



Facility Setup

We recommend the following items for an optimal facility setup.

1) Hot water heater

- a) Any water heater is better than nothing. Ideal would be 5gpm incoming 160 degree hot water by gas, but we understand this can be cost prohibitive. This is only an important factor for businesses with high volume. It is less important for lower volume operations and start-ups, and an easy upgrade down the road when it becomes needed.

Some considerations to keep in mind:

- i) Gas recommended if location is subject to "peak usage" rates for electric (certain times of day where electric rates are substantially higher). Otherwise the water heater and the machine will be pulling electric.
- ii) We desire 5gpm incoming so the unit fills in 20 min or less (a full/high level cycle fills with ~100 gal; a half/low level cycle fills with ~60 gallons; plus or minus depending on the volume of weight in the unit). Depending on the unit, this can mean two on demand hot water heaters are needed. Many of our customers use the Rinnai or Navian units.
- iii) Can do a tank or on-demand. Can do standard (140F) or commercial (160F)
- iv) The unit fills with about 100 gallons of water for a full cycle. A tanked hot water heater doesn't have to be the full 100 gallons – but if you have 50 gal of 135F water coming in plus 50 gal of 59F water, you're only starting at around 97F. The hotter the incoming water is, and the more of it, the faster the machine will reach full temperature. If an operator wants to get on a cycle where they can come in and turn a cycle over every day at the same time, and they are running multiple days per week, this can be an important detail (if the business is a start up running once or twice a week, this is not as important). The 20-70 minutes of time saved during heat-up is time that a user gains for collecting remains, re-loading the machine, and starting the next cycle.
- v) **WARNING:** Water heaters cannot be set above 160F because it leads to a safety issue with the chemical.

2) Pet System Steps

- a) For ease of use we recommend you purchase a 60" Adjustable Steel Step Stand (500 lb capacity). This step allows you to be up higher than the loading area of the machine and makes it easier to place the pets into your cycle.
- b) These steps can be purchased through Bio-Response Solutions.



3) Chemical storage area

- a) Dry chemical needs to be stored in a dry area. Dry alkali is delivered in 50-55lb bags on a 48x48" pallet, ~4' height to the stacked bags. You can simply store it that way with a tarp over it, or you can get a horizontal shed to keep it out of sight and locked away.

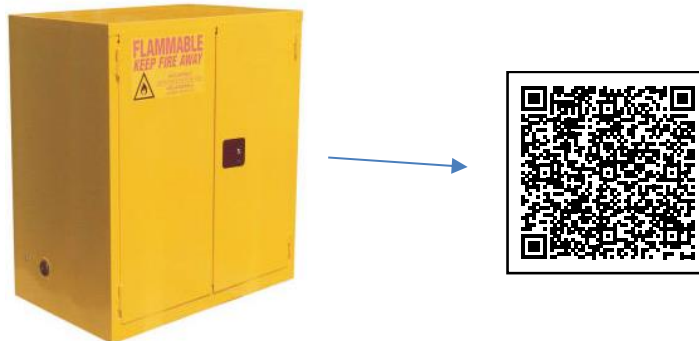
Some of our customers use a "horizontal storage shed" like this:

https://www.amazon.com/Rubbermaid-Horizontal-Storage-Shed-FG374801OLVSS/dp/B000L0FDPG/ref=sr_1_10?s=lawn-garden&ie=UTF8&qid=1543948713&sr=1-10&keywords=horizontal+storage+shed



- b) This unit is more expensive, but very heavy duty:

<http://www.globalindustrial.com/p/storage/flammable-osh-cabinets/flammable/flammable-cabinet-with-manual-close-double-door-120-gallon>

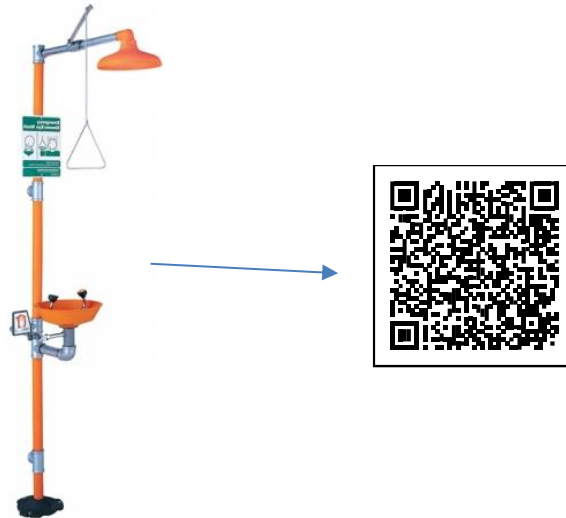


- c) Liquid chemical can also be used if the liquid option is purchased with the machine. In this case, the chemical is delivered in drums, totes, or by a chemical truck into a large chemical tank. Please inquire for details.

4) Safety shower/Eyewash station

- a) The Guardian unit we recommend is \$577 with free shipping. It gets plumbed in right next to the machine when the plumber is hooking up your machine.

<https://www.eyewashdirect.com/Guardian-G1902P-Safety-Shower-Eye-Wash-Station-C1977751/>



- b) If plumbing is a problem, there is a portable unit we recommend for \$864 that meets Z358.1

<https://www.eyewashdirect.com/Guardian-G1562-15-Gallon-Portable-Eyewash-Keg-C1977784/>



We recommend the plumed unit whenever possible. It has better visibility, and will satisfy any inspectors. Its appearance and use is universally recognized as a chemical safety shower. You can use any safety shower/eyewash station you choose, so long as it meets ANSI Z.358.1 standards.

- c) When it comes time to install this, we can advise you on placement. The best placement is NOT next to the chemical storage. The best placement is near the machine, away from the control panel (right side is ideal) with a clear, unobstructed path. Your procedures can dictate that you will perform your chemical handling in that area, not the chemical storage area. Don't put the shower in a place where anything will gather in front of it. You may also want to add a privacy curtain and have towels available.
- d) *The ANSI Z358.1 standard states that all flushing equipment must be located in areas that are accessible within 10 seconds (roughly 55 feet). This is commonly referred to in the industry as the 10-second rule. Best practices are to use a stop watch from your hazardous areas and determine if you have the proper flushing fluid located within 10 seconds. Keep in mind that an injured worker may need additional time to reach the flushing stations, as the severity of the injury could vary. In the presence of highly corrosive chemicals, consideration should be given to installing the flushing equipment much closer to the hazard. Be cautious of electrical supply panels that may be within "splashing distance" such as charging stations for Forklifts and other battery operated machinery.*

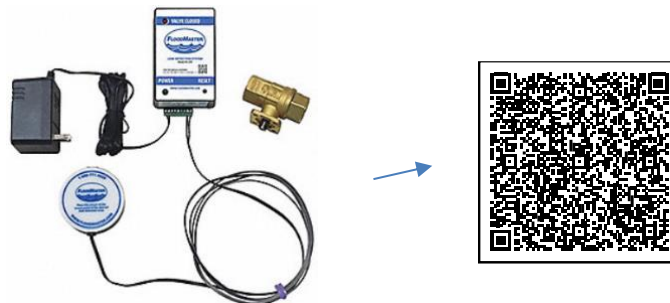
5) Drying methods

- a) Drying closet
 - i) A closet with a drying rack/trays and dehumidifier
 - ii) 24-48 hours dry time depending on setup
- b) Convection oven
 - i) 3-4 hours dry time
 - ii) The longer the dry time you can allow the better. 200°F recommended.
- c) We recommend electric (dryer heat), vented to the outside, double decker rack that can fit a lot of trays if you plan to do high volumes. Your local restaurant supply store might be able to recommend the best solution for drying.

6) Water source shutoff in the event of an overflow

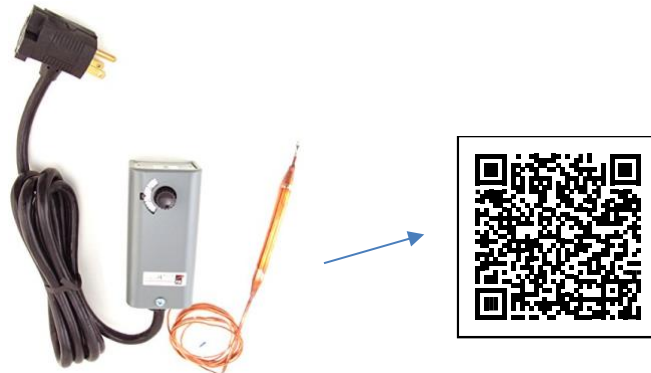
- a) This is the device we recommend to all of our customers. Floor drains would also be helpful in case of an emergency.

https://www.grainger.com/product/11K221?cm_mmc=PPC:+Google+PLA&s_kwcid=AL!2966!3!166592357937!!!!82128381117!&ef_id=WV5etAAAAF8W0QhC:20171003192841:s&kwid=productads-adid%5e166592357937-device%5ec-plaid%5e82128381117-sku%5e11K221-adType%5ePLA



7) Controller to change a chest freezer into a refrigerator

- a) Will you be doing a walk in cooler or chest cooler? Some people don't want their pets to be stacked, so they set up a walk in cooler like a mortuary does with our human loved ones.
<https://www.amazon.com/Johnson-Controls-A19AAT-2C-Temperature-Controller/dp/B0002EAL58>



Other items we highly recommend having on site

- First aid kit
- Apron
- Cart to transport mortalities from storage area to machine
- Brush to remove all bones from the machine after the process is complete



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