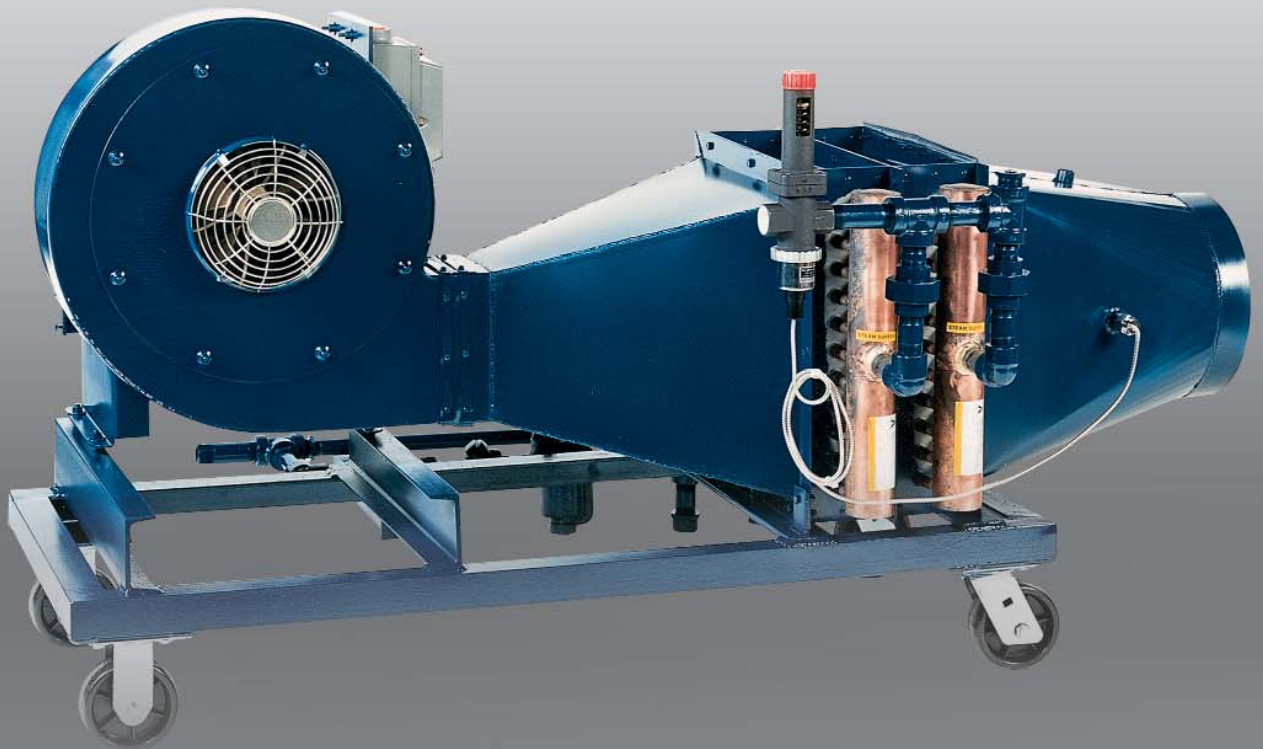
Don't get burned by your insect heat treatment program



Armstrong®

All insect heat treatment options are NOT the same

Although heat treatment is a commonly accepted method of integrated pest management - successfully performed by major food and grain-processing companies for the past 40 years - not all heat-generating options offer the same proven benefits. Of the three primary heat-generating options - electric-resistance, natural gas/liquid propane, and steam - only steam offers the safety, reliability, flexibility and control you demand.

Electric-Resistance

Electric-resistance may be a viable alternative when treating smaller spaces with very targeted treatment areas, however, in larger, more complex applications, electric resistance requires prohibitive wiring and power demands. Additionally, electric-resistance heat generation presents an increased risk of fire or explosion.

Natural Gas and Liquid Propane

Natural gas and liquid propane direct fired heaters also present increased risks for fire and explosion. In addition natural gas and propane carry effects of carbon monoxide and moisture, which can limit the effectiveness of this method, since elevated temperature and low humidity are required to kill insects.

Armstrong Steam Heat Treat Solution

An Armstrong steam-generated heat treatment solution is not only a safer heat generating option, it also provides greater temperature control during the heat-up and cool-down periods, and it is a very dry heat source, which provides an optimal environment for insect eradication.

There's more to implementing an effective insect heat treatment solution than simply raising the building temperature. Armstrong's insect heat treat system delivers controlled heat-up and cool-down cycles, and provides a consistent, low-humidity heat source during the cook phase. This improves efficacy, helps eliminate the risk of structural damage to your storage and processing areas, and the potential for damage to sensitive equipment or electronic components in the treatment area.

What's more, properly locating and mounting heaters for wall or ceiling installations, as well as selecting locations for portable heaters, is critical to a successful heat treatment program. If a heat treatment system is not properly designed and configured, some areas may not reach the critical sustained heating level of 125-140-degrees Fahrenheit. When a consistent, desired temperature is not achieved insects are allowed to survive -- requiring the process be repeated or alternative pest control methods deployed.

With a wide selection of heater sizes and configurations available, and the know-how to ensure they are properly configured, Armstrong's insect heat treatment system ensures maximum coverage in bins, silos, and hard-to-access storage and processing areas.

	Able to Control Heat-up & Cool Down Cycles	Risk of Fire Due to High Element Temperature and/or Combustion	Low Humidity Heat Source	Variable Size Heat Sources Available for Maximum Coverage	Ability to Remotely Control and Monitor Heater
Electric Resistance		X			
Natural Gas and Liquid Propane		X			
Steam Generated Heat Treatment	X		X	X	X

Armstrong Unit Heater Installation

Armstrong Heat Transfer Group, 648 Moeller Street, Granby, Quebec J2G 8N1 - Canada Phone: (450) 378-2655 Fax: (450) 375-3787
www.**armstrong**international.com

Heat Treat Innovation From a Leader in Steam Solutions

Whether you're looking for a portable or stationary system; or whether you're looking to buy and install; lease; or rent, Armstrong has the system configuration, knowledge and terms to make switching to a steam-generated heat treatment solution easy. Our trained representatives will help determine the best option for your plant environment, and our large North American network is always available to support on-going needs, should they arise.

Hot Bin Heaters

Heavy-duty, portable Armstrong Hot Bin Heaters provide an effective way to heat bins, silos and other hard-to-access areas inside your facility. These cost-effective heaters are ideal for heat treatment for insect control, and can also be used for temporary comfort heat and freeze protection. And because the heat is ducted, Hot Bin Heaters can distribute heat to multiple areas from a single heater.

Armstrong Hot Bin Heaters are pre-piped and available in a variety of configurations, Btu outputs and material options to meet most site requirements. Other product features include:

- Temperature regulator
- Inlet strainer
- Outlet steam trap
- Dial thermometer
- Manual motor starter
- Easy-rolling locking wheels

Hot Breath Heaters

With the Heavy-duty Armstrong Hot Breath Heaters you have the option for a permanent wall or ceiling mount or you can mount the Hot Breath on a sturdy cart, providing portable on-demand spot heating in any area within a food-processing facility. These cost-effective heaters are ideal for heat treatment for insect control and cal also be utilized for temporary comfort heat and freeze protection. Armstrong Hot Breath Heaters are pre-piped and available in a wide variety of sizes, output capacities, voltages and materials options. Other product features include:

- Inlet strainer
- Steam trap
- Temperature regulator
- Heavy-duty steel cart with easy-rolling locking wheels

Armstrong Portable Hot Breath Heaters

Armstrong Portable Hot Bin Heaters

Standard & Optional Features

All Armstrong Hot Bin & Hot Breath Heaters feature:

- Pre-piped units with controls, traps and heavy-duty steam hoses
- Permanent, in-place, options for structural heat treatment
- Portable options for structural heat treatment
- Portable options for bin and silo heat treatment
- Technical steam and condensate system support for integration of heat treat into existing plant steams systems
- Heat loss estimation, analysis, equipment, placement suggestions
- Explosion-proof options
- Engineering services can be estimated and arranged if necessary

Additional Armstrong Products

Washdown Equipment

Steamix® hose stations from Armstrong offer a maximum temperature rise set point and cold water failure shutdown for ultimate user safety. Armstrong hot and cold water hose stations include a thermostatic mixing valve for optimum flexibility, control and safety for applications where there is a central hot water supply.

Steam-A-Ware™

Steam-A-ware™ sizing and selection for steam, air and hot water systems. Includes steam traps, pressure reducing valves, control valves, temperature regulators,water heaters and condensate pumps of various types, sizes and configurations for any application. Easy-to-use Steam-A-ware allows you to store multiple product specifications in a schedule and access Armstrong's library of materials from the CD or the Web.

www.armstronginternational.com

For more than 100 years in the steam business, Armstrong has been devoted to building stronger bonds through the sharing of information and ideas. That's why Knowledge Not Shared Is Energy Wasted® is our motto, promise and pledge to you. And it's why we founded Armstrong Steam University.™ Use this site for quick research on steam, answers to steam system questions and comprehensive online steam system education.

Tank Heaters

Armstrong tank heaters are built to withstand the rigorous demands encountered in industrial installations. The heavy-duty features of our units were developed in response to a need for tank heaters that could provide efficient heat transfer without sacrificing structural integrity.

Liquid Drainers

Armstrong float type drain traps are designed for draining heavy liquids from gases or light liquids (dual gravity drainers). These liquid drainers can operate to 3,700 psig or specific gravity down to 0.40.

BiMetallic Superheat Steam Traps

SH Series Bimetallic Steam Traps adjust automatically to changing conditions. The SH Series can operate at pressures to 1800 psig and is capable of operation on low load applications. Available in carbon steel or stainless steel. Inline repairable.

For more information

Let us help you determine if insect heat treatment can be a part of a more efficient pest-management program at your facility.
For a brief insect heat treatment assessment, please visit us online at www.**armstrong**international.com/HeatTreat

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