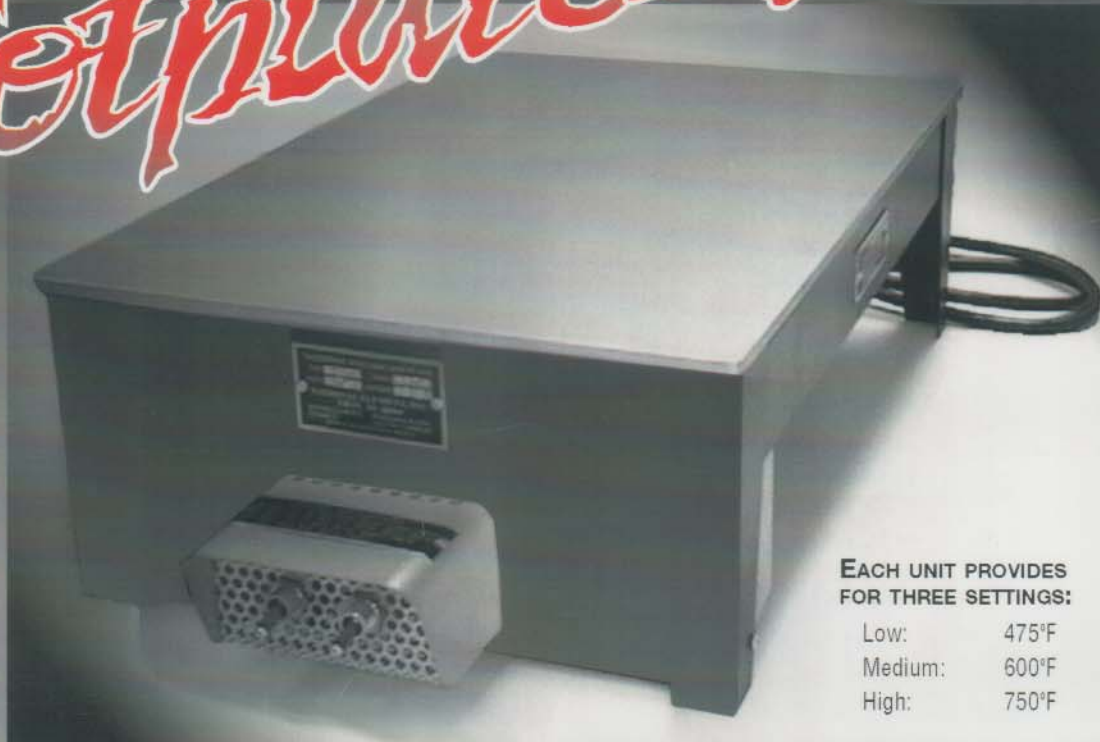


*Hotplates!*

**Static Heaters**



**EACH UNIT PROVIDES FOR THREE SETTINGS:**

Low: 475°F  
 Medium: 600°F  
 High: 750°F

National Element hot plates are designed and built for hard, continuous service. They operate on 120-volt A.C. or D.C. (240-volt units are also available.)

**FEATURES:**

- Chromel<sup>®</sup>-A heating element for long life and uniform heat distribution
- Durable, steel top with aluminum finish
- Heat-control switch-off, low, medium, high
- Black enameled legs and frame
- 6-ft. extension cord

**HOT PLATE SPECIFICATIONS**

TYPE	SIZE	FULL-LOAD K. W.		
		LOW	MEDIUM	HIGH
MA-120	12" x 12"	0.4	0.8	1.2
MA-121	12" x 18"	0.6	1.2	1.8
MA-122	18" x 24"	1.2	2.4	3.6



**NATIONAL ELEMENT, INC.**

7939 Lochlin Dr., Brighton, MI 48116-8329  
 (248) 486-1810 • (800) 600-5511 • FAX: (248) 486-1649  
[www.nationalelement.com](http://www.nationalelement.com)

INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS  
FOR  
HOT PLATE MODELS MA-120 • MA-121 • MA-122

**INSTALLATION**

**CAUTION:** National Element recommends installation be performed by qualified personnel familiar with the National Electrical Code and all local codes and standards. It is the responsibility of the installer to verify the safety and suitability of the installation.

**WARNING:** Hazardous voltages are present in this equipment. Lock out and tag the branch circuit disconnect switch before working on this heater.

**Handling and Storage**

Care must be taken to avoid damage to the heater during storage and handling. Protect the heater from weather damage during storage if shipping packaging is not sealed. It is recommended to store the heater in a cool dry area to help prevent the heating elements or ceramic spacers from drawing moisture.

**Mechanical Instructions**

**WARNING:** DO NOT mount heaters in an atmosphere containing combustible gases, vapors, dusts, or fibers.

Allow at least three feet in front of the heater terminal box for hot plate maintenance and safe operation. Consideration should also be given for heater removal clearance to allow heater replacement. Do not install a heater in an area not consistent with safety.

Electric hot plates are capable of developing high temperatures. Therefore, extreme care should be taken to avoid mounting hot plates in an atmosphere containing combustible gases, vapors, dusts, or fibers unless properly marked as suitable for the condition.

The hot plate should only be placed on a level surface to assure proper operation  
**WARNING:** Do not cover the heater terminal box or install the heater so that part of the terminal box air flow is blocked. Dangerous over-heating of the wiring could result.

**WARNING:** Retighten all electrical connections that may have loosened during shipment. Failure to do so may result in damage to the heater or risk of fire.

## Operation

DO NOT operate heaters at voltages in excess of that marked on the Hot Plate. Excess voltage can shorten heater life or overload the branch circuit wiring.

TEMPERATURE REGULATION: The temperature is regulated by two toggle switches mounted on the front of the hot plate. Manually regulate the temperature as shown on the name plate (see Operation plate below). Do not leave unit un-attended during use. Monitor article(s) being heated with thermometer or thermocouple if required. Turn off unit when not present to prevent over-heating and/or burnout.

### CONTROL INSTRUCTIONS

LOW Heat- LIFT UP ONLY RIGHT SWITCH TOGGLE (150°C)  
MEDIUM Heat- LIFT UP ONLY LEFT SWITCH TOGGLE (250°C)  
HIGH Heat- LIFT UP BOTH SWITCHES TOGGLES (350°C)  
OFF- PUSH DOWN BOTH SWITCHES TOGGLES  
CAUTION PLATE STILL HOT WHEN SWITCHED OFF

### CAUTION

TO AVOID WARPING TOP OF PLATE WHEN HEATING MATERIALS OTHER THAN LIQUIDS. ALLOW AT LEAST ONE INCH (25MM) CLEARANCE BETWEEN SURFACE OF PLATE AND ARTICLE BEING HEATED AND OPERATE ONLY ON "LOW" OR "MEDIUM" HEAT.

### CAUTION

DO NOT LEAVE HOT PLATE ON HIGH FOR EXTENDED PERIODS OF TIME. OVERHEATING AND MELTING OF THE HEATING ELEMENTS WILL RESULT.

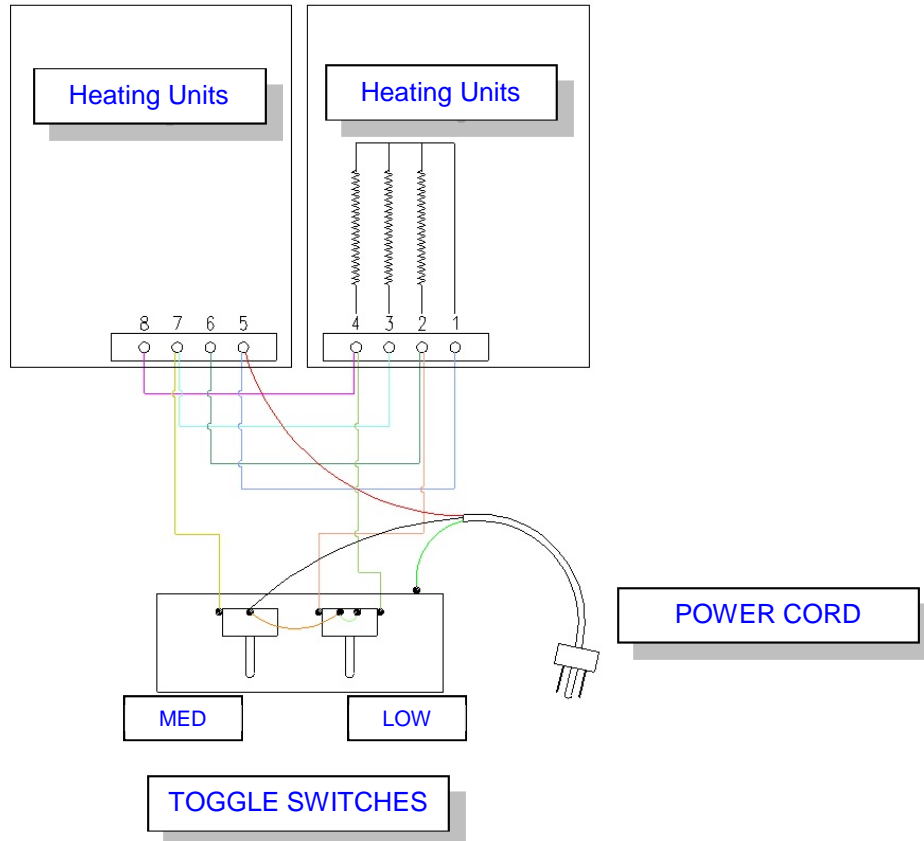
Allow at least three feet in front of the heater terminal box for heater maintenance. Consideration should also be given for heater removal clearance to allow heater replacement. Do not install a heater in an area not consistent with safety.

Electric heaters are capable of developing high temperatures. Therefore, extreme care should be taken to avoid mounting heaters in an atmosphere containing combustible gases, vapors, dusts, or fibers unless properly marked as suitable for the condition.

### CAUTION

OPERATING PERSONEL MUST ALWAYS WEAR INSULATING SAFETY GLOVES, WITH PROTECTIVE ARM SLEEVES, PROTECTIVE CLOTHING, AND EYE PROTECTION AT ALL TIMES DURING USE OF HOT PLATES

**ELECTRICAL DIAGRAM MA-122**



**CAUTION**  
 MAKE SURE THAT YOUR SUPPLY LINE VOLTAGE IS  
 THE SAME AS THAT MARKED ON NAME PLATE

**LINE AMP DATA**  
 Use fuse size as follows

HOT PLATE MODEL	120 VOLT	240 VOLT
MA-120	15 AMP	10 AMP
MA-121	20 AMP	10 AMP
MA-122	40 AMP	20 AMP

## MAINTENANCE

**CAUTION:** Troubleshooting and repairs should only be attempted by qualified maintenance personnel.

Periodically check all electrical connections, including field and factory-made connections for tightness, and all wiring for deterioration at least once a year.



Inspect the terminal enclosure and conduit connections for evidence of water leaks or moisture collection. Tighten connections as required. Clean up any corrosion. Do not continue using a heater with signs of damage.

Where buildup of dirt or solids on the heating elements or significant corrosion is expected, periodically inspect the heating elements. Do not continue using a heater with signs of damage.

## Trouble shooting

The heating elements are not field-repairable. The only recommended field repairs are to remove and replace the faulty heating units, or return the heater to the factory for repair.

If reduced heat output is suspected, verify the condition of the heating elements by using an ammeter to check the current draw of each input line. All input lines should draw approximately equal current, which should agree with nameplate rating. If they do not, one or more of the heating elements could be damaged.



# NATIONAL ELEMENT, INC.

7939 Lochlin Dr. Brighton, MI 48116

248-486-1810 ♦ FAX 248-486-1649 ♦ TOLL FREE 800-600-5511

TERMS & CONDITIONS acceptable to NATIONAL ELEMENT, INC.

In UNITED STATES

1. **Acceptance of Orders** - All orders are subject to acceptance by a duly authorized employee of National Element, Inc. and are not binding upon National Element, Inc. unless and until acknowledgement in writing. Any terms and conditions specified on Purchaser's order which are in conflict with, inconsistent with, or in addition to the terms and conditions of sale herein, shall not be binding upon National Element Inc., unless expressly accepted in writing, by National Element, Inc. In the absence of such express acceptance, these terms and conditions shall constitute the entire contract between Purchaser and National Element, Inc.

2. **Terms of Payment** - Terms of Payment are net cash within thirty (30)-days of invoice from National Element Inc. Any other terms of payment must be approved, in writing, by National Element Inc. In case of doubt arising at anytime as to the Purchaser's financial condition, shipments may be suspended at National Element, Inc.'s sole option until it receives satisfactory payment assurances from Purchaser. Overdue accounts shall be subject to collection by National Element, Inc., including cost of collection and interest on the past due balance, at the rate of 1.5% per month If said interest exceeds the maximum interest rate allowed by law in the state of Purchaser, then the interest rate shall be reduced to that state's maximum interest rate. Payment shall be in United States' funds. In the event of any litigation arising out of this contract and in the event National Element Inc. receives a judgement of \$1 or more, or a judgement of equity in its favor, Purchaser shall reimburse National Element, Inc. for all cost National Element, Inc. incurs, including all of National Element Inc.'s court costs and actual attorneys fees.

3. **Title** - Title to and risk of loss of goods will pass to Purchaser upon National Element Inc. placing the goods in the custody of a carrier for shipment to Purchaser. Final delivery is defined as Purchaser's place of business when delivered by truck or Purchaser's private rail siding when delivered by rail or the freight station or public team track nearest Purchaser's plant. Within 48 hours following final delivery, Purchaser shall inspect the goods and will immediately notify National Element Inc. of any defects in the goods. Failure by the Purchaser to notify National Element Inc. in writing of any defects in the goods within 72 hours of final delivery will be conclusive proof that the goods have been received by the Purchaser without defects. National Element Inc. will in no event have any responsibility for any damage caused to the goods during shipment. It will be the sole responsibility of Purchaser to file any appropriate claims for reimbursement with the carrier. Stop off charges shall be passed to Purchaser. Purchaser assumes responsibility for all packing, crating, removal, and shipping of goods. If National Element Inc. assists Purchaser in this regard, it is agreed that such assistance is gratuitous and National Element Inc. shall have no obligation or liability arising out of such assistance. National Element Inc. will not be liable in any respect for failure to ship or for the delay in shipment of goods pursuant to this agreement where the failure to delay will have labor or production difficulty in National Element Inc. plants or those of its suppliers, or to any case beyond National Element Inc.'s control. National Element Inc. will not be liable for shipping products over routes or by means of transportation other than specified by this contract. National Element Inc. reserves the right to allot or prorate shipment against all orders whenever in its sole judgment, an oversold condition exists as to any particular good manufactured and/or sold by National Element Inc.

4. **Non-Conforming Goods** - Rejection of goods for failure to conform to the requirements of this contract must be made by Purchaser within 72 hours after final delivery. Purchaser must send written notification of the rejection to National Element Inc. The notification must state the basis of the alleged nonconformity of the goods and describe the portion of the shipment being rejected. Purchaser shall waive any right to rejection of nonconforming goods if it fails to timely notify National Element, Inc. Purchaser shall not return any goods to National Element Inc. without National Element Inc. written consent.

5. **Warranty: NATIONAL ELEMENT INC. EXPRESSLY WARRANTS, FOR ONE (1) YEAR FROM DATE OF SHIPPING, THAT ALL MATERIAL AND WORK COVERED BY THIS CONTRACT WILL CONFORM TO THE SPECIFICATIONS, DRAWING, SAMPLES OR OTHER DESCRIPTION FURNISHED OR SPECIFIED BY PURCHASER. IN ALL OTHER RESPECTS, NATIONAL ELEMENT, INC. DISCLAIMS ALL WARRANTIES IN CONNECTION WITH THE GOODS, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING BUT WITHOUT LIMITATION, DESCRIPTION, QUALITY, DESIGN, PERFORMANCE, SPECIFICATIONS, CONDITION, MERCHANTABILITY, AND FITNESS FOR ANY PARTICULAR PURPOSE. NATIONAL ELEMENT, INC. HAS MADE NO AFFIRMATION OF FACT AND HAS MADE NO PROMISE RELATING TO THE GOODS BEING SOLD THAT HAS BECOME PART OF THE BASIS OF THIS CONTRACT. FURTHER, SELLER HAS MADE NO AFFIRMATION OF FACT OR PROMISE RELATING TO THE GOODS BEING SOLD THAT HAS CREATED OR AMOUNTED TO AN EXPRESS WARRANTY THAT THE GOODS WOULD CONFORM TO ANY AFFIRMATION OR PROMISE. ANY DESCRIPTION OF THE GOODS HAS BEEN MADE FOR THE SOLE PURPOSE OF IDENTIFYING THEM. NO DESCRIPTION OF THE GOODS BEING SOLD HAS BEEN MADE PART OF THIS CONTRACT OR HAS CREATED OR AMOUNTED TO AN EXPRESS WARRANTY THAT THE GOODS WOULD CONFORM TO ANY DESCRIPTION. NATIONAL ELEMENT, INC. MAKES NO REPRESENTATIONS AS TO WHETHER THE GOODS BEING SOLD ARE FREE OF RIGHTFUL CLAIM OF ANY THIRD PERSON BY WAY OF INFRINGEMENT FROM PATENT, TRADEMARK, OR OTHER PROPERTY RIGHTS IN THE GOODS AND DISCLAIMS ANY WARRANTY AGAINST INFRINGEMENT WITH RESPECT TO THE GOODS. PURCHASER ACKNOWLEDGES THAT THE PURCHASER IS NOT RELYING ON NATIONAL ELEMENT, INC.'S SKILL OR JUDGEMENT TO SELECT OR FURNISH GOODS SUITABLE FOR ANY PARTICULAR PURPOSE AND THAT THERE ARE NO WARRANTIES CONTAINED IN THIS CONTRACT. THE GOODS COVERED BY THIS CONTRACT HAVE BEEN PURCHASED BY PURCHASER "AS IS" AND "WITH ALL FAULTS", AND PURCHASER ACKNOWLEDGES THAT NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE ARE TO BE IMPLIED IN THIS TRANSACTION.**

6. **Purchaser's Delegation** - Purchaser must obtain National Element, Inc.'s prior written consent if it wishes to delegate the duty of paying the price for the goods to be delivered.

7. **Assignment** - Purchaser may not assign the right to receive goods from National Element, Inc. under this contract without prior written consent of National Element, Inc. National Element, Inc.'s consent will be based on whether the assignment will adversely affect National Element, Inc. Conversely, National Element Inc. may assign its right to receive from purchaser the payment(s) required under this contract at any time on reasonable notification to Purchaser as to the identity of the assignee.

8. **Limitation of National Element, Inc.'s Damages** - Under no circumstances shall National Element, Inc. be liable to any person for claims based on strict liability or ordinary negligence in the design, manufacture or sale of the goods supplied hereunder. If National Element, Inc.

Terms & Conditions continued:

## In UNITED STATES

fails to comply with this contract, Purchaser's sole remedy shall be recovery from National Element, Inc. of the difference between what it cost Purchaser to purchase goods similar to National Element, Inc. which National Element, Inc. did not properly deliver and what it would have cost to purchase similar goods from National Element, Inc. However, the liability of National Element, Inc. and its agents, servants, representatives and employees shall not exceed in the aggregate the agreed-upon price for the goods. In no event shall National Element Inc. be liable for indirect, special or consequential damages.

9. Indemnification - Purchaser agrees to indemnify National Element Inc. and hold National Element Inc. harmless from and against all actions, suits, damages, judgements, costs, claims, charges, expenses, attorney fees, and consequence of any liabilities, of any nature, which are asserted against the goods.

10. Contractual Statute of Limitations - Any claim or suit relating to the goods supplied by National Element, Inc. whether for breach of contract, negligence or tort, must be commenced within one year after tender of final delivery of goods to Purchaser. If the cause of action is deemed to accrue upon discovery of an alleged defect or injury, suit must be commenced within one year of such discovery.

11. Governing Law - This agreement shall be governed and controlled by the laws of the State of Michigan as to interpretation, enforcement, validity, construction, effect, and in all other respects.

12. Specification Changes - Purchaser may make changes in the drawings and specifications as to any material and/or work covered by this order. Purchaser shall be liable for any differences in price or time performance resulting from such change.

13. Cancellation by Purchaser - If Purchaser cancels this contract, it shall be liable to National Element, Inc. for all cost incurred by National Element, Inc. prior to the moment of notification of cancellation.

14. Materials Furnished by Purchaser - Any material furnished by Purchaser, on other than on a charge basis in connection with this contract, shall be deemed as held by National Element, Inc. upon consignment. All such materials not used in the manufacture of the products covered by this contract shall be returned to Purchase at Purchaser's sole expense.

15. Tools - Unless otherwise herein agreed, National Element, Inc. at its own expense, shall furnish, keep in good condition, and replace when necessary, all dies, tools, gauges, fixtures, molds, and patterns for a period of one (1) year necessary for the production of the material ordered. The cost of changes of the aforementioned items necessary to effect design or specification changes ordered by Purchaser shall be paid for by Purchaser. National Element, Inc. shall at all times cover said tools, dies, etc., with full fire and extended coverage insurance. Purchaser has the option to take possession of the title to any dies, tools, gauges, fixtures, molds, and patterns that are special for the production of the material covered by this contract and paid for by the Purchaser and shall pay National Element, Inc. the cost thereof; provided however, that this option shall not apply if the material hereby ordered is the standard product, or patented product of National Element, Inc., or if a substantial quantity of like material is being sold by National Element, Inc.

16. Taxes - In addition to any price specified herein, Purchaser shall pay the gross amount of any present or future sales, use, excise, value added, or other similar tax applicable to the price, sale or delivery of any products or services furnished hereunder or to their use by National Element, Inc. or Purchaser, or Purchaser shall furnish National Element, Inc. with a tax-exemption certificate acceptable to the taxing authorities.

17. Sales Through Agent - Unless specifically otherwise authorized in writing by National Element, Inc. an agent shall not have authority to solicit or take orders for the sale of products covered by this contract except at National Element Inc.'s established prices and discounts, and in accordance with National Element Inc. standard terms and conditions of sale as set from time to time in National Element Inc.'s published handbooks, price sheets, quotations or printed forms. The Agent shall have no authority to bind National Element Inc. to any contract whatever.

18. Venue - Purchaser and National Element Inc. (a) irrevocably submit to the jurisdiction of any Michigan or Federal court with jurisdiction over Brighton, Michigan, in any action arising out of this agreement, (b) agree that all claims in any action may be decided in either court, and (c) waive, to the fullest extent that they may effectively do so, the defense of inconvenient forum. The parties also agree that a final judgement or in any such action shall be conclusive and may be enforced in other jurisdictions by suit on the judgement or in any other manner provided by law.

19. Notices - Any notice that the Purchaser or National Element, Inc. may give or is required to give under this contract shall be in writing and, if mailed, be effective three days after being sent by certified or registered mail, postage prepaid, addressed to the other party at the other part's address set forth in this contract or at any other address that the other party provides in writing.

20. Severability - If any provision in this contract is held to be invalid or unenforceable, it shall be ineffective only to the extent of the invalidity, without affecting or impairing the validity and enforceability of the remainder of the provision of the remaining provisions of this contract.

21. Waiver - No claim or right arising out of a breach of this contract can be discharged, in whole or in part, by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration, is in writing, and signed by the aggrieved party.

22. Binding Effect - The terms and provisions of this agreement are binding on and shall inure to the benefit of Purchaser and National Element Inc. and their respective heirs, representatives successors and permitted assigns.

23. Integration - All understandings, representations, and agreements heretofore made between Purchaser and National Element Inc. are superseded by and merged into this contract, which alone fully and completely expresses the agreement between the parties. This contract is entered into with no party relying upon any statement or representation made by any party which is not embodied in this contract. Any modification of this contract may be made only by an instrument in writing signed by or on behalf of the party to be bound by such modification.