The Multi-Tank Series

Multi-Tank Ultrasonic Passivation Equipment E598-72

Multi-tank ultrasonic system for: clean/rinse/passivate/rinse/rinse/dry applications

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Model E598-72
Passivation System

Introduction

The E598-72 Ultrasonic System combines ultrasonic power with various cleaning solutions to effectively handle your cleaning/passivation requirements. The E598-72, 15 gallon cleaning unit is combined with Model E598-72R, 15 gallon ultrasonic rinsing unit and with the E598-72D, 15 gallon drying unit for a complete system where parts are ultrasonically cleaned, ultrasonically rinsed, and hot air dried. These models are housed in the same size cabinet.

The integrated system consists of 6 tanks as follows:

Tank #1 – E598-72PF Ultrasonic Cleaner with Pump Filter (Alkaline Cleaner)
Tank #2 – E598-72R Ultrasonic Rinse with Cascade overflow to Drain
Tank #3 – E598-72PF Ultrasonic Cleaner with Pump Filter (Acid Passivation)
Tank #4 – E598-72R Ultrasonic Rinse with Cascade overflow to Drain
Tank #5 – E598-72R Ultrasonic Rinse with Cascade overflow to Drain
Tank #6 – E598-72D Hot Air Dryer

Each ultrasonic unit also includes 2,000 watts of heat with digital temperature control.

Tanks 1 & 3 are manufactured with an integral pump/filter system. The 10” stainless steel filter housing is side mounted to the stainless steel workbench for convenience. The pump and flow control valve are modular and fit under the worktop on the undershelf.

Description

The system includes 3 custom sizes stainless steel tables to accommodate the 6 tank configuration. It was intended that the tanks are mounted perpendicular to the table setup and as such the filters are mounted on 2 of the short ends of the tables accordingly. (see adjacent photo).

The Ultrasonic PC boards are located in the ultrasonic generators which accompany each ultrasonic unit. These generators are sized accordingly to fit on the undershelf of the worktable. There is a cooling fan located on generator so please make sure there is adequate air supply for the fan.

NEVER OPERATE UNIT WITHOUT LIQUID IN TANK

Tanks#1 & 3
E598-72PF Ultrasonic Cleaner with Pump Filter

Description: Tanks 1 & 3 are designed as ultrasonic cleaners with solution filtration. There are 1,200 watts ultrasonic power and 2,000 watts heat on each unit. The filters are mounted on the side of the worktable and the pump modules are to be located under the tank with supplied tubing to connect to the plumbing on the tank. The pump filter is controlled by a panel mount switch.

Electrical: Each Tank is rated at 3,225 watts, 208 VAC, 50/60 HZ. (Requires a shared neutral). The unit is equipped with a NEMA L14-20 plug. Connect to a three-way grounded outlet. Each hot line is fused with a 20amp fuse located on the rear of the cabinet.

Standpipes: The tanks are equipped with standpipes for the pump filter feature. These standpipes can be changed to shorter or taller pipes at user discretion. The fluid level should ALWAYS be at or above the top of the stand pipe.

Ultrasonic Generator: Each tank has a corresponding generator for the ultrasonic pc boards. These modules can be mounted under the tanks on the undershelf. There are 2 cords from the generators which have corresponding sockets on the rear of the tank module.

Tanks #2, 4 & 5
E598-72R Ultrasonic Rinser with Overflow Cascade to Drain

Description: Tanks 2, 4 & 5 are designed as ultrasonic rinser tanks. There are 1,200 watts ultrasonic power and 2,000 watts heat on the unit. An inlet solenoid is located on the rear of the unit marked RINSE IN with a 1/8"NPT connection and is to be connected to a pressurized water supply. An in-tank standpipe is used for the gravity cascade overflow to drain. Connect the fitting on rear of tank marked "RINSE OUT" to a vented drain

Electrical: Each Rinse Tank is rated at 3,225 watts, 208 VAC, 50/60 HZ. (Requires a shared neutral). The unit is equipped with a NEMA L14-20 plug. Connect to a three-way grounded outlet. Each hot line is fused with a 20amp use located on the rear of the cabinet.

Standpipes: The tank is equipped with a standpipe for the cascade to drain rinse feature. These standpipes can be changed to shorter or taller pipes at user discretion. The height of standpipe will determine the fluid level.

Ultrasonic Generator: Each tank has a corresponding generator for the ultrasonic pc boards. These modules can be mounted under the tanks on the undershelf. There are 2 cords from the generators which have corresponding sockets on the rear of the tank module.

Tank #6 – E598-72D Hot Air Dryer

The drying compartment in the E598-72 is a 304 stainless tank housed in a stainless steel cabinet. The E598-72 is a forced air heater unit with sidewall mounted air heaters. Airflow is directed from the bottom of the tank and will exhaust out of the top of the tank. This air will be warm during operation. The hinged cover is gapped to allow venting during operation.

Electrical: Each Rinse Tank is rated at 4,600 watts, 208 VAC, 50/60 HZ. (Requires a shared neutral). The unit is equipped with a NEMA L14-20 plug. Connect to a three-way grounded outlet. Each hot line is fused with a 20amp fuse located on the rear of the cabinet. Each airflow heater is rated as 1,500 watts. There are 3 fans rated at 100 cfm each.

DO NOT PLACE ITEMS SUCH AS TOWELS, PAPER, OR LOOSE FABRIC ON THE FAN INTAKE PORTS ON THE BOTTOM OF THE UNIT. The fan draws air and any loose objects will be pulled up against the filter, diminishing the airflow.

Drying time will vary depending on the number of parts to be dried, if hot or cold water was used to rinse parts before drying. The Betman Warm Air Dryer is capable of maintaining a maximum of 150°F in the chamber. Generally parts should be dry in 10 minutes. **CAUTION: Parts after drying will be hot and should be cooled before touching.**

Timer

A digital solid state timer has been installed in unit. (See separate instructions).

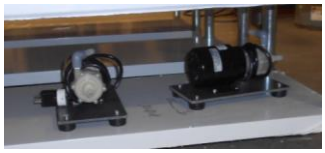
Simply set the time with the ↑ or ↓ button. After time has been set, push START-STOP button and ultrasonic cleaning will commence for the set time. The cycle can be stopped at any time by momentarily pressing the START-STOP Button.

Heaters

The ultrasonic tanks are equipped with 2,000 watts of heat. Set digital temperature control to the desired temperature.

- Turn main switch and heater switch ON.
- Press the "MD" button and after 2 seconds the preset temperature will display. Use the arrow keys to adjust temperature settings. Press the "MD" button a second to return to run mode. When the tank is heating the red indicator light "OUT" on the controller will be ON.
- In approximately 30 minutes the temperature will be reached

Pump/Filter



The side mounted (on workbench) filter is a 10" SS filter chamber with a 5 micron polypropylene filter tube. There are shutoff valves (ball valves) on both the input and output sides of the filter chamber for changing the filter. The corresponding pump module has a Little Giant 3MDHC pump. Use one of the ball valves to control the flow of filtration. It is advisable to operate half closed as too much turbulence in the bath with counteract the ultrasonic cavitation.

To activate the pump/filter turn the PUMP/FILTER switch on the front panel to ON and filtration should occur.

An in-tank standpipe is used for the intake for the filter. The standpipe is used to draw from different fluid levels. Make sure that the liquid level is at or above the top of the standpipe. It can be removed for bottom draw if desired.