

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Electric Baseboard Heaters

Description

Residential and commercial grade electric convector baseboards provide primary, secondary or supplemental heating for new construction or remodeling applications. Baseboard heaters can be used in single family homes, apartments, modular or mobile homes as well as commercial, industrial and institutional construction. Baseboard heaters must be thermostatically controlled for efficient, safe operation. A thermostat is not provided with this heater.

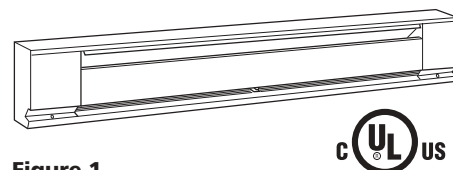


Figure 1

Specifications

HEATER AMPERE RATING

Model No.	Residential			
	120 Volt	208 Volt	240 Volt	277 Volt
3UG76D	4.2	—	—	—
3UG77D	6.3	—	—	—
3UG78D	8.3	—	—	—
3UG79D	10.4	—	—	—
3UG80D	12.5	—	—	—
3UG82D	—	1.8	2.1	—
3UG83D	—	2.7	3.1	—
3UG84D	—	3.6	4.2	—
3UG85D	—	4.5	5.2	—
3UG86D	—	5.4	6.3	—
3UG87D	—	7.2	8.3	—
4TM76D	—	8.7	10.4	—

Model No.	Commercial			
	120 Volt	208 Volt	240 Volt	277 Volt
3KB35D	—	2.7	3.1	3.6
3KB36D	—	3.4	3.9	4.5
3KB37D	—	4.1	4.7	5.4
3KB38D	—	5.4	6.3	7.2
3KB39D	—	4.8	—	—
3KB40D	—	6.0	—	—
3KB41D	—	7.2	—	—
3KB42D	—	8.4	—	—

Total Amps	Minimum AWG. Wire Size (Copper)	Circuit Breaker or Fuse Size
0 thru 12	#14	15 amp
12.1 thru 16	#12	20 amp

Net Volumes of Wiring Compartment		
Description	Cubic Inches	Cubic Centimeters
Heater Only (Each Wiring Compartment)	14.96	241
Heater W/SP Thermostat	11.18	180
Heater W/DP Thermostat	11.18	180
Heater W/Duplex Receptacle	11.18	180

Unpacking

Check heater to make sure it has not been damaged in shipping. Do not install or attempt to operate the heater if damaged. Return to place of purchase or file claim with freight carrier.

General Safety Information

⚠ WARNING Read Carefully - This Instruction Sheet contains vital information for the proper installation, use, and efficient operation of the heater. Carefully read the manual before installation, operation, or cleaning of the heater. Failure to adhere to the instructions could result in fire, electric shock, death, serious personal injury, or property damage. Save these instructions and review frequently for continuing safe operation and instructing future users.

1. Keep all electrical cords, foam filled articles, drapes, bedding, and other household furnishings away from contact with heater. It is recommended all items be kept a minimum of six (6") inches (152 mm) from heater.
2. Do not install baseboard heater below electrical convenience receptacles (outlets).
3. Do not install baseboard heater against vinyl wallpaper, paperboard or low density fiberboard surface. Do not install vinyl drapes or vinyl blinds above heater.
4. Do not recess heater in wall.
5. The installation must comply with applicable Local and National Electrical Codes and utility requirements.
6. Do not remove or by-pass thermal cutout.
7. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.
8. Personal injury or death could result from electric shock. Disconnect all power to heater at main panel before attempting to install or service this heater.

Dayton® Electric Baseboard Heaters

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General Safety Information (Continued)

9. Supply voltage must be the same as heater voltage. Check heater nameplate and supply voltage before energizing.
10. When using Transformer Relay Accessory, supply wiring must be suitable for 90°C.
11. Do not install upside down or sideways. Caution label with word "TOP" must be on top of heater.

This Heater is designed to provide years of efficient, trouble free operation as a primary or supplementary heat source for residential and commercial applications. Baseboard heaters must be thermostatically controlled for efficient, safe operation. A thermostat is not provided with this heater. However, a single or double pole thermostat accessory is available for installation into this heater at your place of purchase, or the heater may be connected to any suitable wall mounted thermostat that will meet the electrical load requirements. Installation or use of this product in any manner not described herein will void the warranty and could result in injury, damage to property, or permanent damage to heater.

Installation

NOTICE TO OWNERS

Certain fabrics discolor in time from indirect sunlight and normal room temperature – mostly organic and synthetic material. They will discolor more rapidly when exposed to direct sunlight and warm currents. Hang drapes to provide minimum of 2" (51 mm) air space between heater front and nearest drape fold as shown in Example 1 Figure 2, or 6" (153 mm) airspace between top of heater and bottom of drapes as shown in Example 2, Figure 2. Allow

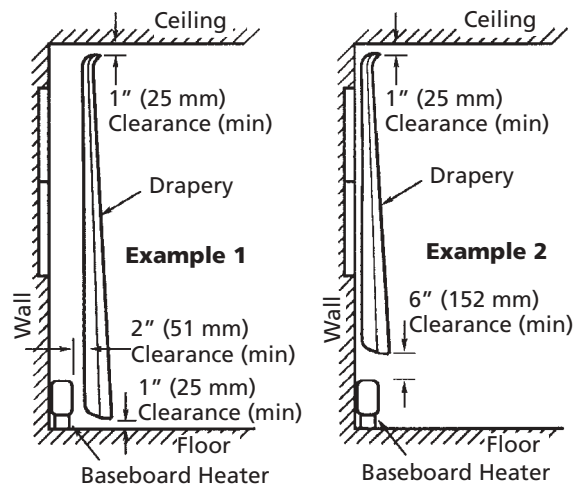


Figure 2 – Position of Drapery near Heater

minimum clearance of 1" (25 mm) from drapes to ceiling and to top of floor covering to permit air circulation as shown in Example 1, Figure 2.

FLOORS & CARPETING

Heaters may be mounted directly on any floor surface, including carpeting. Where wall-to-wall carpets are installed after the baseboard installation, the carpeting can be run up to the front and around the heater body, providing it does not obstruct air flow. (Maximum 3/4" [19 mm] thick).

1. Remove wiring compartment cover at end of heater where power supply cable is to enter. Determine desired

Install at Floor Level or Above
Moldings Shown

Stud Wall

Fasten Above and Below Element

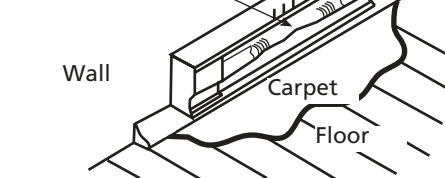


Figure 3

mounting location (Figure 3), position heater to wall as intended and mark wall (or floor) at location where power supply is to enter heater.

NOTE: Make sure the caution label with the word "TOP" is at the top of the heater. For most efficient operation locate heaters along outside wall under windows. Position heater so it can be secured to wall stud. Power cable must enter heater through one of the knockouts provided in wiring compartment. See Figure 4.

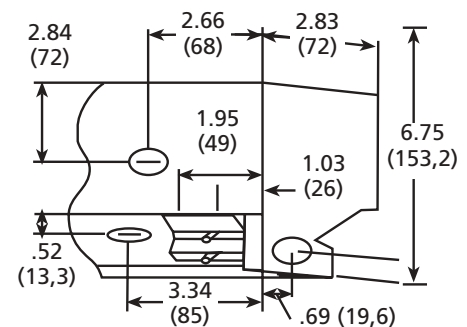


Figure 4 – Wiring Compartment Dimensions – in. (mm)

Models 3UG76D thru 3UG79D, 3UG80D, 3UG82D thru 3UG87D, 3KB35D thru 3KB42D, 4TM76D

Installation (Continued)

2. Drill hole in wall (or floor) at desired location for power supply entry. Install power supply wiring to heater and thermostat location as determined by thermostat option selected. Allow approximately 10 to 12" (254 mm to 305 mm) of wire at heater for connections.

3. If any other Dayton accessories are to be used with this heater, refer to installation instructions provided with the accessory for proper installation and wiring.

4. Wireway Cover - Commercial Baseboard Only

- The wireway cover is a factory installed feature of Dayton commercial baseboard heaters. Two cables or four individual conductors plus two ground wires may be routed through the wireway. Refer to page 1 for maximum current loads.
 - To gain access to wireway, lay heater face down and remove two screws as shown in Figure 5. Remove the knockouts in the channel areas of both terminal boxes.
 - Insert the plastic bushings from the parts kit (in wiring compartment) in the knockout holes.
 - Wire heater according to Figure 6. Reattach the wireway cover using the two screws.
5. Loosen screw in built-in cable clamp or remove desired knockout from heater wiring compartment (Figures 4 and 5). Install power cable into wiring compartment allowing at least 6" (152 mm) of cable for connection to heater. To install two power cables using the built-in cable clamp, bend tab covering second hole up and back

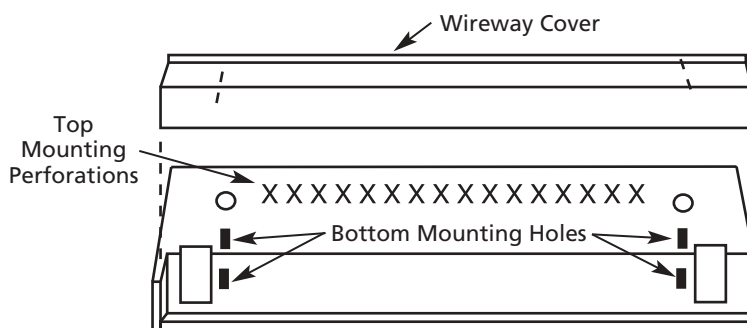


Figure 5

to rear wall of wiring compartment. If built-in cable clamp is not used, install approved cable connector (not included) in desired knockout.

6. Position heater to wall (use cross stamped perforations as a guide, see Figure 5) and secure through the top row of predrilled mounting holes using at least two fasteners, one at each end of the heater. If the unit is mounted above the floor to allow carpet installation under the heater, two additional mounting holes are supplied at each end below the element. This will allow you to screw into the sill plate if the unit does not span across two wall studs.

CAUTION When using bottom mounting holes, (to prevent a possible shock or fire hazard) make sure you do not drive the screws through or damage the power supply wire.

- Connect the supply cable grounding wire to the bare copper pigtail in wiring compartment.
- After making sure the electrical power coming to the heater is turned off at main switch panel follow the desired wiring diagram, as shown in Figure 6, to connect the power supply to the heater using approved wire nuts.

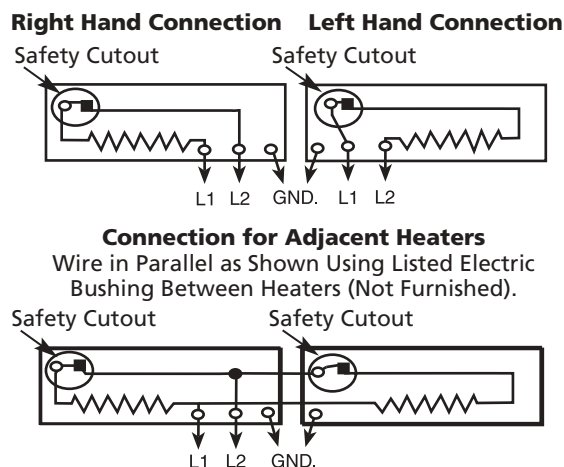


Figure 6

Dayton® Electric Baseboard Heaters

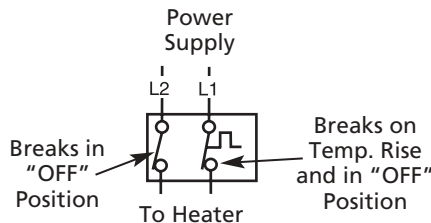
Installation (Continued)

⚠ WARNING To prevent a possible fire, make sure all wire connections are tight.

NOTE: When accessories are installed, use wiring diagram supplied with the accessory.

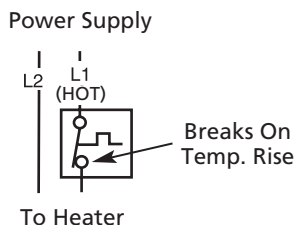
- If front cover was removed, reinstall by hooking the top edge on the support bracket(s). Then push down to latch onto the support bracket(s).
- Replace wiring compartment cover.
- Follow instructions accompanying thermostat for installation and wiring thermostat. See Figure 7 for typical thermostat wiring diagrams.

Double Line Break Thermostat



Double line break thermostats have an "OFF" switch that is open only when the thermostat is put in the "OFF" position

Single Line Break Thermostat



Single line break thermostats DO NOT have an "OFF" position and will operate at a temperature below its minimum set point

Figure 7 – Typical Thermostats

Operation

- After the baseboard system has been completely installed, all thermostats should be turned to LOW or NO HEAT. Then turn on breakers. Wait 3 to 5 minutes and check to see that none of the heaters are operating. If operating, disconnect power and check wiring. If none are operating then turn thermostats to highest position and wait 3 to 5 minutes. Check to see that all heater(s) are operating. Should any not be operating, disconnect power and check wiring.
- Allow entire system to operate steadily for 1/2 hour. This should remove oily residue from manufacturing. (Some smoking may occur).
- Select the setting for comfort on all thermostats.

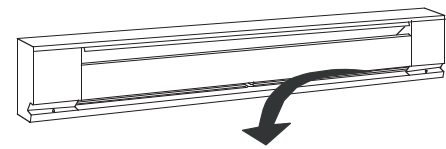
Maintenance

CLEANING



Because of the convection heating principle which depends on air circulation through the finned element, dust will collect between the fins. The heater should be cleaned regularly for maximum efficiency. Before cleaning be sure the heater is off and the element is cool. A vacuum cleaner with a brush attachment may be used for cleaning. The finish of the heater may be cleaned with a slightly damp rag if desired.

PAINTING

Painting of this baseboard is not necessary unless to match room decor. To paint, first rough up the exterior with steel wool. Paint only the exterior of the cabinet. Do not allow paint on the element and high limit capillary tube. Use a high quality enamel paint.



NAMEPLATE

MODEL NO. 3UG76D		DATE CODE 1294	
VOLTS AC	60HZ	WATTS	AMPS
120		100	4.2
<div><div></div><div></div></div>			
		54E1 LISTED BASEBOARD HEATER	
MARLEY ENGINEERED PRODUCTS BENNETTSTVILLE, SC 29512		PATENT PENDING 4104-2109-265	

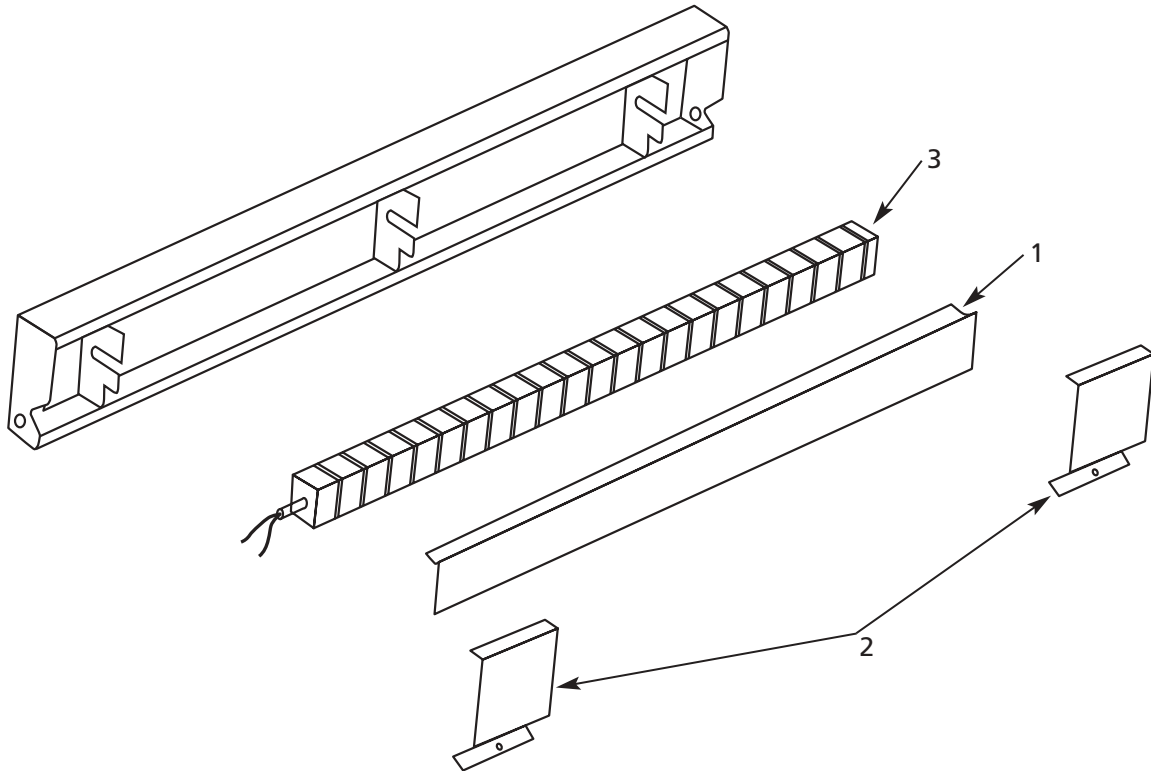
For Repair Parts, call 1-800-323-0620**24 hours a day – 365 days a year**

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address parts correspondence to:

Grainger Parts
P.O. Box 3074
1657 Shermer Road
Northbrook, IL 60065-3074 U.S.A.

**Figure 8 – Repair Parts Illustration for Electric Baseboard Heaters****Repair Parts List for Electric Baseboard Heaters**

Ref. No.	Description	3UG76D/ 3UG82D	3UG77D/ 3UG83D	3UG78D/ 3UG84D	3UG79D/ 3UG85D	3UG80D/ 3UG86D	3UG87D	Qty.
	Length	2'6"	3'	4'	5'	6'	8'	1
1	Front Cover	1402-2122-051	1402-2122-052	1402-2122-053	1402-2122-054	1402-2122-055	1402-2122-056	1
2	Junction Box	1402-2261-000	1402-2261-000	1402-2261-000	1402-2261-000	1402-2261-000	1402-2261-000	1
3	Element 120V	1802-2056-007	1802-2056-011	1802-2044-017	1802-2044-023	1802-2094-015	–	1
	240V	1802-2056-005	1802-2056-009	1802-2044-015	1802-2044-021	1802-2044-027	1802-2044-033	1

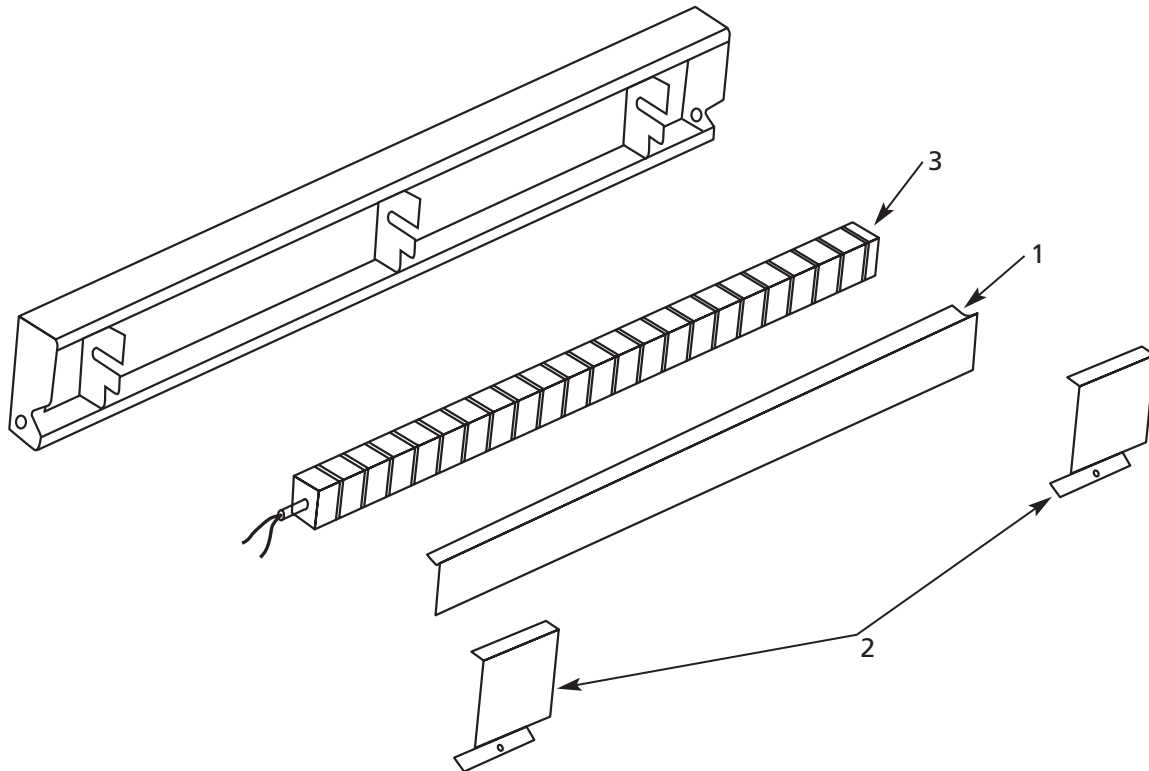
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**Figure 9 – Repair Parts Illustration for Electric Baseboard Heaters****Repair Parts List for Electric Baseboard Heaters**

Ref. No.	Description	4TM76D	3KB39D/ 3KB35D	3KB40D/ 3KB36D	3KB41D/ 3KB37D	3KB42D/ 3KB38D	Qty.
	Length	8'	4'	5'	6'	8'	1
1	Front Cover	1402-2122-056	1402-2122-042	1402-2122-043	1402-2122-044	1402-2122-045	1
2	Junction Box	1402-2261-000	1402-2261-003	1402-2261-003	1402-2261-003	1402-2261-003	1
3	Element 208V	–	1802-2044-016	1802-2044-022	1802-2044-028	1802-2044-034	1
	240V	1802-2044-045	–	–	–	–	1
	277V	–	1802-2044-014	1802-2044-020	1802-2044-026	1802-2044-032	1

ENGLISH

Dayton® Electric Baseboard Heaters

LIMITED WARRANTY

DAYTON ONE-YEAR LIMITED WARRANTY. Dayton® Electric Baseboard Heaters, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.

LIMITATION OF LIABILITY. To the extent allowable under applicable law, Dayton's liability for consequential and incidental damages is expressly disclaimed. Dayton's liability in all events is limited to and shall not exceed the purchase price paid.

WARRANTY DISCLAIMER. Dayton has made a diligent effort to provide product information and illustrate the products in this literature accurately; however, such information and illustrations are for the sole purpose of identification, and do not express or imply a warranty that the products are MERCHANTABLE, or FIT FOR A PARTICULAR PURPOSE, or that the products will necessarily conform to the illustrations or descriptions. Except as provided below, no warranty or affirmation of fact, expressed or implied, other than as stated in the "LIMITED WARRANTY" above is made or authorized by Dayton.

PRODUCT SUITABILITY. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Dayton attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, review the product applications, and all applicable national and local codes and regulations, and be sure that the product, installation, and use will comply with them.

Certain aspects of disclaimers are not applicable to consumer products; e.g., (a) some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you; (b) also, some jurisdictions do not allow a limitation on how long an implied warranty lasts, consequentially the above limitation may not apply to you; and (c) by law, during the period of this Limited Warranty, any implied warranties of implied merchantability or fitness for a particular purpose applicable to consumer products purchased by consumers, may not be excluded or otherwise disclaimed.

PROMPT DISPOSITION. Dayton will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write or call dealer from whom the product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealer's name, address, date, and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714 U.S.A.