

Build Your Own Portable Outdoor Shower

Vince Pitelka, 2020

Keeping the water clean in a hot tub or swimming pool depends partially on always showering before soaking or swimming, and the secret to not “wearing” the spa or pool chemicals after soaking or swimming is rinsing off with fresh water. Showering indoors means drying off before heading out to the tub, or else dripping water through the house on your way outside. I decided to build an outdoor shower. I did not want it permanently installed, so it only made sense to design and build a portable shower unit with its own water heater. I am the only one normally using our hot tub, and a portable shower unit allows me to store it away when I am gone for prolonged periods.

Parts List

Note – these items are written below exactly as they were listed on Amazon when I built this unit 18 months ago.

The Bosch water heater is still

available, but I have not checked the other items. If something has been discontinued, just find an equivalent. The prices are what I paid a year and a half ago. This list specifies brass pipe fittings. They aren’t that much more expensive than standard iron fittings, and will never rust.



Quantity	Item	Price Each
1	Bosch Electric Mini-Tank Water Heater Tronic 3000 T 4-Gallon (ES4)	\$185.00
1	Eaton Weatherhead 3326X8 Brass CA360 Fitting, Nipple, 1/2" NPT Male, Close	\$3.99
1	Anderson Metals 38101 Red Brass Pipe Fitting, Tee, 1/2" x 1/2" x 1/2" Female Pipe	\$6.47
1	Anderson Metals Brass Garden Hose Fitting, Swivel, 3/4" Female Hose x 1/2" Female Pipe	\$6.55
3	Anderson Metals Brass Garden Hose Fitting, Connector, 3/4" Male Hose ID x 1/2" Female Pipe	\$4.99 each

Quantity	Item	Price
1	Dixon BA74 Brass Fitting, Adapter, 3/4" Garden Hose Male x 1/2" NPT Male	\$6.66
Pkg. of 2	Certified Appliance Accessories 2 pk Braided Stainless Steel Washing Machine Hoses, 4ft	\$19.50 for 2
1	Homewerks 3070-250-CH-BWS Outdoor Shower Kit, Chrome	\$44.97
1 optional	Brushed Nickel 5-Function Handheld Shower Head with Hose and Bracket	\$29.99
3	Large Zip Ties Heavy Duty Big Cable Ties Extra Long Tie Wraps Black 26 Inch 50 pieces	\$7.37 for pkg. of 50
1	Harper Trucks 300 lb Capacity Steel Hand Truck with 8" Flat-Free Wheels	\$33.57
1	five-foot length, pressure-treated 1x6 lumber	
1	Wireless Remote-Control Outlet, Fosmon Outdoor Electrical Outlet Switch Weatherproof Heavy Duty, 3-Prong Plug-in ETL Listed (Battery Included)	\$11.99
1	Tiabo Metal Garden Hose 304 Stainless Steel Super Flexible Cool to The Touch All Weather Hose	\$34.99
6	#10x3/4" round-head Phillips wood screws	
4	#8x3/4" round-head Phillips wood screws	
1	Everflow 811 PTFE Thread Seal Tape for Plumbers, White 1/2 Inch	\$3.90
1	3/4" Garden Hose Quick Connector Value Pack	\$7.75
1	Kasian House Heavy Duty Brass Garden Hose Connector with Shut Off Valve and Comfort Grip, Control Water Flow, Faucet Extension	\$8.99
1	Heavy-duty extension cord of appropriate length	

The above list includes all of the parts that I used in my shower for my particular needs. You may want to adapt to your own situation and needs. Mounting the shower on an inexpensive hand truck provided not only portability, but also a convenient vertical structure. You wouldn't expect much of a \$33 hand truck, but this one turned out great. The weight of the little hot water heater filled with four gallons of water sitting on the hand truck shoe makes the whole unit very stable on a flat surface. My Bosch hot water heater has been outdoors uncovered for the past 18 months and has suffered no ill effects.

Since I only use the shower after my early morning walk before getting in the hot tub, I don't want the hot water heater going all the time. I installed the "Wireless Remote-Control Outlet, Fosmon Outdoor Electrical Outlet Switch Weatherproof Heavy Duty" on an outdoor electrical outlet so that I can turn on the hot water heater from inside when I get up in the morning, and then turn it off after soaking in the hot tub and showering again. It takes about fifteen minutes for the water to heat up from stone cold. I have the Bosch hot water heater on its highest setting (I believe that's 145° F), and that provides enough hot water for several people to take hot showers or a bunch of people to take lukewarm showers. If you have a bigger crew needing hot showers outdoors, then you should consider something more permanent plumbed into your household hot and cold water. The hand

shower is optional. You might be happy with the little showerhead that comes with the outdoor shower kit.

The hose supplies water from the nearest faucet on my house, and I chose one of the new stainless steel-jacketed hoses because they are truly freeze-proof. Use whatever kind and length of garden hose that is appropriate for your situation. We do get hard freezes in central North Carolina, and I have to leave the water running at a tiny trickle in sub-freezing weather to save the pipe fittings and showerhead. The duct tape on the hand-shower is because it split in a hard freeze when I forgot to leave the water on at a slow trickle, and I haven't installed a new one yet.

Required Tools:

- Sharpie
- Center punch
- Electric drill with Phillips bit and 3/16" drill bit
- Skillsaw
- Channel-lock or slip-joint pliers
- 12" pipe wrench
- Scissors

Details and Assembly

- The vertical board is a five-foot pressure-treated fence board from Home Depot. I like it with the corners cut off at the top. If you can't find a 5' fence board, get a 6' length of pressure-treated 1x6 lumber and cut it down to 5', and trim the upper corners if you wish.
- Hold the board up against the vertical portion of the hand truck as indicated in the image, and mark the spots to drill four 3/16" holes, two in each of the hand truck cross-stays. Center-punch the marks, and drill the holes in the hand truck cross-stays. Hold the board vertically in place and drive in four of the #10x3/4" round-head wood screws to permanently mount the board on the hand truck.
- Place the Bosch hot water heater on the shoe of the hand truck and mark the positioning for the hanging bracket. The weight of the hot water heater can rest on the hand truck shoe, but you do want it to hang on the bracket just enough so that it is held in place when moving the unit around. Screw the hanging bracket to the vertical board and mount the hot water heater on the hanging bracket.
- **NOTE:** Be sure to use several wraps of Teflon pipe thread sealing tape on all tapered pipe connections. Hose connections have rubber washers and do not require Teflon tape.



- The outdoor shower kit valve has two outflow ports in the center so that the outflow pipe leading to the showerhead can be mounted on the same side as the inlet connections, or on the opposite side. The unit comes with the inlet connections pointing in the same direction as the outflow pipe to the showerhead, with a pipe plug in the opposite port. For this assembly, you want the opposite setup, with the inlet connections on the valve pointing downwards and the pipe to the showerhead pointing upwards. Remove the plug and install it in the opposite port before installing the outflow pipe leading to the showerhead in the correct port. Attach the two provided inlet connectors to the valve and tighten them securely (these connectors are like pipe unions, and do not require Teflon tape on the threads that attach to the shower valve. Teflon tape is only required on tapered pipe connections).



- Before attaching the showerhead or hand shower to the upper end of the outflow pipe, slip the soap dish over the pipe. Even if you don't plan to use soap, the dish screws to the board and provides additional support for the shower pipe. And as you can see in the images, the soap dish provides a convenient place to hang a back-scrubbing brush.
- On each of the two male inlet connections for the shower valve, install one "Anderson Metals Brass Garden Hose Fitting, Connector, 3/4" Male Hose ID x 1/2" Female Pipe."
- With two of the "#8x3/4" round-head Phillips wood screws," attach the shower valve to the board so that it places the showerhead or hand shower at a height convenient for your needs.
- With two of the "#8x3/4" round-head Phillips wood screws," attach the soap dish to the board at a convenient height.
- The two connector fittings atop the Bosch hot water heater are both male 1/2" NPT (National Pipe Thread). On the cold-water connection, install the pipe tee as indicated in the illustration.



- On the top connection on the pipe tee, install one “Dixon BA74 Brass Fitting, Adapter, 3/4" Garden Hose Male x 1/2" NPT Male.”
- On the side connection on the pipe tee, install, in sequence, one “Eaton Weatherhead



- 3326X8 Brass CA360 Fitting, Nipple, 1/2" NPT Male, Close,” one “Anderson Metals Brass Garden Hose Fitting, Swivel, 3/4" Female Hose x 1/2" Female Pipe,” and the male member from the garden hose quick disconnect set.
- On the male end of your garden hose, attach the inline garden hose shutoff valve and then the female member of the garden hose quick disconnect. This will allow you to shut off the water at that point and disconnect the hose from the shower unit when you want to move the shower for any reason.

- Attach the garden hose to the quick disconnect on the hot water heater inlet.
- On the hot-water connection on the Bosch hot water heater, install one “Anderson Metals Brass Garden Hose Fitting, Connector, 3/4" Male Hose ID x 1/2" Female Pipe.”

- On the hot water outlet on the Bosch hot water heater, connect one end of one of the “Certified Appliance Accessories 2 pk Braided Stainless Steel Washing Machine Hoses, 4ft.” Connect the other end to the right-hand inlet connection on the shower valve.
- On the connection atop the pipe tee, connect the other “Certified Appliance Accessories 2 pk Braided Stainless Steel Washing Machine Hoses, 4ft.” Connect the other end to the left-hand connection on the shower valve.



- Before tightening the connections on the two washing machine hoses, coil up the excess and fasten it to the board with the heavy-duty zip-ties, as shown in the images. Trim off the excess length from the zip ties with scissors.
- Use an additional heavy-duty zip-tie to pull the two washing machine hoses in snug against the board just beneath the shower valve, as shown in the images. Trim off the excess length with scissors.
- Use the channel-lock or slip-joint pliers to tighten all water hose connections.

- Turn on the water and the shower valves and allow it to run until it comes out of the showerhead in order to fill the hot water heater, and then turn off the shower valves.
- If you are using the “Wireless Remote-Control Outlet, Fosmon Outdoor Electrical Outlet Switch Weatherproof Heavy Duty, 3-Prong Plug-in,” connect it to a convenient outlet.
- Connect a heavy-duty extension cord to the wireless remote switch or to a convenient outlet and the other end to the hot water heater plug.
- **NOTE:** This unit draws 1440 watts, so you must use a heavy-duty wireless remote (if you are using one at all) and a heavy-duty extension cord. My hot water heater is at the end of a 25’ extension cord and works fine.
- Turn the hot water heater control knob up to the maximum and wait fifteen minutes.
- Remove your clothes and take an outdoor shower.



NOTE: The control knob on the front of the hot water heater is both the on-off switch and the temperature adjustment knob. It is awkward to use at best, and that alone is a very good reason to install the “Wireless Remote-Control Outlet, Fosmon Outdoor Electrical Outlet Switch Weatherproof Heavy Duty, 3-Prong Plug-in.” It’s an inexpensive accessory, and for me has worked perfectly for the past eighteen months. With this setup, you can leave the adjustment knob on the water heater set at whatever temperature you like, and use the remote to turn the unit on and off.

Occasionally I have to press the remote button several times to get the wireless remote-control outlet to connect. There is a small indicator light on the remote-control outlet. In the dark I can see that light clearly from inside the house, so I know when it's on. In daylight I sometimes have to walk over to the outlet to see the indicator light.

I decided to paint my portable outdoor shower unit, but didn't want to paint the hot water heater or the wheels. I disconnected the hoses and temporarily removed the hot water heater, removed the cotter pins and slipped off the wheels, and then spray-painted the whole unit green. The reason that one of the washing machine hoses and the shower valve are not painted green is that both units had to be replaced when they burst in a hard freeze. That's when I learned a hard lesson to leave the water running at a slow dribble whenever a hard freeze is forecast. At those times I also leave the hot water turned on to ensure that it does not freeze. It costs little to run overnight now and then. Since I've been doing that, I have experienced no more problems, and haven't yet got around to repainting the unit. After sitting outside for eighteen months, it could use another coat of paint anyway.