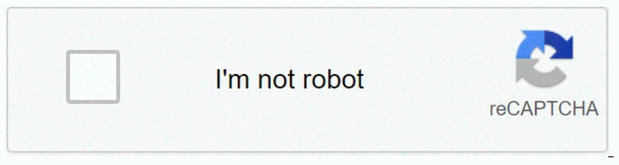

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Zyia tank sizing guide

Collecting big minds together to brainstorm the next innovative ideas is not a new concept. Ptolemy I (Sotor) of ancient Alexandria created one of the first recorded think tanks by paying the great thinkers of his day to gather and think -- an effort that attracted the names of Heron and Archimedes. The National Center for Policy Analysis defines think tanks as idea factories, but they are also businesses, albeit non-profits. As with any start-up, practical financial and managerial considerations must balance creativity in order for the whole to thrive. Define the purpose, focus, and audience of the workgroup. For example, the U.S.-based Center for Strategic and International Studies says its goal is to find ways to support American prominence and prosperity through the new government policy. The public it brings directly benefits is the US government. The purpose of the Fraser Institute of Canada is to investigate how financial markets and government policy affect individuals in order to help individuals achieve greater health and prosperity. Your goal will often come from a need that you identified -- the one that led you to start a think tank in the first place. Write down the problem or problems that think tank members will try to improve or solve. That's your goal. Then articulate whether the focus on how to improve or solve the problem will be through research or through politics. In other words, will you attack the problem through science and technology, or through government or organizational initiatives? Finally, identify your audience -- who are you improving problem solving for? Choose someone to act as chief executive of the think tank or director. It is likely that for any problem that you have identified as your think tank's purpose, there is already someone out there who has become an expert in it through experience. For example, Kenneth Roth, executive director of Human Rights Watch since 2014, had a long and revered career in law, prosecution and government investigations before taking up his position with HRW. He was also a veteran of several international human rights investigations. In other words, he was someone who legitimized HRW through his experience and reputation. Find experts on your problem and their approach about becoming part of the think tank. Of those interested, select someone with a track record as a well-known and respected expert. As Executive Director, she will coordinate the efforts of all other participants by assigning tasks, keeping everyone on the task, and overseeing business details, such as budgets and fundraising. Set up business. Remember that most think tanks need money and get it from donors and/or grants. Donors want their contributions to be tax deductible, which requires organization as a non-profit entity. Non-profit. grants usually require this structure as well. The U.S. tax code states that a non-profit organization must be organized as a corporation, trust or association. The organization must have a federal employee identification number, regardless of whether it has real employees. In addition, you must submit the Irs form requesting approval as a non-profit organization, provided on the Irs website, by the 27th of the month following the training. Most non-profit structures require a board of directors and an internal management hierarchy. You already have the CEO. Now, with the rest of the structure in place, you can show potential members and staffers you're serious about setting up the think tank and that it's worth their time to consider getting involved. Recruit members. Chances are you've drawn up a good list of candidates when you choose the Executive Director. But make sure your potential membership list is varied enough to cover all the necessary traits in a well-rounded think tank. You need not only experts in your problem, but also people familiar with project management, fundraising and research. For example, Human Rights Watch members include government policy specialists, lawyers, lobbyists and teachers from around the world. You may also want to recruit people who are already members of a think tank. Those who have experience working in a formal think tank environment can provide valuable guidance as your project gets off the ground. This includes more than just knocking on a few corporate doors and pitching the benefits of the think tank. This also includes applying for grant money. Both types of funding require much of the same information. The information packages requested by both potential donors and grant applications usually include a clear statement of purpose, focus and audience to demonstrate exactly what the think tank hopes to achieve. It also includes biographies and resumes of the think tank leader and others who have signed up to participate to assure donors that think tank staff are qualified to address the purpose of the tank and focus. Finally, provide financial information, including an operating budget, to show donors that the think tank is organized and financially feasible. Once you have decided on the type of fuel, you need to figure out what size of the water heater will give you enough of what you need. If you are replacing the heater, give some thought about whether or not the previous model constantly provided enough heat. If not, then you'll want to upgrade to a larger size. Also, to considering whether or not your family has any potential to grow over the next ten years. If you have plans to start a family or if your mother-in-law will move in with you, you'll want a bigger heater as well. Once you have considered all this, you can properly size the new heater. For For Tank heaters, there are two important factors in sizing: the amount of water it holds and the recovery rate, which is the amount of water can heat up in an hour. The recovery rate is displayed as the First Time Rating (FHR) on the Energy Guide sticker. Generally speaking, if you live in a household of two people, you can get away with a heater of 30 to 40 gallons. Three to four people need a tank of 40 to 50 gallons, and if you have five or more in your home, go with a model of 50 to 80 gallons. Gas heaters have a higher FHR than electric units, so they have smaller tanks with the same EF rating. To get a more specific idea of your needs, estimate the peak hour request and find a falling heater within a few gallons of that number. Here are estimates for the number of gallons used for each household load: [source: U.S. Department of Energy] Multiply these numbers by the amount of times they appear in a peak hour to get total gallons used. For example, if you have three people in the household taking all the morning showers, you would multiply 20 gallons by three to get 60 gallons used totally. If you also run the dishwasher in the same hour after showering, add another 14 gallons to give you a total of 74 gallons. This is the need for rush hour and what you should look on the Energy Guide sticker. If you have limited free space where the heater should go, look for lowboy models - they are shorter and larger around, but have the same capacity as their higher cousins. For more information about appliances, home renovations and energy savings, please see the links below. Related HowStuffWorks Articles A Consumer's Guide to Energy Efficiency and Renewable Energy. U.S. Department of Energy, 2008. 12980?printGhidul the buyer's natural gas water heaters. citizengas.com 2008. Choosing a boiler. U.S. Department of Energy, 2008. Hot Water Heating. U.S. Department of Energy, 2008. Heater Buying Guide. lowes.com, 2008. Water heating. American Council on Energy Efficient Economics, 2008. Celia Kuperszmid. Get in the hot water. This old house, 2008. How big should the boiler be? hometips.com 2008. Don. Water Heater Buying Guide. hometips.com 2008. Larry and Suzanne. Water heaters and energy conservation- Elections! Home Energy Magazine, May/June 1996. people at work, image air compressor by Greg Pickens from Fotolia.com compressed air instruments are widely used in commercial and residential applications for repair, painting and other uses. A key part of a compressed air system is the compressed air tank or receiver. The air tank acts as a storage vessel to ensure adequate air supply to the instruments you use and helps the air compressor to function efficiently by smoothing pressure fluctuations. It is estimated that 70 percent of manufacturers have a compressed air system. You need to calculate the correct tank size for air requirements to avoid installing an undersized tank that provides too little air or an oversized tank that wastes energy by requiring the compressor to run longer. List the compressed air instruments you use. Get the air flow and pressure requirements of each machine. The instrument specifications are often printed or stamped on the instrument (forms would be 2 cubic metres per minute (cfm) per 100 pounds per square inch (psi)) and will determine the instrument requirement. Calculate the total air requirement for all instruments by adding together the required airflow for each instrument. You must overestimate the requirements of the machine's airflow to prevent undersizing of the receiver. Undersizing calculates too little volume for the required airflow, which would lead to too little air capacity. For example, the compressed air system can provide air to multiple workstations. We have to assume that all stations use air simultaneously to ensure adequate capacity. Use the total airflow requirement and estimate the time it takes for maximum air capacity. For example, if all necessary tools require 20 cfm for a maximum of 15 minutes per hour, then the minimum volume is (20 cfm) x (15 min) = 300 cubic meters. So the minimum air required is 300 cubic meters. Calculate the required volume of the tank. Calculation based on the time required for the compressor to run uses the equation t = V (p1 - p2) / C pa (Time for the receiver to move from the upper pressure limits (min) = Volume of the receiver tank (cuft) (Maximum tank pressure (psi) x minimum tank pressure (psi)) / Air required (cfm) x 14.7 psi). Or you can estimate the size of the tank in one of two ways; Use the actual cfm from Step 3 above or assume 4 galloncapacity for each compressor power horses. Take in several smaller compressors than a large compressor. Energy savings from smaller compressors can be significant, as maximum capacity may only be required intermittently. A large compressor will run below capacity most of the time, which is ineffective. Ineffective. Ineffective.