



Smart Heating Solutions

INSTRUCTIONS KDS Series

WARNING

When using electrical appliances, basic precautions should always be taken to reduce the risk of fire, electrical shock and injury, including the following:

Read carefully these instructions before installation, operation of the heater. Failure to adhere to the instructions could result in fire, electric shock, serious personal injury, and death or property damage. Review frequently for continuing safe operation and instruction of future users, if necessary.

IMPORTANT INSTRUCTIONS

- 1- Read all instructions before installing or using this heater.
- 2- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, like furniture, pillows, bedding, papers, clothes, and curtains at least 36 in. (915 mm) from the front of the heater.
- 3- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- 4- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- 5- Do not use outdoors.
- 6- 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.
- 7- Do not block air intakes or exhaust in any way whatsoever.
- 8- This 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.
- 9- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury.
- 10- **AMERICAN VERSION ONLY:** This heater includes a visual alarm to warn that parts of the heater are getting excessively hot. If the light turns on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. If no obstruction is visible, the heater must be checked by a qualified person. **DO NOT OPERATE THE HEATER WHEN THE ALARM LIGHT IS ON.**
- 11- The thermostat should not be considered an infallible device in cases where maintaining a temperature is considered critical. Examples: Hazardous material storage, computer server room, etc. In these particular cases, it is imperative to add a monitoring system to avoid the consequences of a thermostat failure.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

- The installation must be executed by a qualified technician.
- Must be installed solidly. This heater could weight up to 25 lb (11 kg).
- The motor is thermally protected.
- All wiring must be in accordance with National and local Electrical Codes.
- Heater must be grounded as a precaution against possible shock.
- To avoid possible electrical shock, disconnect all power at the main panel prior to wiring.
- Verify the power supply voltage coming to the heater matches the heater nameplate rating before energizing heater.
- When installed, heater must be electrically grounded in accordance with the National Electrical Code.

CAUTION:

- High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 36 in. (915 mm) from the front of the heater. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.
- Ceiling installation only.
- Use copper wire only.

STANDARD CEILING MOUNTING

1. Never install the air-forced diffuser at less than 8 ft. (250 cm) from the floor and 12 in. (30 cm) from adjacent walls.
2. Provide an exit for the power supply wires in the ceiling, under the heater.
3. Mount the ceiling support using provided screws. For drop ceiling mounting, the necessary kit is not provided.
4. Suspend the heater at the hangers of the ceiling support.
5. Convey the wires of power supply to the junction box of the heater and connect the heater leads to the supply leads according to the local and national codes. See wiring diagram.
6. Fold back the heater toward the ceiling and fix it using the screw provided..
7. Install the front cover using the 3 screws provided.

DROP CEILING MOUNTING with T-BAR option

1. Install the T-BAR on the ceiling using chains, steel wires or bar.
2. Mount the ceiling support on the T-BAR option.
3. Follow instructions 4 to 7 as above for STANDARD CEILING MOUNTING.

OPTIONS

See installation pamphlet provided with the various options for the installation of those options.

IMPORTANT
Connect the control (thermostat or relay) to the T1-T2 position on the terminal block. Do not interrupt power supply to control this heater.

OPERATING INSTRUCTIONS

The heater must be properly installed before it is used.

START UP

- Turn the power on at the circuit breaker panel.
- Electronic thermostat: be sure to set it on the fan mode.
- Built-in tamperproof thermostat: the setting can be done with a small slotted screwdriver.
- On a call for heat from either remote thermostat or unit mounted thermostat, the elements and fan will be energized.
- When the thermostat is satisfied, elements will be deenergized.
- The fan will continue to run until the residual heat is removed from the heater. Then the fan will stop.

Automatic Reset Thermal High Limit

The heater has an automatic reset thermal high limit that will deenergize the heating elements if the interior temperatures of heater exceed its setting. The limit will automatically reset when the heater interior temperatures fall below its setting.

AMERICAN VERSION ONLY

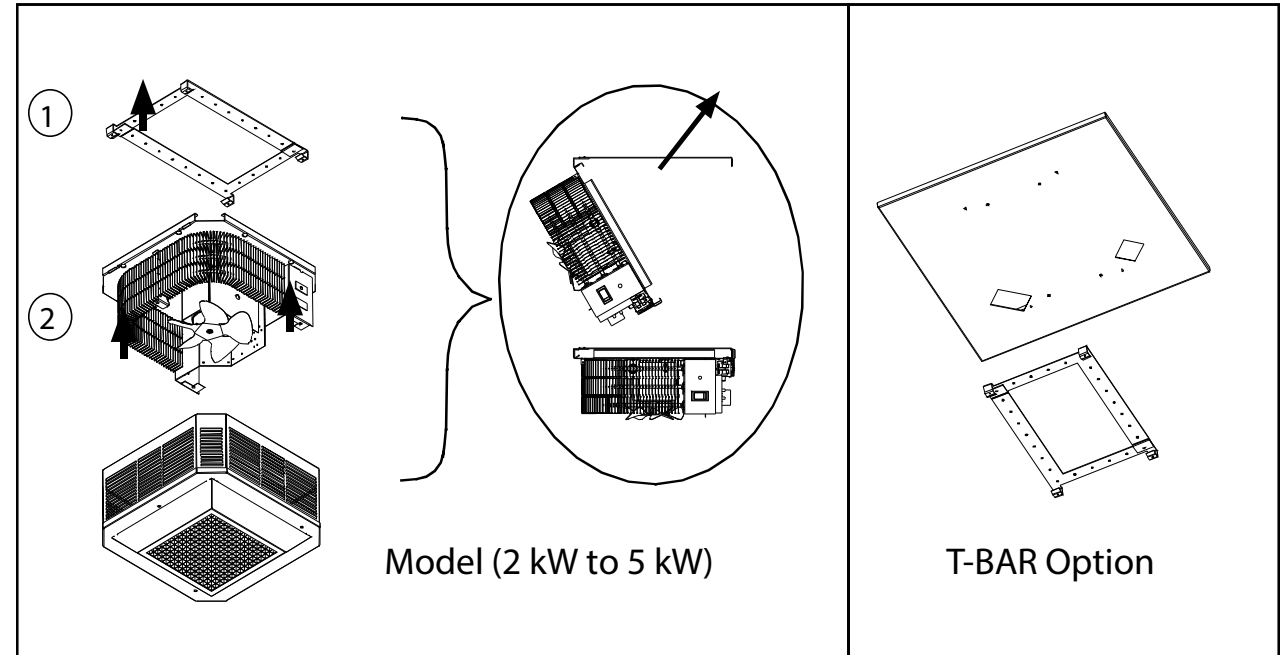
This heater includes a visual alarm to warn that parts of the heater are getting excessively hot. If the light turns on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DONOT OPERATE THE HEATER WHEN THE ALARM LIGHT IS ON.**

MAINTENANCE INSTRUCTIONS

- The heater motor is permanently lubricated.
- Wait until the housing and heating elements cool before performing maintenance.
- Once a year, remove the front cover and use a vacuum cleaner or compressed air to remove the dust accumulation inside the heater.
- Cleaning should be done while the heater is disconnected from the power supply circuit.
- A qualified technician should perform any other servicing.

KEEP THIS INSTRUCTION PAMPHLET FOR THE USER

King Electrical Mfg. Company
9131 10th Avenue South, Seattle WA 98108
phone (206) 762-0400 • fax (206) 763-7738





Smart Heating Solutions

INSTRUCTIONS KDS Series



WARNING



When using electrical appliances, basic precautions should always be taken to reduce the risk of fire, electrical shock and injury, including the following:

Read carefully these instructions before installation, operation of the heater. Failure to adhere to the instructions could result in fire, electric shock, serious personal injury, and death or property damage. Review frequently for continuing safe operation and instruction of future users, if necessary.

IMPORTANT INSTRUCTIONS

- 1- Read all instructions before installing or using this heater.
- 2- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, like furniture, pillows, bedding, papers, clothes, and curtains at least 36 in. (915 mm) from the front of the heater.
- 3- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- 4- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- 5- Do not use outdoors.
- 6- 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.
- 7- Do not block air intakes or exhaust in any way whatsoever.
- 8- This 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.
- 9- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury.
- 10- The thermostat should not be considered an infallible device in cases where maintaining a temperature is considered critical. Examples: Hazardous material storage, computer server room, etc. In these particular cases, it is imperative to add a monitoring system to avoid the consequences of a thermostat failure.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

- The installation must be executed by a qualified technician.
- Must be installed solidly. This heater could weight up to 35 lb (16 kg).
- The motor is thermally protected.
- All wiring must be in accordance with National and local Electrical Codes.
- Heater must be grounded as a precaution against possible shock.
- To avoid possible electrical shock, disconnect all power at the main panel prior to wiring.
- Verify the power supply voltage coming to the heater matches the heater nameplate rating before energizing heater.
- When installed, heater must be electrically grounded in accordance with the National Electrical Code.

CAUTION

- High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 36 in. (915 mm) from the front of the heater. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.
- Ceiling installation only.
- Use copper wire only.

STANDARD CEILING MOUNTING

1. Never install the air-forced diffuser at less than 8 ft. (250 cm) from the floor and 12 in. (30 cm) from adjacent walls.
2. Provide an exit for the power supply wires in the ceiling, under the heater.
3. Mount the ceiling support using provided screws. For drop ceiling mounting, the necessary kit is not provided.
4. Suspend the heater at the hangers of the ceiling support.
5. Convey the wires of power supply to the junction box of the heater and connect the heater leads to the supply leads according to the local and national codes. See wiring diagram.
6. Fold back the heater toward the ceiling and fix it using the screw provided..
7. Install the front cover using provided screws (4).

DROP CEILING MOUNTING with T-BAR option

1. Install the T-BAR on the ceiling using chains, steel wires or bar.
2. Mount the ceiling support on the T-BAR option.
3. Follow instructions 4 to 7 as above for STANDARD CEILING MOUNTING.

OPTIONS

See installation pamphlet provided with the various options for the installation of those options.

IMPORTANT
Connect the control (thermostat or relay) to the T1-T2 position on the terminal block. Do not interrupt power supply to control this heater.

OPERATING INSTRUCTIONS

The heater must be properly installed before it is used.

START UP

- Turn the power on at the circuit breaker panel.
- Electronic thermostat: be sure to set it on the fan mode.
- Built-in tamperproof thermostat: the setting can be done with a small slotted screwdriver.
- On a call for heat from either remote thermostat or unit mounted thermostat, the elements and fan will be energized.
- When the thermostat is satisfied, elements will be deenergized.
- The fan will continue to run until the residual heat is removed from the heater. Then the fan will stop.

Automatic Reset Thermal High Limit

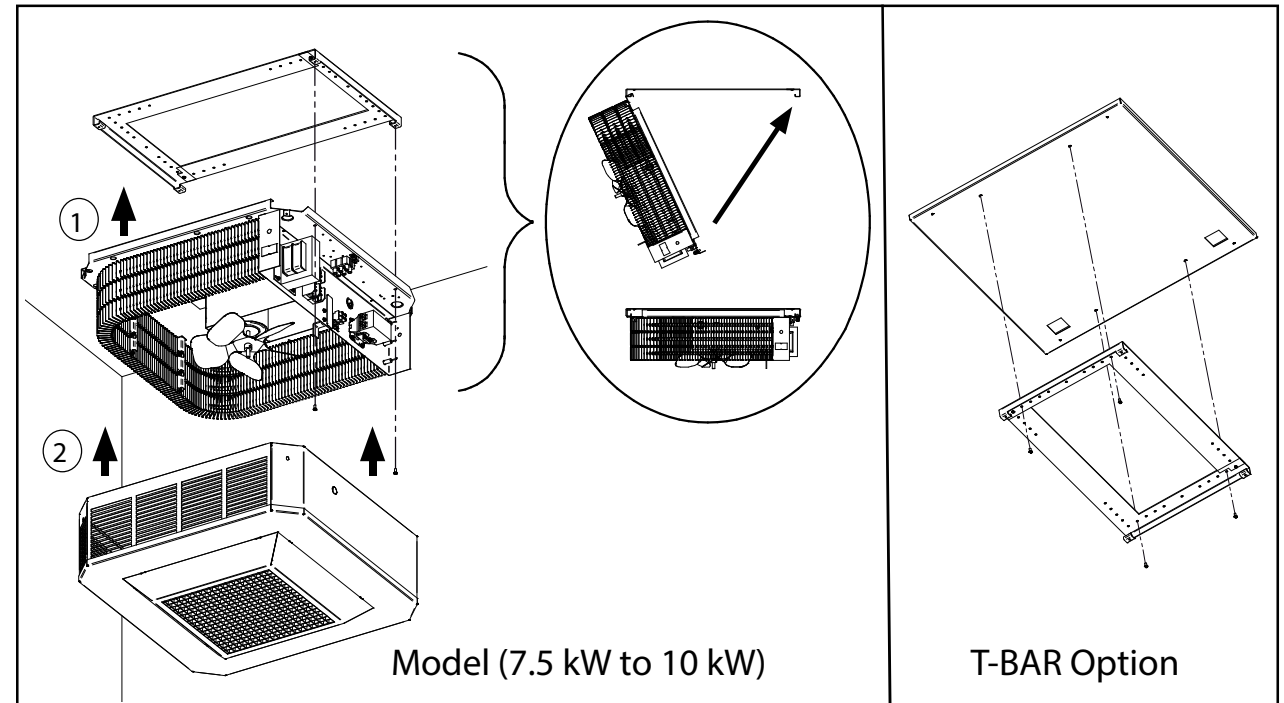
The heater has an automatic reset thermal high limit that will deenergize the heating elements if the interior temperatures of heater exceed its setting. The limit will automatically reset when the heater interior temperatures fall below its setting.

MAINTENANCE INSTRUCTIONS

- The heater motor is permanently lubricated.
- Wait until the housing and heating elements cool before performing maintenance.
- Once a year, remove the front cover and use a vacuum cleaner or compressed air to remove the dust accumulation inside the heater.
- Cleaning should be done while the heater is disconnected from the power supply circuit.
- A qualified technician should perform any other servicing.

KEEP THIS INSTRUCTION PAMPHLET FOR THE USER

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Model (7.5 kW to 10 kW)

T-BAR Option



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IMPORTANT INSTRUCTIONS

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- 2- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, like furniture, pillows, bedding, papers, clothes, and curtains at least 36 in. (915 mm) from the front of the heater.
- 3- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- 4- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- 5- Do not use outdoors.
- 6- 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.
- 7- Do not block air intakes or exhaust in any way whatsoever.
- 8- This 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.
- 9- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury.
- 10- **AMERICAN VERSION ONLY:** This heater includes a visual alarm to warn that parts of the heater are getting excessively hot. If the light turns on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. If no obstruction is visible, the heater must be checked by a qualified person. **DO NOT OPERATE THE HEATER WHEN THE ALARM LIGHT IS ON.**
- 11- The thermostat should not be considered an infallible device in cases where maintaining a temperature is considered critical. Examples: Hazardous material storage, computer server room, etc. In these particular cases, it is imperative to add a monitoring system to avoid the consequences of a thermostat failure.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

- The installation must be executed by a qualified technician.
- Must be installed solidly. This heater could weight up to 31 lb (14 kg).
- The motor is thermally protected.
- All wiring must be in accordance with National and local Electrical Codes.
- Heater must be grounded as a precaution against possible shock.
- To avoid possible electrical shock, disconnect all power at the main panel prior to wiring.
- Verify the power supply voltage coming to the heater matches the heater nameplate rating before energizing heater.
- When installed, heater must be electrically grounded in accordance with the National Electrical Code.

CAUTION

- High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 36 in. (915 mm) from the front of the heater. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.
- Ceiling installation only.
- Use copper wire only.

STANDARD CEILING MOUNTING (Fig. 1)

1. Never install the air-forced diffuser at less than 8 ft. (250 cm) from the floor and 12 in. (30 cm) from adjacent walls.
2. Provide an opening in the ceiling of 23 X 23 X 6 3/16 in. (580 X 580 X 160 mm).
3. Convey the wires of power supply to the opening provided.
4. Remove the appropriate knock-out from the recess box for the electrical supply.
5. Attach firmly the heater using provided screws.
6. Connect the heater leads to the supply leads according to the national and local codes. See wiring diagram.
7. Install the front cover using provided screws (4).

SUSPENDED CEILING MOUNTING (Fig. 2)

1. Never install the air-forced diffuser at less than 8 ft. (250 cm) from the floor and 12 in. (30 cm) from adjacent walls.
2. Convey the wires of power supply to the ceiling space.
3. Suspend the heater firmly (without the front cover) using chains, steel wires (use the supplied hooks) or steel bar by taking care of leaving enough space between the heater and the drop ceiling in anticipation of step # 5.
4. Connect the heater leads to the supply leads according to the national and local codes. See wiring diagram.
5. Gently sit the front cover on the drop ceiling structure.
6. Lower the heater and adjust its height so that it rests on the front cover already in place.
7. Mount the front cover to the heater using provided screws (4).

OPTIONS

See installation pamphlet provided with the various options for the installation of those options.

IMPORTANT
Connect the control (thermostat or relay) to the T1-T2 position on the terminal block. Do not interrupt power supply to control this heater.

OPERATING INSTRUCTIONS

The heater must be properly installed before it is used.

START UP

- Turn the power on at the circuit breaker panel.
- Electronic thermostat: be sure to set it on the fan mode.
- Built-in tamperproof thermostat: the setting can be done with a small slotted screwdriver.
- On a call for heat from either remote thermostat or unit mounted thermostat, the elements and fan will be energized.
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- The fan will continue to run until the residual heat is removed from the heater. Then the fan will stop.

Automatic Reset Thermal High Limit

The heater has an automatic reset thermal high limit that will deenergize the heating elements if the interior temperatures of heater exceed its setting. The limit will automatically reset when the heater interior temperatures fall below its setting.

AMERICAN VERSION ONLY

This heater includes a visual alarm to warn that parts of the heater are getting excessively hot. If the light turns on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DO NOT OPERATE THE HEATER WHEN THE ALARM LIGHT IS ON.**

MAINTENANCE INSTRUCTIONS

- The heater motor is permanently lubricated.
- Wait until the housing and heating elements cool before performing maintenance.
- Once a year, remove the front cover and use a vacuum cleaner or compressed air to remove the dust accumulation inside the heater.
- Cleaning should be done while the heater is disconnected from the power supply circuit.
- A qualified technician should perform any other servicing.

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Fig. 1 Model (2 kW to 5 kW) Standard Ceiling Mounting

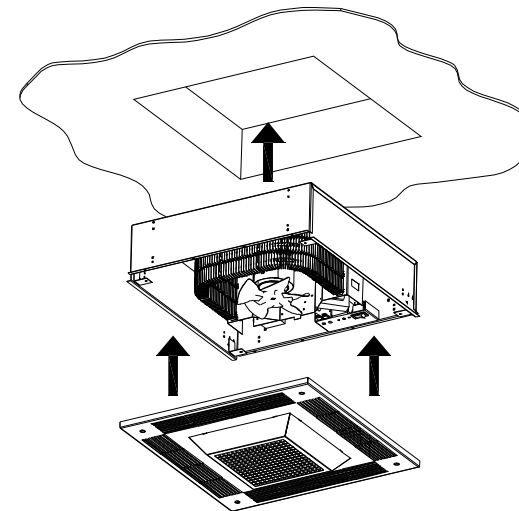


Fig. 2 Model (2 kW to 5 kW) Drop Ceiling Mounting

