

Hallways

We have several outlets in the hallways outside of our rooms. We believe in always having easy access to power, but if you're careful about where you plug things in you don't need a lot of extra circuits here.

Always cover unused electrical sockets, even in the hallways. We recommend childproof covers any time outlets are not in use to prevent water or moisture from reaching them.

Lobby

Make sure to have easy access to power for your computers at your front desk. Put outlets where your customers might sit so they can charge their electronics and use their computers.

Avoid outlet holes on the walls bordering your float rooms, since those will be weak spots in your soundproofing, even with your putty pads around the electrical boxes.

Miscellaneous Rooms

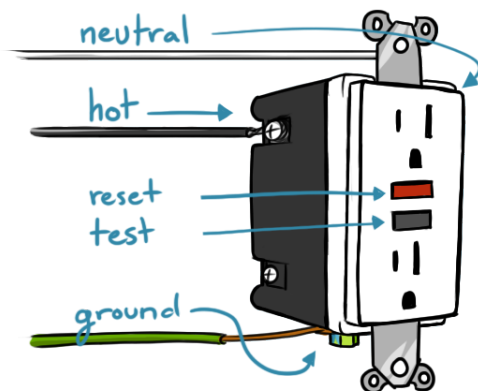
Other rooms, such as massage rooms or an office, don't have much out of the ordinary. Your contractor will be able to easily help you through the process of the more conventional portions of

Electrical

This is just a small preview of the Electrical Chapter.

This section was reviewed by Master Electricians.

GFCI stands for ground-fault circuit interrupter. **These are built into electrical outlets so that they can shut off the current (in case of an issue) in as little as 1/40 of a second.** For this reason, they're always used when dealing with wet environments (and you'll be familiar with seeing them in kitchens and bathrooms).



Any outlets in the tank vicinity should be stamped WR (weather resistant) and use "bubble" type covers which are closed when a cord is plugged in. Per the National Electric Code, they are required for any receptacle within 6 ft of water, or any unfinished spaces.



Plugging in Your Tanks and Filtration Equipment

Float tanks and their accompanying filtration equipment have specific needs which will differ from unit to unit. There are a few general strategies for protecting your electronics from both salt and water, but ultimately you should go with the recommendations of your tank manufacturer. **You don't want to break your warranty by re-wiring electrical connections.** If something goes wrong, having done everything according to manufacturer instructions will help to keep the liability and financial responsibility off of your shoulders.

! Always use common sense. Salt water and electricity don't mix, and if you see any instance where electric connections or equipment are getting wet or collecting salt, there could be a serious risk of short-circuit, fire, or electrocution. **Extreme care is advised both during the initial install and after you're already up and running.**

Hard Wiring Into the Wall

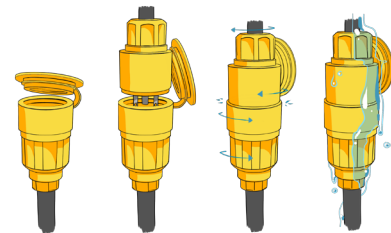
Some float tanks are designed to be hard wired directly into the electrical in your wall. This eliminates the need for plugs or outlets at all, and is a good option for ensuring a safe electrical connection that water and salt won't get into.

This has the downside of making repairs more difficult, since you'll need to un-wire the connection from the wall in order to move your equipment from the room.

! Hard-wiring in can also affect the requirements of your building code and permits. If hard-wiring is what your manufacturer recommends, check with them and with your local permit department to find out what impact this will have on your plans.

Watertight Electrical Plugs

Watertight electrical plugs replace ordinary power plugs. The male and female ends of the plugs lock together, creating a watertight seal to prevent salt and water from getting into the connection.



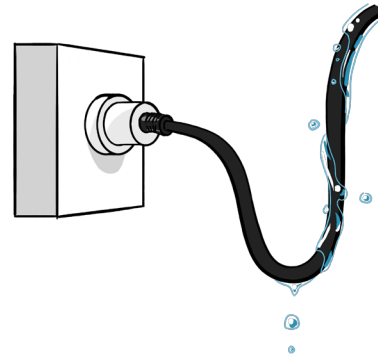
! We have used these at Float On and had several burn out on us. Even with the watertight connection, care is still necessary to make sure no water or salt is in the plug when you connect it and that the plug is not sitting in standing water.

Weather Resistant Outlet Covers

Just as you will use Weather Resistant outlet covers for your standard electronics in your room (such as wall heaters), some manufacturers have designed their tanks to plug into standard GFCI outlets housed in WR covers with no further waterproofing measures.

Drip Loops

Drip loops are just a way of positioning your cords so that water doesn't collect and go either into your machinery, or into your outlet/plug. It's very commonly seen in aquarium setups, but is basic practice for any electrical cords used in a wet environment. With a drip loop, the cord drops down so it's lowest point is below both the outlet and the electronics that are being powered.



Planning for Room Lights

The lighting in your float tank rooms have to serve different functions at different times, and satisfying all of them takes some forethought. **You want bright light to clean, low light for clients, lower light when they get out of the tank, and controls that won't get salty.**

Most float tanks on the market are not light-proof, which means that the room that you build for them needs to be capable of becoming either completely, or almost completely, pitch black.

Work Lights

The lights in your rooms need to be able to get very bright so that you can inspect the rooms for cleaning. This isn't only a good idea: in many areas, health departments will actually require that you have a bright worklight installed in all of your rooms to ensure sanitation.

Ambience

In contrast to bright cleaning lights, **your customers will want to have soft, dim, relaxing lights to go along with their float experience.** Common solutions are colored lights, color changing LED strips, salt lamps, and LED shower heads.

The older you get, the less sensitive you are to light. Make sure that you at least have the option of making the rooms brighter so that people can see. You don't want to be liable for a slip and fall lawsuit because your rooms were too dim for someone with poor vision.

Controlling Lights from the Lobby

It's nice to be able to have lights that you can fade on from the lobby for a few reasons:

- Gives you separately controllable work lights
- Lets you cue people that their float is over visually (as well as auditorily)
- Very useful for deaf clients
- Lets you fade lights on and off if people are taking too long getting out of their room

At Float On we use lights on a separate circuit going into our float pools, so that there is a customer-controlled light, and one controlled from the lobby.

Motion Sensors

Motion sensors help solve the problem of tanks that are not fully lightproof. If the room is illuminated when someone is preparing to float, and then the room goes dark when they're in the tank, that's an ideal setup. Motion sensors work with infrared, and there are many different models to choose from. We've seen them commonly in float centers as a solution to hands free (and thus salt free) lighting options.



The Many Issues With Motion Sensors

Motion sensors, although they are a good solution to lighting, come with their share of issues. Some of these are easily resolved, some are difficult, and some are probably only solvable with a better unit than we've found so far for our own center.

- **Motion sensors will go turn the light off when people are showering, undressing, or getting ready.** We use a 360° infrared motion sensor, which we set to low sensitivity. We currently have issues with this in the rooms we use motion sensors in.
- **Motion sensors will go on during floats, causing light to get in the tanks.** We had this issue and found that the heat waves from our wall heaters were setting off the infrared motion sensor. We fixed this problem by changing the sensor from high to low sensitivity, but this caused occasional outages while people were getting ready.
- **Motion sensors not keeping lights on during cleaning.** Especially if you're crouched over, or in an out-of-the-way place (like by the pumps) the lights can go out on you because they haven't detected enough movement. Wearing a head lamp can take care of this easily, but is slightly inconvenient.

Tying Lights Into Your Tank's Light Button

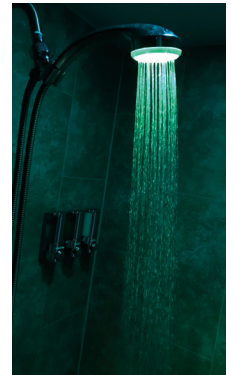
If you have a light button on the inside of your tank (usually an air button, which triggers a relay based on air traveling through a hose), you can tie that into the lights in your room.

This is a job for a licensed electrician.

In this case, when the client turns off the light inside the tank, it will turn off the light in the room. When they turn the light back on inside the float tank, it will turn the light on inside the room. **This is what we use** in most of our rooms.

LED Showerheads

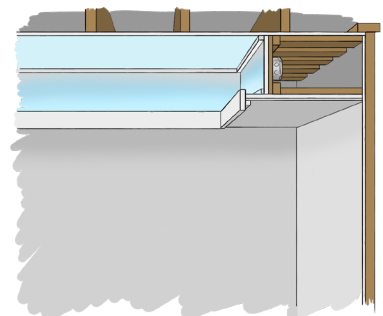
We use them. We've seen them in other float centers. **They're like a little party while you shower, and customers seem to love them.** They provide light (via hydroelectric power) while people are showering, in case you're using a motion sensor that wants to turn off on you.



Recessed LED Strips

This is another common ambient lighting setup that we've seen at many centers. It provides indirect light, which can stay on a single color, or fade between colors.

LED lighting can be provided with dimming drivers and lamps. The dimming drivers have better control and function. LEDs are more expensive than typical lighting, however, they don't create the heat that other fixtures do and use only 15% of the power required by regular lighting. **This is an area to do your homework.**



Low-Voltage Wiring

You will likely be using low-voltage wiring for your tank controls and your speakers. **Make sure to contact your tank manufacturer beforehand to find out what kind of wire will need to be run from your rooms to your lobby**, and whether there's any restrictions on length (some cables will not function properly beyond a certain distance).

Your electrician will likely be instructed to run network cable and audio lines. A few manufacturers are utilizing wireless audio and/or tank controls.

Plan on putting in your low-voltage wire while you are doing the rest of your electrical, and while the studs and joists are still bare. You don't want to finish up your soundproofing and waterproofing, just to have to cut holes in it to run speaker wire when you install your float tank.



At Float On we made exactly this mistake, and we had to cut into our new walls and ceilings... which was quite painful.

Resources

Amps, Volts, and Watts

floattanksolutions.com/construction/amps

Single Phase vs Three Phase Power Video

floattanksolutions.com/construction/powerphase

How Circuit Breakers Work

floattanksolutions.com/construction/circuitbreakers

Leviton Waterproof Electrical Plugs and Outlets

floattanksolutions.com/construction/leviton

Electrical - Checklist

- Electrical Load Calculated
- Any older or insufficient electrical work removed
- Manufacturer Contacted About Electrical Needs
 - 240 V needed?
- 4 circuits per room (3 minimum)
- Circuits planned for equipment with a high electrical load
 - Washer/Dryer
 - HVAC
 - Water Heater
 - Hairdrying station
 - Other Large Appliances?
- Extra Circuits for Work Room
- Using LED lights throughout space?
- Outlets for guests and staff in lobby
- Few to no outlets on walls bordering float rooms
- Waterproofing Electronics
 - GFCI Outlets throughout float rooms, work room, and hallway
 - Watertight electrical plugs or outlets used for float tank equipment
 - Drip loops used on all equipment in float rooms
 - Childproof covers on all unused outlets
- Light controls planned for float room
 - Motion sensor, tied to float tank, waterproof switch, or other?
 - Work lights in float rooms
 - Ability to control room / tank lights from lobby?
- Pre-wire speaker wire for float tanks
- Pre-wire control cables for float tank