Tabletop Multi-Tank Ultrasonic System —1 Gallon

The Multi-Tank Series

MODEL E386

Multi-chambered cleaner/rinser/dryer

P.O. Box 734
450 Taft Drive
South Holland, IL 60473
800-276-2466
www.esmainc.com
Email: sales@esmainc.com

Features & Specs

Dimensions: 22″L x 13″W x 12″H
Tanks: 4.5 Quarts, 9.5″L x 5.5″W x 6″H
Ultrasonic power: 100 watts per tank
Power Requirements: 120V 60Hz 15A Hot Air Dryer: 1500 Watt

- All Stainless Steel Construction
- One year unconditional guarantee
  Two years on Power Circuit Boards
  Lifetime on Transducer Bonds and Weld Seams

Hot water input:
1/4″NPT, 1-GPM Max.
Rinse Output:
1/4″NPT (gravity feed)
Drain Ports Tanks 1 & 2:
1/4″NPT
*High liquid level protection built into unit to prevent overflow.

APPLICATIONS

- Springs
- Precision machining
- Medical Devices • Drawn wire dies
- Clean Room applications
- Gears, filters • Screw machine parts
- Housings, fittings
- Optics
- Cutting tools
- Many other cleaning applications

REMOVES (CLEANS)

- Grinding residues
- Lapping Compounds
- Oils, lubricants
- Cutting compounds
- Buffing-polishing compounds
- Shop dirt
- Abrasives and waxes
- Loose burrs
- Particulars

RESULTS

- Bright parts (original surface re-stored)
- Easy inspection of internal bores.
- Easy overall inspection
- PERFECT CLEANING JOB
- No shadows in internal bores
- No debris in blind hole cavities
- Meets strict cleanup require-ments:
  no particles, no oils, bright, dry parts

✓ UNPRECEDENTED WARRANTY
✓ SINGLE PUSH-BUTTON ACTIVATION
✓ OVER 30 YEARS OF SUCCESSFUL IN-FIELD HISTORY
✓ ALL STAINLESS STEEL CONSTRUCTION

Celebrating over 30 years of excellence in manufacturing ultrasonic cleaning equipment, electropolishing equipment and associated chemistries

Instructions for Model E386

Colster-3 Unit with Rinse

Introduction

The COLSTER-3 UNIT contains two ultrasonic tanks and a hot air drying tank. Each tank has an individual timer.

Tank #1 can be heated (heater optional) by turning on the heater switch. Tank will be thermostatically controlled at approximately 130 degrees F.

Tank #2 is connected to a hot water supply for rinsing. The hot water flow to the rinse tank is controlled by a solenoid valve activated along with the ultrasonics when timer for tank 2 is turned on.

Tank #3 is equipped with air heating elements which are activated when timer is turned on. The forced air stream is heated up to 170 degrees F for rapid drying of parts.

Installation

The E386 is shipped with a number of fittings unattached. It is necessary to make these connections before proceeding with the installation instructions. On the left side of the unit are two ports designated **RINSE**, these are the inlet and outlet ports for the rinse tank #2. A needle valve is supplied to be threaded into the 1/8" NPT inlet port. Add teflon tape to the threads of the needle valve before attaching it (**DO NOT OVER TIGHTEN**). Connect your water supply to the ¼" compression input of the needle valve.

The outlet port for the rinse tank is to have the supplied ¼"NPTx½"Hose connector attached, also using teflon tape on the threads. When the water level reaches the overflow hole inside the tank the water will cascade out of the rinse tank via this port.

The rinse tank comes equipped with a high level control. A high level sensor will detect a high water level and shut off the water flow, as the water level recedes the flow will continue.

Also located on the left side of the unit are two drain ports designated **DRAIN** **TANK1** & **TANK2**. Ball valves have been supplied to be threaded into these ports. A final port is located on the right side of the unit which gives access to the drain of the dryer tank. Because this tank is not intended to hold liquid it is unnecessary to put a ball valve on this port. A ¼"NPTx½"Hose connector has been supplied so this port can allow excess drippings in the dryer tank to exhaust.

ESMA, Inc.
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Once these connections have been made it is necessary to join the E386 to your sink or drain lines with the supplied ½" hose.

Now begin the installation sequence:

1. Place unit on a bench close to a hot water supply drain. DO NOT PLACE THE UNIT ON A TOWEL, PAPER, OR LOOSE FABRICS (the fan draws from the bottom of the unit and these objects will be pulled up against the inlet, slowing the air flow and resulting in the overheating of electronics).

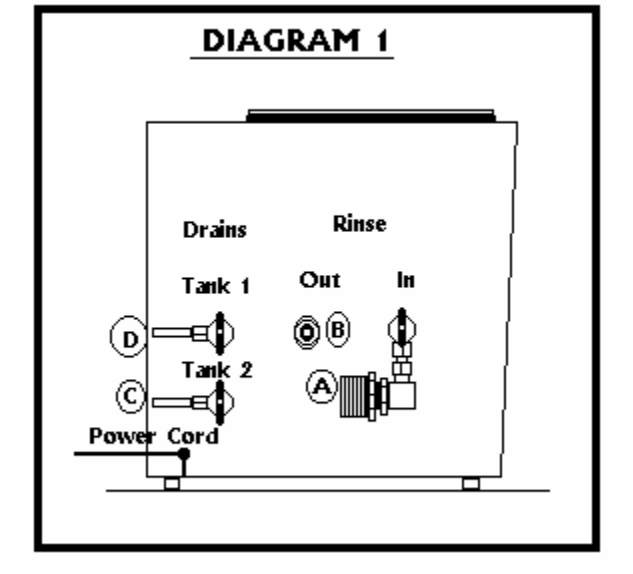
2. Fill tank #1 with 4" of cleaning solution.

3. Hook-up for Rinse Tank

   Place end of rinse outlet hose into sink or drain. Make sure drain hose is not crimped or elevated higher than the outlet of rinse chamber. Also, do not place end of drain hose into water, or back pressure could develop.

   On initial hook-up, bleed the air in the hot water supply as follows:

   1) Pour 4" of water in rinse tank.
   2) Make sure rinse inlet needle valve is closed.
   3) Open valve at your water supply.
   4) Turn on timer to activate solenoid.
   5) Gradually open needle valve on rinse inlet and bleed trapped air.
   6) Adjust needle valve to control flow of water into tank.
   7) Solenoid valve inside unit is controlled by the timer and will automatically stop or start the water flow.



The unit must be electrically grounded. Connect to a three-way grounded outlet. If you have a 2-wire service, an adapter with external ground wire is necessary. Connect the green grounding wire of the adapter to the screw which holds the electric outlet plate cover to the socket.
DO NOT OPERATE UNIT WITHOUT PROPER GROUNDING.

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Operation

The basic principle of operation is the enhancement and acceleration of the chemical cleaning by ultrasonic cavitations. Each tank has a timer to control the time and efficiency of the ultrasonic action.

Heat Switch-If tank #1 has a solution heater (optional), turn MAIN and heater switches ON to preheat the solution. The solution will be thermostatically controlled at 120-130 degrees F.

Timer-With MAIN switch on, set timer to desired cleaning or rinsing time (pressing the start/stop button activates the generation of ultrasonic action). When the set time expires, the ultrasonic action is terminated. Green indicator light is ON during ultrasonic cleaning.

Dryer-After hot water rinse, place rank with parts in drying chamber and set timer clockwise to desired time. Forced hot air will dry the parts in approximately 5 minutes.

When unit is not in use, turn MAIN switch OFF.

Maintenance

1. When liquid in tank needs to be changes, open drain for either tank #1 or #2 on left side of unit.
2. Keep top of unit dry. Unit is manufactured from 304 stainless and can be restored to original finish with a stainless polish used for kitchen appliances.

The unit is guaranteed for one year, circuit boards for two years and transducer bonds and tank weld seams a lifetime guarantee.

DIRECT ANY QUESTIONS TO MANUFACTURER AT 800-276-2466

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