BarnsteadInternational

General Purpose Aquabaths™

Model No.

Digital Water Baths:	Basic Water Baths:
18002, 18002-1CE	18000, 18000-1
18007, 18007-1CE	18005, 18005-1
18012, 18012-1CE	18010, 18010-1
18022, 18022-1CE	18020, 18020-1
18052, 18052-1CE	18050, 18050-1
18102, 18102-1CE	18100, 18100-1
18802, 18802-1CE	18800, 18800-1
18902, 18902-1CE	18900, 18900-1

Teflon® Coated:
18202, 18202-1CE
18212, 18212-1CE

057-533-00 • 7/21/05

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Safety Information

Alert Signals

Warning
Warnings alert you to a possibility of personal injury.

Caution
Cautions alert you to a possibility of damage to the equipment.

Note
Notes alert you to pertinent facts and conditions.

Hot Surface
Hot surfaces alert you to a possibility of personal injury if you come in contact with a surface during use or for a period of time after use.

Read operation manual before using equipment to familiarize yourself the controls and accessories.

When operating this equipment, always wear protective clothing, glasses and other accessories as specified by the safety regulations of your organization.

We recommend that you do not leave equipment unattended while it is in operation. Do not operate equipment with a damaged electrical cord or allow cord to come into contact with a hot surface. Do not operate equipment in an explosive atmosphere. Do not insert fingers into equipment when it is operating.

Do not modify construction and/or assembly of equipment. Keep guards in place. Do not remove tags, labels, decals or other information from the unit.

To eliminate hazard of electrical shock, make sure floor around machine is dry in the event of accidental spilling or splashing of liquids, clean up and/or neutralize the spilled liquids before continuing.

Do not use equipment for other than its intended purpose. Use only the accessories and attachments that are shipped with the equipment or are specified for it. Other accessories can produce hazards or make the unit inoperative.

Perform regular maintenance service as specified in this manual and keep unit in good repair. Do not operate with known defects. Always disconnect equipment from power source before servicing or performing any maintenance procedures.

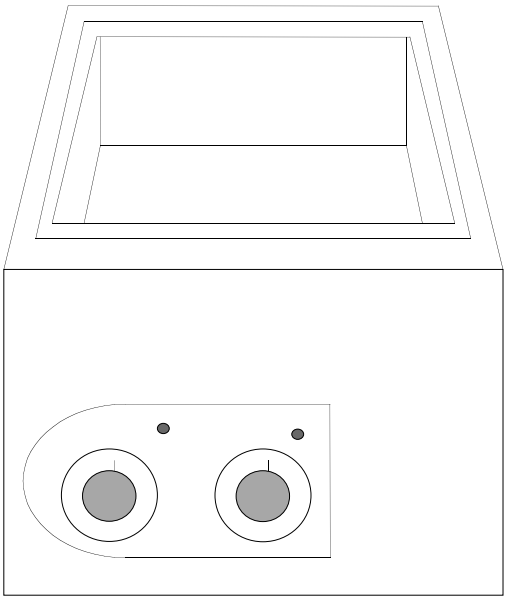
Description

The Barnstead|Lab-Line General Purpose Aquabaths are designed for use in clinical research labs, pharmaceutical labs and a multitude of chemical, biological, research and industrial laboratory applications. They are ideal for serological studies and numerous other applications requiring accurate temperature control. Special heaters positioned beneath the bath chamber transfer heat efficiently. The stainless steel diffuser plate on the chamber bottom helps distribute the heat uniformly and provides a level surface for a variety of glassware. Its removal adds an extra inch of depth to the bath.

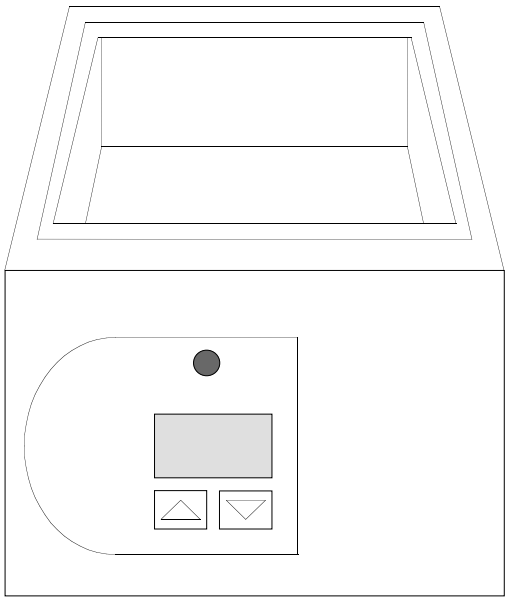
Heat is controlled from slightly above ambient to 65ºC (100ºC with cover) with uniformity of ±0.2ºC. Depending on the model, temperature is maintained in one of two ways:

- with microprocessor temperature controller,
- with dual hydraulic thermostats.

The bath chamber is constructed of seamless stainless steel and has rounded corners with no perforations. This allows easy cleaning and eliminates the possibility of water leakage onto electrical components.



Basic Water Bath



Digital Water Bath

Specifications

Digital Water Baths

Electrical Requirements

18002:	120V	50/60 Hz	500W
18002-1CE:	240V	50/60 Hz	500W
18007:	120V	50/60 Hz	1000W
18007-1CE:	240V	50/60 Hz	1000W
18012:	120V	50/60 Hz	1500W
18012-1CE:	240V	50/60 Hz	1500W
18022:	120V	50/50 Hz	300W
18022-1CE:	240V	50/60 Hz	300W
18052:	120V	50/60 Hz	300W
18052-1CE:	240V	50/60 Hz	300W
18102:	120V	50/60 Hz	1500W
18102-1CE:	240V	50/60 Hz	1500W
18202:	120V	50/60 Hz	1000W
18202-1CE:	240V	50/60 Hz	1000W
18212:	120V	50/60 Hz	1500W
18212-1CE:	240V	50/60 Hz	1500W
18802:	120V	50/60 Hz	1500W
18802-1CE:	240V	50/60 Hz	1500W
18902:	120V	50/60 Hz	1000W
18902-1CE:	240V	50/60 Hz	1000W

Temperature Range

Slightly above ambient to 100ºC with cover (included as standard equipment)
Slightly above ambient to 65ºC without cover

Uniformity

±0.2ºC

Control

±0.15ºC

Basic Water Baths

Electrical Requirements

18000:	120V	50/60 Hz	500W
18000-1:	240V	50/60 Hz	500W
18005:	120V	50/60 Hz	1000W
18005-1:	240V	50/60 Hz	1000W
18010:	120V	50/60 Hz	2000W
18010-1:	240V	50/60 Hz	2000W
18020:	120V	50/60 Hz	300W
18020-1:	240V	50/60 Hz	300W
18050:	120V	50/60 Hz	300W
18050-1:	240V	50/60 Hz	300W
18100:	120V	50/60 Hz	1500W
18100-1:	240V	50/60 Hz	1500W
18800:	120V	50/60 Hz	1500W
18800-1:	240V	50/60 Hz	1500W
18900:	120V	50/60 Hz	1000W
18900-1:	240V	50/60 Hz	1000W

Temperature Range

Slightly above ambient to 100ºC with cover (included as standard equipment)
Slightly above ambient to 65ºC without cover

Uniformity

±0.2°C

Control

±0.5°C

Tank Capacity and Dimensions Digital Water Baths

(applies to both 120V and 240V units)

Model	Liters	Interior (cm)	Exterior (cm)
18002 & 18002-1CE:	6.7	5-7/8" W x 11-5/8" D x 5" H (15 x 30 x 13)	8-3/8" W x 14" D x 9" H (21 x 36 x 23)
18007 & 18202*:	14.6	12-3/4" W x 11-5/8" D x 5" H (32 x 30 x 13)	14" W x 15" D x 9" H (36 x 38 x 23)
18012 & 18012-1CE:	44.0	28” W x 16” D x 6” H (71 x 41 x 15)	31-5/8” W x 19-5/8” D x 9” H (80 x 50 x 23)
18022 & 18022-1CE:	2.0	5-7/8” W x 11-5/8” D x 2-1/2” H (15 x 30 x 6)	7-1/2” W x 14-1/2” D x 7” H (19 x 37 x 18)
18052 & 18052-1CE:	3.1	5-7/8” W x 5-3/8” D x 5” H (15 x 14 x 13)	8-3/8” W x 7-7/8” D x 9” H (21 x 20 x 23)
18102 & 18212*:	22.0	11-5/8” W x 19-1/2” D x (30 x 50 x 13)	5” H 13-3/8” W x 21-1/4” D x 9” H (34 x 54 x 23)
18802: (Sm. bath)	6.7	5-7/8” W x 11-5/8” D x 5” H (15 x 30 x 13)	23-1/4” W x 14-1/4” D x 9” H (59 x 36 x 23)
18802-1CE: (Lg. bath)	14.6	12-3/4” W x 11-5/8” D x 5” H (32 x 30 x 13)	23-1/4” W x 14-1/4” D x 9” H (59 x 36 x 23)
18902 & 18902-1CE:	33.0	14” W x 12” D x 11” H (36 x 30 x 28)	16-3/8” W x 16-3/8” D x 12” H (42 x 42 x 30)

**Models 18202 and 18202-1CE are identical to 18007 and 18007-1CE with the exception that the baths are teflon coated; additionally, 18212 and 18212-1CE are identical to 18102 and 18102-1CE in the same manner.*

Tank Capacity and Dimensions Basic Water Baths

Model	Liters	Interior (cm)	Exterior (cm)
18000 & 18000-1:	6.7	5-7/8” W x 11-5/8” D x 5” H (15 x 30 x 13)	8-3/8” W x 14” D x 9” H (21 x 36 x 23)
18005 & 18005-1:	14.6	12-3/4” W x 11-5/8” D x 5” H (32 x 30 x 13)	14” W x 15” D x 9” H (36 x 38 x 23)
18010 & 18010-1:	44.0	28” W x 16” D x 6” H (71 x 41 x 15)	31-5/8” W x 19-5/8” D x 9” H (80 x 50 x 23)
18020 & 18020-1:	2.0	5-7/8” W x 11-5/8” D x 2-1/2” H (15 x 30 x 6)	7-1/2” W x 14-1/2” D x 7” H (19 x 37 x 18)
18050 & 18050-1:	3.1	5-7/8” W x 5-3/8” D x 5” H (15 x 14 x 13)	8-3/8” W x 7-7/8” D x 9” H (21 x 20 x 23)
18100 & 18100-1:	22.0	11-5/8” W x 19-1/2” D x 5” H (30 x 50 x 13)	13-3/8” W x 21-1/4” D x 9” H (34 x 54 x 23)
18800: (Sm. bath)	6.7	5-7/8” W x 11-5/8” D x 5” H (15 x 30 x 13)	23-1/4” W x 14-1/4” D x 9” H (59 x 36 x 23)
18800-1: (Lg. bath)	14.6	12-3/4” W x 11-5/8” D x 5” H (32 x 30 x 13)	23-1/4” W x 14-1/4” D x 9” H (59 x 36 x 23)
18900 & 18900-1:	33.0	14” W x 12” D x 11” H (36 x 30 x 28)	16-3/8” W x 16-3/8” D x 12” H (42 x 42 x 30)

Declaration of Conformity

(for 220-240 volt, CE models only)
Barnstead International hereby declares under its sole responsibility that this product conforms with the technical requirements of the following standards:

EMC:	EN 61000-3-2	Limits for harmonic current emissions
	EN 61000-3-3	Limits for voltage fluctuations and flicker
	EN 61326-1	Electrical equipment for measurement, control, and laboratory use; Part I: General Requirements
Safety:	EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use; Part I: General Requirements
	EN 61010-2-010	Part II: Particular requirements for laboratory equipment for the heating of materials

per the provisions of the Electromagnetic Compatibility Directive 89/336/EEC, as amended by 92/31/EEC and 93/68/EEC, and per the provisions of the Low Voltage Directive 73/23/EEC, as amended by 93/68/EEC.

The authorized representative located within the European Community is:

Electrothermal Engineering Ltd.
419 Sutton Road
Southend On Sea
Essex SS2 5PH
United Kingdom

Copies of the Declaration of Conformity are available upon request.

Unit's Environmental Operating Conditions

Pollution Degree*:	2
Installation Category*:	II
Altitude:	2000 Meters MSL (Mean Sea Level)
Humidity:	80% maximum, non-condensing
Electrical Supply:	120VAC or 240VAC
Voltage Tolerance:	±10% of normal rated line
Temperature:	15ºC to 40ºC
Product Usage:	This product is intended for use indoors only

*Refer to IEC 664-1

Unpacking and Installation

Note
Leave unit disconnected when not in use.

Electrical Requirements

120 VAC models require a 120 VAC, 50/60 Hz power source. They are supplied with a 3-wire line cord. It should be plugged into an outlet designed for 3-prong plugs. If an extension cord is used, it also should be the 3-wire grounded type. For an outlet designed to accept 2-prong plugs (ungrounded), it is required that a qualified electrician replace the outlet with a new grounded type.

240 VAC models require a 240 VAC, 50/60 Hz power source. Because of the variety of plug configurations in use worldwide for 240 VAC power, the unit may be furnished with the plug removed. The user must install a plug to conform with local code and configuration requirements.

If a plug must be installed, use only the 3-prong grounded type, rated for the unit load requirements and matching the power outlet. Make sure the green ground wire is secured to the plug ground terminal.

Setup

Place the water bath on the table or bench where it is to be operated.

It should be in a level position, though this is not necessary for the operation of the unit. Additionally, it should be out of direct drafts unless a gable cover is used.

Caution
Do not operate the unit without water in the water compartment. To do so may result in damage to the heaters.

Fill the water compartment with water, preferably distilled or chemically softened, to the desired level.

Move the power switch to the **OFF** position and plug the power cord into required outlet.

Operation

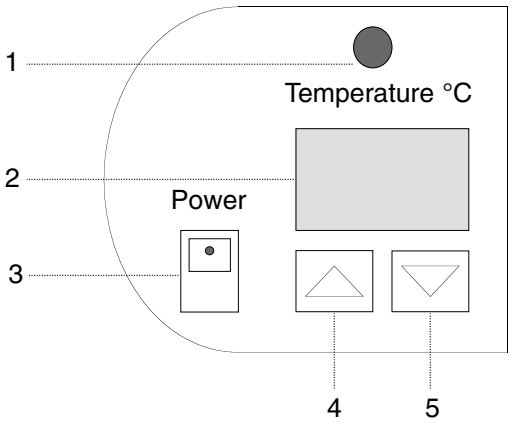
Warning
Do not use in the presence of flammable or combustible materials or explosive gases. Fire or explosion may result causing death or severe injury.

Warning
Do not heat any substance above a temperature that will cause it to emit toxic fumes. Death or severe injury may result.

Warning
At higher temperatures the exterior of the bath becomes warm to the touch. Do not touch these surfaces.

Warning
Do not operate the unit if any of the temperature controls become inoperative; a hazardous condition will develop which can result in injury or death and property damage.

Controls, Digital Water Baths



1. Temperature Status Lamp (Amber)
2. LED Temperature Display
3. Power Switch (OFF/ON)
4. UP Arrow Key
5. DOWN Arrow Key

Bath Temperature is Maintained by Microprocessor Controller

The control panel consists of a microprocessor temperature controller, LED temperature readout, power switch and one pilot light that indicate heater is operational.

Setting the Temperature, Digital Water Baths

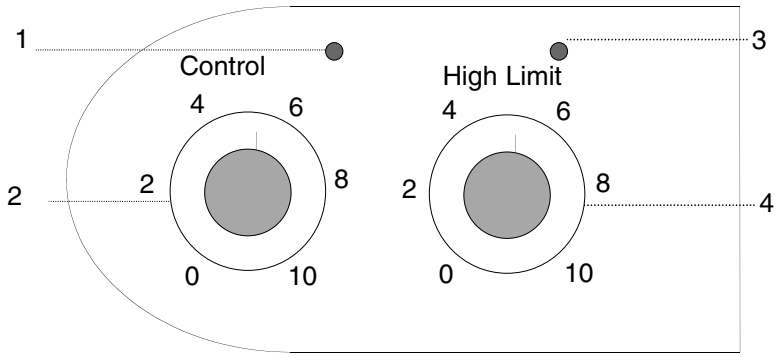
- Turn the power switch **ON**. The display will flash the current revision number for about 5 seconds, then the temperature will be displayed.
- Press and release either the UP or DOWN ARROW KEY once. The display will flash the existing setpoint temperature already established.
- To change a temperature setpoint, press the appropriate UP or DOWN key to raise or lower the temperature to a desired value and release. When the displayed temperature stops flashing-showing the actual temperature of the water at the moment. The new setpoint is established.

Temperature Calibration, Digital Water Baths

- Place a thermometer in the approximate geometric center of the water pan; allow at least 1 full hour for the temperature to stabilize.
- Press and hold both the UP and DOWN ARROW KEYS together at the same time until the display begins to flash a left and right decimal point.
- Check the thermometer to see if the display temperature matches the thermometer temperature.
- If the displayed temperature does not match the thermometer reading, press the appropriate UP or DOWN ARROW KEY to adjust the displayed temperature to match the thermometer temperature. Upon releasing the ARROW KEY, the display will stop flashing and the displayed temperature will match the thermometer temperature. Calibration data is automatically entered and stored.

Note
If the up or down arrow keys are not touched for 5 seconds the display will default to the actual temperature.

Controls-Basic Water Baths



1. Control Panel Status Lamp (Amber)
2. Control Thermostat
3. Hi-Limit Status Lamp (Red)

Water Bath Temperature is Regulated by Two Thermostats

The control panel consists of two thermostats (control and high limit) and two pilot lights that indicate which thermostat is controlling temperature. The dials have a graduated scale that is used for reference only.

Setting the Temperature, Basic Water Baths

- To set the bath temperature:
- Turn the power switch **ON**.
- Rotate the high limit knob clockwise to its maximum setting.
- Rotate the control thermostat to an approximate desired setting. Allow time for temperature of bath to stabilize. Several minor adjustments of the control thermostat will have to be made before reaching the desired temperature. However, always allow plenty of time between adjustments to assure temperature stabilization.
- After the desired temperature has been attained and stabilized, the high limit thermostat must be set properly to prevent an over-temperature condition, if the control thermostat should ever fail. The amber status lamp (heating) will always cycle **ON** and **OFF** at any given temperature setting. The setting of the high limit thermostat must be made during that period of the ON-OFF cycle when the amber heat status lamp is on. With the lamp **ON**, rotate the high limit thermostat from its full clockwise direction slowly counterclockwise until the point where the amber status lamp goes out and the red hi-limit status lamp goes **ON**. Rotate the high limit thermostat knob clockwise a slight amount, representative of about 2 or 3 degrees higher than the control knob setting. Should the control thermostat ever fail, the maximum temperature that the water in the bath will reach is now limited to the high limit thermostat setting which is approximately 2º or 3º above the desired temperature setting.

Note
Each time the control thermostat is reset, there must be an accompanying adjustment in the high-limit thermostat.

Caution
The high temperature cutout is a non-resettable device and must be replaced in the event it has been activated by control thermostat failure.

Models 18020 and 18020-1

These units are designed with a single temperature control thermostat and a high temperature cutout that is integrated into the circuitry. The high temperature cutout will be activated in the event of failure of the temperature control thermostat and will abort power to the heater.

Maintenance

Note
Make no attempt to service or repair a Barnstead|Lab-Line product under warranty before consulting your Barnstead|Lab-Line dealer. After the warranty period, such consultation is still advised, especially when the repair may be technically sophisticated or difficult.

If assistance is needed beyond what the distributor can provide, please call the Barnstead International customer service department at 1-800-553-0039. No merchandise, however should be returned without prior approval from Barnstead International.

Warning
Disconnect from the power supply prior to maintenance and servicing.

Warning
Disconnect unit from power source prior to cleaning. We recommend all service be performed by qualified service personnel.

Caution
Electrolysis can damage stainless steel. This occurs when an object is allowed to rest directly on the surface of stainless steel, trapping moisture that becomes oxygen-starved, but is surrounded by water-containing oxygen.

Properly operated and maintained, the water baths will provide trouble- free service for a long time.

Draining the Tank

The bath water needs to be drained and replaced periodically with fresh water. We recommend using a siphon, siphoning hand pump or a small electric pump to drain the water.

Routine Tank Cleaning

Clean the tank and components immersed in the bath with a solution of mild soapy water. Use a sponge, cloth or synthetic sponge scrubber. Rinse well. Dry thoroughly.

The Alloy Called Stainless

Stainless steel is an alloy of steel with chromium and nickel that increase the metal's resistance to rust and corrosion. Yet, if not properly cared for, stainless steel can rust and corrode.

Exposure to air provides the passivation, or oxide layer coating, for clean stainless by producing a thin, durable chromium-oxide film that forms rapidly on the alloy surface to give stainless its characteristic "stainless" quality. Also exposure of the surface to other oxidizing environments can produce a passivating film or coating.

However, if free oxygen is not available due to scale or contamination buildup the metal surface may become vulnerable to rusting and corrosion as well as pitting. But by maintaining neutral pH and conducting frequent cleanings with detergent and water, years of trouble-free service from stainless steel products can be obtained.

Some Stainless Guidelines to Consider

Distilled water is recommended. Please note, if this water is very pure it may be corrosive to stainless. When filling a bath or incubator, ALWAYS ADD 2 to 40 PPM (20 TO 40 MG/LITER) DISODIUM PHOSPHATE OR SODIUM BICARBONATE, ADJUSTING DOSAGE TO PROVIDE A pH VALUE OF 7 TO 9.

If not available, use clean, aerated soft tap water provided the total solids concentration is < 500 PPM. WE DO NOT RECOMMEND USING 18 MEG OHM DEIONIZED WATER. If this is the only source of treated water available-mix with regular tap water at a 50/50 ratio.

The pH Factor

Check pH regularly. If pH is <6.0, add disodium phosphate to increase pH to a 7 to 9 value. Sodium carbonate or sodium bicarbonate may be used but they tend to form scale that must be rinsed out regularly. If pH is >10.0, add sodium bisulfate to decrease pH to a 7 to 9 value. Avoid adding harsh alkalines or acids since these may cause localized corrosion and result in unstable pH.

Warning
If it is necessary to use the following chemicals, limit exposure time to a maximum of 3 hours-always clean surfaces immediately after use.

Special Considerations

Chemicals which should be limited to a 3 hour maximum exposure time to stainless steel are:

Aluminum chloride	E.D.T.A.
Potassium permanganate	Barium chloride
Ferrous chloride	Potassium thiocyanate
Calcium chloride	Lysol
Sodium hypochlorite	Chlorinated Lime
Mercury salts	Stannous chloride
Citric acid (boiling)	Phenol
Tartaric acid	Dakin's solution

Caution
Extreme care must be taken when handling these materials. Always work in an area with adequate ventilation. Use the precautions as outlined in the material safety data sheet (MSDS) and the manufacturer's instructions for the product being utilized. Also, follow the personal protection index found in the hazardous materials information system (HMIS) section of the MSDS.

Note
The use and disposal of these chemicals may be regulated by your local city codes; consult those regulations before of disposing of these materials.

Caution
Extreme care must be taken when handling these materials. Always work in an area with adequate ventilation. Use the precautions as outlined in the material safety data sheet (MSDS) and the manufacturer's instructions for the product being utilized. Also, follow the personal protection index found in the hazardous materials information system (HMIS) section of the MSDS.

Note
The use and disposal of these chemicals may be regulated by your local city codes; consult those regulations before disposing of these materials.

BE ADVISED: NEVER USE THE FOLLOWING ON STAINLESS STEEL:

Aqua regia
Ferric chloride
Iodine
Sodium acid
Sodium azide

Chemical spills, especially those agents listed here, should be removed as soon as possible and the stainless steel surface cleaned with mild soapy water followed by a clean water rinse.

Cleansing Agents

Anti-fungal and anti-bacterial additives are permissible to use as long as the pH of the aqueous solution is kept within the range of 7 to 9. These are available through laboratory distributors-be sure to CONFIRM that they are not harmful to stainless steel.

Do not use any metallic pads. Instead, for stubborn stains, use a plastic light-duty cleansing pad and rub GENTLY in the direction of the metal grain.

If stains continue to persist, use one of the following chemicals and methods.

Cleaning Methods

- Any of a variety of "scale removers" available at local supermarkets or hardware stores used for the cleaning of coffee marks, humidifiers or vaporizers.
- A 15% to 35% phosphoric acid solution available from laboratory supply distributors for scale and rust removal. Allow solution to soak the surface affected until rust and scale is loosened. Immediately follow with a clean water rinse.
- Citric acid based cleaners.
- Bathroom tub and tile cleaners.

- A mixture of 20% nitric acid and 1.5% hydrofluoric acid (or hydrochloric acid). Swab solution on surface allowing it to remain until rust is loosened. Immediately follow with a clean water rise. This method should ONLY be used if SEVERE rust and scale stains are present.

- Oxalic acid 2% to 5% in warm water. Swab solution on surface allowing it to remain until rust is loosened. Immediately follow with a clean water rinse. This method should ONLY be used if SEVERE rust and scale stains are present.

Regardless of the approach utilized, ALWAYS follow the manufacturer's directions and allow the chemicals to do the cleaning with MINIMAL scrubbing.

Always follow cleanings with a clean water rinse. Air dry.

Materials Effective in Disinfecting

- Glutaraldehyde

- Alcohol

BE ADVISED: this information is intended as guidelines only and Barnstead International makes no claim as to the suitability to any particular situation. Consult your staff chemist to determine what would be best for your stainless steel product and laboratory.

Refilling the Tank

Use DISTILLED only. Do not use tap water-it will cause mineral deposits to build up. Add a fungicide/bactericide (not chlorine-based) to the tank to increase the useful life of the water.

Troubleshooting

The following is intended as a guide to help in servicing this unit, if problems should occur.

Note
Before attempting any repair, disconnect power cord from outlet.

Symptom	Possible Causes of Problem
Unit is does not operate:	Unit is not plugged in or not plugged into proper outlet.
	ON/OFF switch is in the OFF position.
	Check fuses. Fuse may be blown.
Unit does not heat up:	Unit not plugged in or not plugged into proper outlet.
	ON/OFF switch is in OFF position.
	Faulty heater.
	Faulty controller, digital water bath.
	Faulty thermostat, basic water bath.
	Control thermostat set at 0 basic water bath.
	OTP (Overtemperature Protection) has tripped. Reset OTP.
LED reads "EEE" Digital Water Bath:	This is not a problem with the LED but the reading that is obtained when water bath temperature has reached 100ºC.

Over Temperature Protection

In the unlikely event that the programmed hi-limit and the user adjustable hi-limit thermostats fail, there is a third over temperature thermostat. The thermostat is located underneath the water bath's bottom panel attached to the pan. If the water bath fails to heat with the "HEAT ON" lamp lit and the user settable hi-limit thermostat set to the fully clockwise position, it will be necessary to reset the secondary over temperature thermostat. To do so, proceed as follows:

1. Disconnect power cord from outlet.
2. Drain bath
3. Remove bottom panel.
4. Locate the thermostat underneath insulation. The thermostat has a small button that needs to be pressed in to reset the thermostat.
5. Once the thermostat is reset, reposition insulation, reinstall the bottom panel, plug the power cord back into the outlet and verify the unit is heating again.
6. If the water bath still fails to heat, contact Barnstead International customer service for further assistance.

Replacement Parts

Description	Part Number
Cordset:	470-105-00
Grommet:	790-247-00
Diffuser Trays:	
18022:	593-115-00
18052:	593-114-00
18802 (small), 18002:	593-110-00
18802 (large), 18007:	593-111-00
18102:	593-118-00
18012:	018-824-00
18900, 18902:	584-112-00
18202:	593-111-01
18212:	593-118-01
18020:	592-842-00
18050:	592-843-00
18800, 18000:	592-844-00
18800, 18005:	592-845-00
18100:	592-846-00
18010:	592-847-00
Gable Covers:	
18000, 18800, 18002, 18022, 18802 (small), 18020, 18800 (small):	720-428-00
18007, 18800, 18802 (large), 18202, 18005, 18800:	720-429-00
18102, 18212, 18100:	720-432-00
18012, 18010:	720-430-00
18902, 18900:	720-433-00
18050, 18052:	720-433-01
Over-temperature Protection (OTP):	
18000, 18000-1, 18005, 18005-1, 18010, 18010-1, 18100, 18100-1, 18800, 18800-1, 18900, 18900-1, 18002, 18002-1CE, 18007, 18007-1CE, 18012, 18012-1CE, 18102, 18102-1CE, 18202, 18202-1CE, 18212, 18212-1CE, 18802, 18002-1CE, 18902, 18902-1CE:	330-400-00
18020, 18020-1, 18022, 18022-1CE, 18050, 18050-1, 18052, 18052-1CE:	330-403-00
Fuses:	
5 amp	
18000-1, 18020, 18022,18050, 18052, 18002-1, 18002-1CE (2):	330-273-00
10 amp	
18000, 18002, 18005-1, (2), 18007-1, 18007-1CE (2), 18100, 18900-1, 18102-1, 18102-1CE (2), 18902-1, 18902-1CE (2):	330-239-00
20 amp	
18005, 18007, 18900, 18902,18100, 18102:	330-241-00
15 amp	
18010-1 (2), 18800-1, 18802-1, 18802-1CE(2),18012-1, 18012-1CE (2):	330-298-00
20 amp	
18010, 18012,18800, 18802:	330-299-00
4 amp	
18020-1,18022-1, 18022-1CE, 18050, 18052-1, 18052-1CE:	330-371-00

Description	Part Number
Fuse Holder:	
18012, 18012-1, 18012-1CE, 18802, 18802-1, 18802-1CE, 18010, 18010-1, 18010-1CE, 18800, 18800-1, 18800-1CE:	330-297-00
18002:	330-237-00
18000, 18005, 18005-1, 18020, 18050, 18100-1, 18900:	330-273-01
Thermometer Holders:	
18010:	592-170-00
18000, 18005, 18020, 18050, 18100,18800, 18900:	592-106-00
Heaters:	
120V Units:	340-183-00
240V Units:	340-185-00
18020:	340-331-00
18020-1:	340-326-00
18050, 18052:	340-184-00
18050-1, 18052-1:	340-186-00
High Limit Temperature Cutouts:	
18020, 18020-1:	330-261-00
Rubber Feet:	
18020, 18050, 18000, 18005, 18900, 18022,18052,18002,18007,18202:	790-214-00
18010, 18100, 18100-1, 18800, 18800-1, 18102,18012,18802,18902,18212:	790-225-00
Status Lamp Base, 120V/240V:	360-233-01
Status Lamp Lens (Red):	360-234-00
Status Lamp, Temperature (Amber):	360-235-00
Thermometer Grommet:	790-247-00
Switch, Power, 120V Units:	440-359-00
Switch, Power, 240V Units:	440-292-00
Temperature Controller, 120V:	485-197-00
Temperature Controller, 240V:	485-404-00
Temperature Sensor, 120-240V:	410-663-00
Thermostats:	
18000, 18005, 18010, 18100, 18800,18900:	920-232-00
18020:	920-313-00
18050:	920-301-00
Wiring Diagrams:	
18002, 18007, 18012, 18022, 18052, 18102,18902, 18202, 18212:	229-415-00
18802:	229-416-00
18002-1CE, 18007-1CE, 18012-1CE, 18022-1CE, 18052-1CE, 18102-1CE, 18902-1CE, 18202-1CE, 18212-1CE:	229-417-00
18802-1CE:	229-418-00
18000, 18005, 18010, 18050, 18100, 18900:	229-411-00
18800:	229-412-00
18020:	229-409-00
18000-1, 18005-1, 18010-1, 18050-1, 18100-1, 18900-1:	229-413-00
18020-1:	229-410-00
18800-1:	229-414-00

Ordering Procedures

Please refer to the Specification Plate for the complete model number, serial number, and series number when requesting service, replacement parts or in any correspondence concerning this unit.

All parts listed herein may be ordered from the **Barnstead International** dealer from whom you purchased this unit or can be obtained promptly from the factory. When service or replacement parts are needed we ask that you check first with your dealer. If the dealer cannot handle your request, then contact our Customer Service Department at 563-556-2241 or 800-553-0039.

Prior to returning any materials to **Barnstead International**, please contact our Customer Service Department for a “Return Goods Authorization” number (RGA). Material Returned without an RGA number will be returned.

Two Year Limited Warranty

Barnstead International ("BARNSTEAD") warrants that a product manufactured by Barnstead shall be free of defects in materials and workmanship for two (2) years from the first to occur of (i) the date the product is sold by BARNSTEAD or (ii) the date the product is purchased by the original retail customer (the "Commencement Date"). Except as expressly stated above, BARNSTEAD MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS AND EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF DESIGN, MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

An authorized representative of BARNSTEAD must perform all warranty inspections. In the event of a defect covered by BARNSTEAD's warranty, BARNSTEAD shall, as its sole obligation and exclusive remedy, provide free replacement parts to remedy the defective product. In addition, for products sold by BARNSTEAD within the continental United States or Canada, BARNSTEAD shall provide provide free labor to repair the products with the replacement parts, but only for a period of ninety (90) days from the Commencement Date.

BARNSTEAD's warranty provided hereunder shall be null and void and without further force or effect if there is any (i) repair made to the product by a party other than BARNSTEAD or its duly authorized service representative, (ii) misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modification or alteration of the product by any customer or third party or (iii) use of replacement parts that are obtained from a party who is not an authorized dealer of BARNSTEAD.

Heating elements, because of their susceptibility to overheating and contamination, must be returned to the BARNSTEAD factory and if, upon inspection, it is concluded that failure is due to factors other than excessive high temperature or contamination, BARNSTEAD will provide warranty replacement. As a condition to the return of any product, or any constituent part thereof, to BARNSTEAD's factory, it shall be sent prepaid and a prior written authorization from BARNSTEAD assigning a Return Goods Number to the product or part shall be obtained.

IN NO EVENT SHALL BARNSTEAD BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY DAMAGES RESULTING FROM LOSS OF USE OR PROFITS, ANTICIPATED OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR PERFORMANCE OF ANY PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), ANY THEORY OF STRICT LIABILITY OR REGULATORY ACTION.

The name of the authorized Barnstead International dealer nearest you may be obtained by calling 1-800-446-6060 (563-556-2241) or writing to:

BarnsteadInternational

Your Lab Starts Here

ISO 9001 REGISTERED

2555 Kerper Boulevard
Dubuque, Iowa 52001-9918
Phone: 563-556-2241 or 800-553-0039
Fax: 563-589-0516
E-mail: mkt@barnstead.com
www.barnstead.com