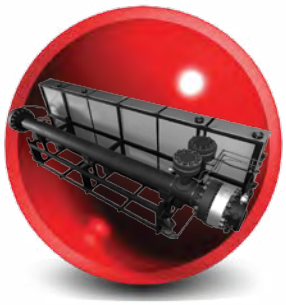
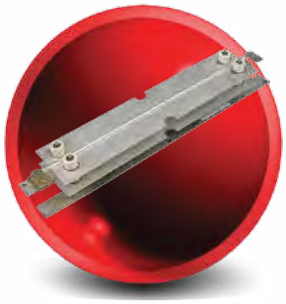
Caloritech™

Engineered Electric Heat

Product Guide





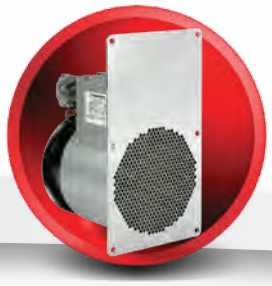
- Engineered Products
- Transit Heaters
- Elements & Specialty Heaters
- Immersion Heaters
- Air & Space Heaters
- Boilers
- Accessories & Controls

CANADA'S BEST MANAGED COMPANIES Platinum member

CCI Thermal Technologies INC.

Heating and Filtration Solutions

Transit Heaters



Electric Calvane™ Cab Heaters – Type RCH1

- Comprised of six horizontally staggered 333W Calvane™ heaters, 250 CFM centrifugal fan.
- Lightweight at 6.35 kg, low profile with a depth of 152 cm.
- Rated 208V, 3 phase, 60Hz, 2 kW.

Open Coil Cab Heaters – Type RCH2

- Feature a speed-controlled fan, 500W open coil element and a 1000W open coil element.

Tubular Element Cab Heaters

- Single entry axial flow fan and automatic reset thermal cutout.
- Fan and elements operate on 480V while the controls function on a separate 120V feed.

Overhead HVAC Heaters - Types DFF & DIF

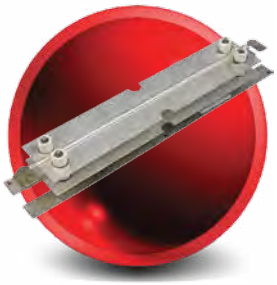
- Optional finned and non-finned tubular elements.
- Fully protected against mechanical shock, vibration or breakage.
- Completely encased resistance wire that will not sag, oxidize or deteriorate.
- Coiled alloy resistor wire is centered and permanently encased within highly compacted magnesium oxide, surrounded by a metallic sheath.

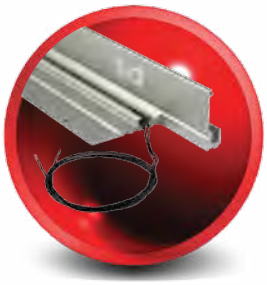
Overhead HVAC Heaters (Open Coil) – Type DOF

- Static pressure drop through open coil is very low, reducing fan horsepower requirements.
- Low element mass yields relatively small amounts of residual heat on fan shut down, reducing the heat effect on surrounding material.

Transit Car Floor Heaters (Calvane™) – Type FV

- Designed with low watt density, rapid start-up and cool down periods, no magnetic noise, low pressure drop, shock and vibration resistance and can be easily isolated for high voltage applications.
- Extremely lightweight at only 0.2 to 0.3 lbs per foot.
- Lengths available up to 120"; two standard widths of 2.25" and 3.25" available.
- For applications with supply voltages in the 600V nominal range, ceramic stand-off insulator systems are available.





Threshold Heaters (CALBAR™)

- Designed using the unique CALBAR™ heating element.
- Hermetically sealed.
- Custom design and mounting hardware to adapt to existing thresholds.
- Can be factory-installed in threshold extrusions.

Transit Car Floor Heaters (Strip) – Type SD

- Available in aluminized steel with stainless steel sheath.
- Wattages range from 100W to 1250W for the aluminized steel sheath and 100 to 1500W for the stainless steel sheath, depending on the size of the heater.
- Overall length limit of 42.5"; effective length limit of 39".
- Rated at 120V or 240V, depending on size.
- High-voltage models rated up to 600V when secondary insulators are used.

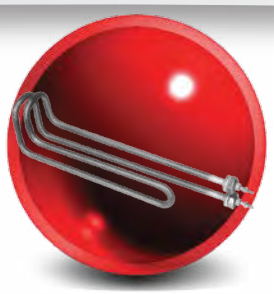
Elements & Specialty Heaters

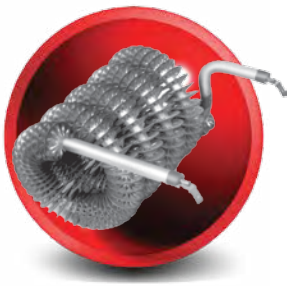
Calvane™ Heaters – Type FV

- Designed for comfort heating in mass transportation applications, such as railcars and aircrafts.
- Aluminum sheath with integrally extruded fins, with lengths up to 120” and widths of 2.25” and 3.25”.
- Offered in standard outputs from 500 to 1750W.
- Can be mounted in ducts for forced convection applications.

Tubular Heaters – Types HX, IX, KX

- Designed for heating applications that require heating temperatures up to 750ºC (1400ºF).
- Sheath material, voltage, wattage, watt density and physical size/shape can be custom-engineered to suit any need.
- Available sheath materials include copper, steel, stainless-steel, incoloy, inconel, monel, titanium, and other metallic materials.



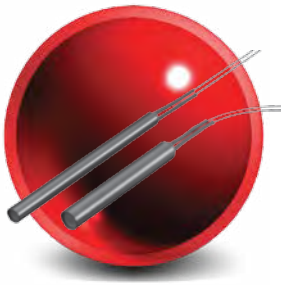


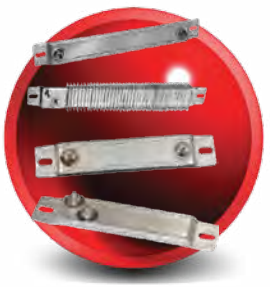
Finned Tubular Heaters - Type KXF

- Designed for use in forced convection, air or gas heating systems such as ducts, fan forced electric heaters, recirculation ovens and more.
- Can be custom designed for virtually any heating application requiring process temperatures up to 750ºF (400ºC).
- Sheath material, voltage, wattage, watt density and physical size/shape can be custom-engineered to suit any need.
- Sheath materials include steel, stainless-steel, copper, incoloy, inconel, nickel plated steel, and other metallic materials.

Cartridge Heaters – Type C

- Designed to offer a convenient and effective method of heating dies, platens, molds, heat sealing tools, hot plates and more.
- Standard diameters for 0.375”, 0.5”, 0.625”, 0.75”, and 1.297” holes.
- Can be supplied with a variety of threaded fittings to facilitate installation.
- Available in standard voltages of 120V or 240V; special voltages available on custom order.
- Range from 30W to 4.7kW, depending on hole diameter and heater length selected; special wattages available on custom order.





Strip Heaters – Types FS, SD, SS

- Designed for a wide range of heating applications including surface heating, process air heating, dropping resistors for line applications in railroads and load banks, winterizing and more.
- Can be finned to facilitate transfer of heat to air.
- Constructed of specially selected, high grade materials, including high temperature alloy resistance wire and corrosion-resistant aluminized steel sheath (suitable for maximum sheath temperatures up to 538°C / 1000ºF) or corrosion-resistant stainless-steel sheath (suitable for maximum sheath temperatures up to 649°C / 1200ºF).

Other Elements and Specialty Heaters

- Tubular Band Heaters (TBH & TBW).
- Band Heaters (Type BC).
- Cast-In Heaters (Type MC).
- Hot Plate Heaters (Type HPH).
- Drum Heaters (Type D).
- Bolt and Stud Heaters.

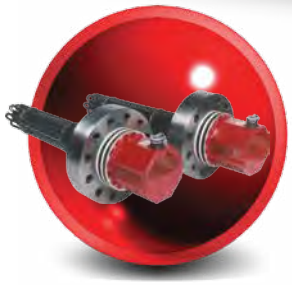
Immersion Heaters

Screwplug Heaters – Type CX

- Designed for heating applications such as water, oils, gases and mildly corrosive liquids.
- Standard designs with 1” to 2.5” screwplugs are available, with copper, incoloy, inconel, nickel plated steel, and other metallic materials, with or without built in thermostat.
- Custom built heaters are available in almost any rating up to 660V, with special sheath and plug materials.
- Available with general purpose, moisture resistant or explosion-proof terminal housings.
- Conforms to API Bulletin 614 chapters 1 and 2.

Flange Heaters – Type CX

- Designed for heating applications such as water, oils, gases and mildly corrosive liquids.
- Available in a standard range of sizes from 2.5” to 14” (ANSI flange dimensions) and up to 135” immersed length, custom lengths and diameters up to 50” are also available.
- Available in a variety of voltages from 208 to 660V.
- NEMA 4, explosion-proof, moisture resistant and/or flame proof terminal housings available.
- Authorized to bear U, S, H or NPT stamps, depending on the ASME code classification (Section VIII or III).



Over the Side Immersion Heaters – Types DX, HX, QM

- Designed for liquid heating applications.
- Standard voltages range from 208 to 660V.
- Available in a range of wattages, from 3 to 7.5 kW for the single element unit and from 9 to 22.5 kW for the three element unit.
- Available sheath materials include cwith copper, incoloy, inconel, nickel plated steel, and other metallic materials, and Teflon or quartz sleeved.

Pipe Insert Heaters – Type MX

- Designed to provide uniformly distributed heat to storage vessels containing high viscosity liquids such as asphalt, molasses, tar, paint, glue, wax and oils without causing charring or coking.
- Standard voltages range from 208 to 660V.
- NEMA 4 explosion-proof terminal housings.
- Standard heaters use heavy duty alloy sheathed elements with either 3”-150 lb flanges or 2” NPT screwplugs with moisture resistant terminal housings.
- Optional features include packaged control systems, special wattages/voltages, built-in thermostats/limits and explosion proof housings.

Urn Heaters – Type TX

- Designed for use in steam tables, coffee urns, kettles and percolators.
- Available in 120V, 208V and 240V standard voltages.
- A range of standard wattages available from 1 - 7.5 kW.
- Standard features include brass mounting flange, fully prewired copper elements and O-ring sealing gaskets.
- Optional features include “fast response low level trip”, special sheath materials, and special wattages and voltages.

Air and Space Heaters

Infrared Radiant Heaters – Type OK

- Designed for comfort and process heating applications.
- Can be configured with incoloy elements or quartz tube elements or quartz lamp to suit the application.
- Wide range of outputs, offered in 0.5 to 10kW and from 120 to 600V.

Panel & Enclosure Heaters – Types PH and PXFT

- Designed to prevent condensation and freezing in control panels, eliminating costly damage and down time.
- PH heater is available in four wattages ranging from 125 to 800W and utilizes a fan to circulate air in the panel, reducing temperature stratification.
- PXFT heater is a natural convection heater, available in wattages from 50 to 600W.
- Both types have built in thermostat control.

Commercial Duct Heaters – Types DI & DF

- Designed for comfort heating applications including make-up air handling units, air pre-heating, heat pump auxiliary systems and return air heating.
- Available in flanged or duct insert designs, with tubular or finned tubular elements.
- Offered in wattages up to 120 kW and from 120 to 600V.
- Larger wattages available in custom designs.

Process Duct Heaters – Type WX

- Designed for installation in process ducts for heating air or other non-hazardous gases.
- Replaceable elements for easy serviceability.
- Suitable for outlet air temperatures up to 600ºC (1112ºF).
- Offered in 6 to 84 kW and from 208 to 600V.
- Larger wattages available in custom designs.

Forced Air Unit Heaters - Type GE

- Designed for use in regular duty industrial and commercial space heating applications.
- Phosphate coated, epoxy painted 18-gauge steel cabinet.
- Numerous optional factory installed features to meet specific customer requirements, including optional thermostats and controls and optional wall bracket.
- 35 models, offered in 2 to 40 kW and from 208 to 600V.

Forced Air Heavy Duty Unit Heaters - Type GX

- Designed for heavy duty use in industrial environments.
- Heavy duty construction reduces the downtime and maintenance costs associated with standard design heaters.
- 18 models, offered in 15 to 50 kW and from 208 to 600V.
- 40 kW and 50 kW units incorporate split loads (50%) for remotely controlled energy management systems.

CCR1 Triton™ Corrosion-Resistant Washdown Heaters

- Designed for non-hazardous locations and applications using water pressure of less than 70 psi.
- NEMA Type 4X construction for increased safety and protection against water penetration.
- IP55 ratings available in CCRE1 models.
- Epoxy-coated fan blade and 16-gauge stainless-steel cabinet for increased corrosion resistance.
- 37 models, offered in 13 to 39kW and from 208 to 600V.
- UL listed Type 4X for Coast Guard and Marine applications.

Boilers

Hot Water Boilers – Type VWB & HWB

- Designed for process heating, comfort heating, commercial dishwashers, radiant floor heating, and carwash.
- Safe, quiet and reliable source of hot water.
- Offered in 150 - 5000kW with pressure ratings up to 2500 psig.
- CSA approved, and designed and built to the latest version of the ASME code.
- Compliance to Chinese SELO Quality Requirements is also available upon request.

Steam Boilers - Type VSB & HSB

- Designed for dry cleaning applications, chemical distillation, autoclaves, heating jacketed vessels and more.
- Fully packaged systems for safe, versatile and easy to use heat sources for low or high pressure steam.
- Caloritech™ boilers have low water volumes for rapid response.
- Offered in 9 to 5000 kW with pressure ratings up to 2500 psig.
- CSA approved, and designed and built to the latest version of the ASME code.
- Compliance to Chinese SELO Quality Requirements is also available upon request.

Packaged Circulation Heaters – Type CWCB

- Designed for installation in circulating systems where space is limited.
- Standard configurations include commercial swimming pool heaters, side arm domestic water heaters, commercial dishwasher booster heaters or commercial hot water furnaces for comfort or process heating.
- Offered in 6 to 60 kW with pressure ratings up to 125 psig.
- Standard features include a galvanized shell, designed to the latest version of the ASME code, inlet, outlet, and drain connections, heavy duty copper sheathed flanged elements and fully pre-wired control panel.

Replacement Boiler Flange Heaters - Type CX

- Designed as replacement parts for boilers.
- Available in a range of sizes and styles to suit the requirements of different boiler units, including rectangular flanges, square flanges and round flanges.

Accessories and Controls

- Contactors
- Control Circuit Transformers
- Control Panels
- Control Sensor Accessories
- Detect-A-Fire® Units
- Digital Indicating Temperature Controls
- Electronic Indicating Controls
- Explosion-Proof Thermostats
- Flow Switches
- Heat Sinks
- High Temperature Wires
- Industrial Thermostats
- Level Control for Conductive Liquids
- Level Probes
- Pilot Lights
- Percentage Timers
- Protective Wells
- Relays
- Sight Glass Assemblies
- Sleeves
- Snap Discs
- Step Controllers
- Stuffing Boxes
- Temperature Controls
- Thermocouples
- Fenwal THERMOSWITCH®
- Thermowells
- Timers
- Thyristor Power Controls
- ***x-Max***® Explosion-Proof Housings

Engineered Products

Circulation Heaters – Type EX

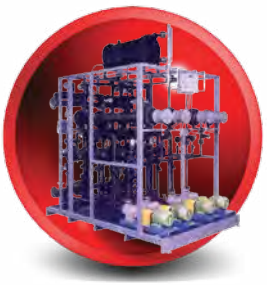
- Designed for forced flow or natural flow applications.
- Designs ranging from 0.6 to 5000 kW, higher kW ratings are also available.
- Optional features include built in high limits and thermostats, stainless steel wetted parts, moisture resistant or explosion-proof housings.
- CRN registered vessels and heaters for Canada.
- Authorized to bear the U and N stamps, depending on the ASME code classification (Section VIII or III).

Packaged Circulation Heaters

- Combine a circulation heater and an engineered control package to provide a turn-key system.
- Built to the highest standards in the industry.
- Pressure Vessels & Heaters authorized to bear the U and N stamps, depending on the ASME code classification (Section VIII or III).

Control Panels – Type CP

- Designed for automatic process control of electric heaters.
- Feature conservative designs, with components de-rated for extended life.
- Available up to 4000 amps at 660V.
- Control packages including basic on/off, contactor staged, base-load SCR and full SCR.

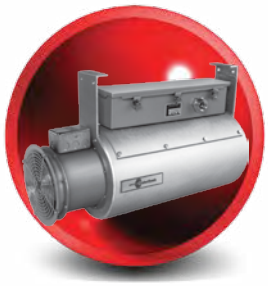


Heat Transfer Systems – Type FX

- Designed to provide high temperature process heat with temperatures up to 375ºC (707ºF).
- Offered in 15 to 3000 kW, and from 380 to 660V, higher kW ratings are also available.
- Typical systems are equipped with low density type EX circulation heaters mounted on a structural steel frame with centrifugal, direct drive pumps, inlet, outlet, bypass, drain, fill and bleed valves.
- Other features may include positive displacement pumps, motorized valves for heating and cooling applications, expansion tanks and pressure switches.
- Pressure Vessels & Heaters authorized to bear the U and N stamps, depending on the ASME code classification (Section VIII or III).

Explosion-Proof Duct Heaters – Type XD

- Designed to heat air that potentially contains explosive gases or other substances.
- Utilize extra-heavy walled, finned tubular heating elements mounted in the Caloritech™ patented ***x-Max***® terminal housing.
- Optional features including custom duct sizes, kW ratings and control panel packages.
- Standard designs from 2.5 to 50 kW sizes with temperature codes of T2D, T3A or T3B.
- Custom designs for higher power ratings and hazardous area requirements available.



Gate Body Duct Heaters - Type WXS

- Designed to heat the inside of the gate and prevent ice build-up on the gate walls, windseals and end members.
- Standard designs ranging from 4 to 120 kW, higher kW ratings are also available.
- Features include a weather proof duct heater, matched motor and high static axial fan assembly installed within a galvanized heavy steel housing.
- Optional controls include ambient temperature sensing thermostat, outlet air temperature thermostat, limit control and differential pressure switch.

CCI Thermal has always been committed to the safety and well being of our customers and takes great pride in its lines of certified products. These certifications include: