N-EVAP™
Nitrogen Evaporation System

Models 11106, 11155, 11250

DRY BATH SYSTEMS

INSTRUCTION MANUAL

ORGANOMATION ASSOCIATES INC.

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Organomation™

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Dear Customer,

Thank you for choosing a Sample Preparation Instrument from Organomation Associates. We appreciate your business and believe that the instrument and accessories you purchased will work very satisfactorily for many years to come. Whether you have added another instrument to your laboratory, or have purchased one for the first time, we will stand behind our equipment.

Should you have questions regarding the set up or operation of this instrument or questions regarding other Organomation products please contact us. The toll free telephone number for sales support and customer service is 888 838-7300. If you purchased the instrument through one of our dealers you should contact them first.

Any comments from you would be much appreciated. We listen to our customers which, in turn, enables us to provide the best instruments available. Please fill out the Warranty and Service Registration Form and return it within ten days of receipt of instrument. Once we have the completed form, your warranty will be activated as stated. The Warranty Form can be mailed or faxed to us at 978 838-2786.

The operating manual contains literature and product lists describing our complete line of laboratory instruments. It provides a convenient way to order new instruments, accessories or repair parts. If you need a verbal or written quote on specific items please call us at our toll free number or e.mail us at the address above.

Again, thank you for selecting ORGANOMATION ASSOCIATES products.

Sincerely,

Andrew McNiven
President

Product designs are subject to change without notice

Items Shipped

Carefully check the contents of all cartons received for damage which may have occurred in transit. Retain all cartons and packaging materials until all components have been checked against the packing slip, the component list below, and the equipment has been assembled and tested. Contact Organomation Associates Inc. immediately if any damage or discrepancies are found.

Your shipment should contain one or more of the instruments shown below. Option codes are listed on the next page.

Cat #	Instrument Size
11106-DA	**6 Position N-EVAP Nitrogen evaporation system**
11155-DA	**12 Position N-EVAP Nitrogen evaporation system**
11250-DA	**24 Position N-EVAP Nitrogen evaporation system**

	Flowmeter Assembly with Mounting Bracket & Connector Tube
NA1221	0-10 LPM for 6 and 12 position N-EVAP
NA1521	0-20 LPM for 24 position N-EVAP
NA1121	Thermometer 0-150° Celsius
NA0603	19ga x 4" Stainless Steel Luer Lock Needles, blunt end 6 for 6 Position N-EVAP 1 Dz for 12 Position N-EVAP 2 Dz for 24 Position N-EVAP
B1102-DA	OA-HEAT Dry Bath 500W, for 12 position N-EVAP, Aluminum beads
B1201-DA	OA-HEAT Dry Bath 800W, for 24 position N-EVAP, Aluminum beads
P1230	SS Gas Supply Tube Tube 1/4" (7mm) OD
	T-Handle Hex Key adjustment tools
V10127	1 ea. 1/8" x 6" Long, for 12 & 24 position N-EVAP
V10128	1 ea. 5/32" x 6" Long, for 12 & 24 position N-EVAP
V10124	Manual for N-EVAP dry bath models 11106-DA, 11155-DA, 11250-DA
NA0636	Pasteur Pippet Adapter with flow controller, 1 Dozen per set (**Optional).**

Option Codes and additional items shipped

The following list contains option codes and items which may have been shipped in conjunction with the standard parts shown on the previous page. Please check your packing list and order information carefully to determine if these items are included in your shipment. For a complete list of available accessories, please refer to the Accessories Section.

Your shipment may contain the following optional items:

Option	Description
-P	Pasteur Pipette Fittings replace SS needles and Luer fittings on the N-EVAP. Pipettes are provided with the respective N-EVAP size ordered, reference part # NA0636
-RT	12 or 24 position N-EVAP Instrument and OA-HEAT bath are coated in PTFE . Instrument is black in color. The bath is blue on the outside and black on the inside. Beads are glass rather than aluminum.
-T	SS Needles 19 gauge x 4" (100mm) Long, are coated in PTFE and are black in color.
-Z	OA-HEAT water bath has been modified for the Type-Z Purge Positive Pressure bath option. Additional parts include: differential pressure gauge, mounting bracket, and tubing. Passive system - operator monitored.
-2	OA-HEAT bath is wired as a 240 Volt unit.

Instrument Description

The N-EVAP Nitrogen Evaporation System is designed for general evaporation and / or concentration of analytical or biological samples in a variety of test tube based glassware under controlled and reproducible conditions.

The instrument portion is circular and is designed to hold test tubes from 10 to 30mm OD. The unit will rotate in either direction. Construction is primarily 304 and 316 stainless steel, anodized aluminum, chrome plated brass, and Delrin (Acetal). Unit may be used with SS needles or disposable glass pipets. Coating in Teflon is available for acidic applications. All tubing provided is Phthalate free. Dry baths do not have the hoist assembly and band springs shown below. Only water baths have sample trays that can be raised and lowered.

The complete instrument is shown below.

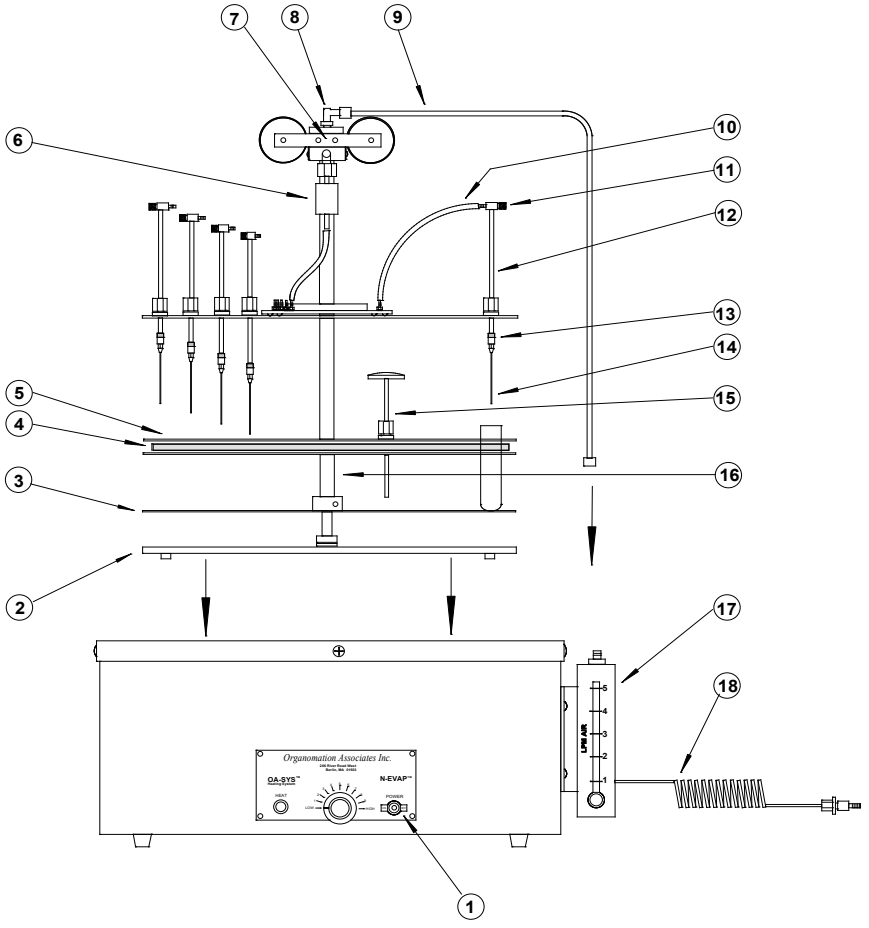


Figure 1 - Model 112 shown

PARTS LIST

Item	Part Name	11106-DA	11155-DA	11250-DA	Description
(1)	Dry Bath	B1102-DA	B1102-DA	B1201-DA	Round dry bath, provides heat.
(4)	Sample Spring	P0614	P0614	P0614	Holds and centers samples.
(5)	Sample Holder	NA1113	P0628	P0715	Holds various sized samples.
(6)	Filter	NA0403	NA0403	NA0403	Removes particles from gas stream.
(9)	Gas Tube	P1230	P1230	P1230	Delivers gas to rotating instrument.
(10)	Silicone Tubing Phthalate free	P0610	P0610	P0710	Delivers gas to each Valve Tube Assembly. Phthalate free.
(12)	Valve Tube Assembly	P0626	P0626	P0626	Delivers gas to each sample.
(13)	Luer Fitting	P0607	P0607	P0607	Connects needle or Pipet Adapter.
(14)	Blunt Needle	NA0603	NA0603	NA0603	Delivers gas into sample tube.
	Teflon coated (Optional)	NA0603-T	NA0603-T	NA0603-T	Teflon coated (Optional)
(15)	Thermometer 150°C	NA1121	NA1121	NA1121	Measures bath temperature.
(16)	Center Tube Assem.	P1117	P1117	P1205	Allows mounted hardware to rotate.
(17)	Flowmeter / Bracket	NA1124	NA1124	NA1221	Meters gas flow to all samples at one time.
(18)	Connector Tube	NA1101	NA1101	NA1101	Connects gas from source to the flowmeter.

Location

The N-EVAP Evaporator System should be located on a bench top or in a chemical fume hood if hazardous or flammable materials and solvents are to be used. The location should provide the necessary support services for the instrument. These include electrical power (required for heating bath) and a clean inert gas source (Air or Nitrogen). Please review the Specifications Section for further information.

Bath Setup

1. Position the bath on a stable flat surface such as a lab bench or in a chemical fume hood.

2. Turn the bath toggle switch to the “OFF” position.

3. Turn the bath thermostat knob to its lowest position, if present.

4. Plug the bath electrical cord into a 3 wire grounded electrical outlet rated for 110-120 VAC, 50-60 Hz, single phase, 15 amps.

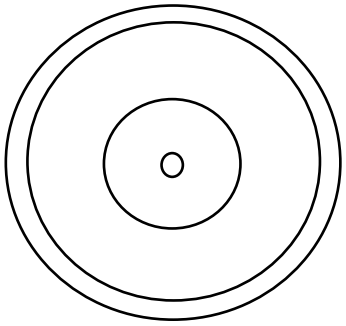
   Optional 220 VAC baths are clearly marked and should be plugged into a 3 wire grounded electrical outlet rated for 220-240 VAC, 50-60 Hz, single phase, 15 amps.

Bath Setup(Continued)

6. Fill the bath chamber with dry media. Dry media baths have a raised center section in the bath to the height of the rim. See diagram below.

   A. Dry bath units - Fill the area between the rim and the raised central section with aluminum or glass beads. Clean sand may be used as a substitute. Unit should be filled to 0.5” from the rim.

Do not use water in dry bath models. These units are not designed for use with water. SHOCK HAZARD!!!



Dry Media Bath

DO NOT USE WATER

Bath Setup (Continued)

7. **Type-Z Purge Positive Pressure Bath option - If you do not have this option, please proceed to the next section.** Procedures for operating this system may be found in the Operation Section. Quick start instructions are posted on the front of the bath. Please refer to Figure 3 below for parts list and installation.

   A. Install the Type Z Purge Gauge Assembly to the rear of the bath as shown. The bracket attaches to the rear of the bath and is held in place by a 6-32 x 1/4" screw on the shoulder spacer and by a 1/4" bulkhead hex nut on the gas inlet fitting.

   B. Connect the small white silicone tube attached to the gauge to the gas inlet fitting using the compression nut provided.

   C. Attach the filter with 5 foot tube to the plastic elbow fitting located at the base of the bath. Insert the filter into the fitting and tighten the nut. Connect the tube to a clean gas source.

   D. Test the system by turning on the gas flow to the Z Purge System. Adjust the gas flow until the gauge reads 0.1 inches water pressure.

   WARNING - If this unit is located in a hazardous area where volatile fumes are present, the Z-Purge System must be activated for a minimum of 10 minutes prior to activation of bath power. Please review the Safety and Operations sections.

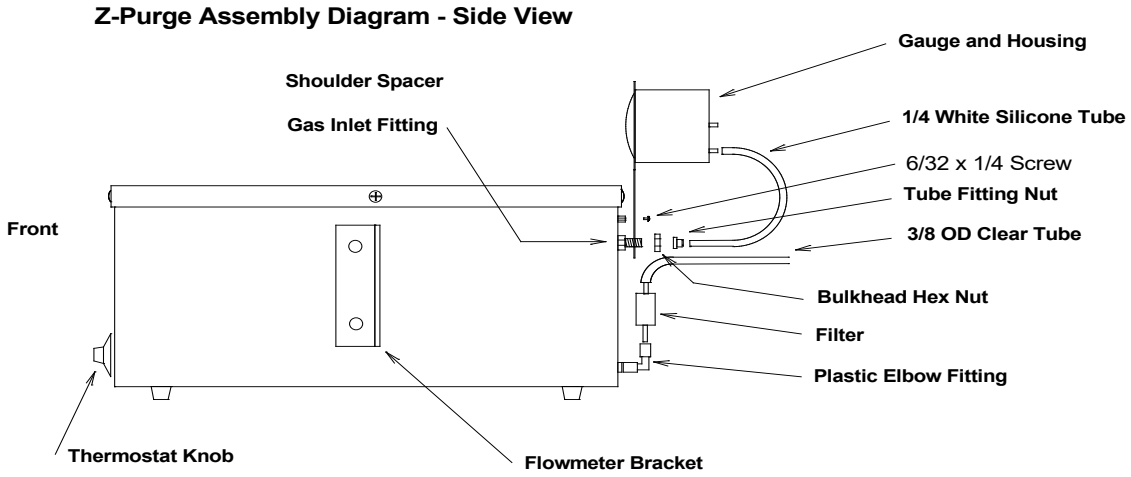


FIGURE 3

Bath Setup (Continued)

8. Flowmeter Assembly - Provided with all N-EVAP Systems. **If an OA-HEAT bath was purchased without an N-EVAP instrument, proceed to the next section.**

A. Attach the flowmeter to the bracket mounted on the bath with the two 10/32 x 1/2" screws provided. The meter should be positioned with the needle valve facing forward and positioned closest to the bench.

B. Connect the Connector Tube to a clean gas source (Air or Nitrogen). Source should be capable of being regulated to 30 psig maximum. If source is in excess of 30 psig, then Organomation part # NA0630 Pressure Reducing Regulator will be required.

9. Pressure Reducing Regulator Option - **If you do not have this option, proceed to the next section.** When purchased with an N-EVAP System, this item is pre-installed onto the flowmeter, between the flowmeter and the Connector Tube. Refer to Figure 4 below.

A. Remove the flowmeter from the bracket.

B. Remove the Connector Tube and fitting from the flowmeter.

C. Connect the Pressure Reducing Regulator to the lower fitting on the back of the flowmeter. Position the regulator such that the adjustment knob is straight up and the gauge points away from the bath.

D. Connect the Connector Tube to the regulator.

E. Re-connect the flowmeter to the bracket.

Presure Reducing Regulator Diagram - Side View

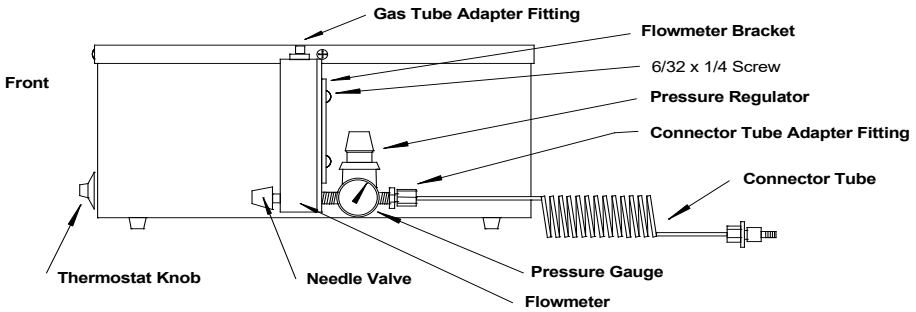


Figure 4

Instrument Setup

1. Place the instrument into the bath. Screw the rod into the raised center. Slide the instrument over the end of the rod. Model 112 has a split rod design.

2. Connect the SS gas line as follows:

   Connect the lower end of the SS Gas Tube to the fitting on the top of the flowmeter. Secure with a wrench. Next, connect the top of the SS Gas Tube into the fitting at the top of the instrument.

3. Install the SS Thermometer into the hole in the sample tray. For most accurate temperature measurement, push down into media 2 inches (50 mm).

4. Sample Holder Plate Adjustment - This item may need to be adjusted from time to time as follows:

   1. Loosen the set screws located in the collar.

   2. Raise the sample holder to the desired height, align with the Valve Tubes to center the needles, and secure in place with the set screws.

5. Needles and Pipets - SS Luer Lock Needles are supplied with the standard N-EVAP system. Optional Pasteur Pippet Fittings allow the use of glass pipets. These fittings replace both SS Needles and Luer Fittings on the N-EVAP. Pasteur Pipet Adapters may be purchased separately with the standard N-EVAP, allowing the use of both needles and pipets.

   A. SS Needles - Install into the Luer fitting at the bottom of the Valve Tube assembly by rotating the needle 1/2 turn. Do not over tighten, finger tight only.

   B. Pasteur Pipet Fittings - Remove the nut on the PPF. Place the nut over the end of the pipet. Install the nut/pipet assembly into the PPF fitting and tighten nut carefully until secure. Over tightening will crack the pipet. Six inch (15 cm) glass pipets are recommended.

   C. Pasteur Pipet Adapters - Remove the nut on the PPA. Place the nut over the end of the pipet. Install the nut/pipet assembly into the PPA fitting and tighten nut carefully until secure. Over tightening will crack the pipet. Install the pipet/PPA assembly into the Luer fitting at the bottom of the Valve Tube assembly by rotating 1/2 turn. Six inch (15 cm) glass pipets are recommended. Needles or PPA's may be used interchangeably in the N-EVAP at the same time.

Instrument Setup (Continued)

6. Raise all Valve Tubes to their highest position. The plastic tube nuts on the top plate should be adjusted so that the Valve Tubes slide easily by hand, but do not fall when released.

7. Turn all needle valves on the Valve Tube Assembly off by rotating clockwise.

8. Close the valve on the flowmeter by rotating clockwise.

9. Install needles or pipets as required.

Safety Considerations

READ THIS SECTION BEFORE EQUIPMENT OPERATION!

This equipment is designed for use in the Analytical or Environmental Laboratory by trained laboratory personnel for evaporative applications. Use of this equipment beyond its stated intended purpose and operating parameters is not recommended and will be the sole responsibility of the user. This equipment should not be modified or altered. Organomation assumes no liability for any misuse of or modification to this product and such misuse or modification will immediately void all warranties.

This equipment should be used in accordance with the operating instructions contained in this manual. For alternative uses not covered in this manual, please contact Organomation technical department for product suitability, safety, and alternative operating instructions.

The following are general safety guidelines recommended when using this product. Please consult your laboratory safety officer for any additional safety steps which may be necessary for your specific application or material.

1. Thoroughly review your MSDS (Material Safety Data Sheets) for all chemicals to be used with this equipment.

2. Do not use this equipment with materials with auto ignition points below 150 ºC.

3. Hand and eye protection are required when using this product. Additional protection may be required with respect to the materials being used. Please consult your laboratory safety officer.

4. This product should only be used in a chemical fume hood with adequate ventilation.

5. Do not move the product when hot.

6. Do not open bath enclosure while energized - SHOCK HAZARD!

7. Repairs of electrical components should be conducted by a trained electrical technician. Incorrect replacement parts or assembly may damage the product and create a serious safety hazard for the user. Factory repair is strongly recommended.

8. Highly flammable materials such as Petroleum Ether should not be used with this product unless the Type-Z Purge positive pressure bath option is installed and operating.

9. Use of acidic or base materials may damage this product and are not recommended unless the product was ordered with the optional protective coating in PTFE.

Instrument Controls

Toggle Switch - Located on the front right bath label. Turns power to the bath on and off.

Thermostat Knob - Located on the front center bath label. Adjusts the bath temperature.

Amber Light - Located on the front left bath label. Indicates heating when heaters are energized, will cycle at temperature.

Planning and Preparation

It is important to thoroughly understand the procedures and equipment operation prior to the use of the equipment. High speed Nitrogen evaporation requires a balance of sample volume, Nitrogen flow, bath temperature, needle position and adjustment. Improper use can impair performance, contaminate samples or result in loss of samples. Environmental conditions are also important, examples include use of dry or wet heating media, hood airborne contaminates, gas purge purity, and sample handling procedures. If you are unfamiliar with the use of the N-EVAP System or are working with a new procedure, it is recommended that a trial run be made using a sample blank to determine optimal operating conditions.

The N-EVAP System is designed to handle multiple samples simultaneously up to the capacity of the equipment. Glass or plastic tubes from 10 to 30mm OD and up to 150mm height may be accommodated. Centrifuge tubes, scintillation vials, and small beakers and Erlenmeyers (50 ml) may also be used. Choice of SS needles or disposable glass pipets (fittings) are available.

The N-EVAP System is manufactured utilizing inert materials. The translucent silicone tubing used in the gas distribution system is FDA licensed and certified to be 100% Phthalate free.

Type Z-Purge Bath Operation - Optional
Please move to the next section if you do not have this option.

1. Turn on the gas flow to the Z-Purge System.
2. Adjust flow to 0.5 inches water pressure.
3. Purge bath for 10 minutes.
4. Adjust gas flow to 0.1 inches water pressure.
5. Proceed to next section

Bath Operation

1. Press the reset button on the GFCI (if present).
2. Turn the bath toggle switch on.
3. **Thermostat Control** - Adjust the bath thermostat to the desired temperature.

   N-EVAP dry bath maximum temperature 150°C.
4. Allow the bath to heat to the desired temperature and stabilize

Instrument Operation

1. Place the test tubes with samples into the sample holder plate assembly. The positions are numbered for sample identification. The sample holder spring will hold the test tube firmly in place. The test tube bottom should be pressed into the dry media.

2. Install the SS needles or pipets for the number of positions to be used. Reference the instrument setup instructions for detailed needle or pipet installation instructions.

3. Turn on the gas flow to the N-Evap System.

4. Lower the needle/valve tube assembly until the needle or pippet tip is 1/4 inch (6mm) from the solution surface.

   Adjustment:

   The valve tube assembly will slide up or down through the retaining nut on the top plate assembly by applying even pressure from the top. Tension may be adjusted by tightening or loosening the retaining nut.

5. Open the needle valve on each valve tube position which is to be used - one revolution only.

6. Adjust the flow meter needle valve to the correct flow rate for the number of positions being used. Please reference Figure 7. Doubling the gas flow rate will increase the evaporation rate up to 50% in most cases.

7. Adjust the needle valve for each sample as needed so that a dimple in the surface of the sample is created by the gas flow. Avoid splashing, as this may cause sample loss and possible contamination.

Instrument Operation (Continued)

8. Continue the evaporation until complete. For non-dryness endpoint requirements, it will be necessary for a technician to monitor the evaporation and to remove the samples manually once the desired endpoint is reached. Refer to the next section for refinements and operating tips for these procedures.

9. At the end of the evaporative process, rinse the needle or pipet tips with one or two drops of solvent using a clean pipet. This step is optional, but should be used if the following conditions apply: sample splashing occurs, needle or pipet tip is accidentally immersed in the sample, or micro quantities of material are to be recovered.

10. Remove samples when done by sliding the valve tube assembly upwards and lifting the sample from the sample holder.

11. When evaporation is complete and all samples are removed, proceed as follows:

    A. Turn off the gas source.
    B. Close the needle valves and the flow meter valve.
    C. Turn off the bath power (toggle switch).
    D. Remove and clean the needles. Pipets should be disposed of properly.
    E. Refer to Maintenance Section for bath and instrument care and upkeep.

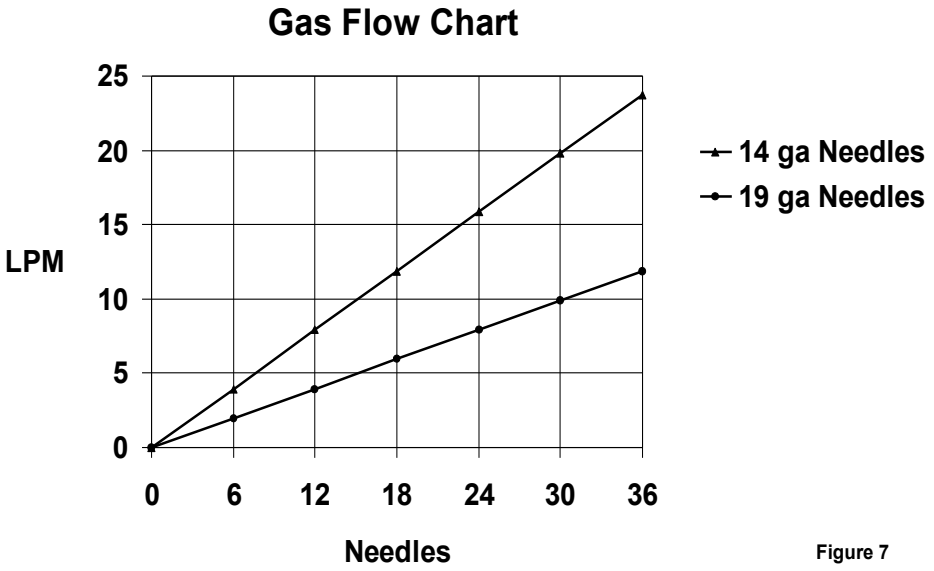


Figure 7

Maintenance and Cleaning

The N-EVAP Evaporation system is manufactured from extremely durable materials and may last for years if operated and maintained properly. The following guidelines are recommended for use with N-EVAP systems.

Cleaning - The stainless steel components may be cleaned with an abrasive or scouring pad followed by rinsing with clean water

Teflon coated parts (black in color) should be cleaned with non-abrasive materials only, otherwise scratching will result and the coating will be compromised.

Acidic Environment - When in contact with or exposed to acidic materials, vapors, or samples. The instrument should be cleaned immediately after use and neutralized with a suitable mild base solution of Sodium BiCarbonate or similar material followed by a clean water rinse. Prolonged contact with acidic materials may damage the instrument unless precautions are taken.

Needles - Needles should be cleaned after every use to reduce the chance of contamination. Solvent rinsing, autoclaving, and Soxhlet Extracting are viable techniques.

Immersion - The bath case is water resistant, not water tight. Under no circumstances should the bath be immersed in any liquid or placed in a location where this may occur.

Energize electrical outlet.
Plug in bath power cord.

SYMPTOMS	CAUSES	SOLUTIONS
		Reset light gray switch on GFCI. Contact factory for instructions.
No Power to bath.	Electrical outlet not energized. Bath power cord not plugged in. GFCI not reset. Internal electrical fault.	Bath will require service, contact factory for instructions.
Bath does not heat. (heat light is on)	Bad wire connection. Defective high temperature protection switch. Defective thermostat control	Replace thermostat, contact factory for instructions.
No temperature control. (temperature continues to rise)	Defective thermostat control	Purchase anti-evaporation floats. Replace heater, switch, or thermostat, contact factory for instructions.
Bath will not heat above 65 - 75 C.	One of two heaters defective. Defective high temp. switch Defective thermostat	
Rust in bath or equipment.	Use of acidic materials in or near equipment.	Clean carefully with steel wool. Remove source of acidic presence. Return unit to factory to be coated in Teflon. Exercise better handling procedures, avoid latex gloves, hand cream, rubber tubing.
Phthalate Contamination	Human error	Check all connections, soap/water. Close needle valves - open valves one revolution and adjust flow using flowmeter.
Inconsistent evaporation rates. (or excessive Nitrogen use)	Nitrogen leaks. Incorrect needle valve adjustment	

Service and Returns

In the event a product purchased from Organomation needs service or must be returned please follow the outlined procedures below.

1) **Contact Organomation Technical Support Department**

Before returning any product to Organomation Associates for any reason, please contact the Technical Support Department, toll free at 888-838-7300 or email sales@organomation.com. Support is available free of charge to customers of Organomation in good standing for all products manufactured by Organomation.

2) **Pack the product for return shipment**

The product should be packaged in its original shipping carton if available. If other packaging is required, use a suitable shipping container which will allow a minimum of two (2) inches clearance between the product and the side walls of the shipping carton. Peanuts, semi rigid foam, cardboard, and other items may be used inside for packaging. Care should be taken when packaging heavy items. Some packaging, such as peanuts, will allow the item to shift in transit and may result in damage.

3) **Insurance**

Most common carriers offer insurance. UPS and Federal Express automatically insure your product up to $100.00 without charge. It is highly recommended that you insure your product. **Organomation is not liable for any return shipping damages.**

4) **Documentation**

When returning items to Organomation, A Return Authorization Form must be included with the shipment. This form can be obtained by emailing sales@organomation.com.

5) **How will your return be handled?**

Organomation will evaluate the returned item for damage. If the return is a repair, the product will be examined for problems and a repair estimate will be made. The contact person will be contacted, at which time a Purchase Order will be requested. After the PO is issued, the product will be repaired and return shipped. Most repairs are done within a 24 hour period. Return for credit items will be evaluated and your account credited after the item is received. The contact person will be notified immediately in the event shipping damage has occurred.

Shipping - Claims for damage and shortage

Organomation Associates Inc. makes a sincere effort to ensure your purchase is properly packed and all items listed on the packing slip are in fact enclosed with the shipment. In the event that your purchase is damaged or if any items are missing, please follow the procedures below.

1) All packaging materials must be retained until the issue is resolved.

2) Thoroughly search all packing materials for the missing items. Review your packing list for back ordered items and the manual for a list of items affiliated with your purchase.

3) Contact Organomation immediately at 888-838-7300 or sales@organomation.com

4) If a damaged item needs to be replaced, Organomation will send this item under warranty at no charge. The damaged item must be returned to Organomation. Please follow the instructions listed in the Service and Returns section. **Important - items not returned or which are further damaged or destroyed in transit are the responsibility of the customer and will be billable.**

5) No claims for shipping damage or shortage will be accepted after 15 days of receipt of the items by the purchaser.

All items should be returned to:

Organomation Associates, Inc.
266 River Road West
Berlin, MA 01503

Specifications

Electrical Requirements:

120 or 240 VAC single phase, non switchable, 50 - 60 Hz.
3 wire grounded outlet required.
GFCI (Ground Fault Circuit Interrupter) optional.
Model 11106 & 11155 6 &12 Position Bath 500 W*
Model 11250 24 Position Bath 800 W*
* 240V units divide wattage by 2.

Electrical Compliance's:

Underwriters Laboratories Listed 2D93, E163892.
Underwriters Laboratories Canadian Listed 2D93, E163892.
See attached declaration.

Gas Services Required:

Nitrogen, clean air, or other inert gas, 5 - 30 Psig, adjustable.
Flow indication standard with all complete N-EVAP™ systems.
Quiet air compressor available.

Sample Sizes Accepted:

Glass or Plastic Test Tubes, 10 - 30 mm Dia. x 10 - 150 mm long.
Scintillation Vials
Centrifuge Tubes (size range above)
Autosampler vials (size range above)
50ml Erlenmeyer Flasks
50ml Beakers
Consult factory for optional smaller & larger sizes.

Sample Types Utilized:

Organic Solvents with Boiling Point range 30 - 140 Celsius.
Water and aqueous solutions.
For strong acidic or base materials, PTFE coating required - consult factory.

Safety Provisions

3 wire grounded power cord.
High Temperature Protection Switch
Stainless Steel construction.
Thermostatically controlled bath.
Optional Teflon Coating
Optional GFCI.
Optional Type-Z positive pressure bath purge.

Parts Identification

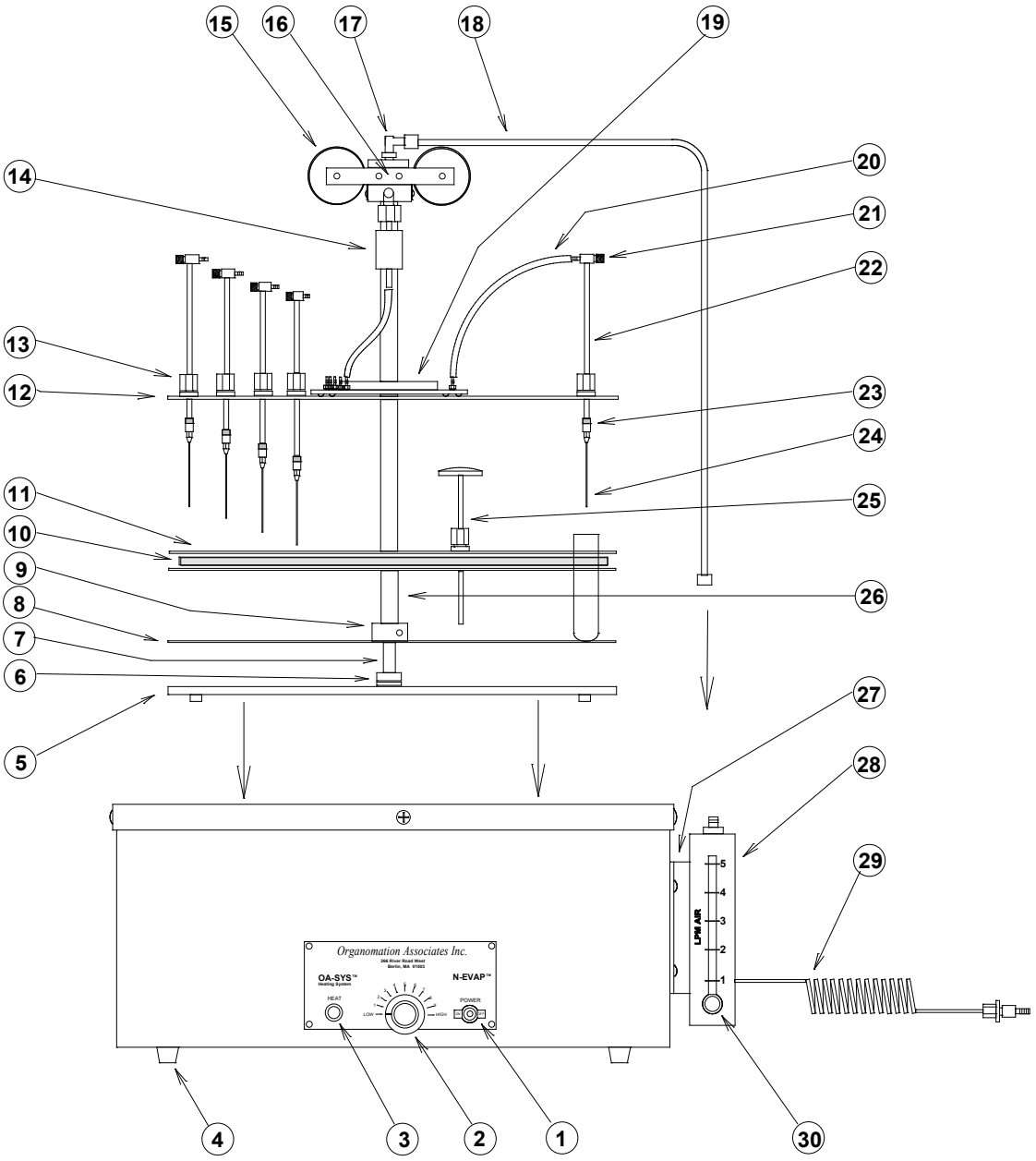


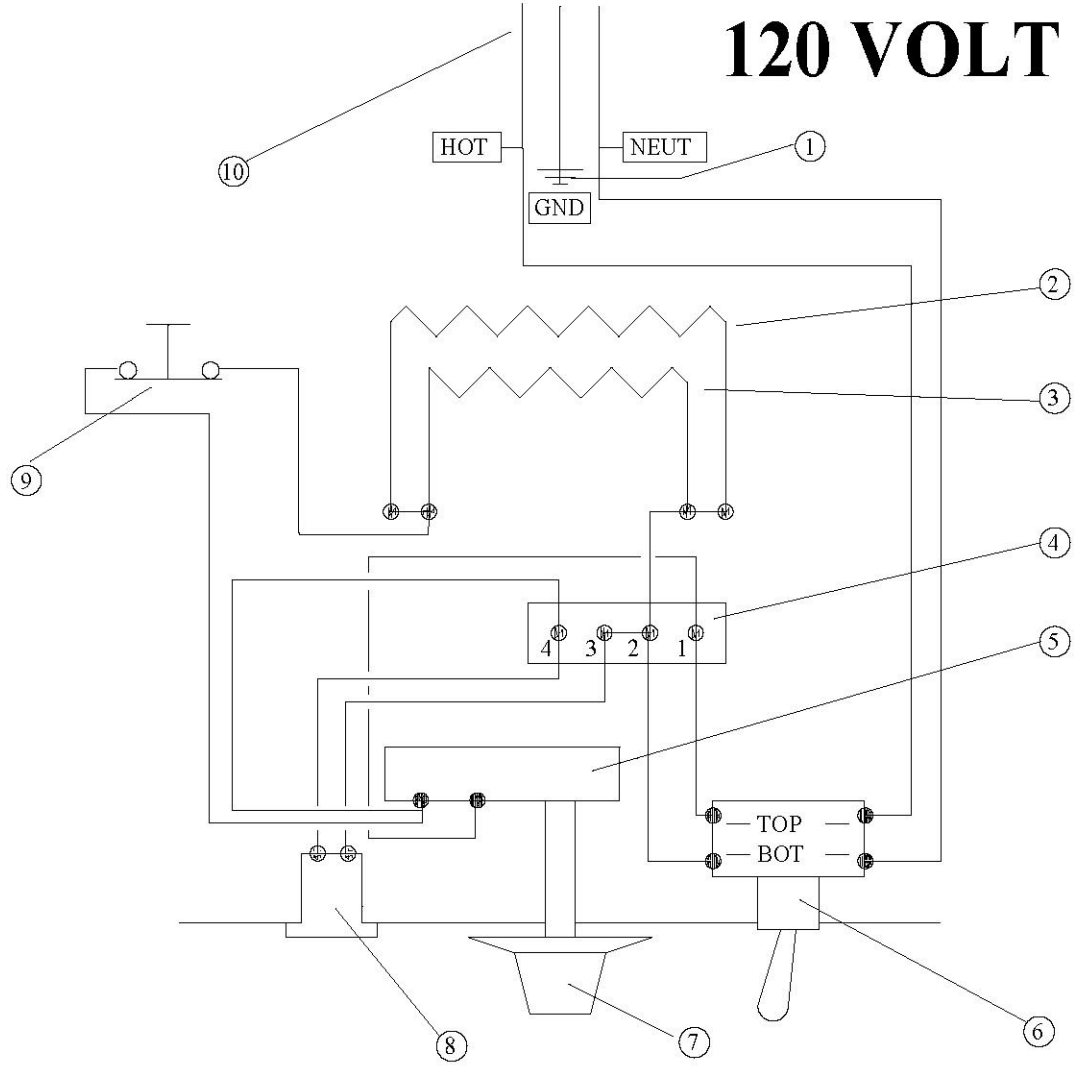
Figure 8

Parts List (See Figure 2)

Item	Part Name	Description
(1)	On/Off Toggle Switch	Turns on bath power.
(2)	Thermostat adjustment knob	Controls bath temperature.
(3)	Amber heat light	Indicates when bath is heating.
(4)	Bath Feet	Polypropylene, lifts bath from bench.
(5)	Base Plate	Sits in bath pan, holds instrument upright.
(6)	SS jam nut and lock washer	Holds rod to base plate.
(7)	SS Rod	Supports center tube and allows to spin.
(8)	Support Tray	Prevents samples from falling into the bath.
(9)	Support Tray Collar	Secures support tray to the center tube.
(10)	Sample Holder Spring	Holds various size test tubes in the sample holder.
(11)	Sample Holder plate assembly	Holds various size test tubes in the instrument.
(12)	Top Plate	Holds the valve tube assemblies.
(13)	Valve Tube Fitting	Allows each valve tube assembly to be adjusted.
(14)	Filter	Filters incoming gas and removes particulates.
(18)	SS gas tube assembly	Delivery tube to rotating unit.
(19)	Manifold with hose barbs	Parallel gas delivery manifold with hose fittings.
(20)	Silicone Tubing for Valve Tube	Tubing for valve tube gas flow.
(21)	Valve Stem	Needle valve adjustment for valve tube.
(22)	Valve Tube Assembly	Individual gas injector for each sample, adjustable.
(23)	Luer with Washer	Adapter between valve tube and needle or pippet.
(24)	SS Blunt End Needle	Gas injector.
(25)	Thermometer	Indicates bath water temperature in degrees C.
(26)	SS Center Tube	Allows rotation of instrument around stand rod.
(27)	Flow Meter Bracket	Mounts flow meter to bath.
(28)	Flow Meter	Measures gas flow to the instrument, adjustable.
(29)	Connector tube with fitting	Flexible tube to connect instrument to gas source.
(30)	Flow Meter Needle Valve	Adjusts overall gas flow to the instrument.

120 VOLT

ITEM	DESCRIPTION	QTY
1	GROUND POST	1
2	BAND HEATER	1
3	FLAT HEATER	1
4	TERMINAL STRIP	1
5	THERMOSTAT	1
6	TOGGLE SWITCH DPST	1
7	THERMOSTAT KNOB	1
8	PILOT LIGHT AMBER	1
9	HIGH TEMP. SWITCH	1
10	GFCI (Optional)	1



BATH MODEL HEATER CHART		
BATH MODEL	BATH HEATERS BAND WATTS	FLAT WATTS
5085	250	250
8105	400	400
8125	400	400
10125	550	550
10129	550	550
12145	600	600
14169	700	700
14185	700	700

ORGANOMATION ASSOC. INC.
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TITLE 110V WIRING DIAGRAM STD

DWG. # N-WIR-120-B | DATE 1/3/97 | C

SPECIFICATIONS

WIRING DIAGRAM FOR WATER BATHS

Rev. C L 0 1

240 VOLT

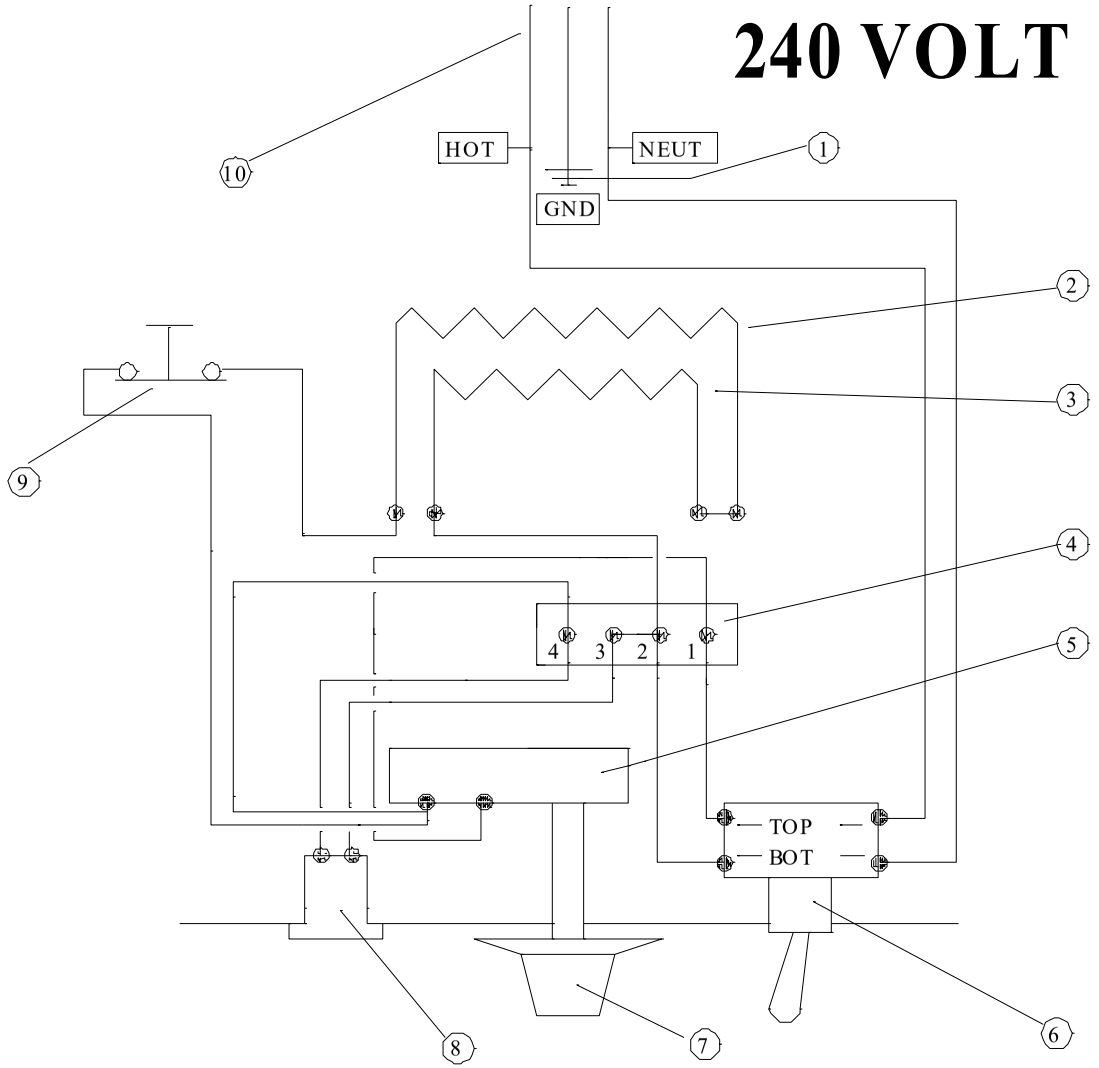
ITEM	DESCRIPTION	QTY
1	GROUND POST	1
2	BAND HEATER	1
3	FLAT HEATER	1
4	TERMINAL STRIP	1
5	THERMOSTAT	1
6	TOGGLE SWITCH DPST	1
7	THERMOSTAT KNOB	1
8	PILOT LIGHT AMBER	1
9	HIGH TEMP. SWITCH	1
10	GFCI (Optional)	1

BATH MODEL HEATER CHART

BATH MODEL	HEATER VALUES @ 120V	
	BAND WATTS	FLAT WATTS
5085	250	250
8105	400	400
8125	400	400
10125	500	500
10129	500	500
14145	700	700
14169	700	700
14185	700	700

ACTUAL SYSTEM WATTAGE AT 240 VOLTS

240 Volt units are wired in series. For total watts at 240 volts, add heater wattage together and divide by two.



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TITLE 240V WIRING DIAGRAM STD

DWG.# N-WIR-240-C | DATE 02/26/03 | D

SPECIFICATIONS

WIRING DIAGRAM FOR WATERBATHS

Rev. C L 01

Organomation™

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978-838-7300

CE Declaration of Conformity
Revised June 1, 2015

We, Organomation Associates Inc a corporation registered in Massachusetts, United States of America, declare under sole responsibility that the following equipment to which this declaration relates, meets the principal protection requirements and is in conformity with relevant sections of the applicable CE standards and other normative documents. If changes are made to the products covered by this declaration then the declaration is no longer valid.

Equipment type: Laboratory sample preparation instruments.
Bench top size, multiple sample position.
Analytical evaporators and extractors.

Model(s): N-EVAP Nitrogen evaporator models:
11106, 11155, 11250, 11634, 11645
MULTIVAP Nitrogen evaporator models:
11364, 11300, 11809, 11830, 11848, 11880
11801, 11803, 11815, 11824
S-EVAP solvent evaporator models:
12060, 12080, 12008
12027, 12037, 12010, 12018, 12048

Rot-X-Tract-S solid-liquid extractor models:
13070, 13090, 13008
Rot-X-Tract-L liquid-liquid extractor models:
13318, 13308

All of the above wired for 110 and 220 volts (-2 option code).
All of the above with dry bath and aluminum beads (-DA option code).
All of the above with acid resistant coatings (-RT option code).
All of the above with positive pressure, purged bath case (-Z option code).

EC Directives and Amendments: 89/336/EEC - Electromagnetic Compatibility Directive (EMC).

Harmonized Standards and IEC publications used: EN61326, EN61010-1

Authorized signature	Title	Date
Andrew McNiven	President	June 1, 2015

CE Declaration of Conformity 2015