



ELECTRIC FIREPLACE/INSERT
SAFETY INFORMATION AND INSTALLATION MANUAL
FOR MODELS CEF21, CEF21WM, CEF21CM, CEF21WMO,
CEF21CMO, VEFSO21, CGESC21, CGEFC21, CGEFCO21,
CGEFCW21, CGEFSO21 AND CGEFSW21



Read these instructions completely before beginning installation. Failure to follow them could cause a heater malfunction resulting in serious injury and/or property damage.

WARNING: All electric heaters have hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint or flammable liquids are or are stored.

WARNING: This heater is tested and listed for use only with the optional accessories listed in these instructions. Use of optional accessories not specifically tested for this heater could void the heater warranty and/or result in a safety hazard.

This fireplace meets the construction and safety standards of H.U.D. for application in manufactured housing when installed according to these instructions.

***Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer**

Save this manual for future reference.
For more information, visit www.desatech.com

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SAFETY INFORMATION

⚠ WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information, consult a qualified installer.

⚠ CAUTION: Do not expose the heater to the elements (such as rain, etc).

Due to high temperatures, the firebox should be located out of traffic and away from furniture and draperies.

Do not place clothing or other flammable material on or near firebox. Never place any objects on the fireplace.

Fireplace becomes very hot when running. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Fireplace will remain hot for a time after shutdown. Allow surfaces to cool before touching.

Carefully supervise young children when they are in the room with fireplace.

When using electrical heaters, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read all instructions before using this heater.
2. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes and curtains at least 3 feet from front of heater and keep them away from sides and rear.
3. Always unplug heater when not in use.
4. Do not operate any heater with a damaged cord or plug or after heater malfunctions, has been dropped or damaged in any way.
5. Do not use outdoors.
6. This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
7. Do not run cord under carpeting. Do not cover cord with throw rugs, runners or the like. Arrange cord away from traffic area and where it will not be tripped over.
8. To disconnect heater, turn controls to "OFF" before removing plug from outlet.
9. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire or damage the heater.
10. To prevent possible fire, do not block air intakes in any manner.
11. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint or flammable liquids are used or stored.
12. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock or injury to persons.

SAFETY INFORMATION

Continued

13. Avoid the use of an extension cord because the extension cord may overheat and cause a risk of fire. However, if you have to use an extension cord, the cord should be No. 14 AWG minimum size and rated not less than 1875 WATTS.
14. Always use properly grounded fused and polarized outlets.
15. Always use ground fault protection where required by electrical codes.
16. Always disconnect power before performing any cleaning, maintenance or relocation of heater.
17. To prevent a possible fire, do not burn wood or other materials in this heater.
18. To prevent electric shock or fire, always use a certified electrician should new circuits or outlets be required.
19. When transporting or storing heater, keep in a dry place free from excessive vibration and store as to avoid damage.

LISTING APPROVALS

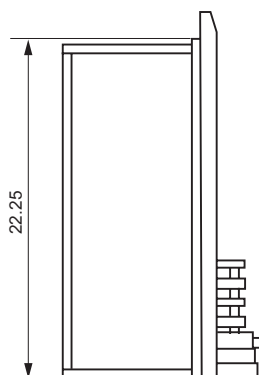
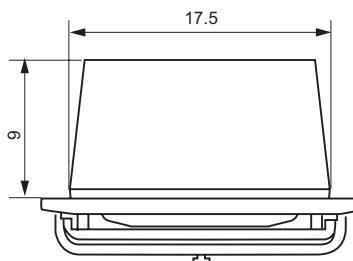
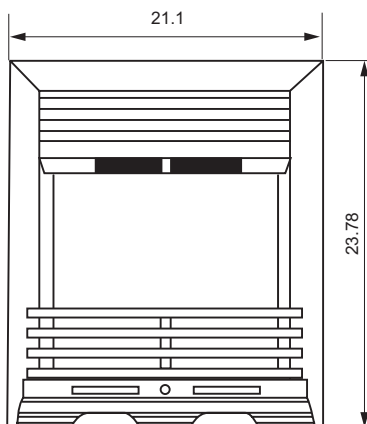
This heater has been tested in accordance with the CSA Standards for fixed and location-dedicated electric room heaters in the United States. All components are UL or CSA safety certified.

If you need assistance during installation, please contact your local dealer or the DESA Heating Products Technical Services Department at 1-866-672-6040.

Description:	21" Fireplace/Insert
Voltage/Hz:	120/60
Watts:	1500
Amps:	15 Amp Grounded Circuit

Note: This heater must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with *National Electric Code ANSI/NFPA 70-latest edition* or the *Canadian Electric Code, CSA C2.1* as appropriate.

PRODUCT DIMENSION SPECIFICATIONS



Note: Recommended clearance for ease of installation is approximately 1" from edge of unit to edge of mantel front.

Figure 1 - Heater Dimensions

LOCATING FIREPLACE

⚠ WARNING: Due to high temperatures, this heater should be located out of traffic. Keep combustible materials such as furniture, pillows, bedding, papers, clothes and curtains at least 3 feet (.9m) from the front of the heater.

⚠ WARNING: Never locate this heater where it may fall into a bathtub or other water container.

NOTICE: Minimum and maximum clearances must be maintained at all times. Illustrations throughout these instructions reflect typical installations and are for design purposes only. Actual installations may vary slightly due to individual preferences.

⚠ WARNING: To prevent contact with sagging or loose insulation, the heater must not be installed against vapor barrier or exposed insulation. Localized overheating could occur and a fire could result.

⚠ CAUTION: Do not expose the heater to the elements (such as rain, etc.)

⚠ CAUTION: Wear gloves and safety glasses for protection during installation and maintenance.

Figure 2 illustrates a variety of ways the heater may be located in a room. The heater may be installed directly on the floor, carpet or raised on a hearth.

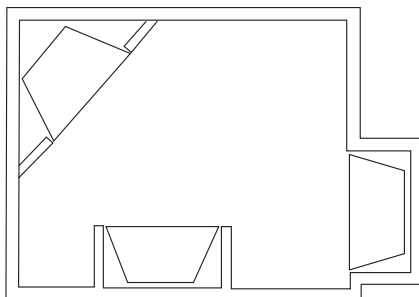


Figure 2 - Heater Locations

UNPACKING AND TESTING FIREPLACE

Carefully remove the unit from the box. Prior to permanently installing the unit, test to make sure the unit operates properly. To do this, plug the unit's power supply cord into a conveniently located 120-volt grounded outlet.

⚠ CAUTION; The unit's power supply cord must be connected to a properly grounded and protected 120-volt outlet. Always use ground fault protection where required by the electrical code.

⚠ WARNING: Do not operate the unit if it is damaged or has malfunctioned. If you suspect the unit is damaged, return the unit to an authorized service facility for examination, electrical or mechanical adjustment or repair.

LOCATING FIREPLACE

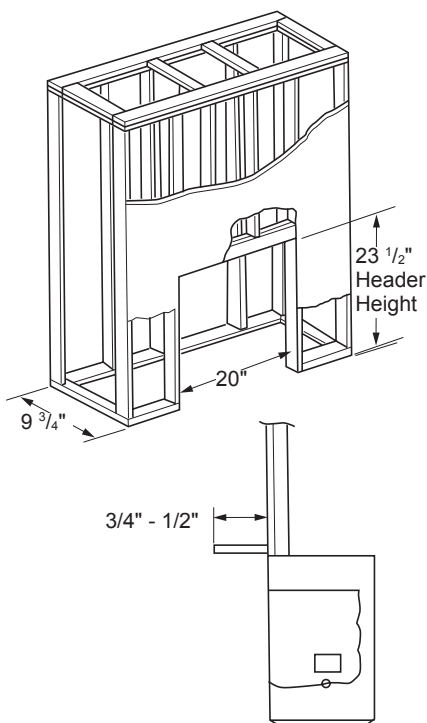
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FRAMING

Figure 3 shows a typical framing of this heater using combustible materials. All required clearances to combustibles must be adhered to. Header height is measured from the base of the heater.

Tools and building supplies required for installation:

- Saw
- Pliers
- Hammer
- Phillips screwdriver
- Tape measure
- Wall-finishing materials
- Electric drill/bits
- Square
- Gloves
- Level
- Framing materials
- Surround
- Caulking material



Note: The height that a combustible mantel is fitted above the heater is dependent on the height of the front selected. The minimum height is 1" above the front.

Figure 3 - Framing Heater for New Construction/Renovation

CAUTION: Provide adequate clearances around the air openings and adequate accessibility clearances for servicing and proper operations.

INSTALLATION

WARNING - RISK OF FIRE!
The power cord must not be pinched or against a sharp edge. Secure cord to avoid tripping or snagging to reduce the risk of fire, electric shock or personal injury.

Do not run cord under carpeting. Do not cover cord with throw rugs, runners or the like. Arrange cord away from traffic areas and where it will not be tripped over.

WARNING - RISK OF FIRE!
To prevent a possible fire, do not block air intake or exhaust in any manner. Do not use on soft surfaces (like a bed) where openings may become blocked.

WARNING - RISK OF FIRE!
Do not blow or place insulation against the firebox.

WARNING: This heater is tested and listed for use only with the approved optional accessories. Use of optional accessories not specifically tested for this heater could void the heater warranty and/or result in a safety hazard.

INSTALLATION

Continued

⚠ WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

Do not store or use gasoline or other flammable vapors in the vicinity of this or any other heater.

INSTALLING AS A FIREPLACE

Select a suitable location that is not susceptible to moisture and is away from drapes, furniture and high traffic areas. **Note:** Follow all national and local electrical codes. This insert can be installed into either an existing fireplace or as new construction/renovation.

NOTICE: Never pick unit up by louvers. Louvers will bend.

Existing Fireplace Installation

1. Thoroughly clean out the existing fireplace and hearth area.
2. Seal all drafts, vents or ash clean-outs with fiber-glass insulation. Seal the flue. Once sealed, close damper to stop debris from falling onto unit.
3. If existing fire box is susceptible to moisture, cap the top of the chimney flue to prevent infiltration of water. **Note:** It is strongly advised that you hire a qualified professional to undertake this step in order to prevent personal injury. Once the flue is capped, the chimney is no longer suitable for wood burning. **Note:** Do not install this unit into a fireplace that is prone to dampness; the area of installation must be dry.
4. Plan the power supply. If an existing grounded outlet is near the fireplace, the power cord can run along the front of the fireplace. If the cord is not long enough to reach the outlet, a grounded extension cord minimum AWG No. 14 and rated to a minimum of 1875 watts, may be used. If you plan to cut or drill a hole in the existing fireplace for wiring, it is best to hire a professional to do this step in order to prevent personal injury. To reduce the risk of fire, do not run the power cord under rugs, carpets, etc. Arrange the power supply cord away from high traffic areas where it may pose a tripping hazard.

⚠ WARNING: The solid fuel/gas fireplace has been converted for use with an electric insert and cannot be used for original fuels unless all original parts have been replaced and the fireplace has been reapproved by the authority having jurisdiction.

New Construction or Renovation

1. Select a location that is not prone to moisture and is located at least .9m or 3 feet away from combustible materials such as curtains or drapes, furniture, bedding, paper, etc.
2. Place unit in selected location to see how it will look in the future.
3. Mark the desired location on the floor and store unit in a safe, dry and dust free location.
4. Frame in an opening leaving at least 1/4" (6 mm) around the edge of the unit. Any new wiring must be done in compliance with local and national codes and other applicable regulations in order to reduce the risk of fire, electric shock or other injuries. Therefore, it strongly recommended that you hire a professional to complete any such work.
5. Plan your power supply. See step 4 of *Existing Fireplace Installation*, page 6.

Installing Insert

Once the site has been prepared, the fireplace insert can be installed.

1. Install the trim onto the front of the unit.
2. Make sure switch is in the "OFF" position.
3. Plug fireplace into a 15-amp/120 volt, grounded outlet.
4. Push fireplace insert so that the trim is against the finished mantle or wall surface.

NOTICE: When the front is installed it will cover the gap between the heater and framing, cabinet, finishing materials or existing fireplace.

FINISHING

Combustible Finishing Material : Materials made of or surfaced with wood, compressed paper, plant fibers, plastics or any material capable of igniting and burning, whether flame proofed or not, plastered or unplastered (this includes drywall).

Noncombustible Finishing Material : Materials which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters or combinations thereof or have a fire rating of zero.

⚠ WARNING: Grilles on this heater cannot, in any way, be covered as it may create a fire hazard.

FINISHING CHECKLIST

- Power supply service must be completed prior to finishing to avoid reconstruction.
- Grilles and air openings cannot be covered in any circumstances.

Note: The heater is a zero clearance fireplace and may be finished with combustible or noncombustible finishing materials.

When using paint or lacquer to finish the mantel, they must be heat resistant to prevent discoloration.

SPECIFICATIONS

Power Supply: 120V; 15-Amp Grounded Plug
Frequency: 60 Hz
BTU Output: 5000 BTU
Heater Power: 1500 W
Net Weight: 44 lbs

OPERATING INSTRUCTIONS

The controls (see Figure 4) are located behind the grill above screens and can be accessed by pulling the grill from the top, forward and down.

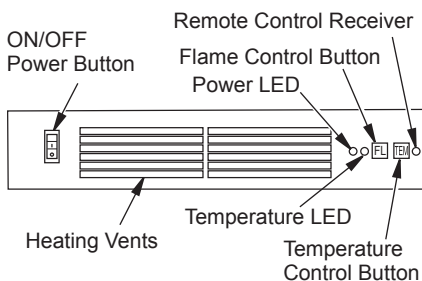


Figure 4 - Controls For Electric Fireplace

1. Plug in your electric fireplace.
2. **Main ON/OFF Power Switch and LED:** This switch is located at the furthest left corner on the control panel. The power LED will light up when the unit is on (see Figure 4). When unit is on, the default settings for the fireplace is low background lighting and high ember bed and flame and the heater is off.
3. **Temperature Control Button and LED:** This button is located to the left of the Remote Control Receiver (see Figure 4). The LED is located to the left of the Flame Button. Push button to cycle through settings. When this button is pushed the LED will change to its corresponding color: Green for LO, Orange for MED and Red for HI. When heater is on heat will emit through vents located in the middle of the control panel (see Figure 4).
The heater has a built-in thermostat so it will shut off automatically once the set temperature is reached. It will also turn on automatically if the room temperature drops below the set temperature.
Note: When the heater is turned on for the first time, it may release a slight, harmless odor. This odor is a normal occurrence caused by the initial heating of the internal heating elements and should not occur again.
4. **Flame Control Button:** This button is located to the left of the Temperature Button (see Figure 4). After power is on, push the Flame Control Button to adjust flame and ember bed brightness. Press and release the Flame Control Button to cycle through LO, MED, HI and OFF.

OPERATING BY REMOTE CONTROL

1. Plug in your electric fireplace.
2. Push the ON/OFF Power Button to turn unit on. Power LED will light.
3. When operating the remote control, it must be pointed at the sensor behind the louver.
Note: Make sure your batteries are fully charged and installed correctly in your remote control.
4. The ON/OFF button at the top left of the remote is the main ON/OFF power button. Pressing this button activates the power to the unit.

OPERATING INSTRUCTIONS

Continued

5. To adjust the ember bed lighting, press the "-" or "+" LAMP buttons. There are four levels of brightness.
6. The HEATER button activates the heater. The heater is pre-set to the following temperatures:
HI will shut off when room reaches approximately 86° F (30 C). The LED will be red.
MED will shut off when room reaches approximately 75° F (24 C). The LED will be orange.
LO will shut off when room reaches approximately 64°F (18 C). The LED will be green.
7. To adjust the back flames use the FLAME button. To increase or decrease flame, press the "-" or "+" buttons to cycle through the four flame settings.
8. To turn off the fireplace, press the ON/OFF button once. When you restart the fireplace with the remote control, all of the features you had set will remain in effect.

NOTICE: This remote control must remain within 8 meters or 26 feet of the fireplace to be effective.

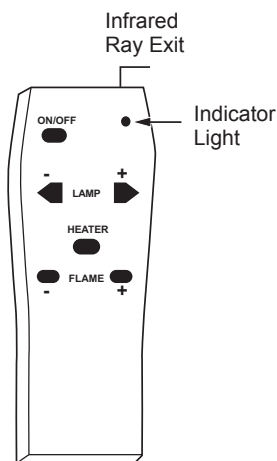


Figure 5 - Remote Control For Electric Fireplace

CLEANING AND MAINTENANCE

WARNING: Always disconnect power and allow the heater to cool before performing any cleaning, maintenance or relocation of this heater. Turn controls to OFF and remove plug from outlet or turn off circuit breaker to heater.

Turn off heater and circuit breaker to heater before performing any cleaning and/or maintenance. Allow heater to cool completely.

CLEANING FIREBOX COMPARTMENT

1. Remove screws from switch bracket. Remove front face by pulling out at the bottom of the face and lifting up. This will give access to logs area.
2. Using the brush vacuum attachment, gently clean compartment.
3. After cleaning compartment, replace front face and reset circuit breaker.

BACK GLASS

1. The glass is cleaned in the factory during assembly. During shipment, installation, handling, etc. the glass surface may collect dust particles. These can be removed by buffing lightly with a clean dry cloth.
2. To remove fingerprints or other marks, the glass can be cleaned with a damp cloth using a good quality household glass cleaner. The glass should be completely dried with a lint free cloth or paper towel.
3. In the event of glass breakage, vacuum all remaining glass pieces with a shop vac. **DO NOT VACUUM WHILE PIECES ARE HOT.** Replace glass only with replacement part specifically for this heater. Never substitute material. Only fully tempered soda lime safety glass may be used on this heater.

CLEANING AND MAINTENANCE

Continued

BULB REPLACEMENT

⚠ WARNING: The halogen light bulbs in your unit can become extremely hot. Allow at least 10 minutes between turning off the heater and removing the light bulbs to avoid accidental burns.

There are a total of 6 halogen light bulbs (type GX6.35 rated 120 volts, 20 watts or 35 watts) in your unit.

- 2 bulbs provide illumination for the ember bed beneath the log set
- 2 bulbs provide illumination for the flame generation assembly
- 2 bulbs for replacement

⚠ WARNING: Do not install replacement bulbs that exceed specified maximum watts.

Your fireplace unit must be opened in order to replace the light bulbs. To reduce the number of times you need to open the unit, replace all bulbs at the same time. If the unit has been running, turn off power and let fireplace cool before changing bulb.

Ember Bed Bulbs

1. Follow step 1 under *Cleaning Firebox Compartment*, page 8, to remove front face.
2. From the bottom, gently pull forward and lift up log set ember bed until front edge clears the front of the unit (do not pull up on logs).
3. Remove spring clip. Hold socket and pull out the old bulb.
4. Hold socket and push in new bulb (DO NOT exceed wattage).
5. Repeat steps 3 and 4 with second bulb. Reconnect spring.
6. Gently push ember bed down until rear edge is resting against rear ledge of unit.
7. Replace front face.

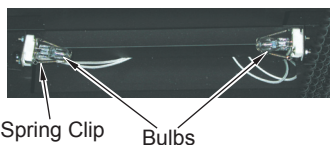


Figure 6 - Ember Bed Bulb Location

Flame Generation Bulbs

1. Remove screws from glass holder brackets. The brackets are located on the inside of the fireplace and the screws to be removed are on the outside (see Figure 7 for screw and glass location).
2. With gloves on, lift up on bottom of glass and pull forward. Place glass on smooth, soft surface to avoid breakage.
3. Locate flame generation cylindrical drum, figure 8.
4. Squeeze half of drum cylinder until it's top edge clears the top drum track. Remove bottom edge of cylinder drum from bottom drum track. This will give you access to the light bulbs. **Note:** Do not exert excessive pressure on drum cylinder as this may cause damage.
5. Remove spring clip. Hold socket and pull out old bulb.
6. Hold socket and push in new bulb (DO NOT exceed wattage).
7. Repeat steps 5 and 6 for second bulb. Reconnect spring.
8. Insert bottom edge of removed cylinder half into bottom drum track. Squeeze drum cylinder until it's top edge fits into top drum rack.
9. With gloves, carefully replace glass.
10. Install glass holder brackets with screws removed in step 2.

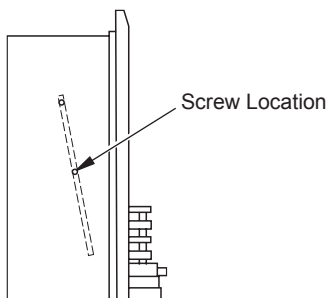


Figure 7 - Glass and Bracket Location

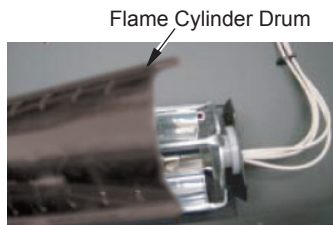


Figure 8 - Flame Generation Cylinder Drum

TECHNICAL SERVICE

You may have further questions about installation, operation or troubleshooting. If so, contact DESA Heating Products' Technical Service Department at 1-866-672-6040. When calling please have your model and serial numbers of your heater ready.

You can also visit DESA Heating Products' technical services web site at **www.desatech.com**.

REPLACEMENT PARTS

Note: Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

PARTS UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s), call DESA Heating Products' Technical Service Department at 1-866-672-6040. Halogen light bulbs used in fireplace are not included in warranty.

When calling DESA Heating Products, have ready

- your name
- your address
- model and serial numbers of your heater
- how heater was malfunctioning
- purchase date

Usually, we will ask you to return the part to the factory.

PARTS NOT UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s), call DESA Heating Products at 1-866-672-6040 for referral information.

When calling DESA Heating Products, have ready

- model number of your heater
- the replacement part number

TROUBLESHOOTING



WARNING: Turn off appliance and let cool before servicing. Only a qualified service person should service and repair heater.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Fireplace turns off and will not turn on	1. Fireplace has overheated and safety device has caused thermal switch to disconnect or home circuit breaker has opened	1. Reset switch by turning main power switch off and waiting 5 minutes then turning it back on
Flame is not moving	1. Loose wiring 2. Flame motor defective	1. Inspect wiring for loose connections 2. Call a qualified service technician to replace flame motor
Dim or poorly visible flame	1. Bulb(s) are burnt out 2. Wiring is loose	1. Inspect bulbs and replace if necessary 2. Inspect wiring for loose connections and repair or replace if necessary
Log set and/or ember is not glowing	1. Bulb(s) are burnt out	1. Inspect bulbs and replace if necessary
Flame sputters	1. Flame motor is defective	1. Call a qualified service technician to replace flame motor
Remote control does not work	1. Low batteries 2. Unit switch and/or wall switch in ON position	1. Replace AA batteries in remote control 2. Turn off main power switch (see Figure 4)

WARRANTY INFORMATION

KEEP THIS WARRANTY

Model _____

Serial No. _____

Date Purchased _____

Always specify model and serial numbers when communicating with the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

LIMITED WARRANTY ELECTRIC FIREPLACE/INSERT

DESA Heating Products warrants this product to be free from defects in materials and components for one (1) year from the date of first purchase (excluding bulbs and fuses), provided that the product has been properly installed, operated and maintained in accordance with all applicable instructions. To make a claim under this warranty the Bill of Sale or cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers the cost of part(s) required to restore this heater to proper operating condition (excluding bulbs and fuses) and an allowance for labor when provided by a DESA Heating Products Authorized Service Center. Warranty part(s) MUST be obtained through authorized dealers of this product and/or DESA Heating Products who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater MUST be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance or defects caused by improper installation. Travel, diagnostic cost, labor, transportation and any and all such other costs related to repairing a defective heater will be the responsibility of the owner. Replacement bulbs are not included in this warranty.

TO THE FULL EXTENT ALLOWED BY THE LAW OF THE JURISDICTION THAT GOVERNS THE SALE OF THE PRODUCT; THIS EXPRESS WARRANTY EXCLUDES ANY AND ALL OTHER EXPRESSED WARRANTIES AND LIMITS THE DURATION OF ANY AND ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO ONE (1) YEAR ON ALL COMPONENTS (EXCLUDING BULBS) FROM THE DATE OF FIRST PURCHASE; AND DESA HEATING PRODUCTS' LIABILITY IS HEREBY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND DESA HEATING PRODUCTS SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES WHATSOEVER INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow a limitation on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties or exclusion or limitation on damages may not apply to you.

This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

For information about this warranty write:

DESA
HEATING PRODUCTS™
2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004
www.desatech.com



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NOT A UPC

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Rev. A

03/05