure: it doesn’t taste salty.Hard water tastes salty due to dissolved calcium, magnesium, and sodium chlorides. Fresh-tasting mineral water, therefore, tells you that your unit is probably fully functional.Hard water can make your skin and hair look dull and dry.When minerals dry on our skin, they may clog pores. Furthermore, minerals have a way of absorbing skin moisture.The result: dry and itchy skin and, in extreme cases, eczema.Our hair isn’t exempt from the effects of hard water, either. Hair washed in hard water is more likely to lose natural oil, making it dry, dull, and flat.If you observe dullness in your skin or hair after a bath or shower, consider getting a professional to check your softening unit.Consistent water pressure and functional water softening units go hand in hand. Good water pressure means that your pipes are clean and that there is enough salt in the brine tank.However, a decrease in pressure isn’t always a red flag for your softener. If you’re using tap water, the low water pressure might be due to a decision by the water supplier or the municipality. Or there might be a firefighting emergency nearby, so a firefighting team might be drawing water from your supply line.If your water source is a private well, the low pressure you’re getting may be the result of a malfunctioning pump or drained water supply. To confirm that the issue isn’t your water softener in a scenario like this, bypass your device and see if the water pressure changes.If you identify the softener as the culprit, check the pipes and screens inside the tanks to see whether they’re clogged. Otherwise, your best bet is to contact a plumber.Fruits and vegetables washed with or left in mineral-rich water tend to lose their color and texture. If your fruit looks almost too good to eat, then your softening device is doing its job well.When it comes to eating, water rich with calcium ions can drastically affect food texture. These ions form insoluble salts, which can make food tough.Minerals also increase the boiling point of water, increasing daily cooking time. So examine your device to cook better-tasting food more efficiently.The calcium and magnesium minerals in hard water lead to limescale formation and stains on kitchen appliances. When the softening device works, appliances that come into frequent contact with water shouldn’t have these stains.You can recognize limescale by its chalk-like appearance. It becomes increasingly evident when you boil hard water in a metal pot or use hot hard water to wash metal cutlery.Although the water is washed away, the calcium and magnesium molecules find surfaces to cling to, leaving stains that are unsightly and can reduce the lifespan of your appliances.Water softeners usually make little noise unless they’re regenerating, in which case they might hum. If your device is working quietly most of the time, it’s probably working well.Note that a completely silent softener may not be working at all. A softener making no sound at all could be having a system error, like a malfunctioning circuit board. This merits professional investigation.Expect soft, cold water right away.You’ll start reaping the benefits of soft water from all your hot water faucets 48 hours after installing your softening device because your water heater will have hard water stored inside the tank.Making sure your water softener works properly is easy when you know the signs. Your device is working properly if:Soap lathers well with water and doesn’t produce scumFaucets, pipes, and toilets don’t have any mineral buildupThe laundry looks shiny and new, and the washing machine is operating effectivelyThe drinking water doesn’t taste saltyBathing water doesn’t cause itching or skin/hair drynessThe water pressure is consistent (or, when it isn’t, you’ve checked that it’s due to another problem with the water supply)Fruits and veggies washed in your water don’t lose their color or become too toughNo limescale or stains form on kitchen appliancesThe device is working quietly unless it’s regeneratingIf you’re not seeing these signs, the problem could be clogged pipes or filters, salt misuse, a salt bridge formation in the brine tank, or a system failure.These issues are far from insurmountable, but it’s worth calling a professional to help. Is it safe to drink soft water? Do you know how dangerous it is to use a faulty water softener? Not only are you drinking hard unfiltered water, but you’re also at risk of consuming the toxic substances that may pass through an “expired” water softener. Can you drink tap water in Arizona? It is generally recommended that you avoid tap water as it could contain dangerous substances, however, if you have an up-to-date water softener in place, then it is generally safe to consume. What is even more shocking, is the fact that most homeowners are not even keen when it comes to ensuring that regular maintenance routines are done. Yet, they expect their trusted devices to live on and keep serving them for decades. So, how long does a water softener last? Somewhere around 10-15 years. However, very few water softeners actually hit the double-digit age. Unlike other appliances that will clearly show when something is wrong, water softeners are ever-silent. It’s not shocking to come across a household that has been unknowingly using a faulty water softener for several years. How do you know if your water softener is working? How do you know when your water softener needs to be replaced? Is a water softener worth it? What are the signs of a faulty water softener? What are some of the common unnoticeable problems in water softeners? Read on to find the answers. We’ll list some of the things you can check to figure out if your water softener is working. It’s one of those simple, but effective tests that will immediately let you know if your water softener is still working. Take a bucket-full of water and add a reasonable amount of soap. Stir the mixture and see if the bubbles produced will be a lot or less than normal. Few bubbles are a sign that the water is hard to lather- A clear sign that your water softener is faulty or not working. When lathering becomes hard, you’ll find that you’re forced to use more detergent when doing laundry. Or, more shampoo when taking a shower. Speaking of laundry, you need to be wary of the type of water you’re using for your laundry. High-quality laundry is a sign that your water softener is still working. On the other hand, low-quality laundry is a sign that your laundry machine is back to using hard water- This will only happen if your water softener is not working. Discolored, scratchy, stiff, and easily torn clothes are a sign that hard water is being used. The impurities in hard water will mess up your clothes’ fabric structure. Hard water usually forms limescale on these surfaces- It’s an ugly-looking chemical compound that sucks the beauty and life from a home. Of course, this is only relevant depending in the area you live in. You may want to find out what type of water flows though your water system. you can use this water quality report for Maricopa as an example on how to find out what to expect in your local water. The formation of limescale is a sure sign that hard water is being used in your household. In this case, your water softener is not working. Limescale formation worsens in piping systems. Continuous passage of hard water in pipes will leave behind limescale residue that piles up over time. If you’re not careful, it might even block and damage your household’s pipe system. People who prefer soft water to hard water know exactly what we’re talking about. Soft water has a unique taste that greatly differs from hard water. Some say it has a dull taste and others like it. To many, hard water has a strong (almost salty) taste- Ths is because of the dissolved mineral ions found in hard water. If you’re drinking soft water, be keen on its taste. A noticeable change is a sign that something is up with your water softener. Next, we’ll be going through some of the common unnoticeable problems in water softeners. You need to spot them early enough before they fatally damage your water softener. It’s easy to live with leaks for years without spotting them. In fact, most water softener leaks aren’t as a result of damage- They’re brought about by poor installation, hence are easy to fix. You need to inspect your entire system (especially for those with whole house water softening systems). Check the pipes, tanks, taps, and any other place you might suspect. Regeneration is a crucial process for water softeners. It’s when your water softener takes time to remove the “filtered” mineral ions that were removed from hard water during the softening process. If a water softener fails to carry out its regeneration cycles, softening will no longer take place- You’ll end up with the hard water you’re trying so desperately to avoid. A sure sign of this is salty tasting water because of the high mineral ion concentration. There is a special timer that lets your water softener know it’s time to regenerate- This is usually during the night- Times when water is least required in the household. Every water softener has its way of letting you know that it’s about to carry out its regeneration cycle. Go through the manufacturer’s guide. It’s usually a specific sound that comes just before the process is initiated. Probably the most annoying water softener problem to ever hit households. Now, several things can cause this menacing problem. An undersized water softening system: You need to be careful when shopping for a home water softener. Take time to calculate your household’s water consumption rate. It’s also worth taking into account factors like how big your house is. While you’re at it, take note of the water softener’s inlet and outlet pressure. Get a professional HVAC expert to help you with sizing. Take a look at some of the best water softeners in Phoenix. Sediment blockages: This is usually a problem for water softeners with in-built filtering systems meant to trap sediments. However, if the filters are not changed regularly, they will cause a lot of blockages. Iron-buildup: For those living in areas with very hard water, iron-build in the resin tank might be the reason why you’re receiving water at low pressure. Solve this by adding a mineral cleaner to the tank. In addition to that, you can increase the number of regeneration cycles your water softener does in a day. Resins beads are normally expected to last as long as the water softener- That is why most people are most likely not going to see this one coming. Sometimes resin beads get worn out earlier than expected, especially if you live in places with very hard water. The first sure sign is the sight of floating particles on the resin tank. Solve this problem by washing the resin tank and replacing the beads. Follow the manufacturer’s guide to avoid using incompatible beads. Note: Just because your water softener is experiencing these problems doesn’t mean you should necessarily get a new one. Most of these problems can be easily solved without calling in a professional HVAC expert. Unless your water softener suddenly dies and won’t turn on no matter what you do, there isn’t a clear sign of when you need to replace your water softener. If your water softener stops working, you’re most likely just experiencing a water softener clog, which can be easily fixed. However, we’d also advise you to go for a new system if your current water softener keeps crashing now and then. In such a case, it would be much cheaper if you spent money on a new system instead of constantly repairing an old one, especially if the water softener has already hit the 10-year mark. Lastly, water softener loop installation can prolong the lifespan of your water heaters and save a substantial amount on energy costs. Call a professional if you’re not sure whether or not you should replace your old water softener with a new one. It is also highly advised that installing a water softener must be done by certified and licensed HVAC technician. As mentioned earlier, very few water softeners manage to hit the 10-year mark. Of course, there are a lot of factors that affect a water softener’s lifespan such as the overall quality of the system and use. However, there are some things you can do to make it last longer. Maintenance- We hope you’re not tired of hearing this word. As simple as it sounds, that’s the only thing that will guarantee your water softener’s longevity. Below are the most critical maintenance routines you should do. Regularly change your water softener’s filters. Never allow your water softener to completely run out of its regenerant. Size your water softener- Make sure it perfectly suits your household’s needs to avoid overworking the system. You should only refill the salt when it’s about ⅓ full. While you’re at it, remove any hardened salt-blocks stuck on the sides of the tank. Contrary to what many people think, water softeners need a lot of care, especially if you want yours to last long enough with minimal issues. Don’t forget about the regular maintenance routines that make sure the system stays healthy. We’d advise you to call over an HVAC professional at least once a year for thorough maintenance and maybe even consider a scale control water treatment system. [related_posts_by_tax posts_per_page="3" format="thumbnails" image_size="medium"] New to water softening & hard water treatment? Our guide will tell you everything you need to know, from our water treatment experts. Water Softeners Salt-Free Conditioners Water softener systems are becoming a commonplace appliance in many households, with an estimated 25% of homeowners in the US choosing to soften their water. Water softeners are tank-based water treatment systems that remove hardness minerals (namely calcium and magnesium) from water, preventing hard water issues like limescale. In this guide, we’ll be sharing all the details you need to know if you’re curious about water softeners, including how they’re set up, how they work, and their benefits. If you find that water softeners aren’t right for you, we’ve also shared several alternatives to consider which can also address hard water problems. Thought there was only one type of water softener available? Fortunately not! It sometimes feels like manufacturers are set out to confuse us with all their different water treatment options, but actually, choice is a good thing. Each type of hard water treatment system has its own unique benefits, and when you understand the differences between them, you might just find that one system is particularly ideal for your needs. Water softeners use a process called ion exchange to replace hardness minerals with sodium ions in water. Quick science lesson: The ions involved in ion exchange (calcium, magnesium and sodium chloride) are all positively charged. Water softeners use a negatively charged resin bed that attracts sodium inside the system. When hard water flows through the softener, the calcium and magnesium ions are also attracted to the resin bed. When these ions stick to the resin, sodium releases into the water to balance the water’s electrical charge. Read the long version of how water softeners work in the post. Traditional water softeners consist of two tanks: a resin tank and a brine tank. Brine, a salt-and-water solution, flows from the brine tank into the resin tank, saturating the negatively charged resin beads with positively charged sodium ions. Ion exchange system Once the sodium ions in the resin beads are depleted, the softener will regenerate, washing the hardness minerals out of the resin and replacing them with fresh sodium chloride. This process can continue consistently as long as you regularly top up the salt in the brine tank. Water softeners are softeners, so they remove the minerals that are responsible for water hardness: calcium and magnesium. Some water softeners can also remove low levels of iron, making them a good choice for anyone looking to soften their well water. Water softeners aren’t filters, so they can’t remove contaminants that don’t contribute to water hardness, like heavy metals and chlorine. Related: Diamond Crystal vs Morton Water Softener Salt Compared There are two types of salt-free water conditioners you’re likely to come across today: TAC/NAC conditioners and citric acid conditioners. TAC/NAC (template-assisted crystallization/ nucleation-assisted crystallization) uses a media to “condition” water, preventing scale formation. TAC/NAC water conditioners don’t remove hardness minerals or other minerals from water. Instead, these systems crystallize the hard water minerals, preventing them from being able to stick to surfaces. The benefit of TAC is that you can still benefit from calcium and magnesium in your tap water without having to deal with limescale. You also don’t have to add salt to your water, which is a bonus if you want to limit your salt intake as much as possible. Related: Do salt free water softeners actually work? NAC media process Water conditioners using citric acid soften water using a process called chelation. Chelation meters citric acid into a hard water supply, causing the hardness ions to bind to the citric acid. The biggest perk of using citric acid to soften your water is that you don’t have to use salt, and unlike water conditioners, chelation softeners physically remove calcium and magnesium from water. However, it’s important to be exact with how much citric acid is added to water. Too little, and your hard water will stay hard; too much, and your water will become acidic, presenting further cleaning problems – especially if you have copper pipes. Electronic or magnetic descalers use magnets or a coil of wire placed around your main water pipe. Like water conditioners, water descalers don’t technically soften water. Instead, these systems treat hard water by producing electromagnetic impulses that alter the composition of hard water minerals, preventing them from forming scale. The great thing about descalers is that they’re affordable, costing around $300-$500, and they require no maintenance whatsoever. However, the evidence to back up this descaling performance is limited, so it’s hard to know whether they truly work or not. Plus, they’re not recommended for homes in a very hard water area. Yarna descaler Further Reading Explained: The Pros and Cons of Water Softeners Water softeners aren’t as complicated as you might think. There are quite a few bits involved in a softening system, but you won’t have to think about most of them once the system is installed. The three main components to be aware of in a traditional salt-based unit are the resin tank, the brine tank, and the control head. The resin tank is where a process called ion exchange takes place. Inside the resin tank are resin beads. These resin beads hold onto each individual sodium ion that passes into the tank. During the ion exchange process, the resin beads release sodium ions into the water, while calcium and magnesium minerals take their place inside the resin. You don’t need to worry too much about the resin softener tank, as once you’ve set it to regenerate (more on that in the “control head” section), you can leave it to do its thing. Depending on the crosslink percentage of your resin, you’ll usually need to replace the resin beads every 8 to 10 years. The brine tank contains the water softener salt. When this softener tank fills with water, a brine solution (combining salt and water) is formed. This brine solution flows into the resin tank when the system regenerates. You should keep the tank at least 1/3 of the way full to ensure there’s always enough salt in the system for the ion exchange process to take place. Check the tank every 4 weeks or so and add more salt if needed. Check out the top rated water softener salts. The control head gives you control over how the system operates. You’ll be able to input important information about your water chemistry and average water usage, and program the system to perform a regeneration cycle at certain times. Once you’ve set the system using the control head, you can leave it to automatically follow your instructions. However, if you want to improve the efficiency of your softener’s performance, it’s easy to amend your settings for more desirable results, whether that’s more water softening or reduced water waste. Some water softeners have a Bluetooth app that lets you monitor and control your water softener from your phone, which can be a convenient option for some people. Water softeners work by using a process called ion exchange – specifically, a type of ion exchange known as cation exchange. Here are the steps involved in this process: Hard water enters the water softener’s resin tank, which contains a bed of negatively charged resin beads. Calcium and magnesium hardness ions in the water, which have a positive charge, are attracted to the negative charge of the resin bed. As water flows through the resin tank, these mineral ions stick to the resin beads. Positively charged sodium chloride ions, which are loaded in the resin beads, are released into the water. Sodium is released, equal to the amount of hardness minerals captured, balancing the water’s charge. The water, now softened with sodium ions, leaves the water softener resin tank. Water softeners must regenerate to replenish the sodium ions and flush away the accumulated water hardness minerals. To regenerate, a water softener draws a highly concentrated solution of salty water (known as brine solution) out of the brine tank and flushes it through the resin beads. The process usually takes 2-3 hours in total. There are five stages involved when a water softener regenerates: Brine tank fill – Water flows into the brine tank, filling to just below the salt level. Backwash – The resin beads are flushed in a backwashing process, removing the minerals. Resin tank brine draw – Brine is drawn from the brine tank and reverse ion exchange takes place. Brine rinse – The brine valve closes and the resin is rinsed again. Lingering brine is washed down the drain. Fast rinse – A final fast rinse cycle occurs in the resin, which causes the resin beads to become compacted and ready for the softening process once more. There are two common regeneration methods used in ion exchange water softeners: co-current and counter-current regeneration. Co-current regeneration sends the brine solution into the resin tank in the same direction as the water flow. As the brine solution flows through the resin beads, the hardness minerals are forced down through the system, causing them to constantly be exchanged and re-exchanged. Once the water reaches the bottom of the resin tank, the solution is weakened, and the resin beads with the highest charge are at the top of the tank. Counter-current regeneration sends brine up through the bottom of the regeneration tank. The brine solution flows in the opposite direction, first coming into contact with the bottom of the resin, which is typically less depleted than the top. There are fewer hardness minerals causing exchange and re-exchange as the brine flows through the resin, which means the brine is still relatively concentrated once it reaches the top of the tank. Counter-current regeneration distributes sodium ions more evenly around the resin, which saves about 65% water and 75% salt compared to a co-current water softener. The four key differences between upflow and downflow water softeners are: The direction of flow. Upflow water softeners push brine up through the bottom of the resin bed, so the brine water flows upward towards the top of the tank. Downflow water softeners, on the other hand, send water down through the top of the resin tank, so water flows down towards the bottom of the tank. The efficiency of regeneration. The upflow regeneration process is about 5% more efficient than a downflow system. What does this mean? You should be able to save money and salt by using an upflow water softener. The thoroughness of brining. Because upflow water softeners more effectively send brine across the entire surface of the resin bed, they offer a more thorough brining process than downflow water softeners. The system components. While most components in upflow and downflow systems are the same, an upflow water softener doesn’t need a backwash control valve, while a downflow softener does. Proportional vs automatic brining. Upflow water softeners are ideal when they’re used for proportional brining – when a measured amount of salt is added based on how much of the resin bed needs to be regenerated. Downflow water softeners are more commonly associated with automatic brining. You have several choices when deciding on a water softener configuration for your home: Single-tank water softeners are the traditional water softener configuration. “Single tank” doesn’t mean that a water softener’s resin and brine tanks are packed into the same tank – it just means that the system has one resin tank, not two. A single-tank system can’t provide a softened water supply when the system is performing a regeneration cycle. Most people set their water softeners to regenerate at a time that they don’t plan to use water, such as 3:00 AM, so they’ll only ever use softened water in their home. Dual tank water softeners technically contain three tanks: two resin tanks and a salt tank. The biggest perk of a dual-tank softener is that the system can always be in use. While one resin tank is regenerating, the system will switch automatically to the other tank. This means you’re never without softened water during the regeneration process. Owning a dual-tank water softener is beneficial if you have appliances running throughout the night, such as hot water heaters. Fleck 9100SXT Dual Tank system Portable water softeners aren’t actually portable, but they’re so-called because they’re much smaller than traditional water softeners. The system configuration is the same as a single-tank ion exchange water softener. The biggest difference is that this water softener is small enough to be installed in tight locations, such as in RVs and small vacation homes. Portable softener If you’re looking for the combined benefits of water softening and filtration, combo systems tend to be the most high-efficiency choice. A combination filter-softener installed at your home’s point of entry can soften your water and improve your water quality, removing common contaminants as well as hard minerals. This means you can benefit from tastier, safer, healthier drinking water as well as reducing the scale issues in your home. Water softener-filter combo systems usually consist of a separate water softener and a separate water filtration system that are designed to work in tandem to offer double the benefits. You should install a water softener unit before a water filtration system to prevent hard minerals from damaging the filter media. Filtration and softening system combo Before you jump into buying a water softening system for your home, there are a few things to think about. This is important – it could make the difference between buying a system that works perfectly for you, and buying a system that doesn’t work at all. Your water hardness is an obvious consideration to make before you invest in a water softener. Yes, all water softener systems are designed to tackle water hardness – but the hardness of your water affects several buying decisions, including the grain capacity of a system. Some scale treatment systems simply aren’t designed for water exceeding a certain level on the hardness scale. HardnessGrains per Gallon (GPG)Parts per Million (PPM) & mg/LSoft10>180 You might know already that your water is hard, but you should still test your water with a laboratory or home testing kit to find out your exact hardness in PPM. Your water chemistry is another important consideration to make before buying a water softener, especially if you get your water from a private well. A pH range of between 6.5 and 8 is ideal for water softening. The ion exchange process is optimal at the neutral pH range, and if your water is too acidic or too alkaline, the process may not work effectively. Test your water’s pH using a laboratory or an at-home test kit. Consider a treatment like soda ash/sodium hydroxide injection to boost your water’s pH if it’s too acidic for proper water softening. While hard water minerals might be the most obvious water quality issue in your home, don’t assume that that’s all you’re dealing with. If you have hard water, it’s more than likely that you’re dealing with other problems in your water supply, too. Municipal water supplies contain traces of the following contaminants: Chlorine, chloramine, and disinfection byproducts Heavy metals like lead and arsenic Emerging contaminants like pharmaceuticals PFOA and PFOS Fluoride Well water supplies are more likely to contain the following impurities: Iron, sulfur, and manganese Microorganisms like bacteria and cysts Sediment, tannins, and turbidity Radon, arsenic, and VOCs Drinking even mildly contaminated water can have dangerous health effects, from sickness and diarrhea to long-term organ damage. If your goal is to improve the quality of your water, don’t stop at water softening! Consider buying a water softener and filter combination to soften and filter your water, making it clean, healthy, tasty, and safe to drink. Again, if you don’t know what your water supply contains, get it tested by a professional laboratory or use a home testing kit to find out which contaminants need to be dealt with ASAP. We’ve touched on this already, but let’s make it clearer: city and well water supplies are unique from one another, and may require their own unique treatments. Let’s look at well water first. Well water may: Have a high hardness content Contain iron Have an acidic pH There are water softeners designed for well water, which can remove low levels of iron as well as high hardness. Moving onto city water. Municipal water supplies may: Have high hardness Contain little iron Have a neutral pH It’s easier to find a water softener for city water than for well water because city water doesn’t have iron or pH problems, as is more common with well water. With that said, water hardness isn’t treated in city water before it reaches your home, meaning that your water supply may contain just as many hardness minerals as the private wells in your local area. Source: United States Geological Survey (USGS) Imagine spending thousands of dollars on a water softener, then putting hours of hard work into installing the thing – only to find out that the type of softening system you’ve bought doesn’t comply with your state’s rules. Many local authorities have their own regulations and plumbing codes for water softeners. Things like installation, maintenance, and even regeneration drain water may be regulated by your state, so check for any local requirements before you make a purchase. Your local plumber should be a good source of information if you’re unsure about your area’s regulations. You’re sure to get the right answers from an expert who has probably installed more water softeners than they can remember. Whether you own a house or apartment will probably affect the size of the water softener system you buy. We know we’re stereotyping here, but houses are generally more spacious than apartments. An apartment might have limited room at your home’s point of entry, where the water softener should be installed. Houses tend to have more space, with a cupboard, garage, or even a basement providing the perfect location for water softener installation. Measure out your available space before buying a water softener. Make sure there’s enough room to comfortably install and maintain the system, including topping up the salt and replacing the resin. You need to install your softener before your hot water heater, so unfortunately, you can’t install it further down your waterline if there happens to be more space. If you own your home, lucky you! You can install whatever type of water softener, wherever you want. However, we know how many thousands of people choose to rent nowadays – whether for the flexibility of not being tied down or simply for the fact that house prices are stomach-clenchingly expensive these days. If you rent your home, you may have a few hurdles to jump before you can buy and install a water softener. Some landlords are cool enough to listen to your requests to make changes to your rental property – especially changes that will increase the value of a property and its appliances. Others won’t allow you to install a water softener because of the invasive installation required. If you moved to a new home and decided to take your water softener with you, you’d leave a gaping hole in your old home’s waterline. Check your rental terms to see if there’s any specific mention of installing water treatment systems. If there isn’t, reach out to your landlord and prepare to do some convincing. If the answer is no, you’ll have to settle for a system that doesn’t require cutting into your waterline, such as an electronic descaler. There are a variety of different technology types that can be used to soften your water. For instance, the best system for you may be a salt-based system if your water is very hard and you would rather remove all mineral ions from your water. Equally, you might not want to remove these ions, but only change their form to prevent them from producing limescale buildup, for which you might prefer one of the best salt-free softening units. A traditional water softener has two tanks and takes up a fair bit of space in your home. You probably won’t be able to install a water softener inside a small cupboard. Open space is more convenient for installation and maintenance (like salt top-ups). Salt-free conditioners are more suitable for tight spaces because they only consist of a single tank. This single tank is still quite tall, so regardless of the system you buy, you should carefully measure your available space and compare these measurements to your chosen system. Limited space for installation Bypass valves are usually included in a water softener’s installation kit. A bypass valve lets you divert water around the softener for any reason – e.g. during maintenance, if the softener is experiencing problems, or you want to stop using the softener periodically. A bypass valve is more essential than most people realize. If your water softener has a major leak and you don’t have a bypass valve, you’ll have to shut off your water supply entirely, which means your whole home won’t have access to water until the problem is solved. If your preferred water softener doesn’t come with a bypass valve, buy a valve separately when you buy the system. How much do you know about the all-important features of a water softener? Make sure you’re aware of the following features while you’re considering the best water softener system for you: Water softening systems on the market today vary in grain capacities from model to model. The average family will use around 3,000 grains per day. That means you’ll get around 1,960 days – or 6 years – out of a 64,000 grain water softener. Make sure to choose the right grain capacity based on your water consumption. Most systems are available in several grain capacities for different-sized households. For instance, a 30,000 grain water softener is ideal for homes with 1-3 bathrooms, with a lower water consumption than homes with 4+ bathrooms, 50,000-grain which require a softener. Grain Capacity Average Price Range 20,000 - 24,000$600 - $1,000 30,000 - 32,000$600 - $1,500 40,000 - 48,000$1,000 - $2,000 60,000 - 64,000$1,500 - $2,200 70,000 - 80,000$1,800 - $3,200+ A water softener’s resin has a crosslink percentage resin. This percentage, which is either 8% or 10%, tells you the durability of the resin. A standard water softener has an 8% resin crosslink percentage. If you can afford to spend more money on a 10% crosslink resin that lasts longer, look for this feature in a water softener. 10% crosslink resins last up to 20 years, while an 8% crosslink resin has a shorter lifespan of between 10 and 12 years. The longer-lasting the resin, the less frequently you’ll need to change it to keep your softening system alive. The flow rate of a water softener is based on its capacity. Large water softeners designed for homes with 3+ bathrooms have a faster water softener flow rate than average-sized water softeners designed for 1-3 bathrooms. Most water softeners have a flow rate of 7-12 GPM. Ion exchange doesn’t slow down water flow like a filter does, so your water pressure shouldn’t drop significantly from using a water softener. At most, you’ll need to wait a couple of seconds after turning on your faucet. Make sure to choose the right flow rate for your home. Overcompensating with a system that’s too big can be just as damaging as using a system that’s too small. A flow rate of up to 12 GPM is ideal for most families. All traditional salt-based water softeners need to regenerate. The resin bed holds onto sodium ions, which are used in ion exchange. When the resin runs out of sodium, the regeneration process replenishes the resin bed with sodium ions. There are a few different ways in which a water softener can regenerate. We’ve outlined your options – and which is best – below. Timed regeneration is water softener regeneration set for a set time on a recurring basis (usually at 3 am, twice or three times per week). Timed regeneration means you don’t have to worry about programming the softener to regenerate yourself, and the system will regenerate when you don’t need to use water. The disadvantage of timed regeneration is that the softener will regenerate according to a set schedule, rather than when it needs to replenish the resin. Metered regeneration is regeneration triggered by water usage. When the water softener has used so much water, the system predicts that the resin will need replenishing, and it’ll automatically regenerate. Metered regeneration is better for avoiding salt and water waste because the system only regenerates when it needs to. Manual regeneration allows you to input your own timings for regeneration into the system. Being able to manually time regenerations means you can ensure the softener is out of use when you don’t need water (i.e. in the middle of the night). However, you’ll probably end up triggering regeneration when the softener doesn’t need to regenerate. The best sign that you can trust a water softener manufacturer is an NSF or WQA certification. Certifications by these independent testing organizations prove that a water softener does what it’s advertised to do and meets customer demands. Water softeners don’t need to be legally certified, but a certification works in the manufacturer’s favor, telling customers that their product can remove hard water minerals and/or iron. At the moment, only traditional salt-based water softeners can be certified for performance. When browsing your options, look out for these certifications: NSF/ANSI 44 – the most important certification you’ll find for ion or cation exchange water softeners using salt or potassium chloride. An NSF 44 certification tells you that a water softener can remove hardness minerals to at least 1 GPG (grain per gallon). Systems certified to this NSF standard also meet safety and structural integrity requirements. NSF/ANSI 372 – softeners with this NSF certification have a lead-free construction and don’t leach metals into your water. This certification can be achieved by both softeners and conditioners because it’s based on design, not performance. So, what is a water softener priced at? Can you afford a water softener for your home? It’s something to put a lot of thought into before you make the investment. The average cost of a water softener is $1,200-$1,800. There are a lot of things that can affect the cost of a water softener, including: Whether it offers additional benefits (e.g. it can remove iron) Whether it offers a high-efficiency performance that helps you save water, money, and salt Whether it’s easy to install yourself Whether it has any fancy tech features (e.g. a touch screen control head or Bluetooth configuration) The system’s capacity (the lower-price systems have a smaller resin bed) The system’s size (e.g. dual-tank systems cost more) We wouldn’t recommend paying any less than $800 for a traditional salt-based water softener. You want to make sure that your water softener works as advertised, and if you spend any less than $800, you may end up falling for a deal that’s too good to be true. Be prepared to do some saving if you’ve decided you want a water softener for your home. The average price is $1,000-$1,500. Water softeners are expensive, but for many people, they’re an essential investment and they pay for themselves in a few short years. This expensive upfront cost is one of the few water softener disadvantages. The price of a water softener depends on factors like: System capacity – the bigger the system, the more expensive it is The manufacturer – more well-known brands can charge more than lesser-known manufacturers The system’s features – smart, efficient, money-saving features come at a premium upfront price Where you buy the system from – buying directly from the manufacturer is often cheaper, especially if you have an affiliate discount code You should prepare to spend $800 minimum on a water softener – any cheaper and you’ll end up regretting your purchase. System TypeAverage Price Range Single Tank Ion Exchange $800 - $2,000+ Dual Tank Ion Exchange$1,500+ Salt-free Condit

laundry in scummy water will result in stains and streaks.Your washing machine will also perform better with soft water. A high level of minerals in laundry water might clog the filters and pipes inside the appliance. This will reduce its efficiency and may cause it to break down. Softened water helps washing machines operate effectively.The jury is still out on whether soft water tastes better than hard water, but there’s one thing we know for sure: it doesn’t taste salty.Hard water tastes salty due to dissolved calcium, magnesium, and sodium chlorides. Fresh-tasting mineral water, therefore, tells you that your unit is probably fully functional.Hard water can make your skin and hair look dull and dry.When minerals dry on our skin, they may clog pores. Furthermore, minerals have a way of absorbing skin moisture.The result: dry and itchy skin and, in extreme cases, eczema.Our hair isn’t exempt from the effects of hard water, either. Hair washed in hard water is more likely to lose natural oil, making it dry, dull, and flat.If you observe dullness in your skin or hair after a bath or shower, consider getting a professional to check your softening unit.Consistent water pressure and functional water softening units go hand in hand. Good water pressure means that your pipes are clean and that there is enough salt in the brine tank.However, a decrease in pressure isn’t always a red flag for your softener. If you’re using tap water, the low water pressure might be due to a decision by the water supplier or the municipality. Or there might be a firefighting emergency nearby, so a firefighting team might be drawing water from your supply line.If your water source is a private well, the low pressure you’re getting may be the result of a malfunctioning pump or drained water supply. To confirm that the issue isn’t your water softener in a scenario like this, bypass your device and see if the water pressure changes.If you identify the softener as the culprit, check the pipes and screens inside the tanks to see whether they’re clogged. Otherwise, your best bet is to contact a plumber.Fruits and vegetables washed with or left in mineral-rich water tend to lose their color and texture. If your fruit looks almost too good to eat, then your softening device is doing its job well.When it comes to eating, water rich with calcium ions can drastically affect food texture. These ions form insoluble salts, which can make food tough.Minerals also increase the boiling point of water, increasing daily cooking time. So examine your device to cook better-tasting food more efficiently.The calcium and magnesium minerals in hard water lead to limescale formation and stains on kitchen appliances. When the softening device works, appliances that come into frequent contact with water shouldn’t have these stains.You can recognize limescale by its chalk-like appearance. It becomes increasingly evident when you boil hard water in a metal pot or use hot hard water to wash metal cutlery.Although the water is washed away, the calcium and magnesium molecules find surfaces to cling to, leaving stains that are unsightly and can reduce the lifespan of your appliances.Water softeners usually make little noise unless they’re regenerating, in which case they might hum. If your device is working quietly most of the time, it’s probably working well.Note that a completely silent softener may not be working at all. A softener making no sound at all could be having a system error, like a malfunctioning circuit board. This merits professional investigation.Expect soft, cold water right away.You’ll start reaping the benefits of soft water from all your hot water faucets 48 hours after installing your softening device because your water heater will have hard water stored inside the tank.Making sure your water softener works properly is easy when you know the signs. Your device is working properly if:Soap lathers well with water and doesn’t produce scumFaucets, pipes, and toilets don’t have any mineral buildupThe laundry looks shiny and new, and the washing machine is operating effectivelyThe drinking water doesn’t taste saltyBathing water doesn’t cause itching or skin/hair drynessThe water pressure is consistent (or, when it isn’t, you’ve checked that it’s due to another problem with the water supply)Fruits and veggies washed in your water don’t lose their color or become too toughNo limescale or stains form on kitchen appliancesThe device is working quietly unless it’s regeneratingIf you’re not seeing these signs, the problem could be clogged pipes or filters, salt misuse, a salt bridge formation in the brine tank, or a system failure.These issues are far from insurmountable, but it’s worth calling a professional to help. If you’ve just installed a water softener in your home, it’s important to learn how to tell if it’s working properly. This guide is going to identify major signs if the water softener is working properly, along with some major factors performance of your softener. Without knowing what to look for, it can be difficult to determine if the machine is doing its job. In this post, we’ll outline some of the most common ways to tell if your water softener is working as it should be. Fun Fact: If you’re using any of the reliable water softeners, you’d not need to worry about if your machine is working properly or not. How do I Know if My Water Softener Is Working? Now that we know what to look for, let’s take a closer look at some of the most common ways to tell if your water softener is working properly: One of the most noticeable signs that your water softener is working properly is that you’ll use less soap when cleaning. This is because the minerals in hard water make it difficult for soap to lather, which means you have to use more to get the same amount of suds. Another telltale sign that your water softener is doing its job is that your clothes will look and feel cleaner after being washed in soft water. This is because the minerals in hard water can actually cause fabrics to appear dull and feel rough to the touch. If you have hard water, you may notice that your skin feels dry and rough after showering. This is because the minerals in hard water can strip away natural oils from the skin. The same is true for hair, which can become brittle and difficult to manage. Another common issue with hard water is soap scum buildup. This occurs when the minerals in hard water react with soap, causing a sticky residue to form on surfaces like showers and tubs. If you have a water softener, you should notice a decrease in soap scum buildup. Hard water can also take a toll on your plumbing, as the minerals can build up and clog pipes over time. If you have a water softener, you should notice that your plumbing works better and drains more freely. There are a few factors that can affect the performance of your water softener, such as: There are two main types of water softeners: ion exchange and reverse osmosis. Ion exchange is the most common type of water softener, and it works by exchanging the minerals in hard water for sodium ions. Reverse osmosis, on the other hand, works by filtering out the minerals in hard water. Another factor that can affect the performance of your water softener is its size. If you have a large home with multiple bathrooms, you’ll need a larger water softener to meet your needs. The quality of the water you’re using can also affect the performance of your water softener. If you have hard water, it will take longer for the water softener to work its magic. However, if you have soft water, the process will happen much faster. The frequency of use can also affect the performance of your water softener. If you only use it occasionally, it may take longer for the water softener to work its magic. However, if you use it on a regular basis, you should notice a difference pretty quickly. The temperature of the water can also affect the performance of your water softener. Cold water is harder to treat than warm water, so it may take longer for the water softener to work its magic. Now that you know how to tell if your water softener is working properly, it’s important to learn how to maintain it. This will help ensure that your water softener continues to work its magic for years to come. Check out this resource for tips on how to maintain your water softener. If you notice that your water pressure is suddenly lower than normal, it could be an indication that your water softener needs to be replaced. This is because over time, the mineral buildup in the softener can restrict water flow and reduce pressure. Another common issue with water softeners is leaking. If you notice water pooled around your machine, it’s important to take action right away as this could be an indication of a serious problem. If you notice a sudden increase in your water bill, it could be an indication that your water softener is not working properly. This is because the machine uses a lot of water to operate, so if it’s not working efficiently, it can cause your bill to go up. If your water softener is making strange noises, it could be an indication that something is wrong with the machine. This is often due to a build-up of minerals in the softener, which can cause the motor to work harder and make noise. If your water softener isn’t using salt, it could be an indication that the machine is not working properly. This is usually due to a build-up of minerals in the softener, which can prevent the salt from dissolving and being used. These are just a few of the most common water softener problems. If you’re having trouble with your machine, it’s important to consult with a professional to diagnose the problem and find a solution. If you’re having any of the above issues with your water softener, it’s important to consult with a professional to diagnose the problem and find a solution. In most cases, these problems can be easily fixed and your water softener will be back to working like new in no time. Thanks for reading! How often should I use my water softener? It’s important to use your water softener on a regular basis to keep it working properly. Depending on the type of water you have, you may need to use it more or less frequently. What are the most common problems with water softeners? The most common problems with water softeners are low water pressure, leaking, high water bills, noisy machines, and machines that aren’t using salt. How often should I check my water softener? You should check your water softener on a regular basis to make sure it’s working properly. Depending on the type of water you have, you may need to check it more or less frequently. How long do water softeners usually last? Water softeners can last for many years if they are properly maintained. However, the life expectancy of a water softener depends on many factors, such as the quality of the unit, how often it is used, and how well it is maintained. Please note: CharlieTrotters.com is reader supported. This page may contain affiliate links. If you buy a product or service through such a link we earn a commission at no additional cost to you. Removing positive ions from hard water Idealized image of cation-exchange resin performing water softening. It shows sodium ions being released by the resin, and replaced with calcium ions captured from water. Water softening is the removal of calcium, magnesium, and certain other metal cations in hard water. The resulting soft water requires less soap for the same cleaning effort, as soap is not wasted bonding with calcium ions. Soft water also extends the lifetime of plumbing by reducing or eliminating scale build-up in pipes and fittings. Water softening is usually achieved using lime softening or ion-exchange resins, but is increasingly being accomplished using nanofiltration or reverse osmosis membranes. Main article: Hard water Limescale buildup in a PVC pipe The presence of certain metal ions like calcium and magnesium, principally as bicarbonates, chlorides, and sulfates, in water causes a variety of problems.[1] Hard water leads to the buildup of limescale, which can foul plumbing, and promote galvanic corrosion.[2] In industrial scale water softening plants, the effluent flow from the re-generation process can precipitate scale that can interfere with sewage systems.[3] The slippery feeling associated with washing in soft water is caused by the weaker attraction of the soap to the water ions when the water has been stripped of its mineral content. The surface of human skin has a light charge that the soap tends to bind with, requiring more effort and a greater volume of water to remove.[4] Hard water contains calcium or magnesium ions that form insoluble salts upon reacting with soap, leaving a coating of insoluble stearates on tub and shower surfaces, commonly called soap scum.[4][5] The most common means for removing water hardness rely on ion-exchange resin or reverse osmosis. Other approaches include precipitation methods, such as fluidized bed pellet softening,[6] and sequestration by the addition of chelating agents. Distillation and reverse osmosis are the most widely used two non-chemical methods of water softening. Ion exchange resins, in the form of beads, are a functional component of domestic water softening units Conventional water-softening appliances intended for household use depend on an ion-exchange resin in which "hardness ions"—mainly Ca2+ and Mg2+—are exchanged for sodium ions.[7] As described by NSF/ANSI Standard 44,[8] ion-exchange devices reduce the hardness by replacing magnesium and calcium (Mg2+ and Ca2+) with sodium or potassium ions (Na+ and K+)." Ion-exchange resins are organic polymers containing anionic functional groups to which the divalent cations (Ca2+) bind more strongly than monovalent cations (Na+). Inorganic materials called zeolites also exhibit ion-exchange properties. These minerals are widely used in laundry detergents. Resins are also available to remove the carbonate, bicarbonate, and sulfate ions that are absorbed and hydroxide ions that are released from the resin. [9] When all the available Na+ ions have been replaced with calcium or magnesium ions, the resin must be recharged by eluting the Ca2+ and Mg2+ ions using a solution of sodium chloride or sodium hydroxide, depending on the type of resin used.[10] For anionic resins, regeneration typically uses a solution of sodium hydroxide (lye) or potassium hydroxide. The waste waters eluted from the ion-exchange column containing the unwanted calcium and magnesium salts are typically discharged to the sewage system.[3] Recharge typically takes the following steps:[11] Backwash: Water is directed through the resin in the direction opposite to that of normal flow, and the output is sent to a drain for disposal. This ten-minute process flushes out solids, and expands the resin bed. Brine draw: Water is directed through a jet pump, which pulls salt water from the brine tank, before the water and brine pass through the resin bed in the normal direction, if co-current, or in the reverse direction, if counter-current.[12] The output of this typically thirty-minute process is discarded through the drain hose. Rinse: Brine draw stops, but water continues to flow from the inlet to the outlet, gradually flushing the brine out of the resin bed. The flushing water flows slowly for several minutes, then at a faster rate for as long as an hour. At some point, the brine reservoir is refilled with fresh water. Main article: Lime softening Lime softening is the process in which lime is added to hard water to make it softer. It has several advantages[further explanation needed] over the ion-exchange method but is mainly suited to commercial treatment applications.[13] Main article: Chelation This section does not cite any sources. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. (March 2018) (Learn how and when to remove this message) Chelators are used in chemical analysis, as water softeners, and are ingredients in many commercial products such as shampoos and food preservatives. Citric acid is used to soften water in soaps, personal care products and laundry detergents. A commonly used synthetic chelator is ethylenediaminetetraacetic acid (EDTA), which may exist as a tetrasodium or disodium salt. Due to environmental and aquatic toxicity concerns regarding widespread use of EDTA in household and personal care products, alternatives such as sodium phytate/phytic acid, tetrasodium glutamate diacetate and trisodium ethylenediamine disuccinate are finding more prevalent usage. In this method, water is treated with a calculated amount of washing soda (Na2CO3), which converts the chlorides and sulphates of calcium and magnesium into their respective carbonates, which get precipitated. CaCl2 + Na2CO3 → CaCO3 + 2NaCl MgSO4 + Na2CO3 → MgCO3 + Na2SO4 Since Ca2+ and Mg2+ exist as nonvolatile salts, they can be removed by distilling the water. Distillation is expensive and energy-inefficient compared to other methods of water softening. Rainwater is soft because it is naturally distilled during the water cycle of evaporation, condensation and precipitation.[14] Main article: Reverse osmosis Reverse osmosis uses an applied pressure gradient across a semipermeable membrane to overcome osmotic pressure and remove water molecules from the solution with hardness ions. The membrane has pores large enough to admit water molecules for passage; hardness ions such as Ca2+ and Mg2+ will not fit through the pores. The resulting soft water supply is free of hardness ions without any other ions being added. Membranes are a type of water filter requiring regular cleaning or replacement maintenance. Main article: Nanofiltration Nanofiltration is a process similar to reverse osmosis in that it involves the use of a semipermeable membrane, though the filter membrane is distinct in that its pores are ≤ 10 nanometers in diameter. The process is often used in conjunction with reverse osmosis filtration, as nanofiltration on its own is not as effective and more expensive than chemical water treatment methods.[15] Removing or replacing minerals in hard water is called water softening. An alternative water treatment is called water conditioning, in which minerals remain in the water, but are altered so they do not form scale. Although the United States has standards for measuring the minerals in water, it does not have standards for measuring scale forming ability of water. Instead, US researchers use the German DVGW-W512 protocol.[16] Rain water contains dissolved carbon dioxide taken from the atmosphere. Some of the dissolved carbon dioxide reacts with the water to form carbonic acid, which remains in solution. Minerals containing calcium and magnesium form soluble bicarbonates when exposed to carbonic acid. Water containing these minerals is known as "hard water".[citation needed] When hard water is heated in a plumbing system, carbon dioxide goes out of solution, and bicarbonates become carbonates, which are much less soluble. The carbonates bind to plumbing surfaces providing seed crystals for further crystal growth, which build up as hard scale.[citation needed] Conditioning of hard water from Tempe, Arizona with different types of treatment methods[17][18] Treatment Normalized scale formation No treatment 1.00 Electromagnetic Water Treatment 0.57 Electrically Induced Precipitation 0.50 Capacitive Deionization 0.17 Ion exchange 0.06 Template Assisted Crystallization 0.04 Some manufacturers claim that the electrical devices they produce can affect the interaction of minerals with water so that the minerals do not bind to surfaces. Since these systems do not work by exchanging ions, like traditional water softeners do, one benefit claimed for the user is the elimination of the need to add salt to the system. Such systems do not remove minerals from the water itself. Rather, they can only alter the downstream effects that the mineral-bearing water would otherwise have. These systems do not fall within the term "water softening" but rather "water conditioning".[citation needed] Electrical precipitation devices cause microscopic mineral crystals to form and remain suspended as they flow with the water, while also acting as seeds for further crystal growth. As water is heated, minerals will crystallize on these seeds, instead of the plumbing system. The dissolved minerals become insoluble solid particles in suspension, passing through the system without binding to plumbing surfaces.[19] Claims for magnetic water treatment are not considered to be valid. For instance, no reduction of scale formation was found when such a magnet device was scientifically tested.[20] Cold hard water passes through a tank containing tiny polymeric beads with surfaces that allow nucleation of tiny bubbles of carbon dioxide gas. The initial nucleation of the gas bubbles can occur due to depressurization of the hard water as it flows up a water well just like when the top comes off of a beer bottle. Once carbon dioxide leaves the liquid a chemical reaction immediately drives formation of calcium carbonate crystals on the surface of the bubbles. As crystals grow on these seeds they break off in the flow while still of microscopic size. If these tiny particles travel through a water heater, further exsolution of carbon dioxide occurs due to increased temperature and new crystal growth occurs on the particles, rather than on the water heater. Once calcite occurs in the water, new calcite will prefer to form on the old calcite due to the available bonds on the crystals and the proximity and number of calcite surfaces in the water.[citation needed] This process is either called template assisted crystallization (TAC) or nucleation assisted crystallization (NAC). The polymeric beads are polyphosphates ranging in size from 0.5 to 2.0 μm.[citation needed] and some have a ceramic coating. Testing at the University of Arizona found TAC to be the most effective at reducing scale formation, followed closely by ion exchange (see chart above). They are more effective than approaches that attempt to sequester ions through application of magnetic or electric fields. The advantages of TAC tanks include simplicity, low maintenance, lack of toxic effluent (like chlorine), and the availability of calcium as a nutrient in drinking water. The disadvantages include that the calcite crystals are not avoided or removed from the water such that areas where water evaporates will still show deposits. It is claimed by manufacturers that these deposits are easier to clean since the calcite forms on seed crystals instead of on the surfaces.[citation needed] The UK's National Health Service recommends a maximum salt intake of 6g, against an actual current intake of 8.1g. The US CDC recommends limiting daily total sodium intake to 2,300 mg per day,[21] though the average US American consumes 3,500 mg per day.[22] Because the amount of sodium present in drinking water—even after softening—does not represent a significant percentage of a person's daily sodium intake, the US EPA considers sodium in drinking water to be unlikely to cause adverse health effects.[23] A study found the mean concentration of sodium in softened water to be 278 mg/L.[24] In 2 liters of water—the amount of drinking water typically suggested for an average adult, this constitutes about 22% of the recommended sodium intake by the US CDC and may make a difference to those who need to significantly limit their sodium consumption.[citation needed] For those who are on sodium-restricted diets, the use of a reverse osmosis system for drinking water and cooking water will remove sodium along with any other impurities that may be present.[citation needed]Potassium chloride can also be used as a regenerant instead of sodium chloride, although it is more costly. For people with impaired kidney function, however, elevated potassium levels, or hyperkalemia, can lead to complications such as cardiac arrhythmia.[citation needed] High levels of water hardness in the home may also be linked to the development of atopic dermatitis (eczema) early in life,[25] although the actual relationship is correlational at the present and further research is indicated to establish a causal one. However, using water softeners when atopic dermatitis is already established does not reduce the severity of the symptoms.[26][27] Softened water (measured as residual sodium carbonate index) in which calcium and magnesium have been partly replaced by sodium is not suitable for irrigation use, as it tends to cause the development of alkali soils.[28] Non-chemical devices are often used in place of traditional water softening for this application. Water portal Desalination Ion exchange Lime softening Magnetic water treatment Purified water Water purification ^ Hard water. 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Retrieved from " Click/ tap to get started Get advice from a Certified Water Specialist (CWS) and Certified Water Treatment Representative (CWR) No need to analyze testing data and sift through endless options! I do the heavy lifting for you Get a custom water treatment plan for your specific water situation and budget. Before you can address any underlying issues, its best to first get a good understanding of what’s in your water. Conduct a home drinking water quality test to find out what you’re working with, and what needs to be dealt with. Safe water is essential. For some folks, like pregnant women, infants, and those with underlying health concerns, this is even more important. Consider your unique needs while consulting the results from your water quality test. Whether you need water treatment, purification, or a combination, finding the right solution starts with education. Read comprehensive guides & reviews written by industry experts to learn all about the recent tech and most innovative systems available. I just want to say thanks for reading, I’m glad you made it here. I completely value everyone I’ve met because of this website. Most importantly, it’s our #1 goal to help you get access to clean water. Got a question? Need specific advise? Just want to have a nice chat? Reach out! We’ll do whatever we can to help Ready to Get Started? Take the quiz to get a personalized recommendation about how to ensure clean, contaminant-free water Risk of dangerous blood disorder called methemoglobinemia. Long-term can cause cancer, high blood pressure, heart disease, and neurological issues Often added to water during treatment. Possible risk of cancer and skeletal fluorosis. Large amounts can affect kidney and liver function Pose threat of waterborne illness if water is not properly purified. Chloramine Used during water treatment. Leaves residual taste and smell in water. Chlorine Used to disinfect water but leaves a distinct taste and smell. Lead Consumption of lead in water can lead to high blood pressure and kidney damage. Knowing if your water softener is working is a crucial part of maintenance and is not always talked about when you purchase it or is explained poorly. If you know more about what can go wrong with your water softener along with how it works, you have a better chance of fixing problems right away when they happen. Depending on what type of water softener you have the function may be a little different than what I describe here. But they all do the main function of keeping scaling in pipes from happening and helping to reduce the number of minerals inside the water. Only one type of water softener works to completely remove minerals that make water hard though instead of filtering them out or changing their charges, so they do not build up in your pipes at all. This is an Ion Exchange Water Softener and they work like this… Hard Or Well Water Enters The SoftenerThe Ion Exchange Process StartsSoft Water Is Made And Sent To The Destination During the softening stage, water from the source (well water or city water that contains calcium and magnesium) enters the softener unit. Once in the tank, the ion exchange process starts where the softener resin starts to exchange sodium ions in place of the hardness minerals. Once complete the water will be soft and then will exit the softener without the hard water minerals. Look at this water softener flow diagram: Water Softening Process Flow Diagram Image Credit: 4perfectwater.com Ion-exchange water softeners are the only ones that mark all the boxes to truly make soft water soft and remove minerals completely from the water. The minerals swap the chemical bonds between the salt and the resin beads, and the salt is released from bonds while minerals are trapped, creating soft water that is better for skin and hair equilibrium overall compared to hard water. To know you have a water softener working properly, you can do a couple of different things.Check it when it will regenerate: If your water softener is not regenerating or using salt and you are not needing to fill up the salt when you used to, you may have an issue with your water softener will need to check. How Much Does It Cost to Install a Water Softener? (Complete Guide) Has your water gone back to leaving water spots on dishes and in the bathrooms?Has your laundry gone back to being a little stiffer?Have you been noticing dry skin after showering again?Have faucets started to have mineral deposits again? Running a Soap Test: Checking for suds from soap is something you could do at home very easily without the need to go to the store for a hard water testing kit and be a guide for if your water softener is working desired just as easily. Fill a water bottle to almost full of tap water from your faucetAdd 10 drops of liquid soapShake the bottle Check for suds. If suds do not appear when you have a water softener with around 10 drops of liquid soap, you may need to get a test kit to see how hard your water is. There are a couple of different signs to note when a water softener is not working properly. Sticky hands: Hands feel sticky after washing them, or a little dry.Seeing Signs of hard water: Signs of hard water returning are almost always a sign of something wrong with the water softener.Water Tastes Salty: The water begins to taste saltier than normal, it may be regenerating too often.Brine Tank of Out of Salt: If your brine tank is out of salt, it has no way to regenerate and continue to produce soft water.Water Softener is not working at all: This is when you call in a professional to take a look to service it if you have ruled out all the minor issues it may be pieces that have worn out for your softener that need to be replaced. You will have a couple of different factors that can affect water softener performance. When the proper maintenance is not done often enough, salt buildups that affect softener performance can occur. Over time these will eventually wear out and stop working how they originally functioned even with proper care. When these wear out they cannot be repaired and will make the water softener eventually not be able to function even if everything else is working perfectly. All motors eventually stop working due to having a certain range for life due to it being mechanical. This is a piece that will need to be replaced when it decides to stop working altogether. If the filter is clogged that keeps hard minerals out of your water softener, then your water softener will need to be cleaned more frequently and lose efficiency more often. Salt is what makes them work, but also what can make them no longer work. Salt bridges cause water flow issues, and all is needed is to break them up to allow water to flow through again normally. Recommended Reading: Best Water Softener Salt for Sensitive Skin In 2021 It may work for a little bit, but after too much time, it will fail to work and start having issues to where it will no longer be making soft water due to not being able to drain properly. You can tell if your whirlpool water softener is working by checking to see how much salt is in its week to week and if it is going down at all or not. If it is then it is regenerating. Another thing you can do is a manual regeneration to see if it runs and is working properly. The last easy thing to make sure that your water softener is working is to do a soap test to make sure that you have soft water. Yes, you can put too much salt in a water softener. You need to leave at least 4-6 inches unfilled for salt in the brine tank, if not more, depending on what the manual says for the water softener that you buy. I also have a guide on how to remove excess salt if you need that advice. By creating soft water, you are taking out impurities from the water and filtering them out, along with getting minerals out with the ion exchange. This means that you can catch dirt or grime in the tank as well. You may also have a full filter that needs to be changed to do its job again and keep the bigger particles and impurities out of the water. Many things can go wrong with a water softener, and knowing more about what can go wrong and checking to make sure that it is working properly before having to call on someone else to come service it can help save you a lot of money. Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Want to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowEnjoy sharper detail, more accurate color, lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever.See What's NewExplore how consumers want to see climate stories told today, and what that means for your visuals.Download Our Latest VisualGPS ReportWant to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowEnjoy sharper detail, more accurate color, lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever.See What's NewExplore how consumers want to see climate stories told today, and what that means for your visuals.Download Our Latest VisualGPS Report Is your water softener not working? Here are some common signs to check for a faulty water softener: Getting hard water Hearing unusual noises from the softener Rapid salt depletion Changes in the color of the water But don’t worry – these problems often have simple solutions like: Adding salt,Adjusting hardness settings,Breaking salt bridges. In this updated guide, we’ll dive into these symptoms in more detail and provide comprehensive troubleshooting to help you get your malfunctioning water softener fixed. How Do You Know If Your Water Softener Is Not Working? SignsAdjust settings, Add salt, Break the salt bridge, Check if the softener is plugged in, and power on.SolutionYou’re getting hard waterWrong hardness setting, Brine tank empty, Salt mushing, Power not on.Adjust settings, Add salt, Break the salt bridge, Check if the softener is plugged in, and power it on.Consuming excessive salt/not using salt at allIncorrect settings, Resin bed issueAdjust settings, Clean/replace the resin bedBrine Tank Full Of Water/not enough waterMalfunctioning float, Incorrect water level settingRepair/replace float, Adjust water levelFloating particles in the resin tankBroken resin beadsReplace resin beadsDiscolored waterIron or manganese in waterUse iron filterWater Pressure Is LowClogged resin bed, sediment filterRegenerate resin bed, Clean/replace filterSoftener making excessive noise/too quietMechanical issues, Power not onCheck for broken parts; ensure power is onSoftener Is LeakingLoose connections, Worn out sealsTighten connections, Replace sealsWater Tastes Salty/WeirdImproper regeneration, Excessive salt in the brine tankAdjust the regeneration cycles, Reduce the salt level It means you’ll experience hard water problems again, such as soaps not lathering properly, white spots on dishes, a white film on fixtures due to mineral deposits, and a bitter taste in the water. Adjust the hardness settings according to the hardness of your incoming water.Refill the brine tank with salt.Break up the salt mushing in the brine tank and clog the brine line.Make sure the water softener is plugged in and turned on. When your water softener uses an unusual amount of salt or not at all, it could indicate a problem. It could make the water taste salty. Incorrect settingsResin bed issues Adjust the settings according to the hardness level of your incoming water.Clean the resin bed or replace it if necessary. If your brine tank has too much or too little water, it can prevent the system from softening your water effectively. Malfunctioning floatIncorrect water level setting Adjust or replace the float in the brine tank.Adjust the water level setting in the brine tank. #4: Floating Particles in the Resin Tank Floating particles in your resin tank can indicate broken resin beads, affecting the water-softening system. Purchase resin beads at $150-170Replace them with the steps I have shown in this video. Also Read: Is Water Softener Resin Bad For Health? If your water is discolored (brown, orange, or grey), it could mean your water softener system isn’t working properly. High Iron or manganese concentration in water (more than 0.3 ppm) Install an iron filter in your water supply line.You can add bleach to your softener brine tank for brown water – it can be used as a sterilizer for a potential bacteria buildup. Also Read: How To Fix Brown Sludge In Water Softener Tank A decrease in water pressure might indicate a clogged resin bed or sediment filter. Clogged resin bedClogged sediment filterThe system size can be incorrect Regenerate the resin bed.Clean or replace the sediment filter.Install a booster pump to increase the water pressure. If your water softener makes more noise than usual or has become unusually quiet, it could indicate mechanical or power problems. Note: If you hear flushing sounds during the regeneration cycles, those are completely normal. Mechanical issuesPower not on Check for broken parts and repair/replace them as necessary.Ensure the water softener is plugged in and turned on. A leaking water softener can waste water and salt, potentially damaging your property. The worn-out parts in your softener or incorrect installation can cause stagnant water to collect in your house. Loose connectionsWorn out seals Tighten all connections.Replace worn-out seals. You must call a service technician in case of a major leak. Also Read: Why My Water Softener Is Constantly Draining If your water tastes salty or weird, it could mean an issue with the regeneration process or the brine concentration. Improper regenerationExcessive salt in the brine tankA pinched drain hose can let too much salt in your water Adjust the regeneration cycle.Reduce the salt level in the brine tank. ⚒How to Get Your Water Softener Working? Here’s how to get a properly working water softener: Adjust Settings: Ensure the hardness level is set according to your incoming water’s hardness.Check Power Supply: Ensure your water softener is plugged in and turned on.Refill Salt: Check if the brine tank is empty. If so, refill it with salt.Break Salt Mushing: Sometimes, salt can form a hard crust in the brine tank, preventing the salt from dissolving in the water. Break it up to resolve the issue.Clean Resin Bed: Over time, iron and other mineral deposits can clog the resin bed of your water softener. Regular cleaning can help maintain its efficiency.Replace Broken Parts: If you notice any mechanical or broken parts, replace them immediately.Install an Iron Filter: If your water is discolored, installing an iron filter in your water supply line can help. To ensure your softener lasts longer by performing water softener maintenance, you must consider these tips: Always refill the salt on time. Regularly check the salt level in your system and refill it as needed.Use high-quality salt. Low-quality salt can cause issues like salt bridging or mushing.Regular maintenance. Schedule regular check-ups and cleanings to prevent potential problems with the failed water softener.Avoid overfilling the salt tank. Too much salt can lead to salt bridging and reduce the system’s efficiency.Regularly check for leaks. Small leaks can turn into more significant problems if left unattended. Signs Water Softener Not Working: FAQs When a water softener isn’t working, it stops softening water. It means you’ll start to notice hard water symptoms such as: 1. Soap not lathering well, 2. Spots on dishes, and 3. Scale buildup on appliances. You can tell if your water softener is regenerating by checking its control panel for a regeneration cycle indicator. Additionally, you might hear water flowing into the drain line during the process. If these signs aren’t present during a scheduled regeneration cycle, it could indicate a problem with your water softener. If your water softener isn’t regenerating automatically, it could be due to incorrect settings, a malfunctioning timer, or a mechanical issue with the system. Check these components and adjust or repair them as necessary. Common problems with faulty water softeners include: 1. Salt bridge or mushing in the brine tank – Break up the salt bridges, remove the mushy salt, and clean the tank.2. Resin bed issues – Flush the system with a resin cleaner to restore the bed’s capacity.3. Mechanical failures – Consult a service technician to inspect and repair any mechanical issues.4. Incorrect settings – Check and adjust the settings according to your water hardness and usage. You can tell if your new water softener is working properly by testing the water and observing what’s happening in your home. Here are ten signs to look out for:A water hardness test that shows little or no mineral presenceSoap that lathers well with waterNo mineral buildup on faucets, pipes, and toiletsImproved laundry performanceWater that doesn’t taste saltyWater that doesn’t cause skin dryness or itchinessConsistent water pressureBetter-looking fruits and veggiesAppliances without limescale or stainsA quiet water softener, unless it’s regeneratingThe best way to know whether your device is softening water is to conduct a water hardness test. You can do this easily and cost-effect

Finding and breaking salt bridges2. Clean resin bead3. Repair/replace broken parts Did you know that approximately 50% of water softener noise issues are attributed to air trapped in the resin tank? Some home appliance breakdowns are obvious, but others can sneak up on you. If your water softener starts to malfunction, for instance, you may not notice the problem right away. After all, it's easy to neglect an appliance in the basement or other infrequently visited space.It pays to stay vigilant. The sooner you catch a problem, the greater your chances of mitigating damage and avoiding steep repair costs. In this article, we'll share some signs that could suggest that your water softener requires maintenance or repair.Comprehensive PlansHighly Competitive Rates24/7/365 ClaimsOnline PortalIs My Water Softener Not Working Properly?1. Your water feels hard.The express purpose of a water softener is to filter out hard minerals, such as calcium and magnesium, from home water. You will start to notice if your water turns hard—that is, if the dissolved mineral content increases. When you wash your hands or bathe, you might notice that you need to scrub harder with soap to get a good lather. Hard water reacts with soap to form soap scum, which you could see accumulate on the surfaces of your shower or tub. Soap scum can also leave a film on your skin. Other signs of hard water include spots and streaks on your plates, glasses, and silverware and mineral stains on your laundered clothes.If your water feels too hard, consult a water softener troubleshooting guide. Here are a few potential causes: The water softener needs to be turned on, or the circuit needs to be reset. The water softener settings need to be adjusted. Salt needs to be added to the tank. A mechanical or electrical component has broken down. A salt bridge has formed and needs to be manually broken up.2. Your water softener is making too much noise—or no noise at all.A healthy water softener will naturally make some noise when it undergoes a regeneration cycle. You might hear the gentle hum of the motor, periodic gurgling of water, or the ticking of the water softener's timer.Depending on your water softener's size and design, you might hear a regeneration cycle every few days or once every one to two weeks. If you don't notice any noise over an exceptionally long stretch of time, you should check on your appliance and service it as needed.Also keep an ear out for unusual noises. Hissing or high-pitched squealing can indicate a faulty valve or damaged pipe or hose. Grinding, banging, or other loud noises can be due to mechanical malfunctions or mineral buildup. Trickling noises suggest a leak, but you'll presumably notice the pooling water as well.3. You are going through salt too quickly or slowly.If you've lived in your home for several years, you should have some frame of reference for how much salt your softener requires from month to month. It's a red flag if you find yourself using more or less salt than you're accustomed to.Troubleshoot water softener salt consumption issues by checking your timer and settings. If you're consuming salt too quickly, you may have inadvertently set your softener to engage a regeneration cycle too frequently. An unideal regeneration timer setting could also be why you're going through salt too slowly.Also, if your softener appears to be full of salt, consider the possibility of a salt bridge. This is a cake or crust of salt that forms above the water level. Salt bridges are very common. Simply break it up with a broomstick or other long tool. Extract and discard any chunks that look too large to dissolve in the water.4. The water level is too high.Keep an eye on the water level in your softener's brine tank. The water level should usually be quite low. There should not be enough water to fully submerge the salt. A water softener full of water could be due to a malfunctioning float switch. Another possibility is a drain line that is pinched or clogged with mineral buildup.5. Your water pressure is low.Poor water pressure could be a sign of a water softener malfunction. To confirm your softener is the source of the problem, engage the bypass valve, then check the water pressure in your kitchen or bathroom. If the pressure is greater than it was previously, your softener is causing the problem. Check the appliance's internal filter. If you hadn't replaced it in some time, it is likely clogged, inhibiting waterflow.If low water pressure is a chronic issue, you water softener could be too small for your home. It could also be that minerals or resin beads have accumulated in your showerheads and faucets.6. Your water is discolored or full of resin.Discolored water could have a number of causes, one of which is rust buildup in your water softener. If you notice brown or orange water, check your brine tank for signs of corrosion or dirt.You also may notice tiny resin beads in your water. These can damage your plumbing and fixtures over time and should not be able to escape the tank. If you notice resin beads, confirm that your internal water softener screen is not torn.7. Your water has an unpleasant odor.Water softeners should be cleaned once every year or two. If you're noticing the odor of sulfur in your water or in the softener itself, you probably need to clean your brine tank to remove the accumulation of bacteria. Consult your owner's manual or contact a professional as needed.Common Water Softener Problems and SolutionsWater softeners are complex systems that can develop various issues over time. Understanding these problems can help you identify when professional service is needed. Here are some additional signs to watch for:Mineral Scaling on Fixtures If you notice white or chalky buildup on your faucets, showerheads, or appliances, this could indicate your water softener isn't effectively removing hard minerals. This scaling can reduce water flow and efficiency while potentially damaging your plumbing system over time.Strange Sounds During Operation While some noise is normal during regeneration cycles, certain sounds can indicate problems. A water softener hissing persistently might signal a pressure issue or valve problem. If you hear a continuous water softener making noise outside its normal regeneration cycle, this could indicate:A damaged valve causing pressure releaseAir trapped in the systemDebris in the valve assemblyWorn-out motor componentsSalt Efficiency Problems Modern water softeners should be highly efficient with salt usage. If you notice irregular salt consumption, check these often-overlooked areas:Timer settings for regeneration cyclesWater hardness settingsBrine line for proper flowResin bed conditionBrine tank for proper salt dissolutionDigital Display Issues Many contemporary water softeners feature electronic controls. If your display shows error codes or isn't functioning correctly, this could indicate:Power supply problemsControl board malfunctionSensor failuresProgramming errorsKeep Your Home Appliances HummingSome water softener problems are quickly and cheaply resolved. Others require expensive replacement parts of several hours of skilled labor to remedy. Protect yourself from surprise costs with a home warranty from Liberty Home Guard. Our water softener coverage will protect all mechanical parts that are necessary for the unit to function properly.Request a free quote through our website or call (866)-432-1283 to learn more. Our mission is to help homeowners plan and complete successful building and remodeling projects, from start to finish. We provide free, unbiased information to help you: Evaluate a building lot and buy it at the best price. Decide what work to do yourself, what to hire out. Negotiate successfully with sellers, designers, contractors, subs, and other professionals. Accurately estimate project costs. Build a healthy, low-energy, and durable building. Get your project built on time and on budget. Reduce your costs. Minimize your risk. And keep your sanity! FEATURED ARTICLES Installing Leakproof Windows — Updated Details Keep Your Basement Dry Prevent Septic System Failure Avoid Cost Overruns UNBIASED INFORMATION (from Humans, not AI Chatbots) Our philosophy is simple: The sole purpose of BuildingAdvisor.com is to help our readers with their building projects. All articles are researched and written by hands-on construction experts with decades of building experience. We have no relationship with any advertisers or products. We have no paid links, no paid content, and therefore no conflicts of interest. We are supported entirely by ads placed on our pages by Google and by sales of the BuildingAdvisor Estimating Spreadsheet. WHO WE SERVE Whether you are an owner-builder who wants to do it all, or plan to use the services of an architect, general contractor, subcontractors, or a construction manager (or aren't sure which way to go), we can help make your project go more smoothly – and save you money and gray hairs in the process. Who we are GET INVOLVED If you've read this far, you're probably the kind of person that wants to play an active role in your building project, maybe designing and contracting it yourself, and maybe even swinging a hammer. It's great to be actively involved. You're much more likely to end up with the project you want in terms of design, cost, energy efficiency, comfort, and durability. It's not that the other people on your building team don't want to do a good job. But no one understands your goals, or cares as much about your project, as you. WHERE TO BEGIN Maybe you've been thinking about this project for years, or maybe you just got started yesterday. In either case, you should begin at the beginning — assessing your needs, capabilities, time constraints, and budget, and deciding what responsibilities to take on yourself and which to outsource to others. HOW TO USE THIS SITE The site is organized roughly in the order of a typical project, although in reality, you'll often be jumping back and forth between sections. Your three biggest assets going forward will be knowledge, planning, and communication: Knowledge – The more you bring to your project, the better the outcome. Learn as much as you can about design, materials, building systems, contracts and contractors, costs, and risks before proceeding. Take advantage of the vast amount of information available today on the Web and elsewhere. Without knowledge you are shooting in the dark! Planning – The more time you spend planning, the faster, better, and cheaper your project will be — with the fewest headaches. Construction on the building site may be the most exciting phase, but the planning is the most important. Surprises on the job site always cause headaches and cost money, so don't be surprised — plan ahead! Communication – Remember, it's your project. If you don't clearly communicate your desires to all members of your building team, don't expect things to come out the way you want. They won't! Your contract, plans, specifications,and budget are your primary tools for communication. Learn how to use these effectively to keep everyone working together, on track, to meet your goals. So don't skimp on any of these. Remember that this is a marathon, not a sprint. Take the time necessary to learn the ropes, to formulate a good plan and realistic budget, and to communicate clearly with everyone on your team. Invest your time in good planning, the building will almost build itself. Ask a question and we'll get you an answer as soon possible. Let us know what you think. Email your feedback and suggestions for how we can improve our site. Share your experiences with others by posting a comment at the end of any article. View our Privacy Policy. Reader Interactions Water softeners are a vital part of many Missoula homes, ensuring we can enjoy clean, safe water daily. But, like all fixtures and appliances, they can experience issues that impact their performance. Problems may not always become immediately evident, so how can you tell if your softener system is operating like it should? In this post, we provide practical guidance to educate you on how to tell if your water softener is working and what you can do if it's not. At Plumb-Tech, we're more than just plumbing and heating experts; we're also your neighbors – so no matter your challenge, we're here to provide assistance. A water softener is vital to your plumbing system if you live in a region with hard water – like Missoula. Softeners are devices designed to soften water by eliminating calcium and magnesium minerals that contribute to hard water conditions, including calcium carbonate. You may be asking: What's so bad about hard water? Picture this: if while washing dishes or taking a shower, your soap doesn't lather properly, or there is white chalky residue left behind on dishes and faucets – these could be telltale signs of hard water. Over time, it could lead to scale build-up in pipes that compromises their performance and may require costly repairs. That's where a water softener comes in. It uses an ion exchange process to swap out the hard minerals in your water with softer ones, usually sodium or potassium ions. The result? Softer water that's gentler on your skin, better for your appliances, and kinder to your wallet in the long run. Remember, as residents of Missoula, our water quality matters, and Plumb-Tech is here to ensure it's top-notch. After successfully installing a softener system, it's wise to check that everything is functioning properly. Curious about how to know if your water softener is working? Here are six key signs to look out for: One of the most noticeable signs your water softener is working is how easily your soap lathers up. When your water is soft, soap can do its job more effectively, creating a rich lather for your dish soap, laundry detergent, and even personal care products such as shampoo and shower gel. Spot-free dishes and glassware If your dishes, glasses, and silverware sparkle without any chalky residue or spots after washing, that's an indication your softener system is doing its job. Hard water often leaves a white residue, but soft water rinses clean, leaving your kitchenware looking its best. Comfortable skin and hair After taking a shower or bath with soft water, your skin should feel smoother and your hair more manageable. Hard water may leave skin and hair feeling parched and prone to cracking, whereas soft, soothing water is gentle enough for all skin types and hair textures. Longer-lasting appliances Your household appliances that use water, including your coffeemaker, dishwasher, washing machine and pipes, should last longer and operate more efficiently when exposed to soft water, as they won't leave behind mineral deposits that cause build-up over time. Soft water may lead to reduced soap, shampoo, and detergent usage. Soft water's increased effectiveness allows these products to produce similar or even superior results from using less of them. Still wondering how to tell if your water softener is working? Check your pipes, faucets, showerheads, and the inside of your kettle or coffee pot. If you don't notice any scale or chalky deposits, it's a good sign that your softening system is working correctly. We often get calls from homeowners wanting to know how to tell if a water softener is working. We've found that when homeowners have concerns about their system, there's often something wrong. If you suspect your softener system isn't working, check for these five common problems. Frequent regeneration cycle: If your system seems to be regenerating more often than usual, it may indicate a problem. Typically, regeneration should happen after a certain amount of water usage, not frequently or daily. Salt bridges or salt mushing: Salt bridges form a hard crust in the brine tank; this stops the salt from dissolving in the water to create brine. On the other hand, salt mushing occurs when the salt dissolves and recrystallizes to form a sludgy layer at the bottom of the brine tank. Both these issues can hinder the water softening process. Inconsistent water softness: If you're experiencing intermittent soft and hard water, it might indicate your unit is not operating consistently. A properly working system should deliver soft water consistently. Increased water and salt usage: An unusual increase in your water or salt usage could mean that something is wrong with your softener. If you find yourself filling your salt tank more often or experiencing an unusual rise in your bill, something could be off. Changes in water pressure: If your home experiences an apparent reduction in pressure, a damaged water softener could be to blame. It is vital that professional assistance be sought immediately. If any of these symptoms arise, call one of our professionals to take a look at your system. At Plumb-Tech in Missoula, our friendly and reliable service will ensure your water remains top quality. Understanding your water softener and its functionality is crucial for maintaining your home's plumbing system. From enjoying a softer lather while washing dishes and bathing to spotless, sparkling kitchenware and relishing your appliances' extended lifespan, the signs of an efficiently working system are noticeable. Hard water isn't just an inconvenience. It can cause costly damage to your home water system if not treated promptly. So, stay vigilant, and remember, your friendly neighborhood experts at Plumb-Tech are always ready to lend a helping hand. We don't just promise flexible and reliable service – we live by it. If you need assistance with the efficiency of your water softener or other plumbing issues, don't hesitate to reach out to us. Serving Missoula community members isn't simply our job – it's what drives us. Let's work together towards keeping Missoula's water quality outstanding! Q: I installed a whole-house water softener for our well water but the water still tastes bad? Is this due to my water softener or is there any other issue? Thanks – Kathy A: In most cases, water softeners have little effect on the taste of drinking water. They might make it a little better or a little worse, or have no effect at all. This is a side effect of the softening process that depends on the makeup of the incoming water and, to some extent, on the type of water softener used. Purpose of Water Softeners Most people install water softeners to make it easier to make soap suds and to rinse them off when bathing and cleaning. Hard water makes detergents less effective at removing dirt and grease. Another benefit of water softeners is that they prevent the buildup of mineral scale on water heaters, dishwashers, and other appliances that reduces their efficiency and can shorten their life. How Water Softeners Work A water softening system removes minerals and adds a small amount of sodium to household water. The softened water makes soap more effective and reduces mineral buildup in appliances. Courtesy Knoxville Water Treatment Water softeners accomplish their task by removing dissolved minerals from the household water – mainly magnesium and calcium – and replacing them with sodium ions. The sodium comes from salt (sodium-chloride) that the homeowner adds periodically in either pellet or crystal form. ` The main water softener tank contains plastic beads (resin) covered with sodium ions. As household water flows through the resin, the positively charged calcium and magnesium ions stick to the negatively charged resin, replacing the sodium which is released into the household water. Over time, the resin becomes saturated with calcium and magnesium ions and must be recharged by flushing with a saltwater solution from the unit's brine tank. This usually occurs every few days late at night. During this process, the concentrated sodium ions displace the calcium and magnesium ions which get flushed down the drain in the salty water. And the cycle begins over again. Periodically, the homeowner needs to add a bag of salt to the brine tank to keep the process going. How often depends on the size of the tank and hardness of the water. It is important to set the system to the hardness of the incoming water or you may be wasting salt and adding extra sodium to your drinking water. Taste the Water As mentioned above, water softeners are not intended to improve the taste of water, but removing the magnesium and/or calcium may change it a little. Some people prefer the water with more mineral content, especially the calcium. Others prefer softened water especially in tea or coffee. It's pretty subjective. Where the original water flavor is preferred, it's easy to bypass the water softener and direct unfiltered water to the tap or dispenser used for drinking water. You can also run this line through a separate filter, such as activated charcoal, to remove most unpleasant tastes. Alternately, you can use a countertop device such as a Brita, to filter this water that bypassed the water softener.. Water softeners can remove a small amount of iron, which could improve the taste of the water. For larger amounts of iron, you will need to add a special filter to the water softening unit. Insoluble "red-water" iron and soluble invisible iron need different types of filters. For example, removing iron can remove an unpleasant metallic taste. Removing magnesium and calcium can make subtle changes, which may homeowners may find good or bad. The small amount of sodium add to the soft water is tasteless if the system is functioning properly. Other taste problems may be caused by sulfur (think rotten eggs) organic materials, which can usually be solved with an activated charcoal filter. Highly acidic water can also cause problems in combination with copper plumbing. The acidic water leaches copper from water pipes giving the water a metallic taste and leaving bright blue stains on sinks and tubs. The solution is an acid-neutralizing filter. Salt Intake & Health The small amount of sodium added to the water is low and generally not tasted. If it were a commercial beverage, the FDA would consider it "low-sodium." The amount of sodium varies with the hardness of the water. For a hardness level of 7 to 10 grains per gallon (GPG), the softened water will contain about 18 mg of added salt per 8 oz. glass of water. Water from 3 to 6 GPG is considered moderately hard and over 10 very hard. Softened water with an initial hardness of 5 will have half the sodium of water with an initial hardness of 10. For a rough estimate, you can use this rule of thumb: Grains Per Gallon x 8 = mg salt/liter water So, for example, water with a hardness rating of 10 grains per gallon would contain this much salt: 10 x 8 = 80 mg salt per liter of water For comparison, a tablespoon of ketchup contains about 160 mg. of salt and the average American consumes 3,400 mg of salt a day, about 1,00 more than recommended by the American Heart Association. For people on a low salt diet, the extra salt might be a concern. One option is to use the more expensive potassium chloride to recharge the brine tank. Another approach is to have the plumber bypass the water softener for the faucet you use for drinking water. This can also address taste issues if you prefer the taste of the hard water, as some do. The only way to remove the salt altogether is to use a reverse-osmosis system downstream from the water softener. These are expensive to install and operate, so they are only worth considering if you have badly polluted water that is difficult to clean any other way. The resulting water is similar to distilled water, with very little mineral content – not a water taste everyone likes. That's why so many people buy "spring water" rather than distilled water for drinking. – Steve Bliss, BuildingAdvisor.com Read More on Water Softeners Hard Water Water Quality Reader Interactions Unsure if your water softener is working properly? Water softeners are a necessary part of many homes, but they require routine maintenance and are prone to a few operational issues that can reduce their capacity to soften your water. Regular testing of your water softener is an important way to monitor its performance to ensure it is functioning properly. Testing also allows you to identify problems as soon as they arise so you can address them before they harm your plumbing system. This article provides 6 methods to test your water softener's performance. We explain how to interpret the results, so you know what you need to do. We also provide tips on how to resolve problems with your softener to keep it operating at peak efficiency. Continue reading to learn more about how to test your water softener! Water Softeners – How They Work Water softeners work by exchanging hardness ions, such as calcium and magnesium, for sodium. The softener resin beads inside the tank attract and hold the hardness minerals while the sodium is released into the water. When the resin becomes spent – meaning it can't remove any more hardness from the water – the water softener initiates a regeneration process. Regeneration is when the softener flushes the resin beads with a brine (salt) solution to remove the hardness minerals and reset them for another cycle of water softening. In this process, sodium ions displace the calcium and magnesium ions that are adsorbed to the resin. The hardness is discharged as a waste and the process can be repeated to continue softening water. The frequency of regeneration is determined by how hard your water is, how much water you use, and the amount of ion exchange resin in your system. What is hardness Hardness is a measure of the dissolved calcium and magnesium ions in water. These are the minerals responsible for scaling and fouling on fixtures, appliances, and pipes. The higher the hardness level, the more scaling and fouling will occur. Hardness is measured in grains per gallon (gpg). It is sometimes measured in parts per million (ppm). Problems with hard water Hard or extremely hard water is a problem in almost 85% of the United States. In some areas, the water hardness exceeds 200 ppm. Hard water can be described as shown in the following table. I put together a detailed article on the harmful effects hard water has on your skin. Read it here. How to Evaluate Water Softener Performance Your water softener removes hardness from your water. The capacity of your softener is measured in grains per gallon (gpg). The higher the grain rating, the more hardness your water softener can remove from your water. Read my article about the importance of water softener maintenance. There are several ways you can evaluate how well your water softener is removing hardness. Some are qualitative and others are quantitative. Let's review them. 1 – Visual checks Water hardness causes a host of issues. Problems caused by hard water include: Clogged pipes and scaling Mineral deposits on dishes and glasses Dry skin and hair Brown or yellow water coming out of faucets Dingy laundry Reduced life of water-using appliances Higher energy costs for hot water If you start to notice any of these issues, then it is an indication that your water softener is not softening your water adequately. The best way to tell if your water softener is performing well is to do a visual check of your home's plumbing system. Look for any evidence of scaling or mineral deposits on faucets, fixtures, dishes, glasses, and hard surfaces. Check your laundry to see if your clothes are becoming dinging or not getting cleaned as well as they did. Check your skin and hair for dryness. Any of these conditions can be an indication that your water softener needs to be serviced or replaced. While doing a visual inspection can give you a general idea of how well your softener is working, it is not quantitative. In order to get a more accurate measure of the performance of your softener, you need to use one of the following methods: 2 – Soap test A soap test is a simple, yet effective, way to measure how hard your water is. As your water hardness increases, you can assume your water softener is not performing adequately. To do a soap test: Fill a clear glass jar half full with a sample of your treated water. Mark the water level with a marker. Add 3 drops of soap to the water. Use a basic soap like Castile – it doesn't have surfactants in it and performs very well. Shake the water and soap for 30 seconds. Check the water. If there is a thick layer of soap suds on the top, your water is soft, and your water softener is performing well. If the water turns a milky white, your water is hard, and your water softener needs attention. 3 – Hardness test strips You can purchase hardness test strips at most hardware stores or online. These strips allow you to test the hardness of your water and give you a numerical value that can be compared against the grain rating of your softener. To use hardness test strips, follow the manufacturer's instructions. Generally, the procedure is: Dip a strip into a sample of your treated water to wet the colorimetric tip. Remove the strip and shake off any excess water. Wait for 30 seconds for the color to develop. Compare the strip against the colors on the bottle or chart that came with the strips. If the hardness is greater than 1, your water softener is not working properly and needs to be serviced. 4 – TDS meter You can measure the total dissolved solids (TDS) in your water. This is not the same as hardness, but it can be used to get a general idea of how many ions (i.e., hardness) are in your water. The TDS meter is very easy to operate. Simply turn it on and submerge the tip into the water sample. The meter should display the results almost immediately. Since TDS measures ions that aren't removed by your water softener – such as iron and manganese – you'll need to have a value from a time when the softener was working properly. By comparing the initial value to the current reading, you can tell if the hardness is going up or not. Any increases in TDS over time are an indication that your softener isn't working properly. 5 – Laboratory analysis The most accurate method of measuring your water's hardness is to submit it to a laboratory for analysis. Water labs can test for a host of water parameters, including hardness. This approach is the most expensive and takes the longest, but it can give you a detailed report of your water's hardness. You can also have the laboratory test for other contaminants to get a more detailed assessment of your water's quality. 6 – Check with City or Town If you get your water from a public water supply, such as a city or town, you can check with the water department to find out the hardness of your water. This information is usually available online or through customer service. Importance of Testing Your Water Softener Testing your water and evaluating the performance of your water softener provides valuable and important information. By using one or more of the methods described above, you can determine if your water softener is removing hardness from your water and whether it needs attention. If you find that your water softener isn't working properly, don't wait to have it serviced – contact a professional today! Interpreting Water Softener Testing Results Now that you have the test results, what do they mean? It is useful to know if your water is being softened or if still has high amounts of hardness. Hardness levels above 1 grain per gallon means your water isn't adequately treated. What does a high hardness level mean, and what should you do? Here are six possible problems and suggestions for how to resolve them. 1 – Salt related problems Salt is an important part of the water softening process. It is used to regenerate the resin so that it can continue softening your water. There are several issues related to salt that you should check if your water is hard. They are: salt bridging: This is when salt clumps together to form a hard crust that sticks to the tank walls. It prevents the salt from dissolving adequately and reduces the regeneration efficiency. Break up any salt bridges immediately. Use evaporated pellets to prevent this from happening. no salt: If your water softener runs out of salt, it won't be able to regenerate the resin bed and soften your water. Check the salt level every week or two and refill the brine tank when the level gets down to 25% full. salt mushing: This occurs when dissolved salt in the brine tank recrystallizes and forms hard clumps and sludge on the bottom. The solid material won't dissolve and must be removed from your tank. Use a high-quality salt to prevent this from occurring. Learn everything you need to know about water softener salt in my article. 2 – Regeneration cycle too long Most water softeners allow you to adjust the regeneration cycle. This is the time between regeneration events. The typical range for regenerating the resin in softeners is 3 days to 14 days. One regeneration every 7 days is the most common setting. If your system is removing a lot of hardness, the resin can become saturated. If the regeneration cycle is too long (i.e., too many days between regeneration events), then the media won't have any capacity to soften your water and the hardness will start to increase To avoid this problem, don't make too many adjustments to the regeneration cycle. If you make changes, be certain to verify your new settings are appropriate and can adequately maintain the resin. 3 – Brine dose too low Many water softeners allow you to change the brine dose. I don't recommend adjusting this value because it requires a good understanding of ion exchange, and if you get it wrong, your water softener won't adequately soften your water. Check the manufacturer's recommendations before making changes. Once you make an adjustment, initiate a regeneration cycle and then test the water. If the hardness isn't less than 1 gpg, then you should increase the brine dose. 4 – Fouled resin The ion exchange resin in your water softener can become fouled over time. Common issues with the resin include biological fouling and iron fouling. In these cases, biological slime or iron scale can coat the resin and block it from the hardness in the water. Periodically open the resin vessel and inspect the media. If you notice any slime accumulation on the media, it must be removed and replaced with fresh resin. If you notice a brownish/rust colored scale on it, you need to clean it. There are several resin cleaning solutions available to remove iron from the media. 5 – Excessively hard water If the hardness of your water supply increases, it is possible that the water softener doesn't have enough capacity to fully soften it. This is a rare occurrence, but it might happen if your tap water supply has a high hardness level. If the water softener can't keep up with the increasing hardness, it will stop removing any hardness from your water. Your options for this issue are relatively limited. You may be able to reduce the regeneration cycle time to increase the number of regeneration events. You might try increasing the brine concentration to restore more capacity to the resin during each regeneration event. If these strategies don't work, you may need to install a larger water softener or add another tank to your system. 6 – Unusually high water usage Your water softener has a specific amount of capacity – the ability to remove hardness from your water. If you use a lot more water for an extended period of time, the softener may not be able to fully treat your water. This will cause hard water to start building up in your water supply. If you're using more water than normal, you may need to reduce the regeneration cycle time to regenerate the resin more often. You can also increase the brine concentration to provide more capacity to the resin. Final Take on Testing Water Softener Testing your water softener is essential to confirming that it's working effectively. The tests you can use include visual checks, soap test, hardness test strips and a TDS meter reading. These will tell you if there is an issue with the salt, the regeneration cycle, or fouling. Once you have collected all necessary data, use the strategies in this article to interpret what you've found. If your water softener isn't performing as well as it used to or you are experiencing hardness issues, we have the answers you need! This article will explore the essential steps to test your water and determine if your water softener is working effectively. Hard water can be a nuisance, causing a mineral buildup in your pipes and appliances. Ensuring that your water softener is functioning optimally is crucial to maintaining soft and clean water throughout your home. We will guide you through the process step by step so that you can enjoy the benefits of soft water. What Is a Water Softener? Before we delve into the testing process, let's briefly understand what a water softener does. A water softener is a device that removes calcium and magnesium ions, which are responsible for making water "hard." It uses resin beads that exchange these ions for sodium ions, resulting in softer water. Why Testing Is Important Testing your water is vital because it helps you assess the efficiency of your water softener. If the softener is not working correctly, you may still have hard water issues, leading to scale buildup, reduced appliance efficiency, and skin and hair problems. How to Test Your Water Softener Step 1: Gather Your Supplies To begin testing your water, you'll need a few simple supplies: A clean, transparent container Liquid soap Water hardness test strips or a water hardness testing kit Step 2: Collect a Sample Fill the clean container with water from a tap directly connected to your water softener. This ensures that you are testing the water that has been treated. Step 3: Add Soap Add a few drops of liquid soap to the container with the collected water. Secure the lid and shake the container vigorously for a few seconds to mix the soap and water thoroughly. Step 4: Observe the Results Now, it's time to check the water. If your water is soft, you will notice that the soap creates a lot of suds. Soft water allows soap to lather quickly. If your water is hard, you'll see that the soap creates very few suds, and the water remains cloudy. Step 5: Compare with Testing Strips You can also use water hardness test strips or a testing kit for a more accurate assessment. Follow the instructions on the package to test your water. These strips will provide you with a numerical value representing the hardness level of your water. Frequently Asked Questions How often should I test my water? It's a good practice to test your water at least once a month to ensure your water softener is working correctly. Can I use any soap for the test? Yes, any liquid soap will work for the test. It's the reaction with hard water that you're looking for. What should I do if my water softener is not working? Suppose your water softener is not working as it should. In that case, it's best to contact a professional for inspection and potential repairs. Are there health benefits to using a water softener? While water softeners primarily improve water quality for your appliances and plumbing, some people find that softened water can be gentler on their skin and hair. How can I maintain my water softener? Regularly adding salt to your water softener's brine tank and scheduling periodic maintenance checks can help ensure its longevity and efficiency. Still Unsure? Contact Joe The Plumber For An Inspection Is your water softener not performing as expected? Don't wait for problems to escalate. It's time to take action! Contact Joe The Plumber for a professional inspection of your water softener system. Our experts will ensure that your system is working efficiently and provide any necessary repairs or maintenance. Enjoy the benefits of soft water in your h How do water softener systems work? A water softener contains resin beads that help remove the hardness minerals, calcium and magnesium, through an exchange of ions. Generally, water softeners are used for softening hard water and iron treatment, making the lifespan of resin beads shorter. The resin beads in the softener draw the mineral contents from the water and hold them to make sure that the water flowing from the faucets or shower is softened and pure.Over time, these microscopic resin beads become so full that they are unable to hold any more minerals. This is when the system needs to be regenerated. Regeneration of the system involves the use of sodium to remove the accumulation of residue from the resin.If your water softener isn't working as it should be, the problem can be in the beads, the regeneration process, or the other components in your unit. How to tell if water softener is working properly? 1. Hard water spots: You will notice hard water spots on the faucets, shower doors, glassware, etc., which are caused by exposure to hard water. 2. Dry skin and hair: Your water will feel harder too. That is, it will cause dry skin and itchiness after a shower. Or, you could find that your skin feels squeaky. It is because of the magnesium in the water as it leaves a filmy residue on the skin. Your skin can feel sticky, too. It can affect your hair, too. You will notice that your hair is becoming dry and brittle. 3. Changes in water pressure: Changes in the water pressure can be because of a buildup of salt in the brine tank that obstructs the water supply. 4. Change in the taste of water: Water tastes different and can be salty due to the increase in minerals. It could be caused by too much salt in the water. You may need to clean the brine tank and replace the salt and water to remove salty water. 5. Reduced lather: Lathering is reduced when the water is hard. If you find that the soap is not lathering well or quickly, it is a sign that the water softener is not working correctly.You can also run a soap test to check if suds form in the container. The container must be filled with water and some drops of liquid soap. Shaking it should produce bubbles on top leaving the water below the bubbles clear.If the water is cloudy, or if there are only a few bubbles forming in spite of shaking the container, it means that your water softener is not working efficiently. How to set water softener hardness level? To set the water softener's hardness level, you need to know the hardness level of your water. For example, if water hardness is running at 25, you would set it to 25 on the unit. This setting can be done through the dial manually or by programming it in an electrical unit. The instruction manual that comes with equipment will help. What should you do if your water softener is not working properly? Some steps that you can take to make sure your water softener is working properly include: 1. Unplug The Unit Start by unplugging the unit. Block or remove access to the water to avoid flooding the house. 2. Look for salt buildup Look for salt buildups or salt bridges that could be preventing the system from working correctly. The salt buildup can obstruct the water flow. In case of excess salt, you need to clean the system and add salt and water for it to start working properly again. Pressing the regeneration button will also help clean the system. 3. Remove iron particles You can also try removing any iron particles that might have built up in your unit by using products to remove rust and clean the resin bed if it has become too full of iron deposits. 4. Restart the unit After you've cleaned and recharged the water softener, restart the system. 5. Call for assistance If the above steps don't work, you may have problems with the electrical systems or the plumbing. For issues like that, you may need to have electricians or plumbers come in to check the unit.Service professionals are better equipped to handle the problems that are preventing your water softener from working optimally. You can tell if the water softener is regenerating properly by seeing how much salt is used each week and if it is reducing in quantity. If it is, that means the water softener is regenerating. You can also take a manual regeneration step to see if it runs properly. 2. How to know if water softener is set correctly? You can know if the water softener is set correctly by checking the water hardness level in your home. The hardness level and the setting will be the same. The water setting is done manually by turning a dial or through the programs in an electrical unit. 3. How long should a water softener last? You can expect water softeners to last anywhere from 10 to 20 years, depending on the model, type, and quality of the unit. On average, a single tank electric water softener could last up to 12 years, while some can last nearly 20 years. 4. Who should you call if water softener isn't working? If your water softening unit is not working correctly, and you are unable to figure out why you can call the service professionals that specialize in water softeners. If the unit is still under warranty, it won't cost you anything. But, if it is past its warranty period, you may have some expenses. A service technician would be able to fix the problem. 5. How fast does a water softener work? The water softener regeneration cycle takes about two hours. Ideally, you should not be using the water when it is in its regeneration cycle, as the hard water can fill up the heater and cause a mineral buildup in the system. Conclusion When we invest in an appliance that softens the hard water, we would want it to work well enough to remove iron and other contaminants from the water. So, it is best to know some of the basic steps you can take if you think the unit is not working well.Learning about how water softeners work and what they should be doing can help in handling hard water-related issues. Hopefully, the above information will help you notice the signs of a poor functioning unit quickly to take appropriate steps.It should ensure that you get a continuous supply of softened water for your household needs. You can tell if your new water softener is working properly by testing the water and observing what's happening in your home. Here are ten signs to look out for:A water hardness test that shows little or no mineral presenceSoap that lathers well with waterNo mineral buildup on faucets, pipes, and toiletsImproved laundry performanceWater that doesn't taste saltyWater that doesn't cause skin dryness or itchinessConsistent water pressureBetter-looking fruits and veggiesAppliances without limescale or stainsA quiet water softener, unless it's regeneratingThe best way to know whether your device is softening water is to conduct a water hardness test. You can do this easily and cost-effectively using a water hardness test kit.Water softeners remove minerals like calcium, magnesium, iron, and manganese from water. If your device isn't working properly, the water hardness test will reveal the presence of these minerals.You can simply wash your hands with soap to see whether your water lathers well. Alternatively, collect some water in a bucket or bowl, add soap, and mix it to see if it lathers.If your softening device isn't working properly, you'll have hard water, and it'll be difficult to work up a lather.When the sodium salts in soaps interact with mineral molecules like calcium and magnesium, it forms a precipitate called scum instead of a lather.If scum forms in the soap solution you made, you're still getting hard water.If you're not sure, continue looking out for other signs of hard water. If your investigations point to hard water, contact a professional to check your device.Mineral buildup is a common problem in well water across the United States, potentially affecting faucets, pipes, and toilets with limescale and rust. If your water softener is functioning properly, you won't see scaling around your pipes and faucets.If your water softener isn't doing its job, you might see white spots on your faucets. Even the color of the water might change, giving you a scare.Good-looking, soft laundry is one of the signs that your water-softening device is working properly.Hard water can make new garments look dull. Moreover, powdered detergents contain sodium salts that react with mineral molecules and form scum. Washing laundry in scummy water will result in stains and streaks.Your washing machine will also perform better with soft water. A high level of minerals in laundry water might clog the filters and pipes inside the appliance. This will reduce its efficiency and may cause it to break down. Softened water helps washing machines operate effectively.The jury is still out on whether soft water tastes better than hard water, but there's one thing we know for sure: it doesn't taste salty.Hard water tastes salty due to dissolved calcium, magnesium, and sodium chlorides. Fresh-tasting mineral water, therefore, tells you that your unit is probably fully functional.Hard water can make your skin and hair look dull and dry.When minerals dry on our skin, they may clog pores. Furthermore, minerals have a way of absorbing skin moisture.The result: dry and itchy skin and, in extreme cases, eczema.Our hair isn't exempt from the effects of hard water, either. Hair washed in hard water is more likely to lose natural oil, making it dry, dull, and flat.If you observe dullness in your skin or hair after a bath or shower, consider getting a professional to check your softening unit.Consistent water pressure and functional water softening units go hand in hand. Good water pressure means that your pipes are clean and that there is enough salt in the brine tank.However, a decrease in pressure isn't always a red flag for your softener. If you're using tap water, the low water pressure might be due to a decision by the water supplier or the municipality. Or there might be a firefighting emergency nearby, so a firefighting team might be drawing water from your supply line.If your water source is a private well, the low pressure you're getting may be the result of a malfunctioning pump or drained water supply. To confirm that the issue isn't your water softener in a scenario like this, bypass your device and see if the water pressure changes.If you identify the softener as the culprit, check the pipes and screens inside the tanks to see whether they're clogged. Otherwise, your best bet is to contact a plumber.Fruits and vegetables washed with or left in mineral-rich water tend to lose their color and texture. If your fruit looks almost too good to eat, then your softening device is doing its job well.When it comes to eating, water rich with calcium ions can drastically affect food texture. These ions form insoluble salts, which can make food tough.Minerals also increase the boiling point of water, increasing daily cooking time. So examine your device to cook better-tasting food more efficiently.The calcium and magnesium minerals in hard water lead to limescale formation and stains on kitchen appliances. When the softening device works, appliances that come into frequent contact with water shouldn't have these stains.You can recognize limescale by its chalk-like appearance. It becomes increasingly evident when you boil hard water in a metal pot or use hot hard water to wash metal cutlery.Although the water is washed away, the calcium and magnesium molecules find surfaces to cling to, leaving stains that are unsightly and can reduce the lifespan of your appliances.Water softeners usually make little noise unless they're regenerating, in which case they might hum. If your device is working quietly most of the time, it's probably working well.Note that a completely silent softener may not be working at all. A softener making no sound at all could be having a system error, like a malfunctioning circuit board. This merits professional investigation.Expect soft, cold water right away.You'll start reaping the benefits of soft water from all your hot water faucets 48 hours after installing your softening device because your water heater will have hard water stored inside the tank.Making sure your water softener works properly is easy when you know the signs. Your device is working properly if:Soap lathers well with water and doesn't produce scumFaucets, pipes, and toilets don't have any mineral buildupThe laundry looks shiny and new, and the washing machine is operating effectivelyThe drinking water doesn't taste salt