

APPLICATION OR PROCESS	METHOD OF HEATING	TYPE OF HEATER
Acid Heating	Direct (For Solutions Listed)	Leaded Immersion
	Liquid Jacket	Water or Oil Immersion
	Clamped on or Air Jacket	Cast-In
		Tubular
Air Filtering	Immersion	Oil Immersion
	1	Tubular
Air Heating (Process)	Direct	Tubular
	1	Finned Tubular
	1	Cast-In
		Oven Heaters
(Comfort)	Direct	Natural or Forced Convection
	1	Air Heaters
Alkaline Baths	Direct	Immersion
Asphalt Tanks (See Also Pipe Heating)	Clamped on or Air Jacket	Cast-In
		Tubular
	Liquid Jacket	Water or Oil Immersion
Automotive	Immersion	Cartridge
	Surface	Tubular
Babbitt Melting	Direct	Cast-in Immersion
		Melting Pots
Baking Ovens (Paint, Enamel, etc.)	Air	Tubular
	1	Cast-In
Baseboard Heaters	Air	Tubular
		Finned Tubular
Bolt Heating	Direct	Insertion
Bottle Capping	Surface	Tubular
3	1	Cartridge
Brass Plating Solution	Direct	Alkaline Immersion
Bronze Plating Solution	Direct	Alkaline Immersion
Cadmium Plating Solution	Direct	Alkaline Immersion
Can Soldering	Direct	Cast-in Immersion
Candy Coating	Liquid Jacket	Water or Oil Immersion
Cartoning Equipment	Surface	Tubular
Caustic Water Solution	Direct	Alkaline Immersion
Cellulose Dip Tanks	Liquid Jacket	Water or Oil Immersion
Chocolate Melting and Processing	Clamped on or Air Jacket	Cast-In
		Tubular
	Liquid Jacket	Water Immersion
Chromium Plating Solution	Direct	Leaded Immersion
Cleaning Tanks	Direct	Water Immersion
		Alkaline Immersion



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Coal Spraying	Direct	Oil Immersion
Coffee Roasting	Air	Tubular
Comfort Heating		Cast-In
Component Heaters for:		
Electric Furnaces	Air	Finned Tubular
		Tubular
Air Conditioners	Air	Tubular
		Finned Tubular
Heat Pumps	Air	Tubular
		Finned Tubular
Wall Insert Heaters	Air, Radiant	Tubular
	Radiant	Finned Tubular
Radiant-Industrial	Radiant	Tubular
Compound Melting	Air Jacket	Water or Oil Immersion
		Strip
	Liquid Jacket	Tubular
Cooking (Food)	Immersion, Cast-in, Air	Tubular
Copper Plating Solution	Direct	
(Cyanide)		Alkaline Immersion
(Acid)		Leaded Immersion
Core Baking	Direct	Cast-In
		Tubular
Defrosting	Air, Surface, Radiant	Tubular
		Finned Tubular
		Cartridge
Degreasers	Direct	Oil Immersion
		Tubular
	Clamped on or Air Jacket	Tubular
		Cast-In
Dehydrating	Air	Tubular
		Finned Tubular
		Cast-In
Deicing (Refrigeration)	Surface	Tubular
Die Heating	Surface	Tubular
Diesels (Starting Aids)	Fuel, Air, Surface, Immersion	Tubular
		Cartridge
Drying (Ovens and Processes)	Air	Tubular
		Finned Tubular
		Cast-In
		Air Heaters
	Radiant	Tubular



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Duct Heating	Air	Tubular
		Finned Tubular
		Cast-In
Electroplating Baths	Direct	Lead or Alkaline
		Immersion (See Specific
		Plating Solutions)
	Liquid Jacket	Water or Oil Immersion
	Clamped on or Air Jacket	Cast-In
		Tubular
Electrotype Pots	Direct	Cast-in Immersion
Embossing	Surface	Cartridge
		Tubular
Extrusion (Metal or Plastic)	Surface	Tubular
		Insertion
		Cartridge
Fruit Ripening	Air	Tubular
		Finned Tubular
Fuel Oil and Furnace Oil Preheating	Direct (Also see Automotive)	Oil Immersion
Gelatin Heating	Liquid Jacket	Water Immersion
Glue Melting and Heating	Liquid Jacket	Water Immersion
Gold Plating Solution (Cyanide)	Direct	Leaded Immersion
Grease Melting	Direct	Tubular
	Liquid Jacket	Water or Oil Immersion
Heat Exchangers	Air, Immersion	Immersion
		Tubular
		Finned Tubular
Hot Plates	Surface	Cartridge
		Tubular
		Cast-In
Humidifying	Direct	Water Immersion
Injection, Plastic	See Plastic Injection	
Labeling Equipment	Surface	Cast-In
	1	Tubular
	1	Cartridge
	Liquid Jacket	Water Immersion
Lead Melting	See Metal Melting	
Lead Plating Solution	Direct	Leaded Immersion
Metal Extrusion	Surface	Tubular
		Insertion



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Metal Melting	Direct	Cast-in Immersion
	Clamped on or Air Jacket	Cast-In
		Tubular
Molasses Heating (Tank)	Liquid Jacket	Water or Oil Immersion
Mold Heating	Surface	Tubular
		Cartridge
Molding Presses	Surface	Tubular
A11		Insertion
		Cartridge
		Cast-In
Molding (Vacuum) (Plastic Sheets)	Radiant	Tubular
Nickel Plating Solution	Direct	Leaded Immersion
Oil Heating, Reclaiming, Tempering	Direct	Oil Immersion
Oven Heating (1000° F. Max.)	Air	Tubular
		Oven
Oven Heating (800° F. Max.)	Air	Cast-In
		Oven
Packaging Equipment	Surface	Cartridge
		Cast-In
		Tubular
	Liquid Jacket	Water or Oil Immersion
Paraffin Baths	Direct	Oil Immersion
Pipe Line Heating (Including Winter	Surface	Tubular
Protection)		
Plastic Extrusion or Injection	Surface	Tubular
		Insertion
		Cartridge
Plastic Molding	Radiant, Surface	Tubular
		Cartridge
		Insertion
		Cast-In
Platen Heating	Surface	Cartridge
		Tubular
		Insertion
		Cast-In
	Liquid Jacket	Water or Oil Immersion
Plating Baths	Direct	Alkaline or Lead Immersion
	Liquid Jacket	Water or Oil Immersion
	Clamped on or Air Jacket	Cast-In
		Tubular
Recapping	Surface	Tubular



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Roll Heaters	Surface	Tubular
		Cast-In
		Oil Immersion
Sealers (Hand)	Cast-in, Surface	Tubular
		Cartridge
		Cast-In
Silver Plating Solution (Cyanide)	Direct	Alkaline Immersion
Snowmelters	Surface, Radiant	Tubular
Soldering (Industrial)		Soldering Irons
Space Heating (Motors, Generators,	Air	Tubular
Control Cubicles, Switchgear, etc.)		Cast-In
Steam Generators	Immersion	Flanged Immersion
		Tubular
Steam Superheating	Direct	Tubular
Tin Plating Solution	Direct	Alkaline Immersion
Vacuum Molding (Plastic Sheets)	Radiant	Tubular
Valve Warming	Surface	Cartridge
3		Tubular
	Liquid Jacket	Water or Oil Immersion
Vaporizers	Immersion	Immersion
Varnish Heating	Clamped on or Air Jacket	Cast-In
3		Tubular
	Liquid Jacket	Oil Immersion
Vulcanizing	Surface	Cartridge
		Tubular
		Cast-In
	Liquid Jacket	Water or Oil Immersion
Warming Ovens	Air	Cast-In
3		Tubular
		Finned Tubular
Water Heating	Direct	Water Immersion
		Tubular
Water Towers	Immersion, Surface	Tubular
Trace Torreis		Cast-In
		Immersion
Wax Melting and Heating	Direct	Oil Immersion
	Liquid Jacket	Water or Oil Immersion
Wood Processing	Air, Surface	Tubular
	,	Finned Tubular
Yarn Conditioning	Immersion	Water Immersion
Zinc Plating Solution	Direct	Alkaline Immersion