



Evaluating electric kilns and their accessories that have become wet

Kilns

Safety

No matter what caused the kiln to get wet, your number one concern should be your safety. The first thing you need to do is turn off the breaker then unplug the kiln. If for some reason the kiln is still running and there is water on the floor, contact a certified electrician to do this for you.

If necessary, always wear rubber soled shoes and keep one hand in your pocket when entering a room with wet floors and live electrical equipment.

What is in the water?

During a flood or a fire there are often times other elements such as salt (storm surge flooding), fire retardant or other pollutants that could be mixed in with the water. Some of these can be toxic and/or highly corrosive. When the water soaks into the brick it can leave behind residues after it is dried out. When the kiln is fired these residues can become volatile and, depending on the residue, potentially toxic when inhaled.

If you are not sure if the water absorbed into the kiln has been contaminated by potentially toxic material do not fire the kiln. It is recommended that you submit your claim to the insurance company as a total loss.

If your kiln was exposed to salt water from a storm surge it is difficult, if not impossible, to remove all of the salt. Salt is very corrosive. If all of the salt is not removed metal components will continue to corrode. If your kiln has been exposed to storm surge water, we recommend you submit it to your insurance company as a total loss.

If the kiln was not insured and you want to save it, wipe down all exposed metal components as best you can with isopropyl alcohol. Alcohol is good because it does not leave a residue. When you fire the kiln make sure it is well ventilated. If you have a downdraft vent make sure it is on. If you do not have a vent, remove all of the peep plugs and ventilate the room.

Salt cannot be "burned out" of the kiln brick like organic material because its boiling point is 2575°F (1686°C), which is way beyond the capabilities of our kilns. That being said, you will likely experience reduced element life and your bands will corrode at a faster rate.

Did the wet kiln freeze?

If the kiln gets wet and then freezes, the water will expand when it turns to ice and can damage the brick and electronic components on your controller. Inspect the kiln thoroughly for damage caused by ice before you submit an insurance claim.

DRYING KILNS AND KILN ACCESSORIES CONTINUED

Time is of the essence

Once the kiln is safely disconnected from the power supply, the quicker you can start drying out the kiln, the more likely you are to prevent permanent damage. The longer you wait the more likely it is for components to corrode.

Recommended steps:

Drying out

1. Turn off breaker and unplug the kiln.
2. Remove control box.
3. Remove baffle from control box.
4. Place fan blowing into the control box.
5. Place fan inside kiln with peep plugs out and lid open.
6. Wipe down all exposed metal with alcohol.

Inspect receptacle and wall wiring

If your kiln got wet there is a good possibility that the receptacle got wet as well. You may want to consult an electrician to test the receptacle and other wiring to the kiln. At the very least it would be a good idea to point a fan into the receptacle to dry it out before plugging in the kiln.

Kiln drying program

1. Reassemble the kiln when it is completely dry. This is a judgement call. It could take as long as a week depending on humidity levels. If you have access to a dehumidifier it will definitely speed up the process.
2. Plug in the kiln
3. Turn on the breaker and check kiln display. (If display does not come on or the breaker throws, unplug the kiln and contact Skutt or your Skutt distributor for further suggestions.)
4. Follow the Instructions in your manual and input the following Ramp/Hold program:

<u>Rate</u>	<u>Temperature</u>	<u>Hold</u>
60°F/hr	180°F	*2 Hours

Monitor the kiln immediately after pressing Start. If you hear any unusual sounds or see smoke from the control box, immediately press Stop. When the kiln reaches 180°F, hold a mirror up to an open peep hole every few hours to see if it fogs the glass. If no fog appears, most of the residual moisture should be gone and you can stop the program.

* Only enter a hold time that allows you to monitor the kiln during the entire firing.

Test firing

Follow the instructions in your manual for the initial test firing. In KM kilns this is a Cone 04 ConeFire program using a Cone 04 witness cone placed 2" from the thermocouple. Be sure to monitor this firing.

DRYING KILNS AND KILN ACCESSORIES CONTINUED

If the Cone 04 bends to an acceptable position (tip is between 2 o'clock and 6 o'clock), you should be good to go. If the firing fails, consult Skutt or your Skutt kiln supplier for further instructions.

If everything seems to work okay, that does not mean that it will remain okay. Sometimes the effects of corrosion can take awhile and components can fail prematurely. Because of this, always replace equipment that has been exposed to extreme moisture through your insurance company when possible.

If you cannot find your manual (or it is too wet to read) you can download one at:

<https://skutt.com/skutt-resources/printed/>

KilnSitter and Glass Kilns

Instructions for these kilns are basically the same except for the test firing and some box designs. If you have specific questions please feel free to contact us directly.

EnviroVents

If your EnviroVent motor was submerged, chances are very good the motor and bearings are going to be compromised. If it is covered under your insurance it should be covered as a total loss.

PLUGGING IN A WET ELECTRIC MOTOR CAN BE VERY DANGEROUS. If the motor was running when it got wet, it most likely tripped the breaker controlling that outlet. If the motor was off when it got wet, **DO NOT TURN ON THE MOTOR UNTIL IT IS COMPLETELY DRY.**

Because of the electrical hazards associated with electric motors we strongly suggest you bring the motor to an Electric Motor repair shop. Most towns have one of these and they are usually fairly reasonable.

Here are our recommendations for steps to take when evaluating an EnviroVent that got wet:

1. Unplug the vent and blow out the motor and squirrel cage (fan blades) with compressed air.
2. Let it sit with a fan on it for a few days. Before you plug it in, try shaking it a few times. If any water comes out, do not plug it in until it is dry.
3. Remove the two screws that hold the plate cover on the in-line toggle switch in the cord. Blow out any water with compressed air and replace the cover.
4. Disconnect the ducting, spray it down with a hose to remove any residue and dry it with a towel the best you can. Place a fan so it blowing through the ducting until it is visibly dry.

DRYING KILNS AND KILN ACCESSORIES CONTINUED

5. If the motor is completely dry, plug it in with the motor sitting on a non-conductive surface. Do not touch the motor casing when you plug it in to the outlet. Turn on the switch to see if the motor still runs. If it throws the breaker the motor is no good and will need to be replaced.
6. If the motor turns on and the fan is blowing air, listen to see if you hear any squeaking in the squirrel cage. If you do hear squeaking place 3 or 4 drops into each oil port and turn the motor on to see if the sound goes away. If it does not, the bearings are compromised. Unfortunately we cannot buy only the squirrel cage so the entire unit needs to be replaced.
7. If everything seems to be working, reinstall the vent and turn it on. The suction coming through the top holes of the kiln lid should be strong enough to draw the flame from a cigarette lighter into the kiln chamber. If it cannot do this, the vent has been compromised and must be replaced.

Replacement Parts

There have been two EnviroVent Models that Skutt has manufactured. On the first unit, The EnviroVent, the motor fits under the kiln. On the EnviroVent 2, the motor was designed to mount to the wall or ceiling. Below are the replacement motor parts (with squirrel cage) required for each. Contact your Skutt Distributor for pricing.

EnviroVent Replacement Motor w/Squirrel Cage #1631

EnviroVent2 Replacement Motor w/Squirrel Cage #2449

If your EnviroVent was equipped with an EnviroLink you will want to remove the cover of the EnviroLink and let it dry out completely. It can only be tested properly with a functioning KilnMaster Kiln. Follow the instructions in your manual for operation and see if it still works. If it does not cycle the Vent on when it is supposed to, it is likely the circuit board was damaged and the whole unit needs to be replaced. Consult your Skutt kiln distributor for pricing.

Kiln Shelves and Posts

Kiln shelves definitely need to be slowly dried out before they are fired to temperature. It is best to stand them on edge with something to space them apart to allow air to flow freely across both sides. You may want to hose them off to make sure any organic debris is removed before they are fired. Place a fan on them for at least a day and then post them up in your kiln and run the same drying program you used for the kiln.

If the kiln wash was compromised you will want to apply new coats after they are thoroughly dried in the kiln.



Evaluating your Skutt Wheel after it gets wet

Safety

No matter what caused the wheel to get wet, your number one concern should be your safety. The first thing you need to do is turn off the breaker then unplug the wheel. If for some reason the wheel is still running and there is water on the floor, contact a certified electrician to do this for you.

If necessary, always wear rubber soled shoes and dry non-conductive gloves when entering a room with wet floors and live electrical equipment. If you do not have gloves, keep one hand in your pocket to avoid creating a circuit through your body.

If your wheel motor was submerged, chances are very good the motor and bearings are going to be compromised. If it is covered under your insurance, it should be covered as a total loss.

PLUGGING IN A WET ELECTRIC MOTOR CAN BE VERY DANGEROUS. If the motor was running when it got wet, it most likely tripped the breaker controlling that outlet. If the motor was off when it got wet, **DO NOT TURN ON THE MOTOR UNTIL IT IS COMPLETELY DRY.**

Because of the electrical hazards associated with electric motors we strongly suggest you bring the motor to an Electric Motor repair shop. Most towns have one of these and they are usually fairly reasonable.

What is in the water?

During a flood or a fire there are often times other elements such as salt (storm surge flooding), fire retardant or other pollutants that could be mixed in with the water. If your wheel was exposed to salt water from a storm surge it is difficult, if not impossible, to remove all of the salt. Salt is very corrosive. If all of the salt is not removed, metal components will continue to corrode. If your wheel has been exposed to storm surge water, we recommend you submit it to your insurance company as a total loss.

If the wheel was not insured and you want to save it, wipe down all exposed metal components as best you can with isopropyl alcohol. Alcohol is good because it does not leave a residue.

Time is of the essence

Once the wheel is safely disconnected from the power supply, the quicker you can start drying out the wheel, the more likely you are to prevent permanent damage. The longer you wait the more likely it is for components to corrode.

DRYING KILNS AND KILN ACCESSORIES CONTINUED

Recommended steps:

Drying out

1. Turn off breaker and unplug the wheel.
2. Remove the belt guard, control box cover plate, and cover plate under the foot pedal.
3. Blow compressed air into all of these areas until you no longer see any water. Tilt the wheel on its side to ensure no water was trapped in crevices.
4. Allow a fan to blow into all of these areas over night to help remove any excess water.

Inspect receptacle and wall wiring

If your wheel got wet there is a good possibility that the receptacle got wet as well. You may want to consult an electrician to test the receptacle and other wiring to the wheel. At the very least it would be a good idea to point a fan into the receptacle to dry it out before plugging in the wheel.

Testing the wheel

1. If the wheel is completely dry, replace all of the covers and plates.
2. Plug it in with the wheel sitting on a non-conductive surface. Do not touch the motor casing when you plug it in to the outlet. Turn on the switch and press down on the foot pedal. If it throws the breaker, there is a short somewhere in the system. Contact Skutt support for further help diagnosing your wheel.
3. If the wheel turns, listen to see if you hear any squeaking coming from the bearings. If you do hear squeaking, it may be necessary to replace the wheel bearings.
4. If everything seems to be working, let the wheel run overnight at full speed to see if any problems develop.
5. Listen to see if any noises develop the same day. If you hear a noise, remove the belt and see if the noise goes away. If it does, then the noise is coming from the bearings and you will need to replace them. If it does not go away the noise is coming from the motor. If the noise is coming from the motor, contact Skutt Technical Support for further assistance.
6. Wipe off the wheel head shaft and re-coat it with Anti-Seize to prevent the wheel head from sticking. Anti Seize can be purchased through Skutt Distributors, and most automotive supply stores.

Replacement Parts

On the following page you will find the part list for most of the parts used in the construction of Skutt Wheels. These parts have not changed since Skutt purchased Thomas Stuart Wheels and changed the name.

DRYING KILNS AND KILN ACCESSORIES CONTINUED

Part #	Description
4036	2 oz. Tube of Anti-Seize
4063	EW Bat Pins with Nuts (1 pair)
4048	EW Removable Splash Pan-Deep
4051	SCR Control Box Complete
4053	Foot Pedal Assembly
4054	EW 14" Wheel Head Replacement
4055	EW 12" Wheel Head Replacement
4064	KW 14" Wheel Head Replacement
4057	EW Bearing Block Replacement 5 Bolt
4409M76955	SSX Controller
4230R76955	EW 1HP Motor 90 Volt DC
4231R76955	EW 1/2HP Motor 90 Volt DC
4232R76955	EW 1/3HP Motor 90 Volt DC
4239J75955	EW Belt R400J-31X6 (also used on Prodigy)
4256B75955	EW Fuse-15 AMP BK/ABC-15-110
4257S75955	EW Fuse Holder
4270D76955	EW Leg Caps-2.32X1.00 3505 Black (each)
4056	Potentiometer with Cord
4279W76955	EW Reversing Switch
4280W76955	EW Rocker Switch 15 Amp
4281W76955	EW Rocker Switch 20 Amp (used on SSX Wheels)
4283R77955	EW Shaft Tapered-Short
4286M76955	EW SCR Controller (also used on Prodigy)
4206A75955	Prodigy - 3-Bolt Bearing
4208A76955	Prodigy - Removable Splash Pan
4209K75955	Prodigy - Rubber Shaft Washer
4217D76955	Prodigy Leg Caps (each)
4232R76955	Prodigy 1/3 HP Motor
4396D76955	EW Rubber Feet - Foot Pedal (each)
4305R78956	KW Motor Drive Wheel