



Smart Heating Solutions

## Curing Concrete with Clean Electric Heat.

*A Better Alternative To Direct Fired/Open Flame Heaters  
That Generate Exhaust Fumes*



Curing is an essential part of using concrete during construction. Done correctly it will increase the concrete's strength and durability.

**To properly cure concrete, the ambient temperature must remain within a certain range.** Concrete curing can take from five to seven days. Clean Electric Heaters are an **ideal solution to speed up concrete curing in cold weather.** Clean Electric Heaters provide a specific level of heat during cold weather and do not require ventilation of hazardous fumes.

According to the Concrete Floor Contractors Association\*, "traditional methods often used were direct fired/open flame heaters that can often create a harmful buildup of both carbon monoxide and carbon dioxide fumes. Carbon monoxide poisoning occurs from exposure to these gases in enclosed spaces, creating extreme hazards for all tradespeople. Adequate ventilation with fresh air must be provided to avoid this condition. Although the use of indirect fired (ducted furnace type) heaters which use heat exchangers reduce these gases, gas levels should be monitored at all times."

In addition to worker safety concerns, freshly placed concrete must also be protected from carbon dioxide which can react with the concrete to produce a soft chalky surface through a chemical reaction process known as carbonization (production of calcium carbonate). There are no known threshold limits of carbon dioxide that can be monitored to avoid causing this problem.

**Simply put, completely eliminating carbon monoxide and carbon dioxide fumes that not only cause potential health hazards but also significant structural problems with the concrete itself, is essential when concrete must be poured in winter months.**

**Curing concrete with Clean Electric Heaters.** Heated enclosures may be necessary. These can be made of wood, canvas tarps, or polyethylene sheets—or you can use commercial rigid-plastic enclosures. Heating within the enclosure is best accomplished with electric heaters because they do not require ventilation or emit hazardous fumes.

\*[http://www.concretefloors.ca/?page\\_id=548](http://www.concretefloors.ca/?page_id=548)

## **Clean Electric Heat: The safer, more efficient method.**

### **Benefits of Electric Curing**

- *They deliver clean, dry air with no emissions.*
- *Temperature control is superior than open flame heaters.*
- *As a result, all concrete follows the same time/temperature curve.*
- *Maintenance is minimal compared to direct fired/open flame heaters.*
- *Electric systems are more efficient than open flame heaters.*
- *Over 90% of the electrical energy goes into the concrete.*
- *Reliability: Electric Heaters seldom fail during use.*
- *Fan circulated heated air throughout a room*
- *Some models can be ducted to direct the heated air.*



## What is an electric portable heaters?

Electric heaters use resistive heat, offering high heating capacities of 17,000 – 102,000 BTU/hr They combine a heating element and a fan to circulate heated air throughout a room or some models can be ducted to direct the heated air to a specific location. They deliver clean, dry air with no emissions.

### Choosing the right King Electric Industrial Portable.



# PKB-DT DUCTABLE

### DUCTABLE INDUSTRIAL PORTABLE

King's PKB-DT ductable portable unit heater is constructed to hold up to the rigorous demands of jobsites or industrial facilities. These portable heaters can be ducted, to direct the heated air to

required areas and are ideal for construction sites, warehouse and warehouse space heating, agriculture, events and military applications. It is the best heat source to assist in dry-out applications where dry electric heat is preferred over propane or kerosene space heaters. In addition, electric heat has no odor, flame or carbon monoxide. The high CFM and low temperature rise are also key features to make the PKB-DT the best solution for temporary large capacity heating applications.

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# PKBS STAINLESS

## STAINLESS INDUSTRIAL PORTABLE

**King's PKBS Stainless Steel Portable Unit Heater is specially constructed for heating of, and freeze protection in, dirty, dusty or corrosive areas requiring periodic washing or hose-down.** Typical places of use are: wastewater treatment plants, car/truck washes, agriculture, ship and marine docks, fish processors, and military applications. The heater is constructed from 18-gauge type 304 Stainless Steel and elements making it extremely corrosion resistant. The N.E.M.A. 4 wiring compartment is sealed and gasketed making it watertight. All optional control components are U.L. listed for use in N.E.M.A. 4 enclosures. It is the best heat source to assist in dry-out applications where dry electric heat is preferred over propane or kerosene space heaters. In addition, electric heat has no odor, flame or carbon monoxide. The high CFM and low temperature rise are also key features to make the PKBS the best solution for temporary large capacity heating applications.

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# PKB PLATINUM

## ELECTRONIC INDUSTRIAL PORTABLE W/ REMOTE

King's PKB Platinum Electronic Portable Utility Heaters are the most full-featured utility heaters on the market, with in-built Platinum electronic thermostat for accuracy and remote control for simple operation. With integrated summer fan only and thermostat timer mode, the PKB Platinum has you covered. Constructed to hold up to the rigorous demands of a jobsite or industrial facility. It is the best heat source to assist in dry-out applications where dry electric heat is preferred to propane or kerosene space heaters. In addition, electric heat has no odor, flame or carbon monoxide. The high CFM and low temperature rise are also key features to make the PKB Platinum the best solution for temporary large capacity heating applications. Spiral finned steel elements and high CFM ensure even air distribution producing cooler element operation, prolonging heater life.

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# PORTABLE INDUSTRIAL

## HIGH CFM DUCTABLE INDUSTRIAL PORTABLE

**The King PCK industrial portable unit heater is constructed to hold up to the rigorous demands of a jobsite or industrial facility.** This unit heater is the very BEST heat source to assist in complete “Dry-out” applications, where dry electric heat is preferred to propane or kerosene space heaters. In addition, electric heat omits absolutely no odor, flame or carbon monoxide. The high CFM and moderate temperature rise are also key features to make this unit heater the very best solution for temporary large capacity heating and dry-out applications. Comes standard with a 12” collar for adding a flexible duct to extend the heated air to where it is needed. The -IF (Industrial Frame) complies with the FAA’s Airport regulations of 18 inch above the ground for air inlet of the heater to reduce the jet fuel vapor being drawn in. An Outdoor rain proof rating can be added to the portable unit heater by adding the -OR (Outdoor Rating) to the Model number. This will allow you to place the heater outside in the rain and feed heated air into a building structure, plane, container, apartment, ship or any work area requiring heated dry fresh air and not take up space in the work area. The -OR option adds an intake rain baffle and electrical compartment rain cover and is UL approved for Outdoor Use. Many options are available. We can build one for your application.

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Curing Concrete With Clean Electric Heat In Winter*

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