Omegasonics

Ultrasonic Cleaning Equipment

Operation & Instruction Manual

Viking Products PDX3
Model OMG-5022-DX3

208 - 240 VAC 50/60 Hz

Read all instructions thoroughly before operating this equipment

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INTRODUCTION

About the Ultrasonic Cleaning Process

Congratulations! You have purchased an Omegasonics Ultrasonic Parts Washer.

But how does Ultrasonic Cleaning work?

When ultrasonic energy is introduced into a cleaning solution, alternating patterns of low and high pressure phases occur. This process forms microscopic vacuum bubbles. During the subsequent high pressure phases, the bubbles implode violently. This is called cavitation.

Cavitation provides an intense scrubbing action that leads to an unsurpassed cleaning speed and consistency when compared with simple soaking or immersion with agitation. Additionally, the bubbles are small enough to penetrate even microscopic crevices, cleaning them thoroughly and consistently. As a result, ultrasonic cleaning is one of the most highly effective and efficient methods you can use for cleaning a wide array of items.

Omegasonics provides a complete line of quality ultrasonic cleaning washers that have been developed for industries that have historically used technology that is quickly becoming outdated. While other companies use environmentally harmful cleaning solvents, we provide state-of-the-art, labor saving, fast, efficient and environmentally safe alternatives.

WARNINGS

Failure to read these warnings may cause the unit to fail, personal injury or property damage.

- Equipment should only be operated on a three phase, 208 - 240VAC, 30 Amp electrical outlet.

- Do not plug equipment into a power source that utilizes a GFI receptacle. Ultrasound passes a small, trickle current through the neutral which will cause GFI's to trip.

- Never plug in or operate the unit (heat, ultrasound or pump) without the appropriate liquid level in the liquid tanks (the height of the spray bar).

- Any detergents or chemicals used in this equipment must be compatible with 300 series stainless steel. Do not use any chemicals that contain any strong acids i.e. hydrochloric, sulfuric or muriatic acid. These chemicals will cause permanent damage to the stainless steel welds.

- Due to the heated liquid in the first two tanks, use baskets, tongs or wires to insert or remove parts from the tank.

- Do not operate the unit with wet hands.

- Use only biodegradable cleaning agents. Never use solvents or flammable cleaning solvents without approval from Omegasonics. Any chemistry with a flash point below 180˚F should never be used with an ultrasonic cleaner.

- Do not rest parts to be cleaned directly on the radiating surface. Severe transducer erosion will occur. The tank rack must rest on the bottom.

- Do not open the internal circuitry of the equipment, disassemble any part or parts, or move or remove any components or electrical devices.

- Never attempt to perform maintenance on the equipment when the unit is energized or when the cleaning solution is hot.

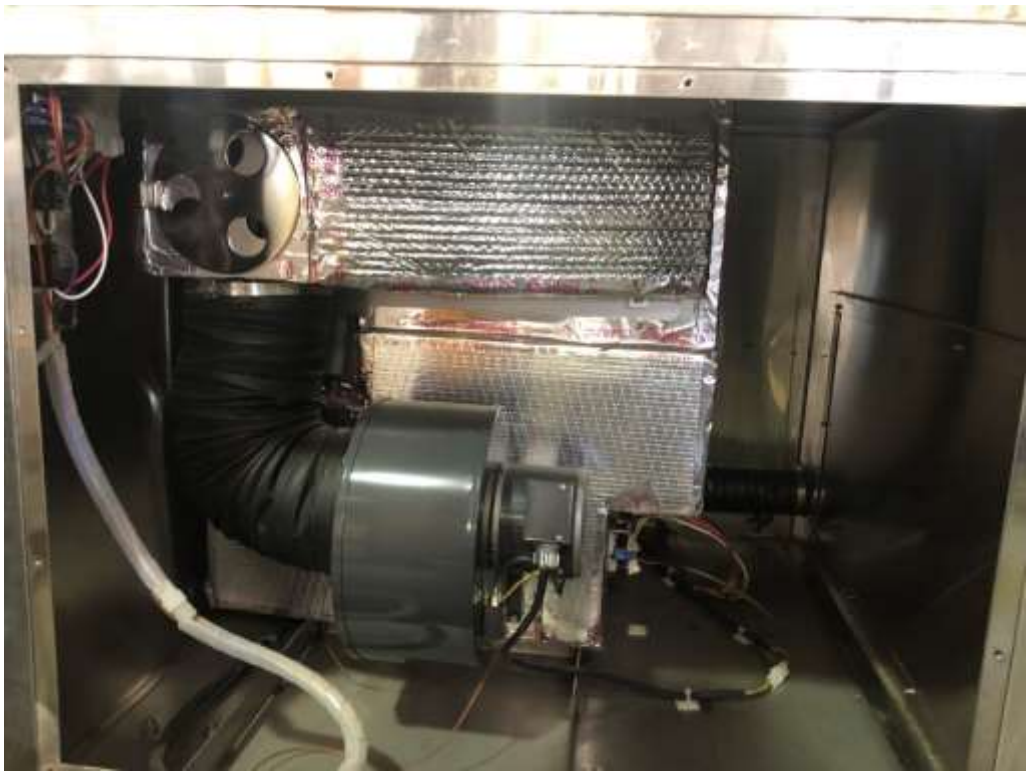
- Disconnect the power source when moving the unit to a new location.

- Avoid splashing water outside the tank.

- When removing work baskets from the drying chamber, use protective gloves or allow the baskets to cool.

Only qualified technically trained personnel should perform any electrical maintenance on this machine.

Tank 3 (Dryer)



Description

The dryer consists of a stainless steel drying chamber. It contains a work area to allow hot air entering the drying chamber to flow upward through and around the basket of items to be dried. The cover seals the chamber permitting re-circulated warm air to dry the items placed within the chamber. The temperature of the air, up to 180º F is adjusted by the digital temperature controller. If the Dryer seems to be too humid, there is a fresh air intake control damper located behind the right side end panel. The panel must be removed to allow access to the fresh air intake control mechanism. Turn the wheel to open the air passage.

Exhaust Damper

There is also an exhaust damper located on the rear of the console. This is to expel the humidity laden moist air. The dryer dries by moving a large volume of dry air over the items to be dried. The dryer is not an oven. An oven dryer would likely use temperatures in excess of 212º F that would likely boil off the water and may leave water mark residue.

If the system is used in a confined area it may be necessary to connect the dryer exhaust to the external vent (Similar to your home hot air clothes dryer). There is an air flow control damper located on the back side of the machine. This is used to control the flow of humid air leaving the dryer. The damper is factory set to ¾ open. If a long vent hose is used to exhaust the air, open the vent to full open.

Drain Connections

There is a water drain in the bottom of the drying chamber. This drain has a hose and a clamp type valve. In most application this does not require any connection. However if the items you are drying carry excessive amounts of water into the dryer, this drain may have to connected to a permanent drain or to a collection vessel.

Safety

Surfaces inside the console and inside the drying chamber can become very hot. Avoid touching the walls of the drying chamber. Only qualified personnel should have access to the inside of the console. Note: make sure the power is disconnected when servicing the machine.

CONTROL PANELS


TANK 2
PV
162
SV
165
TEMPERATURE
ON OFF
HEAT
ON OFF
OFF
OFF

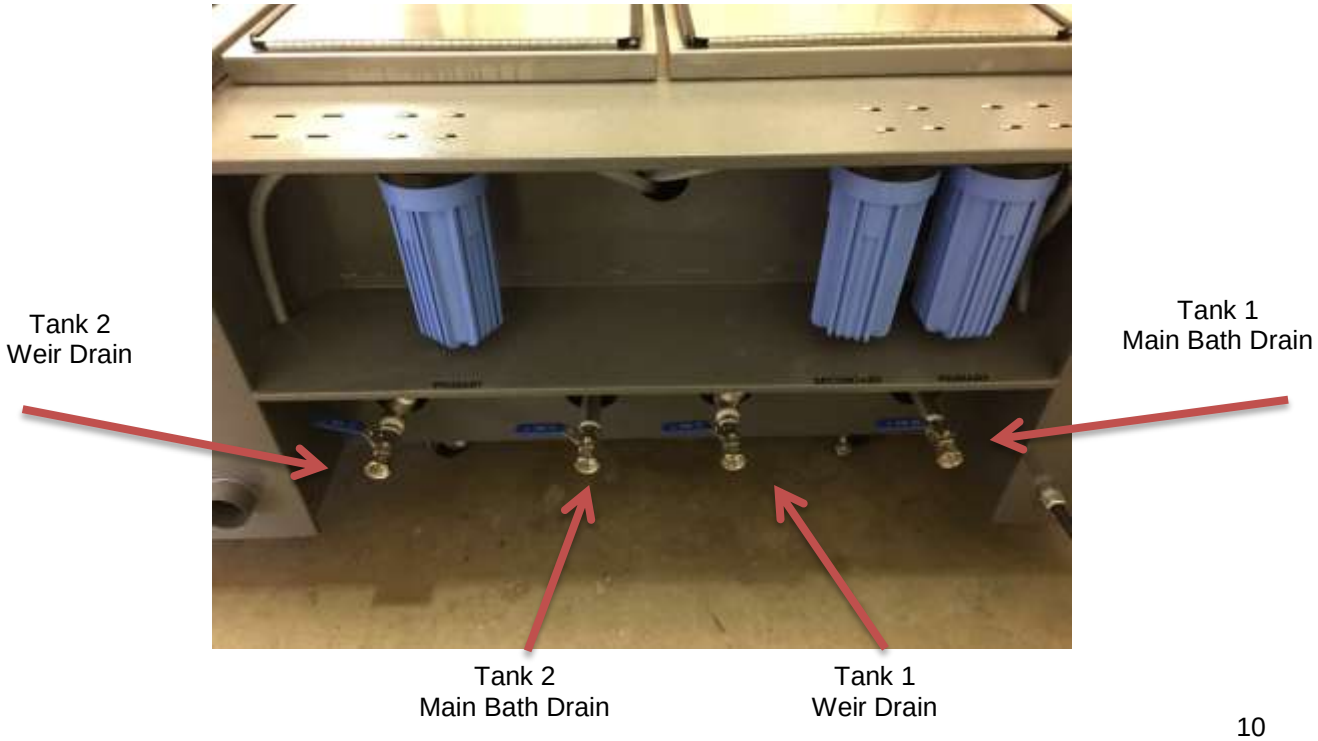

TANK 3
Panasonic
TIMER
0:00
10:00
PV
83.
SV
165
TIMER
TEMPERATURE
ON
RESET
DRYING CYCLE
HEAT

SET-UP

Tank 1 and Tank 2

- Place the machine on a level surface and lock all wheels.

- Be sure all drain valves are completely closed (handles perpendicular to the drain) before filling the tanks.



- Fill Tank 1 and Tank 2 with water (*see note at the end of this section)* and the proper dilution of soap to the top of each weir and make sure that each weir is 2/3 full. Using hot water will shorten the amount of time required to reach the desired temperature. Check drain assembly to insure that there is no leakage.
- The Viking DX3 tank dimensions are 18" x 18" with a liquid depth of 15 ½" from the top of the rack to the weir. This tank has an approximate liquid volume of 28 gallons. This liquid volume includes the liquid in the overflow weir and the pump / filter system. Use this volume for calculating the amount of detergent you will use.

- If either weirs or machine tanks do not have enough water the pump will be damaged and the machine will fail. Once the proper amount of water has reached the low level sensor, just below the spray bar, it will be activated allowing the machine to function properly.
- Plug the power cord into a proper electrical outlet and press green **POWER** button.
- Unlock each lid by pulling the hinge, located on the left side (Tank 1) and right side (Tank 2) of each lid, towards yourself and close the lids over each tank to maximize insulation efficiency
- Set digital timer and temperature controls.
- The Viking Products DX3 utilizes three (3) 900 Watt built-in silicone heating elements in Tank 1 and three (3) 900 Watt built-in silicone heating elements in Tank 2. Both are well insulated. The time required to heat the tanks initially will vary between four (4) and six (6) hours. The unit heats water at approximately fifteen (15) degrees per hour. After the initial heating period, the temperature will remain constant with very limited electrical draw. It is important that the lid remain closed when not in use to minimize heat loss and evaporation.

Note About Water

The quality of your water source can have an important effect on the performance of the ultrasonic equipment. High levels of calcium, magnesium, sulfur and other contaminants in the water source can have a negative effect on the type of cleaning soap used. High levels of calcium and/or magnesium (constitutes hard water) can cause the soap to work less efficiently and less effectively as intended and can also leave a white, flaky residue on the parts once dried. If this white spotting occurs and is not desired, it will be necessary to use soft water, drinking water or distilled water, in the machine. The level of final cleanliness will dictate the water source used in the machine.

Tank 3

- Set the desired operating temperature. Factory preset is 160 ˚F.
- Set the desired Drying Cycle.
- Turn the Drying Cycle selector switch to the ON position.
- The red **HEAT** light will be lit when the heat has been turned on.
- There will be a two minute delay before the blower starts; this gives the heater time to warm up.
- Allow approximately 5 minutes for the dryer to reach full temperature. The dryer is designed to operate with the lid closed during the drying cycle.

Digital Temperature

Knowing Your Temperature Controller (Tank 1, Tank 2, and Tank 3)

- PV: This upper display indicates the actual Process Value (or current temperature) of the bath and cannot be changed manually.
- SV: The lower display indicates the Set Value or desired bath temperature. This Set Value is adjustable.
- ALM 1: If this light is on, it means that the machine is currently heating. It will shut off once the desired temperature has been reached.
- OUT: If this light is on, it means that the bath temperature is out of the preset range of 50˚F - 160˚F. There is a 5˚ hysteresis which means that the heating mechanism (and the OUT light) will go on/off based on a 5˚ variance. This serves as a buffer to protect the life of the motor contactor.
- AT, ALM 2: Omegasonics use only.
- Return Key 

Operation

- The temperature controller is factory set at 140˚F for Tank 1 and 150˚F for Tank 2.
- To change the Set Value, lightly press the up arrow key to increase or lightly press the down arrow key to decrease the value. Pressing and holding down either arrow key will change the displayed value rapidly.
- Upon changing the Set Value, this lower display will flicker indicating the new value is not set. To make this value permanent, press the RETURN Key  .
- Experience shows that the optimum ultrasonic cleaning temperature for most applications is 120˚F - 160˚F.
- When ready to activate the heat, turn the selector switch marked **TEMPERATURE** to the **ON** position.
- The heat circuit and the ultrasound can be operated simultaneously.

If increased or decreased security is desired, please contact technical support at Omegasonics to receive instructions.

Digital Timer (Tank 1 and Tank 3)

Operation

- The 4-digit number on the upper display is the amount of time that the machine has been in actual operation. It will count up to the preset value.
- The illuminated 4-digit number on the lower display is the preset value.
- Pressing the **RESET** button will deactivate the timer and reset it to 0. Turning the switch to **RESET** will also deactivate the timer.
- Pressing the **LOCK** button will prevent you from changing the preset time value. **LOCK** will display in the lower orange display.
- The ultrasound is factory set to 15:00 minutes.
- To adjust the preset value, press the blue keys. Press the up arrow key, to increase, or down arrow key, to decrease.
- Left most blue key corresponds to 10 minute increments.
- Second blue key from the left corresponds to 1 minute increments.
- Third blue key from the left corresponds to 10 second increments.
- Right most blue key corresponds to 1 second increments.
- The time is activated by turning the selector switched marked **SONICS** to the **ON** position. The button will return to center. The “OP” light will illuminate on the lower, left side orange display. A red light will illuminate and blink on the upper, left side red display while the timer is operational.

Filtration System

- In many applications the use of a pump and filtration system will extend the useful life of the cleaning chemistry.
- The spray bar pushes the water surface over the weir, skimming off floating oil and debris that is loosened by the ultrasonic cleaning.
- The filtration system will then remove water from the weir tank, pass it through the dual filters and spray the filtered water back into the wash tank through the spray bar.
- The pump and heat circuits can be operated simultaneously.
- However the pump will not operate while the ultrasound is in use. Doing so would decrease the cavitation cleaning effects of the ultrasound.
- How often you use the pump is dependent on what is being cleaned and the state of the water (i.e. if the items are oily, then the pump should be run after each cleaning cycle).
- To activate the filtration system, turn the selector switch marked **PUMP** to the **ON** position for each of the tanks.

CLEANING PROCEDURES

Machine Operation (Tank 1)

- If you haven't done so already, press the green button marked **POWER.** The button will illuminate. The control panel is now energized.
- To activate the ultrasound, turn the switch marked **SONICS** to the **ON** position. The selector switch will spring back to the center position.
- Before cleaning your first batch of items, operate the ultrasound for fifteen (15) minutes. This process is called degassing and helps eliminate any air from the water in the tank.
- To deactivate the ultrasound before the timer has completed its cycle, turn selector switch to the **RESET** position. The selector switch will spring back to the center position.

General Cleaning (Tank 1)

- Be careful not to overload the system and/or the baskets.
- Many times you can achieve better results by cleaning two smaller loads rather than one large load.
- Baskets should be made from round stock (rod) whenever possible, rather than flat stock that would reflect the ultrasonic energy.
- When lowering the items into the tank via baskets or tongs, be sure to arrange the items so they are not touching the bottom of the tank. They should be suspended at least ½" above the tank bottom. This can be achieved with the use of a tank rack.
- Items should not be stacked too densely.
- The volume of parts to be cleaned should not exceed thirty percent (30%) of the total tank volume.
- Once the timer has been set, activate the ultrasound by switching **SONICS** to **ON**.
- Cleaning times will vary depending on the temperature of the solution, the number of parts to be cleaned, the amount of contamination and the amount and type of cleaning agent used. Generally, small parts should be cleaned with the ultrasound operating for three (3) to five (5) minutes.
- While the parts being cleaned do not require continuous supervision or labor intensive cleaning, they should be inspected during the cleaning process.
- After the timer has cycled off, remove the items via basket and transfer them to Tank 2. Be careful not to overload the system and/or the baskets.
- If parts must be handled, wear gloves when touching surfaces to protect against heated items

Rinsing (Tank 2)

- When lowering the items into the tank via baskets or tongs, be sure to arrange the items so they are not touching the bottom of the tank. They should be suspended at least ½" above the tank bottom. This can be achieved with the use of a tank rack.

- Items should not be stacked too densely.

- The volume of parts to be rinsed should not exceed thirty percent (30%) of the total tank volume.

- Rinse times will vary depending on the temperature of the solution and the number of parts to be rinsed. Generally, (3) to five (5) minutes is sufficient.

- After completion of the rinse process, remove the items via basket and transfer to Tank 3 (Drying Chamber).

- If parts must be handled, wear gloves when touching surfaces to protect against heated items

Drying (Tank 3)

- Any items that hold or "cup" any appreciable amount of water should be drained or blown off via compressed air.

- Lower the basket, containing the contents to be dried, into Tank 3.

- Do not leave the lid open for extended times and this cause the heaters to remain on for unnecessary long periods and this can shorten the life of the heater elements.

- After the timer has cycled off, open the lid, and remove the contents from the tank.

SPECIFIC CLEANING PROCEDURES

Aluminum Housings

- In the ultrasonic bath, preheat 1 part OmegaSupreme with 10 parts clean water to a temperature of 125˚F.
- Wipe off the readily accessible, exterior excess from the parts to be cleaned.
- Arrange the parts so that no trapped air exits in the interior when lowered.
- Set the time for 2-5 minutes and start the cleaning cycle.
- If additional cleaning is needed, at the end of the first cycle, rotate the parts 180˚ in the basket so that the portion that was facing the bottom of the tank is now facing the top and vice versa.
- Clean the parts for another 2-5 minutes.
- When completed, rinse the parts with clean, hot water that is 125˚F.
- Blow off excess moisture using compressed air or a hot air blower.

Electrical Components

- In the ultrasonic bath, preheat 1 part Omega AquaClean with 64 parts clean water to a temperature of 115˚F. A higher dilution may be required depending on the severity of contamination.
- If it exists, excess water should be removed as quickly as possible.
- UnWet CPDL should be used to stabilize the components if moisture exists, prior to cleaning.
- Vacuum excess soot with a HEPA-style vacuum prior to placing in bath.
- Pre-spray the outside of the components with a 1 part OmegaSmoke, 64 parts clean water mixture. Let sit for 2 – 5 minutes depending on the degree of the exterior soot.
- Place components in basket, do not stack, and clean for 2 minutes.
- Remove the basket from bath and rinse with free flowing de-ionized water.
- Blow off excess water with compressed air.
- Place a bowl of 1 part Omega Deodorizer and 1 part clean water at the bottom of the drying chamber and dry the electronics for 10 hours at 120˚F.
- Ensure that the items are dry before connecting to a power source.

Metal Parts

- In the ultrasonic bath, preheat 1 part OmegaSupreme with 10 parts clean water to a temperature of 150˚F.
- Place the metal parts into the basket with the cavity containing heaviest residue facing the bottom of the basket.
- Submerge the basket into the bath and rotate the housings (if applicable) keeping them underneath the surface to allow air bubbles to be removed from the part.
- Clean the part for 5 minutes.
- Once completed, rotate the part 180˚ if the part facing opposite the ultrasonic transducers is heavily soiled.
- If necessary, clean the part for an additional 5 minutes.
- Once the part is cleaned, remove from the bath and rinse using water that is 150˚F.
- Blow off the excess water using compressed air.
- Due to the heat of the metal, after being removed from the bath, it will dry quickly, on its own (“flash dry”).

EQUIPMENT MAINTENANCE

General

- Keep the bath free of oils, grease and any foreign materials.
- Skim off oil and grease residue periodically, if necessary.
- Cleaning agents should be changed periodically depending on usage.

Draining Tank

- Turn equipment off and unplug the power cord.
- Wait at least twenty (20) minutes after the heat circuit is turned off before emptying the tanks. Permanent damage to the heater elements will occur if the tank is drained too soon after the heaters are turned off.
- Drain the contaminated cleaning solutions from the tanks using all the valves.
- Rinse the inside of each tank with clean water.
- Buff the inside of the tanks with a clean, soft cloth. Do not use steel wool cleaning pads as they are too abrasive and will scratch the tank surface.
- Rinse the tanks again.
- If the tanks will not be used for a long period of time, wipe the inside and the outside of the tanks dry with a dry, clean, soft cloth.
- Close the lids on each tank. The lid should remain closed when the equipment is not in use to keep dust and debris from accumulating.
- This tank cleaning procedure should be performed every time the bath is changed. Always thoroughly inspect drain areas for leaks.

When discharging bath and waste, follow all environmental and regulatory requirements. A reputable and licensed waste transportation firm should perform removal of all waste materials. Omegasonics is not liable for improper handling of waste materials.

Changing Filters

Disposable

- Prior to changing the filters, the water level in the tank must be no higher than the level of the spray bar.
- Filters should be changed periodically depending on the usage of the equipment and the contaminants being removed. If water is not flowing more than a trickle from the spray bar holes, it is time to replace your filters.
- Individually unscrew counterclockwise the two (2) large blue filter cartridge holders. The cartridges will be full of water.
- Pour the water out of the cartridges and remove the filters. Be careful not to lose the rubber O-ring gasket located on the inside of the filter cartridge. Absence of this gasket will cause the filter(s) to leak.
- Replace with new filter(s) and re-install the cartridges.
- The 50 Micron Polycarbonate Filter is the primary filter for Tank 1 and is located on the right side of the filtration unit.
- The Carbon Filter is the secondary oil filter for Tank 1 and the primary filter for Tank 2. Their canisters are located on the left and middle of the machine, respectively. The Carbon Filter removes oil and grease and will require changing more often than the 50 Micron Polycarbonate Filter.

Reusable Stainless Steel

- Clean the outside of the filters in a sink.
- Place each filter into individual Ziplock bags.
- Fill each bag with hot water and add soap from the bath.
- Seal bag and place into ultrasonic tank and operate the ultrasound for 15 minutes.
- Dump the fluid from the bag into the sink, NOT the ultrasonic tank.
- Repeat the process until no dirt is extracted from the filters.
- Replace the filters into the blue canisters.

LIMITED WARRANTY

Omegasonics warrants the OMG-5022-DX3 ultrasonic cleaner for a period of two (2) years from the date of delivery, when used in accordance with the manufacturer's instructions. During the warranty period, Omegasonics will repair or replace free of charge at an authorized repair service center all parts that are defective because of material or workmanship. Freight charges to an authorized service centers are the responsibility of the user.

This warranty does not include damage or product failure, which results from cavitation erosion, misuse, abuse or transportation damage. This warranty is limited to the original purchaser and is not transferable. Total liability for any reason whatsoever, shall not in any case exceed the cost of repair or replacement of the defective part. In no case shall Omegasonics be responsible for any incidental or consequential damages.

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TROUBLE SHOOTING

Isolate the exact issues(s) you are experiencing by following the following procedure.

1. Turn off Ultrasound
2. Turn off Heat
3. Turn off Pump
4. Leave Green Power push button pressed in and illuminated.
5. Turn on Pump – Does it operate?
6. Turn off Pump
7. Turn on Heat – Does it operate?
8. Turn off Heat
9. Turn on Ultrasound – Does it operate?
10. Turn off Ultrasound

Control panel has lights, but there is no Ultrasound, Heat or Pump action.

1. Is the water level to the middle height of the spray bar?
2. If NO - fill water to the appropriate level.
3. If YES- check the float located under the spray bar, towards the back of machine.
4. If the float is stuck in the down position, toggle it up.
5. Preventative maintenance is to clean the pivot point where the float connects to the body.
6. If the float is up and water is in the tank to the middle of the spray bar.
    a. Unplug the machine from the facility power supply.
    b. Remove upper panel located on the right end of the machine.
    c. Look for the ice cube relay located at the left end of the back panel.
    d. Flip the window up (window has a red button) – this bypasses the float. You will see an orange flag visible in the upper right window.
    e. The machine will be operational, but will have no low water level protection.
    f. Replace the defective float switch.
7. Machines manufactured prior to 2013, will not have this relay option.
    a. Locate the looped wire terminating into a two pin connector.
    b. Unplug the two connectors that the looped wire is threaded through.
    c. Plug the looped wire into the open mating connector.
    d. The machine will be operational, but will have no low water level protection.
    e. Replace the defective float switch.
8. If either instruction 6 or 7 does not solve the issue, replace ice cube relay.
9. Contact Omegasonics to order a replacement ice cube relay.

The Pump is not operational.

1. Turn on the Pump and listen for the sound of the motor spinning.
2. Note: Pump motor is located on the left end of the machine under the blue canisters.
3. Put your hand near the back of the pump motor and feel for any air flow.
4. If you feel air flow, or feel motor vibration or hear the motor humming, follow steps a-f.
    a. Unscrew each blue canister and remove the filters completely.
    b. Place the filters in a sink or away from the machine and keep track of orientation.
    c. Note: Make sure to not lose black O-ring from blue canister or leaks will occur.
    d. Screw blue canisters back on.
    e. Turn on Pump and wait several minutes to see if water moves through spray bar.
    f. If you have water flow, the filters are clogged and must be replaced.
5. If you are using stainless steel reusable filters, follow 5a - 5g.
    a. Clean outside of filters in a sink.
    b. Place each filter into individual Ziplock bags.
    c. Fill each bag with hot water and add soap.
    d. Seal bag and place into ultrasonic tank and operate ultrasound for 15 minutes.
    e. Dump the fluid from the bag into a sink – not into the ultrasonic tank.
    f. Repeat this process until no dirt is extracted from the filters.
    g. Replace filters into the blue canisters.
6. If you do not have water flow without filters and the motor is operational, follow 6a - 6c.
    a. Drain tank and remove the pump head volute from motor.
    b. Inspect the impellor and shaft to see where the damage is.
    c. Replacing the Pump Head less Motor is the likely solution.

No lights on the control panel.

1. Is the Power push button pushed in?
2. Is there power to the facility outlet?
3. Turn off Power and unplug the machine.
4. Remove upper panel located on the right end of the machine.
5. Is the circuit breaker energized (UP-Red) or (DOWN-Green)?
6. If the circuit breaker is tripped, re-set the circuit breaker.
7. Plug in machine.
8. Follow the steps above in “Isolate the exact issue”.
9. Machines manufactured after January 2015 have panel fuses and may be burnt. If either of the fuse holder red lights are lit, the 5 amp fuse(s) must be replaced.

Heat is causing the circuit breaker to trip.

1. Likely cause is a shorted heat blanket.
2. Remove the front (if applicable) and back lower access panels.
3. Inspect the heat blanket(s) – they should be an orange/ pinkish color.
4. If the heat blankets are black or charcoal white, they must be replaced.
5. Call Omegasonics to order new heat blanket(s).

Pump is causing the circuit breaker to trip.

1. Likely cause is a faulty or shorted motor.
2. The timer could also be shorted, but the display will not display properly.
3. Call Omegasonics to order a new pump.

Ultrasound is causing the circuit breaker to trip.

1. Remove lower vented/ panel located on the right end of the machine.
2. Remove the power plug from the back of each generator.
3. Activate the ultrasound.
4. If the circuit breaker trips again, then the corrective action is to replace the digital timer.
5. If the circuit breaker does not trip, then follow these procedures.
    a. Plug in one generator at a time to isolate which exact generator is causing issue.
    b. Contact Omegasonics to have the existing generator repaired or replaced.
6. If no specific circuit causes the internal circuit breaker to trip but the issue occurs sporadically, then the circuit breaker will need to be replaced.
7. Call Omegasonics to order a new circuit breaker.

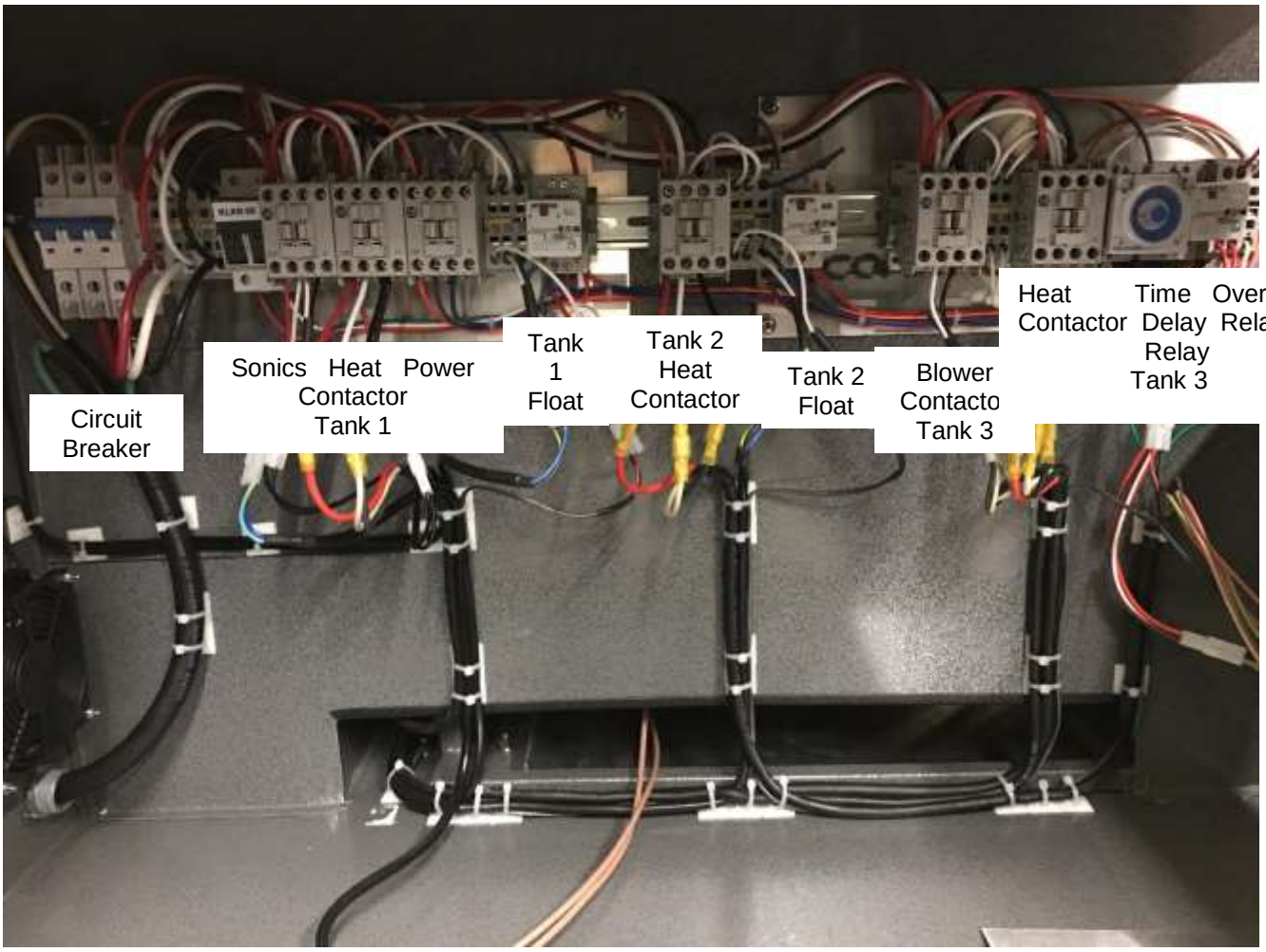
Ultrasound circuit is not operational.

1. Does the digital timer have a visible display?
2. Does the timer count up?
3. Does the timer display flash “OP.” in the lower left side?
4. Does the timer display flash a RED dot in the upper left side?
5. If the answer to 1 -4 is NO, replace the digital timer.
6. If the answer to 1, 2 or 3 is YES, use the following steps.
7. Remove upper panel located on the right end of the machine.
8. Does the center coil on the Ultrasound contactor pull in when timer activates?
9. If the answer is YES, the generator is the likely cause.
10. If the answer is NO, can you manually push in the coil to activate the ultrasound?
    a. NOTE: Use an insulated screwdriver to push in the center coil.
    b. If you cannot push in the coil manually, the contactor needs to be replaced.
11. Contact Omegasonics for a generator RMA or to order a replacement contactor.

The unit trips the GFCI circuit breaker when the ultrasound operates.

1. GFCI circuit breakers will cause intermittent trips with ultrasound.
2. Install non-GFCI circuit breaker.

NOTE: Always inspect the back panel wires for burnt or loose wires. Burnt wires are typically caused by a loosened connection and must be replaced.


Circuit Breaker
Sonics Heat Power Contactor Tank 1
Tank 1 Float
Tank 2 Heat Contactor
Tank 2 Float
Blower Contacto Tank 3
Heat Contactor
Time Delay Relay Tank 3
Overload Relay

PARTS LIST

- Pump (2) - *Pump-MD3240*
- Float Sensor (2) – *Float-Stainless Steel*
- Generator (1) – *OMG-9001-40U*
- Digital Timer (1) - *Timer*
- Digital Temperature Controller (3) – *Digital Temp*
- 3 Position Selector (“Sonics” and “Drying Cycle”) (2) – *Switch-3 Position Selector*
- 2 Position Selector (“Heat” and “Pump”) (4) – *Switch-2 Position Selector*
- Power Button – *Push Button*
- Motor Contactor (6) –*Contactor-240*
- Heat Blanket (6) – *Heat Blanket-900/240V*
- Ice Cube Relay (3) - *Relay-240*

CLEANING AGENTS - OMEGASONICS

Omegasonics carries a full line of cleaning agents. Each cleaning agent has a unique cleaning specialty and use. Some of the products are as follows.

- **OmegaSupreme** – Heavy-duty degreaser removes carbon, oil, dirt, grease and dirt from a variety of metals. It is excellent for cleaning and brightening ferrous and nonferrous metals. Product may cause aluminum to scar if left in contact with aluminum part for an extended period of time. Product contains a short-term flash rust inhibitor.
- **OmegaClean** – General to heavy-duty degreaser which will remove carbon, oil, grease and dirt from a variety of metals and will not harm aluminum finishes. Especially formulated for the aerospace industry as well as for automotive applications. Has built in conditioners for hard water (high calcium and magnesium content) sources and good quality rust inhibitors.

- **OmegaZyme** – Ideal for industrial applications cleaning oil and grease from aluminum, stainless steel and titanium parts. Does not remove carbon. Will cause cast iron and cold rolled steel parts to rust if not used in conjunction with silicate, nitrate or trisodium phosphate rust inhibitors or with another cleaning agent containing rust inhibitors.

- **OmegaCitriSurf 2250**– Designed for industrial and aerospace applications where stainless steel passivation (the removing of free iron from the surface) is required. Also useful in removing calcium deposits from a variety of metals including brass and steel.

- **Omega DeScaler** - A unique product formulated to remove rust, corrosion, heat scale and mineral deposits from a variety of metals. Excellent when used in an ultrasonic tank to remove rust from metal components exposed to extreme moisture and water. Effectively used to remove mineral deposits from heat exchangers

- **Omega Mold Release** - A high pH concentrated cleaning agent used successfully to remove burnt-on crystalline rubber, plastic and food from molds, dies and other metal surfaces

- **OmegaBlue** - Designed to remove ink and ink residue from metal and rubber components including Anilox rollers.

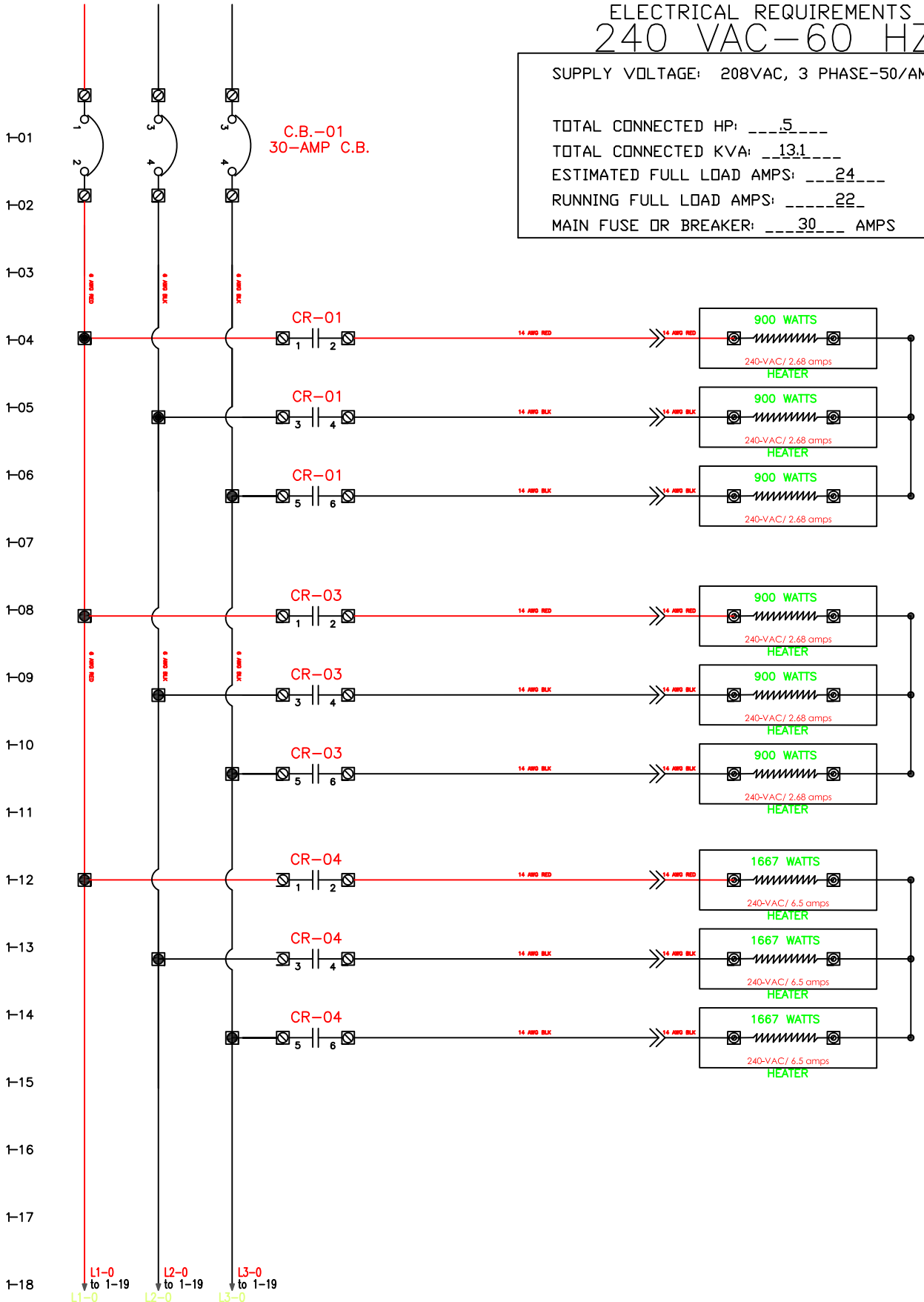
- **Omega Aqua Clean LPH** – A reduced pH solution designed to clean electronic and electrical components. Also effective at removing solder flux residue. It is safe on all surfaces that can be cleaned in water and any surfaces that may be damaged in a high pH solution.

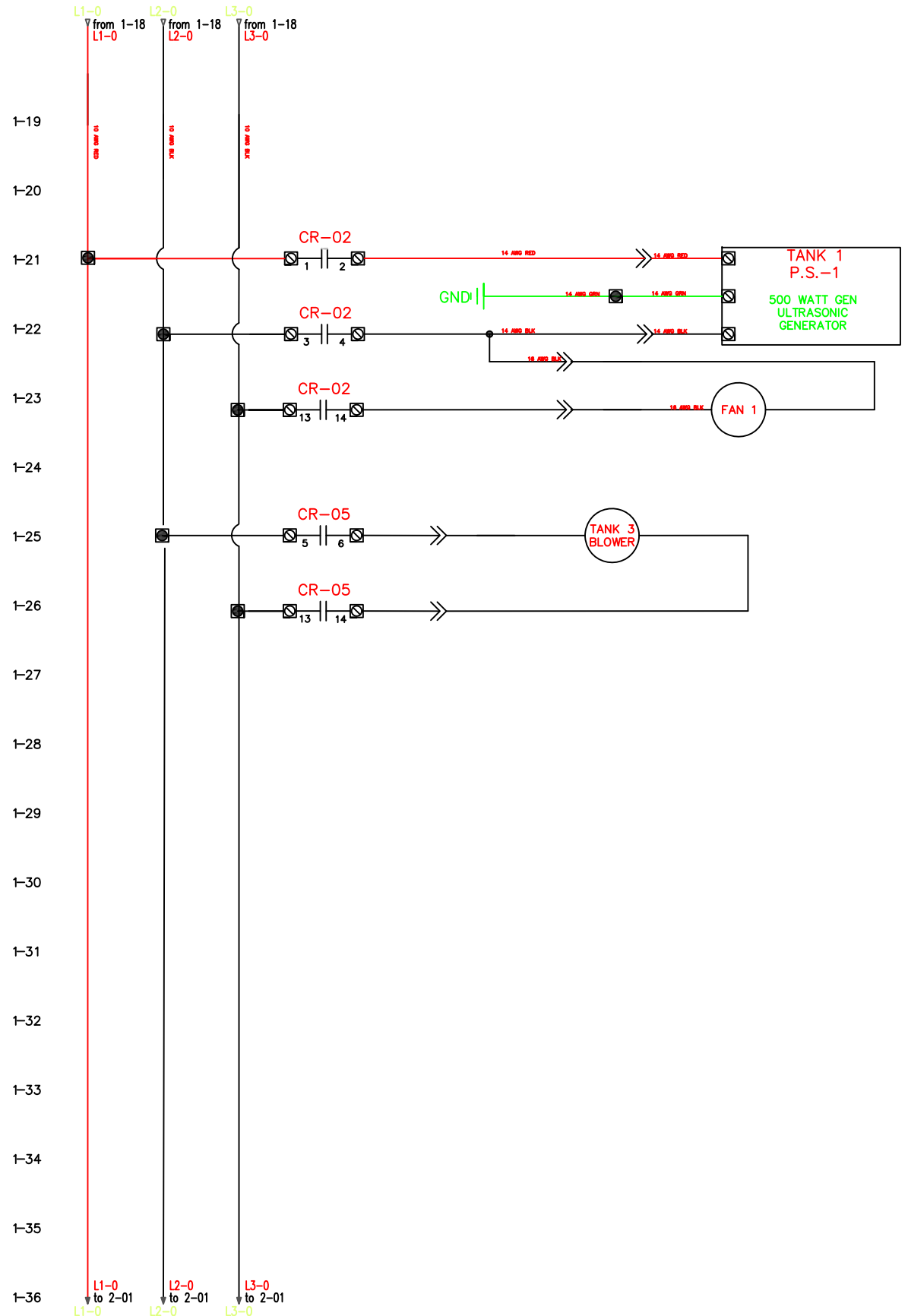
The above products are concentrates. These products are formulated to be used at a 10 to 1 ratio. Ten 10 parts water one part cleaning detergent

ELECTRICAL REQUIREMENTS
240 VAC–60 HZ.

SUPPLY VOLTAGE: 208VAC, 3 PHASE-50/AMPS

TOTAL CONNECTED HP: ___5___
TOTAL CONNECTED KVA: __13.1___
ESTIMATED FULL LOAD AMPS: ___24___
RUNNING FULL LOAD AMPS: _____22_
MAIN FUSE OR BREAKER: ___30___ AMPS





OMEGASONICS
330 East Easy Street, Suite A
Simi Valley, CA 93065

POWER CIRCUIT
ELECTRICAL SCEMATIC
Pro DX3

DWN JPE DATE 10/01/2019
DWG NO Pro DX3 DWG REV R-1
SHEET 1 OF 2

CAD PART LAYERING SELECT: ECHO 10/01/2019

CAD PART Pro DX3

LAYERING SELECT: ECHO

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OMEGASONICS
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Simi Valley, CA 93065

DMEGASONICS CORP.
ULTRA SONIC CLEANER
Pro DX3

DWN JPE DATE 10/01/19
ENG NO Pro DX3 REV R-1
SHEET 2 OF 2

10/01/19

TYPICAL TIMER START/RESET WIRING