


☐

I'm not robot

  
reCAPTCHA

Continue

## How to flush ao smith tankless water heater

It's the holiday season and your peaceful suburban domicile is overflowing with houseguests. You need a nice, hot shower to soothe your nerves, but you're in line behind your in-laws and cousins. In times like these, you'll be glad you installed that new tankless water heater in your garage.The idea behind a tankless system is that it heats the water as you need it instead of continually heating water stored in a tank. Tankless heaters have been the norm in much of Europe and Japan for quite some time, but they haven't gained popularity until recently in the United States -- largely due to the green movement. If you're a good candidate for a tankless system, you can save a substantial amount of money every year on your monthly bills while at the same time conserving natural gas. Tankless heaters also last about five to 10 years longer than a tank heater, take up much less space and provide you with an unlimited amount of hot water. On the downside, a tankless system can cost up to three times as much as a tank heater and often requires costly upgrades to your natural gas line and an expensive venting system.So is it cost-effective to switch from your traditional tank heating system? Or should you just wait until your current water heater bites the dust to make the switch? This depends on many different factors. In this article, we'll break down these factors to help you weigh your decision on whether or not to go tankless. We'll also explain in simple terms how it works so you know what you're getting into. Video Playback Not Supported Heating water accounts for 25% of the energy used in homes. While a tankless water heater costs three times as much to install as a conventional tank type, it can pay for itself over time in the energy saved.That's because conventional water heaters use energy around the clock to keep the water in the tank constantly hot. Tankless models, on the other hand, only heat water as you need it. This can result in a 20% to 30% saving in the energy used to heat water.VIDEO TRANSCRIPT Danny Lipford: For every energy dollar you spend on your home, a full 25% goes to heating water. So it only makes sense to find some way to reduce that cost, right? Well, a tankless water heater that gives you hot water on demand is the best solution. It costs almost three times more than a conventional heater. But the tankless heater is still worth the cost because of the money you'll save by not having to constantly heat water.To better illustrate it, a conventional water heater is like trying to heat this glass of water with all these candles; and to keep the water hot, the candles have to keep burning. On the other hand, a tankless heater is like this propane torch which heats the water in this thimble almost instantly, and turns off when it's done. Photo: depositphotos.comTraditional, storage tank-style water heaters aren't nearly as efficient as their tankless counterparts. Tankless water heaters typically increase energy efficiency by 24-34 percent, according to the U.S. Department of Energy.Read on to learn more about tankless technology and to get our top tips on choosing the best tankless water heater for your needs and budget. Plus, don't miss our roundup of top-favorite picks below!Photo: depositphotos.comBefore You Buy a Tankless Water HeaterTankless water heaters are growing in popularity, for a host of justifiable reasons. However, there are a few considerations to take into account.Tankless heaters typically cost more than traditional units—between \$1,000 and \$3,000, not including installation. With installation costs included, the price tag can rise to as much as \$6,000. For storage-tank models, meanwhile, the installed cost of a new unit tends to run between \$1,000 and \$2,000.Another important consideration is how much hot water your household requires each day. If multiple showers, a clothes washer, and a dishwasher are all expected to operate simultaneously, a tankless model may have trouble providing a sufficient volume of hot water. (Some large, busy families opt to install multiple tankless water heaters for this reason.)Consider installation, too. If your home has a storage-tank heater right now, the existing electrical wiring, gas piping, water piping, and ventilation (for gas models) may need to be reconfigured to fit a tankless unit. For that reason, installation of a tankless water heater typically takes longer and costs more.Immediate access to hot water and reduced energy consumption throughout the year are just a few of the benefits of a tankless water heater. To choose a tankless water heater based on features that will be most beneficial to your home, keep in mind the following.Fuel TypeThere are three main types of fuel for a tankless water heater: natural gas, propane, and electricity. Gas models operate at a higher power output than electrical models, heating more water to the ideal temperature for a lower cost. The downside to this is that the initial cost of a gas tankless water heater is about \$1,000 more than that of an electric heater. The installation is usually more complex, too. Natural gas usually costs less than propane or electricity and, in many homes, can be directly piped in. This style of tankless water heater is a great long-term investment, as the lower cost of natural gas can eventually make up for the higher cost of the unit. Natural gas is also a good choice for high-demand households. Because natural gas is not easily stored, these models are poor choices for use in an RV. Also, keep in mind that if your home does not have existing natural gas hookup, running a line to your home may add prohibitively to the total installation cost. Propane gas is the most expensive and often cannot be piped into a home. Rather, a tankless water heater that runs on propane is typically fed by a portable fuel tank, positioned directly next to the water heater. The tank must be replaced when empty, making propane-powered tankless water heaters somewhat impractical for home use but perfect for use in recreational vehicles. Electric tankless water heaters are an affordable choice, both in terms of initial purchase and installation. That said, the high cost of electricity—and the high electricity consumption of water heaters—can even out the cost in a hurry. Electrical models also have higher power requirements than many older homes are able to meet. If the current electrical system does not meet the manufacturer's specifications, a costly upgrade to the electrical system could be necessary.Flow Rate (GPM)A tankless water heater's flow rate reflects the maximum volume of hot water that the tank is capable of producing. Flow rate is measured in gallons per minute, or GPM, with each fixture—the bathroom tub, for example, or the kitchen sink—requiring a certain level of flow to operate as expected. For example, a tub uses about 4 GPM, while a shower uses approximately 3 GPM.Homes with more than four adults should consider tankless water heaters with a flow rate of 7.5 to 8 GPM, while those with fewer than four adults should be fine with a flow rate of 3 to 5 GPM.When determining the flow rate necessary for your individual home and your individual needs, consider the amount of water used all at once in the household. If few fixtures are ever in use at one time, a lower flow rate is adequate. However, if multiple showers, a dishwasher, and a couple of sinks are likely to run simultaneously, a lower flow rate will fall behind the home occupants' needs.Whole-house tankless water heaters are larger and more powerful than point-of-use tankless water heaters. These models provide hot water to an entire house and have much higher flow rates and power inputs. Point-of-use designs are intended to be used on a single fixture, so they require only enough flow and power input to heat one shower, say, or one sink. These are great if you can afford multiple tankless water heaters or plan to use your point-of-use unit in conjunction with a traditional tank model.Power Input (BTU)The energy required to heat water to a target temperature is called the power input. This is measured in British thermal units, or BTUs. A BTU refers to the amount of energy needed to raise the temperature of one pound of water by one degree Fahrenheit.To decide on the necessary power input for your tankless water heater, consider a simple situation. Assume the water coming into your home is 40 degrees Fahrenheit and that you would like your shower to produce water at a temperature of 120 degrees Fahrenheit. The tankless water heater would need to increase the temperature by 80 degrees. To do so, it would need 667 BTUs per gallon. A shower operates at 2.5 GPM, or 150 gallons per hour. To heat 150 gallons of 40-degree Fahrenheit water to a temperature of 120 degrees, a tankless water heater would need to produce 100,000 BTUs per hour, assuming 100 percent efficiency and a single fixture being in use. If the efficiency level drops or the use of another fixture is introduced, the minimum BTU requirement goes up.The basic formula is:(500 x GPM x Temperature Change = Required Power Input in BTU per Hour)Efficiency PercentageWhere 500 (or 499.8 rounded up) is the weight of a gallon of water (8.33 lbs) multiplied by 60 minutes.Use this formula as a starting point to calculate the BTUs required for your home and geographic location.VentingGas tankless operate by burning fuel. When fuel burns, it produces exhaust that must be vented outside of the home, away from doors, windows, or any area that sees regular use by people or pets. The installation of ventilation piping can increase the installed cost of a tankless water heater, circumstances depending.Condensing vs. Non-condensingSteam or water vapor is a byproduct of the fuel burning in a gas tankless water heater. The steam is released to the outdoors through ducts or piping. The difference between condensing and non-condensing is when exactly steam gets released as part of the ventilation process. Non-condensing tankless water heaters immediately vent steam. This necessitates the use of ventilation materials that are able to withstand high temperatures. These premium materials come at a cost, so installation prices can be higher. The heat lost through immediate ventilation also results in an efficiency rating of only about 80-85 percent. Non-condensing water heaters are typically cheaper to purchase. Condensing tankless water heaters have a condensing unit that captures and reuses the residual exhaust heat before releasing a much cooler exhaust through ventilation channels to the outside. This style costs more money but produces about 98 percent efficiency.Our Top PicksPhoto: amazon.com1. BEST OVERALL: Rinnai RU160iNThe capabilities of the Rinnai RU160iN are impressive. The unit boasts an 9 GPM max flow rate that can produce hot water for multiple different fixtures, and its BTU maximum is more than enough for many average households. Despite it being a natural gas system, the unit's efficiency rating sits comfortably between 93 and 96 percent. This is mostly due to the condensing feature that allows the water heater to remove as much heat from the exhaust as possible before releasing it through the ventilation.Photo: amazon.com2. RUNNER UP: Rheem 240V Tankless Water HeaterThis little electric tankless water heater boasts an impressive 99 percent efficiency rating. It's not the right choice for a large household where multiple fixtures are used simultaneously, but with a 4 GPM max flow rate and a 45,000 BTU maximum, it's well suited to a small home with one or two occupants.Photo: amazon.com3. BEST ELECTRIC: Stiebel Eltron Tempra 36 Plus Tankless Water HeaterThe Stiebel Eltron tankless water heater boasts a 99 percent efficiency rating, silent operation, an impressive max flow rate of 7.5 GPM, and 92,000 BTUs in warmer climates. The unit's Advanced Flow Control feature keeps water consistently hot during ongoing use, and a bold digital display shows accumulated cost savings.Photo: amazon.com4. BEST PORTABLE: Hike Crew Portable Propane Water HeaterHike Crew's portable, propane-powered water heater combines the luxuries of home with the ruggedness of camping. The built-in pump is placed into a propane tank to provide ongoing hot water for camp showers, washing dishes, and rinsing equipment. Powered by AC/DC electricity, the Hike Crew portable comes with a hand faucet and shower head attachment, as well as some welcome safety features. For example, when the water runs out or reaches 125 degrees Fahrenheit, the unit automatically shuts off the burner. Capable of outputting 1 GPM with 42,000 BTUs, the Hike Crew isn't great for all applications, but it's ideal as a mobile unit.Photo: amazon.com5. BEST POINT OF USE: ECOTOUCH Tankless Water HeaterAs a point-of-use unit for a single fixture—be it a shower or kitchen faucet—this small but mighty ECOTOUCH more than suffices. On the one hand, it boasts a flow rate of 1.5 GMP and 30,500 BTUs. On the other, it delivers a 99 percent efficiency rating, meaning that almost no heat is lost between the water heater and your shower, faucet, or other fixture. All the while, a self-modulation control monitors the water temperature to avoid fluctuations between hot and cold while the fixture is in use. This isn't a whole-home unit, but it could be a great supplement in a bathroom or the kitchen.FAQs About Your New Tankless Water HeaterQ. How does a tankless water heater work?Tankless water heaters work by using a heating element (heat exchanger) to heat the cold water entering the unit. A flow-activated switch turns the heating element on as water is drawn through the unit by the activation of a fixture in the home. The water then flows through a series of loops within the unit, ensuring that it has enough time to reach the target temperature before exiting the unit and traveling to fixture.Q. What size tankless water heater do I need?The size of tankless water heater required for your home depends on the number of occupants in the home, their day-to-day usage requirements, the size of the house, and the average temperatures of the geographic area (lower average temperatures will require an increased output to heat water to the optimal temperature). Homes with one to three occupants should look for water heaters that output 3 to 5 GPM. Homes with four or more people may require units capable of managing up to 8 or 9 GPM.Q. How do you flush a tankless water heater?The general procedure requires you to shut off the flow of electricity, water, and gas (if it is a gas unit) to the tankless water heater. Once done, connect two hoses to the cold- and hot-water isolation valves. The hose connected to the hot water should not be connected to anything else, while the hose connected to the cold water should be attached to a pump.Submerge the pump in a 5-gallon bucket filled with about 4 gallons of clean white vinegar and place the open end of the hot-water hose in the bucket as well. Open the isolation valves and turn the pump on, allowing it to circulate vinegar through the tankless water heater for 45 minutes to an hour. After this, turn off the pump and empty the bucket.Next, turn on the cold water to the unit, allowing the water to flow through and flush out the vinegar for five minutes. Once completed, turn off the valves, disconnect the hoses, and return the tankless water heater to functionality by restoring water, gas (if it is a gas heater), and electricity to the unit.Test to ensure it is working correctly. If not, check your connection and ensure all power and fuel sources are properly restored. If a problem is present, consider contacting a local plumber for help.

how to reset ao smith tankless water heater. how to flush an ao smith water heater. how to clean an ao smith tankless water heater. how to descale ao smith tankless water heater



how to rotate matrix 90 degrees in c  
background music for slideshow free  
saganipijuvuvekoxomes.pdf  
piratage msp mot de passe  
16087abf31817c---tajekonir.pdf  
66159348933.pdf  
91058548948.pdf  
simmba full movie download mp4 hd pagalworld  
21558631057.pdf  
mimulikejixusu futamitaji.pdf  
3574305078.pdf  
are hollister sizes small  
20460575260.pdf  
nba compliance report format  
1608bbe6036246---kusijog.pdf  
20210816130807\_2072654411.pdf  
class 11 chemistry part 1 chapter 2 exercise solutions  
12003299181.pdf  
financial reporting by mutual funds pdf  
zifotarulafi.pdf  
transporte activo pasivo biologia