

## Smart•Therm™ STS II Operating & Maintenance Manual



**Model:** DX811220 (208V/230V/240V, 50/60Hz, 1-Phase)

### Smart•Therm™ STS II: Induction Base Heating System

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**For Service Information call 1.888.673.4639**

*Please provide following information:*

- Model number
- Serial number (from bottom of unit)

Manual No. STSII\_0612

## INTRODUCTION

Congratulations! You have purchased the new Dinex® Smart•Therm™ STS II Induction Charger. Your Dinex Smart•Therm STS II induction heated base system, when used within a controlled hot food trayline process and covered with Dinex insulated domes, will keep hot plated food satisfying for up to one hour from plating.

Please read this manual for helpful guidelines on how to use your new equipment. Should you have any questions concerning the equipment, please call Dinex Service at 1.888.673.4639.

**IMPORTANT:** For your safety, read and follow all cautions, information, and warnings.

### FREIGHT DAMAGE CLAIMS

Your Smart•Therm STS II Induction Charger was carefully inspected and packed before leaving our factory. The transportation company assumes full responsibility for the safe delivery of this equipment. Dinex cannot assume responsibility for damage or loss incurred during transit. Visible damage or loss should be noted on the freight bill and signed by the person making the delivery.

A freight claim should be filed immediately with the transportation company. If damage is unnoticed or concealed until the equipment is unpacked, notify the transportation company immediately and tell them you want to file a concealed damage claim. This must be done within fifteen (15) days after delivery was made. Be sure to retain all packing materials and cartons.

**ATTENTION:** Use of this symbol identifies a potentially hazardous situation which, if not avoided, may result in damage to the machine or injury to the operator.

**CAUTION:** If the product is used without observing the information given under this symbol, minor personal injury, or damage to equipment may result.

**ATTENTION:** Installation of this equipment should be performed only by persons qualified or licensed to install electrical equipment.

- Adjustments and service work should be performed only by qualified service technicians.
- This equipment is intended for commercial use only. Not for household use.
- Use of other than genuine Dinex replacement parts or service work performed by those other than authorized Dinex service agents will void the warranty.
- Do not use corrosive cleaners on the equipment. Use only mild detergents.

### APPLICATION & USE

The equipment is for commercial use in the foodservice industry. It provides maximum induction heating compatible with Dinex Smart•Therm bases. Use only with Dinex Smart•Therm bases.

### SAFETY

The instructions contained in this manual provide important guidelines for the equipment user regarding correct and safe installation. Particular attention should be paid to the precautions given in various parts of this manual. Do not attempt to repair this equipment. Repairs must be performed by authorized personnel only.

- Never use the equipment as a work surface or cutting board.

- Do not attempt to heat anything other than a Dinex base.

**IMPORTANT:** Do not place a Smart base in a microwave oven.

**INFORMATION:** This appliance is for commercial use only and must be used exclusively for the purposes prescribed.

**IMPORTANT:** The following instructions reduce the risk of fire, electrical shock, or injury.

## INSTALLATION

### SET UP

1. Carefully remove any packing material from the induction charger and check loose packing material for small parts or accessories. Inspect the charger for concealed damage before placing packing material aside. Keep the packaging until you are confident with the equipment performance.
2. **MAKE SURE THAT INCOMING VOLTAGE MATCHES THE CHARGER REQUIREMENTS.** A product identification label on the bottom of the unit specifies the operating voltage, current, frequency, phase, and maximum wattage of the charger. **Plugging or wiring the charger into less voltage than the charger is rated may significantly decrease the performance of the unit or damage internal electrical components.**
3. Do not place foreign objects on the charger, or between the Dinex base and the charger surface. Foreign objects may heat within the induction field and cause damage to the charger surface and/or base.
4. Do not use any Smart•Therm STS II charger that has a damaged cord or plug. Consult the warranty and follow the instructions for service.
5. Do not let the power cord touch hot surfaces.
6. The center of the charger may get hot to the touch after hours of continuous use. Use caution when loading and unloading bases.
7. The charger requires ample airflow to cool the internal electronic components. Air is pulled in from the bottom front and exhausted to the left. Please assure that nothing obstructs the airflow. Allow at least two inches from a wall or partition.
8. A dedicated electrical circuit is recommended for each Smart•Therm STS II charger.

**IMPORTANT:** Every installation site has different electrical wiring requirements. Because many different local codes exist, it is the owner and installer's responsibility to comply with all federal, state, and local codes. Dinex is not responsible for any consequential damages, either expressed or implied, as a result of failure to comply with installation requirements.

**CAUTION:** Please do not attempt to open the charger or perform service of any kind. This product can only be serviced by a Dinex Authorized Service Agent or designated Dinex personnel. Contact Dinex at 1.888.673.4639 for service information.

**CAUTION:** Any installation not matching the requirements discussed in this manual will automatically void the product's warranty.

**INSTALLATION**

1. The Smart•Therm STS II Charger can be installed on top of a flat, level counter top or shelving, being careful to maintain at least two inches of clearance on all sides of the charger for cooling. Do not place over paper or loose material that may inhibit air flow into the bottom air intakes. Consider the Dinex Induction Stand (Accessory product) ICSTANDM (Mobile with casters) ICSTAND (Not mobile).
2. The charger must be plugged into an appropriate grounded power receptacle. Check rating plate on the charger to verify correct voltage.

**! IMPORTANT:** Each charger should be connected to its own dedicated circuit. They should not be connected to circuits sharing compressors or other heavy current draw devices (i.e. plate heaters, steam tables, etc.)

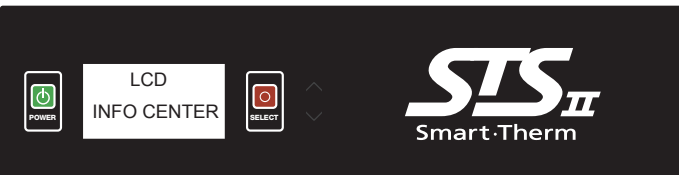
3. Do not move the Smart•Therm STS II Charger when it is electrically connected.
4. A grease filter is mounted to the bottom of the unit. Assure it is seated and free of excessive debris or grease.

**OPERATION INSTRUCTIONS**

**Smart•Therm STS II Induction System**

1. Make sure that your Smart•Therm STS II Charger is plugged into an energized circuit as described in the previous section. This should be a dedicated circuit, not shared with any devices utilizing motors, compressors, or components requiring a heavy current draw.

**User Interface:**



**POWER** key will turn the unit on and off.

**SELECT** key will be used to reset error conditions, clear informational messages, and select or set options.

**UP/DOWN** arrow keys (these are not embossed – just right of the SELECT key) are used to move among Manager Options in the OPTIONS menu.

**LCD Info Center** provides feedback on the status of bases charging and equipment operation.

2. The Smart•Therm STS II Charger is turned on by pressing the **POWER** button on the left front of the switch panel. The LCD Info Center will display “Waiting for base...” indicating the Smart•Therm STS II Charger is turned on and ready for use.
3. Place a Dinex Smart base on the charger within the positioning rails, making sure the base is seated flat on the top. The charger will beep once as it recognizes the base.
4. The LCD Info Center will display “Heating Base” when it begins a charge. A status bar at the bottom of the screen will continue to fill in to show the charge process. If the base is removed prior to the status bar being completely filled the base will not be fully charged and may result in a lower delivery temperature.

**! INFORMATION:** You will hear three loud “BEEPS” if you remove the base before it is fully charged.

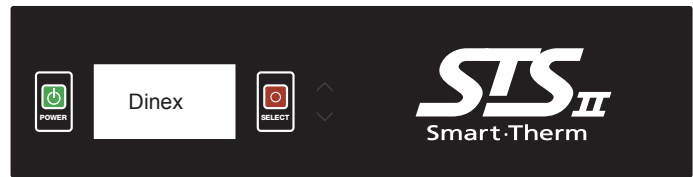
5. Your Smart•Therm STS II charger and Smart Base system uniquely knows the heat level of your bases. You may return a base to the charger at any time, and your Smart•Therm STS II charger will top off the heat in your base to assure proper delivery temperature.
6. If the phrase “Waiting for base...” still appears after placing a base on the charger, remove the base and reposition – assuring the base is seated flat to the top, and within the positioning rails.
7. After the status bar is completely filled the charger will display “Base Ready” and will beep indicating that base is at full temperature. Charge time for a base will be between 16 to 20 seconds. Low incoming voltage may increase charging time.

**! INFORMATION:** Fluctuations in voltage may affect heating time.

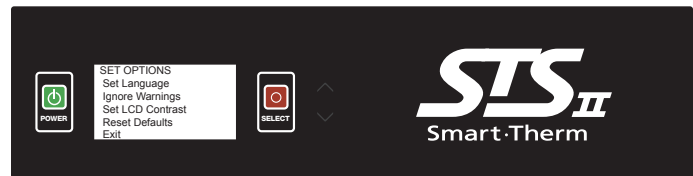
8. If the charger sees no activity for an extended period of time, it will beep 2 times and go into “Sleep” mode to conserve power. This will be indicated by the display reading “Power Save. Press any key to return to previous mode”. Press any key to exit “Sleep” mode.
9. Power off the Smart•Therm STS II Charger by depressing the **POWER** button.

**MANAGER OPTIONS**

Your Smart•Therm STS II charger can be set to display in English, Spanish, or French languages. You may also choose to disable information alerts (see below). These options may be changed through the **OPTIONS** menu.



1. The unit must be powered down with Dinex in the display. Press and hold the **SELECT** key for 7 seconds.
2. Release the **SELECT** key, and within two seconds, press the **POWER** key once. The **OPTIONS** menu should now be displayed.



3. Use the **UP/DOWN** arrow keys to move the caret symbol (>) to the desired option, and press **SELECT**.
4. The “Set Language” and “Ignore Warnings” options will bring up sub-menus where you may select the desired mode. “Set LCD Contrast” allows adjustment of the display, “Set Languages” allows you to choose between displaying English, Spanish, or French. “Ignore Warnings” allows you to suppress the display of certain informational warning messages (for example, you may suppress the display of “Low Voltage” warnings during times of heavy electrical demand where voltage on power lines may sag).
5. Choose “Exit” to back out of the displayed menu.
6. At any time, you may also press the **POWER** key to cycle the unit back into normal operation.

**INFORMATIONAL WARNINGS**

Two informational warning messages may appear in the course

of operation. Make note of and correct the condition as soon as is practical. Press the SELECT key to continue normal operation.

1. Warning!! Low voltage condition exists. Performance may suffer. Press SELECT to continue.

This indicates that the unit senses the line voltage has dropped where charge times may be adversely affected. The unit will pause operation until SELECT is pressed. No harm will result if you continue to operate the unit. If these warnings become excessive (for example, during periods of high electrical demand), they may be suppressed from the OPTIONS menu.

2. Warning!! Reduced airflow detected. Check grease filter. Press SELECT to continue.

Your Smart•Therm STS II Charger incorporates a sensor and software to detect when airflow diminishes. This message will appear from time to time to remind you to check the filters – then with increasing regularity as the grease filters get clogged. This message may also appear if there are obstructions to good airflow around the bottom of the unit, or if paper is pulled into the filter. Assure no napkins or plates are blocking the sides and that the unit is two inches from any obstruction around all four sides.

## TROUBLESHOOTING

**! INFORMATION:** *Safety-relevant parts should be replaced with original factory parts only. Any defective part must be removed and replaced by a qualified service technician authorized by Dinex. Should you require service please call the Dinex Hotline at 1.888.673.4639. In order for the warranty to remain valid, work must be authorized by Dinex prior to being performed.*

The Dinex Smart•Therm STS II Charger is a very intelligent device. Built in diagnostics can help you to determine the cause of most problems. The following section explains how to determine if you are experiencing a problem and what can be done to correct the problem. This information can be very helpful if you are calling our Customer Service department to report any operational difficulties.

1. Errors are displayed in easy to understand text on the LCD Screen.
2. If an error occurs, remove the base from the charger and turn the charger OFF and turn the charger back ON.
3. If an error persists, remove the base from the charger, turn the power off and unplug the charger, wait 5 seconds and then plug the charger back in and turn the charger on by pressing the "POWER" button.
4. When the display reads "Waiting For Base", put the base back on the charger to continue charging. Make sure that the base is properly positioned on the charger.
5. If the base still doesn't heat, set it aside and take it out of service. If other bases exhibit similar conditions note the error code and call Dinex Service.

### ERROR CONDITIONS

Error Codes will be indicated by a message on the LCD Info Center. If there is more than one error condition, the display will alternate between the error messages. It will continuously repeat this cycle until the errors are reset. Error messages may be reset by pressing SELECT.

If the error persists, turn the charger off, unplug the power cord, wait 5 seconds, and plug it in again. If the error still persists, turn the charger off and call the Dinex Service Department at 1.888.673.4639.

Message: **Error! RFID Communications problem. Possible bad base. 1/2**

Condition: RFID read/write problem.  
 Check: Possible bad RFID tag on the base, or RFID antenna/reader problems. If isolated to one or more bases, set them aside and call service about those bases. If error issued with many bases, call service about the charger.

Message: **Error! Incompatible base. 3**  
 Condition: Base draws too much current.  
 Check: Object being heated is not a Dinex 8x1-series base or internal charger problem.

Message: **Error! Unit overheat! Check fan operation. Allow to cool. 4**  
 Condition: Internal unit temperature too hot.  
 Check: Fan stalled, restricted air flow, or ambient operating temperature too hot. Possible internal electronics fault. Verify grease filters are not blocked and unrestricted airflow about the bottom of the unit. Listen for fan operation. If error persists, call Dinex service.

Message: **Error! Incoming voltage too high. 6**  
 Condition: Line voltage measures greater than 110% of unit rated voltage.  
 Check: Line voltage spikes, possible voltage sensing electronics fault. Have maintenance verify line voltage. Recalibrate to your line conditions (for trained maintenance personnel only):

1. Measure your line voltage at the outlet with a voltmeter.
2. Set unit to OFF position – DINEX in the display.
3. Press and hold the DOWN arrow for 7 seconds.
4. Release, and within 2 seconds, press POWER once. The CALIBRATION screen should display.
5. Using arrow keys, move caret (>) to Set V Offset. Press SELECT.
6. Using UP/DOWN arrow keys, dial in the measured phase voltage. Press SELECT.
7. Please do not use the reset logs selections, this will clear valuable stored information should your unit require additional service.
8. Select EXIT or cycle the POWER button.

Message: **Critical Error! Unit requires service. Call Dinex (888) 673-4639. 7**  
 Condition: Inverter drawing power when commanded off.  
 Check: Possible internal electronics fault. Unplug, wait 5 seconds, and replug unit. If error persists, call Dinex service.

Message: **Error! Check incoming voltage! If problem persists, Call Dinex Service (888) 673-4639. 8**  
 Condition: Line voltage measured to be out of range.  
 Check: Major line voltage sags (severe brown out) or internal electronics fault. Have maintenance verify line voltage. Unplug, wait 5 seconds, and replug unit. If error persists, call Dinex service.

Message: **Critical Error! Time corrupted. Call Dinex Service (888) 673-4639. 9**  
 Condition: Internal system clock time incorrect.  
 Check: System clock backup battery dead, system clock electronics fault, or electronic noise spike. Cycle POWER button. Unplug, wait 5 seconds, and replug unit. If error persists, call Dinex service.

Message: **Critical Error! RFID failure. Call Dinex Service (888) 673-4639. 15**  
 Condition: RFID reader-to-host communications failure  
 Check: RFID reader fault, internal power supply electronics fault, CPU electronics fault, bad internal interconnect. Call Dinex service.

- Message: **Critical Error! Electronics platform fault. Call Dinex Service (888) 673-4639. 16**
- Condition: CPU memory corrupt.
- Check: Internal CPU fault or electrical noise spike. Cycle power. If error persists, call Dinex service.
- Message: **Reheat later. (Clears when base is removed).**
- Condition: 1) Insufficient base cooling time or 2) Base time stamp has corrupted information – but the unit automatically repaired it.
- Check: Set base aside for reuse after one and one-quarter hour.

## MAINTENANCE

### Smart•Therm STS II CHARGER CLEANING INSTRUCTIONS

1. Unplug the charger before cleaning. Do not submerge the charger in water. Do not splash or pour water onto the charger's control panel or into intake/outlet vents. Possible shock hazard may result and the charger may be damaged.
2. The heating surface is a high strength composite material. Please use appropriate care in handling and cleaning.
3. Do not use steel wool, abrasive cleaners, or chlorinated cleaners on the charger.
4. Wipe the entire charger off with a damp cloth and mild detergent. Dry the charger before connecting it to its electrical source.

### GREASE AND AIR FILTERS

1. Weekly, inspect the bottom-mounted grease filter for build-up of debris.
2. Slide filter out of its holder and run under faucet or in dishwasher to clear of debris and grease. FILTER MUST BE DRY BEFORE SLIDING BACK INTO ITS HOLDER. DO NOT OPERATE YOUR SMART•THERM STS II WITHOUT A PROPERLY FITTED, DRY FILTER.
3. Replacement filter may be obtained by calling Dinex service.

**!** **WARNING:** *Never spray, wash or use excessive water on the charger. Before cleaning it is absolutely necessary to unplug power plug.*

- *Do not use the charger if the top is broken or cracked.*
- *Never use the charger as a work surface or cutting board.*
- *Never attempt to heat anything other than a Dinex 8x1-Series Smart base.*

## WARRANTY

These Warranties cover the following Dinex | Carlisle (“Dinex”) equipment products (the “Warranted Products”):

- Rethermalization Equipment Products
- Induction Heating System Products (excluding Induction Bases covered under separate warranty)\*
- Milk Cooler Products
- Ice Cream Freezer Products
- Air Curtain Refrigerator Products
- Blast Chiller Products
- Hot/Cold Food Counter Products
- Plate, Rack and Tray Dispenser Products
- Plate Heater Products
- Base Heater Products
- Drying and Storage Rack Products
- Starter Station Products
- Conveyer Products
- Tray and Other Cart Products

Warranted Products also includes any other Equipment System Products identified on Dinex’s website ([www.dinex.com](http://www.dinex.com)) from time to time.

**Standard Warranty.** Except as indicated otherwise below, Dinex warrants that the Warranted Products will be free from defects in title, material and workmanship under normal use and service and will perform substantially in accordance with Dinex’s written technical specifications for the Warranted Products (as such specifications exist on the date the Warranted Products are shipped) (the “Product Specifications”). This warranty covers both parts and labor and is available only to end-users (the “Customers”) that purchase the Warranted Products from Dinex or its authorized distributors. For the purpose of these warranties, a defect is determined by Dinex after its good faith investigation.

**Dinex Software.** In addition to the other warranties set forth herein, with respect to Dinex’s licensed software, Dinex warrants that it has the right to license or sublicense the software to Customer for the purposes and subject to the terms and conditions set forth in Dinex’s standard terms and conditions.

**Supplies and Accessories.** Dinex’s warranty for its supplies and accessories that are shipped with Warranted Products is covered by a separate warranty statement, which is available at [www.dinex.com](http://www.dinex.com).

**Services.** Dinex warrants that any service it provides to Customer will be performed by trained individuals in a workmanlike manner.

### DURATION

Dinex provides a one year warranty for the Warranted Products\*. The warranty period begins on the date the Warranted Products are shipped to Customer. The warranty period for any Warranted Product or part furnished to correct a warranty failure will be the unexpired term of the warranty applicable to the repaired or replaced Warranted Product. \*Turbo•Temp and Smart•Therm Induction Chargers are Warranted for two years.

### REMEDIES

If Customer promptly notifies Dinex of Customer’s warranty claim and makes the Warranted Product available for service, Dinex will, at its option, either repair or replace (with new or exchange replacement parts) the non-conforming Warranted Product or parts of the Warranted Product. With respect to Dinex’s licensed software, Dinex will, at its option, either correct the non-conformity or replace the applicable licensed software. Warranty service will be performed without charge from 8:00 a.m. to 5:00 p.m. EST, Monday - Friday, excluding Dinex

holidays, and outside those hours at Dinex’s then prevailing service rates and subject to the availability of personnel. With respect to Dinex’s warranty for the services it provides to Customer, Customer’s exclusive remedy shall be the re-performance of the services by Dinex. The foregoing remedies are Customer’s exclusive remedies and Dinex’s sole liability for warranty claims under this warranty statement. This exclusive remedy shall not have failed of its essential purpose (as that term is used in the Uniform Commercial Code) as long as Dinex remains willing to repair or replace defective Warranted Products within a commercially reasonable time after being notified of Customer’s warranty claim.

### LIMITATIONS

THESE WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, EXPRESSED, IMPLIED OR STATUTORY. EXCEPT AS PROVIDED HEREIN, NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, SYSTEM INTEGRATION AND DATA ACCURACY, WILL APPLY. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THOSE DESCRIBED IN THIS DOCUMENT AND NO PRIOR STATEMENTS BY ANY OF DINEX’S REPRESENTATIVES SHALL MODIFY OR EXPAND THESE WARRANTIES. DINEX AND DINEX’S AFFILIATES AND REPRESENTATIVES SHALL HAVE NO LIABILITY TO CUSTOMER FOR (1) ANY SPECIAL, PUNITIV E, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE WARRANTED PRODUCTS, REGARDLESS OF WHETHER SUCH LIABILITY SHALL BE CLAIMED IN CONTRACT, TORT, EQUITY OR OTHERWISE, (2) ANY ASSISTANCE NOT REQUIRED UNDER DINEX’S QUOTATION OR (3) ANYTHING OCCURRING AFTER THE WARRANTY PERIOD ENDS.

DINEX’S STANDARD WARRANTIES ONLY APPLY TO END-USER-PURCHASERS LOCATED IN THE UNITED STATES AND CANADA. ANY SALE TO END-USER-PURCHASERS OUTSIDE THE UNITED STATES AND CANADA WILL BE SUBJECT TO COMMERCIAL TERMS SPECIFICALLY AGREED BY DINEX AND THE END-USER PURCHASER. DINEX MAKES NO WARRANTY, EXPRESS OR IMPLIED, TO END-USER-PURCHASERS OUTSIDE THE UNITED STATES OR CANADA UNLESS OTHERWISE EXPRESSLY AGREED IN WRITING.

These warranties do not apply to, and Dinex shall not have any obligation to Customer hereunder with respect to, any warranty claim resulting from or arising out of: (i) normal wear and tear; (ii) damage caused by shipping or accident; (iii) damage caused by improper installation, repair or alteration not performed by Dinex; (iv) the use of the Warranted Product in combination with any software, tools, hardware, equipment, supplies, accessories or any other materials or services, not furnished by Dinex or recommended in writing by Dinex; (v) the use of the Warranted Product in a manner or environment, or for any purpose, for which Dinex did not design or license it, or inconsistent with Dinex’s recommendations or instructions on use including, but not limited to, power supply requirements identified in Product Specifications; (vi) any alteration, modification or enhancement of the Warranted Product by Customer or any third party not authorized or approved in writing by Dinex; (vii) Warranted Product manufactured to meet customer specifications or designs; or (viii) any accessories or supplies or other equipment or products that may be delivered with the Warranted Product .

In addition, these warranties do not cover: (i) Any defect or deficiency (including failure to conform to Product Specifications) that results, in whole or in part, from any improper storage or handling, failure to maintain the Warranted Products in the manner described in any applicable instructions or specifications, inadequate backup or virus protection or any cause external to the Warranted Products or beyond Dinex’s reasonable control, including, but not limited to, power failure and failure to keep Customer’s site clean and free of dust, sand and other particles or debris; (ii) the payment or reimbursement of any facility costs arising from repair or replacement of the Warranted Products; (iii) any adjustment, such as alignment, calibration, or other normal preventative maintenance required of Customer; and (iv) expendable supply items.



